Accurate Atomic Transition Probabilities for Hydrogen, Helium, and Lithium

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Accurate Atomic Transition Probabilities for Hydrogen, Helium, and Lithium

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We have carried out a comprehensive tabulation of the atomic transition probabilities for allowed and forbidden lines of hydrogen, helium and lithium, including Li II, as well as the hydrogen isotopes deuterium and tritium. Altogether, we tabulated about 3600 transitions and listed scaling relations for the hydrogenlike ions He II and Li III. The selected data are based on a critical evaluation of available literature sources and are all taken from recent advanced calculations. The tables are normally arranged in multiplets, and these are ordered in increasing excitation energies. For hydrogen, deuterium, and tritium, the energy levels are degenerate, i.e., all energy levels of the same principal quantum number essentially coincide. Thus, the principal tables for these species are for the average transition probabilities of lines between different principal quantum numbers. [doi:10.1063/1.3077727]

Key words: allowed and forbidden transitions; atomic transition probabilities; *f* values; helium; hydrogen; line strengths; lithium; oscillator strengths.

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1. Introduction

1.1. Overview

In 1966, the first reference data tables for the atomic transition probabilities of the light elements hydrogen to neon, atomic numbers 1–10, were published by the National Bureau of Standards (NBS),[1] now the National Institute of Standards and Technology (NIST). Since then, large amounts of much higher quality data have become available, most from quantum mechanical calculations. These advanced calculations became feasible due to a combination of sophisticated new atomic structure codes and the greatly increased power of computers. Since this new material covers the spectra more extensively, our present NIST reference data tables are greatly expanded and are therefore being published in several parts. The first part, containing all spectra of carbon, nitrogen and oxygen, was already published in 1996,[2] and an addendum for C I and C II and N I and N II, again with much improved data sets, has also been completed.[3]

Most of the tabulated data for this second major part are the results of two extensive very high precision calculations: For hydrogen and its isotopes, we have tabulated new calculations by Baker, whose results are recorded in Ref. 4, and by Jitrik and Bunge.[5] The two sets of data were obtained from fully relativistic calculations and yielded identical results for the transition probabilities, where they overlap. For neutral helium and singly ionized lithium, we have tabulated the results of variational calculations by Drake,[6–8] which for most practical purposes may be considered as essentially exact. Drake applied his sophisticated computational techniques to more than 2400 transitions of He I and about 500 transitions of heliumlike Li II.

In contrast to these high-precision calculations—and some similar smaller, slightly less refined theoretical works—experimental results have played only a minor role for this compilation, essentially serving to reaffirm the calculations.

1.2. Brief Remarks on the Principal Data Sources

Hydrogen and the hydrogenlike ions He II and Li III are special cases because (a) they are one-electron atomic systems for which the transition probabilities have been calculated on a practically exact basis, except for very small quantum electrodynamic (QED) corrections, and (b) all energy levels for a given principal quantum number n essentially coincide (which is known as the lj degeneracy). We have tabulated the new fully relativistic data by Baker[4] and by Jitrik and Bunge.[5] Baker, with his results appearing in Ref. 4, also provided explicit results for the "average" transition probabilities of transitions n_i–n_k which are of the utmost practical importance and give rise to the familiar Lyman, Balmer, Paschen, etc., lines. We have found that for the great majority of transitions, Baker's results, which include a finite mass term, are for the first four digits identical to the nonrelativistic calculations by Green *et al.*,[9] which we used in our 1966 NBS reference tables. The only exceptions, i.e., extremely slight differences with a change in the last digit by one or two, occur in such highly excited transitions as from principal quantum numbers 19 and 20. For these, minute changes in the transition energy may be partly responsible. Baker[4] also calculated relativistic transition probabilities for the hydrogen isotopes deuterium and tritium, again with the finite mass term, and found—not surprisingly—only very small changes in the transition energies and probabilities. Therefore, our tables for these isotopes are kept small, covering principal quantum numbers of 20 and below.

Very high precision variational and asymptotic expansion methods for neutral helium and some heliumlike ions were developed in the 1980s and 1990s by Drake,[6–8] refining an earlier, already quite sophisticated, variational approach by Schiff and Pekeris[10] in the 1960s. Drake's work provides essentially exact calculations of the nonrelativistic energies including the lowest-order relativistic corrections for the entire spectrum of helium and singly ionized lithium. His calculated energies were compared with extremely accurate experimental energies in order to find the magnitude of the residual differences due to higher-order relativistic and QED corrections. These turned out to be so small that they are estimated to produce only occasional small changes in the fourth or fifth digit of the numerical transition probability data we provide in this tabulation. Drake stated that replacing his calculated transition energies by the experimental ones will not necessarily produce higher accuracy for the transition probabilities because there are also relativistic corrections in the transition operator itself that must be included.

Based on his results for the helium energy levels, Drake proceeded to calculate transition probabilities that include

the singlet-triplet mixing terms as the lowest-order but largest relativistic contribution. These represent a well-defined theoretical result accurate to at least 0.3% or better. His results for the dipole length and velocity formulations agree normally for the first eight to ten digits (he carried his calculations out to 14+figures). He also chose the infinite nuclear mass case for the main reason that—at least for the transition frequencies—relativistic and nuclear mass polarization corrections are comparable in magnitude but of opposite sign. Drake and Morton[11] recently undertook an extensive comparison of these calculated energies with experimental high-precision energies as well as with some precise lifetime data and confirmed the outstanding accuracy of the calculated data.

For the spectrum of Li I, the data situation is quite different. In order to produce extensive coverage, we had to apply the results of seven different advanced calculations which were carried out over the past 20 years. For this atom of still simple structure, the agreement between different authors, where their results overlap, is remarkably good, normally within 0.5% for the stronger transitions. However, for the very weak lines, disagreements become significant, and for the weakest line tabulated here, it reaches a factor of 2 mainly due to severe cancellation in the transition integral. Fortunately, these few transitions are the only exceptions to a table of otherwise truly accurate atomic transition probabilities.

1.3. Scaling Relationships for Hydrogenlike He II and Li III

Transition probabilities A_{ki}, oscillator strengths f_{ik}, and line strengths S for the hydrogenlike ions He II and Li III may be obtained from the data for the corresponding hydrogen lines by using the following scaling relationships:[12]

$$A_{ki}(Z) = Z^4 A_{ki}(H)\frac{\mu(Z)}{\mu(H)},$$

$$f(Z) = f(H)\frac{\mu(H)}{\mu(Z)},$$

and

$$S(Z) = Z^{-2} S(H)\left(\frac{\mu(H)}{\mu(Z)}\right)^2,$$

where the quantities for hydrogen are indicated by H and those for the hydrogenlike ions by their nuclear charges Z. These relationships include a term for the finite masses of H and the H-like ions, expressed by their reduced masses $\mu(Z)=M(Z)/[m_e+M(Z)]$ (m_e is the electron mass and $M(Z)$ is the mass of the nuclide of charge Z). They are valid for hydrogenlike ions of small Z because relativistic effects are negligibly small. For wavelength and energy level data, the NIST Atomic Energy Levels and Spectra Bibliographic Database[13] and the NIST Atomic Spectra Database[14] (ASD) should be consulted. (In the nonrelativistic approximation, the wavelengths λ scale as $\lambda(Z)=Z^{-2}\lambda(H)[\mu(H)/\mu(Z)]$.)

1.4. List of Symbols

Symbols for indication of data accuracy:

AAA = uncertainty less than ±0.3%
AA = uncertainty less than ±1%
A = uncertainty less than ±3%
B = uncertainty less than ±10%
C = uncertainty less than ±25%
D = uncertainty less than ±50%
E = uncertainty greater than ±50%, but within a factor of 3

Symbols used for the table headings:

λ = Wavelength (Å)
E_i = lower energy level (cm^{-1})
E_k = upper energy level (cm^{-1})
g_i = statistical weight of lower level
g_k = statistical weight of upper level
A_{ki} = atomic transition probability for spontaneous emission (10^8 s^{-1}) for all E1 (allowed: electric dipole) transitions, s^{-1} for all M1, M2, and E2 transitions
f_{ik} = absorption oscillator strength
S = line strength in a.u.; formulas and values for these quantities in SI units are as follows:

For E1 transitions:
$a_0^2 e^2 = 7.188_3 \times 10^{-59}$ m^2 C^2
For E2 transitions:
$a_0^4 e^2 = 2.012_9 \times 10^{-79}$ m^4 C^2
For M1 transitions:
$\mu_B^2 = (eh/\pi me)^2 = 8.600_7 \times 10^{-47}$ J^2 T^{-2}
For M2 transitions:
$\mu_B^2 a_0^2 = 2.408_5 \times 10^{-67}$ J^2 $m^2 T^{-2}$
where a_0, e, m_e, and h are the Bohr radius, electron charge, electron mass, and Planck constant, respectively, and μ_B is the Bohr magneton. Note that for E_i and E_k, the customary unit for atomic energy levels, used here, is related to the SI unit for energy (J) by 1 $cm^{-1} = 1.986 \times 10^{-23}$ J.

Abbreviations appearing in the column labeled "type" (forbidden lines only):
M1: magnetic dipole transition
E2: electric quadrupole transition
M2: magnetic quadrupole transition

Special symbols used in the wavelength and energy level columns: Numbers in italics indicate multiplet values, i.e., weighted averages of line values. Notation for exponents: In all tables, we have shown the power of 10 by the exponential notation. For example, 3.88e−03 stands for 3.88×10^{-3}.

1.5. Useful Relations

We present only relations pertinent to H, He, and Li. For more extensive descriptions of spectroscopic terminology, selection rules, relations between multiplets and fine structure lines, etc., see Refs. 15 and 16.

(A) Statistical weight g:

(1) The statistical weight of a level is related to the total angular momentum or quantum number J_L (j for one-electron spectra) of that level (initial or final state of a line) by

$$g_L = 2J_L + 1.$$

(2) Similarly, the statistical weight of a term (initial or final state of a multiplet) is

$$g_M = (2L + 1)(2S + 1),$$

where L is the total orbital angular momentum and S is the total spin angular momentum. For the one-electron spectra of hydrogen and hydrogenlike ions, lowercase letters l, s, and j are used, and a particular level is denoted either by nl_j or by nl^2L_J, with $L=l$ and $J=j$.

(B) Relations between the strengths of (LS-allowed) fine structure lines and the total multiplet strength:

(1) Line strength S: The line strength of a multiplet is the sum of the strengths of its component lines, i.e.,

$$S(\text{multiplet}) = \sum S\ (\text{line})$$

or

$$S(i,k) = \sum_{J_i,J_k} S(J_i,J_k),$$

where k denotes the upper term and i denotes the lower term.

(2) Absorption oscillator strength f_{ik}:

$$f_{ik}^{\text{multiplet}} = \frac{1}{\langle\lambda\rangle_{ik}\Sigma_{J_i}(2J_i+1)} \sum_{J_i,J_k} (2J_i+1) \times \lambda(J_i,J_k) \times f(J_i,J_k).$$

The mean wavelength for the multiplet, $\langle\lambda\rangle_{ik}$, may be obtained from the *weighted* energy levels. Often the wavelength differences for the lines within a multiplet are small, in which case the wavelength factors may be neglected.

(3) Transition probability A_{ki}:

$$A_{ki}^{\text{multiplet}} = \frac{1}{\langle\lambda\rangle_{ik}^3\Sigma_{J_k}(2J_k+1)} \sum_{J_i,J_k} (2J_k+1) \times \lambda(J_i,J_k)^3 \times A(J_i,J_k).$$

(C) Definition of the average transition probabilities for hydrogen and hydrogenlike ions (due to the l degeneracy) in terms of n_il_i–n_kl_k multiplet values:

1

$$A_{n_k,n_i}^{\text{avg}} = \sum_{l_k,l_i} \frac{2l_k+1}{n_k^2} A_{(nl)_k,(nl)_i},$$

2

$$f_{n_i,n_k}^{\text{avg}} = \sum_{l_k,l_i} \frac{2l_i+1}{n_i^2} f_{(nl)_i,(nl)_k},$$

3

$$S_{n_i,n_k}^{\text{avg}} = \sum_{l_k,l_i} S_{(nl)_i,(nl)_k}.$$

The multiplet values are in turn related to the values for the fine structure lines as shown in (B) above.

(D) Conversions:

(1) For electric dipole (E1-allowed) transitions,

$$A_{ki} = \frac{6.670\,251\,7 \times 10^{15} g_i}{g_k\lambda^2} f_{ik} = \frac{2.026\,126\,9 \times 10^{18}}{g_k\lambda^3} S.$$

(2) For magnetic dipole (M1-forbidden) transitions,

$$A_{ki} = \frac{2.697\,350\,0 \times 10^{13}}{g_k\lambda^3} S.$$

(3) For electric quadrupole (E2-forbidden) transitions,

$$A_{ki} = \frac{1.119\,950\,0 \times 10^{18}}{g_k\lambda^5} S.$$

(4) For magnetic quadrupole (M2-forbidden) transitions,

$$A_{ki} = \frac{1.490\,971\,4 \times 10^{13}}{g_k\lambda^5} S.$$

For these conversions, λ is the vacuum wavelength in Å units, and g_i and g_k are the statistical weights of the lower and upper levels, respectively. The line strength (S) is given in a.u., the transition probability (A_{ki}) is in units of s^{-1}, and the f value is dimensionless. For more details on these units and conversion factors, we refer the reader to Wiese *et al.*[2]

2. Hydrogen (H I) and its Isotopes D I and T I

2.1. H I

Ground State: $1s\ ^2S_{1/2}$
Ionization Energy (H I): 13.598 eV (109 678.7737 cm^{-1})

2.1.1. H I, D I, and T I Allowed Transitions

Hydrogen and hydrogenlike ions represent special cases with respect to their spectra. They are two-body atomic systems, for which the wavelengths, energy levels, and transition probabilities can be calculated on an essentially exact basis. Such calculations were first done nonrelativistically and provided transition probabilities accurate to four significant figures for hydrogen as well as for light hydrogenic ions.[9] Recently, more sophisticated calculations were carried out on a fully relativistic basis and including a finite mass term by Baker,[4] Jitrik and Bunge,[5] and Pal'chikov.[17] For the energy levels, even more refined calculations including QED effects,[5] were recently undertaken, so that the latter quantities are now known to at least 13 significant figures.

The hydrogen spectrum possesses another unique feature insofar as all energy levels for a given principal quantum number n are degenerate, that is, they essentially coincide. Thus, in laboratory or astrophysical plasmas, where the excited atoms undergo many transitions during their lifetimes and where pressure (Stark) and Doppler broadening are present, only one spectral line is observed for all possible transitions from an upper level n_k to a lower level n_i. Therefore, the average (sometimes called the total) transition probabilities for transitions n_i–n_k assume great importance, giving rise to the well-known Lyman, Balmer, Paschen, etc., lines, and they are the data in our principal table.

Baker explicitly calculated these very important average transition probabilities from upper levels n_k to lower levels n_i for all combinations of $n_i \leqslant 19$ and $n_k \leqslant 20$ (where n is the principal quantum number). For the important Lyman, Balmer, and Paschen spectral series, he extended his calculations to $n_i \leqslant 39$ and $n_k \leqslant 40$. Therefore, we have used his results. Actually, forbidden transitions (M1, E2, M2, E3, etc.) must be also included in the averaged transition probabilities, but they are totally negligible (see the comment below on Jitrik and Bunge's calculations).

The average transition probabilities A_{ki}, oscillator strengths f_{ik}, and line strengths S are obtained from the values for multiplets $n_i l_i$–$n_k l_k$ and for fine structure lines $n_i l_i j_i$–$n_k l_k j_k$ by the relations shown in Sec. 5 of the general introduction to this compilation.

For the fine structure lines $n_i l_i j_i$–$n_k l_k j_k$ (where l is the orbital angular momentum quantum number and j is the total angular momentum quantum number), we have utilized the fully relativistic calculations by Baker[4] and Jitrik and Bunge[5] for all transitions between lower levels with $n_i \leqslant 5$ and upper levels with $n_k \leqslant 6$ for all possible values of $l_i j_i$ and $l_k j_k$. The data of Baker[4] and Jitrik and Bunge[5] turned out to be identical for the transition probabilities but differ slightly for the f and S data, where Jitrik and Bunge apparently did not correct for the finite mass. Pal'chikov[17] used the same computational approach but provided only few numerical transition probability data but in complete agreement with Refs. 4 and 5.

Finding lists and transition probabilities of the allowed lines of H I (both average and fine-structure) are given in Tables 1–6, while finding lists and transition probabilities for the allowed lines of the hydrogen isotopes D I and T I are given in Tables 7–10.

Baker[4] and Jitrik and Bunge[5] also calculated energy levels and wavelengths but did not include QED effects in their calculations. However, these are estimated to be very small and will only start to affect the sixth and higher digits in the tabulated numbers. (For the $2s$ and $2p$ levels, a numerical change of 1 already occurs in the fifth digit.) Jitrik and Bunge also calculated the strengths of forbidden lines, i.e., M1, M2, M3, E2, and E3 transitions, which all occur at the same wavelengths as the allowed electric dipole (E1) lines because of the above-noted energy level degeneracy for hydrogen. The forbidden lines were found to be smaller than the E1 lines by many orders of magnitude, so that their contributions to the averaged line strengths are totally negligible.

It should be noted that the comprehensive nonrelativistic calculations by Green *et al.*,[9] which were utilized in the first NBS/NIST compilation for hydrogen in 1966,[1] delivered almost identical results as the recent relativistic calculations,[4,5,17] that we have employed here. We show comparisons of relativistic and nonrelativistic results for a few selected transitions in Table 2.

For the energy levels and wavelengths, we used the results of several recent sources. For the nlj levels and fine structure lines, we took the data from Jentschura *et al.*,[18] in which all significant relativistic and QED corrections are included. Their results are given in the NIST Physical Reference Data website to 14 significant digits. These values agree almost perfectly with results compiled and analyzed by Reader,[19] which are based on data calculated by Erickson,[20] who also included relativistic and QED effects. Reader also computed the averaged energy levels and wavelengths for the six strongest Lyman and five strongest Balmer lines, which we have tabulated. For the higher Lyman and Balmer lines, as well as for lines of the Paschen, Brackett, and higher spectral series, we used the calculated averages by Baker.[4] For the strong Lyman and Balmer lines, these values agree closely with the data of Reader, with differences of only 1, 2, or 3 showing up in the sixth digit.

We also present short tables of average values for the hydrogen isotopes, deuterium and tritium, because of their importance in magnetic fusion research. For the isotopes, only the mass of the nucleus changes, so that the A values are readily modified by the ratios of the reduced mass for D or T against H.[4] The changes compared to hydrogen itself are very small, amounting consistently to a slight increase in the fourth digit. Numerical comparisons for the first two Lyman and Balmer lines are shown in Table 3.

TABLE 1. List of tabulated lines for allowed transitions of H I, average values

Wavelength (Å)	Multiplet No.
In vacuum	
912.321	39
912.351	38
912.383	37
912.418	36
912.455	35
912.496	34
912.541	33
912.589	32
912.642	31
912.701	30
912.765	29
912.837	28
912.916	27
913.004	26
913.102	25
913.212	24
913.337	23
913.478	22
913.639	21
913.823	20
914.036	19
914.284	18
914.574	17
914.917	16
915.327	15
915.821	14
916.427	13
917.178	12
918.127	11
919.349	10
920.961	9
923.148	8
926.223	7
930.748	6
937.803	5
949.743	4
972.537	3
1 025.72	2
1 215.67	1
In air	
3 655.09	77
3 655.56	76
3 656.08	75
3 656.63	74
3 657.24	73
3 657.89	72
3 658.61	71
3 659.39	70
3 660.25	69
3 661.19	68
3 662.23	67
3 663.37	66
3 664.65	65
3 666.07	64
3 667.65	63
3 669.43	62
3 671.45	61
3 673.73	60
3 676.33	59
3 679.32	58
3 682.78	57
3 686.80	56
3 691.52	55
3 697.12	54
3 703.82	53
3 711.94	52
3 721.91	51
3 734.34	50
3 750.12	49
3 770.60	48
3 797.87	47
3 835.35	46
3 889.02	45
3 970.08	44
4 101.74	43
4 340.47	42
4 861.34	41
6 562.83	40
8 392.19	94
8 413.11	93
8 437.75	92
8 467.04	91
8 502.27	90
8 545.17	89
8 598.18	88
8 664.80	87
8 750.25	86
8 862.55	85
9 014.67	84
9 228.77	83
9 545.70	82
10 049.4	81
10 938.1	80
12 818.1	79
15 191.2	110
15 259.9	109
15 341.1	108
15 438.2	107
15 555.7	106
15 699.9	105
15 879.8	104
16 108.6	103
16 406.4	102
16 805.7	101
17 361.2	100
18 173.2	99
18 751.0	78
19 444.5	98
21 655.2	97
24 305.3	125

TABLE 1. List of tabulated lines for allowed transitions of H I, average values—Continued

Wavelength (Å)	Multiplet No.
24 481.6	124
24 691.4	123
24 944.0	122
25 252.2	121
25 634.4	120
26 117.4	119
26 251.4	96
26 742.0	118
27 573.0	117
28 719.8	116
30 381.1	115
32 957.8	114
36 056.2	139
36 445.6	138
36 912.5	137
37 391.4	113
37 479.8	136
38 180.0	135
39 060.6	134
40 193.2	133
40 511.4	95
41 691.7	132
43 747.2	131
46 524.9	112
46 706.2	130

Wave number (cm^{-1})	Multiplet No.
29.623	230
34.695	228
40.996	225
48.921	221
59.028	216
64.318	229
72.123	210
75.691	226
89.400	203
89.917	222
105.314	227
107.949	217
112.670	195
124.612	223
131.151	211
144.776	186
148.945	218
154.235	224
161.523	204
180.072	212
183.640	219
190.350	176
202.071	196
213.263	220
220.551	205
221.068	213
255.763	214
257.269	165

TABLE 1. List of tabulated lines for allowed transitions of H I, average values—Continued

Wave number (cm^{-1})	Multiplet No.
257.446	187
269.472	206
274.194	197
285.386	215
310.468	207
333.222	198
335.126	177
345.163	208
346.847	188
359.668	153
374.786	209
382.143	199
418.970	189
423.139	200
447.619	166
447.796	178
457.834	201
477.998	190
487.457	202
524.885	140
526.919	191
537.197	179
567.915	192
592.395	167
602.610	193
609.320	180
616.937	154
632.233	194
668.348	181
705.065	168
717.269	182
758.265	183
792.960	184
794.466	169
807.286	155
808.286	126
822.582	185
866.589	170
884.554	141
925.617	171
952.063	156
974.538	172
1 015.534	173
1 050.229	174
1 064.733	157
1 079.851	175
1 141.823	142
1 154.134	158
1 226.257	159
1 285.285	160
1 332.172	143
1 333.171	127
1 334.206	161
1 340.514	111
1 375.202	162

TABLE 1. List of tabulated lines for allowed transitions of H I, average values—Continued

Wave number (cm^{-1})	Multiplet No.
1 409.897	163
1 439.519	164
1 476.949	144
1 589.619	145
1 679.020	146
1 692.839	128
1 751.143	147

TABLE 1. List of tabulated lines for allowed transitions of H I, average values—Continued

Wave number (cm^{-1})	Multiplet No.
1 810.171	148
1 859.092	149
1 900.088	150
1 934.783	151
1 950.108	129
1 964.405	152

TABLE 2. Comparison of relativistic and nonrelativistic results for some H I transition probabilities (transition probabilities are in units of $10^8\ s^{-1}$; no fine structure data, only multiplet values $n_i l_i - n_k l_k$ are given in Ref. 9)

Transition	Nonrelativistic value Green *et al.*[9]	Relativistic values		
		Baker[4]	Jitrik and Bunge[5]	Pal'chikov[17]
$1s-2p$	6.265	6.264 9		
$1s-2p_{1/2}$		6.264 9	6.264 9	6.264 9
$1s-2p_{3/2}$		6.264 8	6.264 8	6.264 8
$1s-3p$	1.672	1.672 5		
$1s-3p_{1/2}$		1.672 5	1.672 5	1.672 5
$1s-3p_{3/2}$		1.672 5	1.672 5	1.672 5
$1s-4p$	0.6818	0.681 86		
$1s-4p_{1/2}$		0.681 86	0.681 86	0.681 86
$1s-4p_{3/2}$		0.681 86	0.681 86	0.681 86

TABLE 3. Variations for the hydrogen isotopes. Wavelengths λ (in nm) and A values (in $10^8\ s^{-1}$) for the strongest Lyman and Balmer lines of hydrogen, deuterium, and tritium

Transition		Hydrogen			Deuterium		Tritium	
		λ (nm)	A_{nonrel}	$A_{relativistic}$	λ (nm)	$A_{relativistic}$	λ (nm)	$A_{relativistic}$
L_α	1–2	121.567	4.699	4.6986	121.533	4.6999	121.523	4.7004
L_β	1–3	102.572	5.575e−1	5.5751e−1	102.544	5.5766e−1	102.535	5.5771e−1
H_α	2–3	656.464	4.410e−1	4.4101e−1	656.29	4.4113e−1	656.23	4.4117e−1
H_β	2–4	486.270	8.419e−2	8.4193e−1	486.14	8.4216e−2	486.09	8.4224e−2

TABLE 4. H I: Allowed transitions, average values

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i-g_k	A_{ki} ($10^8\ s^{-1}$)	f_{ik}	S (a.u.)	log gf	Acc.	Source
1	1–2 (L_α)		1 215.67	0.000	82 259.163	2–8	4.6986e+00	4.1641e−01	3.3331e+00	−0.079 45	AAA	4
2	1–3 (L_β)		1 025.72	0.000	97 492.283	2–18	5.5751e−01	7.9142e−02	5.3450e−01	−0.800 56	AAA	4
3	1–4 (L_γ)		972.537	0.000	102 823.879	2–32	1.2785e−01	2.9006e−02	1.8574e−01	−1.236 48	AAA	4
4	1–5 (L_δ)		949.743	0.000	105 291.644	2–50	4.1250e−02	1.3945e−02	8.7206e−02	−1.554 54	AAA	4
5	1–6 (L_ε)		937.803	0.000	106 632.158	2–72	1.6440e−02	7.8035e−03	4.8184e−02	−1.806 68	AAA	4
6	1–7		930.748	0.000	107 440.444	2–98	7.5684e−03	4.8164e−03	2.9516e−02	−2.016 25	AAA	4
7	1–8		926.223	0.000	107 965.321	2–128	3.8694e−03	3.1850e−03	1.9424e−02	−2.195 86	AAA	4
8	1–9		923.148	0.000	108 324.992	2–162	2.1425e−03	2.2172e−03	1.3477e−02	−2.353 16	AAA	4
9	1–10		920.961	0.000	108 582.262	2–200	1.2631e−03	1.6062e−03	9.7396e−03	−2.493 18	AAA	4
10	1–11		919.349	0.000	108 772.613	2–242	7.8340e−04	1.2011e−03	7.2707e−03	−2.619 38	AAA	4
11	1–12		918.127	0.000	108 917.391	2–288	5.0659e−04	9.2190e−04	5.5730e−03	−2.734 29	AAA	4
12	1–13		917.178	0.000	109 030.061	2–338	3.3927e−04	7.2310e−04	4.3668e−03	−2.839 77	AAA	4
13	1–14		916.427	0.000	109 119.462	2–392	2.3409e−04	5.7769e−04	3.4858e−03	−2.937 27	AAA	4
14	1–15		915.821	0.000	109 191.586	2–450	1.6572e−04	4.6886e−04	2.8272e−03	−3.027 93	AAA	4

TABLE 4. H I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
15	1–16		915.327	0.000	109 250.614	2–512	1.1997e−04	3.8577e−04	2.3249e−03	−3.112 64	AAA	4
16	1–17		914.917	0.000	109 299.535	2–578	8.8574e−05	3.2124e−04	1.9351e−03	−3.192 15	AAA	4
17	1–18		914.574	0.000	109 340.532	2–648	6.6540e−05	2.7035e−04	1.6280e−03	−3.267 05	AAA	4
18	1–19		914.284	0.000	109 375.227	2–722	5.0767e−05	2.2967e−04	1.3826e−03	−3.337 86	AAA	4
19	1–20		914.036	0.000	109 404.849	2–800	3.9276e−05	1.9677e−04	1.1842e−03	−3.405 00	AAA	4
20	1–21		913.823	0.000	109 430.341	2–882	3.0769e−05	1.6987e−04	1.0221e−03	−3.468 84	AAA	4
21	1–22		913.639	0.000	109 452.436	2–968	2.4380e−05	1.4767e−04	8.8831e−04	−3.529 69	AAA	4
22	1–23		913.478	0.000	109 471.713	2–1058	1.9519e−05	1.2917e−04	7.7691e−04	−3.587 80	AAA	4
23	1–24		913.337	0.000	109 488.631	2–1152	1.5776e−05	1.1364e−04	6.8340e−04	−3.643 43	AAA	4
24	1–25		913.212	0.000	109 503.559	2–1250	1.2862e−05	1.0051e−04	6.0432e−04	−3.696 78	AAA	4
25	1–26		913.102	0.000	109 516.798	2–1352	1.0571e−05	8.9321e−05	5.3700e−04	−3.748 02	AAA	4
26	1–27		913.004	0.000	109 528.594	2–1458	8.7524e−06	7.9736e−05	4.7933e−04	−3.797 31	AAA	4
27	1–28		912.916	0.000	109 539.148	2–1568	7.2967e−06	7.1476e−05	4.2963e−04	−3.844 81	AAA	4
28	1–29		912.837	0.000	109 548.630	2–1682	6.1221e−06	6.4319e−05	3.8658e−04	−3.890 63	AAA	4
29	1–30		912.765	0.000	109 557.179	2–1800	5.1673e−06	5.8087e−05	3.4910e−04	−3.934 89	AAA	4
30	1–31		912.701	0.000	109 564.915	2–1922	4.3857e−06	5.2635e−05	3.1631e−04	−3.977 69	AAA	4
31	1–32		912.642	0.000	109 571.936	2–2048	3.7418e−06	4.7845e−05	2.8751e−04	−4.019 13	AAA	4
32	1–33		912.589	0.000	109 578.329	2–2178	3.2081e−06	4.3619e−05	2.6210e−04	−4.059 29	AAA	4
33	1–34		912.541	0.000	109 584.167	2–2312	2.7631e−06	3.9877e−05	2.3960e−04	−4.098 25	AAA	4
34	1–35		912.496	0.000	109 589.511	2–2450	2.3903e−06	3.6551e−05	2.1960e−04	−4.136 07	AAA	4
35	1–36		912.455	0.000	109 594.416	2–2592	2.0762e−06	3.3585e−05	2.0177e−04	−4.172 83	AAA	4
36	1–37		912.418	0.000	109 598.928	2–2738	1.8103e−06	3.0931e−05	1.8582e−04	−4.208 57	AAA	4
37	1–38		912.383	0.000	109 603.089	2–2888	1.5843e−06	2.8550e−05	1.7151e−04	−4.243 36	AAA	4
38	1–39		912.351	0.000	109 606.935	2–3042	1.3913e−06	2.6407e−05	1.5863e−04	−4.277 24	AAA	4
39	1–40		912.321	0.000	109 610.495	2–3200	1.2258e−06	2.4474e−05	1.4701e−04	−4.310 27	AAA	4
40	2–3 (H_α)	6 562.83	6 564.64	82 259.163	97 492.283	8–18	4.4101e−01	6.4108e−01	1.1084e+02	0.710 00	AAA	4
41	2–4 (H_β)	4 861.34	4 862.70	82 259.163	102 823.879	8–32	8.4193e−02	1.1938e−01	1.5289e+01	−0.019 96	AAA	4
42	2–5 (H_γ)	4 340.47	4 341.69	82 259.163	105 291.644	8–50	2.5304e−02	4.4694e−02	5.1106e+00	−0.446 66	AAA	4
43	2–6 (H_δ)	4 101.74	4 102.90	82 259.163	106 632.158	8–72	9.7320e−03	2.2105e−02	2.3886e+00	−0.752 43	AAA	4
44	2–7 (H_ε)	3 970.08	3 971.20	82 259.163	107 440.444	8–98	4.3889e−03	1.2711e−02	1.3295e+00	−0.992 72	AAA	4
45	2–8	3 889.02	3 890.12	82 259.163	107 965.324	8–128	2.2148e−03	8.0397e−03	8.2370e−01	−1.191 67	AAA	4
46	2–9	3 835.35	3 836.44	82 259.163	108 324.994	8–162	1.2156e−03	5.4317e−03	5.4882e−01	−1.361 97	AAA	4
47	2–10	3 797.87	3 798.94	82 259.163	108 582.264	8–200	7.1225e−04	3.8526e−03	3.8546e−01	−1.511 16	AAA	4
48	2–11	3 770.60	3 771.67	82 259.163	108 772.614	8–242	4.3972e−04	2.8368e−03	2.8179e−01	−1.644 08	AAA	4
49	2–12	3 750.12	3 751.19	82 259.163	108 917.391	8–288	2.8337e−04	2.1521e−03	2.1261e−01	−1.764 06	AAA	4
50	2–13	3 734.34	3 735.40	82 259.163	109 030.062	8–338	1.8927e−04	1.6728e−03	1.6457e−01	−1.873 46	AAA	4
51	2–14	3 721.91	3 722.97	82 259.163	109 119.463	8–392	1.3032e−04	1.3269e−03	1.3011e−01	−1.974 07	AAA	4
52	2–15	3 711.94	3 713.00	82 259.163	109 191.586	8–450	9.2102e−05	1.0708e−03	1.0471e−01	−2.067 21	AAA	4
53	2–16	3 703.82	3 704.88	82 259.163	109 250.615	8–512	6.6583e−05	8.7690e−04	8.5564e−02	−2.153 96	AAA	4
54	2–17	3 697.12	3 698.17	82 259.163	109 299.536	8–578	4.9101e−05	7.2738e−04	7.0846e−02	−2.235 15	AAA	4
55	2–18	3 691.52	3 692.58	82 259.163	109 340.532	8–648	3.6851e−05	6.1017e−04	5.9340e−02	−2.311 46	AAA	4
56	2–19	3 686.80	3 687.85	82 259.163	109 375.227	8–722	2.8093e−05	5.1695e−04	5.0210e−02	−2.383 46	AAA	4
57	2–20	3 682.78	3 683.83	82 259.163	109 404.849	8–800	2.1719e−05	4.4187e−04	4.2871e−02	−2.451 61	AAA	4
58	2–21	3 679.32	3 680.37	82 259.163	109 430.341	8–882	1.7005e−05	3.8070e−04	3.6902e−02	−2.516 32	AAA	4
59	2–22	3 676.33	3 677.38	82 259.163	109 452.437	8–968	1.3467e−05	3.3036e−04	3.1996e−02	−2.577 92	AAA	4
60	2–23	3 673.73	3 674.78	82 259.163	109 471.713	8–1058	1.0777e−05	2.8854e−04	2.7926e−02	−2.636 70	AAA	4
61	2–24	3 671.45	3 672.49	82 259.163	109 488.631	8–1152	8.7069e−06	2.5352e−04	2.4521e−02	−2.692 90	AAA	4
62	2–25	3 669.43	3 670.48	82 259.163	109 503.559	8–1250	7.0963e−06	2.2395e−04	2.1649e−02	−2.746 76	AAA	4
63	2–26	3 667.65	3 668.70	82 259.163	109 516.798	8–1352	5.8304e−06	1.9882e−04	1.9211e−02	−2.798 45	AAA	4
64	2–27	3 666.07	3 667.11	82 259.163	109 528.594	8–1458	4.8261e−06	1.7732e−04	1.7126e−02	−2.848 14	AAA	4
65	2–28	3 664.65	3 665.69	82 259.163	109 539.149	8–1568	4.0224e−06	1.5882e−04	1.5333e−02	−2.896 00	AAA	4
66	2–29	3 663.37	3 664.42	82 259.163	109 548.630	8–1682	3.3742e−06	1.4281e−04	1.3783e−02	−2.942 14	AAA	4
67	2–30	3 662.23	3 663.27	82 259.163	109 557.179	8–1800	2.8474e−06	1.2889e−04	1.2435e−02	−2.986 69	AAA	4
68	2–31	3 661.19	3 662.23	82 259.163	109 564.915	8–1922	2.4162e−06	1.1672e−04	1.1258e−02	−3.029 76	AAA	4
69	2–32	3 660.25	3 661.29	82 259.163	109 571.936	8–2048	2.0612e−06	1.0604e−04	1.0225e−02	−3.071 43	AAA	4
70	2–33	3 659.39	3 660.43	82 259.163	109 578.329	8–2178	1.7669e−06	9.6627e−05	9.3153e−03	−3.111 81	AAA	4
71	2–34	3 658.61	3 659.65	82 259.163	109 584.167	8–2312	1.5216e−06	8.8297e−05	8.5104e−03	−3.150 97	AAA	4

TABLE 4. H I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
72	2–35	3 657.89	3 658.94	82 259.163	109 589.511	8–2450	1.3161e−06	8.0898e−05	7.7958e−03	−3.188 97	AAA	4
73	2–36	3 657.24	3 658.28	82 259.163	109 594.416	8–2592	1.1430e−06	7.4305e−05	7.1591e−03	−3.225 89	AAA	4
74	2–37	3 656.63	3 657.68	82 259.163	109 598.928	8–2738	9.9657e−07	6.8410e−05	6.5901e−03	−3.261 79	AAA	4
75	2–38	3 656.08	3 657.12	82 259.163	109 603.089	8–2888	8.7206e−07	6.3123e−05	6.0799e−03	−3.296 72	AAA	4
76	2–39	3 655.56	3 656.61	82 259.163	109 606.935	8–3042	7.6576e−07	5.8368e−05	5.6211e−03	−3.330 73	AAA	4
77	2–40	3 655.09	3 656.13	82 259.163	109 610.495	8–3200	6.7464e−07	5.4079e−05	5.2074e−03	−3.363 88	AAA	4
78	3–4 (P_α)	18 751.0	5 331.596 cm^{-1}	97 492.283	102 823.879	18–32	8.9860e−02	8.4254e−01	9.3644e+02	1.180 86	AAA	4
79	3–5 (P_β)	12 818.1	7 799.361 cm^{-1}	97 492.283	105 291.644	18–50	2.2008e−02	1.5066e−01	1.1447e+02	0.433 28	AAA	4
80	3–6 (P_γ)	10 938.1	9 139.875 cm^{-1}	97 492.283	106 632.158	18–72	7.7829e−03	5.5870e−02	3.6223e+01	0.002 45	AAA	4
81	3–7 (P_δ)	10 049.4	9 948.161 cm^{-1}	97 492.283	107 440.444	18–98	3.3585e−03	2.7700e−02	1.6500e+01	−0.302 25	AAA	4
82	3–8 (P_ε)	9 545.70	9 548.32	97 492.283	107 965.326	18–128	1.6506e−03	1.6044e−02	9.0777e+00	−0.539 43	AAA	4
83	3–9	9 228.77	9 231.30	97 492.283	108 324.995	18–162	8.9050e−04	1.0239e−02	5.6011e+00	−0.734 47	AAA	4
84	3–10	9 014.67	9 017.15	97 492.283	108 582.265	18–200	5.1558e−04	6.9831e−03	3.7313e+00	−0.900 68	AAA	4
85	3–11	8 862.55	8 864.99	97 492.283	108 772.615	18–242	3.1558e−04	4.9988e−03	2.6260e+00	−1.045 86	AAA	4
86	3–12	8 750.25	8 752.65	97 492.283	108 917.392	18–288	2.0207e−04	3.7133e−03	1.9260e+00	−1.174 97	AAA	4
87	3–13	8 664.80	8 667.18	97 492.283	109 030.062	18–338	1.3431e−04	2.8402e−03	1.4587e+00	−1.291 38	AAA	4
88	3–14	8 598.18	8 600.54	97 492.283	109 119.463	18–392	9.2117e−05	2.2246e−03	1.1338e+00	−1.397 47	AAA	4
89	3–15	8 545.17	8 547.52	97 492.283	109 191.587	18–450	6.4901e−05	1.7772e−03	9.0015e−01	−1.495 00	AAA	4
90	3–16	8 502.27	8 504.61	97 492.283	109 250.615	18–512	4.6801e−05	1.4435e−03	7.2748e−01	−1.585 31	AAA	4
91	3–17	8 467.04	8 469.37	97 492.283	109 299.536	18–578	3.4442e−05	1.1893e−03	5.9690e−01	−1.669 43	AAA	4
92	3–18	8 437.75	8 440.07	97 492.283	109 340.532	18–648	2.5804e−05	9.9207e−04	4.9618e−01	−1.748 19	AAA	4
93	3–19	8 413.11	8 415.42	97 492.283	109 375.227	18–722	1.9643e−05	8.3653e−04	4.1716e−01	−1.822 25	AAA	4
94	3–20	8 392.19	8 394.50	97 492.283	109 404.849	18–800	1.5167e−05	7.1215e−04	3.5426e−01	−1.892 15	AAA	4
95	4–5	40 511.4	2 467.765 cm^{-1}	102 823.879	105 291.644	32–50	2.6993e−02	1.0383e+00	4.4324e+03	1.521 46	AAA	4
96	4–6	26 251.4	3 808.279 cm^{-1}	102 823.879	106 632.158	32–72	7.7110e−03	1.7935e−01	4.9613e+02	0.758 84	AAA	4
97	4–7	21 655.2	4 616.565 cm^{-1}	102 823.879	107 440.444	32–98	3.0415e−03	6.5521e−02	1.4952e+02	0.321 53	AAA	4
98	4–8	19 444.5	5 141.448 cm^{-1}	102 823.879	107 965.327	32–128	1.4242e−03	3.2309e−02	6.6201e+01	0.014 47	AAA	4
99	4–9	18 173.2	5 501.117 cm^{-1}	102 823.879	108 324.996	32–162	7.4593e−04	1.8708e−02	3.5826e+01	−0.222 83	AAA	4
100	4–10	17 361.2	5 758.386 cm^{-1}	102 823.879	108 582.265	32–200	4.2347e−04	1.1966e−02	2.1892e+01	−0.416 89	AAA	4
101	4–11	16 805.7	5 948.737 cm^{-1}	102 823.879	108 772.616	32–242	2.5565e−04	8.1908e−03	1.4505e+01	−0.581 52	AAA	4
102	4–12	16 406.4	6 093.513 cm^{-1}	102 823.879	108 917.392	32–288	1.6205e−04	5.8887e−03	1.0181e+01	−0.724 83	AAA	4
103	4–13	16 108.6	6 206.184 cm^{-1}	102 823.879	109 030.063	32–338	1.0689e−04	4.3945e−03	7.4595e+00	−0.851 94	AAA	4
104	4–14	15 879.8	6 295.584 cm^{-1}	102 823.879	109 119.463	32–392	7.2879e−05	3.3769e−03	5.6508e+00	−0.966 33	AAA	4
105	4–15	15 699.9	6 367.708 cm^{-1}	102 823.879	109 191.587	32–450	5.1106e−05	2.6572e−03	4.3961e+00	−1.070 42	AAA	4
106	4–16	15 555.7	6 426.736 cm^{-1}	102 823.879	109 250.615	32–512	3.6714e−05	2.1322e−03	3.4952e+00	−1.166 02	AAA	4
107	4–17	15 438.2	6 475.657 cm^{-1}	102 823.879	109 299.536	32–578	2.6935e−05	1.7393e−03	2.8296e+00	−1.254 47	AAA	4
108	4–18	15 341.1	6 516.653 cm^{-1}	102 823.879	109 340.532	32–648	2.0128e−05	1.4389e−03	2.3261e+00	−1.336 82	AAA	4
109	4–19	15 259.9	6 551.348 cm^{-1}	102 823.879	109 375.227	32–722	1.5289e−05	1.2049e−03	1.9376e+00	−1.413 89	AAA	4
110	4–20	15 191.2	6 580.970 cm^{-1}	102 823.879	109 404.849	32–800	1.1784e−05	1.0198e−03	1.6324e+00	−1.486 35	AAA	4
111	5–6		1 340.514 cm^{-1}	105 291.644	106 632.158	50–72	1.0254e−02	1.2319e+00	1.5127e+04	1.789 54	AAA	4
112	5–7	46 524.9	2 148.800 cm^{-1}	105 291.644	107 440.444	50–98	3.2528e−03	2.0700e−01	1.5857e+03	1.014 94	AAA	4
113	5–8	37 391.4	2 673.684 cm^{-1}	105 291.644	107 965.328	50–128	1.3877e−03	7.4503e−02	4.5868e+02	0.571 15	AAA	4
114	5–9	32 957.8	3 033.353 cm^{-1}	105 291.644	108 324.997	50–162	6.9078e−04	3.6467e−02	1.9789e+02	0.260 87	AAA	4
115	5–10	30 381.1	3 290.622 cm^{-1}	105 291.644	108 582.266	50–200	3.7999e−04	2.1044e−02	1.0527e+02	0.022 11	AAA	4
116	5–11	28 719.8	3 480.972 cm^{-1}	105 291.644	108 772.616	50–242	2.2460e−04	1.3450e−02	6.3599e+01	−0.172 32	AAA	4
117	5–12	27 573.0	3 625.749 cm^{-1}	105 291.644	108 917.393	50–288	1.4024e−04	9.2122e−03	4.1823e+01	−0.336 66	AAA	4
118	5–13	26 742.0	3 738.419 cm^{-1}	105 291.644	109 030.063	50–338	9.1481e−05	6.6338e−03	2.9209e+01	−0.479 27	AAA	4
119	5–14	26 117.4	3 827.819 cm^{-1}	105 291.644	109 119.463	50–392	6.1848e−05	4.9613e−03	2.1335e+01	−0.605 44	AAA	4
120	5–15	25 634.4	3 899.943 cm^{-1}	105 291.644	109 191.587	50–450	4.3084e−05	3.8221e−03	1.6132e+01	−0.718 73	AAA	4
121	5–16	25 252.2	3 958.971 cm^{-1}	105 291.644	109 250.615	50–512	3.0788e−05	3.0156e−03	1.2538e+01	−0.821 66	AAA	4
122	5–17	24 944.0	4 007.892 cm^{-1}	105 291.644	109 299.536	50–578	2.2490e−05	2.4265e−03	9.9656e+00	−0.916 06	AAA	4
123	5–18	24 691.4	4 048.888 cm^{-1}	105 291.644	109 340.532	50–648	1.6747e−05	1.9849e−03	8.0694e+00	−1.003 30	AAA	4
124	5–19	24 481.6	4 083.583 cm^{-1}	105 291.644	109 375.227	50–722	1.2683e−05	1.6465e−03	6.6371e+00	−1.084 46	AAA	4
125	5–20	24 305.3	4 113.205 cm^{-1}	105 291.644	109 404.849	50–800	9.7511e−06	1.3825e−03	5.5327e+00	−1.160 36	AAA	4
126	6–7		808.286 cm^{-1}	106 632.158	107 440.444	72–98	4.5608e−03	1.4245e+00	4.1774e+04	2.010 99	AAA	4
127	6–8		1 333.171 cm^{-1}	106 632.158	107 965.329	72–128	1.5609e−03	2.3407e−01	4.1616e+03	1.226 67	AAA	4
128	6–9		1 692.839 cm^{-1}	106 632.158	108 324.997	72–162	7.0652e−04	8.3164e−02	1.1645e+03	0.777 27	AAA	4

TABLE 4. H I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
129	6–10		1 950.108 cm^{-1}	106 632.158	108 582.266	72–200	3.6881e−04	4.0387e−02	4.9090e+02	0.463 57	AAA	4
130	6–11	46 706.2	2 140.458 cm^{-1}	106 632.158	108 772.616	72–242	2.1096e−04	2.3202e−02	2.5694e+02	0.222 86	AAA	4
131	6–12	43 747.2	2 285.235 cm^{-1}	106 632.158	108 917.393	72–288	1.2884e−04	1.4794e−02	1.5345e+02	0.027 42	AAA	4
132	6–13	41 691.7	2 397.905 cm^{-1}	106 632.158	109 030.063	72–338	8.2716e−05	1.0124e−02	1.0008e+02	−0.137 30	AAA	4
133	6–14	40 193.2	2 487.305 cm^{-1}	106 632.158	109 119.463	72–392	5.5265e−05	7.2912e−03	6.9483e+01	−0.279 87	AAA	4
134	6–15	39 060.6	2 559.429 cm^{-1}	106 632.158	109 191.587	72–450	3.8151e−05	5.4570e−03	5.0538e+01	−0.405 72	AAA	4
135	6–16	38 180.0	2 618.457 cm^{-1}	106 632.158	109 250.615	72–512	2.7068e−05	4.2089e−03	3.8100e+01	−0.518 50	AAA	4
136	6–17	37 479.8	2 667.378 cm^{-1}	106 632.158	109 299.536	72–578	1.9660e−05	3.3256e−03	2.9552e+01	−0.620 80	AAA	4
137	6–18	36 912.5	2 708.374 cm^{-1}	106 632.158	109 340.532	72–648	1.4571e−05	2.6803e−03	2.3457e+01	−0.714 49	AAA	4
138	6–19	36 445.6	2 743.069 cm^{-1}	106 632.158	109 375.227	72–722	1.0993e−05	2.1963e−03	1.8979e+01	−0.800 97	AAA	4
139	6–20	36 056.2	2 772.691 cm^{-1}	106 632.158	109 404.849	72–800	8.4239e−06	1.8253e−03	1.5604e+01	−0.881 34	AAA	4
140	7–8		524.885 cm^{-1}	107 440.444	107 965.329	98–128	2.2720e−03	1.6148e+00	9.9258e+04	2.199 35	AAA	4
141	7–9		884.554 cm^{-1}	107 440.444	108 324.998	98–162	8.2370e−04	2.6090e−01	9.5158e+03	1.407 69	AAA	4
142	7–10		1 141.823 cm^{-1}	107 440.444	108 582.267	98–200	3.9049e−04	9.1636e−02	2.5892e+03	0.953 29	AAA	4
143	7–11		1 332.172 cm^{-1}	107 440.444	108 772.616	98–242	2.1174e−04	4.4169e−02	1.0697e+03	0.636 35	AAA	4
144	7–12		1 476.949 cm^{-1}	107 440.444	108 917.393	98–288	1.2503e−04	2.5253e−02	5.5164e+02	0.393 54	AAA	4
145	7–13		1 589.619 cm^{-1}	107 440.444	109 030.063	98–338	7.8457e−05	1.6054e−02	3.2584e+02	0.196 82	AAA	4
146	7–14		1 679.020 cm^{-1}	107 440.444	109 119.464	98–392	5.1562e−05	1.0968e−02	2.1076e+02	0.031 36	AAA	4
147	7–15		1 751.143 cm^{-1}	107 440.444	109 191.587	98–450	3.5158e−05	7.8926e−03	1.4541e+02	−0.111 55	AAA	4
148	7–16		1 810.171 cm^{-1}	107 440.444	109 250.615	98–512	2.4709e−05	5.9062e−03	1.0527e+02	−0.237 46	AAA	4
149	7–17		1 859.092 cm^{-1}	107 440.444	109 299.536	98–578	1.7812e−05	4.5568e−03	7.9079e+01	−0.350 12	AAA	4
150	7–18		1 900.088 cm^{-1}	107 440.444	109 340.532	98–648	1.3121e−05	3.6028e−03	6.1174e+01	−0.452 14	AAA	4
151	7–19		1 934.783 cm^{-1}	107 440.444	109 375.227	98–722	9.8498e−06	2.9062e−03	4.8462e+01	−0.545 44	AAA	4
152	7–20		1 964.405 cm^{-1}	107 440.444	109 404.849	98–800	7.5169e−06	2.3839e−03	3.9153e+01	−0.631 48	AAA	4
153	8–9		359.668 cm^{-1}	107 965.330	108 324.998	128–162	1.2328e−03	1.8083e+00	2.1186e+05	2.364 48	AAA	4
154	8–10		616.937 cm^{-1}	107 965.330	108 582.267	128–200	4.6762e−04	2.8780e−01	1.9658e+04	1.566 30	AAA	4
155	8–11		807.286 cm^{-1}	107 965.330	108 772.616	128–242	2.3007e−04	1.0006e−01	5.2231e+03	1.107 48	AAA	4
156	8–12		952.063 cm^{-1}	107 965.330	108 917.393	128–288	1.2870e−04	4.7894e−02	2.1198e+03	0.787 49	AAA	4
157	8–13		1 064.733 cm^{-1}	107 965.330	109 030.063	128–338	7.8037e−05	2.7251e−02	1.0785e+03	0.542 59	AAA	4
158	8–14		1 154.134 cm^{-1}	107 965.330	109 119.464	128–392	5.0098e−05	1.7268e−02	6.3048e+02	0.344 45	AAA	4
159	8–15		1 226.257 cm^{-1}	107 965.330	109 191.587	128–450	3.3586e−05	1.1772e−02	4.0454e+02	0.178 07	AAA	4
160	8–16		1 285.285 cm^{-1}	107 965.330	109 250.615	128–512	2.3306e−05	8.4602e−03	2.7737e+02	0.034 59	AAA	4
161	8–17		1 334.206 cm^{-1}	107 965.330	109 299.536	128–578	1.6635e−05	6.3265e−03	1.9981e+02	−0.091 63	AAA	4
162	8–18		1 375.202 cm^{-1}	107 965.330	109 340.532	128–648	1.2159e−05	4.8798e−03	1.4953e+02	−0.204 39	AAA	4
163	8–19		1 409.897 cm^{-1}	107 965.330	109 375.227	128–722	9.0700e−06	3.8585e−03	1.1532e+02	−0.306 37	AAA	4
164	8–20		1 439.519 cm^{-1}	107 965.330	109 404.849	128–800	6.8858e−06	3.1136e−03	9.1144e+01	−0.399 53	AAA	4
165	9–10		257.269 cm^{-1}	108 324.998	108 582.267	162–200	7.1514e−04	1.9998e+00	4.1456e+05	2.510 50	AAA	4
166	9–11		447.619 cm^{-1}	108 324.998	108 772.617	162–242	2.8131e−04	3.1443e−01	3.7464e+04	1.707 04	AAA	4
167	9–12		592.395 cm^{-1}	108 324.998	108 917.393	162–288	1.4269e−04	1.0837e−01	9.7565e+03	1.244 43	AAA	4
168	9–13		705.065 cm^{-1}	108 324.998	109 030.063	162–338	8.1919e−05	5.1545e−02	3.8990e+03	0.921 70	AAA	4
169	9–14		794.466 cm^{-1}	108 324.998	109 119.464	162–392	5.0797e−05	2.9195e−02	1.9599e+03	0.674 83	AAA	4
170	9–15		866.589 cm^{-1}	108 324.998	109 191.587	162–450	3.3253e−05	1.8440e−02	1.1348e+03	0.475 27	AAA	4
171	9–16		925.617 cm^{-1}	108 324.998	109 250.615	162–512	2.2679e−05	1.2542e−02	7.2266e+02	0.307 89	AAA	4
172	9–17		974.538 cm^{-1}	108 324.998	109 299.536	162–578	1.5979e−05	8.9994e−03	4.9250e+02	0.163 73	AAA	4
173	9–18		1 015.534 cm^{-1}	108 324.998	109 340.532	162–648	1.1562e−05	6.7228e−03	3.5306e+02	0.037 07	AAA	4
174	9–19		1 050.229 cm^{-1}	108 324.998	109 375.227	162–722	8.5550e−06	5.1824e−03	2.6317e+02	−0.075 96	AAA	4
175	9–20		1 079.851 cm^{-1}	108 324.998	109 404.849	162–800	6.4524e−06	4.0966e−03	2.0233e+02	−0.178 06	AAA	4
176	10–11		190.350 cm^{-1}	108 582.267	108 772.617	200–242	4.3766e−04	2.1912e+00	7.5793e+05	2.641 71	AAA	4
177	10–12		335.126 cm^{-1}	108 582.267	108 917.393	200–288	1.7740e−04	3.4100e−01	6.6997e+04	1.833 78	AAA	4
178	10–13		447.796 cm^{-1}	108 582.267	109 030.063	200–338	9.2309e−05	1.1663e−01	1.7150e+04	1.367 86	AAA	4
179	10–14		537.197 cm^{-1}	108 582.267	109 119.464	200–392	5.4172e−05	5.5159e−02	6.7607e+03	1.042 65	AAA	4
180	10–15		609.320 cm^{-1}	108 582.267	109 191.587	200–450	3.4241e−05	3.1110e−02	3.3617e+03	0.793 93	AAA	4
181	10–16		668.348 cm^{-1}	108 582.267	109 250.615	200–512	2.2796e−05	1.9586e−02	1.9296e+03	0.592 99	AAA	4
182	10–17		717.269 cm^{-1}	108 582.267	109 299.536	200–578	1.5782e−05	1.3291e−02	1.2200e+03	0.424 58	AAA	4
183	10–18		758.265 cm^{-1}	108 582.267	109 340.532	200–648	1.1269e−05	9.5202e−03	8.2666e+02	0.279 67	AAA	4
184	10–19		792.960 cm^{-1}	108 582.267	109 375.227	200–722	8.2526e−06	7.1032e−03	5.8981e+02	0.152 48	AAA	4
185	10–20		822.582 cm^{-1}	108 582.267	109 404.849	200–800	6.1733e−06	5.4711e−03	4.3793e+02	0.039 10	AAA	4

TABLE 4. H I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
186	11–12		144.776 cm^{-1}	108 772.617	108 917.393	242–288	2.7989e−04	2.3825e+00	1.3111e+06	2.760 84	AAA	4
187	11–13		257.446 cm^{-1}	108 772.617	109 030.063	242–338	1.1633e−04	3.6752e−01	1.1373e+05	1.949 10	AAA	4
188	11–14		346.847 cm^{-1}	108 772.617	109 119.464	242–392	6.1856e−05	1.2486e−01	2.8681e+04	1.480 25	AAA	4
189	11–15		418.970 cm^{-1}	108 772.617	109 191.587	242–450	3.6992e−05	5.8748e−02	1.1171e+04	1.152 81	AAA	4
190	11–16		477.998 cm^{-1}	108 772.617	109 250.615	242–512	2.3773e−05	3.3002e−02	5.5006e+03	0.902 36	AAA	4
191	11–17		526.919 cm^{-1}	108 772.617	109 299.536	242–578	1.6062e−05	2.0715e−02	3.1321e+03	0.700 10	AAA	4
192	11–18		567.915 cm^{-1}	108 772.617	109 340.532	242–648	1.1267e−05	1.4024e−02	1.9673e+03	0.530 68	AAA	4
193	11–19		602.610 cm^{-1}	108 772.617	109 375.227	242–722	8.1411e−06	1.0027e−02	1.3257e+03	0.385 00	AAA	4
194	11–20		632.233 cm^{-1}	108 772.617	109 404.850	242–800	6.0262e−06	7.4717e−03	9.4153e+02	0.257 24	AAA	4
195	12–13		112.670 cm^{-1}	108 917.393	109 030.063	288–338	1.8569e−04	2.5737e+00	2.1658e+06	2.869 95	AAA	4
196	12–14		202.071 cm^{-1}	108 917.393	109 119.464	288–392	7.8842e−05	3.9401e−01	1.8487e+05	2.054 89	AAA	4
197	12–15		274.194 cm^{-1}	108 917.393	109 191.587	288–450	4.2709e−05	1.3307e−01	4.6014e+04	1.583 47	AAA	4
198	12–16		333.222 cm^{-1}	108 917.393	109 250.615	288–512	2.5962e−05	6.2317e−02	1.7731e+04	1.254 00	AAA	4
199	12–17		382.143 cm^{-1}	108 917.393	109 299.536	288–578	1.6929e−05	3.4879e−02	8.6539e+03	1.001 96	AAA	4
200	12–18		423.139 cm^{-1}	108 917.393	109 340.532	288–648	1.1587e−05	2.1830e−02	4.8914e+03	0.798 44	AAA	4
201	12–19		457.834 cm^{-1}	108 917.393	109 375.227	288–722	8.2236e−06	1.4745e−02	3.0536e+03	0.628 04	AAA	4
202	12–20		487.457 cm^{-1}	108 917.393	109 404.850	288–800	6.0050e−06	1.0524e−02	2.0471e+03	0.481 59	AAA	4
203	13–14		89.400 cm^{-1}	109 030.064	109 119.464	338–392	1.2709e−04	2.7648e+00	3.4413e+06	2.970 59	AAA	4
204	13–15		161.523 cm^{-1}	109 030.064	109 191.587	338–450	5.4961e−05	4.2047e−01	2.8967e+05	2.152 66	AAA	4
205	13–16		220.551 cm^{-1}	109 030.064	109 250.615	338–512	3.0257e−05	1.4126e−01	7.1269e+04	1.678 93	AAA	4
206	13–17		269.472 cm^{-1}	109 030.064	109 299.536	338–578	1.8658e−05	6.5873e−02	2.7201e+04	1.347 63	AAA	4
207	13–18		310.468 cm^{-1}	109 030.064	109 340.532	338–648	1.2323e−05	3.6745e−02	1.3170e+04	1.094 11	AAA	4
208	13–19		345.163 cm^{-1}	109 030.064	109 375.227	338–722	8.5323e−06	2.2935e−02	7.3937e+03	0.889 41	AAA	4
209	13–20		374.786 cm^{-1}	109 030.064	109 404.850	338–800	6.1190e−06	1.5458e−02	4.5893e+03	0.718 06	AAA	4
210	14–15		72.123 cm^{-1}	109 119.464	109 191.587	392–450	8.9344e−05	2.9560e+00	5.2892e+06	3.063 99	AAA	4
211	14–16		131.151 cm^{-1}	109 119.464	109 250.615	392–512	3.9258e−05	4.4691e−01	4.3976e+05	2.243 51	AAA	4
212	14–17		180.072 cm^{-1}	109 119.464	109 299.536	392–578	2.1920e−05	1.4943e−01	1.0709e+05	1.767 73	AAA	4
213	14–18		221.068 cm^{-1}	109 119.464	109 340.532	392–648	1.3689e−05	6.9418e−02	4.0524e+04	1.434 76	AAA	4
214	14–19		255.763 cm^{-1}	109 119.464	109 375.227	392–722	9.1446e−06	3.8601e−02	1.9477e+04	1.179 88	AAA	4
215	14–20		285.386 cm^{-1}	109 119.464	109 404.850	392–800	6.3972e−06	2.4032e−02	1.0867e+04	0.974 07	AAA	4
216	15–16		59.028 cm^{-1}	109 191.587	109 250.615	450–512	6.4283e−05	3.1470e+00	7.8982e+06	3.151 11	AAA	4
217	15–17		107.949 cm^{-1}	109 191.587	109 299.536	450–578	2.8644e−05	4.7334e−01	6.4959e+05	2.328 38	AAA	4
218	15–18		148.945 cm^{-1}	109 191.587	109 340.532	450–648	1.6195e−05	1.5760e−01	1.5675e+05	1.850 76	AAA	4
219	15–19		183.640 cm^{-1}	109 191.587	109 375.227	450–722	1.0228e−05	7.2954e−02	5.8853e+04	1.516 26	AAA	4
220	15–20		213.263 cm^{-1}	109 191.587	109 404.850	450–800	6.9026e−06	4.0450e−02	2.8099e+04	1.260 13	AAA	4
221	16–17		48.921 cm^{-1}	109 250.615	109 299.536	512–578	4.7203e−05	3.3380e+00	1.1501e+07	3.232 76	AAA	4
222	16–18		89.917 cm^{-1}	109 250.615	109 340.532	512–648	2.1295e−05	4.9975e−01	9.3683e+05	2.408 03	AAA	4
223	16–19		124.612 cm^{-1}	109 250.615	109 375.227	512–722	1.2175e−05	1.6575e−01	2.2421e+05	1.928 73	AAA	4
224	16–20		154.235 cm^{-1}	109 250.615	109 404.850	512–800	7.7670e−06	7.6483e−02	8.3585e+04	1.592 84	AAA	4
225	17–18		40.996 cm^{-1}	109 299.536	109 340.532	578–648	3.5289e−05	3.5291e+00	1.6381e+07	3.309 59	AAA	4
226	17–19		75.691 cm^{-1}	109 299.536	109 375.227	578–722	1.6097e−05	5.2616e−01	1.3228e+06	2.483 05	AAA	4
227	17–20		105.314 cm^{-1}	109 299.536	109 404.850	578–800	9.2951e−06	1.7390e−01	3.1421e+05	2.002 23	AAA	4
228	18–19		34.695 cm^{-1}	109 340.532	109 375.227	648–722	2.6808e−05	3.7201e+00	2.2874e+07	3.382 13	AAA	4
229	18–20		64.318 cm^{-1}	109 340.532	109 404.850	648–800	1.2350e−05	5.5254e−01	1.8327e+06	2.553 94	AAA	4
230	19–20		29.623 cm^{-1}	109 375.227	109 404.850	722–800	2.0659e−05	3.9108e+00	3.1380e+07	3.450 81	AAA	4

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

TABLE 5. List of tabulated lines for allowed transitions of H I, fine structure lines

Wavelength (Å)	No.
In vacuum	
937.803	5
949.743	4
972.537	3
1 025.722	2

TABLE 5. List of tabulated lines for allowed transitions of H I, fine structure lines—Continued

Wavelength (Å)	No.
1 025.723	2
1 215.668	1
1 215.674	1
In air	

TABLE 5. List of tabulated lines for allowed transitions of H I, fine structure lines—Continued

Wavelength (Å)	No.
4 101.702	17
4 101.704	16
4 101.708	9
4 101.710	9
4 101.763	17
4 101.764	17
4 101.766	16
4 340.427	15
4 340.431	14
4 340.433	8
4 340.438	8
4 340.494	15
4 340.496	15
4 340.500	14
4 861.279	13
4 861.287	7
4 861.288	12
4 861.298	7
4 861.362	13
4 861.365	13
4 861.375	12
6 562.710	11
6 562.724	6
6 562.752	10
6 562.771	6
6 562.852	11
6 562.868	11
6 562.909	10
10 937.982	26
10 937.995	20
10 937.996	25
10 938.011	20
10 938.105	32
10 938.106	26
10 938.111	31
10 938.112	26
10 938.127	31
10 938.127	25
10 938.147	32
10 938.149	32
10 938.155	31
12 817.925	24
12 817.944	19
12 817.960	23
12 817.981	19
12 818.090	30
12 818.091	24
12 818.103	29
12 818.105	24
12 818.139	23
12 818.141	29
12 818.144	30
12 818.151	30
12 818.164	29
18 750.684	22
18 750.723	18

TABLE 5. List of tabulated lines for allowed transitions of H I, fine structure lines—Continued

Wavelength (Å)	No.
18 750.828	21
18 750.881	18
18 751.011	28
18 751.015	22
18 751.064	27
18 751.067	22
18 751.113	28
18 751.141	28
18 751.194	27
18 751.212	21
18 751.222	27
26 251.184	38
26 251.212	34
26 251.267	37
26 251.301	34
26 251.460	38
26 251.460	42
26 251.494	38
26 251.494	41
26 251.549	42
26 251.549	46
26 251.563	42
26 251.563	45
26 251.577	37
26 251.584	41
26 251.598	45
26 251.598	46
26 251.598	41
26 251.604	46
26 251.618	45
40 510.826	36
40 510.892	33
40 511.171	35
40 511.269	33
40 511.433	36
40 511.433	40
40 511.565	36
40 511.565	39
40 511.614	40
40 511.614	44
40 511.680	43
40 511.680	40
40 511.713	44
40 511.745	44
40 511.811	43
40 511.811	39
40 511.910	35
40 511.942	39

Wave number (cm^{-1})	No.
1 340.497	50
1 340.498	48
1 340.502	50
1 340.502	52
1 340.503	54

TABLE 5. List of tabulated lines for allowed transitions of H I, fine structure lines—Continued

Wave number (cm^{-1})	No.
1 340.503	52
1 340.504	55
1 340.505	54
1 340.505	53
1 340.505	55
1 340.506	55
1 340.506	53
1 340.507	52
1 340.507	51
1 340.509	53

TABLE 5. List of tabulated lines for allowed transitions of H I, fine structure lines—Continued

Wave number (cm^{-1})	No.
1 340.509	51
1 340.510	50
1 340.510	49
1 340.515	49
1 340.515	51
1 340.518	47
1 340.521	48
1 340.531	47
1 340.533	49

TABLE 6. H I: Allowed transitions, fine structure lines

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
1	1*s*-2*p*	$^2S-^2P^\circ$		*1 215.67*	*0.000–82 259.16*	2–6	6.2649e+00	4.1641e−01	3.3331e+00	−0.079 45	AAA	4
				1 215.668	0.000–82 259.285	2–4	6.2648e+00	2.7760e−01	2.2220e+00	−0.255 54	AAA	4
				1 215.674	0.000–82 258.919	2–2	6.2649e+00	1.3881e−01	1.1110e+00	−0.556 56	AAA	4
2	1*s*-3*p*	$^2S-^2P^\circ$		*1 025.72*	*0.000–97 492.28*	2–6	1.6725e+00	7.9142e−02	5.3450e−01	−0.800 56	AAA	4
				1 025.722	0.000–97 492.320	2–4	1.6725e+00	5.2761e−02	3.5633e−01	−0.976 65	AAA	4
				1 025.723	0.000–97 492.211	2–2	1.6725e+00	2.6381e−02	1.7817e−01	−1.277 68	AAA	4
3	1*s*-4*p*	$^2S-^2P^\circ$		*972.54*	*0.000–102 823.88*	2–6	6.8186e−01	2.9006e−02	1.8574e−01	−1.236 48	AAA	4
				972.537	0.000–102 823.894	2–4	6.8186e−01	1.9337e−02	1.2382e−01	−1.412 57	AAA	4
				972.537	0.000–102 823.849	2–2	6.8186e−01	9.6686e−03	6.1912e−02	−1.713 61	AAA	4
4	1*s*-5*p*	$^2S-^2P^\circ$		*949.74*	*0.000–105 291.64*	2–6	3.4375e−01	1.3945e−02	8.7206e−02	−1.554 54	AAA	4
				949.743	0.000–105 291.652	2–4	3.4375e−01	9.2970e−03	5.8137e−02	−1.730 63	AAA	4
				949.743	0.000–105 291.629	2–2	3.4375e−01	4.6484e−03	2.9068e−02	−2.031 66	AAA	4
5	1*s*-6*p*	$^2S-^2P^\circ$		*937.80*	*0.000–106 632.16*	2–6	1.9728e−01	7.8035e−03	4.8184e−02	−1.806 68	AAA	4
				937.803	0.000–106 632.162	2–4	1.9728e−01	5.2023e−03	3.2123e−02	−1.982 77	AAA	4
				937.803	0.000–106 632.149	2–2	1.9728e−01	2.6011e−03	1.6061e−02	−2.283 81	AAA	4
6	2*s*-3*p*	$^2S-^2P^\circ$	*6 562.74*	*6 564.55*	*82 258.954–97 492.28*	2–6	2.2448e−01	4.3508e−01	1.8805e+01	−0.060 40	AAA	4
			6 562.724	6 564.537	82 258.954–97 492.320	2–4	2.2448e−01	2.9005e−01	1.2537e+01	−0.236 50	AAA	4
			6 562.771	6 564.584	82 258.954–97 492.211	2–2	2.2449e−01	1.4503e−01	6.2688e+00	−0.537 50	AAA	4
7	2*s*-4*p*	$^2S-^2P^\circ$	*4 861.29*	*4 862.65*	*82 258.954–102 823.88*	2–6	9.6681e−02	1.0282e−01	3.2919e+00	−0.686 90	AAA	4
			4 861.287	4 862.645	82 258.954–102 823.894	2–4	9.6680e−02	6.8544e−02	2.1946e+00	−0.863 00	AAA	4
			4 861.298	4 862.656	82 258.954–102 823.849	2–2	9.6683e−02	3.4273e−02	1.0973e+00	−1.164 01	AAA	4
8	2*s*-5*p*	$^2S-^2P^\circ$	*4 340.43*	*4 341.66*	*82 258.954–105 291.64*	2–6	4.9484e−02	4.1952e−02	1.1993e+00	−1.076 22	AAA	4
			4 340.433	4 341.654	82 258.954–105 291.652	2–4	4.9483e−02	2.7968e−02	7.9950e−01	−1.252 31	AAA	4
			4 340.438	4 341.658	82 258.954–105 291.629	2–2	4.9484e−02	1.3984e−02	3.9976e−01	−1.553 33	AAA	4
9	2*s*-6*p*	$^2S-^2P^\circ$	*4 101.71*	*4 102.87*	*82 258.954–106 632.16*	2–6	2.8584e−02	2.1641e−02	5.8460e−01	−1.363 70	AAA	4
			4 101.708	4 102.866	82 258.954–106 632.162	2–4	2.8583e−02	1.4427e−02	3.8973e−01	−1.539 80	AAA	4
			4 101.710	4 102.868	82 258.954–106 632.149	2–2	2.8584e−02	7.2136e−03	1.9487e−01	−1.840 82	AAA	4
10	2*p*-3*s*	$^2P^\circ-^2S$	*6 562.86*	*6 564.67*	*82 259.16–97 492.222*	6–2	6.3143e−02	1.3598e−02	1.7633e+00	−1.088 36	AAA	4
			6 562.909	6 564.722	82 259.285–97 492.222	4–2	4.2097e−02	1.3599e−02	1.1756e+00	−1.264 43	AAA	4
			6 562.752	6 564.564	82 258.919–97 492.222	2–2	2.1046e−02	1.3597e−02	5.8769e−01	−1.565 53	AAA	4
11	2*p*-3*d*	$^2P^\circ-^2D$	*6 562.81*	*6 564.62*	*82 259.16–97 492.34*	6–10	6.4651e−01	6.9615e−01	9.0269e+01	0.620 85	AAA	4
			6 562.852	6 564.664	82 259.285–97 492.356	4–6	6.4651e−01	6.2654e−01	5.4162e+01	0.399 01	AAA	4
			6 562.710	6 564.523	82 258.919–97 492.319	2–4	5.3877e−01	6.9614e−01	3.0089e+01	0.143 73	AAA	4

TABLE 6. H I: Allowed transitions, fine structure lines—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			6 562.868	6 564.680	82 259.285–97 492.319	4–4	1.0775e−01	6.9616e−02	6.0181e+00	−0.555 23	AAA	4
12	2*p*-4*s*	$^2P^\circ-^2S$	*4 861.35*	*4 862.70*	*82 259.16–102 823.853*	6–2	2.5784e−02	3.0468e−03	2.9265e−01	−1.738 00	AAA	4
			4 861.375	4 862.733	82 259.285–102 823.853	4–2	1.7190e−02	3.0469e−03	1.9511e−01	−1.914 08	AAA	4
			4 861.288	4 862.646	82 258.919–102 823.853	2–2	8.5941e−03	3.0465e−03	9.7540e−02	−2.215 17	AAA	4
13	2*p*-4*d*	$^2P^\circ-^2D$	*4 861.33*	*4 862.69*	*82 259.16–102 823.90*	6–10	2.0625e−01	1.2186e−01	1.1705e+01	−0.135 99	AAA	4
			4 861.362	4 862.720	82 259.285–102 823.909	4–6	2.0625e−01	1.0967e−01	7.0230e+00	−0.357 84	AAA	4
			4 861.279	4 862.637	82 258.919–102 823.894	2–4	1.7188e−01	1.2186e−01	3.9016e+00	−0.613 11	AAA	4
			4 861.365	4 862.723	82 259.285–102 823.894	4–4	3.4375e−02	1.2186e−02	7.8032e−01	−1.312 08	AAA	4
14	2*p*-5*s*	$^2P^\circ-^2S$	*4 340.48*	*4 341.70*	*82 259.16–105 291.631*	6–2	1.2888e−02	1.2140e−03	1.0411e−01	−2.137 62	AAA	4
			4 340.500	4 341.720	82 259.285–105 291.631	4–2	8.5920e−03	1.2141e−03	6.9413e−02	−2.313 70	AAA	4
			4 340.431	4 341.651	82 258.919–105 291.631	2–2	4.2955e−03	1.2139e−03	3.4701e−02	−2.614 79	AAA	4
15	2*p*-5*d*	$^2P^\circ-^2D$	*4 340.47*	*4 341.69*	*82 259.16–105 291.66*	6–10	9.4255e−02	4.4394e−02	3.8073e+00	−0.574 52	AAA	4
			4 340.494	4 341.715	82 259.285–105 291.660	4–6	9.4254e−02	3.9955e−02	2.2844e+00	−0.796 37	AAA	4
			4 340.427	4 341.647	82 258.919–105 291.652	2–4	7.8548e−02	4.4395e−02	1.2691e+00	−1.051 64	AAA	4
			4 340.496	4 341.716	82 259.285–105 291.652	4–4	1.5709e−02	4.4394e−03	2.5382e−01	−1.750 62	AAA	4
16	2*p*-6*s*	$^2P^\circ-^2S$	*4 101.75*	*4 102.90*	*82 259.16–106 632.150*	6–2	7.3507e−03	6.1837e−04	5.0115e−02	−2.430 60	AAA	4
			4 101.766	4 102.923	82 259.285–106 632.150	4–2	4.9006e−03	6.1839e−04	3.3411e−02	−2.606 68	AAA	4
			4 101.704	4 102.862	82 258.919–106 632.150	2–2	2.4501e−03	6.1831e−04	1.6703e−02	−2.907 76	AAA	4
17	2*p*-6*d*	$^2P^\circ-^2D$	*4 101.74*	*4 102.90*	*82 259.16–106 632.17*	6–10	5.1450e−02	2.1641e−02	1.7539e+00	−0.886 57	AAA	4
			4 101.763	4 102.921	82 259.285–106 632.167	4–6	5.1450e−02	1.9477e−02	1.0523e+00	−1.108 42	AAA	4
			4 101.702	4 102.860	82 258.919–106 632.162	2–4	4.2877e−02	2.1641e−02	5.8462e−01	−1.363 69	AAA	4
			4 101.764	4 102.921	82 259.285–106 632.162	4–4	8.5748e−03	2.1641e−03	1.1692e−01	−2.062 67	AAA	4
18	3*s*-4*p*	$^2S-^2P^\circ$	*18 750.78*	*5 331.66* cm^{-1}	*97 492.222–102 823.88*	2–6	3.0651e−02	4.8495e−01	5.9888e+01	−0.013 27	AAA	4
			18 750.723	5 331.672 cm^{-1}	97 492.222–102 823.894	2–4	3.0650e−02	3.2329e−01	3.9924e+01	−0.189 37	AAA	4
			18 750.881	5 331.627 cm^{-1}	97 492.222–102 823.849	2–2	3.0652e−02	1.6166e−01	1.9964e+01	−0.490 37	AAA	4
19	3*s*-5*p*	$^2S-^2P^\circ$	*12 817.96*	*7 799.42* cm^{-1}	*97 492.222–105 291.64*	2–6	1.6377e−02	1.2109e−01	1.0222e+01	−0.615 88	AAA	4
			12 817.944	7 799.430 cm^{-1}	97 492.222–105 291.652	2–4	1.6377e−02	8.0722e−02	6.8145e+00	−0.791 98	AAA	4
			12 817.981	7 799.407 cm^{-1}	97 492.222–105 291.629	2–2	1.6378e−02	4.0363e−02	3.4074e+00	−1.092 99	AAA	4
20	3*s*-6*p*	$^2S-^2P^\circ$	*10 938.00*	*9 139.94* cm^{-1}	*97 492.222–106 632.16*	2–6	9.5509e−03	5.1421e−02	3.7042e+00	−0.987 83	AAA	4
			10 937.995	9 139.940 cm^{-1}	97 492.222–106 632.162	2–4	9.5508e−03	3.4280e−02	2.4695e+00	−1.163 93	AAA	4
			10 938.011	9 139.927 cm^{-1}	97 492.222–106 632.149	2–2	9.5511e−03	1.7141e−02	1.2348e+00	−1.464 94	AAA	4
21	3*p*-4*s*	$^2P^\circ-^2S$	*18 751.08*	*5 331.57* cm^{-1}	*97 492.28–102 823.853*	6–2	1.8356e−02	3.2270e−02	1.1956e+01	−0.713 04	AAA	4
			18 751.212	5 331.533 cm^{-1}	97 492.320–102 823.853	4–2	1.2238e−02	3.2272e−02	7.9709e+00	−0.889 12	AAA	4
			18 750.828	5 331.642 cm^{-1}	97 492.211–102 823.853	2–2	6.1182e−03	3.2267e−02	3.9848e+00	−1.190 21	AAA	4
22	3*p*-4*d*	$^2P^\circ-^2D$	*18 750.91*	*5 331.62* cm^{-1}	*97 492.28–102 823.90*	6–10	7.0376e−02	6.1860e−01	2.2918e+02	0.569 56	AAA	4
			18 751.015	5 331.589 cm^{-1}	97 492.320–102 823.909	4–6	7.0376e−02	5.5675e−01	1.3751e+02	0.347 72	AAA	4
			18 750.684	5 331.683 cm^{-1}	97 492.211–102 823.894	2–4	5.8647e−02	6.1859e−01	7.6391e+01	0.092 43	AAA	4
			18 751.067	5 331.574 cm^{-1}	97 492.320–102 823.894	4–4	1.1729e−02	6.1862e−02	1.5279e+01	−0.606 52	AAA	4
23	3*p*-5*s*	$^2P^\circ-^2S$	*12 818.08*	*7 799.35* cm^{-1}	*97 492.28–105 291.631*	6–2	9.0477e−03	7.4329e−03	1.8825e+00	−1.350 69	AAA	4
			12 818.139	7 799.311 cm^{-1}	97 492.320–105 291.631	4–2	6.0320e−03	7.4332e−03	1.2550e+00	−1.526 77	AAA	4
			12 817.960	7 799.420 cm^{-1}	97 492.211–105 291.631	2–2	3.0157e−03	7.4323e−03	6.2743e−01	−1.827 85	AAA	4
24	3*p*-5*d*	$^2P^\circ-^2D$	*12 818.04*	*7 799.37* cm^{-1}	*97 492.28–105 291.66*	6–10	3.3915e−02	1.3931e−01	3.5281e+01	−0.077 87	AAA	4
			12 818.091	7 799.340 cm^{-1}	97 492.320–105 291.660	4–6	3.3915e−02	1.2538e−01	2.1169e+01	−0.299 72	AAA	4
			12 817.925	7 799.441 cm^{-1}	97 492.211–105 291.652	2–4	2.8263e−02	1.3931e−01	1.1760e+01	−0.555 00	AAA	4
			12 818.105	7 799.332 cm^{-1}	97 492.320–105 291.652	4–4	5.6525e−03	1.3931e−02	2.3521e+00	−1.253 96	AAA	4
25	3*p*-6*s*	$^2P^\circ-^2S$	*10 938.08*	*9 139.87* cm^{-1}	*97 492.28–106 632.150*	6–2	5.0721e−03	3.0342e−03	6.5574e−01	−1.739 80	AAA	4
			10 938.127	9 139.830 cm^{-1}	97 492.320–106 632.150	4–2	3.3815e−03	3.0343e−03	4.3718e−01	−1.915 88	AAA	4
			10 937.996	9 139.939 cm^{-1}	97 492.211–106 632.150	2–2	1.6906e−03	3.0340e−03	2.1856e−01	−2.216 96	AAA	4

TABLE 6. H I: Allowed transitions, fine structure lines—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
26	3*p*-6*d*	$^2P^\circ-{}^2D$	*10 938.07*	*9 139.88* cm^{-1}	*97 492.28–106 632.17*	6–10	1.8778e−02	5.6166e−02	1.2138e+01	−0.472 37	AAA	4
			10 938.106	9 139.847 cm^{-1}	97 492.320–106 632.167	4–6	1.8778e−02	5.0549e−02	7.2831e+00	−0.694 22	AAA	4
			10 937.982	9 139.951 cm^{-1}	97 492.211–106 632.162	2–4	1.5649e−02	5.6166e−02	4.0461e+00	−0.949 50	AAA	4
			10 938.112	9 139.842 cm^{-1}	97 492.320–106 632.162	4–4	3.1296e−03	5.6166e−03	8.0923e−01	−1.648 47	AAA	4
27	3*d*-4*p*	$^2D-{}^2P^\circ$	*18 751.19*	*5 331.54* cm^{-1}	*97 492.34–102 823.88*	10–6	3.4757e−03	1.0999e−02	6.7915e+00	−0.958 66	AAA	4
			18 751.194	5 331.538 cm^{-1}	97 492.356–102 823.894	6–4	3.1280e−03	1.0998e−02	4.0748e+00	−1.180 52	AAA	4
			18 751.222	5 331.530 cm^{-1}	97 492.319–102 823.849	4–2	3.4759e−03	9.1663e−03	2.2640e+00	−1.435 75	AAA	4
			18 751.064	5 331.575 cm^{-1}	97 492.319–102 823.894	4–4	3.4754e−04	1.8329e−03	4.5272e−01	−2.134 79	AAA	4
28	3*d*-4*f*	$^2D-{}^2F^\circ$	*18 751.07*	*5 331.57* cm^{-1}	*97 492.34–102 823.91*	10–14	1.3788e−01	1.0181e+00	6.2863e+02	1.007 78	AAA	4
			18 751.113	5 331.561 cm^{-1}	97 492.356–102 823.917	6–8	1.3788e−01	9.6959e−01	3.5922e+02	0.764 74	AAA	4
			18 751.011	5 331.590 cm^{-1}	97 492.319–102 823.909	4–6	1.2869e−01	1.0181e+00	2.5145e+02	0.609 83	AAA	4
			18 751.141	5 331.553 cm^{-1}	97 492.356–102 823.909	6–6	9.1919e−03	4.8479e−02	1.7961e+01	−0.536 29	AAA	4
29	3*d*-5*p*	$^2D-{}^2P^\circ$	*12 818.15*	*7 799.30* cm^{-1}	*97 492.34–105 291.64*	10–6	1.4955e−03	2.2115e−03	9.3347e−01	−1.655 32	AAA	4
			12 818.164	7 799.296 cm^{-1}	97 492.356–105 291.652	6–4	1.3459e−03	2.2114e−03	5.6006e−01	−1.877 18	AAA	4
			12 818.141	7 799.310 cm^{-1}	97 492.319–105 291.629	4–2	1.4956e−03	1.8430e−03	3.1118e−01	−2.132 41	AAA	4
			12 818.103	7 799.333 cm^{-1}	97 492.319–105 291.652	4–4	1.4954e−04	3.6855e−04	6.2226e−02	−2.831 45	AAA	4
30	3*d*-5*f*	$^2D-{}^2F^\circ$	*12 818.12*	*7 799.32* cm^{-1}	*97 492.34–105 291.66*	10–14	4.5422e−02	1.5672e−01	6.6154e+01	0.195 13	AAA	4
			12 818.144	7 799.308 cm^{-1}	97 492.356–105 291.664	6–8	4.5421e−02	1.4926e−01	3.7802e+01	−0.047 90	AAA	4
			12 818.090	7 799.341 cm^{-1}	97 492.319–105 291.660	4–6	4.2394e−02	1.5672e−01	2.6461e+01	−0.202 81	AAA	4
			12 818.151	7 799.304 cm^{-1}	97 492.356–105 291.660	6–6	3.0281e−03	7.4630e−03	1.8901e+00	−1.348 94	AAA	4
31	3*d*-6*p*	$^2D-{}^2P^\circ$	*10 938.14*	*9 139.82* cm^{-1}	*97 492.34–106 632.16*	10–6	7.8248e−04	8.4257e−04	3.0349e−01	−2.074 39	AAA	4
			10 938.155	9 139.806 cm^{-1}	97 492.356–106 632.162	6–4	7.0421e−04	8.4254e−04	1.8209e−01	−2.296 26	AAA	4
			10 938.127	9 139.830 cm^{-1}	97 492.319–106 632.149	4–2	7.8253e−04	7.0219e−04	1.0117e−01	−2.551 49	AAA	4
			10 938.111	9 139.843 cm^{-1}	97 492.319–106 632.162	4–4	7.8242e−05	1.4042e−04	2.0231e−02	−3.250 52	AAA	4
32	3*d*-6*f*	$^2D-{}^2F^\circ$	*10 938.13*	*9 139.83* cm^{-1}	*97 492.34–106 632.17*	10–14	2.1460e−02	5.3920e−02	1.9422e+01	−0.268 25	AAA	4
			10 938.147	9 139.813 cm^{-1}	97 492.356–106 632.169	6–8	2.1460e−02	5.1352e−02	1.1098e+01	−0.511 29	AAA	4
			10 938.105	9 139.848 cm^{-1}	97 492.319–106 632.167	4–6	2.0030e−02	5.3920e−02	7.7687e+00	−0.666 19	AAA	4
			10 938.149	9 139.811 cm^{-1}	97 492.356–106 632.167	6–6	1.4307e−03	2.5676e−03	5.5490e−01	−1.812 33	AAA	4
33	4*s*-5*p*	$^2S-{}^2P^\circ$	*40 511.02*	*2 467.79* cm^{-1}	*102 823.853–105 291.64*	2–6	7.3717e−03	5.4442e−01	1.4525e+02	0.036 96	AAA	4
			40 510.892	2 467.799 cm^{-1}	102 823.853–105 291.652	2–4	7.3716e−03	3.6293e−01	9.6833e+01	−0.139 14	AAA	4
			40 511.269	2 467.776 cm^{-1}	102 823.853–105 291.629	2–2	7.3721e−03	1.8148e−01	4.8421e+01	−0.440 14	AAA	4
34	4*s*-6*p*	$^2S-{}^2P^\circ$	*26 251.24*	*3 808.30* cm^{-1}	*102 823.853–106 632.16*	2–6	4.4562e−03	1.3819e−01	2.3892e+01	−0.558 49	AAA	4
			26 251.212	3 808.309 cm^{-1}	102 823.853–106 632.162	2–4	4.4561e−03	9.2125e−02	1.5928e+01	−0.734 59	AAA	4
			26 251.301	3 808.296 cm^{-1}	102 823.853–106 632.149	2–2	4.4563e−03	4.6065e−02	7.9643e+00	−1.035 60	AAA	4
35	4*p*-5*s*	$^2P^\circ-{}^2S$	*40 511.66*	*2 467.75* cm^{-1}	*102 823.88–105 291.631*	6–2	6.4513e−03	5.2939e−02	4.2374e+01	−0.498 07	AAA	4
			40 511.910	2 467.737 cm^{-1}	102 823.894–105 291.631	4–2	4.3010e−03	5.2942e−02	2.8251e+01	−0.674 14	AAA	4
			40 511.171	2 467.782 cm^{-1}	102 823.849–105 291.631	2–2	2.1503e−03	5.2935e−02	1.4123e+01	−0.975 23	AAA	4
36	4*p*-5*d*	$^2P^\circ-{}^2D$	*40 511.24*	*2 467.78* cm^{-1}	*102 823.88–105 291.66*	6–10	1.4858e−02	6.0960e−01	4.8794e+02	0.563 20	AAA	4
			40 511.433	2 467.766 cm^{-1}	102 823.894–105 291.660	4–6	1.4858e−02	5.4865e−01	2.9277e+02	0.341 35	AAA	4
			40 510.826	2 467.803 cm^{-1}	102 823.849–105 291.652	2–4	1.2381e−02	6.0958e−01	1.6264e+02	0.086 06	AAA	4
			40 511.565	2 467.758 cm^{-1}	102 823.894–105 291.652	4–4	2.4763e−03	6.0962e−02	3.2531e+01	−0.612 88	AAA	4
37	4*p*-6*s*	$^2P^\circ-{}^2S$	*26 251.47*	*3 808.27* cm^{-1}	*102 823.88–106 632.150*	6–2	3.5827e−03	1.2345e−02	6.4031e+00	−1.130 36	AAA	4
			26 251.577	3 808.256 cm^{-1}	102 823.894–106 632.150	4–2	2.3885e−03	1.2345e−02	4.2689e+00	−1.306 44	AAA	4
			26 251.267	3 808.301 cm^{-1}	102 823.849–106 632.150	2–2	1.1942e−03	1.2344e−02	2.1342e+00	−1.607 51	AAA	4
38	4*p*-6*d*	$^2P^\circ-{}^2D$	*26 251.37*	*3 808.29* cm^{-1}	*102 823.88–106 632.17*	6–10	8.6219e−03	1.4854e−01	7.7046e+01	−0.050 00	AAA	4
			26 251.460	3 808.273 cm^{-1}	102 823.894–106 632.167	4–6	8.6219e−03	1.3369e−01	4.6228e+01	−0.271 84	AAA	4
			26 251.184	3 808.313 cm^{-1}	102 823.849–106 632.162	2–4	7.1849e−03	1.4854e−01	2.5681e+01	−0.527 13	AAA	4
			26 251.494	3 808.268 cm^{-1}	102 823.894–106 632.162	4–4	1.4370e−03	1.4854e−02	5.1365e+00	−1.226 08	AAA	4
39	4*d*-5*p*	$^2D-{}^2P^\circ$	*40 511.84*	*2 467.74* cm^{-1}	*102 823.90–105 291.64*	10–6	1.8847e−03	2.7839e−02	3.7139e+01	−0.555 34	AAA	4

TABLE 6. H I: Allowed transitions, fine structure lines—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			40 511.811	2 467.743 cm^{-1}	102 823.909–105 291.652	6–4	1.6962e−03	2.7838e−02	2.2283e+01	−0.777 20	AAA	4
			40 511.942	2 467.735 cm^{-1}	102 823.894–105 291.629	4–2	1.8849e−03	2.3201e−02	1.2381e+01	−1.032 43	AAA	4
			40 511.565	2 467.758 cm^{-1}	102 823.894–105 291.652	4–4	1.8846e−04	4.6395e−03	2.4757e+00	−1.731 47	AAA	4
40	4*d*-5*f*	$^2D-^2F^\circ$	*40 511.54*	*2 467.76* cm^{-1}	*102 823.90–105 291.66*	10–14	2.5844e−02	8.9072e−01	1.1883e+03	0.949 74	AAA	4
			40 511.614	2 467.755 cm^{-1}	102 823.909–105 291.664	6–8	2.5844e−02	8.4831e−01	6.7901e+02	0.706 70	AAA	4
			40 511.433	2 467.766 cm^{-1}	102 823.894–105 291.660	4–6	2.4121e−02	8.9072e−01	4.7530e+02	0.551 80	AAA	4
			40 511.680	2 467.751 cm^{-1}	102 823.909–105 291.660	6–6	1.7229e−03	4.2416e−02	3.3951e+01	−0.594 32	AAA	4
41	4*d*-6*p*	$^2D-^2P^\circ$	*26 251.59*	*3 808.25* cm^{-1}	*102 823.90–106 632.16*	10–6	9.4175e−04	5.8411e−03	5.0494e+00	−1.233 51	AAA	4
			26 251.598	3 808.253 cm^{-1}	102 823.909–106 632.162	6–4	8.4755e−04	5.8409e−03	3.0296e+00	−1.455 37	AAA	4
			26 251.584	3 808.255 cm^{-1}	102 823.894–106 632.149	4–2	9.4181e−04	4.8679e−03	1.6833e+00	−1.710 60	AAA	4
			26 251.494	3 808.268 cm^{-1}	102 823.894–106 632.162	4–4	9.4169e−05	9.7344e−04	3.3660e−01	−2.409 63	AAA	4
42	4*d*-6*f*	$^2D-^2F^\circ$	*26 251.51*	*3 808.27* cm^{-1}	*102 823.90–106 632.17*	10–14	1.2870e−02	1.8625e−01	1.6101e+02	0.270 11	AAA	4
			26 251.549	3 808.260 cm^{-1}	102 823.909–106 632.169	6–8	1.2870e−02	1.7738e−01	9.2006e+01	0.027 07	AAA	4
			26 251.460	3 808.273 cm^{-1}	102 823.894–106 632.167	4–6	1.2012e−02	1.8625e−01	6.4404e+01	−0.127 84	AAA	4
			26 251.563	3 808.258 cm^{-1}	102 823.909–106 632.167	6–6	8.5799e−04	8.8692e−03	4.6003e+00	−1.273 96	AAA	4
43	4*f*-5*d*	$^2F^\circ-^2D$	*40 511.81*	*2 467.74* cm^{-1}	*102 823.91–105 291.66*	14–10	5.0479e−04	8.8765e−03	1.6578e+01	−0.905 63	AAA	4
			40 511.811	2 467.743 cm^{-1}	102 823.917–105 291.660	8–6	4.8075e−04	8.8763e−03	9.4733e+00	−1.148 68	AAA	4
			40 511.811	2 467.743 cm^{-1}	102 823.909–105 291.652	6–4	5.0480e−04	8.2848e−03	6.6315e+00	−1.303 57	AAA	4
			40 511.680	2 467.751 cm^{-1}	102 823.909–105 291.660	6–6	2.4037e−05	5.9174e−04	4.7365e−01	−2.449 72	AAA	4
44	4*f*-5*g*	$^2F^\circ-^2G$	*40 511.67*	*2 467.75* cm^{-1}	*102 823.91–105 291.67*	14–18	4.2542e−02	1.3465e+00	2.5149e+03	1.275 34	AAA	4
			40 511.713	2 467.749 cm^{-1}	102 823.917–105 291.666	8–10	4.2542e−02	1.3091e+00	1.3972e+03	1.020 07	AAA	4
			40 511.614	2 467.755 cm^{-1}	102 823.909–105 291.664	6–8	4.1023e−02	1.3465e+00	1.0778e+03	0.907 36	AAA	4
			40 511.745	2 467.747 cm^{-1}	102 823.917–105 291.664	8–8	1.5193e−03	3.7403e−02	3.9919e+01	−0.524 00	AAA	4
45	4*f*-6*d*	$^2F^\circ-^2D$	*26 251.61*	*3 808.25* cm^{-1}	*102 823.91–106 632.17*	14–10	2.1451e−04	1.5839e−03	1.9169e+00	−1.654 15	AAA	4
			26 251.618	3 808.250 cm^{-1}	102 823.917–106 632.167	8–6	2.0429e−04	1.5838e−03	1.0953e+00	−1.897 20	AAA	4
			26 251.598	3 808.253 cm^{-1}	102 823.909–106 632.162	6–4	2.1451e−04	1.4783e−03	7.6677e−01	−2.052 09	AAA	4
			26 251.563	3 808.258 cm^{-1}	102 823.909–106 632.167	6–6	1.0214e−05	1.0559e−04	5.4766e−02	−3.198 24	AAA	4
46	4*f*-6*g*	$^2F^\circ-^2G$	*26 251.58*	*3 808.26* cm^{-1}	*102 823.91–106 632.17*	14–18	1.3728e−02	1.8245e−01	2.2081e+02	0.407 28	AAA	4
			26 251.598	3 808.253 cm^{-1}	102 823.917–106 632.170	8–10	1.3728e−02	1.7738e−01	1.2268e+02	0.152 01	AAA	4
			26 251.549	3 808.260 cm^{-1}	102 823.909–106 632.169	6–8	1.3238e−02	1.8245e−01	9.4635e+01	0.039 30	AAA	4
			26 251.604	3 808.252 cm^{-1}	102 823.917–106 632.169	8–8	4.9028e−04	5.0681e−03	3.5050e+00	−1.392 06	AAA	4
47	5*s*-6*p*	$^2S-^2P^\circ$		*1 340.53* cm^{-1}	*105 291.631–106 632.16*	2–6	2.4295e−03	6.0806e−01	2.9866e+02	0.084 98	AAA	4
				1 340.531 cm^{-1}	105 291.631–106 632.162	2–4	2.4295e−03	4.0536e−01	1.9910e+02	−0.091 13	AAA	4
				1 340.518 cm^{-1}	105 291.631–106 632.149	2–2	2.4296e−03	2.0270e−01	9.9559e+01	−0.392 12	AAA	4
48	5*p*-6*s*	$^2P^\circ-^2S$		*1 340.51* cm^{-1}	*105 291.64–106 632.150*	6–2	2.6819e−03	7.4585e−02	1.0990e+02	−0.349 20	AAA	4
				1 340.498 cm^{-1}	105 291.652–106 632.150	4–2	1.7880e−03	7.4587e−02	7.3272e+01	−0.525 27	AAA	4
				1 340.521 cm^{-1}	105 291.629–106 632.150	2–2	8.9393e−04	7.4578e−02	3.6631e+01	−0.826 36	AAA	4
49	5*p*-6*d*	$^2P^\circ-^2D$		*1 340.52* cm^{-1}	*105 291.64–106 632.17*	6–10	4.4948e−03	6.2499e−01	9.2092e+02	0.574 02	AAA	4
				1 340.515 cm^{-1}	105 291.652–106 632.167	4–6	4.4948e−03	5.6249e−01	5.5256e+02	0.352 18	AAA	4
				1 340.533 cm^{-1}	105 291.629–106 632.162	2–4	3.7456e−03	6.2496e−01	3.0696e+02	0.096 89	AAA	4
				1 340.510 cm^{-1}	105 291.652–106 632.162	4–4	7.4915e−04	6.2501e−02	6.1398e+01	−0.602 06	AAA	4
50	5*d*-6*p*	$^2D-^2P^\circ$		*1 340.50* cm^{-1}	*105 291.66–106 632.16*	10–6	9.5940e−04	4.8026e−02	1.1795e+02	−0.318 53	AAA	4
				1 340.502 cm^{-1}	105 291.660–106 632.162	6–4	8.6344e−04	4.8024e−02	7.0765e+01	−0.540 39	AAA	4
				1 340.497 cm^{-1}	105 291.652–106 632.149	4–2	9.5946e−04	4.0024e−02	3.9318e+01	−0.795 62	AAA	4
				1 340.510 cm^{-1}	105 291.652–106 632.162	4–4	9.5934e−05	8.0037e−03	7.8624e+00	−1.494 65	AAA	4
51	5*d*-6*f*	$^2D-^2F^\circ$		*1 340.51* cm^{-1}	*105 291.66–106 632.17*	10–14	7.2326e−03	8.4477e−01	2.0746e+03	0.926 74	AAA	4
				1 340.509 cm^{-1}	105 291.660–106 632.169	6–8	7.2326e−03	8.0454e−01	1.1855e+03	0.683 70	AAA	4
				1 340.515 cm^{-1}	105 291.652–106 632.167	4–6	6.7504e−03	8.4476e−01	8.2985e+02	0.528 79	AAA	4
				1 340.507 cm^{-1}	105 291.660–106 632.167	6–6	4.8217e−04	4.0227e−02	5.9276e+01	−0.617 33	AAA	4
52	5*f*-6*d*	$^2F^\circ-^2D$		*1 340.50* cm^{-1}	*105 291.66–106 632.17*	14–10	3.9081e−04	2.3290e−02	8.0075e+01	−0.486 71	AAA	4

TABLE 6. H I: Allowed transitions, fine structure lines—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				1 340.503 cm^{-1}	105 291.664–106 632.167	8–6	3.7220e−04	2.3289e−02	4.5757e+01	−0.729 76	AAA	4
				1 340.502 cm^{-1}	105 291.660–106 632.162	6–4	3.9082e−04	2.1737e−02	3.2030e+01	−0.884 65	AAA	4
				1 340.507 cm^{-1}	105 291.660–106 632.167	6–6	1.8609e−05	1.5526e−03	2.2878e+00	−2.030 80	AAA	4
53	5*f*-6*g*	$^2F^\circ-{}^2G$		*1 340.51* cm^{-1}	*105 291.66–106 632.17*	14–18	1.1057e−02	1.1860e+00	4.0779e+03	1.220 23	AAA	4
				1 340.506 cm^{-1}	105 291.664–106 632.170	8–10	1.1057e−02	1.1531e+00	2.2655e+03	0.964 95	AAA	4
				1 340.509 cm^{-1}	105 291.660–106 632.169	6–8	1.0662e−02	1.1860e+00	1.7476e+03	0.852 25	AAA	4
				1 340.505 cm^{-1}	105 291.664–106 632.169	8–8	3.9489e−04	3.2946e−02	6.4728e+01	−0.579 11	AAA	4
54	5*g*-6*f*	$^2G-{}^2F^\circ$		*1 340.50* cm^{-1}	*105 291.67–106 632.17*	18–14	1.1373e−04	7.3800e−03	3.2624e+01	−0.876 67	AAA	4
				1 340.503 cm^{-1}	105 291.666–106 632.169	10–8	1.1057e−04	7.3800e−03	1.8124e+01	−1.131 95	AAA	4
				1 340.503 cm^{-1}	105 291.664–106 632.167	8–6	1.1373e−04	7.1165e−03	1.3982e+01	−1.244 65	AAA	4
				1 340.505 cm^{-1}	105 291.664–106 632.169	8–8	3.1591e−06	2.6356e−04	5.1783e−01	−2.676 02	AAA	4
55	5*g*-6*h*	$^2G-{}^2H^\circ$		*1 340.51* cm^{-1}	*105 291.67–106 632.17*	18–22	1.6448e−02	1.6772e+00	7.4143e+03	1.479 86	AAA	4
				1 340.505 cm^{-1}	105 291.666–106 632.171	10–12	1.6448e−02	1.6467e+00	4.0442e+03	1.216 62	AAA	4
				1 340.506 cm^{-1}	105 291.664–106 632.170	8–10	1.6083e−02	1.6772e+00	3.2953e+03	1.127 68	AAA	4
				1 340.504 cm^{-1}	105 291.666–106 632.170	10–10	3.6552e−04	3.0495e−02	7.4892e+01	−0.515 77	AAA	4

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

TABLE 7. List of tabulated lines for allowed transitions of D I, average values

Wavelength (Å)	Multiplet No.
In vacuum	
913.788	19
914.035	18
914.325	17
914.668	16
915.078	15
915.572	14
916.178	13
916.929	12
917.877	11
919.099	10
920.710	9
922.897	8
925.971	7
930.495	6
937.548	5
949.485	4
972.272	3
1 025.44	2
1 215.34	1
In air	
3 681.78	37
3 685.80	36
3 690.52	35
3 696.12	34
3 702.82	33
3 710.93	32
3 720.90	31
3 733.32	30
3 749.10	29
3 769.57	28
3 796.83	27

TABLE 7. List of tabulated lines for allowed transitions of D I, average values—Continued

Wavelength (Å)	Multiplet No.
3 834.31	26
3 887.96	25
3 968.96	24
4 100.58	23
4 339.24	22
4 859.95	21
6 560.93	20
8 389.91	54
8 410.82	53
8 435.45	52
8 464.74	51
8 499.96	50
8 542.84	49
8 595.84	48
8 662.44	47
8 747.87	46
8 860.14	45
9 012.22	44
9 226.25	43
9 543.11	42
10 046.3	41
10 934.8	40
12 814.1	39
15 187.0	70
15 255.7	69
15 336.9	68
15 434.0	67
15 551.5	66
15 695.7	65
15 875.5	64
16 104.2	63
16 401.9	62
16 801.1	61

TABLE 7. List of tabulated lines for allowed transitions of D I, average values—Continued

Wavelength (Å)	Multiplet No.
17 356.5	60
18 168.2	59
18 744.9	38
19 439.2	58
21 648.0	57
24 298.7	85
24 475.0	84
24 684.7	83
24 937.2	82
25 245.3	81
25 627.4	80
26 110.3	79
26 242.4	56
26 734.7	78
27 565.5	77
28 712.0	76
30 372.8	75
32 948.9	74
36 046.4	99
36 435.6	98
36 902.4	97
37 381.2	73
37 469.6	96
38 169.6	95
39 049.9	94
40 182.2	93
40 495.8	55
41 680.3	92
43 735.3	91
46 506.3	72
46 693.5	90

Wave number (cm^{-1})	Multiplet No.
257.339	125
359.766	113
447.741	126
525.028	100
592.556	127
617.105	114
705.257	128
794.682	129
807.506	115
808.785	86
866.825	130
884.795	101
925.869	131
952.322	116
974.803	132
1 015.811	133
1 050.515	134
1 065.023	117
1 080.145	135
1 142.134	102
1 154.448	118
1 226.591	119
1 285.635	120
1 332.535	103
1 333.535	87
1 334.569	121
1 341.159	71
1 375.577	122
1 410.281	123
1 439.911	124
1 477.351	104
1 590.052	105
1 679.477	106
1 693.302	88
1 751.620	107
1 810.664	108
1 859.598	109
1 900.606	110
1 935.310	111
1 950.640	89
1 964.940	112

TABLE 8. D I: Allowed transitions, average values

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
1	1–2 (L_α)		1 215.34	0.000–82 281.545	2–8	4.6999e+00	4.1630e−01	3.3312e+00	−0.079 57	AAA	4
2	1–3 (L_β)		1 025.44	0.000–97 518.810	2–18	5.5766e−01	7.9121e−02	5.3420e−01	−0.800 68	AAA	4
3	1–4 (L_γ)		972.272	0.000–102 851.857	2–32	1.2788e−01	2.8998e−02	1.8564e−01	−1.236 60	AAA	4
4	1–5 (L_δ)		949.485	0.000–105 320.293	2–50	4.1261e−02	1.3942e−02	8.7158e−02	−1.554 66	AAA	4
5	1–6 (L_ε)		937.548	0.000–106 661.171	2–72	1.6445e−02	7.8013e−03	4.8158e−02	−1.806 80	AAA	4
6	1–7		930.495	0.000–107 469.678	2–98	7.5705e−03	4.8151e−03	2.9500e−02	−2.016 37	AAA	4
7	1–8		925.971	0.000–107 994.698	2–128	3.8705e−03	3.1842e−03	1.9413e−02	−2.195 97	AAA	4
8	1–9		922.897	0.000–108 354.467	2–162	2.1431e−03	2.2166e−03	1.3469e−02	−2.353 28	AAA	4

TABLE 8. D I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
9	1–10		920.710	0.000–108 611.807	2–200	1.2635e−03	1.6057e−03	9.7343e−03	−2.493 30	AAA	4
10	1–11		919.099	0.000–108 802.210	2–242	7.8361e−04	1.2008e−03	7.2667e−03	−2.619 50	AAA	4
11	1–12		917.877	0.000–108 947.027	2–288	5.0673e−04	9.2165e−04	5.5700e−03	−2.734 41	AAA	4
12	1–13		916.929	0.000–109 059.728	2–338	3.3936e−04	7.2290e−04	4.3644e−03	−2.839 89	AAA	4
13	1–14		916.178	0.000–109 149.153	2–392	2.3416e−04	5.7753e−04	3.4839e−03	−2.937 39	AAA	4
14	1–15		915.572	0.000–109 221.297	2–450	1.6577e−04	4.6873e−04	2.8257e−03	−3.028 05	AAA	4
15	1–16		915.078	0.000–109 280.341	2–512	1.2000e−04	3.8567e−04	2.3237e−03	−3.112 76	AAA	4
16	1–17		914.668	0.000–109 329.276	2–578	8.8598e−05	3.2115e−04	1.9341e−03	−3.192 26	AAA	4
17	1–18		914.325	0.000–109 370.283	2–648	6.6558e−05	2.7027e−04	1.6271e−03	−3.267 17	AAA	4
18	1–19		914.035	0.000–109 404.988	2–722	5.0781e−05	2.2961e−04	1.3818e−03	−3.337 98	AAA	4
19	1–20		913.788	0.000–109 434.618	2–800	3.9286e−05	1.9672e−04	1.1836e−03	−3.405 12	AAA	4
20	2–3 (H_α)	6 560.93	6 562.75	82 281.545–97 519.071	8–18	4.4113e−01	6.4089e−01	1.1077e+02	0.709 87	AAA	4
21	2–4 (H_β)	4 859.95	4 861.31	82 281.545–102 852.124	8–32	8.4216e−02	1.1935e−01	1.5281e+01	−0.020 09	AAA	4
22	2–5 (H_γ)	4 339.24	4 340.46	82 281.545–105 320.563	8–50	2.5311e−02	4.4681e−02	5.1077e+00	−0.446 79	AAA	4
23	2–6 (H_δ)	4 100.58	4 101.74	82 281.545–106 661.442	8–72	9.7346e−03	2.2098e−02	2.3872e+00	−0.752 55	AAA	4
24	2–7 (H_ε)	3 968.96	3 970.08	82 281.545–107 469.950	8–98	4.3901e−03	1.2708e−02	1.3287e+00	−0.992 84	AAA	4
25	2–8	3 887.96	3 889.06	82 281.545–107 994.701	8–128	2.2154e−03	8.0375e−03	8.2325e−01	−1.191 79	AAA	4
26	2–9	3 834.31	3 835.40	82 281.545–108 354.469	8–162	1.2160e−03	5.4303e−03	5.4853e−01	−1.362 09	AAA	4
27	2–10	3 796.83	3 797.91	82 281.545–108 611.809	8–200	7.1244e−04	3.8515e−03	3.8525e−01	−1.511 28	AAA	4
28	2–11	3 769.57	3 770.64	82 281.545–108 802.211	8–242	4.3984e−04	2.8360e−03	2.8164e−01	−1.644 20	AAA	4
29	2–12	3 749.10	3 750.17	82 281.545–108 947.028	8–288	2.8345e−04	2.1515e−03	2.1250e−01	−1.764 17	AAA	4
30	2–13	3 733.32	3 734.38	82 281.545–109 059.729	8–338	1.8932e−04	1.6724e−03	1.6448e−01	−1.873 58	AAA	4
31	2–14	3 720.90	3 721.95	82 281.545–109 149.154	8–392	1.3036e−04	1.3266e−03	1.3004e−01	−1.974 19	AAA	4
32	2–15	3 710.93	3 711.99	82 281.545–109 221.297	8–450	9.2127e−05	1.0705e−03	1.0465e−01	−2.067 33	AAA	4
33	2–16	3 702.82	3 703.87	82 281.545–109 280.342	8–512	6.6601e−05	8.7666e−04	8.5517e−02	−2.154 08	AAA	4
34	2–17	3 696.12	3 697.17	82 281.545–109 329.276	8–578	4.9115e−05	7.2718e−04	7.0808e−02	−2.235 27	AAA	4
35	2–18	3 690.52	3 691.57	82 281.545–109 370.283	8–648	3.6861e−05	6.1000e−04	5.9308e−02	−2.311 58	AAA	4
36	2–19	3 685.80	3 686.85	82 281.545–109 404.988	8–722	2.8101e−05	5.1681e−04	5.0183e−02	−2.383 58	AAA	4
37	2–20	3 681.78	3 682.82	82 281.545–109 434.618	8–800	2.1725e−05	4.4175e−04	4.2847e−02	−2.451 73	AAA	4
38	3–4 (P_α)	18 744.9	5 333.328 cm^{-1}	97 518.810–102 852.138	18–32	8.9885e−02	8.4222e−01	9.3578e+02	1.180 70	AAA	4
39	3–5 (P_β)	12 814.1	7 801.760 cm^{-1}	97 518.810–105 320.570	18–50	2.2014e−02	1.5061e−01	1.1440e+02	0.433 13	AAA	4
40	3–6 (P_γ)	10 934.8	9 142.636 cm^{-1}	97 518.810–106 661.446	18–72	7.7850e−03	5.5851e−02	3.6200e+01	0.002 31	AAA	4
41	3–7 (P_δ)	10 046.3	9 951.142 cm^{-1}	97 518.810–107 469.952	18–98	3.3594e−03	2.7691e−02	1.6489e+01	−0.302 40	AAA	4
42	3–8 (P_ε)	9 543.11	9 545.73	97 518.810–107 994.703	18–128	1.6511e−03	1.6039e−02	9.0728e+00	−0.539 55	AAA	4
43	3–9	9 226.25	9 228.79	97 518.810–108 354.471	18–162	8.9074e−04	1.0236e−02	5.5980e+00	−0.734 59	AAA	4

TABLE 8. D I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
44	3–10	9 012.22	9 014.69	97 518.810–108 611.810	18–200	5.1572e−04	6.9812e−03	3.7293e+00	−0.900 80	AAA	4
45	3–11	8 860.14	8 862.58	97 518.810–108 802.212	18–242	3.1567e−04	4.9975e−03	2.6246e+00	−1.045 98	AAA	4
46	3–12	8 747.87	8 750.27	97 518.810–108 947.028	18–288	2.0213e−04	3.7123e−03	1.9249e+00	−1.175 09	AAA	4
47	3–13	8 662.44	8 664.82	97 518.810–109 059.729	18–338	1.3434e−04	2.8394e−03	1.4579e+00	−1.291 50	AAA	4
48	3–14	8 595.84	8 598.20	97 518.810–109 149.154	18–392	9.2142e−05	2.2240e−03	1.1332e+00	−1.397 59	AAA	4
49	3–15	8 542.84	8 545.19	97 518.810–109 221.298	18–450	6.4918e−05	1.7767e−03	8.9966e−01	−1.495 12	AAA	4
50	3–16	8 499.96	8 502.29	97 518.810–109 280.342	18–512	4.6814e−05	1.4431e−03	7.2709e−01	−1.585 43	AAA	4
51	3–17	8 464.74	8 467.07	97 518.810–109 329.276	18–578	3.4451e−05	1.1890e−03	5.9657e−01	−1.669 55	AAA	4
52	3–18	8 435.45	8 437.77	97 518.810–109 370.283	18–648	2.5811e−05	9.9180e−04	4.9591e−01	−1.748 30	AAA	4
53	3–19	8 410.82	8 413.13	97 518.810–109 404.988	18–722	1.9648e−05	8.3630e−04	4.1694e−01	−1.822 36	AAA	4
54	3–20	8 389.91	8 392.21	97 518.810–109 434.618	18–800	1.5171e−05	7.1196e−04	3.5406e−01	−1.892 27	AAA	4
55	4–5	40 495.8	2 468.719 cm^{-1}	102 851.857–105 320.576	32–50	2.7000e−02	1.0378e+00	4.4284e+03	1.521 25	AAA	4
56	4–6	26 242.4	3 809.593 cm^{-1}	102 851.857–106 661.450	32–72	7.7131e−03	1.7927e−01	4.9575e+02	0.758 66	AAA	4
57	4–7	21 648.0	4 618.097 cm^{-1}	102 851.857–107 469.954	32–98	3.0423e−03	6.5495e−02	1.4941e+02	0.321 36	AAA	4
58	4–8	19 439.2	5 142.847 cm^{-1}	102 851.857–107 994.704	32–128	1.4246e−03	3.2300e−02	6.6165e+01	0.014 35	AAA	4
59	4–9	18 168.2	5 502.614 cm^{-1}	102 851.857–108 354.471	32–162	7.4614e−04	1.8703e−02	3.5806e+01	−0.222 95	AAA	4
60	4–10	17 356.5	5 759.954 cm^{-1}	102 851.857–108 611.811	32–200	4.2359e−04	1.1963e−02	2.1880e+01	−0.417 01	AAA	4
61	4–11	16 801.1	5 950.355 cm^{-1}	102 851.857–108 802.212	32–242	2.5572e−04	8.1886e−03	1.4497e+01	−0.581 64	AAA	4
62	4–12	16 401.9	6 095.172 cm^{-1}	102 851.857–108 947.029	32–288	1.6210e−04	5.8871e−03	1.0175e+01	−0.724 95	AAA	4
63	4–13	16 104.2	6 207.873 cm^{-1}	102 851.857–109 059.730	32–338	1.0692e−04	4.3933e−03	7.4554e+00	−0.852 06	AAA	4
64	4–14	15 875.5	6 297.298 cm^{-1}	102 851.857–109 149.155	32–392	7.2899e−05	3.3760e−03	5.6478e+00	−0.966 45	AAA	4
65	4–15	15 695.7	6 369.441 cm^{-1}	102 851.857–109 221.298	32–450	5.1120e−05	2.6565e−03	4.3937e+00	−1.070 54	AAA	4
66	4–16	15 551.5	6 428.485 cm^{-1}	102 851.857–109 280.342	32–512	3.6724e−05	2.1316e−03	3.4933e+00	−1.166 14	AAA	4
67	4–17	15 434.0	6 477.419 cm^{-1}	102 851.857–109 329.276	32–578	2.6942e−05	1.7389e−03	2.8281e+00	−1.254 59	AAA	4
68	4–18	15 336.9	6 518.427 cm^{-1}	102 851.857–109 370.284	32–648	2.0134e−05	1.4385e−03	2.3249e+00	−1.336 93	AAA	4
69	4–19	15 255.7	6 553.131 cm^{-1}	102 851.857–109 404.988	32–722	1.5293e−05	1.2046e−03	1.9365e+00	−1.414 00	AAA	4
70	4–20	15 187.0	6 582.761 cm^{-1}	102 851.857–109 434.618	32–800	1.1787e−05	1.0195e−03	1.6316e+00	−1.486 47	AAA	4
71	5–6		1 341.159 cm^{-1}	105 320.293–106 661.452	50–72	1.0257e−02	1.2310e+00	1.5109e+04	1.789 24	AAA	4
72	5–7	46 506.3	2 149.662 cm^{-1}	105 320.293–107 469.955	50–98	3.2537e−03	2.0689e−01	1.5842e+03	1.014 71	AAA	4
73	5–8	37 381.2	2 674.412 cm^{-1}	105 320.293–107 994.705	50–128	1.3881e−03	7.4483e−02	4.5843e+02	0.571 03	AAA	4
74	5–9	32 948.9	3 034.179 cm^{-1}	105 320.293–108 354.472	50–162	6.9097e−04	3.6457e−02	1.9778e+02	0.260 75	AAA	4
75	5–10	30 372.8	3 291.518 cm^{-1}	105 320.293–108 611.811	50–200	3.8010e−04	2.1039e−02	1.0521e+02	0.021 99	AAA	4
76	5–11	28 712.0	3 481.920 cm^{-1}	105 320.293–108 802.213	50–242	2.2466e−04	1.3446e−02	6.3565e+01	−0.172 44	AAA	4
77	5–12	27 565.5	3 626.736 cm^{-1}	105 320.293–108 947.029	50–288	1.4028e−04	9.2097e−03	4.1800e+01	−0.336 78	AAA	4
78	5–13	26 734.7	3 739.437 cm^{-1}	105 320.293–109 059.730	50–338	9.1506e−05	6.6320e−03	2.9193e+01	−0.479 39	AAA	4

