Atomic Spectral Tables for the Chandra X-ray Observatory. Part IV. Ne V–Ne VIII

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Tables of critically compiled wavelengths, energy levels, line classifications, and transition probabilities are given for spectra of ionized neon (Ne V–Ne VIII) in the region 55–170 Å. These tables provide data of interest for the Emission Line Project in support of analysis of astronomical data from the Chandra X-Ray Observatory. They will also be useful for the diagnostics of plasma encountered in fusion energy research. The transition probabilities were obtained mainly from recent sophisticated calculations carried out with complex computer codes. [DOI: 10.1063/1.1637924]

Key words: far ultraviolet; Ne V, Ne VI, Ne VII, Ne VIII; neon; soft x rays; transition probabilities; wavelengths.

Contents

List of Symbols

Symbols for indication of data accuracy

- A uncertainty within 3%,
- B uncertainty within 10%,
- C uncertainty within 25%,
- D uncertainty within 50%,
- E uncertainty greater than 50%.

Symbols used for the table headings

- E_i: lower energy level,
- E_k: upper energy level,
- g_i: statistical weight of the lower level,
- g_k: statistical weight of the upper level,
- A_{ki}: atomic transition probability for spontaneous emission,
- f_{ik}: (absorption) oscillator strength,
- S: line strength.

Abbreviations appearing in the column labeled Ref.

- LS: decomposition from multiplet value according to LS rules.

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. Introduction

The Chandra X-Ray Observatory was designed to observe x rays from high-energy regions of the universe, as for example remnants of exploded stars. It was launched by the Space Shuttle Columbia in July 1999. In previous Parts I (S), II (Si), and III (Mg) of this series[1–3] of papers containing data for the Chandra X-Ray Observatory, we presented data for S VIII–S XIV, Si VI–Si XII, and Mg V–Mg X in the 20–170 Å region. This is the region covered by the Low Energy Transmission Grating on the observatory. These tables are compiled to assist the Emission Line Project situated at the Smithsonian Astrophysical Observatory. The present tables provide data for the cosmically abundant element Ne in the region 55–170 Å. These tables will also be of use for diagnostics of plasmas found in fusion energy research devices such as tokamaks.

The wavelengths in the tables are Ritz-type values derived from experimental energy level values in the NIST Atomic Spectra Database (ASD).[4] That is, the wave number of a particular transition is found as the difference of the values of the combining energy levels in cm^{-1}, and the wavelength in vacuum is the reciprocal of the wave number. Only transitions are considered for which experimental energies are known for both lower and upper levels. The ionization energies given in the text portion for each ion are taken from ASD. The values in cm^{-1} were converted to electron volts[5] with the factor 1 eV/hc=8065.544 77(32) cm^{-1}. In compiling the transition probabilities we selected only values obtained with the most advanced theoretical and experimental methods. Our general evaluation criteria were those that have been developed at NIST.[6,7] We normally list here only values having estimated uncertainties of ±50% or less. A few exceptions have been made for important lines. Because of the

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limited amount of experimental results available for highly ionized ions, we had to rely on theoretical data for most transitions.

The most extensive source of theoretical data was the Opacity Project (OP),[8] which has produced multiplet f values for the spectra of many elements. However, since the OP calculations do not include spin–orbit interactions they generally do not provide values for individual lines of a fine-structure multiplet. Therefore, for the present compilation the OP values for LS multiplets were decomposed into their LSJ fine structure components using LS coupling rules.[9] For the present light ions LS coupling should generally be a fairly good approximation. Where this is clearly not the case we have used results of calculations that do include spin-orbit and other relativistic effects. Tachiev and Froese Fischer have performed calculations for Be-, B-, and C-like ions with the multiconfiguration Hartree–Fock (MCHF)[10] method with Breit–Pauli corrections and have made their results available on the World Wide Web. Aggarwal has carried out extensive calculations for C-like ions[11] with the configuration interaction code-version 3 (CIV3).[12] Vilkas and co-workers applied many-body perturbation theory including Breit–Pauli corrections to obtain transition probabilities for C-like ions.[13] For the Be- and B-like ions, the data of Safronova and co-workers were found to be very useful.[14–16] These calculations were performed using the relativistic many-body perturbation theory (MBPT). For Li-like neon most of the transition probabilities were taken from the OP results. For comparative purposes, data from many other sources were also used in our work.

In order to put the uncertainty estimates of transition probabilities for the present compilation on a firmer basis, we made graphical and numerical comparisons of the results of different advanced calculations for as many transitions as possible, regardless of wavelength. We then selected data for the Chandra spectral range 55–170 Å. To fit the data into systematic trends, or deviations from them, we found the theoretically predicted scaling of data along isoelectronic sequences to be useful. If available, we always selected data from detailed configuration-interaction calculations with intermediate coupling. Usually these calculations were performed for transitions to the ground state or between low excited configurations. For transitions involving high-lying configurations, only OP data are available. For the stronger transitions of many spectra, good agreement exists between the OP data and data from more detailed calculations that consider spin–orbit interactions. However, large disagreements are often observed for weaker transitions when appreciable cancellation of positive and negative components of the transition integral is encountered. The agreement between the OP calculations and various relativistic calculations becomes worse for transitions between levels where one or both are appreciably mixed due to breakdown of LS coupling. Samples of graphical and numerical comparisons in support of the assessment procedure were given in previous parts[1–3] of this series of papers.

2. Arrangement of the Tables

The tables are ordered by increasing ionization stage. Individual lines are arranged in order of wavelength. For each transition we give the wavelength, the energy of the lower level (i), the energy of the upper level (k), the level designations, and the statistical weights of the levels $(g=2J+1)$. In some cases the designations in ASD are given with a question mark. In the present tables we omitted these question marks because the designations were confirmed by later calculations in Refs. 8, 10–16. If an energy level were given in ASD with a question mark to indicate that it is uncertain, we have retained the question mark and have added it to the Ritz wavelength as well. Levels whose values are noted with a $+x$, $+v$, $+s$, $+$ etc. are not connected to the main system of levels by observed transitions. The level values have been estimated by theoretical methods so that these unknown quantities x, v, s.... will be minimized. All of the present values are for electric dipole transitions, E1.

Following the statistical weights, we give the transition probability for spontaneous emission A_{ki} (in units of $10^8\ s^{-1}$), the oscillator strength f_{ik} (dimensionless), the line strength S in atomic units (a.u.), and $\log g_i f$. For electric dipole transitions, E1, $1\ \text{a.u.}=a_0^2e^2=7.188\times10^{-59}\ \text{m}^2\ \text{C}^2$, where a_0 is the Bohr radius, and e is the electron charge. For conversion factors and more details on the units, see Wiese *et al.*[6] The power of 10 is indicated by exponential notation (E−02 indicates 10^{-2}). Finally, the estimated uncertainty and the references are given. The estimated uncertainty is indicated by the following code letters, which are the same as those used in earlier NIST publications:[6,7] A—uncertainty less than 3%, B—uncertainty less than 10%, C—uncertainty less than 25%, D—uncertainty less than 50%, and E—uncertainty greater than 50%.

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5. Ne V

$Z=10$

C I isoelectronic sequence

Ground state $1s^22s^22p^2\ ^3P_0$

Ionization energy 1 018 000 cm^{-1} (126.22 eV)

Data are tabulated for 106 transitions in the range from 109 to 169 Å. Transition probabilities for the $2s^22p^2-2s^22p3s$ and $2s^22p^2-2s^22p3d$ arrays are mean values from MCHF[1] and CIV3[2] calculations. The other results are taken from the Opacity Project (OP).[3] OP provides, however, only multiplet values. These have been decomposed into fine-structure components assuming LS coupling, as indicated by the notation LS in the reference column.

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Ne V

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} ($10^8\ s^{-1}$)	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
109.570	30 291.5	942 950	$2s^22p^2-2s^22p(^2P^\circ)6d$	$^1D-^1F^\circ$	2–3	5–7	1.73E+02	4.37E−02	7.88E−02	−0.661	C	3,LS
113.859	30 291.5	908 570	$2s^22p^2-2s^22p(^2P^\circ)5d$	$^1D-^1F^\circ$	2–3	5–7	2.93E+02	7.97E−02	1.49E−01	−0.400	B	3,LS
118.636	0.0	842 914	$2s^22p^2-2s^22p4d$	$^3P-^3P^\circ$	0–1	1–3	7.55E+01	4.78E−02	1.87E−02	−1.321	C	3,LS
118.694	412.4	842 914	$2s^22p^2-2s^22p4d$	$^3P-^3P^\circ$	1–1	3–3	5.65E+01	1.19E−02	1.40E−02	−1.446	C	3,LS
118.694	412.4	842 914	$2s^22p^2-2s^22p4d$	$^3P-^3P^\circ$	1–2	3–5	5.65E+01	1.99E−02	2.33E−02	−1.224	C	3,LS
118.694	412.4	842 914	$2s^22p^2-2s^22p4d$	$^3P-^3P^\circ$	1–0	3–1	2.26E+02	1.59E−02	1.87E−02	−1.321	C	3,LS
118.762	0.0	842 020	$2s^22p^2-2s^22p4d$	$^3P-^3D^\circ$	0–1	1–3	2.82E+02	1.79E−01	6.98E−02	−0.748	C	3,LS
118.793	1 110.1	842 914	$2s^22p^2-2s^22p4d$	$^3P-^3P^\circ$	2–1	5–3	9.39E+01	1.19E−02	2.33E−02	−1.225	C	3,LS
118.793	1 110.1	842 914	$2s^22p^2-2s^22p4d$	$^3P-^3P^\circ$	2–2	5–5	1.69E+02	3.58E−02	6.99E−02	−0.747	C	3,LS
118.820	412.4	842 020	$2s^22p^2-2s^22p4d$	$^3P-^3D^\circ$	1–2	3–5	3.80E+02	1.34E−01	1.57E−01	−0.396	B	3,LS
118.820	412.4	842 020	$2s^22p^2-2s^22p4d$	$^3P-^3D^\circ$	1–1	3–3	2.11E+02	4.46E−02	5.24E−02	−0.873	C	3,LS
118.919	1 110.1	842 020	$2s^22p^2-2s^22p4d$	$^3P-^3D^\circ$	2–3	5–7	5.05E+02	1.50E−01	2.93E−01	−0.125	B	3,LS
118.919	1 110.1	842 020	$2s^22p^2-2s^22p4d$	$^3P-^3D^\circ$	2–1	5–3	1.40E+01	1.78E−03	3.49E−03	−2.050	D	3,LS
118.919	1 110.1	842 020	$2s^22p^2-2s^22p4d$	$^3P-^3D^\circ$	2–2	5–5	1.26E+02	2.68E−02	5.24E−02	−0.874	C	3,LS
122.520	30 291.5	846 487	$2s^22p^2-2s^22p4d$	$^1D-^1F^\circ$	2–3	5–7	4.28E+02	1.35E−01	2.72E−01	−0.171	B	3,LS
123.712	30 291.5	838 623	$2s^22p^2-2s^22p4d$	$^1D-^1D^\circ$	2–2	5–5	9.50E+01	2.18E−02	4.44E−02	−0.963	C	3,LS
125.742	0.0	795 279	$2s^22p^2-2s^22p4s$	$^3P-^3P^\circ$	0–1	1–3	2.58E+01	1.84E−02	7.60E−03	−1.736	D	3,LS
125.807	412.4	795 279	$2s^22p^2-2s^22p4s$	$^3P-^3P^\circ$	1–0	3–1	7.73E+01	6.12E−03	7.60E−03	−1.736	D	3,LS
125.807	412.4	795 279	$2s^22p^2-2s^22p4s$	$^3P-^3P^\circ$	1–1	3–3	1.93E+01	4.59E−03	5.70E−03	−1.861	D	3,LS
125.807	412.4	795 279	$2s^22p^2-2s^22p4s$	$^3P-^3P^\circ$	1–2	3–5	1.93E+01	7.64E−03	9.50E−03	−1.640	D	3,LS
125.820	30 291.5	825 080	$2s^22p^2-2s2p^2(^2D)3p$	$^1D-^1F^\circ$	2–3	5–7	4.84E+02	1.61E−01	3.33E−01	−0.095	B	3,LS
125.918	1 110.1	795 279	$2s^22p^2-2s^22p4s$	$^3P-^3P^\circ$	2–1	5–3	3.21E+01	4.58E−03	9.50E−03	−1.640	D	3,LS
125.918	1 110.1	795 279	$2s^22p^2-2s^22p4s$	$^3P-^3P^\circ$	2–2	5–5	5.78E+01	1.37E−02	2.85E−02	−1.163	C	3,LS
128.793	88 360+l	864 800+l	$2s2p^3-2s2p^2(^4P)4d$	$^5S^\circ-^5P$	2–3	5–7	4.65E+02	1.62E−01	3.44E−01	−0.091	B	3,LS
128.793	88 360+l	864 800+l	$2s2p^3-2s2p^2(^4P)4d$	$^5S^\circ-^5P$	2–1	5–3	4.65E+02	6.94E−02	1.47E−01	−0.459	B	3,LS
128.793	88 360+l	864 800+l	$2s2p^3-2s2p^2(^4P)4d$	$^5S^\circ-^5P$	2–2	5–5	4.65E+02	1.16E−01	2.45E−01	−0.238	B	3,LS
129.034	30 291.5	805 284	$2s^22p^2-2s^22p4s$	$^1D-^1P^\circ$	2–1	5–3	1.04E+02	1.56E−02	3.32E−02	−1.107	C	3,LS
130.610	0.0	765 640	$2s^22p^2-2s2p^2(^4P)3p$	$^3P-^3P^\circ$	0–1	1–3	6.75E+01	5.18E−02	2.23E−02	−1.286	C	3,LS
130.619	412.4	766 000	$2s^22p^2-2s2p^2(^4P)3p$	$^3P-^3P^\circ$	1–2	3–5	5.06E+01	2.16E−02	2.78E−02	−1.189	C	3,LS
130.680	412.4	765 640	$2s^22p^2-2s2p^2(^4P)3p$	$^3P-^3P^\circ$	1–1	3–3	5.06E+01	1.29E−02	1.67E−02	−1.411	C	3,LS
130.714	412.4	765 440	$2s^22p^2-2s2p^2(^4P)3p$	$^3P-^3P^\circ$	1–0	3–1	2.02E+02	1.73E−02	2.23E−02	−1.286	C	3,LS
130.738	1 110.1	766 000	$2s^22p^2-2s2p^2(^4P)3p$	$^3P-^3P^\circ$	2–2	5–5	1.51E+02	3.88E−02	8.35E−02	−0.712	C	3,LS
134.885	63 913.6	805 284	$2s^22p^2-2s^22p4s$	$^1S-^1P^\circ$	0–1	1–3	3.05E+01	2.50E−02	1.11E−02	−1.602	C	3,LS
135.656	0.0	737 160	$2s^22p^2-2s2p^2(^4P)3p$	$^3P-^3S^\circ$	0–1	1–3	3.24E+01	2.68E−02	1.20E−02	−1.571	C	3,LS
135.732	412.4	737 160	$2s^22p^2-2s2p^2(^4P)3p$	$^3P-^3S^\circ$	1–1	3–3	9.71E+01	2.68E−02	3.60E−02	−1.094	C	3,LS
135.860	1 110.1	737 160	$2s^22p^2-2s2p^2(^4P)3p$	$^3P-^3S^\circ$	2–1	5–3	1.61E+02	2.68E−02	5.99E−02	−0.873	C	3,LS
136.215	88 360	822 494	$2s2p^3-2s2p^2(^4P)4s$	$^5S^\circ-^5P$	2–1	5–3	3.37E+01	5.63E−03	1.26E−02	−1.551	C	3,LS
136.215	88 360	822 494	$2s2p^3-2s2p^2(^4P)4s$	$^5S^\circ-^5P$	2–2	5–5	3.37E+01	9.38E−03	2.10E−02	−1.329	C	3,LS
136.215	88 360	822 494	$2s2p^3-2s2p^2(^4P)4s$	$^5S^\circ-^5P$	2–3	5–7	3.37E+01	1.31E−02	2.94E−02	−1.183	C	3,LS
140.716	88 360	799 011	$2s2p^3-2s2p^2(^4P)3d$	$^5S^\circ-^5P$	2–1	5–3	1.42E+03	2.53E−01	5.86E−01	0.102	B	3,LS

