Wavelengths and energy level classifications of scandium spectra for all stages of ionization

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V. Kaufman, and J. Sugar

Wavelengths and Energy Level Classifications of Scandium Spectra for All Stages of Ionization

V. Kaufman and J. Sugar

Atomic and Plasma Radiation Division, National Institute of Standards and Technology, Gaithersburg, Maryland 20899

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Wavelengths and their classifications are compiled for the spectra of scandium, Sc I through Sc XXI. Selections of data are based on the critical evaluations in the compilation of energy levels by Sugar and Corliss[8]. These are updated by a thorough search of the subsequent literature. All classifications are verified with predictions made by differencing the energy levels. Spectra are ordered by ionization stage and listed by wavelength. Two finding lists are included, one containing Sc I to Sc III and the other Sc IV to Sc XXI.

Key words: energy levels; scandium; spectra; wavelengths.

Contents

1. Introduction

The Atomic Data Center of the National Institute of Standards and Technology publishes critical compilations of atomic energy levels, which have updated and supplemented the three volumes of Atomic Energy Levels by Charlotte Moore.[1] Her works included the elements hydrogen through vanadium (Vol. I), chromium through niobium (Vol. II), and molybdenum through lanthanum plus hafnium through actinium (Vol. III). The gap at the rare earths was filled by Martin, Zalubas, and Hagan with their compilation of the elements lanthanum to lutetium in 1978.[2] New compilations for the elements sodium to phosphorus were prepared by Martin, Zalubas, and Musgrove[3-7] and for the elements potassium to nickel by Sugar and Corliss (1985).[8]

These new compilations contain detailed reviews of the literature and provide a reliable basis for extracting a complete list of classified spectral wavelengths for each stage of ionization. We have used the Sugar and Corliss[8] work supplemented with subsequent publications to compile the present list of classified lines of scandium. Recently NIST, in collaboration with the Japan Atomic Energy Research Institute, has issued similar compilations of wavelengths for the elements nickel[9] and molybdenum,[10] and has in preparation works on chromium, iron, and copper. These, however, do not include the lower stages of ionization. The present wavelength compilation includes all stages of ionization of scandium, and we intend to continue this format in subsequent compilations.

The compiled energy levels are used to predict the spectral wavelengths for comparison with the published values. This check reveals errors in transcribing the observed wavelengths or the level values. It also provides a simple way of recording the classification with each line. The format of the data for each line is basically adopted from the compilation of vacuum ultraviolet wavelengths by Kelly.[11] The sequence of columns is multiplet number, observed wavelength, calculated wavelength (from level differences), relative intensity, the two level values, the two configurations, the two terms, the two J-values, and the reference. If the calculated and observed wavelengths do not agree exactly, the former should in general be more accurate.

No limitation has been made on the wavelength range of the classified lines. All lines above 2000 Å are given wavelengths in air; the rest are vacuum wavelengths except for Sc I 2000.190 Å and Sc II 2000.135 Å designated with a "v". The air wavelengths would be less than 2000 Å. Observed magnetic dipole transitions are included. The listed reference for each line is the source for the data. Descriptions of the wavelength measurements and classifications may be found in the quoted references and in the compilation of Sugar and Corliss[8]. We

selected our data based largely on the conclusions of Sugar and Corliss[8] and on our critical evaluation of the new publications.

The intensities are usually visual estimates of relative plate blackening as given by the authors, and are meaningful only for indicating, within a single ionization stage, those lines that are strong and those that are weak within a small wavelength range. Some authors limit these estimates to a small range of 1 to 10, while others reach optimistically into the 100,000's. We include the following symbols with the intensity to further characterize the line:

M1	Magnetic dipole transition
bl	blended with another line which may affect the wavelength and intensity
d	diffuse
g	transition to a level of the ground term
a	observed in absorption

All the information described above is given for lines sorted by ionization stage; for each such spectrum the wavelengths are sorted in increasing numerical order. The tables in Section 4 are followed by two finding lists. Section 5 contains lines of Sc I through Sc III and Section 6 contains lines of Sc IV through Sc XXI. Both lists include only wavelengths, intensities, and spectrum number. This separation is intended to follow roughly the division of user interests. The calculated wavelengths of Sc XX and Sc XXI lines, for which there are no observations, are included with brackets in the finding list.

Two sets of references are given. Section 1.1. includes references for the introduction (numerically labeled) and Section 3 contains references for each wavelength (alphanumerically labeled).

For conversion of ionization energies to eV we use the conversion factor 8065.5410(24) cm^{-1}/eV, given by Cohen and Taylor.[12]

1.1. References for the Introduction

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2. Comments on Each Scandium Ion

Sc I

Ground state: $1s^2 2s^2 2p^6 3s^2 3p^6 3d 4s^2\ ^2D_{3/2}$

Ionization energy: 52 922.0 ± 0.5 cm^{-1}
(6.561 49 ± 0.000 06 eV)

Ben Ahmed and Verges [B1] gave an analysis of the complete spectrum in the range 2040 to 33 900 Å. However, they reported only the energy levels, not the wavelengths. We obtained a list of wavenumbers and intensities privately from the authors. Ben Ahmed's dissertation [B7] contains a classified line list in the range 6500–33 900 Å observed with a Fourier transform spectrometer.

An absorption spectrum of Sc I in the range 1550–2670 Å was reported by Garton *et al.* [G1]. They gave 79 pairs of lines whose wavenumber difference are equal to the ground ^2D term splitting. These establish 79 upper levels with $J = {}^3/_2$ or ${}^5/_2$ but with no further identification, and all are below the ionization limit. We list them in Section 4 with no J value for the upper state.

Sc II (Ca Sequence)

Ground state: $1s^2 2s^2 2p^6 3s^2 3p^6 3d 4s\ ^3D_1$

Ionization energy: 103 237.1 ± 2.0 cm^{-1}
(12.799 77 ± 0.000 25 eV)

The wavelengths and classifications are from the work of Johansson and Litzén [J1].

Sc III (K Sequence)

Ground state: $1s^2 2s^2 2p^6 3s^2 3p^6 3d\ ^2D_{3/2}$

Ionization energy: 199 677.37 ± 0.10 cm^{-1}
(24.756 85 ± 0.000 02 eV)

All lines are taken from the observations of Van Deurzen *et al.* [V1] except for two blends giving $5g-6h$, $7h$ transitions, and seven lines below 800 Å reported by Holmstrom [H1]. The remainder of Holmstrom's lines are included in Reference [V1].

Sc IV (Ar Sequence)

Ground state: $1s^2 2s^2 2p^6 3s^2 3p^6\ ^1S_0$

Ionization energy: 592 732 ± 3 cm^{-1}
(73.4900 ± 0.0004 eV)

The wavelengths and classifications are quoted from the work of Smitt [S1], except for the absorption line at 153.210 Å reported by Kastner *et al.* [K1].

The following misprints of energy levels are contained in Sugar and Corliss [S9]: 477 746.6 and 479 933.2 should be 477 747.6 and 479 993.2, respectively.

Sc V (Cl Sequence)

Ground state: $1s^2 2s^2 2p^6 3s^2 3p^5\ ^2P^\circ_{3/2}$

Ionization energy: 739 500 ± 1000 cm^{-1}
(91.65 ± 0.12 eV)

A new work by Smitt and Ekberg [S2] not included in Sugar and Corliss [S9] is the source of the wavelengths, classifications, and the value for the ionization energy given here.

Sc VI (S Sequence)

Ground state: $1s^2 2s^2 2p^6 3s^2 3p^4\ ^3P_2$

Ionization energy: 892 700 ± 400 cm^{-1}
(110.68 ± 0.05 eV)

Wavelengths and classifications are from Svensson and Ekberg [S4] for the $3s^2 3p^4 - 3s^2 3p^3 3d$ array, from Smitt *et al.* [S3] for the $3s^2 3p^4 - 3s 3p^5$ array, from Beckman [B2] for $3s^2 3p^4 - 3s^2 3p^3 4s$, and from Fawcett *et al.* [F2] for $3s^2 3p^4 - 3s^2 3p^3 4d$ and $5s$.

Sc VII (P Sequence)

Ground state: $1s^2 2s^2 2p^6 3s^2 3p^3\ ^4S^\circ_{3/2}$

Ionization energy: 1 113 000 ± 2000 cm^{-1}
(138.0 ± 0.2 eV)

The measurements of Smitt *et al.* [S3] are given for the $3s^2 3p^3 - 3s 3p^4$ array, and Ekberg and Svensson [E1] for $3s^2 3p^3 - 3s^2 3p^2 3d$ and $4s$. There is no measured connection between the doublets and the ground state.

Sc VIII (Si Sequence)

Ground state: $1s^2 2s^2 2p^6 3s^2 3p^2\ ^3P_0$

Ionization energy: 1 275 000 ± 2000 cm^{-1}
(158.1 ± 0.2 eV)

The $3s^2 3p^2 - 3s 3p^3$ array is from the measurements of Smitt *et al.* [S3], and $3s^2 3p^2 - 3s^2 3p 3d$ and $4s$ are from Ekberg and Svensson [E1].

Sc IX (Al Sequence)

Ground state: $1s^2 2s^2 2p^6 3s^2 3p\ ^2P^\circ_{1/2}$

Ionization energy: 1 452 000 ± 1000 cm^{-1}
(180.03 ± 0.12 eV)

The $3s^2 3p - 3s 3p^2$ array is from the measurements of Smitt *et al.* [S3], and $3s^2 3p - 3s^2 n\ell$ are from Ekberg and Svensson. There is no measured connection between the quartets and the ground state.

Sc X (Mg Sequence)

Ground state: $1s^2 2s^2 2p^6 3s^2\ ^1S_0$

Ionization energy: 1 816 200 ± 400 cm^{-1}
(225.18 ± 0.05 eV)

All $3s - 3p$ arrays are from the new measurements and analysis of Litzén and Redfors [L1]. Fawcett [F3] has given the $3p3d - 3p4f$ array and Kastner *et al.* [K2] have classified the $3p^2 - 3p4d$ array. The rest of the $n = 3$ to $n = 4$ transitions are from Ekberg [E2]. All level values in Sugar and Corliss [S9] are revised.

Sc XI (Na Sequence)

Ground state: $1s^2 2s^2 2p^6 3s\ ^2S_{1/2}$

Ionization energy: 2 014 760 ± 100 cm^{-1}
(249.800 ± 0.012 eV)

The $3s - 3p$, $3p - 3d$, and $3d - 4f$ lines are from the new adjusted wavelengths of Reader *et al.* [R1]. For $3p - 4d$ and $3d - 5f$ we quote Kruger and Phillips [K3]. The $3d - 4p$, $3p - 4s$, and $3s - 4p$ doublets are from Edlén [E3]. Beckman [B2] has measured the transitions from all the $n = 5,6$ levels and from $7d$. Transitions from all $n = 8,9$ levels are given by Fawcett [F3]. Cohen and Behring [C1] have measured the lines from $7p$, $7f$, and $10p$. The work of Reader *et al.* [R1] revises the previous values of the $3d\ ^2D$ levels downward by 300 cm^{-1}, thereby also reducing the values of all $nf\ ^2F$ levels by that amount. The quoted value of the ionization energy is therefore 300 cm^{-1} less than that given in Sugar and Corliss [S9].

Sc XII (Ne Sequence)

Ground state: $1s^2 2s^2 2p^6\ ^1S_0$

Ionization energy: 5 543 900 ± 1000 cm^{-1}
(687.36 ± 0.12 eV)

New analyses of this spectrum by Jupén and Litzén [J2] giving $2s^2 2p^5 3s - 2s^2 2p^5 3p$ and $2s^2 2p^5 3p - 2s^2 2p^5 3d$ arrays, and by Jupén *et al.* [J3] giving $n = 3$ to $n = 4$ transitions are quoted. Resonance transitions from $2s^2 2p^5 3s$ and $3d$ are from Edlén and Tyrén [E4] and those from $2s^2 2p^5 3p$, $4s$, $4d$, and $5d$ were reported by Feldman and Cohen [F4].

Sc XIII (F Sequence)

Ground state: $1s^2 2s^2 2p^5\ ^2P^\circ_{3/2}$

Ionization energy: 6 103 000 ± 12000 cm^{-1}
(756.7 ± 1.5 eV)

The $2p^5-2p^4 3s$ and $3d$ arrays are from Feldman *et al.* [F5]. Suckewer *et al.* [S5] reported the $2p^5\ ^2P^\circ_{1/2}-^2P^\circ_{3/2}$ M1 transition. The two resonance lines from $2s2p^6$ were reported by Kaufman *et al.* [K5].

Sc XIV (O Sequence)

Ground state: $1s^2 2s^2 2p^4\ ^3P_2$

Ionization energy: 6 701 000 ± 13000 cm^{-1}
(830.8 ± 1.6 eV)

All $2s-2p$ transitions are from the measurements of Kaufman *et al.* [K5]. The $2s^2 2p^4\ ^3P_2-^3P_1$ M1 transition was measured by Suckewer *et al.* [S5], and the $2s^2 2p^4\ ^3P_1-^1S_0$ M1 line was given by Hinnov [H2]. Doschek *et al.* [D1] is the source of the $2p^4-2p^3 3s$ measurements, while the $2p^4-2p^3 3d$ array is from Fawcett and Hayes [F6] with some revisions of the latter by Bromage and Fawcett [B3].

Sc XV (N Sequence)

Ground state: $1s^2 2s^2 2p^3\ ^4S^\circ_{3/2}$

Ionization energy: 7 481 000 ± 15000 cm^{-1}
(927.5 ± 2.0 eV)

All $2s-2p$ transitions are from the measurements of Kaufman *et al.* [K6]. The M1 transition $3s^2 3p^3\ ^4S^\circ_{3/2}-^2D^\circ_{3/2}$ was reported by Hinnov [H2]. The $2s^2 2p^3-2s^2 2p^2 3d$ array is from Fawcett and Hayes [F6] with some revisions by Bromage and Fawcett [B4].

Sc XVI (C Sequence)

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

Ionization energy: 8 140 000 ± 160 00 cm^{-1}
(1009 ± 2 eV)

All $2s-2p$ transitions are from the measurements of Sugar *et al.* [S6]. The M1 transitions within the $2s^2 2p^2$ configurations, $^3P_1-^3P_2$ and $^3P_0-^3P_1$, were given by Suckewer *et al.* [S6] while the M1 line $^3P_1-^1S_0$ is due to Hinnov [H2]. The $2s^2 2p^2-2s^2 2p\,3d$ array was measured by Bromage and Fawcett [B5]. Goldsmith *et al.* observed $2s^2 2p^2-2s^2 2p\,3s$ and the $2s2p^3-2s2p^2 3s$, $3d$ arrays. In Corliss and Sugar [S9] the J-values of the two levels $2s2p^3\ ^3D^\circ_{1,2}$ should each be interchanged, as well as those of $2p^4\ ^3P_{0,1}$.

Sc XVII (B Sequence)

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

Ionization energy: 8 820 000 ± 20000 cm^{-1}
(1094 ± 2 eV)

All $2s-2p$ transitions are from the measurements of Sugar *et al.* [S7], except for the intersystem transition $2s^2 2p\ ^2P^\circ_{3/2}-2s2p^2\ ^4P_{5/2}$ observed by Denne and Hinnov [D2]. Suckewer *et al.* [S5] reported the M1 transition $2s^2 2p\ ^2P^\circ_{1/2}-^2P^\circ_{3/2}$. Fawcett and Hayes [F6] reported all the transitions $n=2$ to $n=3$. The $2s2p^2\ ^4P_{1/2}$ and $^4P_{3/2}$ levels in Sugar and Corliss [S9] have been reevaluated to 288 250 and 306 780 cm^{-1}. The $2p^3\ ^4S^\circ_{3/2}$ has also been reevaluated to 896 920 cm^{-1}.

Sc XVIII (Be Sequence)

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

Ionization energy: 9 780 000 ± 200 00 cm^{-1}
(1213 ± 2 eV)

The intersystem transition $2s^2\ ^1S_0-2s2p\ ^3P^\circ_1$ was measured by Denne and Hinnov [D2]. Suckewer and Hinnov [S8] reported the M1 transition $2s2p\ ^3P^\circ_1-^3P^\circ_2$. All $2s-2p$ transitions, except for the resonance line mentioned above, are from the measurements of Kaufman *et al.* [K7]. The $n=2$ to $n=3$ lines were classified by Fawcett and Hayes [F6].

Sc XIX (Li Sequence)

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

Ionization energy: 10 388 200 ± 3000 cm^{-1}
(1287.98 ± 0.37 eV)

Fawcett *et al.* [F7] gave the best value for the $2s\ ^2S_{1/2}-2p\ ^2P^\circ_{3/2}$ transition. Both lines of the doublet were reported by Suckewer *et al.* [S5]. Goldsmith *et al.* [G4] reported measurements of $2p-3s$, $3d$, $4d$, and $2s-3p$. Boiko *et al.* [B6] gave $2s-np$ ($n=4-7$) and $2p-nd$ ($n=5-8$). The $3d-4f$ doublet was reported by Fawcett and Ridgely [F8]. Boiko *et al.* also reported the inner-shell excitations. In Sugar and Corliss [S9] the $1s^2 4s$ level is erroneously included, and $1s^2 3s\ ^2S_{1/2}$ should be 5 856 000 cm^{-1}.

Sc XX (He Sequence)

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

Ionization energy: 45 770 000 ± 9000 cm^{-1}
(5674.8 ± 1.0 eV)

The two transitions of $1s^2\ ^1S_0 - 1s2p\ ^1P^\circ_1, ^3P^\circ_1$ were reported by Boiko *et al.* [B6]. We have also included calculated wavelengths for the $1s^2\ ^1S_0 - 1snp$ $(n=3-5)\ ^1P^\circ_1$ transitions based upon the calculated values by Drake [D3] for the $n=2$ shell and by Vainshtein and Safronova [V2] for $n=3$–5 adjusted to Drake's values for the $1s2p$ levels.

Sc XXI (H Sequence)

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

Ionization energy: 48 665 520 ± 20 cm^{-1}
(6033.758 ± 0.003 eV)

No observations of this spectrum are reported. We give calculated wavelengths based on the energy levels calculated by Mohr [M1] for the $n=2$ shell and by Erickson [E5] for $n=3-5$ adjusted to the $2p\ ^2P^\circ_{3/2}$ level of Mohr.

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4. Tables of Wavelengths and Energy Level Classifications for Sc I through Sc XXI