TABLE 8. D I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
79	5–14	26 110.3	3 828.862 cm^{-1}	105 320.293–109 149.155	50–392	6.1864e−05	4.9599e−03	2.1323e+01	−0.605 56	AAA	4
80	5–15	25 627.4	3 901.005 cm^{-1}	105 320.293–109 221.298	50–450	4.3096e−05	3.8210e−03	1.6123e+01	−0.718 85	AAA	4
81	5–16	25 245.3	3 960.049 cm^{-1}	105 320.293–109 280.342	50–512	3.0796e−05	3.0148e−03	1.2531e+01	−0.821 78	AAA	4
82	5–17	24 937.2	4 008.983 cm^{-1}	105 320.293–109 329.276	50–578	2.2496e−05	2.4258e−03	9.9602e+00	−0.916 18	AAA	4
83	5–18	24 684.7	4 049.991 cm^{-1}	105 320.293–109 370.284	50–648	1.6752e−05	1.9843e−03	8.0650e+00	−1.003 42	AAA	4
84	5–19	24 475.0	4 084.695 cm^{-1}	105 320.293–109 404.988	50–722	1.2687e−05	1.6461e−03	6.6335e+00	−1.084 57	AAA	4
85	5–20	24 298.7	4 114.325 cm^{-1}	105 320.293–109 434.618	50–800	9.7537e−06	1.3821e−03	5.5297e+00	−1.160 48	AAA	4
86	6–7		808.785 cm^{-1}	106 661.171–107 469.956	72–98	4.5620e−03	1.4231e+00	4.1708e+04	2.010 57	AAA	4
87	6–8		1 333.535 cm^{-1}	106 661.171–107 994.706	72–128	1.5613e−03	2.3400e−01	4.1594e+03	1.226 55	AAA	4
88	6–9		1 693.302 cm^{-1}	106 661.171–108 354.473	72–162	7.0671e−04	8.3141e−02	1.1638e+03	0.777 15	AAA	4
89	6–10		1 950.640 cm^{-1}	106 661.171–108 611.811	72–200	3.6891e−04	4.0376e−02	4.9063e+02	0.463 45	AAA	4
90	6–11	46 693.5	2 141.042 cm^{-1}	106 661.171–108 802.213	72–242	2.1102e−04	2.3196e−02	2.5680e+02	0.222 74	AAA	4
91	6–12	43 735.3	2 285.858 cm^{-1}	106 661.171–108 947.029	72–288	1.2887e−04	1.4790e−02	1.5337e+02	0.027 30	AAA	4
92	6–13	41 680.3	2 398.559 cm^{-1}	106 661.171–109 059.730	72–338	8.2739e−05	1.0122e−02	1.0002e+02	−0.137 42	AAA	4
93	6–14	40 182.2	2 487.984 cm^{-1}	106 661.171–109 149.155	72–392	5.5280e−05	7.2892e−03	6.9445e+01	−0.279 99	AAA	4
94	6–15	39 049.9	2 560.127 cm^{-1}	106 661.171–109 221.298	72–450	3.8161e−05	5.4555e−03	5.0510e+01	−0.405 84	AAA	4
95	6–16	38 169.6	2 619.171 cm^{-1}	106 661.171–109 280.342	72–512	2.7076e−05	4.2077e−03	3.8079e+01	−0.518 62	AAA	4
96	6–17	37 469.6	2 668.105 cm^{-1}	106 661.171–109 329.276	72–578	1.9665e−05	3.3247e−03	2.9536e+01	−0.620 92	AAA	4
97	6–18	36 902.4	2 709.113 cm^{-1}	106 661.171–109 370.284	72–648	1.4575e−05	2.6795e−03	2.3445e+01	−0.714 61	AAA	4
98	6–19	36 435.6	2 743.817 cm^{-1}	106 661.171–109 404.988	72–722	1.0996e−05	2.1957e−03	1.8968e+01	−0.801 09	AAA	4
99	6–20	36 046.4	2 773.447 cm^{-1}	106 661.171–109 434.618	72–800	8.4262e−06	1.8248e−03	1.5595e+01	−0.881 46	AAA	4
100	7–8		525.028 cm^{-1}	107 469.678–107 994.706	98–128	2.2727e−03	1.6144e+00	9.9204e+04	2.199 24	AAA	4
101	7–9		884.795 cm^{-1}	107 469.678–108 354.473	98–162	8.2393e−04	2.6083e−01	9.5106e+03	1.407 58	AAA	4
102	7–10		1 142.134 cm^{-1}	107 469.678–108 611.812	98–200	3.9059e−04	9.1611e−02	2.5878e+03	0.953 18	AAA	4
103	7–11		1 332.535 cm^{-1}	107 469.678–108 802.213	98–242	2.1179e−04	4.4157e−02	1.0691e+03	0.636 23	AAA	4
104	7–12		1 477.351 cm^{-1}	107 469.678–108 947.029	98–288	1.2507e−04	2.5246e−02	5.5134e+02	0.393 42	AAA	4
105	7–13		1 590.052 cm^{-1}	107 469.678–109 059.730	98–338	7.8478e−05	1.6050e−02	3.2566e+02	0.196 70	AAA	4
106	7–14		1 679.477 cm^{-1}	107 469.678–109 149.155	98–392	5.1576e−05	1.0965e−02	2.1064e+02	0.031 24	AAA	4
107	7–15		1 751.620 cm^{-1}	107 469.678–109 221.298	98–450	3.5167e−05	7.8905e−03	1.4533e+02	−0.111 67	AAA	4
108	7–16		1 810.664 cm^{-1}	107 469.678–109 280.342	98–512	2.4715e−05	5.9046e−03	1.0521e+02	−0.237 58	AAA	4
109	7–17		1 859.598 cm^{-1}	107 469.678–109 329.276	98–578	1.7816e−05	4.5555e−03	7.9036e+01	−0.350 23	AAA	4
110	7–18		1 900.606 cm^{-1}	107 469.678–109 370.284	98–648	1.3125e−05	3.6018e−03	6.1140e+01	−0.452 26	AAA	4
111	7–19		1 935.310 cm^{-1}	107 469.678–109 404.988	98–722	9.8524e−06	2.9054e−03	4.8435e+01	−0.545 56	AAA	4
112	7–20		1 964.940 cm^{-1}	107 469.678–109 434.618	98–800	7.5189e−06	2.3833e−03	3.9132e+01	−0.631 60	AAA	4
113	8–9		359.766 cm^{-1}	107 994.707–108 354.473	128–162	1.2332e−03	1.8078e+00	2.1175e+05	2.364 36	AAA	4

TABLE 8. D I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
114	8–10		617.105 cm^{-1}	107 994.707–108 611.812	128–200	4.6775e−04	2.8772e−01	1.9647e+04	1.566 18	AAA	4
115	8–11		807.506 cm^{-1}	107 994.707–108 802.213	128–242	2.3013e−04	1.0003e−01	5.2202e+03	1.107 36	AAA	4
116	8–12		952.322 cm^{-1}	107 994.707–108 947.029	128–288	1.2873e−04	4.7881e−02	2.1187e+03	0.787 37	AAA	4
117	8–13		1 065.023 cm^{-1}	107 994.707–109 059.730	128–338	7.8058e−05	2.7244e−02	1.0779e+03	0.542 48	AAA	4
118	8–14		1 154.448 cm^{-1}	107 994.707–109 149.155	128–392	5.0112e−05	1.7263e−02	6.3014e+02	0.344 33	AAA	4
119	8–15		1 226.591 cm^{-1}	107 994.707–109 221.298	128–450	3.3596e−05	1.1769e−02	4.0432e+02	0.177 95	AAA	4
120	8–16		1 285.635 cm^{-1}	107 994.707–109 280.342	128–512	2.3312e−05	8.4579e−03	2.7722e+02	0.034 47	AAA	4
121	8–17		1 334.569 cm^{-1}	107 994.707–109 329.276	128–578	1.6640e−05	6.3248e−03	1.9970e+02	−0.091 75	AAA	4
122	8–18		1 375.577 cm^{-1}	107 994.707–109 370.284	128–648	1.2163e−05	4.8785e−03	1.4945e+02	−0.204 51	AAA	4
123	8–19		1 410.281 cm^{-1}	107 994.707–109 404.988	128–722	9.0725e−06	3.8574e−03	1.1526e+02	−0.306 49	AAA	4
124	8–20		1 439.911 cm^{-1}	107 994.707–109 434.618	128–800	6.8877e−06	3.1127e−03	9.1094e+01	−0.399 65	AAA	4
125	9–10		257.339 cm^{-1}	108 354.473–108 611.812	162–200	7.1533e−04	1.9993e+00	4.1434e+05	2.510 38	AAA	4
126	9–11		447.741 cm^{-1}	108 354.473–108 802.214	162–242	2.8139e−04	3.1435e−01	3.7443e+04	1.706 92	AAA	4
127	9–12		592.556 cm^{-1}	108 354.473–108 947.029	162–288	1.4273e−04	1.0834e−01	9.7512e+03	1.244 31	AAA	4
128	9–13		705.257 cm^{-1}	108 354.473–109 059.730	162–338	8.1942e−05	5.1531e−02	3.8968e+03	0.921 58	AAA	4
129	9–14		794.682 cm^{-1}	108 354.473–109 149.155	162–392	5.0811e−05	2.9187e−02	1.9588e+03	0.674 71	AAA	4
130	9–15		866.825 cm^{-1}	108 354.473–109 221.298	162–450	3.3262e−05	1.8435e−02	1.1342e+03	0.475 16	AAA	4
131	9–16		925.869 cm^{-1}	108 354.473–109 280.342	162–512	2.2685e−05	1.2539e−02	7.2227e+02	0.307 77	AAA	4
132	9–17		974.803 cm^{-1}	108 354.473–109 329.276	162–578	1.5983e−05	8.9969e−03	4.9223e+02	0.163 61	AAA	4
133	9–18		1 015.811 cm^{-1}	108 354.473–109 370.284	162–648	1.1565e−05	6.7210e−03	3.5287e+02	0.036 95	AAA	4
134	9–19		1 050.515 cm^{-1}	108 354.473–109 404.988	162–722	8.5573e−06	5.1810e−03	2.6303e+02	−0.076 07	AAA	4
135	9–20		1 080.145 cm^{-1}	108 354.473–109 434.618	162–800	6.4542e−06	4.0955e−03	2.0222e+02	−0.178 17	AAA	4

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

TABLE 9. List of tabulated lines for allowed transitions of T I, average values

Wavelength (Å)	No.
In vacuum	
913.705	19
913.952	18
914.242	17
914.585	16
914.995	15
915.489	14
916.095	13
916.846	12
917.794	11
919.016	10
920.627	9
922.813	8
925.888	7

TABLE 9. List of tabulated lines for allowed transitions of T I, average values—Continued

Wavelength (Å)	No.
930.408	6
937.461	5
949.396	4
972.182	3
1 025.35	2
1 215.23	1
In air	
3 681.46	37
3 685.48	36
3 690.20	35
3 695.80	34
3 702.50	33
3 710.61	32
3 720.58	31

TABLE 9. List of tabulated lines for allowed transitions of T I, average values—Continued

Wavelength (Å)	No.
3 733.00	30
3 748.78	29
3 769.25	28
3 796.51	27
3 833.98	26
3 887.62	25
3 968.62	24
4 100.23	23
4 338.87	22
4 859.54	21
6 560.39	20
8 389.35	54
8 410.26	53
8 434.89	52
8 464.18	51
8 499.39	50
8 542.28	49
8 595.27	48
8 661.87	47
8 747.29	46
8 859.56	45
9 011.63	44
9 225.66	43
9 542.50	42
10 045.7	41
10 934.1	40
12 813.4	39
15 186.3	70
15 255.0	69
15 336.2	68
15 433.3	67
15 550.8	66
15 695.0	65
15 874.8	64
16 103.5	63
16 401.2	62
16 800.4	61
17 355.8	60
18 167.5	59
18 744.2	38
19 438.5	58
21 647.4	57
24 298.2	85
24 474.5	84
24 684.2	83
24 936.7	82
25 244.9	81
25 627.0	80
26 109.9	79
26 242.0	56
26 734.3	78
27 565.2	77
28 711.7	76
30 372.7	75
32 949.0	74
36 046.8	99

TABLE 9. List of tabulated lines for allowed transitions of T I, average values—Continued

Wavelength (Å)	No.
36 436.1	98
36 902.9	97
37 381.8	73
37 470.1	96
38 170.3	95
39 050.7	94
40 183.1	93
40 496.9	55
41 681.5	92
43 736.8	91
46 508.2	72
46 695.4	90
Wave number (cm^{-1})	**No.**
257.362	125
359.799	113
447.781	126
524.797	100
592.610	127
617.161	114
705.321	128
794.754	129
807.580	115
808.576	86
866.904	130
884.596	101
925.953	131
952.409	116
974.892	132
1 015.903	133
1 050.610	134
1 065.120	117
1 080.243	135
1 141.958	102
1 154.553	118
1 226.703	119
1 285.752	120
1 332.377	103
1 333.373	87
1 334.691	121
1 340.994	71
1 375.702	122
1 410.409	123
1 440.042	124
1 477.206	104
1 589.917	105
1 679.350	106
1 693.172	88
1 751.500	107
1 810.549	108
1 859.487	109
1 900.499	110
1 935.206	111
1 950.535	89
1 964.839	112

TABLE 10. T I: Allowed transitions, average values

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
1	1–2 (L_α)		1 215.23	0.000–82 289.021	2–8	4.7004e+00	4.1626e−01	3.3306e+00	−0.079 61	AAA	4
2	1–3 (L_β)		1 025.35	0.000–97 527.837	2–18	5.5771e−01	7.9113e−02	5.3410e−01	−0.800 72	AAA	4
3	1–4 (L_γ)		972.182	0.000–102 861.408	2–32	1.2790e−01	2.8995e−02	1.8560e−01	−1.236 64	AAA	4
4	1–5 (L_δ)		949.396	0.000–105 330.083	2–50	4.1265e−02	1.3940e−02	8.7142e−02	−1.554 70	AAA	4
5	1–6 (L_ε)		937.461	0.000–106 671.089	2–72	1.6446e−02	7.8006e−03	4.8149e−02	−1.806 84	AAA	4
6	1–7		930.408	0.000–107 479.672	2–98	7.5712e−03	4.8146e−03	2.9495e−02	−2.016 41	AAA	4
7	1–8		925.888	0.000–108 004.473	2–128	3.8708e−03	3.1839e−03	1.9410e−02	−2.196 01	AAA	4
8	1–9		922.813	0.000–108 364.274	2–162	2.1433e−03	2.2164e−03	1.3467e−02	−2.353 32	AAA	4
9	1–10		920.627	0.000–108 621.638	2–200	1.2636e−03	1.6056e−03	9.7325e−03	−2.493 34	AAA	4
10	1–11		919.016	0.000–108 812.057	2–242	7.8369e−04	1.2007e−03	7.2654e−03	−2.619 54	AAA	4
11	1–12		917.794	0.000–108 956.887	2–288	5.0677e−04	9.2156e−04	5.5690e−03	−2.734 45	AAA	4
12	1–13		916.846	0.000–109 069.599	2–338	3.3940e−04	7.2284e−04	4.3636e−03	−2.839 93	AAA	4
13	1–14		916.095	0.000–109 159.032	2–392	2.3418e−04	5.7748e−04	3.4833e−03	−2.937 43	AAA	4
14	1–15		915.489	0.000–109 231.182	2–450	1.6578e−04	4.6869e−04	2.8252e−03	−3.028 09	AAA	4
15	1–16		914.995	0.000–109 290.232	2–512	1.2002e−04	3.8563e−04	2.3233e−03	−3.112 80	AAA	4
16	1–17		914.585	0.000–109 339.171	2–578	8.8606e−05	3.2112e−04	1.9337e−03	−3.192 30	AAA	4
17	1–18		914.242	0.000–109 380.182	2–648	6.6564e−05	2.7025e−04	1.6268e−03	−3.267 21	AAA	4
18	1–19		913.952	0.000–109 414.890	2–722	5.0786e−05	2.2959e−04	1.3816e−03	−3.338 02	AAA	4
19	1–20		913.705	0.000–109 444.522	2–800	3.9290e−05	1.9670e−04	1.1834e−03	−3.405 16	AAA	4
20	2–3 (H_α)	6 560.39	6 562.20	82 289.115–97 527.897	8–18	4.4117e−01	6.4084e−01	1.1076e+02	0.709 84	AAA	4
21	2–4 (H_β)	4 859.54	4 860.90	82 289.115–102 861.433	8–32	8.4224e−02	1.1934e−01	1.5278e+01	−0.020 13	AAA	4
22	2–5 (H_γ)	4 338.87	4 340.09	82 289.115–105 330.096	8–50	2.5314e−02	4.4677e−02	5.1068e+00	−0.446 82	AAA	4
23	2–6 (H_δ)	4 100.23	4 101.39	82 289.115–106 671.096	8–72	9.7355e−03	2.2096e−02	2.3868e+00	−0.752 59	AAA	4
24	2–7 (H_ε)	3 968.62	3 969.74	82 289.115–107 479.676	8–98	4.3905e−03	1.2707e−02	1.3285e+00	−0.992 88	AAA	4
25	2–8	3 887.62	3 888.73	82 289.115–108 004.476	8–128	2.2156e−03	8.0368e−03	8.2311e−01	−1.191 82	AAA	4
26	2–9	3 833.98	3 835.07	82 289.115–108 364.276	8–162	1.2161e−03	5.4298e−03	5.4843e−01	−1.362 12	AAA	4
27	2–10	3 796.51	3 797.59	82 289.115–108 621.639	8–200	7.1250e−04	3.8512e−03	3.8519e−01	−1.511 31	AAA	4
28	2–11	3 769.25	3 770.32	82 289.115–108 812.059	8–242	4.3988e−04	2.8358e−03	2.8159e−01	−1.644 23	AAA	4
29	2–12	3 748.78	3 749.84	82 289.115–108 956.888	8–288	2.8347e−04	2.1513e−03	2.1246e−01	−1.764 21	AAA	4
30	2–13	3 733.00	3 734.06	82 289.115–109 069.600	8–338	1.8934e−04	1.6722e−03	1.6445e−01	−1.873 62	AAA	4
31	2–14	3 720.58	3 721.63	82 289.115–109 159.033	8–392	1.3037e−04	1.3264e−03	1.3001e−01	−1.974 22	AAA	4
32	2–15	3 710.61	3 711.67	82 289.115–109 231.183	8–450	9.2135e−05	1.0704e−03	1.0464e−01	−2.067 37	AAA	4
33	2–16	3 702.50	3 703.55	82 289.115–109 290.232	8–512	6.6607e−05	8.7659e−04	8.5503e−02	−2.154 11	AAA	4
34	2–17	3 695.80	3 696.85	82 289.115–109 339.171	8–578	4.9119e−05	7.2712e−04	7.0796e−02	−2.235 30	AAA	4
35	2–18	3 690.20	3 691.25	82 289.115–109 380.182	8–648	3.6864e−05	6.0995e−04	5.9298e−02	−2.311 61	AAA	4

TABLE 10. T I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
36	2–19	3 685.48	3 686.53	82 289.115–109 414.890	8–722	2.8103e−05	5.1677e−04	5.0174e−02	−2.383 61	AAA	4
37	2–20	3 681.46	3 682.51	82 289.115–109 444.523	8–800	2.1727e−05	4.4171e−04	4.2840e−02	−2.451 77	AAA	4
38	3–4 (P_α)	18 744.2	5 333.528 cm^{-1}	97 527.918–102 861.446	18–32	8.9893e−02	8.4223e−01	9.3576e+02	1.180 70	AAA	4
39	3–5 (P_β)	12 813.4	7802.184 cm^{-1}	97 527.918–105 330.102	18–50	2.2016e−02	1.5061e−01	1.1439e+02	0.433 12	AAA	4
40	3–6 (P_γ)	10 934.1	9143.182 cm^{-1}	97 527.918–106 671.100	18–72	7.7857e−03	5.5850e−02	3.6197e+01	0.002 29	AAA	4
41	3–7 (P_δ)	10 045.7	9951.761 cm^{-1}	97 527.918–107 479.679	18–98	3.3597e−03	2.7690e−02	1.6488e+01	−0.302 41	AAA	4
42	3–8 (P_ε)	9 542.50	9 545.12	97 527.918–108 004.477	18–128	1.6512e−03	1.6039e−02	9.0719e+00	−0.539 56	AAA	4
43	3–9	9 225.66	9 228.19	97 527.918–108 364.277	18–162	8.9082e−04	1.0236e−02	5.5974e+00	−0.734 60	AAA	4
44	3–10	9 011.63	9 014.11	97 527.918–108 621.640	18–200	5.1577e−04	6.9809e−03	3.7289e+00	−0.900 82	AAA	4
45	3–11	8 859.56	8 861.99	97 527.918–108 812.059	18–242	3.1570e−04	4.9973e−03	2.6243e+00	−1.045 99	AAA	4
46	3–12	8 747.29	8 749.69	97 527.918–108 956.889	18–288	2.0214e−04	3.7121e−03	1.9247e+00	−1.175 11	AAA	4
47	3–13	8 661.87	8 664.25	97 527.918–109 069.600	18–338	1.3435e−04	2.8393e−03	1.4578e+00	−1.291 51	AAA	4
48	3–14	8 595.27	8 597.63	97 527.918–109 159.033	18–392	9.2150e−05	2.2239e−03	1.1331e+00	−1.397 60	AAA	4
49	3–15	8 542.28	8 544.62	97 527.918–109 231.183	18–450	6.4924e−05	1.7766e−03	8.9956e−01	−1.495 14	AAA	4
50	3–16	8 499.39	8 501.73	97 527.918–109 290.232	18–512	4.6818e−05	1.4431e−03	7.2701e−01	−1.585 45	AAA	4
51	3–17	8 464.18	8 466.50	97 527.918–109 339.171	18–578	3.4454e−05	1.1889e−03	5.9651e−01	−1.669 57	AAA	4
52	3–18	8 434.89	8 437.21	97 527.918–109 380.182	18–648	2.5814e−05	9.9175e−04	4.9585e−01	−1.748 32	AAA	4
53	3–19	8 410.26	8 412.57	97 527.918–109 414.890	18–722	1.9650e−05	8.3627e−04	4.1689e−01	−1.822 38	AAA	4
54	3–20	8 389.35	8 391.65	97 527.918–109 444.523	18–800	1.5173e−05	7.1193e−04	3.5402e−01	−1.892 29	AAA	4
55	4–5	40 496.9	2 468.653 cm^{-1}	102 861.455–105 330.108	32–50	2.7002e−02	1.0379e+00	4.4292e+03	1.521 31	AAA	4
56	4–6	26 242.0	3 809.648 cm^{-1}	102 861.455–106 671.103	32–72	7.7138e−03	1.7928e−01	4.9577e+02	0.758 69	AAA	4
57	4–7	21 647.4	4 618.226 cm^{-1}	102 861.455–107 479.681	32–98	3.0426e−03	6.5497e−02	1.4941e+02	0.321 37	AAA	4
58	4–8	19 438.5	5 143.024 cm^{-1}	102 861.455–108 004.479	32–128	1.4247e−03	3.2301e−02	6.6164e+01	0.014 36	AAA	4
59	4–9	18 167.5	5 502.823 cm^{-1}	102 861.455–108 364.278	32–162	7.4620e−04	1.8703e−02	3.5805e+01	−0.222 94	AAA	4
60	4–10	17 355.8	5 760.186 cm^{-1}	102 861.455–108 621.641	32–200	4.2363e−04	1.1963e−02	2.1880e+01	−0.417 00	AAA	4
61	4–11	16 800.4	5 950.605 cm^{-1}	102 861.455–108 812.060	32–242	2.5575e−04	8.1886e−03	1.4497e+01	−0.581 64	AAA	4
62	4–12	16 401.2	6 095.434 cm^{-1}	102 861.455–108 956.889	32–288	1.6211e−04	5.8871e−03	1.0175e+01	−0.724 95	AAA	4
63	4–13	16 103.5	6 208.145 cm^{-1}	102 861.455–109 069.600	32–338	1.0693e−04	4.3933e−03	7.4551e+00	−0.852 06	AAA	4
64	4–14	15 874.8	6 297.578 cm^{-1}	102 861.455–109 159.033	32–392	7.2905e−05	3.3760e−03	5.6475e+00	−0.966 44	AAA	4
65	4–15	15 695.0	6 369.728 cm^{-1}	102 861.455–109 231.183	32–450	5.1125e−05	2.6565e−03	4.3935e+00	−1.070 54	AAA	4
66	4–16	15 550.8	6 428.778 cm^{-1}	102 861.455–109 290.233	32–512	3.6728e−05	2.1316e−03	3.4931e+00	−1.166 14	AAA	4
67	4–17	15 433.3	6 477.716 cm^{-1}	102 861.455–109 339.171	32–578	2.6945e−05	1.7389e−03	2.8279e+00	−1.254 59	AAA	4
68	4–18	15 336.2	6 518.727 cm^{-1}	102 861.455–109 380.182	32–648	2.0135e−05	1.4385e−03	2.3248e+00	−1.336 93	AAA	4
69	4–19	15 255.0	6 553.435 cm^{-1}	102 861.455–109 414.890	32–722	1.5295e−05	1.2046e−03	1.9364e+00	−1.414 01	AAA	4
70	4–20	15 186.3	6 583.068 cm^{-1}	102 861.455–109 444.523	32–800	1.1788e−05	1.0195e−03	1.6315e+00	−1.486 47	AAA	4

TABLE 10. T I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
71	5–6		1 340.994 cm^{-1}	105 330.111–106 671.105	50–72	1.0258e−02	1.2314e+00	1.5116e+04	1.789 39	AAA	4
72	5–7	46 508.2	2 149.571 cm^{-1}	105 330.111–107 479.682	50–98	3.2540e−03	2.0693e−01	1.5846e+03	1.014 79	AAA	4
73	5–8	37 381.8	2 674.369 cm^{-1}	105 330.111–108 004.480	50–128	1.3882e−03	7.4492e−02	4.5850e+02	0.571 08	AAA	4
74	5–9	32 949.0	3 034.168 cm^{-1}	105 330.111–108 364.279	50–162	6.9103e−04	3.6460e−02	1.9780e+02	0.260 79	AAA	4
75	5–10	30 372.7	3 291.530 cm^{-1}	105 330.111–108 621.641	50–200	3.8013e−04	2.1040e−02	1.0522e+02	0.022 02	AAA	4
76	5–11	28 711.7	3 481.949 cm^{-1}	105 330.111–108 812.060	50–242	2.2468e−04	1.3447e−02	6.3569e+01	−0.172 41	AAA	4
77	5–12	27 565.2	3 626.778 cm^{-1}	105 330.111–108 956.889	50–288	1.4029e−04	9.2104e−03	4.1802e+01	−0.336 75	AAA	4
78	5–13	26 734.3	3 739.490 cm^{-1}	105 330.111–109 069.601	50–338	9.1514e−05	6.6324e−03	2.9195e+01	−0.479 36	AAA	4
79	5–14	26 109.9	3 828.922 cm^{-1}	105 330.111–109 159.033	50–392	6.1870e−05	4.9602e−03	2.1324e+01	−0.605 53	AAA	4
80	5–15	25 627.0	3 901.072 cm^{-1}	105 330.111–109 231.183	50–450	4.3100e−05	3.8212e−03	1.6124e+01	−0.718 83	AAA	4
81	5–16	25 244.9	3 960.122 cm^{-1}	105 330.111–109 290.233	50–512	3.0799e−05	3.0149e−03	1.2532e+01	−0.821 76	AAA	4
82	5–17	24 936.7	4 009.060 cm^{-1}	105 330.111–109 339.171	50–578	2.2498e−05	2.4259e−03	9.9605e+00	−0.916 15	AAA	4
83	5–18	24 684.2	4 050.071 cm^{-1}	105 330.111–109 380.182	50–648	1.6753e−05	1.9844e−03	8.0652e+00	−1.003 40	AAA	4
84	5–19	24 474.5	4 084.779 cm^{-1}	105 330.111–109 414.890	50–722	1.2688e−05	1.6462e−03	6.6337e+00	−1.084 55	AAA	4
85	5–20	24 298.2	4 114.412 cm^{-1}	105 330.111–109 444.523	50–800	9.7546e−06	1.3822e−03	5.5298e+00	−1.160 46	AAA	4
86	6–7		808.576 cm^{-1}	106 671.107–107 479.683	72–98	4.5624e−03	1.4240e+00	4.1744e+04	2.010 84	AAA	4
87	6–8		1 333.373 cm^{-1}	106 671.107–108 004.480	72–128	1.5615e−03	2.3408e−01	4.1612e+03	1.226 70	AAA	4
88	6–9		1 693.172 cm^{-1}	106 671.107–108 364.279	72–162	7.0678e−04	8.3161e−02	1.1642e+03	0.777 25	AAA	4
89	6–10		1 950.535 cm^{-1}	106 671.107–108 621.642	72–200	3.6895e−04	4.0384e−02	4.9075e+02	0.463 54	AAA	4
90	6–11	46 695.4	2 140.953 cm^{-1}	106 671.107–108 812.060	72–242	2.1104e−04	2.3200e−02	2.5685e+02	0.222 81	AAA	4
91	6–12	43 736.8	2 285.783 cm^{-1}	106 671.107–108 956.890	72–288	1.2888e−04	1.4792e−02	1.5340e+02	0.027 37	AAA	4
92	6–13	41 681.5	2 398.494 cm^{-1}	106 671.107–109 069.601	72–338	8.2746e−05	1.0123e−02	1.0004e+02	−0.137 36	AAA	4
93	6–14	40 183.1	2 487.927 cm^{-1}	106 671.107–109 159.034	72–392	5.5285e−05	7.2902e−03	6.9456e+01	−0.279 93	AAA	4
94	6–15	39 050.7	2 560.076 cm^{-1}	106 671.107–109 231.183	72–450	3.8164e−05	5.4562e−03	5.0518e+01	−0.405 78	AAA	4
95	6–16	38 170.3	2 619.126 cm^{-1}	106 671.107–109 290.233	72–512	2.7078e−05	4.2082e−03	3.8085e+01	−0.518 57	AAA	4
96	6–17	37 470.1	2 668.064 cm^{-1}	106 671.107–109 339.171	72–578	1.9667e−05	3.3251e−03	2.9540e+01	−0.620 87	AAA	4
97	6–18	36 902.9	2 709.075 cm^{-1}	106 671.107–109 380.182	72–648	1.4577e−05	2.6799e−03	2.3448e+01	−0.714 56	AAA	4
98	6–19	36 436.1	2 743.783 cm^{-1}	106 671.107–109 414.890	72–722	1.0997e−05	2.1960e−03	1.8971e+01	−0.801 04	AAA	4
99	6–20	36 046.8	2 773.416 cm^{-1}	106 671.107–109 444.523	72–800	8.4270e−06	1.8250e−03	1.5597e+01	−0.881 41	AAA	4
100	7–8		524.797 cm^{-1}	107 479.684–108 004.481	98–128	2.2729e−03	1.6160e+00	9.9344e+04	2.199 66	AAA	4
101	7–9		884.596 cm^{-1}	107 479.684–108 364.280	98–162	8.2400e−04	2.6097e−01	9.5179e+03	1.407 81	AAA	4
102	7–10		1 141.958 cm^{-1}	107 479.684–108 621.642	98–200	3.9063e−04	9.1648e−02	2.5893e+03	0.953 35	AAA	4
103	7–11		1 332.377 cm^{-1}	107 479.684–108 812.061	98–242	2.1181e−04	4.4172e−02	1.0696e+03	0.636 37	AAA	4
104	7–12		1 477.206 cm^{-1}	107 479.684–108 956.890	98–288	1.2508e−04	2.5254e−02	5.5155e+02	0.393 55	AAA	4
105	7–13		1 589.917 cm^{-1}	107 479.684–109 069.601	98–338	7.8485e−05	1.6054e−02	3.2577e+02	0.196 81	AAA	4

TABLE 10. T I: Allowed transitions, average values—Continued

No.	Transition	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
106	7–14		1 679.350 cm^{-1}	107 479.684–109 159.034	98–392	5.1581e−05	1.0968e−02	2.1071e+02	0.031 35	AAA	4
107	7–15		1 751.500 cm^{-1}	107 479.684–109 231.184	98–450	3.5171e−05	7.8923e−03	1.4538e+02	−0.111 57	AAA	4
108	7–16		1 810.549 cm^{-1}	107 479.684–109 290.233	98–512	2.4718e−05	5.9059e−03	1.0524e+02	−0.237 49	AAA	4
109	7–17		1 859.487 cm^{-1}	107 479.684–109 339.171	98–578	1.7818e−05	4.5565e−03	7.9057e+01	−0.350 14	AAA	4
110	7–18		1 900.499 cm^{-1}	107 479.684–109 380.183	98–648	1.3126e−05	3.6025e−03	6.1156e+01	−0.452 17	AAA	4
111	7–19		1 935.206 cm^{-1}	107 479.684–109 414.890	98–722	9.8533e−06	2.9060e−03	4.8448e+01	−0.545 48	AAA	4
112	7–20		1 964.839 cm^{-1}	107 479.684–109 444.523	98–800	7.5196e−06	2.3837e−03	3.9141e+01	−0.631 51	AAA	4
113	8–9		359.799 cm^{-1}	108 004.481–108 364.280	128–162	1.2333e−03	1.8076e+00	2.1171e+05	2.364 32	AAA	4
114	8–10		617.161 cm^{-1}	108 004.481–108 621.642	128–200	4.6779e−04	2.8769e−01	1.9643e+04	1.566 14	AAA	4
115	8–11		807.580 cm^{-1}	108 004.481–108 812.061	128–242	2.3015e−04	1.0002e−01	5.2193e+03	1.107 32	AAA	4
116	8–12		952.409 cm^{-1}	108 004.481–108 956.890	128–288	1.2874e−04	4.7876e−02	2.1183e+03	0.787 33	AAA	4
117	8–13		1 065.120 cm^{-1}	108 004.481–109 069.601	128–338	7.8065e−05	2.7241e−02	1.0777e+03	0.542 44	AAA	4
118	8–14		1 154.553 cm^{-1}	108 004.481–109 159.034	128–392	5.0116e−05	1.7262e−02	6.3002e+02	0.344v29	AAA	4
119	8–15		1 226.703 cm^{-1}	108 004.481–109 231.184	128–450	3.3599e−05	1.1768e−02	4.0425e+02	0.177 91	AAA	4
120	8–16		1 285.752 cm^{-1}	108 004.481–109 290.233	128–512	2.3314e−05	8.4571e−03	2.7717e+02	0.034 43	AAA	4
121	8–17		1 334.691 cm^{-1}	108 004.481–109 339.172	128–578	1.6641e−05	6.3242e−03	1.9967e+02	−0.091 79	AAA	4
122	8–18		1 375.702 cm^{-1}	108 004.481–109 380.183	128–648	1.2164e−05	4.8780e−03	1.4942e+02	−0.204 55	AAA	4
123	8–19		1 410.409 cm^{-1}	108 004.481–109 414.890	128–722	9.0733e−06	3.8571e−03	1.1524e+02	−0.306 53	AAA	4
124	8–20		1 440.042 cm^{-1}	108 004.481–109 444.523	128–800	6.8883e−06	3.1124e−03	9.1077e+01	−0.399 69	AAA	4
125	9–10		257.362 cm^{-1}	108 364.280–108 621.642	162–200	7.1540e−04	1.9991e+00	4.1426e+05	2.510 34	AAA	4
126	9–11		447.781 cm^{-1}	108 364.280–108 812.061	162–242	2.8141e−04	3.1432e−01	3.7436e+04	1.706 88	AAA	4
127	9–12		592.610 cm^{-1}	108 364.280–108 956.890	162–288	1.4274e−04	1.0833e−01	9.7494e+03	1.244 27	AAA	4
128	9–13		705.321 cm^{-1}	108 364.280–109 069.601	162–338	8.1949e−05	5.1526e−02	3.8961e+03	0.921 54	AAA	4
129	9–14		794.754 cm^{-1}	108 364.280–109 159.034	162–392	5.0815e−05	2.9185e−02	1.9585e+03	0.674 67	AAA	4
130	9–15		866.904 cm^{-1}	108 364.280–109 231.184	162–450	3.3265e−05	1.8433e−02	1.1340e+03	0.475 12	AAA	4
131	9–16		925.953 cm^{-1}	108 364.280–109 290.233	162–512	2.2687e−05	1.2538e−02	7.2214e+02	0.307 73	AAA	4
132	9–17		974.892 cm^{-1}	108 364.280–109 339.172	162–578	1.5984e−05	8.9961e−03	4.9214e+02	0.163 57	AAA	4
133	9–18		1 015.903 cm^{-1}	108 364.280–109 380.183	162–648	1.1566e−05	6.7204e−03	3.5280e+02	0.036 91	AAA	4
134	9–19		1 050.610 cm^{-1}	108 364.280–109 414.890	162–722	8.5581e−06	5.1805e−03	2.6298e+02	−0.076 11	AAA	4
135	9–20		1 080.243 cm^{-1}	108 364.280–109 444.523	162–800	6.4548e−06	4.0952e−03	2.0218e+02	−0.178 21	AAA	4

[a]Wavelenghts (Å) are always given unless cm^{-1} is indicated.

2.1.2. H I, D I, and T I Forbidden Transitions

Of the forbidden lines of hydrogen, the magnetic dipole transition arising from the hyperfine splitting of the ground level $1s\ ^2S_{1/2}$ into two sublevels has acquired great importance in radio astronomy. This transition, arising from the interaction of the magnetic moments of the proton and its electron, produces the famous 21 cm line, i.e., a radio frequency line at 1420.405 751 8 MHz, which has been observed in interstellar space.

Gould[21] carried out a detailed, improved calculation of the transition probability for the 21 cm line, including the effect of the first-order radiative correction to the intrinsic magnetic

moment of the electron and the effect of the coupling of the outgoing photon to the magnetic moment of the nucleon/nucleus. These effects produce very small changes to the zeroth-order formula, where the line strengths are either 3 or 16/3, respectively. Gould estimated that his results are accurate to 1 ppm. We include his results for the analogous hyperfine transitions of deuterium and tritium, which occur at significantly different frequencies.

Other forbidden transitions have no practical significance. Due to the hydrogen energy-level degeneracy, their transition frequencies essentially coincide with the allowed lines of the same principal quantum numbers, but the latter ones are orders of magnitude stronger and thus overwhelm the forbidden line contributions.

Jitrik and Bunge[5,22] recently calculated the forbidden line strengths for electric and magnetic multipole transitions up to E3 and M3 (octupole transitions). In a special table, we have assembled the transition probabilities of these forbidden lines for the two transitions from the $n=1$ to $n=2$ and 3, i.e., essentially components of the L_α and L_β transitions. We also show the strengths of the allowed transitions for L_α and L_β and the averaged transition probabilities for these two lines in order to provide a quantitative comparison for the strengths of all these components. For the $n=1$ to $n=3$ transition (L_β) the addition of the forbidden components increases the transition probability only by one unit in the fifth digit (due to E2).

Transition probabilities for the forbidden lines of (H I), (D I), and (T I) are given in Tables 11 and 12.

TABLE 11. H I, D I, and T I: Hyperfine structure, magnetic dipole transitions

Transition	Frequency (MHz)	ΔE (cm^{-1})	g_i-g_k	Type	A_{ki}	f_{ik}	S	Acc.	Source
H I: $1s\ ^2S_{1/2}$ ($F=0-F=1$)	1420.405 751 8	0.047 379 6	1–3	M1	2.8843e−15	5.7786e−12	3.0160e+00	AAA	21
D I: $1s\ ^2S_{1/2}$ ($F=1/2-F=3/2$)	327.384 352 3	0.010 920 4	2–4	M1	4.6968e−17	1.1809e−12	5.3481e+00	AAA	21
T I: $1s\ ^2S_{1/2}$ ($F=0-F=1$)	1516.701 476 8	0.050 591 7	1–3	M1	3.5123e−15	6.1716e−12	3.0167e+00	AAA	21

TABLE 12. H I: Forbidden transitions

No.	Transition Array	Mult.	λ_{vac} (Å)	E_i-E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	S	Accuracy	Source
1	$1s$-$2s$	$^2S-{}^2S$								
			1215.6731	0.000–82 258.954	2–2	M1	2.495e−06	3.323e−10	AAA	22
2	$1s$-$2p$	$^2S-{}^2P^\circ$								
			1215.6682	0.000–82 259.285	2–4	M2	4.684e−02	8.885e−04	AAA	22
3	$1s$-$3s$	$^2S-{}^2S$								
			1025.7229	0.000–97 492.222	2–2	M1	1.109e−06	8.871e−11	AAA	22
4	$1s$-$3p$	$^2S-{}^2P^\circ$								
			1025.7218	0.000–97 492.320	2–4	M2	1.757e−02	1.689e−04	AAA	22
5	$1s$-$3d$	$^2S-{}^2D$								
			1025.7218	0.000–97 492.319	2–4	M1	6.929e−09	1.109e−12	AAA	22
			1025.7218	0.000–97 492.319	2–4	E2	5.938e+02	2.408e+00	AAA	22
			1025.7214	0.000–97 492.356	2–6	E2	5.937e+02	3.612e+00	AAA	22
			1025.7214	0.000–97 492.356	2–6	M3	7.391e−08	1.265e+02	AAA	22

3. Helium

3.1. He I

Ground State: $1s^2\ ^1S_0$
Ionization Energy: 24.587 eV (198 310.6672 cm^{-1})

3.1.1. He I Allowed Transitions

The high-precision variational calculations by Drake,[6] recently published in full by Drake and Morton,[11] provided the definitive set of data for neutral helium and may be considered as essentially exact for most applications. Drake's calculations produced transition probability data for about 2400 transitions with principal quantum numbers up to 10 and orbital angular momentum quantum numbers up to 7 with an estimated accuracy of about 0.1%. Drake calculated the transition integrals both in the dipole length and dipole velocity formulations and achieved agreement of the two forms to at least several more significant figures than given in our tabu-

lation. He included the lowest-order relativistic terms in his calculations, thus taking into account singlet-triplet mixing. Drake stated that higher-order relativistic and QED effects are only expected to change the fourth and higher digits in the numerical results.

Drake and Morton[11] converted the tabulated transition probabilities into oscillator strengths by utilizing their calculated nonrelativistic wavelengths for the various transitions. We used higher-precision experimental wavelengths (listed in the NIST ASD) for this conversion, making our oscillator strengths slightly different.

Drake[8] also calculated precise radiation data for several intercombination lines, among them the principal intercombination transition $1s^2\ ^1S_0-1s2p\ ^3P_1$. Since the helium spectrum is very close to LS coupling, the intercombination or "non-LS-allowed" lines are quite weak.

A finding list and transition probabilities for the allowed lines of (He I) are given in Tables 13 and 14.

TABLE 13. List of tabulated lines for allowed transitions of He I

Wavelength (Å)	No.
In vacuum	
507.058	10
507.718	9
508.643	8
509.998	7
512.099	6
515.617	5
522.213	4
537.030	3
584.334	2
591.412	1
In air	
2 677.128	20
2 677.129	20
2 696.118	19
2 723.191	18
2 723.192	18
2 763.802	17
2 763.803	17
2 829.078	16
2 829.081	16
2 945.099	15
2 945.104	15
3 187.733	14
3 187.744	14
3 187.745	14
3 231.270	30
3 258.273	29
3 296.773	28
3 354.555	27
3 447.589	26
3 554.406	47
3 554.416	47
3 554.541	47
3 562.969	46
3 562.979	46

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
3 563.104	46
3 587.262	45
3 587.272	45
3 587.399	45
3 599.304	44
3 599.314	44
3 599.442	44
3 613.642	25
3 634.231	43
3 634.241	43
3 634.371	43
3 651.981	42
3 651.992	42
3 652.123	42
3 704.995	41
3 704.996	41
3 705.006	41
3 705.141	41
3 732.863	40
3 732.874	40
3 733.012	40
3 819.602	39
3 819.603	39
3 819.613	39
3 819.614	39
3 819.757	39
3 833.549	64
3 838.100	63
3 867.472	38
3 867.484	38
3 867.632	38
3 871.786	62
3 878.177	61
3 888.605	13
3 888.646	13
3 888.649	13
3 926.544	60
3 935.945	59
3 964.729	24
4 009.256	58
4 023.980	57
4 026.184	37
4 026.186	37
4 026.197	37
4 026.198	37
4 026.357	37
4 120.811	36
4 120.824	36
4 120.992	36
4 143.759	56
4 168.971	55
4 387.929	54
4 437.553	53
4 471.470	35
4 471.474	35
4 471.486	35
4 471.489	35

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
4 471.683	35
4 713.139	34
4 713.156	34
4 713.376	34
4 921.931	52
5 015.678	23
5 047.738	51
5 874.434	33
5 874.460	33
5 875.599	32
5 875.614	32
5 875.615	32
5 875.625	32
5 875.640	32
5 875.966	32
6 678.152	50
6 679.677	49
7 065.177	31
7 065.215	31
7 065.708	31
7 160.556	72
7 160.559	72
7 160.560	72
7 281.350	48
7 298.032	71
7 298.037	71
7 298.038	71
7 499.847	70
7 499.855	70
7 816.125	69
7 816.137	69
7 816.138	69
8 094.115	80
8 265.701	79
8 361.714	68
8 361.736	68
8 361.738	68
8 518.036	78
8 582.612	98
8 582.613	98
8 582.628	98
8 582.827	98
8 632.707	97
8 632.723	97
8 632.925	97
8 776.707	96
8 776.709	96
8 776.724	96
8 776.725	96
8 776.933	96
8 849.144	95
8 849.161	95
8 849.374	95
8 863.661	12
8 914.772	77
8 996.966	120
8 996.966	119

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
8 996.967	119
8 996.968	120
8 996.969	119
8 997.004	119
8 997.520	143
8 999.736	142
8 999.738	141
9 009.144	118
9 009.146	118
9 009.147	118
9 009.177	118
9 009.182	118
9 063.282	94
9 063.284	94
9 063.300	94
9 063.302	94
9 063.523	94
9 085.421	159
9 111.026	158
9 174.488	93
9 174.506	93
9 174.735	93
9 210.049	140
9 210.325	117
9 210.326	116
9 210.327	116
9 210.327	117
9 210.328	116
9 210.329	116
9 210.366	116
9 213.228	139
9 213.230	138
9 227.851	115
9 227.853	115
9 227.854	115
9 227.883	115
9 227.891	115
9 303.163	157
9 340.143	156
9 463.537	67
9 463.587	67
9 463.591	67
9 516.562	92
9 516.565	92
9 516.566	92
9 516.582	92
9 516.585	92
9 516.827	92
9 524.433	137
9 526.155	114
9 526.156	113
9 526.157	114
9 526.157	113
9 526.158	113
9 526.159	113
9 526.160	113
9 526.199	113

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
9 529.261	136
9 529.264	135
9 552.890	112
9 552.891	112
9 552.892	112
9 552.919	112
9 552.931	112
9 552.932	112
9 603.441	76
9 625.697	155
9 682.388	154
9 702.614	91
9 702.634	91
9 702.890	91
10 023.198	134
10 027.708	111
10 027.711	110
10 027.711	111
10 027.712	110
10 027.713	110
10 027.716	110
10 027.758	110
10 031.150	133
10 031.155	132
10 072.025	109
10 072.026	109
10 072.027	109
10 072.051	109
10 072.071	109
10 072.072	109
10 138.424	153
10 233.102	152
10 311.221	90
10 311.227	90
10 311.244	90
10 311.250	90
10 311.532	90
10 667.662	89
10 667.686	89
10 667.995	89
10 829.091	11
10 830.250	11
10 830.340	11
10 902.208	131
10 912.986	108
10 912.989	108
10 912.990	107
10 912.993	107
10 912.995	107
10 912.998	107
10 913.045	107
10 917.062	130
10 917.066	129
10 917.071	129
10 996.640	106
10 996.643	106
10 996.655	106

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
10 996.693	106
10 996.696	106
11 013.072	75
11 044.983	151
11 225.937	150
11 967.428	88
11 967.459	88
11 969.045	87
11 969.059	87
11 969.060	87
11 969.076	87
11 969.089	87
11 969.464	87
12 527.323	66
12 527.496	66
12 527.510	66
12 755.688	128
12 784.905	105
12 784.909	105
12 784.913	104
12 784.918	104
12 784.921	104
12 784.926	104
12 784.930	104
12 784.990	104
12 790.500	127
12 790.509	126
12 790.521	126
12 845.944	86
12 845.980	86
12 846.427	86
12 968.430	149
12 970.345	148
12 984.853	103
12 984.872	103
12 984.875	103
12 984.880	103
12 984.946	103
12 984.954	103
13 411.683	147
14 488.317	166
14 488.331	166
14 488.332	166
15 062.414	165
15 062.435	165
15 062.437	165
15 083.654	74
15 929.712	173
15 948.135	164
15 948.169	164
15 948.172	164
16 608.233	172
16 673.825	188
16 673.829	188
16 673.850	188
16 673.854	188
16 674.157	188

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
16 863.942	187
16 863.968	187
16 864.281	187
16 996.685	85
16 996.747	85
17 002.336	84
17 002.390	84
17 002.393	84
17 002.398	84
17 002.452	84
17 003.182	84
17 327.390	228
17 329.679	207
17 329.680	208
17 329.680	207
17 329.681	207
17 329.682	207
17 329.685	207
17 329.738	207
17 335.610	227
17 335.615	226
17 351.710	252
17 351.711	251
17 351.713	251
17 351.732	252
17 351.733	251
17 351.734	251
17 351.735	251
17 351.759	251
17 351.781	276
17 351.782	275
17 351.784	275
17 353.010	250
17 353.081	274
17 353.503	249
17 353.525	249
17 353.547	249
17 353.550	249
17 353.574	273
17 374.917	206
17 374.919	206
17 374.920	206
17 374.955	206
17 374.975	206
17 374.976	206
17 422.348	186
17 422.353	186
17 422.375	186
17 422.380	186
17 422.710	186
17 449.608	163
17 449.668	163
17 449.673	163
17 476.896	291
17 571.890	290
17 659.360	171
17 710.123	185

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
17 710.152	185
17 710.498	185
18 133.213	225
18 139.038	205
18 139.042	204
18 139.042	205
18 139.045	204
18 139.046	204
18 139.050	204
18 139.107	204
18 145.540	224
18 145.548	223
18 163.100	248
18 163.101	247
18 163.104	247
18 163.124	248
18 163.125	247
18 163.126	247
18 163.128	247
18 163.153	247
18 163.178	272
18 163.178	271
18 163.181	271
18 165.048	246
18 165.126	270
18 165.781	245
18 165.782	245
18 165.805	245
18 165.828	245
18 165.833	245
18 165.859	269
18 207.143	203
18 207.145	203
18 207.147	203
18 207.175	203
18 207.206	203
18 207.208	203
18 300.845	289
18 444.498	288
18 555.573	125
18 589.115	184
18 589.123	184
18 589.124	184
18 589.146	184
18 589.154	184
18 589.528	184
18 685.258	102
18 685.267	102
18 685.285	101
18 685.294	101
18 685.315	101
18 685.340	101
18 685.349	101
18 685.449	101
18 697.212	124
18 697.239	123
18 697.294	123

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
19 063.041	183
19 063.074	183
19 063.474	183
19 089.359	146
19 096.555	145
19 393.556	222
19 406.142	202
19 406.147	202
19 406.149	201
19 406.153	201
19 406.155	201
19 406.160	201
19 406.223	201
19 413.584	221
19 413.597	220
19 433.544	244
19 433.545	243
19 433.550	243
19 433.571	244
19 433.573	243
19 433.575	243
19 433.578	243
19 433.605	243
19 433.633	268
19 433.634	267
19 433.639	267
19 436.707	242
19 436.796	266
19 437.885	241
19 437.886	241
19 437.913	241
19 437.936	241
19 437.945	241
19 437.974	265
19 437.975	265
19 454.255	170
19 517.415	200
19 517.416	200
19 517.420	200
19 517.436	200
19 517.486	200
19 517.490	200
19 542.837	100
19 543.090	100
19 543.114	100
19 543.124	100
19 543.259	100
19 543.293	100
19 556.157	122
19 556.191	122
19 592.264	287
19 828.567	286
20 424.836	162
20 424.969	162
20 424.979	162
20 581.287	22
20 601.735	182

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
20 601.750	182
20 601.773	182
20 601.788	182
20 602.241	182
21 120.023	83
21 120.119	83
21 121.329	83
21 132.029	144
21 493.979	181
21 494.021	181
21 494.530	181
21 580.112	219
21 607.779	199
21 607.785	199
21 607.790	198
21 607.796	198
21 607.798	198
21 607.802	198
21 607.808	198
21 607.882	198
21 617.006	218
21 617.017	217
21 617.029	217
21 641.471	240
21 641.473	239
21 641.482	239
21 641.504	240
21 641.507	239
21 641.511	239
21 641.516	239
21 641.547	239
21 641.581	264
21 641.583	263
21 641.592	263
21 647.295	238
21 647.405	262
21 649.429	237
21 649.430	237
21 649.464	237
21 649.487	237
21 649.503	237
21 649.504	237
21 649.539	261
21 649.540	261
21 814.597	197
21 814.603	197
21 814.605	197
21 814.611	197
21 814.691	197
21 814.699	197
21 840.424	285
21 842.596	284
22 284.580	283
23 063.452	169
24 722.900	180
24 722.955	180
24 727.139	179

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
24 727.173	179
24 727.176	179
24 727.194	179
24 727.228	179
24 727.869	179
25 957.849	297
25 957.895	297
25 957.898	297
26 113.089	216
26 184.917	196
26 184.925	196
26 184.940	195
26 184.949	195
26 184.958	195
26 184.969	195
26 184.977	195
26 185.076	195
26 198.468	215
26 198.491	214
26 198.519	214
26 233.686	236
26 233.693	235
26 233.714	235
26 233.735	236
26 233.742	235
26 233.753	235
26 233.764	235
26 233.801	235
26 233.848	260
26 233.854	259
26 233.876	259
26 247.162	234
26 247.324	258
26 251.978	233
26 251.981	233
26 252.030	233
26 252.049	233
26 252.087	233
26 252.090	233
26 252.140	257
26 252.143	257
26 531.626	282
26 536.548	281
26 671.651	194
26 671.745	194
26 671.755	194
26 671.764	194
26 671.877	194
26 671.895	194
26 881.045	178
26 881.110	178
26 881.907	178
27 600.329	280
27 860.361	296
27 860.434	296
27 860.439	296
28 140.903	303

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
28 541.991	161
28 542.443	161
28 542.480	161
29 299.304	317
29 299.314	317
29 299.315	317
29 299.344	317
29 299.354	317
29 299.819	317
29 891.451	316
29 891.492	316
29 891.988	316
30 314.981	351
30 329.670	334
30 329.675	334
30 329.678	333
30 329.683	333
30 329.684	333
30 329.686	333
30 329.691	333
30 329.771	333
30 329.872	302
30 340.150	350
30 340.166	349
30 365.594	371
30 365.596	370
30 365.603	370
30 365.623	371
30 365.625	370
30 365.627	370
30 365.631	370
30 365.665	370
30 365.710	391
30 365.712	390
30 365.719	390
30 369.575	369
30 369.691	389
30 370.028	410
30 370.031	410
30 370.052	411
30 370.053	410
30 370.055	410
30 370.057	410
30 370.076	410
30 370.091	431
30 370.092	430
30 370.096	430
30 370.797	409
30 370.810	408
30 370.813	408
30 370.836	408
30 370.846	409
30 370.854	408
30 370.862	429
30 370.862	408
30 370.875	428
30 370.877	428

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
30 371.084	368
30 371.085	368
30 371.113	368
30 371.142	368
30 371.153	368
30 371.154	368
30 371.200	388
30 371.201	388
30 468.517	332
30 468.518	332
30 468.522	332
30 468.544	332
30 468.606	332
30 468.611	332
30 567.771	444
30 859.559	443
31 049.990	295
31 050.118	295
31 050.128	295
31 691.893	315
31 691.909	315
31 691.910	315
31 691.939	315
31 691.955	315
31 692.496	315
32 657.168	314
32 657.217	314
32 657.808	314
32 870.598	348
32 898.797	331
32 898.804	331
32 898.810	330
32 898.817	330
32 898.818	330
32 898.822	330
32 898.829	330
32 898.920	330
32 911.129	347
32 911.154	346
32 940.805	367
32 940.808	366
32 940.818	366
32 940.838	367
32 940.842	366
32 940.846	366
32 940.851	366
32 940.889	366
32 940.941	387
32 940.945	386
32 940.954	386
32 945.960	406
32 945.967	406
32 945.988	407
32 945.990	406
32 945.993	406
32 945.997	406
32 946.018	406

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
32 946.034	427
32 946.036	426
32 946.043	426
32 947.192	405
32 947.213	404
32 947.213	365
32 947.217	404
32 947.243	404
32 947.250	405
32 947.263	404
32 947.268	425
32 947.275	404
32 947.289	424
32 947.293	424
32 947.350	385
32 949.625	364
32 949.626	364
32 949.660	364
32 949.689	364
32 949.706	364
32 949.707	364
32 949.762	384
32 949.763	384
33 123.514	329
33 123.515	329
33 123.516	329
33 123.521	329
33 123.618	329
33 123.626	329
33 180.611	442
33 299.433	168
33 655.861	441
34 028.779	301
35 585.049	21
35 772.748	313
35 776.650	312
35 776.679	312
35 776.681	312
35 776.709	312
35 776.738	312
35 777.418	312
37 009.819	177
37 009.942	177
37 025.287	176
37 025.410	176
37 025.417	176
37 025.425	176
37 025.541	176
37 026.923	176
37 260.017	345
37 298.458	294
37 298.734	294
37 298.756	294
37 318.148	328
37 318.157	328
37 318.172	327
37 318.180	327

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
37 318.187	327
37 318.196	327
37 318.204	327
37 318.313	327
37 334.016	344
37 334.063	343
37 371.685	363
37 371.691	362
37 371.709	362
37 371.728	363
37 371.734	362
37 371.742	362
37 371.752	362
37 371.795	362
37 371.861	383
37 371.867	382
37 371.885	382
37 378.193	403
37 378.198	402
37 378.210	402
37 378.233	403
37 378.237	402
37 378.242	402
37 378.249	402
37 378.272	402
37 378.291	423
37 378.295	422
37 378.308	422
37 380.431	401
37 380.470	400
37 380.478	400
37 380.505	401
37 380.509	400
37 380.529	421
37 380.529	400
37 380.553	400
37 380.568	420
37 380.576	420
37 383.386	361
37 383.562	381
37 387.744	360
37 387.745	360
37 387.788	360
37 387.816	360
37 387.849	360
37 387.850	360
37 387.920	380
37 387.921	380
37 574.492	311
37 574.557	311
37 575.339	311
37 684.154	440
37 688.582	439
37 731.759	326
37 731.812	326
37 731.819	326
37 731.827	326

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
37 731.947	326
37 731.963	326
38 568.211	438
40 021.431	193
40 053.076	213
40 366.116	192
40 366.136	192
40 366.200	191
40 366.219	191
40 366.271	191
40 366.322	191
40 366.341	191
40 366.521	191
40 398.329	212
40 398.412	211
40 398.534	211
40 478.923	232
40 478.950	231
40 479.037	231
40 479.041	232
40 479.068	231
40 479.109	231
40 479.155	231
40 479.209	231
40 479.308	256
40 479.336	255
40 479.423	255
40 533.608	230
40 533.994	254
40 552.318	229
40 552.328	229
40 552.422	229
40 552.447	229
40 552.578	229
40 552.588	229
40 552.705	253
40 552.715	253
41 216.046	279
41 235.392	278
41 386.723	300
42 428.444	190
42 429.109	190
42 429.170	190
42 429.192	190
42 429.442	190
42 429.525	190
42 464.678	210
42 464.761	210
42 942.467	65
42 947.468	65
42 947.865	65
44 052.095	310
44 052.184	310
44 060.866	309
44 060.934	309
44 060.938	309
44 060.956	309

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
44 061.024	309
44 062.031	309
44 192.313	449
44 192.444	449
44 192.454	449
46 053.396	277
46 266.592	342
46 411.960	325
46 411.973	325
46 412.010	324
46 412.023	324
46 412.044	324
46 412.066	324
46 412.079	324
46 412.227	324
46 436.506	341
46 436.556	340
46 436.612	340
46 493.478	359
46 493.491	358
46 493.532	358
46 493.545	359
46 493.558	358
46 493.577	358
46 493.599	358
46 493.653	358
46 493.750	379
46 493.763	378
46 493.804	378
46 503.247	399
46 503.258	398
46 503.284	398
46 503.307	399
46 503.318	398
46 503.331	398
46 503.344	398
46 503.372	398
46 503.398	419
46 503.409	418
46 503.435	418
46 508.335	397
46 508.419	396
46 508.441	396
46 508.450	397
46 508.480	396
46 508.487	417
46 508.500	396
46 508.534	396
46 508.556	396
46 508.571	416
46 508.593	416
46 520.368	357
46 520.641	377
46 530.226	356
46 530.230	356
46 530.297	356
46 530.313	356

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wavelength (Å)	No.
46 530.388	356
46 530.393	356
46 530.499	376
46 530.503	376
46 936.650	175
46 936.848	175
46 939.279	175
46 987.044	437
46 997.101	436
47 376.516	323
47 376.748	323
47 376.770	323
47 376.784	323
47 376.961	323
47 376.997	323
47 578.413	454
48 353.717	308
48 353.824	308
48 355.120	308
49 092.082	435
49 489.393	466
49 489.423	466
49 489.425	466
49 489.457	466
49 489.486	466
49 490.234	466
Wave number (cm^{-1})	**No.**
3.1000	891
4.2441	849
14.1379	482
14.4872	890
14.4927	890
14.4931	890
14.4932	890
14.4939	890
14.4944	890
14.8312	467
14.8367	467
19.8868	843
19.8945	843
19.8951	843
19.8952	843
19.8961	843
19.8968	843
24.1723	335
25.3008	318
25.3103	318
28.3385	748
28.3494	748
28.3504	748
28.3505	748
28.3517	748
28.3528	748
34.0239	889
42.3401	616

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
42.3564	616
42.3578	616
42.3580	616
42.3599	616
42.3615	616
46.2561	209
46.7901	841
48.2112	189
48.2297	189
48.4213	611
53.0994	888
53.0999	888
53.1066	888
66.8360	745
67.3000	455
67.3262	455
67.3284	455
67.3288	455
67.3317	455
67.3343	455
73.3440	839
73.3447	839
73.3540	839
100.1922	612
104.3986	121
105.3499	742
105.3510	742
105.3642	742
107.7724	99
107.8166	99
116.3939	304
116.4398	304
116.4438	304
116.4444	304
116.4493	304
116.4539	304
159.0779	606
159.0795	606
159.0993	606
160.0395	450
209.8919	844
209.9012	844
209.9019	844
210.8504	607
222.3728	885
227.3404	174
227.4322	174
227.4400	174
227.4412	174
227.4507	174
227.4597	174
243.1045	846
243.1050	846
243.1061	846
243.1062	846
243.1066	846

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
243.1117	846
253.1331	886
253.2967	887
256.6231	445
256.6257	445
256.6574	445
256.8785	857
256.8786	857
256.8797	853
256.8798	853
256.8804	853
256.8808	853
256.8809	853
256.8810	853
257.0422	858
257.0445	854
257.3130	865
257.3133	861
257.3133	865
257.3136	861
257.3140	861
257.3141	861
257.3142	861
257.3145	861
257.3147	866
257.3150	862
257.3159	862
257.3593	869
257.3595	873
257.3597	869
257.3599	869
257.3600	869
257.3600	874
257.3602	870
257.3603	869
257.3689	877
257.3689	879
257.3691	877
257.3692	880
257.3693	877
257.3694	878
257.3695	877
257.3715	883
257.3715	881
257.3716	881
257.3717	881
257.3718	881
257.3718	884
257.3719	881
257.3719	882
257.3810	875
257.3813	875
257.3814	871
257.3814	876
257.3815	871
257.3817	871

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
257.3818	871
257.3818	872
257.3821	871
257.3822	872
257.3977	867
257.3981	867
257.3982	868
257.3984	863
257.3986	863
257.3988	863
257.3989	864
257.3989	863
257.3993	863
257.3994	864
257.4728	859
257.4735	859
257.4737	860
257.4747	855
257.4751	855
257.4754	855
257.4756	856
257.4758	855
257.4760	856
257.9033	850
257.9050	851
258.1246	847
258.1254	847
258.1255	847
258.1258	847
258.1262	847
258.1263	847
258.1271	848
258.1272	848
260.6408	852
277.4857	845
277.4938	845
277.4944	845
277.4945	845
277.4950	845
277.4957	845
278.9498	298
295.2613	753
295.2745	753
295.2756	753
303.1868	842
311.5025	833
336.3453	840
336.3458	840
336.3525	840
339.9581	762
340.2668	755
340.2675	755
340.2691	755
340.2692	755
340.2698	755
340.2768	755

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
353.8264	834
354.0485	835
359.1444	777
359.1445	777
359.1461	769
359.1462	769
359.1472	769
359.1478	769
359.1479	769
359.3666	778
359.3700	770
359.7337	793
359.7341	785
359.7341	793
359.7345	785
359.7351	785
359.7352	785
359.7354	785
359.7358	785
359.7360	794
359.7364	786
359.7377	786
359.7959	801
359.7961	809
359.7964	801
359.7968	810
359.7968	801
359.7971	802
359.7973	801
359.8086	817
359.8088	821
359.8090	817
359.8092	822
359.8092	817
359.8093	817
359.8094	818
359.8096	817
359.8121	829
359.8121	825
359.8125	830
359.8125	825
359.8127	825
359.8127	826
359.8252	811
359.8256	811
359.8258	812
359.8259	803
359.8261	803
359.8263	803
359.8264	803
359.8265	804
359.8268	803
359.8270	804
359.8489	795
359.8495	795
359.8497	796

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
359.8499	787
359.8503	787
359.8505	787
359.8506	787
359.8507	788
359.8512	787
359.8514	788
359.9557	779
359.9566	779
359.9569	780
359.9583	771
359.9585	771
359.9590	771
359.9591	771
359.9594	771
359.9597	772
359.9600	771
359.9603	772
360.5710	763
360.5733	764
360.8815	756
360.8827	756
360.8828	756
360.8832	756
360.8838	756
360.8839	756
360.8850	757
360.8851	757
364.3188	765
364.6305	758
388.5021	749
388.5137	749
388.5147	749
388.5148	749
388.5153	749
388.5164	749
388.7358	750
425.1286	746
434.0255	617
434.0453	617
434.0469	617
453.7161	292
453.7207	292
453.7761	292
455.4767	733
473.9695	743
473.9702	743
473.9795	743
496.5846	637
497.0353	626
497.0364	626
497.0388	626
497.0390	626
497.0399	626
497.0496	626
515.9748	734

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
516.2865	735
523.8812	661
523.8813	661
523.8835	649
523.8836	649
523.8851	649
523.8859	649
523.8861	649
523.8862	649
524.1930	662
524.1979	650
524.7075	685
524.7081	685
524.7081	673
524.7087	673
524.7096	673
524.7098	673
524.7100	673
524.7106	673
524.7109	686
524.7115	674
524.7134	674
524.7939	697
524.7941	709
524.7946	697
524.7951	710
524.7951	697
524.7952	697
524.7956	698
524.7958	697
524.8113	721
524.8114	727
524.8118	721
524.8121	721
524.8121	728
524.8122	721
524.8125	722
524.8126	721
524.8348	711
524.8354	711
524.8356	712
524.8359	699
524.8362	699
524.8365	699
524.8367	700
524.8371	699
524.8373	700
524.8698	687
524.8707	687
524.8710	688
524.8713	675
524.8718	675
524.8722	675
524.8723	675
524.8725	676
524.8732	675

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
524.8735	676
525.0286	663
525.0299	663
525.0303	664
525.0322	651
525.0325	651
525.0332	651
525.0335	651
525.0338	651
525.0342	652
525.0348	651
525.0352	652
525.9504	638
525.9521	638
525.9538	639
526.4039	627
526.4057	627
526.4059	627
526.4065	627
526.4074	627
526.4076	627
526.4091	628
526.4093	628
531.2719	640
531.7272	629
536.7380	81
536.9649	81
536.9838	81
536.9864	81
537.0091	81
537.0306	81
540.3829	82
552.4849	167
567.7282	618
567.7457	618
567.7472	618
567.7473	618
567.7480	618
567.7496	618
568.0574	619
568.0590	619
578.5072	754
578.5204	754
578.5215	754
580.6654	836
603.2681	759
603.2686	759
603.2704	759
603.2705	759
603.2709	759
603.2753	759
611.4257	837
611.5893	838
616.7437	781
616.7438	781
616.7454	773

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
616.7455	773
616.7465	773
616.7467	773
616.7471	773
616.7472	773
616.9074	782
616.9108	774
617.1407	797
617.1410	797
617.1411	789
617.1414	789
617.1419	789
617.1420	789
617.1424	789
617.1424	798
617.1427	789
617.1428	790
617.1441	790
617.1782	805
617.1783	813
617.1786	805
617.1788	814
617.1789	805
617.1790	805
617.1791	806
617.1791	805
617.1795	805
617.1851	823
617.1851	819
617.1854	824
617.1855	819
617.1856	819
617.1856	820
617.1857	819
617.1859	819
617.1866	831
617.1867	827
617.1869	832
617.1870	827
617.1871	827
617.1871	828
617.1872	827
617.1998	815
617.2001	815
617.2002	816
617.2004	807
617.2005	807
617.2006	807
617.2008	807
617.2009	808
617.2010	807
617.2013	807
617.2014	808
617.2254	799
617.2258	799
617.2259	800

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
617.2262	791
617.2264	791
617.2266	791
617.2268	791
617.2269	792
617.2271	791
617.2275	791
617.2276	792
617.3380	783
617.3387	783
617.3389	784
617.3404	775
617.3408	775
617.3412	775
617.3414	775
617.3415	775
617.3417	776
617.3421	775
617.3423	776
617.9797	767
617.9797	766
618.2882	760
618.2897	760
618.2898	760
618.2901	760
618.2905	760
618.2906	760
618.2914	761
618.2915	761
620.7155	768
622.5049	613
646.1010	751
646.1130	751
646.1140	751
646.1141	751
646.1142	751
646.1153	751
646.2766	752
675.4599	456
675.4916	456
675.4942	456
681.5253	747
698.4747	608
698.4758	608
698.4890	608
703.9869	594
736.9708	744
736.9713	744
736.9780	744
766.5445	483
766.5461	483
767.2378	468
767.2394	468
767.2433	468
767.2437	468
767.2449	468

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
767.2592	468
794.7646	595
795.2199	596
807.2411	514
807.2413	514
807.2445	498
807.2447	498
807.2470	498
807.2482	498
807.2486	498
807.2488	498
807.6966	515
807.7041	499
808.4490	546
808.4500	530
808.4500	546
808.4510	530
808.4525	530
808.4526	530
808.4531	530
808.4539	547
808.4541	530
808.4549	531
808.4580	531
808.5737	562
808.5740	578
808.5747	562
808.5755	579
808.5756	562
808.5757	562
808.5762	563
808.5767	562
808.6332	580
808.6340	580
808.6344	581
808.6347	564
808.6348	564
808.6352	564
808.6356	564
808.6359	564
808.6360	565
808.6367	564
808.6371	565
808.6874	548
808.6886	548
808.6891	549
808.6896	532
808.6899	532
808.6905	532
808.6911	532
808.6915	532
808.6916	533
808.6927	532
808.6932	533
808.9370	516
808.9389	516

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
808.9395	517
808.9423	500
808.9429	500
808.9439	500
808.9445	500
808.9448	500
808.9454	501
808.9464	500
808.9470	501
810.4056	484
810.4082	484
810.4105	485
811.1015	469
811.1044	469
811.1048	469
811.1058	469
811.1070	469
811.1074	469
811.1093	470
811.1097	470
818.3170	486
819.0158	471
833.8152	736
834.6510	620
834.6708	620
834.6724	620
865.2038	641
865.6549	630
865.6556	630
865.6584	630
865.6586	630
865.6591	630
865.6649	630
876.1391	737
876.3612	738
876.8993	457
876.9275	457
876.9299	457
876.9301	457
876.9310	457
876.9336	457
877.3828	458
877.3854	458
884.0455	665
884.0456	665
884.0478	653
884.0479	653
884.0494	653
884.0495	653
884.0504	653
884.0505	653
884.2677	666
884.2726	654
884.5738	689
884.5742	689
884.5744	677

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
884.5748	677
884.5755	677
884.5757	677
884.5761	690
884.5763	677
884.5767	678
884.5767	677
884.5786	678
884.6221	713
884.6221	701
884.6226	701
884.6228	714
884.6230	701
884.6232	701
884.6233	701
884.6233	702
884.6238	701
884.6305	723
884.6305	729
884.6309	730
884.6311	723
884.6313	724
884.6313	723
884.6317	723
884.6512	715
884.6516	715
884.6518	716
884.6521	703
884.6523	703
884.6525	703
884.6527	703
884.6529	703
884.6529	704
884.6533	703
884.6535	704
884.6890	691
884.6896	691
884.6898	692
884.6902	679
884.6905	679
884.6909	679
884.6911	679
884.6913	680
884.6915	679
884.6921	679
884.6923	680
884.8568	667
884.8577	667
884.8580	668
884.8600	655
884.8607	655
884.8612	655
884.8616	655
884.8617	655
884.8619	656
884.8626	655

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
884.8629	656
885.8167	642
885.8178	642
885.8190	643
886.2696	631
886.2720	631
886.2722	631
886.2726	631
886.2731	631
886.2733	631
886.2743	632
886.2745	632
889.5645	644
890.0198	633
918.9277	160
918.9367	160
919.0470	160
927.8918	621
927.9100	621
927.9115	621
927.9116	621
927.9132	621
928.1321	622
964.2186	451
980.7975	614
1 067.0943	609
1 067.0950	609
1 067.1043	609
1 091.1952	446
1 091.1968	446
1 091.2166	446
1 102.9781	739
1 117.8969	623
1 117.9167	623
1 117.9183	623
1 128.2049	645
1 128.6562	634
1 128.6567	634
1 128.6597	634
1 128.6599	634
1 128.6602	634
1 128.6634	634
1 133.7384	740
1 133.9020	741
1 135.3523	305
1 135.4077	305
1 135.4123	305
1 141.6448	669
1 141.6449	669
1 141.6471	657
1 141.6472	657
1 141.6484	657
1 141.6487	657
1 141.6497	657
1 141.6498	657
1 141.8085	670

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
1 141.8134	658
1 141.9808	693
1 141.9811	693
1 141.9814	681
1 141.9817	681
1 141.9822	681
1 141.9825	694
1 141.9826	681
1 141.9831	682
1 141.9833	681
1 141.9836	681
1 141.9850	682
1 142.0043	717
1 142.0044	705
1 142.0048	718
1 142.0051	705
1 142.0053	706
1 142.0054	705
1 142.0056	705
1 142.0060	705
1 142.0068	731
1 142.0070	725
1 142.0071	732
1 142.0074	725
1 142.0075	726
1 142.0076	725
1 142.0078	725
1 142.0080	725
1 142.0258	719
1 142.0261	719
1 142.0262	720
1 142.0266	707
1 142.0269	707
1 142.0270	707
1 142.0272	707
1 142.0273	708
1 142.0275	707
1 142.0278	707
1 142.0279	708
1 142.0655	695
1 142.0659	695
1 142.0660	696
1 142.0665	683
1 142.0670	683
1 142.0672	683
1 142.0674	683
1 142.0675	684
1 142.0680	683
1 142.0684	683
1 142.0685	684
1 142.2391	671
1 142.2398	671
1 142.2400	672
1 142.2421	659
1 142.2430	659
1 142.2434	659

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
1 142.2437	659
1 142.2439	660
1 142.2440	659
1 142.2447	659
1 142.2449	660
1 143.2237	646
1 143.2254	647
1 143.6763	635
1 143.6790	635
1 143.6792	635
1 143.6795	635
1 143.6798	635
1 143.6800	635
1 143.6807	636
1 143.6809	636
1 145.9612	648
1 172.4067	432
1 185.4907	624
1 185.5093	624
1 185.5105	624
1 185.5108	624
1 185.5109	624
1 185.5121	624
1 185.6729	625
1 237.1942	615
1 259.6558	597
1 268.5847	459
1 268.6164	459
1 268.6190	459
1 274.4530	336
1 274.4556	336
1 275.5815	319
1 275.5841	319
1 275.5910	319
1 275.5916	319
1 275.5936	319
1 275.6158	319
1 305.9424	487
1 306.6346	472
1 306.6357	472
1 306.6401	472
1 306.6405	472
1 306.6412	472
1 306.6489	472
1 317.6095	433
1 318.3083	434
1 320.1539	598
1 320.4656	599
1 330.0956	610
1 330.0961	610
1 330.1028	610
1 332.6305	518
1 332.6306	518
1 332.6339	502
1 332.6340	502
1 332.6363	502

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
1 332.6364	502
1 332.6380	502
1 332.6381	502
1 332.9423	519
1 332.9498	503
1 333.3516	550
1 333.3522	550
1 333.3526	534
1 333.3532	534
1 333.3543	534
1 333.3547	534
1 333.3550	551
1 333.3557	534
1 333.3560	535
1 333.3563	534
1 333.3591	535
1 333.4146	566
1 333.4146	582
1 333.4156	583
1 333.4159	566
1 333.4162	566
1 333.4163	567
1 333.4166	566
1 333.4173	566
1 333.4553	584
1 333.4559	584
1 333.4561	585
1 333.4566	568
1 333.4569	568
1 333.4572	568
1 333.4575	568
1 333.4577	569
1 333.4580	568
1 333.4586	568
1 333.4588	569
1 333.5139	552
1 333.5148	552
1 333.5151	553
1 333.5158	536
1 333.5164	536
1 333.5169	536
1 333.5173	536
1 333.5176	537
1 333.5180	536
1 333.5189	536
1 333.5192	537
1 333.7779	520
1 333.7792	520
1 333.7796	521
1 333.7826	504
1 333.7838	504
1 333.7845	504
1 333.7851	504
1 333.7854	504
1 333.7855	505
1 333.7867	504

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
1 333.7871	505
1 335.3082	488
1 335.3099	488
1 335.3116	489
1 336.0032	473
1 336.0070	473
1 336.0074	473
1 336.0080	473
1 336.0087	473
1 336.0091	473
1 336.0104	474
1 336.0108	474
1 338.9405	372
1 338.9409	372
1 338.9456	352
1 338.9460	352
1 338.9500	352
1 338.9515	352
1 338.9531	352
1 338.9535	352
1 339.6397	373
1 339.6523	353
1 340.6297	490
1 340.8023	412
1 340.8039	412
1 340.8040	392
1 340.8056	392
1 340.8081	392
1 340.8093	392
1 340.8098	413
1 340.8109	392
1 340.8115	393
1 340.8168	393
1 341.1711	414
1 341.1731	414
1 341.1738	415
1 341.1748	394
1 341.1753	394
1 341.1764	394
1 341.1773	394
1 341.1780	395
1 341.1781	394
1 341.1801	394
1 341.1808	395
1 341.3285	475
1 341.5922	374
1 341.5953	374
1 341.5963	375
1 341.6004	354
1 341.6017	354
1 341.6033	354
1 341.6048	354
1 341.6058	355
1 341.6079	354
1 341.6089	355
1 344.1343	337

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
1 344.1384	337
1 344.1418	338
1 344.5350	73
1 345.2669	320
1 345.2723	320
1 345.2729	320
1 345.2745	320
1 345.2764	320
1 345.2770	320
1 345.2798	321
1 345.2804	321
1 356.6185	339
1 357.7565	322
1 402.2874	460
1 402.3168	460
1 402.3191	460
1 402.3193	460
1 402.3194	460
1 402.3217	460
1 402.6285	461
1 402.6311	461
1 459.3097	306
1 459.3596	306
1 459.3638	306
1 459.3642	306
1 459.3651	306
1 459.3697	306
1 460.0584	307
1 460.0630	307
1 486.5313	452
1 611.3960	299
1 630.5920	447
1 630.5931	447
1 630.6063	447
1 637.9943	600
1 669.2102	462
1 669.2419	462
1 669.2445	462
1 674.5616	491
1 675.2542	476
1 675.2549	476
1 675.2597	476
1 675.2601	476
1 675.2604	476
1 675.2642	476
1 680.3182	601
1 680.5403	602
1 692.7948	522
1 692.7949	522
1 692.7982	506
1 692.7983	506
1 692.7999	506
1 692.8007	506
1 692.8023	506
1 692.8024	506
1 693.0170	523

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
1 693.0245	507
1 693.2179	554
1 693.2183	554
1 693.2189	538
1 693.2193	538
1 693.2200	538
1 693.2202	555
1 693.2208	538
1 693.2212	539
1 693.2220	538
1 693.2224	538
1 693.2243	539
1 693.2426	586
1 693.2428	570
1 693.2433	587
1 693.2437	570
1 693.2440	571
1 693.2442	570
1 693.2448	570
1 693.2453	570
1 693.2717	588
1 693.2721	588
1 693.2723	589
1 693.2728	572
1 693.2733	572
1 693.2735	572
1 693.2737	572
1 693.2739	573
1 693.2744	572
1 693.2748	572
1 693.2750	573
1 693.3331	556
1 693.3337	556
1 693.3339	557
1 693.3347	540
1 693.3356	540
1 693.3360	540
1 693.3362	540
1 693.3364	541
1 693.3372	540
1 693.3378	540
1 693.3380	541
1 693.6061	524
1 693.6070	524
1 693.6073	525
1 693.6104	508
1 693.6120	508
1 693.6125	508
1 693.6129	508
1 693.6132	509
1 693.6136	508
1 693.6145	508
1 695.1745	492
1 695.1768	493
1 695.8689	477
1 695.8733	477

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
1 695.8737	477
1 695.8741	477
1 695.8744	477
1 695.8748	477
1 695.8756	478
1 695.8760	478
1 698.9223	494
1 762.4510	463
1 762.4811	463
1 762.4827	463
1 762.4836	463
1 762.4837	463
1 762.4853	463
1 762.7032	464
1 844.8239	453
1 845.7515	293
1 845.7541	293
1 845.7858	293
1 907.1572	603
1 937.9175	604
1 938.0811	605
1 938.2555	479
1 938.2560	479
1 938.2610	479
1 938.2614	479
1 938.2615	479
1 938.2627	479
1 950.3941	526
1 950.3942	526
1 950.3975	510
1 950.3976	510
1 950.3988	510
1 950.4000	510
1 950.4016	510
1 950.4017	510
1 950.5578	527
1 950.5653	511
1 950.6248	590
1 950.6249	558
1 950.6251	574
1 950.6252	558
1 950.6253	591
1 950.6258	574
1 950.6259	542
1 950.6260	575
1 950.6264	574
1 950.6266	559
1 950.6267	542
1 950.6271	574
1 950.6275	574
1 950.6276	543
1 950.6277	542
1 950.6290	542
1 950.6293	542
1 950.6307	543
1 950.6463	592

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
1 950.6466	592
1 950.6467	593
1 950.6473	576
1 950.6479	576
1 950.6480	576
1 950.6482	576
1 950.6483	577
1 950.6490	576
1 950.6493	576
1 950.7096	560
1 950.7100	560
1 950.7101	561
1 950.7110	544
1 950.7121	544
1 950.7123	544
1 950.7125	544
1 950.7126	545
1 950.7137	544
1 950.7141	544
1 950.7142	545
1 950.9884	528
1 950.9891	528
1 950.9893	529
1 950.9925	512
1 950.9943	512

TABLE 13. List of tabulated lines for allowed transitions of He I—Continued

Wave number (cm^{-1})	No.
1 950.9947	512
1 950.9950	512
1 950.9952	513
1 950.9959	512
1 950.9966	512
1 950.9968	513
1 952.4561	465
1 952.4878	465
1 952.4904	465
1 952.5815	495
1 952.5832	496
1 953.2756	480
1 953.2803	480
1 953.2807	480
1 953.2810	480
1 953.2811	480
1 953.2815	480
1 953.2820	481
1 953.2824	481
1 955.3190	497
1 999.2116	448
1 999.2123	448
1 999.2216	448