Ne V–Continued

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} ($10^8\ s^{-1}$)	f_{ik}	S (a.u.)	$\log g_i f$	Acc.	Ref.
140.757	88 360	798 804	$2s2p^3-2s2p^2(^4P)3d$	$^5S^\circ-^5P$	2–2	5–5	1.42E+03	4.21E−01	9.76E−01	0.324	B	3,LS
140.791	88 360	798 633	$2s2p^3-2s2p^2(^4P)3d$	$^5S^\circ-^5P$	2–3	5–7	1.42E+03	5.90E−01	1.37E+00	0.470	B	3,LS
141.074	1 110.1	709 956	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^1F^\circ$	2–3	5–7	9.52E−02	3.98E−05	9.23E−05	−3.702	E	1,2
142.367	0.0	702 412	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^1P^\circ$	0–1	1–3	8.92E−01	8.13E−04	3.81E−04	−3.090	D	1,2
142.435	0.0	702 074	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3P^\circ$	0–1	1–3	1.74E+02	1.59E−01	7.44E−02	−0.800	A	1,2
142.441	412.4	702 459	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3P^\circ$	1–0	3–1	7.73E+02	7.84E−02	1.10E−01	−0.628	A	1,2
142.450	412.4	702 412	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^1P^\circ$	1–1	3–3	2.18E−01	6.62E−05	9.31E−05	−3.702	D	1,2
142.519	412.4	702 074	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3P^\circ$	1–1	3–3	2.63E+02	8.01E−02	1.13E−01	−0.619	A	1,2
142.582	412.4	701 765	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3P^\circ$	1–2	3–5	8.01E+01	4.07E−02	5.73E−02	−0.914	A	1,2
142.592	1 110.1	702 412	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^1P^\circ$	2–1	5–3	3.55E−02	6.49E−06	1.52E−05	−4.489	E	1,2
142.661	1 110.1	702 074	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3P^\circ$	2–1	5–3	3.40E+02	6.23E−02	1.46E−01	−0.506	A	1,2
142.724	1 110.1	701 765	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3P^\circ$	2–2	5–5	7.00E+02	2.14E−01	5.02E−01	0.029	A	1,2
143.219	0.0	698 231	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3D^\circ$	0–1	1–3	8.28E+02	7.64E−01	3.60E−01	−0.117	A	1,2
143.273	412.4	698 382	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3D^\circ$	1–2	3–5	1.11E+03	5.72E−01	8.09E−01	0.234	A	1,2
143.304	412.4	698 231	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3D^\circ$	1–1	3–3	4.91E+02	1.51E−01	2.14E−01	−0.344	A	1,2
143.344	1 110.1	698 735	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3D^\circ$	2–3	5–7	1.34E+03	5.78E−01	1.36E+00	0.461	A	1,2
143.416	1 110.1	698 382	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3D^\circ$	2–2	5–5	2.12E+02	6.55E−02	1.55E−01	−0.485	A	1,2
143.447	1 110.1	698 231	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3D^\circ$	2–1	5–3	1.83E+01	3.40E−03	8.02E−03	−1.770	B	1,2
144.972?	1 110.1	690 900+y	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^3F^\circ$	2–3	5–7	3.36E+00	1.48E−03	3.53E−03	−2.131	C	1,2
145.016	1 110.1	690 691	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^3P-^1D^\circ$	2–2	5–5	5.81E−01	1.83E−04	4.37E−04	−3.038	E	1,2
147.131	30 291.5	709 956	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^1F^\circ$	2–3	5–7	1.49E+03	6.77E−01	1.64E+00	0.530	B	1,2
148.150	208 157	883 150	$2s2p^3-2s2p^2(^2D)3d$	$^3P^\circ-^3S$	2–1	5–3	2.72E+02	5.38E−02	1.31E−01	−0.571	B	3,LS
148.150	208 157	883 150	$2s2p^3-2s2p^2(^2D)3d$	$^3P^\circ-^3S$	1–1	3–3	1.63E+02	5.38E−02	7.87E−02	−0.792	C	3,LS
148.158	208 193	883 150	$2s2p^3-2s2p^2(^2D)3d$	$^3P^\circ-^3S$	0–1	1–3	5.45E+01	5.38E−02	2.62E−02	−1.270	C	3,LS
148.783	30 291.5	702 412	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^1P^\circ$	2–1	5–3	4.31E+01	8.58E−03	2.10E−02	−1.367	C	1,2
148.858	30 291.5	702 074	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^3P^\circ$	2–1	5–3	2.43E−02	4.84E−06	1.19E−05	−4.616	D	1,2
148.926	30 291.5	701 765	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^3P^\circ$	2–2	5–5	1.56E+00	5.19E−04	1.27E−03	−2.586	C	1,2
149.601	30 291.5	698 735	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^3D^\circ$	2–3	5–7	1.26E−01	5.93E−05	1.46E−04	−3.528	D	1,2
149.680	30 291.5	698 382	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^3D^\circ$	2–2	5–5	1.62E−01	5.45E−05	1.34E−04	−3.565	D	1,2
149.714	30 291.5	698 231	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^3D^\circ$	2–1	5–3	1.10E−01	2.23E−05	5.49E−05	−3.953	D	1,2
151.376?	30 291.5	690 900+y	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^3F^\circ$	2–3	5–7	6.99E−01	3.36E−04	8.38E−04	−2.775	C	1,2
151.423	30 291.5	690 691	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^1D^\circ$	2–2	5–5	3.18E+02	1.09E−01	2.73E−01	−0.262	B	1,2
151.582	30 291.5	690 000	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1D-^3F^\circ$	2–2	5–5	2.14E+02	7.38E−02	1.84E−01	−0.433	C	1,2
156.617	63 913.6	702 412	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1S-^1P^\circ$	0–1	1–3	8.77E+02	9.67E−01	4.99E−01	−0.015	B	1,2
156.700	63 913.6	702 074	$2s^22p^2-2s^22p(^2P^\circ)3d$	$^1S-^3P^\circ$	0–1	1–3	3.16E−01	3.49E−04	1.80E−04	−3.458	D	1,2
158.590	175 834	806 390	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3F$	3–4	7–9	5.46E+02	2.65E−01	9.68E−01	0.268	B	3,LS
158.703	175 834	805 940	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3F$	3–3	7–7	6.08E+01	2.29E−02	8.39E−02	−0.794	C	3,LS
158.721	175 905	805 940	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3F$	2–3	5–7	4.84E+02	2.56E−01	6.69E−01	0.107	B	3,LS
158.797	175 834	805 570	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3F$	3–2	7–5	2.39E+00	6.47E−04	2.37E−03	−2.344	D	3,LS
158.815	175 905	805 570	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3F$	2–2	5–5	8.49E+01	3.21E−02	8.39E−02	−0.795	C	3,LS
158.820	175 927	805 570	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3F$	1–2	3–5	4.57E+02	2.88E−01	4.52E−01	−0.063	B	3,LS
159.841	175 927	801 550	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3P$	1–0	3–1	7.06E+01	9.01E−03	1.42E−02	−1.568	C	3,LS
159.896	175 905	801 310	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3P$	2–1	5–3	5.29E+01	1.22E−02	3.20E−02	−1.216	C	3,LS
159.902	175 927	801 310	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3P$	1–1	3–3	1.76E+01	6.75E−03	1.07E−02	−1.693	C	3,LS
160.004	175 834	800 820	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3P$	3–2	7–5	5.91E+01	1.62E−02	5.97E−02	−0.945	C	3,LS
160.022	175 905	800 820	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3P$	2–2	5–5	1.05E+01	4.05E−03	1.07E−02	−1.694	C	3,LS
160.027	175 927	800 820	$2s2p^3-2s2p^2(^4P)3d$	$^3D^\circ-^3P$	1–2	3–5	7.03E−01	4.50E−04	7.11E−04	−2.870	D	3,LS
162.149	270 564	887 280	$2s2p^3-2s2p^2(^2D)3d$	$^1D^\circ-^1F$	2–3	5–7	3.08E+02	1.70E−01	4.54E−01	−0.071	B	3,LS
164.023	88 360+l	698 031+l	$2s2p^3-2s2p^2(^4P)3s$	$^5S^\circ-^5P$	2–3	5–7	1.44E+02	8.15E−02	2.20E−01	−0.390	B	3,LS
164.145	88 360+l	697 577+l	$2s2p^3-2s2p^2(^4P)3s$	$^5S^\circ-^5P$	2–2	5–5	1.44E+02	5.82E−02	1.57E−01	−0.536	B	3,LS
164.294	88 360+l	697 025+l	$2s2p^3-2s2p^2(^4P)3s$	$^5S^\circ-^5P$	2–1	5–3	1.44E+02	3.49E−02	9.43E−02	−0.759	C	3,LS
165.226	0.0	605 231	$2s^22p^2-2s^22p(^2P^\circ)3s$	$^3P-^1P^\circ$	0–1	1–3	1.19E−01	1.46E−04	7.95E−05	−3.835	D	1,2
165.339	412.4	605 231	$2s^22p^2-2s^22p(^2P^\circ)3s$	$^3P-^1P^\circ$	1–1	3–3	1.70E−01	6.97E−05	1.14E−04	−3.680	D	1,2
165.530	1 110.1	605 231	$2s^22p^2-2s^22p(^2P^\circ)3s$	$^3P-^1P^\circ$	2–1	5–3	7.95E−02	1.96E−05	5.34E−05	−4.009	D	1,2
167.473	412.4	597 523	$2s^22p^2-2s^22p(^2P^\circ)3s$	$^3P-^3P^\circ$	1–2	3–5	4.52E+01	3.17E−02	5.24E−02	−1.022	A	1,2
167.609	0.0	596 626	$2s^22p^2-2s^22p(^2P^\circ)3s$	$^3P-^3P^\circ$	0–1	1–3	5.99E+01	7.57E−02	4.18E−02	−1.121	A	1,2
167.669	1 110.1	597 523	$2s^22p^2-2s^22p(^2P^\circ)3s$	$^3P-^3P^\circ$	2–2	5–5	1.36E+02	5.71E−02	1.58E−01	−0.544	A	1,2
167.725	412.4	596 626	$2s^22p^2-2s^22p(^2P^\circ)3s$	$^3P-^3P^\circ$	1–1	3–3	4.48E+01	1.89E−02	3.13E−02	−1.246	A	1,2
167.830	412.4	596 254	$2s^22p^2-2s^22p(^2P^\circ)3s$	$^3P-^3P^\circ$	1–0	3–1	1.80E+02	2.53E−02	4.19E−02	−1.120	A	1,2
167.922	1 110.1	596 626	$2s^22p^2-2s^22p(^2P^\circ)3s$	$^3P-^3P^\circ$	2–1	5–3	7.51E+01	1.90E−02	5.27E−02	−1.021	A	1,2
168.522	208 157	801 550	$2s2p^3-2s2p^2(^4P)3d$	$^3P^\circ-^3P$	1–0	3–1	3.47E+02	4.93E−02	8.20E−02	−0.830	C	3,LS
168.591	208 157	801 310	$2s2p^3-2s2p^2(^4P)3d$	$^3P^\circ-^3P$	2–1	5–3	1.45E+02	3.70E−02	1.03E−01	−0.733	B	3,LS

Ne V–Continued

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i–J_k	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
168.591	208 157	801 310	$2s2p^3$–$2s2p^2(^4P)3d$	$^3P°$–^3P	1–1	3–3	8.67E+01	3.70E−02	6.15E−02	−0.955	C	3,LS
168.601	208 193	801 310	$2s2p^3$–$2s2p^2(^4P)3d$	$^3P°$–^3P	0–1	1–3	1.16E+02	1.48E−01	8.20E−02	−0.830	C	3,LS
168.730	208 157	800 820	$2s2p^3$–$2s2p^2(^4P)3d$	$^3P°$–^3P	2–2	5–5	2.60E+02	1.11E−01	3.08E−01	−0.257	B	3,LS
168.730	208 157	800 820	$2s2p^3$–$2s2p^2(^4P)3d$	$^3P°$–^3P	1–2	3–5	8.65E+01	6.15E−02	1.03E−01	−0.734	B	3,LS

6. Ne VI

$Z=10$

B I isoelectronic sequence

Ground state $1s^22s^22p\ ^2P^\circ_{1/2}$

Ionization energy 1 273 800 cm^{-1} (157.93 eV)

Data are tabulated for 236 transitions in the range from 86 to 169 Å. Transition probabilities for the $2s^22p-2s^23s$, $2s^22p-2s^23d$, and $2s2p^2-2s2p3s$ arrays are taken from MCHF calculations.[1] The other results are taken from the Opacity Project (OP).[2] OP provides, however, only multiplet values. These have been decomposed into fine-structure components assuming LS coupling, as indicated by the notation LS in the reference column.

References

[1]G. Tachiev and C. Froese Fischer, http://www.vuse.vanderbilt.edu/~cff/mchf_collection/ (downloaded 19 August, 2002). See also G. Tachiev and C. Froese Fischer, J. Phys. B **33**, 2419 (2000).

[2]J. A. Fernley, A. Hibbert, A. E. Kingston, and M. J. Seaton, J. Phys. B **32**, 5507 (1999) (complete list of data from private communication 4 September, 1991).