Sc I

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1553.32	1553.318	g,a	0.00	64378.3	$3d4s^2$	$4s^220f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1554.05	1554.050	g,a	0.00	64348.0	$3d4s^2$	$4s^219f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1554.91	1554.910	g,a	0.00	64312.4	$3d4s^2$	$4s^218f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1555.76	1555.755	g,a	168.34	64445.8	$3d4s^2$	$4s^223f$	^2D	$^2F°$	$^5/_2$		G1
	1555.90	1555.907	g,a	0.00	64271.2	$3d4s^2$	$4s^217f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1556.22	1556.220	g,a	168.34	64426.6	$3d4s^2$	$4s^222f$	^2D	$^2F°$	$^5/_2$		G1
	1556.75	1556.748	g,a	168.34	64404.8	$3d4s^2$	$4s^221f$	^2D	$^2F°$	$^5/_2$		G1
	1558.13	1558.126	g,a	168.34	64348.0	$3d4s^2$	$4s^219f$	^2D	$^2F°$	$^5/_2$		G1
	1558.62	1558.594	g,a	0.00	64160.4	$3d4s^2$	$4s^215f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1558.99	1558.991	g,a	168.34	64312.4	$3d4s^2$	$4s^218f$	^2D	$^2F°$	$^5/_2$		G1
	1560.00	1559.993	g,a	168.34	64271.2	$3d4s^2$	$4s^217f$	^2D	$^2F°$	$^5/_2$		G1
	1560.39	1560.398	g,a	0.00	64086.2	$3d4s^2$	$4s^214f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1562.67	1562.651	g,a	0.00	63993.8	$3d4s^2$	$4s^213f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
		1562.694	g,a	168.34	64160.4	$3d4s^2$	$4s^215f$	^2D	$^2F°$	$^5/_2$		G1
	1564.52	1564.508	g,a	168.34	64086.2	$3d4s^2$	$4s^214f$	^2D	$^2F°$	$^5/_2$		G1
	1565.47	1565.469	g,a	0.00	63878.6	$3d4s^2$	$4s^212f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1566.75	1566.773	g,a	168.34	63993.8	$3d4s^2$	$4s^213f$	^2D	$^2F°$	$^5/_2$		G1
	1569.13	1569.130	g,a	0.00	63729.6	$3d4s^2$	$4s^211f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1569.61	1569.606	g,a	168.34	63878.6	$3d4s^2$	$4s^212f$	^2D	$^2F°$	$^5/_2$		G1
	1573.28	1573.285	g,a	168.34	63729.6	$3d4s^2$	$4s^211f$	^2D	$^2F°$	$^5/_2$		G1
	1573.98	1573.980	g,a	0.00	63533.2	$3d4s^2$	$4s^210f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1578.16	1578.162	g,a	168.34	63533.2	$3d4s^2$	$4s^210f$	^2D	$^2F°$	$^5/_2$		G1
	1580.61	1580.603	g,a	0.00	63267.0	$3d4s^2$	$4s^29f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1584.81	1584.820	g,a	168.34	63267.0	$3d4s^2$	$4s^29f$	^2D	$^2F°$	$^5/_2$		G1
	1590.16	1590.174	g,a	0.00	62886.2	$3d4s^2$	$4s^28f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1594.45	1594.442	g,a	168.34	62886.2	$3d4s^2$	$4s^28f$	^2D	$^2F°$	$^5/_2$		G1
	1604.02	1604.009	g,a	0.00	62343.8	$3d4s^2$	$4s^27f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1608.34	1608.352	g,a	168.34	62343.8	$3d4s^2$	$4s^27f$	^2D	$^2F°$	$^5/_2$		G1
	1626.08	1626.069	g,a	0.00	61498.0	$3d4s^2$	$4s^26f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1630.52	1630.532	g,a	168.34	61498.0	$3d4s^2$	$4s^26f$	^2D	$^2F°$	$^5/_2$		G1
	1664.16	1664.159	g,a	0.00	60090.4	$3d4s^2$	$4s^25f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1668.83	1668.834	g,a	168.34	60090.4	$3d4s^2$	$4s^25f$	^2D	$^2F°$	$^5/_2$		G1
	1736.083	1736.087	g,a	0.00	57600.8	$3d4s^2$	—	^2D	°	$^3/_2$	—	G1
	1736.661	1736.660	g,a	0.00	57581.8	$3d4s^2$	—	^2D	°	$^3/_2$	—	G1
	1736.811	1736.805	g,a	0.00	57577.0	$3d4s^2$	—	^2D	°	$^3/_2$	—	G1
	1739.01	1739.012	g,a	0.00	57503.9	$3d4s^2$	$4s^24f$	^2D	$^2F°$	$^3/_2$	$^5/_2$	G1
	1739.786	1739.781	g,a	0.00	57478.5	$3d4s^2$	—	^2D	°	$^3/_2$	—	G1
	1739.992		a									G1
	1740.515	1740.520	g,a	0.00	57454.1	$3d4s^2$	—	^2D	°	$^3/_2$	—	G1
	1741.178	1741.176	g,a	168.34	57600.8	$3d4s^2$	—	^2D	°	$^5/_2$	—	G1
	1741.391	1741.390	g,a	0.00	57425.4	$3d4s^2$	—	^2D	°	$^3/_2$	—	G1
	1741.749	1741.752	g,a	168.34	57581.8	$3d4s^2$	—	^2D	°	$^5/_2$	—	G1
	1741.892	1741.897	g,a	168.34	57577.0	$3d4s^2$		^2D	°	$^5/_2$	—	G1
	1742.408	1742.412	g,a	0.00	57391.7	$3d4s^2$	—	^2D	°	$^3/_2$	—	G1
	1744.12	1744.118	g,a	168.34	57503.9	$3d4s^2$	$4s^24f$	^2D	$^2F°$	$^5/_2$	$^5/_2$	G1
	1744.63		a									G1
	1744.67	1744.672	g,a	168.34	57485.7	$3d4s^2$	$4s^24f$	^2D	$^2F°$	$^5/_2$	$^7/_2$	G1
	1744.884	1744.891	g,a	168.34	57478.5	$3d4s^2$	—	^2D	°	$^5/_2$	—	G1
	1745.631	1745.635	g,a	168.34	57454.1	$3d4s^2$	—	^2D	°	$^5/_2$	—	G1
	1746.28		a									G1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1746.511	1746.510	g,a	168.34 –	57425.4	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1747.541	1747.538	g,a	168.34 –	57391.7	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1747.80		a									G1
	1748.42		a									G1
	1748.774		a									G1
	1749.160	1749.157	g,a	0.00 –	57170.4	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1749.290	1749.288	g,a	0.00 –	57166.1	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1749.470	1749.472	g,a	0.00 –	57160.1	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1751.705	1751.706	g,a	0.00 –	57087.2	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1752.500		a									G1
	1753.443	1753.451	g,a	0.00 –	57030.4	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1754.321	1754.323	g,a	168.34 –	57170.4	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1754.411	1754.412	g,a	168.34 –	57167.5	$3d4s^2$ –	$3d^2(^3F)15p$	^{2}D –	^{2}F°	$^5/_2$ –		G1
	1754.452	1754.455	g,a	168.34 –	57166.1	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1754.547		a									G1
	1754.644	1754.640	g,a	168.34 –	57160.1	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1754.898		a									G1
	1755.060		a									G1
	1756.66		a									G1
	1756.887	1756.887	g,a	168.34 –	57087.2	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1757.468	1757.460	g,a	0.00 –	56900.3	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1757.710		a									G1
	1757.812	1757.813	g,a	168.34 –	57057.2	$3d4s^2$ –	$3d^2(^3F)14p$	^{2}D –	^{2}F°	$^5/_2$ –		G1
	1758.649	1758.642	g,a	168.34 –	57030.4	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1758.830		a									G1
	1758.932		a									G1
	1759.250	1759.247	g,a	0.00 –	56842.5	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1759.33		a									G1
	1761.952		a									G1
	1762.176	1762.178	g,a	168.34 –	56916.3	$3d4s^2$ –	$3d^2(^3F)13p$	^{2}D –	^{2}F°	$^5/_2$ –		G1
	1762.47		a									G1
	1762.664	1762.675	g,a	168.34 –	56900.3	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1764.469	1764.473	g,a	168.34 –	56842.5	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1764.63		a									G1
	1764.93		a									G1
	1765.06		a									G1
	1766.152	1766.148	g,a	0.00 –	56620.4	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1767.882	1767.882	g,a	168.34 –	56733.2	$3d4s^2$ –	$3d^2(^3F)12p$	^{2}D –	^{2}F°	$^5/_2$ –		G1
	1768.506	1768.506	g,a	0.00 –	56544.9	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1770.07		a									G1
	1771.413	1771.415	g,a	168.34 –	56620.4	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1771.782	1771.784	g,a	0.00 –	56440.3	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1772.0		a									G1
	1772.6		a									G1
	1773.785	1773.787	g,a	168.34 –	56544.9	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1774.315	1774.308	g,a	0.00 –	56360.0	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1775.613	1775.614	g,a	168.34 –	56486.9	$3d4s^2$ –	$3d^2(^3F)11p$	^{2}D –	^{2}F°	$^5/_2$ –		G1
	1777.086	1777.084	g,a	168.34 –	56440.3	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1778.039	1778.040	g,a	0.00 –	56241.7	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1779.621	1779.624	g,a	168.34 –	56360.0	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1779.991	1779.993	g,a	0.00 –	56180.0	$3d4s^2$ –		^{2}D –	°	$^3/_2$ –		G1
	1780.6		a									G1
	1782.5		a									G1
	1783.381	1783.378	g,a	168.34 –	56241.7	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1785.		a									G1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1785.345	1785.343	g,a	168.34 –	56180.0	$3d4s^2$ –		^{2}D –	°	$^5/_2$ –		G1
	1786.392	1786.395	g,a	168.34 –	56147.0	$3d4s^2$ –	$3d^2(^3F)10p$	^{2}D –	^{2}F°	$^5/_2$ –		G1
	1788.69		a									G1
	1791.3		a									G1
	1796.1		a									G1
	1798.0		a									G1
	1799.07		a									G1
	1802.161	1802.160	g,a	168.34 –	55657.3	$3d4s^2$ –	$3d^2(^3F)9p$	^{2}D –	^{2}F°	$^5/_2$ –		G1
	1802.547		a									G1
	1806.065	1806.075	g,a	0.00 –	55368.7	$3d4s^2$ –	$3d4s(^1D)36p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1806.26	1806.267	g,a	0.00 –	55362.8	$3d4s^2$ –	$3d4s(^1D)35p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1806.48	1806.463	g,a	0.00 –	55356.8	$3d4s^2$ –	$3d4s(^1D)34p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1806.71	1806.717	g,a	0.00 –	55349.0	$3d4s^2$ –	$3d4s(^1D)33p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1806.965	1806.965	g,a	0.00 –	55341.4	$3d4s^2$ –	$3d4s(^1D)32p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1807.245	1807.246	g,a	0.00 –	55332.8	$3d4s^2$ –	$3d4s(^1D)31p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1807.56	1807.560	g,a	0.00 –	55323.2	$3d4s^2$ –	$3d4s(^1D)30p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1807.91	1807.906	g,a	0.00 –	55312.6	$3d4s^2$ –	$3d4s(^1D)29p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1808.28	1808.279	g,a	0.00 –	55301.2	$3d4s^2$ –	$3d4s(^1D)28p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1808.705	1808.711	g,a	0.00 –	55288.0	$3d4s^2$ –	$3d4s(^1D)27p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1808.73	1808.730	g,a	0.00 –	55287.4	$3d4s^2$ –	$3d4s(^1D)27p$	^{2}D –	^{2}P°	$^3/_2$ –	$^1/_2$	G1
	1809.19	1809.198	g,a	0.00 –	55273.1	$3d4s^2$ –	$3d4s(^1D)26p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1809.215	1809.215	g,a	0.00 –	55272.6	$3d4s^2$ –	$3d4s(^1D)26p$	^{2}D –	^{2}P°	$^3/_2$ –	$^1/_2$	G1
	1809.74	1809.752	g,a	0.00 –	55256.2	$3d4s^2$ –	$3d4s(^1D)25p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1809.77	1809.771	g,a	0.00 –	55255.6	$3d4s^2$ –	$3d4s(^1D)25p$	^{2}D –	^{2}P°	$^3/_2$ –	$^1/_2$	G1
	1810.36	1810.368	g,a	0.00 –	55237.4	$3d4s^2$ –	$3d4s(^1D)24p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1810.405	1810.404	g,a	0.00 –	55236.3	$3d4s^2$ –	$3d4s(^1D)24p$	^{2}D –	^{2}P°	$^3/_2$ –	$^1/_2$	G1
	1811.09	1811.089	g,a	0.00 –	55215.4	$3d4s^2$ –	$3d4s(^1D)23p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1811.125	1811.125	g,a	0.00 –	55214.3	$3d4s^2$ –	$3d4s(^1D)23p$	^{2}D –	^{2}P°	$^3/_2$ –	$^1/_2$	G1
	1811.27	1811.274	g,a	168.34 –	55378.1	$3d4s^2$ –	$3d4s(^1D)38p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1811.42	1811.422	g,a	168.34 –	55373.6	$3d4s^2$ –	$3d4s(^1D)37p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1811.59	1811.582	g,a	168.34 –	55368.7	$3d4s^2$ –	$3d4s(^1D)36p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1811.78	1811.776	g,a	168.34 –	55362.8	$3d4s^2$ –	$3d4s(^1D)35p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1811.915	1811.916	g,a	0.00 –	55190.2	$3d4s^2$ –	$3d4s(^1D)22p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1811.96	1811.973	g,a	168.34 –	55356.8	$3d4s^2$ –	$3d4s(^1D)34p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1812.23	1812.229	g,a	168.34 –	55349.0	$3d4s^2$ –	$3d4s(^1D)33p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1812.48	1812.479	g,a	168.34 –	55341.4	$3d4s^2$ –	$3d4s(^1D)32p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1812.76	1812.761	g,a	168.34 –	55332.8	$3d4s^2$ –	$3d4s(^1D)31p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1812.88	1812.882	g,a	0.00 –	55160.8	$3d4s^2$ –	$3d4s(^1D)21p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1812.935	1812.934	g,a	0.00 –	55159.2	$3d4s^2$ –	$3d4s(^1D)21p$	^{2}D –	^{2}P°	$^3/_2$ –	$^1/_2$	G1
	1813.07	1813.077	g,a	168.34 –	55323.2	$3d4s^2$ –	$3d4s(^1D)30p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1813.42	1813.425	g,a	168.34 –	55312.6	$3d4s^2$ –	$3d4s(^1D)29p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1813.80	1813.800	g,a	168.34 –	55301.2	$3d4s^2$ –	$3d4s(^1D)28p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1814.005	1814.006	g,a	0.00 –	55126.6	$3d4s^2$ –	$3d4s(^1D)20p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1814.06	1814.059	g,a	0.00 –	55125.0	$3d4s^2$ –	$3d4s(^1D)20p$	^{2}D –	^{2}P°	$^3/_2$ –	$^1/_2$	G1
	1814.24	1814.235	g,a	168.34 –	55288.0	$3d4s^2$ –	$3d4s(^1D)27p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1814.73	1814.725	g,a	168.34 –	55273.1	$3d4s^2$ –	$3d4s(^1D)26p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1815.29	1815.282	g,a	168.34 –	55256.2	$3d4s^2$ –	$3d4s(^1D)25p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1815.345	1815.343	g,a	0.00 –	55086.0	$3d4s^2$ –	$3d4s(^1D)19p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1815.40	1815.403	g,a	0.00 –	55084.2	$3d4s^2$ –	$3d4s(^1D)19p$	^{2}D –	^{2}P°	$^3/_2$ –	$^1/_2$	G1
	1815.91	1815.902	g,a	168.34 –	55237.4	$3d4s^2$ –	$3d4s(^1D)24p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1816.63	1816.627	g,a	168.34 –	55215.4	$3d4s^2$ –	$3d4s(^1D)23p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1
	1816.91	1816.920	g,a	0.00 –	55038.2	$3d4s^2$ –	$3d4s(^1D)18p$	^{2}D –	^{2}P°	$^3/_2$ –	$^3/_2$	G1
	1816.98	1816.979	g,a	0.00 –	55036.4	$3d4s^2$ –	$3d4s(^1D)18p$	^{2}D –	^{2}P°	$^3/_2$ –	$^1/_2$	G1
	1817.167	1817.168	g,a	0.00 –	55030.7	$3d4s^2$ –	$3d4s(^1D)18p$	^{2}D –	^{2}D°	$^3/_2$ –		G1
	1817.460	1817.459	g,a	168.34 –	55190.2	$3d4s^2$ –	$3d4s(^1D)22p$	^{2}D –	^{2}P°	$^5/_2$ –	$^3/_2$	G1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1818.43	1818.431	g,a	168.34 –	55160.8	$3d4s^2$ –	$3d4s(^1D)21p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1819.147	1819.128	g,a	0.00 –	54971.4	$3d4s^2$ –	$3d4s(^1D)17p$	^2D –	$^2D^o$	$^3/_2$ –		G1
	1819.56	1819.563	g,a	168.34 –	55126.6	$3d4s^2$ –	$3d4s(^1D)20p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1820.90	1820.908	g,a	168.34 –	55086.0	$3d4s^2$ –	$3d4s(^1D)19p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1821.22	1821.215	g,a	0.00 –	54908.4	$3d4s^2$ –	$3d4s(^1D)16p$	^2D –	$^2P^o$	$^3/_2$ –	$^3/_2$	G1
	1821.29	1821.288	g,a	0.00 –	54906.2	$3d4s^2$ –	$3d4s(^1D)16p$	^2D –	$^2P^o$	$^3/_2$ –	$^1/_2$	G1
	1821.648	1821.660	g,a	0.00 –	54895.0	$3d4s^2$ –	$3d4s(^1D)16p$	^2D –	$^2D^o$	$^3/_2$ –		G1
	1822.50	1822.494	g,a	168.34 –	55038.2	$3d4s^2$ –	$3d4s(^1D)18p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1824.08	1824.085	g,a	0.00 –	54822.0	$3d4s^2$ –	$3d4s(^1D)15p$	^2D –	$^2P^o$	$^3/_2$ –	$^3/_2$	G1
	1824.43	1824.429	g,a	168.34 –	54980.0	$3d4s^2$ –	$3d4s(^1D)17p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1824.696	1824.711	g,a	0.00 –	54803.2	$3d4s^2$ –	$3d4s(^1D)15p$	^2D –	$^2D^o$	$^3/_2$ –		G1
		1824.716	g,a	168.34 –	54971.4	$3d4s^2$ –	$3d4s(^1D)17p$	^2D –	$^2D^o$	$^5/_2$ –		G1
	1826.81	1826.816	g,a	168.34 –	54908.4	$3d4s^2$ –	$3d4s(^1D)16p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1826.977	1826.979	g,a	168.34 –	54903.5	$3d4s^2$ –	$3d^2(^3F3)8p$	^2D –	$^2F^o$	$^5/_2$ –		G1
	1827.273	1827.263	g,a	168.34 –	54895.0	$3d4s^2$ –	$3d4s(^1D)16p$	^2D –	$^2D^o$	$^5/_2$ –		G1
	1827.76	1827.749	g,a	0.00 –	54712.1	$3d4s^2$ –	$3d4s(^1D)14p$	^2D –	$^2P^o$	$^3/_2$ –	$^3/_2$	G1
	1828.572	1828.568	g,a	0.00 –	54687.6	$3d4s^2$ –	$3d4s(^1D)14p$	^2D –	$^2D^o$	$^3/_2$ –		G1
	1829.713	1829.704	0g,a	168.34 –	54822.0	$3d4s^2$ –	$3d4s(^1D)15p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1830.341	1830.333	g,a	168.34 –	54803.2	$3d4s^2$ –	$3d4s(^1D)15p$	^2D –	$^2D^o$	$^5/_2$ –		G1
	1832.97	1832.959	g,a	0.00 –	54556.6	$3d4s^2$ –	$3d4s(^1D)13p$	^2D –	$^2P^o$	$^3/_2$ –	$^3/_2$	G1
	1833.065	1833.066	g,a	0.00 –	54553.4	$3d4s^2$ –	$3d4s(^1D)13p$	^2D –	$^2P^o$	$^3/_2$ –	$^1/_2$	G1
	1833.38	1833.390	g,a	168.34 –	54712.1	$3d4s^2$ –	$3d4s(^1D)14p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1833.540	1833.540	g,a	0.00 –	54539.3	$3d4s^2$ –	$3d4s(^1D)13p$	^2D –	$^2D^o$	$^3/_2$ –		G1
	1834.206	1834.214	g,a	168.34 –	54687.6	$3d4s^2$ –	$3d4s(^1D)14p$	^2D –	$^2D^o$	$^5/_2$ –		G1
	1838.62	1838.632	g,a	168.34 –	54556.6	$3d4s^2$ –	$3d4s(^1D)13p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1839.214	1839.217	g,a	168.34 –	54539.3	$3d4s^2$ –	$3d4s(^1D)13p$	^2D –	$^2D^o$	$^5/_2$ –		G1
	1839.40	1839.365	g,a	0.00 –	54366.6	$4d4s^2$ –	$3d4s(^1D)12p$	^2D –	$^2P^o$	$^3/_2$ –	$^3/_2$	G1
	1840.142	1840.143	g,a	0.00 –	54343.6	$3d4s^2$ –	$3d4s(^1D)12p$	^2D –	$^2D^o$	$^3/_2$ –		G1
	1845.04	1845.078	g,a	168.34 –	54366.6	$3d4s^2$ –	$3d4s(^1D)12p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1845.858	1845.861	g,a	168.34 –	54343.6	$3d4s^2$ –	$3d4s(^1D)12p$	^2D –	$^2D^o$	$^5/_2$ –		G1
	1849.129	1849.112	g,a	0.00 –	54080.0	$3d4s^2$ –	$3d4s(^1D)11p$	^2D –	$^2D^o$	$^3/_2$ –		G1
	1853.79	1853.793	g,a	168.34 –	54111.8	$3d4s^2$ –	$3d4s(^1D)11p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1854.866	1854.886	g,a	168.34 –	54080.0	$3d4s^2$ –	$3d4s(^1D)11p$	^2D –	$^2D^o$	$^5/_2$ –		G1
	1861.952	1861.975	g,a	0.00 –	53706.4	$3d4s^2$ –	$3d4s(^1D)10p$	^2D –	$^2D^o$	$^3/_2$ –		G1
	1865.1	1865.127	g,a	168.34 –	53784.	$3d4s^2$ –	$3d4s(^1D)10p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1867.852	1867.830	g,a	168.34 –	53706.4	$3d4s^2$ –	$3d4s(^1D)10p$	^2D –	$^2D^o$	$^5/_2$ –		G1
	1868.309	1868.312	g,a	168.34 –	53692.6	$3d4s^2$ –	$3d^2(^3F3)7p$	^2D –	$^2F^o$	$^5/_2$ –		G1
	1881.018	1881.015	g,a	0.00 –	53162.8	$3d4s^2$ –	$3d4s(^1D)9p$	^2D –	$^2D^o$	$^3/_2$ –		G1
	1884.85	1884.852	g,a	168.34 –	53222.9	$3d4s^2$ –	$3d4s(^1D)9p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	G1
	1886.989	1886.990	g,a	168.34 –	53162.8	$3d4s^2$ –	$3d4s(^1D)9p$	^2D –	$^2D^o$	$^5/_2$ –		G1
	1891.924	1891.924	0g,a	0.00 –	52856.25	$3d4s^2$ –		^2D –	^{o}	$^3/_2$ –		G1
	1893.638	1893.638	0g,a	0.00 –	52808.40	$3d4s^2$ –		^2D –	^{o}	$^3/_2$ –		G1
	1894.492	1894.492	1g,a	0.00 –	52784.60	$3d4s^2$ –		^2D –	^{o}	$^3/_2$ –		G1
	1895.818	1895.818	1g,a	0.00 –	52747.68	$3d4s^2$ –		^2D –	^{o}	$^3/_2$ –		G1
	1897.525	1897.525	1g,a	0.00 –	52700.22	$3d4s^2$ –		^2D –	^{o}	$^3/_2$ –		G1
	1897.969	1897.969	3g,a	168.34 –	52856.25	$3d4s^2$ –		^2D –	^{o}	$^5/_2$ –		G1
	1899.694	1899.694	1g,a	168.34 –	52808.40	$3d4s^2$ –		^2D –	^{o}	$^5/_2$ –		G1
	1900.553	1900.553	2g,a	168.34 –	52784.60	$3d4s^2$ –		^2D –	^{o}	$^5/_2$ –		G1
	1901.375	1901.375	1g,a	0.00 –	52593.51	$3d4s^2$ –		^2D –	^{o}	$^3/_2$ –		G1
	1901.887	1901.888	3g,a	168.34 –	52747.68	$3d4s^2$ –		^2D –	^{o}	$^5/_2$ –		G1
	1903.606	1903.606	3g,a	168.34 –	52700.22	$3d4s^2$ –		^2D –	^{o}	$^5/_2$ –		G1
	1904.434	1904.434	1g,a	0.00 –	52509.04	$3d4s^2$ –		^2D –	^{o}	$^3/_2$ –		G1
	1905.243	1905.243	0g,a	0.00 –	52486.74	$3d4s^2$ –		^2D –	^{o}	$^3/_2$ –		G1
	1907.294	1907.294	0g,a	0.00 –	52430.31	$3d4s^2$ –		^2D –	^{o}	$^3/_2$ –		G1
	1907.480	1907.481	3g,a	168.34 –	52593.51	$3d4s^2$ –		^2D –	^{o}	$^5/_2$ –		G1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1907.818	1907.818	3g,a	0.00	52415.89	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1910.559	1910.559	3g,a	168.34	52509.04	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1911.374	1911.373	3g,a	168.34	52486.74	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1913.437	1913.437	1g,a	168.34	52430.31	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1913.966	1913.965	3g,a	168.34	52415.89	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1918.894	1918.894	2g,a	0.00	52113.34	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1919.799	1919.799	3g,a	0.00	52088.78	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1925.113	1925.113	2g,a	168.34	52113.34	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1926.024	1926.024	0g,a	168.34	52088.78	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1927.871	1927.871	0g,a	0.00	51870.68	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1929.571	1929.572	2g,a	0.00	51824.97	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1930.994	1930.994	2g,a	0.00	51786.80	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1932.091	1932.091	0g,a	0.00	51757.40	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1934.149	1934.148	0g,a	168.34	51870.68	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1935.753	1935.753	2g,a	0.00	51659.49	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1935.831	1935.831	3g,a	0.00	51657.39	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1935.860	1935.860	2g,a	168.34	51824.97	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1936.235	1936.235	2g,a	0.00	51646.62	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1936.411	1936.412	2g,a	0.00	51641.91	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1937.292	1937.291	3g,a	168.34	51786.80	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1937.600	1937.600	1g,a	0.00	51610.24	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1938.396	1938.395	3g,a	168.34	51757.40	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1938.492	1938.492	2g,a	0.00	51586.48	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1938.666	1938.666	3g,a	0.00	51581.86	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1939.342	1939.342	0g,a	0.00	51563.87	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1940.239	1940.239	2g,a	0.00	51540.05	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1940.482	1940.482	0g,a	0.00	51533.58	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1942.081	1942.081	3g,a	168.34	51659.49	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1942.159	1942.161	2g,a	168.34	51657.39	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1942.566	1942.567	3g,a	168.34	51646.62	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1942.745	1942.745	4g,a	168.34	51641.91	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1943.940	1943.941	2g,a	168.34	51610.24	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1944.838	1944.839	3g,a	168.34	51586.48	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1945.013	1945.014	2g,a	168.34	51581.86	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1945.694	1945.694	3g,a	168.34	51563.87	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1946.596	1946.597	1g,a	168.34	51540.05	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1946.841	1946.842	3g,a	168.34	51533.58	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1947.653	1947.653	1g,a	0.00	51343.84	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1948.324	1948.324	2g,a	0.00	51326.17	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1948.702	1948.702	1g,a	0.00	51316.21	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1950.869	1950.869	2g,a	0.00	51259.21	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1951.148	1951.148	1g,a	0.00	51251.88	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1951.786	1951.787	2g,a	0.00	51235.11	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1952.877	1952.877	2g,a	0.00	51206.49	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1953.132	1953.133	0g,a	0.00	51199.80	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1954.059	1954.060	3g,a	168.34	51343.84	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1954.109	1954.109	2g,a	0.00	51174.21	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1954.735	1954.735	3g,a	168.34	51326.17	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1955.115	1955.116	2g,a	168.34	51316.21	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1956.541	1956.541	2g,a	0.00	51110.61	$3d4s^2$	– $3d4s(^1D)7p$	^{2}D	– ^{2}P°	$^3/_2$	– $^3/_2$	G1
	1957.296	1957.297	0g,a	168.34	51259.21	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1957.577	1957.578	2g,a	168.34	51251.88	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1958.220	1958.221	2g,a	168.34	51235.11	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1959.319	1959.319	0g,a	168.34	51206.49	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1959.575	1959.576	2g,a	168.34	51199.80	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1960.559	1960.559	2g,a	168.34	51174.21	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1961.196	1961.196	1g,a	0.00	50989.29	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1961.365	1961.365	1g,a	0.00	50984.90	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1961.986	1961.986	1g,a	0.00	50968.77	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1962.383	1962.383	1g,a	0.00	50958.44	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1963.006	1963.006	g,a	168.34	51110.61	$3d4s^2$	$3d4s(^1D)7p$	^{2}D	^{2}P°	$^5/_2$	$^3/_2$	G1
	1964.485	1964.485	2g,a	0.00	50903.92	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1966.738	1966.738	0g,a	0.00	50845.61	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1966.839	1966.839	1g,a	0.00	50842.99	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1967.693	1967.692	2g,a	168.34	50989.29	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1967.863	1967.862	1g,a	168.34	50984.90	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1968.488	1968.487	2g,a	168.34	50968.77	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1968.888	1968.888	2g,a	168.34	50958.44	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1968.965	1968.965	0g,a	0.00	50788.10	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1969.564	1969.564	1g,a	0.00	50772.65	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1971.003	1971.003	1g,a	168.34	50903.92	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1973.271	1973.271	2g,a	168.34	50845.61	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1973.373	1973.373	2g,a	168.34	50842.99	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1975.083	1975.083	1g,a	0.00	50630.78	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1975.512	1975.513	2g,a	168.34	50788.10	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1976.117	1976.116	1g,a	168.34	50772.65	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1981.671	1981.672	2g,a	168.34	50630.78	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	1997.206	1997.206	3g,a	0.00	50069.96	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1998.293	1998.293	3g,a	0.00	50042.72	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	1999.618	1999.618	3g,a	0.00	50009.54	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2000.150	2000.150	0g,a	0.00	49980.05	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2000.190v	2000.190	0g,a	0.00	49995.25	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2001.420	2001.420	2g,a	0.00	49948.35	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2001.823	2001.822	2g,a	0.00	49938.31	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2003.293	2003.294	3g,a	168.34	50069.96	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2004.172	2004.172	0g,a	0.00	49879.76	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2004.387	2004.389	1g,a	168.34	50042.72	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2005.723	2005.723	2g,a	168.34	50009.54	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2006.039	2006.039	0g,a	0.00	49833.36	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2006.298	2006.298	2g,a	168.34	49995.25	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2006.911	2006.911	0g,a	168.34	49980.05	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2008.189	2008.189	0g,a	168.34	49948.35	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2008.594	2008.594	0g,a	168.34	49938.31	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2010.961	2010.960	2g,a	168.34	49879.76	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2012.839	2012.839	0g,a	168.34	49833.36	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2032.682	2032.683	2g,a	0.00	49180.25	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2039.665	2039.665	2g,a	168.34	49180.25	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2042.586	2042.586	2g,a	0.00	48941.83	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2044.195	2044.195	3g,a	0.00	48903.32	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2046.426	2046.424	9g	0.00	48850.07	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	B1
	2047.623		9									B1
	2048.259		4									B1
	2049.636	2049.637	4g,a	168.34	48941.83	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2049.654		9									B1
	2050.025		9									B1
	2051.257	2051.257	4g,a	168.34	48903.32	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2051.328		4									B1
	2053.500	2053.501	3g,a	168.34	48850.07	$3d4s^2$	–	^{2}D	°	$^5/_2$	–	G1
	2057.038	2057.037	3g,a	0.00	48598.05	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1
	2057.711	2057.711	2g,a	0.00	48582.13	$3d4s^2$	–	^{2}D	°	$^3/_2$	–	G1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2058.147		4									B1
	2058.503	2058.504	2g,a	0.00	48563.43	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2058.581	2058.582	2g,a	0.00	48561.60	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2058.994	2058.994	3g,a	0.00	48551.87	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2061.637		9									B1
	2062.680	2062.681	0g,a	0.00	48465.10	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2062.969	2062.969	0g,a	0.00	48458.34	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2064.071	2064.071	1g,a	0.00	48432.46	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2064.187	2064.188	0g,a	168.34	48598.05	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2064.866	2064.867	1g,a	168.34	48582.13	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2065.412	2065.413	0g,a	0.00	48401.01	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2065.592	2065.591	2g,a	0.00	48396.82	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2065.666	2065.665	2g,a	168.34	48563.43	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2065.742	2065.743	2g,a	168.34	48561.60	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2066.158	2066.159	2g,a	168.34	48551.87	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2066.282	2066.281	2g,a	0.00	48380.66	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2067.062	2067.062	0g,a	0.00	48362.39	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2067.769	2067.769	0g,a	0.00	48345.87	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2068.846	2068.846	1g,a	168.34	48489.03	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2069.871	2069.871	1g,a	168.34	48465.10	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2070.159	2070.161	1g,a	168.34	48458.34	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2071.272	2071.271	3g,a	168.34	48432.46	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2072.622	2072.622	1g,a	168.34	48401.01	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2072.802	2072.802	1g,a	168.34	48396.82	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2073.497	2073.497	2g,a	168.34	48380.66	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2074.283	2074.283	3g,a	168.34	48362.39	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2074.994	2074.995	3g,a	168.34	48345.87	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2112.846	2112.846	7g	0.00	47314.53	$3d4s^2$	– $3d^2(^3F)5p$	^2D	– $^2D°$	$^3/_2$	– $^5/_2$	B1
	2116.650	2116.649	9g	0.00	47229.54	$3d4s^2$	– $3d^2(^3F)5p$	^2D	– $^2D°$	$^3/_2$	– $^3/_2$	B1
	2120.392	2120.392	9g	168.34	47314.53	$3d4s^2$	– $3d^2(^3F)5p$	^2D	– $^2D°$	$^5/_2$	– $^5/_2$	B1
	2124.223	2124.221	5g	168.34	47229.54	$3d4s^2$	– $3d^2(^3F)5p$	^2D	– $^2D°$	$^5/_2$	– $^3/_2$	B1
	2125.172	2125.172	4g,a	0.00	47040.14	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2125.206		9									B1
	2128.881		9									B1
	2132.840		5									B1
	2138.430	2138.430	2g	0.00	46748.53	$3d4s^2$	–	^2D	°	$^3/_2$	–	B1
	2146.159	2146.160	2g	168.34	46748.53	$3d4s^2$	–	^2D	°	$^5/_2$	–	B1
	2161.232	2161.231	2g,a	0.00	46255.40	$3d4s^2$	– $3d^2(^3F)5p$	^2D	– $^4F°$	$^3/_2$	– $^5/_2$	G1
	2169.126	2169.126	1g,a	168.34	46255.40	$3d4s^2$	– $3d^2(^3F)5p$	^2D	– $^4F°$	$^5/_2$	– $^5/_2$	G1
	2172.293	2172.293	1g,a	0.00	46019.88	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2172.843	2172.843	2g,a	0.00	46008.23	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2174.522	2174.522	1g,a	0.00	45972.70	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2176.209	2176.207	2g	0.00	45937.12	$3d4s^2$	–	^2D	°	$^3/_2$	–	B1
	2177.738	2177.737	1g,a	0.00	45904.84	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2178.034	2178.033	2g	0.00	45898.61	$3d4s^2$	–	^2D	°	$^3/_2$	– $^3/_2$	B1
	2180.269	2180.269	1g,a	168.34	46019.88	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2180.645	2180.645	2g,a	0.00	45843.64	$3d4s^2$	–	^2D	°	$^3/_2$	–	G1
	2180.822	2180.823	2g,a	168.34	46008.23	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2182.515	2182.515	1g,a	168.34	45972.70	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2184.210	2184.212	0g,a	168.34	45937.12	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2185.752	2185.754	2g,a	168.34	45904.84	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2186.051	2186.051	2g,a	168.34	45898.61	$3d4s^2$	–	^2D	°	$^5/_2$	– $^3/_2$	G1
	2188.681	2188.683	0g,a	168.34	45843.64	$3d4s^2$	–	^2D	°	$^5/_2$	–	G1
	2262.292	2262.292	6g	0.00	44189.29	$3d4s^2$	– $3d^2(^3P)4p$	^2D	– $^2P°$	$^3/_2$	– $^3/_2$	B1
	2266.594	2266.592	9g	0.00	44105.45	$3d4s^2$	– $3d^2(^3P)4p$	^2D	– $^2P°$	$^3/_2$	– $^1/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2270.944	2270.944	9*g*	168.34 –	44189.29	$3d4s^2$ –	$3d^2(^3P)4p$	^2D –	$^2P^\circ$	$^5/_2$ –	$^3/_2$	B1
	2280.833	2280.832	9*g*	0.00 –	43830.12	$3d4s^2$ –	$3d^2(^1G)4p$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	B1
	2288.059	2288.054	9*g*,bl	168.34 –	43860.12	$3d4s^2$ –	$3d^2(^1G)4p$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	B1
	2289.628	2289.627	2*g*	168.34 –	43830.12	$3d4s^2$ –	$3d^2(^1G)4p$	^2D –	$^2F^\circ$	$^5/_2$ –	$^5/_2$	B1
	2301.947		4									B1
	2305.827		2									B1
	2306.886		2									B1
	2311.291	2311.291	4*g*	0.00 –	43252.56	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2D^\circ$	$^3/_2$ –	$^5/_2$	B1
	2314.050		4									B1
	2314.581		2									B1
	2315.687	2315.687	5*g*	0.00 –	43170.45	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	B1
	2318.482		4									B1
	2319.714		4									B1
	2319.900		2									B1
	2320.226		2									B1
	2320.321	2320.323	5*g*	168.34 –	43252.56	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2D^\circ$	$^5/_2$ –	$^5/_2$	B1
	2324.753	2324.753	4*g*	168.34 –	43170.45	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2D^\circ$	$^5/_2$ –	$^3/_2$	B1
	2327.246		4									B1
	2327.750		3									B1
	2328.186	2328.182	5*g*	0.00 –	42938.79	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	B1
	2330.826		3									B1
	2330.936		3									B1
	2332.130		4									B1
	2334.671	2334.669	5*g*	0.00 –	42819.49	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2P^\circ$	$^3/_2$ –	$^1/_2$	B1
	2335.165	2335.161	5*g*	168.34 –	42978.81	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	B1
	2335.762		4									B1
	2336.635		3									B1
	2336.707		2									B1
	2336.806	2336.802	4*g*	0.00 –	42780.41	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2P^\circ$	$^3/_2$ –	$^3/_2$	B1
	2337.342	2337.346	2*g*	168.34 –	42938.79	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2F^\circ$	$^5/_2$ –	$^5/_2$	B1
	2340.202		3									B1
	2343.481		2									B1
	2344.485		3									B1
	2346.034	2346.034	5*g*	168.34 –	42780.41	$3d4s^2$ –	$3d4s(^1D)5p$	^2D –	$^2P^\circ$	$^5/_2$ –	$^3/_2$	B1
	2347.094		3									B1
	2356.210		3									B1
	2358.118		4									B1
	2360.012		3									B1
	2367.825		2									B1
	2368.148		2									B1
	2372.748		4									B1
	2373.637		2									B1
	2376.409		4									B1
	2378.750		4									B1
	2397.937		3									B1
	2405.956		4									B1
	2412.208		3									B1
	2412.248		3									B1
	2414.177		3									B1
	2414.215		3									B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2424.453		3									B1
	2424.729		4									B1
	2428.554		4									B1
	2428.659	2428.657	5g	0.00	41162.52	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^2D^\circ$	$^3/_2$	$^5/_2$	B1
	2429.191	2429.194	5g	0.00	41153.42	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^2D^\circ$	$^3/_2$	$^3/_2$	B1
	2432.228		4									B1
	2432.722		4									B1
	2435.023		2									B1
	2438.627	2438.631	5g	168.34	41162.52	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^2D^\circ$	$^5/_2$	$^5/_2$	B1
	2439.165	2439.173	5g	168.34	41153.42	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
	2443.363		2									B1
	2449.408		4									B1
	2452.120		2									B1
	2455.330	2455.329	2g,a	0.00	40715.42	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4P^\circ$	$^3/_2$	$^5/_2$	G1
	2459.602	2459.605	3g,a	0.00	40644.64	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4P^\circ$	$^3/_2$	$^3/_2$	G1
	2462.664	2462.669	4g	0.00	40594.07	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^2P^\circ$	$^3/_2$	$^3/_2$	B1
	2465.516	2465.523	3g	168.34	40715.42	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4P^\circ$	$^5/_2$	$^5/_2$	B1
	2468.403	2468.407	5g	0.00	40499.71	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	B1
	2469.829	2469.835	4g	168.34	40644.64	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4P^\circ$	$^5/_2$	$^3/_2$	B1
	2472.925	2472.925	5g	168.34	40594.07	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	B1
	2477.727	2477.730	4g	0.00	40347.34	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^2D^\circ$	$^3/_2$	$^3/_2$	B1
	2487.860	2487.866	4g	168.34	40351.30	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^2D^\circ$	$^5/_2$	$^5/_2$	B1