TABLE 14. He I: Allowed transitions

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
1	$1s^2$-$1s2p$	$^1S-^3P^\circ$										
				591.412	0.0000–169 086.8412	1–3	1.764e−06	2.775e−08	5.403e−08	−7.556 7	AA	8
2	$1s^2$-$1s2p$	$^1S-^1P^\circ$		584.334	0.0000–171 134.8951	1–3	1.7989e+01	2.7625e−01	5.3143e−01	−0.558 69	AAA	6
3	$1s^2$-$1s3p$	$^1S-^1P^\circ$		537.030	0.0000–186 209.3632	1–3	5.6634e+00	7.3460e−02	1.2988e−01	−1.133 95	AAA	6
4	$1s^2$-$1s4p$	$^1S-^1P^\circ$		522.213	0.0000–191 492.7101	1–3	2.4356e+00	2.9873e−02	5.1357e−02	−1.524 72	AAA	6
5	$1s^2$-$1s5p$	$^1S-^1P^\circ$		515.617	0.0000–193 942.4605	1–3	1.2582e+00	1.5045e−02	2.5538e−02	−1.822 62	AAA	6
6	$1s^2$-$1s6p$	$^1S-^1P^\circ$		512.099	0.0000–195 274.9067	1–3	7.3174e−01	8.6306e−03	1.4550e−02	−2.063 96	AAA	6
7	$1s^2$-$1s7p$	$^1S-^1P^\circ$		509.998	0.0000–196 079.0858	1–3	4.6224e−01	5.4073e−03	9.0788e−03	−2.267 02	AAA	6
8	$1s^2$-$1s8p$	$^1S-^1P^\circ$		508.643	0.0000–196 601.3985	1–3	3.1031e−01	3.6108e−03	6.0463e−03	−2.442 40	AAA	6
9	$1s^2$-$1s9p$	$^1S-^1P^\circ$		507.718	0.0000–196 959.6911	1–3	2.1826e−01	2.5304e−03	4.2296e−03	−2.596 80	AAA	6
10	$1s^2$-$1s10p$	$^1S-^1P^\circ$		507.058	0.0000–197 216.0878	1–3	1.5929e−01	1.8420e−03	3.0748e−03	−2.734 72	AAA	6
11	$1s2s$-$1s2p$	$^3S-^3P^\circ$	*10 830.17*	*9 230.936* cm^{-1}	*159 855.9726–169 086.909*	3–9	1.0216e−01	5.3922e−01	5.7692e+01	0.208 89	AAA	6
			10 830.340	9 230.7921 cm^{-1}	159 855.9726–169 086.7647	3–5	1.0216e−01	2.9958e−01	3.2053e+01	−0.046 37	AAA	6
			10 830.250	9 230.8686 cm^{-1}	159 855.9726–169 086.8412	3–3	1.0216e−01	1.7974e−01	1.9231e+01	−0.268 23	AAA	6
			10 829.091	9 231.8565 cm^{-1}	159 855.9726–169 087.8291	3–1	1.0216e−01	5.9902e−02	6.4084e+00	−0.745 44	AAA	6
12	$1s2s$-$1s2p$	$^3S-^1P^\circ$										
			8 863.661	8 866.095	159 855.9726–171 134.8951	3–3	1.442e−08	1.700e−08	1.488e−06	−7.292 5	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
13	$1s2s$-$1s3p$	$^3S-^3P^\circ$	*3 888.64*	*3 889.74*	*159 855.9726–185 564.600*	3–9	9.4746e−02	6.4474e−02	2.4769e+00	−0.713 50	AAA	6
			3 888.649	3 889.751	159 855.9726–185 564.5602	3–5	9.4746e−02	3.5819e−02	1.3760e+00	−0.968 77	AAA	6
			3 888.646	3 889.748	159 855.9726–185 564.5817	3–3	9.4746e−02	2.1491e−02	8.2562e−01	−1.190 62	AAA	6
			3 888.605	3 889.707	159 855.9726–185 564.8528	3–1	9.4746e−02	7.1636e−03	2.7520e−01	−1.667 75	AAA	6
14	$1s2s$-$1s4p$	$^3S-^3P^\circ$	*3 187.74*	*3 188.67*	*159 855.9726–191 217.056*	3–9	5.6361e−02	2.5774e−02	8.1167e−01	−1.111 70	AAA	6
			3 187.745	3 188.667	159 855.9726–191 217.0392	3–5	5.6361e−02	1.4319e−02	4.5093e−01	−1.366 98	AAA	6
			3 187.744	3 188.666	159 855.9726–191 217.0482	3–3	5.6361e−02	8.5912e−03	2.7056e−01	−1.588 83	AAA	6
			3 187.733	3 188.655	159 855.9726–191 217.1585	3–1	5.6361e−02	2.8637e−03	9.0185e−02	−2.065 95	AAA	6
15	$1s2s$-$1s5p$	$^3S-^3P^\circ$	*2 945.10*	*2 945.96*	*159 855.9726–193 800.714*	3–9	3.2006e−02	1.2493e−02	3.6349e−01	−1.426 21	AAA	6
			2 945.104	2 945.965	159 855.9726–193 800.7058	3–5	3.2006e−02	6.9405e−03	2.0194e−01	−1.681 49	AAA	6
			2 945.104	2 945.965	159 855.9726–193 800.7104	3–3	3.2006e−02	4.1643e−03	1.2116e−01	−1.903 34	AAA	6
			2 945.099	2 945.960	159 855.9726–193 800.7658	3–1	3.2006e−02	1.3881e−03	4.0387e−02	−2.380 46	AAA	6
16	$1s2s$-$1s6p$	$^3S-^3P^\circ$	*2 829.08*	*2 829.91*	*159 855.9726–195 192.746*	3–9	1.9389e−02	6.9836e−03	1.9519e−01	−1.678 80	AAA	6
			2 829.081	2 829.914	159 855.9726–195 192.7412	3–5	1.9389e−02	3.8798e−03	1.0844e−01	−1.934 07	AAA	6
			2 829.081	2 829.913	159 855.9726–195 192.7438	3–3	1.9389e−02	2.3279e−03	6.5062e−02	−2.155 92	AAA	6
			2 829.078	2 829.911	159 855.9726–195 192.7755	3–1	1.9389e−02	7.7595e−04	2.1687e−02	−2.633 04	AAA	6
17	$1s2s$-$1s7p$	$^3S-^3P^\circ$	*2 763.80*	*2 764.62*	*159 855.9726–196 027.316*	3–9	1.2508e−02	4.2997e−03	1.1740e−01	−1.889 44	AAA	6
			2 763.803	2 764.620	159 855.9726–196 027.3133	3–5	1.2508e−02	2.3887e−03	6.5222e−02	−2.144 71	AAA	6
			2 763.803	2 764.620	159 855.9726–196 027.3149	3–3	1.2508e−02	1.4332e−03	3.9133e−02	−2.366 56	AAA	6
			2 763.802	2 764.618	159 855.9726–196 027.3347	3–1	1.2508e−02	4.7774e−04	1.3044e−02	−2.843 69	AAA	6
18	$1s2s$-$1s8p$	$^3S-^3P^\circ$	*2 723.19*	*2 724.00*	*159 855.9726–196 566.712*	3–9	8.4996e−03	2.8365e−03	7.6312e−02	−2.070 09	AAA	6
			2 723.192	2 723.999	159 855.9726–196 566.7101	3–5	8.4996e−03	1.5759e−03	4.2396e−02	−2.325 36	AAA	6
			2 723.192	2 723.999	159 855.9726–196 566.7112	3–3	8.4996e−03	9.4552e−04	2.5437e−02	−2.547 21	AAA	6
			2 723.191	2 723.998	159 855.9726–196 566.7244	3–1	8.4996e−03	3.1517e−04	8.4791e−03	−3.024 33	AAA	6
19	$1s2s$-$1s9p$	$^3S-^3P^\circ$	*2 696.12*	*2 696.92*	*159 855.9726–196 935.331*	3–9	6.0234e−03	1.9704e−03	5.2483e−02	−2.228 32	AAA	6
			2 696.118	2 696.918	159 855.9726–196 935.3297	3–5	6.0234e−03	1.0947e−03	2.9157e−02	−2.483 60	AAA	6
			2 696.118	2 696.918	159 855.9726–196 935.3304	3–3	6.0234e−03	6.5680e−04	1.7494e−02	−2.705 44	AAA	6
			2 696.118	2 696.918	159 855.9726–196 935.3397	3–1	6.0234e−03	2.1893e−04	5.8315e−03	−3.182 57	AAA	6
20	$1s2s$-$1s10p$	$^3S-^3P^\circ$	*2 677.13*	*2 677.92*	*159 855.9726–197 198.332*	3–9	4.4174e−03	1.4248e−03	3.7682e−02	−2.369 14	AAA	6
			2 677.129	2 677.924	159 855.9726–197 198.3310	3–5	4.4174e−03	7.9153e−04	2.0935e−02	−2.624 41	AAA	6
			2 677.129	2 677.924	159 855.9726–197 198.3315	3–3	4.4174e−03	4.7492e−04	1.2561e−02	−2.846 26	AAA	6
			2 677.128	2 677.924	159 855.9726–197 198.3382	3–1	4.4174e−03	1.5831e−04	4.1869e−03	−3.323 38	AAA	6
21	$1s2s$-$1s2p$	$^1S-^3P^\circ$										
			35 585.049	2 809.4028 cm^{-1}	166 277.4384–169 086.8412	1–3	2.966e−10	1.690e−08	1.980e−06	−7.772 1	AA	6
22	$1s2s$-$1s2p$	$^1S-^1P^\circ$	20 581.287	4 857.4567 cm^{-1}	166 277.4384–171 134.8951	1–3	1.9746e−02	3.7639e−01	2.5510e+01	−0.424 36	AAA	6
23	$1s2s$-$1s3p$	$^1S-^1P^\circ$	5 015.678	5 017.077	166 277.4384–186 209.3632	1–3	1.3372e−01	1.5138e−01	2.5004e+00	−0.819 92	AAA	6
24	$1s2s$-$1s4p$	$^1S-^1P^\circ$	3 964.729	3 965.851	166 277.4384–191 492.7101	1–3	6.9507e−02	4.9168e−02	6.4194e−01	−1.308 32	AAA	6
25	$1s2s$-$1s5p$	$^1S-^1P^\circ$	3 613.642	3 614.673	166 277.4384–193 942.4605	1–3	3.8022e−02	2.2343e−02	2.6589e−01	−1.650 85	AAA	6
26	$1s2s$-$1s6p$	$^1S-^1P^\circ$	3 447.589	3 448.577	166 277.4384–195 274.9067	1–3	2.2691e−02	1.2137e−02	1.3779e−01	−1.915 89	AAA	6
27	$1s2s$-$1s7p$	$^1S-^1P^\circ$	3 354.555	3 355.519	166 277.4384–196 079.0858	1–3	1.4537e−02	7.3616e−03	8.1322e−02	−2.133 03	AAA	6
28	$1s2s$-$1s8p$	$^1S-^1P^\circ$	3 296.773	3 297.722	166 277.4384–196 601.3985	1–3	9.8432e−03	4.8144e−03	5.2268e−02	−2.317 46	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
29	$1s2s$-$1s9p$	$^1S-{}^1P^\circ$	3 258.273	3 259.213	166 277.4384–196 959.6911	1–3	6.9627e−03	3.3265e−03	3.5692e−02	−2.478 02	AAA	6
30	$1s2s$-$1s10p$	$^1S-{}^1P^\circ$	3 231.270	3 232.203	166 277.4384–197 216.0878	1–3	5.1015e−03	2.3970e−03	2.5506e−02	−2.620 33	AAA	6
31	$1s2p$-$1s3s$	$^3P^\circ-{}^3S$	*7 065.25*	*7 067.20*	*169 086.909–183 236.7905*	9–3	2.7853e−01	6.9519e−02	1.4557e+01	−0.203 65	AAA	6
			7 065.177	7 067.125	169 086.7647–183 236.7905	5–3	1.5474e−01	6.9518e−02	8.0870e+00	−0.458 93	AAA	6
			7 065.215	7 067.163	169 086.8412–183 236.7905	3–3	9.2844e−02	6.9519e−02	4.8523e+00	−0.680 78	AAA	6
			7 065.708	7 067.657	169 087.8291–183 236.7905	1–3	3.0948e−02	6.9528e−02	1.6178e+00	−1.157 84	AAA	6
32	$1s2p$-$1s3d$	$^3P^\circ-{}^3D$	*5 875.66*	*5 877.29*	*169 086.909–186 101.554*	9–15	7.0703e−01	6.1023e−01	1.0627e+02	0.739 74	AAA	6
			5 875.615	5 877.243	169 086.7647–186 101.5440	5–7	7.0708e−01	5.1263e−01	4.9593e+01	0.408 77	AAA	6
			5 875.640	5 877.269	169 086.8412–186 101.5466	3–5	5.3019e−01	4.5760e−01	2.6562e+01	0.137 61	AAA	6
			5 875.966	5 877.595	169 087.8291–186 101.5908	1–3	3.9282e−01	6.1034e−01	1.1810e+01	−0.214 43	AAA	6
			5 875.614	5 877.243	169 086.7647–186 101.5466	5–5	1.7673e−01	9.1520e−02	8.8539e+00	−0.339 52	AAA	6
			5 875.625	5 877.254	169 086.8412–186 101.5908	3–3	2.9462e−01	1.5257e−01	8.8560e+00	−0.339 41	AAA	6
			5 875.599	5 877.227	169 086.7647–186 101.5908	5–3	1.9641e−02	6.1026e−03	5.9038e−01	−1.515 51	AAA	6
33	$1s2p$-$1s3d$	$^3P^\circ-{}^1D$										
			5 874.434	5 876.062	169 086.7647–186 104.9646	5–5	4.310e−05	2.231e−05	2.158e−03	−3.952 6	AA	6
			5 874.460	5 876.089	169 086.8412–186 104.9646	3–5	1.232e−04	1.063e−04	6.170e−03	−3.496 2	AA	6
34	$1s2p$-$1s4s$	$^3P^\circ-{}^3S$	*4 713.17*	*4 714.49*	*169 086.909–190 298.1115*	9–3	9.5209e−02	1.0575e−02	1.4772e+00	−1.021 47	AAA	6
			4 713.139	4 714.458	169 086.7647–190 298.1115	5–3	5.2894e−02	1.0575e−02	8.2065e−01	−1.276 75	AAA	6
			4 713.156	4 714.475	169 086.8412–190 298.1115	3–3	3.1736e−02	1.0575e−02	4.9239e−01	−1.498 60	AAA	6
			4 713.376	4 714.694	169 087.8291–190 298.1115	1–3	1.0579e−02	1.0576e−02	1.6416e−01	−1.975 67	AAA	6
35	$1s2p$-$1s4d$	$^3P^\circ-{}^3D$	*4 471.50*	*4 472.76*	*169 086.909–191 444.484*	9–15	2.4578e−01	1.2286e−01	1.6282e+01	0.043 64	AAA	6
			4 471.474	4 472.729	169 086.7647–191 444.4792	5–7	2.4579e−01	1.0320e−01	7.5982e+00	−0.287 34	AAA	6
			4 471.489	4 472.744	169 086.8412–191 444.4804	3–5	1.8432e−01	9.2135e−02	4.0700e+00	−0.558 45	AAA	6
			4 471.683	4 472.938	169 087.8291–191 444.4989	1–3	1.3655e−01	1.2287e−01	1.8094e+00	−0.910 54	AAA	6
			4 471.474	4 472.729	169 086.7647–191 444.4804	5–5	6.1440e−02	1.8427e−02	1.3567e+00	−1.035 58	AAA	6
			4 471.486	4 472.740	169 086.8412–191 444.4989	3–3	1.0241e−01	3.0715e−02	1.3568e+00	−1.035 53	AAA	6
			4 471.470	4 472.725	169 086.7647–191 444.4989	5–3	6.8275e−03	1.2286e−03	9.0455e−02	−2.211 62	AAA	6
36	$1s2p$-$1s5s$	$^3P^\circ-{}^3S$	*4 120.84*	*4 122.00*	*169 086.909–193 346.9897*	9–3	4.4529e−02	3.7809e−03	4.6176e−01	−1.468 17	AAA	6
			4 120.811	4 121.973	169 086.7647–193 346.9897	5–3	2.4738e−02	3.7808e−03	2.5653e−01	−1.723 45	AAA	6
			4 120.824	4 121.986	169 086.8412–193 346.9897	3–3	1.4843e−02	3.7809e−03	1.5392e−01	−1.945 29	AAA	6
			4 120.992	4 122.154	169 087.8291–193 346.9897	1–3	4.9476e−03	3.7811e−03	5.1312e−02	−2.422 38	AAA	6
37	$1s2p$-$1s5d$	$^3P^\circ-{}^3D$	*4 026.21*	*4 027.35*	*169 086.909–193 917.152*	9–15	1.1600e−01	4.7013e−02	5.6099e+00	−0.373 54	AAA	6
			4 026.186	4 027.324	169 086.7647–193 917.1496	5–7	1.1601e−01	3.9492e−02	2.6180e+00	−0.704 52	AAA	6
			4 026.198	4 027.336	169 086.8412–193 917.1502	3–5	8.6997e−02	3.5257e−02	1.4024e+00	−0.975 63	AAA	6
			4 026.357	4 027.495	169 087.8291–193 917.1597	1–3	6.4448e−02	4.7017e−02	6.2340e−01	−1.327 74	AAA	6
			4 026.186	4 027.324	169 086.7647–193 917.1502	5–5	2.8999e−02	7.0514e−03	4.6745e−01	−1.452 76	AAA	6
			4 026.197	4 027.335	169 086.8412–193 917.1597	3–3	4.8336e−02	1.1753e−02	4.6750e−01	−1.452 72	AAA	6
			4 026.184	4 027.322	169 086.7647–193 917.1597	5–3	3.2224e−03	4.7013e−04	3.1166e−02	−2.628 81	AAA	6
38	$1s2p$-$1s6s$	$^3P^\circ-{}^3S$	*3 867.49*	*3 868.59*	*169 086.909–194 936.1181*	9–3	2.4466e−02	1.8298e−03	2.0973e−01	−1.783 36	AAA	6
			3 867.472	3 868.569	169 086.7647–194 936.1181	5–3	1.3592e−02	1.8298e−03	1.1652e−01	−2.038 64	AAA	6
			3 867.484	3 868.580	169 086.8412–194 936.1181	3–3	8.1551e−03	1.8297e−03	6.9910e−02	−2.260 49	AAA	6
			3 867.632	3 868.728	169 087.8291–194 936.1181	1–3	2.7184e−03	1.8299e−03	2.3306e−02	−2.737 57	AAA	6
39	$1s2p$-$1s6d$	$^3P^\circ-{}^3D$	*3 819.62*	*3 820.71*	*169 086.909–195 260.071*	9–15	6.4351e−02	2.3472e−02	2.6571e+00	−0.675 21	AAA	6
			3 819.603	3 820.687	169 086.7647–195 260.0696	5–7	6.4353e−02	1.9717e−02	1.2400e+00	−1.006 19	AAA	6
			3 819.614	3 820.698	169 086.8412–195 260.0700	3–5	4.8261e−02	1.7603e−02	6.6424e−01	−1.277 29	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			3 819.757	3 820.841	169 087.8291–195 260.0755	1–3	3.5752e−02	2.3474e−02	2.9528e−01	−1.629 40	AAA	6
			3 819.603	3 820.687	169 086.7647–195 260.0700	5–5	1.6087e−02	3.5206e−03	2.2141e−01	−1.754 42	AAA	6
			3 819.613	3 820.697	169 086.8412–195 260.0755	3–3	2.6814e−02	5.8682e−03	2.2143e−01	−1.754 38	AAA	6
			3 819.602	3 820.686	169 086.7647–195 260.0755	5–3	1.7876e−03	2.3473e−04	1.4762e−02	−2.930 47	AAA	6
40	1*s*2*p*-1*s*7*s*	$^3P^\circ-{}^3S$	*3 732.88*	*3 733.94*	*169 086.909–195 868.2354*	9–3	1.4895e−02	1.0378e−03	1.1481e−01	−2.029 65	AAA	6
			3 732.863	3 733.925	169 086.7647–195 868.2354	5–3	8.2750e−03	1.0378e−03	6.3785e−02	−2.284 92	AAA	6
			3 732.874	3 733.936	169 086.8412–195 868.2354	3–3	4.9650e−03	1.0378e−03	3.8271e−02	−2.506 77	AAA	6
			3 733.012	3 734.073	169 087.8291–195 868.2354	1–3	1.6550e−03	1.0379e−03	1.2759e−02	−2.983 86	AAA	6
41	1*s*2*p*-1*s*7*d*	$^3P^\circ-{}^3D$	*3 705.02*	*3 706.07*	*169 086.909–196 069.672*	9–15	3.9528e−02	1.3565e−02	1.4896e+00	−0.913 32	AAA	6
			3 704.996	3 706.050	169 086.7647–196 069.6711	5–7	3.9529e−02	1.1395e−02	6.9515e−01	−1.244 31	AAA	6
			3 705.006	3 706.060	169 086.8412–196 069.6713	3–5	2.9644e−02	1.0173e−02	3.7237e−01	−1.515 41	AAA	6
			3 705.141	3 706.196	169 087.8291–196 069.6748	1–3	2.1961e−02	1.3567e−02	1.6554e−01	−1.867 51	AAA	6
			3 704.996	3 706.050	169 086.7647–196 069.6713	5–5	9.8814e−03	2.0347e−03	1.2412e−01	−1.992 53	AAA	6
			3 705.006	3 706.060	169 086.8412–196 069.6748	3–3	1.6470e−02	3.3914e−03	1.2413e−01	−1.992 50	AAA	6
			3 704.995	3 706.049	169 086.7647–196 069.6748	5–3	1.0980e−03	1.3565e−04	8.2754e−03	−3.168 60	AAA	6
42	1*s*2*p*-1*s*8*s*	$^3P^\circ-{}^3S$	*3 652.00*	*3 653.04*	*169 086.909–196 461.3602*	9–3	9.7444e−03	6.4983e−04	7.0335e−02	−2.232 96	AAA	6
			3 651.981	3 653.022	169 086.7647–196 461.3602	5–3	5.4136e−03	6.4983e−04	3.9075e−02	−2.488 23	AAA	6
			3 651.992	3 653.032	169 086.8412–196 461.3602	3–3	3.2481e−03	6.4982e−04	2.3445e−02	−2.710 09	AAA	6
			3 652.123	3 653.164	169 087.8291–196 461.3602	1–3	1.0827e−03	6.4987e−04	7.8157e−03	−3.187 18	AAA	6
43	1*s*2*p*-1*s*8*d*	$^3P^\circ-{}^3D$	*3 634.25*	*3 635.29*	*169 086.909–196 595.061*	9–15	2.6062e−02	8.6058e−03	9.2694e−01	−1.110 96	AAA	6
			3 634.231	3 635.267	169 086.7647–196 595.0605	5–7	2.6063e−02	7.2291e−03	4.3258e−01	−1.441 95	AAA	6
			3 634.241	3 635.277	169 086.8412–196 595.0606	3–5	1.9546e−02	6.4541e−03	2.3173e−01	−1.713 04	AAA	6
			3 634.371	3 635.407	169 087.8291–196 595.0629	1–3	1.4479e−02	8.6064e−03	1.0300e−01	−2.065 18	AAA	6
			3 634.231	3 635.267	169 086.7647–196 595.0606	5–5	6.5151e−03	1.2908e−03	7.7238e−02	−2.190 18	AAA	6
			3 634.241	3 635.277	169 086.8412–196 595.0629	3–3	1.0859e−02	2.1514e−03	7.7243e−02	−2.190 16	AAA	6
			3 634.231	3 635.267	169 086.7647–196 595.0629	5–3	7.2396e−04	8.6059e−05	5.1496e−03	−3.366 23	AAA	6
44	1*s*2*p*-1*s*9*s*	$^3P^\circ-{}^3S$	*3 599.32*	*3 600.35*	*169 086.909–196 861.9857*	9–3	6.7245e−03	4.3559e−04	4.6467e−02	−2.406 67	AAA	6
			3 599.304	3 600.331	169 086.7647–196 861.9857	5–3	3.7358e−03	4.3559e−04	2.5815e−02	−2.661 95	AAA	6
			3 599.314	3 600.341	169 086.8412–196 861.9857	3–3	2.2415e−03	4.3559e−04	1.5489e−02	−2.883 80	AAA	6
			3 599.442	3 600.469	169 087.8291–196 861.9857	1–3	7.4716e−04	4.3562e−04	5.1635e−03	−3.360 89	AAA	6
45	1*s*2*p*-1*s*9*d*	$^3P^\circ-{}^3D$	*3 587.28*	*3 588.30*	*169 086.909–196 955.225*	9–15	1.8107e−02	5.8255e−03	6.1935e−01	−1.280 43	AAA	6
			3 587.262	3 588.286	169 086.7647–196 955.2248	5–7	1.8107e−02	4.8933e−03	2.8903e−01	−1.611 42	AAA	6
			3 587.272	3 588.296	169 086.8412–196 955.2249	3–5	1.3580e−02	4.3690e−03	1.5483e−01	−1.882 50	AAA	6
			3 587.399	3 588.423	169 087.8291–196 955.2265	1–3	1.0060e−02	5.8262e−03	6.8828e−02	−2.234 62	AAA	6
			3 587.262	3 588.286	169 086.7647–196 955.2249	5–5	4.5265e−03	8.7376e−04	5.1609e−02	−2.359 64	AAA	6
			3 587.272	3 588.295	169 086.8412–196 955.2265	3–3	7.5448e−03	1.4564e−03	5.1614e−02	−2.359 60	AAA	6
			3 587.262	3 588.286	169 086.7647–196 955.2265	5–3	5.0298e−04	5.8255e−05	3.4409e−03	−3.535 70	AAA	6
46	1*s*2*p*-1*s*10*s*	$^3P^\circ-{}^3S$	*3 562.99*	*3 564.00*	*169 086.909–197 145.2316*	9–3	4.8363e−03	3.0699e−04	3.2417e−02	−2.558 64	AAA	6
			3 562.969	3 563.987	169 086.7647–197 145.2316	5–3	2.6868e−03	3.0698e−04	1.8009e−02	−2.813 91	AAA	6
			3 562.979	3 563.996	169 086.8412–197 145.2316	3–3	1.6121e−03	3.0699e−04	1.0806e−02	−3.035 76	AAA	6
			3 563.104	3 564.122	169 087.8291–197 145.2316	1–3	5.3735e−04	3.0700e−04	3.6022e−03	−3.512 86	AAA	6
47	1*s*2*p*-1*s*10*d*	$^3P^\circ-{}^3D$	*3 554.42*	*3 555.44*	*169 086.909–197 212.824*	9–15	7.5971e−03	2.3996e−03	2.5279e−01	−1.665 61	AAA	6
			3 554.406	3 555.422	169 086.7647–197 212.8241	5–7	1.3099e−03	3.4754e−04	2.0340e−02	−2.760 02	AAA	6
			3 554.416	3 555.431	169 086.8412–197 212.8242	3–5	9.8235e−03	3.1028e−03	1.0895e−01	−2.031 12	AAA	6
			3 554.541	3 555.556	169 087.8291–197 212.8254	1–3	7.2772e−03	4.1377e−03	4.8433e−02	−2.383 24	AAA	6
			3 554.406	3 555.422	169 086.7647–197 212.8242	5–5	3.2745e−03	6.2056e−04	3.6318e−02	−2.508 25	AAA	6
			3 554.416	3 555.431	169 086.8412–197 212.8254	3–3	5.4579e−03	1.0343e−03	3.6321e−02	−2.508 21	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			3 554.406	3 555.421	169 086.7647–197 212.8254	5–3	3.6386e−04	4.1374e−05	2.4214e−03	−3.684 31	AAA	6
48	1*s*2*p*-1*s*3*s*	$^1P^\circ-{}^1S$	7 281.350	7 283.357	171 134.8951–184 864.8282	3–1	1.8299e−01	4.8509e−02	3.4894e+00	−0.837 05	AAA	6
49	1*s*2*p*-1*s*3*d*	$^1P^\circ-{}^3D$										
			6 679.677	6 681.521	171 134.8951–186 101.5466	3–5	1.510e−04	1.684e−04	1.112e−02	−3.296 4	AA	6
50	1*s*2*p*-1*s*3*d*	$^1P^\circ-{}^1D$	6 678.152	6 679.996	171 134.8951–186 104.9646	3–5	6.3705e−01	7.1028e−01	4.6860e+01	0.328 55	AAA	6
51	1*s*2*p*-1*s*4*s*	$^1P^\circ-{}^1S$	5 047.738	5 049.146	171 134.8951–190 940.2252	3–1	6.7712e−02	8.6265e−03	4.3018e−01	−1.587 04	AAA	6
52	1*s*2*p*-1*s*4*d*	$^1P^\circ-{}^1D$	4 921.931	4 923.305	171 134.8951–191 446.4540	3–5	1.9863e−01	1.2030e−01	5.8495e+00	−0.442 61	AAA	6
53	1*s*2*p*-1*s*5*s*	$^1P^\circ-{}^1S$	4 437.553	4 438.799	171 134.8951–193 663.5107	3–1	3.2689e−02	3.2186e−03	1.4110e−01	−2.015 21	AAA	6
54	1*s*2*p*-1*s*5*d*	$^1P^\circ-{}^1D$	4 387.929	4 389.162	171 134.8951–193 918.2882	3–5	8.9889e−02	4.3269e−02	1.8757e+00	−0.886 70	AAA	6
55	1*s*2*p*-1*s*6*s*	$^1P^\circ-{}^1S$	4 168.971	4 170.147	171 134.8951–195 114.8672	3–1	1.8298e−02	1.5902e−03	6.5492e−02	−2.321 44	AAA	6
56	1*s*2*p*-1*s*6*d*	$^1P^\circ-{}^1D$	4 143.759	4 144.928	171 134.8951–195 260.7688	3–5	4.8812e−02	2.0954e−02	8.5779e−01	−1.201 61	AAA	6
57	1*s*2*p*-1*s*7*s*	$^1P^\circ-{}^1S$	4 023.980	4 025.117	171 134.8951–195 978.8936	3–1	1.1281e−02	9.1336e−04	3.6309e−02	−2.562 24	AAA	6
58	1*s*2*p*-1*s*7*d*	$^1P^\circ-{}^1D$	4 009.256	4 010.390	171 134.8951–196 070.1266	3–5	2.9612e−02	1.1900e−02	4.7134e−01	−1.447 33	AAA	6
59	1*s*2*p*-1*s*8*s*	$^1P^\circ-{}^1S$	3 935.945	3 937.059	171 134.8951–196 534.5625	3–1	7.4475e−03	5.7689e−04	2.2432e−02	−2.761 79	AAA	6
60	1*s*2*p*-1*s*8*d*	$^1P^\circ-{}^1D$	3 926.544	3 927.656	171 134.8951–196 595.3723	3–5	1.9371e−02	7.4666e−03	2.8964e−01	−1.649 75	AAA	6
61	1*s*2*p*-1*s*9*s*	$^1P^\circ-{}^1S$	3 878.177	3 879.276	171 134.8951–196 912.9010	3–1	5.1753e−03	3.8920e−04	1.4911e−02	−2.932 71	AAA	6
62	1*s*2*p*-1*s*9*d*	$^1P^\circ-{}^1D$	3 871.786	3 872.884	171 134.8951–196 955.4470	3–5	1.3386e−02	5.0168e−03	1.9189e−01	−1.822 45	AAA	6
63	1*s*2*p*-1*s*10*s*	$^1P^\circ-{}^1S$	3 838.100	3 839.189	171 134.8951–197 182.0639	3–1	3.7425e−03	2.7566e−04	1.0452e−02	−3.082 50	AAA	6
64	1*s*2*p*-1*s*10*d*	$^1P^\circ-{}^1D$	3 833.549	3 834.636	171 134.8951–197 212.9878	3–5	9.6470e−03	3.5444e−03	1.3424e−01	−1.973 33	AAA	6
65	1*s*3*s*-1*s*3*p*	$^3S-{}^3P^\circ$	*42 947.13*	*2 327.809* cm^{-1}	*183 236.7905–185 564.600*	3–9	1.0736e−02	8.9110e−01	3.7807e+02	0.427 05	AAA	6
			42 947.865	2 327.7697 cm^{-1}	183 236.7905–185 564.5602	3–5	1.0736e−02	4.9507e−01	2.1005e+02	0.171 79	AAA	6
			42 947.468	2 327.7912 cm^{-1}	183 236.7905–185 564.5817	3–3	1.0736e−02	2.9704e−01	1.2603e+02	−0.050 07	AAA	6
			42 942.467	2 328.0623 cm^{-1}	183 236.7905–185 564.8528	3–1	1.0736e−02	9.8989e−02	4.1994e+01	−0.527 29	AAA	6
66	1*s*3*s*-1*s*4*p*	$^3S-{}^3P^\circ$	*12 527.48*	*7 980.265* cm^{-1}	*183 236.7905–191 217.056*	3–9	7.0932e−03	5.0094e−02	6.1996e+00	−0.823 09	AAA	6
			12 527.510	7 980.2487 cm^{-1}	183 236.7905–191 217.0392	3–5	7.0932e−03	2.7830e−02	3.4443e+00	−1.078 36	AAA	6
			12 527.496	7 980.2577 cm^{-1}	183 236.7905–191 217.0482	3–3	7.0932e−03	1.6698e−02	2.0665e+00	−1.300 21	AAA	6
			12 527.323	7 980.3680 cm^{-1}	183 236.7905–191 217.1585	3–1	7.0932e−03	5.5659e−03	6.8882e−01	−1.777 35	AAA	6
67	1*s*3*s*-1*s*5*p*	$^3S-{}^3P^\circ$	*9 463.58*	*9 466.18*	*183 236.7905–193 800.714*	3–9	5.6868e−03	2.2919e−02	2.1427e+00	−1.162 68	AAA	6
			9 463.591	9 466.187	183 236.7905–193 800.7058	3–5	5.6868e−03	1.2733e−02	1.1904e+00	−1.417 96	AAA	6
			9 463.587	9 466.183	183 236.7905–193 800.7104	3–3	5.6868e−03	7.6397e−03	7.1424e−01	−1.639 80	AAA	6
			9 463.537	9 466.133	183 236.7905–193 800.7658	3–1	5.6868e−03	2.5465e−03	2.3808e−01	−2.116 93	AAA	6
68	1*s*3*s*-1*s*6*p*	$^3S-{}^3P^\circ$	*8 361.73*	*8 364.03*	*183 236.7905–195 192.746*	3–9	3.8126e−03	1.1996e−02	9.9093e−01	−1.443 85	AAA	6
			8 361.738	8 364.036	183 236.7905–195 192.7412	3–5	3.8126e−03	6.6644e−03	5.5052e−01	−1.699 12	AAA	6
			8 361.736	8 364.034	183 236.7905–195 192.7438	3–3	3.8126e−03	3.9986e−03	3.3031e−01	−1.920 97	AAA	6
			8 361.714	8 364.012	183 236.7905–195 192.7755	3–1	3.8126e−03	1.3329e−03	1.1010e−01	−2.398 09	AAA	6
69	1*s*3*s*-1*s*7*p*	$^3S-{}^3P^\circ$	*7 816.14*	*7 818.29*	*183 236.7905–196 027.316*	3–9	2.5748e−03	7.0786e−03	5.4658e−01	−1.672 93	AAA	6
			7 816.138	7 818.289	183 236.7905–196 027.3133	3–5	2.5748e−03	3.9325e−03	3.0366e−01	−1.928 21	AAA	6
			7 816.137	7 818.288	183 236.7905–196 027.3149	3–3	2.5748e−03	2.3595e−03	1.8219e−01	−2.150 06	AAA	6
			7 816.125	7 818.276	183 236.7905–196 027.3347	3–1	2.5748e−03	7.8650e−04	6.0731e−02	−2.627 18	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
70	1*s*3*s*-1*s*8*p*	$^3S-^3P^\circ$	*7 499.85*	*7 501.92*	*183 236.7905–196 566.712*	3–9	1.7942e−03	4.5414e−03	3.3648e−01	−1.865 68	AAA	6
			7 499.855	7 501.921	183 236.7905–196 566.7101	3–5	1.7942e−03	2.5230e−03	1.8694e−01	−2.120 96	AAA	6
			7 499.855	7 501.920	183 236.7905–196 566.7112	3–3	1.7942e−03	1.5138e−03	1.1216e−01	−2.342 81	AAA	6
			7 499.847	7 501.913	183 236.7905–196 566.7244	3–1	1.7942e−03	5.0460e−04	3.7387e−02	−2.819 93	AAA	6
71	1*s*3*s*-1*s*9*p*	$^3S-^3P^\circ$	*7 298.04*	*7 300.05*	*183 236.7905–196 935.331*	3–9	1.2913e−03	3.0950e−03	2.2314e−01	−2.032 22	AAA	6
			7 298.038	7 300.048	183 236.7905–196 935.3297	3–5	1.2913e−03	1.7194e−03	1.2397e−01	−2.287 49	AAA	6
			7 298.037	7 300.048	183 236.7905–196 935.3304	3–3	1.2913e−03	1.0317e−03	7.4380e−02	−2.509 34	AAA	6
			7 298.032	7 300.043	183 236.7905–196 935.3397	3–1	1.2913e−03	3.4389e−04	2.4793e−02	−2.986 47	AAA	6
72	1*s*3*s*-1*s*10*p*	$^3S-^3P^\circ$	*7 160.56*	*7 162.53*	*183 236.7905–197 198.332*	3–9	9.5686e−04	2.2078e−03	1.5618e−01	−2.178 92	AAA	6
			7 160.560	7 162.533	183 236.7905–197 198.3310	3–5	9.5686e−04	1.2266e−03	8.6766e−02	−2.434 19	AAA	6
			7 160.559	7 162.533	183 236.7905–197 198.3315	3–3	9.5686e−04	7.3593e−04	5.2060e−02	−2.656 04	AAA	6
			7 160.556	7 162.530	183 236.7905–197 198.3382	3–1	9.5686e−04	2.4531e−04	1.7353e−02	−3.133 16	AAA	6
73	1*s*3*s*-1*s*3*p*	$^1S-^1P^\circ$		1 344.5350 cm^{-1}	184 864.8282–186 209.3632	1–3	2.5165e−03	6.2608e−01	1.5330e+02	−0.203 37	AAA	6
74	1*s*3*s*-1*s*4*p*	$^1S-^1P^\circ$	15 083.654	6 627.8819 cm^{-1}	184 864.8282–191 492.7101	1–3	1.4057e−02	1.4392e−01	7.1486e+00	−0.841 88	AAA	6
75	1*s*3*s*-1*s*5*p*	$^1S-^1P^\circ$	11 013.072	9 077.6323 cm^{-1}	184 864.8282–193 942.4605	1–3	9.2496e−03	5.0484e−02	1.8309e+00	−1.296 84	AAA	6
76	1*s*3*s*-1*s*6*p*	$^1S-^1P^\circ$	9 603.441	9 606.075	184 864.8282–195 274.9067	1–3	5.8286e−03	2.4190e−02	7.6499e−01	−1.616 37	AAA	6
77	1*s*3*s*-1*s*7*p*	$^1S-^1P^\circ$	8 914.772	8 917.220	184 864.8282–196 079.0858	1–3	3.8260e−03	1.3683e−02	4.0169e−01	−1.863 82	AAA	6
78	1*s*3*s*-1*s*8*p*	$^1S-^1P^\circ$	8 518.036	8 520.377	184 864.8282–196 601.3985	1–3	2.6252e−03	8.5715e−03	2.4043e−01	−2.066 94	AAA	6
79	1*s*3*s*-1*s*9*p*	$^1S-^1P^\circ$	8 265.701	8 267.973	184 864.8282–196 959.6911	1–3	1.8722e−03	5.7561e−03	1.5668e−01	−2.239 87	AAA	6
80	1*s*3*s*-1*s*10*p*	$^1S-^1P^\circ$	8 094.115	8 096.340	184 864.8282–197 216.0878	1–3	1.3791e−03	4.0658e−03	1.0837e−01	−2.390 85	AAA	6
81	1*s*3*p*-1*s*3*d*	$^3P^\circ-^3D$		*536.954* cm^{-1}	*185 564.600–186 101.554*	9–15	1.2916e−04	1.1193e−01	6.1764e+02	0.003 19	AAA	6
				536.9838 cm^{-1}	185 564.5602–186 101.5440	5–7	1.2917e−04	9.4021e−02	2.8821e+02	−0.327 81	AAA	6
				536.9649 cm^{-1}	185 564.5817–186 101.5466	3–5	9.6851e−05	8.3930e−02	1.5437e+02	−0.598 96	AAA	6
				536.7380 cm^{-1}	185 564.8528–186 101.5908	1–3	7.1759e−05	1.1203e−01	6.8714e+01	−0.950 67	AAA	6
				536.9864 cm^{-1}	185 564.5602–186 101.5466	5–5	3.2284e−05	1.6785e−02	5.1452e+01	−1.076 11	AAA	6
				537.0091 cm^{-1}	185 564.5817–186 101.5908	3–3	5.3819e−05	2.7979e−02	5.1457e+01	−1.076 05	AAA	6
				537.0306 cm^{-1}	185 564.5602–186 101.5908	5–3	3.5879e−06	1.1191e−03	3.4300e+00	−2.252 18	AAA	6
82	1*s*3*p*-1*s*3*d*	$^3P^\circ-^1D$										
				540.3829 cm^{-1}	185 564.5817–186 104.9646	3–5	2.317e−08	1.982e−05	3.623e−02	−4.225 7	AA	6
83	1*s*3*p*-1*s*4*s*	$^3P^\circ-^3S$	*21 120.20*	*4 733.512* cm^{-1}	*185 564.600–190 298.1115*	9–3	6.5122e−02	1.4524e−01	9.0914e+01	0.116 34	AAA	6
			21 120.023	4 733.5513 cm^{-1}	185 564.5602–190 298.1115	5–3	3.6179e−02	1.4524e−01	5.0507e+01	−0.138 94	AAA	6
			21 120.119	4 733.5298 cm^{-1}	185 564.5817–190 298.1115	3–3	2.1707e−02	1.4524e−01	3.0304e+01	−0.360 79	AAA	6
			21 121.329	4 733.2587 cm^{-1}	185 564.8528–190 298.1115	1–3	7.2358e−03	1.4526e−01	1.0103e+01	−0.837 86	AAA	6
84	1*s*3*p*-1*s*4*d*	$^3P^\circ-^3D$	*17 002.50*	*5 879.884* cm^{-1}	*185 564.600–191 444.484*	9–15	6.6088e−02	4.7763e−01	2.4068e+02	0.633 33	AAA	6
			17 002.393	5 879.9190 cm^{-1}	185 564.5602–191 444.4792	5–7	6.6090e−02	4.0122e−01	1.1232e+02	0.302 35	AAA	6
			17 002.452	5 879.8987 cm^{-1}	185 564.5817–191 444.4804	3–5	4.9562e−02	3.5819e−01	6.0165e+01	0.031 24	AAA	6
			17 003.182	5 879.6461 cm^{-1}	185 564.8528–191 444.4989	1–3	3.6717e−02	4.7769e−01	2.6747e+01	−0.320 86	AAA	6
			17 002.390	5 879.9202 cm^{-1}	185 564.5602–191 444.4804	5–5	1.6520e−02	7.1635e−02	2.0054e+01	−0.445 91	AAA	6
			17 002.398	5 879.9172 cm^{-1}	185 564.5817–191 444.4989	3–3	2.7538e−02	1.1941e−01	2.0057e+01	−0.445 83	AAA	6
			17 002.336	5 879.9387 cm^{-1}	185 564.5602–191 444.4989	5–3	1.8358e−03	4.7763e−03	1.3371e+00	−1.621 94	AAA	6
85	1*s*3*p*-1*s*4*d*	$^3P^\circ-^1D$										
			16 996.685	5 881.8938 cm^{-1}	185 564.5602–191 446.4540	5–5	2.148e−06	9.308e−06	2.605e−03	−4.332 2	AA	6
			16 996.747	5 881.8723 cm^{-1}	185 564.5817–191 446.4540	3–5	6.038e−06	4.361e−05	7.323e−03	−3.883 3	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
86	1*s*3*p*-1*s*5*s*	$^3P^\circ$–^3S	*12 846.01*	*7 782.390* cm^{-1}	*185 564.600–193 346.9897*	9–3	2.7317e−02	2.2539e−02	8.5812e+00	−0.692 82	AAA	6
			12 845.944	7 782.4295 cm^{-1}	185 564.5602–193 346.9897	5–3	1.5176e−02	2.2539e−02	4.7672e+00	−0.948 10	AAA	6
			12 845.980	7 782.4080 cm^{-1}	185 564.5817–193 346.9897	3–3	9.1057e−03	2.2539e−02	2.8604e+00	−1.169 94	AAA	6
			12 846.427	7 782.1369 cm^{-1}	185 564.8528–193 346.9897	1–3	3.0352e−03	2.2541e−02	9.5355e−01	−1.647 03	AAA	6
87	1*s*3*p*-1*s*5*d*	$^3P^\circ$–^3D	*11 969.11*	*8 352.552* cm^{-1}	*185 564.600–193 917.152*	9–15	3.4781e−02	1.2457e−01	4.4188e+01	0.049 65	AAA	6
			11 969.060	8 352.5894 cm^{-1}	185 564.5602–193 917.1496	5–7	3.4782e−02	1.0464e−01	2.0622e+01	−0.281 33	AAA	6
			11 969.089	8 352.5685 cm^{-1}	185 564.5817–193 917.1502	3–5	2.6084e−02	9.3420e−02	1.1046e+01	−0.552 44	AAA	6
			11 969.464	8 352.3069 cm^{-1}	185 564.8528–193 917.1597	1–3	1.9323e−02	1.2458e−01	4.9103e+00	−0.904 56	AAA	6
			11 969.059	8 352.5900 cm^{-1}	185 564.5602–193 917.1502	5–5	8.6946e−03	1.8684e−02	3.6820e+00	−1.029 57	AAA	6
			11 969.076	8 352.5780 cm^{-1}	185 564.5817–193 917.1597	3–3	1.4493e−02	3.1144e−02	3.6826e+00	−1.029 50	AAA	6
			11 969.045	8 352.5995 cm^{-1}	185 564.5602–193 917.1597	5–3	9.6617e−04	1.2457e−03	2.4550e−01	−2.205 61	AAA	6
88	1*s*3*p*-1*s*5*d*	$^3P^\circ$–^1D										
			11 967.428	8 353.7280 cm^{-1}	185 564.5602–193 918.2882	5–5	8.899e−07	1.912e−06	3.767e−04	−5.019 6	AA	6
			11 967.459	8 353.7065 cm^{-1}	185 564.5817–193 918.2882	3–5	2.500e−06	8.950e−06	1.058e−03	−4.571 0	AA	6
89	1*s*3*p*-1*s*6*s*	$^3P^\circ$–^3S	*10 667.71*	*9 371.518* cm^{-1}	*185 564.600–194 936.1181*	9–3	1.4471e−02	8.2340e−03	2.6033e+00	−1.130 15	AAA	6
			10 667.662	9 371.5579 cm^{-1}	185 564.5602–194 936.1181	5–3	8.0394e−03	8.2339e−03	1.4462e+00	−1.385 42	AAA	6
			10 667.686	9 371.5364 cm^{-1}	185 564.5817–194 936.1181	3–3	4.8236e−03	8.2339e−03	8.6775e−01	−1.607 27	AAA	6
			10 667.995	9 371.2653 cm^{-1}	185 564.8528–194 936.1181	1–3	1.6079e−03	8.2346e−03	2.8928e−01	−2.084 36	AAA	6
90	1*s*3*p*-1*s*6*d*	$^3P^\circ$–^3D	*10 311.27*	*9 695.471* cm^{-1}	*185 564.600–195 260.071*	9–15	1.9945e−02	5.3016e−02	1.6202e+01	−0.321 35	AAA	6
			10 311.227	9 695.5094 cm^{-1}	185 564.5602–195 260.0696	5–7	1.9946e−02	4.4535e−02	7.5609e+00	−0.652 33	AAA	6
			10 311.250	9 695.4883 cm^{-1}	185 564.5817–195 260.0700	3–5	1.4958e−02	3.9759e−02	4.0501e+00	−0.923 44	AAA	6
			10 311.532	9 695.2227 cm^{-1}	185 564.8528–195 260.0755	1–3	1.1081e−02	5.3020e−02	1.8004e+00	−1.275 56	AAA	6
			10 311.227	9 695.5098 cm^{-1}	185 564.5602–195 260.0700	5–5	4.9860e−03	7.9518e−03	1.3500e+00	−1.400 56	AAA	6
			10 311.244	9 695.4938 cm^{-1}	185 564.5817–195 260.0755	3–3	8.3108e−03	1.3254e−02	1.3502e+00	−1.400 52	AAA	6
			10 311.221	9 695.5153 cm^{-1}	185 564.5602–195 260.0755	5–3	5.5405e−04	5.3017e−04	9.0010e−02	−2.576 61	AAA	6
91	1*s*3*p*-1*s*7*s*	$^3P^\circ$–^3S	*9 702.65*	*9 705.31*	*185 564.600–195 868.2354*	9–3	8.6511e−03	4.0722e−03	1.1710e+00	−1.435 93	AAA	6
			9 702.614	9 705.275	185 564.5602–195 868.2354	5–3	4.8062e−03	4.0722e−03	6.5055e−01	−1.691 20	AAA	6
			9 702.634	9 705.295	185 564.5817–195 868.2354	3–3	2.8837e−03	4.0722e−03	3.9033e−01	−1.913 05	AAA	6
			9 702.890	9 705.550	185 564.8528–195 868.2354	1–3	9.6124e−04	4.0724e−03	1.3012e−01	−2.390 15	AAA	6
92	1*s*3*p*-1*s*7*d*	$^3P^\circ$–^3D	*9 516.60*	*9 519.21*	*185 564.600–196 069.672*	9–15	1.2439e−02	2.8163e−02	7.9433e+00	−0.596 08	AAA	6
			9 516.566	9 519.176	185 564.5602–196 069.6711	5–7	1.2439e−02	2.3658e−02	3.7069e+00	−0.927 06	AAA	6
			9 516.585	9 519.195	185 564.5817–196 069.6713	3–5	9.3285e−03	2.1121e−02	1.9857e+00	−1.198 16	AAA	6
			9 516.827	9 519.438	185 564.8528–196 069.6748	1–3	6.9105e−03	2.8165e−02	8.8267e−01	−1.550 29	AAA	6
			9 516.565	9 519.176	185 564.5602–196 069.6713	5–5	3.1095e−03	4.2242e−03	6.6190e−01	−1.675 28	AAA	6
			9 516.582	9 519.192	185 564.5817–196 069.6748	3–3	5.1829e−03	7.0409e−03	6.6195e−01	−1.675 25	AAA	6
			9 516.562	9 519.173	185 564.5602–196 069.6748	5–3	3.4553e−04	2.8164e−04	4.4130e−02	−2.851 34	AAA	6
93	1*s*3*p*-1*s*8*s*	$^3P^\circ$–^3S	*9 174.52*	*9 177.04*	*185 564.600–196 461.3602*	9–3	5.5996e−03	2.3567e−03	6.4079e−01	−1.673 46	AAA	6
			9 174.488	9 177.006	185 564.5602–196 461.3602	5–3	3.1109e−03	2.3567e−03	3.5599e−01	−1.928 73	AAA	6
			9 174.506	9 177.024	185 564.5817–196 461.3602	3–3	1.8665e−03	2.3566e−03	2.1359e−01	−2.150 59	AAA	6
			9 174.735	9 177.253	185 564.8528–196 461.3602	1–3	6.2217e−04	2.3567e−03	7.1203e−02	−2.627 69	AAA	6
94	1*s*3*p*-1*s*8*d*	$^3P^\circ$–^3D	*9 063.32*	*9 065.80*	*185 564.600–196 595.061*	9–15	8.2702e−03	1.6984e−02	4.5620e+00	−0.815 72	AAA	6
			9 063.284	9 065.772	185 564.5602–196 595.0605	5–7	8.2704e−03	1.4267e−02	2.1290e+00	−1.146 71	AAA	6
			9 063.302	9 065.790	185 564.5817–196 595.0606	3–5	6.2023e−03	1.2737e−02	1.1404e+00	−1.417 81	AAA	6
			9 063.523	9 066.010	185 564.8528–196 595.0629	1–3	4.5947e−03	1.6985e−02	5.0694e−01	−1.769 93	AAA	6
			9 063.284	9 065.772	185 564.5602–196 595.0606	5–5	2.0674e−03	2.5474e−03	3.8014e−01	−1.894 94	AAA	6
			9 063.300	9 065.788	185 564.5817–196 595.0629	3–3	3.4460e−03	4.2460e−03	3.8018e−01	−1.894 90	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			9 063.282	9 065.770	185 564.5602–196 595.0629	5–3	2.2973e−04	1.6984e−04	2.5345e−02	−3.070 99	AAA	6
95	1*s*3*p*-1*s*9*s*	$^3P^\circ$–^3S	*8 849.18*	*8 851.61*	*185 564.600–196 861.9857*	9–3	3.8377e−03	1.5026e−03	3.9409e−01	−1.868 91	AAA	6
			8 849.144	8 851.574	185 564.5602–196 861.9857	5–3	2.1321e−03	1.5026e−03	2.1894e−01	−2.124 17	AAA	6
			8 849.161	8 851.591	185 564.5817–196 861.9857	3–3	1.2792e−03	1.5026e−03	1.3136e−01	−2.346 04	AAA	6
			8 849.374	8 851.803	185 564.8528–196 861.9857	1–3	4.2641e−04	1.5027e−03	4.3790e−02	−2.823 13	AAA	6
96	1*s*3*p*-1*s*9*d*	$^3P^\circ$–^3D	*8 776.74*	*8 779.15*	*185 564.600–196 955.225*	9–15	5.7758e−03	1.1123e−02	2.8933e+00	−0.999 54	AAA	6
			8 776.709	8 779.119	185 564.5602–196 955.2248	5–7	5.7759e−03	9.3434e−03	1.3502e+00	−1.330 52	AAA	6
			8 776.725	8 779.135	185 564.5817–196 955.2249	3–5	4.3316e−03	8.3418e−03	7.2328e−01	−1.601 62	AAA	6
			8 776.933	8 779.343	185 564.8528–196 955.2265	1–3	3.2088e−03	1.1124e−02	3.2150e−01	−1.953 76	AAA	6
			8 776.709	8 779.119	185 564.5602–196 955.2249	5–5	1.4439e−03	1.6684e−03	2.4110e−01	−2.078 73	AAA	6
			8 776.724	8 779.134	185 564.5817–196 955.2265	3–3	2.4066e−03	2.7808e−03	2.4111e−01	−2.078 71	AAA	6
			8 776.707	8 779.118	185 564.5602–196 955.2265	5–3	1.6044e−04	1.1123e−04	1.6074e−02	−3.254 81	AAA	6
97	1*s*3*p*-1*s*10*s*	$^3P^\circ$–^3S	*8 632.74*	*8 635.11*	*185 564.600–197 145.2316*	9–3	2.7471e−03	1.0236e−03	2.6190e−01	−2.035 61	AAA	6
			8 632.707	8 635.078	185 564.5602–197 145.2316	5–3	1.5262e−03	1.0237e−03	1.4550e−01	−2.290 88	AAA	6
			8 632.723	8 635.094	185 564.5817–197 145.2316	3–3	9.1570e−04	1.0236e−03	8.7299e−02	−2.512 73	AAA	6
			8 632.925	8 635.296	185 564.8528–197 145.2316	1–3	3.0523e−04	1.0237e−03	2.9101e−02	−2.989 84	AAA	6
98	1*s*3*p*-1*s*10*d*	$^3P^\circ$–^3D	*8 582.64*	*8 585.00*	*185 564.600–197 212.824*	9–15	4.1927e−03	7.7211e−03	1.9640e+00	−1.158 08	AAA	6
			8 582.613	8 584.970	185 564.5602–197 212.8241	5–7	4.1928e−03	6.4858e−03	9.1654e−01	−1.489 06	AAA	6
			8 582.628	8 584.986	185 564.5817–197 212.8242	3–5	3.1444e−03	5.7906e−03	4.9098e−01	−1.760 16	AAA	6
			8 582.827	8 585.185	185 564.8528–197 212.8254	1–3	2.3293e−03	7.7215e−03	2.1824e−01	−2.112 30	AAA	6
			8 582.613	8 584.970	185 564.5602–197 212.8242	5–5	1.0481e−03	1.1581e−03	1.6365e−01	−2.237 29	AAA	6
			8 582.628	8 584.985	185 564.5817–197 212.8254	3–3	1.7470e−03	1.9303e−03	1.6367e−01	−2.237 25	AAA	6
			8 582.612	8 584.969	185 564.5602–197 212.8254	5–3	1.1647e−04	7.7215e−05	1.0912e−02	−3.413 33	AAA	6
99	1*s*3*d*-1*s*3*p*	^3D–$^1P^\circ$										
				107.8166 cm^{-1}	186 101.5466–186 209.3632	5–3	3.986e−10	3.084e−06	4.709e−02	−4.811 9	AA	6
				107.7724 cm^{-1}	186 101.5908–186 209.3632	3–3	2.833e−14	3.657e−10	3.351e−06	−8.959 7	AA	6
100	1*s*3*d*-1*s*4*p*	^3D–$^3P^\circ$	*19 543.09*	*5 115.501* cm^{-1}	*186 101.554–191 217.056*	15–9	6.4529e−03	2.2181e−02	2.1413e+01	−0.477 92	AAA	6
			19 543.114	5 115.4952 cm^{-1}	186 101.5440–191 217.0392	7–5	5.4209e−03	2.2183e−02	9.9934e+00	−0.808 88	AAA	6
			19 543.090	5 115.5016 cm^{-1}	186 101.5466–191 217.0482	5–3	4.8389e−03	1.6633e−02	5.3522e+00	−1.080 05	AAA	6
			19 542.837	5 115.5677 cm^{-1}	186 101.5908–191 217.1585	3–1	6.4534e−03	1.2324e−02	2.3792e+00	−1.432 14	AAA	6
			19 543.124	5 115.4926 cm^{-1}	186 101.5466–191 217.0392	5–5	9.6778e−04	5.5444e−03	1.7841e+00	−1.557 17	AAA	6
			19 543.259	5 115.4574 cm^{-1}	186 101.5908–191 217.0482	3–3	1.6134e−03	9.2434e−03	1.7846e+00	−1.557 05	AAA	6
			19 543.293	5 115.4484 cm^{-1}	186 101.5908–191 217.0392	3–5	6.4534e−05	6.1621e−04	1.1897e−01	−2.733 15	AAA	6
101	1*s*3*d*-1*s*4*f*	^3D–$^3F^\circ$	*18 685.35*	*5 350.325* cm^{-1}	*186 101.554–191 451.879*	15–21	1.2220e−01	8.9596e−01	8.2694e+02	1.128 38	AAA	6
			18 685.315	5 350.3354 cm^{-1}	186 101.5440–191 451.8794	7–9	1.3838e−01	9.3178e−01	4.0133e+02	0.814 41	AAA	6
			18 685.349	5 350.3256 cm^{-1}	186 101.5466–191 451.8722	5–7	8.0071e−02	5.8708e−01	1.8062e+02	0.467 67	AAA	6
			18 685.449	5 350.2972 cm^{-1}	186 101.5908–191 451.8880	3–5	1.1624e−01	1.0146e+00	1.8729e+02	0.483 43	AAA	6
			18 685.340	5 350.3282 cm^{-1}	186 101.5440–191 451.8722	7–7	9.7644e−03	5.1138e−02	2.2026e+01	−0.446 16	AAA	6
			18 685.294	5 350.3414 cm^{-1}	186 101.5466–191 451.8880	5–5	2.1521e−02	1.1271e−01	3.4675e+01	−0.249 07	AAA	6
			18 685.285	5 350.3440 cm^{-1}	186 101.5440–191 451.8880	7–5	6.1502e−04	2.3007e−03	9.9094e−01	−1.793 05	AAA	6
102	1*s*3*d*-1*s*4*f*	^3D–$^1F^\circ$										
			18 685.258	5 350.352 cm^{-1}	186 101.5440–191 451.8957	7–7	5.611e−03	2.939e−02	1.266e+01	−0.686 8	AA	6
			18 685.267	5 350.349 cm^{-1}	186 101.5466–191 451.8957	5–7	4.294e−02	3.148e−01	9.686e+01	0.197 0	AA	6
103	1*s*3*d*-1*s*5*p*	^3D–$^3P^\circ$	*12 984.88*	*7 699.160* cm^{-1}	*186 101.554–193 800.714*	15–9	2.7292e−03	4.1415e−03	2.6563e+00	−1.206 75	AAA	6
			12 984.875	7 699.1618 cm^{-1}	186 101.5440–193 800.7058	7–5	2.2927e−03	4.1418e−03	1.2397e+00	−1.537 71	AAA	6
			12 984.872	7 699.1638 cm^{-1}	186 101.5466–193 800.7104	5–3	2.0466e−03	3.1057e−03	6.6398e−01	−1.808 88	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			12 984.853	7 699.1750 cm^{-1}	186 101.5908–193 800.7658	3–1	2.7294e−03	2.3010e−03	2.9517e−01	−2.160 96	AAA	6
			12 984.880	7 699.1592 cm^{-1}	186 101.5466–193 800.7058	5–5	4.0931e−04	1.0352e−03	2.2132e−01	−2.286 01	AAA	6
			12 984.946	7 699.1196 cm^{-1}	186 101.5908–193 800.7104	3–3	6.8235e−04	1.7258e−03	2.2138e−01	−2.285 90	AAA	6
			12 984.954	7 699.1150 cm^{-1}	186 101.5908–193 800.7058	3–5	2.7294e−05	1.1505e−04	1.4759e−02	−3.461 99	AAA	6
104	1*s*3*d*-1*s*5*f*	$^3D-^3F^\circ$	*12 784.94*	*7 819.565* cm^{-1}	*186 101.554–193 921.120*	15–21	4.1339e−02	1.4190e−01	8.9611e+01	0.328 07	AAA	6
			12 784.921	7 819.5756 cm^{-1}	186 101.5440–193 921.1196	7–9	4.5746e−02	1.4421e−01	4.2499e+01	0.004 09	AAA	6
			12 784.930	7 819.5699 cm^{-1}	186 101.5466–193 921.1165	5–7	2.8980e−02	9.9476e−02	2.0940e+01	−0.303 31	AAA	6
			12 784.990	7 819.5332 cm^{-1}	186 101.5908–193 921.1240	3–5	3.8426e−02	1.5703e−01	1.9833e+01	−0.326 91	AAA	6
			12 784.926	7 819.5725 cm^{-1}	186 101.5440–193 921.1165	7–7	3.5457e−03	8.6935e−03	2.5620e+00	−1.215 71	AAA	6
			12 784.918	7 819.5774 cm^{-1}	186 101.5466–193 921.1240	5–5	7.1142e−03	1.7443e−02	3.6718e+00	−1.059 41	AAA	6
			12 784.913	7 819.5800 cm^{-1}	186 101.5440–193 921.1240	7–5	2.0331e−04	3.5606e−04	1.0493e−01	−2.603 38	AAA	6
105	1*s*3*d*-1*s*5*f*	$^3D-^1F^\circ$										
			12 784.905	7 819.5851 cm^{-1}	186 101.5440–193 921.1291	7–7	1.537e−03	3.769e−03	1.111e+00	−1.578 7	AA	6
			12 784.909	7 819.5825 cm^{-1}	186 101.5466–193 921.1291	5–7	1.168e−02	4.011e−02	8.443e+00	−0.697 8	AA	6
106	1*s*3*d*-1*s*6*p*	$^3D-^3P^\circ$	*10 996.65*	*9 091.192* cm^{-1}	*186 101.554–195 192.746*	15–9	1.4253e−03	1.5512e−03	8.4257e−01	−1.633 25	AAA	6
			10 996.640	9 091.1972 cm^{-1}	186 101.5440–195 192.7412	7–5	1.1973e−03	1.5513e−03	3.9323e−01	−1.964 21	AAA	6
			10 996.640	9 091.1972 cm^{-1}	186 101.5466–195 192.7438	5–3	1.0688e−03	1.1632e−03	2.1061e−01	−2.235 37	AAA	6
			10 996.655	9 091.1847 cm^{-1}	186 101.5908–195 192.7755	3–1	1.4254e−03	8.6185e−04	9.3629e−02	−2.587 45	AAA	6
			10 996.643	9 091.1946 cm^{-1}	186 101.5466–195 192.7412	5–5	2.1375e−04	3.8772e−04	7.0201e−02	−2.712 51	AAA	6
			10 996.693	9 091.1530 cm^{-1}	186 101.5908–195 192.7438	3–3	3.5634e−04	6.4637e−04	7.0220e−02	−2.712 40	AAA	6
			10 996.696	9 091.1504 cm^{-1}	186 101.5908–195 192.7412	3–5	1.4254e−05	4.3093e−05	4.6815e−03	−3.888 47	AAA	6
107	1*s*3*d*-1*s*6*f*	$^3D-^3F^\circ$	*10 913.00*	*9 160.870* cm^{-1}	*186 101.554–195 262.424*	15–21	1.9801e−02	4.9522e−02	2.6695e+01	−0.129 11	AAA	6
			10 912.993	9 160.8801 cm^{-1}	186 101.5440–195 262.4241	7–9	2.1644e−02	4.9712e−02	1.2506e+01	−0.458 44	AAA	6
			10 912.998	9 160.8759 cm^{-1}	186 101.5466–195 262.4225	5–7	1.4356e−02	3.5904e−02	6.4514e+00	−0.745 89	AAA	6
			10 913.045	9 160.8358 cm^{-1}	186 101.5908–195 262.4266	3–5	1.8181e−02	5.4132e−02	5.8360e+00	−0.789 43	AAA	6
			10 912.995	9 160.8785 cm^{-1}	186 101.5440–195 262.4225	7–7	1.7594e−03	3.1430e−03	7.9065e−01	−1.657 55	AAA	6
			10 912.993	9 160.8800 cm^{-1}	186 101.5466–195 262.4266	5–5	3.3661e−03	6.0133e−03	1.0805e+00	−1.521 92	AAA	6
			10 912.990	9 160.8826 cm^{-1}	186 101.5440–195 262.4266	7–5	9.6197e−05	1.2275e−04	3.0878e−02	−3.065 89	AAA	6
108	1*s*3*d*-1*s*6*f*	$^3D-^1F^\circ$										
			10 912.986	9 160.8860 cm^{-1}	186 101.5440–195 262.4300	7–7	6.455e−04	1.153e−03	2.901e−01	−2.093 0	AA	6
			10 912.989	9 160.8834 cm^{-1}	186 101.5466–195 262.4300	5–7	4.884e−03	1.222e−02	2.195e+00	−1.214 1	AA	6
109	1*s*3*d*-1*s*7*p*	$^3D-^3P^\circ$	*10 072.03*	*9 925.762* cm^{-1}	*186 101.554–196 027.316*	15–9	8.4430e−04	7.7086e−04	3.8351e−01	−1.936 93	AAA	6
			10 072.025	9 925.7693 cm^{-1}	186 101.5440–196 027.3133	7–5	7.0927e−04	7.7092e−04	1.7899e−01	−2.267 89	AAA	6
			10 072.026	9 925.7683 cm^{-1}	186 101.5466–196 027.3149	5–3	6.3312e−04	5.7805e−04	9.5862e−02	−2.539 06	AAA	6
			10 072.051	9 925.7439 cm^{-1}	186 101.5908–196 027.3347	3–1	8.4437e−04	4.2829e−04	4.2616e−02	−2.891 14	AAA	6
			10 072.027	9 925.7667 cm^{-1}	186 101.5466–196 027.3133	5–5	1.2662e−04	1.9268e−04	3.1953e−02	−3.016 20	AAA	6
			10 072.071	9 925.7241 cm^{-1}	186 101.5908–196 027.3149	3–3	2.1109e−04	3.2122e−04	3.1962e−02	−3.016 08	AAA	6
			10 072.072	9 925.7225 cm^{-1}	186 101.5908–196 027.3133	3–5	8.4437e−06	2.1415e−05	2.1308e−03	−4.192 16	AAA	6
110	1*s*3*d*-1*s*7*f*	$^3D-^3F^\circ$	*10 027.72*	*9 969.621* cm^{-1}	*186 101.554–196 071.175*	15–21	1.1225e−02	2.3704e−02	1.1741e+01	−0.449 08	AAA	6
			10 027.712	9 969.6314 cm^{-1}	186 101.5440–196 071.1754	7–9	1.2183e−02	2.3626e−02	5.4613e+00	−0.781 50	AAA	6
			10 027.716	9 969.6278 cm^{-1}	186 101.5466–196 071.1744	5–7	8.2928e−03	1.7512e−02	2.8913e+00	−1.057 70	AAA	6
			10 027.758	9 969.5862 cm^{-1}	186 101.5908–196 071.1770	3–5	1.0234e−02	2.5727e−02	2.5487e+00	−1.112 48	AAA	6
			10 027.713	9 969.6304 cm^{-1}	186 101.5440–196 071.1744	7–7	1.0174e−03	1.5346e−03	3.5472e−01	−1.968 91	AAA	6
			10 027.713	9 969.6304 cm^{-1}	186 101.5466–196 071.1770	5–5	1.8947e−03	2.8578e−03	4.7185e−01	−1.844 99	AAA	6
			10 027.711	9 969.6330 cm^{-1}	186 101.5440–196 071.1770	7–5	5.4147e−05	5.8337e−05	1.3485e−02	−3.388 96	AAA	6
111	1*s*3*d*-1*s*7*f*	$^3D-^1F^\circ$										
			10 027.708	9 969.6353 cm^{-1}	186 101.5440–196 071.1793	7–7	3.363e−04	5.072e−04	1.172e−01	−2.449 7	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			10 027.711	9 969.6327 cm^{-1}	186 101.5466–196 071.1793	5–7	2.537e−03	5.357e−03	8.845e−01	−1.572 1	AA	6
112	1*s*3*d*-1*s*8*p*	$^3D-^3P^\circ$	*9 552.90*	*9 555.52*	*186 101.554–196 566.712*	15–9	5.4372e−04	4.4657e−04	2.1072e−01	−2.174 02	AAA	6
			9 552.890	9 555.510	186 101.5440–196 566.7101	7–5	4.5676e−04	4.4661e−04	9.8345e−02	−2.504 98	AAA	6
			9 552.891	9 555.511	186 101.5466–196 566.7112	5–3	4.0772e−04	3.3487e−04	5.2672e−02	−2.776 15	AAA	6
			9 552.919	9 555.540	186 101.5908–196 566.7244	3–1	5.4376e−04	2.4812e−04	2.3416e−02	−3.128 23	AAA	6
			9 552.892	9 555.512	186 101.5466–196 566.7101	5–5	8.1544e−05	1.1162e−04	1.7557e−02	−3.253 27	AAA	6
			9 552.931	9 555.552	186 101.5908–196 566.7112	3–3	1.3594e−04	1.8609e−04	1.7562e−02	−3.253 16	AAA	6
			9 552.932	9 555.553	186 101.5908–196 566.7101	3–5	5.4376e−06	1.2406e−05	1.1708e−03	−4.429 25	AAA	6
113	1*s*3*d*-1*s*8*f*	$^3D-^3F^\circ$	*9 526.17*	*9 528.78*	*186 101.554–196 596.078*	15–21	7.0457e−03	1.3427e−02	6.3181e+00	−0.695 93	AAA	6
			9 526.157	9 528.770	186 101.5440–196 596.0776	7–9	7.6127e−03	1.3323e−02	2.9257e+00	−1.030 29	AAA	6
			9 526.160	9 528.773	186 101.5466–196 596.0770	5–7	5.2655e−03	1.0035e−02	1.5739e+00	−1.299 53	AAA	6
			9 526.199	9 528.812	186 101.5908–196 596.0787	3–5	6.3946e−03	1.4508e−02	1.3653e+00	−1.361 28	AAA	6
			9 526.158	9 528.771	186 101.5440–196 596.0770	7–7	6.4641e−04	8.7991e−04	1.9322e−01	−2.210 46	AAA	6
			9 526.159	9 528.772	186 101.5466–196 596.0787	5–5	1.1839e−03	1.6116e−03	2.5277e−01	−2.093 78	AAA	6
			9 526.156	9 528.769	186 101.5440–196 596.0787	7–5	3.3834e−05	3.2897e−05	7.2238e−03	−3.637 75	AAA	6
114	1*s*3*d*-1*s*8*f*	$^3D-^1F^\circ$										
			9 526.155	9 528.768	186 101.5440–196 596.0804	7–7	1.994e−04	2.715e−04	5.961e−02	−2.721 2	AA	6
			9 526.157	9 528.770	186 101.5466–196 596.0804	5–7	1.502e−03	2.861e−03	4.488e−01	−1.844 4	AA	6
115	1*s*3*d*-1*s*9*p*	$^3D-^3P^\circ$	*9 227.86*	*9 230.39*	*186 101.554–196 935.331*	15–9	3.7167e−04	2.8484e−04	1.2984e−01	−2.369 30	AAA	6
			9 227.851	9 230.384	186 101.5440–196 935.3297	7–5	3.1223e−04	2.8487e−04	6.0595e−02	−2.700 26	AAA	6
			9 227.853	9 230.385	186 101.5466–196 935.3304	5–3	2.7871e−04	2.1360e−04	3.2454e−02	−2.971 43	AAA	6
			9 227.883	9 230.415	186 101.5908–196 935.3397	3–1	3.7170e−04	1.5826e−04	1.4427e−02	−3.323 51	AAA	6
			9 227.854	9 230.386	186 101.5466–196 935.3297	5–5	5.5742e−05	7.1200e−05	1.0818e−02	−3.448 55	AAA	6
			9 227.891	9 230.423	186 101.5908–196 935.3304	3–3	9.2925e−05	1.1870e−04	1.0821e−02	−3.448 45	AAA	6
			9 227.891	9 230.424	186 101.5908–196 935.3297	3–5	3.7170e−06	7.9130e−06	7.2137e−04	−4.624 54	AAA	6
116	1*s*3*d*-1*s*9*f*	$^3D-^3F^\circ$	*9 210.34*	*9 212.86*	*186 101.554–196 955.944*	15–21	4.7381e−03	8.4408e−03	3.8401e+00	−0.897 53	AAA	6
			9 210.326	9 212.854	186 101.5440–196 955.9437	7–9	5.1041e−03	8.3504e−03	1.7729e+00	−1.233 19	AAA	6
			9 210.329	9 212.857	186 101.5466–196 955.9433	5–7	3.5681e−03	6.3564e−03	9.6394e−01	−1.497 82	AAA	6
			9 210.366	9 212.893	186 101.5908–196 955.9444	3–5	4.2875e−03	9.0929e−03	8.2736e−01	−1.564 18	AAA	6
			9 210.327	9 212.854	186 101.5440–196 955.9433	7–7	4.3822e−04	5.5762e−04	1.1839e−01	−2.408 56	AAA	6
			9 210.328	9 212.856	186 101.5466–196 955.9444	5–5	7.9378e−04	1.0101e−03	1.5317e−01	−2.296 68	AAA	6
			9 210.326	9 212.853	186 101.5440–196 955.9444	7–5	2.2685e−05	2.0618e−05	4.3775e−03	−3.840 65	AAA	6
117	1*s*3*d*-1*s*9*f*	$^3D-^1F^\circ$										
			9 210.325	9 212.852	186 101.5440–196 955.9456	7–7	1.289e−04	1.640e−04	3.483e−02	−2.940 0	AA	6
			9 210.327	9 212.855	186 101.5466–196 955.9456	5–7	9.691e−04	1.726e−03	2.618e−01	−2.063 9	AA	6
118	1*s*3*d*-1*s*10*p*	$^3D-^3P^\circ$	*9 009.15*	*9 011.62*	*186 101.554–197 198.332*	15–9	2.6573e−04	1.9411e−04	8.6383e−02	−2.535 85	AAA	6
			9 009.144	9 011.618	186 101.5440–197 198.3310	7–5	2.2323e−04	1.9413e−04	4.0315e−02	−2.866 82	AAA	6
			9 009.146	9 011.619	186 101.5466–197 198.3315	5–3	1.9927e−04	1.4556e−04	2.1593e−02	−3.137 97	AAA	6
			9 009.177	9 011.650	186 101.5908–197 198.3382	3–1	2.6575e−04	1.0785e−04	9.5988e−03	−3.490 06	AAA	6
			9 009.147	9 011.620	186 101.5466–197 198.3310	5–5	3.9853e−05	4.8520e−05	7.1973e−03	−3.615 11	AAA	6
			9 009.182	9 011.655	186 101.5908–197 198.3315	3–3	6.6439e−05	8.0889e−05	7.1993e−03	−3.614 99	AAA	6
			9 009.182	9 011.656	186 101.5908–197 198.3310	3–5	2.6575e−06	5.3925e−06	4.7994e−04	−4.791 09	AAA	6
119	1*s*3*d*-1*s*10*f*	$^3D-^3F^\circ$	*8 996.98*	*8 999.44*	*186 101.554–197 213.351*	15–21	3.3504e−03	5.6953e−03	2.5310e+00	−1.068 39	AAA	6
			8 996.967	8 999.437	186 101.5440–197 213.3506	7–9	3.6017e−03	5.6226e−03	1.1661e+00	−1.404 96	AAA	6
			8 996.969	8 999.439	186 101.5466–197 213.3503	5–7	2.5364e−03	4.3115e−03	6.3870e−01	−1.666 40	AAA	6
			8 997.004	8 999.474	186 101.5908–197 213.3511	3–5	3.0254e−03	6.1224e−03	5.4417e−01	−1.735 96	AAA	6
			8 996.967	8 999.437	186 101.5440–197 213.3503	7–7	3.1161e−04	3.7835e−04	7.8467e−02	−2.577 00	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			8 996.969	8 999.438	186 101.5466–197 213.3511	5–5	5.6012e−04	6.8009e−04	1.0075e−01	−2.468 46	AAA	6
			8 996.966	8 999.436	186 101.5440–197 213.3511	7–5	1.6007e−05	1.3883e−05	2.8791e−03	−4.012 43	AAA	6
120	1*s*3*d*-1*s*10*f*	$^3D-^1F^\circ$										
			8 996.966	8 999.436	186 101.5440–197 213.3520	7–7	8.857e−05	1.075e−04	2.230e−02	−3.123 3	AA	6
			8 996.968	8 999.438	186 101.5466–197 213.3520	5–7	6.651e−04	1.131e−03	1.675e−01	−2.247 7	AA	6
121	1*s*3*d*-1*s*3*p*	$^1D-^1P^\circ$		104.3986 cm^{-1}	186 104.9646–186 209.3632	5–3	1.5281e−06	1.2612e−02	1.9885e+02	−1.200 26	AAA	6
122	1*s*3*d*-1*s*4*p*	$^1D-^3P^\circ$										
			19 556.191	5 112.0746 cm^{-1}	186 104.9646–191 217.0392	5–5	2.354e−07	1.350e−06	4.348e−04	−5.170 6	AA	6
			19 556.157	5 112.0836 cm^{-1}	186 104.9646–191 217.0482	5–3	1.150e−06	3.958e−06	1.274e−03	−4.703 6	AA	6
123	1*s*3*d*-1*s*4*f*	$^1D-^3F^\circ$										
			18 697.294	5 346.9076 cm^{-1}	186 104.9646–191 451.8722	5–7	4.852e−02	3.562e−01	1.097e+02	0.2507	AA	6
			18 697.239	5 346.9234 cm^{-1}	186 104.9646–191 451.8880	5–5	5.235e−06	2.745e−05	8.451e−03	−3.862 5	AA	6
124	1*s*3*d*-1*s*4*f*	$^1D-^1F^\circ$	18 697.212	5 346.9311 cm^{-1}	186 104.9646–191 451.8957	5–7	8.9780e−02	6.5911e−01	2.0291e+02	0.517 93	AAA	6
125	1*s*3*d*-1*s*4*p*	$^1D-^1P^\circ$	18 555.573	5 387.7455 cm^{-1}	186 104.9646–191 492.7101	5–3	2.9630e−03	9.1817e−03	2.8052e+00	−1.338 10	AAA	6
126	1*s*3*d*-1*s*5*f*	$^1D-^3F^\circ$										
			12 790.509	7 816.1594 cm^{-1}	186 104.9646–193 921.1240	5–5	1.732e−06	4.249e−06	8.949e−04	−4.672 7	AA	6
			12 790.521	7 816.1519 cm^{-1}	186 104.9646–193 921.1165	5–7	1.320e−02	4.535e−02	9.550e+00	−0.644 5	AA	6
127	1*s*3*d*-1*s*5*f*	$^1D-^1F^\circ$	12 790.500	7 816.1645 cm^{-1}	186 104.9646–193 921.1291	5–7	3.2475e−02	1.1157e−01	2.3496e+01	−0.253 48	AAA	6
128	1*s*3*d*-1*s*5*p*	$^1D-^1P^\circ$	12 755.688	7 837.4959 cm^{-1}	186 104.9646–193 942.4605	5–3	1.2754e−03	1.8677e−03	3.9226e−01	−2.029 73	AAA	6
129	1*s*3*d*-1*s*6*f*	$^1D-^3F^\circ$										
			10 917.066	9 157.4620 cm^{-1}	186 104.9646–195 262.4266	5–5	8.195e−07	1.465e−06	2.633e−04	−5.135 2	AA	6
			10 917.071	9 157.4579 cm^{-1}	186 104.9646–195 262.4225	5–7	5.518e−03	1.381e−02	2.482e+00	−1.160 8	AA	6
130	1*s*3*d*-1*s*6*f*	$^1D-^1F^\circ$	10 917.062	9 157.4654 cm^{-1}	186 104.9646–195 262.4300	5–7	1.6083e−02	4.0253e−02	7.2356e+00	−0.696 23	AAA	6
131	1*s*3*d*-1*s*6*p*	$^1D-^1P^\circ$	10 902.208	9 169.9421 cm^{-1}	186 104.9646–195 274.9067	5–3	6.6614e−04	7.1259e−04	1.2791e−01	−2.448 19	AAA	6
132	1*s*3*d*-1*s*7*f*	$^1D-^3F^\circ$										
			10 031.155	9 966.2098 cm^{-1}	186 104.9646–196 071.1744	5–7	2.866e−03	6.057e−03	1.000e+00	−1.518 8	AA	6
133	1*s*3*d*-1*s*7*f*	$^1D-^1F^\circ$	10 031.150	9 966.2147 cm^{-1}	186 104.9646–196 071.1793	5–7	9.2892e−03	1.9629e−02	3.2420e+00	−1.008 13	AAA	6
134	1*s*3*d*-1*s*7*p*	$^1D-^1P^\circ$	10 023.198	9 974.1212 cm^{-1}	186 104.9646–196 079.0858	5–3	3.9418e−04	3.5641e−04	5.8820e−02	−2.749 08	AAA	6
135	1*s*3*d*-1*s*8*f*	$^1D-^3F^\circ$										
			9 529.264	9 531.878	186 104.9646–196 596.0770	5–7	1.697e−03	3.235e−03	5.076e−01	−1.791 1	AA	6
136	1*s*3*d*-1*s*8*f*	$^1D-^1F^\circ$	9 529.261	9 531.875	186 104.9646–196 596.0804	5–7	5.8976e−03	1.1246e−02	1.7646e+00	−1.250 01	AAA	6
137	1*s*3*d*-1*s*8*p*	$^1D-^1P^\circ$	9 524.433	9 527.045	186 104.9646–196 601.3985	5–3	2.5364e−04	2.0708e−04	3.2475e−02	−2.984 89	AAA	6
138	1*s*3*d*-1*s*9*f*	$^1D-^3F^\circ$										
			9 213.230	9 215.759	186 104.9646–196 955.9433	5–7	1.095e−03	1.952e−03	2.961e−01	−2.010 6	AA	6
139	1*s*3*d*-1*s*9*f*	$^1D-^1F^\circ$	9 213.228	9 215.757	186 104.9646–196 955.9456	5–7	3.9961e−03	7.1233e−03	1.0806e+00	−1.448 35	AAA	6
140	1*s*3*d*-1*s*9*p*	$^1D-^1P^\circ$	9 210.049	9 212.577	186 104.9646–196 959.6911	5–3	1.7331e−04	1.3231e−04	2.0064e−02	−3.179 44	AAA	6
141	1*s*3*d*-1*s*10*f*	$^1D-^3F^\circ$										
			8 999.738	9 002.208	186 104.9646–197 213.3503	5–7	7.516e−04	1.278e−03	1.894e−01	−2.194 4	AA	6
142	1*s*3*d*-1*s*10*f*	$^1D-^1F^\circ$	8 999.736	9 002.207	186 104.9646–197 213.3520	5–7	2.8406e−03	4.8316e−03	7.1596e−01	−1.616 94	AAA	6
143	1*s*3*d*-1*s*10*p*	$^1D-^1P^\circ$	8 997.520	8 999.990	186 104.9646–197 216.0878	5–3	1.2389e−04	9.0267e−05	1.3373e−02	−3.345 50	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
144	1*s*3*p*-1*s*4*s*	$^1P^\circ-{}^1S$	21 132.029	4 730.8620 cm^{-1}	186 209.3632–190 940.2252	3–1	4.5925e−02	1.0254e−01	2.1407e+01	−0.511 97	AAA	6
145	1*s*3*p*-1*s*4*d*	$^1P^\circ-{}^3D$										
			19 096.555	5 235.1172 cm^{-1}	186 209.3632–191 444.4804	3–5	8.944e−06	8.154e−05	1.538e−02	−3.611 5	AA	6
146	1*s*3*p*-1*s*4*d*	$^1P^\circ-{}^1D$	19 089.359	5 237.0908 cm^{-1}	186 209.3632–191 446.4540	3–5	7.1159e−02	6.4827e−01	1.2225e+02	0.288 88	AAA	6
147	1*s*3*p*-1*s*5*s*	$^1P^\circ-{}^1S$	13 411.683	7 454.1475 cm^{-1}	186 209.3632–193 663.5107	3–1	2.0572e−02	1.8502e−02	2.4514e+00	−1.255 66	AAA	6
148	1*s*3*p*-1*s*5*d*	$^1P^\circ-{}^3D$										
			12 970.345	7 707.7870 cm^{-1}	186 209.3632–193 917.1502	3–5	3.303e−06	1.389e−05	1.780e−03	−4.380 1	AA	6
149	1*s*3*p*-1*s*5*d*	$^1P^\circ-{}^1D$	12 968.430	7 708.9250 cm^{-1}	186 209.3632–193 918.2882	3–5	3.3615e−02	1.4134e−01	1.8107e+01	−0.372 63	AAA	6
150	1*s*3*p*-1*s*6*s*	$^1P^\circ-{}^1S$	11 225.937	8 905.5040 cm^{-1}	186 209.3632–195 114.8672	3–1	1.1168e−02	7.0371e−03	7.8043e−01	−1.675 48	AAA	6
151	1*s*3*p*-1*s*6*d*	$^1P^\circ-{}^1D$	11 044.983	9 051.4056 cm^{-1}	186 209.3632–195 260.7688	3–5	1.8457e−02	5.6290e−02	6.1421e+00	−0.772 44	AAA	6
152	1*s*3*p*-1*s*7*s*	$^1P^\circ-{}^1S$	10 233.102	9 769.5304 cm^{-1}	186 209.3632–195 978.8936	3–1	6.7731e−03	3.5463e−03	3.5851e−01	−1.973 10	AAA	6
153	1*s*3*p*-1*s*7*d*	$^1P^\circ-{}^1D$	10 138.424	9 860.7634 cm^{-1}	186 209.3632–196 070.1266	3–5	1.1248e−02	2.8904e−02	2.8950e+00	−1.061 92	AAA	6
154	1*s*3*p*-1*s*8*s*	$^1P^\circ-{}^1S$	9 682.388	9 685.043	186 209.3632–196 534.5625	3–1	4.4271e−03	2.0752e−03	1.9850e−01	−2.205 82	AAA	6
155	1*s*3*p*-1*s*8*d*	$^1P^\circ-{}^1D$	9 625.697	9 628.337	186 209.3632–196 595.3723	3–5	7.3744e−03	1.7082e−02	1.6244e+00	−1.290 34	AAA	6
156	1*s*3*p*-1*s*9*s*	$^1P^\circ-{}^1S$	9 340.143	9 342.705	186 209.3632–196 912.9010	3–1	3.0562e−03	1.3331e−03	1.2301e−01	−2.398 02	AAA	6
157	1*s*3*p*-1*s*9*d*	$^1P^\circ-{}^1D$	9 303.163	9 305.716	186 209.3632–196 955.4470	3–5	5.1030e−03	1.1042e−02	1.0148e+00	−1.479 85	AAA	6
158	1*s*3*p*-1*s*10*s*	$^1P^\circ-{}^1S$	9 111.026	9 113.527	186 209.3632–197 182.0639	3–1	2.2000e−03	9.1313e−04	8.2189e−02	−2.562 35	AAA	6
159	1*s*3*p*-1*s*10*d*	$^1P^\circ-{}^1D$	9 085.421	9 087.915	186 209.3632–197 212.9878	3–5	3.6807e−03	7.5956e−03	6.8175e−01	−1.642 31	AAA	6
160	1*s*4*s*-1*s*4*p*	$^3S-{}^3P^\circ$		*918.944* cm^{-1}	*190 298.1115–191 217.056*	3–9	2.2825e−03	1.2157e+00	1.3065e+03	0.561 93	AAA	6
				918.9277 cm^{-1}	190 298.1115–191 217.0392	3–5	2.2825e−03	6.7539e−01	7.2589e+02	0.306 67	AAA	6
				918.9367 cm^{-1}	190 298.1115–191 217.0482	3–3	2.2825e−03	4.0523e−01	4.3552e+02	0.084 82	AAA	6
				919.0470 cm^{-1}	190 298.1115–191 217.1585	3–1	2.2825e−03	1.3504e−01	1.4512e+02	−0.392 41	AAA	6
161	1*s*4*s*-1*s*5*p*	$^3S-{}^3P^\circ$	*28 542.41*	*3 502.603* cm^{-1}	*190 298.1115–193 800.714*	3–9	1.2068e−03	4.4242e−02	1.2475e+01	−0.877 05	AAA	6
			28 542.480	3 502.5943 cm^{-1}	190 298.1115–193 800.7058	3–5	1.2068e−03	2.4579e−02	6.9306e+00	−1.132 32	AAA	6
			28 542.443	3 502.5989 cm^{-1}	190 298.1115–193 800.7104	3–3	1.2068e−03	1.4747e−02	4.1583e+00	−1.354 17	AAA	6
			28 541.991	3 502.6543 cm^{-1}	190 298.1115–193 800.7658	3–1	1.2068e−03	4.9156e−03	1.3860e+00	−1.831 30	AAA	6
162	1*s*4*s*-1*s*6*p*	$^3S-{}^3P^\circ$	*20 424.96*	*4 894.634* cm^{-1}	*190 298.1115–195 192.746*	3–9	1.1524e−03	2.1634e−02	4.3653e+00	−1.187 74	AAA	6
			20 424.979	4 894.6297 cm^{-1}	190 298.1115–195 192.7412	3–5	1.1524e−03	1.2019e−02	2.4252e+00	−1.443 01	AAA	6
			20 424.969	4 894.6323 cm^{-1}	190 298.1115–195 192.7438	3–3	1.1524e−03	7.2114e−03	1.4551e+00	−1.664 86	AAA	6
			20 424.836	4 894.6640 cm^{-1}	190 298.1115–195 192.7755	3–1	1.1524e−03	2.4038e−03	4.8503e−01	−2.141 99	AAA	6
163	1*s*4*s*-1*s*7*p*	$^3S-{}^3P^\circ$	*17 449.66*	*5 729.205* cm^{-1}	*190 298.1115–196 027.316*	3–9	8.5957e−04	1.1778e−02	2.0304e+00	−1.451 81	AAA	6
			17 449.673	5 729.2018 cm^{-1}	190 298.1115–196 027.3133	3–5	8.5957e−04	6.5433e−03	1.1280e+00	−1.707 08	AAA	6
			17 449.668	5 729.2034 cm^{-1}	190 298.1115–196 027.3149	3–3	8.5957e−04	3.9260e−03	6.7679e−01	−1.928 93	AAA	6
			17 449.608	5 729.2232 cm^{-1}	190 298.1115–196 027.3347	3–1	8.5957e−04	1.3087e−03	2.2559e−01	−2.406 05	AAA	6
164	1*s*4*s*-1*s*8*p*	$^3S-{}^3P^\circ$	*15 948.17*	*6 268.601* cm^{-1}	*190 298.1115–196 566.712*	3–9	6.2580e−04	7.1626e−03	1.1285e+00	−1.667 81	AAA	6
			15 948.172	6 268.5986 cm^{-1}	190 298.1115–196 566.7101	3–5	6.2580e−04	3.9792e−03	6.2694e−01	−1.923 08	AAA	6
			15 948.169	6 268.5997 cm^{-1}	190 298.1115–196 566.7112	3–3	6.2580e−04	2.3875e−03	3.7616e−01	−2.144 93	AAA	6
			15 948.135	6 268.6129 cm^{-1}	190 298.1115–196 566.7244	3–1	6.2580e−04	7.9584e−04	1.2539e−01	−2.622 05	AAA	6
165	1*s*4*s*-1*s*9*p*	$^3S-{}^3P^\circ$	*15 062.43*	*6 637.220* cm^{-1}	*190 298.1115–196 935.331*	3–9	4.6126e−04	4.7092e−03	7.0075e−01	−1.849 93	AAA	6
			15 062.437	6 637.2182 cm^{-1}	190 298.1115–196 935.3297	3–5	4.6126e−04	2.6162e−03	3.8931e−01	−2.105 20	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			15 062.435	6 637.2189 cm^{-1}	190 298.1115–196 935.3304	3–3	4.6126e−04	1.5697e−03	2.3358e−01	−2.327 05	AAA	6
			15 062.414	6 637.2282 cm^{-1}	190 298.1115–196 935.3397	3–1	4.6126e−04	5.2325e−04	7.7861e−02	−2.804 17	AAA	6
166	1*s*4*s*-1*s*10*p*	$^3S-^3P^\circ$	*14 488.33*	*6 900.221* cm^{-1}	*190 298.1115–197 198.332*	3–9	3.4680e−04	3.2759e−03	4.6889e−01	−2.007 55	AAA	6
			14 488.332	6 900.2195 cm^{-1}	190 298.1115–197 198.3310	3–5	3.4680e−04	1.8199e−03	2.6049e−01	−2.262 82	AAA	6
			14 488.331	6 900.2200 cm^{-1}	190 298.1115–197 198.3315	3–3	3.4680e−04	1.0920e−03	1.5629e−01	−2.484 67	AAA	6
			14 488.317	6 900.2267 cm^{-1}	190 298.1115–197 198.3382	3–1	3.4680e−04	3.6399e−04	5.2098e−02	−2.961 79	AAA	6
167	1*s*4*s*-1*s*4*p*	$^1S-^1P^\circ$		552.4849 cm^{-1}	190 940.2252–191 492.7101	1–3	5.8221e−04	8.5786e−01	5.1118e+02	−0.066 58	AAA	6
168	1*s*4*s*-1*s*5*p*	$^1S-^1P^\circ$	33 299.433	3 002.2353 cm^{-1}	190 940.2252–193 942.4605	1–3	2.9323e−03	1.4632e−01	1.6045e+01	−0.834 70	AAA	6
169	1*s*4*s*-1*s*6*p*	$^1S-^1P^\circ$	23 063.452	4 334.6815 cm^{-1}	190 940.2252–195 274.9067	1–3	2.2045e−03	5.2768e−02	4.0077e+00	−1.277 63	AAA	6
170	1*s*4*s*-1*s*7*p*	$^1S-^1P^\circ$	19 454.255	5 138.8606 cm^{-1}	190 940.2252–196 079.0858	1–3	1.5207e−03	2.5899e−02	1.6592e+00	−1.586 71	AAA	6
171	1*s*4*s*-1*s*8*p*	$^1S-^1P^\circ$	17 659.360	5 661.1733 cm^{-1}	190 940.2252–196 601.3985	1–3	1.0661e−03	1.4961e−02	8.7003e−01	−1.825 04	AAA	6
172	1*s*4*s*-1*s*9*p*	$^1S-^1P^\circ$	16 608.233	6 019.4659 cm^{-1}	190 940.2252–196 959.6911	1–3	7.6907e−04	9.5461e−03	5.2209e−01	−2.020 17	AAA	6
173	1*s*4*s*-1*s*10*p*	$^1S-^1P^\circ$	15 929.712	6 275.8626 cm^{-1}	190 940.2252–197 216.0878	1–3	5.7048e−04	6.5144e−03	3.4172e−01	−2.186 13	AAA	6
174	1*s*4*p*-1*s*4*d*	$^3P^\circ-^3D$		*227.428* cm^{-1}	*191 217.056–191 444.484*	9–15	4.1537e−05	2.0066e−01	2.6141e+03	0.25670	AAA	6
				227.4400 cm^{-1}	191 217.0392–191 444.4792	5–7	4.1539e−05	1.6854e−01	1.2198e+03	−0.074 32	AAA	6
				227.4322 cm^{-1}	191 217.0482–191 444.4804	3–5	3.1150e−05	1.5047e−01	6.5344e+02	−0.345 42	AAA	6
				227.3404 cm^{-1}	191 217.1585–191 444.4989	1–3	2.3077e−05	2.0082e−01	2.9081e+02	−0.697 20	AAA	6
				227.4412 cm^{-1}	191 217.0392–191 444.4804	5–5	1.0383e−05	3.0091e−02	2.1778e+02	−0.822 59	AAA	6
				227.4507 cm^{-1}	191 217.0482–191 444.4989	3–3	1.7308e−05	5.0157e−02	2.1779e+02	−0.822 55	AAA	6
				227.4597 cm^{-1}	191 217.0392–191 444.4989	5–3	1.1539e−06	2.0062e−03	1.4518e+01	−1.998 66	AAA	6
175	1*s*4*p*-1*s*5*s*	$^3P^\circ-^3S$	*46 937.01*	*2 129.93* cm^{-1}	*191 217.056–193 346.9897*	9–3	2.0227e−02	2.2280e−01	3.0994e+02	0.302 17	AAA	6
			46 936.650	2 129.9505 cm^{-1}	191 217.0392–193 346.9897	5–3	1.1237e−02	2.2280e−01	1.7219e+02	0.046 89	AAA	6
			46 936.848	2 129.9415 cm^{-1}	191 217.0482–193 346.9897	3–3	6.7421e−03	2.2280e−01	1.0331e+02	−0.174 96	AAA	6
			46 939.279	2 129.8312 cm^{-1}	191 217.1585–193 346.9897	1–3	2.2474e−03	2.2283e−01	3.4443e+01	−0.652 03	AAA	6
176	1*s*4*p*-1*s*5*d*	$^3P^\circ-^3D$	*37 025.62*	*2 700.096* cm^{-1}	*191 217.056–193 917.152*	9–15	1.2792e−02	4.3843e−01	4.8111e+02	0.596 14	AAA	6
			37 025.425	2 700.1104 cm^{-1}	191 217.0392–193 917.1496	5–7	1.2793e−02	3.6829e−01	2.2452e+02	0.265 16	AAA	6
			37 025.541	2 700.1020 cm^{-1}	191 217.0482–193 917.1502	3–5	9.5937e−03	3.2880e−01	1.2027e+02	−0.005 95	AAA	6
			37 026.923	2 700.0012 cm^{-1}	191 217.1585–193 917.1597	1–3	7.1071e−03	4.3847e−01	5.3463e+01	−0.358 06	AAA	6
			37 025.417	2 700.1110 cm^{-1}	191 217.0392–193 917.1502	5–5	3.1979e−03	6.5759e−02	4.0089e+01	−0.483 07	AAA	6
			37 025.410	2 700.1115 cm^{-1}	191 217.0482–193 917.1597	3–3	5.3303e−03	1.0961e−01	4.0092e+01	−0.483 03	AAA	6
			37 025.287	2 700.1205 cm^{-1}	191 217.0392–193 917.1597	5–3	3.5536e−04	4.3844e−03	2.6728e+00	−1.659 12	AAA	6
177	1*s*4*p*-1*s*5*d*	$^3P^\circ-^1D$										
			37 009.819	2 701.2490 cm^{-1}	191 217.0392–193 918.2882	5–5	3.276e−07	6.731e−06	4.101e−03	−4.473 0	AA	6
			37 009.942	2 701.2400 cm^{-1}	191 217.0482–193 918.2882	3–5	9.122e−07	3.124e−05	1.142e−02	−4.028 2	AA	6
178	1*s*4*p*-1*s*6*s*	$^3P^\circ-^3S$	*26 881.16*	*3 719.063* cm^{-1}	*191 217.056–194 936.1181*	9–3	9.5913e−03	3.4653e−02	2.7608e+01	−0.506 01	AAA	6
			26 881.045	3 719.0789 cm^{-1}	191 217.0392–194 936.1181	5–3	5.3285e−03	3.4653e−02	1.5337e+01	−0.761 29	AAA	6
			26 881.110	3 719.0699 cm^{-1}	191 217.0482–194 936.1181	3–3	3.1971e−03	3.4653e−02	9.2025e+00	−0.983 13	AAA	6
			26 881.907	3 718.9596 cm^{-1}	191 217.1585–194 936.1181	1–3	1.0657e−03	3.4655e−02	3.0678e+00	−1.460 23	AAA	6
179	1*s*4*p*-1*s*6*d*	$^3P^\circ-^3D$	*24 727.27*	*4 043.015* cm^{-1}	*191 217.056–195 260.071*	9–15	8.1093e−03	1.2396e−01	9.0843e+01	0.047 52	AAA	6
			24 727.176	4 043.0304 cm^{-1}	191 217.0392–195 260.0696	5–7	8.1095e−03	1.0413e−01	4.2394e+01	−0.283 47	AAA	6
			24 727.228	4 043.0218 cm^{-1}	191 217.0482–195 260.0700	3–5	6.0816e−03	9.2963e−02	2.2709e+01	−0.554 57	AAA	6
			24 727.869	4 042.9170 cm^{-1}	191 217.1585–195 260.0755	1–3	4.5053e−03	1.2397e−01	1.0095e+01	−0.906 69	AAA	6
			24 727.173	4 043.0308 cm^{-1}	191 217.0392–195 260.0700	5–5	2.0272e−03	1.8593e−02	7.5697e+00	−1.031 69	AAA	6
			24 727.194	4 043.0273 cm^{-1}	191 217.0482–195 260.0755	3–3	3.3790e−03	3.0991e−02	7.5705e+00	−1.031 65	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			24 727.139	4 043.0363 cm^{-1}	191 217.0392–195 260.0755	5–3	2.2527e−04	1.2396e−03	5.0470e−01	−2.207 73	AAA	6
180	1*s*4*p*-1*s*6*d*	$^3P^\circ$–^1D										
			24 722.900	4 043.7296 cm^{-1}	191 217.0392–195 260.7688	5–5	1.842e−07	1.689e−06	6.874e−04	−5.073 5	AA	6
			24 722.955	4 043.7206 cm^{-1}	191 217.0482–195 260.7688	3–5	5.148e−07	7.866e−06	1.921e−03	−4.627 1	AA	6
181	1*s*4*p*-1*s*7*s*	$^3P^\circ$–^3S	*21 494.05*	*4 651.180* cm^{-1}	*191 217.056–195 868.2354*	9–3	5.5212e−03	1.2754e−02	8.1245e+00	−0.940 12	AAA	6
			21 493.979	4 651.1962 cm^{-1}	191 217.0392–195 868.2354	5–3	3.0673e−03	1.2754e−02	4.5135e+00	−1.195 40	AAA	6
			21 494.021	4 651.1872 cm^{-1}	191 217.0482–195 868.2354	3–3	1.8404e−03	1.2754e−02	2.7082e+00	−1.417 24	AAA	6
			21 494.530	4 651.0769 cm^{-1}	191 217.1585–195 868.2354	1–3	6.1346e−04	1.2754e−02	9.0278e−01	−1.894 34	AAA	6
182	1*s*4*p*-1*s*7*d*	$^3P^\circ$–^3D	*20 601.82*	*4 852.616* cm^{-1}	*191 217.056–196 069.672*	9–15	5.2062e−03	5.5242e−02	3.3730e+01	−0.303 49	AAA	6
			20 601.750	4 852.6319 cm^{-1}	191 217.0392–196 069.6711	5–7	5.2063e−03	4.6404e−02	1.5741e+01	−0.634 47	AAA	6
			20 601.788	4 852.6231 cm^{-1}	191 217.0482–196 069.6713	3–5	3.9044e−03	4.1429e−02	8.4319e+00	−0.905 57	AAA	6
			20 602.241	4 852.5163 cm^{-1}	191 217.1585–196 069.6748	1–3	2.8924e−03	5.5246e−02	3.7481e+00	−1.257 70	AAA	6
			20 601.750	4 852.6321 cm^{-1}	191 217.0392–196 069.6713	5–5	1.3015e−03	8.2860e−03	2.8107e+00	−1.382 68	AAA	6
			20 601.773	4 852.6266 cm^{-1}	191 217.0482–196 069.6748	3–3	2.1693e−03	1.3811e−02	2.8109e+00	−1.382 66	AAA	6
			20 601.735	4 852.6356 cm^{-1}	191 217.0392–196 069.6748	5–3	1.4462e−04	5.5243e−04	1.8739e−01	−2.558 75	AAA	6
183	1*s*4*p*-1*s*8*s*	$^3P^\circ$–^3S	*19 063.10*	*5 244.305* cm^{-1}	*191 217.056–196 461.3602*	9–3	3.5053e−03	6.3692e−03	3.5984e+00	−1.241 67	AAA	6
			19 063.041	5 244.3210 cm^{-1}	191 217.0392–196 461.3602	5–3	1.9474e−03	6.3692e−03	1.9991e+00	−1.496 95	AAA	6
			19 063.074	5 244.3120 cm^{-1}	191 217.0482–196 461.3602	3–3	1.1684e−03	6.3690e−03	1.1994e+00	−1.718 81	AAA	6
			19 063.474	5 244.2017 cm^{-1}	191 217.1585–196 461.3602	1–3	3.8948e−04	6.3695e−03	3.9985e−01	−2.195 90	AAA	6
184	1*s*4*p*-1*s*8*d*	$^3P^\circ$–^3D	*18 589.18*	*5 378.006* cm^{-1}	*191 217.056–196 595.061*	9–15	3.5063e−03	3.0291e−02	1.6688e+01	−0.564 45	AAA	6
			18 589.124	5 378.0213 cm^{-1}	191 217.0392–196 595.0605	5–7	3.5063e−03	2.5444e−02	7.7878e+00	−0.895 44	AAA	6
			18 589.154	5 378.0124 cm^{-1}	191 217.0482–196 595.0606	3–5	2.6296e−03	2.2717e−02	4.1718e+00	−1.166 53	AAA	6
			18 589.528	5 377.9044 cm^{-1}	191 217.1585–196 595.0629	1–3	1.9480e−03	3.0293e−02	1.8544e+00	−1.518 66	AAA	6
			18 589.123	5 378.0214 cm^{-1}	191 217.0392–196 595.0606	5–5	8.7651e−04	4.5433e−03	1.3906e+00	−1.643 66	AAA	6
			18 589.146	5 378.0147 cm^{-1}	191 217.0482–196 595.0629	3–3	1.4610e−03	7.5729e−03	1.3907e+00	−1.643 62	AAA	6
			18 589.115	5 378.0237 cm^{-1}	191 217.0392–196 595.0629	5–3	9.7398e−05	3.0291e−04	9.2712e−02	−2.819 72	AAA	6
185	1*s*4*p*-1*s*9*s*	$^3P^\circ$–^3S	*17 710.17*	*5 644.930* cm^{-1}	*191 217.056–196 861.9857*	9–3	2.3748e−03	3.7243e−03	1.9548e+00	−1.474 72	AAA	6
			17 710.123	5 644.9465 cm^{-1}	191 217.0392–196 861.9857	5–3	1.3193e−03	3.7242e−03	1.0860e+00	−1.730 00	AAA	6
			17 710.152	5 644.9375 cm^{-1}	191 217.0482–196 861.9857	3–3	7.9160e−04	3.7243e−03	6.5160e−01	−1.951 83	AAA	6
			17 710.498	5 644.8272 cm^{-1}	191 217.1585–196 861.9857	1–3	2.6387e−04	3.7245e−03	2.1722e−01	−2.428 93	AAA	6
186	1*s*4*p*-1*s*9*d*	$^3P^\circ$–^3D	*17 422.40*	*5 738.170* cm^{-1}	*191 217.056–196 955.225*	9–15	2.4658e−03	1.8712e−02	9.6621e+00	−0.773 63	AAA	6
			17 422.353	5 738.1856 cm^{-1}	191 217.0392–196 955.2248	5–7	2.4659e−03	1.5718e−02	4.5090e+00	−1.104 62	AAA	6
			17 422.380	5 738.1767 cm^{-1}	191 217.0482–196 955.2249	3–5	1.8493e−03	1.4033e−02	2.4154e+00	−1.375 71	AAA	6
			17 422.710	5 738.0680 cm^{-1}	191 217.1585–196 955.2265	1–3	1.3699e−03	1.8713e−02	1.0736e+00	−1.727 86	AAA	6
			17 422.353	5 738.1857 cm^{-1}	191 217.0392–196 955.2249	5–5	6.1643e−04	2.8067e−03	8.0512e−01	−1.852 84	AAA	6
			17 422.375	5 738.1783 cm^{-1}	191 217.0482–196 955.2265	3–3	1.0275e−03	4.6783e−03	8.0522e−01	−1.852 79	AAA	6
			17 422.348	5 738.1873 cm^{-1}	191 217.0392–196 955.2265	5–3	6.8497e−05	1.8712e−04	5.3679e−02	−3.028 90	AAA	6
187	1*s*4*p*-1*s*10*s*	$^3P^\circ$–^3S	*16 863.99*	*5 928.176* cm^{-1}	*191 217.056–197 145.2316*	9–3	1.6871e−03	2.3990e−03	1.1990e+00	−1.665 73	AAA	6
			16 863.942	5 928.1924 cm^{-1}	191 217.0392–197 145.2316	5–3	9.3727e−04	2.3990e−03	6.6612e−01	−1.921 00	AAA	6
			16 863.968	5 928.1834 cm^{-1}	191 217.0482–197 145.2316	3–3	5.6236e−04	2.3990e−03	3.9967e−01	−2.142 85	AAA	6
			16 864.281	5 928.0731 cm^{-1}	191 217.1585–197 145.2316	1–3	1.8745e−04	2.3990e−03	1.3323e−01	−2.619 96	AAA	6
188	1*s*4*p*-1*s*10*d*	$^3P^\circ$–^3D	*16 673.87*	*5 995.769* cm^{-1}	*191 217.056–197 212.824*	9–15	1.7977e−03	1.2495e−02	6.1744e+00	−0.949 03	AAA	6
			16 673.829	5 995.7849 cm^{-1}	191 217.0392–197 212.8241	5–7	1.7977e−03	1.0496e−02	2.8814e+00	−1.280 02	AAA	6
			16 673.854	5 995.7760 cm^{-1}	191 217.0482–197 212.8242	3–5	1.3482e−03	9.3706e−03	1.5436e+00	−1.551 11	AAA	6
			16 674.157	5 995.6669 cm^{-1}	191 217.1585–197 212.8254	1–3	9.9872e−04	1.2495e−02	6.8610e−01	−1.903 25	AAA	6
			16 673.829	5 995.7850 cm^{-1}	191 217.0392–197 212.8242	5–5	4.4939e−04	1.8741e−03	5.1450e−01	−2.028 24	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			16 673.850	5 995.7772 cm^{-1}	191 217.0482–197 212.8254	3–3	7.4904e−04	3.1237e−03	5.1454e−01	−2.028 21	AAA	6
			16 673.825	5 995.7862 cm^{-1}	191 217.0392–197 212.8254	5–3	4.9936e−05	1.2495e−04	3.4303e−02	−3.204 30	AAA	6
189	1*s*4*d*-1*s*4*p*	$^3D-{}^1P^\circ$										
				48.2297 cm^{-1}	191 444.4804–191 492.7101	5–3	8.058e−11	3.116e−06	1.063e−01	−4.807 4	AA	6
				48.2112 cm^{-1}	191 444.4989–191 492.7101	3–3	1.024e−14	6.605e−10	1.353e−05	−8.703 0	AA	6
190	1*s*4*d*-1*s*5*p*	$^3D-{}^3P^\circ$	*42 429.10*	*2 356.231* cm^{-1}	*191 444.484–193 800.714*	15–9	3.2710e−03	5.2997e−02	1.1107e+02	−0.099 65	AAA	6
			42 429.170	2 356.2266 cm^{-1}	191 444.4792–193 800.7058	7–5	2.7478e−03	5.3000e−02	5.1837e+01	−0.430 62	AAA	6
			42 429.109	2 356.2300 cm^{-1}	191 444.4804–193 800.7104	5–3	2.4530e−03	3.9744e−02	2.7765e+01	−0.701 76	AAA	6
			42 428.444	2 356.2669 cm^{-1}	191 444.4989–193 800.7658	3–1	3.2711e−03	2.9443e−02	1.2341e+01	−1.053 90	AAA	6
			42 429.192	2 356.2254 cm^{-1}	191 444.4804–193 800.7058	5–5	4.9061e−04	1.3248e−02	9.2553e+00	−1.178 87	AAA	6
			42 429.442	2 356.2115 cm^{-1}	191 444.4989–193 800.7104	3–3	8.1779e−04	2.2084e−02	9.2566e+00	−1.178 81	AAA	6
			42 429.525	2 356.2069 cm^{-1}	191 444.4989–193 800.7058	3–5	3.2711e−05	1.4722e−03	6.1710e−01	−2.354 91	AAA	6
191	1*s*4*d*-1*s*5*f*	$^3D-{}^3F^\circ$	*40 366.34*	*2 476.636* cm^{-1}	*191 444.484–193 921.120*	15–21	2.3336e−02	7.9851e−01	1.5922e+03	1.078 37	AAA	6
			40 366.271	2 476.6404 cm^{-1}	191 444.4792–193 921.1196	7–9	2.5858e−02	8.1259e−01	7.5610e+02	0.754 97	AAA	6
			40 366.341	2 476.6361 cm^{-1}	191 444.4804–193 921.1165	5–7	1.6288e−02	5.5735e−01	3.7044e+02	0.445 10	AAA	6
			40 366.521	2 476.6251 cm^{-1}	191 444.4989–193 921.1240	3–5	2.1720e−02	8.8480e−01	3.5284e+02	0.423 97	AAA	6
			40 366.322	2 476.6373 cm^{-1}	191 444.4792–193 921.1165	7–7	2.0042e−03	4.8986e−02	4.5581e+01	−0.464 83	AAA	6
			40 366.219	2 476.6436 cm^{-1}	191 444.4804–193 921.1240	5–5	4.0218e−03	9.8299e−02	6.5333e+01	−0.308 48	AAA	6
			40 366.200	2 476.6448 cm^{-1}	191 444.4792–193 921.1240	7–5	1.1492e−04	2.0063e−03	1.8668e+00	−1.852 51	AAA	6
192	1*s*4*d*-1*s*5*f*	$^3D-{}^1F^\circ$										
			40 366.116	2 476.6499 cm^{-1}	191 444.4792–193 921.1291	7–7	8.689e−04	2.124e−02	1.976e+01	−0.827 8	AA	6
			40 366.136	2 476.6487 cm^{-1}	191 444.4804–193 921.1291	5–7	6.697e−03	2.292e−01	1.523e+02	0.059 1	AA	6
193	1*s*4*d*-1*s*5*p*	$^3D-{}^1P^\circ$										
			40 021.431	2 497.9801 cm^{-1}	191 444.4804–193 942.4605	5–3	2.005e−07	2.890e−06	1.904e−03	−4.840 2	AA	6
194	1*s*4*d*-1*s*6*p*	$^3D-{}^3P^\circ$	*26 671.75*	*3 748.262* cm^{-1}	*191 444.484–195 192.746*	15–9	1.5975e−03	1.0228e−02	1.3475e+01	−0.814 11	AAA	6
			26 671.755	3 748.2620 cm^{-1}	191 444.4792–195 192.7412	7–5	1.3420e−03	1.0229e−02	6.2888e+00	−1.145 08	AAA	6
			26 671.745	3 748.2634 cm^{-1}	191 444.4804–195 192.7438	5–3	1.1980e−03	7.6702e−03	3.3684e+00	−1.416 23	AAA	6
			26 671.651	3 748.2766 cm^{-1}	191 444.4989–195 192.7755	3–1	1.5976e−03	5.6825e−03	1.4973e+00	−1.768 34	AAA	6
			26 671.764	3 748.2608 cm^{-1}	191 444.4804–195 192.7412	5–5	2.3961e−04	2.5568e−03	1.1228e+00	−1.893 33	AAA	6
			26 671.877	3 748.2449 cm^{-1}	191 444.4989–195 192.7438	3–3	3.9939e−04	4.2618e−03	1.1230e+00	−1.893 28	AAA	6
			26 671.895	3 748.2423 cm^{-1}	191 444.4989–195 192.7412	3–5	1.5976e−05	2.8413e−04	7.4867e−02	−3.069 36	AAA	6
195	1*s*4*d*-1*s*6*f*	$^3D-{}^3F^\circ$	*26 184.99*	*3 817.941* cm^{-1}	*191 444.484–195 262.424*	15–21	1.1808e−02	1.7001e−01	2.1990e+02	0.406 58	AAA	6
			26 184.958	3 817.9449 cm^{-1}	191 444.4792–195 262.4241	7–9	1.2923e−02	1.7089e−01	1.0315e+02	0.077 80	AAA	6
			26 184.977	3 817.9421 cm^{-1}	191 444.4804–195 262.4225	5–7	8.5264e−03	1.2277e−01	5.2931e+01	−0.211 94	AAA	6
			26 185.076	3 817.9277 cm^{-1}	191 444.4989–195 262.4266	3–5	1.0855e−02	1.8607e−01	4.8134e+01	−0.253 20	AAA	6
			26 184.969	3 817.9433 cm^{-1}	191 444.4792–195 262.4225	7–7	1.0505e−03	1.0804e−02	6.5214e+00	−1.121 31	AAA	6
			26 184.949	3 817.9462 cm^{-1}	191 444.4804–195 262.4266	5–5	2.0100e−03	2.0673e−02	8.9127e+00	−0.985 64	AAA	6
			26 184.940	3 817.9474 cm^{-1}	191 444.4792–195 262.4266	7–5	5.7436e−05	4.2194e−04	2.5468e−01	−2.529 65	AAA	6
196	1*s*4*d*-1*s*6*f*	$^3D-{}^1F^\circ$										
			26 184.917	3 817.9508 cm^{-1}	191 444.4792–195 262.4300	7–7	3.854e−04	3.964e−03	2.392e+00	−1.556 8	AA	6
			26 184.925	3 817.9496 cm^{-1}	191 444.4804–195 262.4300	5–7	2.961e−03	4.263e−02	1.838e+01	−0.671 3	AA	6
197	1*s*4*d*-1*s*7*p*	$^3D-{}^3P^\circ$	*21 814.61*	*4 582.833* cm^{-1}	*191 444.484–196 027.316*	15–9	9.1121e−04	3.9026e−03	4.2053e+00	−1.232 55	AAA	6
			21 814.605	4 582.8341 cm^{-1}	191 444.4792–196 027.3133	7–5	7.6545e−04	3.9028e−03	1.9625e+00	−1.563 52	AAA	6
			21 814.603	4 582.8345 cm^{-1}	191 444.4804–196 027.3149	5–3	6.8335e−04	2.9267e−03	1.0512e+00	−1.834 65	AAA	6
			21 814.597	4 582.8358 cm^{-1}	191 444.4989–196 027.3347	3–1	9.1125e−04	2.1682e−03	4.6727e−01	−2.186 77	AAA	6
			21 814.611	4 582.8329 cm^{-1}	191 444.4804–196 027.3133	5–5	1.3667e−04	9.7558e−04	3.5041e−01	−2.311 77	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			21 814.691	4 582.8160 cm^{-1}	191 444.4989–196 027.3149	3–3	2.2781e−04	1.6262e−03	3.5045e−01	−2.311 71	AAA	6
			21 814.699	4 582.8144 cm^{-1}	191 444.4989–196 027.3133	3–5	9.1125e−06	1.0841e−04	2.3364e−02	−3.487 80	AAA	6
198	1*s*4*d*-1*s*7*f*	$^3D-^3F^\circ$	*21 607.82*	*4 626.692* cm^{-1}	*191 444.484–196 071.175*	15–21	6.7931e−03	6.6606e−02	7.1090e+01	−0.000 40	AAA	6
			21 607.798	4 626.6962 cm^{-1}	191 444.4792–196 071.1754	7–9	7.3817e−03	6.6468e−02	3.3107e+01	−0.332 29	AAA	6
			21 607.808	4 626.6940 cm^{-1}	191 444.4804–196 071.1744	5–7	4.9996e−03	4.9021e−02	1.7440e+01	−0.610 65	AAA	6
			21 607.882	4 626.6781 cm^{-1}	191 444.4989–196 071.1770	3–5	6.2007e−03	7.2378e−02	1.5450e+01	−0.663 27	AAA	6
			21 607.802	4 626.6952 cm^{-1}	191 444.4792–196 071.1744	7–7	6.1644e−04	4.3172e−03	2.1503e+00	−1.519 70	AAA	6
			21 607.796	4 626.6966 cm^{-1}	191 444.4804–196 071.1770	5–5	1.1481e−03	8.0407e−03	2.8607e+00	−1.395 74	AAA	6
			21 607.790	4 626.6978 cm^{-1}	191 444.4792–196 071.1770	7–5	3.2808e−05	1.6412e−04	8.1747e−02	−2.939 74	AAA	6
199	1*s*4*d*-1*s*7*f*	$^3D-^1F^\circ$										
			21 607.779	4 626.7001 cm^{-1}	191 444.4792–196 071.1793	7–7	2.038e−04	1.427e−03	7.107e−01	−2.000 5	AA	6
			21 607.785	4 626.6989 cm^{-1}	191 444.4804–196 071.1793	5–7	1.562e−03	1.532e−02	5.449e+00	−1.115 9	AA	6
200	1*s*4*d*-1*s*8*p*	$^3D-^3P^\circ$	*19 517.42*	*5 122.229* cm^{-1}	*191 444.484–196 566.712*	15–9	5.7358e−04	1.9665e−03	1.8958e+00	−1.530 22	AAA	6
			19 517.415	5 122.2309 cm^{-1}	191 444.4792–196 566.7101	7–5	4.8183e−04	1.9665e−03	8.8475e−01	−1.861 20	AAA	6
			19 517.416	5 122.2308 cm^{-1}	191 444.4804–196 566.7112	5–3	4.3015e−04	1.4747e−03	4.7391e−01	−2.132 32	AAA	6
			19 517.436	5 122.2255 cm^{-1}	191 444.4989–196 566.7244	3–1	5.7360e−04	1.0925e−03	2.1065e−01	−2.484 45	AAA	6
			19 517.420	5 122.2297 cm^{-1}	191 444.4804–196 566.7101	5–5	8.6030e−05	4.9157e−04	1.5797e−01	−2.609 44	AAA	6
			19 517.486	5 122.2123 cm^{-1}	191 444.4989–196 566.7112	3–3	1.4340e−04	8.1939e−04	1.5799e−01	−2.609 39	AAA	6
			19 517.490	5 122.2112 cm^{-1}	191 444.4989–196 566.7101	3–5	5.7360e−06	5.4626e−05	1.0533e−02	−3.785 48	AAA	6
201	1*s*4*d*-1*s*8*f*	$^3D-^3F^\circ$	*19 406.17*	*5 151.594* cm^{-1}	*191 444.484–196 596.078*	15–21	4.2901e−03	3.3929e−02	3.2524e+01	−0.293 33	AAA	6
			19 406.153	5 151.5984 cm^{-1}	191 444.4792–196 596.0776	7–9	4.6409e−03	3.3707e−02	1.5078e+01	−0.627 18	AAA	6
			19 406.160	5 151.5966 cm^{-1}	191 444.4804–196 596.0770	5–7	3.1946e−03	2.5265e−02	8.0728e+00	−0.898 51	AAA	6
			19 406.223	5 151.5798 cm^{-1}	191 444.4989–196 596.0787	3–5	3.8984e−03	3.6704e−02	7.0367e+00	−0.958 17	AAA	6
			19 406.155	5 151.5978 cm^{-1}	191 444.4792–196 596.0770	7–7	3.9407e−04	2.2261e−03	9.9581e−01	−1.807 36	AAA	6
			19 406.153	5 151.5983 cm^{-1}	191 444.4804–196 596.0787	5–5	7.2183e−04	4.0776e−03	1.3029e+00	−1.690 62	AAA	6
			19 406.149	5 151.5995 cm^{-1}	191 444.4792–196 596.0787	7–5	2.0626e−05	8.3226e−05	3.7230e−02	−3.234 64	AAA	6
202	1*s*4*d*-1*s*8*f*	$^3D-^1F^\circ$										
			19 406.142	5 151.6012 cm^{-1}	191 444.4792–196 596.0804	7–7	1.216e−04	6.868e−04	3.072e−01	−2.318 1	AA	6
			19 406.147	5 151.6000 cm^{-1}	191 444.4804–196 596.0804	5–7	9.307e−04	7.360e−03	2.352e+00	−1.434 1	AA	6
203	1*s*4*d*-1*s*9*p*	$^3D-^3P^\circ$	*18 207.15*	*5 490.848* cm^{-1}	*191 444.484–196 935.331*	15–9	3.8633e−04	1.1526e−03	1.0366e+00	−1.762 23	AAA	6
			18 207.143	5 490.8505 cm^{-1}	191 444.4792–196 935.3297	7–5	3.2453e−04	1.1527e−03	4.8377e−01	−2.093 20	AAA	6
			18 207.145	5 490.8500 cm^{-1}	191 444.4804–196 935.3304	5–3	2.8972e−04	8.6439e−04	2.5913e−01	−2.364 32	AAA	6
			18 207.175	5 490.8408 cm^{-1}	191 444.4989–196 935.3397	3–1	3.8634e−04	6.4036e−04	1.1518e−01	−2.716 45	AAA	6
			18 207.147	5 490.8493 cm^{-1}	191 444.4804–196 935.3297	5–5	5.7943e−05	2.8812e−04	8.6374e−02	−2.841 45	AAA	6
			18 207.206	5 490.8315 cm^{-1}	191 444.4989–196 935.3304	3–3	9.6585e−05	4.8028e−04	8.6387e−02	−2.841 39	AAA	6
			18 207.208	5 490.8308 cm^{-1}	191 444.4989–196 935.3297	3–5	3.8634e−06	3.2018e−05	5.7592e−03	−4.017 48	AAA	6
204	1*s*4*d*-1*s*9*f*	$^3D-^3F^\circ$	*18 139.06*	*5 511.460* cm^{-1}	*191 444.484–196 955.944*	15–21	2.8944e−03	1.9999e−02	1.7919e+01	−0.522 90	AAA	6
			18 139.045	5 511.4645 cm^{-1}	191 444.4792–196 955.9437	7–9	3.1216e−03	1.9808e−02	8.2823e+00	−0.858 06	AAA	6
			18 139.050	5 511.4629 cm^{-1}	191 444.4804–196 955.9433	5–7	2.1720e−03	1.5008e−02	4.4822e+00	−1.124 72	AAA	6
			18 139.107	5 511.4455 cm^{-1}	191 444.4989–196 955.9444	3–5	2.6221e−03	2.1569e−02	3.8651e+00	−1.189 06	AAA	6
			18 139.046	5 511.4641 cm^{-1}	191 444.4792–196 955.9433	7–7	2.6801e−04	1.3227e−03	5.5307e−01	−2.033 43	AAA	6
			18 139.046	5 511.4640 cm^{-1}	191 444.4804–196 955.9444	5–5	4.8552e−04	2.3962e−03	7.1566e−01	−1.921 50	AAA	6
			18 139.042	5 511.4652 cm^{-1}	191 444.4792–196 955.9444	7–5	1.3874e−05	4.8910e−05	2.0450e−02	−3.465 51	AAA	6
205	1*s*4*d*-1*s*9*f*	$^3D-^1F^\circ$										
			18 139.038	5 511.4664 cm^{-1}	191 444.4792–196 955.9456	7–7	7.884e−05	3.891e−04	1.627e−01	−2.564 8	AA	6
			18 139.042	5 511.4652 cm^{-1}	191 444.4804–196 955.9456	5–7	6.028e−04	4.165e−03	1.244e+00	−1.681 4	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
206	1*s*4*d*-1*s*10*p*	$^3D-^3P^\circ$	*17 374.93*	*5 753.848* cm^{-1}	*191 444.484–197 198.332*	15–9	2.7341e−04	7.4287e−04	6.3756e−01	−1.953 00	AAA	6
			17 374.917	5 753.8518 cm^{-1}	191 444.4792–197 198.3310	7–5	2.2968e−04	7.4291e−04	2.9754e−01	−2.283 97	AAA	6
			17 374.919	5 753.8511 cm^{-1}	191 444.4804–197 198.3315	5–3	2.0504e−04	5.5710e−04	1.5937e−01	−2.555 10	AAA	6
			17 374.955	5 753.8393 cm^{-1}	191 444.4989–197 198.3382	3–1	2.7342e−04	4.1271e−04	7.0842e−02	−2.907 23	AAA	6
			17 374.920	5 753.8506 cm^{-1}	191 444.4804–197 198.3310	5–5	4.1008e−05	1.8570e−04	5.3125e−02	−3.032 22	AAA	6
			17 374.975	5 753.8326 cm^{-1}	191 444.4989–197 198.3315	3–3	6.8356e−05	3.0954e−04	5.3132e−02	−3.032 16	AAA	6
			17 374.976	5 753.8321 cm^{-1}	191 444.4989–197 198.3310	3–5	2.7342e−06	2.0636e−05	3.5421e−03	−4.208 26	AAA	6
207	1*s*4*d*-1*s*10*f*	$^3D-^3F^\circ$	*17 329.69*	*5 768.867* cm^{-1}	*191 444.484–197 213.351*	15–21	2.0506e−03	1.2932e−02	1.1070e+01	−0.712 23	AAA	6
			17 329.680	5 768.8714 cm^{-1}	191 444.4792–197 213.3506	7–9	2.2069e−03	1.2782e−02	5.1061e+00	−1.048 30	AAA	6
			17 329.685	5 768.8699 cm^{-1}	191 444.4804–197 213.3503	5–7	1.5470e−03	9.7565e−03	2.7839e+00	−1.311 74	AAA	6
			17 329.738	5 768.8522 cm^{-1}	191 444.4989–197 213.3511	3–5	1.8538e−03	1.3918e−02	2.3829e+00	−1.379 29	AAA	6
			17 329.681	5 768.8711 cm^{-1}	191 444.4792–197 213.3503	7–7	1.9094e−04	8.6015e−04	3.4360e−01	−2.220 33	AAA	6
			17 329.682	5 768.8707 cm^{-1}	191 444.4804–197 213.3511	5–5	3.4325e−04	1.5463e−03	4.4121e−01	−2.111 74	AAA	6
			17 329.679	5 768.8719 cm^{-1}	191 444.4792–197 213.3511	7–5	9.8084e−06	3.1561e−05	1.2607e−02	−3.655 76	AAA	6
208	1*s*4*d*-1*s*10*f*	$^3D-^1F^\circ$										
			17 329.676	5 768.8728 cm^{-1}	191 444.4792–197 213.3520	7–7	5.427e−05	2.445e−04	9.767e−02	−2.766 6	AA	6
			17 329.680	5 768.8716 cm^{-1}	191 444.4804–197 213.3520	5–7	4.147e−04	2.615e−03	7.462e−01	−1.883 5	AA	6
209	1*s*4*d*-1*s*4*p*	$^1D-^1P^\circ$		46.2561 cm^{-1}	191 446.4540–191 492.7101	5–3	5.6862e−07	2.3905e−02	8.5069e+02	−0.922 54	AAA	6
210	1*s*4*d*-1*s*5*p*	$^1D-^3P^\circ$										
			42 464.761	2 354.2518 cm^{-1}	191 446.4540–193 800.7058	5–5	6.356e−08	1.719e−06	1.202e−03	−5.065 7	AA	6
			42 464.678	2 354.2564 cm^{-1}	191 446.4540–193 800.7104	5–3	3.076e−07	4.992e−06	3.490e−03	−4.602 8	AA	6
211	1*s*4*d*-1*s*5*f*	$^1D-^3F^\circ$										
			40 398.412	2 474.6700 cm^{-1}	191 446.4540–193 921.1240	5–5	5.211e−07	1.276e−05	8.486e−03	−4.195 3	AA	6
			40 398.534	2 474.6625 cm^{-1}	191 446.4540–193 921.1165	5–7	7.567e−03	2.594e−01	1.725e+02	0.112 9	AA	6
212	1*s*4*d*-1*s*5*f*	$^1D-^1F^\circ$	40 398.329	2 474.6751 cm^{-1}	191 446.4540–193 921.1291	5–7	1.8294e−02	6.2698e−01	4.1705e+02	0.496 23	AAA	6
213	1*s*4*d*-1*s*5*p*	$^1D-^1P^\circ$	40 053.076	2 496.0065 cm^{-1}	191 446.4540–193 942.4605	5–3	1.6330e−03	2.3578e−02	1.5549e+01	−0.928 53	AAA	6
214	1*s*4*d*-1*s*6*f*	$^1D-^3F^\circ$										
			26 198.491	3 815.9726 cm^{-1}	191 446.4540–195 262.4266	5–5	2.607e−07	2.684e−06	1.158e−03	−4.872 3	AA	6
			26 198.519	3 815.9685 cm^{-1}	191 446.4540–195 262.4225	5–7	3.343e−03	4.819e−02	2.079e+01	−0.618 1	AA	6
215	1*s*4*d*-1*s*6*f*	$^1D-^1F^\circ$	26 198.468	3 815.9760 cm^{-1}	191 446.4540–195 262.4300	5–7	9.5684e−03	1.3792e−01	5.9491e+01	−0.161 42	AAA	6
216	1*s*4*d*-1*s*6*p*	$^1D-^1P^\circ$	26 113.089	3 828.4527 cm^{-1}	191 446.4540–195 274.9067	5–3	8.1901e−04	5.0263e−03	2.1611e+00	−1.599 78	AAA	6
217	1*s*4*d*-1*s*7*f*	$^1D-^3F^\circ$										
			21 617.017	4 624.7230 cm^{-1}	191 446.4540–196 071.1770	5–5	1.489e−07	1.044e−06	3.716e−04	−5.282 4	AA	6
			21 617.029	4 624.7204 cm^{-1}	191 446.4540–196 071.1744	5–7	1.763e−03	1.730e−02	6.159e+00	−1.062 9	AA	6
218	1*s*4*d*-1*s*7*f*	$^1D-^1F^\circ$	21 617.006	4 624.7253 cm^{-1}	191 446.4540–196 071.1793	5–7	5.6085e−03	5.5038e−02	1.9589e+01	−0.560 37	AAA	6
219	1*s*4*d*-1*s*7*p*	$^1D-^1P^\circ$	21 580.112	4 632.6318 cm^{-1}	191 446.4540–196 079.0858	5–3	4.6870e−04	1.9645e−03	6.9802e−01	−2.007 78	AAA	6
220	1*s*4*d*-1*s*8*f*	$^1D-^3F^\circ$										
			19 413.597	5 149.6230 cm^{-1}	191 446.4540–196 596.0770	5–7	1.051e−03	8.314e−03	2.658e+00	−1.381 2	AA	6
221	1*s*4*d*-1*s*8*f*	$^1D-^1F^\circ$	19 413.584	5 149.6264 cm^{-1}	191 446.4540–196 596.0804	5–7	3.5829e−03	2.8358e−02	9.0644e+00	−0.848 36	AAA	6
222	1*s*4*d*-1*s*8*p*	$^1D-^1P^\circ$	19 393.556	5 154.9445 cm^{-1}	191 446.4540–196 601.3985	5–3	2.9506e−04	9.9878e−04	3.1893e−01	−2.301 56	AAA	6
223	1*s*4*d*-1*s*9*f*	$^1D-^3F^\circ$										
			18 145.548	5 509.4893 cm^{-1}	191 446.4540–196 955.9433	5–7	6.804e−04	4.705e−03	1.406e+00	−1.628 5	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
224	1*s*4*d*-1*s*9*f*	$^1D-^1F^\circ$	18 145.540	5 509.4916 cm^{-1}	191 446.4540–196 955.9456	5–7	2.4356e−03	1.6841e−02	5.0316e+00	−1.074 66	AAA	6
225	1*s*4*d*-1*s*9*p*	$^1D-^1P^\circ$	18 133.213	5 513.2371 cm^{-1}	191 446.4540–196 959.6911	5–3	1.9866e−04	5.8790e−04	1.7553e−01	−2.531 72	AAA	6
226	1*s*4*d*-1*s*10*f*	$^1D-^3F^\circ$										
			17 335.615	5 766.8963 cm^{-1}	191 446.4540–197 213.3503	5–7	4.680e−04	2.954e−03	8.430e−01	−1.830 7	AA	6
227	1*s*4*d*-1*s*10*f*	$^1D-^1F^\circ$	17 335.610	5 766.8980 cm^{-1}	191 446.4540–197 213.3520	5–7	1.7347e−03	1.0948e−02	3.1248e+00	−1.261 71	AAA	6
228	1*s*4*d*-1*s*10*p*	$^1D-^1P^\circ$	17 327.390	5 769.6338 cm^{-1}	191 446.4540–197 216.0878	5–3	1.4055e−04	3.7979e−04	1.0835e−01	−2.721 49	AAA	6
229	1*s*4*f*-1*s*5*d*	$^3F^\circ-^3D$	*40 552.40*	*2 465.273* cm^{-1}	*191 451.879–193 917.152*	21–15	4.5778e−04	8.0659e−03	2.2620e+01	−0.771 13	AAA	6
			40 552.447	2 465.2702 cm^{-1}	191 451.8794–193 917.1496	9–7	4.7698e−04	9.1513e−03	1.0999e+01	−1.084 27	AAA	6
			40 552.318	2 465.2780 cm^{-1}	191 451.8722–193 917.1502	7–5	2.9793e−04	5.2494e−03	4.9070e+00	−1.434 79	AAA	6
			40 552.422	2 465.2717 cm^{-1}	191 451.8880–193 917.1597	5–3	5.1938e−04	7.6871e−03	5.1327e+00	−1.415 27	AAA	6
			40 552.328	2 465.2774 cm^{-1}	191 451.8722–193 917.1496	7–7	2.6178e−05	6.4575e−04	6.0363e−01	−2.344 84	AAA	6
			40 552.578	2 465.2622 cm^{-1}	191 451.8880–193 917.1502	5–5	5.7703e−05	1.4234e−03	9.5041e−01	−2.147 70	AAA	6
			40 552.588	2 465.2616 cm^{-1}	191 451.8880–193 917.1496	5–7	1.1777e−06	4.0672e−05	2.7157e−02	−3.691 74	AAA	6
230	1*s*4*f*-1*s*5*d*	$^3F^\circ-^1D$										
			40 533.608	2 466.4160 cm^{-1}	191 451.8722–193 918.2882	7–5	1.833e−04	3.227e−03	3.015e+00	−1.646 1	AA	6
231	1*s*4*f*-1*s*5*g*	$^3F^\circ-^3G$	*40 479.11*	*2 469.737* cm^{-1}	*191 451.879–193 921.616*	21–27	4.2016e−02	1.3277e+00	3.7167e+03	1.445 33	AAA	6
			40 479.109	2 469.7366 cm^{-1}	191 451.8794–193 921.6160	9–11	4.2584e−02	1.2792e+00	1.5347e+03	1.061 19	AAA	6
			40 479.037	2 469.7410 cm^{-1}	191 451.8722–193 921.6132	7–9	4.0469e−02	1.2789e+00	1.1933e+03	0.951 92	AAA	6
			40 479.209	2 469.7305 cm^{-1}	191 451.8880–193 921.6185	5–7	3.9107e−02	1.3457e+00	8.9689e+02	0.827 91	AAA	6
			40 479.155	2 469.7338 cm^{-1}	191 451.8794–193 921.6132	9–9	1.3816e−03	3.3958e−02	4.0739e+01	−0.514 82	AAA	6
			40 478.950	2 469.7463 cm^{-1}	191 451.8722–193 921.6185	7–7	2.1731e−03	5.3411e−02	4.9837e+01	−0.427 27	AAA	6
			40 479.068	2 469.7391 cm^{-1}	191 451.8794–193 921.6185	9–7	5.4316e−05	1.0383e−03	1.2457e+00	−2.029 42	AAA	6
232	1*s*4*f*-1*s*5*g*	$^3F^\circ-^1G$										
			40 478.923	2 469.7480 cm^{-1}	191 451.8722–193 921.6202	7–9	4.245e−04	1.341e−02	1.252e+01	−1.027 3	AA	6
			40 479.041	2 469.7408 cm^{-1}	191 451.8794–193 921.6202	9–9	1.280e−03	3.146e−02	3.774e+01	−0.548 0	AA	6
233	1*s*4*f*-1*s*6*d*	$^3F^\circ-^3D$	*26 252.02*	*3 808.192* cm^{-1}	*191 451.879–195 260.071*	21–15	1.9466e−04	1.4374e−03	2.6095e+00	−1.520 21	AAA	6
			26 252.030	3 808.1902 cm^{-1}	191 451.8794–195 260.0696	9–7	2.0287e−04	1.6311e−03	1.2691e+00	−1.833 26	AAA	6
			26 251.978	3 808.1978 cm^{-1}	191 451.8722–195 260.0700	7–5	1.2660e−04	9.3481e−04	5.6569e−01	−2.184 18	AAA	6
			26 252.049	3 808.1875 cm^{-1}	191 451.8880–195 260.0755	5–3	2.2090e−04	1.3701e−03	5.9224e−01	−2.164 26	AAA	6
			26 251.981	3 808.1974 cm^{-1}	191 451.8722–195 260.0696	7–7	1.1134e−05	1.1510e−04	6.9650e−02	−3.093 83	AAA	6
			26 252.087	3 808.1820 cm^{-1}	191 451.8880–195 260.0700	5–5	2.4542e−05	2.5371e−04	1.0966e−01	−2.896 70	AAA	6
			26 252.090	3 808.1816 cm^{-1}	191 451.8880–195 260.0696	5–7	5.0091e−07	7.2495e−06	3.1336e−03	−4.440 72	AAA	6
234	1*s*4*f*-1*s*6*d*	$^3F^\circ-^1D$										
			26 247.162	3 808.8966 cm^{-1}	191 451.8722–195 260.7688	7–5	7.805e−05	5.761e−04	3.485e−01	−2.394 4	AA	6
235	1*s*4*f*-1*s*6*g*	$^3F^\circ-^3G$	*26 233.75*	*3 810.844* cm^{-1}	*191 451.879–195 262.723*	21–27	1.3565e−02	1.8004e−01	3.2663e+02	0.577 60	AAA	6
			26 233.753	3 810.8435 cm^{-1}	191 451.8794–195 262.7229	9–11	1.3748e−02	1.7346e−01	1.3487e+02	0.193 45	AAA	6
			26 233.714	3 810.8491 cm^{-1}	191 451.8722–195 262.7213	7–9	1.3066e−02	1.7342e−01	1.0487e+02	0.084 20	AAA	6
			26 233.801	3 810.8364 cm^{-1}	191 451.8880–195 262.7244	5–7	1.2626e−02	1.8248e−01	7.8820e+01	−0.039 82	AAA	6
			26 233.764	3 810.8419 cm^{-1}	191 451.8794–195 262.7213	9–9	4.4636e−04	4.6079e−03	3.5826e+00	−1.382 26	AAA	6
			26 233.693	3 810.8522 cm^{-1}	191 451.8722–195 262.7244	7–7	7.0158e−04	7.2425e−03	4.3797e+00	−1.295 01	AAA	6
			26 233.742	3 810.8450 cm^{-1}	191 451.8794–195 262.7244	9–7	1.7536e−05	1.4080e−04	1.0947e−01	−2.897 16	AAA	6
236	1*s*4*f*-1*s*6*g*	$^3F^\circ-^1G$										
			26 233.686	3 810.8532 cm^{-1}	191 451.8722–195 262.7254	7–9	1.360e−04	1.805e−03	1.092e+00	−1.898 3	AA	6
			26 233.735	3 810.8460 cm^{-1}	191 451.8794–195 262.7254	9–9	4.129e−04	4.262e−03	3.314e+00	−1.416 1	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
237	1*s*4*f*-1*s*7*d*	$^3F^\circ-{}^3D$	*21 649.46*	*4 617.793* cm^{-1}	*191 451.879–196 069.672*	21–15	1.0208e−04	5.1264e−04	7.6749e−01	−1.967 97	AAA	6
			21 649.464	4 617.7917 cm^{-1}	191 451.8794–196 069.6711	9–7	1.0640e−04	5.8182e−04	3.7331e−01	−2.280 97	AAA	6
			21 649.429	4 617.7991 cm^{-1}	191 451.8722–196 069.6713	7–5	6.6361e−05	3.3325e−04	1.6631e−01	−2.632 13	AAA	6
			21 649.487	4 617.7868 cm^{-1}	191 451.8880–196 069.6748	5–3	1.1585e−04	4.8869e−04	1.7420e−01	−2.611 99	AAA	6
			21 649.430	4 617.7989 cm^{-1}	191 451.8722–196 069.6711	7–7	5.8392e−06	4.1053e−05	2.0487e−02	−3.541 56	AAA	6
			21 649.503	4 617.7833 cm^{-1}	191 451.8880–196 069.6713	5–5	1.2872e−05	9.0497e−05	3.2259e−02	−3.344 39	AAA	6
			21 649.504	4 617.7831 cm^{-1}	191 451.8880–196 069.6711	5–7	2.6271e−07	2.5858e−06	9.2174e−04	−4.888 44	AAA	6
238	1*s*4*f*-1*s*7*d*	$^3F^\circ-{}^1D$										
			21 647.295	4 618.2544 cm^{-1}	191 451.8722–196 070.1266	7–5	4.095e−05	2.056e−04	1.026e−01	−2.841 9	AA	6
239	1*s*4*f*-1*s*7*g*	$^3F^\circ-{}^3G$	*21 641.51*	*4 619.489* cm^{-1}	*191 451.879–196 071.368*	21–27	6.3833e−03	5.7658e−02	8.6290e+01	0.083 08	AAA	6
			21 641.511	4 619.4886 cm^{-1}	191 451.8794–196 071.3680	9–11	6.4692e−03	5.5548e−02	3.5628e+01	−0.301 09	AAA	6
			21 641.482	4 619.4948 cm^{-1}	191 451.8722–196 071.3670	7–9	6.1488e−03	5.5540e−02	2.7707e+01	−0.410 30	AAA	6
			21 641.547	4 619.4809 cm^{-1}	191 451.8880–196 071.3689	5–7	5.9411e−03	5.8434e−02	2.0822e+01	−0.534 36	AAA	6
			21 641.516	4 619.4876 cm^{-1}	191 451.8794–196 071.3670	9–9	2.1016e−04	1.4765e−03	9.4699e−01	−1.876 54	AAA	6
			21 641.473	4 619.4967 cm^{-1}	191 451.8722–196 071.3689	7–7	3.3014e−04	2.3193e−03	1.1570e+00	−1.789 54	AAA	6
			21 641.507	4 619.4895 cm^{-1}	191 451.8794–196 071.3689	9–7	8.2516e−06	4.5088e−05	2.8919e−02	−3.391 70	AAA	6
240	1*s*4*f*-1*s*7*g*	$^3F^\circ-{}^1G$										
			21 641.471	4 619.4973 cm^{-1}	191 451.8722–196 071.3695	7–9	6.364e−05	5.749e−04	2.868e−01	−2.395 3	AA	6
			21 641.504	4 619.4901 cm^{-1}	191 451.8794–196 071.3695	9–9	1.942e−04	1.364e−03	8.749e−01	−1.910 9	AA	6
241	1*s*4*f*-1*s*8*d*	$^3F^\circ-{}^3D$										
			19 437.913	5 143.1811 cm^{-1}	191 451.8794–196 595.0605	9–7	6.3528e−05	2.8004e−04	1.6132e−01	−2.598 54	AAA	6
			19 437.885	5 143.1884 cm^{-1}	191 451.8722–196 595.0606	7–5	3.9611e−05	1.6035e−04	7.1849e−02	−2.949 82	AAA	6
			19 437.936	5 143.1749 cm^{-1}	191 451.8880–196 595.0629	5–3	6.9175e−05	2.3523e−04	7.5285e−02	−2.929 54	AAA	6
			19 437.886	5 143.1883 cm^{-1}	191 451.8722–196 595.0605	7–7	3.4865e−06	1.9760e−05	8.8537e−03	−3.859 12	AAA	6
			19 437.945	5 143.1726 cm^{-1}	191 451.8880–196 595.0606	5–5	7.6855e−06	4.3558e−05	1.3941e−02	−3.661 96	AAA	6
242	1*s*4*f*-1*s*8*d*	$^3F^\circ-{}^1D$										
			19 436.707	5 143.5001 cm^{-1}	191 451.8722–196 595.3723	7–5	2.445e−05	9.898e−05	4.435e−02	−3.159 3	AA	6
243	1*s*4*f*-1*s*8*g*	$^3F^\circ-{}^3G$	*19 433.57*	*5 144.330* cm^{-1}	*191 451.879–196 596.209*	21–27	3.6010e−03	2.6228e−02	3.5248e+01	−0.259 01	AAA	6
			19 433.575	5 144.3292 cm^{-1}	191 451.8794–196 596.2086	9–11	3.6494e−03	2.5268e−02	1.4553e+01	−0.643 19	AAA	6
			19 433.550	5 144.3357 cm^{-1}	191 451.8722–196 596.2079	7–9	3.4688e−03	2.5265e−02	1.1318e+01	−0.752 38	AAA	6
			19 433.605	5 144.3212 cm^{-1}	191 451.8880–196 596.2092	5–7	3.3515e−03	2.6581e−02	8.5052e+00	−0.876 46	AAA	6
			19 433.578	5 144.3285 cm^{-1}	191 451.8794–196 596.2079	9–9	1.1860e−04	6.7187e−04	3.8697e−01	−2.218 47	AAA	6
			19 433.545	5 144.3370 cm^{-1}	191 451.8722–196 596.2092	7–7	1.8624e−04	1.0550e−03	4.7262e−01	−2.131 63	AAA	6
			19 433.573	5 144.3298 cm^{-1}	191 451.8794–196 596.2092	9–7	4.6549e−06	2.0510e−05	1.1813e−02	−3.733 79	AAA	6
244	1*s*4*f*-1*s*8*g*	$^3F^\circ-{}^1G$										
			19 433.544	5 144.3374 cm^{-1}	191 451.8722–196 596.2096	7–9	3.575e−05	2.604e−04	1.167e−01	−2.739 2	AA	6
			19 433.571	5 144.3302 cm^{-1}	191 451.8794–196 596.2096	9–9	1.095e−04	6.203e−04	3.572e−01	−2.253 2	AA	6
245	1*s*4*f*-1*s*9*d*	$^3F^\circ-{}^3D$										
			18 165.805	5 503.3454 cm^{-1}	191 451.8794–196 955.2248	9–7	4.1309e−05	1.5904e−04	8.5624e−02	−2.844 25	AAA	6
			18 165.781	5 503.3527 cm^{-1}	191 451.8722–196 955.2249	7–5	2.5752e−05	9.1051e−05	3.8127e−02	−3.195 62	AAA	6
			18 165.828	5 503.3385 cm^{-1}	191 451.8880–196 955.2265	5–3	4.4981e−05	1.3359e−04	3.9958e−02	−3.175 25	AAA	6
			18 165.782	5 503.3526 cm^{-1}	191 451.8722–196 955.2248	7–7	2.2671e−06	1.1222e−05	4.6992e−03	−4.104 83	AAA	6
			18 165.833	5 503.3369 cm^{-1}	191 451.8880–196 955.2249	5–5	4.9975e−06	2.4738e−05	7.3991e−03	−3.907 67	AAA	6
246	1*s*4*f*-1*s*9*d*	$^3F^\circ-{}^1D$										
			18 165.048	5 503.5748 cm^{-1}	191 451.8722–196 955.4470	7–5	1.590e−05	5.622e−05	2.354e−02	−3.405 0	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
247	1*s*4*f*-1*s*9*g*	$^3F^\circ-{}^3G$	*18 163.13*	*5 504.158* cm^{-1}	*191 451.879–196 956.037*	21–27	2.2627e−03	1.4396e−02	1.8082e+01	−0.519 53	AAA	6
			18 163.126	5 504.1572 cm^{-1}	191 451.8794–196 956.0366	9–11	2.2931e−03	1.3869e−02	7.4658e+00	−0.903 71	AAA	6
			18 163.104	5 504.1639 cm^{-1}	191 451.8722–196 956.0361	7–9	2.1797e−03	1.3868e−02	5.8063e+00	−1.012 89	AAA	6
			18 163.153	5 504.1490 cm^{-1}	191 451.8880–196 956.0370	5–7	2.1059e−03	1.4590e−02	4.3631e+00	−1.136 99	AAA	6
			18 163.128	5 504.1567 cm^{-1}	191 451.8794–196 956.0361	9–9	7.4545e−05	3.6889e−04	1.9857e−01	−2.478 86	AAA	6
			18 163.101	5 504.1648 cm^{-1}	191 451.8722–196 956.0370	7–7	1.1702e−04	5.7907e−04	2.4245e−01	−2.392 17	AAA	6
			18 163.125	5 504.1576 cm^{-1}	191 451.8794–196 956.0370	9–7	2.9248e−06	1.1257e−05	6.0597e−03	−3.994 33	AAA	6
248	1*s*4*f*-1*s*9*g*	$^3F^\circ-{}^1G$										
			18 163.100	5 504.1651 cm^{-1}	191 451.8722–196 956.0373	7–9	2.239e−05	1.425e−04	5.965e−02	−3.001 2	AA	6
			18 163.124	5 504.1579 cm^{-1}	191 451.8794–196 956.0373	9–9	6.877e−05	3.403e−04	1.832e−01	−2.513 9	AA	6
249	1*s*4*f*-1*s*10*d*	$^3F^\circ-{}^3D$										
			17 353.525	5 760.9447 cm^{-1}	191 451.8794–197 212.8241	9–7	2.8526e−05	1.0022e−04	5.1545e−02	−3.044 79	AAA	6
			17 353.503	5 760.9520 cm^{-1}	191 451.8722–197 212.8242	7–5	1.7780e−05	5.7368e−05	2.2948e−02	−3.396 23	AAA	6
			17 353.547	5 760.9374 cm^{-1}	191 451.8880–197 212.8254	5–3	3.1062e−05	8.4188e−05	2.4055e−02	−3.375 78	AAA	6
			17 353.503	5 760.9519 cm^{-1}	191 451.8722–197 212.8241	7–7	1.5656e−06	7.0721e−06	2.8290e−03	−4.305 35	AAA	6
			17 353.550	5 760.9362 cm^{-1}	191 451.8880–197 212.8242	5–5	3.4510e−06	1.5589e−05	4.4542e−03	−4.108 21	AAA	6
250	1*s*4*f*-1*s*10*d*	$^3F^\circ-{}^1D$										
			17 353.010	5 761.1156 cm^{-1}	191 451.8722–197 212.9878	7–5	1.098e−05	3.544e−05	1.417e−02	−3.605 5	AA	6
251	1*s*4*f*-1*s*10*g*	$^3F^\circ-{}^3G$	*17 351.73*	*5 761.540* cm^{-1}	*191 451.879–197 213.419*	21–27	1.5277e−03	8.8708e−03	1.0644e+01	−0.729 82	AAA	6
			17 351.734	5 761.5394 cm^{-1}	191 451.8794–197 213.4188	9–11	1.5482e−03	8.5459e−03	4.3948e+00	−1.114 00	AAA	6
			17 351.713	5 761.5462 cm^{-1}	191 451.8722–197 213.4184	7–9	1.4717e−03	8.5456e−03	3.4180e+00	−1.223 16	AAA	6
			17 351.759	5 761.5311 cm^{-1}	191 451.8880–197 213.4191	5–7	1.4218e−03	8.9897e−03	2.5684e+00	−1.347 28	AAA	6
			17 351.735	5 761.5390 cm^{-1}	191 451.8794–197 213.4184	9–9	5.0342e−05	2.2736e−04	1.1692e−01	−2.689 05	AAA	6
			17 351.711	5 761.5469 cm^{-1}	191 451.8722–197 213.4191	7–7	7.9008e−05	3.5682e−04	1.4272e−01	−2.602 45	AAA	6
			17 351.733	5 761.5397 cm^{-1}	191 451.8794–197 213.4191	9–7	1.9748e−06	6.9368e−06	3.5673e−03	−4.204 60	AAA	6
252	1*s*4*f*-1*s*10*g*	$^3F^\circ-{}^1G$										
			17 351.710	5 761.5471 cm^{-1}	191 451.8722–197 213.4193	7–9	1.508e−05	8.759e−05	3.503e−02	−3.212 5	AA	6
			17 351.732	5 761.5399 cm^{-1}	191 451.8794–197 213.4193	9–9	4.642e−05	2.096e−04	1.078e−01	−2.724 3	AA	6
253	1*s*4*f*-1*s*5*d*	$^1F^\circ-{}^3D$										
			40 552.715	2 465.2539 cm^{-1}	191 451.8957–193 917.1496	7–7	1.504e−05	3.711e−04	3.469e−01	−2.585 4	AA	6
			40 552.705	2 465.2545 cm^{-1}	191 451.8957–193 917.1502	7–5	1.638e−04	2.885e−03	2.697e+00	−1.694 7	AA	6
254	1*s*4*f*-1*s*5*d*	$^1F^\circ-{}^1D$	40 533.994	2 466.3925 cm^{-1}	191 451.8957–193 918.2882	7–5	3.3200e−04	5.8444e−03	5.4608e+00	−1.388 16	AAA	6
255	1*s*4*f*-1*s*5*g*	$^1F^\circ-{}^3G$										
			40 479.336	2 469.7228 cm^{-1}	191 451.8957–193 921.6185	7–7	1.249e−03	3.069e−02	2.864e+01	−0.667 8	AA	6
			40 479.423	2 469.7175 cm^{-1}	191 451.8957–193 921.6132	7–9	7.332e−04	2.317e−02	2.162e+01	−0.790 0	AA	6
256	1*s*4*f*-1*s*5*g*	$^1F^\circ-{}^1G$	40 479.308	2 469.7245 cm^{-1}	191 451.8957–193 921.6202	7–9	4.0879e−02	1.2918e+00	1.2054e+03	0.956 30	AAA	6
257	1*s*4*f*-1*s*6*d*	$^1F^\circ-{}^3D$										
			26 252.143	3 808.1739 cm^{-1}	191 451.8957–195 260.0696	7–7	6.398e−06	6.614e−05	4.002e−02	−3.334 4	AA	6
			26 252.140	3 808.1743 cm^{-1}	191 451.8957–195 260.0700	7–5	6.976e−05	5.151e−04	3.117e−01	−2.443 0	AA	6
258	1*s*4*f*-1*s*6*d*	$^1F^\circ-{}^1D$	26 247.324	3 808.8731 cm^{-1}	191 451.8957–195 260.7688	7–5	1.4102e−04	1.0409e−03	6.2979e−01	−2.137 49	AAA	6
259	1*s*4*f*-1*s*6*g*	$^1F^\circ-{}^3G$										
			26 233.854	3 810.8287 cm^{-1}	191 451.8957–195 262.7244	7–7	4.032e−04	4.162e−03	2.517e+00	−1.535 6	AA	6
			26 233.876	3 810.8256 cm^{-1}	191 451.8957–195 262.7213	7–9	2.353e−04	3.124e−03	1.889e+00	−1.660 2	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
260	1*s*4*f*-1*s*6*g*	$^1F^\circ$–^1G	26 233.848	3 810.8297 cm^{-1}	191 451.8957–195 262.7254	7–9	1.3199e−02	1.7519e−01	1.0594e+02	0.088 60	AAA	6
261	1*s*4*f*-1*s*7*d*	$^1F^\circ$–^3D										
			21 649.540	4 617.7754 cm^{-1}	191 451.8957–196 069.6711	7–7	3.356e−06	2.359e−05	1.177e−02	−3.782 2	AA	6
			21 649.539	4 617.7756 cm^{-1}	191 451.8957–196 069.6713	7–5	3.662e−05	1.839e−04	9.178e−02	−2.890 3	AA	6
262	1*s*4*f*-1*s*7*d*	$^1F^\circ$–^1D	21 647.405	4 618.2309 cm^{-1}	191 451.8957–196 070.1266	7–5	7.3892e−05	3.7100e−04	1.8513e−01	−2.585 53	AAA	6
263	1*s*4*f*-1*s*7*g*	$^1F^\circ$–^3G										
			21 641.583	4 619.4732 cm^{-1}	191 451.8957–196 071.3689	7–7	1.897e−04	1.333e−03	6.649e−01	−2.030 1	AA	6
			21 641.592	4 619.4713 cm^{-1}	191 451.8957–196 071.3670	7–9	1.103e−04	9.959e−04	4.968e−01	−2.156 7	AA	6
264	1*s*4*f*-1*s*7*g*	$^1F^\circ$–^1G	21 641.581	4 619.4738 cm^{-1}	191 451.8957–196 071.3695	7–9	6.2114e−03	5.6106e−02	2.7989e+01	−0.405 90	AAA	6
265	1*s*4*f*-1*s*8*d*	$^1F^\circ$–^3D										
			19 437.975	5 143.1648 cm^{-1}	191 451.8957–196 595.0605	7–7	2.004e−06	1.136e−05	5.088e−03	−4.099 7	AA	6
			19 437.974	5 143.1649 cm^{-1}	191 451.8957–196 595.0606	7–5	2.188e−05	8.857e−05	3.968e−02	−3.207 6	AA	6
266	1*s*4*f*-1*s*8*d*	$^1F^\circ$–^1D	19 436.796	5 143.4766 cm^{-1}	191 451.8957–196 595.3723	7–5	4.4094e−05	1.7848e−04	7.9967e−02	−2.903 31	AAA	6
267	1*s*4*f*-1*s*8*g*	$^1F^\circ$–^3G										
			19 433.634	5 144.3135 cm^{-1}	191 451.8957–196 596.2092	7–7	1.070e−04	6.063e−04	2.716e−01	−2.372 2	AA	6
			19 433.639	5 144.3122 cm^{-1}	191 451.8957–196 596.2079	7–9	6.200e−05	4.516e−04	2.023e−01	−2.500 2	AA	6
268	1*s*4*f*-1*s*8*g*	$^1F^\circ$–^1G	19 433.633	5 144.3139 cm^{-1}	191 451.8957–196 596.2096	7–9	3.5042e−03	2.5523e−02	1.1434e+01	−0.747 97	AAA	6
269	1*s*4*f*-1*s*9*d*	$^1F^\circ$–^3D										
			18 165.859	5 503.3291 cm^{-1}	191 451.8957–196 955.2248	7–7	1.303e−06	6.449e−06	2.700e−03	−4.345 4	AA	6
			18 165.859	5 503.3292 cm^{-1}	191 451.8957–196 955.2249	7–5	1.423e−05	5.032e−05	2.107e−02	−3.453 2	AA	6
270	1*s*4*f*-1*s*9*d*	$^1F^\circ$–^1D	18 165.126	5 503.5513 cm^{-1}	191 451.8957–196 955.4470	7–5	2.8661e−05	1.0133e−04	4.2429e−02	−3.149 17	AAA	6
271	1*s*4*f*-1*s*9*g*	$^1F^\circ$–^3G										
			18 163.178	5 504.1413 cm^{-1}	191 451.8957–196 956.0370	7–7	6.725e−05	3.328e−04	1.393e−01	−2.632 8	AA	6
			18 163.181	5 504.1404 cm^{-1}	191 451.8957–196 956.0361	7–9	3.886e−05	2.473e−04	1.035e−01	−2.761 8	AA	6
272	1*s*4*f*-1*s*9*g*	$^1F^\circ$–^1G	18 163.178	5 504.1416 cm^{-1}	191 451.8957–196 956.0373	7–9	2.2019e−03	1.4009e−02	5.8655e+00	−1.008 48	AAA	6
273	1*s*4*f*-1*s*10*d*	$^1F^\circ$–^3D										
			17 353.574	5 760.9284 cm^{-1}	191 451.8957–197 212.8241	7–7	8.997e−07	4.064e−06	1.626e−03	−4.546 0	AA	6
			17 353.574	5 760.9285 cm^{-1}	191 451.8957–197 212.8242	7–5	9.830e−06	3.172e−05	1.269e−02	−3.653 6	AA	6
274	1*s*4*f*-1*s*10*d*	$^1F^\circ$–^1D	17 353.081	5 761.0921 cm^{-1}	191 451.8957–197 212.9878	7–5	1.9786e−05	6.3838e−05	2.5536e−02	−3.349 82	AAA	6
275	1*s*4*f*-1*s*10*g*	$^1F^\circ$–^3G										
			17 351.782	5 761.5234 cm^{-1}	191 451.8957–197 213.4191	7–7	4.540e−05	2.050e−04	8.202e−02	−2.843 0	AA	6
			17 351.784	5 761.5227 cm^{-1}	191 451.8957–197 213.4184	7–9	2.619e−05	1.521e−04	6.083e−02	−2.972 8	AA	6
276	1*s*4*f*-1*s*10*g*	$^1F^\circ$–^1G	17 351.781	5 761.5236 cm^{-1}	191 451.8957–197 213.4193	7–9	1.4867e−03	8.6328e−03	3.4529e+00	−1.218 75	AAA	6
277	1*s*4*p*-1*s*5*s*	$^1P^\circ$–^1S	46 053.396	2 170.8006 cm^{-1}	191 492.7101–193 663.5107	3–1	1.4961e−02	1.5866e−01	7.2183e+01	−0.322 42	AAA	6
278	1*s*4*p*-1*s*5*d*	$^1P^\circ$–^3D										
			41 235.392	2 424.4401 cm^{-1}	191 492.7101–193 917.1502	3–5	1.507e−06	6.406e−05	2.609e−02	−3.716 3	AA	6
279	1*s*4*p*-1*s*5*d*	$^1P^\circ$–^1D	41 216.046	2 425.5781 cm^{-1}	191 492.7101–193 918.2882	3–5	1.5254e−02	6.4783e−01	2.6378e+02	0.288 58	AAA	6
280	1*s*4*p*-1*s*6*s*	$^1P^\circ$–^1S	27 600.329	3 622.1571 cm^{-1}	191 492.7101–195 114.8672	3–1	7.5443e−03	2.8736e−02	7.8352e+00	−1.064 46	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
281	1*s*4*p*-1*s*6*d*	$^1P^\circ-{}^3D$										
			26 536.548	3 767.3599 cm^{-1}	191 492.7101–195 260.0700	3–5	7.575e−07	1.333e−05	3.496e−03	−4.397 9	AA	6
282	1*s*4*p*-1*s*6*d*	$^1P^\circ-{}^1D$	26 531.626	3 768.0587 cm^{-1}	191 492.7101–195 260.7688	3–5	8.6854e−03	1.5285e−01	4.0063e+01	−0.338 62	AAA	6
283	1*s*4*p*-1*s*7*s*	$^1P^\circ-{}^1S$	22 284.580	4 486.1835 cm^{-1}	191 492.7101–195 978.8936	3–1	4.4367e−03	1.1016e−02	2.4253e+00	−1.480 84	AAA	6
284	1*s*4*p*-1*s*7*d*	$^1P^\circ-{}^3D$										
			21 842.596	4 576.9612 cm^{-1}	191 492.7101–196 069.6713	3–5	4.330e−07	5.165e−06	1.115e−03	−4.809 8	AA	6
285	1*s*4*p*-1*s*7*d*	$^1P^\circ-{}^1D$	21 840.424	4 577.4165 cm^{-1}	191 492.7101–196 070.1266	3–5	5.3341e−03	6.3610e−02	1.3725e+01	−0.719 35	AAA	6
286	1*s*4*p*-1*s*8*s*	$^1P^\circ-{}^1S$	19 828.567	5 041.8524 cm^{-1}	191 492.7101–196 534.5625	3–1	2.8512e−03	5.6051e−03	1.0980e+00	−1.774 30	AAA	6
287	1*s*4*p*-1*s*8*d*	$^1P^\circ-{}^1D$	19 592.264	5 102.6622 cm^{-1}	191 492.7101–196 595.3723	3–5	3.5063e−03	3.3648e−02	6.5127e+00	−0.995 92	AAA	6
288	1*s*4*p*-1*s*9*s*	$^1P^\circ-{}^1S$	18 444.498	5 420.1909 cm^{-1}	191 492.7101–196 912.9010	3–1	1.9477e−03	3.3131e−03	6.0369e−01	−2.002 65	AAA	6
289	1*s*4*p*-1*s*9*d*	$^1P^\circ-{}^1D$	18 300.845	5 462.7369 cm^{-1}	191 492.7101–196 955.4470	3–5	2.4289e−03	2.0337e−02	3.6769e+00	−1.214 58	AAA	6
290	1*s*4*p*-1*s*10*s*	$^1P^\circ-{}^1S$	17 571.890	5 689.3538 cm^{-1}	191 492.7101–197 182.0639	3–1	1.3922e−03	2.1494e−03	3.7312e−01	−2.190 57	AAA	6
291	1*s*4*p*-1*s*10*d*	$^1P^\circ-{}^1D$	17 476.896	5 720.2777 cm^{-1}	191 492.7101–197 212.9878	3–5	1.7528e−04	1.3385e−03	2.3109e−01	−2.396 28	AAA	6
292	1*s*5*s*-1*s*5*p*	$^3S-{}^3P^\circ$		*453.724* cm^{-1}	*193 346.9897–193 800.714*	3–9	7.0086e−04	1.5312e+00	3.3330e+03	0.662 15	AAA	6
				453.7161 cm^{-1}	193 346.9897–193 800.7058	3–5	7.0086e−04	8.5068e−01	1.8517e+03	0.406 89	AAA	6
				453.7207 cm^{-1}	193 346.9897–193 800.7104	3–3	7.0086e−04	5.1040e−01	1.1110e+03	0.185 03	AAA	6
				453.7761 cm^{-1}	193 346.9897–193 800.7658	3–1	7.0086e−04	1.7009e−01	3.7020e+02	−0.292 20	AAA	6
293	1*s*5*s*-1*s*6*p*	$^3S-{}^3P^\circ$		*1 845.756* cm^{-1}	*193 346.9897–195 192.746*	3–9	3.1456e−04	4.1527e−02	2.2221e+01	−0.904 55	AAA	6
				1 845.7515 cm^{-1}	193 346.9897–195 192.7412	3–5	3.1456e−04	2.3071e−02	1.2345e+01	−1.159 82	AAA	6
				1 845.7541 cm^{-1}	193 346.9897–195 192.7438	3–3	3.1456e−04	1.3842e−02	7.4069e+00	−1.381 67	AAA	6
				1 845.7858 cm^{-1}	193 346.9897–195 192.7755	3–1	3.1456e−04	4.6140e−03	2.4688e+00	−1.858 80	AAA	6
294	1*s*5*s*-1*s*7*p*	$^3S-{}^3P^\circ$	*37 298.72*	*2 680.327* cm^{-1}	*193 346.9897–196 027.316*	3–9	3.3712e−04	2.1105e−02	7.7767e+00	−1.198 49	AAA	6
			37 298.756	2 680.3236 cm^{-1}	193 346.9897–196 027.3133	3–5	3.3712e−04	1.1725e−02	4.3204e+00	−1.453 76	AAA	6
			37 298.734	2 680.3252 cm^{-1}	193 346.9897–196 027.3149	3–3	3.3712e−04	7.0350e−03	2.5922e+00	−1.675 61	AAA	6
			37 298.458	2 680.3450 cm^{-1}	193 346.9897–196 027.3347	3–1	3.3712e−04	2.3450e−03	8.6406e−01	−2.152 74	AAA	6
295	1*s*5*s*-1*s*8*p*	$^3S-{}^3P^\circ$	*31 050.11*	*3 219.722* cm^{-1}	*193 346.9897–196 566.712*	3–9	2.7073e−04	1.1746e−02	3.6029e+00	−1.453 00	AAA	6
			31 050.128	3 219.7204 cm^{-1}	193 346.9897–196 566.7101	3–5	2.7073e−04	6.5254e−03	2.0016e+00	−1.708 27	AAA	6
			31 050.118	3 219.7215 cm^{-1}	193 346.9897–196 566.7112	3–3	2.7073e−04	3.9152e−03	1.2010e+00	−1.930 12	AAA	6
			31 049.990	3 219.7347 cm^{-1}	193 346.9897–196 566.7244	3–1	2.7073e−04	1.3051e−03	4.0032e−01	−2.407 25	AAA	6
296	1*s*5*s*-1*s*9*p*	$^3S-{}^3P^\circ$	*27 860.43*	*3 588.341* cm^{-1}	*193 346.9897–196 935.331*	3–9	2.0818e−04	7.2716e−03	2.0014e+00	−1.661 25	AAA	6
			27 860.439	3 588.3400 cm^{-1}	193 346.9897–196 935.3297	3–5	2.0818e−04	4.0398e−03	1.1119e+00	−1.916 52	AAA	6
			27 860.434	3 588.3407 cm^{-1}	193 346.9897–196 935.3304	3–3	2.0818e−04	2.4239e−03	6.6713e−01	−2.138 37	AAA	6
			27 860.361	3 588.3500 cm^{-1}	193 346.9897–196 935.3397	3–1	2.0818e−04	8.0795e−04	2.2238e−01	−2.615 49	AAA	6
297	1*s*5*s*-1*s*10*p*	$^3S-{}^3P^\circ$	*25 957.89*	*3 851.342* cm^{-1}	*193 346.9897–197 198.332*	3–9	1.6011e−04	4.8549e−03	1.2450e+00	−1.836 70	AAA	6
			25 957.898	3 851.3413 cm^{-1}	193 346.9897–197 198.3310	3–5	1.6011e−04	2.6971e−03	6.9165e−01	−2.091 98	AAA	6
			25 957.895	3 851.3418 cm^{-1}	193 346.9897–197 198.3315	3–3	1.6011e−04	1.6183e−03	4.1499e−01	−2.313 83	AAA	6
			25 957.849	3 851.3485 cm^{-1}	193 346.9897–197 198.3382	3–1	1.6011e−04	5.3942e−04	1.3833e−01	−2.790 95	AAA	6
298	1*s*5*s*-1*s*5*p*	$^1S-{}^1P^\circ$		278.9498 cm^{-1}	193 663.5107–193 942.4605	1–3	1.8738e−04	1.0831e+00	1.2782e+03	0.034 65	AAA	6
299	1*s*5*s*-1*s*6*p*	$^1S-{}^1P^\circ$		1 611.3960 cm^{-1}	193 663.5107–195 274.9067	1–3	8.8145e−04	1.5268e−01	3.1192e+01	−0.816 23	AAA	6
300	1*s*5*s*-1*s*7*p*	$^1S-{}^1P^\circ$	41 386.723	2 415.5751 cm^{-1}	193 663.5107–196 079.0858	1–3	7.2156e−04	5.5617e−02	7.5799e+00	−1.254 79	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
301	1*s*5*s*-1*s*8*p*	$^1S-^1P^\circ$	34 028.779	2 937.8878 cm^{-1}	193 663.5107–196 601.3985	1–3	5.2980e−04	2.7607e−02	3.0936e+00	−1.558 98	AAA	6
302	1*s*5*s*-1*s*9*p*	$^1S-^1P^\circ$	30 329.872	3 296.1804 cm^{-1}	193 663.5107–196 959.6911	1–3	3.8969e−04	1.6132e−02	1.6112e+00	−1.792 32	AAA	6
303	1*s*5*s*-1*s*10*p*	$^1S-^1P^\circ$	28 140.903	3 552.5771 cm^{-1}	193 663.5107–197 216.0878	1–3	2.9201e−04	1.0406e−02	9.6432e−01	−1.982 71	AAA	6
304	1*s*5*p*-1*s*5*d*	$^3P^\circ-^3D$		*116.438* cm^{-1}	*193 800.714–193 917.152*	9–15	1.5174e−05	2.7966e−01	7.1163e+03	0.400 87	AAA	6
				116.4438 cm^{-1}	193 800.7058–193 917.1496	5–7	1.5175e−05	2.3490e−01	3.3206e+03	0.069 85	AAA	6
				116.4398 cm^{-1}	193 800.7104–193 917.1502	3–5	1.1380e−05	2.0972e−01	1.7789e+03	−0.201 23	AAA	6
				116.3939 cm^{-1}	193 800.7658–193 917.1597	1–3	8.4304e−06	2.7988e−01	7.9161e+02	−0.553 03	AAA	6
				116.4444 cm^{-1}	193 800.7058–193 917.1502	5–5	3.7933e−06	4.1941e−02	5.9288e+02	−0.678 39	AAA	6
				116.4493 cm^{-1}	193 800.7104–193 917.1597	3–3	6.3228e−06	6.9902e−02	5.9286e+02	−0.678 39	AAA	6
				116.4539 cm^{-1}	193 800.7058–193 917.1597	5–3	4.2152e−07	2.7959e−03	3.9519e+01	−1.854 51	AAA	6
305	1*s*5*p*-1*s*6*s*	$^3P^\circ-^3S$		*1 135.404* cm^{-1}	*193 800.714–194 936.1181*	9–3	7.7681e−03	3.0113e−01	7.8581e+02	0.432 99	AAA	6
				1 135.4123 cm^{-1}	193 800.7058–194 936.1181	5–3	4.3156e−03	3.0112e−01	4.3655e+02	0.177 71	AAA	6
				1 135.4077 cm^{-1}	193 800.7104–194 936.1181	3–3	2.5894e−03	3.0113e−01	2.6194e+02	−0.044 13	AAA	6
				1 135.3523 cm^{-1}	193 800.7658–194 936.1181	1–3	8.6312e−04	3.0115e−01	8.7324e+01	−0.521 21	AAA	6
306	1*s*5*p*-1*s*6*d*	$^3P^\circ-^3D$		*1 459.357* cm^{-1}	*193 800.714–195 260.071*	9–15	3.6607e−03	4.2948e−01	8.7198e+02	0.587 19	AAA	6
				1 459.3638 cm^{-1}	193 800.7058–195 260.0696	5–7	3.6608e−03	3.6077e−01	4.0693e+02	0.256 20	AAA	6
				1 459.3596 cm^{-1}	193 800.7104–195 260.0700	3–5	2.7454e−03	3.2210e−01	2.1798e+02	−0.014 89	AAA	6
				1 459.3097 cm^{-1}	193 800.7658–195 260.0755	1–3	2.0338e−03	4.2953e−01	9.6899e+01	−0.367 01	AAA	6
				1 459.3642 cm^{-1}	193 800.7058–195 260.0700	5–5	9.1512e−04	6.4418e−02	7.2659e+01	−0.492 02	AAA	6
				1 459.3651 cm^{-1}	193 800.7104–195 260.0755	3–3	1.5253e−03	1.0737e−01	7.2664e+01	−0.491 99	AAA	6
				1 459.3697 cm^{-1}	193 800.7058–195 260.0755	5–3	1.0169e−04	4.2949e−03	4.8444e+00	−1.668 07	AAA	6
307	1*s*5*p*-1*s*6*d*	$^3P^\circ-^1D$										
				1 460.0630 cm^{-1}	193 800.7058–195 260.7688	5–5	8.322e−08	5.853e−06	6.598e−03	−4.533 7	AA	6
				1 460.0584 cm^{-1}	193 800.7104–195 260.7688	3–5	2.304e−07	2.700e−05	1.827e−02	−4.091 5	AA	6
308	1*s*5*p*-1*s*7*s*	$^3P^\circ-^3S$	*48 353.91*	*2 067.521* cm^{-1}	*193 800.714–195 868.2354*	9–3	3.9977e−03	4.6735e−02	6.6975e+01	−0.376 11	AAA	6
			48 353.717	2 067.5296 cm^{-1}	193 800.7058–195 868.2354	5–3	2.2209e−03	4.6734e−02	3.7207e+01	−0.631 40	AAA	6
			48 353.824	2 067.5250 cm^{-1}	193 800.7104–195 868.2354	3–3	1.3326e−03	4.6736e−02	2.2326e+01	−0.853 22	AAA	6
			48 355.120	2 067.4696 cm^{-1}	193 800.7658–195 868.2354	1–3	4.4419e−04	4.6738e−02	7.4423e+00	−1.330 33	AAA	6
309	1*s*5*p*-1*s*7*d*	$^3P^\circ-^3D$	*44 061.08*	*2 268.958* cm^{-1}	*193 800.714–196 069.672*	9–15	2.5808e−03	1.2526e−01	1.6357e+02	0.052 05	AAA	6
			44 060.938	2 268.9653 cm^{-1}	193 800.7058–196 069.6711	5–7	2.5809e−03	1.0522e−01	7.6334e+01	−0.278 93	AAA	6
			44 061.024	2 268.9609 cm^{-1}	193 800.7104–196 069.6713	3–5	1.9355e−03	9.3939e−02	4.0890e+01	−0.550 03	AAA	6
			44 062.031	2 268.9090 cm^{-1}	193 800.7658–196 069.6748	1–3	1.4338e−03	1.2527e−01	1.8176e+01	−0.902 17	AAA	6
			44 060.934	2 268.9655 cm^{-1}	193 800.7058–196 069.6713	5–5	6.4516e−04	1.8787e−02	1.3630e+01	−1.027 16	AAA	6
			44 060.956	2 268.9644 cm^{-1}	193 800.7104–196 069.6748	3–3	1.0754e−03	3.1316e−02	1.3631e+01	−1.027 11	AAA	6
			44 060.866	2 268.9690 cm^{-1}	193 800.7058–196 069.6748	5–3	7.1691e−05	1.2526e−03	9.0873e−01	−2.203 21	AAA	6
310	1*s*5*p*-1*s*7*d*	$^3P^\circ-^1D$										
			44 052.095	2 269.4208 cm^{-1}	193 800.7058–196 070.1266	5–5	5.472e−08	1.593e−06	1.155e−03	−5.098 8	AA	6
			44 052.184	2 269.4162 cm^{-1}	193 800.7104–196 070.1266	3–5	1.524e−07	7.394e−06	3.218e−03	−4.654 0	AA	6
311	1*s*5*p*-1*s*8*s*	$^3P^\circ-^3S$	*37 574.61*	*2 660.646* cm^{-1}	*193 800.714–196 461.3602*	9–3	2.4421e−03	1.7240e−02	1.9198e+01	−0.809 23	AAA	6
			37 574.492	2 660.6544 cm^{-1}	193 800.7058–196 461.3602	5–3	1.3567e−03	1.7239e−02	1.0665e+01	−1.064 52	AAA	6
			37 574.557	2 660.6498 cm^{-1}	193 800.7104–196 461.3602	3–3	8.1405e−04	1.7240e−02	6.3994e+00	−1.286 35	AAA	6
			37 575.339	2 660.5944 cm^{-1}	193 800.7658–196 461.3602	1–3	2.7135e−04	1.7241e−02	2.1333e+00	−1.763 45	AAA	6
312	1*s*5*p*-1*s*8*d*	$^3P^\circ-^3D$	*35 776.78*	*2 794.347* cm^{-1}	*193 800.714–196 595.061*	9–15	1.7834e−03	5.7069e−02	6.0512e+01	−0.289 36	AAA	6
			35 776.681	2 794.3547 cm^{-1}	193 800.7058–196 595.0605	5–7	1.7835e−03	4.7940e−02	2.8240e+01	−0.620 34	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			35 776.738	2 794.3502 cm^{-1}	193 800.7104–196 595.0606	3–5	1.3375e−03	4.2799e−02	1.5127e+01	−0.891 44	AAA	6
			35 777.418	2 794.2971 cm^{-1}	193 800.7658–196 595.0629	1–3	9.9081e−04	5.7072e−02	6.7240e+00	−1.243 58	AAA	6
			35 776.679	2 794.3548 cm^{-1}	193 800.7058–196 595.0606	5–5	4.4583e−04	8.5598e−03	5.0423e+00	−1.368 57	AAA	6
			35 776.709	2 794.3525 cm^{-1}	193 800.7104–196 595.0629	3–3	7.4311e−04	1.4267e−02	5.0427e+00	−1.368 53	AAA	6
			35 776.650	2 794.3571 cm^{-1}	193 800.7058–196 595.0629	5–3	4.9541e−05	5.7070e−04	3.3618e−01	−2.544 62	AAA	6
313	1*s*5*p*-1*s*8*d*	$^3P^\circ-{}^1D$										
			35 772.748	2 794.6619 cm^{-1}	193 800.7104–196 595.3723	3–5	1.010e−07	3.230e−06	1.141e−03	−5.013 7	AA	6
314	1*s*5*p*-1*s*9*s*	$^3P^\circ-{}^3S$	*32 657.26*	*3 061.272* cm^{-1}	*193 800.714–196 861.9857*	9–3	1.6219e−03	8.6489e−03	8.3710e+00	−1.108 80	AAA	6
			32 657.168	3 061.2799 cm^{-1}	193 800.7058–196 861.9857	5–3	9.0107e−04	8.6489e−03	4.6505e+00	−1.364 07	AAA	6
			32 657.217	3 061.2753 cm^{-1}	193 800.7104–196 861.9857	3–3	5.4064e−04	8.6489e−03	2.7903e+00	−1.585 92	AAA	6
			32 657.808	3 061.2199 cm^{-1}	193 800.7658–196 861.9857	1–3	1.8021e−04	8.6490e−03	9.3014e−01	−2.063 03	AAA	6
315	1*s*5*p*-1*s*9*d*	$^3P^\circ-{}^3D$	*31 691.99*	*3 154.511* cm^{-1}	*193 800.714–196 955.225*	9–15	1.2681e−03	3.1840e−02	2.9907e+01	−0.542 78	AAA	6
			31 691.910	3 154.5190 cm^{-1}	193 800.7058–196 955.2248	5–7	1.2681e−03	2.6747e−02	1.3957e+01	−0.873 76	AAA	6
			31 691.955	3 154.5145 cm^{-1}	193 800.7104–196 955.2249	3–5	9.5099e−04	2.3879e−02	7.4762e+00	−1.144 86	AAA	6
			31 692.496	3 154.4607 cm^{-1}	193 800.7658–196 955.2265	1–3	7.0449e−04	3.1842e−02	3.3232e+00	−1.497 00	AAA	6
			31 691.909	3 154.5191 cm^{-1}	193 800.7058–196 955.2249	5–5	3.1699e−04	4.7757e−03	2.4920e+00	−1.621 99	AAA	6
			31 691.939	3 154.5161 cm^{-1}	193 800.7104–196 955.2265	3–3	5.2836e−04	7.9601e−03	2.4922e+00	−1.621 96	AAA	6
			31 691.893	3 154.5207 cm^{-1}	193 800.7058–196 955.2265	5–3	3.5224e−05	3.1840e−04	1.6615e−01	−2.798 05	AAA	6
316	1*s*5*p*-1*s*10*s*	$^3P^\circ-{}^3S$	*29 891.52*	*3 344.518* cm^{-1}	*193 800.714–197 145.2316*	9–3	1.1384e−03	5.0860e−03	4.5057e+00	−1.339 38	AAA	6
			29 891.451	3 344.5258 cm^{-1}	193 800.7058–197 145.2316	5–3	6.3246e−04	5.0859e−03	2.5031e+00	−1.594 66	AAA	6
			29 891.492	3 344.5212 cm^{-1}	193 800.7104–197 145.2316	3–3	3.7948e−04	5.0860e−03	1.5019e+00	−1.816 50	AAA	6
			29 891.988	3 344.4658 cm^{-1}	193 800.7658–197 145.2316	1–3	1.2649e−04	5.0860e−03	5.0065e−01	−2.293 62	AAA	6
317	1*s*5*p*-1*s*10*d*	$^3P^\circ-{}^3D$	*29 299.38*	*3 412.110* cm^{-1}	*193 800.714–197 212.824*	9–15	9.2978e−04	1.9954e−02	1.7327e+01	−0.745 72	AAA	6
			29 299.315	3 412.1183 cm^{-1}	193 800.7058–197 212.8241	5–7	9.2980e−04	1.6762e−02	8.0863e+00	−1.076 70	AAA	6
			29 299.354	3 412.1138 cm^{-1}	193 800.7104–197 212.8242	3–5	6.9730e−04	1.4965e−02	4.3316e+00	−1.347 80	AAA	6
			29 299.819	3 412.0596 cm^{-1}	193 800.7658–197 212.8254	1–3	5.1656e−04	1.9956e−02	1.9254e+00	−1.699 93	AAA	6
			29 299.314	3 412.1184 cm^{-1}	193 800.7058–197 212.8242	5–5	2.3243e−04	2.9930e−03	1.4439e+00	−1.824 93	AAA	6
			29 299.344	3 412.1150 cm^{-1}	193 800.7104–197 212.8254	3–3	3.8742e−04	4.9887e−03	1.4440e+00	−1.824 89	AAA	6
			29 299.304	3 412.1196 cm^{-1}	193 800.7058–197 212.8254	5–3	2.5828e−05	1.9955e−04	9.6266e−02	−3.000 98	AAA	6
318	1*s*5*d*-1*s*5*p*	$^3D-{}^1P^\circ$										
				25.3103 cm^{-1}	193 917.1502–193 942.4605	5–3	2.501e−11	3.512e−06	2.284e−01	−4.755 5	AA	6
				25.3008 cm^{-1}	193 917.1597–193 942.4605	3–3	3.949e−15	9.249e−10	3.611e−05	−8.556 8	AA	6
319	1*s*5*d*-1*s*6*p*	$^3D-{}^3P^\circ$		*1 275.594* cm^{-1}	*193 917.152–195 192.746*	15–9	2.4736e−03	1.3674e−01	5.2938e+02	0.312 00	AAA	6
				1 275.5916 cm^{-1}	193 917.1496–195 192.7412	7–5	1.3405e−03	8.8221e−02	1.5938e+02	−0.209 33	AAA	6
				1 275.5936 cm^{-1}	193 917.1502–195 192.7438	5–3	1.1968e−03	6.6161e−02	8.5377e+01	−0.480 43	AAA	6
				1 275.6158 cm^{-1}	193 917.1597–195 192.7755	3–1	1.5959e−03	4.9012e−02	3.7947e+01	−0.832 58	AAA	6
				1 275.5910 cm^{-1}	193 917.1502–195 192.7412	5–5	2.3936e−04	2.2054e−02	2.8459e+01	−0.957 54	AAA	6
				1 275.5841 cm^{-1}	193 917.1597–195 192.7438	3–3	3.9897e−04	3.6760e−02	2.8462e+01	−0.957 50	AAA	6
				1 275.5815 cm^{-1}	193 917.1597–195 192.7412	3–5	1.5959e−03	2.4507e−01	1.8975e+02	−0.133 58	AAA	6
320	1*s*5*d*-1*s*6*f*	$^3D-{}^3F^\circ$		*1 345.272* cm^{-1}	*193 917.152–195 262.424*	15–21	6.5936e−03	7.6469e−01	2.8070e+03	1.059 58	AAA	6
				1 345.2745 cm^{-1}	193 917.1496–195 262.4241	7–9	7.2192e−03	7.6890e−01	1.3171e+03	0.730 97	AAA	6
				1 345.2723 cm^{-1}	193 917.1502–195 262.4225	5–7	4.7555e−03	5.5152e−01	6.7483e+02	0.440 53	AAA	6
				1 345.2669 cm^{-1}	193 917.1597–195 262.4266	3–5	6.0641e−03	8.3725e−01	6.1467e+02	0.399 98	AAA	6
				1 345.2729 cm^{-1}	193 917.1496–195 262.4225	7–7	5.8684e−04	4.8613e−02	8.3276e+01	−0.468 15	AAA	6
				1 345.2764 cm^{-1}	193 917.1502–195 262.4266	5–5	1.1229e−03	9.3020e−02	1.1382e+02	−0.332 46	AAA	6
				1 345.2770 cm^{-1}	193 917.1496–195 262.4266	7–5	3.2085e−05	1.8985e−03	3.2521e+00	−1.876 49	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
321	1*s*5*d*-1*s*6*f*	$^3D-^1F^\circ$										
				1 345.2804 cm^{-1}	193 917.1496–195 262.4300	7–7	2.153e−04	1.783e−02	3.055e+01	−0.903 6	AA	6
				1 345.2798 cm^{-1}	193 917.1502–195 262.4300	5–7	1.662e−03	1.927e−01	2.358e+02	−0.016 1	AA	6
322	1*s*5*d*-1*s*6*p*	$^3D-^1P^\circ$										
				1 357.7565 cm^{-1}	193 917.1502–195 274.9067	5–3	8.075e−08	3.940e−06	4.777e−03	−4.705 5	AA	6
323	1*s*5*d*-1*s*7*p*	$^3D-^3P^\circ$	*47 376.75*	*2 110.164* cm^{-1}	*193 917.152–196 027.316*	15–9	8.5944e−04	1.7362e−02	4.0629e+01	−0.584 32	AAA	6
			47 376.770	2 110.1637 cm^{-1}	193 917.1496–196 027.3133	7–5	7.2195e−04	1.7362e−02	1.8961e+01	−0.915 30	AAA	6
			47 376.748	2 110.1647 cm^{-1}	193 917.1502–196 027.3149	5–3	6.4453e−04	1.3020e−02	1.0157e+01	−1.186 41	AAA	6
			47 376.516	2 110.1750 cm^{-1}	193 917.1597–196 027.3347	3–1	8.5946e−04	9.6455e−03	4.5144e+00	−1.538 55	AAA	6
			47 376.784	2 110.1631 cm^{-1}	193 917.1502–196 027.3133	5–5	1.2891e−04	4.3402e−03	3.3856e+00	−1.663 52	AAA	6
			47 376.961	2 110.1552 cm^{-1}	193 917.1597–196 027.3149	3–3	2.1487e−04	7.2344e−03	3.3860e+00	−1.663 48	AAA	6
			47 376.997	2 110.1536 cm^{-1}	193 917.1597–196 027.3133	3–5	8.5946e−06	4.8228e−04	2.2573e−01	−2.839 58	AAA	6
324	1*s*5*d*-1*s*7*f*	$^3D-^3F^\circ$	*46 412.09*	*2 154.024* cm^{-1}	*193 917.152–196 071.175*	15–21	3.9911e−03	1.8054e−01	4.1390e+02	0.432 67	AAA	6
			46 412.044	2 154.0258 cm^{-1}	193 917.1496–196 071.1754	7–9	4.3385e−03	1.8023e−01	1.9282e+02	0.100 94	AAA	6
			46 412.079	2 154.0242 cm^{-1}	193 917.1502–196 071.1744	5–7	2.9340e−03	1.3272e−01	1.0142e+02	−0.178 09	AAA	6
			46 412.227	2 154.0173 cm^{-1}	193 917.1597–196 071.1770	3–5	3.6443e−03	1.9626e−01	8.9985e+01	−0.230 06	AAA	6
			46 412.066	2 154.0248 cm^{-1}	193 917.1496–196 071.1744	7–7	3.6230e−04	1.1706e−02	1.2524e+01	−1.086 48	AAA	6
			46 412.023	2 154.0268 cm^{-1}	193 917.1502–196 071.1770	5–5	6.7481e−04	2.1804e−02	1.6662e+01	−0.962 49	AAA	6
			46 412.010	2 154.0274 cm^{-1}	193 917.1496–196 071.1770	7–5	1.9282e−05	4.4502e−04	4.7610e−01	−2.506 52	AAA	6
325	1*s*5*d*-1*s*7*f*	$^3D-^1F^\circ$										
			46 411.960	2 154.0297 cm^{-1}	193 917.1496–196 071.1793	7–7	1.198e−04	3.869e−03	4.140e+00	−1.567 3	AA	6
			46 411.973	2 154.0291 cm^{-1}	193 917.1502–196 071.1793	5–7	9.225e−04	4.173e−02	3.189e+01	−0.680 6	AA	6
326	1*s*5*d*-1*s*8*p*	$^3D-^3P^\circ$	*37 731.82*	*2 649.560* cm^{-1}	*193 917.152–196 566.712*	15–9	5.2292e−04	6.7004e−03	1.2488e+01	−0.997 81	AAA	6
			37 731.819	2 649.5605 cm^{-1}	193 917.1496–196 566.7101	7–5	4.3927e−04	6.7006e−03	5.8279e+00	−1.328 79	AAA	6
			37 731.812	2 649.5610 cm^{-1}	193 917.1502–196 566.7112	5–3	3.9217e−04	5.0250e−03	3.1218e+00	−1.599 90	AAA	6
			37 731.759	2 649.5647 cm^{-1}	193 917.1597–196 566.7244	3–1	5.2294e−04	3.7225e−03	1.3876e+00	−1.952 04	AAA	6
			37 731.827	2 649.5599 cm^{-1}	193 917.1502–196 566.7101	5–5	7.8433e−05	1.6750e−03	1.0406e+00	−2.077 02	AAA	6
			37 731.947	2 649.5515 cm^{-1}	193 917.1597–196 566.7112	3–3	1.3073e−04	2.7918e−03	1.0407e+00	−2.076 99	AAA	6
			37 731.963	2 649.5504 cm^{-1}	193 917.1597–196 566.7101	3–5	5.2294e−06	1.8613e−04	6.9381e−02	−3.253 07	AAA	6
327	1*s*5*d*-1*s*8*f*	$^3D-^3F^\circ$	*37 318.22*	*2 678.926* cm^{-1}	*193 917.152–196 596.078*	15–21	2.5528e−03	7.4658e−02	1.3762e+02	0.049 17	AAA	6
			37 318.187	2 678.9280 cm^{-1}	193 917.1496–196 596.0776	7–9	2.7625e−03	7.4196e−02	6.3826e+01	−0.284 52	AAA	6
			37 318.204	2 678.9268 cm^{-1}	193 917.1502–196 596.0770	5–7	1.8988e−03	5.5532e−02	3.4121e+01	−0.556 49	AAA	6
			37 318.313	2 678.9190 cm^{-1}	193 917.1597–196 596.0787	3–5	2.3205e−03	8.0792e−02	2.9786e+01	−0.615 51	AAA	6
			37 318.196	2 678.9274 cm^{-1}	193 917.1496–196 596.0770	7–7	2.3458e−04	4.9003e−03	4.2154e+00	−1.464 68	AAA	6
			37 318.180	2 678.9285 cm^{-1}	193 917.1502–196 596.0787	5–5	4.2968e−04	8.9759e−03	5.5152e+00	−1.347 95	AAA	6
			37 318.172	2 678.9291 cm^{-1}	193 917.1496–196 596.0787	7–5	1.2278e−05	1.8320e−04	1.5760e−01	−2.891 97	AAA	6
328	1*s*5*d*-1*s*8*f*	$^3D-^1F^\circ$										
			37 318.148	2 678.9308 cm^{-1}	193 917.1496–196 596.0804	7–7	7.237e−05	1.512e−03	1.301e+00	−1.975 4	AA	6
			37 318.157	2 678.9302 cm^{-1}	193 917.1502–196 596.0804	5–7	5.568e−04	1.628e−02	1.001e+01	−1.089 3	AA	6
329	1*s*5*d*-1*s*9*p*	$^3D-^3P^\circ$	*33 123.52*	*3 018.179* cm^{-1}	*193 917.152–196 935.331*	15–9	3.4487e−04	3.4054e−03	5.5718e+00	−1.291 74	AAA	6
			33 123.515	3 018.1801 cm^{-1}	193 917.1496–196 935.3297	7–5	2.8970e−04	3.4055e−03	2.6003e+00	−1.622 72	AAA	6
			33 123.514	3 018.1802 cm^{-1}	193 917.1502–196 935.3304	5–3	2.5863e−04	2.5539e−03	1.3928e+00	−1.893 83	AAA	6
			33 123.516	3 018.1800 cm^{-1}	193 917.1597–196 935.3397	3–1	3.4488e−04	1.8920e−03	6.1911e−01	−2.245 97	AAA	6
			33 123.521	3 018.1795 cm^{-1}	193 917.1502–196 935.3297	5–5	5.1727e−05	8.5130e−04	4.6429e−01	−2.370 95	AAA	6
			33 123.618	3 018.1707 cm^{-1}	193 917.1597–196 935.3304	3–3	8.6220e−05	1.4190e−03	4.6433e−01	−2.370 90	AAA	6
			33 123.626	3 018.1700 cm^{-1}	193 917.1597–196 935.3297	3–5	3.4488e−06	9.4599e−05	3.0956e−02	−3.546 99	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
330	1*s*5*d*-1*s*9*f*	$^3D-^3F^\circ$	*32 898.84*	*3 038.792* cm^{-1}	*193 917.152–196 955.944*	15–21	1.7309e−03	3.9343e−02	6.3934e+01	−0.229 05	AAA	6
			32 898.818	3 038.7941 cm^{-1}	193 917.1496–196 955.9437	7–9	1.8675e−03	3.8982e−02	2.9562e+01	−0.564 04	AAA	6
			32 898.829	3 038.7931 cm^{-1}	193 917.1502–196 955.9433	5–7	1.2975e−03	2.9491e−02	1.5975e+01	−0.831 34	AAA	6
			32 898.920	3 038.7847 cm^{-1}	193 917.1597–196 955.9444	3–5	1.5687e−03	4.2447e−02	1.3796e+01	−0.895 03	AAA	6
			32 898.822	3 038.7937 cm^{-1}	193 917.1496–196 955.9433	7–7	1.6033e−04	2.6030e−03	1.9740e+00	−1.739 43	AAA	6
			32 898.817	3 038.7942 cm^{-1}	193 917.1502–196 955.9444	5–5	2.9046e−04	4.7156e−03	2.5544e+00	−1.627 49	AAA	6
			32 898.810	3 038.7948 cm^{-1}	193 917.1496–196 955.9444	7–5	8.2998e−06	9.6248e−05	7.2991e−02	−3.171 51	AAA	6
331	1*s*5*d*-1*s*9*f*	$^3D-^1F^\circ$										
			32 898.797	3 038.7960 cm^{-1}	193 917.1496–196 955.9456	7–7	4.716e−05	7.657e−04	5.807e−01	−2.270 8	AA	6
			32 898.804	3 038.7954 cm^{-1}	193 917.1502–196 955.9456	5–7	3.625e−04	8.239e−03	4.463e+00	−1.385 1	AA	6
332	1*s*5*d*-1*s*10*p*	$^3D-^3P^\circ$	*30 468.53*	*3 281.180* cm^{-1}	*193 917.152–197 198.332*	15–9	2.4070e−04	2.0110e−03	3.0266e+00	−1.520 49	AAA	6
			30 468.517	3 281.1814 cm^{-1}	193 917.1496–197 198.3310	7–5	2.0219e−04	2.0111e−03	1.4124e+00	−1.851 47	AAA	6
			30 468.518	3 281.1813 cm^{-1}	193 917.1502–197 198.3315	5–3	1.8051e−04	1.5082e−03	7.5660e−01	−2.122 58	AAA	6
			30 468.544	3 281.1785 cm^{-1}	193 917.1597–197 198.3382	3–1	2.4070e−04	1.1173e−03	3.3629e−01	−2.474 73	AAA	6
			30 468.522	3 281.1808 cm^{-1}	193 917.1502–197 198.3310	5–5	3.6101e−05	5.0271e−04	2.5219e−01	−2.599 71	AAA	6
			30 468.606	3 281.1718 cm^{-1}	193 917.1597–197 198.3315	3–3	6.0174e−05	8.3793e−04	2.5222e−01	−2.599 67	AAA	6
			30 468.611	3 281.1713 cm^{-1}	193 917.1597–197 198.3310	3–5	2.4070e−06	5.5863e−05	1.6815e−02	−3.775 76	AAA	6
333	1*s*5*d*-1*s*10*f*	$^3D-^3F^\circ$	*30 329.70*	*3 296.199* cm^{-1}	*193 917.152–197 213.351*	15–21	1.2293e−03	2.3748e−02	3.5577e+01	−0.448 29	AAA	6
			30 329.683	3 296.2010 cm^{-1}	193 917.1496–197 213.3506	7–9	1.3235e−03	2.3480e−02	1.6416e+01	−0.784 20	AAA	6
			30 329.691	3 296.2001 cm^{-1}	193 917.1502–197 213.3503	5–7	9.2647e−04	1.7897e−02	8.9376e+00	−1.048 24	AAA	6
			30 329.771	3 296.1914 cm^{-1}	193 917.1597–197 213.3511	3–5	1.1117e−03	2.5566e−02	7.6604e+00	−1.115 21	AAA	6
			30 329.686	3 296.2007 cm^{-1}	193 917.1496–197 213.3503	7–7	1.1451e−04	1.5801e−03	1.1047e+00	−1.956 23	AAA	6
			30 329.684	3 296.2009 cm^{-1}	193 917.1502–197 213.3511	5–5	2.0586e−04	2.8405e−03	1.4185e+00	−1.847 63	AAA	6
			30 329.678	3 296.2015 cm^{-1}	193 917.1496–197 213.3511	7–5	5.8822e−06	5.7975e−05	4.0532e−02	−3.391 66	AAA	6
334	1*s*5*d*-1*s*10*f*	$^3D-^1F^\circ$										
			30 329.670	3 296.2024 cm^{-1}	193 917.1496–197 213.3520	7–7	3.255e−05	4.491e−04	3.140e−01	−2.502 5	AA	6
			30 329.675	3 296.2018 cm^{-1}	193 917.1502–197 213.3520	5–7	2.500e−04	4.829e−03	2.412e+00	−1.617 2	AA	6
335	1*s*5*d*-1*s*5*p*	$^1D-^1P^\circ$		24.1723 cm^{-1}	193 918.2882–193 942.4605	5–3	2.2222e−07	3.4210e−02	2.3296e+03	−0.766 87	AAA	6
336	1*s*5*d*-1*s*6*p*	$^1D-^3P^\circ$										
				1 274.4530 cm^{-1}	193 918.2882–195 192.7412	5–5	2.442e−08	2.254e−06	2.912e−03	−4.948 0	AA	6
				1 274.4556 cm^{-1}	193 918.2882–195 192.7438	5–3	1.176e−07	6.514e−06	8.413e−03	−4.487 2	AA	6
337	1*s*5*d*-1*s*6*f*	$^1D-^3F^\circ$										
				1 344.1384 cm^{-1}	193 918.2882–195 262.4266	5–5	1.146e−07	9.509e−06	1.164e−02	−4.322 9	AA	6
				1 344.1343 cm^{-1}	193 918.2882–195 262.4225	5–7	1.879e−03	2.182e−01	2.673e+02	0.037 9	AA	6
338	1*s*5*d*-1*s*6*f*	$^1D-^1F^\circ$		1 344.1418 cm^{-1}	193 918.2882–195 262.4300	5–7	5.3465e−03	6.2110e−01	7.6062e+02	0.492 13	AAA	6
339	1*s*5*d*-1*s*6*p*	$^1D-^1P^\circ$		1 356.6185 cm^{-1}	193 918.2882–195 274.9067	5–3	8.3990e−04	4.1051e−02	4.9809e+01	−0.687 71	AAA	6
340	1*s*5*d*-1*s*7*f*	$^1D-^3F^\circ$										
			46 436.556	2 152.8888 cm^{-1}	193 918.2882–196 071.1770	5–5	6.893e−08	2.230e−06	1.705e−03	−4.952 8	AA	6
			46 436.612	2 152.8862 cm^{-1}	193 918.2882–196 071.1744	5–7	1.042e−03	4.719e−02	3.608e+01	−0.627 2	AA	6
341	1*s*5*d*-1*s*7*f*	$^1D-^1F^\circ$	46 436.506	2 152.8911 cm^{-1}	193 918.2882–196 071.1793	5–7	3.2955e−03	1.4923e−01	1.1410e+02	−0.127 17	AAA	6
342	1*s*5*d*-1*s*7*p*	$^1D-^1P^\circ$	46 266.592	2 160.7976 cm^{-1}	193 918.2882–196 079.0858	5–3	4.6719e−04	9.0006e−03	6.8565e+00	−1.346 76	AAA	6
343	1*s*5*d*-1*s*8*f*	$^1D-^3F^\circ$										
			37 334.063	2 677.7888 cm^{-1}	193 918.2882–196 596.0770	5–7	6.287e−04	1.840e−02	1.131e+01	−1.036 2	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
344	1*s*5*d*-1*s*8*f*	$^1D-^1F^\circ$	37 334.016	2 677.7922 cm^{-1}	193 918.2882–196 596.0804	5–7	2.1319e−03	6.2402e−02	3.8359e+01	−0.505 83	AAA	6
345	1*s*5*d*-1*s*8*p*	$^1D-^1P^\circ$	37 260.017	2 683.1103 cm^{-1}	193 918.2882–196 601.3985	5–3	2.8583e−04	3.5714e−03	2.1910e+00	−1.748 19	AAA	6
346	1*s*5*d*-1*s*9*f*	$^1D-^3F^\circ$										
			32 911.154	3 037.6551 cm^{-1}	193 918.2882–196 955.9433	5–7	4.093e−04	9.309e−03	5.044e+00	−1.332 1	AA	6
347	1*s*5*d*-1*s*9*f*	$^1D-^1F^\circ$	32 911.129	3 037.6574 cm^{-1}	193 918.2882–196 955.9456	5–7	1.4564e−03	3.3127e−02	1.7951e+01	−0.780 84	AAA	6
348	1*s*5*d*-1*s*9*p*	$^1D-^1P^\circ$	32 870.598	3 041.4029 cm^{-1}	193 918.2882–196 959.6911	5–3	1.8869e−04	1.8349e−03	9.9307e−01	−2.037 42	AAA	6
349	1*s*5*d*-1*s*10*f*	$^1D-^3F^\circ$										
			30 340.166	3 295.0621 cm^{-1}	193 918.2882–197 213.3503	5–7	2.822e−04	5.455e−03	2.725e+00	−1.564 2	AA	6
350	1*s*5*d*-1*s*10*f*	$^1D-^1F^\circ$	30 340.150	3 295.0638 cm^{-1}	193 918.2882–197 213.3520	5–7	1.0398e−03	2.0101e−02	1.0041e+01	−0.997 82	AAA	6
351	1*s*5*d*-1*s*10*p*	$^1D-^1P^\circ$	30 314.981	3 297.7996 cm^{-1}	193 918.2882–197 216.0878	5–3	1.3169e−04	1.0892e−03	5.4367e−01	−2.263 92	AAA	6
352	1*s*5*f*-1*s*6*d*	$^3F^\circ-^3D$		*1 338.951* cm^{-1}	*193 921.120–195 260.071*	21–15	3.6181e−04	2.1611e−02	1.1159e+02	−0.343 10	AAA	6
				1 338.9500 cm^{-1}	193 921.1196–195 260.0696	9–7	3.6841e−04	2.3962e−02	5.3024e+01	−0.666 24	AAA	6
				1 338.9535 cm^{-1}	193 921.1165–195 260.0700	7–5	2.5203e−04	1.5054e−02	2.5909e+01	−0.977 25	AAA	6
				1 338.9515 cm^{-1}	193 921.1240–195 260.0755	5–3	4.0116e−04	2.0128e−02	2.4744e+01	−0.997 23	AAA	6
				1 338.9531 cm^{-1}	193 921.1165–195 260.0696	7–7	2.2209e−05	1.8572e−03	3.1964e+00	−1.886 05	AAA	6
				1 338.9460 cm^{-1}	193 921.1240–195 260.0700	5–5	4.4569e−05	3.7270e−03	4.5819e+00	−1.729 67	AAA	6
				1 338.9456 cm^{-1}	193 921.1240–195 260.0696	5–7	9.0965e−07	1.0650e−04	1.3092e−01	−3.273 70	AAA	6
353	1*s*5*f*-1*s*6*d*	$^3F^\circ-^1D$										
				1 339.6523 cm^{-1}	193 921.1165–195 260.7688	7–5	1.171e−04	6.989e−03	1.202e+01	−1.310 5	AA	6
354	1*s*5*f*-1*s*6*g*	$^3F^\circ-^3G$		*1 341.603* cm^{-1}	*193 921.120–195 262.723*	21–27	1.0854e−02	1.1624e+00	5.9899e+03	1.387 57	AAA	6
				1 341.6033 cm^{-1}	193 921.1196–195 262.7229	9–11	1.1064e−02	1.1263e+00	2.4875e+03	1.005 91	AAA	6
				1 341.6048 cm^{-1}	193 921.1165–195 262.7213	7–9	1.0284e−02	1.1013e+00	1.8917e+03	0.887 01	AAA	6
				1 341.6004 cm^{-1}	193 921.1240–195 262.7244	5–7	1.0161e−02	1.1849e+00	1.4538e+03	0.772 64	AAA	6
				1 341.6017 cm^{-1}	193 921.1196–195 262.7213	9–9	3.5923e−04	2.9921e−02	6.6081e+01	−0.569 78	AAA	6
				1 341.6079 cm^{-1}	193 921.1165–195 262.7244	7–7	6.2021e−04	5.1659e−02	8.8735e+01	−0.441 76	AAA	6
				1 341.6048 cm^{-1}	193 921.1196–195 262.7244	9–7	1.4113e−05	9.1429e−04	2.0192e+00	−2.084 68	AAA	6
355	1*s*5*f*-1*s*6*g*	$^3F^\circ-^1G$										
				1 341.6089 cm^{-1}	193 921.1165–195 262.7254	7–9	2.984e−04	3.195e−02	5.489e+01	−0.650 4	AA	6
				1 341.6058 cm^{-1}	193 921.1196–195 262.7254	9–9	3.323e−04	2.768e−02	6.112e+01	−0.603 6	AA	6
356	1*s*5*f*-1*s*7*d*	$^3F^\circ-^3D$	*46 530.28*	*2 148.552* cm^{-1}	*193 921.120–196 069.672*	21–15	1.7703e−04	4.1067e−03	1.3214e+01	−1.064 29	AAA	6
			46 530.297	2 148.5515 cm^{-1}	193 921.1196–196 069.6711	9–7	1.8028e−04	4.5537e−03	6.2797e+00	−1.387 39	AAA	6
			46 530.226	2 148.5548 cm^{-1}	193 921.1165–196 069.6713	7–5	1.2328e−04	2.8598e−03	3.0673e+00	−1.698 57	AAA	6
			46 530.313	2 148.5508 cm^{-1}	193 921.1240–196 069.6748	5–3	1.9630e−04	3.8250e−03	2.9305e+00	−1.718 39	AAA	6
			46 530.230	2 148.5546 cm^{-1}	193 921.1165–196 069.6711	7–7	1.0868e−05	3.5295e−04	3.7857e−01	−2.607 19	AAA	6
			46 530.388	2 148.5473 cm^{-1}	193 921.1240–196 069.6713	5–5	2.1810e−05	7.0831e−04	5.4266e−01	−2.450 81	AAA	6
			46 530.393	2 148.5471 cm^{-1}	193 921.1240–196 069.6711	5–7	4.4513e−07	2.0239e−05	1.5505e−02	−3.994 85	AAA	6
357	1*s*5*f*-1*s*7*d*	$^3F^\circ-^1D$										
			46 520.368	2 149.0101 cm^{-1}	193 921.1165–196 070.1266	7–5	5.736e−05	1.330e−03	1.426e+00	−2.031 0	AA	6
358	1*s*5*f*-1*s*7*g*	$^3F^\circ-^3G$	*46 493.58*	*2 150.248* cm^{-1}	*193 921.120–196 071.368*	21–27	5.3840e−03	2.2445e−01	7.2166e+02	0.673 34	AAA	6
			46 493.577	2 150.2484 cm^{-1}	193 921.1196–196 071.3680	9–11	5.4880e−03	2.1749e−01	2.9969e+02	0.291 69	AAA	6
			46 493.532	2 150.2505 cm^{-1}	193 921.1165–196 071.3670	7–9	5.1013e−03	2.1267e−01	2.2792e+02	0.172 80	AAA	6
			46 493.653	2 150.2449 cm^{-1}	193 921.1240–196 071.3689	5–7	5.0400e−03	2.2879e−01	1.7514e+02	0.058 41	AAA	6
			46 493.599	2 150.2474 cm^{-1}	193 921.1196–196 071.3670	9–9	1.7828e−04	5.7807e−03	7.9655e+00	−1.283 78	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			46 493.491	2 150.2524 cm^{-1}	193 921.1165–196 071.3689	7–7	3.0763e−04	9.9749e−03	1.0690e+01	−1.156 00	AAA	6
			46 493.558	2 150.2493 cm^{-1}	193 921.1196–196 071.3689	9–7	7.0000e−06	1.7654e−04	2.4326e−01	−2.798 92	AAA	6
359	1*s*5*f*-1*s*7*g*	$^3F^\circ-{}^1G$										
			46 493.478	2 150.2530 cm^{-1}	193 921.1165–196 071.3695	7–9	1.475e−04	6.149e−03	6.590e+00	−1.366 1	AA	6
			46 493.545	2 150.2499 cm^{-1}	193 921.1196–196 071.3695	9–9	1.647e−04	5.341e−03	7.360e+00	−1.318 1	AA	6
360	1*s*5*f*-1*s*8*d*	$^3F^\circ-{}^3D$	*37 387.78*	*2 673.941* cm^{-1}	*193 921.120–196 595.061*	21–15	1.0083e−04	1.5101e−03	3.9043e+00	−1.498 79	AAA	6
			37 387.788	2 673.9409 cm^{-1}	193 921.1196–196 595.0605	9–7	1.0268e−04	1.6745e−03	1.8555e+00	−1.821 86	AAA	6
			37 387.744	2 673.9441 cm^{-1}	193 921.1165–196 595.0606	7–5	7.0195e−05	1.0513e−03	9.0605e−01	−2.133 17	AAA	6
			37 387.816	2 673.9389 cm^{-1}	193 921.1240–196 595.0629	5–3	1.1181e−04	1.4066e−03	8.6593e−01	−2.152 84	AAA	6
			37 387.745	2 673.9440 cm^{-1}	193 921.1165–196 595.0605	7–7	6.1901e−06	1.2979e−04	1.1186e−01	−3.041 65	AAA	6
			37 387.849	2 673.9366 cm^{-1}	193 921.1240–196 595.0606	5–5	1.2422e−05	2.6046e−04	1.6034e−01	−2.885 28	AAA	6
			37 387.850	2 673.9365 cm^{-1}	193 921.1240–196 595.0605	5–7	2.5353e−07	7.4424e−06	4.5815e−03	−4.429 32	AAA	6
361	1*s*5*f*-1*s*8*d*	$^3F^\circ-{}^1D$										
			37 383.386	2 674.2558 cm^{-1}	193 921.1165–196 595.3723	7–5	3.268e−05	4.894e−04	4.217e−01	−2.465 3	AA	6
362	1*s*5*f*-1*s*8*g*	$^3F^\circ-{}^3G$	*37 371.74*	*2 675.089* cm^{-1}	*193 921.120–196 596.209*	21–27	3.0797e−03	8.2953e−02	2.1438e+02	0.241 05	AAA	6
			37 371.742	2 675.0890 cm^{-1}	193 921.1196–196 596.2086	9–11	3.1391e−03	8.0378e−02	8.9026e+01	−0.140 62	AAA	6
			37 371.709	2 675.0914 cm^{-1}	193 921.1165–196 596.2079	7–9	2.9181e−03	7.8600e−02	6.7711e+01	−0.259 48	AAA	6
			37 371.795	2 675.0852 cm^{-1}	193 921.1240–196 596.2092	5–7	2.8829e−03	8.4555e−02	5.2029e+01	−0.373 89	AAA	6
			37 371.752	2 675.0883 cm^{-1}	193 921.1196–196 596.2079	9–9	1.0202e−04	2.1373e−03	2.3673e+00	−1.715 89	AAA	6
			37 371.691	2 675.0927 cm^{-1}	193 921.1165–196 596.2092	7–7	1.7597e−04	3.6865e−03	3.1758e+00	−1.588 28	AAA	6
			37 371.734	2 675.0896 cm^{-1}	193 921.1196–196 596.2092	9–7	4.0040e−06	6.5242e−05	7.2262e−02	−3.231 23	AAA	6
363	1*s*5*f*-1*s*8*g*	$^3F^\circ-{}^1G$										
			37 371.685	2 675.0931 cm^{-1}	193 921.1165–196 596.2096	7–9	8.416e−05	2.267e−03	1.953e+00	−1.799 5	AA	6
			37 371.728	2 675.0900 cm^{-1}	193 921.1196–196 596.2096	9–9	9.418e−05	1.973e−03	2.185e+00	−1.750 6	AA	6
364	1*s*5*f*-1*s*9*d*	$^3F^\circ-{}^3D$	*32 949.66*	*3 034.106* cm^{-1}	*193 921.120–196 955.225*	21–15	6.3607e−05	7.3990e−04	1.6859e+00	−1.808 61	AAA	6
			32 949.660	3 034.1052 cm^{-1}	193 921.1196–196 955.2248	9–7	6.4780e−05	8.2053e−04	8.0127e−01	−2.131 67	AAA	6
			32 949.625	3 034.1084 cm^{-1}	193 921.1165–196 955.2249	7–5	4.4277e−05	5.1504e−04	3.9119e−01	−2.443 06	AAA	6
			32 949.689	3 034.1025 cm^{-1}	193 921.1240–196 955.2265	5–3	7.0538e−05	6.8924e−04	3.7393e−01	−2.462 66	AAA	6
			32 949.626	3 034.1083 cm^{-1}	193 921.1165–196 955.2248	7–7	3.9052e−06	6.3597e−05	4.8304e−02	−3.351 46	AAA	6
			32 949.706	3 034.1009 cm^{-1}	193 921.1240–196 955.2249	5–5	7.8370e−06	1.2763e−04	6.9241e−02	−3.195 08	AAA	6
			32 949.707	3 034.1008 cm^{-1}	193 921.1240–196 955.2248	5–7	1.5995e−07	3.6468e−06	1.9785e−03	−4.739 12	AAA	6
365	1*s*5*f*-1*s*9*d*	$^3F^\circ-{}^1D$										
			32 947.213	3 034.3305 cm^{-1}	193 921.1165–196 955.4470	7–5	2.062e−05	2.398e−04	1.822e−01	−2.775 0	AA	6
366	1*s*5*f*-1*s*9*g*	$^3F^\circ-{}^3G$	*32 940.85*	*3 034.917* cm^{-1}	*193 921.120–196 956.037*	21–27	1.9462e−03	4.0728e−02	9.2778e+01	−0.067 88	AAA	6
			32 940.846	3 034.9170 cm^{-1}	193 921.1196–196 956.0366	9–11	1.9837e−03	3.9463e−02	3.8527e+01	−0.449 57	AAA	6
			32 940.818	3 034.9196 cm^{-1}	193 921.1165–196 956.0361	7–9	1.8442e−03	3.8594e−02	2.9305e+01	−0.568 39	AAA	6
			32 940.889	3 034.9130 cm^{-1}	193 921.1240–196 956.0370	5–7	1.8218e−03	4.1514e−02	2.2516e+01	−0.682 84	AAA	6
			32 940.851	3 034.9165 cm^{-1}	193 921.1196–196 956.0361	9–9	6.4489e−05	1.0497e−03	1.0248e+00	−2.024 71	AAA	6
			32 940.808	3 034.9205 cm^{-1}	193 921.1165–196 956.0370	7–7	1.1120e−04	1.8100e−03	1.3743e+00	−1.897 24	AAA	6
			32 940.842	3 034.9174 cm^{-1}	193 921.1196–196 956.0370	9–7	2.5303e−06	3.2032e−05	3.1272e−02	−3.540 17	AAA	6
367	1*s*5*f*-1*s*9*g*	$^3F^\circ-{}^1G$										
			32 940.805	3 034.9208 cm^{-1}	193 921.1165–196 956.0373	7–9	5.308e−05	1.111e−03	8.435e−01	−2.109 2	AA	6
			32 940.838	3 034.9177 cm^{-1}	193 921.1196–196 956.0373	9–9	5.950e−05	9.684e−04	9.454e−01	−2.059 7	AA	6
368	1*s*5*f*-1*s*10*d*	$^3F^\circ-{}^3D$	*30 371.11*	*3 291.705* cm^{-1}	*193 921.120–197 212.824*	21–15	4.3038e−05	4.2534e−04	8.9333e−01	−2.049 04	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			30 371.113	3 291.7045 cm^{-1}	193 921.1196–197 212.8241	9–7	4.3833e−05	4.7171e−04	4.2459e−01	−2.372 09	AAA	6
			30 371.084	3 291.7077 cm^{-1}	193 921.1165–197 212.8242	7–5	2.9956e−05	2.9605e−04	2.0726e−01	−2.683 53	AAA	6
			30 371.142	3 291.7014 cm^{-1}	193 921.1240–197 212.8254	5–3	4.7730e−05	3.9624e−04	1.9815e−01	−2.703 07	AAA	6
			30 371.085	3 291.7076 cm^{-1}	193 921.1165–197 212.8241	7–7	2.6425e−06	3.6562e−05	2.5597e−02	−3.591 87	AAA	6
			30 371.153	3 291.7002 cm^{-1}	193 921.1240–197 212.8242	5–5	5.3029e−06	7.3372e−05	3.6691e−02	−3.435 50	AAA	6
			30 371.154	3 291.7001 cm^{-1}	193 921.1240–197 212.8241	5–7	1.0823e−07	2.0965e−06	1.0484e−03	−4.979 54	AAA	6
369	1*s*5*f*-1*s*10*d*	$^3F^\circ-{}^1D$										
			30 369.575	3 291.8713 cm^{-1}	193 921.1165–197 212.9878	7–5	1.396e−05	1.379e−04	9.654e−02	−3.015 3	AA	6
370	1*s*5*f*-1*s*10*g*	$^3F^\circ-{}^3G$	*30 365.63*	*3 292.299* cm^{-1}	*193 921.120–197 213.419*	21–27	1.3179e−03	2.3436e−02	4.9213e+01	−0.307 90	AAA	6
			30 365.627	3 292.2992 cm^{-1}	193 921.1196–197 213.4188	9–11	1.3433e−03	2.2708e−02	2.0436e+01	−0.689 58	AAA	6
			30 365.603	3 292.3019 cm^{-1}	193 921.1165–197 213.4184	7–9	1.2488e−03	2.2207e−02	1.5544e+01	−0.808 41	AAA	6
			30 365.665	3 292.2951 cm^{-1}	193 921.1240–197 213.4191	5–7	1.2336e−03	2.3887e−02	1.1943e+01	−0.922 87	AAA	6
			30 365.631	3 292.2988 cm^{-1}	193 921.1196–197 213.4184	9–9	4.3678e−05	6.0412e−04	5.4368e−01	−2.264 64	AAA	6
			30 365.596	3 292.3026 cm^{-1}	193 921.1165–197 213.4191	7–7	7.5297e−05	1.0414e−03	7.2897e−01	−2.137 27	AAA	6
			30 365.625	3 292.2995 cm^{-1}	193 921.1196–197 213.4191	9–7	1.7134e−06	1.8432e−05	1.6588e−02	−3.780 19	AAA	6
371	1*s*5*f*-1*s*10*g*	$^3F^\circ-{}^1G$										
			30 365.594	3 292.3028 cm^{-1}	193 921.1165–197 213.4193	7–9	3.590e−05	6.383e−04	4.468e−01	−2.349 9	AA	6
			30 365.623	3 292.2997 cm^{-1}	193 921.1196–197 213.4193	9–9	4.028e−05	5.571e−04	5.013e−01	−2.299 9	AA	6
372	1*s*5*f*-1*s*6*d*	$^1F^\circ-{}^3D$										
				1 338.9405 cm^{-1}	193 921.1291–195 260.0696	7–7	9.628e−06	8.052e−04	1.386e+00	−2.249 0	AA	6
				1 338.9409 cm^{-1}	193 921.1291–195 260.0700	7–5	1.046e−04	6.246e−03	1.075e+01	−1.359 3	AA	6
373	1*s*5*f*-1*s*6*d*	$^1F^\circ-{}^1D$		1 339.6397 cm^{-1}	193 921.1291–195 260.7688	7–5	2.8105e−04	1.6770e−02	2.8848e+01	−0.930 37	AAA	6
374	1*s*5*f*-1*s*6*g*	$^1F^\circ-{}^3G$										
				1 341.5953 cm^{-1}	193 921.1291–195 262.7244	7–7	2.689e−04	2.240e−02	3.847e+01	−0.804 7	AA	6
				1 341.5922 cm^{-1}	193 921.1291–195 262.7213	7–9	4.216e−04	4.515e−02	7.755e+01	−0.500 3	AA	6
375	1*s*5*f*-1*s*6*g*	$^1F^\circ-{}^1G$		1 341.5963 cm^{-1}	193 921.1291–195 262.7254	7–9	1.0434e−02	1.1174e+00	1.9194e+03	0.893 31	AAA	6
376	1*s*5*f*-1*s*7*d*	$^1F^\circ-{}^3D$										
			46 530.503	2 148.5420 cm^{-1}	193 921.1291–196 069.6711	7–7	4.712e−06	1.530e−04	1.641e−01	−2.970 2	AA	6
			46 530.499	2 148.5422 cm^{-1}	193 921.1291–196 069.6713	7–5	5.122e−05	1.188e−03	1.274e+00	−2.080 0	AA	6
377	1*s*5*f*-1*s*7*d*	$^1F^\circ-{}^1D$	46 520.641	2 148.9975 cm^{-1}	193 921.1291–196 070.1266	7–5	1.3745e−04	3.1871e−03	3.4177e+00	−1.651 50	AAA	6
378	1*s*5*f*-1*s*7*g*	$^1F^\circ-{}^3G$										
			46 493.763	2 150.2398 cm^{-1}	193 921.1291–196 071.3689	7–7	1.334e−04	4.325e−03	4.635e+00	−1.519 0	AA	6
			46 493.804	2 150.2379 cm^{-1}	193 921.1291–196 071.3670	7–9	2.085e−04	8.692e−03	9.315e+00	−1.215 8	AA	6
379	1*s*5*f*-1*s*7*g*	$^1F^\circ-{}^1G$	46 493.750	2 150.2404 cm^{-1}	193 921.1291–196 071.3695	7–9	5.1758e−03	2.1578e−01	2.3126e+02	0.179 10	AAA	6
380	1*s*5*f*-1*s*8*d*	$^1F^\circ-{}^3D$										
			37 387.921	2 673.9314 cm^{-1}	193 921.1291–196 595.0605	7–7	2.684e−06	5.627e−05	4.850e−02	−3.404 6	AA	6
			37 387.920	2 673.9315 cm^{-1}	193 921.1291–196 595.0606	7–5	2.919e−05	4.372e−04	3.768e−01	−2.514 2	AA	6
381	1*s*5*f*-1*s*8*d*	$^1F^\circ-{}^1D$	37 383.562	2 674.2432 cm^{-1}	193 921.1291–196 595.3723	7–5	7.8248e−05	1.1717e−03	1.0097e+00	−2.086 10	AAA	6
382	1*s*5*f*-1*s*8*g*	$^1F^\circ-{}^3G$										
			37 371.867	2 675.0801 cm^{-1}	193 921.1291–196 596.2092	7–7	7.629e−05	1.598e−03	1.377e+00	−1.951 3	AA	6
			37 371.885	2 675.0788 cm^{-1}	193 921.1291–196 596.2079	7–9	1.190e−04	3.205e−03	2.761e+00	−1.649 0	AA	6
383	1*s*5*f*-1*s*8*g*	$^1F^\circ-{}^1G$	37 371.861	2 675.0805 cm^{-1}	193 921.1291–196 596.2096	7–9	2.9608e−03	7.9751e−02	6.8703e+01	−0.253 17	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
384	1*s*5*f*-1*s*9*d*	$^1F^\circ-{}^3D$										
			32 949.763	3 034.0957 cm^{-1}	193 921.1291–196 955.2248	7–7	1.693e−06	2.757e−05	2.094e−02	−3.714 4	AA	6
			32 949.762	3 034.0958 cm^{-1}	193 921.1291–196 955.2249	7–5	1.842e−05	2.143e−04	1.628e−01	−2.823 8	AA	6
385	1*s*5*f*-1*s*9*d*	$^1F^\circ-{}^1D$	32 947.350	3 034.3179 cm^{-1}	193 921.1291–196 955.4470	7–5	4.9347e−05	5.7394e−04	4.3589e−01	−2.396 03	AAA	6
386	1*s*5*f*-1*s*9*g*	$^1F^\circ-{}^3G$										
			32 940.945	3 034.9079 cm^{-1}	193 921.1291–196 956.0370	7–7	4.821e−05	7.847e−04	5.958e−01	−2.260 2	AA	6
			32 940.954	3 034.9070 cm^{-1}	193 921.1291–196 956.0361	7–9	7.508e−05	1.571e−03	1.193e+00	−1.958 7	AA	6
387	1*s*5*f*-1*s*9*g*	$^1F^\circ-{}^1G$	32 940.941	3 034.9082 cm^{-1}	193 921.1291–196 956.0373	7–9	1.8711e−03	3.9157e−02	2.9733e+01	−0.562 09	AAA	6
388	1*s*5*f*-1*s*10*d*	$^1F^\circ-{}^3D$										
			30 371.201	3 291.6950 cm^{-1}	193 921.1291–197 212.8241	7–7	1.146e−06	1.585e−05	1.110e−02	−3.954 9	AA	6
			30 371.200	3 291.6951 cm^{-1}	193 921.1291–197 212.8242	7–5	1.247e−05	1.232e−04	8.628e−02	−3.064 1	AA	6
389	1*s*5*f*-1*s*10*d*	$^1F^\circ-{}^1D$	30 369.691	3 291.8587 cm^{-1}	193 921.1291–197 212.9878	7–5	3.3382e−05	3.2988e−04	2.3094e−01	−2.636 54	AAA	6
390	1*s*5*f*-1*s*10*g*	$^1F^\circ-{}^3G$										
			30 365.712	3 292.2900 cm^{-1}	193 921.1291–197 213.4191	7–7	3.264e−05	4.515e−04	3.160e−01	−2.500 2	AA	6
			30 365.719	3 292.2893 cm^{-1}	193 921.1291–197 213.4184	7–9	5.078e−05	9.030e−04	6.321e−01	−2.199 2	AA	6
391	1*s*5*f*-1*s*10*g*	$^1F^\circ-{}^1G$	30 365.710	3 292.2902 cm^{-1}	193 921.1291–197 213.4193	7–9	1.2671e−03	2.2533e−02	1.5772e+01	−0.802 09	AAA	6
392	1*s*5*g*-1*s*6*f*	$^3G-{}^3F^\circ$		1 340.8085 cm^{-1}	*193 921.616–195 262.424*	27–21	1.1155e−04	7.2350e−03	4.7963e+01	−0.709 20	AAA	6
				1 340.8081 cm^{-1}	193 921.6160–195 262.4241	11–9	1.0859e−04	7.4091e−03	2.0011e+01	−1.088 84	AAA	6
				1 340.8093 cm^{-1}	193 921.6132–195 262.4225	9–7	1.0439e−04	6.7708e−03	1.4962e+01	−1.215 12	AAA	6
				1 340.8081 cm^{-1}	193 921.6185–195 262.4266	7–5	1.1423e−04	6.8042e−03	1.1695e+01	−1.322 13	AAA	6
				1 340.8109 cm^{-1}	193 921.6132–195 262.4241	9–9	2.8825e−06	2.4038e−04	5.3118e−01	−2.664 87	AAA	6
				1 340.8040 cm^{-1}	193 921.6185–195 262.4225	7–7	5.2232e−06	4.3557e−04	7.4864e−01	−2.515 84	AAA	6
				1 340.8056 cm^{-1}	193 921.6185–195 262.4241	7–9	8.8141e−08	9.4503e−06	1.6243e−02	−4.179 45	AAA	6
393	1*s*5*g*-1*s*6*f*	$^3G-{}^1F^\circ$										
				1 340.8168 cm^{-1}	193 921.6132–195 262.4300	9–7	6.134e−06	3.979e−04	8.792e−01	−2.446 0	AA	6
				1 340.8115 cm^{-1}	193 921.6185–195 262.4300	7–7	1.916e−06	1.598e−04	2.746e−01	−2.951 3	AA	6
394	1*s*5*g*-1*s*6*h*	$^3G-{}^3H^\circ$		*1 341.177* cm^{-1}	*193 921.616–195 262.792*	27–33	1.6352e−02	1.6658e+00	1.1040e+04	1.652 98	AAA	6
				1 341.1764 cm^{-1}	193 921.6160–195 262.7924	11–13	1.6459e−02	1.6212e+00	4.3775e+03	1.251 23	AAA	6
				1 341.1781 cm^{-1}	193 921.6132–195 262.7913	9–11	1.6117e−02	1.6418e+00	3.6270e+03	1.169 56	AAA	6
				1 341.1748 cm^{-1}	193 921.6185–195 262.7933	7–9	1.5646e−02	1.6766e+00	2.8809e+03	1.069 53	AAA	6
				1 341.1753 cm^{-1}	193 921.6160–195 262.7913	11–11	3.3922e−04	2.8273e−02	7.6340e+01	−0.507 24	AAA	6
				1 341.1801 cm^{-1}	193 921.6132–195 262.7933	9–9	4.1770e−04	3.4813e−02	7.6909e+01	−0.504 01	AAA	6
				1 341.1773 cm^{-1}	193 921.6160–195 262.7933	11–9	8.1279e−06	5.5426e−04	1.4966e+00	−2.214 89	AAA	6
395	1*s*5*g*-1*s*6*h*	$^3G-{}^1H^\circ$										
				1 341.1808 cm^{-1}	193 921.6132–195 262.7940	9–11	6.517e−07	6.639e−05	1.467e−01	−3.223 7	AA	6
				1 341.1780 cm^{-1}	193 921.6160–195 262.7940	11–11	3.191e−04	2.660e−02	7.182e+01	−0.533 7	AA	6
396	1*s*5*g*-1*s*7*f*	$^3G-{}^3F^\circ$	*46 508.47*	*2 149.560* cm^{-1}	*193 921.616–196 071.175*	27–21	4.5482e−05	1.1478e−03	4.7462e+00	−1.508 78	AAA	6
			46 508.480	2 149.5594 cm^{-1}	193 921.6160–196 071.1754	11–9	4.4418e−05	1.1791e−03	1.9865e+00	−1.887 04	AAA	6
			46 508.441	2 149.5612 cm^{-1}	193 921.6132–196 071.1744	9–7	4.2206e−05	1.0651e−03	1.4681e+00	−2.018 37	AAA	6
			46 508.500	2 149.5585 cm^{-1}	193 921.6185–196 071.1770	7–5	4.6725e−05	1.0829e−03	1.1609e+00	−2.120 32	AAA	6
			46 508.419	2 149.5622 cm^{-1}	193 921.6132–196 071.1754	9–9	1.1791e−06	3.8257e−05	5.2732e−02	−3.463 05	AAA	6
			46 508.556	2 149.5559 cm^{-1}	193 921.6185–196 071.1744	7–7	2.1949e−06	7.1215e−05	7.6348e−02	−3.302 33	AAA	6
			46 508.534	2 149.5569 cm^{-1}	193 921.6185–196 071.1754	7–9	3.6054e−08	1.5040e−06	1.6124e−03	−4.977 65	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
397	1*s*5*g*-1*s*7*f*	$^3G-^1F^\circ$										
			46 508.335	2 149.5661 cm^{-1}	193 921.6132–196 071.1793	9–7	3.002e−06	7.577e−05	1.044e−01	−3.166 3	AA	6
			46 508.450	2 149.5608 cm^{-1}	193 921.6185–196 071.1793	7–7	7.255e−07	2.354e−05	2.524e−02	−3.783 1	AA	6
398	1*s*5*g*-1*s*7*h*	$^3G-^3H^\circ$	*46 503.32*	*2 149.798* cm^{-1}	*193 921.616–196 071.413*	27–33	5.0580e−03	2.0054e−01	8.2916e+02	0.733 56	AAA	6
			46 503.331	2 149.7974 cm^{-1}	193 921.6160–196 071.4134	11–13	5.0910e−03	1.9517e−01	3.2877e+02	0.331 81	AAA	6
			46 503.284	2 149.7996 cm^{-1}	193 921.6132–196 071.4128	9–11	4.9851e−03	1.9764e−01	2.7240e+02	0.250 13	AAA	6
			46 503.372	2 149.7955 cm^{-1}	193 921.6185–196 071.4140	7–9	4.8396e−03	2.0184e−01	2.1637e+02	0.150 11	AAA	6
			46 503.344	2 149.7968 cm^{-1}	193 921.6160–196 071.4128	11–11	1.0493e−04	3.4038e−03	5.7337e+00	−1.426 65	AAA	6
			46 503.258	2 149.8008 cm^{-1}	193 921.6132–196 071.4140	9–9	1.2920e−04	4.1910e−03	5.7762e+00	−1.423 43	AAA	6
			46 503.318	2 149.7980 cm^{-1}	193 921.6160–196 071.4140	11–9	2.5141e−06	6.6726e−05	1.1240e−01	−3.134 31	AAA	6
399	1*s*5*g*-1*s*7*h*	$^3G-^1H^\circ$										
			46 503.247	2 149.8013 cm^{-1}	193 921.6132–196 071.4145	9–11	2.017e−07	7.995e−06	1.102e−02	−4.142 9	AA	6
			46 503.307	2 149.7985 cm^{-1}	193 921.6160–196 071.4145	11–11	9.871e−05	3.202e−03	5.394e+00	−1.453 2	AA	6
400	1*s*5*g*-1*s*8*f*	$^3G-^3F^\circ$										
			37 380.509	2 674.4616 cm^{-1}	193 921.6160–196 596.0776	11–9	2.2814e−05	3.9123e−04	5.2975e−01	−2.366 17	AAA	6
			37 380.478	2 674.4638 cm^{-1}	193 921.6132–196 596.0770	9–7	2.1503e−05	3.5054e−04	3.8835e−01	−2.501 02	AAA	6
			37 380.529	2 674.4602 cm^{-1}	193 921.6185–196 596.0787	7–5	2.3999e−05	3.5929e−04	3.0959e−01	−2.599 45	AAA	6
			37 380.470	2 674.4644 cm^{-1}	193 921.6132–196 596.0776	9–9	6.0558e−07	1.2693e−05	1.4062e−02	−3.942 20	AAA	6
			37 380.553	2 674.4585 cm^{-1}	193 921.6185–196 596.0770	7–7	1.1463e−06	2.4026e−05	2.0702e−02	−3.774 22	AAA	6
401	1*s*5*g*-1*s*8*f*	$^3G-^1F^\circ$										
			37 380.431	2 674.4672 cm^{-1}	193 921.6132–196 596.0804	9–7	1.717e−06	2.799e−05	3.101e−02	−3.598 7	AA	6
			37 380.505	2 674.4619 cm^{-1}	193 921.6185–196 596.0804	7–7	3.537e−07	7.413e−06	6.387e−03	−4.284 9	AA	6
402	1*s*5*g*-1*s*8*h*	$^3G-^3H^\circ$	*37 378.24*	*2 674.624* cm^{-1}	*193 921.616–196 596.240*	27–33	2.3250e−03	5.9554e−02	1.9792e+02	0.206 27	AAA	6
			37 378.242	2 674.6238 cm^{-1}	193 921.6160–196 596.2398	11–13	2.3402e−03	5.7961e−02	7.8477e+01	−0.195 47	AAA	6
			37 378.210	2 674.6261 cm^{-1}	193 921.6132–196 596.2393	9–11	2.2915e−03	5.8695e−02	6.5021e+01	−0.277 16	AAA	6
			37 378.272	2 674.6217 cm^{-1}	193 921.6185–196 596.2402	7–9	2.2246e−03	5.9942e−02	5.1646e+01	−0.377 17	AAA	6
			37 378.249	2 674.6233 cm^{-1}	193 921.6160–196 596.2393	11–11	4.8232e−05	1.0108e−03	1.3686e+00	−1.953 94	AAA	6
			37 378.198	2 674.6270 cm^{-1}	193 921.6132–196 596.2402	9–9	5.9389e−05	1.2446e−03	1.3788e+00	−1.950 72	AAA	6
			37 378.237	2 674.6242 cm^{-1}	193 921.6160–196 596.2402	11–9	1.1556e−06	1.9815e−05	2.6828e−02	−3.661 62	AAA	6
403	1*s*5*g*-1*s*8*h*	$^3G-^1H^\circ$										
			37 378.193	2 674.6273 cm^{-1}	193 921.6132–196 596.2405	9–11	9.272e−08	2.375e−06	2.631e−03	−4.670 1	AA	6
			37 378.233	2 674.6245 cm^{-1}	193 921.6160–196 596.2405	11–11	4.538e−05	9.509e−04	1.288e+00	−1.980 5	AA	6
404	1*s*5*g*-1*s*9*f*	$^3G-^3F^\circ$										
			32 947.243	3 034.3277 cm^{-1}	193 921.6160–196 955.9437	11–9	1.3474e−05	1.7951e−04	2.1423e−01	−2.704 53	AAA	6
			32 947.217	3 034.3301 cm^{-1}	193 921.6132–196 955.9433	9–7	1.2627e−05	1.5991e−04	1.5615e−01	−2.841 87	AAA	6
			32 947.263	3 034.3259 cm^{-1}	193 921.6185–196 955.9444	7–5	1.4174e−05	1.6485e−04	1.2520e−01	−2.937 81	AAA	6
			32 947.213	3 034.3305 cm^{-1}	193 921.6132–196 955.9437	9–9	3.5767e−07	5.8239e−06	5.6868e−03	−4.280 54	AAA	6
			32 947.275	3 034.3248 cm^{-1}	193 921.6185–196 955.9433	7–7	6.8452e−07	1.1146e−05	8.4651e−03	−4.107 78	AAA	6
405	1*s*5*g*-1*s*9*f*	$^3G-^1F^\circ$										
			32 947.192	3 034.3324 cm^{-1}	193 921.6132–196 955.9456	9–7	1.087e−06	1.377e−05	1.345e−02	−3.906 8	AA	6
			32 947.250	3 034.3271 cm^{-1}	193 921.6185–196 955.9456	7–7	2.014e−07	3.279e−06	2.490e−03	−4.639 2	AA	6
406	1*s*5*g*-1*s*9*h*	$^3G-^3H^\circ$	*32 945.99*	*3 034.443* cm^{-1}	*193 921.616–196 956.059*	27–33	1.2949e−03	2.5768e−02	7.5481e+01	−0.157 56	AAA	6
			32 945.993	3 034.4429 cm^{-1}	193 921.6160–196 956.0589	11–13	1.3033e−03	2.5078e−02	2.9928e+01	−0.559 31	AAA	6
			32 945.967	3 034.4453 cm^{-1}	193 921.6132–196 956.0585	9–11	1.2762e−03	2.5396e−02	2.4797e+01	−0.640 99	AAA	6
			32 946.018	3 034.4406 cm^{-1}	193 921.6185–196 956.0591	7–9	1.2390e−03	2.5937e−02	1.9697e+01	−0.740 99	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			32 945.997	3 034.4425 cm^{-1}	193 921.6160–196 956.0585	11–11	2.6862e−05	4.3736e−04	5.2195e−01	−2.317 77	AAA	6
			32 945.960	3 034.4459 cm^{-1}	193 921.6132–196 956.0591	9–9	3.3076e−05	5.3853e−04	5.2584e−01	−2.314 55	AAA	6
			32 945.990	3 034.4431 cm^{-1}	193 921.6160–196 956.0591	11–9	6.4363e−07	8.5740e−06	1.0232e−02	−4.025 42	AAA	6
407	1*s*5*g*-1*s*9*h*	$^3G-{}^1H^\circ$										
			32 945.988	3 034.4433 cm^{-1}	193 921.6160–196 956.0593	11–11	2.527e−05	4.115e−04	4.911e−01	−2.344 3	AA	6
408	1*s*5*g*-1*s*10*f*	$^3G-{}^3F^\circ$										
			30 370.836	3 291.7346 cm^{-1}	193 921.6160–197 213.3506	11–9	8.7165e−06	9.8673e−05	1.0855e−01	−2.964 41	AAA	6
			30 370.813	3 291.7371 cm^{-1}	193 921.6132–197 213.3503	9–7	8.1334e−06	8.7525e−05	7.8782e−02	−3.103 62	AAA	6
			30 370.854	3 291.7326 cm^{-1}	193 921.6185–197 213.3511	7–5	9.1693e−06	9.0618e−05	6.3440e−02	−3.197 69	AAA	6
			30 370.810	3 291.7374 cm^{-1}	193 921.6132–197 213.3506	9–9	2.3137e−07	3.2012e−06	2.8814e−03	−4.540 44	AAA	6
			30 370.862	3 291.7318 cm^{-1}	193 921.6185–197 213.3503	7–7	4.4624e−07	6.1741e−06	4.3224e−03	−4.364 33	AAA	6
409	1*s*5*g*-1*s*10*f*	$^3G-{}^1F^\circ$										
			30 370.797	3 291.7388 cm^{-1}	193 921.6132–197 213.3520	9–7	7.381e−07	7.943e−06	7.150e−03	−4.145 8	AA	6
			30 370.846	3 291.7335 cm^{-1}	193 921.6185–197 213.3520	7–7	1.268e−07	1.755e−06	1.229e−03	−4.910 6	AA	6
410	1*s*5*g*-1*s*10*h*	$^3G-{}^3H^\circ$	*30 370.05*	*3 291.820* cm^{-1}	*193 921.616–197 213.435*	27–33	8.0822e−04	1.3667e−02	3.6903e+01	−0.432 97	AAA	6
			30 370.055	3 291.8192 cm^{-1}	193 921.6160–197 213.4352	11–13	8.1349e−04	1.3301e−02	1.4633e+01	−0.834 72	AAA	6
			30 370.031	3 291.8218 cm^{-1}	193 921.6132–197 213.4350	9–11	7.9656e−04	1.3470e−02	1.2124e+01	−0.916 40	AAA	6
			30 370.076	3 291.8169 cm^{-1}	193 921.6185–197 213.4354	7–9	7.7331e−04	1.3756e−02	9.6299e+00	−1.016 42	AAA	6
			30 370.057	3 291.8190 cm^{-1}	193 921.6160–197 213.4350	11–11	1.6766e−05	2.3196e−04	2.5518e−01	−2.593 19	AAA	6
			30 370.028	3 291.8222 cm^{-1}	193 921.6132–197 213.4354	9–9	2.0644e−05	2.8561e−04	2.5708e−01	−2.589 98	AAA	6
			30 370.053	3 291.8194 cm^{-1}	193 921.6160–197 213.4354	11–9	4.0172e−07	4.5473e−06	5.0025e−03	−4.300 85	AAA	6
411	1*s*5*g*-1*s*10*h*	$^3G-{}^1H^\circ$										
			30 370.052	3 291.8195 cm^{-1}	193 921.6160–197 213.4355	11–11	1.577e−05	2.182e−04	2.401e−01	−2.619 7	AA	6
412	1*s*5*g*-1*s*6*f*	$^1G-{}^3F^\circ$										
				1 340.8023 cm^{-1}	193 921.6202–195 262.4225	9–7	4.618e−06	2.995e−04	6.619e−01	−2.569 3	AA	6
				1 340.8039 cm^{-1}	193 921.6202–195 262.4241	9–9	2.670e−06	2.227e−04	4.921e−01	−2.698 1	AA	6
413	1*s*5*g*-1*s*6*f*	$^1G-{}^1F^\circ$		1 340.8098 cm^{-1}	193 921.6202–195 262.4300	9–7	1.0618e−04	6.8868e−03	1.5219e+01	−1.207 74	AAA	6
414	1*s*5*g*-1*s*6*h*	$^1G-{}^3H^\circ$										
				1 341.1731 cm^{-1}	193 921.6202–195 262.7933	9–9	3.870e−04	3.225e−02	7.125e+01	−0.537 2	AA	6
				1 341.1711 cm^{-1}	193 921.6202–195 262.7913	9–11	3.180e−06	3.239e−04	7.156e−01	−2.535 3	AA	6
415	1*s*5*g*-1*s*6*h*	$^1G-{}^1H^\circ$		1 341.1738 cm^{-1}	193 921.6202–195 262.7940	9–11	1.6139e−02	1.6440e+00	3.6320e+03	1.170 16	AAA	6
416	1*s*5*g*-1*s*7*f*	$^1G-{}^3F^\circ$										
			46 508.593	2 149.5542 cm^{-1}	193 921.6202–196 071.1744	9–7	2.324e−06	5.865e−05	8.084e−02	−3.277 5	AA	6
			46 508.571	2 149.5552 cm^{-1}	193 921.6202–196 071.1754	9–9	1.092e−06	3.544e−05	4.885e−02	−3.496 3	AA	6
417	1*s*5*g*-1*s*7*f*	$^1G-{}^1F^\circ$	46 508.487	2 149.5591 cm^{-1}	193 921.6202–196 071.1793	9–7	4.2996e−05	1.0850e−03	1.4956e+00	−2.010 32	AAA	6
418	1*s*5*g*-1*s*7*h*	$^1G-{}^3H^\circ$										
			46 503.409	2 149.7938 cm^{-1}	193 921.6202–196 071.4140	9–9	1.197e−04	3.883e−03	5.351e+00	−1.456 6	AA	6
			46 503.435	2 149.7926 cm^{-1}	193 921.6202–196 071.4128	9–11	9.834e−07	3.899e−05	5.374e−02	−3.454 8	AA	6
419	1*s*5*g*-1*s*7*h*	$^1G-{}^1H^\circ$	46 503.398	2 149.7943 cm^{-1}	193 921.6202–196 071.4145	9–11	4.9921e−03	1.9792e−01	2.7278e+02	0.250 74	AAA	6
420	1*s*5*g*-1*s*8*f*	$^1G-{}^3F^\circ$										
			37 380.576	2 674.4568 cm^{-1}	193 921.6202–196 596.0770	9–7	1.350e−06	2.200e−05	2.437e−02	−3.703 3	AA	6
			37 380.568	2 674.4574 cm^{-1}	193 921.6202–196 596.0776	9–9	5.610e−07	1.176e−05	1.303e−02	−3.975 4	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
421	$1s5g$-$1s8f$	$^1G-^1F^\circ$	37 380.529	2 674.4602 cm^{-1}	193 921.6202–196 596.0804	9–7	2.1927e−05	3.5745e−04	3.9601e−01	−2.492 54	AAA	6
422	$1s5g$-$1s8h$	$^1G-^3H^\circ$										
			37 378.295	2 674.6200 cm^{-1}	193 921.6202–196 596.2402	9–9	5.502e−05	1.153e−03	1.277e+00	−1.983 9	AA	6
			37 378.308	2 674.6191 cm^{-1}	193 921.6202–196 596.2393	9–11	4.520e−07	1.158e−05	1.283e−02	−3.982 1	AA	6
423	$1s5g$-$1s8h$	$^1G-^1H^\circ$	37 378.291	2 674.6203 cm^{-1}	193 921.6202–196 596.2405	9–11	2.2947e−03	5.8777e−02	6.5113e+01	−0.276 55	AAA	6
424	$1s5g$-$1s9f$	$^1G-^3F^\circ$										
			32 947.293	3 034.3231 cm^{-1}	193 921.6202–196 955.9433	9–7	8.630e−07	1.093e−05	1.067e−02	−4.007 2	AA	6
			32 947.289	3 034.3235 cm^{-1}	193 921.6202–196 955.9437	9–9	3.314e−07	5.396e−06	5.269e−03	−4.313 7	AA	6
425	$1s5g$-$1s9f$	$^1G-^1F^\circ$	32 947.268	3 034.3254 cm^{-1}	193 921.6202–196 955.9456	9–7	1.2885e−05	1.6318e−04	1.5934e−01	−2.833 09	AAA	6
426	$1s5g$-$1s9h$	$^1G-^3H^\circ$										
			32 946.036	3 034.4389 cm^{-1}	193 921.6202–196 956.0591	9–9	3.064e−05	4.989e−04	4.872e−01	−2.347 7	AA	6
			32 946.043	3 034.4383 cm^{-1}	193 921.6202–196 956.0585	9–11	2.518e−07	5.010e−06	4.892e−03	−4.345 9	AA	6
427	$1s5g$-$1s9h$	$^1G-^1H^\circ$	32 946.034	3 034.4391 cm^{-1}	193 921.6202–196 956.0593	9–11	1.2780e−03	2.5432e−02	2.4833e+01	−0.640 38	AAA	6
428	$1s5g$-$1s10f$	$^1G-^3F^\circ$										
			30 370.877	3 291.7301 cm^{-1}	193 921.6202–197 213.3503	9–7	5.895e−07	6.344e−06	5.710e−03	−4.243 4	AA	6
			30 370.875	3 291.7304 cm^{-1}	193 921.6202–197 213.3506	9–9	2.144e−07	2.966e−06	2.669e−03	−4.573 6	AA	6
429	$1s5g$-$1s10f$	$^1G-^1F^\circ$	30 370.862	3 291.7318 cm^{-1}	193 921.6202–197 213.3520	9–7	8.3039e−06	8.9360e−05	8.0434e−02	−3.094 61	AAA	6
430	$1s5g$-$1s10h$	$^1G-^3H^\circ$										
			30 370.092	3 291.8152 cm^{-1}	193 921.6202–197 213.4354	9–9	1.913e−05	2.646e−04	2.382e−01	−2.623 1	AA	6
			30 370.096	3 291.8148 cm^{-1}	193 921.6202–197 213.4350	9–11	1.571e−07	2.656e−06	2.391e−03	−4.621 5	AA	6
431	$1s5g$-$1s10h$	$^1G-^1H^\circ$	30 370.091	3 291.8153 cm^{-1}	193 921.6202–197 213.4355	9–11	7.9768e−04	1.3489e−02	1.2141e+01	−0.915 79	AAA	6
432	$1s5p$-$1s6s$	$^1P^\circ-^1S$		1 172.4067 cm^{-1}	193 942.4605–195 114.8672	3–1	5.9321e−03	2.1567e−01	1.8168e+02	−0.189 09	AAA	6
433	$1s5p$-$1s6d$	$^1P^\circ-^3D$										
				1 317.6095 cm^{-1}	193 942.4605–195 260.0700	3–5	4.082e−07	5.875e−05	4.404e−02	−3.753 9	AA	6
434	$1s5p$-$1s6d$	$^1P^\circ-^1D$		1 318.3083 cm^{-1}	193 942.4605–195 260.7688	3–5	4.6603e−03	6.7002e−01	5.0196e+02	0.303 21	AAA	6
435	$1s5p$-$1s7s$	$^1P^\circ-^1S$	49 092.082	2 036.4331 cm^{-1}	193 942.4605–195 978.8936	3–1	3.2421e−03	3.9068e−02	1.8947e+01	−0.931 06	AAA	6
436	$1s5p$-$1s7d$	$^1P^\circ-^3D$										
			46 997.101	2 127.2108 cm^{-1}	193 942.4605–196 069.6713	3–5	2.405e−07	1.328e−05	6.166e−03	−4.399 7	AA	6
437	$1s5p$-$1s7d$	$^1P^\circ-^1D$	46 987.044	2 127.6661 cm^{-1}	193 942.4605–196 070.1266	3–5	2.9544e−03	1.6307e−01	7.5694e+01	−0.310 51	AAA	6
438	$1s5p$-$1s8s$	$^1P^\circ-^1S$	38 568.211	2 592.1020 cm^{-1}	193 942.4605–196 534.5625	3–1	2.0203e−03	1.5026e−02	5.7252e+00	−1.346 03	AAA	6
439	$1s5p$-$1s8d$	$^1P^\circ-^3D$										
			37 688.582	2 652.6001 cm^{-1}	193 942.4605–196 595.0606	3–5	1.518e−07	5.392e−06	2.008e−03	−4.791 1	AA	6
440	$1s5p$-$1s8d$	$^1P^\circ-^1D$	37 684.154	2 652.9118 cm^{-1}	193 942.4605–196 595.3723	3–5	1.9526e−03	6.9322e−02	2.5808e+01	−0.682 01	AAA	6
441	$1s5p$-$1s9s$	$^1P^\circ-^1S$	33 655.861	2 970.4405 cm^{-1}	193 942.4605–196 912.9010	3–1	1.3565e−03	7.6827e−03	2.5544e+00	−1.637 37	AAA	6
442	$1s5p$-$1s9d$	$^1P^\circ-^1D$	33 180.611	3 012.9865 cm^{-1}	193 942.4605–196 955.4470	3–5	1.3542e−03	3.7273e−02	1.2218e+01	−0.951 48	AAA	6
443	$1s5p$-$1s10s$	$^1P^\circ-^1S$	30 859.559	3 239.6034 cm^{-1}	193 942.4605–197 182.0639	3–1	9.5913e−04	4.5670e−03	1.3923e+00	−1.863 25	AAA	6
444	$1s5p$-$1s10d$	$^1P^\circ-^1D$	30 567.771	3 270.5273 cm^{-1}	193 942.4605–197 212.9878	3–5	9.7739e−04	2.2832e−02	6.8947e+00	−1.164 34	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
445	1*s*6*s*-1*s*6*p*	$^3S-^3P^\circ$		*256.628* cm^{-1}	*194 936.1181–195 192.746*	3–9	2.6979e−04	1.8425e+00	7.0907e+03	0.742 52	AAA	6
				256.6231 cm^{-1}	194 936.1181–195 192.7412	3–5	2.6979e−04	1.0236e+00	3.9395e+03	0.487 26	AAA	6
				256.6257 cm^{-1}	194 936.1181–195 192.7438	3–3	2.6979e−04	6.1416e−01	2.3636e+03	0.265 40	AAA	6
				256.6574 cm^{-1}	194 936.1181–195 192.7755	3–1	2.6979e−04	2.0467e−01	7.8758e+02	−0.211 83	AAA	6
446	1*s*6*s*-1*s*7*p*	$^3S-^3P^\circ$		*1 091.198* cm^{-1}	*194 936.1181–196 027.316*	3–9	1.0673e−04	4.0314e−02	3.6488e+01	−0.917 42	AAA	6
				1 091.1952 cm^{-1}	194 936.1181–196 027.3133	3–5	1.0673e−04	2.2397e−02	2.0271e+01	−1.172 69	AAA	6
				1 091.1968 cm^{-1}	194 936.1181–196 027.3149	3–3	1.0673e−04	1.3438e−02	1.2163e+01	−1.394 54	AAA	6
				1 091.2166 cm^{-1}	194 936.1181–196 027.3347	3–1	1.0673e−04	4.4792e−03	4.0540e+00	−1.871 68	AAA	6
447	1*s*6*s*-1*s*8*p*	$^3S-^3P^\circ$		*1 630.594* cm^{-1}	*194 936.1181–196 566.712*	3–9	1.2413e−04	2.0997e−02	1.2718e+01	−1.200 72	AAA	6
				1 630.5920 cm^{-1}	194 936.1181–196 566.7101	3–5	1.2413e−04	1.1665e−02	7.0655e+00	−1.455 99	AAA	6
				1 630.5931 cm^{-1}	194 936.1181–196 566.7112	3–3	1.2413e−04	6.9991e−03	4.2393e+00	−1.677 84	AAA	6
				1 630.6063 cm^{-1}	194 936.1181–196 566.7244	3–1	1.2413e−04	2.3330e−03	1.4131e+00	−2.154 96	AAA	6
448	1*s*6*s*-1*s*9*p*	$^3S-^3P^\circ$		*1 999.213* cm^{-1}	*194 936.1181–196 935.331*	3–9	1.0521e−04	1.1839e−02	5.8486e+00	−1.449 56	AAA	6
				1 999.2116 cm^{-1}	194 936.1181–196 935.3297	3–5	1.0521e−04	6.5773e−03	3.2493e+00	−1.704 83	AAA	6
				1 999.2123 cm^{-1}	194 936.1181–196 935.3304	3–3	1.0521e−04	3.9464e−03	1.9496e+00	−1.926 68	AAA	6
				1 999.2216 cm^{-1}	194 936.1181–196 935.3397	3–1	1.0521e−04	1.3154e−03	6.4984e−01	−2.403 81	AAA	6
449	1*s*6*s*-1*s*10*p*	$^3S-^3P^\circ$	*44 192.43*	*2 262.214* cm^{-1}	*194 936.1181–197 198.332*	3–9	8.4325e−05	7.4108e−03	3.2354e+00	−1.653 01	AAA	6
			44 192.454	2 262.2129 cm^{-1}	194 936.1181–197 198.3310	3–5	8.4323e−05	4.1170e−03	1.7974e+00	−1.908 29	AAA	6
			44 192.444	2 262.2134 cm^{-1}	194 936.1181–197 198.3315	3–3	8.4323e−05	2.4702e−03	1.0784e+00	−2.130 14	AAA	6
			44 192.313	2 262.2201 cm^{-1}	194 936.1181–197 198.3382	3–1	8.4323e−05	8.2340e−04	3.5948e−01	−2.607 27	AAA	6
450	1*s*6*s*-1*s*6*p*	$^1S-^1P^\circ$		160.0395 cm^{-1}	195 114.8672–195 274.9067	1–3	7.4321e−05	1.3051e+00	2.6846e+03	0.115 64	AAA	6
451	1*s*6*s*-1*s*7*p*	$^1S-^1P^\circ$		964.2186 cm^{-1}	195 114.8672–196 079.0858	1–3	3.3283e−04	1.6101e−01	5.4973e+01	−0.793 15	AAA	6
452	1*s*6*s*-1*s*8*p*	$^1S-^1P^\circ$		1 486.5313 cm^{-1}	195 114.8672–196 601.3985	1–3	2.8896e−04	5.8812e−02	1.3025e+01	−1.230 53	AAA	6
453	1*s*6*s*-1*s*9*p*	$^1S-^1P^\circ$		1 844.8239 cm^{-1}	195 114.8672–196 959.6911	1–3	2.2206e−04	2.9345e−02	5.2367e+00	−1.532 46	AAA	6
454	1*s*6*s*-1*s*10*p*	$^1S-^1P^\circ$	47 578.413	2 101.2206 cm^{-1}	195 114.8672–197 216.0878	1–3	1.3169e−04	1.3415e−02	2.1018e+00	−1.872 41	AAA	6
455	1*s*6*p*-1*s*6*d*	$^3P^\circ-^3D$		*67.325* cm^{-1}	*195 192.746–195 260.071*	9–15	6.4181e−06	3.5380e−01	1.5571e+04	0.503 00	AAA	6
				67.3284 cm^{-1}	195 192.7412–195 260.0696	5–7	6.4183e−06	2.9717e−01	7.2653e+03	0.171 98	AAA	6
				67.3262 cm^{-1}	195 192.7438–195 260.0700	3–5	4.8134e−06	2.6533e−01	3.8923e+03	−0.099 09	AAA	6
				67.3000 cm^{-1}	195 192.7755–195 260.0755	1–3	3.5657e−06	3.5407e−01	1.7320e+03	−0.450 91	AAA	6
				67.3288 cm^{-1}	195 192.7412–195 260.0700	5–5	1.6044e−06	5.3060e−02	1.2972e+03	−0.576 26	AAA	6
				67.3317 cm^{-1}	195 192.7438–195 260.0755	3–3	2.6743e−06	8.8436e−02	1.2972e+03	−0.576 25	AAA	6
				67.3343 cm^{-1}	195 192.7412–195 260.0755	5–3	1.7829e−07	3.5372e−03	8.6471e+01	−1.752 37	AAA	6
456	1*s*6*p*-1*s*7*s*	$^3P^\circ-^3S$		*675.489* cm^{-1}	*195 192.746–195 868.2354*	9–3	3.4683e−03	3.7985e−01	1.6661e+03	0.533 85	AAA	6
				675.4942 cm^{-1}	195 192.7412–195 868.2354	5–3	1.9268e−03	3.7984e−01	9.2561e+02	0.278 57	AAA	6
				675.4916 cm^{-1}	195 192.7438–195 868.2354	3–3	1.1561e−03	3.7985e−01	5.5538e+02	0.056 73	AAA	6
				675.4599 cm^{-1}	195 192.7755–195 868.2354	1–3	3.8536e−04	3.7988e−01	1.8515e+02	−0.420 35	AAA	6
457	1*s*6*p*-1*s*7*d*	$^3P^\circ-^3D$		*876.926* cm^{-1}	*195 192.746–196 069.672*	9–15	1.3352e−03	4.3383e−01	1.4658e+03	0.591 56	AAA	6
				876.9299 cm^{-1}	195 192.7412–196 069.6711	5–7	1.3352e−03	3.6442e−01	6.8404e+02	0.260 57	AAA	6
				876.9275 cm^{-1}	195 192.7438–196 069.6713	3–5	1.0013e−03	3.2534e−01	3.6642e+02	−0.010 54	AAA	6
				876.8993 cm^{-1}	195 192.7755–196 069.6748	1–3	7.4180e−04	4.3388e−01	1.6289e+02	−0.362 63	AAA	6
				876.9301 cm^{-1}	195 192.7412–196 069.6713	5–5	3.3378e−04	6.5071e−02	1.2214e+02	−0.487 64	AAA	6
				876.9310 cm^{-1}	195 192.7438–196 069.6748	3–3	5.5635e−04	1.0846e−01	1.2215e+02	−0.487 60	AAA	6
				876.9336 cm^{-1}	195 192.7412–196 069.6748	5–3	3.7090e−05	4.3384e−03	8.1435e+00	−1.663 70	AAA	6
458	1*s*6*p*-1*s*7*d*	$^3P^\circ-^1D$										