Ne VI

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} ($10^8\ s^{-1}$)	f_{ik}	S (a.u.)	$\log g_i f$	Acc.	Ref.
86.090	0	1 161 580	$2s^22p-2s^26d$	$^2P^\circ-^2D$	1/2–3/2	2–4	1.17E+02	2.60E−02	1.48E−02	−1.283	C	2,LS
86.187	1 310	1 161 580	$2s^22p-2s^26d$	$^2P^\circ-^2D$	3/2–5/2	4–6	1.40E+02	2.34E−02	2.66E−02	−1.028	C	2,LS
86.187	1 310	1 161 580	$2s^22p-2s^26d$	$^2P^\circ-^2D$	3/2–3/2	4–4	2.34E+01	2.60E−03	2.95E−03	−1.983	D	2,LS
87.527?	0	1 142 500+*e*	$2s^22p-2p^2(^1D)3d$	$^2P^\circ-^2P$	1/2–3/2	2–4	5.29E+00	1.21E−03	7.00E−04	−2.615	D	2,LS
87.550?	0	1 142 200+*e*	$2s^22p-2p^2(^1D)3d$	$^2P^\circ-^2P$	1/2–1/2	2–2	2.11E+01	2.43E−03	1.40E−03	−2.314	D	2,LS
87.628?	1 310	1 142 500+*e*	$2s^22p-2p^2(^1D)3d$	$^2P^\circ-^2P$	3/2–3/2	4–4	2.63E+01	3.03E−03	3.50E−03	−1.916	D	2,LS
87.651?	1 310	1 142 200+*e*	$2s^22p-2p^2(^1D)3d$	$^2P^\circ-^2P$	3/2–1/2	4–2	1.05E+01	6.06E−04	7.00E−04	−2.615	D	2,LS
88.974	100 261+*e*	1 224 180+*e*	$2s2p^2-2s2p(^3P^\circ)5d$	$^4P-^4D^\circ$	1/2–1/2	2–2	3.32E+02	3.94E−02	2.31E−02	−1.104	C	2,LS
88.974	100 261+*e*	1 224 180+*e*	$2s2p^2-2s2p(^3P^\circ)5d$	$^4P-^4D^\circ$	1/2–3/2	2–4	1.66E+02	3.94E−02	2.31E−02	−1.104	C	2,LS
88.996	0	1 123 640	$2s2p^2-2s2p(^3P^\circ)4p$	$^2P^\circ-^2D$	1/2–3/2	2–4	1.94E+02	4.60E−02	2.70E−02	−1.036	C	2,LS
89.009	100 704+*e*	1 224 180+*e*	$2s2p^2-2s2p(^3P^\circ)5d$	$^4P-^4D^\circ$	3/2–1/2	4–2	6.63E+01	3.94E−03	4.62E−03	−1.803	D	2,LS
89.009	100 704+*e*	1 224 180+*e*	$2s2p^2-2s2p(^3P^\circ)5d$	$^4P-^4D^\circ$	3/2–3/2	4–4	2.12E+02	2.52E−02	2.95E−02	−0.996	C	2,LS
89.009	100 704+*e*	1 224 180+*e*	$2s2p^2-2s2p(^3P^\circ)5d$	$^4P-^4D^\circ$	3/2–5/2	4–6	2.79E+02	4.96E−02	5.82E−02	−0.702	C	2,LS
89.060	101 347+*e*	1 224 180+*e*	$2s2p^2-2s2p(^3P^\circ)5d$	$^4P-^4D^\circ$	5/2–7/2	6–8	3.97E+02	6.30E−02	1.11E−01	−0.423	B	2,LS
89.060	101 347+*e*	1 224 180+*e*	$2s2p^2-2s2p(^3P^\circ)5d$	$^4P-^4D^\circ$	5/2–3/2	6–4	1.99E+01	1.57E−03	2.77E−03	−2.025	D	2,LS
89.060	101 347+*e*	1 224 180+*e*	$2s2p^2-2s2p(^3P^\circ)5d$	$^4P-^4D^\circ$	5/2–5/2	6–6	1.19E+02	1.42E−02	2.49E−02	−1.071	C	2,LS
89.100	1 310	1 123 640	$2s^22p^2-2s2p(^3P^\circ)4p$	$^2P^\circ-^2D$	3/2–5/2	4–6	2.32E+02	4.14E−02	4.85E−02	−0.781	C	2,LS
89.100	1 310	1 123 640	$2s^22p^2-2s2p(^3P^\circ)4p$	$^2P^\circ-^2D$	3/2–3/2	4–4	3.86E+01	4.60E−03	5.39E−03	−1.736	D	2,LS
89.950	0	1 111 730	$2s^22p-2s^25d$	$^2P^\circ-^2D$	1/2–3/2	2–4	2.31E+02	5.59E−02	3.31E−02	−0.951	C	2,LS
90.056	1 310	1 111 730	$2s^22p-2s^25d$	$^2P^\circ-^2D$	3/2–5/2	4–6	2.76E+02	5.03E−02	5.96E−02	−0.697	C	2,LS
90.056	1 310	1 111 730	$2s^22p-2s^25d$	$^2P^\circ-^2D$	3/2–3/2	4–4	4.60E+01	5.59E−03	6.63E−03	−1.651	D	2,LS
91.743	0	1 090 000	$2s^22p-2s^25s$	$^2P^\circ-^2S$	1/2–1/2	2–2	1.09E+01	1.38E−03	8.33E−04	−2.559	D	2,LS
91.854	1 310	1 090 000	$2s^22p-2s^25s$	$^2P^\circ-^2S$	3/2–1/2	4–2	2.18E+01	1.38E−03	1.67E−03	−2.259	D	2,LS
95.375	178 992	1 227 490	$2s2p^2-2s2p(^3P^\circ)5d$	$^2D-^2F^\circ$	5/2–7/2	6–8	1.87E+02	3.40E−02	6.41E−02	−0.690	C	2,LS
95.436	178 992	1 226 820	$2s2p^2-2s2p(^3P^\circ)5d$	$^2D-^2F^\circ$	5/2–5/2	6–6	1.25E+01	1.70E−03	3.21E−03	−1.991	D	2,LS
95.438	179 021	1 226 820	$2s2p^2-2s2p(^3P^\circ)5d$	$^2D-^2F^\circ$	3/2–5/2	4–6	1.74E+02	3.57E−02	4.49E−02	−0.845	C	2,LS
96.849	100 261+*e*	1 132 800+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4P^\circ$	1/2–1/2	2–2	7.31E+01	1.03E−02	6.56E−03	−1.687	D	2,LS
96.858	100 261+*e*	1 132 700+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4P^\circ$	1/2–3/2	2–4	1.83E+02	5.14E−02	3.28E−02	−0.988	C	2,LS
96.890	100 704+*e*	1 132 800+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4P^\circ$	3/2–1/2	4–2	3.65E+02	2.57E−02	3.28E−02	−0.988	C	2,LS
96.900	100 704+*e*	1 132 700+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4P^\circ$	3/2–3/2	4–4	5.84E+01	8.22E−03	1.05E−02	−1.483	C	2,LS
96.909	100 704+*e*	1 132 600+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4P^\circ$	3/2–5/2	4–6	1.31E+02	2.77E−02	3.54E−02	−0.955	C	2,LS
96.960	101 347+*e*	1 132 700+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4P^\circ$	5/2–3/2	6–4	1.97E+02	1.85E−02	3.54E−02	−0.955	C	2,LS
96.969	101 347+*e*	1 132 600+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4P^\circ$	5/2–5/2	6–6	3.06E+02	4.31E−02	8.26E−02	−0.587	C	2,LS
97.051	100 261+*e*	1 130 650+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4D^\circ$	1/2–3/2	2–4	3.33E+02	9.39E−02	6.00E−02	−0.726	C	2,LS
97.055	100 261+*e*	1 130 600+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4D^\circ$	1/2–1/2	2–2	6.65E+02	9.39E−02	6.00E−02	−0.726	C	2,LS
97.069	100 704+*e*	1 130 900+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4D^\circ$	3/2–5/2	4–6	5.58E+02	1.18E−01	1.51E−01	−0.325	B	2,LS
97.092	100 704+*e*	1 130 650+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4D^\circ$	3/2–3/2	4–4	4.25E+02	6.01E−02	7.68E−02	−0.619	C	2,LS
97.097	100 704+*e*	1 130 600+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4D^\circ$	3/2–1/2	4–2	1.33E+02	9.39E−03	1.20E−02	−1.425	C	2,LS
97.111	101 347+*e*	1 131 100+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4D^\circ$	5/2–7/2	6–8	7.97E+02	1.50E−01	2.88E−01	−0.045	B	2,LS
97.130	101 347+*e*	1 130 900+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4D^\circ$	5/2–5/2	6–6	2.39E+02	3.38E−02	6.48E−02	−0.693	C	2,LS
97.153	101 347+*e*	1 130 650+*e*	$2s2p^2-2s2p(^3P^\circ)4d$	$^4P-^4D^\circ$	5/2–3/2	6–4	3.98E+01	3.75E−03	7.20E−03	−1.647	D	2,LS

Ne VI—Continued

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} ($10^8 s^{-1}$)	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
98.131	0	1 019 050	$2s^22p-2s^24d$	$^2P^\circ-^2D$	1/2–3/2	2–4	4.24E+02	1.22E−01	7.91E−02	−0.611	C	2,LS
98.257	1 310	1 019 050	$2s^22p-2s^24d$	$^2P^\circ-^2D$	3/2–3/2	4–4	8.44E+01	1.22E−02	1.58E−02	−1.311	C	2,LS
98.257	1 310	1 019 050	$2s^22p-2s^24d$	$^2P^\circ-^2D$	3/2–5/2	4–6	5.07E+02	1.10E−01	1.42E−01	−0.357	B	2,LS
100.604	0	994 000	$2s^22p-2s2p(^1P^\circ)3p$	$^2P^\circ-^2S$	1/2–1/2	2–2	1.13E+01	1.71E−03	1.13E−03	−2.466	D	2,LS
100.736	1 310	994 000	$2s^22p-2s2p(^1P^\circ)3p$	$^2P^\circ-^2S$	3/2–1/2	4–2	2.25E+01	1.71E−03	2.27E−03	−2.165	D	2,LS
101.220	0	987 950	$2s^22p-2s2p(^1P^\circ)3p$	$^2P^\circ-^2P$	1/2–3/2	2–4	3.02E+01	9.27E−03	6.18E−03	−1.732	D	2,LS
101.250	0	987 650	$2s^22p-2s2p(^1P^\circ)3p$	$^2P^\circ-^2P$	1/2–1/2	2–2	1.21E+02	1.85E−02	1.24E−02	−1.431	C	2,LS
101.354	1 310	987 950	$2s^22p-2s2p(^1P^\circ)3p$	$^2P^\circ-^2P$	3/2–3/2	4–4	1.50E+02	2.31E−02	3.09E−02	−1.034	C	2,LS
101.385	1 310	987 650	$2s^22p-2s2p(^1P^\circ)3p$	$^2P^\circ-^2P$	3/2–1/2	4–2	6.01E+01	4.63E−03	6.18E−03	−1.733	D	2,LS
101.420	0	986 000	$2s^22p-2s2p(^1P^\circ)3p$	$^2P^\circ-^2D$	1/2–3/2	2–4	6.36E+01	1.96E−02	1.31E−02	−1.406	C	2,LS
101.540	1 310	986 140	$2s^22p-2s2p(^1P^\circ)3p$	$^2P^\circ-^2D$	3/2–5/2	4–6	7.61E+01	1.76E−02	2.36E−02	−1.152	C	2,LS
101.555	1 310	986 000	$2s^22p-2s2p(^1P^\circ)3p$	$^2P^\circ-^2D$	3/2–3/2	4–4	1.27E+01	1.96E−03	2.62E−03	−2.106	D	2,LS
101.729	0	983 000	$2s^22p-2s^24s$	$^2P^\circ-^2S$	1/2–1/2	2–2	8.95E+01	1.39E−02	9.30E−03	−1.557	D	2,LS
101.752	100 261+*e*	1 083 040+*e*	$2s2p^2-2s2p(^3P)3p$	$^4P-^4S^\circ$	1/2–3/2	2–4	4.79E+01	1.49E−02	9.97E−03	−1.527	D	2,LS
101.798	100 704+*e*	1 083 040+*e*	$2s2p^2-2s2p(^3P)3p$	$^4P-^4S^\circ$	3/2–3/2	4–4	9.57E+01	1.49E−02	1.99E−02	−1.226	C	2,LS
101.865	1 310	983 000	$2s^22p-2s^24s$	$^2P^\circ-^2S$	3/2–1/2	4–2	1.78E+02	1.39E−02	1.86E−02	−1.256	C	2,LS
101.865	101 347+*e*	1 083 040+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4S^\circ$	5/2–3/2	6–4	1.43E+02	1.49E−02	2.99E−02	−1.050	C	2,LS
103.580	100 704+*e*	1 066 140+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4P^\circ$	3/2–5/2	4–6	8.90E+01	2.15E−02	2.93E−02	−1.066	C	2,LS
103.594	100 261+*e*	1 065 570+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4P^\circ$	1/2–3/2	2–4	1.24E+02	3.97E−02	2.71E−02	−1.100	C	2,LS
103.633	100 261+*e*	1 065 200+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4P^\circ$	1/2–1/2	2–2	4.94E+01	7.95E−03	5.42E−03	−1.799	D	2,LS
103.641	100 704+*e*	1 065 570+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4P^\circ$	3/2–3/2	4–4	3.95E+01	6.36E−03	8.67E−03	−1.595	D	2,LS
103.649	101 347+*e*	1 066 140+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4P^\circ$	5/2–5/2	6–6	2.07E+02	3.34E−02	6.83E−02	−0.699	C	2,LS
103.681	100 704+*e*	1 065 200+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4P^\circ$	3/2–1/2	4–2	2.46E+02	1.99E−02	2.71E−02	−1.100	C	2,LS
103.710	101 347+*e*	1 065 570+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4P^\circ$	5/2–3/2	6–4	1.33E+02	1.43E−02	2.93E−02	−1.067	C	2,LS
103.973	100 261+*e*	1 062 050+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4D^\circ$	1/2–3/2	2–4	7.74E+01	2.51E−02	1.72E−02	−1.300	C	2,LS
103.973	100 261+*e*	1 062 050+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4D^\circ$	1/2–1/2	2–2	1.55E+02	2.51E−02	1.72E−02	−1.300	C	2,LS
104.021	100 704+*e*	1 062 050+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4D^\circ$	3/2–1/2	4–2	3.09E+01	2.51E−03	3.43E−03	−1.999	D	2,LS
104.021	100 704+*e*	1 062 050+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4D^\circ$	3/2–3/2	4–4	9.89E+01	1.60E−02	2.20E−02	−1.193	C	2,LS
104.021	100 704+*e*	1 062 050+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4D^\circ$	3/2–5/2	4–6	1.30E+02	3.16E−02	4.33E−02	−0.899	C	2,LS
104.090	101 347+*e*	1 062 050+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4D^\circ$	5/2–5/2	6–6	5.55E+01	9.02E−03	1.85E−02	−1.267	C	2,LS
104.090	101 347+*e*	1 062 050+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4D^\circ$	5/2–7/2	6–8	1.85E+02	4.01E−02	8.24E−02	−0.619	C	2,LS
104.090	101 347+*e*	1 062 050+*e*	$2s2p^2-2p^2(^3P)3p$	$^4P-^4D^\circ$	5/2–3/2	6–4	9.25E+00	1.00E−03	2.06E−03	−2.221	D	2,LS
104.170	178 992	1 138 960	$2s2p^2-2s2p(^3P^\circ)4d$	$^2D-^2F^\circ$	5/2–7/2	6–8	6.59E+02	1.43E−01	2.94E−01	−0.067	B	2,LS
104.257	178 992	1 138 160	$2s2p^2-2s2p(^3P^\circ)4d$	$^2D-^2F^\circ$	5/2–5/2	6–6	4.38E+01	7.14E−03	1.47E−02	−1.368	C	2,LS
104.260	179 021	1 138 160	$2s2p^2-2s2p(^3P^\circ)4d$	$^2D-^2F^\circ$	3/2–5/2	4–6	6.13E+02	1.50E−01	2.06E−01	−0.222	B	2,LS
104.930	178 992	1 132 010	$2s2p^2-2s2p(^3P^\circ)4d$	$^2D-^2D^\circ$	5/2–3/2	6–4	1.51E+01	1.66E−03	3.45E−03	−2.001	D	2,LS
104.930	178 992	1 132 010	$2s2p^2-2s2p(^3P^\circ)4d$	$^2D-^2D^\circ$	5/2–5/2	6–6	1.41E+02	2.33E−02	4.83E−02	−0.855	C	2,LS
104.933	179 021	1 132 010	$2s2p^2-2s2p(^3P^\circ)4d$	$^2D-^2D^\circ$	3/2–5/2	4–6	1.01E+01	2.49E−03	3.45E−03	−2.001	D	2,LS
104.933	179 021	1 132 010	$2s2p^2-2s2p(^3P^\circ)4d$	$^2D-^2D^\circ$	3/2–3/2	4–4	1.36E+02	2.25E−02	3.10E−02	−1.047	C	2,LS
107.600	178 992	1 108 360	$2s2p^2-2p^2(^1D)3p$	$^2D-^2D^\circ$	5/2–5/2	6–6	2.34E+02	4.06E−02	8.63E−02	−0.613	C	2,LS
107.600	178 992	1 108 360	$2s2p^2-2p^2(^1D)3p$	$^2D-^2D^\circ$	5/2–3/2	6–4	2.51E+01	2.90E−03	6.16E−03	−1.759	D	2,LS
107.603	179 021	1 108 360	$2s2p^2-2p^2(^1D)3p$	$^2D-^2D^\circ$	3/2–3/2	4–4	2.26E+02	3.91E−02	5.55E−02	−0.805	C	2,LS
107.603	179 021	1 108 360	$2s2p^2-2p^2(^1D)3p$	$^2D-^2D^\circ$	3/2–5/2	4–6	1.67E+01	4.35E−03	6.16E−03	−1.760	D	2,LS
109.030	178 992	1 096 170	$2s2p^2-2p^2(^1D)3p$	$^2D-^2F^\circ$	5/2–7/2	6–8	1.70E+02	4.03E−02	8.68E−02	−0.617	C	2,LS
109.071	178 992	1 095 830	$2s2p^2-2p^2(^1D)3p$	$^2D-^2F^\circ$	5/2–5/2	6–6	1.13E+01	2.01E−03	4.34E−03	−1.918	D	2,LS
109.074	179 021	1 095 830	$2s2p^2-2p^2(^1D)3p$	$^2D-^2F^\circ$	3/2–5/2	4–6	1.58E+02	4.23E−02	6.08E−02	−0.772	C	2,LS
109.306	0	914 860	$2s^22p-2s2p(^3P^\circ)3p$	$^2P^\circ-^2S$	1/2–1/2	2–2	1.63E+02	2.91E−02	2.10E−02	−1.235	C	2,LS
109.463	1 310	914 860	$2s^22p-2s2p(^3P^\circ)3p$	$^2P^\circ-^2S$	3/2–1/2	4–2	3.24E+02	2.91E−02	4.19E−02	−0.934	C	2,LS
111.099	0	900 100	$2s^22p-2s2p(^3P^\circ)3p$	$^2P^\circ-^2D$	1/2–3/2	2–4	4.54E+02	1.68E−01	1.23E−01	−0.473	B	2,LS
111.162	1 310	900 900	$2s^22p-2s2p(^3P^\circ)3p$	$^2P^\circ-^2D$	3/2–5/2	4–6	5.44E+02	1.51E−01	2.21E−01	−0.218	B	2,LS
111.261	1 310	900 100	$2s^22p-2s2p(^3P^\circ)3p$	$^2P^\circ-^2D$	3/2–3/2	4–4	9.04E+01	1.68E−02	2.46E−02	−1.173	C	2,LS
113.286	249 292	1 132 010	$2s2p^2-2s2p(^3P^\circ)4d$	$^2P-^2D^\circ$	1/2–3/2	2–4	1.19E+02	4.57E−02	3.41E−02	−1.039	C	2,LS
113.392	250 112	1 132 010	$2s2p^2-2s2p(^3P^\circ)4d$	$^2P-^2D^\circ$	3/2–5/2	4–6	1.42E+02	4.11E−02	6.14E−02	−0.784	C	2,LS
113.392	250 112	1 132 010	$2s2p^2-2s2p(^3P^\circ)4d$	$^2P-^2D^\circ$	3/2–3/2	4–4	2.37E+01	4.57E−03	6.82E−03	−1.738	D	2,LS
114.069	0	876 660	$2s^22p-2s2p(^3P^\circ)3p$	$^2P^\circ-^2P$	1/2–3/2	2–4	8.87E+01	3.46E−02	2.60E−02	−1.160	C	2,LS
114.130	0	876 190	$2s^22p-2s2p(^3P^\circ)3p$	$^2P^\circ-^2P$	1/2–1/2	2–2	3.54E+02	6.92E−02	5.20E−02	−0.859	C	2,LS
114.240	1 310	876 660	$2s^22p-2s2p(^3P^\circ)3p$	$^2P^\circ-^2P$	3/2–3/2	4–4	4.42E+02	8.64E−02	1.30E−01	−0.461	B	2,LS
114.301	1 310	876 190	$2s^22p-2s2p(^3P^\circ)3p$	$^2P^\circ-^2P$	3/2–1/2	4–2	1.76E+02	1.73E−02	2.60E−02	−1.161	C	2,LS
116.405	249 292	1 108 360	$2s2p^2-2p^2(^1D)3p$	$^2P-^2D^\circ$	1/2–3/2	2–4	1.63E+02	6.61E−02	5.07E−02	−0.879	C	2,LS
116.516	250 112	1 108 360	$2s2p^2-2p^2(^1D)3p$	$^2P-^2D^\circ$	3/2–3/2	4–4	3.25E+01	6.61E−03	1.01E−02	−1.578	C	2,LS
116.516	250 112	1 108 360	$2s2p^2-2p^2(^1D)3p$	$^2P-^2D^\circ$	3/2–5/2	4–6	1.95E+02	5.95E−02	9.12E−02	−0.624	C	2,LS
117.187	178 992	1 032 330	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2P^\circ$	5/2–3/2	6–4	2.23E+01	3.06E−03	7.08E−03	−1.736	D	2,LS