		2487.869	g	0.00	40182.92	$3d4s^2$	–	^2D	$^\circ$	$^3/_2$	–	B1
	2488.113	2488.111	2g,a	168.34	40347.34	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^2D^\circ$	$^5/_2$	$^3/_2$	G1
	2491.263	2491.266	3g,a	0.00	40128.13	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4D^\circ$	$^3/_2$	$^5/_2$	G1
	2491.396		2									B1
	2492.749	2492.753	4g	0.00	40104.19	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^2F^\circ$	$^3/_2$	$^5/_2$	B1
	2494.660	2494.663	3g,a	0.00	40073.49	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4D^\circ$	$^3/_2$	$^3/_2$	G1
	2498.336	2498.336	0g,a	168.34	40182.92	$3d4s^2$	–	^2D	$^\circ$	$^5/_2$	–	G1
	2499.898	2499.898	2g,a	0.00	39989.58	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4F^\circ$	$^3/_2$	$^5/_2$	G1
	2501.765	2501.762	3g	168.34	40128.13	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4D^\circ$	$^5/_2$	$^5/_2$	B1
	2503.264	2503.261	3g,a	168.34	40104.19	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^2F^\circ$	$^5/_2$	$^5/_2$	G1
	2505.185	2505.187	2g,a	168.34	40073.49	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4D^\circ$	$^5/_2$	$^3/_2$	G1
	2510.466	2510.467	1g,a	168.34	39989.58	$3d4s^2$	$3d4s(^3D)5p$	^2D	$^4F^\circ$	$^5/_2$	$^5/_2$	G1
	2535.120		4									B1
	2548.084		4									B1
	2549.581		4									B1
	2549.620		2									B1
	2571.399		2									B1
	2588.444		3									B1
	2592.438		3									B1
	2594.999		2									B1
	2633.223	2633.228	3g	0.00	37964.89	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4P^\circ$	$^3/_2$	$^5/_2$	B1
	2637.142	2637.145	3g	0.00	37908.50	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4P^\circ$	$^3/_2$	$^3/_2$	B1
	2639.280	2639.284	3g	0.00	37877.78	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4P^\circ$	$^3/_2$	$^1/_2$	B1
	2642.155		1									B1
	2642.859		2									B1
	2644.954	2644.956	3g	168.34	37964.89	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4P^\circ$	$^5/_2$	$^5/_2$	B1
	2648.906	2648.908	3g	168.34	37908.50	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4P^\circ$	$^5/_2$	$^3/_2$	B1
	2666.802	2666.808	0g,a	0.00	37486.86	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4S^\circ$	$^3/_2$	$^3/_2$	G1
	2671.476		2									B1
	2674.646		4									B1
	2674.857		4									B1
	2678.038		4									B1
	2678.833	2678.839	4g	168.34	37486.86	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4S^\circ$	$^5/_2$	$^3/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2688.251		3									B1
UV2	2692.776	2692.774	6g	0.00	37125.40	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	B1
	2695.635	2695.634	5g	0.00	37086.02	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^3/_2$	B1
	2696.029		4									B1
	2699.018	2699.015	6g	0.00	37039.57	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2D^\circ$	$^3/_2$	$^5/_2$	B1
	2704.573		2									B1
	2705.075		1									B1
	2705.790		2									B1
	2706.088		2									B1
UV1	2706.738	2706.736	6g	0.00	36933.91	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2D^\circ$	$^3/_2$	$^3/_2$	B1
UV2	2707.931	2707.926	6g	168.34	37086.02	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	B1
	2709.503		3									B1
	2710.045		5									B1
	2710.709		3									B1
UV1	2711.341	2711.338	6g	168.34	37039.57	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2D^\circ$	$^5/_2$	$^5/_2$	B1
	2711.901		2									B1
	2712.148	2712.149	3g	0.00	36860.20	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4D^\circ$	$^3/_2$	$^5/_2$	B1
	2713.076		2									B1
	2713.171		2									B1
	2714.530		3									B1
	2717.053	2717.055	5g	0.00	36793.65	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4D^\circ$	$^3/_2$	$^3/_2$	B1
	2717.267	2717.274	4g	168.34	36959.03	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4D^\circ$	$^5/_2$	$^7/_2$	B1
	2719.130	2719.130	5g	168.34	36933.91	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
	2719.231	2719.232	3g	0.00	36764.20	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4D^\circ$	$^3/_2$	$^1/_2$	B1
	2723.095		2									B1
	2724.594	2724.593	5g	168.34	36860.20	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^4D^\circ$	$^5/_2$	$^5/_2$	B1
	2726.481	2726.484	5g	0.00	36666.42	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2F^\circ$	$^3/_2$	$^5/_2$	B1
	2734.287	2734.287	5g	168.34	36730.12	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^7/_2$	B1
	2739.057	2739.060	5g	168.34	36666.42	$3d4s^2$	$3d^2(^1D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^5/_2$	B1
	2740.994		4									B1
	2760.244		4									B1
	2763.397		3									B1
	2786.749		2									B1
	2800.717		3									B1
	2828.319	2828.314	1g	0.00	35346.35	$3d4s^2$	$3d^2(^3P)4p$	^2D	$^2S^\circ$	$^3/_2$	$^1/_2$	B1
	2832.180		4									B1
	2835.897		4									B1
	2843.411		4									B1
	2849.463	2849.469	2	11557.69	46641.64	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4D^\circ$	$^5/_2$	$^7/_2$	B1
	2850.067		3									B1
	2853.750	2853.747	3	11610.28	46641.64	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4D^\circ$	$^7/_2$	$^7/_2$	B1
	2855.261	2855.279	4	11557.69	46570.25	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4D^\circ$	$^5/_2$	$^5/_2$	B1
	2855.870		4									B1
	2856.507	2856.503	4	11519.99	46517.55	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4D^\circ$	$^3/_2$	$^3/_2$	B1
	2859.127	2859.124	4	11519.99	46485.47	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4D^\circ$	$^3/_2$	$^1/_2$	B1
	2859.228	2859.224	5	11677.38	46641.64	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4D^\circ$	$^9/_2$	$^7/_2$	B1
	2859.579	2859.574	5	11610.28	46570.25	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4D^\circ$	$^7/_2$	$^5/_2$	B1
		2859.583		11557.69	46517.55	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4D^\circ$	$^5/_2$	$^3/_2$	B1
	2867.235		1									B1
	2875.249		2									B1
	2876.117	2876.113	2	11610.28	46369.23	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4F^\circ$	$^7/_2$	$^9/_2$	B1
	2878.064	2878.062	2	11519.99	46255.40	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4F^\circ$	$^3/_2$	$^5/_2$	B1
	2879.213		3									B1
	2879.601		4									B1
	2880.299	2880.292	3	11557.69	46266.21	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^4F	$^4F^\circ$	$^5/_2$	$^7/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2881.188	2881.189	5	11557.69 –	46255.40	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4F^\circ$	$^5/_2$ –	$^5/_2$	B1
	2881.672	2881.676	3	11677.38 –	46369.23	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4F^\circ$	$^9/_2$ –	$^9/_2$	B1
	2882.095	2882.095	5	11519.99 –	46206.80	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4F^\circ$	$^3/_2$ –	$^3/_2$	B1
	2884.659	2884.663	4	11610.28 –	46266.21	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4F^\circ$	$^7/_2$ –	$^7/_2$	B1
	2885.232	2885.231	2	11557.69 –	46206.80	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4F^\circ$	$^5/_2$ –	$^3/_2$	B1
	2885.563	2885.563	3	11610.28 –	46255.40	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4F^\circ$	$^7/_2$ –	$^5/_2$	B1
	2888.106		1									B1
	2890.263	2890.259	2	11677.38 –	46266.21	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4F^\circ$	$^9/_2$ –	$^7/_2$	B1
	2892.501		2									B1
	2894.868		5									B1
	2895.144		5									B1
	2896.784		3									B1
	2898.320		3									B1
	2899.262		3									B1
	2900.515		3									B1
	2911.128	2911.125	1	11557.69 –	45898.61	$3d^2(^3F)4s$ –		^4F –	$^\circ$	$^5/_2$ –	$^3/_2$	B1
	2912.478		2									B1
	2917.747		4									B1
	2918.126		1									B1
	2918.408		1									B1
	2919.864		4									B1
	2920.523		4									B1
	2921.098		4									B1
	2924.167		5									B1
	2924.309		4									B1
	2927.152		1									B1
	2929.462		1									B1
	2930.111		1									B1
	2930.806		1									B1
	2932.508	2932.508	5	11519.99 –	45610.52	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4G^\circ$	$^3/_2$ –	$^5/_2$	B1
	2932.778	2932.776	5	11557.69 –	45645.10	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4G^\circ$	$^5/_2$ –	$^7/_2$	B1
	2933.088	2933.083	5	11677.38 –	45761.23	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4G^\circ$	$^9/_2$ –	$^{11}/_2$	B1
	2933.330	2933.330	5	11610.28 –	45691.26	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4G^\circ$	$^7/_2$ –	$^9/_2$	B1
	2934.163		2									B1
	2935.757	2935.755	3	11557.69 –	45610.52	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4G^\circ$	$^5/_2$ –	$^5/_2$	B1
	2937.317	2937.308	2	11610.28 –	45645.10	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4G^\circ$	$^7/_2$ –	$^7/_2$	B1
	2939.118	2939.117	2	11677.38 –	45691.26	$3d^2(^3F)4s$ –	$3d^2(^3F)5p$	^4F –	$^4G^\circ$	$^9/_2$ –	$^9/_2$	B1
	2941.282		1									B1
	2943.080		3									B1
	2945.246		3									B1
	2945.364		2									B1
	2946.892		2									D1
	2947.715		1									B1
	2948.991		2									B1
	2957.198		1									B1
	2965.233		3									B1
11	2965.879	2965.871	6g	0.00 –	33707.06	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^2D^\circ$	$^3/_2$ –	$^5/_2$	B1
	2969.364		1									B1
	2969.604		2									B1
11	2974.010	2974.005	6g	0.00 –	33614.88	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	B1
	2978.481		2									B1
	2978.943		1									B1
11	2980.755	2980.758	6g	168.34 –	33707.06	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^2D^\circ$	$^5/_2$ –	$^5/_2$	B1
	2981.358		2									B1
	2981.465		3									B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2981.990		3									B1
	2985.467		2									B1
	2985.666		3									B1
	2986.993		1									B1
	2987.814		3									B1
	2987.896		3									B1
11	2988.965	2988.974	6g	168.34 –	33614.88	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^2D^\circ$	$5/2$ –	$3/2$	B1
	2989.961		5									B1
	2991.111		5									B1
	2992.255		3									B1
	2992.792		5									B1
	2996.702		1									B1
	3001.118		5									B1
	3002.641		3									B1
	3002.727		2									B1
	3006.417		1									B1
	3006.480		3									B1
	3008.923		3									B1
10	3015.367	3015.368	6g	0.00 –	33153.79	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^2F^\circ$	$3/2$ –	$5/2$	B1
	3017.916		3									B1
	3018.355		3									B1
10	3019.349	3019.351	6g	168.34 –	33278.40	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^2F^\circ$	$5/2$ –	$7/2$	B1
	3023.707		2									B1
	3028.742		2									B1
10	3030.759	3030.757	6g	168.34 –	33153.79	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^2F^\circ$	$5/2$ –	$5/2$	B1
	3033.770		2									B1
	3034.929		3									B1
	3035.160		3									B1
	3035.221		3									B1
	3038.737	3038.742	2	16021.82 –	48920.60	$3d4s(^3D)4p$ –		$^4D^\circ$ –	^4P	$3/2$ –	$5/2$	B1
	3038.826	3038.826	4	16022.73 –	48920.60	$3d4s(^3D)4p$ –		$^2D^\circ$ –	^4P	$5/2$ –	$5/2$	B1
	3039.779	3039.771	5g	168.34 –	33055.98	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^2G^\circ$	$5/2$ –	$7/2$	B1
	3042.346	3042.348	3	16009.77 –	48869.56	$3d4s(^3D)4p$ –		$^4D^\circ$ –	^4P	$1/2$ –	$3/2$	B1
	3042.427		3									B1
	3042.541		2									B1
	3043.463	3043.464	5	16021.82 –	48869.56	$3d4s(^3D)4p$ –		$^4D^\circ$ –	^4P	$3/2$ –	$3/2$	B1
	3043.551	3043.548	5	16022.73 –	48869.56	$3d4s(^3D)4p$ –		$^2D^\circ$ –	^4P	$5/2$ –	$3/2$	B1
	3044.012		3									B1
	3044.704		4									B1
	3045.836		1									B1
	3046.009	3046.005	5	16009.77 –	48830.11	$3d4s(^3D)4p$ –		$^4D^\circ$ –	^4P	$1/2$ –	$1/2$	B1
	3047.121	3047.124	5	16021.82 –	48830.11	$3d4s(^3D)4p$ –		$^4D^\circ$ –	^4P	$3/2$ –	$1/2$	B1
	3049.797	3049.796	5	16141.06 –	48920.60	$3d4s(^3D)4p$ –		$^4D^\circ$ –	^4P	$5/2$ –	$5/2$	B1
	3050.438	3050.437	5	16096.90 –	48869.56	$3d4s(^3D)4p$ –		$^2D^\circ$ –	^4P	$1/2$ –	$3/2$	B1
	3050.558		4									B1
	3051.193		4									B1
	3051.746		4									B1
	3053.049		5									B1
	3054.111	3054.113	4	16096.90 –	48830.11	$3d4s(^3D)4p$ –		$^2D^\circ$ –	^4P	$3/2$ –	$1/2$	B1
	3054.553	3054.553	5	16141.06 –	48869.56	$3d4s(^3D)4p$ –		$^4D^\circ$ –	^4P	$5/2$ –	$3/2$	B1
	3055.245		4									B1
	3056.309	3056.304	5	16210.85 –	48920.60	$3d4s(^3D)4p$ –		$^4D^\circ$ –	^4P	$7/2$ –	$5/2$	B1
	3057.520	3057.510	5g	0.00 –	32696.84	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^4D^\circ$	$3/2$ –	$5/2$	B1
	3059.864		3									B1
	3061.031	3061.025	5g	0.00 –	32659.30	$3d4s^2$ –	$3d^2(^3F)4p$	^2D –	$^4D^\circ$	$3/2$ –	$3/2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3062.083		5									B1
	3062.384		3									B1
	3063.080	3063.079	4*g*	0.00	32637.40	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4D^\circ$	$^3/_2$	$^1/_2$	B1
	3063.508		1									B1
	3066.625		4									B1
	3066.920		2									B1
	3068.186	3068.178	5*g*	168.34	32751.50	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4D^\circ$	$^5/_2$	$^7/_2$	B1
	3068.741		5									B1
	3069.002		5									B1
	3070.581		1									B1
	3071.066		2									B1
	3073.341	3073.334	5*g*	168.34	32696.84	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4D^\circ$	$^5/_2$	$^5/_2$	B1
	3073.762		2									B1
	3080.303		2									B1
	3081.223		1									B1
	3081.347		2									B1
	3081.718		1									B1
	3082.307		1									B1
	3082.677		5									B1
	3083.415		3									B1
	3084.822		2									B1
	3085.710		2									B1
	3085.881		3									B1
	3086.157		2									B1
	3086.626	3086.623	1	14926.07	47314.53	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^2F	$^2D^\circ$	$^5/_2$	$^5/_2$	B1
	3087.567		4									B1
	3089.913		3									B1
	3090.133		3									B1
	3090.256	3090.251	1	16022.73	48373.17	$3d4s(^3D)4p$	–	$^2D^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	3090.367		3									B1
	3090.569		3									B1
	3092.883		1									B1
	3093.646	3093.651	4	16009.77	48324.66	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^1/_2$	$^3/_2$	B1
	3093.953		2									B1
	3094.740	3094.744	5	14926.07	47229.54	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^2F	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
	3094.808	3094.805	3	16021.82	48324.66	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^3/_2$	$^3/_2$	B1
	3097.050		1									B1
	3097.701	3097.704	5	15041.92	47314.53	$3d^2(^3F)4s$	$3d^2(^3F)5p$	^2F	$^2D^\circ$	$^7/_2$	$^5/_2$	B1
	3100.842		3									B1
	3101.329		2									B1
	3101.589	3101.596	4	16141.06	48373.17	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	3102.024	3102.015	4	16096.90	48324.66	$3d4s(^3D)4p$	–	$^2D^\circ$	^4P	$^3/_2$	$^3/_2$	B1
	3106.375	3106.354	2	11677.38	43860.12	$3d^2(^3F)4s$	$3d^2(^1G)4p$	^4F	$^2F^\circ$	$^9/_2$	$^7/_2$	B1
	3106.424		2									B1
	3108.324	3108.327	5	16210.85	48373.17	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^7/_2$	$^5/_2$	B1
	3115.767		4									B1
	3117.459		3									B1
	3117.903		3									B1
	3118.112		3									B1
	3123.771		2									B1
	3125.982		2									B1
	3128.632		1									B1
	3143.077	3143.077	3	15756.57	47563.31	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4F^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3143.333		3									B1
	3143.419	3143.415	3	15672.58	47475.90	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4F^\circ$	^4D	$^3/_2$	$^1/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3146.629	3146.627	1	15881.75	47652.61	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4F^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	3147.256		1									B1
	3147.592		4									B1
	3148.607	3148.613	3	15756.57	47507.39	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4F^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	3153.456		3									B1
	3153.600		1									B1
	3155.497	3155.497	3	15881.75	47563.31	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4F^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	3157.655		1									B1
	3158.303		1									B1
	3159.359		4									B1
	3160.948		4									B1
	3161.047	3161.041	4	16026.62	47652.61	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4F^\circ$	^4D	$^9/_2$	$^7/_2$	B1
	3169.511	3169.510	1	16021.82	47563.31	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4D^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	3169.604	3169.601	5	16022.73	47563.31	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^2D^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3169.829		1									B1
	3170.915		3									B1
	3171.057	3171.066	3	16009.77	47535.78	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^1/_2$	$^3/_2$	B1
	3172.271	3172.279	2	16021.82	47535.78	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^3/_2$	$^3/_2$	B1
	3172.515	3172.522	2	16141.06	47652.61	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4D^\circ$	^4D	$^5/_2$	$^7/_2$	B1
	3172.717		2									B1
	3173.934	3173.925	2	16009.77	47507.39	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4D^\circ$	^4D	$^1/_2$	$^3/_2$	B1
	3174.542	3174.543	2	16022.73	47514.22	$3d4s(^3D)4p$	–	$^2D^\circ$	^2G	$^5/_2$	$^7/_2$	B1
	3175.135	3175.139	3	16021.82	47507.39	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4D^\circ$	^4D	$^3/_2$	$^3/_2$	B1
	3175.234	3175.231	3	16022.73	47507.39	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^2D^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	3175.792	3175.807	2	16009.77	47488.72	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^1/_2$	$^1/_2$	B1
	3177.099	3177.101	2	16009.77	47475.90	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4D^\circ$	^4D	$^1/_2$	$^1/_2$	B1
	3177.358	3177.364	1	16141.06	47604.59	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	3178.316	3178.318	2	16021.82	47475.90	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4D^\circ$	^4D	$^3/_2$	$^1/_2$	B1
	3179.561	3179.564	5	16210.85	47652.61	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4D^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	3181.536	3181.538	3	16141.06	47563.31	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4D^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3182.140		2									B1
	3182.298		1									B1
	3183.515	3183.516	3	16022.73	47425.46	$3d4s(^3D)4p$	–	$^2D^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	3184.320	3184.328	2	16141.06	47535.78	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^5/_2$	$^3/_2$	B1
	3184.427	3184.427	2	16210.85	47604.59	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^7/_2$	$^5/_2$	B1
	3186.037		5									B1
	3188.475	3188.480	2	16021.82	47375.66	$3d4s(^3D)4p$	–	$^4D^\circ$	^2D	$^3/_2$	$^3/_2$	B1
	3188.618	3188.620	2	16210.85	47563.31	$3d4s(^3D)4p$	$3d4s(^3D)7s$	$^4D^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	3188.909		2									B1
	3192.874		3									B1
	3193.196		4									B1
	3193.831	3193.819	4	11677.38	42978.81	$3d^2(^3F)4s$	$3d4s(^1D)5p$	^4F	$^2F^\circ$	$^9/_2$	$^7/_2$	B1
	3194.052		1									B1
	3194.293		1									B1
	3194.881		2									B1
	3195.553	3195.558	3	16141.06	47425.46	$3d4s(^3D)4p$	–	$^4D^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	3196.134	3196.134	3	16096.90	47375.66	$3d4s(^3D)4p$	–	$^2D^\circ$	^2D	$^3/_2$	$^3/_2$	B1
	3196.503		2									B1
	3197.372		2									B1
	3200.822	3200.822	4	15756.57	46989.52	$3d4s(^3D)4p$	–	$^4F^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	3201.587		2									B1
	3202.580	3202.579	5g	0.00	31215.81	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4F^\circ$	$^3/_2$	$^5/_2$	B1
	3202.683	3202.702	2	16210.85	47425.46	$3d4s(^3D)4p$	–	$^4D^\circ$	^2D	$^7/_2$	$^5/_2$	B1
	3202.875		2									B1
	3203.172		2									B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3203.532		5									B1
	3205.162		2									B1
	3205.844		3									B1
	3207.015	3207.008	5g	0.00	31172.70	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4F^\circ$	$^3/_2$	$^3/_2$	B1
	3207.316		2									B1
	3209.257		2									B1
	3209.743		2									B1
	3210.930		2									B1
	3213.774	3213.777	5g	168.34	31275.39	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4F^\circ$	$^5/_2$	$^7/_2$	B1
	3215.271		3									B1
	3216.198		1									B1
	3218.708		3									B1
	3219.943	3219.944	5g	168.34	31215.81	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4F^\circ$	$^5/_2$	$^5/_2$	B1
	3222.740		3									B1
	3224.424	3224.422	4g	168.34	31172.70	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4F^\circ$	$^5/_2$	$^3/_2$	B1
	3226.762		2									B1
	3228.337	3228.334	5	16022.73	46989.52	$3d4s(^3D)4p$	–	$^2D^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	3230.665		3									B1
	3231.149		3									B1
	3231.571		4									B1
	3233.464		3									B1
	3235.085		4									B1
	3236.070	3236.075	5	16021.82	46914.54	$3d4s(^3D)4p$	–	$^4D^\circ$	^2D	$^3/_2$	$^3/_2$	B1
	3236.288		2									B1
	3238.429		4									B1
	3238.898		3									B1
	3240.711	3240.718	5	16141.06	46989.52	$3d4s(^3D)4p$	–	$^4D^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	3243.383		3									B1
	3243.792		3									B1
	3243.960	3243.959	5	16096.90	46914.54	$3d4s(^3D)4p$	–	$^2D^\circ$	^2D	$^3/_2$	$^3/_2$	B1
	3245.458		2									B1
	3247.515		2									B1
	3252.444		3									B1
	3253.393		3									B1
9	3255.676	3255.683	6g	0.00	30706.66	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^3/_2$	B1
	3260.257		1									B1
	3260.997	3260.995	5	15672.58	46329.23	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4F	$^3/_2$	$^3/_2$	B1
	3264.648	3264.654	4	15756.57	46378.86	$3d4s(^3D)4p$	–	$^4F^\circ$	^2F	$^5/_2$	$^5/_2$	B1
	3267.260	3267.263	5	15756.57	46354.41	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4F	$^5/_2$	$^5/_2$	B1
	3267.666		3									B1
9	3269.897	3269.899	6g	0.00	30573.17	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	B1
9	3273.628	3273.631	6g	168.34	30706.66	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	B1
	3275.429	3275.430	5	15881.75	46403.30	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4F	$^7/_2$	$^7/_2$	B1
	3276.768		1									B1
	3278.051	3278.055	3	15881.75	46378.86	$3d4s(^3D)4p$	–	$^4F^\circ$	^2F	$^7/_2$	$^5/_2$	B1
	3278.505		3									B1
	3280.172		5									B1
	3280.777		3									B1
	3282.040		3									B1
	3282.433		4									B1
	3284.541	3284.536	5	16022.73	46459.66	$3d4s(^3D)4p$	–	$^2D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	3284.955	3284.956	2	16026.62	46459.66	$3d4s(^3D)4p$	–	$^4F^\circ$	^2F	$^9/_2$	$^7/_2$	B1
	3285.064	3285.066	5	16026.62	46458.64	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4F	$^9/_2$	$^9/_2$	B1
	3286.602		2									B1
	3287.149	3287.154	5	16210.85	46623.54	$3d4s(^3D)4p$	–	$^4D^\circ$	^4P	$^7/_2$	$^5/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3288.148		2									B1
	3290.152		4									B1
	3290.632	3290.630	5	16022.73	46403.30	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^2D^\circ$	^4F	$^5/_2$	$^7/_2$	B1
	3292.956		3									B1
	3295.836	3295.835	5	16021.82	46354.41	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4D^\circ$	^4F	$^3/_2$	$^5/_2$	B1
	3297.267	3297.262	5	16009.77	46329.23	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4D^\circ$	^4F	$^1/_2$	$^3/_2$	B1
	3297.360	3297.356	5	16141.06	46459.66	$3d4s(^3D)4p$	–	$^4D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	3298.570	3298.573	3	16021.82	46329.23	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4D^\circ$	^4F	$^3/_2$	$^3/_2$	B1
	3301.352	3301.346	5	16096.90	46378.86	$3d4s(^3D)4p$	–	$^2D^\circ$	^2F	$^3/_2$	$^5/_2$	B1
	3302.375	3302.376	3	15672.58	45945.09	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	3303.496	3303.497	5	16141.06	46403.30	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4D^\circ$	^4F	$^5/_2$	$^7/_2$	B1
	3303.733	3303.735	3	15756.57	46016.63	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4D	$^5/_2$	$^7/_2$	B1
	3304.234	3304.262	5	15672.58	45927.81	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4D	$^3/_2$	$^1/_2$	B1
	3305.077	3305.075	5	16210.85	46458.64	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4D^\circ$	^4F	$^7/_2$	$^9/_2$	B1
	3306.162	3306.167	4	16141.06	46378.86	$3d4s(^3D)4p$	–	$^4D^\circ$	^2F	$^5/_2$	$^5/_2$	B1
	3306.763	3306.765	4	16096.90	46329.23	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^2D^\circ$	^4F	$^3/_2$	$^3/_2$	B1
	3307.299	3307.298	5	15672.58	45900.04	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4D	$^3/_2$	$^3/_2$	B1
	3308.758	3308.763	5	15672.58	45886.66	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^3/_2$	$^5/_2$	B1
	3310.021	3310.020	5	15672.58	45875.18	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4D	$^3/_2$	$^1/_2$	B1
	3311.131	3311.133	4	16210.85	46403.30	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4D^\circ$	^4F	$^7/_2$	$^7/_2$	B1
	3311.563	3311.564	5	15756.57	45945.09	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3313.096	3313.093	5	15756.57	45931.16	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^5/_2$	$^7/_2$	B1
	3314.593	3314.593	3	15881.75	46042.69	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	3315.231		1									B1
	3315.637		3									B1
	3316.514	3316.514	5	15756.57	45900.04	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	3317.458	3317.459	5	15881.75	46016.63	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	3317.990	3317.986	5	15756.57	45886.66	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^5/_2$	$^5/_2$	B1
	3318.927	3318.934	4	15756.57	45878.06	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4H	$^5/_2$	$^7/_2$	B1
	3320.164		2									B1
	3320.512	3320.511	5	15881.75	45988.93	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^7/_2$	$^9/_2$	B1
	3321.143	3321.140	4	15881.75	45983.23	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	3321.579		4									B1
	3324.085		4									B1
	3325.356	3325.354	5	15881.75	45945.09	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	3326.895	3326.895	5	15881.75	45931.16	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^7/_2$	$^7/_2$	B1
	3327.577	3327.582	5	15672.58	45715.79	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^3/_2$	$^5/_2$	B1
	3329.377	3329.387	5	16026.62	46053.54	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^9/_2$	$^{11}/_2$	B1
	3330.157	3330.159	1	16022.73	46042.69	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^2D^\circ$	^4D	$^5/_2$	$^7/_2$	B1
	3330.262		1									B1
	3330.591	3330.591	5	16026.62	46042.69	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4D	$^9/_2$	$^7/_2$	B1
	3330.705		1									B1
	3331.500		3									B1
	3332.423		3									B1
	3332.850	3332.851	5	15756.57	45752.28	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^5/_2$	$^7/_2$	B1
	3333.487	3333.485	5	16026.62	46016.63	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4D	$^9/_2$	$^7/_2$	B1
	3333.867	3333.874	2	15672.58	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	3334.523	3334.531	2	15756.57	45737.17	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^5/_2$	$^7/_2$	B1
	3336.158		3									B1
	3336.556	3336.567	3	16026.62	45988.93	$3d4s(^3D)4p$	$3d4s(^1D)5d$	$^4F^\circ$	^4G	$^9/_2$	$^9/_2$	B1
	3336.663	3336.667	3	16021.82	45983.23	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4D^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	3336.768	3336.768	3	16022.73	45983.23	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^2D^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3336.899	3336.911	5	15756.57	45715.79	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^5/_2$	$^5/_2$	B1
	3339.315	3339.323	4	16009.77	45947.35	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4D^\circ$	^4D	$^1/_2$	$^3/_2$	B1
	3339.805	3339.809	5	15672.58	45605.80	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^3/_2$	$^3/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3340.168		3									B1
	3340.660	3340.668	4	16021.82	45947.35	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4D^\circ$	^4D	$^3/_2$	$^3/_2$	B1
	3341.014	3341.023	5	15881.75	45804.10	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^7/_2$	$^9/_2$	B1
	3341.502	3341.504	4	16009.77	45927.81	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4D^\circ$	^4D	$^1/_2$	$^1/_2$	B1
	3342.573	3342.578	4	16022.73	45931.16	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^2D^\circ$	^4G	$^5/_2$	$^7/_2$	B1
	3342.700		2									B1
	3342.844	3342.851	2	16021.82	45927.81	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4D^\circ$	^4D	$^3/_2$	$^1/_2$	B1
	3343.233	3343.238	10bl	15756.57	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3343.290	3343.290	5	15672.58	45574.64	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^3/_2$	$^1/_2$	B1
	3345.049	3345.050	4	16096.90	45983.23	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^2D^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	3345.457		3									B1
	3345.949	3345.958	3	16021.82	45900.04	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4D^\circ$	^4D	$^3/_2$	$^3/_2$	B1
	3346.808	3346.819	3	15881.75	45752.28	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^7/_2$	$^7/_2$	B1
	3348.281	3348.282	3	18515.69	48373.17	$3d4s(^3D)4p$	–	$^4P^\circ$	^4P	$^3/_2$	$^5/_2$	B1
	3348.517	3348.513	5	15881.75	45737.17	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	3348.841		1									B1
	3349.203	3349.207	5	15756.57	45605.80	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	3349.764	3349.761	5	16026.62	45870.92	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^9/_2$	$^{11}/_2$	B1
	3349.995	3350.000	5	16141.06	45983.23	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4D^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3351.162	3351.160	5	16210.85	46042.69	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4D^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	3352.425	3352.423	3	18504.06	48324.66	$3d4s(^3D)4p$	–	$^4P^\circ$	^4P	$^1/_2$	$^3/_2$	B1
	3353.046		4									B1
	3353.724	3353.731	13bl	18515.69	48324.66	$3d4s(^3D)4p$	–	$^4P^\circ$	^4P	$^3/_2$	$^3/_2$	B1
	3353.963		4									B1
	3357.292	3357.293	5	15881.75	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	3357.852	3357.853	4	16210.85	45983.23	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4D^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	3358.925		1									B1
	3362.955		4									B1
	3364.393	3364.400	3	16022.73	45737.17	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D^\circ$	^4D	$^5/_2$	$^7/_2$	B1
	3364.841	3364.841	5	16026.62	45737.17	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^9/_2$	$^7/_2$	B1
	3373.160	3373.161	4	16021.82	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	3373.271	3373.265	4	16022.73	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3374.746		4									B1
	3377.856	3377.852	5	16141.06	45737.17	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4D	$^5/_2$	$^7/_2$	B1
		3377.861		16009.77	45605.80	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4D	$^1/_2$	$^3/_2$	B1
	3379.234	3379.237	4	16021.82	45605.80	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4D	$^3/_2$	$^3/_2$	B1
	3380.606		4									B1
	3381.418	3381.422	4	16009.77	45574.64	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4D	$^1/_2$	$^1/_2$	B1
	3381.722	3381.728	4	16096.90	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	3385.841	3385.837	5	16210.85	45737.17	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	3386.785	3386.788	5	16141.06	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3388.524		1									B1
	3389.310		4									B1
	3391.419	3391.417	4	16096.90	45574.64	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D^\circ$	^4D	$^3/_2$	$^1/_2$	B1
	3392.911	3392.913	4	16141.06	45605.80	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	3394.803	3394.814	4	16210.85	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	3398.623		1									B1
	3401.877		3									B1
	3409.671		1									B1
	3410.156		1									B1
	3410.950		1									B1
21	3416.670	3416.671	4	15756.57	45016.43	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4F	$^5/_2$	$^7/_2$	B1
	3416.966		1									B1
21	3418.529	3418.527	4	15881.75	45125.73	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4F	$^7/_2$	$^9/_2$	B1
21	3419.350	3419.346	4	15672.58	44909.55	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4F	$^3/_2$	$^5/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3425.405	3425.407	4	15756.57	44941.81	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^2F	$^5/_2$	$^7/_2$	B1
	3427.669	3427.669	3	15672.58	44838.56	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^2F	$^3/_2$	$^5/_2$	B1
21	3429.199	3429.198	5	15756.57	44909.55	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^4F	$^5/_2$	$^5/_2$	B1
21	3429.479	3429.474	5	15672.58	44823.21	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^4F	$^3/_2$	$^3/_2$	B1
21	3431.351	3431.352	5	15881.75	45016.43	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^4F	$^7/_2$	$^7/_2$	B1
	3433.135		4									B1
	3433.399		2									B1
21	3435.541	3435.546	5	16026.62	45125.73	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^4F	$^9/_2$	$^9/_2$	B1
	3437.563	3437.569	4	15756.57	44838.56	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^2F	$^5/_2$	$^5/_2$	B1
21	3439.382	3439.384	4	15756.57	44823.21	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^4F	$^5/_2$	$^3/_2$	B1
	3440.158	3440.163	4	15881.75	44941.81	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^2F	$^7/_2$	$^7/_2$	B1
21	3443.986	3443.986	4	15881.75	44909.55	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^4F	$^7/_2$	$^5/_2$	B1
	3444.577	3444.577	4*g*	0.00	29022.82	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4G°$	$^3/_2$	$^5/_2$	B1
	3445.141	3445.141	3	15672.58	44690.65	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^2P	$^3/_2$	$^1/_2$	B1
	3448.031	3448.037	1	16022.73	45016.43	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D°$	^4F	$^5/_2$	$^7/_2$	B1
21	3448.500	3448.500	4	16026.62	45016.43	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^4F	$^9/_2$	$^7/_2$	B1
	3449.209		4									B1
	3452.065		1									B1
	3452.443	3452.430	2	15881.75	44838.56	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^2F	$^7/_2$	$^5/_2$	B1
	3455.892	3455.887	3*g*	168.34	29096.18	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4G°$	$^5/_2$	$^7/_2$	B1
	3456.854		1									B1
	3456.938	3456.934	1	16022.73	44941.81	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D°$	^2F	$^5/_2$	$^7/_2$	B1
	3457.442	3457.436	5	16210.85	45125.73	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^4F	$^7/_2$	$^9/_2$	B1
	3458.725	3458.732	1	14926.07	43830.12	$3d^2(^3F)4s$	$3d^2(^1G)4p$	^2F	$^2F°$	$^5/_2$	$^5/_2$	B1
	3460.664	3460.686	4	16021.82	44909.55	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^4F	$^3/_2$	$^5/_2$	B1
	3460.802	3460.795		16022.73	44909.55	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D°$	^4F	$^5/_2$	$^5/_2$	B1
	3462.166	3462.167	4	16141.06	45016.43	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^4F	$^5/_2$	$^7/_2$	B1
	3463.046		1									B1
	3464.667	3464.674	1*g*	168.34	29022.82	$3d4s^2$	$3d^2(^3F)4p$	^2D	$^4G°$	$^5/_2$	$^5/_2$	B1
	3466.604	3466.606	3	15756.57	44594.97	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4F°$	^2P	$^5/_2$	$^3/_2$	B1
	3469.021	3469.036	3	15041.92	43860.12	$3d^2(^3F)4s$	$3d^2(^1G)4p$	^2F	$^2F°$	$^7/_2$	$^7/_2$	B1
	3469.209	3469.212	3	16021.82	44838.56	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^2F	$^3/_2$	$^5/_2$	B1
	3469.326	3469.321	2	16022.73	44838.56	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D°$	^2F	$^5/_2$	$^5/_2$	B1
	3469.609	3469.609	4	16009.77	44823.21	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^4F	$^1/_2$	$^3/_2$	B1
	3469.705	3469.704	4	16096.90	44909.55	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D°$	^4F	$^3/_2$	$^5/_2$	B1
	3470.556	3470.556	3	16210.85	45016.43	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^4F	$^7/_2$	$^7/_2$	B1
	3471.056	3471.061	4	16021.82	44823.21	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^4F	$^3/_2$	$^3/_2$	B1
	3471.133	3471.138	3	16141.06	44941.81	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^2F	$^5/_2$	$^7/_2$	B1
	3475.025	3475.030	3	16141.06	44909.55	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^4F	$^5/_2$	$^5/_2$	B1
	3478.267	3478.274	1	16096.90	44838.56	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D°$	^2F	$^3/_2$	$^5/_2$	B1
	3478.904		1									B1
	3479.566	3479.570	2	16210.85	44941.81	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^2F	$^7/_2$	$^7/_2$	B1
	3480.125	3480.133	1	16096.90	44823.21	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D°$	^4F	$^3/_2$	$^3/_2$	B1
	3483.181		1									B1
	3483.620	3483.627	1	16141.06	44838.56	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^2F	$^5/_2$	$^5/_2$	B1
	3485.494	3485.491	1	16141.06	44823.21	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^4F	$^5/_2$	$^3/_2$	B1
	3486.647	3486.656	1	17226.04	45898.61	$3d^2(^3P)4s$	–	^4P	–	$^1/_2$	$^3/_2$	B1
	3487.102	3487.111	4	16021.82	44690.65	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^2P	$^3/_2$	$^1/_2$	B1
	3487.623	3487.620	1	18711.02	47375.66	$4s^24p$	–	$^2P°$	^2D	$^1/_2$	$^3/_2$	B1
	3490.191	3490.190	1	17255.07	45898.61	$3d^2(^3P)4s$	–	^4P	–	$^3/_2$	$^3/_2$	B1
	3495.421	3495.430	1	11610.28	40210.88	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4D°$	$^7/_2$	$^7/_2$	B1
	3496.265	3496.267	4	16096.90	44690.65	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D°$	^2P	$^3/_2$	$^1/_2$	B1