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				877.3854 cm^{-1}	195 192.7412–196 070.1266	5–5	2.834e−08	5.519e−06	1.035e−02	−4.559 2	AA	6
				877.3828 cm^{-1}	195 192.7438–196 070.1266	3–5	7.815e−08	2.537e−05	2.855e−02	−4.118 6	AA	6
459	1*s*6*p*-1*s*8*s*	$^3P^\circ-{}^3S$		*1 268.614* cm^{-1}	*195 192.746–196 461.3602*	9–3	1.8924e−03	5.8759e−02	1.3724e+02	−0.276 68	AAA	6
				1 268.6190 cm^{-1}	195 192.7412–196 461.3602	5–3	1.0513e−03	5.8759e−02	7.6241e+01	−0.531 96	AAA	6
				1 268.6164 cm^{-1}	195 192.7438–196 461.3602	3–3	6.3079e−04	5.8760e−02	4.5745e+01	−0.753 80	AAA	6
				1 268.5847 cm^{-1}	195 192.7755–196 461.3602	1–3	2.1026e−04	5.8762e−02	1.5249e+01	−1.230 90	AAA	6
460	1*s*6*p*-1*s*8*d*	$^3P^\circ-{}^3D$		*1 402.315* cm^{-1}	*195 192.746–196 595.061*	9–15	1.0081e−03	1.2809e−01	2.7063e+02	0.061 75	AAA	6
				1 402.3193 cm^{-1}	195 192.7412–196 595.0605	5–7	1.0081e−03	1.0760e−01	1.2630e+02	−0.269 24	AAA	6
				1 402.3168 cm^{-1}	195 192.7438–196 595.0606	3–5	7.5601e−04	9.6060e−02	6.7654e+01	−0.540 34	AAA	6
				1 402.2874 cm^{-1}	195 192.7755–196 595.0629	1–3	5.6005e−04	1.2809e−01	3.0073e+01	−0.892 47	AAA	6
				1 402.3194 cm^{-1}	195 192.7412–196 595.0606	5–5	2.5200e−04	1.9212e−02	2.2551e+01	−1.017 47	AAA	6
				1 402.3191 cm^{-1}	195 192.7438–196 595.0629	3–3	4.2004e−04	3.2022e−02	2.2553e+01	−1.017 43	AAA	6
				1 402.3217 cm^{-1}	195 192.7412–196 595.0629	5–3	2.8002e−05	1.2809e−03	1.5035e+00	−2.193 53	AAA	6
461	1*s*6*p*-1*s*8*d*	$^3P^\circ-{}^1D$										
				1 402.6311 cm^{-1}	195 192.7412–196 595.3723	5–5	2.047e−08	1.560e−06	1.830e−03	−5.108 0	AA	6
				1 402.6285 cm^{-1}	195 192.7438–196 595.3723	3–5	5.685e−08	7.220e−06	5.084e−03	−4.664 3	AA	6
462	1*s*6*p*-1*s*9*s*	$^3P^\circ-{}^3S$		*1 669.240* cm^{-1}	*195 192.746–196 861.9857*	9–3	1.2088e−03	2.1679e−02	3.8481e+01	−0.709 71	AAA	6
				1 669.2445 cm^{-1}	195 192.7412–196 861.9857	5–3	6.7155e−04	2.1679e−02	2.1378e+01	−0.964 98	AAA	6
				1 669.2419 cm^{-1}	195 192.7438–196 861.9857	3–3	4.0293e−04	2.1679e−02	1.2827e+01	−1.186 83	AAA	6
				1 669.2102 cm^{-1}	195 192.7755–196 861.9857	1–3	1.3431e−04	2.1680e−02	4.2759e+00	−1.663 94	AAA	6
463	1*s*6*p*-1*s*9*d*	$^3P^\circ-{}^3D$		*1 762.479* cm^{-1}	*195 192.746–196 955.225*	9–15	7.3352e−04	5.9003e−02	9.9190e+01	−0.274 89	AAA	6
				1 762.4836 cm^{-1}	195 192.7412–196 955.2248	5–7	7.3354e−04	4.9563e−02	4.6289e+01	−0.605 87	AAA	6
				1 762.4811 cm^{-1}	195 192.7438–196 955.2249	3–5	5.5012e−04	4.4250e−02	2.4796e+01	−0.876 96	AAA	6
				1 762.4510 cm^{-1}	195 192.7755–196 955.2265	1–3	4.0752e−04	5.9006e−02	1.1022e+01	−1.229 11	AAA	6
				1 762.4837 cm^{-1}	195 192.7412–196 955.2249	5–5	1.8337e−04	8.8498e−03	8.2652e+00	−1.354 10	AAA	6
				1 762.4827 cm^{-1}	195 192.7438–196 955.2265	3–3	3.0564e−04	1.4751e−02	8.2659e+00	−1.354 06	AAA	6
				1 762.4853 cm^{-1}	195 192.7412–196 955.2265	5–3	2.0376e−05	5.9003e−04	5.5106e−01	−2.530 15	AAA	6
464	1*s*6*p*-1*s*9*d*	$^3P^\circ-{}^1D$										
				1 762.7032 cm^{-1}	195 192.7438–196 955.4470	3–5	4.024e−08	3.236e−06	1.813e−03	−5.012 9	AA	6
465	1*s*6*p*-1*s*10*s*	$^3P^\circ-{}^3S$		*1 952.486* cm^{-1}	*195 192.746–197 145.2316*	9–3	8.3144e−04	1.0899e−02	1.6540e+01	−1.008 37	AAA	6
				1 952.4904 cm^{-1}	195 192.7412–197 145.2316	5–3	4.6191e−04	1.0899e−02	9.1885e+00	−1.263 64	AAA	6
				1 952.4878 cm^{-1}	195 192.7438–197 145.2316	3–3	2.7715e−04	1.0899e−02	5.5132e+00	−1.485 48	AAA	6
				1 952.4561 cm^{-1}	195 192.7755–197 145.2316	1–3	9.2383e−05	1.0900e−02	1.8378e+00	−1.962 59	AAA	6
466	1*s*6*p*-1*s*10*d*	$^3P^\circ-{}^3D$	*49 489.53*	*2 020.079* cm^{-1}	*195 192.746–197 212.824*	9–15	5.4295e−04	3.3245e−02	4.8761e+01	−0.524 03	AAA	6
			49 489.425	2 020.0829 cm^{-1}	195 192.7412–197 212.8241	5–7	5.4296e−04	2.7926e−02	2.2756e+01	−0.855 02	AAA	6
			49 489.486	2 020.0804 cm^{-1}	195 192.7438–197 212.8242	3–5	4.0719e−04	2.4932e−02	1.2190e+01	−1.126 11	AAA	6
			49 490.234	2 020.0499 cm^{-1}	195 192.7755–197 212.8254	1–3	3.0164e−04	3.3246e−02	5.4182e+00	−1.478 26	AAA	6
			49 489.423	2 020.0830 cm^{-1}	195 192.7412–197 212.8242	5–5	1.3573e−04	4.9865e−03	4.0632e+00	−1.603 24	AAA	6
			49 489.457	2 020.0816 cm^{-1}	195 192.7438–197 212.8254	3–3	2.2623e−04	8.3113e−03	4.0635e+00	−1.603 21	AAA	6
			49 489.393	2 020.0842 cm^{-1}	195 192.7412–197 212.8254	5–3	1.5082e−05	3.3245e−04	2.7090e−01	−2.779 30	AAA	6
467	1*s*6*d*-1*s*6*p*	$^3D-{}^1P^\circ$										
				14.8367 cm^{-1}	195 260.0700–195 274.9067	5–3	9.800e−12	4.004e−06	4.443e−01	−4.698 5	AA	6
				14.8312 cm^{-1}	195 260.0755–195 274.9067	3–3	1.723e−15	1.174e−09	7.818e−05	−8.453 2	AA	6
468	1*s*6*d*-1*s*7*p*	$^3D-{}^3P^\circ$		*767.245* cm^{-1}	*195 260.071–196 027.316*	15–9	8.2460e−04	1.2600e−01	8.1099e+02	0.276 47	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				767.2437 cm^{-1}	195 260.0696–196 027.3133	7–5	6.9268e−04	1.2601e−01	3.7847e+02	−0.054 51	AAA	6
				767.2449 cm^{-1}	195 260.0700–196 027.3149	5–3	6.1841e−04	9.4497e−02	2.0273e+02	−0.325 61	AAA	6
				767.2592 cm^{-1}	195 260.0755–196 027.3347	3–1	8.2462e−04	7.0001e−02	9.0107e+01	−0.677 77	AAA	6
				767.2433 cm^{-1}	195 260.0700–196 027.3133	5–5	1.2368e−04	3.1499e−02	6.7578e+01	−0.802 74	AAA	6
				767.2394 cm^{-1}	195 260.0755–196 027.3149	3–3	2.0616e−04	5.2505e−02	6.7587e+01	−0.802 68	AAA	6
				767.2378 cm^{-1}	195 260.0755–196 027.3133	3–5	8.2462e−06	3.5003e−03	4.5057e+00	−1.978 78	AAA	6
469	1*s*6*d*-1*s*7*f*	^3D–$^3F^\circ$		*811.105* cm^{-1}	*195 260.071–196 071.175*	15–21	2.3774e−03	7.5846e−01	4.6177e+03	1.056 02	AAA	6
				811.1058 cm^{-1}	195 260.0696–196 071.1754	7–9	2.5848e−03	7.5731e−01	2.1516e+03	0.724 37	AAA	6
				811.1044 cm^{-1}	195 260.0700–196 071.1744	5–7	1.7468e−03	5.5728e−01	1.1310e+03	0.445 04	AAA	6
				811.1015 cm^{-1}	195 260.0755–196 071.1770	3–5	2.1712e−03	8.2462e−01	1.0041e+03	0.393 38	AAA	6
				811.1048 cm^{-1}	195 260.0696–196 071.1744	7–7	2.1585e−04	4.9188e−02	1.3975e+02	−0.463 05	AAA	6
				811.1070 cm^{-1}	195 260.0700–196 071.1770	5–5	4.0204e−04	9.1616e−02	1.8592e+02	−0.339 06	AAA	6
				811.1074 cm^{-1}	195 260.0696–196 071.1770	7–5	1.1488e−05	1.8699e−03	5.3127e+00	−1.883 09	AAA	6
470	1*s*6*d*-1*s*7*f*	^3D–$^1F^\circ$										
				811.1097 cm^{-1}	195 260.0696–196 071.1793	7–7	7.135e−05	1.626e−02	4.619e+01	−0.943 8	AA	6
				811.1093 cm^{-1}	195 260.0700–196 071.1793	5–7	5.508e−04	1.757e−01	3.566e+02	−0.056 2	AA	6
471	1*s*6*d*-1*s*7*p*	^3D–$^1P^\circ$										
				819.0158 cm^{-1}	195 260.0700–196 079.0858	5–3	3.830e−08	5.136e−06	1.032e−02	−4.590 4	AA	6
472	1*s*6*d*-1*s*8*p*	^3D–$^3P^\circ$		*1 306.641* cm^{-1}	*195 260.071–196 566.712*	15–9	4.7665e−04	2.5113e−02	9.4909e+01	−0.424 01	AAA	6
				1 306.6405 cm^{-1}	195 260.0696–196 566.7101	7–5	4.0040e−04	2.5114e−02	4.4292e+01	−0.754 99	AAA	6
				1 306.6412 cm^{-1}	195 260.0700–196 566.7112	5–3	3.5747e−04	1.8834e−02	2.3726e+01	−1.026 10	AAA	6
				1 306.6489 cm^{-1}	195 260.0755–196 566.7244	3–1	4.7666e−04	1.3952e−02	1.0545e+01	−1.378 25	AAA	6
				1 306.6401 cm^{-1}	195 260.0700–196 566.7101	5–5	7.1493e−05	6.2778e−03	7.9086e+00	−1.503 22	AAA	6
				1 306.6357 cm^{-1}	195 260.0755–196 566.7112	3–3	1.1917e−04	1.0464e−02	7.9097e+00	−1.503 16	AAA	6
				1 306.6346 cm^{-1}	195 260.0755–196 566.7101	3–5	4.7666e−06	6.9760e−04	5.2729e−01	−2.679 27	AAA	6
473	1*s*6*d*-1*s*8*f*	^3D–$^3F^\circ$		*1 336.007* cm^{-1}	*195 260.071–196 596.078*	15–21	1.5942e−03	1.8746e−01	6.9291e+02	0.449 01	AAA	6
				1 336.0080 cm^{-1}	195 260.0696–196 596.0776	7–9	1.7255e−03	1.8634e−01	3.2141e+02	0.115 40	AAA	6
				1 336.0070 cm^{-1}	195 260.0700–196 596.0770	5–7	1.1852e−03	1.3937e−01	1.7171e+02	−0.156 87	AAA	6
				1 336.0032 cm^{-1}	195 260.0755–196 596.0787	3–5	1.4494e−03	2.0290e−01	1.4999e+02	−0.215 60	AAA	6
				1 336.0074 cm^{-1}	195 260.0696–196 596.0770	7–7	1.4651e−04	1.2306e−02	2.1226e+01	−1.064 80	AAA	6
				1 336.0087 cm^{-1}	195 260.0700–196 596.0787	5–5	2.6838e−04	2.2542e−02	2.7773e+01	−0.948 04	AAA	6
				1 336.0091 cm^{-1}	195 260.0696–196 596.0787	7–5	7.6687e−06	4.6008e−04	7.9359e−01	−2.492 07	AAA	6
474	1*s*6*d*-1*s*8*f*	^3D–$^1F^\circ$										
				1 336.0108 cm^{-1}	195 260.0696–196 596.0804	7–7	4.520e−05	3.797e−03	6.549e+00	−1.575 5	AA	6
				1 336.0104 cm^{-1}	195 260.0700–196 596.0804	5–7	3.486e−04	4.099e−02	5.050e+01	−0.688 4	AA	6
475	1*s*6*d*-1*s*8*p*	^3D–$^1P^\circ$										
				1 341.3285 cm^{-1}	195 260.0700–196 601.3985	5–3	2.306e−08	1.153e−06	1.415e−03	−5.239 2	AA	6
476	1*s*6*d*-1*s*9*p*	^3D–$^3P^\circ$		*1 675.260* cm^{-1}	*195 260.071–196 935.331*	15–9	3.0467e−04	9.7650e−03	2.8784e+01	−0.834 24	AAA	6
				1 675.2601 cm^{-1}	195 260.0696–196 935.3297	7–5	2.5593e−04	9.7653e−03	1.3433e+01	−1.165 22	AAA	6
				1 675.2604 cm^{-1}	195 260.0700–196 935.3304	5–3	2.2849e−04	7.3234e−03	7.1957e+00	−1.436 32	AAA	6
				1 675.2642 cm^{-1}	195 260.0755–196 935.3397	3–1	3.0467e−04	5.4250e−03	3.1983e+00	−1.788 48	AAA	6
				1 675.2597 cm^{-1}	195 260.0700–196 935.3297	5–5	4.5697e−05	2.4411e−03	2.3985e+00	−1.913 45	AAA	6
				1 675.2549 cm^{-1}	195 260.0755–196 935.3304	3–3	7.6169e−05	4.0689e−03	2.3988e+00	−1.913 41	AAA	6
				1 675.2542 cm^{-1}	195 260.0755–196 935.3297	3–5	3.0467e−06	2.7125e−04	1.5992e−01	−3.089 51	AAA	6
477	1*s*6*d*-1*s*9*f*	^3D–$^3F^\circ$		*1 695.873* cm^{-1}	*195 260.071–196 955.944*	15–21	1.0928e−03	7.9753e−02	2.3223e+02	0.077 84	AAA	6
				1 695.8741 cm^{-1}	195 260.0696–196 955.9437	7–9	1.1792e−03	7.9032e−02	1.0739e+02	−0.257 10	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				1 695.8733 cm^{-1}	195 260.0700–196 955.9433	5–7	8.1879e−04	5.9754e−02	5.7999e+01	−0.524 66	AAA	6
				1 695.8689 cm^{-1}	195 260.0755–196 955.9444	3–5	9.9057e−04	8.6061e−02	5.0120e+01	−0.588 07	AAA	6
				1 695.8737 cm^{-1}	195 260.0696–196 955.9433	7–7	1.0124e−04	5.2774e−03	7.1714e+00	−1.432 48	AAA	6
				1 695.8744 cm^{-1}	195 260.0700–196 955.9444	5–5	1.8342e−04	9.5613e−03	9.2804e+00	−1.320 51	AAA	6
				1 695.8748 cm^{-1}	195 260.0696–196 955.9444	7–5	5.2411e−06	1.9515e−04	2.6518e−01	−2.864 54	AAA	6
478	1*s*6*d*-1*s*9*f*	$^3D-{}^1F^\circ$										
				1 695.8760 cm^{-1}	195 260.0696–196 955.9456	7–7	2.978e−05	1.553e−03	2.110e+00	−1.963 9	AA	6
				1 695.8756 cm^{-1}	195 260.0700–196 955.9456	5–7	2.294e−04	1.674e−02	1.625e+01	−1.077 2	AA	6
479	1*s*6*d*-1*s*10*p*	$^3D-{}^3P^\circ$		*1 938.261* cm^{-1}	*195 260.071–197 198.332*	15–9	2.0848e−04	4.9916e−03	1.2717e+01	−1.125 67	AAA	6
				1 938.2614 cm^{-1}	195 260.0696–197 198.3310	7–5	1.7512e−04	4.9916e−03	5.9347e+00	−1.456 66	AAA	6
				1 938.2615 cm^{-1}	195 260.0700–197 198.3315	5–3	1.5634e−04	3.7433e−03	3.1790e+00	−1.727 78	AAA	6
				1 938.2627 cm^{-1}	195 260.0755–197 198.3382	3–1	2.0848e−04	2.7732e−03	1.4131e+00	−2.079 90	AAA	6
				1 938.2610 cm^{-1}	195 260.0700–197 198.3310	5–5	3.1269e−05	1.2478e−03	1.0597e+00	−2.204 88	AAA	6
				1 938.2560 cm^{-1}	195 260.0755–197 198.3315	3–3	5.2119e−05	2.0798e−03	1.0598e+00	−2.204 85	AAA	6
				1 938.2555 cm^{-1}	195 260.0755–197 198.3310	3–5	2.0848e−06	1.3866e−04	7.0654e−02	−3.380 93	AAA	6
480	1*s*6*d*-1*s*10*f*	$^3D-{}^3F^\circ$		*1 953.280* cm^{-1}	*195 260.071–197 213.351*	15–21	7.7923e−04	4.2867e−02	1.0837e+02	−0.191 79	AAA	6
				1 953.2810 cm^{-1}	195 260.0696–197 213.3506	7–9	8.3906e−04	4.2390e−02	5.0012e+01	−0.527 64	AAA	6
				1 953.2803 cm^{-1}	195 260.0700–197 213.3503	5–7	5.8698e−04	3.2291e−02	2.7212e+01	−0.791 95	AAA	6
				1 953.2756 cm^{-1}	195 260.0755–197 213.3511	3–5	7.0481e−04	4.6158e−02	2.3339e+01	−0.858 63	AAA	6
				1 953.2807 cm^{-1}	195 260.0696–197 213.3503	7–7	7.2594e−05	2.8525e−03	3.3654e+00	−1.699 67	AAA	6
				1 953.2811 cm^{-1}	195 260.0700–197 213.3511	5–5	1.3051e−04	5.1283e−03	4.3217e+00	−1.591 06	AAA	6
				1 953.2815 cm^{-1}	195 260.0696–197 213.3511	7–5	3.7291e−06	1.0467e−04	1.2348e−01	−3.135 10	AAA	6
481	1*s*6*d*-1*s*10*f*	$^3D-{}^1F^\circ$										
				1 953.2824 cm^{-1}	195 260.0696–197 213.3520	7–7	2.064e−05	8.108e−04	9.566e−01	−2.246 0	AA	6
				1 953.2820 cm^{-1}	195 260.0700–197 213.3520	5–7	1.589e−04	8.739e−03	7.365e+00	−1.359 6	AA	6
482	1*s*6*d*-1*s*6*p*	$^1D-{}^1P^\circ$		14.1379 cm^{-1}	195 260.7688–195 274.9067	5–3	9.7658e−08	4.3949e−02	5.1169e+03	−0.658 08	AAA	6
483	1*s*6*d*-1*s*7*p*	$^1D-{}^3P^\circ$										
				766.5445 cm^{-1}	195 260.7688–196 027.3133	5–5	1.120e−08	2.858e−06	6.137e−03	−4.845 0	AA	6
				766.5461 cm^{-1}	195 260.7688–196 027.3149	5–3	5.379e−08	8.235e−06	1.768e−02	−4.385 4	AA	6
484	1*s*6*d*-1*s*7*f*	$^1D-{}^3F^\circ$										
				810.4082 cm^{-1}	195 260.7688–196 071.1770	5–5	3.641e−08	8.312e−06	1.688e−02	−4.381 3	AA	6
				810.4056 cm^{-1}	195 260.7688–196 071.1744	5–7	6.230e−04	1.991e−01	4.044e+02	−0.001 9	AA	6
485	1*s*6*d*-1*s*7*f*	$^1D-{}^1F^\circ$		810.4105 cm^{-1}	195 260.7688–196 071.1793	5–7	1.9652e−03	6.2803e−01	1.2756e+03	0.496 95	AAA	6
486	1*s*6*d*-1*s*7*p*	$^1D-{}^1P^\circ$		818.3170 cm^{-1}	195 260.7688–196 079.0858	5–3	4.5011e−04	6.0462e−02	1.2162e+02	−0.519 55	AAA	6
487	1*s*6*d*-1*s*8*p*	$^1D-{}^3P^\circ$										
				1 305.9424 cm^{-1}	195 260.7688–196 566.7112	5–3	3.103e−08	1.637e−06	2.063e−03	−5.087 1	AA	6
488	1*s*6*d*-1*s*8*f*	$^1D-{}^3F^\circ$										
				1 335.3099 cm^{-1}	195 260.7688–196 596.0787	5–5	2.433e−08	2.046e−06	2.522e−03	−4.990 1	AA	6
				1 335.3082 cm^{-1}	195 260.7688–196 596.0770	5–7	3.939e−04	4.636e−02	5.715e+01	−0.634 8	AA	6
489	1*s*6*d*-1*s*8*f*	$^1D-{}^1F^\circ$		1 335.3116 cm^{-1}	195 260.7688–196 596.0804	5–7	1.3321e−03	1.5680e−01	1.9329e+02	−0.105 67	AAA	6
490	1*s*6*d*-1*s*8*p*	$^1D-{}^1P^\circ$		1 340.6297 cm^{-1}	195 260.7688–196 601.3985	5–3	2.6987e−04	1.3507e−02	1.6584e+01	−1.170 49	AAA	6
491	1*s*6*d*-1*s*9*p*	$^1D-{}^3P^\circ$										
				1 674.5616 cm^{-1}	195 260.7688–196 935.3304	5–3	1.983e−08	6.359e−07	6.251e−04	−5.497 6	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
492	1*s*6*d*-1*s*9*f*	$^1D-^3F^\circ$										
				1 695.1745 cm^{-1}	195 260.7688–196 955.9433	5–7	2.592e−04	1.893e−02	1.838e+01	−1.023 9	AA	6
493	1*s*6*d*-1*s*9*f*	$^1D-^1F^\circ$		1 695.1768 cm^{-1}	195 260.7688–196 955.9456	5–7	9.1988e−04	6.7187e−02	6.5240e+01	−0.473 74	AAA	6
494	1*s*6*d*-1*s*9*p*	$^1D-^1P^\circ$		1 698.9223 cm^{-1}	195 260.7688–196 959.6911	5–3	1.7374e−04	5.4145e−03	5.2461e+00	−1.567 47	AAA	6
495	1*s*6*d*-1*s*10*f*	$^1D-^3F^\circ$										
				1 952.5815 cm^{-1}	195 260.7688–197 213.3503	5–7	1.794e−04	9.877e−03	8.326e+00	−1.306 4	AA	6
496	1*s*6*d*-1*s*10*f*	$^1D-^1F^\circ$		1 952.5832 cm^{-1}	195 260.7688–197 213.3520	5–7	6.5928e−04	3.6294e−02	3.0597e+01	−0.741 19	AAA	6
497	1*s*6*d*-1*s*10*p*	$^1D-^1P^\circ$		1 955.3190 cm^{-1}	195 260.7688–197 216.0878	5–3	1.1910e−04	2.8021e−03	2.3589e+00	−1.853 55	AAA	6
498	1*s*6*f*-1*s*7*d*	$^3F^\circ-^3D$		*807.248* cm^{-1}	*195 262.424–196 069.672*	21–15	2.3615e−04	3.8807e−02	3.3235e+02	−0.088 87	AAA	6
				807.2470 cm^{-1}	195 262.4241–196 069.6711	9–7	2.3752e−04	4.2501e−02	1.5600e+02	−0.417 36	AAA	6
				807.2488 cm^{-1}	195 262.4225–196 069.6713	7–5	1.7017e−04	2.7964e−02	7.9830e+01	−0.708 31	AAA	6
				807.2482 cm^{-1}	195 262.4266–196 069.6748	5–3	2.5864e−04	3.5702e−02	7.2800e+01	−0.748 34	AAA	6
				807.2486 cm^{-1}	195 262.4225–196 069.6711	7–7	1.5017e−05	3.4548e−03	9.8626e+00	−1.616 48	AAA	6
				807.2447 cm^{-1}	195 262.4266–196 069.6713	5–5	2.8735e−05	6.6109e−03	1.3480e+01	−1.480 77	AAA	6
				807.2445 cm^{-1}	195 262.4266–196 069.6711	5–7	5.8648e−07	1.8890e−04	3.8518e−01	−3.024 80	AAA	6
499	1*s*6*f*-1*s*7*d*	$^3F^\circ-^1D$										
				807.7041 cm^{-1}	195 262.4225–196 070.1266	7–5	6.695e−05	1.099e−02	3.136e+01	−1.113 9	AA	6
500	1*s*6*f*-1*s*7*g*	$^3F^\circ-^3G$		*808.944* cm^{-1}	*195 262.424–196 071.368*	21–27	3.6771e−03	1.0831e+00	9.2564e+03	1.356 89	AAA	6
				808.9439 cm^{-1}	195 262.4241–196 071.3680	9–11	3.7651e−03	1.0543e+00	3.8614e+03	0.977 19	AAA	6
				808.9445 cm^{-1}	195 262.4225–196 071.3670	7–9	3.4418e−03	1.0138e+00	2.8881e+03	0.851 05	AAA	6
				808.9423 cm^{-1}	195 262.4266–196 071.3689	5–7	3.4578e−03	1.1090e+00	2.2567e+03	0.743 92	AAA	6
				808.9429 cm^{-1}	195 262.4241–196 071.3670	9–9	1.2231e−04	2.8021e−02	1.0263e+02	−0.598 27	AAA	6
				808.9464 cm^{-1}	195 262.4225–196 071.3689	7–7	2.2135e−04	5.0710e−02	1.4446e+02	−0.449 81	AAA	6
				808.9448 cm^{-1}	195 262.4241–196 071.3689	9–7	4.8025e−06	8.5574e−04	3.1343e+00	−2.113 42	AAA	6
501	1*s*6*f*-1*s*7*g*	$^3F^\circ-^1G$										
				808.9470 cm^{-1}	195 262.4225–196 071.3695	7–9	1.512e−04	4.454e−02	1.269e+02	−0.506 1	AA	6
				808.9454 cm^{-1}	195 262.4241–196 071.3695	9–9	1.130e−04	2.589e−02	9.483e+01	−0.632 6	AA	6
502	1*s*6*f*-1*s*8*d*	$^3F^\circ-^3D$		*1 332.637* cm^{-1}	*195 262.424–196 595.061*	21–15	1.2739e−04	7.6817e−03	3.9851e+01	−0.792 33	AAA	6
				1 332.6364 cm^{-1}	195 262.4241–196 595.0605	9–7	1.2814e−04	8.4134e−03	1.8706e+01	−1.120 78	AAA	6
				1 332.6381 cm^{-1}	195 262.4225–196 595.0606	7–5	9.1781e−05	5.5342e−03	9.5702e+00	−1.411 84	AAA	6
				1 332.6363 cm^{-1}	195 262.4266–196 595.0629	5–3	1.3953e−04	7.0673e−03	8.7294e+00	−1.451 78	AAA	6
				1 332.6380 cm^{-1}	195 262.4225–196 595.0605	7–7	8.1017e−06	6.8392e−04	1.1827e+00	−2.319 89	AAA	6
				1 332.6340 cm^{-1}	195 262.4266–196 595.0606	5–5	1.5502e−05	1.3086e−03	1.6164e+00	−2.184 21	AAA	6
				1 332.6339 cm^{-1}	195 262.4266–196 595.0605	5–7	3.1640e−07	3.7394e−05	4.6189e−02	−3.728 23	AAA	6
503	1*s*6*f*-1*s*8*d*	$^3F^\circ-^1D$										
				1 332.9498 cm^{-1}	195 262.4225–196 595.3723	7–5	3.614e−05	2.178e−03	3.766e+00	−1.816 8	AA	6
504	1*s*6*f*-1*s*8*g*	$^3F^\circ-^3G$		*1 333.784* cm^{-1}	*195 262.424–196 596.209*	21–27	2.2114e−03	2.3960e−01	1.2420e+03	0.701 71	AAA	6
				1 333.7845 cm^{-1}	195 262.4241–196 596.2086	9–11	2.2643e−03	2.3322e−01	5.1809e+02	0.322 01	AAA	6
				1 333.7854 cm^{-1}	195 262.4225–196 596.2079	7–9	2.0700e−03	2.2428e−01	3.8751e+02	0.195 90	AAA	6
				1 333.7826 cm^{-1}	195 262.4266–196 596.2092	5–7	2.0794e−03	2.4533e−01	3.0277e+02	0.088 72	AAA	6
				1 333.7838 cm^{-1}	195 262.4241–196 596.2079	9–9	7.3585e−05	6.2012e−03	1.3776e+01	−1.253 28	AAA	6
				1 333.7867 cm^{-1}	195 262.4225–196 596.2092	7–7	1.3311e−04	1.1217e−02	1.9381e+01	−1.105 01	AAA	6
				1 333.7851 cm^{-1}	195 262.4241–196 596.2092	9–7	2.8881e−06	1.8930e−04	4.2052e−01	−2.768 60	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
505	1*s*6*f*-1*s*8*g*	$^3F^\circ$–^1G										
				1 333.7871 cm^{-1}	195 262.4225–196 596.2096	7–9	9.076e−05	9.834e−03	1.699e+01	−1.162 2	AA	6
				1 333.7855 cm^{-1}	195 262.4241–196 596.2096	9–9	6.793e−05	5.725e−03	1.272e+01	−1.288 0	AA	6
506	1*s*6*f*-1*s*9*d*	$^3F^\circ$–^3D		*1 692.801* cm^{-1}	*195 262.424–196 955.225*	21–15	7.7178e−05	2.8841e−03	1.1779e+01	−1.217 77	AAA	6
				1 692.8007 cm^{-1}	195 262.4241–196 955.2248	9–7	7.7633e−05	3.1590e−03	5.5292e+00	−1.546 21	AAA	6
				1 692.8024 cm^{-1}	195 262.4225–196 955.2249	7–5	5.5595e−05	2.0776e−03	2.8283e+00	−1.837 35	AAA	6
				1 692.7999 cm^{-1}	195 262.4266–196 955.2265	5–3	8.4534e−05	2.6536e−03	2.5803e+00	−1.877 20	AAA	6
				1 692.8023 cm^{-1}	195 262.4225–196 955.2248	7–7	4.9083e−06	2.5679e−04	3.4958e−01	−2.745 33	AAA	6
				1 692.7983 cm^{-1}	195 262.4266–196 955.2249	5–5	9.3919e−06	4.9136e−04	4.7779e−01	−2.609 63	AAA	6
				1 692.7982 cm^{-1}	195 262.4266–196 955.2248	5–7	1.9169e−07	1.4040e−05	1.3653e−02	−4.153 66	AAA	6
507	1*s*6*f*-1*s*9*d*	$^3F^\circ$–^1D										
				1 693.0245 cm^{-1}	195 262.4225–196 955.4470	7–5	2.190e−05	8.182e−04	1.114e+00	−2.242 0	AA	6
508	1*s*6*f*-1*s*9*g*	$^3F^\circ$–^3G		*1 693.612* cm^{-1}	*195 262.424–196 956.037*	21–27	1.4152e−03	9.5100e−02	3.8820e+02	0.300 40	AAA	6
				1 693.6125 cm^{-1}	195 262.4241–196 956.0366	9–11	1.4490e−03	9.2565e−02	1.6194e+02	−0.079 31	AAA	6
				1 693.6136 cm^{-1}	195 262.4225–196 956.0361	7–9	1.3247e−03	8.9020e−02	1.2113e+02	−0.205 41	AAA	6
				1 693.6104 cm^{-1}	195 262.4266–196 956.0370	5–7	1.3307e−03	9.7373e−02	9.4639e+01	−0.312 59	AAA	6
				1 693.6120 cm^{-1}	195 262.4241–196 956.0361	9–9	4.7104e−05	2.4620e−03	4.3072e+00	−1.654 47	AAA	6
				1 693.6145 cm^{-1}	195 262.4225–196 956.0370	7–7	8.5184e−05	4.4523e−03	6.0582e+00	−1.506 32	AAA	6
				1 693.6129 cm^{-1}	195 262.4241–196 956.0370	9–7	1.8482e−06	7.5133e−05	1.3144e−01	−3.169 92	AAA	6
509	1*s*6*f*-1*s*9*g*	$^3F^\circ$–^1G										
				1 693.6148 cm^{-1}	195 262.4225–196 956.0373	7–9	5.799e−05	3.897e−03	5.303e+00	−1.564 2	AA	6
				1 693.6132 cm^{-1}	195 262.4241–196 956.0373	9–9	4.346e−05	2.271e−03	3.974e+00	−1.689 5	AA	6
510	1*s*6*f*-1*s*10*d*	$^3F^\circ$–^3D		*1 950.400* cm^{-1}	*195 262.424–197 212.824*	21–15	5.0840e−05	1.4312e−03	5.0729e+00	−1.522 10	AAA	6
				1 950.4000 cm^{-1}	195 262.4241–197 212.8241	9–7	5.1141e−05	1.5676e−03	2.3814e+00	−1.850 52	AAA	6
				1 950.4017 cm^{-1}	195 262.4225–197 212.8242	7–5	3.6620e−05	1.0309e−03	1.2180e+00	−2.141 70	AAA	6
				1 950.3988 cm^{-1}	195 262.4266–197 212.8254	5–3	5.5687e−05	1.3168e−03	1.1113e+00	−2.181 52	AAA	6
				1 950.4016 cm^{-1}	195 262.4225–197 212.8241	7–7	3.2334e−06	1.2743e−04	1.5056e−01	−3.049 63	AAA	6
				1 950.3976 cm^{-1}	195 262.4266–197 212.8242	5–5	6.1870e−06	2.4383e−04	2.0578e−01	−2.913 94	AAA	6
				1 950.3975 cm^{-1}	195 262.4266–197 212.8241	5–7	1.2627e−07	6.9669e−06	5.8798e−03	−4.457 99	AAA	6
511	1*s*6*f*-1*s*10*d*	$^3F^\circ$–^1D										
				1 950.5653 cm^{-1}	195 262.4225–197 212.9878	7–5	1.443e−05	4.062e−04	4.799e−01	−2.546 2	AA	6
512	1*s*6*f*-1*s*10*g*	$^3F^\circ$–^3G		*1 950.995* cm^{-1}	*195 262.424–197 213.419*	21–27	9.6303e−04	4.8767e−02	1.7281e+02	0.010 35	AAA	6
				1 950.9947 cm^{-1}	195 262.4241–197 213.4188	9–11	9.8602e−04	4.7466e−02	7.2085e+01	−0.369 38	AAA	6
				1 950.9959 cm^{-1}	195 262.4225–197 213.4184	7–9	9.0152e−04	4.5652e−02	5.3924e+01	−0.495 44	AAA	6
				1 950.9925 cm^{-1}	195 262.4266–197 213.4191	5–7	9.0553e−04	4.9932e−02	4.2128e+01	−0.602 65	AAA	6
				1 950.9943 cm^{-1}	195 262.4241–197 213.4184	9–9	3.2062e−05	1.2628e−03	1.9178e+00	−1.944 42	AAA	6
				1 950.9966 cm^{-1}	195 262.4225–197 213.4191	7–7	5.7967e−05	2.2831e−03	2.6968e+00	−1.796 38	AAA	6
				1 950.9950 cm^{-1}	195 262.4241–197 213.4191	9–7	1.2577e−06	3.8528e−05	5.8511e−02	−3.459 98	AAA	6
513	1*s*6*f*-1*s*10*g*	$^3F^\circ$–^1G										
				1 950.9968 cm^{-1}	195 262.4225–197 213.4193	7–9	3.942e−05	1.996e−03	2.358e+00	−1.854 7	AA	6
				1 950.9952 cm^{-1}	195 262.4241–197 213.4193	9–9	2.957e−05	1.164e−03	1.768e+00	−1.979 6	AA	6
514	1*s*6*f*-1*s*7*d*	$^1F^\circ$–^3D										
				807.2411 cm^{-1}	195 262.4300–196 069.6711	7–7	5.509e−06	1.267e−03	3.618e+00	−2.052 0	AA	6
				807.2413 cm^{-1}	195 262.4300–196 069.6713	7–5	5.973e−05	9.816e−03	2.802e+01	−1.163 0	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
515	1*s*6*f*-1*s*7*d*	$^1F^\circ$–^1D		807.6966 cm^{-1}	195 262.4300–196 070.1266	7–5	1.8985e−04	3.1163e−02	8.8914e+01	−0.661 26	AAA	6
516	1*s*6*f*-1*s*7*g*	$^1F^\circ$–^3G										
				808.9389 cm^{-1}	195 262.4300–196 071.3689	7–7	8.121e−05	1.860e−02	5.300e+01	−0.885 3	AA	6
				808.9370 cm^{-1}	195 262.4300–196 071.3670	7–9	2.011e−04	5.923e−02	1.687e+02	−0.382 4	AA	6
517	1*s*6*f*-1*s*7*g*	$^1F^\circ$–^1G		808.9395 cm^{-1}	195 262.4300–196 071.3695	7–9	3.5009e−03	1.0312e+00	2.9377e+03	0.858 45	AAA	6
518	1*s*6*f*-1*s*8*d*	$^1F^\circ$–^3D										
				1 332.6305 cm^{-1}	195 262.4300–196 595.0605	7–7	2.972e−06	2.509e−04	4.339e−01	−2.755 4	AA	6
				1 332.6306 cm^{-1}	195 262.4300–196 595.0606	7–5	3.225e−05	1.945e−03	3.363e+00	−1.866 1	AA	6
519	1*s*6*f*-1*s*8*d*	$^1F^\circ$–^1D		1 332.9423 cm^{-1}	195 262.4300–196 595.3723	7–5	1.0240e−04	6.1717e−03	1.0670e+01	−1.364 50	AAA	6
520	1*s*6*f*-1*s*8*g*	$^1F^\circ$–^3G										
				1 333.7792 cm^{-1}	195 262.4300–196 596.2092	7–7	4.884e−05	4.115e−03	7.111e+00	−1.540 5	AA	6
				1 333.7779 cm^{-1}	195 262.4300–196 596.2079	7–9	1.207e−04	1.308e−02	2.260e+01	−1.038 3	AA	6
521	1*s*6*f*-1*s*8*g*	$^1F^\circ$–^1G		1 333.7796 cm^{-1}	195 262.4300–196 596.2096	7–9	2.1056e−03	2.2814e−01	3.9418e+02	0.203 31	AAA	6
522	1*s*6*f*-1*s*9*d*	$^1F^\circ$–^3D										
				1 692.7948 cm^{-1}	195 262.4300–196 955.2248	7–7	1.801e−06	9.421e−05	1.283e−01	−3.180 8	AA	6
				1 692.7949 cm^{-1}	195 262.4300–196 955.2249	7–5	1.955e−05	7.304e−04	9.944e−01	−2.291 3	AA	6
523	1*s*6*f*-1*s*9*d*	$^1F^\circ$–^1D		1 693.0170 cm^{-1}	195 262.4300–196 955.4470	7–5	6.2019e−05	2.3170e−03	3.1539e+00	−1.789 97	AAA	6
524	1*s*6*f*-1*s*9*g*	$^1F^\circ$–^3G										
				1 693.6070 cm^{-1}	195 262.4300–196 956.0370	7–7	3.125e−05	1.633e−03	2.223e+00	−1.941 8	AA	6
				1 693.6061 cm^{-1}	195 262.4300–196 956.0361	7–9	7.714e−05	5.184e−03	7.054e+00	−1.440 2	AA	6
525	1*s*6*f*-1*s*9*g*	$^1F^\circ$–^1G		1 693.6073 cm^{-1}	195 262.4300–196 956.0373	7–9	1.3475e−03	9.0553e−02	1.2322e+02	−0.198 00	AAA	6
526	1*s*6*f*-1*s*10*d*	$^1F^\circ$–^3D										
				1 950.3941 cm^{-1}	195 262.4300–197 212.8241	7–7	1.186e−06	4.675e−05	5.524e−02	−3.485 1	AA	6
				1 950.3942 cm^{-1}	195 262.4300–197 212.8242	7–5	1.288e−05	3.626e−04	4.284e−01	−2.595 5	AA	6
527	1*s*6*f*-1*s*10*d*	$^1F^\circ$–^1D		1 950.5578 cm^{-1}	195 262.4300–197 212.9878	7–5	4.0845e−05	1.1496e−03	1.3582e+00	−2.094 35	AAA	6
528	1*s*6*f*-1*s*10*g*	$^1F^\circ$–^3G										
				1 950.9891 cm^{-1}	195 262.4300–197 213.4191	7–7	2.127e−05	8.376e−04	9.894e−01	−2.231 9	AA	6
				1 950.9884 cm^{-1}	195 262.4300–197 213.4184	7–9	5.244e−05	2.656e−03	3.137e+00	−1.730 7	AA	6
529	1*s*6*f*-1*s*10*g*	$^1F^\circ$–^1G		1 950.9893 cm^{-1}	195 262.4300–197 213.4193	7–9	9.1703e−04	4.6438e−02	5.4852e+01	−0.488 03	AAA	6
530	1*s*6*g*-1*s*7*f*	^3G–$^3F^\circ$		*808.453* cm^{-1}	*195 262.723–196 071.175*	27–21	1.0853e−04	1.9361e−02	2.1287e+02	−0.281 70	AAA	6
				808.4525 cm^{-1}	195 262.7229–196 071.1754	11–9	1.0598e−04	1.9889e−02	8.9091e+01	−0.659 99	AAA	6
				808.4531 cm^{-1}	195 262.7213–196 071.1744	9–7	1.0072e−04	1.7969e−02	6.5854e+01	−0.791 24	AAA	6
				808.4526 cm^{-1}	195 262.7244–196 071.1770	7–5	1.1148e−04	1.8265e−02	5.2064e+01	−0.893 29	AAA	6
				808.4541 cm^{-1}	195 262.7213–196 071.1754	9–9	2.8151e−06	6.4571e−04	2.3665e+00	−2.235 72	AAA	6
				808.4500 cm^{-1}	195 262.7244–196 071.1744	7–7	5.2366e−06	1.2012e−03	3.4239e+00	−2.075 30	AAA	6
				808.4510 cm^{-1}	195 262.7244–196 071.1754	7–9	8.6019e−08	2.5368e−05	7.2312e−02	−3.750 61	AAA	6
531	1*s*6*g*-1*s*7*f*	^3G–$^1F^\circ$										
				808.4580 cm^{-1}	195 262.7213–196 071.1793	9–7	7.143e−06	1.274e−03	4.670e+00	−1.940 5	AA	6
				808.4549 cm^{-1}	195 262.7244–196 071.1793	7–7	1.731e−06	3.970e−04	1.132e+00	−2.556 1	AA	6
532	1*s*6*g*-1*s*7*h*	^3G–$^3H^\circ$		*808.691* cm^{-1}	*195 262.723–196 071.413*	27–33	5.2914e−03	1.4826e+00	1.6296e+04	1.602 38	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				808.6905 cm^{-1}	195 262.7229–196 071.4134	11–13	5.3259e−03	1.4429e+00	6.4613e+03	1.200 63	AAA	6
				808.6915 cm^{-1}	195 262.7213–196 071.4128	9–11	5.2151e−03	1.4612e+00	5.3535e+03	1.118 95	AAA	6
				808.6896 cm^{-1}	195 262.7244–196 071.4140	7–9	5.0629e−03	1.4922e+00	4.2524e+03	1.018 93	AAA	6
				808.6899 cm^{-1}	195 262.7229–196 071.4128	11–11	1.0977e−04	2.5164e−02	1.1268e+02	−0.557 83	AAA	6
				808.6927 cm^{-1}	195 262.7213–196 071.4140	9–9	1.3526e−04	3.1007e−02	1.1360e+02	−0.554 30	AAA	6
				808.6911 cm^{-1}	195 262.7229–196 071.4140	11–9	2.6301e−06	4.9330e−04	2.2090e+00	−2.265 49	AAA	6
533	1*s*6*g*-1*s*7*h*	$^3G-^1H^\circ$										
				808.6932 cm^{-1}	195 262.7213–196 071.4145	9–11	1.863e−07	5.221e−05	1.913e−01	−3.328 0	AA	6
				808.6916 cm^{-1}	195 262.7229–196 071.4145	11–11	1.033e−04	2.367e−02	1.060e+02	−0.584 3	AA	6
534	1*s*6*g*-1*s*8*f*	$^3G-^3F^\circ$		*1 333.355* cm^{-1}	*195 262.723–196 596.078*	27–21	5.1081e−05	3.3502e−03	2.2334e+01	−1.043 56	AAA	6
				1 333.3547 cm^{-1}	195 262.7229–196 596.0776	11–9	4.9993e−05	3.4492e−03	9.3680e+00	−1.420 88	AAA	6
				1 333.3557 cm^{-1}	195 262.7213–196 596.0770	9–7	4.7129e−05	3.0911e−03	6.8688e+00	−1.555 65	AAA	6
				1 333.3543 cm^{-1}	195 262.7244–196 596.0787	7–5	5.2590e−05	3.1677e−03	5.4748e+00	−1.654 16	AAA	6
				1 333.3563 cm^{-1}	195 262.7213–196 596.0776	9–9	1.3280e−06	1.1199e−04	2.4885e−01	−2.996 60	AAA	6
				1 333.3526 cm^{-1}	195 262.7244–196 596.0770	7–7	2.5119e−06	2.1182e−04	3.6610e−01	−2.828 93	AAA	6
				1 333.3532 cm^{-1}	195 262.7244–196 596.0776	7–9	4.0578e−08	4.3995e−06	7.6038e−03	−4.511 50	AAA	6
535	1*s*6*g*-1*s*8*f*	$^3G-^1F^\circ$										
				1 333.3591 cm^{-1}	195 262.7213–196 596.0804	9–7	3.752e−06	2.461e−04	5.469e−01	−2.654 7	AA	6
				1 333.3560 cm^{-1}	195 262.7244–196 596.0804	7–7	7.750e−07	6.535e−05	1.130e−01	−3.339 6	AA	6
536	1*s*6*g*-1*s*8*h*	$^3G-^3H^\circ$		1 333.5169 cm^{-1}	*195 262.723–196 596.240*	27–33	2.5630e−03	2.6409e−01	1.7603e+03	0.853 12	AAA	6
				1 333.5169 cm^{-1}	195 262.7229–196 596.2398	11–13	2.5797e−03	2.5703e−01	6.9799e+02	0.451 37	AAA	6
				1 333.5180 cm^{-1}	195 262.7213–196 596.2393	9–11	2.5260e−03	2.6028e−01	5.7831e+02	0.369 68	AAA	6
				1 333.5158 cm^{-1}	195 262.7244–196 596.2402	7–9	2.4523e−03	2.6581e−01	4.5936e+02	0.269 68	AAA	6
				1 333.5164 cm^{-1}	195 262.7229–196 596.2393	11–11	5.3169e−05	4.4825e−03	1.2173e+01	−1.307 09	AAA	6
				1 333.5189 cm^{-1}	195 262.7213–196 596.2402	9–9	6.5517e−05	5.5235e−03	1.2272e+01	−1.303 55	AAA	6
				1 333.5173 cm^{-1}	195 262.7229–196 596.2402	11–9	1.2739e−06	8.7871e−05	2.3862e−01	−3.014 76	AAA	6
537	1*s*6*g*-1*s*8*h*	$^3G-^1H^\circ$										
				1 333.5192 cm^{-1}	195 262.7213–196 596.2405	9–11	9.028e−08	9.302e−06	2.067e−02	−4.077 2	AA	6
				1 333.5176 cm^{-1}	195 262.7229–196 596.2405	11–11	5.002e−05	4.217e−03	1.145e+01	−1.333 6	AA	6
538	1*s*6*g*-1*s*9*f*	$^3G-^3F^\circ$		*1 693.221* cm^{-1}	*195 262.723–196 955.944*	27–21	2.8465e−05	1.1577e−03	6.0775e+00	−1.505 04	AAA	6
				1 693.2208 cm^{-1}	195 262.7229–196 955.9437	11–9	2.7904e−05	1.1938e−03	2.5533e+00	−1.881 66	AAA	6
				1 693.2220 cm^{-1}	195 262.7213–196 955.9433	9–7	2.6153e−05	1.0637e−03	1.8613e+00	−2.018 95	AAA	6
				1 693.2200 cm^{-1}	195 262.7244–196 955.9444	7–5	2.9353e−05	1.0964e−03	1.4922e+00	−2.114 95	AAA	6
				1 693.2224 cm^{-1}	195 262.7213–196 955.9437	9–9	7.4123e−07	3.8760e−05	6.7824e−02	−3.457 38	AAA	6
				1 693.2189 cm^{-1}	195 262.7244–196 955.9433	7–7	1.4176e−06	7.4128e−05	1.0089e−01	−3.284 92	AAA	6
				1 693.2193 cm^{-1}	195 262.7244–196 955.9437	7–9	2.2649e−08	1.5227e−06	2.0725e−03	−4.972 28	AAA	6
539	1*s*6*g*-1*s*9*f*	$^3G-^1F^\circ$										
				1 693.2243 cm^{-1}	195 262.7213–196 955.9456	9–7	2.246e−06	9.135e−05	1.598e−01	−3.085 1	AA	6
				1 693.2212 cm^{-1}	195 262.7244–196 955.9456	7–7	4.170e−07	2.181e−05	2.968e−02	−3.816 3	AA	6
540	1*s*6*g*-1*s*9*h*	$^3G-^3H^\circ$		*1 693.336* cm^{-1}	*195 262.723–196 956.059*	27–33	1.3760e−03	8.7929e−02	4.6156e+02	0.375 50	AAA	6
				1 693.3360 cm^{-1}	195 262.7229–196 956.0589	11–13	1.4566e−03	9.0004e−02	1.9248e+02	−0.004 35	AAA	6
				1 693.3372 cm^{-1}	195 262.7213–196 956.0585	9–11	1.2171e−03	7.7776e−02	1.3609e+02	−0.154 91	AAA	6
				1 693.3347 cm^{-1}	195 262.7244–196 956.0591	7–9	1.3847e−03	9.3083e−02	1.2668e+02	−0.186 03	AAA	6
				1 693.3356 cm^{-1}	195 262.7229–196 956.0585	11–11	2.5617e−05	1.3394e−03	2.8643e+00	−1.831 71	AAA	6
				1 693.3378 cm^{-1}	195 262.7213–196 956.0591	9–9	3.6992e−05	1.9341e−03	3.3842e+00	−1.759 28	AAA	6
				1 693.3362 cm^{-1}	195 262.7229–196 956.0591	11–9	7.1930e−07	3.0770e−05	6.5805e−02	−3.470 48	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
541	1*s*6*g*-1*s*9*h*	$^3G-{}^1H^\circ$										
				1 693.3380 cm^{-1}	195 262.7213–196 956.0593	9–11	5.097e−08	3.257e−06	5.699e−03	−4.532 9	AA	6
				1 693.3364 cm^{-1}	195 262.7229–196 956.0593	11–11	2.824e−05	1.477e−03	3.158e+00	−1.789 3	AA	6
542	1*s*6*g*-1*s*10*f*	$^3G-{}^3F^\circ$										
				1 950.6277 cm^{-1}	195 262.7229–197 213.3506	11–9	1.7406e−05	5.6112e−04	1.0417e+00	−2.209 55	AAA	6
				1 950.6290 cm^{-1}	195 262.7213–197 213.3503	9–7	1.6245e−05	4.9783e−04	7.5618e−01	−2.348 67	AAA	6
				1 950.6267 cm^{-1}	195 262.7244–197 213.3511	7–5	1.8310e−05	5.1531e−04	6.0879e−01	−2.442 83	AAA	6
				1 950.6293 cm^{-1}	195 262.7213–197 213.3506	9–9	4.6237e−07	1.8218e−05	2.7672e−02	−3.785 26	AAA	6
				1 950.6259 cm^{-1}	195 262.7244–197 213.3503	7–7	8.9110e−07	3.5110e−05	4.1480e−02	−3.609 47	AAA	6
543	1*s*6*g*-1*s*10*f*	$^3G-{}^1F^\circ$										
				1 950.6307 cm^{-1}	195 262.7213–197 213.3520	9–7	1.470e−06	4.505e−05	6.844e−02	−3.392 0	AA	6
				1 950.6276 cm^{-1}	195 262.7244–197 213.3520	7–7	2.533e−07	9.980e−06	1.179e−02	−4.155 8	AA	6
544	1*s*6*g*-1*s*10*h*	$^3G-{}^3H^\circ$		*1 950.712* cm^{-1}	*195 262.723–197 213.435*	27–33	9.0832e−04	4.3738e−02	1.9930e+02	0.072 22	AAA	6
				1 950.7123 cm^{-1}	195 262.7229–197 213.4352	11–13	9.1424e−04	4.2568e−02	7.9024e+01	−0.329 53	AAA	6
				1 950.7137 cm^{-1}	195 262.7213–197 213.4350	9–11	8.9521e−04	4.3107e−02	6.5474e+01	−0.411 21	AAA	6
				1 950.7110 cm^{-1}	195 262.7244–197 213.4354	7–9	8.6910e−04	4.4024e−02	5.2008e+01	−0.511 22	AAA	6
				1 950.7121 cm^{-1}	195 262.7229–197 213.4350	11–11	1.8843e−05	7.4237e−04	1.3781e+00	−2.087 99	AAA	6
				1 950.7141 cm^{-1}	195 262.7213–197 213.4354	9–9	2.3219e−05	9.1477e−04	1.3894e+00	−2.084 44	AAA	6
				1 950.7125 cm^{-1}	195 262.7229–197 213.4354	11–9	4.5148e−07	1.4553e−05	2.7017e−02	−3.795 65	AAA	6
545	1*s*6*g*-1*s*10*h*	$^3G-{}^1H^\circ$										
				1 950.7142 cm^{-1}	195 262.7213–197 213.4355	9–11	3.202e−08	1.542e−06	2.342e−03	−4.857 7	AA	6
				1 950.7126 cm^{-1}	195 262.7229–197 213.4355	11–11	1.773e−05	6.984e−04	1.297e+00	−2.114 5	AA	6
546	1*s*6*g*-1*s*7*f*	$^1G-{}^3F^\circ$										
				808.4490 cm^{-1}	195 262.7254–196 071.1744	9–7	5.527e−06	9.860e−04	3.614e+00	−2.051 9	AA	6
				808.4500 cm^{-1}	195 262.7254–196 071.1754	9–9	2.604e−06	5.973e−04	2.189e+00	−2.269 5	AA	6
547	1*s*6*g*-1*s*7*f*	$^1G-{}^1F^\circ$	808.4539 cm^{-1}	195 262.7254–196 071.1793	9–7	1.0260e−04	1.8304e−02	6.7083e+01	−0.783 21	AAA	6	
548	1*s*6*g*-1*s*7*h*	$^1G-{}^3H^\circ$										
				808.6886 cm^{-1}	195 262.7254–196 071.4140	9–9	1.251e−04	2.868e−02	1.051e+02	−0.588 1	AA	6
				808.6874 cm^{-1}	195 262.7254–196 071.4128	9–11	1.086e−06	3.042e−04	1.114e+00	−2.562 6	AA	6
549	1*s*6*g*-1*s*7*h*	$^1G-{}^1H^\circ$	808.6891 cm^{-1}	195 262.7254–196 071.4145	9–11	5.2225e−03	1.4633e+00	5.3612e+03	1.119 56	AAA	6	
550	1*s*6*g*-1*s*8*f*	$^1G-{}^3F^\circ$										
				1 333.3516 cm^{-1}	195 262.7254–196 596.0770	9–7	2.948e−06	1.934e−04	4.297e−01	−2.759 3	AA	6
				1 333.3522 cm^{-1}	195 262.7254–196 596.0776	9–9	1.228e−06	1.036e−04	2.302e−01	−3.030 5	AA	6
551	1*s*6*g*-1*s*8*f*	$^1G-{}^1F^\circ$	1 333.3550 cm^{-1}	195 262.7254–196 596.0804	9–7	4.8061e−05	3.1522e−03	7.0046e+00	−1.547 14	AAA	6	
552	1*s*6*g*-1*s*8*h*	$^1G-{}^3H^\circ$										
				1 333.5148 cm^{-1}	195 262.7254–196 596.2402	9–9	6.060e−05	5.109e−03	1.135e+01	−1.337 4	AA	6
				1 333.5139 cm^{-1}	195 262.7254–196 596.2393	9–11	5.258e−07	5.418e−05	1.204e−01	−3.311 9	AA	6
553	1*s*6*g*-1*s*8*h*	$^1G-{}^1H^\circ$	1 333.5151 cm^{-1}	195 262.7254–196 596.2405	9–11	2.5296e−03	2.6065e−01	5.7914e+02	0.370 31	AAA	6	
554	1*s*6*g*-1*s*9*f*	$^1G-{}^3F^\circ$										
				1 693.2179 cm^{-1}	195 262.7254–196 955.9433	9–7	1.782e−06	7.247e−05	1.268e−01	−3.185 6	AA	6
				1 693.2183 cm^{-1}	195 262.7254–196 955.9437	9–9	6.857e−07	3.585e−05	6.274e−02	−3.491 2	AA	6
555	1*s*6*g*-1*s*9*f*	$^1G-{}^1F^\circ$	1 693.2202 cm^{-1}	195 262.7254–196 955.9456	9–7	2.6689e−05	1.0855e−03	1.8994e+00	−2.010 14	AAA	6	