Ne VI—Continued

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} ($10^8 s^{-1}$)	f_{ik}	S (a.u.)	$\log g_i f$	Acc.	Ref.
117.191	179 021	1 032 330	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2P^\circ$	3/2–1/2	4–2	2.48E+01	2.55E−03	3.93E−03	−1.992	D	2,LS
117.191	179 021	1 032 330	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2P^\circ$	3/2–3/2	4–4	2.48E+00	5.10E−04	7.87E−04	−2.691	D	2,LS
117.476	178 992	1 030 230	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2D^\circ$	5/2–5/2	6–6	2.03E+02	4.19E−02	9.73E−02	−0.599	C	2,LS
117.480	179 021	1 030 230	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2D^\circ$	3/2–5/2	4–6	1.45E+01	4.49E−03	6.95E−03	−1.746	D	2,LS
117.493	178 992	1 030 110	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2D^\circ$	5/2–3/2	6–4	2.17E+01	2.99E−03	6.95E−03	−1.746	D	2,LS
117.497	179 021	1 030 110	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2D^\circ$	3/2–3/2	4–4	1.95E+02	4.04E−02	6.25E−02	−0.791	C	2,LS
118.623?	178 992	1 022 000+s	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2F^\circ$	5/2–5/2	6–6	3.76E+01	7.93E−03	1.86E−02	−1.323	C	2,LS
118.623?	178 992	1 022 000+s	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2F^\circ$	5/2–7/2	6–8	5.64E+02	1.59E−01	3.71E−01	−0.022	B	2,LS
118.627?	179 021	1 022 000+s	$2s2p^2-2s2p(^1P^\circ)3d$	$^2D-^2F^\circ$	3/2–5/2	4–6	5.26E+02	1.66E−01	2.60E−01	−0.177	B	2,LS
120.208?	100 261+e	932 150+u	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4P^\circ$	1/2–1/2	2–2	2.07E+02	4.47E−02	3.54E−02	−1.048	C	2,LS
120.244?	100 261+e	931 900+u	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4P^\circ$	1/2–3/2	2–4	5.16E+02	2.24E−01	1.77E−01	−0.349	B	2,LS
120.272?	100 704+e	932 150+u	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4P^\circ$	3/2–1/2	4–2	1.03E+03	1.12E−01	1.77E−01	−0.349	B	2,LS
120.309?	100 704+e	931 900+u	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4P^\circ$	3/2–3/2	4–4	1.65E+02	3.58E−02	5.67E−02	−0.844	C	2,LS
120.352?	100 704+e	931 600+u	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4P^\circ$	3/2–5/2	4–6	3.70E+02	1.21E−01	1.91E−01	−0.316	B	2,LS
120.402?	101 347+e	931 900+u	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4P^\circ$	5/2–3/2	6–4	5.55E+02	8.04E−02	1.91E−01	−0.317	B	2,LS
120.445?	101 347+e	931 600+u	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4P^\circ$	5/2–5/2	6–6	8.62E+02	1.88E−01	4.46E−01	0.051	B	2,LS
121.049	100 261+e	926 370+e	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4D^\circ$	1/2–3/2	2–4	9.58E+02	4.21E−01	3.35E−01	−0.075	B	2,LS
121.064	100 261+e	926 270+e	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4D^\circ$	1/2–1/2	2–2	1.92E+03	4.21E−01	3.35E−01	−0.075	B	2,LS
121.100	100 704+e	926 470+e	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4D^\circ$	3/2–5/2	4–6	1.61E+03	5.30E−01	8.45E−01	0.326	B	2,LS
121.114	100 704+e	926 370+e	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4D^\circ$	3/2–3/2	4–4	1.22E+03	2.69E−01	4.29E−01	0.032	B	2,LS
121.129	100 704+e	926 270+e	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4D^\circ$	3/2–1/2	4–2	3.82E+02	4.21E−02	6.71E−02	−0.774	C	2,LS
121.150	101 347+e	926 770+e	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4D^\circ$	5/2–7/2	6–8	2.29E+03	6.73E−01	1.61E+00	0.606	B	2,LS
121.194	101 347+e	926 470+e	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4D^\circ$	5/2–5/2	6–6	6.87E+02	1.51E−01	3.62E−01	−0.042	B	2,LS
121.209	101 347+e	926 370+e	$2s2p^2-2s2p(^3P^\circ)3d$	$^4P-^4D^\circ$	5/2–3/2	6–4	1.14E+02	1.68E−02	4.02E−02	−0.996	C	2,LS
122.488	0	816 405	$2s^22p-2s^23d$	$^2P^\circ-^2D$	1/2–3/2	2–4	1.26E+03	5.68E−01	4.58E−01	0.055	A	1
122.685	1 310	816 405	$2s^22p-2s^23d$	$^2P^\circ-^2D$	3/2–5/2	4–6	1.51E+03	5.11E−01	8.26E−01	0.311	A	1
122.685	1 310	816 405	$2s^22p-2s^23d$	$^2P^\circ-^2D$	3/2–3/2	4–4	2.52E+02	5.69E−02	9.19E−02	−0.643	B	1
127.707?	359 460	1 142 500+e	$2p^3-2p^2(^1D)3d$	$^2D^\circ-^2P$	3/2–3/2	4–4	3.57E+01	8.73E−03	1.47E−02	−1.457	C	2,LS
127.707?	359 460	1 142 500+e	$2p^3-2p^2(^1D)3d$	$^2D^\circ-^2P$	5/2–3/2	6–4	3.21E+02	5.24E−02	1.32E−01	−0.503	B	2,LS
127.708	249 292	1 032 330	$2s2p^2-2s2p(^1P^\circ)3d$	$^2P-^2P^\circ$	1/2–1/2	2–2	5.23E+02	1.28E−01	1.08E−01	−0.592	B	2,LS
127.708	249 292	1 032 330	$2s2p^2-2s2p(^1P^\circ)3d$	$^2P-^2P^\circ$	1/2–3/2	2–4	1.31E+02	6.40E−02	5.38E−02	−0.893	C	2,LS
127.756?	359 460	1 142 220+e	$2p^3-2p^2(^1D)3d$	$^2D^\circ-^2P$	3/2–1/2	4–2	3.57E+02	4.36E−02	7.34E−02	−0.758	C	2,LS
127.842	250 112	1 032 330	$2s2p^2-2s2p(^1P^\circ)3d$	$^2P-^2P^\circ$	3/2–3/2	4–4	6.52E+02	1.60E−01	2.69E−01	−0.194	B	2,LS
127.842	250 112	1 032 330	$2s2p^2-2s2p(^1P^\circ)3d$	$^2P-^2P^\circ$	3/2–1/2	4–2	2.61E+02	3.20E−02	5.38E−02	−0.893	C	2,LS
128.071	249 292	1 030 110	$2s2p^2-2s2p(^1P^\circ)3d$	$^2P-^2D^\circ$	1/2–3/2	2–4	1.29E+03	6.37E−01	5.37E−01	0.105	B	2,LS
128.180	359 460	1 139 610	$2p^3-2p^2(^1D)3d$	$^2D^\circ-^2F$	5/2–7/2	6–8	1.01E+03	3.31E−01	8.39E−01	0.299	B	2,LS
128.180	359 460	1 139 610	$2p^3-2p^2(^1D)3d$	$^2D^\circ-^2F$	3/2–5/2	4–6	9.42E+02	3.48E−01	5.88E−01	0.144	B	2,LS
128.180	359 460	1 139 610	$2p^3-2p^2(^1D)3d$	$^2D^\circ-^2F$	5/2–5/2	6–6	6.73E+01	1.66E−02	4.20E−02	−1.002	C	2,LS
128.186	250 112	1 030 230	$2s2p^2-2s2p(^1P^\circ)3d$	$^2P-^2D^\circ$	3/2–5/2	4–6	1.55E+03	5.72E−01	9.66E−01	0.360	B	2,LS
128.205	250 112	1 030 110	$2s2p^2-2s2p(^1P^\circ)3d$	$^2P-^2D^\circ$	3/2–3/2	4–4	2.58E+02	6.36E−02	1.07E−01	−0.595	B	2,LS
129.268	179 021	952 610	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2P^\circ$	3/2–1/2	4–2	8.75E+00	1.10E−03	1.87E−03	−2.358	D	2,LS
129.331	178 992	952 200	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2P^\circ$	5/2–3/2	6–4	7.87E+00	1.32E−03	3.36E−03	−2.103	D	2,LS
129.336	179 021	952 200	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2P^\circ$	3/2–3/2	4–4	8.74E−01	2.19E−04	3.73E−04	−3.057	D	2,LS
129.684?	249 292	1 020 400+s	$2s2p^2-2s^24p$	$^2P-^2P^\circ$	1/2–3/2	2–4	5.68E+00	2.86E−03	2.44E−03	−2.242	D	2,LS
129.700?	249 292	1 020 300+s	$2s2p^2-2s^24p$	$^2P-^2P^\circ$	1/2–1/2	2–2	2.27E+01	5.72E−03	4.89E−03	−1.941	D	2,LS
129.822?	250 112	1 020 400+s	$2s2p^2-2s^24p$	$^2P-^2P^\circ$	3/2–3/2	4–4	2.83E+01	7.15E−03	1.22E−02	−1.544	C	2,LS
129.838?	250 112	1 020 300+s	$2s2p^2-2s^24p$	$^2P-^2P^\circ$	3/2–1/2	4–2	1.13E+01	1.43E−03	2.44E−03	−2.243	D	2,LS
130.258	178 992	946 700	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2F^\circ$	5/2–7/2	6–8	1.45E+03	4.91E−01	1.26E+00	0.469	B	2,LS
130.394	178 992	945 900	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2F^\circ$	5/2–5/2	6–6	9.62E+01	2.45E−02	6.31E−02	−0.833	C	2,LS
130.399	179 021	945 900	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2F^\circ$	3/2–5/2	4–6	1.35E+03	5.15E−01	8.84E−01	0.314	B	2,LS
130.859	359 460	1 123 640	$2p^3-2s2p(^3P^\circ)4p$	$^2D^\circ-^2D$	3/2–3/2	4–4	1.36E+02	3.50E−02	6.04E−02	−0.854	C	2,LS
130.859	359 460	1 123 640	$2p^3-2s2p(^3P^\circ)4p$	$^2D^\circ-^2D$	5/2–5/2	6–6	1.42E+02	3.63E−02	9.39E−02	−0.662	C	2,LS
130.859	359 460	1 123 640	$2p^3-2s2p(^3P^\circ)4p$	$^2D^\circ-^2D$	5/2–3/2	6–4	1.52E+01	2.59E−03	6.71E−03	−1.808	D	2,LS
130.859	359 460	1 123 640	$2p^3-2s2p(^3P^\circ)4p$	$^2D^\circ-^2D$	3/2–5/2	4–6	1.01E+01	3.89E−03	6.71E−03	−1.808	D	2,LS
131.360	178 992	940 260	$2s2p^2-2s2p(^1P^\circ)3s$	$^2D-^2P^\circ$	5/2–3/2	6–4	1.58E+02	2.73E−02	7.08E−02	−0.786	C	2,LS
131.365	179 021	940 260	$2s2p^2-2s2p(^1P^\circ)3s$	$^2D-^2P^\circ$	3/2–1/2	4–2	1.76E+02	2.27E−02	3.93E−02	−1.041	C	2,LS
131.365	179 021	940 260	$2s2p^2-2s2p(^1P^\circ)3s$	$^2D-^2P^\circ$	3/2–3/2	4–4	1.76E+01	4.55E−03	7.87E−03	−1.740	D	2,LS
133.471	178 992	928 220	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2D^\circ$	5/2–5/2	6–6	5.84E+02	1.56E−01	4.11E−01	−0.029	B	2,LS
133.476	179 021	928 220	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2D^\circ$	3/2–5/2	4–6	4.17E+01	1.67E−02	2.94E−02	−1.175	C	2,LS
133.506	178 992	928 020	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2D^\circ$	5/2–3/2	6–4	6.25E+01	1.11E−02	2.94E−02	−1.175	C	2,LS
133.512	179 021	928 020	$2s2p^2-2s2p(^3P^\circ)3d$	$^2D-^2D^\circ$	3/2–3/2	4–4	5.63E+02	1.50E−01	2.64E−01	−0.221	B	2,LS
135.774?	405 984	1 142 500+e	$2p^3-2p^2(^1D)3d$	$^2P^\circ-^2P$	1/2–3/2	2–4	1.49E+02	8.21E−02	7.34E−02	−0.785	C	2,LS