	3498.788	3498.788	2	16021.82	44594.97	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D°$	^2P	$^3/_2$	$^3/_2$	B1
	[illegible]	3498.899	4	16022.73	44594.97	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D°$	^2P	$^5/_2$	$^3/_2$	B1
	3499.2[illegible]	[illegible]499.208	2	18855.74	47425.46	$4s^24p$	–	$^2P°$	^2D	$^3/_2$	$^5/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3500.330		1									B1
	3501.193	3501.196	1	11519.99	40073.49	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4D^\circ$	$^3/_2$	$^3/_2$	B1
	3502.040	3502.054	1	11557.69	40104.19	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^2F^\circ$	$^5/_2$	$^5/_2$	B1
	3503.641	3503.650	4	11677.38	40210.88	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4D^\circ$	$^9/_2$	$^7/_2$	B1
	3504.729	3504.738	2	11519.99	40044.63	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4D^\circ$	$^3/_2$	$^1/_2$	B1
	3505.564	3505.573	3	11610.28	40128.13	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4D^\circ$	$^7/_2$	$^5/_2$	B1
	3505.815	3505.825	3	11557.69	40073.49	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4D^\circ$	$^5/_2$	$^3/_2$	B1
	3508.006	3508.006	2	16096.90	44594.97	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	3511.644	3511.647	3	11677.38	40145.90	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4F^\circ$	$^9/_2$	$^9/_2$	B1
	3513.442	3513.451	3	16141.06	44594.97	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^2P	$^5/_2$	$^3/_2$	B1
	3515.357	3515.362	1	11610.28	40048.72	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4F^\circ$	$^7/_2$	$^7/_2$	B1
	3516.180	3516.172	1	11557.69	39989.58	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4F^\circ$	$^5/_2$	$^5/_2$	B1
	3516.409	3516.435	1	11519.99	39949.75	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4F^\circ$	$^3/_2$	$^3/_2$	B1
	3520.633		1									B1
	3521.425		4									B1
	3522.112		1									B1
	3522.695	3522.688	1	11610.28	39989.58	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^4F	$^4F^\circ$	$^7/_2$	$^5/_2$	B1
	3527.671		1									B1
	3529.340		1									B1
	3530.042		1									B1
	3537.395		2									B1
	3539.511	3539.516	3	14926.07	43170.45	$3d^2(^3F)4s$	$3d4s(^1D)5p$	^2F	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
	3540.761		3									B1
	3543.744	3543.749	4	15041.92	43252.56	$3d^2(^3F)4s$	$3d4s(^1D)5p$	^2F	$^2D^\circ$	$^7/_2$	$^5/_2$	B1
	3552.414	3552.407	1	15672.58	43814.47	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^4F^\circ$	^4D	$^3/_2$	$^3/_2$	B1
	3553.009	3553.001	2	15672.58	43809.76	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^4F^\circ$	^4D	$^3/_2$	$^1/_2$	B1
	3556.711	3556.709	1	18515.69	46623.54	$3d4s(^3D)4p$	–	$^4P^\circ$	^4P	$^3/_2$	$^5/_2$	B1
	3556.886	3556.886	1	15881.75	43988.20	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^4F^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	3559.262		1									B1
	3559.621		3									B1
	3563.776	3563.774	3	18571.41	46623.54	$3d4s(^3D)4p$	–	$^4P^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	3564.309		1									B1
	3566.924	3566.921	4	16210.85	44238.23	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4P	$^7/_2$	$^5/_2$	B1
	3568.293	3568.299	3	15881.75	43898.31	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^4F^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	3574.727	3574.726	3	16141.06	44107.25	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4P	$^5/_2$	$^3/_2$	B1
	3575.310	3575.315	4	16026.62	43988.20	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^4F^\circ$	^4D	$^9/_2$	$^7/_2$	B1
	3578.474	3578.475	3	15041.92	42978.81	$3d^2(^3F)4s$	$3d4s(^1D)5p$	^2F	$^2F^\circ$	$^7/_2$	$^7/_2$	B1
	3581.962		1									B1
	3582.950	3582.955	1	15756.57	43658.53	$3d4s(^3D)4p$	$4s^24d$	$^4F^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	3598.417		3									B1
	3599.031	3599.029	2	16210.85	43988.20	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^4D^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	3601.397		1									B1
	3601.640	3601.635	1	16141.06	43898.31	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^4D^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	3606.792	3606.791	1	16096.90	43814.47	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^2D^\circ$	^4D	$^3/_2$	$^3/_2$	B1
	3617.455	3617.463	4	16022.73	43658.53	$3d4s(^3D)4p$	$4s^24d$	$^2D^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	3621.305		1									B1
	3623.099		3									B1
	3625.388	3625.395	3	16021.82	43597.16	$3d4s(^3D)4p$	$4s^24d$	$^4D^\circ$	^2D	$^3/_2$	$^3/_2$	B1
	3633.022	3633.019	3	16141.06	43658.53	$3d4s(^3D)4p$	$4s^24d$	$^4D^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	3635.288	3635.293	3	16096.90	43597.16	$3d4s(^3D)4p$	$4s^24d$	$^2D^\circ$	^2D	$^3/_2$	$^3/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3636.426		1									B1
	3642.600	3642.584	5	18571.41	46016.63	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4P^\circ$	^4D	5/2	7/2	B1
	3644.687	3644.684	4	18515.69	45945.09	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4P^\circ$	^4D	3/2	5/2	B1
	3646.910	3646.909	4	16022.73	43435.40	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2D^\circ$	^2P	5/2	3/2	B1
	3647.552	3647.549	2	16021.82	43429.68	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^4D^\circ$	^2P	3/2	1/2	B1
	3649.136	3649.131	2	18504.06	45900.04	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4P^\circ$	^4D	1/2	3/2	B1
	3650.680	3650.681	2	18515.69	45900.04	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^4P^\circ$	^4D	3/2	3/2	B1
	3651.798	3651.802	11bl	18571.41	45947.35	$3d4s(^3D)4p$	$3d^2(^3F)4d$	$^4P^\circ$	^4D	5/2	3/2	B1
	3656.803	3656.803	1	16096.90	43435.40	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2D^\circ$	^2P	3/2	3/2	B1
	3657.574	3657.569	3	16096.90	43429.68	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2D^\circ$	^2P	3/2	1/2	B1
	3662.709	3662.720	2	16141.06	43435.40	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^4D^\circ$	^2P	5/2	3/2	B1
	3680.066	3680.057	2	18571.41	45737.17	$3d4s(^3D)4p$	$3d(^4D)4p^2(^4P)$	$^4P^\circ$	^4D	5/2	7/2	B1
	3683.096	3683.088	1	18515.69	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4D	3/2	5/2	B1
	3688.766	3688.750	1	18504.06	45605.80	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4D	1/2	3/2	B1
	3689.104		1									B1
	3690.332	3690.334	1	18515.69	45605.80	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4D	3/2	3/2	B1
	3690.659	3690.665	1	18571.41	45659.09	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4D	5/2	5/2	B1
	3692.997	3692.996	1	18504.06	45574.64	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4D	1/2	1/2	B1
	3712.111		3									B1
	3712.512		2									B1
	3714.244	3714.250	2	16021.82	42937.50	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	$^2D1$	3/2	3/2	B1
	3716.221		3									B1
	3717.086	3717.092	3	16022.73	42917.83	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	$^2D1$	5/2	5/2	B1
	3717.742		4									B1
	3724.638	3724.640	3	16096.90	42937.50	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	$^2D1$	3/2	3/2	B1
	3729.740	3729.731	4	18711.02	45514.98	$4s^24p$	$3d4s(^1D)4d$	$^2P^\circ$	^2S	1/2	1/2	B1
	3730.238		3									B1
	3733.503	3733.519	2	16141.06	42917.83	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	$^2D1$	5/2	5/2	B1
	3736.467		1									B1
	3736.700		1									B1
	3746.092		1									B1
	3749.963	3749.979	1	18855.74	45514.98	$4s^24p$	$3d4s(^1D)4d$	$^2P^\circ$	^2S	3/2	1/2	B1
	3751.159		3									B1
	3755.162		2									B1
	3759.973		2									B1
	3769.065		2									B1
	3780.412	3780.421	2	16021.82	42466.39	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^4D^\circ$	^2D	3/2	3/2	B1
	3783.524	3783.533	3	16022.73	42445.55	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2D^\circ$	^2D	5/2	5/2	B1
	3791.189	3791.185	3	16096.90	42466.39	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2D^\circ$	^2D	3/2	3/2	B1
	3794.533		3									B1
	3800.543	3800.553	1	16141.06	42445.55	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^4D^\circ$	^2D	5/2	5/2	B1
	3808.533	3808.543	1	15672.58	41921.89	$3d4s(^3D)4p$	$3d^2(^3\Gamma)5s$	$^4\Gamma^\circ$	$^4\Gamma$	3/2	3/2	B1
	3811.729	3811.722	3	17025.14	43252.56	$3d^2(^1D)4s$	$3d4s(^1D)5p$	^2D	$^2D^\circ$	3/2	5/2	B1
		3811.732		14926.07	41153.42	$3d^2(^3F)4s$	$3d^2(^3P)4p$	^2F	$^2D^\circ$	5/2	3/2	B1
	3812.293		3									B1
	3815.053	3815.070	1	15756.57	41960.97	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4F^\circ$	^4F	5/2	5/2	B1
	3817.815		3									B1
	3819.192	3819.193	2	16022.73	42198.84	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2D^\circ$	^2F	5/2	7/2	B1
	3819.368	3819.361	2	18515.69	44690.65	$3d4s(^3D)4p$	$3d(^2D)4p^2(^1P)$	$^4P^\circ$	^2P	3/2	1/2	B1
	3822.402		2									B1
	3822.489		2									B1
	3824.926		1									B1
	3825.364	3825.372	3	15881.75	42015.58	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4F^\circ$	^4F	7/2	7/2	B1
	3827.307	3827.310	3	15041.92	41162.52	$3d^2(^3F)4s$	$3d^2(^3P)4p$	^2F	$^2D^\circ$	7/2	5/2	B1
	3833.370	3833.374	3	18515.69	44594.97	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^2P	3/2	3/2	B1
		3833.383		15881.75	41960.97	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4F^\circ$	^4F	7/2	5/2	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3834.397		3									B1
	3836.418	3836.422	5	16026.62	42085.18	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4F^\circ$	^4F	$^9/_2$	$^9/_2$	B1
	3836.518	3836.537	3	16141.06	42198.84	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^4D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	3837.270	3837.276	4	16096.90	42149.66	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2D^\circ$	^2F	$^3/_2$	$^5/_2$	B1
	3844.866		6									B1
	3845.409	3845.434	3	17255.07	43252.56	$3d^2(^3P)4s$	$3d4s(^1D)5p$	^4P	$^2D^\circ$	$^3/_2$	$^5/_2$	B1
	3846.688	3846.697	2	16026.62	42015.58	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4F^\circ$	^4F	$^9/_2$	$^7/_2$	B1
	3848.075	3848.078	4	18711.02	44690.65	$4s^24p$	$3d(^2D)4p^2(^3P)$	$^2P^\circ$	^2P	$^1/_2$	$^1/_2$	B1
	3851.814		3									B1
	3854.081	3854.083	5	16021.82	41960.97	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^3/_2$	$^5/_2$	B1
	3855.060		1									B1
	3858.101	3858.104	5	16009.77	41921.89	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^1/_2$	$^3/_2$	B1
	3859.374	3859.362	5bl	21085.85	46989.52	$3d4s(^1D)4p$	–	$^2F^\circ$	^2D	$^7/_2$	$^5/_2$	B1
	3859.911	3859.899	4	16021.82	41921.89	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^3/_2$	$^3/_2$	B1
	3862.306	3862.303	3	18711.02	44594.97	$4s^24p$	$3d(^2D)4p^2(^3P)$	$^2P^\circ$	^2P	$^1/_2$	$^3/_2$	B1
	3862.631	3862.625	4	21032.75	46914.54	$3d4s(^1D)4p$	–	$^2F^\circ$	^2D	$^5/_2$	$^3/_2$	B1
	3863.725	3863.710	6	16141.06	42015.58	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^5/_2$	$^7/_2$	B1
		3863.739		16210.85	42085.18	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^7/_2$	$^9/_2$	B1
	3865.271	3865.272	4	16096.90	41960.97	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^2D^\circ$	^4F	$^3/_2$	$^5/_2$	B1
	3869.637	3869.634	3	18855.74	44690.65	$4s^24p$	$3d(^2D)4p^2(^3P)$	$^2P^\circ$	^2P	$^3/_2$	$^1/_2$	B1
	3871.880	3871.883	4	16141.06	41960.97	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^5/_2$	$^5/_2$	B1
	3874.157	3874.160	4	16210.85	42015.58	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^7/_2$	$^7/_2$	B1
	3874.334		5									B1
	3875.718	3875.719	4	17025.14	42819.49	$3d^2(^1D)4s$	$3d4s(^1D)5p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	B1
	3878.253		1									B1
	3878.295		1									B1
	3879.737	3879.735	5	17012.76	42780.41	$3d^2(^1D)4s$	$3d4s(^1D)5p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	B1
	3883.794		2									B1
	3884.022	3884.019	5	18855.74	44594.97	$4s^24p$	$3d(^2D)4p^2(^3P)$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	3884.220		3									B1
	3885.434		3									B1
	3886.541	3886.539	5	18515.69	44238.23	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4P	$^3/_2$	$^5/_2$	B1
	3890.107		2									B1
	3890.867		1									B1
	3894.802	3894.798	1	14926.07	40594.07	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^2F	$^2P^\circ$	$^5/_2$	$^3/_2$	B1
	3894.971	3894.977	5	18571.41	44238.23	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	3898.974		2									B1
	3899.686		1									B1
	3900.201		4									B1
	3904.660	3904.657	5	18504.06	44107.25	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4P	$^1/_2$	$^3/_2$	B1
	3906.427	3906.432	4	18515.69	44107.25	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4P	$^3/_2$	$^3/_2$	B1
8	3907.484	3907.488	7*g*	0.00	25584.64	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2F^\circ$	$^3/_2$	$^5/_2$	B1
8	3911.812	3911.815	7*g*	168.34	25724.68	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^7/_2$	B1
	3914.954	3914.956	5	18571.41	44107.25	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4P	$^5/_2$	$^3/_2$	B1
	3918.203	3918.207	5	18515.69	44030.34	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^4P^\circ$	^4P	$^3/_2$	$^1/_2$	B1
	3923.094	3923.094	3	16022.73	41505.60	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	3927.687	3927.690	3	16021.82	41474.87	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4P	$^3/_2$	$^3/_2$	B1
	3927.829	3927.830	2	16022.73	41474.87	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4P	$^5/_2$	$^3/_2$	B1
	3930.150	3930.156	4	16009.77	41446.85	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4P	$^1/_2$	$^1/_2$	B1
	3932.008	3931.988	4	14926.07	40351.30	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^2F	$^2D^\circ$	$^5/_2$	$^5/_2$	B1
		3932.019		16021.82	41446.85	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4P	$^3/_2$	$^1/_2$	B1
	3932.594	3932.600	4	14926.07	40347.34	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^2F	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
8	3933.375	3933.369	7*g*	168.34	25584.64	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^5/_2$	B1
	3938.589	3938.589	2	18515.69	43898.31	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^4P^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	3939.011		1									B1
	3939.307	3939.310	1	16096.90	41474.87	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4P	$^3/_2$	$^3/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3940.966		3									B1
	3941.388	3941.396	2	16141.06	41505.60	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	3943.663	3943.665	2	16096.90	41446.85	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4P	$^3/_2$	$^1/_2$	B1
	3946.172	3946.177	5	16141.06	41474.87	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4P	$^5/_2$	$^3/_2$	B1
	3949.990	3949.986	3	15041.92	40351.30	$3d^2(^3F)4s$	$3d4s(^3D)5p$	^2F	$^2D^\circ$	$^7/_2$	$^5/_2$	B1
	3952.269	3952.271	5	16210.85	41505.60	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4P	$^7/_2$	$^5/_2$	B1
	3958.191		3									B1
	3968.193		3									B1
	3975.215		3									B1
	3978.152	3978.154	5	15672.58	40802.76	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^2F	$^3/_2$	$^5/_2$	B1
	3987.827	3987.829	5	15756.57	40825.78	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	3993.814		2									B1
7	3996.601	3996.598	7g	0.00	25014.21	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2D^\circ$	$^3/_2$	$^5/_2$	B1
	4007.049		2									B1
	4007.837	4007.842	4	15881.75	40825.78	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^2F	$^7/_2$	$^7/_2$	B1
	4017.761	4017.768	4	15672.58	40554.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^3/_2$	$^5/_2$	B1
7	4020.387	4020.392	7g	0.00	24866.17	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2D^\circ$	$^3/_2$	$^3/_2$	B1
	4023.215	4023.220	5	15672.58	40521.27	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^3/_2$	$^3/_2$	B1
7	4023.678	4023.677	7g	168.34	25014.21	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2D^\circ$	$^5/_2$	$^5/_2$	B1
	4030.622	4030.623	6	16022.73	40825.78	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	4031.376	4031.376	5	15756.57	40554.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^5/_2$	$^5/_2$	B1
	4031.955		3									B1
	4032.882	4032.888	1	15881.75	40670.87	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^7/_2$	$^9/_2$	B1
	4034.211	4034.219	5	16021.82	40802.76	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^2F	$^3/_2$	$^5/_2$	B1
	4034.363	4034.368	4	16022.73	40802.76	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^2F	$^5/_2$	$^5/_2$	B1
	4036.858	4036.865	5	15756.57	40521.27	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^5/_2$	$^3/_2$	B1
	4039.157		3									B1
	4043.803	4043.805	5	15881.75	40603.95	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^7/_2$	$^7/_2$	B1
	4046.479	4046.479	5	16096.90	40802.76	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^2F	$^3/_2$	$^5/_2$	B1
7	4047.797	4047.795	7g	168.34	24866.17	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
	4049.937	4049.945	5	16141.06	40825.78	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	4051.826	4051.829	5	15881.75	40554.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^7/_2$	$^5/_2$	B1
	4052.600		5									B1
6	4054.544	4054.544	7g	0.00	24656.72	$3d4s^2$	$3d4s(^1D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	B1
	4056.593	4056.596	5	16026.62	40670.87	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^9/_2$	$^9/_2$	B1
	4060.103		4									B1
	4061.888		3									B1
	4062.626		3									B1
	4067.001	4066.998	5	16022.73	40603.95	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4F	$^5/_2$	$^7/_2$	B1
	4067.259	4067.256	3	18855.74	43435.40	$4s^24p$	$3d4s(^1D)4d$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	4067.632	4067.641	5	16026.62	40603.95	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^9/_2$	$^7/_2$	B1
	4074.962	4074.963	6	16021.82	40554.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4F	$^3/_2$	$^5/_2$	B1
	4075.111	4075.115	2	16022.73	40554.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4F	$^5/_2$	$^5/_2$	B1
	4078.564	4078.566	5	16009.77	40521.27	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4F	$^1/_2$	$^3/_2$	B1
	4080.567	4080.572	4	16021.82	40521.27	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4F	$^3/_2$	$^3/_2$	B1
6	4082.387	4082.390	7g	168.34	24656.88	$3d4s^2$	$3d4s(^1D)4p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	B1
	4085.031		1									B1
	4086.019	4086.031	5	14926.07	39392.79	$3d^2(^3F)4s$	$3d^2(^1G)4p$	^2F	$^2G^\circ$	$^5/_2$	$^7/_2$	B1
	4086.664	4086.671	5	16141.06	40603.95	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^4D^\circ$	^4F	$^5/_2$	$^7/_2$	B1
	4087.150	4087.150	6	16210.85	40670.87	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^4D^\circ$	^4F	$^7/_2$	$^9/_2$	B1
	4087.474	4087.473	5	16096.90	40554.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4F	$^3/_2$	$^5/_2$	B1
	4093.119	4093.116	5	16096.90	40521.27	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4F	$^3/_2$	$^3/_2$	B1
	4094.861	4094.866	5	16141.06	40554.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4F	$^5/_2$	$^5/_2$	B1
	4096.843	4096.845	2	18515.69	42917.83	$3d4s(^3D)4p$	$3d^3$	$^4P^\circ$	$^2D1$	$^3/_2$	$^5/_2$	B1
	4098.360	4098.363	5	16210.85	40603.95	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4F	$^7/_2$	$^7/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	4100.313	4100.318	5	15041.92 –	39423.39	$3d^2(^3F)4s$ –	$3d^2(^1G)4p$	^2F –	$^2G^\circ$	$^7/_2$ –	$^9/_2$	B1
	4100.525	4100.530	5	16141.06 –	40521.27	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^4F	$^5/_2$ –	$^3/_2$	B1
	4102.831		1									B1
	4104.694		1									B1
	4107.375		1									B1
	4107.451		1									B1
	4126.547	4126.551	5	18711.02 –	42937.50	$4s^24p$ –	$3d^3$	$^2P^\circ$ –	$^2D1$	$^1/_2$ –	$^3/_2$	B1
	4130.045		2									B1
20	4132.984	4132.981	6	15672.58 –	39861.37	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –		$^3/_2$ –	$^5/_2$	B1
	4136.741		1									B1
	4136.794	4136.770	1	18711.02 –	42877.65	$4s^24p$ –	$3d4s(^1D)4d$	$^2P^\circ$ –	^2S	$^1/_2$ –	$^1/_2$	B1
20	4140.272	4140.274	6	15756.57 –	39902.75	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4G	$^5/_2$ –	$^7/_2$	B1
	4146.272	4146.277	1	15041.92 –	39153.14	$3d^2(^3F)4s$ –	$3d^2(^1G)4p$	^2F –	$^2H^\circ$	$^7/_2$ –	$^9/_2$	B1
20	4147.378	4147.382	5	15756.57 –	39861.37	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –		$^5/_2$ –	$^5/_2$	B1
	4151.355	4151.350	1	18855.74 –	42937.50	$4s^24p$ –	$3d^3$	$^2P^\circ$ –	$^2D1$	$^3/_2$ –	$^3/_2$	B1
20	4152.341	4152.336	6	15881.75 –	39957.79	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4G	$^7/_2$ –	$^9/_2$	B1
	4154.736	4154.743	5	18855.74 –	42917.83	$4s^24p$ –	$3d^3$	$^2P^\circ$ –	$^2D1$	$^3/_2$ –	$^5/_2$	B1
	4155.738		1									B1
	4156.970	4156.969	3	15672.58 –	39721.79	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4D	$^3/_2$ –	$^3/_2$	B1
	4158.359	4158.362	4	16022.73 –	40063.88	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2D^\circ$ –	^2P	$^5/_2$ –	$^3/_2$	B1
	4161.695	4161.693	5	18855.74 –	42877.65	$4s^24p$ –	$3d4s(^1D)4d$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	B1
20	4161.847	4161.851	5	15881.75 –	39902.75	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4G	$^7/_2$ –	$^7/_2$	B1
20	4165.187	4165.187	6	16026.62 –	40028.38	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4G	$^9/_2$ –	$^{11}/_2$	B1
	4170.112	4170.114	3	16096.90 –	40070.30	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2D^\circ$ –	^2P	$^3/_2$ –	$^1/_2$	B1
	4171.534	4171.538	5	15756.57 –	39721.79	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4D	$^5/_2$ –	$^3/_2$	B1
20	4177.466	4177.473	5	16026.62 –	39957.79	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4G	$^9/_2$ –	$^9/_2$	B1
	4177.557	4177.576	2	21085.85 –	45016.43	$3d4s(^1D)4p$ –	$3d(^2D)4p^2(^3P)$	$^2F^\circ$ –	^4F	$^7/_2$ –	$^7/_2$	B1
	4178.919	4178.931	3	16141.06 –	40063.88	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^2P	$^5/_2$ –	$^3/_2$	B1
	4179.723	4179.732	1	15881.75 –	39799.99	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4D	$^7/_2$ –	$^7/_2$	B1
	4184.729		2									B1
	4186.421	4186.421	5	16022.73 –	39902.75	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2D^\circ$ –	^4G	$^5/_2$ –	$^7/_2$	B1
	4186.986	4186.986	1	21032.75 –	44909.55	$3d4s(^1D)4p$ –	$3d(^2D)4p^2(^3P)$	$^2F^\circ$ –	^4F	$^5/_2$ –	$^5/_2$	B1
	4187.605	4187.605	5	15881.75 –	39755.02	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4D	$^7/_2$ –	$^5/_2$	B1
	4190.638	4190.644	4	21085.85 –	44941.81	$3d4s(^1D)4p$ –	$3d(^2D)4p^2(^3P)$	$^2F^\circ$ –	^2F	$^7/_2$ –	$^7/_2$	B1
	4193.528	4193.528	5	16021.82 –	39861.37	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –		$^3/_2$ –	$^5/_2$	B1
	4193.683	4193.688	1	16022.73 –	39861.37	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2D^\circ$ –		$^5/_2$ –	$^5/_2$	B1
	4195.100		2									B1
	4195.730		2									B1
	4196.451		1									B1
	4199.470	4199.472	4	21032.75 –	44838.56	$3d4s(^1D)4p$ –	$3d(^2D)4p^2(^3P)$	$^2F^\circ$ –	^2F	$^5/_2$ –	$^5/_2$	B1
	4204.518	4204.514	5	16022.73 –	39799.99	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2D^\circ$ –	^4D	$^5/_2$ –	$^7/_2$	B1
	4205.197	4205.202	5	16026.62 –	39799.99	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4F^\circ$ –	^4D	$^9/_2$ –	$^7/_2$	B1
	4206.781	4206.777	3	16096.90 –	39861.37	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2D^\circ$ –		$^3/_2$ –	$^5/_2$	B1
	4209.879	4209.883	4	16210.85 –	39957.79	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^4G	$^7/_2$ –	$^9/_2$	B1
	4210.922		1									B1
	4212.318	4212.320	5	16021.82 –	39755.02	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^4D	$^3/_2$ –	$^5/_2$	B1
	4212.481	4212.482	5	16022.73 –	39755.02	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2D^\circ$ –	^4D	$^5/_2$ –	$^5/_2$	B1
	4216.083	4216.083	5	16009.77 –	39721.79	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^4D	$^1/_2$ –	$^3/_2$	B1
	4218.225	4218.226	5	16021.82 –	39721.79	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^4D	$^3/_2$ –	$^3/_2$	B1
	4218.396	4218.388	3	16022.73 –	39721.79	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2D^\circ$ –	^4D	$^5/_2$ –	$^3/_2$	B1
	4219.703	4219.704	5	16009.77 –	39701.44	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^4D	$^1/_2$ –	$^1/_2$	B1
	4221.383		1									B1
	4221.463		1									B1
	4221.848	4221.852	5	16021.82 –	39701.44	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^4D	$^3/_2$ –	$^1/_2$	B1
	4224.203		1									B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	4224.847		2									B1
	4224.902		1									B1
	4225.540	4225.544	5	16141.06	39799.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4D	$5/2$	$7/2$	B1
	4225.692	4225.688	5	16096.90	39755.02	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4D	$3/2$	$5/2$	B1
	4227.459		2									B1
	4231.636	4231.632	5	16096.90	39721.79	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4D	$3/2$	$3/2$	B1
	4231.915	4231.924	5	20236.86	43860.12	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2F^\circ$	$9/2$	$7/2$	B1
	4232.422	4232.426	1	20239.66	43860.12	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2F^\circ$	$7/2$	$7/2$	B1
	4233.591	4233.591	5	16141.06	39755.02	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4D	$5/2$	$5/2$	B1
	4235.280	4235.280	4	16096.90	39701.44	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^4D	$3/2$	$1/2$	B1
	4237.799	4237.808	5	20239.66	43830.12	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2F^\circ$	$7/2$	$5/2$	B1
	4238.053	4238.045	6	16210.85	39799.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4D	$7/2$	$7/2$	B1
	4239.552	4239.557	5	16141.06	39721.79	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4D	$5/2$	$3/2$	B1
	4246.139	4246.140	4	16210.85	39755.02	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^4D	$7/2$	$5/2$	B1
	4252.690	4252.699	1	20681.43	44189.29	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^2P	$^2P^\circ$	$1/2$	$3/2$	B1
	4257.287		2									B1
	4259.648	4259.663	4	20719.86	44189.29	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^2P	$^2P^\circ$	$3/2$	$3/2$	B1
	4260.304		2									B1
	4261.312	4261.311	5	17255.07	40715.42	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^4P^\circ$	$3/2$	$5/2$	B1
	4267.914	4267.921	2	20681.43	44105.45	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^2P	$^2P^\circ$	$1/2$	$1/2$	B1
	4268.901	4268.909	2	17226.04	40644.64	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^4P^\circ$	$1/2$	$3/2$	B1
	4270.404		2									B1
	4270.774	4270.780	4	17307.08	40715.42	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^4P^\circ$	$5/2$	$5/2$	B1
	4274.210	4274.207	2	17255.07	40644.64	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^4P^\circ$	$3/2$	$3/2$	B1
		4274.209		18571.41	41960.97	$3d4s(^3D)4p$	$3d^2(^3F)5s$	$^4P^\circ$	^4F	$5/2$	$5/2$	B1
	4274.922	4274.934	1	20719.86	44105.45	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^2P	$^2P^\circ$	$3/2$	$1/2$	B1
	4282.037		4									B1
	4283.235	4283.246	3	17255.07	40595.28	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^4P^\circ$	$3/2$	$1/2$	B1
	4283.549	4283.553	5	17012.76	40351.30	$3d^2(^1D)4s$	$3d4s(^3D)5p$	^2D	$^2D^\circ$	$5/2$	$5/2$	B1
	4283.724	4283.733	2	17307.08	40644.64	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^4P^\circ$	$5/2$	$3/2$	B1
	4284.274	4284.280	1	17012.76	40347.34	$3d^2(^1D)4s$	$3d4s(^3D)5p$	^2D	$^2D^\circ$	$5/2$	$3/2$	B1
	4285.824	4285.826	1	17025.14	40351.30	$3d^2(^1D)4s$	$3d4s(^3D)5p$	^2D	$^2D^\circ$	$3/2$	$5/2$	B1
	4286.554	4286.554	5	17025.14	40347.34	$3d^2(^1D)4s$	$3d4s(^3D)5p$	^2D	$^2D^\circ$	$3/2$	$3/2$	B1
	4308.641	4308.652	3	15756.57	38959.16	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^2F	$5/2$	$7/2$	B1
	4309.300	4309.305	2	15672.58	38871.65	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^2F	$3/2$	$5/2$	B1
	4309.473	4309.482	2	17012.76	40210.88	$3d^2(^1D)4s$	$3d4s(^3D)5p$	^2D	$^4D^\circ$	$5/2$	$7/2$	B1
	4322.372		4									B1
	4329.247	4329.236	1	17255.07	40347.34	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^2D^\circ$	$3/2$	$3/2$	B1
	4329.405	4329.394	1	17012.76	40104.19	$3d^2(^1D)4s$	$3d4s(^3D)5p$	^2D	$^2F^\circ$	$5/2$	$5/2$	B1
	4331.729	4331.716	4	17025.14	40104.19	$3d^2(^1D)4s$	$3d4s(^3D)5p$	^2D	$^2F^\circ$	$3/2$	$5/2$	B1
	4338.269	4338.263	3	17307.08	40351.30	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^2D^\circ$	$5/2$	$5/2$	B1
	4340.624		1									B1
	4348.520	4348.512	4	18515.69	41505.60	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4P	$3/2$	$5/2$	B1
		4348.514		15881.75	38871.65	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^2F	$7/2$	$5/2$	B1
	4352.127	4352.128	3	18504.06	41474.87	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4P	$1/2$	$3/2$	B1
	4354.338	4354.332	1	18515.69	41474.87	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4P	$3/2$	$3/2$	B1
	4356.854		1									B1
	4357.456	4357.443	3	18504.06	41446.85	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^4P^\circ$	^4P	$1/2$	$1/2$	B1
	4358.649	4358.651	5	16022.73	38959.16	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^2F	$5/2$	$7/2$	B1
	4359.079	4359.077	5	18571.41	41505.60	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4P	$5/2$	$5/2$	B1
	4359.649	4359.653	3	18515.69	41446.85	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4P	$3/2$	$1/2$	B1
	4364.922	4364.926	4	18571.41	41474.87	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4P	$5/2$	$3/2$	B1
	4375.167	4375.171	4	16021.82	38871.65	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4D^\circ$	^2F	$3/2$	$5/2$	B1
	4375.314	4375.307	3	17255.07	40104.19	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^2F^\circ$	$3/2$	$5/2$	B1
	4376.289	4376.287	2	17307.08	40151.08	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^4P	$^2F^\circ$	$5/2$	$7/2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	4381.243	4381.255	3	16141.06 –	38959.16	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^2F	$^5/_2$ –	$^7/_2$	B1
	4389.590	4389.594	5	16096.90 –	38871.65	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2D^\circ$ –	^2F	$^3/_2$ –	$^5/_2$	B1
	4391.704	4391.696	2	18711.02 –	41474.87	$4s^24p$ –	$3d4s(^3D)4d$	$^2P^\circ$ –	^4P	$^1/_2$ –	$^3/_2$	B1
	4394.700	4394.696	1	16210.85 –	38959.16	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^2F	$^7/_2$ –	$^7/_2$	B1
	4395.935	4395.925	2	20236.86 –	42978.81	$3d^2(^1G)4s$ –	$3d4s(^1D)5p$	^2G –	$^2F^\circ$	$^9/_2$ –	$^7/_2$	B1
	4398.119	4398.122	3	16141.06 –	38871.65	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4D^\circ$ –	^2F	$^5/_2$ –	$^5/_2$	B1
	4400.397	4400.378	6	24656.72 –	47375.66	$3d4s(^1D)4p$ –		$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B1
		4400.409		24656.88 –	47375.66	$3d4s(^1D)4p$ –		$^2P^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B1
	4404.426		3									B1
	4413.797	4413.799	2	18855.74 –	41505.60	$4s^24p$ –	$3d4s(^3D)4d$	$^2P^\circ$ –	^4P	$^3/_2$ –	$^5/_2$	B1
	4418.490	4418.496	1	21032.75 –	43658.53	$3d4s(^1D)4p$ –	$4s^24d$	$^2F^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	B1
	4425.275	4425.277	2	18855.74 –	41446.85	$4s^24p$ –	$3d4s(^3D)4d$	$^2P^\circ$ –	^4P	$^3/_2$ –	$^1/_2$	B1
	4428.891	4428.890	4	21085.85 –	43658.53	$3d4s(^1D)4p$ –	$4s^24d$	$^2F^\circ$ –	^2D	$^7/_2$ –	$^5/_2$	B1
	4430.520	4430.514	4	21032.75 –	43597.16	$3d4s(^1D)4p$ –	$4s^24d$	$^2F^\circ$ –	^2D	$^5/_2$ –	$^3/_2$	B1
	4496.213		3									B1
	4511.372	4511.380	4	14926.07 –	37086.02	$3d^2(^3F)4s$ –	$3d^2(^1D)4p$	^2F –	$^2P^\circ$	$^5/_2$ –	$^3/_2$	B1
	4515.829	4515.841	4	20681.43 –	42819.49	$3d^2(^3P)4s$ –	$3d4s(^1D)5p$	^2P –	$^2P^\circ$	$^1/_2$ –	$^1/_2$	B1
	4520.846	4520.857	3	14926.07 –	37039.57	$3d^2(^3F)4s$ –	$3d^2(^1D)4p$	^2F –	$^2D^\circ$	$^5/_2$ –	$^5/_2$	B1
	4521.916	4521.922	3	15672.58 –	37780.87	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^4F^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B1
	4523.815	4523.815	3	15756.57 –	37855.61	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^4F^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	B1
		4523.827		20681.43 –	42780.41	$3d^2(^3P)4s$ –	$3d4s(^1D)5p$	^2P –	$^2P^\circ$	$^1/_2$ –	$^3/_2$	B1
	4531.691	4531.708	3	20719.86 –	42780.41	$3d^2(^3P)4s$ –	$3d4s(^1D)5p$	^2P –	$^2P^\circ$	$^3/_2$ –	$^3/_2$	B1
	4532.392	4532.398	3	11557.69 –	33614.88	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^2D^\circ$	$^5/_2$ –	$^3/_2$	B1
	4534.222	4534.211	4	24866.17 –	46914.54	$3d4s(^3D)4p$ –		$^2D^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B1
	4542.551	4542.562	5	14926.07 –	36933.91	$3d^2(^3F)4s$ –	$3d^2(^1D)4p$	^2F –	$^2D^\circ$	$^5/_2$ –	$^3/_2$	B1
	4542.985		4									B1
	4549.276	4549.286	4	25014.21 –	46989.52	$3d4s(^3D)4p$ –		$^2D^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	B1
	4552.665		2									B1
	4557.221	4557.225	5	21032.75 –	42969.78	$3d4s(^1D)4p$ –	$3d4s(^1D)4d$	$^2F^\circ$ –	^2G	$^5/_2$ –	$^7/_2$	B1
	4557.798	4557.827	2	14926.07 –	36860.20	$3d^2(^3F)4s$ –	$3d^2(^3P)4p$	^2F –	$^4D^\circ$	$^5/_2$ –	$^5/_2$	B1
	4562.708		3									B1
	4568.285	4568.283	4	21085.85 –	42969.78	$3d4s(^1D)4p$ –	$3d4s(^1D)4d$	$^2F^\circ$ –	^2G	$^7/_2$ –	$^7/_2$	B1
	4571.682	4571.698	4	14926.07 –	36793.65	$3d^2(^3F)4s$ –	$3d^2(^3P)4p$	^2F –	$^4D^\circ$	$^5/_2$ –	$^3/_2$	B1
	4573.982	4573.983	5	21085.85 –	42942.51	$3d4s(^1D)4p$ –	$3d4s(^1D)4d$	$^2F^\circ$ –	^2G	$^7/_2$ –	$^9/_2$	B1
	4578.780	4578.774	2	16021.82 –	37855.61	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^4D^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B1
	4578.964	4578.964	5	16022.73 –	37855.61	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	B1
	4582.029	4582.029	4	15041.92 –	36860.20	$3d^2(^3F)4s$ –	$3d^2(^3P)4p$	^2F –	$^4D^\circ$	$^7/_2$ –	$^5/_2$	B1
	4585.017	4585.019	4	14926.07 –	36730.12	$3d^2(^3F)4s$ –	$3d^2(^1D)4p$	^2F –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	B1
	4587.769	4587.761	1	25584.64 –	47375.66	$3d4s(^3D)4p$ –		$^2F^\circ$ –	^2D	$^5/_2$ –	$^3/_2$	B1
	4590.476	4590.482	4	18504.06 –	40282.16	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4P^\circ$ –	^4S	$^1/_2$ –	$^3/_2$	B1
	4592.927	4592.935	5	18515.69 –	40282.16	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4P^\circ$ –	^4S	$^3/_2$ –	$^3/_2$	B1
	4594.514	4594.501	4	16021.82 –	37780.87	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^4D^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B1
	4594.694	4594.694	4	16022.73 –	37780.87	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^3/_2$	B1
	4595.678	4595.682	4	18504.06 –	40257.52	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B1
	4598.145	4598.140	5	18515.69 –	40257.52	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4P^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B1
	4598.456	4598.454	5	14926.07 –	36666.42	$3d^2(^3F)4s$ –	$3d^2(^1D)4p$	^2F –	$^2F^\circ$	$^5/_2$ –	$^5/_2$	B1
	4603.909	4603.917	4	16141.06 –	37855.61	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^4D^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	B1
	4604.723	4604.723	5	18571.41 –	40282.16	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4P^\circ$ –	^4S	$^5/_2$ –	$^3/_2$	B1
	4606.858	4606.839	2	25724.68 –	47425.46	$3d4s(^3D)4p$ –		$^2F^\circ$ –	^2D	$^7/_2$ –	$^5/_2$	B1
	4609.528	4609.511	5	15041.92 –	36730.12	$3d^2(^3F)4s$ –	$3d^2(^1D)4p$	^2F –	$^2F^\circ$	$^7/_2$ –	$^7/_2$	B1
	4609.949	4609.955	5	18571.41 –	40257.52	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^4P^\circ$ –	^2D	$^5/_2$ –	$^3/_2$	B1
	4610.408	4610.410	5	16096.90 –	37780.87	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B1
	4613.785	4613.783	3	11610.28 –	33278.40	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^2F^\circ$	$^7/_2$ –	$^7/_2$	B1
	4619.818	4619.819	2	16141.06 –	37780.87	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^4D^\circ$ –	^2D	$^5/_2$ –	$^3/_2$	B1
	4628.119	4628.115	4	11677.38 –	33278.40	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^2F^\circ$	$^9/_2$ –	$^7/_2$	B1
	4629.186	4629.169	2	11557.69 –	33153.79	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^2F^\circ$	$^5/_2$ –	$^5/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	4634.547	4634.526	1	18711.02	40282.16	$4s^24p$	$3d4s(^3D)4d$	$^2P^\circ$	^4S	$^1/_2$	$^3/_2$	B1
	4636.983	4636.959	4	18504.06	40063.88	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^2P	$^1/_2$	$^3/_2$	B1
	4639.427	4639.462	3	18515.69	40063.88	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	4639.836	4639.826	3	18711.02	40257.52	$4s^24p$	$3d4s(^3D)4d$	$^2P^\circ$	^2D	$^1/_2$	$^3/_2$	B1
	4640.480	4640.470	3	11610.28	33153.79	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^2F^\circ$	$^7/_2$	$^5/_2$	B1
	4647.131	4647.118	2	24866.17	46378.86	$3d4s(^3D)4p$	–	$^2D^\circ$	^2F	$^3/_2$	$^5/_2$	B1
	4651.485	4651.490	3	18571.41	40063.88	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^2P	$^5/_2$	$^3/_2$	B1
	4652.423	4652.406	1	24866.17	46354.41	$3d4s(^3D)4p$	$3d4s(^3D)5d$	$^2D^\circ$	^4F	$^3/_2$	$^5/_2$	B1
	4654.504	4654.500	3	18855.74	40334.31	$4s^24p$	$3d4s(^3D)4d$	$^2P^\circ$	^2D	$^3/_2$	$^5/_2$	B1
	4655.166	4655.135	1	15672.58	37148.22	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	4655.536	4655.530	3	11677.38	33151.20	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^2G^\circ$	$^9/_2$	$^9/_2$	B1