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
556	1*s*6*g*-1*s*9*h*	$^1G-^3H^\circ$										
				1 693.3337 cm^{-1}	195 262.7254–196 956.0591	9–9	3.422e−05	1.789e−03	3.131e+00	−1.793 1	AA	6
				1 693.3331 cm^{-1}	195 262.7254–196 956.0585	9–11	2.969e−07	1.897e−05	3.320e−02	−3.767 6	AA	6
557	1*s*6*g*-1*s*9*h*	$^1G-^1H^\circ$		1 693.3339 cm^{-1}	195 262.7254–196 956.0593	9–11	1.4283e−03	9.1273e−02	1.5970e+02	−0.085 42	AAA	6
558	1*s*6*g*-1*s*10*f*	$^1G-^3F^\circ$										
				1 950.6249 cm^{-1}	195 262.7254–197 213.3503	9–7	1.174e−06	3.597e−05	5.464e−02	−3.489 8	AA	6
				1 950.6252 cm^{-1}	195 262.7254–197 213.3506	9–9	4.277e−07	1.685e−05	2.560e−02	−3.819 1	AA	6
559	1*s*6*g*-1*s*10*f*	$^1G-^1F^\circ$		1 950.6266 cm^{-1}	195 262.7254–197 213.3520	9–7	1.6586e−05	5.0828e−04	7.7206e−01	−2.339 65	AAA	6
560	1*s*6*g*-1*s*10*h*	$^1G-^3H^\circ$										
				1 950.7100 cm^{-1}	195 262.7254–197 213.4354	9–9	2.148e−05	8.462e−04	1.285e+00	−2.118 3	AA	6
				1 950.7096 cm^{-1}	195 262.7254–197 213.4350	9–11	1.863e−07	8.969e−06	1.362e−02	−4.093 0	AA	6
561	1*s*6*g*-1*s*10*h*	$^1G-^1H^\circ$		1 950.7101 cm^{-1}	195 262.7254–197 213.4355	9–11	8.9648e−04	4.3168e−02	6.5567e+01	−0.410 60	AAA	6
562	1*s*6*h*-1*s*7*g*	$^3H^\circ-^3G$		*808.576* cm^{-1}	*195 262.792–196 071.368*	33–27	3.3374e−05	6.2615e−03	8.4129e+01	−0.684 81	AAA	6
				808.5756 cm^{-1}	195 262.7924–196 071.3680	13–11	3.2481e−05	6.3022e−03	3.3357e+01	−1.086 56	AAA	6
				808.5757 cm^{-1}	195 262.7913–196 071.3670	11–9	3.2892e−05	6.1710e−03	2.7638e+01	−1.168 25	AAA	6
				808.5756 cm^{-1}	195 262.7933–196 071.3689	9–7	3.3592e−05	5.9911e−03	2.1954e+01	−1.268 25	AAA	6
				808.5767 cm^{-1}	195 262.7913–196 071.3680	11–11	5.6645e−07	1.2989e−04	5.8173e−01	−2.845 03	AAA	6
				808.5737 cm^{-1}	195 262.7933–196 071.3670	9–9	6.9839e−07	1.6015e−04	5.8683e−01	−2.841 24	AAA	6
				808.5747 cm^{-1}	195 262.7933–196 071.3680	9–11	1.1105e−08	3.1123e−06	1.1405e−02	−4.552 67	AAA	6
563	1*s*6*h*-1*s*7*g*	$^3H^\circ-^1G$										
				808.5762 cm^{-1}	195 262.7933–196 071.3695	9–9	6.453e−07	1.480e−04	5.422e−01	−2.875 6	AA	6
564	1*s*6*h*-1*s*7*i*	$^3H^\circ-^3I$		*808.635* cm^{-1}	*195 262.792–196 071.428*	33–39	7.3786e−03	1.9993e+00	2.6860e+04	1.819 39	AAA	6
				808.6352 cm^{-1}	195 262.7924–196 071.4276	13–15	7.4121e−03	1.9608e+00	1.0378e+04	1.406 38	AAA	6
				808.6359 cm^{-1}	195 262.7913–196 071.4272	11–13	7.3058e−03	1.9796e+00	8.8651e+03	1.337 96	AAA	6
				808.6347 cm^{-1}	195 262.7933–196 071.4280	9–11	7.1671e−03	2.0084e+00	7.3589e+03	1.257 09	AAA	6
				808.6348 cm^{-1}	195 262.7924–196 071.4272	13–13	1.0560e−04	2.4211e−02	1.2814e+02	−0.502 04	AAA	6
				808.6367 cm^{-1}	195 262.7913–196 071.4280	11–11	1.2537e−04	2.8744e−02	1.2872e+02	−0.500 06	AAA	6
				808.6356 cm^{-1}	195 262.7924–196 071.4280	13–11	1.7016e−06	3.3011e−04	1.7471e+00	−2.367 40	AAA	6
565	1*s*6*h*-1*s*7*i*	$^3H^\circ-^1I$										
				808.6371 cm^{-1}	195 262.7913–196 071.4284	11–13	1.600e−07	4.335e−05	1.941e−01	−3.321 6	AA	6
				808.6360 cm^{-1}	195 262.7924–196 071.4284	13–13	1.003e−04	2.299e−02	1.217e+02	−0.524 4	AA	6
566	1*s*6*h*-1*s*8*g*	$^3H^\circ-^3G$										
				1 333.4162 cm^{-1}	195 262.7924–196 596.2086	13–11	1.2645e−05	9.0218e−04	2.8957e+00	−1.930 76	AAA	6
				1 333.4166 cm^{-1}	195 262.7913–196 596.2079	11–9	1.2805e−05	8.8339e−04	2.3992e+00	−2.012 45	AAA	6
				1 333.4159 cm^{-1}	195 262.7933–196 596.2092	9–7	1.3077e−05	8.5761e−04	1.9056e+00	−2.112 47	AAA	6
				1 333.4173 cm^{-1}	195 262.7913–196 596.2086	11–11	2.2052e−07	1.8594e−05	5.0498e−02	−3.689 23	AAA	6
				1 333.4146 cm^{-1}	195 262.7933–196 596.2079	9–9	2.7200e−07	2.2935e−05	5.0962e−02	−3.685 26	AAA	6
567	1*s*6*h*-1*s*8*g*	$^3H^\circ-^1G$										
				1 333.4163 cm^{-1}	195 262.7933–196 596.2096	9–9	2.511e−07	2.117e−05	4.704e−02	−3.720 0	AA	6
568	1*s*6*h*-1*s*8*i*	$^3H^\circ-^3I$		*1 333.457* cm^{-1}	*195 262.792–196 596.250*	33–39	2.1672e−03	2.1594e−01	1.7593e+03	0.852 85	AAA	6
				1 333.4572 cm^{-1}	195 262.7924–196 596.2496	13–15	2.1770e−03	2.1179e−01	6.7974e+02	0.439 85	AAA	6
				1 333.4580 cm^{-1}	195 262.7913–196 596.2493	11–13	2.1458e−03	2.1381e−01	5.8067e+02	0.371 43	AAA	6
				1 333.4566 cm^{-1}	195 262.7933–196 596.2499	9–11	2.1050e−03	2.1692e−01	4.8199e+02	0.290 54	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				1 333.4569 cm^{-1}	195 262.7924–196 596.2493	13–13	3.1015e−05	2.6150e−03	8.3929e+00	−1.468 59	AAA	6
				1 333.4586 cm^{-1}	195 262.7913–196 596.2499	11–11	3.6823e−05	3.1047e−03	8.4315e+00	−1.466 59	AAA	6
				1 333.4575 cm^{-1}	195 262.7924–196 596.2499	13–11	4.9976e−07	3.5654e−05	1.1443e−01	−3.333 95	AAA	6
569	1*s*6*h*-1*s*8*i*	$^3H^\circ-{}^1I$										
				1 333.4588 cm^{-1}	195 262.7913–196 596.2501	11–13	4.699e−08	4.682e−06	1.271e−02	−4.288 2	AA	6
				1 333.4577 cm^{-1}	195 262.7924–196 596.2501	13–13	2.946e−05	2.484e−03	7.971e+00	−1.491 0	AA	6
570	1*s*6*h*-1*s*9*g*	$^3H^\circ-{}^3G$										
				1 693.2442 cm^{-1}	195 262.7924–196 956.0366	13–11	6.2931e−06	2.7844e−04	7.0377e−01	−2.441 33	AAA	6
				1 693.2448 cm^{-1}	195 262.7913–196 956.0361	11–9	6.3726e−06	2.7264e−04	5.8309e−01	−2.523 02	AAA	6
				1 693.2437 cm^{-1}	195 262.7933–196 956.0370	9–7	6.5082e−06	2.6469e−04	4.6316e−01	−2.623 02	AAA	6
				1 693.2453 cm^{-1}	195 262.7913–196 956.0366	11–11	1.0975e−07	5.7388e−06	1.2274e−02	−4.199 79	AAA	6
				1 693.2428 cm^{-1}	195 262.7933–196 956.0361	9–9	1.3541e−07	7.0806e−06	1.2390e−02	−4.195 69	AAA	6
571	1*s*6*h*-1*s*9*g*	$^3H^\circ-{}^1G$										
				1 693.2440 cm^{-1}	195 262.7933–196 956.0373	9–9	1.249e−07	6.532e−06	1.143e−02	−4.230 7	AA	6
572	1*s*6*h*-1*s*9*i*	$^3H^\circ-{}^3I$		*1 693.274* cm^{-1}	*195 262.792–196 956.066*	33–39	9.6356e−04	5.9543e−02	3.8203e+02	0.293 35	AAA	6
				1 693.2735 cm^{-1}	195 262.7924–196 956.0659	13–15	9.6793e−04	5.8398e−02	1.4760e+02	−0.119 66	AAA	6
				1 693.2744 cm^{-1}	195 262.7913–196 956.0657	11–13	9.5406e−04	5.8956e−02	1.2609e+02	−0.188 08	AAA	6
				1 693.2728 cm^{-1}	195 262.7933–196 956.0661	9–11	9.3593e−04	5.9813e−02	1.0466e+02	−0.268 96	AAA	6
				1 693.2733 cm^{-1}	195 262.7924–196 956.0657	13–13	1.3790e−05	7.2105e−04	1.8225e+00	−2.028 09	AAA	6
				1 693.2748 cm^{-1}	195 262.7913–196 956.0661	11–11	1.6372e−05	8.5606e−04	1.8308e+00	−2.026 10	AAA	6
				1 693.2737 cm^{-1}	195 262.7924–196 956.0661	13–11	2.2221e−07	9.8314e−06	2.4849e−02	−3.893 44	AAA	6
573	1*s*6*h*-1*s*9*i*	$^3H^\circ-{}^1I$										
				1 693.2750 cm^{-1}	195 262.7913–196 956.0663	11–13	2.089e−08	1.291e−06	2.761e−03	−4.847 7	AA	6
				1 693.2739 cm^{-1}	195 262.7924–196 956.0663	13–13	1.310e−05	6.848e−04	1.731e+00	−2.050 5	AA	6
574	1*s*6*h*-1*s*10*g*	$^3H^\circ-{}^3G$										
				1 950.6264 cm^{-1}	195 262.7924–197 213.4188	13–11	3.6411e−06	1.2139e−04	2.6634e−01	−2.801 87	AAA	6
				1 950.6271 cm^{-1}	195 262.7913–197 213.4184	11–9	3.6871e−06	1.1886e−04	2.2067e−01	−2.883 56	AAA	6
				1 950.6258 cm^{-1}	195 262.7933–197 213.4191	9–7	3.7656e−06	1.1540e−04	1.7528e−01	−2.983 56	AAA	6
				1 950.6275 cm^{-1}	195 262.7913–197 213.4188	11–11	6.3498e−08	2.5019e−06	4.6448e−03	−4.560 34	AAA	6
				1 950.6251 cm^{-1}	195 262.7933–197 213.4184	9–9	7.8363e−08	3.0876e−06	4.6899e−03	−4.556 14	AAA	6
575	1*s*6*h*-1*s*10*g*	$^3H^\circ-{}^1G$										
				1 950.6260 cm^{-1}	195 262.7933–197 213.4193	9–9	7.226e−08	2.847e−06	4.325e−03	−4.591 4	AA	6
576	1*s*6*h*-1*s*10*i*	$^3H^\circ-{}^3I$		*1 950.648* cm^{-1}	*195 262.792–197 213.440*	33–39	5.2498e−04	2.4445e−02	1.3614e+02	−0.093 30	AAA	6
				1 950.6480 cm^{-1}	195 262.7924–197 213.4404	13–15	5.2736e−04	2.3975e−02	5.2601e+01	−0.506 30	AAA	6
				1 950.6490 cm^{-1}	195 262.7913–197 213.4403	11–13	5.1980e−04	2.4204e−02	4.4934e+01	−0.574 72	AAA	6
				1 950.6473 cm^{-1}	195 262.7933–197 213.4406	9–11	5.0992e−04	2.4556e−02	3.7299e+01	−0.655 61	AAA	6
				1 950.6479 cm^{-1}	195 262.7924–197 213.4403	13–13	7.5132e−06	2.9602e−04	6.4948e−01	−2.414 73	AAA	6
				1 950.6493 cm^{-1}	195 262.7913–197 213.4406	11–11	8.9202e−06	3.5146e−04	6.5247e−01	−2.412 73	AAA	6
				1 950.6482 cm^{-1}	195 262.7924–197 213.4406	13–11	1.2106e−07	4.0360e−06	8.8550e−03	−4.280 11	AAA	6
577	1*s*6*h*-1*s*10*i*	$^3H^\circ-{}^1I$										
				1 950.6483 cm^{-1}	195 262.7924–197 213.4407	13–13	7.136e−06	2.811e−04	6.168e−01	−2.437 1	AA	6
578	1*s*6*h*-1*s*7*g*	$^1H^\circ-{}^3G$										
				808.5740 cm^{-1}	195 262.7940–196 071.3680	11–11	5.329e−07	1.222e−04	5.473e−01	−2.871 5	AA	6
579	1*s*6*h*-1*s*7*g*	$^1H^\circ-{}^1G$		808.5755 cm^{-1}	195 262.7940–196 071.3695	11–9	3.2939e−05	6.1798e−03	2.7677e+01	−1.167 63	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
580	1*s*6*h*-1*s*7*i*	$^1H^\circ-{}^3I$										
				808.6332 cm^{-1}	195 262.7940–196 071.4272	11–13	6.460e−07	1.750e−04	7.838e−01	−2.715 5	AA	6
				808.6340 cm^{-1}	195 262.7940–196 071.4280	11–11	1.180e−04	2.704e−02	1.211e+02	−0.526 6	AA	6
581	1*s*6*h*-1*s*7*i*	$^1H^\circ-{}^1I$		808.6344 cm^{-1}	195 262.7940–196 071.4284	11–13	7.3116e−03	1.9811e+00	8.8722e+03	1.338 31	AAA	6
582	1*s*6*h*-1*s*8*g*	$^1H^\circ-{}^3G$										
				1 333.4146 cm^{-1}	195 262.7940–196 596.2086	11–11	2.075e−07	1.749e−05	4.751e−02	−3.715 7	AA	6
583	1*s*6*h*-1*s*8*g*	$^1H^\circ-{}^1G$		1 333.4156 cm^{-1}	195 262.7940–196 596.2096	11–9	1.2823e−05	8.8464e−04	2.4025e+00	−2.011 84	AAA	6
584	1*s*6*h*-1*s*8*i*	$^1H^\circ-{}^3I$										
				1 333.4553 cm^{-1}	195 262.7940–196 596.2493	11–13	1.897e−07	1.890e−05	5.134e−02	−3.682 0	AA	6
				1 333.4559 cm^{-1}	195 262.7940–196 596.2499	11–11	3.464e−05	2.921e−03	7.932e+00	−1.493 1	AA	6
585	1*s*6*h*-1*s*8*i*	$^1H^\circ-{}^1I$		1 333.4561 cm^{-1}	195 262.7940–196 596.2501	11–13	2.1475e−03	2.1398e−01	5.8113e+02	0.371 78	AAA	6
586	1*s*6*h*-1*s*9*g*	$^1H^\circ-{}^3G$										
				1 693.2426 cm^{-1}	195 262.7940–196 956.0366	11–11	1.033e−07	5.399e−06	1.155e−02	−4.226 3	AA	6
587	1*s*6*h*-1*s*9*g*	$^1H^\circ-{}^1G$		1 693.2433 cm^{-1}	195 262.7940–196 956.0373	11–9	6.3818e−06	2.7303e−04	5.8393e−01	−2.522 40	AAA	6
588	1*s*6*h*-1*s*9*i*	$^1H^\circ-{}^3I$										
				1 693.2717 cm^{-1}	195 262.7940–196 956.0657	11–13	8.436e−08	5.213e−06	1.115e−02	−4.241 5	AA	6
				1 693.2721 cm^{-1}	195 262.7940–196 956.0661	11–11	1.540e−05	8.054e−04	1.722e+00	−2.052 6	AA	6
589	1*s*6*h*-1*s*9*i*	$^1H^\circ-{}^1I$		1 693.2723 cm^{-1}	195 262.7940–196 956.0663	11–13	9.5481e−04	5.9003e−02	1.2619e+02	−0.187 74	AAA	6
590	1*s*6*h*-1*s*10*g*	$^1H^\circ-{}^3G$										
				1 950.6248 cm^{-1}	195 262.7940–197 213.4188	11–11	5.974e−08	2.354e−06	4.370e−03	−4.586 8	AA	6
591	1*s*6*h*-1*s*10*g*	$^1H^\circ-{}^1G$		1 950.6253 cm^{-1}	195 262.7940–197 213.4193	11–9	3.6925e−06	1.1904e−04	2.2099e−01	−2.882 93	AAA	6
592	1*s*6*h*-1*s*10*i*	$^1H^\circ-{}^3I$										
				1 950.6463 cm^{-1}	195 262.7940–197 213.4403	11–13	4.596e−08	2.140e−06	3.973e−03	−4.628 2	AA	6
				1 950.6466 cm^{-1}	195 262.7940–197 213.4406	11–11	8.392e−06	3.307e−04	6.138e−01	−2.439 2	AA	6
593	1*s*6*h*-1*s*10*i*	$^1H^\circ-{}^1I$		1 950.6467 cm^{-1}	195 262.7940–197 213.4407	11–13	5.2021e−04	2.4223e−02	4.4970e+01	−0.574 38	AAA	6
594	1*s*6*p*-1*s*7*s*	$^1P^\circ-{}^1S$		703.9869 cm^{-1}	195 274.9067–195 978.8936	3–1	2.7091e−03	2.7317e−01	3.8323e+02	−0.086 45	AAA	6
595	1*s*6*p*-1*s*7*d*	$^1P^\circ-{}^3D$										
				794.7646 cm^{-1}	195 274.9067–196 069.6713	3–5	1.454e−07	5.751e−05	7.146e−02	−3.763 1	AA	6
596	1*s*6*p*-1*s*7*d*	$^1P^\circ-{}^1D$		795.2199 cm^{-1}	195 274.9067–196 070.1266	3–5	1.7789e−03	7.0288e−01	8.7296e+02	0.324 00	AAA	6
597	1*s*6*p*-1*s*8*s*	$^1P^\circ-{}^1S$		1 259.6558 cm^{-1}	195 274.9067–196 534.5625	3–1	1.5694e−03	4.9427e−02	3.8753e+01	−0.828 91	AAA	6
598	1*s*6*p*-1*s*8*d*	$^1P^\circ-{}^3D$										
				1 320.1539 cm^{-1}	195 274.9067–196 595.0606	3–5	9.426e−08	1.351e−05	1.011e−02	−4.392 1	AA	6
599	1*s*6*p*-1*s*8*d*	$^1P^\circ-{}^1D$		1 320.4656 cm^{-1}	195 274.9067–196 595.3723	3–5	1.2094e−03	1.7331e−01	1.2963e+02	−0.284 06	AAA	6
600	1*s*6*p*-1*s*9*s*	$^1P^\circ-{}^1S$		1 637.9943 cm^{-1}	195 274.9067–196 912.9010	3–1	1.0218e−03	1.9032e−02	1.1475e+01	−1.243 40	AAA	6
601	1*s*6*p*-1*s*9*d*	$^1P^\circ-{}^3D$										
				1 680.3182 cm^{-1}	195 274.9067–196 955.2249	3–5	6.359e−08	5.627e−06	3.307e−03	−4.772 6	AA	6
602	1*s*6*p*-1*s*9*d*	$^1P^\circ-{}^1D$		1 680.5403 cm^{-1}	195 274.9067–196 955.4470	3–5	8.4180e−04	7.4476e−02	4.3769e+01	−0.650 86	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
603	1*s*6*p*-1*s*10*s*	$^1P^\circ-{}^1S$		1 907.1572 cm^{-1}	195 274.9067–197 182.0639	3–1	7.1005e−04	9.7555e−03	5.0520e+00	−1.533 63	AAA	6
604	1*s*6*p*-1*s*10*d*	$^1P^\circ-{}^3D$										
				1 937.9175 cm^{-1}	195 274.9067–197 212.8242	3–5	4.490e−08	2.987e−06	1.522e−03	−5.047 6	AA	6
605	1*s*6*p*-1*s*10*d*	$^1P^\circ-{}^1D$		1 938.0811 cm^{-1}	195 274.9067–197 212.9878	3–5	6.0761e−04	4.0419e−02	2.0597e+01	−0.916 29	AAA	6
606	1*s*7*s*-1*s*7*p*	$^3S-{}^3P^\circ$		*159.081* cm^{-1}	*195 868.2354–196 027.316*	3–9	1.2105e−04	2.1513e+00	1.3356e+04	0.809 83	AAA	6
				159.0779 cm^{-1}	195 868.2354–196 027.3133	3–5	1.2105e−04	1.1952e+00	7.4206e+03	0.554 57	AAA	6
				159.0795 cm^{-1}	195 868.2354–196 027.3149	3–3	1.2105e−04	7.1712e−01	4.4522e+03	0.332 71	AAA	6
				159.0993 cm^{-1}	195 868.2354–196 027.3347	3–1	1.2105e−04	2.3898e−01	1.4835e+03	−0.144 52	AAA	6
607	1*s*7*s*-1*s*7*p*	$^3S-{}^1P^\circ$										
				210.8504 cm^{-1}	195 868.2354–196 079.0858	3–3	1.693e−11	5.710e−08	2.675e−04	−6.766 2	AA	6
608	1*s*7*s*-1*s*8*p*	$^3S-{}^3P^\circ$		*698.477* cm^{-1}	*195 868.2354–196 566.712*	3–9	4.9006e−05	4.5178e−02	6.3881e+01	−0.867 96	AAA	6
				698.4747 cm^{-1}	195 868.2354–196 566.7101	3–5	4.3310e−05	2.2182e−02	3.1365e+01	−1.176 89	AAA	6
				698.4758 cm^{-1}	195 868.2354–196 566.7112	3–3	4.3310e−05	1.3309e−02	1.8819e+01	−1.398 74	AAA	6
				698.4890 cm^{-1}	195 868.2354–196 566.7244	3–1	4.3310e−05	4.4361e−03	6.2725e+00	−1.875 87	AAA	6
609	1*s*7*s*-1*s*9*p*	$^3S-{}^3P^\circ$		*1 067.096* cm^{-1}	*195 868.2354–196 935.331*	3–9	5.6702e−05	2.2396e−02	2.0728e+01	−1.172 71	AAA	6
				1 067.0943 cm^{-1}	195 868.2354–196 935.3297	3–5	5.3540e−05	1.1748e−02	1.0874e+01	−1.452 90	AAA	6
				1 067.0950 cm^{-1}	195 868.2354–196 935.3304	3–3	5.3540e−05	7.0490e−03	6.5241e+00	−1.674 75	AAA	6
				1 067.1043 cm^{-1}	195 868.2354–196 935.3397	3–1	5.3540e−05	2.3496e−03	2.1747e+00	−2.151 88	AAA	6
610	1*s*7*s*-1*s*10*p*	$^3S-{}^3P^\circ$		*1 330.097* cm^{-1}	*195 868.2354–197 198.332*	3–9	4.7281e−05	1.2020e−02	8.9251e+00	−1.442 98	AAA	6
				1 330.0956 cm^{-1}	195 868.2354–197 198.3310	3–5	4.7278e−05	6.6773e−03	4.9581e+00	−1.698 28	AAA	6
				1 330.0961 cm^{-1}	195 868.2354–197 198.3315	3–3	4.7278e−05	4.0064e−03	2.9748e+00	−1.920 13	AAA	6
				1 330.1028 cm^{-1}	195 868.2354–197 198.3382	3–1	4.7278e−05	1.3354e−03	9.9160e−01	−2.397 25	AAA	6
611	1*s*7*s*-1*s*7*p*	$^1S-{}^3P^\circ$										
				48.4213 cm^{-1}	195 978.8936–196 027.3149	1–3	2.318e−13	4.446e−08	3.023e−04	−7.352 1	AA	6
612	1*s*7*s*-1*s*7*p*	$^1S-{}^1P^\circ$		100.1922 cm^{-1}	195 978.8936–196 079.0858	1–3	3.4044e−05	1.5253e+00	5.0118e+03	0.183 35	AAA	6
613	1*s*7*s*-1*s*8*p*	$^1S-{}^1P^\circ$		622.5049 cm^{-1}	195 978.8936–196 601.3985	1–3	1.4688e−04	1.7047e−01	9.0155e+01	−0.768 34	AAA	6
614	1*s*7*s*-1*s*9*p*	$^1S-{}^1P^\circ$		980.7975 cm^{-1}	195 978.8936–196 959.6911	1–3	1.3311e−04	6.2234e−02	2.0889e+01	−1.205 97	AAA	6
615	1*s*7*s*-1*s*10*p*	$^1S-{}^1P^\circ$		1 237.1942 cm^{-1}	195 978.8936–197 216.0878	1–3	1.0590e−04	3.1117e−02	8.2801e+00	−1.507 00	AAA	6
616	1*s*7*p*-1*s*7*d*	$^3P^\circ-{}^3D$		*42.356* cm^{-1}	*196 027.316–196 069.672*	9–15	3.0529e−06	4.2521e−01	2.9744e+04	0.582 84	AAA	6
				42.3578 cm^{-1}	196 027.3133–196 069.6711	5–7	3.0530e−06	3.5715e−01	1.3879e+04	0.251 81	AAA	6
				42.3564 cm^{-1}	196 027.3149–196 069.6713	3–5	2.2896e−06	3.1888e−01	7.4354e+03	−0.019 25	AAA	6
				42.3401 cm^{-1}	196 027.3347–196 069.6748	1–3	1.6961e−06	4.2553e−01	3.3086e+03	−0.371 07	AAA	6
				42.3580 cm^{-1}	196 027.3133–196 069.6713	5–5	7.6318e−07	6.3769e−02	2.4781e+03	−0.496 42	AAA	6
				42.3599 cm^{-1}	196 027.3149–196 069.6748	3–3	1.2721e−06	1.0628e−01	2.4781e+03	−0.496 41	AAA	6
				42.3615 cm^{-1}	196 027.3133–196 069.6748	5–3	8.4805e−08	4.2510e−03	1.6518e+02	−1.672 54	AAA	6
617	1*s*7*p*-1*s*8*s*	$^3P^\circ-{}^3S$		*434.044* cm^{-1}	*196 027.316–196 461.3602*	9–3	1.7296e−03	4.5878e−01	3.1318e+03	0.615 85	AAA	6
				434.0469 cm^{-1}	196 027.3133–196 461.3602	5–3	9.6087e−04	4.5877e−01	1.7398e+03	0.360 57	AAA	6
				434.0453 cm^{-1}	196 027.3149–196 461.3602	3–3	5.7652e−04	4.5878e−01	1.0439e+03	0.138 72	AAA	6
				434.0255 cm^{-1}	196 027.3347–196 461.3602	1–3	1.9217e−04	4.5881e−01	3.4801e+02	−0.338 37	AAA	6
618	1*s*7*p*-1*s*8*d*	$^3P^\circ-{}^3D$		*567.745* cm^{-1}	*196 027.316–196 595.061*	9–15	5.7426e−04	4.4515e−01	2.3231e+03	0.602 75	AAA	6
				567.7472 cm^{-1}	196 027.3133–196 595.0605	5–7	5.7427e−04	3.7393e−01	1.0841e+03	0.271 76	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				567.7457 cm^{-1}	196 027.3149–196 595.0606	3–5	4.3067e−04	3.3384e−01	5.8075e+02	0.000 66	AAA	6
				567.7282 cm^{-1}	196 027.3347–196 595.0629	1–3	3.1904e−04	4.4519e−01	2.5815e+02	−0.351 46	AAA	6
				567.7473 cm^{-1}	196 027.3133–196 595.0606	5–5	1.4356e−04	6.6770e−02	1.9358e+02	−0.476 45	AAA	6
				567.7480 cm^{-1}	196 027.3149–196 595.0629	3–3	2.3928e−04	1.1129e−01	1.9359e+02	−0.476 43	AAA	6
				567.7496 cm^{-1}	196 027.3133–196 595.0629	5–3	1.5952e−05	4.4515e−03	1.2906e+01	−1.652 52	AAA	6
619	1*s*7*p*-1*s*8*d*	$^3P^\circ-{}^1D$										
				568.0590 cm^{-1}	196 027.3133–196 595.3723	5–5	1.167e−08	5.422e−06	1.571e−02	−4.566 9	AA	6
				568.0574 cm^{-1}	196 027.3149–196 595.3723	3–5	3.210e−08	2.485e−05	4.321e−02	−4.127 5	AA	6
620	1*s*7*p*-1*s*9*s*	$^3P^\circ-{}^3S$		*834.669* cm^{-1}	*196 027.316–196 861.9857*	9–3	9.8610e−04	7.0734e−02	2.5109e+02	−0.196 13	AAA	6
				834.6724 cm^{-1}	196 027.3133–196 861.9857	5–3	5.4783e−04	7.0733e−02	1.3949e+02	−0.451 41	AAA	6
				834.6708 cm^{-1}	196 027.3149–196 861.9857	3–3	3.2870e−04	7.0734e−02	8.3697e+01	−0.673 25	AAA	6
				834.6510 cm^{-1}	196 027.3347–196 861.9857	1–3	1.0957e−04	7.0739e−02	2.7902e+01	−1.150 34	AAA	6
621	1*s*7*p*-1*s*9*d*	$^3P^\circ-{}^3D$		*927.909* cm^{-1}	*196 027.316–196 955.225*	9–15	4.5472e−04	1.3196e−01	4.2136e+02	0.074 68	AAA	6
				927.9115 cm^{-1}	196 027.3133–196 955.2248	5–7	4.5473e−04	1.1085e−01	1.9664e+02	−0.256 30	AAA	6
				927.9100 cm^{-1}	196 027.3149–196 955.2249	3–5	3.4102e−04	9.8963e−02	1.0533e+02	−0.527 41	AAA	6
				927.8918 cm^{-1}	196 027.3347–196 955.2265	1–3	2.5263e−04	1.3197e−01	4.6822e+01	−0.879 53	AAA	6
				927.9116 cm^{-1}	196 027.3133–196 955.2249	5–5	1.1367e−04	1.9792e−02	3.5110e+01	−1.004 54	AAA	6
				927.9116 cm^{-1}	196 027.3149–196 955.2265	3–3	1.8947e−04	3.2990e−02	3.5114e+01	−1.004 49	AAA	6
				927.9132 cm^{-1}	196 027.3133–196 955.2265	5–3	1.2631e−05	1.3196e−03	2.3408e+00	−2.180 60	AAA	6
622	1*s*7*p*-1*s*9*d*	$^3P^\circ-{}^1D$										
				928.1321 cm^{-1}	196 027.3149–196 955.4470	3–5	2.486e−08	7.209e−06	7.672e−03	−4.665 0	AA	6
623	1*s*7*p*-1*s*10*s*	$^3P^\circ-{}^3S$		*1 117.915* cm^{-1}	*196 027.316–197 145.2316*	9–3	6.5217e−04	2.6078e−02	6.9118e+01	−0.629 48	AAA	6
				1 117.9183 cm^{-1}	196 027.3133–197 145.2316	5–3	3.6232e−04	2.6078e−02	3.8399e+01	−0.884 75	AAA	6
				1 117.9167 cm^{-1}	196 027.3149–197 145.2316	3–3	2.1739e−04	2.6078e−02	2.3039e+01	−1.106 60	AAA	6
				1 117.8969 cm^{-1}	196 027.3347–197 145.2316	1–3	7.2464e−05	2.6079e−02	7.6802e+00	−1.583 70	AAA	6
624	1*s*7*p*-1*s*10*d*	$^3P^\circ-{}^3D$		*1 185.508* cm^{-1}	*196 027.316–197 212.824*	9–15	3.4374e−04	6.1112e−02	1.5274e+02	−0.259 63	AAA	6
				1 185.5108 cm^{-1}	196 027.3133–197 212.8241	5–7	3.4375e−04	5.1335e−02	7.1278e+01	−0.590 61	AAA	6
				1 185.5093 cm^{-1}	196 027.3149–197 212.8242	3–5	2.5779e−04	4.5831e−02	3.8182e+01	−0.861 72	AAA	6
				1 185.4907 cm^{-1}	196 027.3347–197 212.8254	1–3	1.9097e−04	6.1115e−02	1.6972e+01	−1.213 85	AAA	6
				1 185.5109 cm^{-1}	196 027.3133–197 212.8242	5–5	8.5930e−05	9.1662e−03	1.2727e+01	−1.338 84	AAA	6
				1 185.5105 cm^{-1}	196 027.3149–197 212.8254	3–3	1.4323e−04	1.5278e−02	1.2728e+01	−1.338 80	AAA	6
				1 185.5121 cm^{-1}	196 027.3133–197 212.8254	5–3	9.5485e−06	6.1113e−04	8.4854e−01	−2.514 90	AAA	6
625	1*s*7*p*-1*s*10*d*	$^3P^\circ-{}^1D$										
				1 185.6729 cm^{-1}	196 027.3149–197 212.9878	3–5	1.844e−08	3.278e−06	2.730e−03	−5.007 3	AA	6
626	1*s*7*d*-1*s*8*p*	$^3D-{}^3P^\circ$		*497.040* cm^{-1}	*196 069.672–196 566.712*	15–9	4.5429e−04	1.6541e−01	1.6434e+03	0.394 65	AAA	6
				497.0390 cm^{-1}	196 069.6711–196 566.7101	7–5	3.8161e−04	1.6541e−01	7.6692e+02	0.063 67	AAA	6
				497.0399 cm^{-1}	196 069.6713–196 566.7112	5–3	3.4070e−04	1.2405e−01	4.1082e+02	−0.207 43	AAA	6
				497.0496 cm^{-1}	196 069.6748–196 566.7244	3–1	4.5430e−04	9.1892e−02	1.8259e+02	−0.559 60	AAA	6
				497.0388 cm^{-1}	196 069.6713–196 566.7101	5–5	6.8140e−05	4.1350e−02	1.3694e+02	−0.684 55	AAA	6
				497.0364 cm^{-1}	196 069.6748–196 566.7112	3–3	1.1358e−04	6.8926e−02	1.3696e+02	−0.684 50	AAA	6
				497.0353 cm^{-1}	196 069.6748–196 566.7101	3–5	4.5430e−06	4.5949e−03	9.1303e+00	−1.860 61	AAA	6
627	1*s*7*d*-1*s*8*f*	$^3D-{}^3F^\circ$		*526.406* cm^{-1}	*196 069.672–196 596.078*	15–21	1.0122e−03	7.6671e−01	7.1924e+03	1.060 72	AAA	6
				526.4065 cm^{-1}	196 069.6711–196 596.0776	7–9	1.0957e−03	7.6217e−01	3.3366e+03	0.727 15	AAA	6
				526.4057 cm^{-1}	196 069.6713–196 596.0770	5–7	7.5234e−04	5.6985e−01	1.7819e+03	0.454 73	AAA	6
				526.4039 cm^{-1}	196 069.6748–196 596.0787	3–5	9.2036e−04	8.2990e−01	1.5571e+03	0.396 15	AAA	6
				526.4059 cm^{-1}	196 069.6711–196 596.0770	7–7	9.3036e−05	5.0335e−02	2.2035e+02	−0.453 04	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				526.4074 cm^{-1}	196 069.6713–196 596.0787	5–5	1.7042e−04	9.2200e−02	2.8831e+02	−0.336 30	AAA	6
				526.4076 cm^{-1}	196 069.6711–196 596.0787	7–5	4.8696e−06	1.8818e−03	8.2382e+00	−1.880 32	AAA	6
628	1*s*7*d*-1*s*8*f*	$^3D-^1F^\circ$										
				526.4093 cm^{-1}	196 069.6711–196 596.0804	7–7	2.871e−05	1.553e−02	6.799e+01	−0.963 7	AA	6
				526.4091 cm^{-1}	196 069.6713–196 596.0804	5–7	2.216e−04	1.678e−01	5.248e+02	−0.076 1	AA	6
629	1*s*7*d*-1*s*8*p*	$^3D-^1P^\circ$										
				531.7272 cm^{-1}	196 069.6713–196 601.3985	5–3	2.020e−08	6.427e−06	1.989e−02	−4.493 0	AA	6
630	1*s*7*d*-1*s*9*p*	$^3D-^3P^\circ$		*865.659* cm^{-1}	*196 069.672–196 935.331*	15–9	2.7704e−04	3.3255e−02	1.8971e+02	−0.302 05	AAA	6
				865.6586 cm^{-1}	196 069.6711–196 935.3297	7–5	2.3272e−04	3.3256e−02	8.8531e+01	−0.633 03	AAA	6
				865.6591 cm^{-1}	196 069.6713–196 935.3304	5–3	2.0777e−04	2.4940e−02	4.7424e+01	−0.904 13	AAA	6
				865.6649 cm^{-1}	196 069.6748–196 935.3397	3–1	2.7705e−04	1.8475e−02	2.1079e+01	−1.256 28	AAA	6
				865.6584 cm^{-1}	196 069.6713–196 935.3297	5–5	4.1554e−05	8.3134e−03	1.5808e+01	−1.381 25	AAA	6
				865.6556 cm^{-1}	196 069.6748–196 935.3304	3–3	6.9262e−05	1.3857e−02	1.5809e+01	−1.381 22	AAA	6
				865.6549 cm^{-1}	196 069.6748–196 935.3297	3–5	2.7705e−06	9.2379e−04	1.0540e+00	−2.557 30	AAA	6
631	1*s*7*d*-1*s*9*f*	$^3D-^3F^\circ$		*886.272* cm^{-1}	*196 069.672–196 955.944*	15–21	7.2520e−04	1.9378e−01	1.0797e+03	0.463 40	AAA	6
				886.2726 cm^{-1}	196 069.6711–196 955.9437	7–9	7.8261e−04	1.9205e−01	4.9937e+02	0.128 51	AAA	6
				886.2720 cm^{-1}	196 069.6713–196 955.9433	5–7	5.4320e−04	1.4515e−01	2.6958e+02	−0.139 22	AAA	6
				886.2696 cm^{-1}	196 069.6748–196 955.9444	3–5	6.5739e−04	2.0912e−01	2.3304e+02	−0.202 48	AAA	6
				886.2722 cm^{-1}	196 069.6711–196 955.9433	7–7	6.7191e−05	1.2824e−02	3.3346e+01	−1.046 87	AAA	6
				886.2731 cm^{-1}	196 069.6713–196 955.9444	5–5	1.2173e−04	2.3234e−02	4.3152e+01	−0.934 91	AAA	6
				886.2733 cm^{-1}	196 069.6711–196 955.9444	7–5	3.4783e−06	4.7420e−04	1.2330e+00	−2.478 94	AAA	6
632	1*s*7*d*-1*s*9*f*	$^3D-^1F^\circ$										
				886.2745 cm^{-1}	196 069.6711–196 955.9456	7–7	1.977e−05	3.773e−03	9.809e+00	−1.578 3	AA	6
				886.2743 cm^{-1}	196 069.6713–196 955.9456	5–7	1.525e−04	4.074e−02	7.566e+01	−0.691 0	AA	6
633	1*s*7*d*-1*s*9*p*	$^3D-^1P^\circ$										
				890.0198 cm^{-1}	196 069.6713–196 959.6911	5–3	1.288e−08	1.462e−06	2.704e−03	−5.136 0	AA	6
634	1*s*7*d*-1*s*10*p*	$^3D-^3P^\circ$		*1 128.660* cm^{-1}	*196 069.672–197 198.332*	15–9	1.8411e−04	1.3000e−02	5.6879e+01	−0.709 96	AAA	6
				1 128.6599 cm^{-1}	196 069.6711–197 198.3310	7–5	1.5464e−04	1.2999e−02	2.6542e+01	−1.040 98	AAA	6
				1 128.6602 cm^{-1}	196 069.6713–197 198.3315	5–3	1.3806e−04	9.7488e−03	1.4218e+01	−1.312 08	AAA	6
				1 128.6634 cm^{-1}	196 069.6748–197 198.3382	3–1	1.8409e−04	7.2217e−03	6.3193e+00	−1.664 24	AAA	6
				1 128.6597 cm^{-1}	196 069.6713–197 198.3310	5–5	2.7611e−05	3.2495e−03	4.7391e+00	−1.789 22	AAA	6
				1 128.6567 cm^{-1}	196 069.6748–197 198.3315	3–3	4.6023e−05	5.4164e−03	4.7396e+00	−1.789 17	AAA	6
				1 128.6562 cm^{-1}	196 069.6748–197 198.3310	3–5	1.8409e−06	3.6109e−04	3.1597e−01	−2.965 27	AAA	6
635	1*s*7*d*-1*s*10*f*	$^3D-^3F^\circ$		*1 143.679* cm^{-1}	*196 069.672–197 213.351*	15–21	5.2198e−04	8.3759e−02	3.6166e+02	0.099 12	AAA	6
				1 143.6795 cm^{-1}	196 069.6711–197 213.3506	7–9	5.6211e−04	8.2835e−02	1.6691e+02	−0.236 69	AAA	6
				1 143.6790 cm^{-1}	196 069.6713–197 213.3503	5–7	3.9310e−04	6.3078e−02	9.0787e+01	−0.501 15	AAA	6
				1 143.6763 cm^{-1}	196 069.6748–197 213.3511	3–5	4.7217e−04	9.0198e−02	7.7892e+01	−0.567 68	AAA	6
				1 143.6792 cm^{-1}	196 069.6711–197 213.3503	7–7	4.8633e−05	5.5742e−03	1.1232e+01	−1.408 72	AAA	6
				1 143.6798 cm^{-1}	196 069.6713–197 213.3511	5–5	8.7432e−05	1.0021e−02	1.4423e+01	−1.300 11	AAA	6
				1 143.6800 cm^{-1}	196 069.6711–197 213.3511	7–5	2.4983e−06	2.0453e−04	4.1213e−01	−2.844 14	AAA	6
636	1*s*7*d*-1*s*10*f*	$^3D-^1F^\circ$										
				1 143.6809 cm^{-1}	196 069.6711–197 213.3520	7–7	1.382e−05	1.584e−03	3.193e+00	−1.955 0	AA	6
				1 143.6807 cm^{-1}	196 069.6713–197 213.3520	5–7	1.066e−04	1.710e−02	2.461e+01	−1.068 1	AA	6
637	1*s*7*d*-1*s*8*p*	$^1D-^3P^\circ$										
				496.5846 cm^{-1}	196 070.1266–196 566.7112	5–3	2.762e−08	1.007e−05	3.339e−02	−4.297 8	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
638	1*s*7*d*-1*s*8*f*	$^1D-^3F^\circ$										
				525.9521 cm^{-1}	196 070.1266–196 596.0787	5–5	1.441e−08	7.809e−06	2.444e−02	−4.408 4	AA	6
				525.9504 cm^{-1}	196 070.1266–196 596.0770	5–7	2.508e−04	1.903e−01	5.955e+02	−0.021 7	AA	6
639	1*s*7*d*-1*s*8*f*	$^1D-^1F^\circ$		525.9538 cm^{-1}	196 070.1266–196 596.0804	5–7	8.4683e−04	6.4252e−01	2.0109e+03	0.506 86	AAA	6
640	1*s*7*d*-1*s*8*p*	$^1D-^1P^\circ$		531.2719 cm^{-1}	196 070.1266–196 601.3985	5–3	2.5468e−04	8.1165e−02	2.5148e+02	−0.391 66	AAA	6
641	1*s*7*d*-1*s*9*p*	$^1D-^3P^\circ$										
				865.2038 cm^{-1}	196 070.1266–196 935.3304	5–3	1.680e−08	2.019e−06	3.841e−03	−4.995 9	AA	6
642	1*s*7*d*-1*s*9*f*	$^1D-^3F^\circ$										
				885.8178 cm^{-1}	196 070.1266–196 955.9444	5–5	1.030e−08	1.968e−06	3.658e−03	−5.006 9	AA	6
				885.8167 cm^{-1}	196 070.1266–196 955.9433	5–7	1.724e−04	4.610e−02	8.567e+01	−0.637 3	AA	6
643	1*s*7*d*-1*s*9*f*	$^1D-^1F^\circ$		885.8190 cm^{-1}	196 070.1266–196 955.9456	5–7	6.1082e−04	1.6338e−01	3.0361e+02	−0.087 82	AAA	6
644	1*s*7*d*-1*s*9*p*	$^1D-^1P^\circ$		889.5645 cm^{-1}	196 070.1266–196 959.6911	5–3	1.6163e−04	1.8373e−02	3.3997e+01	−1.036 85	AAA	6
645	1*s*7*d*-1*s*10*p*	$^1D-^3P^\circ$										
				1 128.2049 cm^{-1}	196 070.1266–197 198.3315	5–3	1.116e−08	7.885e−07	1.150e−03	−5.404 2	AA	6
646	1*s*7*d*-1*s*10*f*	$^1D-^3F^\circ$										
				1 143.2237 cm^{-1}	196 070.1266–197 213.3503	5–7	1.204e−04	1.934e−02	2.784e+01	−1.014 6	AA	6
647	1*s*7*d*-1*s*10*f*	$^1D-^1F^\circ$		1 143.2254 cm^{-1}	196 070.1266–197 213.3520	5–7	4.4184e−04	7.0955e−02	1.0216e+02	−0.450 04	AAA	6
648	1*s*7*d*-1*s*10*p*	$^1D-^1P^\circ$		1 145.9612 cm^{-1}	196 070.1266–197 216.0878	5–3	1.0833e−04	7.4202e−03	1.0658e+01	−1.430 61	AAA	6
649	1*s*7*f*-1*s*8*d*	$^3F^\circ-^3D$		*523.886* cm^{-1}	*196 071.175–196 595.061*	21–15	1.4995e−04	5.8504e−02	7.7206e+02	0.089 41	AAA	6
				523.8851 cm^{-1}	196 071.1754–196 595.0605	9–7	1.4974e−04	6.3618e−02	3.5980e+02	−0.242 18	AAA	6
				523.8862 cm^{-1}	196 071.1744–196 595.0606	7–5	1.1012e−04	4.2966e−02	1.8900e+02	−0.521 78	AAA	6
				523.8859 cm^{-1}	196 071.1770–196 595.0629	5–3	1.6305e−04	5.3439e−02	1.6791e+02	−0.573 17	AAA	6
				523.8861 cm^{-1}	196 071.1744–196 595.0605	7–7	9.7261e−06	5.3128e−03	2.3370e+01	−1.429 58	AAA	6
				523.8836 cm^{-1}	196 071.1770–196 595.0606	5–5	1.8116e−05	9.8958e−03	3.1093e+01	−1.305 58	AAA	6
				523.8835 cm^{-1}	196 071.1770–196 595.0605	5–7	3.6974e−07	2.8276e−04	8.8843e−01	−2.849 62	AAA	6
650	1*s*7*f*-1*s*8*d*	$^3F^\circ-^1D$										
				524.1979 cm^{-1}	196 071.1744–196 595.3723	7–5	3.904e−05	1.522e−02	6.689e+01	−0.972 6	AA	6
651	1*s*7*f*-1*s*8*g*	$^3F^\circ-^3G$		*525.033* cm^{-1}	*196 071.175–196 596.209*	21–27	1.4957e−03	1.0458e+00	1.3771e+04	1.341 68	AAA	6
				525.0332 cm^{-1}	196 071.1754–196 596.2086	9–11	1.5363e−03	1.0212e+00	5.7629e+03	0.963 35	AAA	6
				525.0335 cm^{-1}	196 071.1744–196 596.2079	7–9	1.3883e−03	9.7076e−01	4.2609e+03	0.832 21	AAA	6
				525.0322 cm^{-1}	196 071.1770–196 596.2092	5–7	1.4109e−03	1.0743e+00	3.3680e+03	0.730 08	AAA	6
				525.0325 cm^{-1}	196 071.1754–196 596.2079	9–9	4.9927e−05	2.7153e−02	1.5323e+02	−0.611 94	AAA	6
				525.0348 cm^{-1}	196 071.1744–196 596.2092	7–7	9.2783e−05	5.0460e−02	2.2148e+02	−0.451 95	AAA	6
				525.0338 cm^{-1}	196 071.1754–196 596.2092	9–7	1.9595e−06	8.2886e−04	4.6775e+00	−2.127 27	AAA	6
652	1*s*7*f*-1*s*8*g*	$^3F^\circ-^1G$										
				525.0352 cm^{-1}	196 071.1744–196 596.2096	7–9	7.582e−05	5.302e−02	2.327e+02	−0.430 5	AA	6
				525.0342 cm^{-1}	196 071.1754–196 596.2096	9–9	4.609e−05	2.507e−02	1.415e+02	−0.646 7	AA	6
653	1*s*7*f*-1*s*9*d*	$^3F^\circ-^3D$		*884.050* cm^{-1}	*196 071.175–196 955.225*	21–15	8.6942e−05	1.1913e−02	9.3159e+01	−0.601 78	AAA	6
				884.0494 cm^{-1}	196 071.1754–196 955.2248	9–7	8.6827e−05	1.2954e−02	4.3417e+01	−0.933 34	AAA	6
				884.0505 cm^{-1}	196 071.1744–196 955.2249	7–5	6.3841e−05	8.7473e−03	2.2802e+01	−1.213 03	AAA	6
				884.0495 cm^{-1}	196 071.1770–196 955.2265	5–3	9.4545e−05	1.0882e−02	2.0261e+01	−1.264 34	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				884.0504 cm^{-1}	196 071.1744–196 955.2248	7–7	5.6395e−06	1.0818e−03	2.8199e+00	−2.120 76	AAA	6
				884.0479 cm^{-1}	196 071.1770–196 955.2249	5–5	1.0504e−05	2.0149e−03	3.7517e+00	−1.996 77	AAA	6
				884.0478 cm^{-1}	196 071.1770–196 955.2248	5–7	2.1439e−07	5.7576e−05	1.0720e−01	−3.540 79	AAA	6
654	1*s*7*f*-1*s*9*d*	$^3F^\circ$–^1D										
				884.2726 cm^{-1}	196 071.1744–196 955.4470	7–5	2.265e−05	3.102e−03	8.084e+00	−1.663 2	AA	6
655	1*s*7*f*-1*s*9*g*	$^3F^\circ$–^3G		*884.861* cm^{-1}	*196 071.175–196 956.037*	21–27	1.0037e−03	2.4708e−01	1.9305e+03	0.715 06	AAA	6
				884.8612 cm^{-1}	196 071.1754–196 956.0366	9–11	1.0309e−03	2.4125e−01	8.0782e+02	0.336 72	AAA	6
				884.8617 cm^{-1}	196 071.1744–196 956.0361	7–9	9.3169e−04	2.2936e−01	5.9734e+02	0.205 62	AAA	6
				884.8600 cm^{-1}	196 071.1770–196 956.0370	5–7	9.4677e−04	2.5379e−01	4.7212e+02	0.103 45	AAA	6
				884.8607 cm^{-1}	196 071.1754–196 956.0361	9–9	3.3514e−05	6.4170e−03	2.1487e+01	−1.238 42	AAA	6
				884.8626 cm^{-1}	196 071.1744–196 956.0370	7–7	6.2262e−05	1.1921e−02	3.1047e+01	−1.078 57	AAA	6
				884.8616 cm^{-1}	196 071.1754–196 956.0370	9–7	1.3150e−06	1.9583e−04	6.5574e−01	−2.753 87	AAA	6
656	1*s*7*f*-1*s*9*g*	$^3F^\circ$–^1G										
				884.8629 cm^{-1}	196 071.1744–196 956.0373	7–9	5.081e−05	1.251e−02	3.258e+01	−1.057 7	AA	6
				884.8619 cm^{-1}	196 071.1754–196 956.0373	9–9	3.092e−05	5.920e−03	1.982e+01	−1.273 4	AA	6
657	1*s*7*f*-1*s*10*d*	$^3F^\circ$–^3D	*1 141.649* cm^{-1}	*196 071.175–197 212.824*		21–15	5.5262e−05	4.5404e−03	2.7495e+01	−1.020 69	AAA	6
				1 141.6487 cm^{-1}	196 071.1754–197 212.8241	9–7	5.5191e−05	4.9376e−03	1.2815e+01	−1.352 24	AAA	6
				1 141.6498 cm^{-1}	196 071.1744–197 212.8242	7–5	4.0576e−05	3.3337e−03	6.7294e+00	−1.631 97	AAA	6
				1 141.6484 cm^{-1}	196 071.1770–197 212.8254	5–3	6.0097e−05	4.1476e−03	5.9801e+00	−1.683 23	AAA	6
				1 141.6497 cm^{-1}	196 071.1744–197 212.8241	7–7	3.5848e−06	4.1234e−04	8.3233e−01	−2.539 65	AAA	6
				1 141.6472 cm^{-1}	196 071.1770–197 212.8242	5–5	6.6770e−06	7.6802e−04	1.1074e+00	−2.415 66	AAA	6
				1 141.6471 cm^{-1}	196 071.1770–197 212.8241	5–7	1.3628e−07	2.1946e−05	3.1642e−02	−3.959 68	AAA	6
658	1*s*7*f*-1*s*10*d*	$^3F^\circ$–^1D										
				1 141.8134 cm^{-1}	196 071.1744–197 212.9878	7–5	1.440e−05	1.183e−03	2.387e+00	−2.082 0	AA	6
659	1*s*7*f*-1*s*10*g*	$^3F^\circ$–^3G	*1 142.243* cm^{-1}	*196 071.175–197 213.419*		21–27	6.9078e−04	1.0205e−01	6.1767e+02	0.331 04	AAA	6
				1 142.2434 cm^{-1}	196 071.1754–197 213.4188	9–11	7.0951e−04	9.9643e−02	2.5847e+02	−0.047 31	AAA	6
				1 142.2440 cm^{-1}	196 071.1744–197 213.4184	7–9	6.4125e−04	9.4735e−02	1.9113e+02	−0.178 39	AAA	6
				1 142.2421 cm^{-1}	196 071.1770–197 213.4191	5–7	6.5159e−04	1.0482e−01	1.5105e+02	−0.280 59	AAA	6
				1 142.2430 cm^{-1}	196 071.1754–197 213.4184	9–9	2.3071e−05	2.6510e−03	6.8765e+00	−1.622 35	AAA	6
				1 142.2447 cm^{-1}	196 071.1744–197 213.4191	7–7	4.2851e−05	4.9238e−03	9.9338e+00	−1.462 60	AAA	6
				1 142.2437 cm^{-1}	196 071.1754–197 213.4191	9–7	9.0499e−07	8.0879e−05	2.0980e−01	−3.137 92	AAA	6
660	1*s*7*f*-1*s*10*g*	$^3F^\circ$–^1G										
				1 142.2449 cm^{-1}	196 071.1744–197 213.4193	7–9	3.494e−05	5.161e−03	1.041e+01	−1.442 2	AA	6
				1 142.2439 cm^{-1}	196 071.1754–197 213.4193	9–9	2.127e−05	2.444e−03	6.341e+00	−1.657 6	AA	6
661	1*s*7*f*-1*s*8*d*	$^1F^\circ$–^3D										
				523.8812 cm^{-1}	196 071.1793–196 595.0605	7–7	3.215e−06	1.756e−03	7.725e+00	−1.910 4	AA	6
				523.8813 cm^{-1}	196 071.1793–196 595.0606	7–5	3.482e−05	1.359e−02	5.976e+01	−1.021 8	AA	6
662	1*s*7*f*-1*s*8*d*	$^1F^\circ$–^1D		524.1930 cm^{-1}	196 071.1793–196 595.3723	7–5	1.2290e−04	4.7896e−02	2.1056e+02	−0.474 60	AAA	6
663	1*s*7*f*-1*s*8*g*	$^1F^\circ$–^3G										
				525.0299 cm^{-1}	196 071.1793–196 596.2092	7–7	3.067e−05	1.668e−02	7.321e+01	−0.932 7	AA	6
				525.0286 cm^{-1}	196 071.1793–196 596.2079	7–9	9.807e−05	6.857e−02	3.010e+02	−0.318 7	AA	6
664	1*s*7*f*-1*s*8*g*	$^1F^\circ$–^1G		525.0303 cm^{-1}	196 071.1793–196 596.2096	7–9	1.4144e−03	9.8902e−01	4.3410e+03	0.840 30	AAA	6
665	1*s*7*f*-1*s*9*d*	$^1F^\circ$–^3D										

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				884.0455 cm^{-1}	196 071.1793–196 955.2248	7–7	1.864e−06	3.576e−04	9.321e−01	−2.601 5	AA	6
				884.0456 cm^{-1}	196 071.1793–196 955.2249	7–5	2.020e−05	2.768e−03	7.215e+00	−1.712 8	AA	6
666	1*s*7*f*-1*s*9*d*	$^1F^\circ-{}^1D$		884.2677 cm^{-1}	196 071.1793–196 955.4470	7–5	7.1262e−05	9.7593e−03	2.5434e+01	−1.165 48	AAA	6
667	1*s*7*f*-1*s*9*g*	$^1F^\circ-{}^3G$										
				884.8577 cm^{-1}	196 071.1793–196 956.0370	7–7	2.058e−05	3.941e−03	1.026e+01	−1.559 3	AA	6
				884.8568 cm^{-1}	196 071.1793–196 956.0361	7–9	6.573e−05	1.618e−02	4.214e+01	−0.945 9	AA	6
668	1*s*7*f*-1*s*9*g*	$^1F^\circ-{}^1G$		884.8580 cm^{-1}	196 071.1793–196 956.0373	7–9	9.4919e−04	2.3367e−01	6.0857e+02	0.213 71	AAA	6
669	1*s*7*f*-1*s*10*d*	$^1F^\circ-{}^3D$										
				1 141.6448 cm^{-1}	196 071.1793–197 212.8241	7–7	1.185e−06	1.363e−04	2.751e−01	−3.020 4	AA	6
				1 141.6449 cm^{-1}	196 071.1793–197 212.8242	7–5	1.284e−05	1.055e−03	2.130e+00	−2.131 5	AA	6
670	1*s*7*f*-1*s*10*d*	$^1F^\circ-{}^1D$		1 141.8085 cm^{-1}	196 071.1793–197 212.9878	7–5	4.5288e−05	3.7198e−03	7.5077e+00	−1.584 38	AAA	6
671	1*s*7*f*-1*s*10*g*	$^1F^\circ-{}^3G$										
				1 142.2398 cm^{-1}	196 071.1793–197 213.4191	7–7	1.416e−05	1.627e−03	3.283e+00	−1.943 4	AA	6
				1 142.2391 cm^{-1}	196 071.1793–197 213.4184	7–9	4.519e−05	6.677e−03	1.347e+01	−1.330 3	AA	6
672	1*s*7*f*-1*s*10*g*	$^1F^\circ-{}^1G$		1 142.2400 cm^{-1}	196 071.1793–197 213.4193	7–9	6.5330e−04	9.6516e−02	1.9472e+02	−0.170 30	AAA	6
673	1*s*7*g*-1*s*8*f*	$^3G-{}^3F^\circ$		*524.710* cm^{-1}	*196 071.368–196 596.078*	27–21	8.2583e−05	3.4975e−02	5.9249e+02	−0.024 87	AAA	6
				524.7096 cm^{-1}	196 071.3680–196 596.0776	11–9	8.0820e−05	3.6007e−02	2.4851e+02	−0.402 22	AAA	6
				524.7100 cm^{-1}	196 071.3670–196 596.0770	9–7	7.6202e−05	3.2273e−02	1.8224e+02	−0.536 92	AAA	6
				524.7098 cm^{-1}	196 071.3689–196 596.0787	7–5	8.5019e−05	3.3068e−02	1.4523e+02	−0.635 50	AAA	6
				524.7106 cm^{-1}	196 071.3670–196 596.0776	9–9	2.1481e−06	1.1697e−03	6.6050e+00	−1.977 69	AAA	6
				524.7081 cm^{-1}	196 071.3689–196 596.0770	7–7	4.0608e−06	2.2112e−03	9.7116e+00	−1.810 27	AAA	6
				524.7087 cm^{-1}	196 071.3689–196 596.0776	7–9	6.5601e−08	4.5928e−05	2.0171e−01	−3.492 83	AAA	6
674	1*s*7*g*-1*s*8*f*	$^3G-{}^1F^\circ$										
				524.7134 cm^{-1}	196 071.3670–196 596.0804	9–7	6.053e−06	2.564e−03	1.448e+01	−1.636 9	AA	6
				524.7115 cm^{-1}	196 071.3689–196 596.0804	7–7	1.253e−06	6.822e−04	2.996e+00	−2.321 0	AA	6
675	1*s*7*g*-1*s*8*h*	$^3G-{}^3H^\circ$		*524.872* cm^{-1}	*196 071.368–196 596.240*	27–33	2.0794e−03	1.3831e+00	2.3422e+04	1.572 21	AAA	6
				524.8718 cm^{-1}	196 071.3680–196 596.2398	11–13	2.0930e−03	1.3461e+00	9.2872e+03	1.170 46	AAA	6
				524.8723 cm^{-1}	196 071.3670–196 596.2393	9–11	2.0494e−03	1.3631e+00	7.6947e+03	1.088 77	AAA	6
				524.8713 cm^{-1}	196 071.3689–196 596.2402	7–9	1.9896e−03	1.3921e+00	6.1120e+03	0.988 76	AAA	6
				524.8713 cm^{-1}	196 071.3680–196 596.2393	11–11	4.3137e−05	2.3475e−02	1.6196e+02	−0.588 01	AAA	6
				524.8732 cm^{-1}	196 071.3670–196 596.2402	9–9	5.3184e−05	2.8942e−02	1.6338e+02	−0.584 23	AAA	6
				524.8722 cm^{-1}	196 071.3680–196 596.2402	11–9	1.0336e−06	4.6021e−04	3.1752e+00	−2.295 66	AAA	6
676	1*s*7*g*-1*s*8*h*	$^3G-{}^1H^\circ$										
				524.8735 cm^{-1}	196 071.3670–196 596.2405	9–11	6.625e−08	4.406e−05	2.487e−01	−3.401 7	AA	6
				524.8725 cm^{-1}	196 071.3680–196 596.2405	11–11	4.058e−05	2.208e−02	1.524e+02	−0.614 5	AA	6
677	1*s*7*g*-1*s*9*f*	$^3G-{}^3F^\circ$		*884.576* cm^{-1}	*196 071.368–196 955.944*	27–21	4.2967e−05	6.4029e−03	6.4340e+01	−0.762 26	AAA	6
				884.5757 cm^{-1}	196 071.3680–196 955.9437	11–9	4.2117e−05	6.6023e−03	2.7029e+01	−1.138 91	AAA	6
				884.5763 cm^{-1}	196 071.3670–196 955.9433	9–7	3.9481e−05	5.8834e−03	1.9707e+01	−1.276 13	AAA	6
				884.5755 cm^{-1}	196 071.3689–196 955.9444	7–5	4.4304e−05	6.0632e−03	1.5796e+01	−1.372 20	AAA	6
				884.5767 cm^{-1}	196 071.3670–196 955.9437	9–9	1.1194e−06	2.1447e−04	7.1838e−01	−2.714 39	AAA	6
				884.5744 cm^{-1}	196 071.3689–196 955.9433	7–7	2.1396e−06	4.0994e−04	1.0680e+00	−2.542 18	AAA	6
				884.5748 cm^{-1}	196 071.3689–196 955.9437	7–9	3.4186e−08	8.4213e−06	2.1939e−02	−4.229 52	AAA	6
678	1*s*7*g*-1*s*9*f*	$^3G-{}^1F^\circ$										