Ne VI—Continued

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
135.788?	406 056	1 142 500+e	$2p^3-2p^2(^1D)3d$	$^2P^\circ-^2P$	3/2–3/2	4–4	7.43E+02	2.05E−01	3.67E−01	−0.086	B	2,LS
135.830?	405 984	1 142 200+e	$2p^3-2p^2(^1D)3d$	$^2P^\circ-^2P$	1/2–1/2	2–2	5.94E+02	1.64E−01	1.47E−01	−0.484	B	2,LS
135.843?	406 056	1 142 200+e	$2p^3-2p^2(^1D)3d$	$^2P^\circ-^2P$	3/2–1/2	4–2	2.97E+02	4.10E−02	7.34E−02	−0.785	C	2,LS
136.220	100 704+e	834 810+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^4P-^4P^\circ$	3/2–5/2	4–6	1.09E+02	4.54E−02	8.15E−02	−0.741	B	1
136.279	100 261+e	834 050+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^4P-^4P^\circ$	1/2–3/2	2–4	1.50E+02	8.37E−02	7.51E−02	−0.776	B	1
136.340	101 347+e	834 810+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^4P-^4P^\circ$	5/2–5/2	6–6	2.53E+02	7.05E−02	1.90E−01	−0.373	A	1
136.361	100 704+e	834 050+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^4P-^4P^\circ$	3/2–3/2	4–4	4.81E+01	1.34E−02	2.41E−02	−1.270	B	1
136.368	100 261+e	833 570+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^4P-^4P^\circ$	1/2–1/2	2–2	6.03E+01	1.68E−02	1.51E−02	−1.473	B	1
136.451	100 704+e	833 570+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^4P-^4P^\circ$	3/2–1/2	4–2	2.99E+02	4.18E−02	7.51E−02	−0.777	B	1
136.481	101 347+e	834 050+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^4P-^4P^\circ$	5/2–3/2	6–4	1.62E+02	3.02E−02	8.13E−02	−0.743	B	1
138.387	0	722 610	$2s^22p-2s^23s$	$^2P^\circ-^2S$	1/2–1/2	2–2	9.90E+01	2.84E−02	2.59E−02	−1.245	B	1
138.551	230 853	952 610	$2s2p^2-2s2p(^3P^\circ)3d$	$^2S-^2P^\circ$	1/2–1/2	2–2	7.40E+02	2.13E−01	1.94E−01	−0.371	B	2,LS
138.630	230 853	952 200	$2s2p^2-2s2p(^3P^\circ)3d$	$^2S-^2P^\circ$	1/2–3/2	2–4	7.39E+02	4.26E−01	3.89E−01	−0.070	B	2,LS
138.639	1 310	722 610	$2s^22p-2s^23s$	$^2P^\circ-^2S$	3/2–1/2	4–2	1.99E+02	2.86E−02	5.23E−02	−0.941	B	1
139.343	405 984	1 123 640	$2p^3-2s2p(^3P^\circ)4p$	$^2P^\circ-^2D$	1/2–3/2	2–4	1.43E+02	8.33E−02	7.64E−02	−0.779	C	2,LS
139.357	406 056	1 123 640	$2p^3-2s2p(^3P^\circ)4p$	$^2P^\circ-^2D$	3/2–3/2	4–4	2.86E+01	8.33E−03	1.53E−02	−1.478	C	2,LS
139.357	406 056	1 123 640	$2p^3-2s2p(^3P^\circ)4p$	$^2P^\circ-^2D$	3/2–5/2	4–6	1.72E+02	7.49E−02	1.38E−01	−0.523	B	2,LS
140.963	230 853	940 260	$2s2p^2-2s2p(^1P^\circ)3s$	$^2S-^2P^\circ$	1/2–3/2	2–4	1.84E+02	1.09E−01	1.02E−01	−0.660	B	2,LS
140.963	230 853	940 260	$2s2p^2-2s2p(^1P^\circ)3s$	$^2S-^2P^\circ$	1/2–1/2	2–2	1.84E+02	5.47E−02	5.08E−02	−0.961	C	2,LS
142.183	249 292	952 610	$2s2p^2-2s2p(^3P^\circ)3d$	$^2P-^2P^\circ$	1/2–1/2	2–2	6.63E+01	2.01E−02	1.88E−02	−1.396	C	2,LS
142.266	249 292	952 200	$2s2p^2-2s2p(^3P^\circ)3d$	$^2P-^2P^\circ$	1/2–3/2	2–4	1.66E+01	1.00E−02	9.41E−03	−1.697	D	2,LS
142.349	250 112	952 610	$2s2p^2-2s2p(^3P^\circ)3d$	$^2P-^2P^\circ$	3/2–1/2	4–2	3.31E+01	5.02E−03	9.41E−03	−1.697	D	2,LS
142.432	250 112	952 200	$2s2p^2-2s2p(^3P^\circ)3d$	$^2P-^2P^\circ$	3/2–3/2	4–4	8.25E+01	2.51E−02	4.70E−02	−0.999	C	2,LS
142.521	321 579+e	1 023 230+e	$2p^3-2p^2(^3P)3s$	$^4S^\circ-^4P$	3/2–5/2	4–6	1.90E+02	8.69E−02	1.63E−01	−0.459	B	2,LS
142.521	321 579+e	1 023 230+e	$2p^3-2p^2(^3P)3s$	$^4S^\circ-^4P$	3/2–1/2	4–2	1.90E+02	2.90E−02	5.44E−02	−0.936	C	2,LS
142.521	321 579+e	1 023 230+e	$2p^3-2p^2(^3P)3s$	$^4S^\circ-^4P$	3/2–3/2	4–4	1.90E+02	5.79E−02	1.09E−01	−0.635	B	2,LS
143.519	359 460	1 056 230	$2p^3-2p^2(^1D)3s$	$^2D^\circ-^2D$	5/2–5/2	6–6	2.31E+02	7.13E−02	2.02E−01	−0.369	B	2,LS
143.519	359 460	1 056 230	$2p^3-2p^2(^1D)3s$	$^2D^\circ-^2D$	3/2–3/2	4–4	2.23E+02	6.88E−02	1.30E−01	−0.561	B	2,LS
143.519	359 460	1 056 230	$2p^3-2p^2(^1D)3s$	$^2D^\circ-^2D$	5/2–3/2	6–4	2.47E+01	5.09E−03	1.44E−02	−1.515	C	2,LS
143.519	359 460	1 056 230	$2p^3-2p^2(^1D)3s$	$^2D^\circ-^2D$	3/2–5/2	4–6	1.65E+01	7.64E−03	1.44E−02	−1.515	C	2,LS
144.725	249 292	940 260	$2s2p^2-2s2p(^1P^\circ)3s$	$^2P-^2P^\circ$	1/2–3/2	2–4	4.35E+01	2.73E−02	2.60E−02	−1.262	C	2,LS
144.725	249 292	940 260	$2s2p^2-2s2p(^1P^\circ)3s$	$^2P-^2P^\circ$	1/2–1/2	2–2	1.74E+02	5.47E−02	5.21E−02	−0.961	C	2,LS
144.896	250 112	940 260	$2s2p^2-2s2p(^1P^\circ)3s$	$^2P-^2P^\circ$	3/2–1/2	4–2	8.67E+01	1.36E−02	2.60E−02	−1.263	C	2,LS
144.896	250 112	940 260	$2s2p^2-2s2p(^1P^\circ)3s$	$^2P-^2P^\circ$	3/2–3/2	4–4	2.17E+02	6.82E−02	1.30E−01	−0.564	B	2,LS
147.334	249 292	928 020	$2s2p^2-2s2p(^3P^\circ)3d$	$^2P-^2D^\circ$	1/2–3/2	2–4	1.62E+02	1.06E−01	1.02E−01	−0.676	B	2,LS
147.469	250 112	928 220	$2s2p^2-2s2p(^3P^\circ)3d$	$^2P-^2D^\circ$	3/2–5/2	4–6	1.94E+02	9.49E−02	1.84E−01	−0.421	B	2,LS
147.513	250 112	928 020	$2s2p^2-2s2p(^3P^\circ)3d$	$^2P-^2D^\circ$	3/2–3/2	4–4	3.23E+01	1.05E−02	2.05E−02	−1.375	C	2,LS
147.587	178 992	856 560	$2s2p^2-2s2p(^3P^\circ)3s$	$^2D-^2P^\circ$	5/2–3/2	6–4	1.72E+02	3.75E−02	1.09E−01	−0.648	B	2,LS
147.593	179 021	856 560	$2s2p^2-2s2p(^3P^\circ)3s$	$^2D-^2P^\circ$	3/2–3/2	4–4	1.91E+01	6.24E−03	1.21E−02	−1.603	C	2,LS
147.772	179 021	855 740	$2s2p^2-2s2p(^3P^\circ)3s$	$^2D-^2P^\circ$	3/2–1/2	4–2	1.90E+02	3.12E−02	6.07E−02	−0.904	C	2,LS
148.966	100 261	771 556.7	$2s2p^2-2s^23p$	$^4P-^2P^\circ$	1/2–3/2	2–4	8.41E−05	5.60E−08	5.49E−08	−6.951	E	1
149.037	100 261	771 234.1	$2s2p^2-2s^23p$	$^4P-^2P^\circ$	1/2–1/2	2–2	4.01E−04	1.33E−07	1.31E−07	−6.574	D	1
149.064	100 704	771 556.7	$2s2p^2-2s^23p$	$^4P-^2P^\circ$	3/2–3/2	4–4	4.50E−05	1.50E−08	2.94E−08	−7.223	E	1
149.136	100 704	771 234.1	$2s2p^2-2s^23p$	$^4P-^2P^\circ$	3/2–1/2	4–2	6.72E−04	1.12E−07	2.20E−07	−6.349	D	1
149.207	101 347	771 556.7	$2s2p^2-2s^23p$	$^4P-^2P^\circ$	5/2–3/2	6–4	2.59E−03	5.77E−07	1.70E−06	−5.461	D	1
152.481?	178 992	834 810+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^2D-^4P^\circ$	5/2–5/2	6–6	1.86E−02	6.47E−06	1.95E−05	−4.411	C	1
152.488?	179 021	834 810+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^2D-^4P^\circ$	3/2–5/2	4–6	1.15E−03	6.02E−07	1.21E−06	−5.618	D	1
152.658?	178 992	834 050+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^2D-^4P^\circ$	5/2–3/2	6–4	3.06E−02	7.13E−06	2.15E−05	−4.369	C	1
152.665?	179 021	834 050+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^2D-^4P^\circ$	3/2–3/2	4–4	1.37E−02	4.79E−06	9.63E−06	−4.718	D	1
152.777?	179 021	833 570+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^2D-^4P^\circ$	3/2–1/2	4–2	1.55E−02	2.72E−06	5.47E−06	−4.964	D	1
153.788	405 984	1 056 230	$2p^3-2p^2(^1D)3s$	$^2P^\circ-^2D$	1/2–3/2	2–4	6.05E+01	4.29E−02	4.35E−02	−1.066	C	2,LS
153.805	406 056	1 056 230	$2p^3-2p^2(^1D)3s$	$^2P^\circ-^2D$	3/2–3/2	4–4	1.21E+01	4.29E−03	8.69E−03	−1.765	D	2,LS
153.805	406 056	1 056 230	$2p^3-2p^2(^1D)3s$	$^2P^\circ-^2D$	3/2–5/2	4–6	7.26E+01	3.86E−02	7.82E−02	−0.811	C	2,LS
159.112	359 460	987 950	$2p^3-2s2p(^1P^\circ)3p$	$^2D^\circ-^2P$	5/2–3/2	6–4	4.96E+01	1.25E−02	3.94E−02	−1.124	C	2,LS
159.112	359 460	987 950	$2p^3-2s2p(^1P^\circ)3p$	$^2D^\circ-^2P$	3/2–3/2	4–4	5.51E+00	2.09E−03	4.38E−03	−2.078	D	2,LS
159.188	359 460	987 650	$2p^3-2s2p(^1P^\circ)3p$	$^2D^\circ-^2P$	3/2–1/2	4–2	5.50E+01	1.04E−02	2.19E−02	−1.379	C	2,LS
159.571	359 460	986 140	$2p^3-2s2p(^1P^\circ)3p$	$^2D^\circ-^2D$	5/2–5/2	6–6	1.72E+00	6.57E−04	2.07E−03	−2.404	D	2,LS
159.571	359 460	986 140	$2p^3-2s2p(^1P^\circ)3p$	$^2D^\circ-^2D$	3/2–5/2	4–6	1.23E−01	7.04E−05	1.48E−04	−3.550	D	2,LS
159.607	359 460	986 000	$2p^3-2s2p(^1P^\circ)3p$	$^2D^\circ-^2D$	3/2–3/2	4–4	1.66E+00	6.34E−04	1.33E−03	−2.596	D	2,LS
159.607	359 460	986 000	$2p^3-2s2p(^1P^\circ)3p$	$^2D^\circ-^2D$	5/2–3/2	6–4	1.84E−01	4.69E−05	1.48E−04	−3.550	D	2,LS
159.819	230 853	856 560	$2s2p^2-2s2p(^3P^\circ)3s$	$^2S-^2P^\circ$	1/2–3/2	2–4	5.72E+01	4.38E−02	4.61E−02	−1.058	C	2,LS
160.029	230 853	855 740	$2s2p^2-2s2p(^3P^\circ)3s$	$^2S-^2P^\circ$	1/2–1/2	2–2	5.69E+01	2.19E−02	2.30E−02	−1.359	C	2,LS