	4661.673	4661.689	3	25014.21	46459.66	$3d4s(^3D)4p$	–	$^2D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	4664.249	4664.257	3	21032.75	42466.39	$3d4s(^1D)4p$	$3d4s(^1D)4d$	$^2F^\circ$	^2D	$^5/_2$	$^3/_2$	B1
	4665.810	4665.829	4	18855.74	40282.16	$4s^24p$	$3d4s(^3D)4d$	$^2P^\circ$	^4S	$^3/_2$	$^3/_2$	B1
	4668.690	4668.697	3	15672.58	37085.84	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^2P	$^3/_2$	$^1/_2$	B1
	4673.396	4673.413	4	15756.57	37148.22	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^2P	$^5/_2$	$^3/_2$	B1
	4680.428	4680.404	4	21085.85	42445.55	$3d4s(^1D)4p$	$3d4s(^1D)4d$	$^2F^\circ$	^2D	$^7/_2$	$^5/_2$	B1
	4686.938	4686.943	1	25584.64	46914.54	$3d4s(^3D)4p$	–	$^2F^\circ$	^2D	$^5/_2$	$^3/_2$	B1
	4701.283	4701.283	3	25724.68	46989.52	$3d4s(^3D)4p$	–	$^2F^\circ$	^2D	$^7/_2$	$^5/_2$	B1
22	4706.938	4706.929	5	18515.69	39755.02	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4D	$^3/_2$	$^5/_2$	B1
22	4709.313	4709.313	5	18571.41	39799.99	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4D	$^5/_2$	$^7/_2$	B1
22	4711.721	4711.721	4	18504.06	39721.79	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4D	$^1/_2$	$^3/_2$	B1
	4713.845	4713.852	5	18855.74	40063.88	$4s^24p$	$3d4s(^3D)4d$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	B1
22	4714.303	4714.305	4	18515.69	39721.79	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4D	$^3/_2$	$^3/_2$	B1
22	4716.245	4716.245	4	18504.06	39701.44	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4D	$^1/_2$	$^1/_2$	B1
14	4717.023	4717.039	4	11557.69	32751.50	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4D^\circ$	$^5/_2$	$^7/_2$	B1
22	4718.829	4718.834	3	18515.69	39701.44	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4D	$^3/_2$	$^1/_2$	B1
22	4719.308	4719.310	4	18571.41	39755.02	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^4P^\circ$	^4D	$^5/_2$	$^5/_2$	B1
14	4720.810	4720.817	4	11519.99	32696.84	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4D^\circ$	$^3/_2$	$^5/_2$	B1
14	4728.766	4728.773	6	11610.28	32751.50	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4D^\circ$	$^7/_2$	$^7/_2$	B1
14	4729.209	4729.200	6	11519.99	32659.30	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4D^\circ$	$^3/_2$	$^3/_2$	B1
		4729.236		11557.69	32696.84	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4D^\circ$	$^5/_2$	$^5/_2$	B1
	4732.083	4732.090	3	16021.82	37148.22	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	4732.294	4732.294	5	16022.73	37148.22	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^2P	$^5/_2$	$^3/_2$	B1
14	4734.109	4734.105	6	11519.99	32637.40	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4D^\circ$	$^3/_2$	$^1/_2$	B1
	4735.076	4735.096	5	21085.85	42198.84	$3d4s(^1D)4p$	$3d4s(^1D)4d$	$^2F^\circ$	^2F	$^7/_2$	$^7/_2$	B1
14	4737.647	4737.650	5	11557.69	32659.30	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4D^\circ$	$^5/_2$	$^3/_2$	B1
14	4741.024	4741.031	6	11610.28	32696.84	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4D^\circ$	$^7/_2$	$^5/_2$	B1
14	4743.821	4743.830	6	11677.38	32751.50	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4D^\circ$	$^9/_2$	$^7/_2$	B1
	4746.100	4746.104	4	16021.82	37085.84	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^2P	$^3/_2$	$^1/_2$	B1
	4748.961	4748.968	4	16096.90	37148.22	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^2P	$^1/_2$	$^1/_2$	B1
5	4753.165	4753.161	6g	0.00	21032.75	$3d4s^2$	$3d4s(^1D)4p$	^2D	$^2F^\circ$	$^3/_2$	$^5/_2$	B1
	4758.926	4758.951	4	16141.06	37148.22	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^2P	$^5/_2$	$^3/_2$	B1
	4763.073	4763.082	4	16096.90	37085.84	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^2P	$^3/_2$	$^1/_2$	B1
	4771.453	4771.450	4	17012.76	37964.89	$3d^2(^1D)4s$	$3d^2(^3P)4p$	^2D	$^4P^\circ$	$^5/_2$	$^5/_2$	B1
5	4779.354	4779.347	6g	168.34	21085.85	$3d4s^2$	$3d4s(^1D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^7/_2$	B1
	4784.322	4784.327	3	17012.76	37908.50	$3d^2(^1D)4s$	$3d^2(^3P)4p$	^2D	$^4P^\circ$	$^5/_2$	$^3/_2$	B1
5	4791.520	4791.511	5g	168.34	21032.75	$3d4s^2$	$3d4s(^1D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^5/_2$	B1
	4792.924	4792.924	1	24656.72	45514.98	$3d4s(^1D)4p$	$3d4s(^1D)4d$	$^2P^\circ$	^2S	$^1/_2$	$^1/_2$	B1
	4827.283	4827.278	5	17255.07	37964.89	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4P^\circ$	$^3/_2$	$^5/_2$	B1
	4833.664	4833.664	5	17226.04	37908.50	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4P^\circ$	$^1/_2$	$^3/_2$	B1
	4839.434	4839.432	5	17307.08	37964.89	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4P^\circ$	$^5/_2$	$^5/_2$	B1
	4840.456	4840.458	4	17255.07	37908.50	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4P^\circ$	$^3/_2$	$^3/_2$	B1
	4840.864	4840.854	4	17226.04	37877.78	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4P^\circ$	$^1/_2$	$^1/_2$	B1
	4847.673	4847.669	5	17255.07	37877.78	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4P^\circ$	$^3/_2$	$^1/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	4852.071	4852.059	3	15672.58	36276.63	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	$^2D2$	$^3/_2$	$^3/_2$	B1
	4852.679	4852.679	5	17307.08	37908.50	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4P^\circ$	$^5/_2$	$^3/_2$	B1
	4859.146	4859.141	3	15756.57	36330.59	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	$^2D2$	$^5/_2$	$^5/_2$	B1
	4864.599	4864.596	1	16021.82	36572.77	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^4P	$^3/_2$	$^5/_2$	B1
	4864.814	4864.812	3	16022.73	36572.77	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	4875.267	4875.262	3	16009.77	36515.76	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^4P	$^1/_2$	$^3/_2$	B1
	4878.129	4878.129	4	16021.82	36515.76	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^4P	$^3/_2$	$^3/_2$	B1
	4878.343	4878.345	4	16022.73	36515.76	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^4P	$^5/_2$	$^3/_2$	B1
	4880.758	4880.765	4	16009.77	36492.64	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^4P	$^1/_2$	$^1/_2$	B1
	4883.374	4883.359	3	20681.43	41153.42	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^2P	$^2D^\circ$	$^1/_2$	$^3/_2$	B1
	4883.631	4883.638	4	16021.82	36492.64	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^4P	$^3/_2$	$^1/_2$	B1
	4890.373	4890.366	4	20719.86	41162.52	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^2P	$^2D^\circ$	$^3/_2$	$^5/_2$	B1
	4892.546	4892.543	1	20719.86	41153.42	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^2P	$^2D^\circ$	$^3/_2$	$^3/_2$	B1
	4892.984	4892.986	4	16141.06	36572.77	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	4896.068	4896.066	3	16096.90	36515.76	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^4P	$^3/_2$	$^3/_2$	B1
	4901.633	4901.616	3	16096.90	36492.64	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^4P	$^3/_2$	$^1/_2$	B1
	4906.661	4906.678	4	16141.06	36515.76	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^4P	$^5/_2$	$^3/_2$	B1
	4909.748	4909.757	5	16210.85	36572.77	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	^4P	$^7/_2$	$^5/_2$	B1
	4922.633	4922.607	1	16021.82	36330.59	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	$^2D2$	$^3/_2$	$^5/_2$	B1
	4922.837	4922.827	5	16022.73	36330.59	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	$^2D2$	$^5/_2$	$^5/_2$	B1
	4934.257	4934.257	4	17226.04	37486.86	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4S^\circ$	$^1/_2$	$^3/_2$	B1
	4935.719	4935.721	4	16021.82	36276.63	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	$^2D2$	$^3/_2$	$^3/_2$	B1
	4935.940	4935.943	3	16022.73	36276.63	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	$^2D2$	$^5/_2$	$^3/_2$	B1
	4940.885	4940.873	2	16096.90	36330.59	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	$^2D2$	$^3/_2$	$^5/_2$	B1
	4941.310	4941.337	4	17255.07	37486.86	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4S^\circ$	$^3/_2$	$^3/_2$	B1
	4951.673	4951.680	4	16141.06	36330.59	$3d4s(^3D)4p$	$3d^3$	$^4D^\circ$	$^2D2$	$^5/_2$	$^5/_2$	B1
	4954.058	4954.073	5	17307.08	37486.86	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4S^\circ$	$^5/_2$	$^3/_2$	B1
		4954.085		16096.90	36276.63	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	$^2D2$	$^3/_2$	$^3/_2$	B1
	4973.665	4973.672	5	17025.14	37125.40	$3d^2(^1D)4s$	$3d^2(^1D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	B1
	4980.360	4980.362	5	17012.76	37086.02	$3d^2(^1D)4s$	$3d^2(^1D)4p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	B1
	4983.426	4983.436	5	17025.14	37086.02	$3d^2(^1D)4s$	$3d^2(^1D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^3/_2$	B1
	4990.149	4990.140	1	24656.72	44690.65	$3d4s(^1D)4p$	$3d(^2D)4p^2(^3P)$	$^2P^\circ$	^2P	$^1/_2$	$^1/_2$	B1
	4994.997	4995.002	4	17025.14	37039.57	$3d^2(^1D)4s$	$3d^2(^1D)4p$	^2D	$^2D^\circ$	$^3/_2$	$^5/_2$	B1
	5005.102	5005.107	1	20236.86	40210.88	$3d^2(^1G)4s$	$3d4s(^3D)5p$	^2G	$^4D^\circ$	$^9/_2$	$^7/_2$	B1
	5016.784	5016.766	2	25014.21	44941.81	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	5017.486	5017.476	2	20719.86	40644.64	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^2P	$^4P^\circ$	$^3/_2$	$^3/_2$	B1
	5018.408	5018.391	5	17012.76	36933.91	$3d^2(^1D)4s$	$3d^2(^1D)4p$	^2D	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
	5020.132	5020.137	5	20236.86	40151.08	$3d^2(^1G)4s$	$3d4s(^3D)5p$	^2G	$^2F^\circ$	$^9/_2$	$^7/_2$	B1
	5020.548	5020.535	3	20681.43	40594.07	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^2P	$^2P^\circ$	$^1/_2$	$^3/_2$	B1
	5020.848	5020.843	2	20239.66	40151.08	$3d^2(^1G)4s$	$3d4s(^3D)5p$	^2G	$^2F^\circ$	$^7/_2$	$^7/_2$	B1
	5021.521	5021.511	5	17025.14	36933.91	$3d^2(^1D)4s$	$3d^2(^1D)4p$	^2D	$^2D^\circ$	$^3/_2$	$^3/_2$	B1
	5026.609	5026.637	3	20239.66	40128.13	$3d^2(^1G)4s$	$3d4s(^3D)5p$	^2G	$^4D^\circ$	$^7/_2$	$^5/_2$	B1
	5030.251	5030.244	4	20719.86	40594.07	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^2P	$^2P^\circ$	$^3/_2$	$^3/_2$	B1
	5032.708	5032.695	5	20239.66	40104.19	$3d^2(^1G)4s$	$3d4s(^3D)5p$	^2G	$^2F^\circ$	$^7/_2$	$^5/_2$	B1
	5037.034	5037.028	4	17012.76	36860.20	$3d^2(^1D)4s$	$3d^2(^3P)4p$	^2D	$^4D^\circ$	$^5/_2$	$^5/_2$	B1
	5040.157	5040.172	2	17025.14	36860.20	$3d^2(^1D)4s$	$3d^2(^3P)4p$	^2D	$^4D^\circ$	$^3/_2$	$^5/_2$	B1
	5044.453	5044.440	3	20681.43	40499.71	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^2P	$^2P^\circ$	$^1/_2$	$^1/_2$	B1
	5046.084	5046.075	2	20236.86	40048.72	$3d^2(^1G)4s$	$3d4s(^3D)5p$	^2G	$^4F^\circ$	$^9/_2$	$^7/_2$	B1
	5053.076	5053.053	3	17255.07	37039.57	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^4P	$^2D^\circ$	$^3/_2$	$^5/_2$	B1
	5053.983	5053.975	3	17012.76	36793.65	$3d^2(^1D)4s$	$3d^2(^3P)4p$	^2D	$^4D^\circ$	$^5/_2$	$^3/_2$	B1
	5054.251	5054.241	2	20719.86	40499.71	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^2P	$^2P^\circ$	$^3/_2$	$^1/_2$	B1
	5054.489	5054.473	2	17307.08	37086.02	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^4P	$^2P^\circ$	$^5/_2$	$^3/_2$	B1
	5056.779	5056.756	2	21032.75	40802.76	$3d4s(^1D)4p$	$3d^3$	$^2F^\circ$	^2F	$^5/_2$	$^5/_2$	B1
	5057.143	5057.140	3	17025.14	36793.65	$3d^2(^1D)4s$	$3d^2(^3P)4p$	^2D	$^4D^\circ$	$^3/_2$	$^3/_2$	B1
	5061.916	5061.900	1	20239.66	39989.58	$3d^2(^1G)4s$	$3d4s(^3D)5p$	^2G	$^4F^\circ$	$^7/_2$	$^5/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
13	5064.306	5064.300	5	11610.28	31350.84	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4F^\circ$	$7/2$	$9/2$	B1
	5066.384	5066.372	4	17307.08	37039.57	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^4P	$^2D^\circ$	$5/2$	$5/2$	B1
	5068.635	5068.604	1	16021.82	35745.62	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^2D	$3/2$	$5/2$	B1
	5068.845	5068.838	5	16022.73	35745.62	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2D^\circ$	^2D	$5/2$	$5/2$	B1
13	5070.167	5070.172	5	11557.69	31275.39	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4F^\circ$	$5/2$	$7/2$	B1
	5070.257	5070.259	5	17012.76	36730.12	$3d^2(^1D)4s$	$3d^2(^1D)4p$	^2D	$^2F^\circ$	$5/2$	$7/2$	B1
	5072.714	5072.701	3	17226.04	36933.91	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^4P	$^2D^\circ$	$1/2$	$3/2$	B1
13	5075.820	5075.804	3	11519.99	31215.81	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4F^\circ$	$3/2$	$5/2$	B1
	5080.215	5080.184	4	17255.07	36933.91	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^4P	$^2D^\circ$	$3/2$	$3/2$	B1
	5081.080		4									B1
13	5081.561	5081.573	7	11677.38	31350.84	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4F^\circ$	$9/2$	$9/2$	B1
13	5083.721	5083.731	7	11610.28	31275.39	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4F^\circ$	$7/2$	$7/2$	B1
13	5085.549	5085.539	7	11557.69	31215.81	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4F^\circ$	$5/2$	$5/2$	B1
	5086.688	5086.693	4	17012.76	36666.42	$3d^2(^1D)4s$	$3d^2(^1D)4p$	^2D	$^2F^\circ$	$5/2$	$5/2$	B1
	5087.123	5087.135	5	17307.08	36959.03	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4D^\circ$	$5/2$	$7/2$	B1
	5087.834	5087.842	4	16021.82	35671.04	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^2D	$3/2$	$3/2$	B1
	5089.930	5089.899	6	17025.14	36666.42	$3d^2(^1D)4s$	$3d^2(^1D)4p$	^2D	$^2F^\circ$	$3/2$	$5/2$	B1
	5092.458	5092.450	5	20719.86	40351.30	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^2P	$^2D^\circ$	$3/2$	$5/2$	B1
	5093.501	5093.478	2	20719.86	40347.34	$3d^2(^3P)4s$	$3d4s(^3D)5p$	^2P	$^2D^\circ$	$3/2$	$3/2$	B1
	5093.654	5093.646	3	17307.08	36933.91	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^4P	$^2D^\circ$	$5/2$	$3/2$	B1
	5096.225		2									B1
13	5096.721	5096.716	6	11557.69	31172.70	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4F^\circ$	$5/2$	$3/2$	B1
	5097.410		1									B1
13	5099.186	5099.180	5	11610.28	31215.81	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4F^\circ$	$7/2$	$5/2$	B1
	5099.274	5099.284	5	17255.07	36860.20	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4D^\circ$	$3/2$	$5/2$	B1
13	5101.119	5101.137	6	11677.38	31275.39	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^4F	$^4F^\circ$	$9/2$	$7/2$	B1
	5105.644	5105.631	2	25014.21	44594.97	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2D^\circ$	^2P	$5/2$	$3/2$	B1
	5107.371	5107.358	4	16096.90	35671.04	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2D^\circ$	^2D	$3/2$	$3/2$	B1
	5109.070	5109.062	5	17226.04	36793.65	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4D^\circ$	$1/2$	$3/2$	B1
	5112.864	5112.848	5	17307.08	36860.20	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4D^\circ$	$5/2$	$5/2$	B1
	5116.648	5116.653	5	17255.07	36793.65	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4D^\circ$	$3/2$	$3/2$	B1
	5116.748	5116.763	5	17226.04	36764.20	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4D^\circ$	$1/2$	$1/2$	B1
	5118.912	5118.906	1	16141.06	35671.04	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^2D	$5/2$	$3/2$	B1
	5124.388	5124.377	3	17255.07	36764.20	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4D^\circ$	$3/2$	$1/2$	B1
	5130.323	5130.310	3	17307.08	36793.65	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^4P	$^4D^\circ$	$5/2$	$3/2$	B1
	5131.574		1									B1
	5132.794		1									B1
	5147.069	5147.091	3	17307.08	36730.12	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^4P	$^2F^\circ$	$5/2$	$7/2$	B1
	5156.986	5156.978	1	21032.75	40418.55	$3d4s(^1D)4p$	$3d4s(^3D)4d$	$^2F^\circ$	^2G	$5/2$	$7/2$	B1
	5193.793	5193.774	1	21085.85	40334.31	$3d4s(^1D)4p$	$3d4s(^3D)4d$	$^2F^\circ$	^2D	$7/2$	$5/2$	B1
	5202.250	5202.242	1	25724.68	44941.81	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2F^\circ$	^2F	$7/2$	$7/2$	B1
	5210.547	5210.539	6	20236.86	39423.39	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2G^\circ$	$9/2$	$9/2$	B1
	5211.370	5211.299	4	20239.66	39423.39	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2G^\circ$	$7/2$	$9/2$	B1
	5215.176		1									B1
	5218.247	5218.410	1	24656.88	43814.47	$3d4s(^1D)4p$	$3d4s(^3D)6s$	$^2P^\circ$	^4D	$1/2$	$3/2$	B1
	5218.874	5218.862	3	20236.86	39392.79	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2G^\circ$	$9/2$	$7/2$	B1
	5219.634	5219.625	5	20239.66	39392.79	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2G^\circ$	$7/2$	$7/2$	B1
		5219.650		24656.72	43809.76	$3d4s(^1D)4p$	$3d4s(^1D)6s$	$^2P^\circ$	^4D	$1/2$	$1/2$	B1
23	5258.364	5258.383	6	20236.86	39248.82	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2H^\circ$	$9/2$	$11/2$	B1
23	5284.981	5284.981	4	20236.86	39153.14	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2H^\circ$	$9/2$	$9/2$	B1
23	5285.771	5285.763	5	20239.66	39153.14	$3d^2(^1G)4s$	$3d^2(^1G)4p$	^2G	$^2H^\circ$	$7/2$	$9/2$	B1
4	5301.980	5301.950	5g	0.00	18855.74	$3d4s^2$	$4s^24p$	^2D	$^2P^\circ$	$3/2$	$3/2$	B1
19	5314.684	5314.667	3	15756.57	34567.19	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$5/2$	$7/2$	B1
19	5315.588	5315.571	3	15672.58	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$3/2$	$5/2$	B1
17	5323.069	5323.052	4	14926.07	33707.06	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^2F	$^2D^\circ$	$5/2$	$5/2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	5323.775	5323.752	3	24656.88	43435.40	$3d4s(^1D)4p$	$3d4s(^1D)4d$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	5325.386	5325.374	2	24656.88	43429.68	$3d4s(^1D)4p$	$3d4s(^1D)4d$	$^2P^\circ$	^2P	$^3/_2$	$^1/_2$	B1
	5325.749		1									B1
19	5331.788	5331.779	5	15672.58	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$^3/_2$	$^3/_2$	B1
19	5339.431	5339.416	5	15756.57	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$^5/_2$	$^5/_2$	B1
19	5341.074	5341.060	5	15672.58	34390.25	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$^3/_2$	$^1/_2$	B1
4	5342.992	5342.958	6g	0.00	18711.02	$3d4s^2$	$4s^24p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	B1
17	5349.342	5349.308	5	14926.07	33614.88	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^2F	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
4	5349.726	5349.711	5g	168.34	18855.74	$3d4s^2$	$4s^24p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	B1
	5350.278	5350.272	5	15881.75	34567.19	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$^7/_2$	$^7/_2$	B1
19	5355.793	5355.770	5	15756.57	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$^5/_2$	$^3/_2$	B1
17	5356.097	5356.091	5	15041.92	33707.06	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^2F	$^4D^\circ$	$^1/_2$	$^5/_2$	B1
	5356.820		1									B1
19	5375.373	5375.355	5	15881.75	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	5390.912	5390.947	2	16022.73	34567.19	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2D^\circ$	^4D	$^5/_2$	$^7/_2$	B1
19	5392.058	5392.078	5	16026.62	34567.19	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$^9/_2$	$^7/_2$	B1
	5399.330	5399.324	2g	0.00	18515.69	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4P^\circ$	$^3/_2$	$^3/_2$	B1
	5402.735	5402.717	4g	0.00	18504.06	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4P^\circ$	$^3/_2$	$^1/_2$	B1
	5416.161	5416.146	4	16021.82	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	5416.414	5416.413	3	16022.73	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2D^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	5422.335	5422.310	6bl	18711.02	37148.22	$4s^24p$	$3d^3$	$^2P^\circ$	^2P	$^1/_2$	$^3/_2$	B1
	5425.550	5425.567	4	16141.06	34567.19	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^5/_2$	$^7/_2$	B1
	5429.421	5429.419	4	16009.77	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^1/_2$	$^3/_2$	B1
	5432.977	5432.974	4	16021.82	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^3/_2$	$^3/_2$	B1
	5433.246	5433.243	4	16022.73	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2D^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	5438.279	5438.267	4	16096.90	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2D^\circ$	^4D	$^3/_2$	$^5/_2$	B1
	5439.042	5439.042	4	16009.77	34390.25	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^1/_2$	$^1/_2$	B1
	5440.729	5440.718	3	18711.02	37085.84	$4s^24p$	$3d^3$	$^2P^\circ$	^2P	$^1/_2$	$^1/_2$	B1
	5442.617	5442.611	4	16021.82	34390.25	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^3/_2$	$^1/_2$	B1
	5443.784		1									B1
	5446.195	5446.195	6	16210.85	34567.19	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^7/_2$	$^7/_2$	B1
16	5447.397	5447.385	4	14926.07	33278.40	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^2F	$^2F^\circ$	$^5/_2$	$^7/_2$	B1
	5448.885	5448.864	4g	168.34	18515.69	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4P^\circ$	$^5/_2$	$^3/_2$	B1
	5451.369	5451.363	5	16141.06	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^5/_2$	$^5/_2$	B1
	5452.291		1									B1
	5455.236	5455.233	4	16096.90	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2D^\circ$	^4D	$^3/_2$	$^3/_2$	B1
	5464.952	5464.949	2	16096.90	34390.25	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2D^\circ$	^4D	$^3/_2$	$^1/_2$	B1
	5465.229	5465.208	3	18855.74	37148.22	$4s^24p$	$3d^3$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	5468.401	5468.410	4	16141.06	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	5468.715	5468.706	2	24656.72	42937.50	$3d4s(^1D)4p$	$3d^3$	$^2P^\circ$	$^2D1$	$^1/_2$	$^3/_2$	B1
	5472.194	5472.188	4	16210.85	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4D^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	5474.654	5474.645	3	24656.88	42917.83	$3d4s(^1D)4p$	$3d^3$	$^2P^\circ$	$^2D1$	$^3/_2$	$^5/_2$	B1
16	5482.012	5481.991	6	15041.92	33278.40	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^2F	$^2F^\circ$	$^7/_2$	$^7/_2$	B1
	5483.997	5483.991	2	25584.64	43814.47	$3d4s(^3D)4p$	$3d4s(^3D)6s$	$^2F^\circ$	^4D	$^5/_2$	$^3/_2$	B1
16	5484.628	5484.626	6	14926.07	33153.79	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^2F	$^2F^\circ$	$^5/_2$	$^5/_2$	B1
15	5514.230	5514.215	6	14926.07	33055.98	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^2F	$^2G^\circ$	$^5/_2$	$^7/_2$	B1
	5514.963		1									B1
18	5515.380	5515.386	3	15672.58	33798.64	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^4F	$^3/_2$	$^5/_2$	B1
16	5519.729	5519.708	3	15041.92	33153.79	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^2F	$^2F^\circ$	$^7/_2$	$^5/_2$	B1
15	5520.519	5520.497	6	15041.92	33151.20	$3d^2(^3F)4s$	$3d^2(^3F)4p$	^2F	$^2G^\circ$	$^7/_2$	$^9/_2$	B1
18	5526.103	5526.091	4	15672.58	33763.53	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^4F	$^3/_2$	$^3/_2$	B1
18	5526.384	5526.375	4	15756.57	33846.59	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^4F	$^5/_2$	$^7/_2$	B1
	5536.478	5536.456	3	18515.69	36572.77	$3d4s(^3D)4p$	$3d^3$	$^4P^\circ$	^4P	$^3/_2$	$^5/_2$	B1
18	5541.068	5541.062	4	15756.57	33798.64	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^4F	$^5/_2$	$^5/_2$	B1
18	5546.433	5546.424	3	15881.75	33906.38	$3d4s(^3D)4p$	$3d^3$	$^4F^\circ$	^4F	$^7/_2$	$^9/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
15	5549.693	5549.678	3	15041.92 –	33055.98	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^2F –	$^2G^\circ$	$^7/_2$ –	$^7/_2$	B1
	5550.420	5550.405	3	18504.06 –	36515.76	$3d4s(^3D)4p$ –	$3d^3$	$^4P^\circ$ –	^4P	$^1/_2$ –	$^3/_2$	B1
18	5551.854	5551.866	3	15756.57 –	33763.53	$3d4s(^3D)4p$ –	$3d^3$	$^4F^\circ$ –	^4F	$^5/_2$ –	$^3/_2$	B1
	5553.605	5553.593	3	18571.41 –	36572.77	$3d4s(^3D)4p$ –	$3d^3$	$^4P^\circ$ –	^4P	$^5/_2$ –	$^5/_2$	B1
	5554.000	5553.991	2	18515.69 –	36515.76	$3d4s(^3D)4p$ –	$3d^3$	$^4P^\circ$ –	^4P	$^3/_2$ –	$^3/_2$	B1
	5557.523	5557.539	1	18504.06 –	36492.64	$3d4s(^3D)4p$ –	$3d^3$	$^4P^\circ$ –	^4P	$^1/_2$ –	$^1/_2$	B1
	5561.134	5561.134	3	18515.69 –	36492.64	$3d4s(^3D)4p$ –	$3d^3$	$^4P^\circ$ –	^4P	$^3/_2$ –	$^1/_2$	B1
18	5564.896	5564.883	4	15881.75 –	33846.59	$3d4s(^3D)4p$ –	$3d^3$	$^4F^\circ$ –	^4F	$^7/_2$ –	$^7/_2$	B1
	5571.250	5571.238	3	18571.41 –	36515.76	$3d4s(^3D)4p$ –	$3d^3$	$^4P^\circ$ –	^4P	$^5/_2$ –	$^3/_2$	B1
18	5579.764	5579.776	3	15881.75 –	33798.64	$3d4s(^3D)4p$ –	$3d^3$	$^4F^\circ$ –	^4F	$^7/_2$ –	$^5/_2$	B1
18	5591.364	5591.364	5	16026.62 –	33906.38	$3d4s(^3D)4p$ –	$3d^3$	$^4F^\circ$ –	^4F	$^9/_2$ –	$^9/_2$	B1
	5593.381	5593.381	3	21085.85 –	38959.16	$3d4s(^1D)4p$ –	$3d4s(^3D)4d$	$^2F^\circ$ –	^2F	$^7/_2$ –	$^7/_2$	B1
	5604.196	5604.171	3	21032.75 –	38871.65	$3d4s(^1D)4p$ –	$3d4s(^3D)4d$	$^2F^\circ$ –	^2F	$^5/_2$ –	$^5/_2$	B1
	5608.925	5608.900	1	16022.73 –	33846.59	$3d4s(^3D)4p$ –	$3d^3$	$^2D^\circ$ –	^4F	$^5/_2$ –	$^7/_2$	B1
	5610.127	5610.124	3	16026.62 –	33846.59	$3d4s(^3D)4p$ –	$3d^3$	$^4F^\circ$ –	^4F	$^9/_2$ –	$^7/_2$	B1
	5620.037	5619.996	1	24656.88 –	42445.55	$3d4s(^1D)4p$ –	$3d4s(^1D)4d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B1
	5623.732	5623.742	2	16021.82 –	33798.64	$3d4s(^3D)4p$ –	$3d^3$	$^4D^\circ$ –	^4F	$^3/_2$ –	$^5/_2$	B1
	5624.036	5624.030	2	16022.73 –	33798.64	$3d4s(^3D)4p$ –	$3d^3$	$^2D^\circ$ –	^4F	$^5/_2$ –	$^5/_2$	B1
	5631.043	5631.046	3	16009.77 –	33763.53	$3d4s(^3D)4p$ –	$3d^3$	$^4D^\circ$ –	^4F	$^1/_2$ –	$^3/_2$	B1
	5634.855	5634.871	3	16021.82 –	33763.53	$3d4s(^3D)4p$ –	$3d^3$	$^4D^\circ$ –	^4F	$^3/_2$ –	$^3/_2$	B1
	5645.066	5645.094	1	15041.92 –	32751.50	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^2F –	$^4D^\circ$	$^7/_2$ –	$^7/_2$	B1
	5646.357	5646.386	4	16141.06 –	33846.59	$3d4s(^3D)4p$ –	$3d^3$	$^4D^\circ$ –	^4F	$^5/_2$ –	$^7/_2$	B1
	5647.566	5647.595	4	16096.90 –	33798.64	$3d4s(^3D)4p$ –	$3d^3$	$^2D^\circ$ –	^4F	$^3/_2$ –	$^5/_2$	B1
	5649.561	5649.577	5	16210.85 –	33906.38	$3d4s(^3D)4p$ –	$3d^3$	$^4D^\circ$ –	^4F	$^7/_2$ –	$^9/_2$	B1
	5661.712	5661.719	3	16141.06 –	33798.64	$3d4s(^3D)4p$ –	$3d^3$	$^4D^\circ$ –	^4F	$^5/_2$ –	$^5/_2$	B1
	5668.750	5668.730	3	16210.85 –	33846.59	$3d4s(^3D)4p$ –	$3d^3$	$^4D^\circ$ –	^4F	$^7/_2$ –	$^7/_2$	B1
12	5671.828	5671.821	7	11677.38 –	29303.51	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^4G^\circ$	$^9/_2$ –	$^{11}/_2$	B1
	5680.197	5680.171	2	24866.17 –	42466.39	$3d4s(^3D)4p$ –	$3d4s(^1D)4d$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B1
	5684.214	5684.185	15bl	16210.85 –	33798.64	$3d4s(^3D)4p$ –	$3d^3$	$^4D^\circ$ –	^4F	$^7/_2$ –	$^5/_2$	B1
12	5686.856	5686.846	7	11610.28 –	29189.84	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^4G^\circ$	$^7/_2$ –	$^9/_2$	B1
		5686.905		24866.17 –	42445.55	$3d4s(^3D)4p$ –	$3d4s(^1D)4d$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B1
	5691.375	5691.363	2	18711.02 –	36276.63	$4s^24p$ –	$3d^3$	$^2P^\circ$ –	$^2D2$	$^1/_2$ –	$^3/_2$	B1
12	5700.186	5700.163	7	11557.69 –	29096.18	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^4G^\circ$	$^5/_2$ –	$^7/_2$	B1
12	5708.639	5708.636	6	11677.38 –	29189.84	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^4G^\circ$	$^9/_2$ –	$^9/_2$	B1
12	5711.793	5711.777	7	11519.99 –	29022.82	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^4G^\circ$	$^3/_2$ –	$^5/_2$	B1
12	5717.314	5717.307	6	11610.28 –	29096.18	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^4G^\circ$	$^7/_2$ –	$^7/_2$	B1
	5720.955	5720.923	3	18855.74 –	36330.59	$4s^24p$ –	$3d^3$	$^2P^\circ$ –	$^2D2$	$^3/_2$ –	$^5/_2$	B1
12	5724.129	5724.107	6	11557.69 –	29022.82	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^4G^\circ$	$^5/_2$ –	$^5/_2$	B1
	5735.232	5735.203	2	25014.21 –	42445.55	$3d4s(^3D)4p$ –	$3d4s(^1D)4d$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	B1
	5738.666	5738.643	1	18855.74 –	36276.63	$4s^24p$ –	$3d^3$	$^2P^\circ$ –	$^2D2$	$^3/_2$ –	$^3/_2$	B1
12	5739.325	5739.331	4	11677.38 –	29096.18	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^4G^\circ$	$^9/_2$ –	$^7/_2$	B1
12	5741.382	5741.395	4	11610.28 –	29022.82	$3d^2(^3F)4s$ –	$3d^2(^3F)4p$	^4F –	$^4G^\circ$	$^7/_2$ –	$^5/_2$	B1
	5802.242	5802.245	1	18515.69 –	35745.62	$3d4s(^3D)4p$ –	$3d4s(^3D)5s$	$^4P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B1
	5823.532	5823.522	4	18504.06 –	35671.04	$3d4s(^3D)4p$ –	$3d4s(^3D)5s$	$^4P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B1
	5894.558	5894.586	5	18711.02 –	35671.04	$4s^24p$ –	$3d4s(^3D)5s$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B1
	5919.068	5919.065	5	18855.74 –	35745.62	$4s^24p$ –	$3d4s(^3D)5s$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B1
	5931.250	5931.230	3	29022.82 –	45878.06	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4G^\circ$ –	^4H	$^5/_2$ –	$^7/_2$	B1
	5940.499	5940.509	3	29096.18 –	45925.09	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4G^\circ$ –	^4H	$^7/_2$ –	$^9/_2$	B1
	5942.646	5942.646	1	21032.75 –	37855.61	$3d4s(^1D)4p$ –	$3d4s(^1D)5s$	$^2F^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	B1
	5945.321	5945.318	2	18855.74 –	35671.04	$4s^24p$ –	$3d4s(^3D)5s$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B1
	5951.069	5951.055	1	29189.84 –	45988.93	$3d^2(^3F)4p$ –	$3d4s(^3D)5d$	$^4G^\circ$ –	^4G	$^9/_2$ –	$^9/_2$	B1
	5952.139	5952.125	4	29189.84 –	45985.91	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4G^\circ$ –	^4H	$^9/_2$ –	$^{11}/_2$	B1
	5961.470	5961.463	4	21085.85 –	37855.61	$3d4s(^1D)4p$ –	$3d4s(^1D)5s$	$^2F^\circ$ –	^2D	$^7/_2$ –	$^5/_2$	B1
	5968.204	5968.221	4	29303.51 –	46054.28	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4G^\circ$ –	^4H	$^{11}/_2$ –	$^{13}/_2$	B1
	5968.481	5968.485	1	29303.51 –	46053.54	$3d^2(^3F)4p$ –	$3d4s(^3D)5d$	$^4G^\circ$ –	^4G	$^{11}/_2$ –	$^{11}/_2$	B1
	5969.169	5969.166	4	21032.75 –	37780.87	$3d4s(^1D)4p$ –	$3d4s(^1D)5s$	$^2F^\circ$ –	^2D	$^5/_2$ –	$^3/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	5978.879	5978.894	1	25724.68	42445.55	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2F^\circ$	^2D	7/2	5/2	B1
	5983.510	5983.528	1	29096.18	45804.10	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4G^\circ$	^4G	7/2	9/2	B1
	5988.431	5988.410	1	17012.76	33707.06	$3d^2(^1D)4s$	$3d^2(^3F)4p$	^2D	$^2D^\circ$	5/2	5/2	B1
	5988.923	5988.887	1	29022.82	45715.79	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4G^\circ$	^4G	5/2	5/2	B1
	5992.850	5992.854	3	17025.14	33707.06	$3d^2(^1D)4s$	$3d^2(^3F)4p$	^2D	$^2D^\circ$	3/2	5/2	B1
	6002.14	6002.14	1	29096.18	45752.28	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4G^\circ$	^4G	7/2	7/2	B1
	6017.24	6017.26	1	29189.84	45804.10	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4G^\circ$	^4G	9/2	9/2	B1
		6017.28		25584.64	42198.84	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2F^\circ$	^2F	5/2	7/2	B1
	6021.65	6021.66	3	17012.76	33614.88	$3d^2(^1D)4s$	$3d^2(^3F)4p$	^2D	$^2D^\circ$	5/2	3/2	B1
	6026.16	6026.15	5	17025.14	33614.88	$3d^2(^1D)4s$	$3d^2(^3F)4p$	^2D	$^2D^\circ$	3/2	3/2	B1
	6030.24		4									B1
	6034.28	6034.28	2	29303.51	45870.92	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4G^\circ$	^4G	11/2	11/2	B1
	6035.34	6035.15	3	25584.64	42149.66	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2F^\circ$	^2F	5/2	5/2	B1
	6041.47	6041.60	1	29189.84	45737.17	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4G^\circ$	^4D	9/2	7/2	B1
	6048.89		3									B1
	6061.43	6061.40	2	20236.86	36730.12	$3d^2(^1G)4s$	$3d^2(^1D)4p$	^2G	$^2F^\circ$	9/2	7/2	B1
	6068.43	6068.43	4	25724.68	42198.84	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2F^\circ$	^2F	7/2	7/2	B1
	6079.56	6079.57	4	20681.43	37125.40	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^2P	$^2P^\circ$	1/2	1/2	B1
	6085.94	6085.94	2	20239.66	36666.42	$3d^2(^1G)4s$	$3d^2(^1D)4p$	^2G	$^2F^\circ$	7/2	5/2	B1
	6093.78	6093.82	2	20719.86	37125.40	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^2P	$^2P^\circ$	3/2	1/2	B1
	6095.89	6095.88	3	17307.08	33707.06	$3d^2(^3P)4s$	$3d^2(^3F)4p$	^4P	$^2D^\circ$	5/2	5/2	B1
	6108.46	6108.48	3	20719.86	37086.02	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^2P	$^2P^\circ$	3/2	3/2	B1
	6110.82	6110.85	3	17255.07	33614.88	$3d^2(^3P)4s$	$3d^2(^3F)4p$	^4P	$^2D^\circ$	3/2	3/2	B1
	6112.76		4									B1
	6125.88	6125.86	4	20719.86	37039.57	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^2P	$^2D^\circ$	3/2	5/2	B1
	6146.20	6146.23	6	17012.76	33278.40	$3d^2(^1D)4s$	$3d^2(^3F)4p$	^2D	$^2F^\circ$	5/2	7/2	B1
	6151.19	6151.20	3	20681.43	36933.91	$3d^2(^3P)4s$	$3d^2(^1D)4p$	^2P	$^2D^\circ$	1/2	3/2	B1
	6178.24		1									B1
3	6193.70	6193.67	6g	0.00	16141.06	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4D^\circ$	3/2	5/2	B1
		6193.68		17012.76	33153.79	$3d^2(^1D)4s$	$3d^2(^3F)4p$	^2D	$^2F^\circ$	5/2	5/2	B1
	6198.43	6198.43	6	17025.14	33153.79	$3d^2(^1D)4s$	$3d^2(^3F)4p$	^2D	$^2F^\circ$	3/2	5/2	B1
2	6210.66	6210.66	7g	0.00	16096.90	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2D^\circ$	3/2	3/2	B1
3	6231.75	6231.71	3g	168.34	16210.85	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4D^\circ$	5/2	7/2	B1
2	6239.44	6239.41	6g	0.00	16022.73	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2D^\circ$	3/2	5/2	B1
3	6239.80	6239.76	6g	0.00	16021.82	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4D^\circ$	3/2	3/2	B1
3	6244.55	6244.46	2g	0.00	16009.77	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4D^\circ$	3/2	1/2	B1
	6249.96	6249.92	6	18571.41	34567.19	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4P^\circ$	^4D	5/2	7/2	B1
3	6258.90	6258.94	7g	168.34	16141.06	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4D^\circ$	5/2	5/2	B1
	6260.52	6260.53	2	21085.85	37054.51	$3d4s(^1D)4p$	$3d^3$	$^2F^\circ$	^2G	7/2	9/2	B1
	6262.22	6262.24	5	18515.69	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4P^\circ$	^4D	3/2	5/2	B1
	6269.92	6269.92	1	21032.75	36977.51	$3d4s(^1D)4p$	$3d^3$	$^2F^\circ$	^2G	5/2	7/2	B1
	6273.14	6273.13	4	24866.17	40802.76	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	^2F	3/2	5/2	B1
2	6276.28	6276.30	6g	168.34	16096.90	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2D^\circ$	5/2	3/2	B1
	6279.74	6279.57	5	29096.18	45016.43	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4G^\circ$	^4F	7/2	7/2	B1
	6280.13	6280.07	5	29022.82	44941.81	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4G^\circ$	^2F	5/2	7/2	B1
		6280.16		18504.06	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4P^\circ$	^4D	1/2	3/2	B1
	6284.16	6284.17	5	18571.41	34480.00	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4P^\circ$	^4D	5/2	5/2	B1
	6284.73	6284.75	5	18515.69	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4P^\circ$	^4D	3/2	3/2	B1
	6288.07	6288.08	1	17255.07	33153.79	$3d^2(^3P)4s$	$3d^2(^3F)4p$	^4P	$^2F^\circ$	3/2	5/2	B1
	6293.02	6293.04	5	18504.06	34390.25	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4P^\circ$	^4D	1/2	1/2	B1
	6297.64	6297.64	4	18515.69	34390.25	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4P^\circ$	^4D	3/2	1/2	B1
2	6305.65	6305.66	7g	168.34	16022.73	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^2D^\circ$	5/2	5/2	B1
3	6305.99	6306.02	6g	168.34	16021.82	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4D^\circ$	5/2	3/2	B1
	6306.84	6306.84	4	18571.41	34422.83	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^4P^\circ$	^4D	5/2	3/2	B1
	6309.88	6310.02	5	26936.98	42780.41	$3d^2(1S)4s$	$3d4s(^1D)5p$	^2S	$^2P^\circ$	1/2	3/2	B1
	6316.75	6316.73	1	29189.84	45016.43	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4G^\circ$	^4F	9/2	7/2	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	6318.50	6318.48	2	29303.51	45125.73	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4G°$	^4F	$^{11}/_2$	$^9/_2$	B1
	6322.04	6322.01	1	29096.18	44909.55	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4G°$	^4F	$^7/_2$	$^5/_2$	B1
	6322.74	6322.73	4	25014.21	40825.78	$3d4s(^3D)4p$	$3d^3$	$^2D°$	^2F	$^5/_2$	$^7/_2$	B1
	6327.21	6327.21	4	29022.82	44823.21	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4G°$	^4F	$^5/_2$	$^3/_2$	B1
	6331.96	6331.95	1	25014.21	40802.76	$3d4s(^3D)4p$	$3d^3$	$^2D°$	^2F	$^5/_2$	$^5/_2$	B1
1	6344.83	6344.80	5*g*	0.00	15756.57	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4F°$	$^3/_2$	$^5/_2$	B1
1	6362.26	6362.23	4*g*	168.34	15881.75	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4F°$	$^5/_2$	$^7/_2$	B1
	6362.88	6362.88	2	18711.02	34422.83	$4s^24p$	$3d4s(^3D)5s$	$^2P°$	^4D	$^1/_2$	$^3/_2$	B1
	6376.10	6376.10	1	18711.02	34390.25	$4s^24p$	$3d4s(^3D)5s$	$^2P°$	^4D	$^1/_2$	$^1/_2$	B1
	6376.84	6376.83	2	24656.88	40334.31	$3d4s(^1D)4p$	$3d4s(^3D)4d$	$^2P°$	^2D	$^3/_2$	$^5/_2$	B1
1	6378.82	6378.81	6*g*	0.00	15672.58	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4F°$	$^3/_2$	$^3/_2$	B1
	6398.54	6398.53	3	18855.74	34480.00	$4s^24p$	$3d4s(^3D)5s$	$^2P°$	^4D	$^3/_2$	$^5/_2$	B1
	6408.15	6408.16	1	24656.72	40257.52	$3d4s(^1D)4p$	$3d4s(^3D)4d$	$^2P°$	^2D	$^1/_2$	$^3/_2$	B1
1	6413.35	6413.32	6*g*	168.34	15756.57	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4F°$	$^5/_2$	$^5/_2$	B1
	6422.03	6422.03	1	18855.74	34422.83	$4s^24p$	$3d4s(^3D)5s$	$^2P°$	^4D	$^3/_2$	$^3/_2$	B1
	6422.38		3									B1
	6433.96		4									B1
	6434.18		4									B1
	6437.72		3									B1
	6438.34		4									B1
	6442.57		4									B1
	6446.72		3									B1
1	6448.08	6448.07	5*g*	168.34	15672.58	$3d4s^2$	$3d4s(^3D)4p$	^2D	$^4F°$	$^5/_2$	$^3/_2$	B1
	6450.86		1									B1
	6451.93		1									B1
	6461.52		3									B1