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				884.5786 cm^{-1}	196 071.3670–196 955.9456	9–7	3.383e−06	5.042e−04	1.689e+00	−2.343 2	AA	6
				884.5767 cm^{-1}	196 071.3689–196 955.9456	7–7	6.294e−07	1.206e−04	3.142e−01	−3.073 6	AA	6
679	1*s*7*g*-1*s*9*h*	$^3G-^3H^\circ$		*884.691* cm^{-1}	*196 071.368–196 956.059*	27–33	1.2349e−03	2.8911e−01	2.9048e+03	0.892 43	AAA	6
				884.6909 cm^{-1}	196 071.3680–196 956.0589	11–13	1.2430e−03	2.8138e−01	1.1518e+03	0.490 69	AAA	6
				884.6915 cm^{-1}	196 071.3670–196 956.0585	9–11	1.2171e−03	2.8494e−01	9.5428e+02	0.408 99	AAA	6
				884.6902 cm^{-1}	196 071.3689–196 956.0591	7–9	1.1816e−03	2.9100e−01	7.5801e+02	0.308 99	AAA	6
				884.6905 cm^{-1}	196 071.3680–196 956.0585	11–11	2.5617e−05	4.9068e−03	2.0085e+01	−1.267 81	AAA	6
				884.6921 cm^{-1}	196 071.3670–196 956.0591	9–9	3.1584e−05	6.0498e−03	2.0261e+01	−1.264 02	AAA	6
				884.6911 cm^{-1}	196 071.3680–196 956.0591	11–9	6.1380e−07	9.6194e−05	3.9376e−01	−2.975 46	AAA	6
680	1*s*7*g*-1*s*9*h*	$^3G-^1H^\circ$										
				884.6923 cm^{-1}	196 071.3670–196 956.0593	9–11	3.934e−08	9.210e−06	3.084e−02	−4.081 5	AA	6
				884.6913 cm^{-1}	196 071.3680–196 956.0593	11–11	2.410e−05	4.616e−03	1.890e+01	−1.294 3	AA	6
681	1*s*7*g*-1*s*10*f*	$^3G-^3F^\circ$		*1 141.983* cm^{-1}	*196 071.368–197 213.351*	27–21	2.5491e−05	2.2792e−03	1.7740e+01	−1.210 85	AAA	6
				1 141.9826 cm^{-1}	196 071.3680–197 213.3506	11–9	2.5016e−05	2.3529e−03	7.4613e+00	−1.587 00	AAA	6
				1 141.9833 cm^{-1}	196 071.3670–197 213.3503	9–7	2.3351e−05	2.0878e−03	5.4170e+00	−1.726 06	AAA	6
				1 141.9822 cm^{-1}	196 071.3689–197 213.3511	7–5	2.6316e−05	2.1609e−03	4.3606e+00	−1.820 27	AAA	6
				1 141.9836 cm^{-1}	196 071.3670–197 213.3506	9–9	6.6491e−07	7.6436e−05	1.9832e−01	−3.162 46	AAA	6
				1 141.9814 cm^{-1}	196 071.3689–197 213.3503	7–7	1.2807e−06	1.4723e−04	2.9710e−01	−2.986 92	AAA	6
				1 141.9817 cm^{-1}	196 071.3689–197 213.3506	7–9	2.0305e−08	3.0011e−06	6.0562e−03	−4.677 62	AAA	6
682	1*s*7*g*-1*s*10*f*	$^3G-^1F^\circ$										
				1 141.9850 cm^{-1}	196 071.3670–197 213.3520	9–7	2.109e−06	1.886e−04	4.892e−01	−2.770 3	AA	6
				1 141.9831 cm^{-1}	196 071.3689–197 213.3520	7–7	3.640e−07	4.185e−05	8.445e−02	−3.533 2	AA	6
683	1*s*7*g*-1*s*10*h*	$^3G-^3H^\circ$		*1 142.067* cm^{-1}	*196 071.368–197 213.435*	27–33	7.8507e−04	1.1029e−01	8.5838e+02	0.473 90	AAA	6
				1 142.0672 cm^{-1}	196 071.3680–197 213.4352	11–13	7.9019e−04	1.0734e−01	3.4036e+02	0.072 15	AAA	6
				1 142.0680 cm^{-1}	196 071.3670–197 213.4350	9–11	7.7373e−04	1.0870e−01	2.8199e+02	−0.009 55	AAA	6
				1 142.0665 cm^{-1}	196 071.3689–197 213.4354	7–9	7.5117e−04	1.1101e−01	2.2400e+02	−0.109 55	AAA	6
				1 142.0670 cm^{-1}	196 071.3680–197 213.4350	11–11	1.6286e−05	1.8719e−03	5.9356e+00	−1.686 32	AAA	6
				1 142.0684 cm^{-1}	196 071.3670–197 213.4354	9–9	2.0079e−05	2.3079e−03	5.9874e+00	−1.682 54	AAA	6
				1 142.0674 cm^{-1}	196 071.3680–197 213.4354	11–9	3.9022e−07	3.6697e−05	1.1636e−01	−3.393 97	AAA	6
684	1*s*7*g*-1*s*10*h*	$^3G-^1H^\circ$										
				1 142.0685 cm^{-1}	196 071.3670–197 213.4355	9–11	2.504e−08	3.517e−06	9.124e−03	−4.499 6	AA	6
				1 142.0675 cm^{-1}	196 071.3680–197 213.4355	11–11	1.532e−05	1.761e−03	5.584e+00	−1.712 8	AA	6
685	1*s*7*g*-1*s*8*f*	$^1G-^3F^\circ$										
				524.7075 cm^{-1}	196 071.3695–196 596.0770	9–7	4.755e−06	2.014e−03	1.137e+01	−1.741 7	AA	6
				524.7081 cm^{-1}	196 071.3695–196 596.0776	9–9	1.985e−06	1.081e−03	6.103e+00	−2.012 0	AA	6
686	1*s*7*g*-1*s*8*f*	$^1G-^1F^\circ$		524.7109 cm^{-1}	196 071.3695–196 596.0804	9–7	7.7710e−05	3.2912e−02	1.8584e+02	−0.528 41	AAA	6
687	1*s*7*g*-1*s*8*h*	$^1G-^3H^\circ$										
				524.8707 cm^{-1}	196 071.3695–196 596.2402	9–9	4.914e−05	2.674e−02	1.510e+02	−0.618 6	AA	6
				524.8698 cm^{-1}	196 071.3695–196 596.2393	9–11	4.440e−07	2.953e−04	1.667e+00	−2.575 4	AA	6
688	1*s*7*g*-1*s*8*h*	$^1G-^1H^\circ$		524.8710 cm^{-1}	196 071.3695–196 596.2405	9–11	2.0523e−03	1.3650e+00	7.7056e+03	1.089 39	AAA	6
689	1*s*7*g*-1*s*9*f*	$^1G-^3F^\circ$										
				884.5742 cm^{-1}	196 071.3695–196 955.9437	9–9	1.034e−06	1.982e−04	6.638e−01	−2.748 7	AA	6
				884.5738 cm^{-1}	196 071.3695–196 955.9433	9–7	2.683e−06	3.999e−04	1.339e+00	−2.443 8	AA	6
690	1*s*7*g*-1*s*9*f*	$^1G-^1F^\circ$		884.5761 cm^{-1}	196 071.3695–196 955.9456	9–7	4.0290e−05	6.0040e−03	2.0110e+01	−1.267 32	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
691	$1s7g$-$1s9h$	$^1G-^3H^\circ$										
				884.6896 cm^{-1}	196 071.3695–196 956.0591	9–9	2.918e−05	5.590e−03	1.872e+01	−1.298 4	AA	6
				884.6890 cm^{-1}	196 071.3695–196 956.0585	9–11	2.637e−07	6.174e−05	2.068e−01	−3.255 2	AA	6
692	$1s7g$-$1s9h$	$^1G-^1H^\circ$		884.6898 cm^{-1}	196 071.3695–196 956.0593	9–11	1.2188e−03	2.8534e−01	9.5562e+02	0.409 60	AAA	6
693	$1s7g$-$1s10f$	$^1G-^3F^\circ$										
				1 141.9811 cm^{-1}	196 071.3695–197 213.3506	9–9	6.143e−07	7.062e−05	1.832e−01	−3.196 8	AA	6
				1 141.9808 cm^{-1}	196 071.3695–197 213.3503	9–7	1.683e−06	1.505e−04	3.905e−01	−2.868 2	AA	6
694	$1s7g$-$1s10f$	$^1G-^1F^\circ$		1 141.9825 cm^{-1}	196 071.3695–197 213.3520	9–7	2.3842e−05	2.1317e−03	5.5309e+00	−1.717 02	AAA	6
695	$1s7g$-$1s10h$	$^1G-^3H^\circ$										
				1 142.0659 cm^{-1}	196 071.3695–197 213.4354	9–9	1.855e−05	2.132e−03	5.532e+00	−1.716 9	AA	6
				1 142.0655 cm^{-1}	196 071.3695–197 213.4350	9–11	1.676e−07	2.354e−05	6.108e−02	−3.673 9	AA	6
696	$1s7g$-$1s10h$	$^1G-^1H^\circ$		1 142.0660 cm^{-1}	196 071.3695–197 213.4355	9–11	7.7484e−04	1.0885e−01	2.8240e+02	−0.008 92	AAA	6
697	$1s7h$-$1s8g$	$^3H^\circ-^3G$		*524.795* cm^{-1}	*196 071.413–196 596.209*	33–27	3.8362e−05	1.7086e−02	3.5370e+02	−0.248 85	AAA	6
				524.7952 cm^{-1}	196 071.4134–196 596.2086	13–11	3.7336e−05	1.7197e−02	1.4024e+02	−0.650 60	AAA	6
				524.7951 cm^{-1}	196 071.4128–196 596.2079	11–9	3.7808e−05	1.6839e−02	1.1620e+02	−0.732 30	AAA	6
				524.7952 cm^{-1}	196 071.4140–196 596.2092	9–7	3.8612e−05	1.6348e−02	9.2296e+01	−0.832 30	AAA	6
				524.7958 cm^{-1}	196 071.4128–196 596.2086	11–11	6.5111e−07	3.5443e−04	2.4457e+00	−2.409 08	AAA	6
				524.7939 cm^{-1}	196 071.4140–196 596.2079	9–9	8.0310e−07	4.3717e−04	2.4682e+00	−2.405 11	AAA	6
				524.7946 cm^{-1}	196 071.4140–196 596.2086	9–11	1.2764e−08	8.4921e−06	4.7945e−02	−4.116 74	AAA	6
698	$1s7h$-$1s8g$	$^3H^\circ-^1G$										
				524.7956 cm^{-1}	196 071.4140–196 596.2096	9–9	7.414e−07	4.036e−04	2.279e+00	−2.439 8	AA	6
699	$1s7h$-$1s8i$	$^3H^\circ-^3I$		*524.836* cm^{-1}	*196 071.413–196 596.250*	33–39	2.7950e−03	1.7978e+00	3.7214e+04	1.773 26	AAA	6
				524.8362 cm^{-1}	196 071.4134–196 596.2496	13–15	2.8077e−03	1.7632e+00	1.4378e+04	1.360 25	AAA	6
				524.8365 cm^{-1}	196 071.4128–196 596.2493	11–13	2.7674e−03	1.7800e+00	1.2282e+04	1.291 82	AAA	6
				524.8359 cm^{-1}	196 071.4140–196 596.2499	9–11	2.7149e−03	1.8060e+00	1.0196e+04	1.210 96	AAA	6
				524.8359 cm^{-1}	196 071.4134–196 596.2493	13–13	4.0001e−05	2.1771e−02	1.7753e+02	−0.548 18	AAA	6
				524.8371 cm^{-1}	196 071.4128–196 596.2499	11–11	4.7492e−05	2.5848e−02	1.7835e+02	−0.546 18	AAA	6
				524.8365 cm^{-1}	196 071.4134–196 596.2499	13–11	6.4455e−07	2.9683e−04	2.4205e+00	−2.413 54	AAA	6
700	$1s7h$-$1s8i$	$^3H^\circ-^1I$										
				524.8373 cm^{-1}	196 071.4128–196 596.2501	11–13	6.057e−08	3.896e−05	2.688e−01	−3.368 0	AA	6
				524.8367 cm^{-1}	196 071.4134–196 596.2501	13–13	3.799e−05	2.068e−02	1.686e+02	−0.570 6	AA	6
701	$1s7h$-$1s9g$	$^3H^\circ-^3G$		*884.623* cm^{-1}	*196 071.413–196 956.037*	33–27	1.7320e−05	2.7149e−03	3.3341e+01	−1.047 74	AAA	6
				884.6232 cm^{-1}	196 071.4134–196 956.0366	13–11	1.6857e−05	2.7326e−03	1.3220e+01	−1.449 49	AAA	6
				884.6233 cm^{-1}	196 071.4128–196 956.0361	11–9	1.7070e−05	2.6756e−03	1.0953e+01	−1.531 18	AAA	6
				884.6230 cm^{-1}	196 071.4140–196 956.0370	9–7	1.7433e−05	2.5976e−03	8.7002e+00	−1.631 19	AAA	6
				884.6238 cm^{-1}	196 071.4128–196 956.0366	11–11	2.9397e−07	5.6317e−05	2.3054e−01	−3.207 96	AAA	6
				884.6221 cm^{-1}	196 071.4140–196 956.0361	9–9	3.6271e−07	6.9487e−05	2.3273e−01	−3.203 86	AAA	6
				884.6226 cm^{-1}	196 071.4140–196 956.0366	9–11	5.7630e−09	1.3494e−06	4.5196e−03	−4.915 62	AAA	6
702	$1s7h$-$1s9g$	$^3H^\circ-^1G$										
				884.6233 cm^{-1}	196 071.4140–196 956.0373	9–9	3.346e−07	6.410e−05	2.147e−01	−3.238 9	AA	6
703	$1s7h$-$1s9i$	$^3H^\circ-^3I$		*884.652* cm^{-1}	*196 071.413–196 956.066*	33–39	1.3094e−03	2.9643e−01	3.6403e+03	0.990 44	AAA	6
				884.6525 cm^{-1}	196 071.4134–196 956.0659	13–15	1.3153e−03	2.9073e−01	1.4065e+03	0.577 43	AAA	6
				884.6529 cm^{-1}	196 071.4128–196 956.0657	11–13	1.2965e−03	2.9352e−01	1.2015e+03	0.509 03	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				884.6521 cm^{-1}	196 071.4140–196 956.0661	9–11	1.2718e−03	2.9777e−01	9.9730e+02	0.428 12	AAA	6
				884.6523 cm^{-1}	196 071.4134–196 956.0657	13–13	1.8739e−05	3.5897e−03	1.7366e+01	−1.331 00	AAA	6
				884.6533 cm^{-1}	196 071.4128–196 956.0661	11–11	2.2248e−05	4.2619e−03	1.7446e+01	−1.329 01	AAA	6
				884.6527 cm^{-1}	196 071.4134–196 956.0661	13–11	3.0195e−07	4.8944e−05	2.3678e−01	−3.196 36	AAA	6
704	1*s*7*h*-1*s*9*i*	$^3H^\circ-{}^1I$										
				884.6535 cm^{-1}	196 071.4128–196 956.0663	11–13	2.838e−08	6.424e−06	2.630e−02	−4.150 8	AA	6
				884.6529 cm^{-1}	196 071.4134–196 956.0663	13–13	1.780e−05	3.409e−03	1.649e+01	−1.353 4	AA	6
705	1*s*7*h*-1*s*10*g*	$^3H^\circ-{}^3G$										
				1 142.0054 cm^{-1}	196 071.4134–197 213.4188	13–11	9.1505e−06	8.9005e−04	3.3355e+00	−1.936 64	AAA	6
				1 142.0056 cm^{-1}	196 071.4128–197 213.4184	11–9	9.2662e−06	8.7151e−04	2.7636e+00	−2.018 34	AAA	6
				1 142.0051 cm^{-1}	196 071.4140–197 213.4191	9–7	9.4633e−06	8.4609e−04	2.1952e+00	−2.118 34	AAA	6
				1 142.0060 cm^{-1}	196 071.4128–197 213.4188	11–11	1.5958e−07	1.8344e−05	5.8170e−02	−3.695 11	AAA	6
				1 142.0044 cm^{-1}	196 071.4140–197 213.4184	9–9	1.9694e−07	2.2639e−05	5.8736e−02	−3.690 90	AAA	6
706	1*s*7*h*-1*s*10*g*	$^3H^\circ-{}^1G$										
				1 142.0053 cm^{-1}	196 071.4140–197 213.4193	9–9	1.816e−07	2.088e−05	5.416e−02	−3.726 1	AA	6
707	1*s*7*h*-1*s*10*i*	$^3H^\circ-{}^3I$		*1 142.027* cm^{-1}	*196 071.413–197 213.440*	33–39	7.2319e−04	9.8244e−02	9.3458e+02	0.510 82	AAA	6
				1 142.0270 cm^{-1}	196 071.4134–197 213.4404	13–15	7.2647e−04	9.6354e−02	3.6109e+02	0.097 81	AAA	6
				1 142.0275 cm^{-1}	196 071.4128–197 213.4403	11–13	7.1605e−04	9.7274e−02	3.0845e+02	0.029 39	AAA	6
				1 142.0266 cm^{-1}	196 071.4140–197 213.4406	9–11	7.0245e−04	9.8689e−02	2.5604e+02	−0.051 49	AAA	6
				1 142.0269 cm^{-1}	196 071.4134–197 213.4403	13–13	1.0350e−05	1.1897e−03	4.4585e+00	−1.810 61	AAA	6
				1 142.0278 cm^{-1}	196 071.4128–197 213.4406	11–11	1.2288e−05	1.4125e−03	4.4790e+00	−1.808 62	AAA	6
				1 142.0272 cm^{-1}	196 071.4134–197 213.4406	13–11	1.6677e−07	1.6221e−05	6.0787e−02	−3.675 99	AAA	6
708	1*s*7*h*-1*s*10*i*	$^3H^\circ-{}^1I$										
				1 142.0279 cm^{-1}	196 071.4128–197 213.4407	11–13	1.567e−08	2.129e−06	6.751e−03	−4.630 4	AA	6
				1 142.0273 cm^{-1}	196 071.4134–197 213.4407	13–13	9.830e−06	1.130e−03	4.234e+00	−1.833 0	AA	6
709	1*s*7*h*-1*s*8*g*	$^1H^\circ-{}^3G$										
				524.7941 cm^{-1}	196 071.4145–196 596.2086	11–11	6.126e−07	3.334e−04	2.301e+00	−2.435 6	AA	6
710	1*s*7*h*-1*s*8*g*	$^1H^\circ-{}^1G$		524.7951 cm^{-1}	196 071.4145–196 596.2096	11–9	3.7862e−05	1.6863e−02	1.1636e+02	−0.731 68	AAA	6
711	1*s*7*h*-1*s*8*i*	$^1H^\circ-{}^3I$										
				524.8348 cm^{-1}	196 071.4145–196 596.2493	11–13	2.447e−07	1.574e−04	1.086e+00	−2.761 5	AA	6
				524.8354 cm^{-1}	196 071.4145–196 596.2499	11–11	4.468e−05	2.432e−02	1.678e+02	−0.572 7	AA	6
712	1*s*7*h*-1*s*8*i*	$^1H^\circ-{}^1I$		524.8356 cm^{-1}	196 071.4145–196 596.2501	11–13	2.7696e−03	1.7815e+00	1.2292e+04	1.292 17	AAA	6
713	1*s*7*h*-1*s*9*g*	$^1H^\circ-{}^3G$										
				884.6221 cm^{-1}	196 071.4145–196 956.0366	11–11	2.766e−07	5.298e−05	2.169e−01	−3.234 5	AA	6
714	1*s*7*h*-1*s*9*g*	$^1H^\circ-{}^1G$		884.6228 cm^{-1}	196 071.4145–196 956.0373	11–9	1.7095e−05	2.6795e−03	1.0969e+01	−1.530 55	AAA	6
715	1*s*7*h*-1*s*9*i*	$^1H^\circ-{}^3I$										
				884.6512 cm^{-1}	196 071.4145–196 956.0657	11–13	1.147e−07	2.596e−05	1.063e−01	−3.544 3	AA	6
				884.6516 cm^{-1}	196 071.4145–196 956.0661	11–11	2.093e−05	4.010e−03	1.641e+01	−1.355 5	AA	6
716	1*s*7*h*-1*s*9*i*	$^1H^\circ-{}^1I$		884.6518 cm^{-1}	196 071.4145–196 956.0663	11–13	1.2975e−03	2.9374e−01	1.2024e+03	0.509 36	AAA	6
717	1*s*7*h*-1*s*10*g*	$^1H^\circ-{}^3G$										
				1 142.0043 cm^{-1}	196 071.4145–197 213.4188	11–11	1.501e−07	1.726e−05	5.473e−02	−3.721 6	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
718	1*s*7*h*-1*s*10*g*	$^1H^\circ$–^1G		1 142.0048 cm^{-1}	196 071.4145–197 213.4193	11–9	9.2796e−06	8.7277e−04	2.7676e+00	−2.017 71	AAA	6
719	1*s*7*h*-1*s*10*i*	$^1H^\circ$–^3I										
				1 142.0258 cm^{-1}	196 071.4145–197 213.4403	11–13	6.333e−08	8.603e−06	2.728e−02	−4.024 0	AA	6
				1 142.0261 cm^{-1}	196 071.4145–197 213.4406	11–11	1.156e−05	1.329e−03	4.214e+00	−1.835 1	AA	6
720	1*s*7*h*-1*s*10*i*	$^1H^\circ$–^1I		1 142.0262 cm^{-1}	196 071.4145–197 213.4407	11–13	7.1662e−04	9.7352e−02	3.0870e+02	0.029 74	AAA	6
721	1*s*7*i*-1*s*8*h*	^3I–$^3H^\circ$		*524.812* cm^{-1}	*196 071.428–196 596.240*	39–33	1.1856e−05	5.4606e−03	1.3359e+02	−0.671 70	AAA	6
				524.8122 cm^{-1}	196 071.4276–196 596.2398	15–13	1.1628e−05	5.4854e−03	5.1614e+01	−1.084 70	AAA	6
				524.8121 cm^{-1}	196 071.4272–196 596.2393	13–11	1.1739e−05	5.4067e−03	4.4091e+01	−1.153 13	AAA	6
				524.8122 cm^{-1}	196 071.4280–196 596.2402	11–9	1.1910e−05	5.3041e−03	3.6600e+01	−1.234 00	AAA	6
				524.8126 cm^{-1}	196 071.4272–196 596.2398	13–13	1.4358e−07	7.8152e−05	6.3732e−01	−2.993 11	AAA	6
				524.8113 cm^{-1}	196 071.4280–196 596.2393	11–11	1.7046e−07	9.2784e−05	6.4023e−01	−2.991 13	AAA	6
				524.8118 cm^{-1}	196 071.4280–196 596.2398	11–13	1.9576e−09	1.2593e−06	8.6894e−03	−4.858 48	AAA	6
722	1*s*7*i*-1*s*8*h*	^3I–$^1H^\circ$										
				524.8125 cm^{-1}	196 071.4280–196 596.2405	11–11	1.604e−07	8.729e−05	6.023e−01	−3.017 6	AA	6
723	1*s*7*i*-1*s*9*h*	^3I–$^3H^\circ$										
				884.6313 cm^{-1}	196 071.4276–196 956.0589	15–13	4.2897e−06	7.1221e−04	3.9757e+00	−1.971 30	AAA	6
				884.6313 cm^{-1}	196 071.4272–196 956.0585	13–11	4.3308e−06	7.0202e−04	3.3963e+00	−2.039 71	AAA	6
				884.6311 cm^{-1}	196 071.4280–196 956.0591	11–9	4.3937e−06	6.8867e−04	2.8192e+00	−2.120 59	AAA	6
				884.6317 cm^{-1}	196 071.4272–196 956.0589	13–13	5.2967e−08	1.0147e−05	4.9090e−02	−3.879 72	AAA	6
				884.6305 cm^{-1}	196 071.4280–196 956.0585	11–11	6.2886e−08	1.2047e−05	4.9317e−02	−3.877 72	AAA	6
724	1*s*7*i*-1*s*9*h*	^3I–$^1H^\circ$										
				884.6313 cm^{-1}	196 071.4280–196 956.0593	11–11	5.916e−08	1.133e−05	4.640e−02	−3.904 2	AA	6
725	1*s*7*i*-1*s*10*h*	^3I–$^3H^\circ$										
				1 142.0076 cm^{-1}	196 071.4276–197 213.4352	15–13	2.0567e−06	2.0490e−04	8.8601e−01	−2.512 37	AAA	6
				1 142.0078 cm^{-1}	196 071.4272–197 213.4350	13–11	2.0763e−06	2.0196e−04	7.5685e−01	−2.580 80	AAA	6
				1 142.0074 cm^{-1}	196 071.4280–197 213.4354	11–9	2.1065e−06	1.9812e−04	6.2825e−01	−2.661 68	AAA	6
				1 142.0080 cm^{-1}	196 071.4272–197 213.4352	13–13	2.5395e−08	2.9192e−06	1.0940e−02	−4.420 79	AAA	6
				1 142.0070 cm^{-1}	196 071.4280–197 213.4350	11–11	3.0150e−08	3.4658e−06	1.0990e−02	−4.418 80	AAA	6
726	1*s*7*i*-1*s*10*h*	^3I–$^1H^\circ$										
				1 142.0075 cm^{-1}	196 071.4280–197 213.4355	11–11	2.837e−08	3.261e−06	1.034e−02	−4.445 3	AA	6
727	1*s*7*i*-1*s*8*h*	^1I–$^3H^\circ$										
				524.8114 cm^{-1}	196 071.4284–196 596.2398	13–13	1.364e−07	7.422e−05	6.053e−01	−3.015 5	AA	6
728	1*s*7*i*-1*s*8*h*	^1I–$^1H^\circ$		524.8121 cm^{-1}	196 071.4284–196 596.2405	13–11	1.1748e−05	5.4108e−03	4.4124e+01	−1.152 79	AAA	6
729	1*s*7*i*-1*s*9*h*	^1I–$^3H^\circ$										
				884.6305 cm^{-1}	196 071.4284–196 956.0589	13–13	5.030e−08	9.637e−06	4.662e−02	−3.902 1	AA	6
730	1*s*7*i*-1*s*9*h*	^1I–$^1H^\circ$		884.6309 cm^{-1}	196 071.4284–196 956.0593	13–11	4.3342e−06	7.0257e−04	3.3990e+00	−2.039 37	AAA	6
731	1*s*7*i*-1*s*10*h*	^1I–$^3H^\circ$										
				1 142.0068 cm^{-1}	196 071.4284–197 213.4352	13–13	2.412e−08	2.772e−06	1.039e−02	−4.443 2	AA	6
732	1*s*7*i*-1*s*10*h*	^1I–$^1H^\circ$		1 142.0071 cm^{-1}	196 071.4284–197 213.4355	13–11	2.0780e−06	2.0212e−04	7.5747e−01	−2.580 44	AAA	6
733	1*s*7*p*-1*s*8*s*	$^1P^\circ$–^1S		455.4767 cm^{-1}	196 079.0858–196 534.5625	3–1	1.3739e−03	3.3095e−01	7.1761e+02	−0.003 12	AAA	6
734	1*s*7*p*-1*s*8*d*	$^1P^\circ$–^3D										

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				515.9748 cm^{-1}	196 079.0858–196 595.0606	3–5	6.189e−08	5.808e−05	1.112e−01	−3.758 8	AA	6
735	1*s*7*p*-1*s*8*d*	$^1P^\circ-{}^1D$		516.2865 cm^{-1}	196 079.0858–196 595.3723	3–5	7.9119e−04	7.4166e−01	1.4188e+03	0.347 33	AAA	6
736	1*s*7*p*-1*s*9*s*	$^1P^\circ-{}^1S$		833.8152 cm^{-1}	196 079.0858–196 912.9010	3–1	8.3180e−04	5.9788e−02	7.0818e+01	−0.746 26	AAA	6
737	1*s*7*p*-1*s*9*d*	$^1P^\circ-{}^3D$										
				876.1391 cm^{-1}	196 079.0858–196 955.2249	3–5	4.276e−08	1.392e−05	1.569e−02	−4.379 3	AA	6
738	1*s*7*p*-1*s*9*d*	$^1P^\circ-{}^1D$		876.3612 cm^{-1}	196 079.0858–196 955.4470	3–5	5.6491e−03	1.8379e+00	2.0713e+03	0.741 44	AAA	6
739	1*s*7*p*-1*s*10*s*	$^1P^\circ-{}^1S$		1 102.9781 cm^{-1}	196 079.0858–197 182.0639	3–1	5.6053e−04	2.3025e−02	2.0617e+01	−1.160 68	AAA	6
740	1*s*7*p*-1*s*10*d*	$^1P^\circ-{}^3D$										
				1 133.7384 cm^{-1}	196 079.0858–197 212.8242	3–5	3.024e−08	5.879e−06	5.121e−03	−4.753 6	AA	6
741	1*s*7*p*-1*s*10*d*	$^1P^\circ-{}^1D$		1 133.9020 cm^{-1}	196 079.0858–197 212.9878	3–5	4.0864e−04	7.9414e−02	6.9170e+01	−0.622 98	AAA	6
742	1*s*8*s*-1*s*8*p*	$^3S-{}^3P^\circ$		*105.352* cm^{-1}	*196 461.3602–196 566.712*	3–9	6.0675e−05	2.4587e+00	2.3049e+04	0.867 83	AAA	6
				105.3499 cm^{-1}	196 461.3602–196 566.7101	3–5	6.0678e−05	1.3661e+00	1.2807e+04	0.612 59	AAA	6
				105.3510 cm^{-1}	196 461.3602–196 566.7112	3–3	6.0678e−05	8.1962e−01	7.6837e+03	0.390 73	AAA	6
				105.3642 cm^{-1}	196 461.3602–196 566.7244	3–1	6.0678e−05	2.7314e−01	2.5603e+03	−0.086 50	AAA	6
743	1*s*8*s*-1*s*9*p*	$^3S-{}^3P^\circ$		*473.971* cm^{-1}	*196 461.3602–196 935.331*	3–9	2.0002e−05	4.0045e−02	8.3444e+01	−0.920 33	AAA	6
				473.9695 cm^{-1}	196 461.3602–196 935.3297	3–5	2.0002e−05	2.2247e−02	4.6358e+01	−1.175 60	AAA	6
				473.9702 cm^{-1}	196 461.3602–196 935.3304	3–3	2.0002e−05	1.3348e−02	2.7815e+01	−1.397 45	AAA	6
				473.9795 cm^{-1}	196 461.3602–196 935.3397	3–1	2.0002e−05	4.4493e−03	9.2710e+00	−1.874 59	AAA	6
744	1*s*8*s*-1*s*10*p*	$^3S-{}^3P^\circ$		*736.972* cm^{-1}	*196 461.3602–197 198.332*	3–9	2.5928e−05	2.1470e−02	2.8773e+01	−1.191 04	AAA	6
				736.9708 cm^{-1}	196 461.3602–197 198.3310	3–5	2.5922e−05	1.1925e−02	1.5982e+01	−1.446 41	AAA	6
				736.9713 cm^{-1}	196 461.3602–197 198.3315	3–3	2.5922e−05	7.1552e−03	9.5889e+00	−1.668 25	AAA	6
				736.9780 cm^{-1}	196 461.3602–197 198.3382	3–1	2.5922e−05	2.3850e−03	3.1962e+00	−2.145 38	AAA	6
745	1*s*8*s*-1*s*8*p*	$^1S-{}^1P^\circ$		66.8360 cm^{-1}	196 534.5625–196 601.3985	1–3	1.7326e−05	1.7444e+00	8.5925e+03	0.241 66	AAA	6
746	1*s*8*s*-1*s*9*p*	$^1S-{}^1P^\circ$		425.1286 cm^{-1}	196 534.5625–196 959.6911	1–3	7.2589e−05	1.8064e−01	1.3988e+02	−0.743 19	AAA	6
747	1*s*8*s*-1*s*10*p*	$^1S-{}^1P^\circ$		681.5253 cm^{-1}	196 534.5625–197 216.0878	1–3	6.7967e−05	6.5813e−02	3.1791e+01	−1.181 69	AAA	6
748	1*s*8*p*-1*s*8*d*	$^3P^\circ-{}^3D$		*28.349* cm^{-1}	*196 566.712–196 595.061*	9–15	1.5918e−06	4.9490e−01	5.1725e+04	0.648 76	AAA	6
				28.3504 cm^{-1}	196 566.7101–196 595.0605	5–7	1.5918e−06	4.1568e−01	2.4135e+04	0.317 72	AAA	6
				28.3494 cm^{-1}	196 566.7112–196 595.0606	3–5	1.1938e−06	3.7115e−01	1.2930e+04	0.046 67	AAA	6
				28.3385 cm^{-1}	196 566.7244–196 595.0629	1–3	8.8434e−07	4.9527e−01	5.7536e+03	−0.305 16	AAA	6
				28.3505 cm^{-1}	196 566.7101–196 595.0606	5–5	3.9792e−07	7.4222e−02	4.3094e+03	−0.430 50	AAA	6
				28.3517 cm^{-1}	196 566.7112–196 595.0629	3–3	6.6326e−07	1.2370e−01	4.3092e+03	−0.430 50	AAA	6
				28.3528 cm^{-1}	196 566.7101–196 595.0629	5–3	4.4217e−08	4.9477e−03	2.8725e+02	−1.606 62	AAA	6
749	1*s*8*p*-1*s*9*d*	$^3P^\circ-{}^3D$		*388.513* cm^{-1}	*196 566.712–196 955.225*	9–15	2.7822e−04	4.6055e−01	3.5123e+03	0.617 52	AAA	6
				388.5147 cm^{-1}	196 566.7101–196 955.2248	5–7	2.7822e−04	3.8686e−01	1.6391e+03	0.286 53	AAA	6
				388.5137 cm^{-1}	196 566.7112–196 955.2249	3–5	2.0865e−04	3.4539e−01	8.7802e+02	0.015 43	AAA	6
				388.5021 cm^{-1}	196 566.7244–196 955.2265	1–3	1.5457e−04	4.6059e−01	3.9030e+02	−0.336 68	AAA	6
				388.5148 cm^{-1}	196 566.7101–196 955.2249	5–5	6.9550e−05	6.9078e−02	2.9267e+02	−0.461 69	AAA	6
				388.5153 cm^{-1}	196 566.7112–196 955.2265	3–3	1.1593e−04	1.1514e−01	2.9270e+02	−0.461 64	AAA	6
				388.5164 cm^{-1}	196 566.7101–196 955.2265	5–3	7.7284e−06	4.6055e−03	1.9513e+01	−1.637 75	AAA	6
750	1*s*8*p*-1*s*9*d*	$^3P^\circ-{}^1D$										
				388.7358 cm^{-1}	196 566.7112–196 955.4470	3–5	1.507e−08	2.492e−05	6.332e−02	−4.126 3	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
751	1*s*8*p*-1*s*10*d*	$^3P^\circ$–^3D		*646.112* cm^{-1}	*196 566.712–197 212.824*	9–15	2.2813e−04	1.3655e−01	6.2616e+02	0.089 52	AAA	6
				646.1140 cm^{-1}	196 566.7101–197 212.8241	5–7	2.2814e−04	1.1470e−01	2.9222e+02	−0.241 46	AAA	6
				646.1130 cm^{-1}	196 566.7112–197 212.8242	3–5	1.7109e−04	1.0240e−01	1.5653e+02	−0.512 57	AAA	6
				646.1010 cm^{-1}	196 566.7244–197 212.8254	1–3	1.2674e−04	1.3655e−01	6.9577e+01	−0.864 71	AAA	6
				646.1141 cm^{-1}	196 566.7101–197 212.8242	5–5	5.7030e−05	2.0481e−02	5.2177e+01	−0.989 69	AAA	6
				646.1142 cm^{-1}	196 566.7112–197 212.8254	3–3	9.5057e−05	3.4137e−02	5.2181e+01	−0.989 66	AAA	6
				646.1153 cm^{-1}	196 566.7101–197 212.8254	5–3	6.3372e−06	1.3655e−03	3.4787e+00	−2.165 74	AAA	6
752	1*s*8*p*-1*s*10*d*	$^3P^\circ$–^1D										
				646.2766 cm^{-1}	196 566.7112–197 212.9878	3–5	1.220e−08	7.296e−06	1.115e−02	−4.659 8	AA	6
753	1*s*8*p*-1*s*9*s*	$^3P^\circ$–^3S		*295.274* cm^{-1}	*196 566.712–196 861.9857*	9–3	9.3840e−04	5.3787e−01	5.3972e+03	0.684 92	AAA	6
				295.2756 cm^{-1}	196 566.7101–196 861.9857	5–3	5.2133e−04	5.3786e−01	2.9984e+03	0.429 64	AAA	6
				295.2745 cm^{-1}	196 566.7112–196 861.9857	3–3	3.1280e−04	5.3786e−01	1.7990e+03	0.207 79	AAA	6
				295.2613 cm^{-1}	196 566.7244–196 861.9857	1–3	1.0427e−04	5.3793e−01	5.9978e+02	−0.269 28	AAA	6
754	1*s*8*p*-1*s*10*s*	$^3P^\circ$–^3S		*578.519* cm^{-1}	*196 566.712–197 145.2316*	9–3	5.5365e−04	8.2667e−02	4.2338e+02	−0.128 43	AAA	6
				578.5215 cm^{-1}	196 566.7101–197 145.2316	5–3	3.0758e−04	8.2666e−02	2.3521e+02	−0.383 70	AAA	6
				578.5204 cm^{-1}	196 566.7112–197 145.2316	3–3	1.8455e−04	8.2667e−02	1.4113e+02	−0.605 55	AAA	6
				578.5072 cm^{-1}	196 566.7244–197 145.2316	1–3	6.1515e−05	8.2669e−02	4.7045e+01	−1.082 66	AAA	6
755	1*s*8*d*-1*s*9*p*	^3D–$^3P^\circ$		*340.270* cm^{-1}	*196 595.061–196 935.331*	15–9	2.6504e−04	2.0591e−01	2.9882e+03	0.489 76	AAA	6
				340.2692 cm^{-1}	196 595.0605–196 935.3297	7–5	2.2264e−04	2.0591e−01	1.3946e+03	0.158 78	AAA	6
				340.2698 cm^{-1}	196 595.0606–196 935.3304	5–3	1.9877e−04	1.5442e−01	7.4702e+02	−0.112 32	AAA	6
				340.2768 cm^{-1}	196 595.0629–196 935.3397	3–1	2.6504e−04	1.1439e−01	3.3201e+02	−0.464 50	AAA	6
				340.2691 cm^{-1}	196 595.0606–196 935.3297	5–5	3.9753e−05	5.1473e−02	2.4900e+02	−0.589 45	AAA	6
				340.2675 cm^{-1}	196 595.0629–196 935.3304	3–3	6.6261e−05	8.5797e−02	2.4903e+02	−0.589 41	AAA	6
				340.2668 cm^{-1}	196 595.0629–196 935.3297	3–5	2.6504e−06	5.7198e−03	1.6602e+01	−1.765 50	AAA	6
756	1*s*8*d*-1*s*9*f*	^3D–$^3F^\circ$		*360.883* cm^{-1}	*196 595.061–196 955.944*	15–21	4.8613e−04	7.8343e−01	1.0720e+04	1.070 09	AAA	6
				360.8832 cm^{-1}	196 595.0605–196 955.9437	7–9	5.2464e−04	7.7648e−01	4.9583e+03	0.735 23	AAA	6
				360.8827 cm^{-1}	196 595.0606–196 955.9433	5–7	3.6407e−04	5.8673e−01	2.6762e+03	0.467 41	AAA	6
				360.8815 cm^{-1}	196 595.0629–196 955.9444	3–5	4.4069e−04	8.4549e−01	2.3139e+03	0.404 23	AAA	6
				360.8828 cm^{-1}	196 595.0605–196 955.9433	7–7	4.5043e−05	5.1850e−02	3.3110e+02	−0.440 15	AAA	6
				360.8838 cm^{-1}	196 595.0606–196 955.9444	5–5	8.1603e−05	9.3935e−02	4.2846e+02	−0.328 20	AAA	6
				360.8839 cm^{-1}	196 595.0605–196 955.9444	7–5	2.3317e−06	1.9172e−03	1.2243e+01	−1.872 24	AAA	6
757	1*s*8*d*-1*s*9*f*	^3D–$^1F^\circ$										
				360.8851 cm^{-1}	196 595.0605–196 955.9456	7–7	1.325e−05	1.525e−02	9.740e+01	−0.971 6	AA	6
				360.8850 cm^{-1}	196 595.0606–196 955.9456	5–7	1.023e−04	1.648e−01	7.518e+02	−0.084 0	AA	6
758	1*s*8*d*-1*s*9*p*	^3D–$^1P^\circ$										
				364.6305 cm^{-1}	196 595.0606–196 959.6911	5–3	1.151e−08	7.784e−06	3.514e−02	−4.409 8	AA	6
759	1*s*8*d*-1*s*10*p*	^3D–$^3P^\circ$		*603.271* cm^{-1}	*196 595.061–197 198.332*	15–9	1.6861e−04	4.1674e−02	3.4113e+02	−0.204 05	AAA	6
				603.2705 cm^{-1}	196 595.0605–197 198.3310	7–5	1.4159e−04	4.1662e−02	1.5915e+02	−0.535 16	AAA	6
				603.2709 cm^{-1}	196 595.0606–197 198.3315	5–3	1.2641e−04	3.1244e−02	8.5251e+01	−0.806 27	AAA	6
				603.2753 cm^{-1}	196 595.0629–197 198.3382	3–1	1.6855e−04	2.3144e−02	3.7889e+01	−1.158 45	AAA	6
				603.2704 cm^{-1}	196 595.0606–197 198.3310	5–5	2.5281e−05	1.0414e−02	2.8416e+01	−1.283 40	AAA	6
				603.2686 cm^{-1}	196 595.0629–197 198.3315	3–3	4.2139e−05	1.7359e−02	2.8419e+01	−1.283 36	AAA	6
				603.2681 cm^{-1}	196 595.0629–197 198.3310	3–5	1.6855e−06	1.1572e−03	1.8945e+00	−2.459 47	AAA	6
760	1*s*8*d*-1*s*10*f*	^3D–$^3F^\circ$		*618.290* cm^{-1}	*196 595.061–197 213.351*	15–21	3.6472e−04	2.0024e−01	1.5993e+03	0.477 65	AAA	6
				618.2901 cm^{-1}	196 595.0605–197 213.3506	7–9	3.9278e−04	1.9805e−01	7.3816e+02	0.141 86	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				618.2897 cm^{-1}	196 595.0606–197 213.3503	5–7	2.7462e−04	1.5078e−01	4.0141e+02	−0.122 70	AAA	6
				618.2882 cm^{-1}	196 595.0629–197 213.3511	3–5	3.2993e−04	2.1565e−01	3.4447e+02	−0.189 13	AAA	6
				618.2898 cm^{-1}	196 595.0605–197 213.3503	7–7	3.3983e−05	1.3327e−02	4.9673e+01	−1.030 17	AAA	6
				618.2905 cm^{-1}	196 595.0606–197 213.3511	5–5	6.1094e−05	2.3959e−02	6.3786e+01	−0.921 56	AAA	6
				618.2906 cm^{-1}	196 595.0605–197 213.3511	7–5	1.7457e−06	4.8900e−04	1.8226e+00	−2.465 59	AAA	6
761	1*s*8*d*-1*s*10*f*	$^3D-^1F^\circ$										
				618.2915 cm^{-1}	196 595.0605–197 213.3520	7–7	9.659e−06	3.788e−03	1.412e+01	−1.576 5	AA	6
				618.2914 cm^{-1}	196 595.0606–197 213.3520	5–7	7.452e−05	4.091e−02	1.089e+02	−0.689 2	AA	6
762	1*s*8*d*-1*s*9*p*	$^1D-^3P^\circ$										
				339.9581 cm^{-1}	196 595.3723–196 935.3304	5–3	1.541e−08	1.199e−05	5.806e−02	−4.222 2	AA	6
763	1*s*8*d*-1*s*9*f*	$^1D-^3F^\circ$										
				360.5710 cm^{-1}	196 595.3723–196 955.9433	5–7	1.158e−04	1.869e−01	8.533e+02	−0.029 4	AA	6
764	1*s*8*d*-1*s*9*f*	$^1D-^1F^\circ$		360.5733 cm^{-1}	196 595.3723–196 955.9456	5–7	4.0994e−04	6.6179e−01	3.0211e+03	0.519 69	AAA	6
765	1*s*8*d*-1*s*9*p*	$^1D-^1P^\circ$		364.3188 cm^{-1}	196 595.3723–196 959.6911	5–3	1.5165e−04	1.0277e−01	4.6436e+02	−0.289 14	AAA	6
766	1*s*8*d*-1*s*10*f*	$^1D-^1F^\circ$		617.9797 cm^{-1}	196 595.3723–197 213.3520	5–7	8.4274e−05	4.6316e−02	1.2337e+02	−0.635 30	AAA	6
767	1*s*8*d*-1*s*10*f*	$^1D-^1F^\circ$		617.9797 cm^{-1}	196 595.3723–197 213.3520	5–7	3.0892e−04	1.6978e−01	4.5222e+02	−0.071 15	AAA	6
768	1*s*8*d*-1*s*10*p*	$^1D-^1P^\circ$		620.7155 cm^{-1}	196 595.3723–197 216.0878	5–3	1.0063e−04	2.3494e−02	6.2302e+01	−0.930 08	AAA	6
769	1*s*8*f*-1*s*9*d*	$^3F^\circ-^3D$		*359.147* cm^{-1}	*196 596.078–196 955.225*	21–15	9.6344e−05	7.9985e−02	1.5397e+03	0.225 23	AAA	6
				359.1472 cm^{-1}	196 596.0776–196 955.2248	9–7	9.5782e−05	8.6587e−02	7.1433e+02	−0.108 31	AAA	6
				359.1479 cm^{-1}	196 596.0770–196 955.2249	7–5	7.1583e−05	5.9428e−02	3.8132e+02	−0.380 91	AAA	6
				359.1478 cm^{-1}	196 596.0787–196 955.2265	5–3	1.0430e−04	7.2735e−02	3.3336e+02	−0.439 28	AAA	6
				359.1478 cm^{-1}	196 596.0770–196 955.2248	7–7	6.3257e−06	7.3522e−03	4.7176e+01	−1.288 48	AAA	6
				359.1462 cm^{-1}	196 596.0787–196 955.2249	5–5	1.1587e−05	1.3467e−02	6.1725e+01	−1.171 74	AAA	6
				359.1461 cm^{-1}	196 596.0787–196 955.2248	5–7	2.3650e−07	3.8483e−04	1.7638e+00	−2.715 76	AAA	6
770	1*s*8*f*-1*s*9*d*	$^3F^\circ-^1D$										
				359.3700 cm^{-1}	196 596.0770–196 955.4470	7–5	2.370e−05	1.965e−02	1.260e+02	−0.861 6	AA	6
771	1*s*8*f*-1*s*9*g*	$^3F^\circ-^3G$		*359.959* cm^{-1}	*196 596.078–196 956.037*	21–27	6.9358e−04	1.0318e+00	1.9817e+04	1.335 81	AAA	6
				359.9590 cm^{-1}	196 596.0776–196 956.0366	9–11	7.1399e−04	1.0097e+00	8.3111e+03	0.958 44	AAA	6
				359.9591 cm^{-1}	196 596.0770–196 956.0361	7–9	6.4008e−04	9.5220e−01	6.0961e+03	0.823 83	AAA	6
				359.9583 cm^{-1}	196 596.0787–196 956.0370	5–7	6.5571e−04	1.0622e+00	4.8572e+03	0.725 16	AAA	6
				359.9585 cm^{-1}	196 596.0776–196 956.0361	9–9	2.3211e−05	2.6856e−02	2.2106e+02	−0.616 71	AAA	6
				359.9600 cm^{-1}	196 596.0770–196 956.0370	7–7	4.3847e−05	5.0733e−02	3.2479e+02	−0.449 61	AAA	6
				359.9594 cm^{-1}	196 596.0776–196 956.0370	9–7	9.1071e−07	8.1957e−04	6.7461e+00	−2.132 17	AAA	6
772	1*s*8*f*-1*s*9*g*	$^3F^\circ-^1G$										
				359.9603 cm^{-1}	196 596.0770–196 956.0373	7–9	3.981e−05	5.923e−02	3.792e+02	−0.382 4	AA	6
				359.9597 cm^{-1}	196 596.0776–196 956.0373	9–9	2.141e−05	2.478e−02	2.039e+02	−0.651 7	AA	6
773	1*s*8*f*-1*s*10*d*	$^3F^\circ-^3D$		*616.747* cm^{-1}	*196 596.078–197 212.824*	21–15	5.9056e−05	1.6626e−02	1.8637e+02	−0.457 00	AAA	6
				616.7465 cm^{-1}	196 596.0776–197 212.8241	9–7	5.8714e−05	1.7999e−02	8.6467e+01	−0.790 52	AAA	6
				616.7472 cm^{-1}	196 596.0770–197 212.8242	7–5	4.3875e−05	1.2352e−02	4.6153e+01	−1.063 17	AAA	6
				616.7467 cm^{-1}	196 596.0787–197 212.8254	5–3	6.3933e−05	1.5119e−02	4.0351e+01	−1.121 51	AAA	6
				616.7471 cm^{-1}	196 596.0770–197 212.8241	7–7	3.8776e−06	1.5283e−03	5.7105e+00	−1.970 70	AAA	6
				616.7455 cm^{-1}	196 596.0787–197 212.8242	5–5	7.1031e−06	2.7996e−03	7.4719e+00	−1.853 94	AAA	6
				616.7454 cm^{-1}	196 596.0787–197 212.8241	5–7	1.4497e−07	7.9993e−05	2.1350e−01	−3.397 98	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
774	$1s8f$-$1s10d$	$^3F^\circ-{}^1D$										
				616.9108 cm^{-1}	196 596.0770–197 212.9878	7–5	1.453e−05	4.089e−03	1.527e+01	−1.543 3	AA	6
775	$1s8f$-$1s10g$	$^3F^\circ-{}^3G$		*617.341* cm^{-1}	*196 596.078–197 213.419*	21–27	4.9935e−04	2.5256e−01	2.8283e+03	0.724 58	AAA	6
				617.3412 cm^{-1}	196 596.0776–197 213.4188	9–11	5.1404e−04	2.4715e−01	1.1862e+03	0.347 20	AAA	6
				617.3414 cm^{-1}	196 596.0770–197 213.4184	7–9	4.6085e−04	2.3308e−01	8.7008e+02	0.212 61	AAA	6
				617.3404 cm^{-1}	196 596.0787–197 213.4191	5–7	4.7207e−04	2.5998e−01	6.9321e+02	0.113 91	AAA	6
				617.3408 cm^{-1}	196 596.0776–197 213.4184	9–9	1.6715e−05	6.5753e−03	3.1558e+01	−1.227 84	AAA	6
				617.3421 cm^{-1}	196 596.0770–197 213.4191	7–7	3.1567e−05	1.2418e−02	4.6354e+01	−1.060 86	AAA	6
				617.3415 cm^{-1}	196 596.0776–197 213.4191	9–7	6.5566e−07	2.0060e−04	9.6279e−01	−2.743 42	AAA	6
776	$1s8f$-$1s10g$	$^3F^\circ-{}^1G$										
				617.3423 cm^{-1}	196 596.0770–197 213.4193	7–9	2.864e−05	1.448e−02	5.406e+01	−0.994 0	AA	6
				617.3417 cm^{-1}	196 596.0776–197 213.4193	9–9	1.541e−05	6.063e−03	2.910e+01	−1.263 1	AA	6
777	$1s8f$-$1s9d$	$^1F^\circ-{}^3D$										
				359.1444 cm^{-1}	196 596.0804–196 955.2248	7–7	1.952e−06	2.268e−03	1.456e+01	−1.799 2	AA	6
				359.1445 cm^{-1}	196 596.0804–196 955.2249	7–5	2.113e−05	1.754e−02	1.125e+02	−0.910 9	AA	6
778	$1s8f$-$1s9d$	$^1F^\circ-{}^1D$		359.3666 cm^{-1}	196 596.0804–196 955.4470	7–5	7.9916e−05	6.6265e−02	4.2494e+02	−0.333 62	AAA	6
779	$1s8f$-$1s9g$	$^1F^\circ-{}^3G$										
				359.9566 cm^{-1}	196 596.0804–196 956.0370	7–7	1.353e−05	1.565e−02	1.002e+02	−0.960 3	AA	6
				359.9557 cm^{-1}	196 596.0804–196 956.0361	7–9	5.071e−05	7.544e−02	4.830e+02	−0.277 3	AA	6
780	$1s8f$-$1s9g$	$^1F^\circ-{}^1G$		359.9569 cm^{-1}	196 596.0804–196 956.0373	7–9	6.5277e−04	9.7109e−01	6.2170e+03	0.832 36	AAA	6
781	$1s8f$-$1s10d$	$^1F^\circ-{}^3D$										
				616.7437 cm^{-1}	196 596.0804–197 212.8241	7–7	1.196e−06	4.715e−04	1.762e+00	−2.481 4	AA	6
				616.7438 cm^{-1}	196 596.0804–197 212.8242	7–5	1.295e−05	3.647e−03	1.363e+01	−1.593 0	AA	6
782	$1s8f$-$1s10d$	$^1F^\circ-{}^1D$	616.9074 cm^{-1}	196 596.0804–197 212.9878	7–5	4.8993e−05	1.3786e−02	5.1496e+01	−1.015 48	AAA	6	
783	$1s8f$-$1s10g$	$^1F^\circ-{}^3G$										
				617.3387 cm^{-1}	196 596.0804–197 213.4191	7–7	9.739e−06	3.831e−03	1.430e+01	−1.571 6	AA	6
				617.3380 cm^{-1}	196 596.0804–197 213.4184	7–9	3.647e−05	1.845e−02	6.886e+01	−0.889 0	AA	6
784	$1s8f$-$1s10g$	$^1F^\circ-{}^1G$	617.3389 cm^{-1}	196 596.0804–197 213.4193	7–9	4.6999e−04	2.3771e−01	8.8735e+02	0.221 14	AAA	6	
785	$1s8g$-$1s9f$	$^3G-{}^3F^\circ$	*359.735* cm^{-1}	*196 596.209–196 955.944*	27–21	5.9009e−05	5.3170e−02	1.3138e+03	0.157 03	AAA	6	
				359.7351 cm^{-1}	196 596.2086–196 955.9437	11–9	5.7839e−05	5.4823e−02	5.5188e+02	−0.219 65	AAA	6
				359.7354 cm^{-1}	196 596.2079–196 955.9433	9–7	5.4226e−05	4.8860e−02	4.0243e+02	−0.356 80	AAA	6
				359.7352 cm^{-1}	196 596.2092–196 955.9444	7–5	6.0844e−05	5.0348e−02	3.2253e+02	−0.452 92	AAA	6
				359.7358 cm^{-1}	196 596.2079–196 955.9437	9–9	1.5379e−06	1.7816e−03	1.4674e+01	−1.794 94	AAA	6
				359.7341 cm^{-1}	196 596.2092–196 955.9433	7–7	2.9384e−06	3.4041e−03	2.1807e+01	−1.622 90	AAA	6
				359.7345 cm^{-1}	196 596.2092–196 955.9437	7–9	4.6947e−08	6.9927e−05	4.4796e−01	−3.310 26	AAA	6
786	$1s8g$-$1s9f$	$^3G-{}^1F^\circ$										
				359.7377 cm^{-1}	196 596.2079–196 955.9456	9–7	4.639e−06	4.180e−03	3.443e+01	−1.424 6	AA	6
				359.7364 cm^{-1}	196 596.2092–196 955.9456	7–7	8.644e−07	1.001e−03	6.415e+00	−2.154 3	AA	6
787	$1s8g$-$1s9h$	$^3G-{}^3H^\circ$	*359.850* cm^{-1}	*196 596.209–196 956.059*	27–33	9.3856e−04	1.3281e+00	3.2805e+04	1.554 59	AAA	6	
				359.8503 cm^{-1}	196 596.2086–196 956.0589	11–13	9.4468e−04	1.2926e+00	1.3008e+04	1.152 84	AAA	6
				359.8506 cm^{-1}	196 596.2079–196 956.0585	9–11	9.2500e−04	1.3089e+00	1.0777e+04	1.071 15	AAA	6
				359.8499 cm^{-1}	196 596.2092–196 956.0591	7–9	8.9803e−04	1.3367e+00	8.5606e+03	0.971 15	AAA	6
				359.8499 cm^{-1}	196 596.2086–196 956.0585	11–11	1.9470e−05	2.2541e−02	2.2684e+02	−0.605 63	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				359.8512 cm^{-1}	196 596.2079–196 956.0591	9–9	2.4015e−05	2.7803e−02	2.2892e+02	−0.601 66	AAA	6
				359.8505 cm^{-1}	196 596.2086–196 956.0591	11–9	4.6651e−07	4.4190e−04	4.4470e+00	−2.313 28	AAA	6
788	1*s*8*g*-1*s*9*h*	$^3G-{}^1H^\circ$										
				359.8514 cm^{-1}	196 596.2079–196 956.0593	9–11	2.770e−08	3.920e−05	3.228e−01	−3.452 5	AA	6
				359.8507 cm^{-1}	196 596.2086–196 956.0593	11–11	1.832e−05	2.121e−02	2.134e+02	−0.632 1	AA	6
789	1*s*8*g*-1*s*10*f*	$^3G-{}^3F^\circ$		*617.142* cm^{-1}	*196 596.209–197 213.351*	27–21	3.3074e−05	1.0126e−02	1.4584e+02	−0.563 20	AAA	6
				617.1420 cm^{-1}	196 596.2086–197 213.3506	11–9	3.2457e−05	1.0453e−02	6.1338e+01	−0.939 36	AAA	6
				617.1424 cm^{-1}	196 596.2079–197 213.3503	9–7	3.0300e−05	9.2765e−03	4.4537e+01	−1.078 37	AAA	6
				617.1419 cm^{-1}	196 596.2092–197 213.3511	7–5	3.4143e−05	9.5998e−03	3.5847e+01	−1.172 64	AAA	6
				617.1427 cm^{-1}	196 596.2079–197 213.3506	9–9	8.6301e−07	3.3970e−04	1.6309e+00	−2.514 66	AAA	6
				617.1411 cm^{-1}	196 596.2092–197 213.3503	7–7	1.6616e−06	6.5405e−04	2.4423e+00	−2.339 29	AAA	6
				617.1414 cm^{-1}	196 596.2092–197 213.3506	7–9	2.6345e−08	1.3333e−05	4.9787e−02	−4.029 97	AAA	6
790	1*s*8*g*-1*s*10*f*	$^3G-{}^1F^\circ$										
				617.1441 cm^{-1}	196 596.2079–197 213.3520	9–7	2.732e−06	8.365e−04	4.016e+00	−2.123 3	AA	6
				617.1428 cm^{-1}	196 596.2092–197 213.3520	7–7	4.723e−07	1.859e−04	6.942e−01	−2.885 6	AA	6
791	1*s*8*g*-1*s*10*h*	$^3G-{}^3H^\circ$		*617.227* cm^{-1}	*196 596.209–197 213.435*	27–33	6.2632e−04	3.0124e−01	4.3382e+03	0.910 28	AAA	6
				617.2266 cm^{-1}	196 596.2086–197 213.4352	11–13	6.3040e−04	2.9318e−01	1.7201e+03	0.508 53	AAA	6
				617.2271 cm^{-1}	196 596.2079–197 213.4350	9–11	6.1727e−04	2.9689e−01	1.4252e+03	0.426 83	AAA	6
				617.2262 cm^{-1}	196 596.2092–197 213.4354	7–9	5.9927e−04	3.0320e−01	1.1320e+03	0.326 83	AAA	6
				617.2264 cm^{-1}	196 596.2086–197 213.4350	11–11	1.2993e−05	5.1130e−03	2.9999e+01	−1.249 93	AAA	6
				617.2275 cm^{-1}	196 596.2079–197 213.4354	9–9	1.6026e−05	6.3065e−03	3.0274e+01	−1.245 97	AAA	6
				617.2268 cm^{-1}	196 596.2086–197 213.4354	11–9	3.1131e−07	1.0023e−04	5.8808e−01	−2.957 60	AAA	6
												6
792	1*s*8*g*-1*s*10*h*	$^3G-{}^1H^\circ$										
				617.2276 cm^{-1}	196 596.2079–197 213.4355	9–11	1.851e−08	8.901e−06	4.273e−02	−4.096 3	AA	6
				617.2269 cm^{-1}	196 596.2086–197 213.4355	11–11	1.222e−05	4.810e−03	2.822e+01	−1.276 5	AA	6
793	1*s*8*g*-1*s*9*f*	$^1G-{}^3F^\circ$										
				359.7337 cm^{-1}	196 596.2096–196 955.9433	9–7	3.679e−06	3.315e−03	2.730e+01	−1.525 3	AA	6
				359.7341 cm^{-1}	196 596.2096–196 955.9437	9–9	1.420e−06	1.645e−03	1.355e+01	−1.829 7	AA	6
794	1*s*8*g*-1*s*9*f*	$^1G-{}^1F^\circ$		359.7360 cm^{-1}	196 596.2096–196 955.9456	9–7	5.5338e−05	4.9862e−02	4.1068e+02	−0.347 99	AAA	6
795	1*s*8*g*-1*s*9*h*	$^1G-{}^3H^\circ$										
				359.8495 cm^{-1}	196 596.2096–196 956.0591	9–9	2.217e−05	2.567e−02	2.113e+02	−0.636 4	AA	6
				359.8489 cm^{-1}	196 596.2096–196 956.0585	9–11	2.063e−07	2.919e−04	2.403e+00	−2.580 6	AA	6
796	1*s*8*g*-1*s*9*h*	$^1G-{}^1H^\circ$		359.8497 cm^{-1}	196 596.2096–196 956.0593	9–11	9.2633e−04	1.3108e+00	1.0793e+04	1.071 77	AAA	6
797	1*s*8*g*-1*s*10*f*	$^1G-{}^3F^\circ$										
				617.1407 cm^{-1}	196 596.2096–197 213.3503	9–7	2.181e−06	6.676e−04	3.205e+00	−2.221 2	AA	6
				617.1410 cm^{-1}	196 596.2096–197 213.3506	9–9	7.967e−07	3.136e−04	1.506e+00	−2.549 4	AA	6
798	1*s*8*g*-1*s*10*f*	$^1G-{}^1F^\circ$		617.1424 cm^{-1}	196 596.2096–197 213.3520	9–7	3.0937e−05	9.4715e−03	4.5473e+01	−1.069 34	AAA	6
799	1*s*8*g*-1*s*10*h*	$^1G-{}^3H^\circ$										
				617.2258 cm^{-1}	196 596.2096–197 213.4354	9–9	1.479e−05	5.822e−03	2.795e+01	−1.280 7	AA	6
				617.2254 cm^{-1}	196 596.2096–197 213.4350	9–11	1.376e−07	6.618e−05	3.177e−01	−3.225 1	AA	6
800	1*s*8*g*-1*s*10*h*	$^1G-{}^1H^\circ$		617.2259 cm^{-1}	196 596.2096–197 213.4355	9–11	6.1816e−04	2.9732e−01	1.4272e+03	0.427 46	AAA	6
801	1*s*8*h*-1*s*9*g*	$^3H^\circ-{}^3G$		*359.797* cm^{-1}	*196 596.240–196 956.037*	33–27	3.3100e−05	3.1363e−02	9.4699e+02	0.014 93	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				359.7968 cm^{-1}	196 596.2398–196 956.0366	13–11	3.2214e−05	3.1567e−02	3.7549e+02	−0.386 82	AAA	6
				359.7968 cm^{-1}	196 596.2393–196 956.0361	11–9	3.2621e−05	3.0909e−02	3.1110e+02	−0.468 52	AAA	6
				359.7968 cm^{-1}	196 596.2402–196 956.0370	9–7	3.3315e−05	3.0008e−02	2.4711e+02	−0.568 52	AAA	6
				359.7973 cm^{-1}	196 596.2393–196 956.0366	11–11	5.6179e−07	6.5060e−04	6.5483e+00	−2.145 29	AAA	6
				359.7959 cm^{-1}	196 596.2402–196 956.0361	9–9	6.9315e−07	8.0273e−04	6.6105e+00	−2.141 19	AAA	6
				359.7964 cm^{-1}	196 596.2402–196 956.0366	9–11	1.1013e−08	1.5588e−05	1.2837e−01	−3.852 96	AAA	6
802	1*s*8*h*-1*s*9*g*	$^3H^\circ-{}^1G$										
				359.7971 cm^{-1}	196 596.2402–196 956.0373	9–9	6.395e−07	7.406e−04	6.098e+00	−2.176 2	AA	6
803	1*s*8*h*-1*s*9*i*	$^3H^\circ-{}^3I$		*359.826* cm^{-1}	*196 596.240–196 956.066*	33–39	1.2261e−03	1.6778e+00	5.0656e+04	1.743 25	AAA	6
				359.8261 cm^{-1}	196 596.2398–196 956.0659	13–15	1.2316e−03	1.6455e+00	1.9571e+04	1.330 23	AAA	6
				359.8264 cm^{-1}	196 596.2393–196 956.0657	11–13	1.2140e−03	1.6613e+00	1.6719e+04	1.261 83	AAA	6
				359.8259 cm^{-1}	196 596.2402–196 956.0661	9–11	1.1909e−03	1.6854e+00	1.3878e+04	1.180 94	AAA	6
				359.8259 cm^{-1}	196 596.2398–196 956.0657	13–13	1.7547e−05	2.0318e−02	2.4166e+02	−0.578 18	AAA	6
				359.8268 cm^{-1}	196 596.2393–196 956.0661	11–11	2.0833e−05	2.4122e−02	2.4277e+02	−0.576 19	AAA	6
				359.8263 cm^{-1}	196 596.2398–196 956.0661	13–11	2.8274e−07	2.7702e−04	3.2948e+00	−2.443 55	AAA	6
804	1*s*8*h*-1*s*9*i*	$^3H^\circ-{}^1I$										
				359.8270 cm^{-1}	196 596.2393–196 956.0663	11–13	2.656e−08	3.635e−05	3.658e−01	−3.398 1	AA	6
				359.8265 cm^{-1}	196 596.2398–196 956.0663	13–13	1.667e−05	1.930e−02	2.295e+02	−0.600 6	AA	6
805	1*s*8*h*-1*s*10*g*	$^3H^\circ-{}^3G$		*617.179* cm^{-1}	*196 596.240–197 213.419*	33–27	1.6574e−05	5.3373e−03	9.3951e+01	−0.754 16	AAA	6
				617.1790 cm^{-1}	196 596.2398–197 213.4188	13–11	1.6131e−05	5.3721e−03	3.7252e+01	−1.155 91	AAA	6
				617.1791 cm^{-1}	196 596.2393–197 213.4184	11–9	1.6335e−05	5.2602e−03	3.0865e+01	−1.237 60	AAA	6
				617.1789 cm^{-1}	196 596.2402–197 213.4191	9–7	1.6682e−05	5.1067e−03	2.4516e+01	−1.337 62	AAA	6
				617.1795 cm^{-1}	196 596.2393–197 213.4188	11–11	2.8131e−07	1.1072e−04	6.4965e−01	−2.914 39	AAA	6
				617.1782 cm^{-1}	196 596.2402–197 213.4184	9–9	3.4716e−07	1.3664e−04	6.5595e−01	−2.910 19	AAA	6
				617.1786 cm^{-1}	196 596.2402–197 213.4188	9–11	5.5147e−09	2.6528e−06	1.2735e−02	−4.622 05	AAA	6
806	1*s*8*h*-1*s*10*g*	$^3H^\circ-{}^1G$										
				617.1791 cm^{-1}	196 596.2402–197 213.4193	9–9	3.201e−07	1.260e−04	6.049e−01	−2.945 4	AA	6
807	1*s*8*h*-1*s*10*i*	$^3H^\circ-{}^3I$		*617.201* cm^{-1}	*196 596.240–197 213.440*	33–39	7.1250e−04	3.3139e−01	5.8331e+03	1.038 85	AAA	6
				617.2006 cm^{-1}	196 596.2398–197 213.4404	13–15	7.1573e−04	3.2501e−01	2.2537e+03	0.625 84	AAA	6
				617.2010 cm^{-1}	196 596.2393–197 213.4403	11–13	7.0547e−04	3.2812e−01	1.9252e+03	0.557 43	AAA	6
				617.2004 cm^{-1}	196 596.2402–197 213.4406	9–11	6.9207e−04	3.3289e−01	1.5981e+03	0.476 55	AAA	6
				617.2005 cm^{-1}	196 596.2398–197 213.4403	13–13	1.0197e−05	4.0131e−03	2.7827e+01	−1.282 58	AAA	6
				617.2013 cm^{-1}	196 596.2393–197 213.4406	11–11	1.2106e−05	4.7644e−03	2.7954e+01	−1.280 60	AAA	6
				617.2008 cm^{-1}	196 596.2398–197 213.4406	13–11	1.6431e−07	5.4716e−05	3.7941e−01	−3.147 94	AAA	6
808	1*s*8*h*-1*s*10*i*	$^3H^\circ-{}^1I$										
				617.2014 cm^{-1}	196 596.2393–197 213.4407	11–13	1.544e−08	7.179e−06	4.212e−02	−4.102 5	AA	6
				617.2009 cm^{-1}	196 596.2398–197 213.4407	13–13	9.684e−06	3.811e−03	2.643e+01	−1.305 0	AA	6
809	1*s*8*h*-1*s*9*g*	$^1H^\circ-{}^3G$										
				359.7961 cm^{-1}	196 596.2405–196 956.0366	11–11	5.285e−07	6.121e−04	6.161e+00	−2.171 8	AA	6
810	1*s*8*h*-1*s*9*g*	$^1H^\circ-{}^1G$		359.7968 cm^{-1}	196 596.2405–196 956.0373	11–9	3.2669e−05	3.0955e−02	3.1156e+02	−0.467 88	AAA	6
811	1*s*8*h*-1*s*9*i*	$^1H^\circ-{}^3I$										
				359.8252 cm^{-1}	196 596.2405–196 956.0657	11–13	1.074e−07	1.469e−04	1.479e+00	−2.791 5	AA	6
				359.8256 cm^{-1}	196 596.2405–196 956.0661	11–11	1.960e−05	2.269e−02	2.284e+02	−0.602 7	AA	6
812	1*s*8*h*-1*s*9*i*	$^1H^\circ-{}^1I$		359.8258 cm^{-1}	196 596.2405–196 956.0663	11–13	1.2149e−03	1.6625e+00	1.6732e+04	1.262 16	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
813	1*s*8*h*-1*s*10*g*	$^1H^\circ-{}^3G$										
				617.1783 cm^{-1}	196 596.2405–197 213.4188	11–11	2.647e−07	1.042e−04	6.112e−01	−2.940 9	AA	6
814	1*s*8*h*-1*s*10*g*	$^1H^\circ-{}^1G$		617.1788 cm^{-1}	196 596.2405–197 213.4193	11–9	1.6358e−05	5.2676e−03	3.0908e+01	−1.236 99	AAA	6
815	1*s*8*h*-1*s*10*i*	$^1H^\circ-{}^3I$										
				617.1998 cm^{-1}	196 596.2405–197 213.4403	11–13	6.240e−08	2.902e−05	1.703e−01	−3.495 9	AA	6
				617.2001 cm^{-1}	196 596.2405–197 213.4406	11–11	1.139e−05	4.483e−03	2.630e+01	−1.307 1	AA	6
816	1*s*8*h*-1*s*10*i*	$^1H^\circ-{}^1I$		617.2002 cm^{-1}	196 596.2405–197 213.4407	11–13	7.0603e−04	3.2838e−01	1.9267e+03	0.557 77	AAA	6
817	1*s*8*i*-1*s*9*h*	$^3I-{}^3H^\circ$		*359.809* cm^{-1}	*196 596.250–196 956.059*	39–33	1.5391e−05	1.5081e−02	5.3814e+02	−0.230 51	AAA	6
				359.8093 cm^{-1}	196 596.2496–196 956.0589	15–13	1.5095e−05	1.5149e−02	2.0792e+02	−0.643 51	AAA	6
				359.8092 cm^{-1}	196 596.2493–196 956.0585	13–11	1.5239e−05	1.4932e−02	1.7761e+02	−0.711 94	AAA	6
				359.8092 cm^{-1}	196 596.2499–196 956.0591	11–9	1.5461e−05	1.4649e−02	1.4743e+02	−0.792 81	AAA	6
				359.8096 cm^{-1}	196 596.2493–196 956.0589	13–13	1.8638e−07	2.1583e−04	2.5672e+00	−2.551 95	AAA	6
				359.8086 cm^{-1}	196 596.2499–196 956.0585	11–11	2.2128e−07	2.5625e−04	2.5790e+00	−2.549 95	AAA	6
				359.8090 cm^{-1}	196 596.2499–196 956.0589	11–13	2.5412e−09	3.4778e−06	3.5002e−02	−4.417 31	AAA	6
818	1*s*8*i*-1*s*9*h*	$^3I-{}^1H^\circ$										
				359.8094 cm^{-1}	196 596.2499–196 956.0593	11–11	2.082e−07	2.411e−04	2.426e+00	−2.576 5	AA	6
819	1*s*8*i*-1*s*10*h*	$^3I-{}^3H^\circ$										
				617.1856 cm^{-1}	196 596.2496–197 213.4352	15–13	6.5023e−06	2.2179e−03	1.7746e+01	−1.477 96	AAA	6
				617.1857 cm^{-1}	196 596.2493–197 213.4350	13–11	6.5645e−06	2.1861e−03	1.5159e+01	−1.546 38	AAA	6
				617.1855 cm^{-1}	196 596.2499–197 213.4354	11–9	6.6600e−06	2.1446e−03	1.2584e+01	−1.627 26	AAA	6
				617.1859 cm^{-1}	196 596.2493–197 213.4352	13–13	8.0287e−08	3.1599e−05	2.1912e−01	−3.386 39	AAA	6
				617.1851 cm^{-1}	196 596.2499–197 213.4350	11–11	9.5322e−08	3.7516e−05	2.2013e−01	−3.384 39	AAA	6
820	1*s*8*i*-1*s*10*h*	$^3I-{}^1H^\circ$										
				617.1856 cm^{-1}	196 596.2499–197 213.4355	11–11	8.968e−08	3.529e−05	2.071e−01	−3.410 9	AA	6
821	1*s*8*i*-1*s*9*h*	$^1I-{}^3H^\circ$										
				359.8088 cm^{-1}	196 596.2501–196 956.0589	13–13	1.770e−07	2.050e−04	2.438e+00	−2.574 3	AA	6
822	1*s*8*i*-1*s*9*h*	$^1I-{}^1H^\circ$		359.8092 cm^{-1}	196 596.2501–196 956.0593	13–11	1.5251e−05	1.4944e−02	1.7775e+02	−0.711 60	AAA	6
823	1*s*8*i*-1*s*10*h*	$^1I-{}^3H^\circ$										
				617.1851 cm^{-1}	196 596.2501–197 213.4352	13–13	7.625e−08	3.001e−05	2.081e−01	−3.408 8	AA	6
824	1*s*8*i*-1*s*10*h*	$^1I-{}^1H^\circ$		617.1854 cm^{-1}	196 596.2501–197 213.4355	13–11	6.5697e−06	2.1879e−03	1.5171e+01	−1.546 04	AAA	6
825	1*s*8*k*-1*s*9*i*	$^3K^\circ-{}^3I$										
				359.8125 cm^{-1}	196 596.2534–196 956.0659	17–15	4.7511e−06	4.8545e−03	7.5507e+01	−1.083 41	AAA	6
				359.8125 cm^{-1}	196 596.2532–196 956.0657	15–13	4.7864e−06	4.8036e−03	6.5926e+01	−1.142 34	AAA	6
				359.8125 cm^{-1}	196 596.2536–196 956.0661	13–11	4.8371e−06	4.7396e−03	5.6374e+01	−1.210 32	AAA	6
				359.8127 cm^{-1}	196 596.2532–196 956.0659	15–15	4.3733e−08	5.0642e−05	6.9503e−01	−3.119 40	AAA	6
				359.8121 cm^{-1}	196 596.2536–196 956.0657	13–13	5.0631e−08	5.8630e−05	6.9737e−01	−3.117 93	AAA	6
826	1*s*8*k*-1*s*9*i*	$^3K^\circ-{}^1I$										
				359.8127 cm^{-1}	196 596.2536–196 956.0663	13–13	4.809e−08	5.568e−05	6.623e−01	−3.140 3	AA	6
827	1*s*8*k*-1*s*10*i*	$^3K^\circ-{}^3I$										
				617.1870 cm^{-1}	196 596.2534–197 213.4404	17–15	1.6590e−06	5.7612e−04	5.2242e+00	−2.009 04	AAA	6
				617.1871 cm^{-1}	196 596.2532–197 213.4403	15–13	1.6713e−06	5.7007e−04	4.5612e+00	−2.067 98	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				617.1870 cm^{-1}	196 596.2536–197 213.4406	13–11	1.6890e−06	5.6247e−04	3.9004e+00	−2.135 95	AAA	6
				617.1872 cm^{-1}	196 596.2532–197 213.4404	15–15	1.5270e−08	6.0098e−06	4.8085e−02	−4.045 05	AAA	6
				617.1867 cm^{-1}	196 596.2536–197 213.4403	13–13	1.7679e−08	6.9579e−06	4.8249e−02	−4.043 58	AAA	6
828	1*s*8*k*-1*s*10*i*	$^3K^\circ$–^1I										
				617.1871 cm^{-1}	196 596.2536–197 213.4407	13–13	1.679e−08	6.608e−06	4.582e−02	−4.066 0	AA	6
829	1*s*8*k*-1*s*9*i*	$^1K^\circ$–^3I										
				359.8121 cm^{-1}	196 596.2538–196 956.0659	15–15	4.182e−08	4.843e−05	6.647e−01	−3.138 8	AA	6
830	1*s*8*k*-1*s*9*i*	$^1K^\circ$–^1I		359.8125 cm^{-1}	196 596.2538–196 956.0663	15–13	4.7888e−06	4.8060e−03	6.5959e+01	−1.142 13	AAA	6
831	1*s*8*k*-1*s*10*i*	$^1K^\circ$–^3I										
				617.1866 cm^{-1}	196 596.2538–197 213.4404	15–15	1.460e−08	5.747e−06	4.599e−02	−4.064 4	AA	6
832	1*s*8*k*-1*s*10*i*	$^1K^\circ$–^1I		617.1869 cm^{-1}	196 596.2538–197 213.4407	15–13	1.6721e−06	5.7034e−04	4.5634e+00	−2.067 77	AAA	6
833	1*s*8*p*-1*s*9*s*	$^1P^\circ$–^1S		311.5025 cm^{-1}	196 601.3985–196 912.9010	3–1	7.5513e−04	3.8890e−01	1.2330e+03	0.066 96	AAA	6
834	1*s*8*p*-1*s*9*d*	$^1P^\circ$–^3D										
				353.8264 cm^{-1}	196 601.3985–196 955.2249	3–5	2.987e−08	5.962e−05	1.664e−01	−3.747 5	AA	6
835	1*s*8*p*-1*s*9*d*	$^1P^\circ$–^1D		354.0485 cm^{-1}	196 601.3985–196 955.4470	3–5	3.9331e−04	7.8400e−01	2.1870e+03	0.371 44	AAA	6
836	1*s*8*p*-1*s*10*s*	$^1P^\circ$–^1S		580.6654 cm^{-1}	196 601.3985–197 182.0639	3–1	4.7328e−04	7.0146e−02	1.1931e+02	−0.676 88	AAA	6
837	1*s*8*p*-1*s*10*d*	$^1P^\circ$–^3D										
				611.4257 cm^{-1}	196 601.3985–197 212.8242	3–5	2.159e−08	1.443e−05	2.331e−02	−4.363 6	AA	6
838	1*s*8*p*-1*s*10*d*	$^1P^\circ$–^1D		611.5893 cm^{-1}	196 601.3985–197 212.9878	3–5	2.9119e−04	1.9452e−01	3.1412e+02	−0.233 92	AAA	6
839	1*s*9*s*-1*s*9*p*	^3S–$^3P^\circ$		*73.3453* cm^{-1}	*196 861.9857–196 935.331*	3–9	3.3076e−05	2.7653e+00	3.7237e+04	0.918 87	AAA	6
				73.3440 cm^{-1}	196 861.9857–196 935.3297	3–5	3.3076e−05	1.5363e+00	2.0688e+04	0.663 61	AAA	6
				73.3447 cm^{-1}	196 861.9857–196 935.3304	3–3	3.3076e−05	9.2179e−01	1.2413e+04	0.441 75	AAA	6
				73.3540 cm^{-1}	196 861.9857–196 935.3397	3–1	3.3076e−05	3.0719e−01	4.1359e+03	−0.035 48	AAA	6
840	1*s*9*s*-1*s*10*p*	^3S–$^3P^\circ$		*336.346* cm^{-1}	*196 861.9857–197 198.332*	3–9	1.0196e−05	4.0533e−02	1.1902e+02	−0.915 06	AAA	6
				336.3453 cm^{-1}	196 861.9857–197 198.3310	3–5	1.0185e−05	2.2496e−02	6.6055e+01	−1.170 78	AAA	6
				336.3458 cm^{-1}	196 861.9857–197 198.3315	3–3	1.0185e−05	1.3497e−02	3.9633e+01	−1.392 63	AAA	6
				336.3525 cm^{-1}	196 861.9857–197 198.3382	3–1	1.0185e−05	4.4989e−03	1.3210e+01	−1.869 77	AAA	6
841	1*s*9*s*-1*s*9*p*	^1S–$^1P^\circ$		46.7901 cm^{-1}	196 912.9010–196 959.6911	1–3	9.5542e−06	1.9627e+00	1.3810e+04	0.292 86	AAA	6
842	1*s*9*s*-1*s*10*p*	^1S–$^1P^\circ$		303.1868 cm^{-1}	196 912.9010–197 216.0878	1–3	3.9092e−05	1.9127e−01	2.0769e+02	−0.718 35	AAA	6
843	1*s*9*p*-1*s*9*d*	$^3P^\circ$–^3D		*19.894* cm^{-1}	*196 935.331–196 955.225*	9–15	8.9249e−07	5.6345e−01	8.3917e+04	0.705 10	AAA	6
				19.8951 cm^{-1}	196 935.3297–196 955.2248	5–7	8.9251e−07	4.7327e−01	3.9157e+04	0.374 08	AAA	6
				19.8945 cm^{-1}	196 935.3304–196 955.2249	3–5	6.6934e−07	4.2256e−01	2.0977e+04	0.103 01	AAA	6
				19.8868 cm^{-1}	196 935.3397–196 955.2265	1–3	4.9584e−07	5.6388e−01	9.3347e+03	−0.248 81	AAA	6
				19.8952 cm^{-1}	196 935.3297–196 955.2249	5–5	2.2311e−07	8.4504e−02	6.9916e+03	−0.374 15	AAA	6
				19.8961 cm^{-1}	196 935.3304–196 955.2265	3–3	3.7188e−07	1.4084e−01	6.9912e+03	−0.374 16	AAA	6
				19.8968 cm^{-1}	196 935.3297–196 955.2265	5–3	2.4792e−08	5.6332e−03	4.6603e+02	−1.550 28	AAA	6
844	1*s*9*p*-1*s*10*s*	$^3P^\circ$–^3S		*209.901* cm^{-1}	*196 935.331–197 145.2316*	9–3	5.4402e−04	6.1706e−01	8.7103e+03	0.744 57	AAA	6
				209.9019 cm^{-1}	196 935.3297–197 145.2316	5–3	6.0444e−05	1.2340e−01	9.6774e+02	−0.209 70	AAA	6
				209.9012 cm^{-1}	196 935.3304–197 145.2316	3–3	1.8133e−04	6.1702e−01	2.9032e+03	0.267 42	AAA	6
				209.8919 cm^{-1}	196 935.3397–197 145.2316	1–3	3.0222e−04	3.0854e+00	4.8394e+03	0.489 31	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
845	1*s*9*p*-1*s*10*d*	$^3P^\circ-^3D$		*277.493* cm^{-1}	*196 935.331–197 212.824*	9–15	1.4748e−04	4.7854e−01	5.1096e+03	0.634 16	AAA	6
				277.4944 cm^{-1}	196 935.3297–197 212.8241	5–7	1.4748e−04	4.0198e−01	2.3845e+03	0.303 18	AAA	6
				277.4938 cm^{-1}	196 935.3304–197 212.8242	3–5	1.1060e−04	3.5888e−01	1.2773e+03	0.032 08	AAA	6
				277.4857 cm^{-1}	196 935.3397–197 212.8254	1–3	8.1934e−05	4.7859e−01	5.6780e+02	−0.320 04	AAA	6
				277.4945 cm^{-1}	196 935.3297–197 212.8242	5–5	3.6867e−05	7.1777e−02	4.2577e+02	−0.445 04	AAA	6
				277.4950 cm^{-1}	196 935.3304–197 212.8254	3–3	6.1450e−05	1.1964e−01	4.2580e+02	−0.445 01	AAA	6
				277.4957 cm^{-1}	196 935.3297–197 212.8254	5–3	4.0967e−06	4.7855e−03	2.8387e+01	−1.621 10	AAA	6
846	1*s*9*d*-1*s*10*p*	$^3D-^3P^\circ$		*243.107* cm^{-1}	*196 955.225–197 198.332*	15–9	1.6271e−04	2.4765e−01	5.0304e+03	0.569 92	AAA	6
				243.1062 cm^{-1}	196 955.2248–197 198.3310	7–5	1.3642e−04	2.4718e−01	2.3431e+03	0.238 11	AAA	6
				243.1066 cm^{-1}	196 955.2249–197 198.3315	5–3	1.2179e−04	1.8536e−01	1.2551e+03	−0.033 00	AAA	6
				243.1117 cm^{-1}	196 955.2265–197 198.3382	3–1	1.6240e−04	1.3731e−01	5.5783e+02	−0.385 17	AAA	6
				243.1061 cm^{-1}	196 955.2249–197 198.3310	5–5	2.4359e−05	6.1791e−02	4.1838e+02	−0.510 11	AAA	6
				243.1050 cm^{-1}	196 955.2265–197 198.3315	3–3	4.0601e−05	1.0299e−01	4.1842e+02	−0.510 07	AAA	6
				243.1045 cm^{-1}	196 955.2265–197 198.3310	3–5	1.6240e−06	6.8660e−03	2.7894e+01	−1.686 17	AAA	6
847	1*s*9*d*-1*s*10*f*	$^3D-^3F^\circ$		*258.125* cm^{-1}	*196 955.225–197 213.351*	15–21	2.5573e−04	8.0557e−01	1.5411e+04	1.082 20	AAA	6
				258.1258 cm^{-1}	196 955.2248–197 213.3506	7–9	2.7541e−04	7.9674e−01	7.1131e+03	0.746 42	AAA	6
				258.1254 cm^{-1}	196 955.2249–197 213.3503	5–7	1.9254e−04	6.0652e−01	3.8678e+03	0.481 81	AAA	6
				258.1246 cm^{-1}	196 955.2265–197 213.3511	3–5	2.3135e−04	8.6759e−01	3.3196e+03	0.415 44	AAA	6
				258.1255 cm^{-1}	196 955.2248–197 213.3503	7–7	2.3828e−05	5.3615e−02	4.7866e+02	−0.425 62	AAA	6
				258.1262 cm^{-1}	196 955.2249–197 213.3511	5–5	4.2839e−05	9.6390e−02	6.1468e+02	−0.317 00	AAA	6
				258.1263 cm^{-1}	196 955.2248–197 213.3511	7–5	1.2241e−06	1.9673e−03	1.7564e+01	−1.861 02	AAA	6
848	1*s*9*d*-1*s*10*f*	$^3D-^1F^\circ$										
				258.1272 cm^{-1}	196 955.2248–197 213.3520	7–7	6.773e−06	1.524e−02	1.361e+02	−0.971 9	AA	6
				258.1271 cm^{-1}	196 955.2249–197 213.3520	5–7	5.228e−05	1.647e−01	1.050e+03	−0.084 4	AA	6
849	1*s*9*d*-1*s*9*p*	$^1D-^1P^\circ$		4.2441 cm^{-1}	196 955.4470–196 959.6911	5–3	1.4325e−08	7.1537e−02	2.7745e+04	−0.446 50	AAA	6
850	1*s*9*d*-1*s*10*f*	$^1D-^3F^\circ$										
				257.9033 cm^{-1}	196 955.4470–197 213.3503	5–7	5.920e−05	1.868e−01	1.192e+03	−0.029 7	AA	6
851	1*s*9*d*-1*s*10*f*	$^1D-^1F^\circ$		257.9050 cm^{-1}	196 955.4470–197 213.3520	5–7	2.1686e−04	6.8430e−01	4.3675e+03	0.534 21	AAA	6
852	1*s*9*d*-1*s*10*p*	$^1D-^1P^\circ$		260.6408 cm^{-1}	196 955.4470–197 216.0878	5–3	9.4429e−05	1.2503e−01	7.8965e+02	−0.204 00	AAA	6
853	1*s*9*f*-1*s*10*d*	$^3F^\circ-^3D$		*256.881* cm^{-1}	*196 955.944–197 212.824*	21–15	6.3329e−05	1.0277e−01	2.7659e+03	0.334 09	AAA	6
				256.8804 cm^{-1}	196 955.9437–197 212.8241	9–7	6.2773e−05	1.1092e−01	1.2794e+03	−0.000 73	AAA	6
				256.8809 cm^{-1}	196 955.9433–197 212.8242	7–5	4.7418e−05	7.6950e−02	6.9032e+02	−0.268 69	AAA	6
				256.8810 cm^{-1}	196 955.9444–197 212.8254	5–3	6.8353e−05	9.3175e−02	5.9706e+02	−0.331 73	AAA	6
				256.8808 cm^{-1}	196 955.9433–197 212.8241	7–7	4.1917e−06	9.5232e−03	8.5433e+01	−1.176 12	AAA	6
				256.8798 cm^{-1}	196 955.9444–197 212.8242	5–5	7.5942e−06	1.7254e−02	1.1056e+02	−1.064 15	AAA	6
				256.8797 cm^{-1}	196 955.9444–197 212.8241	5–7	1.5499e−07	4.9298e−04	3.1590e+00	−2.608 20	AAA	6
854	1*s*9*f*-1*s*10*d*	$^3F^\circ-^1D$										
				257.0445 cm^{-1}	196 955.9433–197 212.9878	7–5	1.497e−05	2.426e−02	2.175e+02	−0.770 1	AA	6
855	1*s*9*f*-1*s*10*g*	$^3F^\circ-^3G$		*257.475* cm^{-1}	*196 955.944–197 213.419*	21–27	3.5490e−04	1.0319e+00	2.7708e+04	1.335 86	AAA	6
				257.4751 cm^{-1}	196 955.9437–197 213.4188	9–11	3.6592e−04	1.0114e+00	1.1639e+04	0.959 17	AAA	6
				257.4751 cm^{-1}	196 955.9433–197 213.4184	7–9	3.2617e−04	9.4836e−01	8.4882e+03	0.822 07	AAA	6
				257.4747 cm^{-1}	196 955.9444–197 213.4191	5–7	3.3605e−04	1.0639e+00	6.8019e+03	0.725 89	AAA	6
				257.4747 cm^{-1}	196 955.9437–197 213.4184	9–9	1.1898e−05	2.6907e−02	3.0963e+02	−0.615 90	AAA	6
				257.4758 cm^{-1}	196 955.9433–197 213.4191	7–7	2.2721e−05	5.1382e−02	4.5988e+02	−0.444 09	AAA	6
				257.4754 cm^{-1}	196 955.9437–197 213.4191	9–7	4.6674e−07	8.2095e−04	9.4471e+00	−2.131 44	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
856	$1s9f$-$1s10g$	$^3F^\circ-{}^1G$										
				257.4760 cm^{-1}	196 955.9433–197 213.4193	7–9	2.208e−05	6.419e−02	5.745e+02	−0.347 4	AA	6
				257.4756 cm^{-1}	196 955.9437–197 213.4193	9–9	1.097e−05	2.481e−02	2.855e+02	−0.651 1	AA	6
857	$1s9f$-$1s10d$	$^1F^\circ-{}^3D$										
				256.8785 cm^{-1}	196 955.9456–197 212.8241	7–7	1.233e−06	2.802e−03	2.513e+01	−1.707 5	AA	6
				256.8786 cm^{-1}	196 955.9456–197 212.8242	7–5	1.334e−05	2.165e−02	1.942e+02	−0.819 4	AA	6
858	$1s9f$-$1s10d$	$^1F^\circ-{}^1D$		257.0422 cm^{-1}	196 955.9456–197 212.9878	7–5	5.2950e−05	8.5819e−02	7.6941e+02	−0.221 32	AAA	6
859	$1s9f$-$1s10g$	$^1F^\circ-{}^3G$										
				257.4735 cm^{-1}	196 955.9456–197 213.4191	7–7	6.684e−06	1.511e−02	1.353e+02	−0.975 5	AA	6
				257.4728 cm^{-1}	196 955.9456–197 213.4184	7–9	2.785e−05	8.098e−02	7.248e+02	−0.246 5	AA	6
860	$1s9f$-$1s10g$	$^1F^\circ-{}^1G$		257.4737 cm^{-1}	196 955.9456–197 213.4193	7–9	3.3287e−04	9.6785e−01	8.6627e+03	0.830 91	AAA	6
861	$1s9g$-$1s10f$	$^3G-{}^3F^\circ$		*257.314* cm^{-1}	*196 956.037–197 213.351*	27–21	4.1634e−05	7.3323e−02	2.5329e+03	0.296 60	AAA	6
				257.3140 cm^{-1}	196 956.0366–197 213.3506	11–9	4.0856e−05	7.5689e−02	1.0652e+03	−0.079 57	AAA	6
				257.3142 cm^{-1}	196 956.0361–197 213.3503	9–7	3.8144e−05	6.7176e−02	7.7351e+02	−0.218 55	AAA	6
				257.3141 cm^{-1}	196 956.0370–197 213.3511	7–5	4.2978e−05	6.9510e−02	6.2253e+02	−0.312 85	AAA	6
				257.3145 cm^{-1}	196 956.0361–197 213.3506	9–9	1.0867e−06	2.4606e−03	2.8333e+01	−1.654 72	AAA	6
				257.3133 cm^{-1}	196 956.0370–197 213.3503	7–7	2.0916e−06	4.7360e−03	4.2415e+01	−1.479 49	AAA	6
				257.3136 cm^{-1}	196 956.0370–197 213.3506	7–9	3.3162e−08	9.6542e−05	8.6463e−01	−3.170 19	AAA	6
862	$1s9g$-$1s10f$	$^3G-{}^1F^\circ$										
				257.3159 cm^{-1}	196 956.0361–197 213.3520	9–7	3.436e−06	6.050e−03	6.967e+01	−1.264 0	AA	6
				257.3150 cm^{-1}	196 956.0370–197 213.3520	7–7	5.945e−07	1.346e−03	1.206e+01	−2.025 8	AA	6
863	$1s9g$-$1s10h$	$^3G-{}^3H^\circ$		*257.399* cm^{-1}	*196 956.037–197 213.435*	27–33	4.6982e−04	1.2994e+00	4.4870e+04	1.545 09	AAA	6
				257.3986 cm^{-1}	196 956.0366–197 213.4352	11–13	4.7288e−04	1.2646e+00	1.7791e+04	1.143 34	AAA	6
				257.3989 cm^{-1}	196 956.0361–197 213.4350	9–11	4.6303e−04	1.2806e+00	1.4741e+04	1.061 65	AAA	6
				257.3984 cm^{-1}	196 956.0370–197 213.4354	7–9	4.4953e−04	1.3078e+00	1.1709e+04	0.961 65	AAA	6
				257.3984 cm^{-1}	196 956.0366–197 213.4350	11–11	9.7462e−06	2.2054e−02	3.1027e+02	−0.615 13	AAA	6
				257.3993 cm^{-1}	196 956.0361–197 213.4354	9–9	1.2025e−05	2.7210e−02	3.1321e+02	−0.611 03	AAA	6
				257.3988 cm^{-1}	196 956.0366–197 213.4354	11–9	2.3352e−07	4.3233e−04	6.0825e+00	−2.322 79	AAA	6
864	$1s9g$-$1s10h$	$^3G-{}^1H^\circ$										
				257.3994 cm^{-1}	196 956.0361–197 213.4355	9–11	1.308e−08	3.617e−05	4.163e−01	−3.487 4	AA	6
				257.3989 cm^{-1}	196 956.0366–197 213.4355	11–11	9.169e−06	2.075e−02	2.919e+02	−0.641 6	AA	6
865	$1s9g$-$1s10f$	$^1G-{}^3F^\circ$										
				257.3130 cm^{-1}	196 956.0373–197 213.3503	9–7	2.742e−06	4.828e−03	5.560e+01	−1.362 0	AA	6
				257.3133 cm^{-1}	196 956.0373–197 213.3506	9–9	1.003e−06	2.270e−03	2.614e+01	−1.689 7	AA	6
866	$1s9g$-$1s10f$	$^1G-{}^1F^\circ$	257.3147 cm^{-1}		196 956.0373–197 213.3520	9–7	3.8947e−05	6.8589e−02	7.8979e+02	−0.209 50	AAA	6
867	$1s9g$-$1s10h$	$^1G-{}^3H^\circ$										
				257.3981 cm^{-1}	196 956.0373–197 213.4354	9–9	1.109e−05	2.510e−02	2.890e+02	−0.646 0	AA	6
				257.3977 cm^{-1}	196 956.0373–197 213.4350	9–11	1.055e−07	2.916e−04	3.357e+00	−2.580 9	AA	6
868	$1s9g$-$1s10h$	$^1G-{}^1H^\circ$	257.3982 cm^{-1}		196 956.0373–197 213.4355	9–11	4.6370e−04	1.2824e+00	1.4762e+04	1.062 28	AAA	6
869	$1s9h$-$1s10g$	$^3H^\circ-{}^3G$	*257.360* cm^{-1}		*196 956.059–197 213.419*	33–27	2.6091e−05	4.8319e−02	2.0397e+03	0.202 63	AAA	6
				257.3599 cm^{-1}	196 956.0589–197 213.4188	13–11	2.5393e−05	4.8634e−02	8.0875e+02	−0.199 12	AAA	6
				257.3599 cm^{-1}	196 956.0585–197 213.4184	11–9	2.5714e−05	4.7621e−02	6.7007e+02	−0.280 81	AAA	6
				257.3600 cm^{-1}	196 956.0591–197 213.4191	9–7	2.6261e−05	4.6232e−02	5.3225e+02	−0.380 82	AAA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				257.3603 cm^{-1}	196 956.0585–197 213.4188	11–11	4.4284e−07	1.0024e−03	1.4104e+01	−1.957 59	AAA	6
				257.3593 cm^{-1}	196 956.0591–197 213.4184	9–9	5.4650e−07	1.2370e−03	1.4241e+01	−1.953 39	AAA	6
				257.3597 cm^{-1}	196 956.0591–197 213.4188	9–11	8.6813e−09	2.4017e−05	2.7650e−01	−3.665 25	AAA	6
870	1*s*9*h*-1*s*10*g*	$^3H^\circ-{}^1G$										
				257.3602 cm^{-1}	196 956.0591–197 213.4193	9–9	5.039e−07	1.141e−03	1.313e+01	−1.988 6	AA	6
871	1*s*9*h*-1*s*10*i*	$^3H^\circ-{}^3I$		*257.382* cm^{-1}	*196 956.059–197 213.440*	33–39	5.9988e−04	1.6044e+00	6.7722e+04	1.723 83	AAA	6
				257.3815 cm^{-1}	196 956.0589–197 213.4404	13–15	6.0260e−04	1.5735e+00	2.6165e+04	1.310 82	AAA	6
				257.3818 cm^{-1}	196 956.0585–197 213.4403	11–13	5.9396e−04	1.5886e+00	2.2351e+04	1.242 40	AAA	6
				257.3815 cm^{-1}	196 956.0591–197 213.4406	9–11	5.8268e−04	1.6117e+00	1.8553e+04	1.161 52	AAA	6
				257.3814 cm^{-1}	196 956.0589–197 213.4403	13–13	8.5852e−06	1.9429e−02	3.2307e+02	−0.597 60	AAA	6
				257.3821 cm^{-1}	196 956.0585–197 213.4406	11–11	1.0193e−05	2.3068e−02	3.2456e+02	−0.595 61	AAA	6
				257.3817 cm^{-1}	196 956.0589–197 213.4406	13–11	1.3834e−07	2.6491e−04	4.4049e+00	−2.462 96	AAA	6
872	1*s*9*h*-1*s*10*i*	$^3H^\circ-{}^1I$										
				257.3822 cm^{-1}	196 956.0585–197 213.4407	11–13	1.300e−08	3.476e−05	4.891e−01	−3.417 5	AA	6
				257.3818 cm^{-1}	196 956.0589–197 213.4407	13–13	8.154e−06	1.845e−02	3.068e+02	−0.620 0	AA	6
873	1*s*9*h*-1*s*10*g*	$^1H^\circ-{}^3G$										
				257.3595 cm^{-1}	196 956.0593–197 213.4188	11–11	4.166e−07	9.430e−04	1.327e+01	−1.984 1	AA	6
874	1*s*9*h*-1*s*10*g*	$^1H^\circ-{}^1G$		257.3600 cm^{-1}	196 956.0593–197 213.4193	11–9	2.5751e−05	4.7689e−02	6.7104e+02	−0.280 19	AAA	6
875	1*s*9*h*-1*s*10*i*	$^1H^\circ-{}^3I$										
				257.3810 cm^{-1}	196 956.0593–197 213.4403	11–13	9.589e−06	2.565e−02	3.609e+02	−0.549 6	AA	6
				257.3813 cm^{-1}	196 956.0593–197 213.4406	11–11	5.253e−08	1.189e−04	1.673e+00	−2.883 5	AA	6
876	1*s*9*h*-1*s*10*i*	$^1H^\circ-{}^1I$		257.3814 cm^{-1}	196 956.0593–197 213.4407	11–13	5.9443e−04	1.5898e+00	2.2369e+04	1.242 75	AAA	6
877	1*s*9*i*-1*s*10*h*	$^3I-{}^3H^\circ$		*257.369* cm^{-1}	*196 956.066–197 213.435*	39–33	1.4604e−05	2.7968e−02	1.3952e+03	0.037 73	AAA	6
				257.3693 cm^{-1}	196 956.0659–197 213.4352	15–13	1.4323e−05	2.8095e−02	5.3906e+02	−0.375 28	AAA	6
				257.3693 cm^{-1}	196 956.0657–197 213.4350	13–11	1.4460e−05	2.7692e−02	4.6049e+02	−0.443 70	AAA	6
				257.3693 cm^{-1}	196 956.0661–197 213.4354	11–9	1.4670e−05	2.7166e−02	3.8224e+02	−0.524 58	AAA	6
				257.3695 cm^{-1}	196 956.0657–197 213.4352	13–13	1.7685e−07	4.0026e−04	6.6560e+00	−2.283 71	AAA	6
				257.3689 cm^{-1}	196 956.0661–197 213.4350	11–11	2.0997e−07	4.7523e−04	6.6867e+00	−2.281 71	AAA	6
				257.3691 cm^{-1}	196 956.0661–197 213.4352	11–13	2.4113e−09	6.4498e−06	9.0752e−02	−4.149 06	AAA	6
878	1*s*9*i*-1*s*10*h*	$^3I-{}^1H^\circ$										
				257.3694 cm^{-1}	196 956.0661–197 213.4355	11–11	1.975e−07	4.471e−04	6.291e+00	−2.308 2	AA	6
879	1*s*9*i*-1*s*10*h*	$^1I-{}^3H^\circ$										
				257.3689 cm^{-1}	196 956.0663–197 213.4352	13–13	1.680e−07	3.801e−04	6.321e+00	−2.306 1	AA	6
880	1*s*9*i*-1*s*10*h*	$^1I-{}^1H^\circ$		257.3692 cm^{-1}	196 956.0663–197 213.4355	13–11	1.4472e−05	2.7715e−02	4.6088e+02	−0.443 34	AAA	6
881	1*s*9*k*-1*s*10*i*	$^3K^\circ-{}^3I$		*257.372* cm^{-1}	*196 956.069–197 213.440*	45–39	6.8757e−06	1.3487e−02	7.7631e+02	−0.216 88	AAA	6
				257.3717 cm^{-1}	196 956.0687–197 213.4404	17–15	6.7761e−06	1.3532e−02	2.9425e+02	−0.638 19	AAA	6
				257.3718 cm^{-1}	196 956.0685–197 213.4403	15–13	6.8264e−06	1.3390e−02	2.5691e+02	−0.697 13	AAA	6
				257.3718 cm^{-1}	196 956.0688–197 213.4406	13–11	6.8987e−06	1.3211e−02	2.1969e+02	−0.765 11	AAA	6
				257.3719 cm^{-1}	196 956.0685–197 213.4404	15–15	6.2371e−08	1.4116e−04	2.7085e+00	−2.674 19	AAA	6
				257.3715 cm^{-1}	196 956.0688–197 213.4403	13–13	7.2210e−08	1.6343e−04	2.7176e+00	−2.672 72	AAA	6
				257.3716 cm^{-1}	196 956.0688–197 213.4404	13–15	6.2573e−10	1.6341e−06	2.7172e−02	−4.672 79	AAA	6
882	1*s*9*k*-1*s*10*i*	$^3K^\circ-{}^1I$										
				257.3719 cm^{-1}	196 956.0688–197 213.4407	13–13	6.858e−08	1.552e−04	2.581e+00	−2.695 1	AA	6

TABLE 14. He I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
883	$1s9k$-$1s10i$	$^1K^\circ-{}^3I$										
				257.3715 cm^{-1}	196 956.0689–197 213.4404	15–15	5.965e−08	1.350e−04	2.590e+00	−2.693 6	AA	6
884	$1s9k$-$1s10i$	$^1K^\circ-{}^1I$		257.3718 cm^{-1}	196 956.0689–197 213.4407	15–13	6.8298e−06	1.3397e−02	2.5704e+02	−0.696 91	AAA	6
885	$1s9p$-$1s10s$	$^1P^\circ-{}^1S$		222.3728 cm^{-1}	196 959.6911–197 182.0639	3–1	4.4230e−04	4.4698e−01	1.9852e+03	0.127 41	AAA	6
886	$1s9p$-$1s10d$	$^1P^\circ-{}^3D$										
				253.1331 cm^{-1}	196 959.6911–197 212.8242	3–5	1.583e−08	6.172e−05	2.408e−01	−3.732 5	AA	6
887	$1s9p$-$1s10d$	$^1P^\circ-{}^1D$		253.2967 cm^{-1}	196 959.6911–197 212.9878	3–5	2.1278e−04	8.2866e−01	3.2311e+03	0.395 50	AAA	6
888	$1s10s$-$1s10p$	$^3S-{}^3P^\circ$		*53.100* cm^{-1}	*197 145.2316–197 198.332*	3–9	1.7420e−05	2.7786e+00	5.1680e+04	0.920 94	AAA	6
				53.0994 cm^{-1}	197 145.2316–197 198.3310	3–5	1.9254e−05	1.7063e+00	3.1736e+04	0.709 17	AAA	6
				53.0999 cm^{-1}	197 145.2316–197 198.3315	3–3	1.9254e−05	1.0237e+00	1.9041e+04	0.487 31	AAA	6
				53.1066 cm^{-1}	197 145.2316–197 198.3382	3–1	1.9254e−05	3.4116e−01	6.3447e+03	0.010 08	AAA	6
889	$1s10s$-$1s10p$	$^1S-{}^1P^\circ$		34.0239 cm^{-1}	197 182.0639–197 216.0878	1–3	5.6127e−06	2.1806e+00	2.1100e+04	0.338 58	AAA	6
890	$1s10p$-$1s10d$	$^3P^\circ-{}^3D$		*14.492* cm^{-1}	*197 198.332–197 212.824*	9–15	2.8940e−02	3.4429e+04	7.0389e+09	5.491 17	AAA	6
				14.4931 cm^{-1}	197 198.3310–197 212.8241	5–7	5.3061e−07	5.3020e−01	6.0217e+04	0.423 41	AAA	6
				14.4927 cm^{-1}	197 198.3315–197 212.8242	3–5	3.9793e−07	4.7338e−01	3.2260e+04	0.152 33	AAA	6
				14.4872 cm^{-1}	197 198.3382–197 212.8254	1–3	2.9478e−07	6.3169e−01	1.4355e+04	−0.199 49	AAA	6
				14.4932 cm^{-1}	197 198.3310–197 212.8242	5–5	1.3264e−07	9.4668e−02	1.0752e+04	−0.324 83	AAA	6
				14.4939 cm^{-1}	197 198.3315–197 212.8254	3–3	2.2109e−07	1.5778e−01	1.0751e+04	−0.324 82	AAA	6
				14.4944 cm^{-1}	197 198.3310–197 212.8254	5–3	1.4739e−08	6.3107e−03	7.1667e+02	−1.500 95	AAA	6
891	$1s10d$-$1s10p$	$^1D-{}^1P^\circ$		3.1000 cm^{-1}	197 212.9878–197 216.0878	5–3	8.5959e−09	8.0459e−02	4.2723e+04	−0.395 45	AAA	6

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

3.1.2. He I Forbidden Transitions

For the electric quadrupole lines, we have tabulated the results of recent extensive variational calculations by Cann and Thakkar.[23] They constructed 100-term explicitly correlated wave functions and derived the quadrupole oscillator strengths in both the length and velocity formulations. The two formulations almost always gave excellent agreement, usually within 0.1% and slightly exceeding 1% only for the $1s3s\ ^1S-1s6d\ ^1D$ transition.

Cann and Thakkar already applied the same computational approach to the allowed lines of He I and in this case obtained almost perfect agreement with the calculations by Drake,[6] which are tabulated for the allowed (E1) lines.

For the three transitions $1s^2\ ^1S-1s3d\ ^1D$, $1s2s\ ^1S-1s3d\ ^1D$, and $1s2s\ ^3S-1s3d\ ^3D$, electric quadrupole line strengths were also calculated by Godefroid and Verhaegen[24] with a multiconfiguration Hartree-Fock program developed by Froese Fischer[25] in 1977. The agreement with the results of Cann and Thakkar[23] is within 0.5%.

Drake[26] and Johnson and Lin[27] calculated the transition probability of the $1s^2\ ^1S-1s2s\ ^3S$ relativistic magnetic dipole transition using perturbation theory and the Dirac-Fock approximation, respectively, and their results agree within 1.5%. This very weak transition has also been measured by Woodworth and Moos[28] in a He discharge, their results agreeing with the calculations within 15%.

Drake[29] and Kundu *et al.*[30] calculated the magnetic quadrupole transition rates for several $1s^2\ ^1S-1snp\ ^3P^\circ$ transitions with variational and Hartree-Fock methods, respectively. Their calculations overlap for the $1s^2\ ^1S-1s2p\ ^3P^\circ$ transition, where their results differ by only 11%.