Ne VI—Continued

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
164.672	249 292	856 560	$2s2p^2-2s2p(^3P^\circ)3s$	$^2P-^2P^\circ$	1/2–3/2	2–4	2.96E+00	2.41E−03	2.61E−03	−2.317	D	2,LS
164.895	249 292	855 740	$2s2p^2-2s2p(^3P^\circ)3s$	$^2P-^2P^\circ$	1/2–1/2	2–2	1.18E+01	4.81E−03	5.22E−03	−2.017	D	2,LS
164.895	250 112	856 560	$2s2p^2-2s2p(^3P^\circ)3s$	$^2P-^2P^\circ$	3/2–3/2	4–4	1.47E+01	6.01E−03	1.31E−02	−1.619	C	2,LS
165.118	250 112	855 740	$2s2p^2-2s2p(^3P^\circ)3s$	$^2P-^2P^\circ$	3/2–1/2	4–2	5.88E+00	1.20E−03	2.61E−03	−2.319	D	2,LS
165.783?	230 853	834 050+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^2S-^4P^\circ$	1/2–3/2	2–4	5.98E−03	4.93E−06	5.38E−06	−5.006	D	1
165.915?	230 853	833 570+e	$2s2p^2-2s2p(^3P^\circ)3s$	$^2S-^4P^\circ$	1/2–1/2	2–2	1.88E−03	7.74E−07	8.46E−07	−5.810	D	1
168.758	178 992	771 556.7	$2s2p^2-2s^23p$	$^2D-^2P^\circ$	5/2–3/2	6–4	1.90E+01	5.40E−03	1.80E−02	−1.490	B	1
168.766	179 021	771 556.7	$2s2p^2-2s^23p$	$^2D-^2P^\circ$	3/2–3/2	4–4	2.10E+00	8.95E−04	1.99E−03	−2.446	B	1
168.858	179 021	771 234.1	$2s2p^2-2s^23p$	$^2D-^2P^\circ$	3/2–1/2	4–2	2.13E+01	4.54E−03	1.01E−02	−1.741	B	1

7. Ne VII

$Z=10$

Be I isoelectronic sequence

Ground state $1s^22s^2\ ^1S_0$

Ionization energy 1 671 792 cm^{-1} (207.28 eV)

Data are tabulated for 132 transitions in the range from 65 to 160 Å. Transition probabilities for the $2s^2-2s3p$; $2s2p-2s3s$, $2s2p-2s3d$, and $2p^2-2s3p$ arrays are taken from MCHF calculations.[1] Values for the $2s^2-2p3s$, $2s^2-2p3d$; $2s2p-2p3p$, $2p^2-2p3s$, and $2p^2-2p3d$ arrays were obtained with many-body perturbation theory (MBPT)[2] calculations. The other results are taken from the Opacity Project (OP).[3] OP provides, however, only multiplet values. These have been decomposed into fine-structure components assuming LS coupling, as indicated by the notation LS in the reference column.

References

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[2]U. I. Safronova, A. Derevianko, M. S. Safronova, and W. R. Johnson, J. Phys. B **32**, 3527 (1999) (complete data listing from private communication 9 March, 2000).
[3]J. A. Tully, M. J. Seaton, and K. A. Berrington, J. Phys. B:At. Mol. Opt. Phys. **23**, 3811 (1990) (complete list of data from private communication 18 August, 1992).

Ne VII

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
65.850	0	1 518 600	$2s^2-2s6p$	^{1}S–^{1}P°	0–1	1–3	1.49E+02	2.91E−02	6.31E−03	−1.536	D	3,LS
67.787?	0	1 475 210+v	$2s^2-2p4d$	^{1}S–^{1}P°	0–1	1–3	2.39E+01	4.93E−03	1.10E−03	−2.307	D	3,LS
69.250	0	1 444 040	$2s^2-2s5p$	^{1}S–^{1}P°	0–1	1–3	2.38E+02	5.13E−02	1.17E−02	−1.290	C	3,LS
69.297?	0	1 443 060+v	$2s^2-2p4s$	^{1}S–^{1}P°	0–1	1–3	5.46E+01	1.18E−02	2.69E−03	−1.928	D	3,LS
74.230	214 952	1 562 120	$2s2p-2s7d$	^{1}P°–^{1}D	1–2	3–5	8.93E+01	1.23E−02	9.02E−03	−1.433	D	3,LS
75.765	0	1 319 870	$2s^2-2s4p$	^{1}S–^{1}P°	0–1	1–3	4.88E+02	1.26E−01	3.14E−02	−0.900	C	3,LS
76.515	214 952	1 521 880	$2s2p-2s6d$	^{1}P°–^{1}D	1–2	3–5	1.55E+02	2.26E−02	1.71E−02	−1.169	C	3,LS
80.533	214 952	1 456 680	$2s2p-2s5d$	^{1}P°–^{1}D	1–2	3–5	1.55E+00	2.51E−04	2.00E−04	−3.123	E	3,LS
81.370	214 952	1 443 900	$2s2p-2p4p$	^{1}P°–^{1}P	1–1	3–3	2.72E+02	2.70E−02	2.17E−02	−1.092	C	3,LS
82.008?	0	1 219 390+v	$2s^2-2p3d$	^{1}S–^{1}P°	0–1	1–3	1.10E+02	3.33E−02	8.99E−03	−1.478	C	2
83.301?	0	1 200 460+x	$2s^2-2p3d$	^{1}S–^{3}P°	0–1	1–3	2.62E−02	8.17E−06	2.24E−06	−5.088	E	2
83.748?	0	1 194 060+x	$2s^2-2p3d$	^{1}S–^{3}D°	0–1	1–3	6.44E−02	2.03E−05	5.60E−06	−4.692	E	2
86.543	319 720+v	1 475 210+v	$2p^2-2p4d$	^{1}D–^{1}P°	2–1	5–3	3.76E+01	2.53E−03	3.60E−03	−1.898	D	3,LS
86.818	319 720+v	1 471 550+v	$2p^2-2p4d$	^{1}D–^{1}F°	2–3	5–7	1.14E+03	1.80E−01	2.57E−01	−0.046	B	3,LS
87.224?	0	1 146 480+v	$2s^2-2p3s$	^{1}S–^{1}P°	0–1	1–3	3.49E+01	1.19E−02	3.43E−03	−1.923	C	2
87.850	319 720+v	1 458 020+v	$2p^2-2p4d$	^{1}D–^{1}D°	2–2	5–5	3.48E+02	4.03E−02	5.83E−02	−0.696	C	3,LS
88.943?	319 720+v	1 444 040	$2p^2-2s5p$	^{1}D–^{1}P°	2–1	5–3	1.06E+01	7.51E−04	1.10E−03	−2.425	D	3,LS
89.020	319 720+v	1 443 060+v	$2p^2-2p4s$	^{1}D–^{1}P°	2–1	5–3	1.40E+02	1.00E−02	1.47E−02	−1.301	C	3,LS
89.225?	0	1 120 765+x	$2s^2-2p3s$	^{1}S–^{3}P°	0–1	1–3	5.47E−02	1.96E−05	5.75E−06	−4.708	E	2
89.254?	398 200+v	1 518 600	$2p^2-2s6p$	^{1}S–^{1}P°	0–1	1–3	1.42E+01	5.10E−03	1.50E−03	−2.292	D	3,LS
89.368	214 952	1 333 920	$2s2p-2s4d$	^{1}P°–^{1}D	1–2	3–5	5.86E+02	1.17E−01	1.03E−01	−0.455	B	3,LS
91.564	214 952	1 307 080	$2s2p-2s4s$	^{1}P°–^{1}S	1–0	3–1	1.37E+02	5.75E−03	5.20E−03	−1.763	D	3,LS
92.482?	111 710+x	1 193 000	$2s2p-2p3p$	^{3}P°–^{1}S	1–0	3–1	6.86E−02	2.93E−06	2.68E−06	−5.055	E	2
92.850	398 200+v	1 475 210+v	$2p^2-2p4d$	^{1}S–^{1}P°	0–1	1–3	6.65E+02	2.58E−01	7.89E−02	−0.588	C	3,LS
93.173?	111 710+x	1 184 980+v	$2s2p-2p3p$	^{3}P°–^{1}D	1–2	3–5	1.11E−01	2.41E−05	2.22E−05	−4.140	D	2
93.260?	112 704+x	1 184 980+v	$2s2p-2p3p$	^{3}P°–^{1}D	2–2	5–5	1.26E−01	1.64E−05	2.52E−05	−4.086	D	2
94.261	111 255+x	1 172 140+x	$2s2p-2p3p$	^{3}P°–^{3}P	0–1	1–3	1.60E+02	6.38E−02	1.98E−02	−1.195	B	2
94.272	111 710+x	1 172 470+x	$2s2p-2p3p$	^{3}P°–^{3}P	1–2	3–5	1.27E+02	2.81E−02	2.62E−02	−1.074	B	2
94.301	111 710+x	1 172 140+x	$2s2p-2p3p$	^{3}P°–^{3}P	1–1	3–3	1.17E+02	1.56E−02	1.45E−02	−1.331	B	2
94.314?	111 710+x	1 172 000	$2s2p-2p3p$	^{3}P°–^{3}P	1–0	3–1	5.36E+02	2.38E−02	2.22E−02	−1.146	B	2
94.361	112 704+x	1 172 470+x	$2s2p-2p3p$	^{3}P°–^{3}P	2–2	5–5	4.07E+02	5.43E−02	8.43E−02	−0.567	B	2
94.390	112 704+x	1 172 140+x	$2s2p-2p3p$	^{3}P°–^{3}P	2–1	5–3	2.59E+02	2.07E−02	3.22E−02	−0.985	B	2
94.855	111 255+x	1 165 500+x	$2s2p-2p3p$	^{3}P°–^{3}S	0–1	1–3	7.15E+01	2.89E−02	9.04E−03	−1.538	C	2
94.896	111 710+x	1 165 500+x	$2s2p-2p3p$	^{3}P°–^{3}S	1–1	3–3	1.95E+02	2.63E−02	2.47E−02	−1.102	B	2
94.985	112 704+x	1 165 500+x	$2s2p-2p3p$	^{3}P°–^{3}S	2–1	5–3	2.58E+02	2.10E−02	3.28E−02	−0.979	B	2
95.617?	398 200+v	1 444 040	$2p^2-2s5p$	^{1}S–^{1}P°	0–1	1–3	4.65E+00	1.91E−03	6.01E−04	−2.719	E	3,LS
95.707	398 200+v	1 443 060+v	$2p^2-2p4s$	^{1}S–^{1}P°	0–1	1–3	4.15E+01	1.71E−02	5.39E−03	−1.767	D	3,LS
95.751	112 704+x	1 157 080+x	$2s2p-2p3p$	^{3}P°–^{3}D	2–3	5–7	2.82E+02	5.42E−02	8.54E−02	−0.567	B	2