	6463.11	6463.12	2	24866.17	40334.31	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^2D	$^3/_2$	$^5/_2$	B1
	6484.98	6484.98	3	24866.17	40282.16	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^4S	$^3/_2$	$^3/_2$	B1
	6488.89	6488.76	2	24656.88	40063.88	$3d4s(^1D)4p$	$3d4s(^3D)4d$	$^2P°$	^2P	$^3/_2$	$^3/_2$	B1
	6489.30		1									B1
	6495.36	6495.36	9	24866.17	40257.52	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^2D	$^3/_2$	$^3/_2$	B1
	6525.55	6525.57	40	25014.21	40334.31	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^2D	$^5/_2$	$^5/_2$	B1
	6547.88	6547.86	4	25014.21	40282.16	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^4S	$^5/_2$	$^3/_2$	B1
24	6557.84	6557.83	35	21085.85	36330.59	$3d4s(^1D)4p$	$3d^3$	$^2F°$	$^2D2$	$^7/_2$	$^5/_2$	B1
24	6558.20	6558.20	30	21032.75	36276.63	$3d4s(^1D)4p$	$3d^3$	$^2F°$	$^2D2$	$^5/_2$	$^3/_2$	B1
		6558.21		31215.81	46459.66	$3d^2(^3F)4p$	–	$^4F°$	^2F	$^5/_2$	$^7/_2$	B1
	6558.42	6558.44	1	25014.21	40257.52	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^2D	$^5/_2$	$^3/_2$	B1
	6569.30	6569.30	7	25584.64	40802.76	$3d4s(^3D)4p$	$3d^3$	$^2F°$	^2F	$^5/_2$	$^5/_2$	B1
	6575.35	6575.34	7	24866.17	40070.30	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^2P	$^3/_2$	$^1/_2$	B1
	6578.10	6578.12	10	24866.17	40063.88	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^2P	$^3/_2$	$^1/_2$	B1
	6600.16		1									B1
	6620.21	6620.21	21	25724.68	40825.78	$3d4s(^3D)4p$	$3d^3$	$^2F°$	^2F	$^7/_2$	$^7/_2$	B1
	6642.83	6642.83	8	25014.21	40063.88	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^2P	$^5/_2$	$^3/_2$	B1
	6706.09	6706.07	7	32696.84	47604.59	$3d^2(^3F)4p$	–	$^4D°$	^4P	$^5/_2$	$^5/_2$	B1
	6707.51		4									B1
	6714.25		2									B1
	6714.61	6714.58	40	24866.17	39755.02	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D°$	^4D	$^1/_2$	$^5/_2$	B1
	6717.68		32									B1
	6720.20	6720.16	6	32659.30	47535.78	$3d^2(^3F)4p$	–	$^4D°$	^4P	$^3/_2$	$^3/_2$	B1
	6730.76	6730.75	18	32751.50	47604.59	$3d^2(^3F)4p$	–	$^4D°$	^4P	$^7/_2$	$^5/_2$	B1
	6731.55	6731.55	7	32637.40	47488.72	$3d^2(^3F)4p$	–	$^4D°$	^4P	$^1/_2$	$^1/_2$	B1
	6737.19	6737.17	11	32696.84	47535.78	$3d^2(^3F)4p$	–	$^4D°$	^4P	$^5/_2$	$^3/_2$	B1
	6737.88	6737.87	465	25724.68	40562.06	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2F°$	^2G	$^7/_2$	$^9/_2$	B1
	6739.45	6739.45	360	25584.64	40418.55	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2F°$	^2G	$^5/_2$	$^7/_2$	B1
	6751.13	6751.10	6	30706.66	45514.98	$3d4s(^3D)4p$	$3d4s(^1D)4d$	$^2P°$	^2S	$^3/_2$	$^1/_2$	B1
	6769.14		5									B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	6769.83	6769.80	4	31215.81	45983.23	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4D	$^5/_2$	$^5/_2$	B1
		6769.85		31275.39	46042.69	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4D	$^7/_2$	$^7/_2$	B1
	6786.31	6786.28	1	31215.81	45947.35	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	6793.75	6793.75	6	31215.81	45931.16	$3d^2(^3F)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^5/_2$	$^7/_2$	B1
	6794.37	6794.39	1	31172.70	45886.66	$3d^2(^3F)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^3/_2$	$^5/_2$	B1
	6794.60	6794.59	5	31275.39	45988.93	$3d^2(^3F)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^7/_2$	$^9/_2$	B1
	6794.86	6794.90	8	21032.75	35745.62	$3d4s(^1D)4p$	$3d4s(^3D)5s$	$^2F^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	6794.96		2									B1
	6797.26	6797.22	7	31275.39	45983.23	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	6799.62	6799.60	10	31350.84	46053.54	$3d^2(^3F)4p$	$3d4s(^3D)5d$	$^4F^\circ$	^4G	$^9/_2$	$^{11}/_2$	B1
	6803.68	6803.68	14	25724.68	40418.55	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2F^\circ$	^2G	$^7/_2$	$^7/_2$	B1
	6804.61	6804.62	17	31350.84	46042.69	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4D	$^9/_2$	$^7/_2$	B1
	6817.11	6817.11	345	20681.43	35346.35	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^2P	$^2S^\circ$	$^1/_2$	$^1/_2$	B1
	6819.49	6819.51	485	21085.85	35745.62	$3d4s(^1D)4p$	$3d4s(^3D)5s$	$^2F^\circ$	^2D	$^7/_2$	$^5/_2$	B1
	6829.51	6829.51	335	21032.75	35671.04	$3d4s(^1D)4p$	$3d4s(^3D)5s$	$^2F^\circ$	^2D	$^5/_2$	$^3/_2$	B1
	6835.02	6835.02	640	20719.86	35346.35	$3d^2(^3P)4s$	$3d^2(^3P)4p$	^2P	$^2S^\circ$	$^3/_2$	$^1/_2$	B1
	6874.25	6874.22	13	31172.70	45715.79	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^3/_2$	$^5/_2$	B1
	6877.37	6877.35	18	31215.81	45752.28	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^5/_2$	$^7/_2$	B1
	6881.02	6881.02	26	31275.39	45804.10	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^7/_2$	$^9/_2$	B1
	6885.10	6885.12	27	31350.84	45870.92	$3d^2(^3F)4p$	$3d^2(^3F)4d$	$^4F^\circ$	^4G	$^9/_2$	$^{11}/_2$	B1
	6914.56	6914.56	1	33055.98	47514.22	$3d^2(^3F)4p$	–	$^2G^\circ$	^2G	$^7/_2$	$^7/_2$	B1
	6924.00	6924.00	6	33151.20	47589.73	$3d^2(^3F)4p$	–	$^2G^\circ$	^2G	$^9/_2$	$^9/_2$	B1
	6947.36	6947.36	1	31215.81	45605.80	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	6949.12	6949.13	4	31350.84	45737.17	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^9/_2$	$^7/_2$	B1
	6950.44	6950.40	6	31275.39	45659.09	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4D	$^7/_2$	$^5/_2$	B1
	6961.66	6961.66	11	33153.79	47514.22	$3d^2(^3F)4p$	–	$^2F^\circ$	^2G	$^5/_2$	$^7/_2$	B1
	6985.55	6985.54	8	33278.40	47589.73	$3d^2(^3F)4p$	–	$^2F^\circ$	^2G	$^7/_2$	$^9/_2$	B1
	7010.20		6									B1
	7056.71	7056.72	1	11557.69	25724.68	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^2F^\circ$	$^5/_2$	$^7/_2$	B1
	7073.75		1									B1
	7074.65		1									B1
	7083.01	7083.01	1	11610.28	25724.68	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^2F^\circ$	$^7/_2$	$^7/_2$	B1
	7097.73		9									B1
	7102.91		5									B1
	7108.07	7108.06	1	11519.99	25584.64	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^2F^\circ$	$^3/_2$	$^5/_2$	B1
	7127.16	7127.17	4	11557.69	25584.64	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^2F^\circ$	$^5/_2$	$^5/_2$	B1
	7127.76		2									B1
	7138.10	7138.09	19	24866.17	38871.65	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^2F	$^3/_2$	$^5/_2$	B1
	7169.09	7169.08	27	25014.21	38959.16	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	7198.32	7198.32	2	30706.66	44594.97	$3d4s(^3D)4p$	$3d(^2D)4p^2(^3P)$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	7209.41		3									B1
	7216.15		1									B1
	7216.30		1									B1
	7224.31		1									B1
	7244.03	7244.06	1	31215.81	45016.43	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4F	$^5/_2$	$^7/_2$	B1
	7244.81		2									B1
	7251.67		2									B1
	7257.58	7257.59	14	31350.84	45125.73	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4F	$^9/_2$	$^9/_2$	B1
	7265.03	7265.04	1	33153.79	46914.54	$3d^2(^3F)4p$	–	$^2F^\circ$	^2D	$^5/_2$	$^3/_2$	B1
	7265.03	7265.03	1	33614.88	47375.66	$3d^2(^3F)4p$	–	$^2D^\circ$	^2D	$^3/_2$	$^3/_2$	B1
	7275.50	7275.46	7	31275.39	45016.43	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4F	$^7/_2$	$^7/_2$	B1
	7277.62	7277.68	1	31172.70	44909.55	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4F	$^3/_2$	$^5/_2$	B1
	7287.44	7287.47	2	33707.06	47425.46	$3d^2(^3F)4p$	–	$^2D^\circ$	^2D	$^5/_2$	$^5/_2$	B1
	7300.61	7300.60	4	31215.81	44909.55	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4F^\circ$	^4F	$^5/_2$	$^5/_2$	B1
	7320.22	7320.19	1	26936.98	40594.07	$3d^2(1S)4s$	$3d4s(^3D)5p$	^2S	$^2P^\circ$	$^1/_2$	$^3/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	7323.72	7323.72	7	31172.70 –	44823.21	$3d^2(^3F)4p$ –	$3d(^2D)4p^2(^3P)$	$^4F°$ –	^4F	$^3/_2$ –	$^3/_2$	B1
	7332.49	7332.50	1	31275.39 –	44909.55	$3d^2(^3F)4p$ –	$3d(^2D)4p^2(^3P)$	$^4F°$ –	^4F	$^7/_2$ –	$^5/_2$	B1
	7338.54	7338.64	1	31215.81 –	44838.56	$3d^2(^3F)4p$ –	$3d(^2D)4p^2(^3P)$	$^4F°$ –	^2F	$^5/_2$ –	$^5/_2$	B1
	7357.81		1									B1
	7364.19		1									B1
	7379.14	7379.11	1	17025.14 –	30573.17	$3d^2(^1D)4s$ –	$3d4s(^3D)4p$	^2D –	$^2P°$	$^3/_2$ –	$^1/_2$	B1
	7453.13		3									B1
	7458.43	7458.44	3	11610.28 –	25014.21	$3d^2(^3F)4s$ –	$3d4s(^3D)4p$	^4F –	$^2D°$	$^7/_2$ –	$^5/_2$	B1
	7463.85	7463.89	2	21085.85 –	34480.00	$3d4s(^1D)4p$ –	$3d4s(^3D)5s$	$^2F°$ –	^4D	$^7/_2$ –	$^5/_2$	B1
	7474.85	7474.84	3	25584.64 –	38959.16	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2F°$ –	^2F	$^5/_2$ –	$^7/_2$	B1
	7495.75		1									B1
	7503.26	7503.23	2	32659.30 –	45983.23	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4D°$ –	^4D	$^3/_2$ –	$^5/_2$	B1
	7503.90	7503.82	2	33055.98 –	46378.86	$3d^2(^3F)4p$ –		$^2G°$ –	^2F	$^7/_2$ –	$^5/_2$	B1
	7511.14	7511.11	2	32637.40 –	45947.35	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4D°$ –	^4D	$^1/_2$ –	$^3/_2$	B1
	7511.91	7511.94	3	11557.69 –	24866.17	$3d^2(^3F)4s$ –	$3d4s(^3D)4p$	^4F –	$^2D°$	$^5/_2$ –	$^3/_2$	B1
		7511.95		33151.20 –	46459.66	$3d^2(^3F)4p$ –		$^2G°$ –	^2F	$^9/_2$ –	$^7/_2$	B1
	7516.90	7516.92	2	33614.88 –	46914.54	$3d^2(^3F)4p$ –		$^2D°$ –	^2D	$^3/_2$ –	$^3/_2$	B1
	7521.74	7521.71	7	32751.50 –	46042.69	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4D°$ –	^4D	$^7/_2$ –	$^7/_2$	B1
	7524.04	7524.08	8	25584.64 –	38871.65	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2F°$ –	^2F	$^5/_2$ –	$^5/_2$	B1
	7524.36	7524.43	3	32696.84 –	45983.23	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4D°$ –	^4D	$^5/_2$ –	$^5/_2$	B1
	7526.65	7526.65	1	33707.06 –	46989.52	$3d^2(^3F)4p$ –		$^2D°$ –	^2D	$^5/_2$ –	$^5/_2$	B1
	7534.60	7534.57	1	32659.30 –	45927.81	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4D°$ –	^4D	$^3/_2$ –	$^1/_2$	B1
	7544.80	7544.80	2	32696.84 –	45947.35	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4D°$ –	^4D	$^5/_2$ –	$^3/_2$	B1
	7546.10	7546.09	1	32696.84 –	45945.09	$3d^2(^3F)4p$ –	$3d4s(^3D)5d$	$^4D°$ –	^4D	$^5/_2$ –	$^5/_2$	B1
	7550.37	7550.37	1	32659.30 –	45900.04	$3d^2(^3F)4p$ –	$3d4s(^3D)5d$	$^4D°$ –	^4D	$^3/_2$ –	$^3/_2$	B1
	7552.08	7552.06	1	32637.40 –	45875.18	$3d^2(^3F)4p$ –	$3d4s(^3D)5d$	$^4D°$ –	^4D	$^1/_2$ –	$^1/_2$	B1
	7553.95	7553.94	8	25724.68 –	38959.16	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2F°$ –	^2F	$^7/_2$ –	$^7/_2$	B1
	7555.52	7555.51	2	32751.50 –	45983.23	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4D°$ –	^4D	$^7/_2$ –	$^5/_2$	B1
	7559.33	7559.32	3	33153.79 –	46378.86	$3d^2(^3F)4p$ –		$^2F°$ –	^2F	$^5/_2$ –	$^5/_2$	B1
	7563.47		7									B1
	7564.56	7564.57	1	32659.30 –	45875.18	$3d^2(^3F)4p$ –	$3d4s(^3D)5d$	$^4D°$ –	^4D	$^3/_2$ –	$^1/_2$	B1
	7573.31	7573.32	2	33153.79 –	46354.41	$3d^2(^3F)4p$ –	$3d4s(^3D)5d$	$^2F°$ –	^4F	$^5/_2$ –	$^5/_2$	B1
	7574.41	7574.40	18	24656.88 –	37855.61	$3d4s(^1D)4p$ –	$3d4s(^1D)5s$	$^2P°$ –	^2D	$^3/_2$ –	$^5/_2$	B1
	7582.35		2									B1
	7584.48	7584.46	4	32696.84 –	45878.06	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^4D°$ –	^4H	$^5/_2$ –	$^7/_2$	B1
		7584.44		33278.40 –	46459.66	$3d^2(^3F)4p$ –		$^2F°$ –	^2F	$^7/_2$ –	$^7/_2$	B1
	7596.34		2									B1
	7604.18	7604.22	2	25724.68 –	38871.65	$3d4s(^3D)4p$ –	$3d4s(^3D)4d$	$^2F°$ –	^2F	$^7/_2$ –	$^5/_2$	B1
	7617.44	7617.44	9	24656.72 –	37780.87	$3d4s(^1D)4p$ –	$3d4s(^1D)5s$	$^2P°$ –	^2D	$^1/_2$ –	$^3/_2$	B1
	7623.94		1									B1
	7627.73		1									B1
	7662.56		2									B1
	7665.68	7665.70	7	20236.86 –	33278.40	$3d^2(^1G)4s$ –	$3d^2(^3F)4p$	^2G –	$^2F°$	$^9/_2$ –	$^7/_2$	B1
	7667.31	7667.34	3	20239.66 –	33278.40	$3d^2(^1G)4s$ –	$3d^2(^3F)4p$	^2G –	$^2F°$	$^7/_2$ –	$^7/_2$	B1
	7695.42		2									B1
	7696.40	7696.44	3	24866.17 –	37855.61	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^2D°$ –	^2D	$^3/_2$ –	$^5/_2$	B1
	7697.76	7697.77	45	20719.86 –	33707.06	$3d^2(^3P)4s$ –	$3d^2(^3F)4p$	^2P –	$^2D°$	$^3/_2$ –	$^5/_2$	B1
	7698.65	7698.68	2	32751.50 –	45737.17	$3d^2(^3F)4p$ –	$3d(^2D)4p^2(^3P)$	$^4D°$ –	^4D	$^7/_2$ –	$^7/_2$	B1
	7726.98	7726.95	3	29022.82 –	41960.97	$3d^2(^3F)4p$ –	$3d^2(^3F)5s$	$^4G°$ –	^4F	$^5/_2$ –	$^5/_2$	B1
	7729.76	7729.76	29	20681.43 –	33614.88	$3d^2(^3P)4s$ –	$3d^2(^3F)4p$	^2P –	$^2D°$	$^1/_2$ –	$^3/_2$	B1
	7738.16	7738.17	3	29096.18 –	42015.58	$3d^2(^3F)4p$ –	$3d^2(^3F)5s$	$^4G°$ –	^4F	$^7/_2$ –	$^7/_2$	B1
	7741.16	7741.20	24	20236.86 –	33151.20	$3d^2(^1G)4s$ –	$3d^2(^3F)4p$	^2G –	$^2G°$	$^9/_2$ –	$^9/_2$	B1
	7741.28	7741.33	30	20239.66 –	33153.79	$3d^2(^1G)4s$ –	$3d^2(^3F)4p$	^2G –	$^2F°$	$^7/_2$ –	$^5/_2$	B1
	7742.84	7742.88	3	20239.66 –	33151.20	$3d^2(^1G)4s$ –	$3d^2(^3F)4p$	^2G –	$^2G°$	$^7/_2$ –	$^9/_2$	B1
	7750.35	7750.36	4	29022.82 –	41921.89	$3d^2(^3F)4p$ –	$3d^2(^3F)5s$	$^4G°$ –	^4F	$^5/_2$ –	$^3/_2$	B1
	7752.81	7752.80	3	20719.86 –	33614.88	$3d^2(^3P)4s$ –	$3d^2(^3F)4p$	^2P –	$^2D°$	$^3/_2$ –	$^3/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	7771.06	7771.02	6	29096.18 –	41960.97	$3d^2(^3F)4p$ –	$3d^2(^3F)5s$	$^4G°$ –	^4F	$^7/_2$ –	$^5/_2$	B1
	7784.18	7784.20	2	33798.64 –	46641.64	$3d^3$ –	$3d^2(^3F)5p$	^4F –	$^4D°$	$^5/_2$ –	$^7/_2$	B1
	7785.17	7785.17	17	25014.21 –	37855.61	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^2D°$ –	^2D	$^5/_2$ –	$^5/_2$	B1
	7794.72	7794.68	6	29189.84 –	42015.58	$3d^2(^3F)4p$ –	$3d^2(^3F)5s$	$^4G°$ –	^4F	$^9/_2$ –	$^7/_2$	B1
	7798.71	7798.70	4	20236.86 –	33055.98	$3d^2(^1G)4s$ –	$3d^2(^3F)4p$	^2G –	$^2G°$	$^9/_2$ –	$^7/_2$	B1
	7800.42	7800.40	28	20239.66 –	33055.98	$3d^2(^1G)4s$ –	$3d^2(^3F)4p$	^2G –	$^2G°$	$^7/_2$ –	$^7/_2$	B1
	7811.06		1									B1
	7821.56	7821.55	7	29303.51 –	42085.18	$3d^2(^3F)4p$ –	$3d^2(^3F)5s$	$^4G°$ –	^4F	$^{11}/_2$ –	$^9/_2$	B1
	7830.75	7830.75	4	25014.21 –	37780.87	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^2D°$ –	^2D	$^5/_2$ –	$^3/_2$	B1
	7862.16		4									B1
	7865.18	7865.33	4	33278.40 –	45988.93	$3d^2(^3F)4p$ –	$3d4s(^3D)5d$	$^2F°$ –	^4G	$^7/_2$ –	$^9/_2$	B1
	7868.70	7868.86	4	33278.40 –	45983.23	$3d^2(^3F)4p$ –	$3d^2(^3F)4d$	$^2F°$ –	^4D	$^7/_2$ –	$^5/_2$	B1
	7894.58		2									B1
	7899.44		3									B1
	7900.08		3									B1
	7907.96	7908.11	3	31172.70 –	43814.47	$3d^2(^3F)4p$ –	$3d4s(^3D)6s$	$^4F°$ –	^4D	$^3/_2$ –	$^3/_2$	B1
	7915.76		3									B1
	7925.59		3									B1
	7926.56		3									B1
	7932.62		3									B1
	7939.50		3									B1
	7971.72		3									B1
	7977.78		3									B1
	7983.81		3									B1
	7984.32		1									B1
	7989.92		3									B1
	7996.14		2									B1
	8001.45		1									B1
	8002.46		1									B1
	8010.99		2									B1
	8043.55	8043.51	5	24656.88 –	37085.84	$3d4s(^1D)4p$ –	$3d^3$	$^2P°$ –	^2P	$^3/_2$ –	$^1/_2$	B1
	8043.83		8									B1
	8050.60		3									B1
	8098.81		4									B1
	8106.10		3									B1
	8110.91		2									B1
	8139.73	8139.72	1	24866.17 –	37148.22	$3d4s(^3D)4p$ –	$3d^3$	$^2D°$ –	^2P	$^3/_2$ –	$^3/_2$	B1
	8147.07	8147.08	3	25584.64 –	37855.61	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^2F°$ –	^2D	$^5/_2$ –	$^5/_2$	B1
	8165.74		1									B1
	8169.50		3									B1
	8181.32	8181.28	3	24866.17 –	37085.84	$3d4s(^3D)4p$ –	$3d^3$	$^2D°$ –	^2P	$^3/_2$ –	$^1/_2$	B1
	8183.26		1									B1
	8194.80		2									B1
	8196.99	8197.00	12	25584.64 –	37780.87	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^2F°$ –	^2D	$^5/_2$ –	$^3/_2$	B1
	8208.23		2									B1
	8228.90		2									B1
	8239.04	8239.03	2	25014.21 –	37148.22	$3d4s(^3D)4p$ –	$3d^3$	$^2D°$ –	^2P	$^5/_2$ –	$^3/_2$	B1
	8241.12	8241.12	14	25724.68 –	37855.61	$3d4s(^3D)4p$ –	$3d4s(^1D)5s$	$^2F°$ –	^2D	$^7/_2$ –	$^5/_2$	B1
	8283.18		1									B1
	8316.55		1									B1
	8324.74		1									B1
	8364.17		2									B1
	8377.81		2									B1
	8382.56		2									B1
	8396.83		1									B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	8412.27		2									B1
	8426.41		4									B1
	8434.90		4									B1
	8435.57		4									B1
	8563.93	8563.90	6	24656.88	36330.59	$3d4s(^1D)4p$	$3d^3$	$^2P^\circ$	$^2D2$	$^3/_2$	$^5/_2$	B1
	8603.64	8603.67	2	24656.88	36276.63	$3d4s(^1D)4p$	$3d^3$	$^2P^\circ$	$^2D2$	$^3/_2$	$^3/_2$	B1
	8691.25		2									B1
	8694.47	8694.44	3	29022.82	40521.27	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^4G^\circ$	^4F	$^5/_2$	$^3/_2$	B1
	8724.54	8724.51	7	29096.18	40554.99	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^4G^\circ$	^4F	$^7/_2$	$^5/_2$	B1
	8758.71	8758.657	7	36959.03	48373.17	$3d^2(^3P)4p$	–	$^4D^\circ$	^4P	$^7/_2$	$^5/_2$	B1
		8758.680		29189.84	40603.95	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^4G^\circ$	^4F	$^9/_2$	$^7/_2$	B1
	8761.51	8761.482	14	24866.17	36276.63	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	$^2D2$	$^3/_2$	$^3/_2$	B1
		8761.521		32696.84	44107.25	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4P	$^5/_2$	$^3/_2$	B1
	8775.02	8774.956	14	32637.40	44030.34	$3d^2(^3F)4p$	$3d(^2D)4p^2(^3P)$	$^4D^\circ$	^4P	$^1/_2$	$^1/_2$	B1
		8775.010		25584.64	36977.51	$3d4s(^3D)4p$	$3d^3$	$^2F^\circ$	^2G	$^5/_2$	$^7/_2$	B1
	8794.75	8794.70	5	29303.51	40670.87	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^4G^\circ$	^4F	$^{11}/_2$	$^9/_2$	B1
	8823.86	8823.84	14	25724.68	37054.51	$3d4s(^3D)4p$	$3d^3$	$^2F^\circ$	^2G	$^7/_2$	$^9/_2$	B1
	8834.34	8834.32	12	25014.21	36330.59	$3d4s(^3D)4p$	$3d^3$	$^2D^\circ$	$^2D2$	$^5/_2$	$^5/_2$	B1
	9379.52	9379.55	3	14926.07	25584.64	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^2F	$^2F^\circ$	$^5/_2$	$^5/_2$	B1
	9717.30		1									B1
	9720.56		1									B1
	9778.02		1									B1
	9911.58	9911.62	1	25584.64	35671.04	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2F^\circ$	^2D	$^5/_2$	$^3/_2$	B1
	9947.01		1									B1
	9976.31	9976.37	1	25724.68	35745.62	$3d4s(^3D)4p$	$3d4s(^3D)5s$	$^2F^\circ$	^2D	$^7/_2$	$^5/_2$	B1
	10025.06	10025.04	1	15041.92	25014.21	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^2F	$^2D^\circ$	$^7/_2$	$^5/_2$	B1
	10057.49	10057.50	2	14926.07	24866.17	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^2F	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
	10152.68		1									B1
	10233.47	10233.32	1	29189.84	38959.16	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^4G^\circ$	^2F	$^9/_2$	$^7/_2$	B1
	10526.62	10526.61	1	30573.17	40070.30	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2P^\circ$	^2P	$^1/_2$	$^1/_2$	B1
	10684.09	10684.010	2	30706.66	40063.88	$3d4s(^3D)4p$	$3d4s(^3D)4d$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	10704.67	10704.64	1	31215.81	40554.99	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^5/_2$	$^5/_2$	B1
	10711.00	10710.95	3	32751.50	42085.18	$3d^2(^3F)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^7/_2$	$^9/_2$	B1
	10716.85	10716.83	1	31275.39	40603.95	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^7/_2$	$^7/_2$	B1
	10726.62	10726.64	1	31350.84	40670.87	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^4F^\circ$	^4F	$^9/_2$	$^9/_2$	B1
	10728.12	10728.12	3	32696.84	42015.58	$3d^2(^3F)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^5/_2$	$^7/_2$	B1
	10747.84	10747.81	2	32659.30	41960.97	$3d^2(^3F)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^3/_2$	$^5/_2$	B1
	10767.67	10767.70	1	32637.40	41921.89	$3d^2(^3F)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^1/_2$	$^3/_2$	B1
	10791.40	10791.36	1	32696.84	41960.97	$3d^2(^3F)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^5/_2$	$^5/_2$	B1
		10791.42		32751.50	42015.58	$3d^2(^3F)4p$	$3d^2(^3F)5s$	$^4D^\circ$	^4F	$^7/_2$	$^7/_2$	B1
	10916.07		1									B1
	10993.62	10993.64	2	33055.98	42149.66	$3d^2(^3F)4p$	$3d4s(^1D)4d$	$^2G^\circ$	^2F	$^7/_2$	$^5/_2$	B1
	11029.45		2									B1
	11049.58	11049.58	3	33151.20	42198.84	$3d^2(^3F)4p$	$3d4s(^1D)4d$	$^2G^\circ$	^2F	$^9/_2$	$^7/_2$	B1
	11068.15		1									B1
	11113.18	11113.17	3	33153.79	42149.66	$3d^2(^3F)4p$	$3d4s(^1D)4d$	$^2F^\circ$	^2F	$^5/_2$	$^5/_2$	B1
	11207.15	11207.14	4	33278.40	42198.84	$3d^2(^3F)4p$	$3d4s(^1D)4d$	$^2F^\circ$	^2F	$^7/_2$	$^7/_2$	B1
	11475.41	11475.38	8	17012.76	25724.68	$3d^2(^1D)4s$	$3d4s(^3D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^7/_2$	B1
	11590.75		1									B1
	11679.67	11679.73	6	17025.14	25584.64	$3d^2(^1D)4s$	$3d4s(^1D)4p$	^2D	$^2F^\circ$	$^3/_2$	$^5/_2$	B1
	11713.57	11713.56	1	33614.88	42149.66	$3d^2(^3F)4p$	$3d4s(^1D)4d$	$^2D^\circ$	^2F	$^3/_2$	$^5/_2$	B1
	11772.90	11772.87	1	33707.06	42198.84	$3d^2(^3F)4p$	$3d4s(^1D)4d$	$^2D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
	11796.40		1									B1
	11855.04	11855.04	1	18504.06	26936.98	$3d4s(^1D)4p$	$3d^2(1S)4s$	$^4P^\circ$	^2S	$^1/_2$	$^1/_2$	B1
	11871.42	11871.42	2	18515.69	26936.98	$3d4s(^3D)4p$	$3d^2(1S)4s$	$^4P^\circ$	^2S	$^3/_2$	$^1/_2$	B1
	11876.60	11876.62	1	17307.08	25724.68	$3d^2(^3P)4s$	$3d4s(^3D)4p$	^4P	$^2F^\circ$	$^5/_2$	$^7/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	12153.30	12153.31	13	18711.02	26936.98	$4s^24p$	$3d^2(1S)4s$	$^2P°$	^2S	$^1/_2$	$^1/_2$	B1
	12252.94	12252.93	1	35671.04	43830.12	$3d4s(^3D)5s$	$3d^2(^1G)4p$	^2D	$^2F°$	$^3/_2$	$^5/_2$	B1
	12320.29	12320.25	1	35745.62	43860.12	$3d4s(^3D)5s$	$3d^2(^1G)4p$	^2D	$^2F°$	$^5/_2$	$^7/_2$	B1
	12370.97	12370.95	13	18855.74	26936.98	$4s^24p$	$3d^2(1S)4s$	$^2P°$	^2S	$^3/_2$	$^1/_2$	B1
	12905.06	12905.06	4	33055.98	40802.76	$3d^2(^3F)4p$	$3d^3$	$^2G°$	^2F	$^7/_2$	$^5/_2$	B1
	13026.50	13026.47	6	33151.20	40825.78	$3d^2(^3F)4p$	$3d^3$	$^2G°$	^2F	$^9/_2$	$^7/_2$	B1
	13078.41	13078.37	80	17012.76	24656.88	$3d^2(^1D)4s$	$3d4s(^1D)4p$	^2D	$^2P°$	$^5/_2$	$^3/_2$	B1
	13099.86	13099.86	50	17025.14	24656.72	$3d^2(^1D)4s$	$3d4s(^1D)4p$	^2D	$^2P°$	$^3/_2$	$^1/_2$	B1
	13490.02	13490.02	2	33151.20	40562.06	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^2G°$	^2G	$^9/_2$	$^9/_2$	B1
	13506.90	13506.81	1	17255.07	24656.72	$3d^2(^3P)4s$	$3d4s(^1D)4p$	^4P	$^2P°$	$^3/_2$	$^1/_2$	B1
	13578.46	13578.50	2	33055.98	40418.55	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^2G°$	^2G	$^7/_2$	$^7/_2$	B1
	13602.13	13602.09	5	17307.08	24656.88	$3d^2(^3P)4s$	$3d4s(^1D)4p$	^4P	$^2P°$	$^5/_2$	$^3/_2$	B1
	13725.61	13725.61	3	33278.40	40562.06	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^2F°$	^2G	$^7/_2$	$^9/_2$	B1
	13761.32	13761.32	2	33153.79	40418.55	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^2F°$	^2G	$^5/_2$	$^7/_2$	B1
	13870.26	13870.26	2	30573.17	37780.87	$3d4s(^3D)4p$	$3d4s(^1D)5s$	$^2P°$	^2D	$^1/_2$	$^3/_2$	B1
	13902.41		1									B1
	13984.24	13984.24	3	30706.66	37855.61	$3d4s(^3D)4p$	$3d4s(^1D)5s$	$^2P°$	^2D	$^3/_2$	$^5/_2$	B1
	13985.32	13985.22	1	35671.04	42819.49	$3d4s(^3D)5s$	$3d4s(^1D)5p$	^2D	$^2P°$	$^3/_2$	$^1/_2$	B1
	14211.26	14211.18	2	35745.62	42780.41	$3d4s(^3D)5s$	$3d4s(^1D)5p$	^2D	$^2P°$	$^5/_2$	$^3/_2$	B1
	14244.35		1									B1
	14361.60	14361.56	1	11610.28	18571.41	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4P°$	$^7/_2$	$^5/_2$	B1
	14368.12	14368.02	1	11557.69	18515.69	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4P°$	$^5/_2$	$^3/_2$	B1
	14437.53		1									B1
	14442.74	14442.81	1	36330.59	43252.56	$3d^3$	$3d4s(^1D)5p$	$^2D2$	$^2D°$	$^5/_2$	$^5/_2$	B1
	14476.94		1									B1
	15003.66	15003.59	1	36933.91	43597.16	$3d^2(^1D)4p$	$4s^24d$	$^2D°$	^2D	$^3/_2$	$^3/_2$	B1
	15037.44	15037.51	1	36330.59	42978.81	$3d^3$	$3d4s(^1D)5p$	$^2D2$	$^2F°$	$^5/_2$	$^7/_2$	B1
	15104.08	15103.99	2	37039.57	43658.53	$3d^2(^1D)4p$	$4s^24d$	$^2D°$	^2D	$^5/_2$	$^5/_2$	B1
	15784.35	15784.30	2	37855.61	44189.29	$3d4s(^1D)5s$	$3d^2(^3P)4p$	^2D	$^2P°$	$^5/_2$	$^3/_2$	B1
	15807.08	15807.01	1	37780.87	44105.45	$3d4s(^1D)5s$	$3d^2(^3P)4p$	^2D	$^2P°$	$^3/_2$	$^1/_2$	B1
	16033.03	16033.03	2	34480.00	40715.42	$3d4s(^3D)5s$	$3d4s(^3D)5p$	^4D	$^4P°$	$^5/_2$	$^5/_2$	B1
		16033.11		40282.16	46517.55	$3d4s(^3D)4d$	$3d^2(^3F)5p$	^4S	$^4D°$	$^3/_2$	$^3/_2$	B1
	16068.13	16068.10	2	34422.83	40644.64	$3d4s(^3D)5s$	$3d4s(^3D)5p$	^4D	$^4P°$	$^3/_2$	$^3/_2$	B1
	16111.58	16111.56	2	34390.25	40595.28	$3d4s(^3D)5s$	$3d4s(^3D)5p$	^4D	$^4P°$	$^1/_2$	$^1/_2$	B1
	16196.60	16196.60	2	34422.83	40595.28	$3d4s(^3D)5s$	$3d4s(^3D)5p$	^4D	$^4P°$	$^3/_2$	$^1/_2$	B1
	16217.12	16217.12	5	34480.00	40644.64	$3d4s(^3D)5s$	$3d4s(^3D)5p$	^4D	$^4P°$	$^5/_2$	$^3/_2$	B1
	16229.96	16229.91	2	14926.07	21085.85	$3d^2(^3F)4s$	$3d4s(^1D)4p$	^2F	$^2F°$	$^5/_2$	$^7/_2$	B1
	16260.40	16260.40	10	34567.19	40715.42	$3d4s(^3D)5s$	$3d4s(^3D)5p$	^4D	$^4P°$	$^7/_2$	$^5/_2$	B1
	16367.12	16367.15	20	33055.98	39164.11	$3d^2(^3F)4p$	$3d^3$	$^2G°$	^2H	$^7/_2$	$^9/_2$	B1
	16371.09	16371.04	3	14926.07	21032.75	$3d^2(^3F)4s$	$3d4s(^1D)4p$	^2F	$^2F°$	$^5/_2$	$^5/_2$	B1
	16407.52		1									B1
	16438.88		1									B1
	16445.72		1									B1
	16447.15		1									B1
	16458.77	16458.77	27	33151.20	39225.33	$3d^2(^3F)4p$	$3d^3$	$^2G°$	^2H	$^9/_2$	$^{11}/_2$	B1
	16483.65		1									B1
	16540.98	16541.01	6	15041.92	21085.85	$3d^2(^3F)4s$	$3d4s(^1D)4p$	^2F	$^2F°$	$^7/_2$	$^7/_2$	B1
	16626.37	16626.34	1	33151.20	39164.11	$3d^2(^3F)4p$	$3d^3$	$^2G°$	^2H	$^9/_2$	$^9/_2$	B1
	16650.07		1									B1
	16687.65	16687.62	1	15041.92	21032.75	$3d^2(^3F)4s$	$3d4s(^1D)4p$	^2F	$^2F°$	$^7/_2$	$^5/_2$	B1
	16707.11	16706.89	2	36933.91	42917.83	$3d^2(^1D)4p$	$3d^3$	$^2D°$	$^2D1$	$^3/_2$	$^5/_2$	B1
	16723.30	16723.27	2	39949.75	45927.81	$3d4s(^3D)5p$	$3d^2(^3F)4d$	$^4F°$	^4D	$^3/_2$	$^1/_2$	B1
	16747.58		2									B1
	17190.29	17190.23	3	33055.98	38871.65	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^2G°$	^2F	$^7/_2$	$^5/_2$	B1
	17213.14	17213.05	4	33151.20	38959.16	$3d^2(^3F)4p$	$3d4s(^3D)4d$	$^2G°$	^2F	$^9/_2$	$^7/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	17370.24	17370.30	2	40048.72 –	45804.10	$3d4s(^3D)5p$ –	$3d^2(^3F)4d$	$^4F^\circ$ –	^4G	$^7/_2$ –	$^9/_2$	B1
	17444.68	17444.56	2	34480.00 –	40210.88	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^5/_2$ –	$^7/_2$	B1
	17522.84	17522.78	3	34422.83 –	40128.13	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^3/_2$ –	$^5/_2$	B1
	17528.43	17528.43	2	30573.17 –	36276.63	$3d4s(^3D)4p$ –	$3d^3$	$^2P^\circ$ –	$^2D2$	$^1/_2$ –	$^3/_2$	B1
	17590.85	17590.79	2	34390.25 –	40073.49	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^1/_2$ –	$^3/_2$	B1
	17628.54	17628.51	1	34480.00 –	40151.08	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	B1
	17680.64	17680.58	2	34390.25 –	40044.63	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^1/_2$ –	$^1/_2$	B1
	17692.28	17692.22	5	34422.83 –	40073.49	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^3/_2$ –	$^3/_2$	B1
	17700.20	17700.14	7	34480.00 –	40128.13	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^5/_2$ –	$^5/_2$	B1
		17700.27		40104.19 –	45752.28	$3d4s(^3D)5p$ –	$3d^2(^3F)4d$	$^2F^\circ$ –	^4G	$^5/_2$ –	$^7/_2$	B1
	17714.07	17714.07	15	34567.19 –	40210.88	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^7/_2$ –	$^7/_2$	B1
	17776.08	17776.30	3	30706.66 –	36330.59	$3d4s(^3D)4p$ –	$3d^3$	$^2P^\circ$ –	$^2D2$	$^3/_2$ –	$^5/_2$	B1
	17783.10	17783.04	2	34422.83 –	40044.63	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^3/_2$ –	$^1/_2$	B1
	17873.04	17873.04	3	34480.00 –	40073.49	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^5/_2$ –	$^3/_2$	B1
	17903.74	17903.77	3	34567.19 –	40151.08	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^2F^\circ$	$^7/_2$ –	$^7/_2$	B1
	17920.46	17920.40	15	34567.19 –	40145.90	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4F^\circ$	$^7/_2$ –	$^9/_2$	B1
	17952.54	17952.54	11	34480.00 –	40048.72	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4F^\circ$	$^5/_2$ –	$^7/_2$	B1
	17958.83	17958.90	7	34422.83 –	39989.58	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4F^\circ$	$^3/_2$ –	$^5/_2$	B1
	17977.73	17977.66	2	34567.19 –	40128.13	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4D^\circ$	$^7/_2$ –	$^5/_2$	B1
	17982.35	17982.32	4	34390.25 –	39949.75	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4F^\circ$	$^1/_2$ –	$^3/_2$	B1
	18046.10		2									B1
	18055.20	18055.39	3	34567.19 –	40104.19	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^2F^\circ$	$^7/_2$ –	$^5/_2$	B1
	18056.37		3									B1
	18081.52		1									B1
	18088.25	18088.32	2	34422.83 –	39949.75	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4F^\circ$	$^3/_2$ –	$^3/_2$	B1
		18088.38		37908.50 –	43435.40	$3d^2(^3P)4p$ –	$3d4s(^1D)4d$	$^4P^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	B1
	18145.12	18145.25	2	34480.00 –	39989.58	$3d4s(^3D)5s$ –	$3d4s(^3D)5p$	^4D –	$^4F^\circ$	$^5/_2$ –	$^5/_2$	B1
	18217.33	18217.20	26	20236.86 –	25724.68	$3d^2(1G)4s$ –	$3d4s(^3D)4p$	^2G –	$^2F^\circ$	$^9/_2$ –	$^7/_2$	B1
	18226.66	18226.50	2	20239.66 –	25724.68	$3d^2(1G)4s$ –	$3d4s(^3D)4p$	^2G –	$^2F^\circ$	$^7/_2$ –	$^7/_2$	B1
	18232.51	18232.41	1	36666.42 –	42149.66	$3d^2(^1D)4p$ –	$3d4s(^1D)4d$	$^2F^\circ$ –	^2F	$^5/_2$ –	$^5/_2$	B1
	18235.27	18235.27	4	35671.04 –	41153.42	$3d4s(^3D)5s$ –	$3d^2(^3P)4p$	^2D –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	B1
	18280.86	18280.82	1	36730.12 –	42198.84	$3d^2(^1D)4p$ –	$3d4s(^1D)4d$	$^2F^\circ$ –	^2F	$^7/_2$ –	$^7/_2$	B1
	18455.87	18455.70	6	35745.62 –	41162.52	$3d4s(^3D)5s$ –	$3d^2(^3P)4p$	^2D –	$^2D^\circ$	$^5/_2$ –	$^5/_2$	B1
	18523.93	18523.92	4	37855.61 –	43252.56	$3d4s(^1D)5s$ –	$3d4s(^1D)5p$	^2D –	$^2D^\circ$	$^5/_2$ –	$^5/_2$	B1
	18549.32	18549.26	3	37780.87 –	43170.45	$3d4s(^1D)5s$ –	$3d4s(^1D)5p$	^2D –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	B1
	18704.10	18704.04	40	20239.66 –	25584.64	$3d^2(1G)4s$ –	$3d4s(^3D)4p$	^2G –	$^2F^\circ$	$^7/_2$ –	$^5/_2$	B1
	19382.41	19382.37	2	37780.87 –	42938.79	$3d4s(^1D)5s$ –	$3d4s(^1D)5p$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	B1
		19382.48		31172.70 –	36330.59	$3d^2(^3F)4p$ –	$3d^3$	$^4F^\circ$ –	$^2D2$	$^5/_2$ –	$^3/_2$	B1
	19513.57	19513.72	3	37855.61 –	42978.81	$3d4s(^1D)5s$ –	$3d4s(^1D)5p$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	B1
	19610.84	19610.68	3	30573.17 –	35671.04	$3d4s(^3D)4p$ –	$3d4s(^3D)5s$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B1
	19807.32	19807.24	2	15672.58 –	20719.86	$3d4s(^3D)4p$ –	$3d^2(^3P)4s$	$^4F^\circ$ –	^2P	$^5/_2$ –	$^3/_2$	B1
	19840.10	19839.95	3	30706.66 –	35745.62	$3d4s(^3D)4p$ –	$3d4s(^3D)5s$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B1
	19849.99		2									B1
	19959.21	19959.21	4	15672.58 –	20681.43	$3d4s(^3D)4p$ –	$3d^2(^3P)4s$	$^4F^\circ$ –	^2P	$^5/_2$ –	$^1/_2$	B1
	20142.5	20142.4	5	15756.57 –	20719.86	$3d4s(^3D)4p$ –	$3d^2(^3P)4s$	$^4F^\circ$ –	^2P	$^7/_2$ –	$^3/_2$	B1
	20499.7	20499.7	1	36276.63 –	41153.42	$3d^3$ –	$3d^2(^3P)4p$	$^2D2$ –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	B1
	20689.8	20690.0	1	36330.59 –	41162.52	$3d^3$ –	$3d^2(^1P)4p$	$^2D2$ –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	B1
	20703.9	20704.0	1	35671.04 –	40499.71	$3d4s(^3D)5s$ –	$3d4s(^1D)5p$	^2D –	$^2P^\circ$	$^3/_2$ –	$^1/_2$	B1
	21088.2	21088.1	2	29022.82 –	33763.53	$3d^2(^3F)4p$ –	$3d^4$	$^4G^\circ$ –	^4F	$^5/_2$ –	$^5/_2$	B1
	21259.5	21259.7	3	29096.18 –	33798.64	$3d^2(^3F)4p$ –	$3d^4$	$^4G^\circ$ –	^4F	$^7/_2$ –	$^7/_2$	B1
	21284.0	21283.8	50	16022.73 –	20719.86	$3d4s(^3D)4p$ –	$3d^2(^1P)4s$	$^2D^\circ$ –	^2P	$^5/_2$ –	$^5/_2$	B1
	21378.5	21378.6	2	35671.04 –	40347.34	$3d4s(^1D)5s$ –	$3d4s(^1D)5p$	^2D –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	B1
	21455.1	21455.2	18	16021.82 –	20681.43	$3d4s(^1D)4p$ –	$3d^2(^1P)4s$	$^4D^\circ$ –	^2P	$^3/_2$ –	$^1/_2$	B1
	21468.3	21468.3	3	29189.84 –	33846.59	$3d^2(^1F)4p$ –	$3d^4$	$^4G^\circ$ –	^4F	$^9/_2$ –	$^7/_2$	B1
	21484.9	21484.7	7	36793.65 –	41446.85	$3d^2(^1P)4p$ –	$3d4s(^1D)4d$	$^4D^\circ$ –	^4P	$^3/_2$ –	$^1/_2$	B1
		21484.9		11557.69 –	16210.85	$3d^2(^3F)4s$ –	$3d4s(^3D)4p$	^4F –	$^4D^\circ$	$^5/_2$ –	$^7/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	21606.2	21606.0	2	33153.79	37780.87	$3d^2(^3F)4p$	$3d4s(^1D)5s$	$^2F^\circ$	^2D	$^5/_2$	$^3/_2$	B1
	21625.4	21625.3	6	16096.90	20719.86	$3d4s(^3D)4p$	$3d^2(^3P)4s$	$^2D^\circ$	^2P	$^3/_2$	$^3/_2$	B1
	21634.1	21634.1	16	11519.99	16141.06	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4D^\circ$	$^3/_2$	$^5/_2$	B1
	21706.4	21706.4	2	35745.62	40351.30	$3d4s(^3D)5s$	$3d4s(^3D)5p$	^2D	$^2D^\circ$	$^5/_2$	$^5/_2$	B1
	21719.6	21719.6	4	29303.51	33906.38	$3d^2(^3F)4p$	$3d^3$	$^4G^\circ$	^4F	$^{11}/_2$	$^9/_2$	B1
	21730.4	21730.5	165	11610.28	16210.85	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4D^\circ$	$^7/_2$	$^7/_2$	B1
	21806.4	21806.5	19	16096.90	20681.43	$3d4s(^3D)4p$	$3d^2(^3P)4s$	$^2D^\circ$	^2P	$^3/_2$	$^1/_2$	B1
	21812.0	21812.0	305	11557.69	16141.06	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4D^\circ$	$^5/_2$	$^5/_2$	B1
	21833.9	21833.8	9	16141.06	20719.86	$3d4s(^3D)4p$	$3d^2(^3P)4s$	$^4D^\circ$	^2P	$^5/_2$	$^3/_2$	B1
	21842.7	21842.8	190	11519.99	16096.90	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^2D^\circ$	$^3/_2$	$^3/_2$	B1
	22024.2	22024.2	305	11557.69	16096.90	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^2D^\circ$	$^5/_2$	$^3/_2$	B1
	22052.1	22052.1	995	11677.38	16210.85	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4D^\circ$	$^9/_2$	$^7/_2$	B1
	22065.4	22065.2	990	11610.28	16141.06	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4D^\circ$	$^7/_2$	$^5/_2$	B1
	22207.2	22207.1	60	11519.99	16021.82	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4D^\circ$	$^3/_2$	$^3/_2$	B1
	22266.7	22266.7	710	11519.99	16009.77	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4D^\circ$	$^3/_2$	$^1/_2$	B1
	22390.1	22390.1	12	11557.69	16022.73	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^2D^\circ$	$^5/_2$	$^5/_2$	B1
	22394.8	22394.7	695	11557.69	16021.82	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4D^\circ$	$^5/_2$	$^3/_2$	B1
	22551.5	22551.2	3	35671.04	40104.19	$3d4s(^3D)5s$	$3d4s(^3D)5p$	^2D	$^2F^\circ$	$^3/_2$	$^5/_2$	B1
	22637.0	22637.0	60	11610.28	16026.62	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^7/_2$	$^9/_2$	B1
	22656.7	22657.0	250	11610.28	16022.73	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^2D^\circ$	$^7/_2$	$^5/_2$	B1
	22661.5		4									B1
	22693.0	22692.9	4	35745.62	40151.08	$3d4s(^3D)5s$	$3d4s(^3D)5p$	^2D	$^2F^\circ$	$^5/_2$	$^7/_2$	B1
	22986.3	22986.2	510	11677.38	16026.62	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^9/_2$	$^9/_2$	B1
	23119.9	23120.1	85	11557.69	15881.75	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^5/_2$	$^7/_2$	B1
	23280.0	23279.6	13	41960.97	46255.40	$3d^2(^3F)5s$	$3d^2(^3F)5p$	^4F	$^4F^\circ$	$^5/_2$	$^5/_2$	B1
		23280.0		20719.86	25014.21	$3d^2(^3P)4s$	$3d4s(^3D)4p$	^2P	$^2D^\circ$	$^3/_2$	$^5/_2$	B1
	23404.8	23404.8	460	11610.28	15881.75	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^7/_2$	$^7/_2$	B1
	23597.4	23597.5	70	11519.99	15756.57	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^3/_2$	$^5/_2$	B1
	23778.2	23778.3	50	11677.38	15881.75	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^9/_2$	$^7/_2$	B1
	23809.3	23809.4	365	11557.69	15756.57	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^5/_2$	$^5/_2$	B1
	23889.7	23889.6	7	37964.89	42149.66	$3d^2(^3P)4p$	$3d4s(^1D)4d$	$^4P^\circ$	^2F	$^5/_2$	$^5/_2$	B1
		23889.8		20681.43	24866.17	$3d^2(^3P)4s$	$3d4s(^3D)4p$	^2P	$^2D^\circ$	$^1/_2$	$^3/_2$	B1
	24074.7	24074.8	405	11519.99	15672.58	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^3/_2$	$^3/_2$	B1
	24111.4	24111.2	55	20719.86	24866.17	$3d^2(^3P)4s$	$3d4s(^3D)4p$	^2P	$^2D^\circ$	$^3/_2$	$^3/_2$	B1
		24111.4		11610.28	15756.57	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^7/_2$	$^5/_2$	B1
	24295.4	24295.4	27	11557.69	15672.58	$3d^2(^3F)4s$	$3d4s(^3D)4p$	^4F	$^4F^\circ$	$^5/_2$	$^3/_2$	B1
	24544.7	24544.7	85	17012.76	21085.85	$3d^2(^1D)4s$	$3d4s(^1D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^7/_2$	B1
	24611.2		2									B1
	24869.0	24868.9	4	17012.76	21032.75	$3d^2(^1D)4s$	$3d4s(^1D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^5/_2$	B1
	24945.8	24945.7	45	17025.14	21032.75	$3d^2(^1D)4s$	$3d4s(^1D)4p$	^2D	$^2F^\circ$	$^3/_2$	$^5/_2$	B1
	25148.0	25147.5	5	20681.43	24656.88	$3d^4(^3P)4s$	$3d4s(^1D)4p$	^2P	$^2P^\circ$	$^1/_2$	$^3/_2$	B1
		25148.5		20681.43	24656.72	$3d^2(^3P)4s$	$3d4s(^1D)4p$	^2P	$^2P^\circ$	$^1/_2$	$^1/_2$	B1
	25392.9	25393.0	7	20719.86	24656.88	$3d^2(^3P)4s$	$3d4s(^1D)4p$	^2P	$^2P^\circ$	$^3/_2$	$^3/_2$	B1
	25493.2	25493.3	2	33055.98	36977.51	$3d^2(^3F)4p$	$3d^3$	$^2G^\circ$	^2G	$^7/_2$	$^7/_2$	B1
	25612.4	25612.3	2	33151.20	37054.51	$3d^2(^3F)4p$	$3d^3$	$^2G^\circ$	^2G	$^9/_2$	$^9/_2$	B1
	26145.5	26145.4	2	33153.79	36977.51	$3d^2(^3F)4p$	$3d^3$	$^2F^\circ$	^2G	$^5/_2$	$^7/_2$	B1
	26162.0	26162.2	3	32751.50	36572.77	$3d^2(^3F)4p$	$3d^3$	$^4D^\circ$	^4P	$^7/_2$	$^5/_2$	B1
	26178.1	26178.3	2	32696.84	36515.76	$3d^2(^3F)4p$	$3d^3$	$^4D^\circ$	^4P	$^5/_2$	$^5/_2$	B1
	26456.4	26456.4	40	17307.08	21085.85	$3d^2(^3P)4s$	$3d4s(^1D)4p$	^4P	$^2F^\circ$	$^5/_2$	$^7/_2$	B1
	26475.0	26475.0	7	33278.40	37054.51	$3d^2(^3F)4p$	$3d^3$	$^2F^\circ$	^2G	$^7/_2$	$^9/_2$	B1
	26520.0	26520.2	15	26936.98	30706.66	$3d^2(1S)4s$	$3d4s(^3D)4p$	^2S	$^2P^\circ$	$^1/_2$	$^3/_2$	B1
	26805.1	26805.1	3	43860.12	47589.73	$3d^2(1G)4p$	–	$^2F^\circ$	^2G	$^7/_2$	$^9/_2$	B1
	27494.0	27493.8	7	26936.98	30573.17	$3d^2(1S)4s$	$3d4s(^3D)4p$	^2S	$^2P^\circ$	$^1/_2$	$^1/_2$	B1
	28936.1	28936.1	2	34422.83	37877.78	$3d4s(^3D)5s$	$3d^2(^3P)4p$	^4D	$^4P^\circ$	$^3/_2$	$^1/_2$	B1
	29052.0	29052.0	3	33707.06	37148.22	$3d^2(^3F)4p$	$3d^3$	$^2D^\circ$	^2P	$^5/_2$	$^3/_2$	B1
	29159.4	29159.3	2	34480.00	37908.50	$3d4s(^3D)5s$	$3d^2(^3P)4p$	^4D	$^4P^\circ$	$^5/_2$	$^3/_2$	B1
	29423.8	29423.6	2	34567.19	37964.89	$3d4s(^3D)5s$	$3d^2(^3P)4p$	^4D	$^4P^\circ$	$^7/_2$	$^5/_2$	B1