A finding list and transition probabilities for the forbidden lines of (He I) are given in Tables 15 and 16

TABLE 15. List of tabulated lines for forbidden transitions of He I

Wavelength (Å)	No.
In vacuum	
510.133	11
512.136	10
512.314	9
515.681	8
515.994	7
522.339	6
522.966	5
537.331	4
538.896	3
591.412	2

TABLE 15. List of tabulated lines for forbidden transitions of He I—Continued

Wavelength (Å)	No.
625.563	1
In air	
2 823.70	15
2 935.04	14
3 164.79	13
3 449.27	19
3 616.80	18
3 809.08	12
3 829.47	24
3 972.02	17
4 045.18	23
4 141.33	29
4 383.28	28
4 470.02	22
4 517.46	21
4 910.75	27
4 920.61	26
5 042.09	16
6 067.13	20
6 631.90	25
8 314.91	33
9 360.41	32
9 616.50	37
10 383.4	40
11 027.8	49
11 042.5	36
11 095.9	46
11 316.1	43
12 138.3	39
12 180.4	31
12 927.9	48
13 226.4	45
13 798.0	42
15 189.7	35

TABLE 15. List of tabulated lines for forbidden transitions of He I—Continued

Wavelength (Å)	No.
17 686.6	38
18 922.2	47
20 147.8	52
20 675.8	44
23 138.9	55
23 822.6	41
25 146.0	57
26 432.5	63
27 252.3	61
27 624.1	51
28 632.1	59
33 569.7	54
34 897.4	30
38 694.3	56
40 809.4	62
45 092.5	60
Wave number (cm^{-1})	**No.**
145.9016	73
254.7775	66
323.9528	72
506.2288	53
570.1617	64
1 018.9663	69
1 146.3716	50
1 196.5790	70
1 240.1364	34
1 332.4462	71
1 392.0319	68
1 597.2581	67
1 902.5066	58
1 913.0808	65

TABLE 16. He I: Forbidden transitions

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	f_{ik}	S (a.u.)	Acc.	Source
1	$1s^2$-$1s2s$	$^1S-^3S$										
				625.563	0.0000–159 855.9726	1–3	M1	1.272e−04	2.239e−14	3.463e−09	AA	26
2	$1s^2$-$1s2p$	$^1S-^3P^\circ$										
				591.412	0.0000–169 086.7647	1–5	M2	3.27e−01	8.57e−11	7.93e+00	A	29
3	$1s^2$-$1s3p$	$^1S-^3P^\circ$										
				538.896	0.0000–185 564.5602	1–5	M2	1.21e−01	2.63e−11	1.84e+00	C	30
4	$1s^2$-$1s3d$	$^1S-^1D$	537.331		0.0000–186 104.9646	1–5	E2	1.299e+03	2.811e−07	2.597e−01	AA	23
5	$1s^2$-$1s4p$	$^1S-^3P^\circ$										
				522.966	0.0000–191 217.0388	1–5	M2	5.2e−02	1.07e−11	6.8e−01	C	30
6	$1s^2$-$1s4d$	$^1S-^1D$	522.339		0.0000–191 446.4536	1–5	E2	7.4848e+02	1.5308e−07	1.2993e−01	AAA	23

TABLE 16. He I: Forbidden transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	f_{ik}	S (a.u.)	Acc.	Source
7	$1s^2$-1s5p	$^1S-^3P^\circ$										
				515.994	0.0000–193 800.7054	1–5	M2	2.64e−02	5.3e−12	3.24e−01	C	30
8	$1s^2$-1s5d	$^1S-^1D$		515.681	0.0000–193 918.2878	1–5	E2	4.3136e+02	8.5987e−08	7.0229e−02	AAA	23
9	$1s^2$-1s6p	$^1S-^3P^\circ$										
				512.314	0.0000–195 192.7408	1–5	M2	1.53e−02	3.00e−12	1.81e−01	C	30
10	$1s^2$-1s6d	$^1S-^1D$		512.136	0.0000–195 260.7684	1–5	E2	2.6480e+02	5.2062e−08	4.1650e−02	AAA	23
11	$1s^2$-1s7p	$^1S-^3P^\circ$										
				510.133	0.0000–196 027.3129	1–5	M2	1.07e−02	2.09e−12	1.24e−01	C	30
12	1s2s-1s3d	$^3S-^3D$	3 809.08	3 810.17	159 855.9726–186 101.5540	3–15	E2	1.8665e+02	2.0312e−06	2.0075e+03	AAA	23
13	1s2s-1s4d	$^3S-^3D$	3 164.79	3 165.71	159 855.9726–191 444.4831	3–15	E2	6.2239e+01	4.6756e−07	2.6504e+02	AAA	23
14	1s2s-1s5d	$^3S-^3D$	2 935.04	2 935.89	159 855.9726–193 917.1514	3–15	E2	2.8052e+01	1.8125e−07	8.1952e+01	AAA	23
15	1s2s-1s6d	$^3S-^3D$	2 823.70	2 824.53	159 855.9726–195 260.0705	3–15	E2	1.505e+01	8.999e−08	3.623e+01	AA	23
16	1s2s-1s3d	$^1S-^1D$	5 042.09	5 043.49	166 277.4384–186 104.9646	1–5	E2	1.022e+02	1.949e−06	1.489e+03	AA	23
17	1s2s-1s4d	$^1S-^1D$	3 972.02	3 973.14	166 277.4384–191 446.4536	1–5	E2	2.2842e+01	2.7029e−07	1.0097e+02	AAA	23
18	1s2s-1s5d	$^1S-^1D$	3 616.80	3 617.83	166 277.4384–193 918.2878	1–5	E2	8.2983e+00	8.1418e−08	2.2962e+01	AAA	23
19	1s2s-1s6d	$^1S-^1D$	3 449.27	3 450.26	166 277.4384–195 260.7684	1–5	E2	3.9163e+00	3.4947e−08	8.5488e+00	AAA	23
20	1s2p-1s3p	$^3P^\circ-^3P^\circ$	6 067.13	6 068.81	169 086.9085–185 564.5999	9–9	E2	2.8323e+01	1.5639e−07	1.8737e+03	AAA	23
21	1s2p-1s4p	$^3P^\circ-^3P^\circ$	4 517.46	4 518.72	169 086.9085–191 217.0551	9–9	E2	1.188e+01	3.636e−08	1.798e+02	AA	23
22	1s2p-1s4f	$^3P^\circ-^3F^\circ$	4 470.02	4 471.28	169 086.9085–191 451.8790	9–21	E2	6.150e+01	4.301e−07	2.061e+03	AA	24
23	1s2p-1s5p	$^3P^\circ-^3P^\circ$	4 045.18	4 046.32	169 086.9085–193 800.7136	9–9	E2	5.88e+00	1.44e−08	5.12e+01	A	23
24	1s2p-1s6p	$^3P^\circ-^3P^\circ$	3 829.47	3 830.56	169 086.9085–195 192.7455	9–9	E2	3.4236e+00	7.5312e−09	2.2690e+01	AAA	23
25	1s2p-1s3p	$^1P^\circ-^1P^\circ$	6 631.90	6 633.73	171 134.8951–186 209.3632	3–3	E2	2.3749e+01	1.5668e−07	8.1724e+02	AAA	23
26	1s2p-1s4f	$^1P^\circ-^1F^\circ$	4 920.61	4 921.99	171 134.8951–191 451.8953	3–7	E2	6.219e+01	5.270e−07	1.123e+03	AA	24
27	1s2p-1s4p	$^1P^\circ-^1P^\circ$	4 910.75	4 912.12	171 134.8951–191 492.7097	3–3	E2	1.028e+01	3.720e−08	7.879e+01	AA	23
28	1s2p-1s5p	$^1P^\circ-^1P^\circ$	4 383.28	4 384.51	171 134.8951–193 942.4601	3–3	E2	5.317e+00	1.532e−08	2.308e+01	AA	23
29	1s2p-1s6p	$^1P^\circ-^1P^\circ$	4 141.33	4 142.50	171 134.8951–195 274.9063	3–3	E2	3.069e+00	7.897e−09	1.003e+01	AA	23
30	1s3s-1s3d	$^3S-^3D$	34 897.4	2 864.7639 cm^{-1}	183 236.7901–186 101.5540	3–15	E2	7.0494e−02	6.4388e−08	4.8933e+04	AAA	23
31	1s3s-1s4d	$^3S-^3D$	12 180.4	8 207.6930 cm^{-1}	183 236.7901–191 444.4831	3–15	E2	6.9183e+00	7.6982e−07	2.4876e+04	AAA	23
32	1s3s-1s5d	$^3S-^3D$	9 360.41	9 362.98	183 236.7901–193 917.1514	3–15	E2	4.1445e+00	2.7235e−07	3.9942e+03	AAA	23
33	1s3s-1s6d	$^3S-^3D$	8 314.91	8 317.20	183 236.7901–195 260.0705	3–15	E2	2.451e+00	1.271e−07	1.306e+03	AA	23
34	1s3s-1s3d	$^1S-^1D$		1 240.1364 cm^{-1}	184 864.8282–186 104.9646	1–5	E2	1.2492e−03	6.0887e−09	1.9013e+04	AAA	23
35	1s3s-1s4d	$^1S-^1D$	15 189.7	6 581.6254 cm^{-1}	184 864.8282–191 446.4536	1–5	E2	5.6132e+00	9.7135e−07	2.0292e+04	AAA	23
36	1s3s-1s5d	$^1S-^1D$	11 042.5	9 053.4596 cm^{-1}	184 864.8282–193 918.2878	1–5	E2	2.514e+00	2.299e−07	1.845e+03	AA	23
37	1s3s-1s6d	$^1S-^1D$	9 616.50	9 619.14	184 864.8282–195 260.7684	1–5	E2	1.26e+00	8.74e−08	4.63e+02	A	23
38	1s3p-1s4p	$^3P^\circ-^3P^\circ$	17 686.6	5 652.4552 cm^{-1}	185 564.5999–191 217.0551	9–9	E2	2.9354e+00	1.3774e−07	4.0882e+04	AAA	23

TABLE 16. He I: Forbidden transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	f_{ik}	S (a.u.)	Acc.	Source
39	1*s*3*p*-1*s*5*p*	$^3P^\circ-^3P^\circ$	12 138.3	8 236.1137 cm^{-1}	185 564.5999–193 800.7136	9–9	E2	1.6193e+00	3.5788e−08	3.4336e+03	AAA	23
40	1*s*3*p*-1*s*6*p*	$^3P^\circ-^3P^\circ$	10 383.4	9 628.1456 cm^{-1}	185 564.5999–195 192.7455	9–9	E2	9.505e−01	1.537e−08	9.232e+02	AA	23
41	1*s*3*d*-1*s*4*s*	$^3D-^3S$	23 822.6	4 196.5573 cm^{-1}	186 101.5542–190 298.1115	15–3	E2	1.1614e+00	1.9774e−08	2.3903e+04	AAA	23
42	1*s*3*d*-1*s*5*s*	$^3D-^3S$	13 798.0	7 245.4355 cm^{-1}	186 101.5542–193 346.9897	15–3	E2	5.4583e−01	3.1176e−09	7.3225e+02	AAA	23
43	1*s*3*d*-1*s*6*s*	$^3D-^3S$	11 316.1	8 834.5635 cm^{-1}	186 101.5542–194 936.1177	15–3	E2	3.1652e−01	1.2160e−09	1.5754e+02	AAA	23
44	1*s*3*d*-1*s*4*s*	$^1D-^1S$	20 675.8	4 835.2602 cm^{-1}	186 104.9646–190 940.2248	5–1	E2	1.3064e+00	1.6754e−08	4.4135e+03	AAA	23
45	1*s*3*d*-1*s*5*s*	$^1D-^1S$	13 226.4	7 558.5457 cm^{-1}	186 104.9646–193 663.5103	5–1	E2	7.4166e−01	3.8924e−09	2.6842e+02	AAA	23
46	1*s*3*d*-1*s*6*s*	$^1D-^1S$	11 095.9	9 009.9022 cm^{-1}	186 104.9646–195 114.8668	5–1	E2	4.515e−01	1.668e−09	6.790e+01	AA	23
47	1*s*3*p*-1*s*4*p*	$^1P^\circ-^1P^\circ$	18 922.2	5 283.3465 cm^{-1}	186 209.3632–191 492.7097	3–3	E2	2.5290e+00	1.3583e−07	1.6456e+04	AAA	23
48	1*s*3*p*-1*s*5*p*	$^1P^\circ-^1P^\circ$	12 927.9	7 733.0969 cm^{-1}	186 209.3632–193 942.4601	3–3	E2	1.423e+00	3.567e−08	1.378e+03	AA	23
49	1*s*3*p*-1*s*6*p*	$^1P^\circ-^1P^\circ$	11 027.8	9 065.5431 cm^{-1}	186 209.3632–195 274.9063	3–3	E2	8.465e−01	1.544e−08	3.703e+02	AA	23
50	1*s*4*s*-1*s*4*d*	$^3S-^3D$		1 146.3716 cm^{-1}	190 298.1115–191 444.4831	3–15	E2	1.0456e−02	5.9643e−08	7.0737e+05	AAA	23
51	1*s*4*s*-1*s*5*d*	$^3S-^3D$	27 624.1	3 619.0399 cm^{-1}	190 298.1115–193 917.1514	3–15	E2	7.1114e−01	4.0700e−07	1.5342e+05	AAA	23
52	1*s*4*s*-1*s*6*d*	$^3S-^3D$	20 147.8	4 961.9590 cm^{-1}	190 298.1115–195 260.0705	3–15	E2	5.6336e−01	1.7152e−07	2.5085e+04	AAA	23
53	1*s*4*s*-1*s*4*d*	$^1S-^1D$		506.2288 cm^{-1}	190 940.2248–191 446.4536	1–5	E2	2.0286e−04	5.9337e−09	2.7241e+05	AAA	23
54	1*s*4*s*-1*s*5*d*	$^1S-^1D$	33 569.7	2 978.0630 cm^{-1}	190 940.2248–193 918.2878	1–5	E2	7.0191e−01	5.9326e−07	1.3378e+05	AAA	23
55	1*s*4*s*-1*s*6*d*	$^1S-^1D$	23 138.9	4 320.5436 cm^{-1}	190 940.2248–195 260.7684	1–5	E2	4.302e−01	1.728e−07	1.276e+04	AA	23
56	1*s*4*p*-1*s*5*p*	$^3P^\circ-^3P^\circ$	38 694.3	2 583.6585 cm^{-1}	191 217.0551–193 800.7136	9–9	E2	5.0986e−01	1.1451e−07	3.5589e+05	AAA	23
57	1*s*4*p*-1*s*6*p*	$^3P^\circ-^3P^\circ$	25 146.0	3 975.6904 cm^{-1}	191 217.0551–195 192.7455	9–9	E2	3.324e−01	3.153e−08	2.689e+04	AA	23
58	1*s*4*d*-1*s*5*s*	$^3D-^3S$		1 902.5066 cm^{-1}	191 444.4831–193 346.9897	15–3	E2	3.1472e−01	2.6071e−08	3.3823e+05	AAA	23
59	1*s*4*d*-1*s*6*s*	$^3D-^3S$	28 632.1	3 491.6346 cm^{-1}	191 444.4831–194 936.1177	15–3	E2	1.6177e−01	3.9786e−09	8.3497e+03	AAA	23
60	1*s*4*d*-1*s*5*s*	$^1D-^1S$	45 092.5	2 217.0567 cm^{-1}	191 446.4536–193 663.5103	5–1	E2	3.8108e−01	2.3246e−08	6.3523e+04	AAA	23
61	1*s*4*d*-1*s*6*s*	$^1D-^1S$	27 252.3	3 668.4132 cm^{-1}	191 446.4536–195 114.8668	5–1	E2	2.4625e−01	5.4868e−09	3.3097e+03	AAA	23
62	1*s*4*p*-1*s*5*p*	$^1P^\circ-^1P^\circ$	40 809.4	2 449.7504 cm^{-1}	191 492.7097–193 942.4601	3–3	E2	4.5190e−01	1.1289e−07	1.3720e+05	AAA	23
63	1*s*4*p*-1*s*6*p*	$^1P^\circ-^1P^\circ$	26 432.5	3 782.1966 cm^{-1}	191 492.7097–195 274.9063	3–3	E2	2.9767e−01	3.1197e−08	1.0302e+04	AAA	23
64	1*s*5*s*-1*s*5*d*	$^3S-^3D$		570.1617 cm^{-1}	193 346.9897–193 917.1514	3–15	E2	2.1961e−03	5.0639e−08	4.8815e+06	AAA	23
65	1*s*5*s*-1*s*6*d*	$^3S-^3D$		1 913.0808 cm^{-1}	193 346.9897–195 260.0705	3–15	E2	1.2536e−01	2.5676e−07	6.5522e+05	AAA	23
66	1*s*5*s*-1*s*5*d*	$^1S-^1D$		254.7775 cm^{-1}	193 663.5103–193 918.2878	1–5	E2	4.4978e−05	5.1941e−09	1.8705e+06	AAA	23
67	1*s*5*s*-1*s*6*d*	$^1S-^1D$		1 597.2581 cm^{-1}	193 663.5103–195 260.7684	1–5	E2	1.3966e−01	4.1036e−07	5.9976e+05	AAA	23
68	1*s*5*p*-1*s*6*p*	$^3P^\circ-^3P^\circ$		1 392.0319 cm^{-1}	193 800.7136–195 192.7455	9–9	E2	1.2477e−01	9.6529e−08	1.9182e+06	AAA	23
69	1*s*5*d*-1*s*6*s*	$^3D-^3S$		1 018.9663 cm^{-1}	193 917.1514–194 936.1177	15–3	E2	9.4514e−02	2.7294e−08	2.3047e+06	AAA	23
70	1*s*5*d*-1*s*6*s*	$^1D-^1S$		1 196.5790 cm^{-1}	193 918.2878–195 114.8668	5–1	E2	1.2012e−01	2.5154e−08	4.3721e+05	AAA	23
71	1*s*5*p*-1*s*6*p*	$^1P^\circ-^1P^\circ$		1 332.4462 cm^{-1}	193 942.4601–195 274.9063	3–3	E2	1.1287e−01	9.5310e−08	7.1986e+05	AAA	23
72	1*s*6*s*-1*s*6*d*	$^3S-^3D$		323.9528 cm^{-1}	194 936.1177–195 260.0705	3–15	E2	6.0290e−04	4.3064e−08	2.2632e+07	AAA	23
73	1*s*6*s*-1*s*6*d*	$^1S-^1D$		145.9016 cm^{-1}	195 114.8668–195 260.7684	1–5	E2	1.2803e−05	4.5085e−09	8.6455e+06	AAA	23

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

3.2. He II

Hydrogen Isoelectronic Sequence
Ground State: $1s\ ^2S_{1/2}$
Ionization Energy: 54.418 eV (438 908.886 cm^{-1})

3.2.1. He II Allowed Transitions

We have not tabulated numerical data for the hydrogenlike ion He II. Data for this ion of nuclear charge $Z=2$ may be obtained by scaling the tabulated values for hydrogen according to the following nonrelativistic relationships:[12]

$$f(\text{He II}) = f(\text{H I}),$$

$$A(\text{He II}) = (2)^4 A(\text{H I}) = 16A(\text{H I}),$$

$$S(\text{He II}) = (2)^{-2} S(\text{H I}) = (1/4)S(\text{H I}).$$

Extensive numerical calculations for H-like ions by Baker,[4] Jitrik and Bunge,[5] and Pal'chikov[17] showed that the relativistic results are essentially indistinguishable (i.e., identical within a few parts in 10^4) from the nonrelativistic results for hydrogen and hydrogenlike ions of small Z. Therefore the above scaling relationships are valid within this level of accuracy. If better precision is required, we refer the reader to the data tables by Jitrik and Bunge.[5]

Wavelength and energy level data for He II may be obtained by consulting the NIST Atomic Energy Levels and Spectra Bibliographic Database.[13]

3.2.2. He II Forbidden Transitions

The magnetic dipole transition between the two hyperfine levels of the ground state of ^{3}He II, which is an analog to the famous 21 cm line of hydrogen, has been investigated in detail by Gould,[21] who obtained a transition probability of $A = 1.954\ 36 \times 10^{-12}\ s^{-1}$ for it (he used a transition frequency of 8665.649 905 MHz, which was obtained from literature sources).

4. Lithium

4.1. Li I

Ground State: $1s^2 2s\ ^2S_{1/2}$
Ionization Energy: 5.3917 eV (43 487.150 cm^{-1})

4.1.1. Li I Allowed Transitions

Numerous results for the transition probabilities of this spectrum have been obtained in recent years, almost all from calculations. We selected data from seven advanced calculations[31–37] and used high-precision radiative lifetime measurements[38–40] for an independent check of some theoretical results. The majority of tabulated data comes from the close-coupling calculations by Peach *et al.*[37]

A finding list and transition probabilities for the allowed lines of (Li I) are given in Tables 17–19.

The highest precision calculations were carried out by Yan and Drake[31] for the $2s\ ^2S - 2p\ ^2P^\circ$ and the $2p\ ^2P^\circ - 3d\ ^2D$ multiplets by constructing variational wave-functions in Hylleraas coordinates. They calculated the oscillator strengths for two transitions in both the dipole length and velocity formulations and obtained outstanding agreement. For the $2s\ ^2S - 2p\ ^2P$ transition, the two forms agree within six digits, and for the $2p\ ^2P - 3d\ ^2D$ transition, within five digits. These data may therefore serve as benchmarks for other calculations and lifetime experiments. We have made such a comparison in Table 18. We limited it to those advanced calculational methods that we used for our tabulation and high-precision experimental data from recent lifetime measurements obtained with the beam-gas-laser method[38] and with photoassociative spectroscopy of ultracold lithium.[39,40] The agreement of all these results with Yan and Drake's benchmark data is indeed impressive.

Results for other transitions of Li I were selected in the following order: First, the variational-Hylleraas-type calculations by Yan,[32] then the multiconfiguration Hartree-Fock calculations of Froese Fischer *et al.*,[33] third the results of the superposition of correlated configurations method by Pestka and Woznicki,[34] fourth a full-core-plus-correlation method by Qu *et al.*,[35,36] and finally the close-coupling calculations of Peach *et al.*,[37] by utilizing the R-matrix technique. In addition to the data overlap for the two transitions shown in Table 1, there is also overlap for about ten other transitions between the work of Froese Fischer *et al.*, Pestka and Woznicki, Peach *et al.*, and an earlier elaborate configuration interaction calculation by Sims *et al.*[41] (which we did not use). The differences in the results are usually very small, one-half of 1% or less. The differences with Peach *et al.* are a little larger, up to 1.7%. However, for the very weak $2s\ ^2S - 3p\ ^2P^\circ$ transition, the difference between Pestka and Woznicki[34] and Peach *et al.*[37] is larger than a factor of 2. We therefore estimate larger uncertainties for the data of other weak lines between higher quantum numbers that are only covered by Peach *et al.*[37]

TABLE 17. List of tabulated lines for allowed transitions of Li I

Wavelength (Å)	No.
In vacuum	
1 807.3	98
1 901.5	97
1 980.6	96
In air	
2 170.4	95
2 373.54	8
2 394.39	7
2 425.43	6
2 475.06	5
2 562.31	4
2 741.20	3
2 933.4	94
3 232.66	2
3 671.69	21
3 671.74	21

TABLE 17. List of tabulated lines for allowed transitions of Li I—Continued

Wavelength (Å)	No.
3 720.89	20
3 720.94	20
3 746.58	19
3 746.63	19
3 795.02	18
3 795.07	18
3 835.59	17
3 835.64	17
3 915.29	16
3 915.34	16
3 985.48	15
3 985.54	15
4 117.5	102
4 132.56	14
4 132.61	14
4 132.62	14
4 273.06	13
4 273.12	13
4 602.82	12
4 602.89	12
4 641.2	101
4 971.66	11
4 971.74	11
5 142.6	100
6 103.53	10
6 103.64	10
6 103.66	10
6 660.4	99
6 707.76	1
6 707.91	1
6 873.08	27
7 135.17	26
7 582.45	25
8 126.22	9
8 126.45	9
8 465.48	24
9 217.53	38
9 376.78	37
9 549.80	45
9 549.84	45
9 686.21	36
9 954.93	35
10 063.4	44
10 510.2	34
10 792.2	23
10 976.6	43
10 976.7	43
11 031.8	33
12 237.2	32
12 781.9	42
12 782.0	42
12 928.9	41
12 929.0	41
13 557.2	31
14 833.7	50
16 110.9	49
17 545.2	30

TABLE 17. List of tabulated lines for allowed transitions of Li I—Continued

Wavelength (Å)	No.
18 586.5	48
18 696.6	40
18 696.7	40
18 856.5	59
19 275.7	39
19 275.8	39
19 494.5	63
19 494.6	63
19 535.3	58
20 928.1	57
21 761.7	62
21 761.8	62
22 224.3	56
24 463.1	29
24 971.3	47
25 196.2	55
25 196.3	55
26 535.8	61
26 536.0	61
26 879.7	22
28 416.8	54
28 959.7	66
30 951	105
36 278.0	73
37 630.4	76
37 630.6	76
38 079.2	53
38 079.3	53
38 876.6	72
41 791.5	60
41 791.8	60
44 811.9	71
47 103.2	75
47 103.4	75
47 803.2	65
Wave number (cm^{-1})	**No.**
19.7	93
29.2	88
46.47	79
46.48	79
79.37	67
79.38	67
153.83	51
153.85	51
164.5	92
249.5	86
357.70	28
357.74	28
369.8	89
403.20	77
490	104
505.1	91
554.0	90
577.1	80
716.06	64

TABLE 17. List of tabulated lines for allowed transitions of Li I—Continued

Wave number (cm^{-1})	No.
780.03	84
780.04	84
783.7	87
855.7	81
972.08	68
1 196.3	82
1 229.71	78
1 295.90	74
1 295.91	74
1 314.31	85
1 314.32	85
1 380.5	83
1 421.75	69
1 421.76	69
1 457.49	46
1 610	103
1 829.95	52
1 952.3	70

TABLE 18. Comparison of the "benchmark" data by Yan and Drake[31] for the 2*s*-2*p* and 2*p*-3*d* transitions, with other calculations[33–37] (selected for other transitions in this compilation) and with high-precision experimental lifetime data.

	Line Strengths	
	$2s\ ^2S-2p\ ^2P^\circ$	$2p\ ^2P^\circ-3d\ ^2D$
Theory		
Yan and Drake[31]	32.999 072 6 (length)	77.009 167 42
	32.999 068 1(velocity)	
Froese Fischer *et al.*[33]	33.002 7	77.006 8
Pestka and Woznicki[34]	33.009 3	76.977 5
Qu *et al.*[35]	33.007 6	–
Peach *et al.*[37]	33.023	–
Lifetime Experiments		
Schmitt *et al.*[38]	33.02	76.99[a]
McAlexander *et al.*[39]	33.005	–
Martin *et al.*[40]	32.97	–

[a]The contribution of the 3*p*-3*d* transition to the lifetime is negligible according to the calculations.

TABLE 19. Li I: Allowed transitions

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or α (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} ($10^8\ s^{-1}$)	f_{ik}	S (a.u.)	log gf	Acc.	Source
1	$1s^22s$-$1s^22p$	$^2S-^2P^\circ$	*6 707.8*	*6 709.7*	*0.00–14 903.9*	2–6	3.6891e−01	7.4696e−01	3.2999e+01	0.174 33	AAA	31
			6 707.76	6 709.61	0.00–14 904.00	2–4	3.6892e−01	4.9798e−01	2.1999e+01	−0.001 76	AAA	LS
			6 707.91	6 709.76	0.00–14 903.66	2–2	3.6889e−01	2.4898e−01	1.1000e+01	−0.302 80	AAA	LS
2	$1s^22s$-$1s^23p$	$^2S-^2P^\circ$	*3 232.7*	*3 233.6*	*0.00–30 925.4*	2–6	1.002e−02	4.711e−03	1.003e−01	−2.025 9	AA	33
			3 232.66	3 233.59	0.00–30 925.38	2–4	1.002e−02	3.141e−03	6.686e−02	−2.202 0	AA	LS
			3 232.66	3 233.59	0.00–30 925.38	2–2	1.002e−02	1.570e−03	3.343e−02	−2.503 0	AA	LS
3	$1s^22s$-$1s^24p$	$^2S-^2P^\circ$	*2 741.2*	*2 742.0*	*0.00–36 469.6*	2–6	1.248e−02	4.218e−03	7.616e−02	−2.073 8	AA	34
			2 741.20	2 742.01	0.00–36 469.55	2–4	1.248e−02	2.812e−03	5.077e−02	−2.249 9	AA	LS
			2 741.20	2 742.01	0.00–36 469.55	2–2	1.248e−02	1.406e−03	2.539e−02	−2.550 9	AA	LS
4	$1s^22s$-$1s^25p$	$^2S-^2P^\circ$	*2 562.3*	*2 563.1*	*0.00–39 015.6*	2–6	8.865e−03	2.619e−03	4.420e−02	−2.280 8	AA	35
			2 562.31	2 563.08	0.00–39 015.56	2–4	8.798e−03	1.733e−03	2.925e−02	−2.460 2	AA	35
			2 562.31	2 563.08	0.00–39 015.56	2–2	8.999e−03	8.863e−04	1.496e−02	−2.751 4	AA	35
5	$1s^22s$-$1s^26p$	$^2S-^2P^\circ$	*2 475.1*	*2 475.8*	*0.00–40 390.8*	2–6	5.735e−03	1.581e−03	2.577e−02	−2.500 0	AA	35
			2 475.06	2 475.81	0.00–40 390.84	2–4	5.736e−03	1.054e−03	1.718e−02	−2.676 0	AA	35
			2 475.06	2 475.81	0.00–40 390.84	2–2	5.734e−03	5.269e−04	8.589e−03	−2.977 2	AA	35

TABLE 19. Li I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or α (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
6	$1s^22s$-$1s^27p$	$^2S-^2P^\circ$	*2 425.4*	*2 426.2*	*0.00–41 217.4*	2–6	3.823e−03	1.012e−03	1.617e−02	−2.693 7	AA	35
			2 425.43	2 426.16	0.00–41 217.35	2–4	3.824e−03	6.749e−04	1.078e−02	−2.869 7	AA	35
			2 425.43	2 426.16	0.00–41 217.35	2–2	3.822e−03	3.373e−04	5.388e−03	−3.171 0	AA	35
7	$1s^22s$-$1s^28p$	$^2S-^2P^\circ$	*2 394.4*	*2 395.1*	*0.00–41 751.6*	2–6	2.664e−03	6.873e−04	1.084e−02	−2.861 8	AA	35
			2 394.39	2 395.12	0.00–41 751.63	2–4	2.664e−03	4.582e−04	7.226e−03	−3.037 9	AA	35
			2 394.39	2 395.12	0.00–41 751.63	2–2	2.664e−03	2.291e−04	3.613e−03	−3.338 9	AA	35
8	$1s^22s$-$1s^29p$	$^2S-^2P^\circ$	*2 373.5*	*2 374.3*	*0.00–42 118.27*	2–6	1.917e−03	4.861e−04	7.599e−03	−3.012 2	AA	35
			2 373.54	2 374.27	0.00–42 118.27	2–4	1.917e−03	3.241e−04	5.067e−03	−3.188 3	AA	35
			2 373.54	2 374.27	0.00–42 118.27	2–2	1.917e−03	1.620e−04	2.533e−03	−3.489 5	AA	35
9	$1s^22p$-$1s^23s$	$^2P^\circ-^2S$	*8 126.4*	*8 128.6*	*14 903.9–27 206.12*	6–2	3.3466e−01	1.1050e−01	1.7743e+01	−0.178 47	AAA	33
			8 126.45	8 128.68	14 904.00–27 206.12	4–2	2.2310e−01	1.1050e−01	1.1828e+01	−0.354 57	AAA	LS
			8 126.22	8 128.46	14 903.66–27 206.12	2–2	1.1156e−01	1.1051e−01	5.9142e+00	−0.655 59	AAA	LS
10	$1s^22p$-$1s^23d$	$^2P^\circ-^2D$	*6 103.6*	*6 105.3*	*14 903.9–31 283.1*	6–10	6.8563e−01	6.3857e−01	7.7009e+01	0.583 36	AAA	31
			6 103.64	6 105.33	14 904.00–31 283.12	4–6	6.8562e−01	5.7471e−01	4.6206e+01	0.361 51	AAA	LS
			6 103.53	6 105.22	14 903.66–31 283.08	2–4	5.7138e−01	6.3858e−01	2.5670e+01	0.106 24	AAA	LS
			6 103.66	6 105.35	14 904.00–31 283.08	4–4	1.1427e−01	6.3857e−02	5.1339e+00	−0.592 73	AAA	LS
11	$1s^22p$-$1s^24s$	$^2P^\circ-^2S$	*4 971.7*	*4 973.1*	*14 903.9–35 012.06*	6–2	1.038e−01	1.283e−02	1.260e+00	−1.113 8	AA	33
			4 971.74	4 973.13	14 904.00–35 012.06	4–2	6.918e−02	1.283e−02	8.400e−01	−1.289 8	AA	LS
			4 971.66	4 973.05	14 903.66–35 012.06	2–2	3.459e−02	1.283e−02	4.200e−01	−1.590 9	AA	LS
12	$1s^22p$-$1s^24d$	$^2P^\circ-^2D$	*4 602.9*	*4 604.2*	*14 903.9–36 623.4*	6–10	2.322e−01	1.230e−01	1.119e+01	−0.131 9	AA	34
			4 602.89	4 604.18	14 904.00–36 623.40	4–6	2.322e−01	1.107e−01	6.712e+00	−0.353 8	AA	LS
			4 602.82	4 604.11	14 903.66–36 623.38	2–4	1.935e−01	1.230e−01	3.729e+00	−0.609 0	AA	LS
			4 602.89	4 604.18	14 904.00–36 623.38	4–4	3.871e−02	1.230e−02	7.458e−01	−1.308 0	AA	LS
13	$1s^22p$-$1s^25s$	$^2P^\circ-^2S$	*4 273.1*	*4 274.3*	*14 903.9–38 299.50*	6–2	4.76e−02	4.34e−03	3.66e−01	−1.584	A	37
			4 273.12	4 274.33	14 904.00–38 299.50	4–2	3.17e−02	4.34e−03	2.44e−01	−1.760	A	LS
			4 273.06	4 274.26	14 903.66–38 299.50	2–2	1.59e−02	4.34e−03	1.22e−01	−2.061	A	LS
14	$1s^22p$-$1s^25d$	$^2P^\circ-^2D$	*4 132.6*	*4 133.8*	*14 903.9–39 094.9*	6–10	1.08e−01	4.63e−02	3.78e+00	−0.557	A	37
			4 132.61	4 133.78	14 904.00–39 094.94	4–6	1.08e−01	4.16e−02	2.27e+00	−0.778	A	LS
			4 132.56	4 133.72	14 903.66–39 094.93	2–4	9.03e−02	4.63e−02	1.26e+00	−1.034	A	LS
			4 132.62	4 133.78	14 904.00–39 094.93	4–4	1.81e−02	4.63e−03	2.52e−01	−1.733	A	LS
15	$1s^22p$-$1s^26s$	$^2P^\circ-^2S$	*3 985.5*	*3 986.6*	*14 903.9–39 987.64*	6–2	2.59e−02	2.05e−03	1.62e−01	−1.909	A	37
			3 985.54	3 986.66	14 904.00–39 987.64	4–2	1.73e−02	2.05e−03	1.08e−01	−2.085	A	LS
			3 985.48	3 986.61	14 903.66–39 987.64	2–2	8.63e−03	2.05e−03	5.39e−02	−2.386	A	LS
16	$1s^22p$-$1s^26d$	$^2P^\circ-^2D$	*3 915.3*	*3 916.4*	*14 903.9–40 437.3*	6–10	5.957e−02	2.283e−02	1.766e+00	−0.863 3	AA	35
			3 915.34	3 916.45	14 904.00–40 437.32	4–6	5.957e−02	2.055e−02	1.060e+00	−1.085 2	AA	LS
			3 915.29	3 916.40	14 903.66–40 437.31	2–4	4.964e−02	2.283e−02	5.887e−01	−1.340 5	AA	LS
			3 915.34	3 916.45	14 904.00–40 437.31	4–4	9.928e−03	2.283e−03	1.177e−01	−2.039 4	AA	LS
17	$1s^22p$-$1s^27s$	$^2P^\circ-^2S$	*3 835.6*	*3 836.7*	*14 903.9–40 967.9*	6–2	1.56e−02	1.15e−03	8.68e−02	−2.163	A	37
			3 835.64	3 836.72	14 904.00–40 967.9	4–2	1.04e−02	1.15e−03	5.79e−02	−2.339	A	LS
			3 835.59	3 836.67	14 903.66–40 967.9	2–2	5.19e−03	1.15e−03	2.89e−02	−2.640	A	LS
18	$1s^22p$-$1s^27d$	$^2P^\circ-^2D$	*3 795.1*	*3 796.1*	*14 903.9–41 247*	6–10	3.649e−02	1.314e−02	9.853e−01	−1.103 3	AA	35

TABLE 19. Li I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or α (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			3 795.07	3 796.15	14 904.00–41 246.5	4–6	3.649e−02	1.183e−02	5.912e−01	−1.325 1	AA	LS
			3 795.02	3 796.10	14 903.66–41 246.5	2–4	3.041e−02	1.314e−02	3.284e−01	−1.580 4	AA	LS
			3 795.07	3 796.15	14 904.00–41 246.5	4–4	6.082e−03	1.314e−03	6.569e−02	−2.279 3	AA	LS
19	$1s^22p$-$1s^28s$	$^2P^\circ-{}^2S$	*3 746.6*	*3 747.7*	*14 903.9–41 587*	6–2	1.01e−02	7.11e−04	5.26e−02	−2.370	A	37
			3 746.63	3 747.69	14 904.00–41 587.1	4–2	6.75e−03	7.11e−04	3.51e−02	−2.546	A	LS
			3 746.58	3 747.64	14 903.66–41 587.1	2–2	3.38e−03	7.11e−04	1.75e−02	−2.847	A	LS
20	$1s^22p$-$1s^28d$	$^2P^\circ-{}^2D$	*3 720.9*	*3 722.0*	*14 903.9–41 771*	6–10	2.413e−02	8.354e−03	6.142e−01	−1.300 0	AA	35
			3 720.94	3 722.00	14 904.00–41 771.3	4–6	2.413e−02	7.519e−03	3.685e−01	−1.521 8	AA	LS
			3 720.89	3 721.95	14 903.66–41 771.3	2–4	2.011e−02	8.354e−03	2.047e−01	−1.777 1	AA	LS
			3 720.94	3 722.00	14 904.00–41 771.3	4–4	4.022e−03	8.354e−04	4.095e−02	−2.476 0	AA	LS
21	$1s^22p$-$1s^29d$	$^2P^\circ-{}^2D$	*3 671.7*	*3 672.8*	*14 903.9–42 131*	6–10	1.678e−02	5.656e−03	4.103e−01	−1.469 3	AA	35
			3 671.74	3 672.78	14 904.00–42 131.3	4–6	1.678e−02	5.090e−03	2.462e−01	−1.691 2	AA	LS
			3 671.69	3 672.74	14 903.66–42 131.3	2–4	1.398e−02	5.656e−03	1.368e−01	−1.946 5	AA	LS
			3 671.74	3 672.78	14 904.00–42 131.3	4–4	2.797e−03	5.656e−04	2.736e−02	−2.645 4	AA	LS
22	$1s^23s$-$1s^23p$	$^2S-{}^2P^\circ$	*26 880*	*3 719.3* cm^{-1}	*27 206.12–30 925.4*	2–6	3.738e−02	1.215e+00	2.152e+02	0.385 7	AA	33
			26 879.7	3 719.26 cm^{-1}	27 206.12–30 925.38	2–4	3.738e−02	8.102e−01	1.434e+02	0.209 6	AA	LS
			26 879.7	3 719.26 cm^{-1}	27 206.12–30 925.38	2–2	3.738e−02	4.051e−01	7.172e+01	−0.091 4	AA	LS
23	$1s^23s$-$1s^24p$	$^2S-{}^2P^\circ$	*10 792*	*9 263.4* cm^{-1}	*27 206.12–36 469.6*	2–6	6.9e−06	3.6e−05	2.6e−03	−4.14	D	34,37
			10 792.2	9 263.43 cm^{-1}	27 206.12–36 469.55	2–4	6.9e−06	2.4e−05	1.7e−03	−4.31	D	LS
			10 792.2	9 263.43 cm^{-1}	27 206.12–36 469.55	2–2	6.9e−06	1.2e−05	8.6e−04	−4.61	D	LS
24	$1s^23s$-$1s^25p$	$^2S-{}^2P^\circ$	*8 465.5*	*8 467.8*	*27 206.12–39 015.6*	2–6	4.04e−04	1.30e−03	7.26e−02	−2.584	B	37
			8 465.48	8 467.80	27 206.12–39 015.56	2–4	4.04e−04	8.68e−04	4.84e−02	−2.760	B	LS
			8 465.48	8 467.80	27 206.12–39 015.56	2–2	4.04e−04	4.34e−04	2.42e−02	−3.061	B	LS
25	$1s^23s$-$1s^26p$	$^2S-{}^2P^\circ$	*7 582.4*	*7 584.5*	*27 206.12–40 390.8*	2–6	4.38e−04	1.13e−03	5.65e−02	−2.645	B	37
			7 582.45	7 584.54	27 206.12–40 390.84	2–4	4.38e−04	7.54e−04	3.77e−02	−2.821	B	LS
			7 582.45	7 584.54	27 206.12–40 390.84	2–2	4.38e−04	3.77e−04	1.88e−02	−3.122	B	LS
26	$1s^23s$-$1s^27p$	$^2S-{}^2P^\circ$	*7 135.2*	*7 137.1*	*27 206.12–41 217.4*	2–6	3.61e−04	8.26e−04	3.88e−02	−2.782	B	37
			7 135.17	7 137.13	27 206.12–41 217.35	2–4	3.61e−04	5.51e−04	2.59e−02	−2.958	B	LS
			7 135.17	7 137.13	27 206.12–41 217.35	2–2	3.61e−04	2.75e−04	1.29e−02	−3.259	B	LS
27	$1s^23s$-$1s^28p$	$^2S-{}^2P^\circ$	*6 873.1*	*6 875.0*	*27 206.12–41 751.6*	2–6	2.79e−04	5.92e−04	2.68e−02	−2.926	B	37
			6 873.08	6 874.97	27 206.12–41 751.63	2–4	2.79e−04	3.95e−04	1.79e−02	−3.103	B	LS
			6 873.08	6 874.97	27 206.12–41 751.63	2–2	2.79e−04	1.97e−04	8.93e−03	−3.404	B	LS
28	$1s^23p$-$1s^23d$	$^2P^\circ-{}^2D$		*357.7* cm^{-1}	*30 925.4–31 283.1*	6–10	3.77e−05	7.36e−02	4.06e+02	−0.355	A	33
				357.74 cm^{-1}	30 925.38–31 283.12	4–6	3.77e−05	6.62e−02	2.44e+02	−0.577	A	LS
				357.70 cm^{-1}	30 925.38–31 283.08	2–4	3.14e−05	7.36e−02	1.35e+02	−0.832	A	LS
				357.70 cm^{-1}	30 925.38–31 283.08	4–4	6.28e−06	7.36e−03	2.71e+01	−1.531	A	LS
29	$1s^23p$-$1s^24s$	$^2P^\circ-{}^2S$	*24 463*	*4 086.7* cm^{-1}	*30 925.4–35 012.06*	6–2	7.453e−02	2.230e−01	1.078e+02	0.126 5	AA	33
			24 463.1	4 086.68 cm^{-1}	30 925.38–35 012.06	4–2	4.969e−02	2.230e−01	7.186e+01	−0.049 6	AA	LS
			24 463.1	4 086.68 cm^{-1}	30 925.38–35 012.06	2–2	2.484e−02	2.230e−01	3.593e+01	−0.350 6	AA	LS
30	$1s^23p$-$1s^24d$	$^2P^\circ-{}^2D$	*17 545*	*5 698.0* cm^{-1}	*30 925.4–36 623.4*	6–10	6.791e−02	5.227e−01	1.812e+02	0.496 4	AA	34
			17 545.2	5 698.02 cm^{-1}	30 925.38–36 623.40	4–6	6.791e−02	4.704e−01	1.087e+02	0.274 5	AA	LS
			17 545.2	5 698.00 cm^{-1}	30 925.38–36 623.38	2–4	5.659e−02	5.227e−01	6.039e+01	0.019 2	AA	LS

TABLE 19. Li I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or α (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			17 545.2	5 698.00 cm^{-1}	30 925.38–36 623.38	4–4	1.132e−02	5.227e−02	1.208e+01	−0.679 7	AA	LS
31	$1s^2 3p$-$1s^2 5s$	$^2P^\circ$–^2S	*13 557*	*7 374.1* cm^{-1}	*30 925.4–38 299.50*	6–2	2.84e−02	2.60e−02	6.97e+00	−0.806	A	37
			13 557.2	7 374.12 cm^{-1}	30 925.38–38 299.50	4–2	1.89e−02	2.60e−02	4.65e+00	−0.982	A	LS
			13 557.2	7 374.12 cm^{-1}	30 925.38–38 299.50	2–2	9.45e−03	2.60e−02	2.32e+00	−1.283	A	LS
32	$1s^2 3p$-$1s^2 5d$	$^2P^\circ$–^2D	*12 237*	*8 169.6* cm^{-1}	*30 925.4–39 094.9*	6–10	3.49e−02	1.30e−01	3.15e+01	−0.107	A	37
			12 237.2	8 169.56 cm^{-1}	30 925.38–39 094.94	4–6	3.49e−02	1.17e−01	1.89e+01	−0.328	A	LS
			12 237.2	8 169.55 cm^{-1}	30 925.38–39 094.93	2–4	2.90e−02	1.30e−01	1.05e+01	−0.584	A	LS
			12 237.2	8 169.55 cm^{-1}	30 925.38–39 094.93	4–4	5.81e−03	1.30e−02	2.10e+00	−1.283	A	LS
33	$1s^2 3p$-$1s^2 6s$	$^2P^\circ$–^2S	*11 032*	*9 062.3* cm^{-1}	*30 925.4–39 987.64*	6–2	1.46e−02	8.88e−03	1.94e+00	−1.273	A	37
			11 031.8	9 062.26 cm^{-1}	30 925.38–39 987.64	4–2	9.73e−03	8.88e−03	1.29e+00	−1.450	A	LS
			11 031.8	9 062.26 cm^{-1}	30 925.38–39 987.64	2–2	4.87e−03	8.88e−03	6.45e−01	−1.751	A	LS
34	$1s^2 3p$-$1s^2 6d$	$^2P^\circ$–^2D	*10 510*	*9 511.9* cm^{-1}	*30 925.4–40 437.3*	6–10	1.97e−02	5.44e−02	1.13e+01	−0.486	A	37
			10 510.2	9 511.94 cm^{-1}	30 925.38–40 437.32	4–6	1.97e−02	4.90e−02	6.78e+00	−0.708	A	LS
			10 510.2	9 511.93 cm^{-1}	30 925.38–40 437.31	2–4	1.64e−02	5.44e−02	3.77e+00	−0.963	A	LS
			10 510.2	9 511.93 cm^{-1}	30 925.38–40 437.31	4–4	3.29e−03	5.44e−03	7.53e−01	−1.662	A	LS
35	$1s^2 3p$-$1s^2 7s$	$^2P^\circ$–^2S	*9 954.9*	*9 957.7*	*30 925.4–40 967.9*	6–2	8.63e−03	4.27e−03	8.40e−01	−1.591	B	37
			9 954.93	9 957.66	30 925.38–40 967.9	4–2	5.75e−03	4.27e−03	5.60e−01	−1.767	B	LS
			9 954.93	9 957.66	30 925.38–40 967.9	2–2	2.88e−03	4.27e−03	2.80e−01	−2.068	B	LS
36	$1s^2 3p$-$1s^2 7d$	$^2P^\circ$–^2D	*9 686.2*	*9 688.9*	*30 925.4–41 247*	6–10	1.22e−02	2.87e−02	5.49e+00	−0.764	A	37
			9 686.21	9 688.87	30 925.38–41 246.5	4–6	1.22e−02	2.58e−02	3.30e+00	−0.986	A	LS
			9 686.21	9 688.87	30 925.38–41 246.5	2–4	1.02e−02	2.87e−02	1.83e+00	−1.241	A	LS
			9 686.21	9 688.87	30 925.38–41 246.5	4–4	2.04e−03	2.87e−03	3.66e−01	−1.940	A	LS
37	$1s^2 3p$-$1s^2 8s$	$^2P^\circ$–^2S	*9 376.8*	*9 379.3*	*30 925.4–41 587.1*	6–2	5.55e−03	2.44e−03	4.51e−01	−1.835	B	37
			9 376.78	9 379.35	30 925.38–41 587.1	4–2	3.70e−03	2.44e−03	3.01e−01	−2.011	B	LS
			9 376.78	9 379.35	30 925.38–41 587.1	2–2	1.85e−03	2.44e−03	1.50e−01	−2.312	B	LS
38	$1s^2 3p$-$1s^2 8d$	$^2P^\circ$–^2D	*9 217.5*	*9 220.1*	*30 925.4–41 771*	6–10	8.10e−03	1.72e−02	3.13e+00	−0.987	A	37
			9 217.53	9 220.06	30 925.38–41 771.3	4–6	8.10e−03	1.55e−02	1.88e+00	−1.208	A	LS
			9 217.53	9 220.06	30 925.38–41 771.3	2–4	6.75e−03	1.72e−02	1.04e+00	−1.464	A	LS
			9 217.53	9 220.06	30 925.38–41 771.3	4–4	1.35e−03	1.72e−03	2.09e−01	−2.163	A	LS
39	$1s^2 3d$-$1s^2 4p$	^2D–$^2P^\circ$	*19 276*	*5 186.5* cm^{-1}	*31 283.1–36 469.6*	10–6	5.375e−03	1.797e−02	1.141e+01	−0.745 4	AA	34
			19 275.8	5 186.43 cm^{-1}	31 283.12–36 469.55	6–4	4.837e−03	1.797e−02	6.845e+00	−0.967 2	AA	LS
			19 275.7	5 186.47 cm^{-1}	31 283.08–36 469.55	4–2	5.375e−03	1.498e−02	3.803e+00	−1.222 5	AA	LS
			19 275.7	5 186.47 cm^{-1}	31 283.08–36 469.55	4–4	5.375e−04	2.996e−03	7.606e−01	−1.921 5	AA	LS
40	$1s^2 3d$-$1s^2 4f$	^2D–$^2F^\circ$	*18 697*	*5 347.1* cm^{-1}	*31 283.1–36 630*	10–14	1.383e−01	1.015e+00	6.251e+02	1.006 6	AA	36
			18 696.7	5 347.1 cm^{-1}	31 283.12–36 630.2	6–8	1.383e−01	9.669e−01	3.572e+02	0.763 6	AA	LS
			18 696.6	5 347.1 cm^{-1}	31 283.08–36 630.2	4–6	1.291e−01	1.015e+00	2.500e+02	0.608 7	AA	LS
			18 696.7	5 347.1 cm^{-1}	31 283.12–36 630.2	6–6	9.220e−03	4.835e−02	1.786e+01	−0.537 5	AA	LS
41	$1s^2 3d$-$1s^2 5p$	^2D–$^2P^\circ$	*12 929*	*7 732.5* cm^{-1}	*31 283.1–39 015.6*	10–6	2.28e−03	3.43e−03	1.46e+00	−1.465	A	37
			12 929.0	7 732.44 cm^{-1}	31 283.12–39 015.56	6–4	2.05e−03	3.43e−03	8.76e−01	−1.686	A	LS
			12 928.9	7 732.48 cm^{-1}	31 283.08–39 015.56	4–2	2.28e−03	2.86e−03	4.87e−01	−1.942	A	LS
			12 928.9	7 732.48 cm^{-1}	31 283.08–39 015.56	4–4	2.28e−04	5.72e−04	9.74e−02	−2.641	A	LS
42	$1s^2 3d$-$1s^2 5f$	^2D–$^2F^\circ$	*12 782*	*7 821.4* cm^{-1}	*31 283.1–39 105*	10–14	4.578e−02	1.571e−01	6.612e+01	0.196 1	AA	36

TABLE 19. Li I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or α (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			12 782.0	7 821.4 cm^{-1}	31 283.12–39 104.5	6–8	4.578e−02	1.496e−01	3.778e+01	−0.046 9	AA	LS
			12 781.9	7 821.4 cm^{-1}	31 283.08–39 104.5	4–6	4.273e−02	1.571e−01	2.645e+01	−0.201 8	AA	LS
			12 782.0	7 821.4 cm^{-1}	31 283.12–39 104.5	6–6	3.052e−03	7.480e−03	1.889e+00	−1.347 9	AA	LS
43	$1s^2 3d$-$1s^2 6p$	$^2D-^2P^\circ$	*10 977*	*9 107.7* cm^{-1}	*31 283.1–40 390.8*	10–6	1.19e−03	1.29e−03	4.66e−01	−1.889	A	37
			10 976.7	9 107.72 cm^{-1}	31 283.12–40 390.84	6–4	1.07e−03	1.29e−03	2.80e−01	−2.111	A	LS
			10 976.6	9 107.76 cm^{-1}	31 283.08–40 390.84	4–2	1.19e−03	1.08e−03	1.55e−01	−2.366	A	LS
			10 976.6	9 107.76 cm^{-1}	31 283.08–40 390.84	4–4	1.19e−04	2.15e−04	3.11e−02	−3.065	A	LS
44	$1s^2 3d$-$1s^2 7p$	$^2D-^2P^\circ$	*10 063*	*9 934.3* cm^{-1}	*31 283.1–41 217.4*	10–6	7.09e−04	6.46e−04	2.14e−01	−2.190	A	37
			10 063.4	9 934.23 cm^{-1}	31 283.12–41 217.35	6–4	6.38e−04	6.46e−04	1.28e−01	−2.411	A	LS
			10 063.4	9 934.27 cm^{-1}	31 283.08–41 217.35	4–2	7.09e−04	5.39e−04	7.14e−02	−2.667	A	LS
			10 063.4	9 934.27 cm^{-1}	31 283.08–41 217.35	4–4	7.09e−05	1.08e−04	1.43e−02	−3.366	A	LS
45	$1s^2 3d$-$1s^2 8p$	$^2D-^2P^\circ$	*9 549.8*	*9 552.4*	*31 283.1–41 751.6*	10–6	4.57e−04	3.75e−04	1.18e−01	−2.426	B	37
			9 549.84	9 552.46	31 283.12–41 751.63	6–4	4.11e−04	3.75e−04	7.07e−02	−2.648	B	LS
			9 549.80	9 552.42	31 283.08–41 751.63	4–2	4.57e−04	3.13e−04	3.93e−02	−2.903	B	LS
			9 549.80	9 552.42	31 283.08–41 751.63	4–4	4.57e−05	6.25e−05	7.86e−03	−3.602	B	LS
46	$1s^2 4s$-$1s^2 4p$	$^2S-^2P^\circ$		*1 457.5* cm^{-1}	*35 012.06–36 469.6*	2–6	7.760e−03	1.643e+00	7.422e+02	0.516 7	AA	34
				1 457.49 cm^{-1}	35 012.06–36 469.55	2–4	7.760e−03	1.095e+00	4.948e+02	0.340 6	AA	LS
				1 457.49 cm^{-1}	35 012.06–36 469.55	2–2	7.760e−03	5.477e−01	2.474e+02	0.039 5	AA	LS
47	$1s^2 4s$-$1s^2 5p$	$^2S-^2P^\circ$	*24 971*	*4 003.5* cm^{-1}	*35 012.06–39 015.6*	2–6	3.39e−05	9.52e−04	1.57e−01	−2.720	B	37
			24 971.3	4 003.50 cm^{-1}	35 012.06–39 015.56	2–4	3.39e−05	6.35e−04	1.04e−01	−2.896	B	LS
			24 971.3	4 003.50 cm^{-1}	35 012.06–39 015.56	2–2	3.39e−05	3.17e−04	5.22e−02	−3.198	B	LS
48	$1s^2 4s$-$1s^2 6p$	$^2S-^2P^\circ$	*18 587*	*5 378.8* cm^{-1}	*35 012.06–40 390.8*	2–6	1.87e−05	2.91e−04	3.56e−02	−3.235	B	37
			18 586.5	5 378.78 cm^{-1}	35 012.06–40 390.84	2–4	1.87e−05	1.94e−04	2.37e−02	−3.411	B	LS
			18 586.5	5 378.78 cm^{-1}	35 012.06–40 390.84	2–2	1.87e−05	9.70e−05	1.19e−02	−3.712	B	LS
49	$1s^2 4s$-$1s^2 7p$	$^2S-^2P^\circ$	*16 111*	*6 205.3* cm^{-1}	*35 012.06–41 217.4*	2–6	4.16e−05	4.85e−04	5.15e−02	−3.013	B	37
			16 110.9	6 205.29 cm^{-1}	35 012.06–41 217.35	2–4	4.16e−05	3.24e−04	3.43e−02	−3.189	B	LS
			16 110.9	6 205.29 cm^{-1}	35 012.06–41 217.35	2–2	4.16e−05	1.62e−04	1.72e−02	−3.490	B	LS
50	$1s^2 4s$-$1s^2 8p$	$^2S-^2P^\circ$	*14 834*	*6 739.6* cm^{-1}	*35 012.06–41 751.6*	2–6	4.41e−05	4.36e−04	4.26e−02	−3.059	B	37
			14 833.7	6 739.57 cm^{-1}	35 012.06–41 751.63	2–4	4.41e−05	2.91e−04	2.84e−02	−3.235	B	LS
			14 833.7	6 739.57 cm^{-1}	35 012.06–41 751.63	2–2	4.41e−05	1.45e−04	1.42e−02	−3.536	B	LS
51	$1s^2 4p$-$1s^2 4d$	$^2P^\circ-^2D$		*153.8* cm^{-1}	*36 469.6–36 623.4*	6–10	1.273e−05	1.343e−01	1.725e+03	−0.093 6	AA	34
				153.85 cm^{-1}	36 469.55–36 623.40	4–6	1.273e−05	1.209e−01	1.035e+03	−0.315 4	AA	LS
				153.83 cm^{-1}	36 469.55–36 623.38	2–4	1.060e−05	1.343e−01	5.750e+02	−0.570 8	AA	LS
				153.83 cm^{-1}	36 469.55–36 623.38	4–4	2.120e−06	1.343e−02	1.150e+02	−1.269 7	AA	LS
52	$1s^2 4p$-$1s^2 5s$	$^2P^\circ-^2S$		*1 830.0* cm^{-1}	*36 469.6–38 299.50*	6–2	2.25e−02	3.35e−01	3.62e+02	0.304	A	37
				1 829.95 cm^{-1}	36 469.55–38 299.50	4–2	1.50e−02	3.35e−01	2.41e+02	0.128	A	LS
				1 829.95 cm^{-1}	36 469.55–38 299.50	2–2	7.50e−03	3.35e−01	1.21e+02	−0.173	A	LS
53	$1s^2 4p$-$1s^2 5d$	$^2P^\circ-^2D$	*38 079*	*2 625.4* cm^{-1}	*36 469.6–39 094.9*	6–10	1.37e−02	4.95e−01	3.72e+02	0.472	A	37
			38 079.2	2 625.39 cm^{-1}	36 469.55–39 094.94	4–6	1.37e−02	4.45e−01	2.23e+02	0.251	A	LS
			38 079.3	2 625.38 cm^{-1}	36 469.55–39 094.93	2–4	1.14e−02	4.95e−01	1.24e+02	−0.005	A	LS
			38 079.3	2 625.38 cm^{-1}	36 469.55–39 094.93	4–4	2.28e−03	4.95e−02	2.48e+01	−0.704	A	LS
54	$1s^2 4p$-$1s^2 6s$	$^2P^\circ-^2S$	*28 417*	*3 518.1* cm^{-1}	*36 469.6–39 987.64*	6–2	9.59e−03	3.87e−02	2.17e+01	−0.634	A	37

TABLE 19. Li I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or α (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			28 416.8	3 518.09 cm^{-1}	36 469.55–39 987.64	4–2	6.40e−03	3.87e−02	1.45e+01	−0.810	A	LS
			28 416.8	3 518.09 cm^{-1}	36 469.55–39 987.64	2–2	3.20e−03	3.87e−02	7.24e+00	−1.111	A	LS
55	$1s^24p$-$1s^26d$	^{2}P°–^{2}D	*25 196*	*3 967.8* cm^{-1}	*36 469.6–40 437.3*	6–10	8.39e−03	1.33e−01	6.62e+01	−0.098	A	37
			25 196.2	3 967.77 cm^{-1}	36 469.55–40 437.32	4–6	8.39e−03	1.20e−01	3.97e+01	−0.320	A	LS
			25 196.3	3 967.76 cm^{-1}	36 469.55–40 437.31	2–4	6.99e−03	1.33e−01	2.21e+01	−0.575	A	LS
			25 196.3	3 967.76 cm^{-1}	36 469.55–40 437.31	4–4	1.40e−03	1.33e−02	4.42e+00	−1.274	A	LS
56	$1s^24p$-$1s^27s$	^{2}P°–^{2}S	*22 224*	*4 498.4* cm^{-1}	*36 469.6–40 967.9*	6–2	5.38e−03	1.33e−02	5.82e+00	−1.099	A	37
			22 224.3	4 498.4 cm^{-1}	36 469.55–40 967.9	4–2	3.58e−03	1.33e−02	3.88e+00	−1.275	A	LS
			22 224.3	4 498.4 cm^{-1}	36 469.55–40 967.9	2–2	1.79e−03	1.33e−02	1.94e+00	−1.576	A	LS
57	$1s^24p$-$1s^27d$	^{2}P°–^{2}D	*20 928*	*4 777* cm^{-1}	*36 469.6–41 247*	6–10	5.32e−03	5.83e−02	2.41e+01	−0.457	A	37
			20 928.1	4 777.0 cm^{-1}	36 469.55–41 246.5	4–6	5.32e−03	5.24e−02	1.44e+01	−0.678	A	LS
			20 928.1	4 777.0 cm^{-1}	36 469.55–41 246.5	2–4	4.44e−03	5.83e−02	8.03e+00	−0.934	A	LS
			20 928.1	4 777.0 cm^{-1}	36 469.55–41 246.5	4–4	8.87e−04	5.83e−03	1.61e+00	−1.633	A	LS
58	$1s^24p$-$1s^28s$	^{2}P°–^{2}S	*19 535*	*5 117.6* cm^{-1}	*36 469.6–41 587.1*	6–2	3.37e−03	6.42e−03	2.48e+00	−1.414	A	37
			19 535.3	5 117.6 cm^{-1}	36 469.55–41 587.1	4–2	2.25e−03	6.42e−03	1.65e+00	−1.590	A	LS
			19 535.3	5 117.6 cm^{-1}	36 469.55–41 587.1	2–2	1.12e−03	6.42e−03	8.26e−01	−1.891	A	LS
59	$1s^24p$-$1s^28d$	^{2}P°–^{2}D	*18 857*	*5 302* cm^{-1}	*36 469.6–41 771*	6–10	3.55e−03	3.15e−02	1.17e+01	−0.723	A	37
			18 856.5	5 301.8 cm^{-1}	36 469.55–41 771.3	4–6	3.55e−03	2.84e−02	7.05e+00	−0.945	A	LS
			18 856.5	5 301.8 cm^{-1}	36 469.55–41 771.3	2–4	2.96e−03	3.15e−02	3.92e+00	−1.200	A	LS
			18 856.5	5 301.8 cm^{-1}	36 469.55–41 771.3	4–4	5.92e−04	3.15e−03	7.83e−01	−1.899	A	LS
60	$1s^24d$-$1s^25p$	^{2}D–^{2}P°	*41 792*	*2 392.2* cm^{-1}	*36 623.4–39 015.6*	10–6	2.77e−03	4.35e−02	5.98e+01	−0.362	A	37
			41 791.8	2 392.16 cm^{-1}	36 623.40–39 015.56	6–4	2.49e−03	4.35e−02	3.59e+01	−0.584	A	LS
			41 791.5	2 392.18 cm^{-1}	36 623.38–39 015.56	4–2	2.77e−03	3.62e−02	1.99e+01	−0.839	A	LS
			41 791.5	2 392.18 cm^{-1}	36 623.38–39 015.56	4–4	2.77e−04	7.25e−03	3.99e+00	−1.538	A	LS
61	$1s^24d$-$1s^26p$	^{2}D–^{2}P°	*26 536*	*3 767.5* cm^{-1}	*36 623.4–40 390.8*	10–6	1.37e−03	8.65e−03	7.56e+00	−1.063	A	37
			26 536.0	3 767.44 cm^{-1}	36 623.40–40 390.84	6–4	1.23e−03	8.65e−03	4.53e+00	−1.285	A	LS
			26 535.8	3 767.46 cm^{-1}	36 623.38–40 390.84	4–2	1.37e−03	7.21e−03	2.52e+00	−1.540	A	LS
			26 535.8	3 767.46 cm^{-1}	36 623.38–40 390.84	4–4	1.37e−04	1.44e−03	5.04e−01	−2.239	A	LS
62	$1s^24d$-$1s^27p$	^{2}D–^{2}P°	*21 762*	*4 594.0* cm^{-1}	*36 623.4–41 217.4*	10–6	7.82e−04	3.33e−03	2.39e+00	−1.477	A	37
			21 761.8	4 593.95 cm^{-1}	36 623.40–41 217.35	6–4	7.04e−04	3.33e−03	1.43e+00	−1.699	A	LS
			21 761.7	4 593.97 cm^{-1}	36 623.38–41 217.35	4–2	7.82e−04	2.78e−03	7.95e−01	−1.955	A	LS
			21 761.7	4 593.97 cm^{-1}	36 623.38–41 217.35	4–4	7.82e−05	5.55e−04	1.59e−01	−2.654	A	LS
63	$1s^24d$-$1s^28p$	^{2}D–^{2}P°	*19 495*	*5 128.2* cm^{-1}	*36 623.4–41 751.6*	10–6	4.92e−04	1.68e−03	1.08e+00	−1.775	A	37
			19 494.6	5 128.23 cm^{-1}	36 623.40–41 751.63	6–4	4.42e−04	1.68e−03	6.47e−01	−1.996	A	LS
			19 494.5	5 128.25 cm^{-1}	36 623.38–41 751.63	4–2	4.92e−04	1.40e−03	3.59e−01	−2.252	A	LS
			19 494.5	5 128.25 cm^{-1}	36 623.38–41 751.63	4–4	4.92e−05	2.80e−04	7.19e−02	−2.951	A	LS
64	$1s^25s$-$1s^25p$	^{2}S–^{2}P°		*716.1* cm^{-1}	*38 299.50–39 015.6*	2–6	2.34e−03	2.05e+00	1.89e+03	0.614	A	37
				716.06 cm^{-1}	38 299.50–39 015.56	2–4	2.34e−03	1.37e+00	1.26e+03	0.438	A	LS
				716.06 cm^{-1}	38 299.50–39 015.56	2–2	2.34e−03	6.85e−01	6.30e+02	0.137	A	LS
65	$1s^25s$-$1s^26p$	^{2}S–^{2}P°	*47 803*	*2 091.3* cm^{-1}	*38 299.50–40 390.8*	2–6	3.33e−05	3.42e−03	1.08e+00	−2.165	A	37
			47 803.2	2 091.34 cm^{-1}	38 299.50–40 390.84	2–4	3.33e−05	2.28e−03	7.18e−01	−2.341	A	LS
			47 803.2	2 091.34 cm^{-1}	38 299.50–40 390.84	2–2	3.33e−05	1.14e−03	3.59e−01	−2.642	A	LS
66	$1s^25s$-$1s^28p$	^{2}S–^{2}P°	*28 960*	*3 452.1* cm^{-1}	*38 299.50–41 751.6*	2–6	4.63e−06	1.75e−04	3.33e−02	−3.457	B	37

TABLE 19. Li I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or α (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			28 959.7	3 452.13 cm^{-1}	38 299.50–41 751.63	2–4	4.63e−06	1.16e−04	2.22e−02	−3.633	B	LS
			28 959.7	3 452.13 cm^{-1}	38 299.50–41 751.63	2–2	4.63e−06	5.82e−05	1.11e−02	−3.934	B	LS
67	$1s^25p$-$1s^25d$	$^2P^\circ-{}^2D$		*79.4* cm^{-1}	*39 015.6–39 094.9*	6–10	4.80e−06	1.90e−01	4.73e+03	0.058	A	37
				79.38 cm^{-1}	39 015.56–39 094.94	4–6	4.80e−06	1.71e−01	2.84e+03	−0.164	A	LS
				79.37 cm^{-1}	39 015.56–39 094.93	2–4	4.00e−06	1.90e−01	1.58e+03	−0.420	A	LS
				79.37 cm^{-1}	39 015.56–39 094.93	4–4	8.00e−07	1.90e−02	3.16e+02	−1.119	A	LS
68	$1s^25p$-$1s^26s$	$^2P^\circ-{}^2S$		*972.1* cm^{-1}	*39 015.6–39 987.64*	6–2	8.49e−03	4.49e−01	9.12e+02	0.430	A	37
				972.08 cm^{-1}	39 015.56–39 987.64	4–2	5.66e−03	4.49e−01	6.08e+02	0.254	A	LS
				972.08 cm^{-1}	39 015.56–39 987.64	2–2	2.83e−03	4.49e−01	3.04e+02	−0.047	A	LS
69	$1s^25p$-$1s^26d$	$^2P^\circ-{}^2D$		*1 421.8* cm^{-1}	*39 015.6–40 437.3*	6–10	3.99e−03	4.93e−01	6.85e+02	0.471	A	37
				1 421.76 cm^{-1}	39 015.56–40 437.32	4–6	3.99e−03	4.44e−01	4.11e+02	0.249	A	LS
				1 421.75 cm^{-1}	39 015.56–40 437.31	2–4	3.32e−03	4.93e−01	2.28e+02	−0.006	A	LS
				1 421.75 cm^{-1}	39 015.56–40 437.31	4–4	6.65e−04	4.93e−02	4.56e+01	−0.705	A	LS
70	$1s^25p$-$1s^27s$	$^2P^\circ-{}^2S$		*1 952.3* cm^{-1}	*39 015.6–40 967.9*	6–2	3.90e−03	5.11e−02	5.16e+01	−0.514	A	37
				1 952.3 cm^{-1}	39 015.56–40 967.9	4–2	2.60e−03	5.11e−02	3.44e+01	−0.690	A	LS
				1 952.3 cm^{-1}	39 015.56–40 967.9	2–2	1.30e−03	5.11e−02	1.72e+01	−0.991	A	LS
71	$1s^25p$-$1s^27d$	$^2P^\circ-{}^2D$	*44 812*	*2 231* cm^{-1}	*39 015.6–41 247*	6–10	2.72e−03	1.37e−01	1.21e+02	−0.087	A	37
			44 811.9	2 230.9 cm^{-1}	39 015.56–41 246.5	4–6	2.72e−03	1.23e−01	7.25e+01	−0.308	A	LS
			44 811.9	2 230.9 cm^{-1}	39 015.56–41 246.5	2–4	2.27e−03	1.37e−01	4.03e+01	−0.564	A	LS
			44 811.9	2 230.9 cm^{-1}	39 015.56–41 246.5	4–4	4.54e−04	1.37e−02	8.06e+00	−1.263	A	LS
72	$1s^25p$-$1s^28s$	$^2P^\circ-{}^2S$	*38 877*	*2 571.5* cm^{-1}	*39 015.6–41 587.1*	6–2	2.32e−03	1.75e−02	1.35e+01	−0.978	A	37
			38 876.6	2 571.5 cm^{-1}	39 015.56–41 587.1	4–2	1.55e−03	1.75e−02	8.97e+00	−1.154	A	LS
			38 876.6	2 571.5 cm^{-1}	39 015.56–41 587.1	2–2	7.73e−04	1.75e−02	4.48e+00	−1.455	A	LS
73	$1s^25p$-$1s^28d$	$^2P^\circ-{}^2D$	*36 278*	*2 756* cm^{-1}	*39 015.6–41 771*	6–10	1.86e−03	6.11e−02	4.38e+01	−0.436	A	37
			36 278.0	2 755.7 cm^{-1}	39 015.56–41 771.3	4–6	1.86e−03	5.50e−02	2.63e+01	−0.658	A	LS
			36 278.0	2 755.7 cm^{-1}	39 015.56–41 771.3	2–4	1.55e−03	6.11e−02	1.46e+01	−0.913	A	LS
			36 278.0	2 755.7 cm^{-1}	39 015.56–41 771.3	4–4	3.10e−04	6.11e−03	2.92e+00	−1.612	A	LS
74	$1s^25d$-$1s^26p$	$^2D-{}^2P^\circ$		*1 295.9* cm^{-1}	*39 094.9–40 390.8*	10–6	1.37e−03	7.32e−02	1.86e+02	−0.135	A	37
				1 295.90 cm^{-1}	39 094.94–40 390.84	6–4	1.23e−03	7.32e−02	1.12e+02	−0.357	A	LS
				1 295.91 cm^{-1}	39 094.93–40 390.84	4–2	1.37e−03	6.10e−02	6.20e+01	−0.613	A	LS
				1 295.91 cm^{-1}	39 094.93–40 390.84	4–4	1.37e−04	1.22e−02	1.24e+01	−1.312	A	LS
75	$1s^25d$-$1s^27p$	$^2D-{}^2P^\circ$	*47 103*	*2 122.4* cm^{-1}	*39 094.9–41 217.4*	10–6	7.46e−04	1.49e−02	2.31e+01	−0.827	A	37
			47 103.4	2 122.41 cm^{-1}	39 094.94–41 217.35	6–4	6.72e−04	1.49e−02	1.39e+01	−1.049	A	LS
			47 103.2	2 122.42 cm^{-1}	39 094.93–41 217.35	4–2	7.46e−04	1.24e−02	7.70e+00	−1.304	A	LS
			47 103.2	2 122.42 cm^{-1}	39 094.93–41 217.35	4–4	7.46e−05	2.48e−03	1.54e+00	−2.003	A	LS
76	$1s^25d$-$1s^28p$	$^2D-{}^2P^\circ$	*37 631*	*2 656.7* cm^{-1}	*39 094.9–41 751.6*	10–6	4.54e−04	5.79e−03	7.17e+00	−1.237	A	37
			37 630.6	2 656.69 cm^{-1}	39 094.94–41 751.63	6–4	4.09e−04	5.79e−03	4.30e+00	−1.459	A	LS
			37 630.4	2 656.70 cm^{-1}	39 094.93–41 751.63	4–2	4.54e−04	4.82e−03	2.39e+00	−1.715	A	LS
			37 630.4	2 656.70 cm^{-1}	39 094.93–41 751.63	4–4	4.54e−05	9.65e−04	4.78e−01	−2.413	A	LS
77	$1s^26s$-$1s^26p$	$^2S-{}^2P^\circ$		*403.2* cm^{-1}	*39 987.64–40 390.8*	2–6	8.89e−04	2.46e+00	4.01e+03	0.692	A	37
				403.20 cm^{-1}	39 987.64–40 390.84	2–4	8.89e−04	1.64e+00	2.67e+03	0.515	A	LS
				403.20 cm^{-1}	39 987.64–40 390.84	2–2	8.89e−04	8.19e−01	1.34e+03	0.214	A	LS
78	$1s^26s$-$1s^27p$	$^2S-{}^2P^\circ$		*1 229.7* cm^{-1}	*39 987.64–41 217.4*	2–6	2.17e−05	6.46e−03	3.46e+00	−1.889	A	37

TABLE 19. Li I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or α (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				1 229.71 cm^{-1}	39 987.64–41 217.35	2–4	2.17e−05	4.31e−03	2.30e+00	−2.065	A	LS
				1 229.71 cm^{-1}	39 987.64–41 217.35	2–2	2.17e−05	2.15e−03	1.15e+00	−2.366	A	LS
79	$1s^2 6p$-$1s^2 6d$	^{2}P°–^{2}D		*46.5* cm^{-1}	*40 390.8–40 437.3*	6–10	2.11e−06	2.44e−01	1.04e+04	0.166	B	37
				46.48 cm^{-1}	40 390.84–40 437.32	4–6	2.11e−06	2.20e−01	6.23e+03	−0.056	B	LS
				46.47 cm^{-1}	40 390.84–40 437.31	2–4	1.76e−06	2.44e−01	3.46e+03	−0.311	B	LS
				46.47 cm^{-1}	40 390.84–40 437.31	4–4	3.52e−07	2.44e−02	6.92e+02	−1.010	B	LS
80	$1s^2 6p$-$1s^2 7s$	^{2}P°–^{2}S		*577.1* cm^{-1}	*40 390.8–40 967.9*	6–2	3.74e−03	5.61e−01	1.92e+03	0.527	A	37
				577.1 cm^{-1}	40 390.84–40 967.9	4–2	2.49e−03	5.61e−01	1.28e+03	0.351	A	LS
				577.1 cm^{-1}	40 390.84–40 967.9	2–2	1.25e−03	5.61e−01	6.40e+02	0.050	A	LS
81	$1s^2 6p$-$1s^2 7d$	^{2}P°–^{2}D		*856* cm^{-1}	*40 390.8–41 247*	6–10	1.48e−03	5.05e−01	1.16e+03	0.481	A	37
				855.7 cm^{-1}	40 390.84–41 246.5	4–6	1.48e−03	4.54e−01	6.99e+02	0.259	A	LS
				855.7 cm^{-1}	40 390.84–41 246.5	2–4	1.23e−03	5.05e−01	3.88e+02	0.004	A	LS
				855.7 cm^{-1}	40 390.84–41 246.5	4–4	2.47e−04	5.05e−02	7.76e+01	−0.695	A	LS
82	$1s^2 6p$-$1s^2 8s$	^{2}P°–^{2}S		*1 196.3* cm^{-1}	*40 390.8–41 587.1*	6–2	1.81e−03	6.32e−02	1.04e+02	−0.421	A	37
				1 196.3 cm^{-1}	40 390.84–41 587.1	4–2	1.21e−03	6.32e−02	6.96e+01	−0.597	A	LS
				1 196.3 cm^{-1}	40 390.84–41 587.1	2–2	6.04e−04	6.32e−02	3.48e+01	−0.898	A	LS
83	$1s^2 6p$-$1s^2 8d$	^{2}P°–^{2}D		*1 380* cm^{-1}	*40 390.8–41 771*	6–10	1.08e−03	1.41e−01	2.02e+02	−0.072	A	37
				1 380.5 cm^{-1}	40 390.84–41 771.3	4–6	1.08e−03	1.27e−01	1.21e+02	−0.294	A	LS
				1 380.5 cm^{-1}	40 390.84–41 771.3	2–4	8.98e−04	1.41e−01	6.73e+01	−0.549	A	LS
				1 380.5 cm^{-1}	40 390.84–41 771.3	4–4	1.80e−04	1.41e−02	1.35e+01	−1.248	A	LS
84	$1s^2 6d$-$1s^2 7p$	^{2}D–^{2}P°		*780.0* cm^{-1}	*40 437.3–41 217.4*	10–6	7.10e−04	1.05e−01	4.42e+02	0.021	A	37
				780.03 cm^{-1}	40 437.32–41 217.35	6–4	6.39e−04	1.05e−01	2.65e+02	−0.201	A	LS
				780.04 cm^{-1}	40 437.31–41 217.35	4–2	7.10e−04	8.74e−02	1.47e+02	−0.456	A	LS
				780.04 cm^{-1}	40 437.31–41 217.35	4–4	7.10e−05	1.75e−02	2.95e+01	−1.155	A	LS
85	$1s^2 6d$-$1s^2 8p$	^{2}D–^{2}P°		*1 314.3* cm^{-1}	*40 437.3–41 751.6*	10–6	4.17e−04	2.17e−02	5.43e+01	−0.664	A	37
				1 314.31 cm^{-1}	40 437.32–41 751.63	6–4	3.75e−04	2.17e−02	3.26e+01	−0.886	A	LS
				1 314.32 cm^{-1}	40 437.31–41 751.63	4–2	4.17e−04	1.81e−02	1.81e+01	−1.141	A	LS
				1 314.32 cm^{-1}	40 437.31–41 751.63	4–4	4.17e−05	3.61e−03	3.62e+00	−1.840	A	LS
86	$1s^2 7s$-$1s^2 7p$	^{2}S–^{2}P°		*249.5* cm^{-1}	*40 967.9–41 217.4*	2–6	3.96e−04	2.86e+00	7.56e+03	0.758	A	37
				249.5 cm^{-1}	40 967.9–41 217.35	2–4	3.96e−04	1.91e+00	5.04e+03	0.582	A	LS
				249.5 cm^{-1}	40 967.9–41 217.35	2–2	3.96e−04	9.55e−01	2.52e+03	0.281	A	LS
87	$1s^2 7s$-$1s^2 8p$	^{2}S–^{2}P°		*783.7* cm^{-1}	*40 967.9–41 751.6*	2–6	1.34e−05	9.80e−03	8.23e+00	−1.708	A	37
				783.7 cm^{-1}	40 967.9–41 751.63	2–4	1.34e−05	6.54e−03	5.49e+00	−1.884	A	LS
				783.7 cm^{-1}	40 967.9–41 751.63	2–2	1.34e−05	3.27e−03	2.74e+00	−2.185	A	LS
88	$1s^2 7p$-$1s^2 7d$	^{2}P°–^{2}D		*29* cm^{-1}	*41 217.4–41 247*	6–10	9.99e−07	2.93e−01	1.99e+04	0.246	B	37
				29.2 cm^{-1}	41 217.35–41 246.5	4–6	9.99e−07	2.64e−01	1.19e+04	0.024	B	LS
				29.2 cm^{-1}	41 217.35–41 246.5	2–4	8.32e−07	2.93e−01	6.63e+03	−0.231	B	LS
				29.2 cm^{-1}	41 217.35–41 246.5	4–4	1.66e−07	2.93e−02	1.33e+03	−0.930	B	LS
89	$1s^2 7p$-$1s^2 8s$	^{2}P°–^{2}S		*369.8* cm^{-1}	*41 217.4–41 587.1*	6–2	1.84e−03	6.74e−01	3.60e+03	0.607	A	37
				369.8 cm^{-1}	41 217.35–41 587.1	4–2	1.23e−03	6.74e−01	2.40e+03	0.430	A	LS
				369.8 cm^{-1}	41 217.35–41 587.1	2–2	6.15e−04	6.74e−01	1.20e+03	0.129	A	LS
90	$1s^2 7p$-$1s^2 8d$	^{2}P°–^{2}D		*554* cm^{-1}	*41 217.4–41 771*	6–10	6.40e−04	5.21e−01	1.86e+03	0.495	A	37

TABLE 19. Li I: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or α (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				554.0 cm^{-1}	41 217.35–41 771.3	4–6	6.40e−04	4.69e−01	1.11e+03	0.273	A	LS
				554.0 cm^{-1}	41 217.35–41 771.3	2–4	5.33e−04	5.21e−01	6.19e+02	0.018	A	LS
				554.0 cm^{-1}	41 217.35–41 771.3	4–4	1.07e−04	5.21e−02	1.24e+02	−0.681	A	LS
91	$1s^27d$-$1s^28p$	$^2D-^2P^\circ$		*505* cm^{-1}	*41 247–41 751.6*	10–6	3.94e−04	1.39e−01	9.04e+02	0.142	A	37
				505.1 cm^{-1}	41 246.5–41 751.63	6–4	3.54e−04	1.39e−01	5.42e+02	−0.080	A	LS
				505.1 cm^{-1}	41 246.5–41 751.63	4–2	3.94e−04	1.16e−01	3.01e+02	−0.335	A	LS
				505.1 cm^{-1}	41 246.5–41 751.63	4–4	3.94e−05	2.31e−02	6.02e+01	−1.034	A	LS
92	$1s^28s$-$1s^28p$	$^2S-^2P^\circ$		*164.5* cm^{-1}	*41 587.1–41 751.6*	2–6	1.96e−04	3.26e+00	1.30e+04	0.814	A	37
				164.5 cm^{-1}	41 587.1–41 751.63	2–4	1.96e−04	2.17e+00	8.69e+03	0.638	A	LS
				164.5 cm^{-1}	41 587.1–41 751.63	2–2	1.96e−04	1.09e+00	4.34e+03	0.337	A	LS
93	$1s^28p$-$1s^28d$	$^2P^\circ-^2D$		*20* cm^{-1}	*41 751.6–41 771*	6–10	5.34e−07	3.44e−01	3.46e+04	0.315	B	37
				19.7 cm^{-1}	41 751.63–41 771.3	4–6	5.34e−07	3.10e−01	2.07e+04	0.093	B	LS
				19.7 cm^{-1}	41 751.63–41 771.3	2–4	4.45e−07	3.44e−01	1.15e+04	−0.162	B	LS
				19.7 cm^{-1}	41 751.63–41 771.3	4–4	8.89e−08	3.44e−02	2.31e+03	−0.861	B	LS
94	$1s2s2p$-$1s2s3s$	$^4P^\circ-^4S$	*2 933.4*	*2 934.3*	*463 520–497 600*	12–4	1.4820e+00	6.3764e−02	7.3915e+00	−0.116 24	AAA	32
95	$1s2s2p$-$1s2s4s$	$^4P^\circ-^4S$	*2 170.4*	*2 171.1*	*463 520–509 580*	12–4	4.6299e−01	1.0906e−02	9.3539e−01	−0.883 16	AAA	32
96	$1s2s2p$-$1s2s5s$	$^4P^\circ-^4S$		*1 980.6*	*463 520–514 010*	12–4	2.1155e−01	4.1471e−03	3.2449e−01	−1.303 07	AAA	32
97	$1s2s2p$-$1s2s6s$	$^4P^\circ-^4S$		*1 901.5*	*463 520–516 110*	12–4	1.1514e−01	2.0804e−03	1.5628e−01	−1.602 68	AAA	32
98	$1s2s2p$-$1s2s7s$	$^4P^\circ-^4S$		*1 807.3*	*463 520–518 850*	12–4	7.3938e−02	1.2069e−03	8.6174e−02	−1.839 14	AAA	32
99	$1s2s3p$-$1s2s4s$	$^4P^\circ-^4S$	*6 660.4*	*6 662.2*	*494 570–509 580*	12–4	8.0147e−01	1.7777e−01	4.6788e+01	0.329 04	AAA	32
100	$1s2s3p$-$1s2s5s$	$^4P^\circ-^4S$	*5 142.6*	*5 144.0*	*494 570–514 010*	12–4	1.8315e−01	2.4219e−02	4.9217e+00	−0.536 66	AAA	32
101	$1s2s3p$-$1s2s6s$	$^4P^\circ-^4S$	*4 641.2*	*4 642.5*	*494 570–516 110*	12–4	8.2455e−02	8.8810e−03	1.6288e+00	−0.972 36	AAA	32
102	$1s2s3p$-$1s2s7s$	$^4P^\circ-^4S$	*4 117.5*	*4 118.6*	*494 570–518 850*	12–4	5.2767e−02	4.4730e−03	7.2779e−01	−1.270 22	AAA	32
103	$1s2s5s$-$1s2s4p$	$^4S-^4P^\circ$		*1 610* cm^{-1}	*514 010–515 620*	4–12	1.6461e−03	2.8561e−01	2.3361e+02	0.057 83	AAA	32
104	$1s2s4p$-$1s2s6s$	$^4P^\circ-^4S$		*490* cm^{-1}	*515 620–516 110*	12–4	1.7017e−04	3.5419e−02	2.8556e+02	−0.371 58	AAA	32
105	$1s2s4p$-$1s2s7s$	$^4P^\circ-^4S$	*30 953*	*31 230* cm^{-1}	*515 620–518 850*	12–4	2.5846e−03	1.2380e−02	1.5142e+01	−0.828 10	AAA	32

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

4.1.2. Li I Forbidden Transitions

Garstang[42] developed a general formula for the magnetic dipole line strengths of hyperfine transitions within a fixed atomic energy level and applied it to the magnetic dipole transition between the two hyperfine levels of the ground terms of the ^{6}Li and ^{7}Li isotopes. The two isotopes of lithium, with relative abundances of 7.5% and 92.5%, respectively, produce two widely separated lines, for which the transition frequencies are experimentally known.[43] The transitions are analogous to the astrophysically important 21 cm line of hydrogen.

Caves[44] calculated the oscillator strengths for a large number of electric quadrupole (E2) lines with a generalized Coulomb approximation. We have tabulated the majority of his results but excluded the very weak lines and lines between higher levels, for which no experimental wavelength and energy level data are available. Sengupta[45] also calculated the oscillator strengths for a number of P°-P°, D-D, F°-F°, P°-F°, and S-D transitions with Hartree-Fock wave functions, and, more recently, Beck[46] made a detailed study of the two E2 transitions $2p\ ^2P^\circ-3p\ ^2P^\circ$ and $2s\ ^2S-3d\ ^2D$. The agreement between the three authors for these and two other P°-P° transitions ($2p\ ^2P^\circ-4p\ ^2P^\circ$ and $3p\ ^2P^\circ-4p\ ^2P^\circ$) is excellent, with differences not exceeding 5%. But for the D-D transitions, Sengupta disagreed with Caves by large factors, and it appears that his results contain incorrect statistical weights. Caves presented both f values and transition probabilities, which are fully consistent, while Sengupta displayed only gf values, and these are larger by factors of about 3. We have therefore not used his results.

A finding list and transition probabilities for the forbidden lines of (Li I) are given in Tables 20–22

TABLE 20. List of tabulated lines for forbidden transitions of Li I

Wavelength (Å)	No.
In air	
2 372.81	7
2 393.26	6
2 423.71	5
2 472.22	4
2 557.11	3
2 729.69	2
3 195.69	1
3 673.48	14
3 723.65	13
3 799.26	12
3 922.47	11
4 146.20	10
4 635.71	9
6 239.89	8
6 698.24	21
6 863.80	20
7 120.35	19
7 555.82	18
8 408.98	17
8 931.79	27
9 234.27	26
9 531.91	36
9 713.65	25
10 034.0	35
10 322.6	34
10 561.8	24
10 615.9	16
10 921.0	33

TABLE 20. List of tabulated lines for forbidden transitions of Li I—Continued

Wavelength (Å)	No.
11 485.1	32
12 357.3	23
12 797.6	31
14 042.6	42
14 248.4	30
14 790.5	41
16 035.6	40
17 698.3	47
18 032.0	22
18 427.3	39
18 720.4	29
18 926.8	46
21 056.6	45
21 624.6	51
24 486.1	38
24 521.3	15
25 494.9	44
26 212.7	50
26 809.8	28
33 923.6	52
39 266.4	43
40 450.2	49
Wave number (cm^{-1})	No.
1 375.28	53
1 611.3	37
1 676.1	48

TABLE 21. Li I: Isotopes, hyperfine structure, magnetic dipole transitions

Isotope	Transition	Frequency (MHz)	ΔE (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Accuracy	Source
^{6}Li	$1s^22s\ ^2S_{1/2}$ ($F=1/2-F=3/2$)	228.205 26	0.007 607	2–4	M1	1.59e−17	5.36e+00	A	42
^{7}Li	$1s^22s\ ^2S_{1/2}$ ($F=1-F=2$)	803.50 41	0.026 78	3–5	M1	7.79e−16	7.52e+00	A	42

TABLE 22. Li I: Forbidden transitions

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	f_{ik}	S (a.u.)	Acc.	Source
1	$1s^22s$-$1s^23d$	$^2S-^2D$	3 195.69	3 196.61	0–31 283.1	2–10	E2	2.53e+02	1.93e−06	7.53e+02	B	44
2	$1s^22s$-$1s^24d$	$^2S-^2D$	2 729.69	2 730.49	0–36 623.4	2–10	E2	9.78e+01	5.47e−07	1.33e+02	B	44
3	$1s^22s$-$1s^25d$	$^2S-^2D$	2 557.11	2 557.88	0–39 094.9	2–10	E2	4.73e+01	2.32e−07	4.62e+01	B	44
4	$1s^22s$-$1s^26d$	$^2S-^2D$	2 472.22	2 472.96	0–40 437.3	2–10	E2	2.64e+01	1.21e−07	2.18e+01	B	44
5	$1s^22s$-$1s^27d$	$^2S-^2D$	2 423.71	2 424.45	0–41 246.5	2–10	E2	1.63e+01	7.18e−08	1.22e+01	B	44
6	$1s^22s$-$1s^28d$	$^2S-^2D$	2 393.26	2 393.99	0–41 771.3	2–10	E2	1.08e+01	4.64e−08	7.58e+00	B	44
7	$1s^22s$-$1s^29d$	$^2S-^2D$	2 372.81	2 373.53	0–42 131.3	2–10	E2	7.48e+00	3.16e−08	5.03e+00	B	44
8	$1s^22p$-$1s^23p$	$^2P^\circ-^2P^\circ$	6 239.89	6 241.62	14 903.9–30 925.38	6–6	E2	2.64e+01	1.54e−07	1.34e+03	B	44
9	$1s^22p$-$1s^24p$	$^2P^\circ-^2P^\circ$	4 635.71	4 637.00	14 903.9–36 469.55	6–6	E2	1.11e+01	3.59e−08	1.28e+02	B	44

TABLE 22. Li I: Forbidden transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	f_{ik}	S (a.u.)	Acc.	Source
10	$1s^22p$-$1s^25p$	$^2P^\circ-{}^2P^\circ$	4 146.20	4 147.37	14 903.9–39 015.56	6–6	E2	5.64e+00	1.45e−08	3.70e+01	B	44
11	$1s^22p$-$1s^26p$	$^2P^\circ-{}^2P^\circ$	3 922.47	3 923.58	14 903.9–40 390.84	6–6	E2	3.23e+00	7.46e−09	1.61e+01	B	44
12	$1s^22p$-$1s^27p$	$^2P^\circ-{}^2P^\circ$	3 799.26	3 800.34	14 903.9–41 217.35	6–6	E2	2.02e+00	4.38e−09	8.58e+00	B	44
13	$1s^22p$-$1s^28p$	$^2P^\circ-{}^2P^\circ$	3 723.65	3 724.71	14 903.9–41 751.63	6–6	E2	1.35e+00	2.80e−09	5.18e+00	B	44
14	$1s^22p$-$1s^29p$	$^2P^\circ-{}^2P^\circ$	3 673.48	3 674.53	14 903.9–42 118.27	6–6	E2	9.43e−01	1.91e−09	3.38e+00	B	44
15	$1s^23s$-$1s^23d$	$^2S-{}^2D$	2 4521.3	4 077.0 cm^{-1}	27 206.12–31 283.1	2–10	E2	3.55e−01	1.60e−07	2.81e+04	B	44
16	$1s^23s$-$1s^24d$	$^2S-{}^2D$	1 0615.9	9 417.3 cm^{-1}	27 206.12–36 623.4	2–10	E2	6.77e+00	5.72e−07	8.16e+03	B	44
17	$1s^23s$-$1s^25d$	$^2S-{}^2D$	8 408.98	8 411.29	27 206.12–39 094.9	2–10	E2	4.72e+00	2.50e−07	1.77e+03	B	44
18	$1s^23s$-$1s^26d$	$^2S-{}^2D$	7 555.82	7 557.90	27 206.12–40 437.3	2–10	E2	2.99e+00	1.28e−07	6.58e+02	B	44
19	$1s^23s$-$1s^27d$	$^2S-{}^2D$	7 120.35	7 122.31	27 206.12–41 246.5	2–10	E2	1.96e+00	7.45e−08	3.21e+02	B	44
20	$1s^23s$-$1s^28d$	$^2S-{}^2D$	6 863.80	6 865.69	27 206.12–41 771.3	2–10	E2	1.34e+00	4.73e−08	1.83e+02	B	44
21	$1s^23s$-$1s^29d$	$^2S-{}^2D$	6 698.24	6 700.09	27 206.12–42 131.3	2–10	E2	9.54e−01	3.21e−08	1.15e+02	B	44
22	$1s^23p$-$1s^24p$	$^2P^\circ-{}^2P^\circ$	18 032.0	5 544.17 cm^{-1}	30 925.38–36 469.55	6–6	E2	2.78e+00	1.35e−07	2.84e+04	B	44
23	$1s^23p$-$1s^25p$	$^2P^\circ-{}^2P^\circ$	12 357.3	8 090.18 cm^{-1}	30 925.38–39 015.56	6–6	E2	1.54e+00	3.52e−08	2.38e+03	B	44
24	$1s^23p$-$1s^26p$	$^2P^\circ-{}^2P^\circ$	10 561.8	9 465.46 cm^{-1}	30 925.38–40 390.84	6–6	E2	9.10e−01	1.52e−08	6.41e+02	B	44
25	$1s^23p$-$1s^27p$	$^2P^\circ-{}^2P^\circ$	9 713.65	9 716.31	30 925.38–41 217.35	6–6	E2	5.78e−01	8.18e−09	2.68e+02	B	44
26	$1s^23p$-$1s^28p$	$^2P^\circ-{}^2P^\circ$	9 234.27	9 236.81	30 925.38–41 751.63	6–6	E2	3.89e−01	4.97e−09	1.40e+02	B	44
27	$1s^23p$-$1s^29p$	$^2P^\circ-{}^2P^\circ$	8 931.79	8 934.24	30 925.38–42 118.27	6–6	E2	2.73e−01	3.27e−09	8.33e+01	B	44
28	$1s^23d$-$1s^24s$	$^2D-{}^2S$	26 809.8	3 729.0 cm^{-1}	31 283.1–35 012.06	10–2	E2	8.62e−01	1.86e−08	2.14e+04	B	44
29	$1s^23d$-$1s^24d$	$^2D-{}^2D$	18 720.4	5 340.3 cm^{-1}	31 283.1–36 623.4	10–10	E2	1.19e+00	6.27e−08	2.45e+04	B	44
30	$1s^23d$-$1s^25s$	$^2D-{}^2S$	14 248.4	7 016.4 cm^{-1}	31 283.1–38 299.50	10–2	E2	3.06e−01	1.86e−09	3.22e+02	B	44
31	$1s^23d$-$1s^25d$	$^2D-{}^2D$	12 797.6	7 811.8 cm^{-1}	31 283.1–39 094.9	10–10	E2	5.74e−01	1.41e−08	1.76e+03	B	44
32	$1s^23d$-$1s^26s$	$^2D-{}^2S$	11 485.1	8 704.5 cm^{-1}	31 283.1–39 987.64	10–2	E2	1.68e−01	6.64e−10	5.99e+01	B	44
33	$1s^23d$-$1s^26d$	$^2D-{}^2D$	10 921.0	9 154.2 cm^{-1}	31 283.1–40 437.3	10–10	E2	3.18e−01	5.68e−09	4.41e+02	B	44
34	$1s^23d$-$1s^27s$	$^2D-{}^2S$	10 322.6	9 684.8 cm^{-1}	31 283.1–40 967.9	10–2	E2	1.04e−01	3.31e−10	2.17e+01	B	44
35	$1s^23d$-$1s^27d$	$^2D-{}^2D$	10 034.0	9 963.4 cm^{-1}	31 283.1–41 246.5	10–10	E2	1.94e−01	2.94e−09	1.77e+02	B	44
36	$1s^23d$-$1s^28d$	$^2D-{}^2D$	9 531.91	9 534.52	31 283.1–41 771.3	10–10	E2	1.28e−01	1.74e−09	8.99e+01	B	44
37	$1s^24s$-$1s^24d$	$^2S-{}^2D$		1 611.3 cm^{-1}	35 012.06–36 623.4	2–10	E2	4.97e−02	1.43e−07	4.09e+05	B	44
38	$1s^24s$-$1s^25d$	$^2S-{}^2D$	24 486.1	4 082.8 cm^{-1}	35 012.06–39 094.9	2–10	E2	5.81e−01	2.61e−07	4.58e+04	B	44
39	$1s^24s$-$1s^26d$	$^2S-{}^2D$	18 427.3	5 425.2 cm^{-1}	35 012.06–40 437.3	2–10	E2	5.43e−01	1.38e−07	1.03e+04	B	44
40	$1s^24s$-$1s^27d$	$^2S-{}^2D$	16 035.6	6 234.4 cm^{-1}	35 012.06–41 246.5	2–10	E2	4.06e−01	7.82e−08	3.85e+03	B	44
41	$1s^24s$-$1s^28d$	$^2S-{}^2D$	14 790.5	6 759.2 cm^{-1}	35 012.06–41 771.3	2–10	E2	2.96e−01	4.86e−08	1.87e+03	B	44
42	$1s^24s$-$1s^29d$	$^2S-{}^2D$	14 042.6	7 119.2 cm^{-1}	35 012.06–42 131.3	2–10	E2	2.19e−01	3.23e−08	1.07e+03	B	44
43	$1s^24p$-$1s^25p$	$^2P^\circ-{}^2P^\circ$	39 266.4	2 546.01 cm^{-1}	36 469.55–39 015.56	6–6	E2	4.87e−01	1.13e−07	2.44e+05	B	44
44	$1s^24p$-$1s^26p$	$^2P^\circ-{}^2P^\circ$	25 494.9	3 921.29 cm^{-1}	36 469.55–40 390.84	6–6	E2	3.18e−01	3.10e−08	1.84e+04	B	44

TABLE 22. Li I: Forbidden transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	f_{ik}	S (a.u.)	Acc.	Source
45	$1s^24p$-$1s^27p$	$^2P^\circ-{}^2P^\circ$	21 056.6	4 747.80 cm^{-1}	36 469.55–41 217.35	6–6	E2	2.09e−01	1.39e−08	4.65e+03	B	44
46	$1s^24p$-$1s^28p$	$^2P^\circ-{}^2P^\circ$	18 926.8	5 282.08 cm^{-1}	36 469.55–41 751.63	6–6	E2	1.43e−01	7.70e−09	1.87e+03	B	44
47	$1s^24p$-$1s^29p$	$^2P^\circ-{}^2P^\circ$	17 698.3	5 648.72 cm^{-1}	36 469.55–42 118.27	6–6	E2	1.02e−01	4.79e−09	9.50e+02	B	44
48	$1s^24d$-$1s^25s$	$^2D-{}^2S$		1 676.1 cm^{-1}	36 623.4–38 299.50	10–2	E2	2.23e−01	2.38e−08	3.01e+05	B	44
49	$1s^24d$-$1s^25d$	$^2D-{}^2D$	40 450.2	2 471.5 cm^{-1}	36 623.4–39 094.9	10–10	E2	2.67e−01	6.54e−08	2.58e+05	B	44
50	$1s^24d$-$1s^26d$	$^2D-{}^2D$	26 212.7	3 813.9 cm^{-1}	36 623.4–40 437.3	10–10	E2	1.60e−01	1.65e−08	1.77e+04	B	44
51	$1s^24d$-$1s^27d$	$^2D-{}^2D$	21 624.6	4 623.1 cm^{-1}	36 623.4–41 246.5	10–10	E2	1.01e−01	7.08e−09	4.27e+03	B	44
52	$1s^25s$-$1s^27d$	$^2S-{}^2D$	33 923.6	2 947.0 cm^{-1}	38 299.50–41 246.5	2–10	E2	1.01e−01	8.75e−08	4.07e+04	B	44
53	$1s^25p$-$1s^26p$	$^2P^\circ-{}^2P^\circ$		1 375.28 cm^{-1}	39 015.56–40 390.84	6–6	E2	1.20e−01	9.51e−08	1.31e+06	B	44

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

4.2. Li II

Helium Isoelectronic Sequence
Ground State: $1s^2\ {}^1S_0$
Ionization Energy: 75.6402 eV (610 079.0 cm^{-1})

4.2.1. Li II Allowed Transitions

The high-precision variational calculations by Drake[6] provided the definitive set of data for singly ionized (heliumlike) lithium. From his calculations, which included the lowest-order relativistic terms, we have tabulated transition probability data for about 450 transitions with principal quantum numbers up to 7 and orbital angular momentum quantum numbers up to 3. Drake calculated the transition integrals both in the dipole length and dipole velocity formulations and achieved agreement in the transition integrals to at least five significant figures and often several more.

As Drake has stated, higher-order effects, such as nuclear mass corrections and relativistic and QED effects, will only noticeably change the fifth and higher figures in the results, which is of no significance to the vast majority of applications.

Cann and Thakkar[47] and Chen[48] made precise calculations similar to Drake but on a less extensive and slightly less sophisticated basis. Where they overlap, the results are identical within the first four digits. Drake also provided precise results for several weak intercombination lines.

A finding list and transition probabilities for the allowed lines of Li II are given in Tables 23 and 24.

TABLE 23. List of tabulated lines for allowed transitions of Li II

Wavelength (Å)	No.
In vacuum	
166.390	6
167.270	5
168.738	4

TABLE 23. List of tabulated lines for allowed transitions of Li II—Continued

Wavelength (Å)	No.
171.577	3
178.014	2
199.279	1
822.176	12
822.181	12
822.183	12
861.329	11
861.333	11
861.336	11
912.214	19
935.863	31
935.866	31
935.877	31
935.883	31
935.886	31
935.913	31
939.308	18
940.002	30
940.022	30
940.050	30
944.718	10
944.724	10
944.728	10
965.113	29
965.117	29
965.128	29
965.135	29
965.138	29
965.167	29
972.188	28
972.209	28
972.239	28
987.554	17
1 006.94	42
1 008.86	41
1 017.78	27

TABLE 23. List of tabulated lines for allowed transitions of Li II—Continued

Wavelength (Å)	No.
1 017.80	27
1 017.89	26
1 017.89	26
1 017.90	26
1 017.91	26
1 017.91	26
1 017.95	26
1 031.75	25
1 031.77	25
1 031.80	25
1 040.87	40
1 044.15	39
1 093.43	16
1 102.46	38
1 108.88	37
1 131.83	24
1 131.84	24
1 131.85	24
1 131.86	24
1 131.87	24
1 131.91	24
1 166.59	23
1 166.62	23
1 166.66	23
1 198.07	9
1 198.09	9
1 198.10	9
1 237.28	36
1 253.32	35
1 420.89	15
1 492.26	22
1 492.31	22
1 492.91	21
1 492.94	21
1 492.96	21
1 492.98	21
1 492.99	21
1 493.03	21
1 653.08	20
1 653.14	20
1 653.22	20
1 681.66	34
1 682.52	33
1 755.33	32
In air	
2 329.80	46
2 329.84	46
2 329.86	46
2 367.82	51
2 402.30	62
2 402.32	62
2 402.32	62
2 402.36	62
2 402.38	62
2 402.44	62
2 429.78	61

TABLE 23. List of tabulated lines for allowed transitions of Li II—Continued

Wavelength (Å)	No.
2 429.84	61
2 429.89	61
2 506.87	74
2 506.91	74
2 506.94	73
2 506.98	73
2 507.01	73
2 508.79	87
2 508.86	86
2 516.59	85
2 539.49	96
2 551.74	95
2 559.52	50
2 605.04	60
2 605.07	60
2 605.07	60
2 605.12	60
2 605.14	60
2 605.21	60
2 657.26	59
2 657.33	59
2 657.40	59
2 674.41	45
2 674.46	45
2 674.49	45
2 728.20	72
2 728.25	72
2 728.28	71
2 728.33	71
2 728.37	71
2 730.47	84
2 730.55	83
2 734.24	82
2 744.91	70
2 744.96	70
2 744.96	70
2 745.00	70
2 745.05	70
2 745.08	70
2 766.99	94
2 790.31	93
2 952.73	49
3 029.08	58
3 029.11	58
3 029.12	58
3 029.18	58
3 029.21	58
3 029.29	58
3 155.26	57
3 155.37	57
3 155.46	57
3 187.72	81
3 196.22	69
3 196.28	69
3 196.32	68
3 196.38	68
3 196.44	68

TABLE 23. List of tabulated lines for allowed transitions of Li II—Continued

Wavelength (Å)	No.
3 199.33	80
3 199.43	79
3 236.20	67
3 236.26	67
3 236.27	67
3 236.32	67
3 236.39	67
3 236.43	67
3 249.87	92
3 306.28	91
3 684.60	44
3 684.70	44
3 684.75	44
3 878.84	8
4 156.45	48
4 322.06	56
4 322.26	56
4 325.34	55
4 325.41	55
4 325.42	55
4 325.54	55
4 325.62	55
4 325.78	55
4 637.68	78
4 671.40	66
4 671.53	66
4 671.63	65
4 671.76	65
4 671.88	65
4 678.06	77
4 678.29	76
4 788.36	90
4 792.39	89
4 842.78	64
4 842.92	64
4 842.94	64
4 843.04	64
4 843.21	64
4 843.31	64
4 881.22	54
4 881.47	54
4 881.69	54
5 037.91	88
5 152.88	103
5 199.17	112
5 199.17	112
5 199.19	112
5 199.28	112
5 199.37	112
5 199.47	112
5 329.49	111
5 329.60	111
5 329.80	111
5 401.53	121
5 401.72	121
5 401.75	120
5 401.86	120

TABLE 23. List of tabulated lines for allowed transitions of Li II—Continued

Wavelength (Å)	No.
5 402.05	120
5 406.65	132
5 406.99	131
5 410.91	138
5 411.22	144
5 412.05	137
5 412.25	137
5 412.36	137
5 412.37	143
5 412.56	143
5 443.02	130
5 466.28	152
5 483.46	7
5 484.40	7
5 485.09	7
5 523.36	151
5 653.88	99
5 654.09	99
5 654.21	99
6 156.22	102
6 252.19	110
6 252.19	110
6 252.22	110
6 252.35	110
6 252.48	110
6 252.63	110
6 545.66	119
6 545.95	118
6 545.95	119
6 546.11	118
6 546.40	118
6 553.19	129
6 553.64	128
6 560.06	136
6 560.52	142
6 561.43	109
6 561.60	109
6 561.91	109
6 562.61	135
6 562.90	135
6 563.06	135
6 563.07	141
6 563.36	141
6 574.95	127
6 641.62	150
6 642.52	117
6 642.69	117
6 642.81	117
6 642.98	117
6 644.52	149
6 777.60	148
8 225.91	98
8 226.36	98
8 226.62	98
9 057.01	101
9 406.13	108
9 406.77	108

TABLE 23. List of tabulated lines for allowed transitions of Li II—Continued

Wavelength (Å)	No.
9 415.28	107
9 415.29	107
9 415.34	107
9 415.63	107
9 415.93	107
9 416.27	107
9 581.43	14
9 993.30	126
10 090.4	116
10 091.0	115
10 091.1	116
10 091.4	115
10 092.1	115
10 108.3	125
10 109.3	124
10 127.4	134
10 128.5	140
10 137.4	133
10 138.1	133
10 138.5	133
10 138.5	139
10 139.2	139
10 323.1	147
10 334.2	146
10 499.5	114
10 499.9	114
10 500.2	114
10 500.6	114
10 519.3	123
10 520.0	123
10 751.3	106
10 751.7	106
10 752.6	106
10 914.7	145
11 097.6	157
11 126.6	165
11 127.5	165
11 132.3	164
11 132.3	164
11 132.8	164
11 133.1	164
11 133.6	164
11 601.2	172
11 602.1	172
11 602.2	171
11 602.7	171
11 603.6	171
11 615.1	180
11 616.7	179
11 626.2	184
11 627.6	188
11 631.5	183
11 632.4	183
11 632.8	187
11 632.9	183
11 633.7	187
11 747.3	163

TABLE 23. List of tabulated lines for allowed transitions of Li II—Continued

Wavelength (Å)	No.
11 747.8	163
11 748.8	163
11 783.5	194
11 784.3	178
11 789.9	193
12 052.0	192
15 429.9	154
15 431.5	154
15 432.4	154
17 099.7	156
17 391.1	162
17 393.2	162
17 411.1	161
17 412.2	161
17 413.1	161
17 414.3	161
18 574.0	170
18 576.3	170
18 576.3	169
18 577.7	169
18 579.9	169
18 609.8	177
18 613.4	176
18 643.2	182
18 646.7	186
18 663.8	181
18 666.1	181
18 667.3	185
18 667.5	181
18 669.6	185
18 749.9	168
18 786.3	175
19 051.1	191
19 075.0	190
19 375.7	167
19 377.1	167
19 378.2	167
19 379.6	167
19 379.7	167
19 416.1	174
19 418.6	174
20 041.4	160
20 043.0	160
20 045.7	160
20 214.4	189
21 056.3	43
21 060.3	43
21 065.1	43
28 924.9	202
28 930.5	202
28 963.2	201
28 963.2	201
28 966.4	201
28 968.8	201
28 972.1	201
29 253.4	197
30 451.5	205

TABLE 23. List of tabulated lines for allowed transitions of Li II—Continued

Wavelength (Å)	No.
30 493.9	204
30 802.4	208
30 808.7	208
30 809.7	207
30 813.4	207
30 819.6	207
30 865.0	211
30 876.0	210
30 916.9	213
30 927.0	215
30 954.4	212
30 960.7	212
30 964.4	212
30 964.4	214
30 970.8	214
32 021.4	206
32 089.0	209
32 311.8	203
33 530.5	200
33 534.7	200
33 542.3	200
33 605.0	47
34 633.7	13

Wave number (cm^{-1})	No.
120.48	173
130.82	166
131.21	166
199.16	122
212.15	198
212.54	198
212.82	198
213.20	198
213.21	198
216.70	113
217.09	113
219.12	199
219.79	199
255.47	196

TABLE 23. List of tabulated lines for allowed transitions of Li II—Continued

Wave number (cm^{-1})	No.
354	216
369.00	158
369.39	158
369.67	158
370.05	158
370.06	158
379.73	159
380.40	159
479.20	75
508.52	63
509.67	63
540.40	195
540.78	195
541.45	195
645.36	155
726.32	104
726.71	104
727.04	104
727.37	104
727.43	104
727.44	104
744.25	105
744.97	105
949.39	153
949.77	153
950.44	153
1 233.34	100
1 741.73	52
1 741.98	52
1 742.35	52
1 742.80	52
1 742.88	52
1 743.95	52
1 772.20	53
1 773.27	53
1 904.25	97
1 904.65	97
1 905.37	97