Ne VII—Continued

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} ($10^8 s^{-1}$)	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
95.814	111 710+x	1 155 400+x	$2s2p-2p3p$	$^3P^\circ-^3D$	1–2	3–5	2.15E+02	4.93E−02	4.67E−02	−0.830	B	2
95.814	112 704+x	1 154 350+x	$2s2p-2p3p$	$^3P^\circ-^3D$	2–1	5–3	6.99E+00	5.77E−04	9.10E−04	−2.540	C	2
95.869	111 255+x	1 154 350+x	$2s2p-2p3p$	$^3P^\circ-^3D$	0–1	1–3	1.59E+02	6.56E−02	2.07E−02	−1.183	B	2
95.905	112 704+x	1 155 400+x	$2s2p-2p3p$	$^3P^\circ-^3D$	2–2	5–5	6.43E+01	8.87E−03	1.40E−02	−1.353	B	2
95.910	111 710+x	1 154 350+x	$2s2p-2p3p$	$^3P^\circ-^3D$	1–1	3–3	1.11E+02	1.53E−02	1.45E−02	−1.338	B	2
96.393?	111 255+x	1 148 670+v	$2s2p-2p3p$	$^3P^\circ-^1P$	0–1	1–3	4.39E−01	1.83E−04	5.82E−05	−3.737	D	2
96.436?	111 710+x	1 148 670+v	$2s2p-2p3p$	$^3P^\circ-^1P$	1–1	3–3	2.12E+00	2.95E−04	2.81E−04	−3.053	D	2
96.528?	112 704+x	1 148 670+v	$2s2p-2p3p$	$^3P^\circ-^1P$	2–1	5–3	7.47E−03	6.26E−07	9.95E−07	−5.504	E	2
97.227?	0	1 028 519+x	$2s^2-2s3p$	$^1S-^3P^\circ$	0–1	1–3	4.16E+00	1.77E−03	5.66E−04	−2.753	C	1
97.495	0	1 025 690	$2s^2-2s3p$	$^1S-^1P^\circ$	0–1	1–3	1.14E+03	4.86E−01	1.56E−01	−0.313	B	1
102.244	214 952	1 193 000	$2s2p-2p3p$	$^1P^\circ-^1S$	1–0	3–1	3.47E+02	1.81E−02	1.83E−02	−1.265	B	2
103.090?	214 952	1 184 980+v	$2s2p-2p3p$	$^1P^\circ-^1D$	1–2	3–5	8.91E+02	2.37E−01	2.41E−01	−0.149	B	2
104.146?	111 710+x	1 071 900	$2s2p-2s3d$	$^3P^\circ-^1D$	1–2	3–5	2.24E−02	6.08E−06	6.25E−06	−4.739	D	1
104.254?	112 704+x	1 071 900	$2s2p-2s3d$	$^3P^\circ-^1D$	2–2	5–5	3.27E−03	5.33E−07	9.15E−07	−5.574	E	1
104.437?	214 952	1 172 470+x	$2s2p-2p3p$	$^1P^\circ-^3P$	1–2	3–5	5.26E−01	1.43E−04	1.48E−04	−3.366	D	2
104.473?	214 952	1 172 140+x	$2s2p-2p3p$	$^1P^\circ-^3P$	1–1	3–3	1.01E−01	1.66E−05	1.71E−05	−4.304	D	2
104.488	214 952	1 172 000	$2s2p-2p3p$	$^1P^\circ-^3P$	1–0	3–1	6.57E−02	3.58E−06	3.70E−06	−4.968	E	2
105.202?	214 952	1 165 500+x	$2s2p-2p3p$	$^1P^\circ-^3S$	1–1	3–3	5.72E−01	9.50E−05	9.87E−05	−3.545	D	2
106.041	111 255+x	1 054 290+x	$2s2p-2s3d$	$^3P^\circ-^3D$	0–1	1–3	1.34E+03	6.79E−01	2.37E−01	−0.168	A	1
106.086	112 704+x	1 054 290+x	$2s2p-2s3d$	$^3P^\circ-^3D$	2–1	5–3	6.73E+01	6.81E−03	1.19E−02	−1.468	A	1
106.086	111 710+x	1 054 340+x	$2s2p-2s3d$	$^3P^\circ-^3D$	1–2	3–5	1.81E+03	5.09E−01	5.33E−01	0.184	A	1
106.092	111 710+x	1 054 290+x	$2s2p-2s3d$	$^3P^\circ-^3D$	1–1	3–3	1.01E+03	1.70E−01	1.78E−01	−0.293	A	1
106.190	112 704+x	1 054 410+x	$2s2p-2s3d$	$^3P^\circ-^3D$	2–3	5–7	2.40E+03	5.69E−01	9.95E−01	0.454	A	1
106.198	112 704+x	1 054 340+x	$2s2p-2s3d$	$^3P^\circ-^3D$	2–2	5–5	6.02E+02	1.02E−01	1.78E−01	−0.293	A	1
106.332?	214 952	1 155 400+x	$2s2p-2p3p$	$^1P^\circ-^3D$	1–2	3–5	8.83E−02	2.49E−05	2.62E−05	−4.126	D	2
106.451?	214 952	1 154 350+x	$2s2p-2p3p$	$^1P^\circ-^3D$	1–1	3–3	4.55E+00	7.72E−04	8.12E−04	−2.635	D	2
107.099?	214 952	1 148 670+v	$2s2p-2p3p$	$^1P^\circ-^1P$	1–1	3–3	6.71E+02	1.15E−01	1.22E−01	−0.461	B	2
107.520?	289 332+x	1 219 390+v	$2p^2-2p3d$	$^3P-^1P^\circ$	0–1	1–3	5.98E−01	3.11E−04	1.10E−04	−3.508	D	2
107.579?	289 843+x	1 219 390+v	$2p^2-2p3d$	$^3P-^1P^\circ$	1–1	3–3	1.81E−01	3.14E−05	3.34E−05	−4.026	D	2
107.682?	290 726+x	1 219 390+v	$2p^2-2p3d$	$^3P-^1P^\circ$	2–1	5–3	6.98E−04	7.28E−08	1.29E−07	−6.439	E	2
108.296?	290 726+x	1 214 120+v	$2p^2-2p3d$	$^3P-^1F^\circ$	2–3	5–7	8.59E−02	2.11E−05	3.77E−05	−3.976	D	2
108.499?	398 200+v	1 319 870	$2p^2-2s4p$	$^1S-^1P^\circ$	0–1	1–3	4.65E+01	2.46E−02	8.79E−03	−1.609	D	3,LS
109.754	289 332+x	1 200 460+x	$2p^2-2p3d$	$^3P-^3P^\circ$	0–1	1–3	3.97E+02	2.15E−01	7.78E−02	−0.667	B	2
109.781	289 843+x	1 200 750+x	$2p^2-2p3d$	$^3P-^3P^\circ$	1–0	3–1	1.56E+03	9.41E−02	1.02E−01	−0.549	B	2
109.816	289 843+x	1 200 460+x	$2p^2-2p3d$	$^3P-^3P^\circ$	1–1	3–3	4.88E+02	8.81E−02	9.56E−02	−0.578	B	2
109.871?	289 843+x	1 200 000	$2p^2-2p3d$	$^3P-^3P^\circ$	1–2	3–5	2.23E+02	6.72E−02	7.29E−02	−0.696	B	2
109.922	290 726+x	1 200 460+x	$2p^2-2p3d$	$^3P-^3P^\circ$	2–1	5–3	6.76E+02	7.35E−02	1.33E−01	−0.435	B	2
109.978?	290 726+x	1 200 000	$2p^2-2p3d$	$^3P-^3P^\circ$	2–2	5–5	1.34E+03	2.42E−01	4.39E−01	0.084	B	2
110.530	289 332+x	1 194 060+x	$2p^2-2p3d$	$^3P-^3D^\circ$	0–1	1–3	1.75E+03	9.62E−01	3.50E−01	−0.017	B	2
110.562	290 726+x	1 194 060+x	$2p^2-2p3d$	$^3P-^3D^\circ$	2–1	5–3	5.30E+01	5.82E−03	1.06E−02	−1.536	B	2
110.562	289 843+x	1 194 310+x	$2p^2-2p3d$	$^3P-^3D^\circ$	1–2	3–5	2.37E+03	7.22E−01	7.89E−01	0.336	B	2
110.593	289 843+x	1 194 060+x	$2p^2-2p3d$	$^3P-^3D^\circ$	1–1	3–3	1.13E+03	2.07E−01	2.26E−01	−0.207	B	2
110.630	290 726+x	1 194 640+x	$2p^2-2p3d$	$^3P-^3D^\circ$	2–3	5–7	2.93E+03	7.52E−01	1.37E+00	0.575	B	2
110.670	290 726+x	1 194 310+x	$2p^2-2p3d$	$^3P-^3D^\circ$	2–2	5–5	5.59E+02	1.03E−01	1.87E−01	−0.290	B	2
111.152	319 720+v	1 219 390+v	$2p^2-2p3d$	$^1D-^1P^\circ$	2–1	5–3	1.08E+02	1.20E−02	2.19E−02	−1.223	B	2
111.807	319 720+v	1 214 120+v	$2p^2-2p3d$	$^1D-^1F^\circ$	2–3	5–7	3.33E+03	8.75E−01	1.61E+00	0.641	B	2
112.073?	289 843+x	1 182 120+v	$2p^2-2p3d$	$^3P-^1D^\circ$	1–2	3–5	1.68E+00	5.27E−04	5.83E−04	−2.801	D	2
112.184?	290 726+x	1 182 120+v	$2p^2-2p3d$	$^3P-^1D^\circ$	2–2	5–5	3.50E−01	6.61E−05	1.22E−04	−3.481	D	2
112.798?	111 710+x	998 250	$2s2p-2s3s$	$^3P^\circ-^1S$	1–0	3–1	2.61E−03	1.66E−07	1.85E−07	−6.303	E	1
113.541?	319 720+v	1 200 460+x	$2p^2-2p3d$	$^1D-^3P^\circ$	2–1	5–3	8.90E−02	1.03E−05	1.93E−05	−4.287	D	2
113.600?	319 720+v	1 200 000	$2p^2-2p3d$	$^1D-^3P^\circ$	2–2	5–5	1.79E+00	3.45E−04	6.46E−04	−2.763	D	2
114.296?	319 720+v	1 194 640+x	$2p^2-2p3d$	$^1D-^3D^\circ$	2–3	5–7	3.14E−02	8.61E−06	1.62E−05	−4.366	D	2
114.339?	319 720+v	1 194 310+x	$2p^2-2p3d$	$^1D-^3D^\circ$	2–2	5–5	4.64E−04	9.08E−08	1.71E−07	−6.343	E	2
114.372?	319 720+v	1 194 060+x	$2p^2-2p3d$	$^1D-^3D^\circ$	2–1	5–3	1.35E−01	1.59E−05	2.99E−05	−4.100	D	2
115.332	111 255+x	978 320+x	$2s2p-2s3s$	$^3P^\circ-^3S$	0–1	1–3	6.21E+01	3.71E−02	1.41E−02	−1.430	A	1
115.392	111 710+x	978 320+x	$2s2p-2s3s$	$^3P^\circ-^3S$	1–1	3–3	1.86E+02	3.72E−02	4.24E−02	−0.952	A	1
115.525	112 704+x	978 320+x	$2s2p-2s3s$	$^3P^\circ-^3S$	2–1	5–3	3.11E+02	3.73E−02	7.10E−02	−0.729	A	1
115.955	319 720+v	1 182 120+v	$2p^2-2p3d$	$^1D-^1D^\circ$	2–2	5–5	8.00E+02	1.61E−01	3.08E−01	−0.093	B	2
116.666?	289 332+x	1 146 480+v	$2p^2-2p3s$	$^3P-^1P^\circ$	0–1	1–3	5.66E−02	3.46E−05	1.33E−05	−4.461	D	2
116.693	214 952	1 071 900	$2s2p-2s3d$	$^1P^\circ-^1D$	1–2	3–5	1.54E+03	5.25E−01	6.05E−01	0.197	A	1
116.736?	289 843+x	1 146 480+v	$2p^2-2p3s$	$^3P-^1P^\circ$	1–1	3–3	8.79E−02	1.80E−05	2.07E−05	−4.269	D	2
116.856?	290 726+x	1 146 480+v	$2p^2-2p3s$	$^3P-^1P^\circ$	2–1	5–3	5.88E−03	7.23E−07	1.39E−06	−5.442	E	2
119.134?	214 952	1 054 340+x	$2s2p-2s3d$	$^1P^\circ-^3D$	1–2	3–5	2.17E−02	7.69E−06	9.05E−06	−4.637	D	1
119.142?	214 952	1 054 290+x	$2s2p-2s3d$	$^1P^\circ-^3D$	1–1	3–3	4.27E−02	9.09E−06	1.07E−05	−4.564	C	1

Ne VII—Continued

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i–J_k	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
120.201	289 843+x	1 121 780+x	$2p^2$–$2p3s$	^{3}P–^{3}P°	1–2	3–5	1.12E+02	4.06E−02	4.82E−02	−0.914	B	2
120.274	289 332+x	1 120 765+x	$2p^2$–$2p3s$	^{3}P–^{3}P°	0–1	1–3	1.48E+02	9.65E−02	3.82E−02	−1.016	B	2
120.329	290 726+x	1 121 780+x	$2p^2$–$2p3s$	^{3}P–^{3}P°	2–2	5–5	3.35E+02	7.27E−02	1.44E−01	−0.440	B	2
120.348	289 843+x	1 120 765+x	$2p^2$–$2p3s$	^{3}P–^{3}P°	1–1	3–3	1.10E+02	2.39E−02	2.84E−02	−1.145	B	2
120.420	289 843+x	1 120 270+x	$2p^2$–$2p3s$	^{3}P–^{3}P°	1–0	3–1	4.42E+02	3.20E−02	3.81E−02	−1.017	B	2
120.476	290 726+x	1 120 765+x	$2p^2$–$2p3s$	^{3}P–^{3}P°	2–1	5–3	1.85E+02	2.41E−02	4.78E−02	−0.919	B	2
120.954	319 720+v	1 146 480+v	$2p^2$–$2p3s$	^{1}D–^{1}P°	2–1	5–3	3.31E+02	4.35E−02	8.67E−02	−0.662	B	2
121.774	398 200+v	1 219 390+v	$2p^2$–$2p3d$	^{1}S–^{1}P°	0–1	1–3	1.83E+03	1.22E+00	4.90E−01	0.087	B	2
124.648?	398 200+v	1 200 460+x	$2p^2$–$2p3d$	^{1}S–^{3}P°	0–1	1–3	1.87E−01	1.31E−04	5.37E−05	−3.883	D	2
124.679?	319 720+v	1 121 780+x	$2p^2$–$2p3s$	^{1}D–^{3}P°	2–2	5–5	9.76E−02	2.28E−05	4.67E−05	−3.944	D	2
124.837?	319 720+v	1 120 765+x	$2p^2$–$2p3s$	^{1}D–^{3}P°	2–1	5–3	4.89E−02	6.86E−06	1.41E−05	−4.465	D	2
125.650?	398 200+v	1 194 060+x	$2p^2$–$2p3d$	^{1}S–^{3}D°	0–1	1–3	2.79E−01	1.98E−04	8.20E−05	−3.703	D	2
127.665	214 952	998 250	$2s2p$–$2s3s$	^{1}P°–^{1}S	1–0	3–1	1.79E+02	1.46E−02	1.84E−02	−1.359	B	1
130.998?	214 952	978 320+x	$2s2p$–$2s3s$	^{1}P°–^{3}S	1–1	3–3	1.04E−02	2.68E−06	3.47E−06	−5.094	D	1
133.640	398 200+v	1 146 480+v	$2p^2$–$2p3s$	^{1}S–^{1}P°	0–1	1–3	1.25E+02	1.00E−01	4.42E−02	−0.998	B	2
135.284	289 332+x	1 028 519+x	$2p^2$–$2s3p$	^{3}P–^{3}P°	0–1	1–3	1.20E+00	9.88E−04	4.40E−04	−3.005	B	1
135.330	289 843+x	1 028 775+x	$2p^2$–$2s3p$	^{3}P–^{3}P°	1–2	3–5	9.34E−01	4.27E−04	5.71E−04	−2.892	B	1
135.377	289 843+x	1 028 519+x	$2p^2$–$2s3p$	^{3}P–^{3}P°	1–1	3–3	8.87E−01	2.44E−04	3.26E−04	−3.136	B	1
135.402	289 843+x	1 028 386+x	$2p^2$–$2s3p$	^{3}P–^{3}P°	1–0	3–1	3.50E+00	3.21E−04	4.29E−04	−3.017	B	1
135.492	290 726+x	1 028 775+x	$2p^2$–$2s3p$	^{3}P–^{3}P°	2–2	5–5	2.75E+00	7.58E−04	1.69E−03	−2.422	B	1
135.539	290 726+x	1 028 519+x	$2p^2$–$2s3p$	^{3}P–^{3}P°	2–1	5–3	1.42E+00	2.35E−04	5.24E−04	−2.930	B	1
135.804?	289 332+x	1 025 690	$2p^2$–$2s3p$	^{3}P–^{1}P°	0–1	1–3	1.38E−03	1.15E−06	5.13E−07	−5.940	E	1
135.898?	289 843+x	1 025 690	$2p^2$–$2s3p$	^{3}P–^{1}P°	1–1	3–3	5.06E−03	1.40E−06	1.88E−06	−5.377	D	1
136.061?	290 726+x	1 025 690	$2p^2$–$2s3p$	^{3}P–^{1}P°	2–1	5–3	9.95E−02	1.66E−05	3.71E−05	−4.082	C	1
138.396?	398 200+v	1 120 765+x	$2p^2$–$2p3s$	^{1}S–^{3}P°	0–1	1–3	3.34E−02	2.87E−05	1.31E−05	−4.541	D	2
141.033?	319 720+v	1 028 775+x	$2p^2$–$2s3p$	^{1}D–^{3}P°	2–2	5–5	1.14E−03	3.39E−07	7.88E−07	−5.770	E	1
141.084?	319 720+v	1 028 519+x	$2p^2$–$2s3p$	^{1}D–^{3}P°	2–1	5–3	3.13E−01	5.60E−05	1.30E−04	−3.553	C	1
141.649?	319 720+v	1 025 690	$2p^2$–$2s3p$	^{1}D–^{1}P°	2–1	5–3	6.44E+01	1.16E−02	2.71E−02	−1.236	A	1
158.650?	398 200+v	1 028 519+x	$2p^2$–$2s3p$	^{1}S–^{3}P°	0–1	1–3	7.37E−03	8.35E−06	4.36E−06	−5.079	D	1
159.365?	398 200+v	1 025 690	$2p^2$–$2s3p$	^{1}S–^{1}P°	0–1	1–3	2.72E+00	3.11E−03	1.63E−03	−2.508	B	1

8. Ne VIII

$Z=10$

Li I isoelectronic sequence

Ground state $1s^22s\ ^2S_{1/2}$

Ionization energy 1 928 462 cm^{-1} (239.10 eV)

Data are tabulated for 58 transitions in the range from 55 to 171 Å. Most of transition probabilities are taken from the Opacity Project (OP).[1] Transition probabilities for the $2p\ ^2P^\circ_{3/2}-3s\ ^2S_{1/2}$ and $2p\ ^2P^\circ_{1/2}-3s\ ^2S_{1/2}$ transitions are taken from calculations with many-body perturbation theory (MBPT).[2] OP provides, however, only multiplet values. These have been decomposed into fine-structure components assuming LS coupling, as indicated by the notation LS in the reference column.