Sc I – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	30312.7	30312.6	2	40562.06	43860.12	$3d4s(^3D)4d$	$3d^2(1G)4p$	^2G	$^2F^\circ$	$^9/_2$	$^7/_2$	B1
	31172.8	31172.3	2	43252.56	46459.66	$3d4s(^1D)5p$	–	$^2D^\circ$	^2F	$^5/_2$	$^7/_2$	B1
		31173.1		31215.81	34422.83	$3d^2(^3F)4p$	$3d4s(^3D)5s$	$^4F^\circ$	^4D	$^5/_2$	$^3/_2$	B1
	31196.1		2									B1
	32120.7	32120.4	3	33846.59	36959.03	$3d^3$	$3d^2(^3P)4p$	^4F	$^4D^\circ$	$^7/_2$	$^7/_2$	B1
	32749.5	32749.5	14	33906.38	36959.03	$3d^3$	$3d^2(^3P)4p$	^4F	$^4D^\circ$	$^9/_2$	$^7/_2$	B1
	33174.0	33173.7	12	33846.59	36860.20	$3d^3$	$3d^2(^3P)4p$	^4F	$^4D^\circ$	$^7/_2$	$^5/_2$	B1
	33317.0	33316.8	2	33763.53	36764.20	$3d^3$	$3d^2(^3P)4p$	^4F	$^4D^\circ$	$^3/_2$	$^1/_2$	B1
	33379.8	33379.8	8	33798.64	36793.65	$3d^3$	$3d^2(^3P)4p$	^4F	$^4D^\circ$	$^5/_2$	$^3/_2$	B1