TABLE 24. Li II: Allowed transitions

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
1	$1s^2$-$1s2p$	$^1S-^1P^\circ$		199.279	0.00–501 808.59	1–3	2.5569e+02	4.5668e−01	2.9961e−01	−0.340 38	AAA	6
2	$1s^2$-$1s3p$	$^1S-^1P^\circ$		178.014	0.00–561 752.82	1–3	7.7637e+01	1.1065e−01	6.4847e−02	−0.956 04	AAA	6
3	$1s^2$-$1s4p$	$^1S-^1P^\circ$		171.577	0.00–582 830.11	1–3	3.2984e+01	4.3671e−02	2.4668e−02	−1.359 80	AAA	6
4	$1s^2$-$1s5p$	$^1S-^1P^\circ$		168.738	0.00–592 634.91	1–3	1.6944e+01	2.1698e−02	1.2053e−02	−1.663 58	AAA	6
5	$1s^2$-$1s6p$	$^1S-^1P^\circ$		167.270	0.00–597 836.00	1–3	9.8246e+00	1.2363e−02	6.8081e−03	−1.907 87	AAA	6
6	$1s^2$-$1s7p$	$^1S-^1P^\circ$		166.390	0.00–600 998.00	1–3	6.1948e+00	7.7136e−03	4.2253e−03	−2.112 74	AAA	6
7	$1s2s$-$1s2p$	$^3S-^3P^\circ$	*5 484.5*	*5 486.1*	*476 034.98–494 263.0*	3–9	2.2727e−01	3.0764e−01	1.6669e+01	−0.034 84	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			5 484.40	5 485.93	476 034.98–494 263.44	3–5	2.2727e−01	1.7090e−01	9.2597e+00	−0.290 13	AAA	6
			5 485.09	5 486.61	476 034.98–494 261.17	3–3	2.2727e−01	1.0257e−01	5.5579e+00	−0.511 87	AAA	6
			5 483.46	5 484.99	476 034.98–494 266.57	3–1	2.2727e−01	3.4169e−02	1.8510e+00	−0.989 25	AAA	6
8	1*s*2*s*-1*s*2*p*	$^3S-^1P^\circ$										
			3 878.84	3 879.94	476 034.98–501 808.59	3–3	3.813e−07	8.605e−08	3.297e−06	−6.588 2	AA	6
9	1*s*2*s*-1*s*3*p*	$^3S-^3P^\circ$		*1 198.1*	*476 034.98–559 501.2*	3–9	2.8969e+00	1.8702e−01	2.2130e+00	−0.250 99	AAA	6
				1 198.09	476 034.98–559 501.42	3–5	2.8969e+00	1.0390e−01	1.2294e+00	−0.506 26	AAA	6
				1 198.10	476 034.98–559 500.35	3–3	2.8969e+00	6.2342e−02	7.3768e−01	−0.728 10	AAA	6
				1 198.07	476 034.98–559 502.32	3–1	2.8969e+00	2.0780e−02	2.4588e−01	−1.205 24	AAA	6
10	1*s*2*s*-1*s*4*p*	$^3S-^3P^\circ$		*944.72*	*476 034.98–581 886.3*	3–9	1.4329e+00	5.7518e−02	5.3666e−01	−0.763 08	AAA	6
				944.718	476 034.98–581 886.70	3–5	1.4329e+00	3.1954e−02	2.9814e−01	−1.018 35	AAA	6
				944.724	476 034.98–581 885.98	3–3	1.4329e+00	1.9173e−02	1.7889e−01	−1.240 20	AAA	6
				944.728	476 034.98–581 885.58	3–1	1.4329e+00	6.3909e−03	5.9631e−02	−1.717 31	AAA	6
11	1*s*2*s*-1*s*5*p*	$^3S-^3P^\circ$		*861.33*	*476 034.98–592 134.4*	3–9	7.6688e−01	2.5589e−02	2.1768e−01	−1.114 83	AAA	6
				861.329	476 034.98–592 134.70	3–5	7.6688e−01	1.4216e−02	1.2093e−01	−1.370 11	AAA	6
				861.333	476 034.98–592 134.03	3–3	7.6688e−01	8.5296e−03	7.2560e−02	−1.591 95	AAA	6
				861.336	476 034.98–592 133.65	3–1	7.6688e−01	2.8432e−03	2.4187e−02	−2.069 07	AAA	6
12	1*s*2*s*-1*s*6*p*	$^3S-^3P^\circ$		*822.18*	*476 034.98–597 663.1*	3–9	4.5196e−01	1.3741e−02	1.1158e−01	−1.384 87	AAA	6
				822.176	476 034.98–597 663.40	3–5	4.5196e−01	7.6337e−03	6.1987e−02	−1.640 14	AAA	6
				822.181	476 034.98–597 662.73	3–3	4.5196e−01	4.5803e−03	3.7193e−02	−1.861 99	AAA	6
				822.183	476 034.98–597 662.35	3–1	4.5196e−01	1.5268e−03	1.2398e−02	−2.339 11	AAA	6
13	1*s*2*s*-1*s*2*p*	$^1S-^3P^\circ$										
			34 633.7	2 886.57 cm^{-1}	491 374.60–494 261.17	1–3	6.481e−10	3.498e−08	3.990e−06	−7.456 2	AA	6
14	1*s*2*s*-1*s*2*p*	$^1S-^1P^\circ$	9 581.43	9 584.06	491 374.60–501 808.59	1–3	5.1423e−02	2.1244e−01	6.7029e+00	−0.672 77	AAA	6
15	1*s*2*s*-1*s*3*p*	$^1S-^1P^\circ$		1 420.89	491 374.60–561 752.82	1–3	2.8309e+00	2.5705e−01	1.2024e+00	−0.589 97	AAA	6
16	1*s*2*s*-1*s*4*p*	$^1S-^1P^\circ$		1 093.43	491 374.60–582 830.11	1–3	1.3533e+00	7.2770e−02	2.6195e−01	−1.138 05	AAA	6
17	1*s*2*s*-1*s*5*p*	$^1S-^1P^\circ$		987.554	491 374.60–592 634.91	1–3	7.1912e−01	3.1543e−02	1.0255e−01	−1.501 10	AAA	6
18	1*s*2*s*-1*s*6*p*	$^1S-^1P^\circ$		939.308	491 374.60–597 836.00	1–3	4.2318e−01	1.6793e−02	5.1928e−02	−1.774 88	AAA	6
19	1*s*2*s*-1*s*7*p*	$^1S-^1P^\circ$		912.214	491 374.60–600 998.00	1–3	2.6895e−01	1.0066e−02	3.0228e−02	−1.997 16	AAA	6
20	1*s*2*p*-1*s*3*s*	$^3P^\circ-^3S$		*1 653.1*	*494 263.0–554 754.45*	9–3	2.8585e+00	3.9039e−02	1.9121e+00	−0.454 26	AAA	6
				1 653.14	494 263.44–554 754.45	5–3	1.5881e+00	3.9039e−02	1.0623e+00	−0.709 53	AAA	6
				1 653.08	494 261.17–554 754.45	3–3	9.5283e−01	3.9035e−02	6.3731e−01	−0.931 42	AAA	6
				1 653.22	494 266.57–554 754.45	1–3	3.1761e−01	3.9042e−02	2.1249e−01	−1.408 46	AAA	6
21	1*s*2*p*-1*s*3*d*	$^3P^\circ-^3D$		*1 493.0*	*494 263.0–561 243.7*	9 15	1.1215e+01	6.2459e−01	2.7629e+01	0.74984	AAA	6
				1 492.98	494 263.44–561 243.77	5–7	1.1216e+01	5.2472e−01	1.2895e+01	0.41890	AAA	6
				1 492.94	494 261.17–561 243.15	3–5	8.4093e+00	4.6833e−01	6.9054e+00	0.14767	AAA	6
				1 493.03	494 266.57–561 244.30	1–3	6.2311e+00	6.2471e−01	3.0706e+00	−0.204 32	AAA	6
				1 492.99	494 263.44–561 243.15	5–5	2.8030e+00	9.3668e−02	2.3020e+00	−0.329 44	AAA	6
				1 492.91	494 261.17–561 244.30	3–3	4.6733e+00	1.5615e−01	2.3024e+00	−0.329 33	AAA	6
				1 492.96	494 263.44–561 244.30	5–3	3.1156e−01	6.2467e−03	1.5351e−01	−1.505 38	AAA	6
22	1*s*2*p*-1*s*3*d*	$^3P^\circ-^1D$										
				1 492.31	494 263.44–561 273.62	5–5	1.011e−03	3.376e−05	8.292e−04	−3.772 7	AA	6
				1 492.26	494 261.17–561 273.62	3–5	2.720e−03	1.513e−04	2.230e−03	−3.342 9	AA	6
23	1*s*2*p*-1*s*4*s*	$^3P^\circ-^3S$		*1 166.6*	*494 263.0–579 981.33*	9–3	1.0525e+00	7.1582e−03	2.4743e−01	−1.190 95	AAA	6
				1 166.62	494 263.44–579 981.33	5–3	5.8471e−01	7.1582e−03	1.3746e−01	−1.446 22	AAA	6
				1 166.59	494 261.17–579 981.33	3–3	3.5083e−01	7.1579e−03	8.2471e−02	−1.668 09	AAA	6
				1 166.66	494 266.57–579 981.33	1–3	1.1694e−01	7.1586e−03	2.7495e−02	−2.145 17	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
24	1*s*2*p*-1*s*4*d*	$^3P^\circ$–^3D		*1 131.9*	*494 263.0–582 613.6*	9 –15	3.8492e+00	1.2321e−01	4.1320e+00	0.04490	AAA	6
				1 131.85	494 263.44–582 614.07	5–7	3.8494e+00	1.0350e−01	1.9284e+00	−0.286 07	AAA	6
				1 131.83	494 261.17–582 613.41	3–5	2.8866e+00	9.2397e−02	1.0328e+00	−0.557 22	AAA	6
				1 131.91	494 266.57–582 613.02	1–3	2.1386e+00	1.2323e−01	4.5922e−01	−0.909 27	AAA	6
				1 131.86	494 263.44–582 613.41	5–5	9.6216e−01	1.8480e−02	3.4430e−01	−1.034 34	AAA	6
				1 131.84	494 261.17–582 613.02	3–3	1.6039e+00	3.0804e−02	3.4434e−01	−1.034 28	AAA	6
				1 131.87	494 263.44–582 613.02	5–3	1.0693e−01	1.2322e−03	2.2958e−02	−2.210 33	AAA	6
25	1*s*2*p*-1*s*5*s*	$^3P^\circ$–^3S		*1 031.8*	*494 263.0–591 184.26*	9–3	5.0524e−01	2.6878e−03	8.2166e−02	−1.616 36	AAA	6
				1 031.77	494 263.44–591 184.26	5–3	2.8069e−01	2.6878e−03	4.5649e−02	−1.871 6–3	AAA	6
				1 031.75	494 261.17–591 184.26	3–3	1.6841e−01	2.6876e−03	2.7387e−02	−2.093 51	AAA	6
				1 031.80	494 266.57–591 184.26	1–3	5.6137e−02	2.6879e−03	9.1305e−03	−2.570 58	AAA	6
26	1*s*2*p*-1*s*5*d*	$^3P^\circ$–^3D		*1 017.9*	*494 263.0–592 504.3*	9–15	1.8076e+00	4.6798e−02	1.4114e+00	−0.375 53	AAA	6
				1 017.90	494 263.44–592 504.75	5–7	1.8077e+00	3.9312e−02	6.5868e−01	−0.706 51	AAA	6
				1 017.89	494 261.17–592 504.09	3–5	1.3556e+00	3.5094e−02	3.5280e−01	−0.977 64	AAA	6
				1 017.95	494 266.57–592 503.70	1–3	1.0043e+00	4.6805e−02	1.5685e−01	−1.329 71	AAA	6
				1 017.91	494 263.44–592 504.09	5–5	4.5185e−01	7.0189e−03	1.1760e−01	−1.454 76	AAA	6
				1 017.89	494 261.17–592 503.70	3–3	7.5321e−01	1.1700e−02	1.1762e−01	−1.454 71	AAA	6
				1 017.91	494 263.44–592 503.70	5–3	5.0214e−02	4.6801e−04	7.8417e−03	−2.630 78	AAA	6
27	1*s*2*p*-1*s*5*d*	$^3P^\circ$–^1D										
				1 017.80	494 263.44–592 514.43	5–5	7.339e−05	1.140e−06	1.910e−05	−5.244 2	AA	6
				1 017.78	494 261.17–592 514.43	3–5	1.907e−04	4.935e−06	4.960e−05	−4.829 6	AA	6
28	1*s*2*p*-1*s*6*s*	$^3P^\circ$–^3S		*972.21*	*494 263.0–597 121.95*	9–3	2.8167e−01	1.3304e−03	3.8323e−02	−1.921 77	AAA	6
				972.209	494 263.44–597 121.95	5–3	1.5648e−01	1.3304e−03	2.1291e−02	−2.177 04	AAA	6
				972.188	494 261.17–597 121.95	3 3	9.3890e−02	1.3304e−03	1.2774e−02	−2.398 90	AAA	6
				972.239	494 266.57–597 121.95	1–3	3.1297e−02	1.3305e−03	4.2587e−03	−2.875 97	AAA	6
29	1*s*2*p*-1*s*6*d*	$^3P^\circ$–^3D		*965.13*	*494 263.0–597 876.2*	9 15	1.0002e+00	2.3278e−02	6.6566e−01	−0.678 81	AAA	6
				965.128	494 263.44–597 876.60	5–7	1.0002e+00	1.9554e−02	3.1065e−01	−1.009 79	AAA	6
				965.113	494 261.17–597 875.94	3–5	7.5008e−01	1.7457e−02	1.6640e−01	−1.280 91	AAA	6
				965.167	494 266.57–597 875.55	1–3	5.5568e−01	2.3281e−02	7.3975e−02	−1.632 99	AAA	6
				965.135	494 263.44–597 875.94	5–5	2.5002e−01	3.4915e−03	5.5468e−02	−1.758 02	AAA	6
				965.117	494 261.17–597 875.55	3–3	4.1676e−01	5.8197e−03	5.5473e−02	−1.757 98	AAA	6
				965.138	494 263.44–597 875.55	5–3	2.7784e−02	2.3280e−04	3.6984e−03	−2.934 05	AAA	6
30	1*s*2*p*-1*s*7*s*	$^3P^\circ$–^3S		*940.02*	*494 263.0–600 643.90*	9 3	1.7315e−01	7.6457e−04	2.1295e−02	−2.162 34	AAA	6
				940.022	494 263.44–600 643.90	5–3	9.6192e−02	7.6458e−04	1.1831e−02	−2.417 61	AAA	6
				940.002	494 261.17–600 643.90	3–3	5.7715e−02	7.6455e−04	7.0979e−03	−2.639 48	AAA	6
				940.050	494 266.57–600 643.90	1–3	1.9238e−02	7.6461e−04	2.3663e−03	−3.116 56	AAA	6
31	1*s*2*p*-1*s*7*d*	$^3P^\circ$–^3D		*935.88*	*494 263.0–601 114.7*	9 15	6.1345e−01	1.3425e−02	3.7227e−01	−0.917 84	AAA	6
				935.877	494 263.44–601 115.11	5–7	6.1347e−01	1.1278e−02	1.7373e−01	−1.248 81	AAA	6
				935.863	494 261.17–601 114.45	3–5	4.6005e−01	1.0068e−02	9.3056e−02	−1.519 94	AAA	6
				935.913	494 266.57–601 114.06	1–3	3.4081e−01	1.3426e−02	4.1369e−02	−1.872 04	AAA	6
				935.883	494 263.44–601 114.45	5–5	1.5335e−01	2.0136e−03	3.1021e−02	−1.997 05	AAA	6
				935.866	494 261.17–601 114.06	3–3	2.5561e−01	3.3563e−03	3.1022e−02	−1.997 02	AAA	6
				935.886	494 263.44–601 114.06	5–3	1.7041e−02	1.3426e−04	2.0683e−03	−3.173 08	AAA	6
32	1*s*2*p*-1*s*3*s*	$^1P^\circ$–^1S		1 755.33	501 808.59–558 777.88	3–1	2.0499e+00	3.1564e−02	5.4720e−01	−1.023 69	AAA	6
33	1*s*2*p*-1*s*3*d*	$^1P^\circ$–^3D										
				1 682.52	501 808.59–561 243.15	3 5	3.400e−03	2.405e−04	3.997e−03	−3.141 7	AA	6
34	1*s*2*p*-1*s*3*d*	$^1P^\circ$–^1D		1 681.66	501 808.59–561 273.62	3–5	1.0069e+01	7.1149e−01	1.1817e+01	0.32929	AAA	6
35	1*s*2*p*-1*s*4*s*	$^1P^\circ$–^1S		1 253.32	501 808.59–581 596.77	3–1	7.9627e−01	6.2506e−03	7.7371e−02	−1.726 96	AAA	6
36	1*s*2*p*-1*s*4*d*	$^1P^\circ$–^1D		1 237.28	501 808.59–582 630.95	3–5	3.1179e+00	1.1926e−01	1.4574e+00	−0.446 37	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
37	1*s*2*p*-1*s*5*s*	$^1P^\circ$–^1S		1 108.88	501 808.59–591 989.55	3–1	3.9149e−01	2.4056e−03	2.6346e−02	−2.141 65	AAA	6
38	1*s*2*p*-1*s*5*d*	$^1P^\circ$–^1D		1 102.46	501 808.59–592 514.43	3–5	1.4070e+00	4.2730e−02	4.6526e−01	−0.892 15	AAA	6
39	1*s*2*p*-1*s*6*s*	$^1P^\circ$–^1S		1 044.15	501 808.59–597 580.53	3–1	2.2136e−01	1.2060e−03	1.2437e−02	−2.441 52	AAA	6
40	1*s*2*p*-1*s*6*d*	$^1P^\circ$–^1D		1 040.87	501 808.59–597 882.52	3–5	7.6295e−01	2.0653e−02	2.1232e−01	−1.207 89	AAA	6
41	1*s*2*p*-1*s*7*s*	$^1P^\circ$–^1S		1 008.86	501 808.59–600 930.00	3 1	1.3736e−01	6.9865e−04	6.9613e−03	−2.678 62	AAA	6
42	1*s*2*p*-1*s*7*d*	$^1P^\circ$–^1D		1 006.94	501 808.59–601 119.02	3–5	4.6245e−01	1.1716e−02	1.1652e−01	−1.454 10	AAA	6
43	1*s*3*s*-1*s*3*p*	^3S–$^3P^\circ$	*21 061*	*4 746.7* cm^{-1}	*554 754.45–559 501.2*	3 9	2.5664e−02	5.1229e−01	1.0659e+02	0.18664	AAA	6
			21 060.3	4 746.97 cm^{-1}	554 754.45–559 501.42	3–5	2.5664e−02	2.8458e−01	5.9208e+01	−0.068 68	AAA	6
			21 065.1	4 745.90 cm^{-1}	554 754.45–559 500.35	3–3	2.5664e−02	1.7082e−01	3.5549e+01	−0.290 33	AAA	6
			21 056.3	4 747.87 cm^{-1}	554 754.45–559 502.32	3–1	2.5664e−02	5.6893e−02	1.1835e+01	−0.767 82	AAA	6
44	1*s*3*s*-1*s*4*p*	^3S–$^3P^\circ$	*3 684.7*	*3 685.7*	*554 754.45–581 886.3*	3–9	3.0580e−01	1.8683e−01	6.8010e+00	−0.251 42	AAA	6
			3 684.60	3 685.65	554 754.45–581 886.70	3–5	3.0580e−01	1.0379e−01	3.7782e+00	−0.506 71	AAA	6
			3 684.70	3 685.75	554 754.45–581 885.98	3–3	3.0580e−01	6.2280e−02	2.2671e+00	−0.728 53	AAA	6
			3 684.75	3 685.80	554 754.45–581 885.58	3–1	3.0580e−01	2.0760e−02	7.5573e−01	−1.205 64	AAA	6
45	1*s*3*s*-1*s*5*p*	^3S–$^3P^\circ$	*2 674.4*	*2 675.2*	*554 754.45–592 134.4*	3–9	1.9081e−01	6.1419e−02	1.6228e+00	−0.734 58	AAA	6
			2 674.41	2 675.21	554 754.45–592 134.70	3–5	1.9081e−01	3.4121e−02	9.0152e−01	−0.989 86	AAA	6
			2 674.46	2 675.26	554 754.45–592 134.03	3–3	1.9081e−01	2.0473e−02	5.4094e−01	−1.211 69	AAA	6
			2 674.49	2 675.28	554 754.45–592 133.65	3–1	1.9081e−01	6.8246e−03	1.8032e−01	−1.688 80	AAA	6
46	1*s*3*s*-1*s*6*p*	^3S–$^3P^\circ$	*2 329.8*	*2 330.5*	*554 754.45–597 663.1*	3–9	1.1758e−01	2.8723e−02	6.6111e−01	−1.064 66	AAA	6
			2 329.80	2 330.52	554 754.45–597 663.40	3–5	1.1758e−01	1.5957e−02	3.6728e−01	−1.319 94	AAA	6
			2 329.84	2 330.55	554 754.45–597 662.73	3–3	1.1758e−01	9.5743e−03	2.2038e−01	−1.541 77	AAA	6
			2 329.86	2 330.57	554 754.45–597 662.35	3–1	1.1758e−01	3.1915e−03	7.3461e−02	−2.018 88	AAA	6
47	1*s*3*s*-1*s*3*p*	^1S–$^1P^\circ$	33 605.0	2 974.94 cm^{-1}	558 777.88–561 752.82	1–3	7.1274e−03	3.6220e−01	4.0082e+01	−0.441 05	AAA	6
48	1*s*3*s*-1*s*4*p*	^1S–$^1P^\circ$	4 156.45	4 157.62	558 777.88–582 830.11	1–3	3.4105e−01	2.6515e−01	3.6292e+00	−0.576 51	AAA	6
49	1*s*3*s*-1*s*5*p*	^1S–$^1P^\circ$	2 952.73	2 953.60	558 777.88–592 634.91	1–3	2.0309e−01	7.9684e−02	7.7481e−01	−1.098 63	AAA	6
50	1*s*3*s*-1*s*6*p*	^1S–$^1P^\circ$	2 559.52	2 560.29	558 777.88–597 836.00	1–3	1.2342e−01	3.6387e−02	3.0669e−01	−1.439 06	AAA	6
51	1*s*3*s*-1*s*7*p*	^1S–$^1P^\circ$	2 367.82	2 368.54	558 777.88–600 998.00	1–3	7.9550e−02	2.0071e−02	1.5651e−01	−1.697 42	AAA	6
52	1*s*3*p*-1*s*3*d*	$^3P^\circ$–^3D		*1 742.5* cm^{-1}	*559 501.2–561 243.7*	9–15	1.1010e−03	9.0600e−02	1.5405e+02	−0.088 63	AAA	6
				1 742.35 cm^{-1}	559 501.42–561 243.77	5–7	1.1011e−03	7.6127e−02	7.1920e+01	−0.419 49	AAA	6
				1 742.80 cm^{-1}	559 500.35–561 243.15	3–5	8.2552e−04	6.7911e−02	3.8485e+01	−0.690 94	AAA	6
				1 741.98 cm^{-1}	559 502.32–561 244.30	1–3	6.1170e−04	9.0663e−02	1.7134e+01	−1.042 57	AAA	6
				1 741.73 cm^{-1}	559 501.42–561 243.15	5–5	2.7516e−04	1.3598e−02	1.2851e+01	−1.167 55	AAA	6
				1 743.95 cm^{-1}	559 500.35–561 244.30	3–3	4.5877e−04	2.2614e−02	1.2807e+01	−1.168 50	AAA	6
				1 742.88 cm^{-1}	559 501.42–561 244.30	5–3	3.0585e−05	9.0569e−04	8.5538e−01	−2.344 05	AAA	6
53	1*s*3*p*-1*s*3*d*	$^3P^\circ$–^1D										
				1 772.20 cm^{-1}	559 501.42–561 273.62	5–5	1.043e−07	4.979e−06	4.625e−03	−4.603 9	AA	6
				1 773.27 cm^{-1}	559 500.35–561 273.62	3–5	2.854e−07	2.268e−05	1.263e−02	−4.167 2	AA	6
54	1*s*3*p*-1*s*4*s*	$^3P^\circ$–^3S	*4 881.4*	*4 882.8*	*559 501.2–579 981.33*	9–3	7.1352e−01	8.5011e−02	1.2299e+01	−0.116 28	AAA	6
			4 881.47	4 882.83	559 501.42–579 981.33	5–3	3.9640e−01	8.5013e−02	6.8329e+00	−0.371 54	AAA	6
			4 881.22	4 882.58	559 500.35–579 981.33	3–3	2.3784e−01	8.5004e−02	4.0991e+00	−0.593 44	AAA	6
			4 881.69	4 883.05	559 502.32–579 981.33	1–3	7.9280e−02	8.5021e−02	1.3668e+00	−1.070 48	AAA	6
55	1*s*3*p*-1*s*4*d*	$^3P^\circ$–^3D	*4 325.5*	*4 326.7*	*559 501.2–582 613.6*	9 15	1.0761e+00	5.0336e−01	6.4529e+01	0.65612	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			4 325.42	4 326.63	559 501.42–582 614.07	5–7	1.0762e+00	4.2284e−01	3.0114e+01	0.32515	AAA	6
			4 325.34	4 326.56	559 500.35–582 613.41	3 –5	8.0701e−01	3.7746e−01	1.6129e+01	0.05399	AAA	6
			4 325.78	4 327.00	559 502.32–582 613.02	1–3	5.9789e−01	5.0347e−01	7.1719e+00	−0.298 03	AAA	6
			4 325.54	4 326.76	559 501.42–582 613.41	5–5	2.6900e−01	7.5498e−02	5.3770e+00	−0.423 10	AAA	6
			4 325.41	4 326.63	559 500.35–582 613.02	3–3	4.4842e−01	1.2585e−01	5.3776e+00	−0.423 04	AAA	6
			4 325.62	4 326.83	559 501.42–582 613.02	5–3	2.9894e−02	5.0342e−03	3.5855e−01	−1.599 10	AAA	6
56	1*s*3*p*-1*s*4*d*	$^3P^\circ$–^1D										
			4 322.26	4 323.48	559 501.42–582 630.95	5–5	5.436e−05	1.523e−05	1.084e−03	−4.118 3	AA	6
			4 322.06	4 323.28	559 500.35–582 630.95	3–5	1.402e−04	6.545e−05	2.795e−03	−3.707 0	AA	6
57	1*s*3*p*-1*s*5*s*	$^3P^\circ$–^3S	*3 155.3*	*3 156.3*	*559 501.2–591 184.26*	9–3	3.2129e−01	1.5995e−02	1.4958e+00	−0.841 78	AAA	6
			3 155.37	3 156.28	559 501.42–591 184.26	5–3	1.7849e−01	1.5995e−02	8.3099e−01	−1.097 06	AAA	6
			3 155.26	3 156.18	559 500.35–591 184.26	3–3	1.0710e−01	1.5994e−02	4.9857e−01	−1.318 91	AAA	6
			3 155.46	3 156.37	559 502.32–591 184.26	1–3	3.5699e−02	1.5996e−02	1.6622e−01	−1.795 99	AAA	6
58	1*s*3*p*-1*s*5*d*	$^3P^\circ$–^3D	*3 029.1*	*3 030.0*	*559 501.2–592 504.3*	9–15	5.5729e−01	1.2784e−01	1.1477e+01	0.06092	AAA	6
			3 029.12	3 030.00	559 501.42–592 504.75	5–7	5.5732e−01	1.0739e−01	5.3563e+00	−0.270 06	AAA	6
			3 029.08	3 029.96	559 500.35–592 504.09	3–5	4.1793e−01	9.5870e−02	2.8689e+00	−0.541 20	AAA	6
			3 029.29	3 030.18	559 502.32–592 503.70	1–3	3.0962e−01	1.2786e−01	1.2755e+00	−0.893 26	AAA	6
			3 029.18	3 030.06	559 501.42–592 504.09	5–5	1.3931e−01	1.9175e−02	9.5640e−01	−1.018 29	AAA	6
			3 029.11	3 030.00	559 500.35–592 503.70	3–3	2.3222e−01	3.1962e−02	9.5649e−01	−1.018 24	AAA	6
			3 029.21	3 030.09	559 501.42–592 503.70	5–3	1.5481e−02	1.2786e−03	6.3771e−02	−2.194 31	AAA	6
59	1*s*3*p*-1*s*6*s*	$^3P^\circ$–^3S	*2 657.3*	*2 658.1*	*559 501.2–597 121.95*	9 3	1.7416e−01	6.1493e−03	4.8430e−01	−1.256 93	AAA	6
			2 657.33	2 658.12	559 501.42–597 121.95	5–3	9.6754e−02	6.1493e−03	2.6906e−01	−1.512 20	AAA	6
			2 657.26	2 658.05	559 500.35–597 121.95	3–3	5.8053e−02	6.1490e−03	1.6142e−01	−1.734 07	AAA	6
			2 657.40	2 658.19	559 502.32–597 121.95	1–3	1.9351e−02	6.1497e−03	5.3816e−02	−2.211 15	AAA	6
60	1*s*3*p*-1*s*6*d*	$^3P^\circ$–^3D	*2 605.1*	*2 605.9*	*559 501.2–597 876.2*	9–15	3.1751e−01	5.3873e−02	4.1595e+00	−0.314 38	AAA	6
			2 605.07	2 605.85	559 501.42–597 876.60	5–7	3.1753e−01	4.5255e−02	1.9412e+00	−0.645 36	AAA	6
			2 605.04	2 605.82	559 500.35–597 875.94	3–5	2.3812e−01	4.0401e−02	1.0398e+00	−0.916 49	AAA	6
			2 605.21	2 605.98	559 502.32–597 875.55	1–3	1.7640e−01	5.3879e−02	4.6224e−01	−1.268 58	AAA	6
			2 605.12	2 605.90	559 501.42–597 875.94	5–5	7.9370e−02	8.0803e−03	3.4660e−01	−1.393 60	AAA	6
			2 605.07	2 605.85	559 500.35–597 875.55	3–3	1.3230e−01	1.3468e−02	3.4663e−01	−1.393 56	AAA	6
			2 605.14	2 605.92	559 501.42–597 875.55	5–3	8.8202e−03	5.3878e−04	2.3111e−02	−2.569 62	AAA	6
61	1*s*3*p*-1*s*7*s*	$^3P^\circ$–^3S	*2 429.8*	*2 430.6*	*559 501.2–600 643.90*	9 3	1.0542e−01	3.1122e−03	2.2413e−01	−1.552 68	AAA	6
			2 429.84	2 430.58	559 501.42–600 643.90	5–3	5.8567e−02	3.1123e−03	1.2452e−01	−1.807 95	AAA	6
			2 429.78	2 430.51	559 500.35–600 643.90	3–3	3.5140e−02	3.1121e−03	7.4705e−02	−2.029 82	AAA	6
			2 429.89	2 430.63	559 502.32–600 643.90	1–3	1.1713e−02	3.1123e−03	2.4905e−02	−2.506 92	AAA	6
62	1*s*3*p*-1*s*7*d*	$^3P^\circ$–^3D	*2 402.3*	*2 403.1*	*559 501.2–601 114.7*	9–15	1.9733e−01	2.8473e−02	2.0273e+00	−0.591 32	AAA	6
			2 402.32	2 403.06	559 501.42–601 115.11	5–7	1.9734e−01	2.3918e−02	9.4610e−01	−0.922 30	AAA	6
			2 402.30	2 403.03	559 500.35–601 114.45	3–5	1.4799e−01	2.1353e−02	5.0677e−01	−1.193 42	AAA	6
			2 402.44	2 403.17	559 502.32–601 114.06	1–3	1.0963e−01	2.8476e−02	2.2529e−01	−1.545 52	AAA	6
			2 402.36	2 403.09	559 501.42–601 114.45	5–5	4.9328e−02	4.2706e−03	1.6893e−01	−1.670 54	AAA	6
			2 402.32	2 403.05	559 500.35–601 114.06	3–3	8.2224e−02	7.1184e−03	1.6894e−01	−1.670 50	AAA	6
			2 402.38	2 403.12	559 501.42–601 114.06	5–3	5.4816e−03	2.8475e−04	1.1264e−02	−2.846 57	AAA	6
63	1*s*3*d*-1*s*3*p*	^3D–$^1P^\circ$										
				509.67 cm^{-1}	561 243.15–561 752.82	5–3	1.499e−08	5.191e−06	1.677e−02	−4.585 7	AA	6
				508.52 cm^{-1}	561 244.30–561 752.82	3–3	6.438e−12	3.732e−09	7.249e−06	−7.950 9	AA	6
64	1*s*3*d*-1*s*4*p*	^3D–$^3P^\circ$	*4 843.0*	*4 844.3*	*561 243.7–581 886.3*	15 9	9.3185e−02	1.9671e−02	4.7057e+00	−0.530 08	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			4 842.92	4 844.27	561 243.77–581 886.70	7–5	7.8285e−02	1.9673e−02	2.1962e+00	−0.861 04	AAA	6
			4 842.94	4 844.30	561 243.15–581 885.98	5–3	6.9873e−02	1.4750e−02	1.1761e+00	−1.132 25	AAA	6
			4 843.31	4 844.66	561 244.30–581 885.58	3–1	9.3196e−02	1.0931e−02	5.2302e−01	−1.484 22	AAA	6
			4 842.78	4 844.13	561 243.15–581 886.70	5–5	1.3974e−02	4.9160e−03	3.9199e−01	−1.609 42	AAA	6
			4 843.21	4 844.57	561 244.30–581 885.98	3–3	2.3299e−02	8.1979e−03	3.9224e−01	−1.609 17	AAA	6
			4 843.04	4 844.40	561 244.30–581 886.70	3–5	9.3196e−04	5.4649e−04	2.6147e−02	−2.785 30	AAA	6
65	1*s*3*d*-1*s*4*f*	$^3D-^3F^\circ$	*4 671.7*	*4 673.0*	*561 243.7–582 643.0*	15 21	2.0071e+00	9.1995e−01	2.1229e+02	1.13985	AAA	6
			4 671.76	4 673.07	561 243.77–582 642.97	7–9	2.2131e+00	9.3155e−01	1.0032e+02	0.81431	AAA	6
			4 671.63	4 672.94	561 243.15–582 642.97	5–7	1.4220e+00	6.5172e−01	5.0130e+01	0.51303	AAA	6
			4 671.88	4 673.19	561 244.30–582 642.97	3–5	1.8590e+00	1.0144e+00	4.6819e+01	0.48333	AAA	6
			4 671.76	4 673.07	561 243.77–582 642.97	7–7	1.7325e−01	5.6720e−02	6.1082e+00	−0.401 17	AAA	6
			4 671.63	4 672.94	561 243.15–582 642.97	5–5	3.4413e−01	1.1266e−01	8.6655e+00	−0.249 27	AAA	6
			4 671.76	4 673.07	561 243.77–582 642.97	7–5	9.8358e−03	2.3001e−03	2.4770e−01	−1.793 16	AAA	6
66	1*s*3*d*-1*s*4*f*	$^3D-^1F^\circ$										
			4 671.53	4 672.84	561 243.77–582 644.04	7–7	7.264e−02	2.378e−02	2.561e+00	−0.778 7	AA	6
			4 671.40	4 672.70	561 243.15–582 644.04	5–7	5.453e−01	2.499e−01	1.922e+01	0.096 7	AA	6
67	1*s*3*d*-1*s*5*p*	$^3D-^3P^\circ$	*3 236.3*	*3 237.2*	*561 243.7–592 134.4*	15–9	3.9463e−02	3.7200e−03	5.9468e−01	−1.253 36	AAA	6
			3 236.26	3 237.20	561 243.77–592 134.70	7–5	3.3153e−02	3.7204e−03	2.7754e−01	−1.584 31	AAA	6
			3 236.27	3 237.20	561 243.15–592 134.03	5–3	2.9591e−02	2.7894e−03	1.4864e−01	−1.855 52	AAA	6
			3 236.43	3 237.36	561 244.30–592 133.65	3–1	3.9467e−02	2.0671e−03	6.6091e−02	−2.207 53	AAA	6
			3 236.20	3 237.13	561 243.15–592 134.70	5–5	5.9180e−03	9.2972e−04	4.9540e−02	−2.332 68	AAA	6
			3 236.39	3 237.32	561 244.30–592 134.03	3–3	9.8668e−03	1.5503e−03	4.9566e−02	−2.332 47	AAA	6
			3 236.32	3 237.25	561 244.30–592 134.70	3–5	3.9467e−04	1.0335e−04	3.3042e−03	−3.508 59	AAA	6
68	1*s*3*d*-1*s*5*f*	$^3D-^3F^\circ$	*3 196.4*	*3 197.3*	*561 243.7–592 520.1*	15–21	6.8178e−01	1.4628e−01	2.3096e+01	0.34129	AAA	6
			3 196.38	3 197.31	561 243.77–592 520.11	7–9	7.3141e−01	1.4412e−01	1.0619e+01	0.00383	AAA	6
			3 196.32	3 197.24	561 243.15–592 520.11	5–7	5.1900e−01	1.1135e−01	5.8604e+00	−0.254 33	AAA	6
			3 196.44	3 197.36	561 244.30–592 520.11	3–5	6.1439e−01	1.5694e−01	4.9559e+00	−0.327 15	AAA	6
			3 196.38	3 197.31	561 243.77–592 520.11	7–7	6.3540e−02	9.7381e−03	7.1751e−01	−1.166 43	AAA	6
			3 196.32	3 197.24	561 243.15–592 520.11	5–5	1.1373e−01	1.7429e−02	9.1729e−01	−1.059 75	AAA	6
			3 196.38	3 197.31	561 243.77–592 520.11	7–5	3.2507e−03	3.5586e−04	2.6220e−02	−2.603 63	AAA	6
6–9	1*s*3*d*-1*s*5*f*	$^3D-^1F^\circ$										
			3 196.28	3 197.20	561 243.77–592 521.11	7–7	1.773e−02	2.717e−03	2.002e−01	−1.720 8	AA	6
			3 196.22	3 197.14	561 243.15–592 521.11	5–7	1.312e−01	2.814e−02	1.481e+00	−0.851 7	AA	6
70	1*s*3*d*-1*s*6*p*	$^3D-^3P^\circ$	*2 745.0*	*2 745.8*	*561 243.7–597 663.1*	15–9	2.0599e−02	1.3970e−03	1.8942e−01	−1.678 72	AAA	6
			2 744.96	2 745.77	561 243.77–597 663.40	7–5	1.7305e−02	1.3971e−03	8.8403e−02	−2.009 67	AAA	6
			2 744.96	2 745.78	561 243.15–597 662.73	5–3	1.5446e−02	1.0475e−03	4.7344e−02	−2.280 88	AAA	6
			2 745.08	2 745.89	561 244.30–597 662.35	3–1	2.0601e−02	7.7623e−04	2.1051e−02	−2.632 89	AAA	6
			2 744.91	2 745.73	561 243.15–597 663.40	5–5	3.0891e−03	3.4914e−04	1.5780e−02	−2.758 03	AAA	6
			2 745.05	2 745.86	561 244.30–597 662.73	3–3	5.1503e−03	5.8217e−04	1.5788e−02	−2.757 83	AAA	6
			2 745.00	2 745.81	561 244.30–597 663.40	3–5	2.0601e−04	3.8809e−05	1.0525e−03	−3.933 94	AAA	6
71	1*s*3*d*-1*s*6*f*	$^3D-^3F^\circ$	*2 728.3*	*2 729.1*	*561 243.7–597 885.4*	15–21	3.2661e−01	5.1057e−02	6.8809e+00	−0.115 85	AAA	6
			2 728.33	2 729.13	561 243.77–597 885.43	7–9	3.4602e−01	4.9677e−02	3.1243e+00	−0.458 75	AAA	6
			2 728.28	2 729.09	561 243.15–597 885.43	5–7	2.5634e−01	4.0072e−02	1.8001e+00	−0.698 19	AAA	6
			2 728.37	2 729.17	561 244.30–597 885.43	3–5	2.9065e−01	5.4093e−02	1.4580e+00	−0.789 74	AAA	6
			2 728.33	2 729.13	561 243.77–597 885.43	7–7	3.1455e−02	3.5123e−03	2.2090e−01	−1.609 31	AAA	6
			2 728.28	2 729.09	561 243.15–597 885.43	5–5	5.3805e−02	6.0078e−03	2.6988e−01	−1.522 32	AAA	6
			2 728.33	2 729.13	561 243.77–597 885.43	7–5	1.5379e−03	1.2266e−04	7.7145e−03	−3.066 20	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
72	1*s*3*d*-1*s*6*f*	$^3D-^1F^\circ$										
			2 728.25	2 729.06	561 243.77–597 886.48	7–7	6.991e−03	7.806e−04	4.909e−02	−2.262 5	AA	6
			2 728.20	2 729.01	561 243.15–597 886.48	5–7	5.124e−02	8.010e−03	3.598e−01	−1.397 4	AA	6
73	1*s*3*d*-1*s*7*f*	$^3D-^3F^\circ$	*2 507.0*	*2 507.7*	*561 243.7–601 120*	15–21	1.8505e−01	2.4425e−02	3.0247e+00	−0.436 07	AAA	6
			2 506.98	2 507.73	561 243.77–601 120.4	7–9	1.9475e−01	2.3607e−02	1.3643e+00	−0.781 86	AAA	6
			2 506.94	2 507.70	561 243.15–601 120.4	5–7	1.4753e−01	1.9472e−02	8.0378e−01	−1.011 62	AAA	6
			2 507.01	2 507.77	561 244.30–601 120.4	3–5	1.6359e−01	2.5706e−02	6.3668e−01	−1.112 84	AAA	6
			2 506.98	2 507.73	561 243.77–601 120.4	7–7	1.8126e−02	1.7089e−03	9.8759e−02	−1.922 18	AAA	6
			2 506.94	2 507.70	561 243.15–601 120.4	5–5	3.0283e−02	2.8550e−03	1.1785e−01	−1.845 42	AAA	6
			2 506.98	2 507.73	561 243.77–601 120.4	7–5	8.6555e−04	5.8289e−05	3.3685e−03	−3.389 32	AAA	6
74	1*s*3*d*-1*s*7*f*	$^3D-^1F^\circ$										
			2 506.91	2 507.66	561 243.77–601 121.55	7–7	3.513e−03	3.311e−04	1.914e−02	−2.634 9	AA	6
			2 506.87	2 507.62	561 243.15–601 121.55	5–7	2.558e−02	3.376e−03	1.394e−01	−1.772 6	AA	6
75	1*s*3*d*-1*s*3*p*	$^1D-^1P^\circ$		479.20 cm^{-1}	561 273.62–561 752.82	5–3	3.7260e−05	1.4595e−02	5.0136e+01	−1.136 81	AAA	6
76	1*s*3*d*-1*s*4*f*	$^1D-^3F^\circ$										
			4 678.29	4 679.60	561 273.62–582 642.97	5–7	6.172e−01	2.837e−01	2.185e+01	0.151 8	AA	6
			4 678.29	4 679.60	561 273.62–582 642.97	5–5	1.235e−04	4.053e−05	3.122e−03	−3.693 3	AA	6
77	1*s*3*d*-1*s*4*f*	$^1D-^1F^\circ$	4 678.06	4 679.37	561 273.62–582 644.04	5–7	1.5931e+00	7.3215e−01	5.6394e+01	0.56357	AAA	6
78	1*s*3*d*-1*s*4*p*	$^1D-^1P^\circ$	4 637.68	4 638.97	561 273.62–582 830.11	5–3	4.6514e−02	9.0040e−03	6.8755e−01	−1.346 59	AAA	6
79	1*s*3*d*-1*s*5*f*	$^1D-^3F^\circ$										
			3 199.43	3 200.36	561 273.62–592 520.11	5–5	4.086e−05	6.273e−06	3.305e−04	−4.503 5	AA	6
			3 199.43	3 200.36	561 273.62–592 520.11	5–7	1.484e−01	3.190e−02	1.680e+00	−0.797 3	AA	6
80	1*s*3*d*-1*s*5*f*	$^1D-^1F^\circ$	3 199.33	3 200.26	561 273.62–592 521.11	5–7	5.8056e−01	1.2480e−01	6.5740e+00	−0.204 83	AAA	6
81	1*s*3*d*-1*s*5*p*	$^1D-^1P^\circ$	3 187.72	3 188.64	561 273.62–592 634.91	5–3	2.0088e−02	1.8372e−03	9.6429e−02	−2.036 87	AAA	6
82	1*s*3*d*-1*s*6*p*	$^1D-^1P^\circ$	2 734.24	2 735.05	561 273.62–597 836.00	5–3	1.0508e−02	7.0706e−04	3.1833e−02	−2.451 57	AAA	6
83	1*s*3*d*-1*s*6*f*	$^1D-^3F^\circ$										
			2 730.55	2 731.36	561 273.62–597 885.43	5–7	5.796e−02	9.075e−03	4.080e−01	−1.343 2	AA	6
			2 730.55	2 731.36	561 273.62–597 885.43	5–5	1.934e−05	2.163e−06	9.723e−05	−4.966 0	AA	6
84	1*s*3*d*-1*s*6*f*	$^1D-^1F^\circ$	2 730.47	2 731.28	561 273.62–597 886.48	5–7	2.8654e−01	4.4864e−02	2.0170e+00	−0.649 13	AAA	6
85	1*s*3*d*-1*s*7*p*	$^1D-^1P^\circ$	2 516.59	2 517.35	561 273.62–600 998.00	5–3	6.2233e−03	3.5474e−04	1.4700e−02	−2.751 12	AAA	6
86	1*s*3*d*-1*s*7*f*	$^1D-^3F^\circ$										
			2 508.86	2 509.61	561 273.62–601 120.4	5–7	2.894e−02	3.825e−03	1.580e−01	−1.718 4	AA	6
			2 508.86	2 509.61	561 273.62–601 120.4	5–5	1.089e−05	1.028e−06	4.246e−05	−5.289 1	AA	6
87	1*s*3*d*-1*s*7*f*	$^1D-^1F^\circ$	2 508.79	2 509.54	561 273.62–601 121.55	5–7	1.6484e−01	2.1789e−02	9.0007e−01	−0.962 79	AAA	6
88	1*s*3*p*-1*s*4*s*	$^1P^\circ-^1S$	5 037.91	5 039.32	561 752.82–581 596.77	3–1	5.3935e−01	6.8446e−02	3.4066e+00	−0.687 53	AAA	6
89	1*s*3*p*-1*s*4*d*	$^1P^\circ-^3D$										
			4 792.39	4 793.73	561 752.82–582 613.41	3–5	2.115e−04	1.215e−04	5.751e−03	−3.438 4	AA	6
90	1*s*3*p*-1*s*4*d*	$^1P^\circ-^1D$	4 788.36	4 789.70	561 752.82–582 630.95	3–5	1.1368e+00	6.5164e−01	3.0826e+01	0.29113	AAA	6
91	1*s*3*p*-1*s*5*s*	$^1P^\circ-^1S$	3 306.28	3 307.24	561 752.82–591 989.55	3–1	2.5203e−01	1.3776e−02	4.4997e−01	−1.383 76	AAA	6
92	1*s*3*p*-1*s*5*d*	$^1P^\circ-^1D$	3 249.87	3 250.81	561 752.82–592 514.43	3–5	5.3551e−01	1.4140e−01	4.5399e+00	−0.372 42	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
93	1*s*3*p*-1*s*6*s*	$^1P^\circ$–^1S	2 790.31	2 791.14	561 752.82–597 580.53	3–1	1.3884e−01	5.4052e−03	1.4900e−01	−1.790 07	AAA	6
94	1*s*3*p*-1*s*6*d*	$^1P^\circ$–^1D	2 766.99	2 767.81	561 752.82–597 882.52	3–5	2.9369e−01	5.6217e−02	1.5367e+00	−0.773 01	AAA	6
95	1*s*3*p*-1*s*7*s*	$^1P^\circ$–^1S	2 551.74	2 552.51	561 752.82–600 930.00	3–1	8.4872e−02	2.7633e−03	6.9662e−02	−2.081 45	AAA	6
96	1*s*3*p*-1*s*7*d*	$^1P^\circ$–^1D	2 539.49	2 540.25	561 752.82–601 119.02	3–5	1.7886e−01	2.8838e−02	7.2351e−01	−1.062 91	AAA	6
97	1*s*4*s*-1*s*4*p*	^3S–$^3P^\circ$		*1 905.0* cm^{-1}	*579 981.33–581 886.3*	3–9	5.6680e−03	7.0245e−01	3.6418e+02	0.32374	AAA	6
				1 905.37 cm^{-1}	579 981.33–581 886.70	3–5	5.6680e−03	3.9010e−01	2.0221e+02	0.06830	AAA	6
				1 904.65 cm^{-1}	579 981.33–581 885.98	3–3	5.6680e−03	2.3424e−01	1.2146e+02	−0.153 22	AAA	6
				1 904.25 cm^{-1}	579 981.33–581 885.58	3–1	5.6680e−03	7.8112e−02	4.0513e+01	−0.630 16	AAA	6
98	1*s*4*s*-1*s*5*p*	^3S–$^3P^\circ$	*8 226.1*	*8 228.4*	*579 981.33–592 134.4*	3–9	6.4409e−02	1.9614e−01	1.5939e+01	−0.230 32	AAA	6
			8 225.91	8 228.17	579 981.33–592 134.70	3–5	6.4409e−02	1.0896e−01	8.8544e+00	−0.485 62	AAA	6
			8 226.36	8 228.62	579 981.33–592 134.03	3–3	6.4409e−02	6.5382e−02	5.3135e+00	−0.707 42	AAA	6
			8 226.62	8 228.88	579 981.33–592 133.65	3–1	6.4409e−02	2.1795e−02	1.7713e+00	−1.184 52	AAA	6
99	1*s*4*s*-1*s*6*p*	^3S–$^3P^\circ$	*5 654.0*	*5 655.6*	*579 981.33–597 663.1*	3–9	4.5795e−02	6.5879e−02	3.6798e+00	−0.704 13	AAA	6
			5 653.88	5 655.45	579 981.33–597 663.40	3–5	4.5795e−02	3.6598e−02	2.0442e+00	−0.959 42	AAA	6
			5 654.09	5 655.66	579 981.33–597 662.73	3–3	4.5795e−02	2.1960e−02	1.2267e+00	−1.181 24	AAA	6
			5 654.21	5 655.78	579 981.33–597 662.35	3–1	4.5795e−02	7.3205e−03	4.0891e−01	−1.658 34	AAA	6
100	1*s*4*s*-1*s*4*p*	^1S–$^1P^\circ$		1 233.34 cm^{-1}	581 596.77–582 830.11	1–3	1.7027e−03	5.0344e−01	1.3438e+02	−0.298 05	AAA	6
101	1*s*4*s*-1*s*5*p*	^1S–$^1P^\circ$	9 057.01	9 059.50	581 596.77–592 634.91	1–3	7.6774e−02	2.8340e−01	8.4524e+00	−0.547 60	AAA	6
102	1*s*4*s*-1*s*6*p*	^1S–$^1P^\circ$	6 156.22	6 157.93	581 596.77–597 836.00	1–3	5.1772e−02	8.8296e−02	1.7900e+00	−1.054 06	AAA	6
103	1*s*4*s*-1*s*7*p*	^1S–$^1P^\circ$	5 152.88	5 154.31	581 596.77–600 998.00	1–3	3.4292e−02	4.0974e−02	6.9528e−01	−1.387 49	AAA	6
104	1*s*4*p*-1*s*4*d*	$^3P^\circ$–^3D		*727.3* cm^{-1}	*581 886.3–582 613.6*	9 15	3.3973e−04	1.6048e−01	6.5376e+02	0.15966	AAA	6
				727.37 cm^{-1}	581 886.70–582 614.07	5–7	3.3976e−04	1.3479e−01	3.0503e+02	−0.171 38	AAA	6
				727.43 cm^{-1}	581 885.98–582 613.41	3–5	2.5477e−04	1.2030e−01	1.6333e+02	−0.442 61	AAA	6
				727.44 cm^{-1}	581 885.58–582 613.02	1–3	1.8876e−04	1.6043e−01	7.2606e+01	−0.794 71	AAA	6
				726.71 cm^{-1}	581 886.70–582 613.41	5–5	8.4923e−05	2.4108e−02	5.4607e+01	−0.918 87	AAA	6
				727.04 cm^{-1}	581 885.98–582 613.02	3–3	1.4157e−04	4.0152e−02	5.4544e+01	−0.919 17	AAA	6
				726.32 cm^{-1}	581 886.70–582 613.02	5–3	9.4378e−06	1.6092e−03	3.6470e+00	−2.094 41	AAA	6
105	1*s*4*p*-1*s*4*d*	$^3P^\circ$–^1D										
				744.25 cm^{-1}	581 886.70–582 630.95	5–5	1.834e−08	4.964e−06	1.098e−02	−4.605 2	AA	6
				744.97 cm^{-1}	581 885.98–582 630.95	3–5	4.861e−08	2.188e−05	2.901e−02	−4.182 8	AA	6
106	1*s*4*p*-1*s*5*s*	$^3P^\circ$–^3S	*10752*	*9 297.9* cm^{-1}	*581 886.3–591 184.26*	9–3	2.3074e−01	1.3338e−01	4.2503e+01	0.07933	AAA	6
			10 752.6	9 297.56 cm^{-1}	581 886.70–591 184.26	5–3	1.2819e−01	1.3339e−01	2.3616e+01	−0.175 91	AAA	6
			10 751.7	9 298.28 cm^{-1}	581 885.98–591 184.26	3–3	7.6913e−02	1.3337e−01	1.4166e+01	−0.397 83	AAA	6
			10 751.3	9 298.68 cm^{-1}	581 885.58–591 184.26	1–3	2.5638e−02	1.3336e−01	4.7214e+00	−0.874 98	AAA	6
107	1*s*4*p*-1*s*5*d*	$^3P^\circ$–^3D	*9 415.4*	*9 418.0*	*581 886.3–592 504.3*	9–15	2.1232e−01	4.7056e−01	1.3131e+02	0.62686	AAA	6
			9 415.34	9 417.93	581 886.70–592 504.75	5 –7	2.1233e−01	3.9528e−01	6.1278e+01	0.29588	AAA	6
			9 415.29	9 417.87	581 885.98–592 504.09	3–5	1.5923e−01	3.5289e−01	3.2824e+01	0.02476	AAA	6
			9 415.28	9 417.86	581 885.58–592 503.70	1–3	1.1796e−01	4.7056e−01	1.4590e+01	−0.327 38	AAA	6
			9 415.93	9 418.51	581 886.70–592 504.09	5–5	5.3075e−02	7.0585e−02	1.0943e+01	−0.452 32	AAA	6
			9 415.63	9 418.22	581 885.98–592 503.70	3–3	8.8472e−02	1.1765e−01	1.0944e+01	−0.452 28	AAA	6
			9 416.27	9 418.86	581 886.70–592 503.70	5–3	5.8981e−03	4.7067e−03	7.2973e−01	−1.628 31	AAA	6
108	1*s*4*p*-1*s*5*d*	$^3P^\circ$–^1D										
			9 406.77	9 409.35	581 886.70–592 514.43	5–5	8.641e−06	1.147e−05	1.776e−03	−4.241 5	AA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			9 406.13	9 408.71	581 885.98–592 514.43	3–5	2.179e−05	4.820e−05	4.479e−03	−3.839 9	AA	6
109	1*s*4*p*-1*s*6*s*	$^3P^\circ$–^3S	*6 561.8*	*6 563.6*	*581 886.3–597 121.95*	9–3	1.1750e−01	2.5297e−02	4.9196e+00	−0.642 69	AAA	6
			6 561.91	6 563.73	581 886.70–597 121.95	5–3	6.5280e−02	2.5298e−02	2.7333e+00	−0.897 94	AAA	6
			6 561.60	6 563.42	581 885.98–597 121.95	3–3	3.9168e−02	2.5296e−02	1.6397e+00	−1.119 83	AAA	6
			6 561.43	6 563.24	581 885.58–597 121.95	1–3	1.3056e−02	2.5294e−02	5.4654e−01	−1.596 97	AAA	6
110	1*s*4*p*-1*s*6*d*	$^3P^\circ$–^3D	*6 252.2*	*6 254.0*	*581 886.3–597 876.2*	9–15	1.3224e−01	1.2924e−01	2.3948e+01	0.06564	AAA	6
			6 252.22	6 253.95	581 886.70–597 876.60	5–7	1.3225e−01	1.0856e−01	1.1176e+01	−0.265 34	AAA	6
			6 252.19	6 253.92	581 885.98–597 875.94	3–5	9.9175e−02	9.6920e−02	5.9864e+00	−0.536 47	AAA	6
			6 252.19	6 253.92	581 885.58–597 875.55	1–3	7.3472e−02	1.2924e−01	2.6609e+00	−0.888 60	AAA	6
			6 252.48	6 254.21	581 886.70–597 875.94	5–5	3.3058e−02	1.9386e−02	1.9957e+00	−1.013 55	AAA	6
			6 252.35	6 254.08	581 885.98–597 875.55	3–3	5.5104e−02	3.2312e−02	1.9958e+00	−1.013 51	AAA	6
			6 252.63	6 254.36	581 886.70–597 875.55	5 3	3.6736e−03	1.2926e−03	1.3307e−01	−2.189 56	AAA	6
111	1*s*4*p*-1*s*7*s*	$^3P^\circ$–^3S	*5 329.7*	*5 331.2*	*581 886.3–600 643.90*	9–3	6.9141e−02	9.8202e−03	1.5512e+00	−1.053 64	AAA	6
			5 329.80	5 331.29	581 886.70–600 643.90	5–3	3.8412e−02	9.8206e−03	8.6182e−01	−1.308 89	AAA	6
			5 329.60	5 331.08	581 885.98–600 643.90	3–3	2.3047e−02	9.8198e−03	5.1703e−01	−1.530 78	AAA	6
			5 329.49	5 330.97	581 885.58–600 643.90	1–3	7.6824e−03	9.8194e−03	1.7233e−01	−2.007 91	AAA	6
112	1*s*4*p*-1*s*7*d*	$^3P^\circ$–^3D	*5 199.2*	*5 200.7*	*581 886.3–601 114.7*	9–15	8.4288e−02	5.6962e−02	8.7773e+00	−0.290 17	AAA	6
			5 199.19	5 200.64	581 886.70–601 115.11	5–7	8.4291e−02	4.7850e−02	4.0962e+00	−0.621 15	AAA	6
			5 199.17	5 200.62	581 885.98–601 114.45	3–5	6.3211e−02	4.2718e−02	2.1941e+00	−0.892 27	AAA	6
			5 199.17	5 200.62	581 885.58–601 114.06	1–3	4.6828e−02	5.6963e−02	9.7527e−01	−1.244 41	AAA	6
			5 199.37	5 200.82	581 886.70–601 114.45	5–5	2.1070e−02	8.5441e−03	7.3145e−01	−1.369 37	AAA	6
			5 199.28	5 200.73	581 885.98–601 114.06	3–3	3.5121e−02	1.4241e−02	7.3150e−01	−1.369 33	AAA	6
			5 199.47	5 200.92	581 886.70–601 114.06	5–3	2.3414e−03	5.6970e−04	4.8772e−02	−2.545 39	AAA	6
113	1*s*4*d*-1*s*4*p*	^3D–$^1P^\circ$										
				216.70 cm^{-1}	582 613.41–582 830.11	5–3	2.804e−09	5.372e−06	4.080e−02	−4.570 9	AA	6
				217.09 cm^{-1}	582 613.02–582 830.11	3–3	2.157e−12	6.862e−09	3.122e−05	−7.686 5	AA	6
114	1*s*4*d*-1*s*5*p*	^3D–$^3P^\circ$	*10501*	*9 520.7* cm^{-1}	*582 613.6–592 134.4*	15–9	4.7598e−02	4.7234e−02	2.4499e+01	−0.149 65	AAA	6
			10 500.6	9 520.63 cm^{-1}	582 614.07–592 134.70	7–5	3.9985e−02	4.7238e−02	1.1434e+01	−0.480 61	AAA	6
			10 500.6	9 520.62 cm^{-1}	582 613.41–592 134.03	5–3	3.5694e−02	3.5422e−02	6.1243e+00	−0.751 76	AAA	6
			10 500.6	9 520.63 cm^{-1}	582 613.02–592 133.65	3–1	4.7601e−02	2.6243e−02	2.7224e+00	−1.103 86	AAA	6
			10 499.9	9 521.29 cm^{-1}	582 613.41–592 134.70	5–5	7.1387e−03	1.1805e−02	2.0410e+00	−1.228 95	AAA	6
			10 500.2	9 521.01 cm^{-1}	582 613.02–592 134.03	3–3	1.1900e−02	1.9681e−02	2.0415e+00	−1.228 84	AAA	6
			10 499.5	9 521.68 cm^{-1}	582 613.02–592 134.70	3–5	4.7601e−04	1.3119e−03	1.3607e−01	−2.404 98	AAA	6
115	1*s*4*d*-1*s*5*f*	^3D–$^3F^\circ$	*10092*	*9906.5* cm^{-1}	*582 613.6–592 520.1*	15–21	3.8509e−01	8.2358e−01	4.1054e+02	1.09180	AAA	6
			10 092.1	9 906.04 cm^{-1}	582 614.07–592 520.11	7–9	4.1365e−01	8.1252e−01	1.8902e+02	0.75493	AAA	6
			10 091.4	9 906.70 cm^{-1}	582 613.41–592 520.11	5–7	2.9203e−01	6.2453e−01	1.0377e+02	0.49452	AAA	6
			10 091.0	9 907.09 cm^{-1}	582 613.02–592 520.11	3–5	3.4747e−01	8.8457e−01	8.8182e+01	0.42385	AAA	6
			10 092.1	9 906.04 cm^{-1}	582 614.07–592 520.11	7–7	3.5936e−02	5.4902e−02	1.2772e+01	−0.415 32	AAA	6
			10 091.4	9 906.70 cm^{-1}	582 613.41–592 520.11	5–5	6.4333e−02	9.8273e−02	1.6329e+01	−0.308 60	AAA	6
			10 092.1	9 906.04 cm^{-1}	582 614.07–592 520.11	7–5	1.8385e−03	2.0063e−03	4.6673e−01	−1.852 51	AAA	6
116	1*s*4*d*-1*s*5*f*	^3D–$^1F^\circ$										
			10 091.1	9 907.04 cm^{-1}	582 614.07–592 521.11	7–7	1.003e−02	1.531e−02	3.562e+00	−0.969 8	AA	6
			10 090.4	9 907.70 cm^{-1}	582 613.41–592 521.11	5–7	7.567e−02	1.618e−01	2.688e+01	−0.092 0	AA	6
117	1*s*4*d*-1*s*6*p*	^3D–$^3P^\circ$	*6 642.9*	*6 644.8*	*582 613.6–597 663.1*	15–9	2.3327e−02	9.2647e−03	3.0400e+00	−0.857 08	AAA	6
			6 642.98	6 644.81	582 614.07–597 663.40	7–5	1.9596e−02	9.2653e−03	1.4188e+00	−1.188 04	AAA	6
			6 642.98	6 644.82	582 613.41–597 662.73	5–3	1.7493e−02	6.9477e−03	7.5992e−01	−1.459 19	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			6 642.98	6 644.81	582 613.02–597 662.35	3–1	2.3329e−02	5.1475e−03	3.3781e−01	−1.811 28	AAA	6
			6 642.69	6 644.52	582 613.41–597 663.40	5–5	3.4986e−03	2.3157e−03	2.5327e−01	−1.936 35	AAA	6
			6 642.81	6 644.65	582 613.02–597 662.73	3–3	5.8322e−03	3.8604e−03	2.5334e−01	−1.936 25	AAA	6
			6 642.52	6 644.35	582 613.02–597 663.40	3–5	2.3329e−04	2.5734e−04	1.6887e−02	−3.112 37	AAA	6
118	1*s*4*d*-1*s*6*f*	$^3D-^3F^\circ$	*6 546.2*	*6 548.0*	*582 613.6–597 885.4*	15–21	1.9490e−01	1.7540e−01	5.6715e+01	0.42011	AAA	6
			6 546.40	6 548.21	582 614.07–597 885.43	7–9	2.0673e−01	1.7086e−01	2.5784e+01	0.07775	AAA	6
			6 546.11	6 547.92	582 613.41–597 885.43	5–7	1.5246e−01	1.3720e−01	1.4788e+01	−0.163 68	AAA	6
			6 545.95	6 547.76	582 613.02–597 885.43	3–5	1.7365e−01	1.8602e−01	1.2030e+01	−0.253 31	AAA	6
			6 546.40	6 548.21	582 614.07–597 885.43	7–7	1.8793e−02	1.2081e−02	1.8230e+00	−1.072 80	AAA	6
			6 546.11	6 547.92	582 613.41–597 885.43	5–5	3.2151e−02	2.0666e−02	2.2274e+00	−0.985 77	AAA	6
			6 546.40	6 548.21	582 614.07–597 885.43	7–5	9.1879e−04	4.2188e−04	6.3663e−02	−2.529 71	AAA	6
119	1*s*4*d*-1*s*6*f*	$^3D-^1F^\circ$										
			6 545.95	6 547.76	582 614.07–597 886.48	7–7	4.177e−03	2.685e−03	4.051e−01	−1.726 0	AA	6
			6 545.66	6 547.47	582 613.41–597 886.48	5–7	3.131e−02	2.817e−02	3.036e+00	−0.851 3	AA	6
120	1*s*4*d*-1*s*7*f*	$^3D-^3F^\circ$	*5 401.9*	*5 403.4*	*582 613.6–601 120*	15–21	1.1207e−01	6.8680e−02	1.8326e+01	0.01292	AAA	6
			5 402.05	5 403.56	582 614.07–601 120.4	7–9	1.1808e−01	6.6456e−02	8.2754e+00	−0.332 37	AAA	6
			5 401.86	5 403.36	582 613.41–601 120.4	5–7	8.9075e−02	5.4584e−02	4.8549e+00	−0.563 96	AAA	6
			5 401.75	5 403.25	582 613.02–601 120.4	3–5	9.9189e−02	7.2357e−02	3.8613e+00	−0.663 40	AAA	6
			5 402.05	5 403.56	582 614.07–601 120.4	7–7	1.0990e−02	4.8108e−03	5.9906e−01	−1.472 69	AAA	6
			5 401.86	5 403.36	582 613.41–601 120.4	5–5	1.8365e−02	8.0385e−03	7.1497e−01	−1.395 85	AAA	6
			5 402.05	5 403.56	582 614.07–601 120.4	7–5	5.2481e−04	1.6409e−04	2.0434e−02	−2.939 81	AAA	6
121	1*s*4*d*-1*s*7*f*	$^3D-^1F^\circ$										
			5 401.72	5 403.22	582 614.07–601 121.55	7–7	2.130e−03	9.322e−04	1.161e−01	−2.185 4	AA	6
			5 401.53	5 403.03	582 613.41–601 121.55	5–7	1.589e−02	9.735e−03	8.658e−01	−1.312 7	AA	6
122	1*s*4*d*-1*s*4*p*	$^1D-^1P^\circ$		199.16 cm^{-1}	582 630.95–582 830.11	5–3	1.2024e−05	2.7268e−02	2.2537e+02	−0.865 38	AAA	6
123	1*s*4*d*-1*s*5*p*	$^1D-^3P^\circ$										
			10 519.3	9 503.75 cm^{-1}	582 630.95–592 134.70	5–5	1.432e−06	2.376e−06	4.116e−04	−4.925 1	AA	6
			10 520.0	9 503.08 cm^{-1}	582 630.95–592 134.03	5–3	6.578e−06	6.552e−06	1.135e−03	−4.484 7	AA	6
124	1*s*4*d*-1*s*5*f*	$^1D-^3F^\circ$										
			10 109.3	9 889.16 cm^{-1}	582 630.95–592 520.11	5–7	8.574e−02	1.840e−01	3.063e+01	−0.036 2	AA	6
			10 109.3	9 889.16 cm^{-1}	582 630.95–592 520.11	5–5	1.291e−05	1.978e−05	3.293e−03	−4.004 7	AA	6
125	1*s*4*d*-1*s*5*f*	$^1D-^1F^\circ$	10 108.3	9 890.16 cm^{-1}	582 630.95–592 521.11	5–7	3.2804e−01	7.0389e−01	1.1715e+02	0.54647	AAA	6
126	1*s*4*d*-1*s*5*p*	$^1D-^1P^\circ$	9 993.30	9 996.04	582 630.95–592 634.91	5–3	2.5797e−02	2.3186e−02	3.8151e+00	−0.935 80	AAA	6
127	1*s*4*d*-1*s*6*p*	$^1D-^1P^\circ$	6 574.95	6 576.76	582 630.95–597 836.00	5–3	1.2963e−02	5.0436e−03	5.4600e−01	−1.598 29	AAA	6
128	1*s*4*d*-1*s*6*f*	$^1D-^3F^\circ$										
			6 553.64	6 555.45	582 630.95–597 885.43	5–7	3.542e−02	3.194e−02	3.447e+00	−0.796 7	AA	6
			6 553.64	6 555.45	582 630.95–597 885.43	5–5	6.461e−06	4.163e−06	4.492e−04	−4.681 7	AA	6
129	1*s*4*d*-1*s*6*f*	$^1D-^1F^\circ$	6 553.19	6 555.00	582 630.95–597 886.48	5–7	1.7092e−01	1.5414e−01	1.6632e+01	−0.113 11	AAA	6
130	1*s*4*d*-1*s*7*p*	$^1D-^1P^\circ$	5 443.02	5 444.53	582 630.95–600 998.00	5–3	7.4248e−03	1.9798e−03	1.7743e−01	−2.004 42	AAA	6
131	1*s*4*d*-1*s*7*f*	$^1D-^3F^\circ$										
			5 406.99	5 408.49	582 630.95–601 120.4	5–7	1.796e−02	1.103e−02	9.819e−01	−1.258 5	AA	6
			5 406.99	5 408.49	582 630.95–601 120.4	5–5	3.693e−06	1.619e−06	1.442e−04	−5.091 7	AA	6
132	1*s*4*d*-1*s*7*f*	$^1D-^1F^\circ$	5 406.65	5 408.15	582 630.95–601 121.55	5–7	9.9777e−02	6.1251e−02	5.4527e+00	−0.513 92	AAA	6
133	1*s*4*f*-1*s*5*d*	$^3F^\circ-^3D$	*10138*	*9 861.4* cm^{-1}	*582 643.0–592 504.3*	21–15	7.5227e−03	8.2838e−03	5.8075e+00	−0.759 55	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			10 137.4	9 861.78 cm^{-1}	582 642.97–592 504.75	9–7	7.6328e−03	9.1514e−03	2.7495e+00	−1.084 27	AAA	6
			10 138.1	9 861.12 cm^{-1}	582 642.97–592 504.09	7–5	5.2951e−03	5.8311e−03	1.3627e+00	−1.389 15	AAA	6
			10 138.5	9 860.73 cm^{-1}	582 642.97–592 503.70	5–3	8.3113e−03	7.6888e−03	1.2835e+00	−1.415 17	AAA	6
			10 137.4	9 861.78 cm^{-1}	582 642.97–592 504.75	7–7	4.6476e−04	7.1643e−04	1.6741e−01	−2.299 73	AAA	6
			10 138.1	9 861.12 cm^{-1}	582 642.97–592 504.09	5–5	9.2332e−04	1.4235e−03	2.3762e−01	−2.147 67	AAA	6
			10 137.4	9 861.78 cm^{-1}	582 642.97–592 504.75	5–7	1.8846e−05	4.0672e−05	6.7887e−03	−3.691 74	AAA	6
134	1*s*4*f*-1*s*5*d*	$^3F^\circ$–^1D										
			10 127.4	9 871.46 cm^{-1}	582 642.97–592 514.43	7–5	2.325e−03	2.555e−03	5.965e−01	−1.747 5	AA	6
135	1*s*4*f*-1*s*6*d*	$^3F^\circ$–^3D	*6 562.8*	*6 564.6*	*582 643.0–597 876.2*	21–15	3.1992e−03	1.4764e−03	6.7003e−01	−1.508 59	AAA	6
			6 562.61	6 564.42	582 642.97–597 876.60	9–7	3.2467e−03	1.6314e−03	3.1729e−01	−1.833 21	AAA	6
			6 562.90	6 564.71	582 642.97–597 875.94	7–5	2.2504e−03	1.0385e−03	1.5711e−01	−2.138 48	AAA	6
			6 563.06	6 564.88	582 642.97–597 875.55	5–3	3.5353e−03	1.3705e−03	1.4810e−01	−2.164 14	AAA	6
			6 562.61	6 564.42	582 642.97–597 876.60	7–7	1.9769e−04	1.2771e−04	1.9320e−02	−3.048 67	AAA	6
			6 562.90	6 564.71	582 642.97–597 875.94	5–5	3.9275e−04	2.5375e−04	2.7420e−02	−2.896 63	AAA	6
			6 562.61	6 564.42	582 642.97–597 876.60	5–7	8.0165e−06	7.2504e−06	7.8344e−04	−4.440 67	AAA	6
136	1*s*4*f*-1*s*6*d*	$^3F^\circ$–^1D										
			6 560.06	6 561.87	582 642.97–597 882.52	7–5	9.900e−04	4.565e−04	6.903e−02	−2.495 5	AA	6
137	1*s*4*f*-1*s*7*d*	$^3F^\circ$–^3D	*5 412.2*	*5 413.7*	*582 643.0–601 114.7*	21–15	1.6778e−03	5.2657e−04	1.9708e−01	−1.956 33	AAA	6
			5 412.05	5 413.56	582 642.97–601 115.11	9–7	1.7029e−03	5.8192e−04	9.3340e−02	−2.280 89	AAA	6
			5 412.25	5 413.75	582 642.97–601 114.45	7–5	1.1797e−03	3.7025e−04	4.6192e−02	−2.586 41	AAA	6
			5 412.36	5 413.87	582 642.97–601 114.06	5–3	1.8543e−03	4.8888e−04	4.3567e−02	−2.611 83	AAA	6
			5 412.05	5 413.56	582 642.97–601 115.11	7–7	1.0369e−04	4.5557e−05	5.6835e−03	−3.496 34	AAA	6
			5 412.25	5 413.75	582 642.97–601 114.45	5–5	2.0600e−04	9.0515e−05	8.0661e−03	−3.344 31	AAA	6
			5 412.05	5 413.56	582 642.97–601 115.11	5–7	4.2047e−06	2.5863e−06	2.3047e−04	−4.888 34	AAA	6
138	1*s*4*f*-1*s*7*d*	$^3F^\circ$–^1D										
			5 410.91	5 412.41	582 642.97–601 119.02	7–5	5.194e−04	1.629e−04	2.032e−02	−2.942 9	AA	6
139	1*s*4*f*-1*s*5*d*	$^1F^\circ$–^3D										
			10 138.5	9 860.71 cm^{-1}	582 644.04–592 504.75	7–7	1.949e−04	3.004e−04	7.021e−02	−2.677 1	AA	6
			10 139.2	9 860.05 cm^{-1}	582 644.04–592 504.09	7–5	2.093e−03	2.305e−03	5.388e−01	−1.792 2	AA	6
140	1*s*4*f*-1*s*5*d*	$^1F^\circ$–^1D	10 128.5	9 870.39 cm^{-1}	582 644.04–592 514.43	7–5	5.8500e−03	6.4301e−03	1.5013e+00	−1.346 69	AAA	6
141	1*s*4*f*-1*s*6*d*	$^1F^\circ$–^3D										
			6 563.07	6 564.88	582 644.04–597 876.60	7–7	8.289e−05	5.355e−05	8.102e−03	−3.426 1	AA	6
			6 563.36	6 565.17	582 644.04–597 875.94	7–5	8.922e−04	4.118e−04	6.230e−02	−2.540 2	AA	6
142	1*s*4*f*-1*s*6*d*	$^1F^\circ$–^1D	6 560.52	6 562.33	582 644.04–597 882.52	7–5	2.4839e−03	1.1455e−03	1.7323e−01	−2.095 92	AAA	6
143	1*s*4*f*-1*s*7*d*	$^1F^\circ$–^3D										
			5 412.37	5 413.87	582 644.04–601 115.11	7–7	4.347e−05	1.910e−05	2.383e−03	−3.873 8	AA	6
			5 412.56	5 414.06	582 644.04–601 114.45	7–5	4.685e−04	1.471e−04	1.835e−02	−2.987 4	AA	6
144	1*s*4*f*-1*s*7*d*	$^1F^\circ$–^1D	5 411.22	5 412.73	582 644.04–601 119.02	7–5	1.3011e−03	4.0820e−04	5.0917e−02	−2.544 03	AAA	6
145	1*s*4*p*-1*s*5*s*	$^1P^\circ$–^1S	10 914.7	9 159.44 cm^{-1}	582 830.11–591 989.55	3–1	1.8062e−01	1.0759e−01	1.1601e+01	−0.491 12	AAA	6
146	1*s*4*p*-1*s*5*d*	$^1P^\circ$–^3D										
			10 334.2	9 673.98 cm^{-1}	582 830.11–592 504.09	3–5	3.635e−05	9.706e−05	9.909e−03	−3.535 9	AA	6
147	1*s*4*p*-1*s*5*d*	$^1P^\circ$–^1D	10 323.1	9 684.32 cm^{-1}	582 830.11–592 514.43	3–5	2.4422e−01	6.5065e−01	6.6355e+01	0.29047	AAA	6
148	1*s*4*p*-1*s*6*s*	$^1P^\circ$–^1S	6 777.60	6 779.47	582 830.11–597 580.53	3–1	9.4928e−02	2.1803e−02	1.4599e+00	−1.184 36	AAA	6
149	1*s*4*p*-1*s*6*d*	$^1P^\circ$–^3D										
			6 644.52	6 646.36	582 830.11–597 875.94	3–5	1.834e−05	2.024e−05	1.329e−03	−4.216 6	AA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
150	1*s*4*p*-1*s*6*d*	$^1P^\circ$–^1D	6 641.62	6 643.45	582 830.11–597 882.52	3–5	1.3880e−01	1.5307e−01	1.0043e+01	−0.338 00	AAA	6
151	1*s*4*p*-1*s*7*s*	$^1P^\circ$–^1S	5 523.36	5 524.90	582 830.11–600 930.00	3–1	5.6589e−02	8.6321e−03	4.7102e−01	−1.586 76	AAA	6
152	1*s*4*p*-1*s*7*d*	$^1P^\circ$–^1D	5 466.28	5 467.79	582 830.11–601 119.02	3–5	8.5184e−02	6.3634e−02	3.4364e+00	−0.719 19	AAA	6
153	1*s*5*s*-1*s*5*p*	^3S–$^3P^\circ$		*950.1* cm^{-1}	*591 184.26–592 134.4*	3–9	1.7817e−03	8.8772e−01	9.2279e+02	0.42540	AAA	6
				950.44 cm^{-1}	591 184.26–592 134.70	3–5	1.7817e−03	4.9282e−01	5.1211e+02	0.16981	AAA	6
				949.77 cm^{-1}	591 184.26–592 134.03	3 3	1.7817e−03	2.9611e−01	3.0792e+02	−0.051 42	AAA	6
				949.39 cm^{-1}	591 184.26–592 133.65	3–1	1.7817e−03	9.8783e−02	1.0276e+02	−0.528 20	AAA	6
154	1*s*5*s*-1*s*6*p*	^3S–$^3P^\circ$ *15431*		*6 478.8* cm^{-1}	*591 184.26–597 663.1*	3–9	1.9530e−02	2.0926e−01	3.1900e+01	−0.202 19	AAA	6
			15 429.9	6 479.14 cm^{-1}	591 184.26–597 663.40	3–5	1.9530e−02	1.1624e−01	1.7720e+01	−0.457 51	AAA	6
			15 431.5	6 478.47 cm^{-1}	591 184.26–597 662.73	3–3	1.9530e−02	6.9761e−02	1.0635e+01	−0.679 26	AAA	6
			15 432.4	6 478.09 cm^{-1}	591 184.26–597 662.35	3–1	1.9530e−02	2.3256e−02	3.5456e+00	−1.156 34	AAA	6
155	1*s*5*s*-1*s*5*p*	^1S–$^1P^\circ$		645.36 cm^{-1}	591 989.55–592 634.91	1–3	5.5749e−04	6.0202e−01	3.0710e+02	−0.220 39	AAA	6
156	1*s*5*s*-1*s*6*p*	^1S–$^1P^\circ$	17 099.7	5 846.45 cm^{-1}	591 989.55–597 836.00	1–3	2.4268e−02	3.1932e−01	1.7981e+01	−0.495 77	AAA	6
157	1*s*5*s*-1*s*7*p*	^1S–$^1P^\circ$	11 097.6	9 008.45 cm^{-1}	591 989.55–600 998.00	1–3	1.7726e−02	9.8240e−02	3.5902e+00	−1.007 71	AAA	6
158	1*s*5*p*-1*s*5*d*	$^3P^\circ$–^3D		*369.9* cm^{-1}	*592 134.4–592 504.3*	9–15	1.2199e−04	2.2272e−01	1.7838e+03	0.30200	AAA	6
				370.05 cm^{-1}	592 134.70–592 504.75	5–7	1.2201e−04	1.8701e−01	8.3185e+02	−0.029 17	AAA	6
				370.06 cm^{-1}	592 134.03–592 504.09	3–5	9.1498e−05	1.6694e−01	4.4555e+02	−0.300 31	AAA	6
				370.05 cm^{-1}	592 133.65–592 503.70	1–3	6.7786e−05	2.2264e−01	1.9807e+02	−0.652 40	AAA	6
				369.39 cm^{-1}	592 134.70–592 504.09	5–5	3.0499e−05	3.3510e−02	1.4933e+02	−0.775 86	AAA	6
				369.67 cm^{-1}	592 134.03–592 503.70	3–3	5.0839e−05	5.5773e−02	1.4901e+02	−0.776 45	AAA	6
				369.00 cm^{-1}	592 134.70–592 503.70	5–3	3.3893e−06	2.2391e−03	9.9882e+00	−1.950 96	AAA	6
159	1*s*5*p*-1*s*5*d*	$^3P^\circ$–^1D										
				379.73 cm^{-1}	592 134.70–592 514.43	5–5	5.347e−09	5.560e−06	2.410e−02	−4.556 0	AA	6
				380.40 cm^{-1}	592 134.03–592 514.43	3–5	1.397e−08	2.411e−05	6.261e−02	−4.140 6	AA	6
160	1*s*5*p*-1*s*6*s*	$^3P^\circ$–^3S *20044*		*4 987.6* cm^{-1}	*592 134.4–597 121.95*	9–3	9.1008e−02	1.8282e−01	1.0861e+02	0.21628	AAA	6
			20 045.7	4 987.25 cm^{-1}	592 134.70–597 121.95	5–3	5.0560e−02	1.8285e−01	6.0350e+01	−0.038 94	AAA	6
			20 043.0	4 987.92 cm^{-1}	592 134.03–597 121.95	3–3	3.0336e−02	1.8280e−01	3.6195e+01	−0.260 90	AAA	6
			20 041.4	4 988.30 cm^{-1}	592 133.65–597 121.95	1–3	1.0112e−02	1.8277e−01	1.2062e+01	−0.738 09	AAA	6
161	1*s*5*p*-1*s*6*d*	$^3P^\circ$–^3D *17411*		*5 741.8* cm^{-1}	*592 134.4–597 876.2*	9–15	6.1558e−02	4.6654e−01	2.4075e+02	0.62313	AAA	6
			17 411.1	5 741.90 cm^{-1}	592 134.70–597 876.60	5–7	6.1560e−02	3.9190e−01	1.1235e+02	0.29214	AAA	6
			17 411.1	5 741.91 cm^{-1}	592 134.03–597 875.94	3–5	4.6165e−02	3.4987e−01	6.0179e+01	0.02103	AAA	6
			17 411.1	5 741.90 cm^{-1}	592 133.65–597 875.55	1–3	3.4200e−02	4.6654e−01	2.6749e+01	−0.331 11	AAA	6
			17 413.1	5 741.24 cm^{-1}	592 134.70–597 875.94	5–5	1.5388e−02	6.9989e−02	2.0066e+01	−0.456 00	AAA	6
			17 412.2	5 741.52 cm^{-1}	592 134.03–597 875.55	3–3	2.5650e−02	1.1665e−01	2.0066e+01	−0.455 99	AAA	6
			17 414.3	5 740.85 cm^{-1}	592 134.70–597 875.55	5–3	1.7100e−03	4.6671e−03	1.3382e+00	−1.631 98	AAA	6
162	1*s*5*p*-1*s*6*d*	$^3P^\circ$–^1D										
			17 393.2	5 747.82 cm^{-1}	592 134.70–597 882.52	5–5	2.251e−06	1.021e−05	2.925e−03	−4.291 8	AA	6
			17 391.1	5 748.49 cm^{-1}	592 134.03–597 882.52	3–5	5.602e−06	4.236e−05	7.277e−03	−3.895 9	AA	6
163	1*s*5*p*-1*s*7*s*	$^3P^\circ$–^3S *11748*		*8 509.5* cm^{-1}	*592 134.4–600 643.90*	9–3	5.0367e−02	3.4760e−02	1.2103e+01	−0.504 68	AAA	6
			11 748.8	8 509.20 cm^{-1}	592 134.70–600 643.90	5–3	2.7982e−02	3.4762e−02	6.7246e+00	−0.759 92	AAA	6
			11 747.8	8 509.87 cm^{-1}	592 134.03–600 643.90	3–3	1.6789e−02	3.4756e−02	4.0338e+00	−0.981 84	AAA	6
			11 747.3	8 510.25 cm^{-1}	592 133.65–600 643.90	1–3	5.5964e−03	3.4754e−02	1.3444e+00	−1.459 00	AAA	6
164	1*s*5*p*-1*s*7*d*	$^3P^\circ$–^3D *11132*		*8 980.3* cm^{-1}	*592 134.4–601 114.7*	9–15	4.2611e−02	1.3202e−01	4.3558e+01	0.07488	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			11 132.3	8 980.41 cm^{-1}	592 134.70–601 115.11	5–7	4.2612e−02	1.1090e−01	2.0327e+01	−0.256 11	AAA	6
			11 132.3	8 980.42 cm^{-1}	592 134.03–601 114.45	3–5	3.1956e−02	9.9007e−02	1.0888e+01	−0.527 21	AAA	6
			11 132.3	8 980.41 cm^{-1}	592 133.65–601 114.06	1–3	2.3673e−02	1.3202e−01	4.8397e+00	−0.879 36	AAA	6
			11 133.1	8 979.75 cm^{-1}	592 134.70–601 114.45	5–5	1.0652e−02	1.9804e−02	3.6303e+00	−1.004 27	AAA	6
			11 132.8	8 980.03 cm^{-1}	592 134.03–601 114.06	3–3	1.7755e−02	3.3008e−02	3.6303e+00	−1.004 26	AAA	6
			11 133.6	8 979.36 cm^{-1}	592 134.70–601 114.06	5–3	1.1837e−03	1.3206e−03	2.4208e−01	−2.180 27	AAA	6
165	1*s*5*p*-1*s*7*d*	$^3P^\circ$–^1D										
			11 127.5	8 984.32 cm^{-1}	592 134.70–601 119.02	5–5	1.462e−06	2.716e−06	4.976e−04	−4.867 1	AA	6
			11 126.6	8 984.99 cm^{-1}	592 134.03–601 119.02	3–5	3.682e−06	1.140e−05	1.253e−03	−4.466 1	AA	6
166	1*s*5*d*-1*s*5*p*	^3D–$^1P^\circ$										
				130.82 cm^{-1}	592 504.09–592 634.91	5–3	8.420e−10	4.426e−06	5.569e−02	−4.655 1	AA	6
				131.21 cm^{-1}	592 503.70–592 634.91	3–3	8.056e−13	7.015e−09	5.281e−05	−7.676 8	AA	6
167	1*s*5*d*-1*s*6*p*	^3D–$^3P^\circ$	*19379*	*5 158.8* cm^{-1}	*592 504.3–597 663.1*	15–9	2.3355e−02	7.8939e−02	7.5564e+01	0.07338	AAA	6
			19 379.6	5 158.65 cm^{-1}	592 504.75–597 663.40	7–5	1.9619e−02	7.8947e−02	3.5267e+01	−0.257 57	AAA	6
			19 379.7	5 158.64 cm^{-1}	592 504.09–597 662.73	5–3	1.7514e−02	5.9200e−02	1.8890e+01	−0.528 71	AAA	6
			19 379.6	5 158.65 cm^{-1}	592 503.70–597 662.35	3–1	2.3355e−02	4.3857e−02	8.3966e+00	−0.880 84	AAA	6
			19 377.1	5 159.31 cm^{-1}	592 504.09–597 663.40	5–5	3.5027e−03	1.9728e−02	6.2941e+00	−1.005 95	AAA	6
			19 378.2	5 159.03 cm^{-1}	592 503.70–597 662.73	3–3	5.8388e−03	3.2889e−02	6.2961e+00	−1.005 83	AAA	6
			19 375.7	5 159.70 cm^{-1}	592 503.70–597 663.40	3–5	2.3355e−04	2.1920e−03	4.1957e−01	−2.182 04	AAA	6
168	1*s*5*d*-1*s*6*p*	^3D–$^1P^\circ$										
			18 749.9	5 332 cm^{-1}	592 504.09–597 836	5–3	1.870e−06	5.915e−06	1.826e−03	−4.529 0	AA	6
169	1*s*5*d*-1*s*6*f*	^3D–$^3F^\circ$	*18578*	*5 381.1* cm^{-1}	*592 504.3–597 885.4*	15–21	1.0884e−01	7.8895e−01	7.2401e+02	1.07314	AAA	6
			18 579.9	5 380.68 cm^{-1}	592 504.75–597 885.43	7–9	1.1549e−01	7.6890e−01	3.2931e+02	0.73097	AAA	6
			18 577.7	5 381.34 cm^{-1}	592 504.09–597 885.43	5–7	8.5054e−02	6.1645e−01	1.8856e+02	0.48887	AAA	6
			18 576.3	5 381.73 cm^{-1}	592 503.70–597 885.43	3–5	9.7012e−02	8.3693e−01	1.5359e+02	0.39981	AAA	6
			18 579.9	5 380.68 cm^{-1}	592 504.75–597 885.43	7–7	1.0499e−02	5.4366e−02	2.3285e+01	−0.419 57	AAA	6
			18 577.7	5 381.34 cm^{-1}	592 504.09–597 885.43	5–5	1.7962e−02	9.2989e−02	2.8444e+01	−0.332 60	AAA	6
			18 579.9	5 380.68 cm^{-1}	592 504.75–597 885.43	7–5	5.1329e−04	1.8985e−03	8.1312e−01	−1.876 48	AAA	6
170	1*s*5*d*-1*s*6*f*	^3D–$^1F^\circ$										
			18 576.3	5 381.73 cm^{-1}	592 504.75–597 886.48	7–7	2.334e−03	1.208e−02	5.172e+00	−1.072 9	AA	6
			18 574.0	5 382.39 cm^{-1}	592 504.09–597 886.48	5–7	1.761e−02	1.276e−01	3.901e+01	−0.195 3	AA	6
171	1*s*5*d*-1*s*7*f*	^3D–$^3F^\circ$	*11603*	*8 616.1* cm^{-1}	*592 504.3–601 120*	15–21	6.5855e−02	1.8619e−01	1.0671e+02	0.44605	AAA	6
			11 603.6	8 615.7 cm^{-1}	592 504.75–601 120.4	7–9	6.9408e−02	1.8023e−01	4.8208e+01	0.10093	AAA	6
			11 602.7	8 616.3 cm^{-1}	592 504.09–601 120.4	5–7	5.2290e−02	1.4783e−01	2.8241e+01	−0.131 27	AAA	6
			11 602.2	8 616.7 cm^{-1}	592 503.70–601 120.4	3–5	5.8303e−02	1.9621e−01	2.2489e+01	−0.230 16	AAA	6
			11 603.6	8 615.7 cm^{-1}	592 504.75–601 120.4	7–7	6.4602e−03	1.3047e−02	3.4899e+00	−1.039 38	AAA	6
			11 602.7	8 616.3 cm^{-1}	592 504.09–601 120.4	5–5	1.0795e−02	2.1799e−02	4.1645e+00	−0.962 59	AAA	6
			11 603.6	8 615.7 cm^{-1}	592 504.75–601 120.4	7–5	3.0848e−04	4.4502e−04	1.1903e−01	−2.506 52	AAA	6
172	1*s*5*d*-1*s*7*f*	^3D–$^1F^\circ$										
			11 602.1	8 616.80 cm^{-1}	592 504.75–601 121.55	7–7	1.252e−03	2.528e−03	6.760e−01	−1.752 2	AA	6
			11 601.2	8 617.46 cm^{-1}	592 504.09–601 121.55	5–7	9.407e−03	2.659e−02	5.079e+00	−0.876 3	AA	6
173	1*s*5*d*-1*s*5*p*	^1D–$^1P^\circ$		120.48 cm^{-1}	592 514.43–592 634.91	5–3	4.4135e−06	2.7350e−02	3.7367e+02	−0.864 07	AAA	6
174	1*s*5*d*-1*s*6*p*	^1D–$^3P^\circ$										
			19 416.1	5 148.97 cm^{-1}	592 514.43–597 663.40	5–5	5.656e−07	3.198e−06	1.022e−03	−4.796 1	AA	6
			19 418.6	5 148.30 cm^{-1}	592 514.43–597 662.73	5–3	2.568e−06	8.714e−06	2.786e−03	−4.360 8	AA	6
175	1*s*5*d*-1*s*6*p*	^1D–$^1P^\circ$	18 786.3	5 321.57 cm^{-1}	592 514.43–597 836.00	5–3	1.3307e−02	4.2268e−02	1.3074e+01	−0.675 02	AAA	6
176	1*s*5*d*-1*s*6*f*	^1D–$^3F^\circ$										

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			18 613.4	5 371.00 cm^{-1}	592 514.43–597 885.43	5–7	1.998e−02	1.454e−01	4.455e+01	−0.138 6	AA	6
			18 613.4	5 371.00 cm^{-1}	592 514.43–597 885.43	5–5	2.901e−06	1.508e−05	4.620e−03	−4.122 8	AA	6
177	1*s*5*d*-1*s*6*f*	$^1D-^1F^\circ$	18 609.8	5 372.05 cm^{-1}	592 514.43–597 886.48	5–7	9.5708e−02	6.9607e−01	2.1328e+02	0.54162	AAA	6
178	1*s*5*d*-1*s*7*p*	$^1D-^1P^\circ$	11 784.3	8 483.57 cm^{-1}	592 514.43–600 998.00	5–3	7.4112e−03	9.2627e−03	1.7972e+00	−1.334 29	AAA	6
179	1*s*5*d*-1*s*7*f*	$^1D-^3F^\circ$										
			11 616.7	8 606.0 cm^{-1}	592 514.43–601 120.4	5–7	1.065e−02	3.019e−02	5.775e+00	−0.821 1	AA	6
			11 616.7	8 606.0 cm^{-1}	592 514.43–601 120.4	5–5	1.747e−06	3.536e−06	6.763e−04	−4.752 5	AA	6
180	1*s*5*d*-1*s*7*f*	$^1D-^1F^\circ$	11 615.1	8 607.12 cm^{-1}	592 514.43–601 121.55	5–7	5.8720e−02	1.6636e−01	3.1816e+01	−0.079 97	AAA	6
181	1*s*5*f*-1*s*6*d*	$^3F^\circ-^3D$	*18665*	*5 356.1* cm^{-1}	*592 520.1–597 876.2*	21–15	5.9734e−03	2.2298e−02	2.8781e+01	−0.329 52	AAA	6
			18 663.8	5 356.49 cm^{-1}	592 520.11–597 876.60	9–7	5.8964e−03	2.3963e−02	1.3255e+01	−0.666 22	AAA	6
			18 666.1	5 355.83 cm^{-1}	592 520.11–597 875.94	7–5	4.5215e−03	1.6879e−02	7.2628e+00	−0.927 54	AAA	6
			18 667.5	5 355.44 cm^{-1}	592 520.11–597 875.55	5–3	6.4205e−03	2.0137e−02	6.1892e+00	−0.997 04	AAA	6
			18 663.8	5 356.49 cm^{-1}	592 520.11–597 876.60	7–7	3.9841e−04	2.0817e−03	8.9561e−01	−1.836 48	AAA	6
			18 666.1	5 355.83 cm^{-1}	592 520.11–597 875.94	5–5	7.1328e−04	3.7279e−03	1.1457e+00	−1.729 57	AAA	6
			18 663.8	5 356.49 cm^{-1}	592 520.11–597 876.60	5–7	1.4559e−05	1.0650e−04	3.2728e−02	−3.273 67	AAA	6
182	1*s*5*f*-1*s*6*d*	$^3F^\circ-^1D$										
			18 643.2	5 362.41 cm^{-1}	592 520.11–597 882.52	7–5	1.320e−03	4.914e−03	2.112e+00	−1.463 5	AA	6
183	1*s*5*f*-1*s*7*d*	$^3F^\circ-^3D$	*11632*	*8 594.6* cm^{-1}	*592 520.1–601 114.7*	21–15	2.9230e−03	4.2375e−03	3.4086e+00	−1.050 67	AAA	6
			11 631.5	8 595.00 cm^{-1}	592 520.11–601 115.11	9–7	2.8856e−03	4.5547e−03	1.5701e+00	−1.387 30	AAA	6
			11 632.4	8 594.34 cm^{-1}	592 520.11–601 114.45	7–5	2.2119e−03	3.2068e−03	8.5987e−01	−1.648 83	AAA	6
			11 632.9	8 593.95 cm^{-1}	592 520.11–601 114.06	5–3	3.1421e−03	3.8269e−03	7.3299e−01	−1.718 19	AAA	6
			11 631.5	8 595.00 cm^{-1}	592 520.11–601 115.11	7–7	1.9497e−04	3.9567e−04	1.0609e−01	−2.557 57	AAA	6
			11 632.4	8 594.34 cm^{-1}	592 520.11–601 114.45	5–5	3.4907e−04	7.0851e−04	1.3570e−01	−2.450 69	AAA	6
			11 631.5	8 595.00 cm^{-1}	592 520.11–601 115.11	5–7	7.1248e−06	2.0243e−05	3.8767e−03	−3.994 76	AAA	6
184	1*s*5*f*-1*s*7*d*	$^3F^\circ-^1D$										
			11 626.2	8 598.91 cm^{-1}	592 520.11–601 119.02	7–5	6.464e−04	9.361e−04	2.509e−01	−2.183 6	AA	6
185	1*s*5*f*-1*s*6*d*	$^1F^\circ-^3D$										
			18 667.3	5 355.49 cm^{-1}	592 521.11–597 876.60	7–7	1.112e−04	5.810e−04	2.500e−01	−2.390 7	AA	6
			18 669.6	5 354.83 cm^{-1}	592 521.11–597 875.94	7–5	1.186e−03	4.428e−03	1.905e+00	−1.508 7	AA	6
186	1*s*5*f*-1*s*6*d*	$^1F^\circ-^1D$	18 646.7	5 361.41 cm^{-1}	592 521.11–597 882.52	7–5	5.0019e−03	1.8634e−02	8.0094e+00	−0.884 60	AAA	6
187	1*s*5*f*-1*s*7*d*	$^1F^\circ-^3D$										
			11 632.8	8 594.00 cm^{-1}	592 521.11–601 115.11	7–7	5.440e−05	1.104e−04	2.961e−02	−3.111 9	AA	6
			11 633.7	8 593.34 cm^{-1}	592 521.11–601 114.45	7–5	5.811e−04	8.426e−04	2.260e−01	−2.229 3	AA	6
188	1*s*5*f*-1*s*7*d*	$^1F^\circ-^1D$	11 627.6	8 597.91 cm^{-1}	592 521.11–601 119.02	7–5	2.4461e−03	3.5434e−03	9.4973e−01	−1.605 48	AAA	6
189	1*s*5*p*-1*s*6*s*	$^1P^\circ-^1S$	20 214.4	4 945.62 cm^{-1}	592 634.91–597 580.53	3–1	7.2899e−02	1.4894e−01	2.9744e+01	−0.349 86	AAA	6
190	1*s*5*p*-1*s*6*d*	$^1P^\circ-^3D$										
			19 075.0	5 241.03 cm^{-1}	592 634.91–597 875.94	3–5	9.949e−06	9.050e−05	1.705e−02	−3.566 2	AA	6
191	1*s*5*p*-1*s*6*d*	$^1P^\circ-^1D$	19 051.1	5 247.61 cm^{-1}	592 634.91–597 882.52	3–5	7.4660e−02	6.7744e−01	1.2750e+02	0.30799	AAA	6
192	1*s*5*p*-1*s*7*s*	$^1P^\circ-^1S$	12 052.0	8 295.09 cm^{-1}	592 634.91–600 930.00	3–1	4.1540e−02	3.0169e−02	3.5920e+00	−1.043 32	AAA	6
193	1*s*5*p*-1*s*7*d*	$^1P^\circ-^3D$										
			11 789.9	8 479.54 cm^{-1}	592 634.91–601 114.45	3–5	5.865e−06	2.038e−05	2.374e−03	−4.213 7	AA	6
194	1*s*5*p*-1*s*7*d*	$^1P^\circ-^1D$	11 783.5	8 484.11 cm^{-1}	592 634.91–601 119.02	3–5	4.7267e−02	1.6408e−01	1.9100e+01	−0.307 83	AAA	6
195	1*s*6*s*-1*s*6*p*	$^3S-^3P^\circ$		*541.1* cm^{-1}	*597 121.95–597 663.1*	3–9	6.9682e−04	1.0704e+00	1.9536e+03	0.50665	AAA	6
				541.45 cm^{-1}	597 121.95–597 663.40	3–5	6.9682e−04	5.9389e−01	1.0833e+03	0.25083	AAA	6
				540.78 cm^{-1}	597 121.95–597 662.73	3–3	6.9682e−04	3.5722e−01	6.5240e+02	0.03006	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
				540.40 cm^{-1}	597 121.95–597 662.35	3–1	6.9682e−04	1.1924e−01	2.1793e+02	−0.446 45	AAA	6
196	1*s*6*s*-1*s*6*p*	$^1S-^1P^\circ$		255.47 cm^{-1}	597 580.53–597 836.00	1–3	2.2351e−04	1.5403e+00	1.9849e+03	0.18760	AAA	6
197	1*s*6*s*-1*s*7*p*	$^1S-^1P^\circ$	29 253.4	3 417.47 cm^{-1}	597 580.53–600 998.00	1–3	9.4994e−03	3.6582e−01	3.5240e+01	−0.436 74	AAA	6
198	1*s*6*p*-1*s*6*d*	$^3P^\circ-^3D$		*213.1* cm^{-1}	*597 663.1–597 876.2*	9–15	5.1171e−05	2.8153e−01	3.9141e+03	0.40376	AAA	6
				213.20 cm^{-1}	597 663.40–597 876.60	5–7	5.1173e−05	2.3629e−01	1.8244e+03	0.07242	AAA	6
				213.21 cm^{-1}	597 662.73–597 875.94	3–5	3.8375e−05	2.1093e−01	9.7708e+02	−0.198 74	AAA	6
				213.20 cm^{-1}	597 662.35–597 875.55	1–3	2.8429e−05	2.8130e−01	4.3436e+02	−0.550 83	AAA	6
				212.54 cm^{-1}	597 663.40–597 875.94	5–5	1.2791e−05	4.2450e−02	3.2876e+02	−0.673 15	AAA	6
				212.82 cm^{-1}	597 662.73–597 875.55	3–3	2.1322e−05	7.0576e−02	3.2753e+02	−0.674 22	AAA	6
				212.15 cm^{-1}	597 663.40–597 875.55	5–3	1.4215e−06	2.8410e−03	2.2043e+01	−1.847 56	AAA	6
199	1*s*6*p*-1*s*6*d*	$^3P^\circ-^1D$										
				219.12 cm^{-1}	597 663.40–597 882.52	5–5	2.023e−09	6.318e−06	4.746e−02	−4.500 5	AA	6
				219.79 cm^{-1}	597 662.73–597 882.52	3–5	5.242e−09	2.711e−05	1.218e−01	−4.089 7	AA	6
200	1*s*6*p*-1*s*7*s*	$^3P^\circ-^3S$	*33538*	*2980.8* cm^{-1}	*597 663.1–600 643.90*	9–3	4.1402e−02	2.3285e−01	2.3145e+02	0.32133	AAA	6
			33 542.3	2 980.50 cm^{-1}	597 663.40–600 643.90	5–3	2.3001e−02	2.3290e−01	1.2863e+02	0.06615	AAA	6
			33 534.7	2 981.17 cm^{-1}	597 662.73–600 643.90	3–3	1.3801e−02	2.3281e−01	7.7127e+01	−0.155 88	AAA	6
			33 530.5	2 981.55 cm^{-1}	597 662.35–600 643.90	1–3	4.6002e−03	2.3274e−01	2.5698e+01	−0.633 13	AAA	6
201	1*s*6*p*-1*s*7*d*	$^3P^\circ-^3D$	*28964*	*3 451.6* cm^{-1}	*597 663.1–601 114.7*	9–15	2.2663e−02	4.7531e−01	4.0801e+02	0.63122	AAA	6
			28 963.2	3 451.71 cm^{-1}	597 663.40–601 115.11	5–7	2.2664e−02	3.9926e−01	1.9040e+02	0.30022	AAA	6
			28 963.2	3 451.72 cm^{-1}	597 662.73–601 114.45	3–5	1.6996e−02	3.5644e−01	1.0199e+02	0.02910	AAA	6
			28 963.2	3 451.71 cm^{-1}	597 662.35–601 114.06	1–3	1.2591e−02	4.7530e−01	4.5333e+01	−0.323 03	AAA	6
			28 968.8	3 451.05 cm^{-1}	597 663.40–601 114.45	5–5	5.6651e−03	7.1312e−02	3.4014e+01	−0.447 87	AAA	6
			28 966.4	3 451.33 cm^{-1}	597 662.73–601 114.06	3–3	9.4432e−03	1.1885e−01	3.4011e+01	−0.447 88	AAA	6
			28 972.1	3 450.66 cm^{-1}	597 663.40–601 114.06	5–3	6.2955e−04	4.7559e−03	2.2687e+00	−1.623 80	AAA	6
202	1*s*6*p*-1*s*7*d*	$^3P^\circ-^1D$										
			28 930.5	3 455.62 cm^{-1}	597 663.40–601 119.02	5–5	7.793e−07	9.784e−06	4.661e−03	−4.310 5	AA	6
			28 924.9	3 456.29 cm^{-1}	597 662.73–601 119.02	3–5	1.923e−06	4.022e−05	1.149e−02	−3.918 4	AA	6
203	1*s*6*p*-1*s*7*s*	$^1P^\circ-^1S$	32 311.8	3 094.00 cm^{-1}	597 836.00–600 930.00	3–1	3.3705e−02	1.7595e−01	5.6165e+01	−0.277 49	AAA	6
204	1*s*6*p*-1*s*7*d*	$^1P^\circ-^3D$										
			30 493.9	3 278.45 cm^{-1}	597 836.00–601 114.45	3–5	3.565e−06	8.288e−05	2.497e−02	−3.604 5	AA	6
205	1*s*6*p*-1*s*7*d*	$^1P^\circ-^1D$	30 451.5	3 283.02 cm^{-1}	597 836.00–601 119.02	3–5	2.8507e−02	6.6086e−01	1.9881e+02	0.29723	AAA	6
206	1*s*6*d*-1*s*7*p*	$^3D-^1P^\circ$										
			32 021.4	3 122 cm^{-1}	597 875.94–600 998	5–3	8.958e−07	8.267e−06	4.358e−03	−4.383 7	AA	6
207	1*s*6*d*-1*s*7*f*	$^3D-^3F^\circ$	*30816*	*3 244.2* cm^{-1}	*597 876.2–601 120*	15–21	3.9228e−02	7.8227e−01	1.1907e+03	1.06945	AAA	6
			30 819.6	3 243.8 cm^{-1}	597 876.60–601 120.4	7–9	4.1350e−02	7.5748e−01	5.3813e+02	0.72447	AAA	6
			30 813.4	3 244.5 cm^{-1}	597 875.94–601 120.4	5–7	3.1134e−02	6.2078e−01	3.1495e+02	0.49190	AAA	6
			30 809.7	3 244.9 cm^{-1}	597 875.55–601 120.4	3–5	3.4734e−02	8.2427e−01	2.5088e+02	0.39319	AAA	6
			30 819.6	3 243.8 cm^{-1}	597 876.60–601 120.4	7–7	3.8486e−03	5.4834e−02	3.8956e+01	−0.415 85	AAA	6
			30 813.4	3 244.5 cm^{-1}	597 875.94–601 120.4	5–5	6.4313e−03	9.1595e−02	4.6470e+01	−0.339 16	AAA	6
			30 819.6	3 243.8 cm^{-1}	597 876.60–601 120.4	7–5	1.8378e−04	1.8703e−03	1.3287e+00	−1.882 98	AAA	6
208	1*s*6*d*-1*s*7*f*	$^3D-^1F^\circ$										
			30 808.7	3 244.95 cm^{-1}	597 876.60–601 121.55	7–7	7.458e−04	1.062e−02	7.541e+00	−1.128 8	AA	6
			30 802.4	3 245.61 cm^{-1}	597 875.94–601 121.55	5–7	5.622e−03	1.120e−01	5.681e+01	−0.251 7	AA	6
209	1*s*6*d*-1*s*7*p*	$^1D-^1P^\circ$	32 089.0	3 115.48 cm^{-1}	597 882.52–600 998.00	5–3	7.1428e−03	6.6195e−02	3.4974e+01	−0.480 20	AAA	6

TABLE 24. Li II: Allowed transitions—Continued

No.	Transition Array	Mult.	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
210	$1s6d$-$1s7f$	$^1D-^3F^\circ$										
			30 876.0	3 237.88 cm^{-1}	597 882.52–601 120.4	5–7	6.388e−03	1.279e−01	6.501e+01	−0.194 2	AA	6
			30 876.0	3 237.88 cm^{-1}	597 882.52–601 120.4	5–5	9.329e−07	1.334e−05	6.782e−03	−4.175 9	AA	6
211	$1s6d$-$1s7f$	$^1D-^1F^\circ$	30 865.0	3 239.03 cm^{-1}	597 882.52–601 121.55	5–7	3.5078e−02	7.0176e−01	3.5663e+02	0.54516	AAA	6
212	$1s6f$-$1s7d$	$^3F^\circ-^3D$	*30958*	*3 229.3* cm^{-1}	*597 885.4–601 114.7*	21–15	3.9003e−03	4.0052e−02	8.5747e+01	−0.075 15	AAA	6
			30 954.4	3 229.68 cm^{-1}	597 885.43–601 115.11	9–7	3.8018e−03	4.2499e−02	3.8989e+01	−0.417 38	AAA	6
			30 960.7	3 229.02 cm^{-1}	597 885.43–601 114.45	7–5	3.0453e−03	3.1276e−02	2.2321e+01	−0.659 68	AAA	6
			30 964.4	3 228.63 cm^{-1}	597 885.43–601 114.06	5–3	4.1398e−03	3.5723e−02	1.8213e+01	−0.748 08	AAA	6
			30 954.4	3 229.68 cm^{-1}	597 885.43–601 115.11	7–7	2.6881e−04	3.8635e−03	2.7568e+00	−1.567 92	AAA	6
			30 960.7	3 229.02 cm^{-1}	597 885.43–601 114.45	5–5	4.5991e−04	6.6128e−03	3.3710e+00	−1.480 64	AAA	6
			30 954.4	3 229.68 cm^{-1}	597 885.43–601 115.11	5–7	9.3873e−06	1.8889e−04	9.6270e−02	−3.024 82	AAA	6
213	$1s6f$-$1s7d$	$^3F^\circ-^1D$										
			30 916.9	3 233.59 cm^{-1}	597 885.43–601 119.02	7–5	7.071e−04	7.241e−03	5.161e+00	−1.295 1	AA	6
214	$1s6f$-$1s7d$	$^1F^\circ-^3D$										
			30 964.4	3 228.63 cm^{-1}	597 886.48–601 115.11	7–7	5.974e−05	8.592e−04	6.133e−01	−2.220 8	AA	6
			30 970.8	3 227.97 cm^{-1}	597 886.48–601 114.45	7–5	6.346e−04	6.521e−03	4.656e+00	−1.340 6	AA	6
215	$1s6f$-$1s7d$	$^1F^\circ-^1D$	30 927.0	3 232.54 cm^{-1}	597 886.48–601 119.02	7–5	3.3720e−03	3.4556e−02	2.4635e+01	−0.616 37	AAA	6
216	$1s7s$-$1s7p$	$^3S-^1P^\circ$										
				354 cm^{-1}	600 643.90–600 998	3–3	6.147e−10	7.349e−07	2.050e−03	−5.656 6	AA	6

[a]Wavelengths (Å) are always given unless cm^{-1} id indicated.

4.2.2. Li II Forbidden Transitions

For electric quadrupole lines, we have tabulated the results of recent extensive variational calculations by Cann and Thakkar.[23] They constructed 100-term explicitly correlated wave functions and derived the quadrupole oscillator strengths in both the length and velocity formulations. The two formulations are in excellent agreement, usually within 0.1%, and in the worst case, within 0.85%.

Cann and Thakkar already applied the same computational approach to the allowed lines of He I and in this case obtained excellent agreement with the even more sophisticated calculations by Drake,[6] which we tabulated for the allowed (E1) lines.

For the three transitions $1s^2\ ^1S-1s3d\ ^1D$, $1s2s\ ^1S-1s3d\ ^1D$, and $1s2s\ ^3S-1s3d\ ^3D$, electric quadrupole line strengths were also calculated earlier by Godefroid and Verhaegen[24] with a multiconfiguration Hartree-Fock program developed by Froese Fischer[25] in 1977. The agreement with the results of Cann and Thakkar[23] is within 0.15%.

Drake[26] and Johnson and Lin[27] calculated the transition probability of the $1s^2\ ^1S-1s2s\ ^3S$ relativistic magnetic dipole transition using perturbation theory and the Dirac-Fock approximation, respectively, and their results agree within 0.1%. The lifetime of the $1s2s\ ^3S$ level has been measured by Saghiri *et al.*[49] with a storage ring and was found to be 6% longer than Drake's[26] calculated value.

Drake[29] and Kundu *et al.*[30] calculated the magnetic quadrupole transition rates for several $1s^2\ ^1S-1snp\ ^3P^\circ$ transitions with variational and Hartree-Fock calculations, respectively. Their calculations overlap for the $1s^2\ ^1S-1s2p\ ^3P^\circ$ transition, and their results agree within 1%.

A finding list and transition probabilities for the forbidden lines of Li II are given in Tables 25 and 26.

TABLE 25. List of tabulated lines for forbidden transitions of Li II

Wavelength (Å)	No.
In vacuum	
167.257	10
167.318	9
168.772	8
168.880	7
171.635	6
171.855	5
178.166	4
178.731	3
202.321	2
210.069	1
820.741	14
858.595	13
938.274	12
938.897	18
967.118	23
988.730	17

TABLE 25. List of tabulated lines for forbidden transitions of Li II—Continued

Wavelength (Å)	No.
1 021.75	22
1 041.37	28
1 095.81	16
1 101.00	27
1 131.48	21
1 141.25	20
1 173.59	11
1 234.24	26
1 237.08	25
1 430.64	15
1 532.84	19
1 668.22	24
In air	
2 318.30	32
2 556.47	36
2 619.63	39
2 648.23	31
2 753.48	45
2 770.56	48
2 786.38	42
2 963.28	35
3 063.47	38
3 237.19	47
3 254.70	44
3 338.99	41
3 588.46	30
4 191.15	34
4 466.00	37
4 743.12	46
4 919.12	43

TABLE 25. List of tabulated lines for forbidden transitions of Li II—Continued

Wavelength (Å)	No.
5 335.36	40
5 586.64	51
6 138.64	54
6 336.68	56
6 662.21	62
6 687.30	60
6 890.70	58
7 983.13	50
9 156.96	53
9 755.27	55
10 196.3	61
10 682.4	59
11 664.6	57
14 939.3	64
15 405.9	29
16 964.7	66
18 082.4	67
19 221.5	70
19 733.7	69
21 650.2	68
37 979.7	49
40 057.4	33
Wave number (cm^{-1})	**No.**
301.99	72
524.88	65
754.3	71
1 034.18	52
1 320.0	63

TABLE 26. Li II. Forbidden transitions

No.	Transition Array	Mult.	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	f_{ik}	S (a.u.)	Acc.	Source
1	$1s^2$-$1s2s$	$^1S-^3S$									
			210.069	0.00–476 034.98	1–3	M1	2.039e−02	4.047e−13	2.102e−08	AA	26
2	$1s^2$-$1s2p$	$^1S-^3P^\circ$									
			202.321	0.00–494 263.44	1–5	M2	3.50e+01	1.07e−09	3.98e+00	A	29
3	$1s^2$-$1s3p$	$^1S-^3P^\circ$									
			178.731	0.00–559 501.42	1–5	M2	1.20e+01	2.87e−10	7.34e−01	B	30
4	$1s^2$-$1s3d$	$^1S-^1D$	178.166	0.00–561 273.62	1–5	E2	8.2665e+04	1.9670e−06	6.6255e−02	AAA	23
5	$1s^2$-$1s4p$	$^1S-^3P^\circ$									
			171.855	0.00–581 886.70	1–5	M2	5.32e+00	1.18e−10	2.68e−01	B	30
6	$1s^2$-$1s4d$	$^1S-^1D$	171.635	0.00–582 630.95	1–5	E2	4.6897e+04	1.0356e−06	3.1185e−02	AAA	23
7	$1s^2$-$1s5p$	$^1S-^3P^\circ$									
			168.880	0.00–592 134.70	1–5	M2	2.78e+00	5.93e−11	1.28e−01	B	30
8	$1s^2-1s5d$	$^1S-^1D$	168.772	0.00–592 514.43	1–5	E2	2.6847e+04	5.7323e−07	1.6412e−02	AAA	23

TABLE 26. Li II. Forbidden transitions—Continued

No.	Transition Array	Mult.	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i–E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	f_{ik}	S (a.u.)	Acc.	Source
9	$1s^2$-1s6p	$^1S-^3P^\circ$									
			167.318	0.00–597 663.40	1–5	M2	1.56e+00	3.28e−11	6.87e−02	B	30
10	$1s^2$-1s6d	$^1S-^1D$	167.257	0.00–597 882.52	1–5	E2	1.6424e+04	3.4442e−07	9.5980e−03	AAA	23
11	1s2s-1s3d	$^3S-^3D$	*1 173.59*	476 034.98–*561 243.7*	3–15	E2	7.7345e+03	7.9854e−06	2.3062e+02	AAA	23
12	1s2s-1s4d	$^3S-^3D$	*938.274*	476 034.98–*582 613.6*	3–15	E2	1.9649e+03	1.2967e−06	1.9138e+01	AAA	23
13	1s2s-1s5d	$^3S-^3D$	*858.595*	476 034.98–*592 504.3*	3–15	E2	7.6844e+02	4.2464e−07	4.8023e+00	AAA	23
14	1s2s-1s6d	$^3S-^3D$	*820.741*	476 034.98–*597 876.2*	3–15	E2	3.7998e+02	1.9187e−07	1.8953e+00	AAA	23
15	1s2s-1s3d	$^1S-^1D$	1 430.64	491 374.6–561 273.62	1–5	E2	4.7489e+03	7.2859e−06	1.2706e+02	AAA	23
16	1s2s-1s4d	$^1S-^1D$	1 095.81	491 374.6–582 630.95	1–5	E2	7.846e+02	7.063e−07	5.535e+00	AA	23
17	1s2s-1s5d	$^1S-^1D$	988.730	491 374.6–592 514.43	1–5	E2	2.3373e+02	1.7128e−07	9.8601e−01	AAA	23
18	1s2s-1s6d	$^1S-^1D$	938.897	491 374.6–597 882.52	1–5	E2	9.580e+01	6.330e−08	3.121e−01	AA	23
19	1s2p-1s3p	$^3P^\circ-^3P^\circ$	*1 532.84*	*494 263.0–559 501.2*	9–9	E2	1.7780e+03	6.2631e−07	1.2091e+02	AAA	23
20	1s2p-1s4p	$^3P^\circ-^3P^\circ$	*1 141.25*	*494 263.0–581 886.3*	9–9	E2	7.509e+02	1.466e−07	1.168e+01	AA	23
21	1s2p-1s4f	$^3P^\circ-^3F^\circ$	*1 131.48*	*494 263.0–582 643.0*	9–21	E2	3.957e+03	1.772e−06	1.376e+02	AA	24
22	1s2p-1s5p	$^3P^\circ-^3P^\circ$	*1 021.75*	*494 263.0–592 134.4*	9–9	E2	3.8003e+02	5.9480e−08	3.4008e+00	AAA	23
23	1s2p-1s6p	$^3P^\circ-^3P^\circ$	*967.118*	*494 263.0–597 663.1*	9–9	E2	2.1802e+02	3.0571e−08	1.4823e+00	AAA	23
24	1s2p-1s3p	$^1P^\circ-^1P^\circ$	1 668.22	501 808.59–561 752.82	3–3	E2	1.5010e+03	6.2623e−07	5.1946e+01	AAA	23
25	1s2p-1s4f	$^1P^\circ-^1F^\circ$	1 237.08	501 808.59–582 644.04	3–7	E2	3.965e+03	2.123e−06	7.180e+01	AA	24
26	1s2p-1s4p	$^1P^\circ-^1P^\circ$	1 234.24	501 808.59–582 830.11	3–3	E2	6.4988e+02	1.4842e−07	4.9860e+00	AAA	23
27	1s2p-1s5p	$^1P^\circ-^1P^\circ$	1 101.00	501 808.59–592 634.91	3–3	E2	3.342e+02	6.074e−08	1.449e+00	AA	23
28	1s2p-1s6p	$^1P^\circ-^1P^\circ$	1 041.37	501 808.59–597 836	3–3	E2	1.927e+02	3.134e−08	6.323e−01	AA	23
29	1s3s-1s3d	$^3S-^3D$	*6 489.3* cm^{-1}	554 754.45–*561 243.7*	3–15	E2	2.9645e−01	5.2771e−08	3.4505e+03	AAA	23
30	1s3s-1s4d	$^3S-^3D$	*3 589.48*	554 754.45–*582 613.6*	3–15	E2	3.8817e+02	3.7490e−06	3.0980e+03	AAA	23
31	1s3s-1s5d	$^3S-^3D$	*2 649.02*	554 754.45–*592 504.3*	3–15	E2	1.8881e+02	9.9316e−07	3.2986e+02	AAA	23
32	1s3s-1s6d	$^3S-^3D$	*2 319.02*	554 754.45–*597 876.2*	3–15	E2	1.0094e+02	4.0693e−07	9.0676e+01	AAA	23
33	1s3s-1s3d	$^1S-^1D$	2 495.74 cm^{-1}	558 777.88–561 273.62	1–5	E2	2.6723e−03	3.2160e−09	1.2322e+03	AAA	23
34	1s3s-1s4d	$^1S-^1D$	4 192.33	558 777.88–582 630.95	1–5	E2	3.0372e+02	4.0015e−06	1.7560e+03	AAA	23
35	1s3s-1s5d	$^1S-^1D$	2 964.14	558 777.88–592 514.43	1–5	E2	1.1383e+02	7.4970e−07	1.1629e+02	AAA	23
36	1s3s-1s6d	$^1S-^1D$	2 557.24	558 777.88–597 882.52	1–5	E2	5.317e+01	2.607e−07	2.596e+01	AA	23
37	1s3p-1s4p	$^3P^\circ-^3P^\circ$	*4 467.25*	*559 501.2–581 886.3*	9–9	E2	1.8375e+02	5.4976e−07	2.6271e+03	AAA	23
38	1s3p-1s5p	$^3P^\circ-^3P^\circ$	*3 064.36*	*559 501.2–592 134.4*	9–9	E2	1.0185e+02	1.4339e−07	2.2117e+02	AAA	23
39	1s3p-1s6p	$^3P^\circ-^3P^\circ$	*2 620.41*	*559 501.2–597 663.1*	9–9	E2	6.047e+01	6.225e−08	6.004e+01	AA	23
40	1s3d-1s4s	$^3D-^3S$	*5 336.85*	*561 243.7*–579 981.33	15–3	E2	8.4224e+01	7.1928e−08	9.7675e+02	AAA	23
41	1s3d-1s5s	$^3D-^3S$	*3 339.95*	*561 243.7*–591 184.26	15–3	E2	4.6238e+01	1.5466e−08	5.1478e+01	AAA	23
42	1s3d-1s6s	$^3D-^3S$	*2 787.20*	*561 243.7*–597 121.95	15–3	E2	2.783e+01	6.482e−09	1.254e+01	AA	23

TABLE 26. Li II. Forbidden transitions—Continued

No.	Transition Array	Mult.	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i-E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	f_{ik}	S (a.u.)	Acc.	Source
43	1*s*3*d*-1*s*4*s*	$^1D-^1S$	4 920.50	561 273.62–581 596.77	5–1	E2	7.7892e+01	5.6546e−08	2.0060e+02	AAA	23
44	1*s*3*d*-1*s*5*s*	$^1D-^1S$	3 255.64	561 273.62–591 989.55	5–1	E2	4.6388e+01	1.4742e−08	1.5149e+01	AAA	23
45	1*s*3*d*-1*s*6*s*	$^1D-^1S$	2 754.30	561 273.62–597 580.53	5–1	E2	2.8420e+01	6.4646e−09	4.0224e+00	AAA	23
46	1*s*3*p*-1*s*4*p*	$^1P^\circ-^1P^\circ$	4 744.44	561 752.82–582 830.11	3–3	E2	1.6090e+02	5.4299e−07	1.0361e+03	AAA	23
47	1*s*3*p*-1*s*5*p*	$^1P^\circ-^1P^\circ$	3 238.12	561 752.82–592 634.91	3–3	E2	9.0459e+01	1.4220e−07	8.6266e+01	AAA	23
48	1*s*3*p*-1*s*6*p*	$^1P^\circ-^1P^\circ$	2 771.37	561 752.82–597 836	3–3	E2	5.380e+01	6.194e−08	2.356e+01	AA	23
49	1*s*4*s*-1*s*4*d*	$^3S-^3D$	*2 632.3* cm^{-1}	579 981.33–*582 613.6*	3–15	E2	4.6745e−02	5.0572e−08	4.9543e+04	AAA	23
50	1*s*4*s*-1*s*5*d*	$^3S-^3D$	*7 985.33*	579 981.33–*592 504.3*	3–15	E2	4.6490e+01	2.2222e−06	2.0217e+04	AAA	23
51	1*s*4*s*-1*s*6*d*	$^3S-^3D$	*5 588.19*	579 981.33–*597 876.2*	3–15	E2	3.0468e+01	7.1320e−07	2.2238e+03	AAA	23
52	1*s*4*s*-1*s*4*d*	$^1S-^1D$	1 034.18 cm^{-1}	581 596.77–582 630.95	1–5	E2	4.6618e−04	3.2673e−09	1.7593e+04	AAA	23
53	1*s*4*s*-1*s*5*d*	$^1S-^1D$	9 159.47	581 596.77–592 514.43	1–5	E2	4.0723e+01	2.5610e−06	1.1721e+04	AAA	23
54	1*s*4*s*-1*s*6*d*	$^1S-^1D$	6 140.34	581 596.77–597 882.52	1–5	E2	2.166e+01	6.121e−07	8.440e+02	AA	23
55	1*s*4*p*-1*s*5*p*	$^3P^\circ-^3P^\circ$	*9 757.94*	*581 886.3–592 134.4*	9–9	E2	3.2012e+01	4.5697e−07	2.2759e+04	AAA	23
56	1*s*4*p*-1*s*6*p*	$^3P^\circ-^3P^\circ$	*6 338.44*	*581 886.3–597 663.1*	9–9	E2	2.0891e+01	1.2583e−07	1.7176e+03	AAA	23
57	1*s*4*d*-1*s*5*s*	$^3D-^3S$	*8 570.6* cm^{-1}	*582 613.6*–591 184.26	15–3	E2	2.4110e+01	9.8414e−08	1.3965e+04	AAA	23
58	1*s*4*d*-1*s*6*s*	$^3D-^3S$	*6 892.60*	*582 613.6*–597 121.95	15–3	E2	1.4982e+01	2.1342e−08	6.2433e+02	AAA	23
59	1*s*4*d*-1*s*5*s*	$^1D-^1S$	9 358.60 cm^{-1}	582 630.95–591 989.55	5–1	E2	2.3547e+01	8.0614e−08	2.9288e+03	AAA	23
60	1*s*4*d*-1*s*6*s*	$^1D-^1S$	6 689.15	582 630.95–597 580.53	5–1	E2	1.6066e+01	2.1554e−08	1.9211e+02	AAA	23
61	1*s*4*p*-1*s*5*p*	$^1P^\circ-^1P^\circ$	9 804.80 cm^{-1}	582 830.11–592 634.91	3–3	E2	2.8950e+01	4.5148e−07	8.5582e+03	AAA	23
62	1*s*4*p*-1*s*6*p*	$^1P^\circ-^1P^\circ$	6 664.05	582 830.11–597 836	3–3	E2	1.877e+01	1.250e−07	6.608e+02	AA	23
63	1*s*5*s*-1*s*5*d*	$^3S-^3D$	*1 320.0* cm^{-1}	591 184.26–*592 504.3*	3–15	E2	1.0192e−02	4.3846e−08	3.4059e+05	AAA	23
64	1*s*5*s*-1*s*6*d*	$^3S-^3D$	*6 691.9* cm^{-1}	591 184.26–*597 876.2*	3–15	E2	9.0128e+00	1.5086e−06	8.9948e+04	AAA	23
65	1*s*5*s*-1*s*5*d*	$^1S-^1D$	524.88 cm^{-1}	591 989.55–592 514.43	1–5	E2	1.0744e−04	2.9234e−09	1.2041e+05	AAA	23
66	1*s*5*s*-1*s*6*d*	$^1S-^1D$	5 892.97 cm^{-1}	591 989.55–597 882.52	1–5	E2	8.4423e+00	1.8223e−06	5.3035e+04	AAA	23
67	1*s*5*p*-1*s*6*p*	$^3P^\circ-^3P^\circ$	*5 528.7* cm^{-1}	*592 134.4–597 663.1*	9–9	E2	7.8556e+00	3.8529e−07	1.2221e+05	AAA	23
68	1*s*5*d*-1*s*6*s*	$^3D-^3S$	*4 617.6* cm^{-1}	*592 504.3*–597 121.95	15–3	E2	7.5057e+00	1.0555e−07	9.5767e+04	AAA	23
69	1*s*5*d*-1*s*6*s*	$^1D-^1S$	5 066.10 cm^{-1}	592 514.43–597 580.53	5–1	E2	7.5929e+00	8.8706e−08	2.0316e+04	AAA	23
70	1*s*5*p*-1*s*6*p*	$^1P^\circ-^1P^\circ$	5 201 cm^{-1}	592 634.91–597 836	3–3	E2	6.8770e+00	3.8113e−07	4.8400e+04	AAA	23
71	1*s*6*s*-1*s*6*d*	$^3S-^3D$	*754.3* cm^{-1}	597 121.95–*597 876.2*	3–15	E2	2.871e−03	3.782e−08	1.575e+06	AA	23
72	1*s*6*s*-1*s*6*d*	$^1S-^1D$	301.99 cm^{-1}	597 580.53–597 882.52	1–5	E2	3.1288e−05	2.5717e−09	5.5614e+05	AAA	23

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

4.3. Li III

Hydrogen Isoelectronic Sequence
Ground State: $1s\ ^2S_{1/2}$
Ionization Energy: 122.454 eV (987 661.027 cm^{-1})

4.3.1. Li III Allowed Transitions

We have not tabulated numerical data for the hydrogenlike ion Li III since data for this ion of nuclear charge $Z=3$ may be obtained by scaling the tabulated values for hydrogen according to the following relationships:[12]

$$f(\text{Li III}) = f(\text{H I}),$$

$$A(\text{Li III}) = (3)^4 A(\text{H I}) = 81A(\text{H I}),$$

$$S(\text{Li III}) = (3)^{-2} S(\text{H I}) = (1/9)S(\text{H I}).$$

Extensive numerical calculations for H-like ions by Baker,[4] Jitrik and Bunge,[5] and Pal'chikov[17] showed that the relativistic results are essentially indistinguishable (i.e., identical within a few parts in 10^4) from the nonrelativistic results for hydrogen and hydrogenlike ions of small Z. Therefore the above scaling relationships are valid within this level of accuracy, which should be more than sufficient for most applications. If extremely high accuracy is required, we refer the reader to the data tables by Jitrik and Bunge.[5]

Wavelength and energy level data for Li III may be obtained by consulting the NIST Atomic Energy Levels and Spectra Bibliographic Database.[13]

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6. References

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