References

[1]G. Peach, H. E. Saraph, and M. J. Seaton, J. Phys. B **21**, 3669, 1988 (complete list of data from private communication 11 April, 1991).

[2]W. R. Johnson, Z. W. Liu, and J. Sapirstein, At. Data Nucl. Data Tables **64**, 279 (1996).

Ne VIII

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
55.010	0.0	1 817 850	$1s^22s-1s^28p$	$^2S-^2P^\circ$	1/2–1/2	2–2	5.07E+01	2.30E−03	8.33E−04	−2.337	B	1,LS
55.010	0.0	1 817 850	$1s^22s-1s^28p$	$^2S-^2P^\circ$	1/2–3/2	2–4	5.07E+01	4.60E−03	1.67E−03	−2.036	B	1,LS
57.747	0.0	1 731 690	$1s^22s-1s^26p$	$^2S-^2P^\circ$	1/2–3/2	2–4	1.21E+02	1.21E−02	4.60E−03	−1.616	B	1,LS
57.747	0.0	1 731 690	$1s^22s-1s^26p$	$^2S-^2P^\circ$	1/2–1/2	2–2	1.21E+02	6.05E−03	2.30E−03	−1.917	B	1,LS
59.131	128 151.9	1 819 300	$1s^22p-1s^28d$	$^2P^\circ-^2D$	1/2–3/2	2–4	7.68E+01	8.05E−03	3.13E−03	−1.793	B	1,LS
59.189	129 801.2	1 819 300	$1s^22p-1s^28d$	$^2P^\circ-^2D$	3/2–3/2	4–4	1.53E+01	8.04E−04	6.27E−04	−2.493	C	1,LS
59.189	129 801.2	1 819 300	$1s^22p-1s^28d$	$^2P^\circ-^2D$	3/2–5/2	4–6	9.19E+01	7.24E−03	5.64E−03	−1.538	B	1,LS
60.352	128 151.9	1 785 100	$1s^22p-1s^27d$	$^2P^\circ-^2D$	1/2–3/2	2–4	1.17E+02	1.28E−02	5.09E−03	−1.592	B	1,LS
60.412	129 801.2	1 785 100	$1s^22p-1s^27d$	$^2P^\circ-^2D$	3/2–3/2	4–4	2.34E+01	1.28E−03	1.02E−03	−2.291	B	1,LS
60.412	129 801.2	1 785 100	$1s^22p-1s^27d$	$^2P^\circ-^2D$	3/2–5/2	4–6	1.40E+02	1.15E−02	9.15E−03	−1.337	B	1,LS
60.796	0.0	1 644 850	$1s^22s-1s^25p$	$^2S-^2P^\circ$	1/2–1/2	2–2	2.08E+02	1.15E−02	4.60E−03	−1.638	B	1,LS
60.796	0.0	1 644 850	$1s^22s-1s^25p$	$^2S-^2P^\circ$	1/2–3/2	2–4	2.08E+02	2.30E−02	9.21E−03	−1.337	B	1,LS
62.297	128 151.9	1 733 370	$1s^22p-1s^26d$	$^2P^\circ-^2D$	1/2–3/2	2–4	1.92E+02	2.23E−02	9.15E−03	−1.351	B	1,LS
62.361	129 801.2	1 733 370	$1s^22p-1s^26d$	$^2P^\circ-^2D$	3/2–5/2	4–6	2.30E+02	2.01E−02	1.65E−02	−1.095	B	1,LS
62.361	129 801.2	1 733 370	$1s^22p-1s^26d$	$^2P^\circ-^2D$	3/2–3/2	4–4	3.83E+01	2.23E−03	1.83E−03	−2.050	B	1,LS
62.514	128 151.9	1 727 800	$1s^22p-1s^26s$	$^2P^\circ-^2S$	1/2–1/2	2–2	1.66E+01	9.72E−04	4.00E−04	−2.711	C	1,LS
62.578	129 801.2	1 727 800	$1s^22p-1s^26s$	$^2P^\circ-^2S$	3/2–1/2	4–2	3.31E+01	9.71E−04	8.00E−04	−2.411	C	1,LS
65.823	128 151.9	1 647 380	$1s^22p-1s^25d$	$^2P^\circ-^2D$	1/2–3/2	2–4	3.50E+02	4.55E−02	1.97E−02	−1.041	B	1,LS
65.894	129 801.2	1 647 380	$1s^22p-1s^25d$	$^2P^\circ-^2D$	3/2–3/2	4–4	6.97E+01	4.54E−03	3.94E−03	−1.741	B	1,LS
65.894	129 801.2	1 647 380	$1s^22p-1s^25d$	$^2P^\circ-^2D$	3/2–5/2	4–6	4.19E+02	4.09E−02	3.55E−02	−0.786	B	1,LS
66.258	128 151.9	1 637 410	$1s^22p-1s^25s$	$^2P^\circ-^2S$	1/2–1/2	2–2	3.02E+01	1.99E−03	8.68E−04	−2.400	B	1,LS
66.330	129 801.2	1 637 410	$1s^22p-1s^25s$	$^2P^\circ-^2S$	3/2–1/2	4–2	6.00E+01	1.98E−03	1.73E−03	−2.101	B	1,LS
67.382	0.0	1 484 080	$1s^22s-1s^24p$	$^2S-^2P^\circ$	1/2–3/2	2–4	3.97E+02	5.41E−02	2.40E−02	−0.966	B	1,LS
67.386	0.0	1 483 980	$1s^22s-1s^24p$	$^2S-^2P^\circ$	1/2–1/2	2–2	3.97E+02	2.70E−02	1.20E−02	−1.268	B	1,LS
73.475	128 151.9	1 489 150	$1s^22p-1s^24d$	$^2P^\circ-^2D$	1/2–3/2	2–4	7.60E+02	1.23E−01	5.95E−02	−0.609	A	1,LS
73.563	129 801.2	1 489 180	$1s^22p-1s^24d$	$^2P^\circ-^2D$	3/2–5/2	4–6	9.04E+02	1.10E−01	1.07E−01	−0.357	A	1,LS
73.565	129 801.2	1 489 150	$1s^22p-1s^24d$	$^2P^\circ-^2D$	3/2–3/2	4–4	1.50E+02	1.22E−02	1.18E−02	−1.312	B	1,LS
74.544	128 151.9	1 469 640	$1s^22p-1s^24s$	$^2P^\circ-^2S$	1/2–1/2	2–2	6.04E+01	5.03E−03	2.47E−03	−1.997	B	1,LS
74.636	129 801.2	1 469 640	$1s^22p-1s^24s$	$^2P^\circ-^2S$	3/2–1/2	4–2	1.20E+02	5.02E−03	4.93E−03	−1.697	B	1,LS
88.082	0.0	1 135 312	$1s^22s-1s^23p$	$^2S-^2P^\circ$	1/2–3/2	2–4	8.64E+02	2.01E−01	1.17E−01	−0.396	A	1,LS
88.119	0.0	1 134 824	$1s^22s-1s^23p$	$^2S-^2P^\circ$	1/2–1/2	2–2	8.68E+02	1.01E−01	5.86E−02	−0.695	A	1,LS
98.115	128 151.9	1 147 360	$1s^22p-1s^23d$	$^2P^\circ-^2D$	1/2–3/2	2–4	2.30E+03	6.65E−01	4.30E−01	0.124	A	1,LS
98.260	129 801.2	1 147 510	$1s^22p-1s^23d$	$^2P^\circ-^2D$	3/2–5/2	4–6	2.75E+03	5.97E−01	7.73E−01	0.378	A	1,LS
98.274	129 801.2	1 147 360	$1s^22p-1s^23d$	$^2P^\circ-^2D$	3/2–3/2	4–4	4.59E+02	6.64E−02	8.59E−02	−0.576	B	1,LS
102.911	128 151.9	1 099 870	$1s^22p-1s^23s$	$^2P^\circ-^2S$	1/2–1/2	2–2	1.556E+02	2.471E−02	1.674E−02	−1.306	A	2
103.085	129 801.2	1 099 870	$1s^22p-1s^23s$	$^2P^\circ-^2S$	3/2–1/2	4–2	3.131E+02	2.494E−02	3.386E−02	−1.001	A	2
139.280	1 099 870	1 817 850	$1s^23s-1s^28p$	$^2S-^2P^\circ$	1/2–3/2	2–4	1.55E+01	9.01E−03	8.26E−03	−1.744	B	1,LS
139.280	1 099 870	1 817 850	$1s^23s-1s^28p$	$^2S-^2P^\circ$	1/2–1/2	2–2	1.55E+01	4.51E−03	4.14E−03	−2.045	B	1,LS
146.097	1 134 824	1 819 300	$1s^23p-1s^28d$	$^2P^\circ-^2D$	1/2–3/2	2–4	2.70E+01	1.73E−02	1.66E−02	−1.461	B	1,LS
146.201	1 135 312	1 819 300	$1s^23p-1s^28d$	$^2P^\circ-^2D$	3/2–3/2	4–4	5.40E+00	1.73E−03	3.33E−03	−2.160	B	1,LS
146.201	1 135 312	1 819 300	$1s^23p-1s^28d$	$^2P^\circ-^2D$	3/2–5/2	4–6	3.25E+01	1.56E−02	3.00E−02	−1.205	B	1,LS
149.145	1 147 360	1 817 850	$1s^23d-1s^28p$	$^2D-^2P^\circ$	3/2–1/2	4–2	1.53E+00	2.55E−04	5.01E−04	−2.991	C	1,LS
149.178	1 147 510	1 817 850	$1s^23d-1s^28p$	$^2D-^2P^\circ$	5/2–3/2	6–4	1.37E+00	3.05E−04	8.99E−04	−2.738	C	1,LS

Ne VIII—Continued

λ Ritz (Å)	E_i (cm^{-1})	E_k (cm^{-1})	Configurations	Terms	J_i-J_k	g_i-g_k	A_{ki} ($10^8 s^{-1}$)	f_{ik}	S (a.u.)	log $g_i f$	Acc.	Ref.
153.781	1 134 824	1 785 100	$1s^23p-1s^27d$	$^2P°-^2D$	1/2–3/2	2–4	4.09E+01	2.90E−02	2.94E−02	−1.237	B	1,LS
153.896	1 135 312	1 785 100	$1s^23p-1s^27d$	$^2P°-^2D$	3/2–5/2	4–6	4.90E+01	2.61E−02	5.29E−02	−0.981	B	1,LS
153.896	1 135 312	1 785 100	$1s^23p-1s^27d$	$^2P°-^2D$	3/2–3/2	4–4	8.14E+00	2.89E−03	5.86E−03	−1.937	B	1,LS
154.279	1 134 824	1 783 000	$1s^23p-1s^27s$	$^2P°-^2S$	1/2–1/2	2–2	6.61E+00	2.36E−03	2.40E−03	−2.326	B	1,LS
154.395	1 135 312	1 783 000	$1s^23p-1s^27s$	$^2P°-^2S$	3/2–1/2	4–2	1.32E+01	2.36E−03	4.80E−03	−2.025	B	1,LS
158.273	1 099 870	1 731 690	$1s^23s-1s^26p$	$^2S-^2P°$	1/2–1/2	2–2	3.62E+01	1.36E−02	1.42E−02	−1.565	B	1,LS
158.273	1 099 870	1 731 690	$1s^23s-1s^26p$	$^2S-^2P°$	1/2–3/2	2–4	3.61E+01	2.71E−02	2.82E−02	−1.266	B	1,LS
167.072	1 134 824	1 733 370	$1s^23p-1s^26d$	$^2P°-^2D$	1/2–3/2	2–4	6.63E+01	5.55E−02	6.11E−02	−0.955	B	1,LS
167.208	1 135 312	1 733 370	$1s^23p-1s^26d$	$^2P°-^2D$	3/2–5/2	4–6	7.94E+01	4.99E−02	1.10E−01	−0.700	B	1,LS
167.208	1 135 312	1 733 370	$1s^23p-1s^26d$	$^2P°-^2D$	3/2–3/2	4–4	1.32E+01	5.55E−03	1.22E−02	−1.654	B	1,LS
168.641	1 134 824	1 727 800	$1s^23p-1s^26s$	$^2P°-^2S$	1/2–1/2	2–2	1.08E+01	4.59E−03	5.10E−03	−2.037	B	1,LS
168.780	1 135 312	1 727 800	$1s^23p-1s^26s$	$^2P°-^2S$	3/2–1/2	4–2	2.15E+01	4.59E−03	1.02E−02	−1.736	B	1,LS
171.136	1 147 360	1 731 690	$1s^23d-1s^26p$	$^2D-^2P°$	3/2–3/2	4–4	4.03E−01	1.77E−04	3.99E−04	−3.150	C	1,LS
171.136	1 147 360	1 731 690	$1s^23d-1s^26p$	$^2D-^2P°$	3/2–1/2	4–2	4.04E+00	8.87E−04	2.00E−03	−2.450	C	1,LS
171.180	1 147 510	1 731 690	$1s^23d-1s^26p$	$^2D-^2P°$	5/2–3/2	6–4	3.62E+00	1.06E−03	3.58E−03	−2.197	B	1,LS