Sc II

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1160.212	1160.216	0	4883.57	91074.4	$3d^2$	$3d6f$	^3F	$^3G^\circ$	3	4	J1
	1161.347	1161.347	1	4987.79	91094.7	$3d^2$	$3d6f$	^3F	$^3G^\circ$	4	5	J1
	1161.624	1161.621	0	4987.79	91074.4	$3d^2$	$3d6f$	^3F	$^3G^\circ$	4	4	J1
	1161.781	1161.781	0	4987.79	91062.5	$3d^2$	$3d6f$	^3F	$^3F^\circ$	4	4	J1
	1162.544	1162.544	0	4802.87	90821.1	$3d^2$	$3d6f$	^3F	$^3G^\circ$	2	3	J1
	1163.464	1163.466	0	4987.79	90937.9	$3d^2$	$3d6f$	^3F	$^3H^\circ$	4	5	J1
	1203.635	1203.635	0	2540.95	85622.6	$3d4s$	$3d5f$	^1D	$^1F^\circ$	2	3	J1
	1237.170	1237.170	0	4987.79	85817.40	$3d^2$	$3d5f$	^3F	$^1H^\circ$	4	5	J1
	1237.317	1237.322	1	4802.87	85622.6	$3d^2$	$3d5f$	^3F	$^1F^\circ$	2	3	J1
	1238.571	1238.558	1	4883.57	85622.6	$3d^2$	$3d5f$	^3F	$^1F^\circ$	3	3	J1
	1238.813	1238.813	3	4883.57	85605.99	$3d^2$	$3d5f$	^3F	$^3G^\circ$	3	4	J1
	1238.963	1238.959	0	4987.79	85700.7	$3d^2$	$3d5f$	^3F	$^3D^\circ$	4	3	J1
	1239.952	1239.952	4	4987.79	85636.05	$3d^2$	$3d5f$	^3F	$^3G^\circ$	4	5	J1
	1240.415	1240.415	1	4987.79	85605.99	$3d^2$	$3d5f$	^3F	$^3G^\circ$	4	4	J1
	1240.656	1240.656	2	4802.87	85405.39	$3d^2$	$3d5f$	^3F	$^3G^\circ$	2	3	J1
	1240.810	1240.810	1	4987.79	85580.3	$3d^2$	$3d5f$	^3F	$^3F^\circ$	4	4	J1
	1241.166	1241.166	2	4883.57	85452.99	$3d^2$	$3d5f$	^3F	$^\circ$	3	3	J1
	1241.283	1241.283	1	4883.57	85445.35	$3d^2$	$3d5f$	^3F	$^3H^\circ$	3	4	J1
	1241.979	1241.979	0	4987.79	85504.42	$3d^2$	$3d5f$	^3F	$^1H^\circ$	4	5	J1
	1242.693	1242.693	0	4883.57	85353.96	$3d^2$	$3d5f$	^1F	$^1G^\circ$	3	4	J1
	1247.834	1247.834	0	10944.56	91083.4	$3d^2$	$3d6f$	^1D	$^1F^\circ$	2	3	J1
	1265.653	1265.653	0	12154.42	91165.0	$3d^2$	$3d6f$	^1P	$^1P^\circ$	1	1	J1
	1266.246	1266.246	0	12154.42	91128.0	$3d^2$	$3d6f$	^1P	$^1D^\circ$	1	2	J1
	1299.787	1299.787	1	14261.32	91197.0	$3d^2$	$3d6f$	^1G	$^1H^\circ$	4	5	J1
	1304.182	1304.179	0	14261.32	90937.9	$3d^2$	$3d6f$	^1G	$^1H^\circ$	4	5	J1
	1337.684	1337.683	0	10944.56	85700.7	$3d^2$	$3d5f$	^1D	$^1D^\circ$	2	3	J1
	1338.413	1338.394	1	10944.56	85661.0	$3d^2$	$3d5f$	^1D	$^1D^\circ$	2	2	J1
	1339.077	1339.082	2	10944.56	85622.6	$3d^2$	$3d5f$	^1D	$^1F^\circ$	2	3	J1
	1340.237	1340.237	1	10944.56	85558.24	$3d^2$	$3d5f$	^1D	$^1D^\circ$	2	2	J1
	1342.130	1342.130	2	10944.56	85452.99	$3d^2$	$3d5f$	^1D	$^\circ$	2	3	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1356.287	1356.287	0	12101.50	85832.20	$3d^2$	$3d5f$	^3P	$^3P^\circ$	1	0	J1
	1356.868	1356.868	0	12101.50	85800.62	$3d^2$	$3d5f$	^3P	$^3P^\circ$	1	1	J1
	1357.843	1357.843	0	12154.42	85800.62	$3d^2$	$3d5f$	^3P	$^3P^\circ$	2	1	J1
	1358.246	1358.246	2	12154.42	85778.78	$3d^2$	$3d5f$	^3P	$^3P^\circ$	2	2	J1
	1359.439	1359.444	1	12101.50	85661.0	$3d^2$	$3d5f$	^3P	$^3D^\circ$	1	2	J1
	1359.688	1359.688	2	12154.42	85700.7	$3d^2$	$3d5f$	^3P	$^3D^\circ$	2	3	J1
	1360.221	1360.221	1	12074.10	85591.59	$3d^2$	$3d5f$	^3P	$^3D^\circ$	0	1	J1
	1361.345	1361.345	1	12101.50	85558.24	$3d^2$	$3d5f$	^3P	$^1D^\circ$	1	2	J1
	1366.591	1366.591	0	2540.95	75715.75	$3d4s$	$3d4f$	^1D	$^3D^\circ$	2	3	J1
	1368.927	1368.927	2	2540.95	75590.84	$3d4s$	$3d4f$	^1D	$^1D^\circ$	2	2	J1
	1369.647	1369.647	2	2540.95	75552.46	$3d4s$	$3d4f$	^1D	$^1F^\circ$	2	3	J1
	1373.020	1373.020	1	2540.95	75373.10	$3d4s$	$3d4f$	^1D	$^3F^\circ$	2	3	J1
	1397.505	1397.505	3	14261.32	85817.40	$3d^2$	$3d5f$	^1G	$^1H^\circ$	4	5	J1
	1403.645	1403.645	1	14261.32	85504.42	$3d^2$	$3d5f$	^1G	$^3H^\circ$	4	5	J1
	1406.615	1406.615	0	14261.32	85353.96	$3d^2$	$3d5f$	^1G	$^1G^\circ$	4	4	J1
	1409.802	1409.802	0	4987.79	75919.75	$3d^2$	$3d4f$	^3F	$^1H^\circ$	4	5	J1
	1411.472	1411.472	1	4802.87	75650.90	$3d^2$	$3d4f$	^3F	$^3D^\circ$	2	1	J1
	1412.487	1412.487	1	4883.57	75680.69	$3d^2$	$3d4f$	^3F	$^3D^\circ$	3	2	J1
	1412.669	1412.669	0	4802.87	75590.84	$3d^2$	$3d4f$	^3F	$^1D^\circ$	2	2	J1
	1413.436	1413.436	3	4802.87	75552.46	$3d^2$	$3d4f$	^3F	$^1F^\circ$	2	3	J1
	1413.868	1413.868	2	4987.79	75715.75	$3d^2$	$3d4f$	^3F	$^3D^\circ$	4	3	J1
	1414.879	1414.879	3	4883.57	75561.00	$3d^2$	$3d4f$	^3F	$^3H^\circ$	3	4	J1
	1415.050	1415.050	2	4883.57	75552.46	$3d^2$	$3d4f$	^3F	$^1F^\circ$	3	3	J1
	1415.968	1415.968	4	4987.79	75610.83	$3d^2$	$3d4f$	^3F	$^3H^\circ$	4	5	J1
	1416.698	1416.698	3	4883.57	75470.24	$3d^2$	$3d4f$	^3F	$^3F^\circ$	3	4	J1
	1416.968	1416.968	4	4987.79	75561.00	$3d^2$	$3d4f$	^3F	$^3H^\circ$	4	4	J1
	1417.028	1417.028	4	4802.87	75373.10	$3d^2$	$3d4f$	^3F	$^3F^\circ$	2	3	J1
	1417.139	1417.140	0	4987.79	75552.46	$3d^2$	$3d4f$	^3F	$^1F^\circ$	4	3	J1
	1418.301	1418.301	5	4883.57	75390.49	$3d^2$	$3d4f$	^3F	$^3G^\circ$	3	4	J1
	1418.322	1418.322	5	4802.87	75308.70	$3d^2$	$3d4f$	^3F	$^3G^\circ$	2	3	J1
	1418.334	1418.334	5	4802.87	75308.13	$3d^2$	$3d4f$	^3F	$^3F^\circ$	2	2	J1
	1418.650	1418.650	3	4883.57	75373.10	$3d^2$	$3d4f$	^3F	$^3F^\circ$	3	3	J1
	1418.773	1418.773	6	4987.79	75471.25	$3d^2$	$3d4f$	^3F	$^3G^\circ$	4	5	J1
	1418.793	1418.793	6	4987.79	75470.24	$3d^2$	$3d4f$	^3F	$^3F^\circ$	4	4	J1
	1419.948	1419.948	2	4883.57	75308.70	$3d^2$	$3d4f$	^3F	$^3G^\circ$	3	3	J1
	1419.959	1419.959	2	4883.57	75308.13	$3d^2$	$3d4f$	^3F	$^3F^\circ$	3	2	J1
	1420.400	1420.400	2	4987.79	75390.49	$3d^2$	$3d4f$	^3F	$^3G^\circ$	4	4	J1
	1421.709	1421.709	3	4883.57	75221.47	$3d^2$	$3d4f$	^3F	$^1G^\circ$	3	4	J1
	1423.818	1423.818	1	4987.79	75221.47	$3d^2$	$3d4f$	^3F	$^1G^\circ$	4	4	J1
	1502.828	1502.828	2*g*	177.76	66718.99	$3d4s$	$3d5p$	^3D	$^3F^\circ$	3	4	J1
	1503.395	1503.395	0*g*	67.72	66583.86	$3d4s$	$3d5p$	^3D	$^3D^\circ$	2	3	J1
	1503.850	1503.850	1*g*	67.72	66563.73	$3d4s$	$3d5p$	^3D	$^3F^\circ$	2	3	J1
	1504.673	1504.673	1*g*	0.00	66459.64	$3d4s$	$3d5p$	^3D	$^3F^\circ$	1	2	J1
	1505.459	1505.459	0*g*	67.72	66492.66	$3d4s$	$3d5p$	^3D	$^3D^\circ$	2	2	J1
	1505.886	1505.886	1*g*	177.76	66583.86	$3d4s$	$3d5p$	^3D	$^3D^\circ$	3	3	J1
	1506.208	1506.207	0*g*	67.72	66459.64	$3d4s$	$3d5p$	^3D	$^3F^\circ$	2	2	J1
	1506.257	1506.257	0*g*	0.00	66389.74	$3d4s$	$3d5p$	^3D	$^3D^\circ$	1	1	J1
	1516.137	1516.137	2	2540.95	68498.06	$3d4s$	$3d5p$	^1D	$^1P^\circ$	2	1	J1
	1533.677	1533.677	0	2540.95	67743.72	$3d4s$	$3d5p$	^1D	$^1F^\circ$	2	3	J1
	1535.421	1535.421	1	10944.56	76073.28	$3d^2$	$3d4f$	^1D	$^1P^\circ$	2	1	J1
	1538.288	1538.288	0	10944.56	75951.88	$3d^2$	$3d4f$	^1D	$^3P^\circ$	2	1	J1
	1543.896	1543.896	2	10944.56	75715.75	$3d^2$	$3d4f$	^1D	$^3D^\circ$	2	3	J1
	1544.241	1544.241	0	2540.95	67297.68	$3d4s$	$3d5p$	^1D	$^3P^\circ$	2	1	J1
	1544.733	1544.732	2	10944.56	75680.69	$3d^2$	$3d4f$	^1D	$^3D^\circ$	2	2	J1
	1546.880	1546.879	5	10944.56	75590.84	$3d^2$	$3d4f$	^1D	$^1D^\circ$	2	2	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1547.798	1547.798	6	10944.56	75552.46	$3d^2$	$3d4f$	^1D	$^1F^\circ$	2	3	J1
	1552.107	1552.107	4	10944.56	75373.10	$3d^2$	$3d4f$	^1D	$^3F^\circ$	2	3	J1
	1553.660	1553.660	1	10944.56	75308.70	$3d^2$	$3d4f$	^1D	$^3G^\circ$	2	3	J1
	1553.674	1553.674	1	10944.56	75308.13	$3d^2$	$3d4f$	^1D	$^3F^\circ$	2	2	J1
	1564.488	1564.488	0	2540.95	66459.64	$3d4s$	$3d5p$	^1D	$^3F^\circ$	2	2	J1
	1565.118	1565.118	2	12101.50	75994.43	$3d^2$	$3d4f$	^3P	$^3P^\circ$	1	0	J1
	1565.490	1565.490	0	12074.10	75951.88	$3d^2$	$3d4f$	^3P	$^3P^\circ$	0	1	J1
	1565.952	1565.952	0	26081.34	89940.27	$3d4p$	$4s4d$	$^1D^\circ$	^1D	2	2	J1
	1566.161	1566.161	2	12101.50	75951.88	$3d^2$	$3d4f$	^3P	$^3P^\circ$	1	1	J1
	1567.126	1567.126	0	12101.50	75912.58	$3d^2$	$3d4f$	^3P	$^3P^\circ$	1	2	J1
	1567.460	1567.461	2	12154.42	75951.88	$3d^2$	$3d4f$	^3P	$^3P^\circ$	2	1	J1
	1568.427	1568.427	5	12154.42	75912.58	$3d^2$	$3d4f$	^3P	$^3P^\circ$	2	2	J1
	1572.842	1572.842	6	12101.50	75680.69	$3d^2$	$3d4f$	^3P	$^3D^\circ$	1	2	J1
	1572.901	1572.901	6	12074.10	75650.90	$3d^2$	$3d4f$	^3P	$^3D^\circ$	0	1	J1
	1573.283	1573.284	5	12154.42	75715.75	$3d^2$	$3d4f$	^3P	$^3D^\circ$	2	3	J1
	1573.579	1573.579	2	12101.50	75650.90	$3d^2$	$3d4f$	^3P	$^3D^\circ$	1	1	J1
	1574.152	1574.152	1	12154.42	75680.69	$3d^2$	$3d4f$	^3P	$^3D^\circ$	2	2	J1
	1574.619	1574.619	2	2540.95	66048.39	$3d4s$	$3d5p$	^1D	$^1D^\circ$	2	2	J1
	1575.068	1575.068	2	12101.50	75590.84	$3d^2$	$3d4f$	^3P	$^1D^\circ$	1	2	J1
	1581.811	1581.811	2	12154.42	75373.10	$3d^2$	$3d4f$	^3P	$^3F^\circ$	2	3	J1
	1582.112	1582.113	0	12101.50	75308.13	$3d^2$	$3d4f$	^3P	$^3F^\circ$	1	2	J1
	1583.424	1583.424	0	12154.42	75308.70	$3d^2$	$3d4f$	^3P	$^3G^\circ$	2	3	J1
	1583.438	1583.438	0	12154.42	75308.13	$3d^2$	$3d4f$	^3P	$^3F^\circ$	2	2	J1
	1619.926	1619.926	2	4987.79	66718.99	$3d^2$	$3d5p$	^3F	$^3F^\circ$	4	4	J1
	1620.738	1620.738	1	4883.57	66583.86	$3d^2$	$3d5p$	^3F	$^3D^\circ$	3	3	J1
	1621.014	1621.014	1	4802.87	66492.66	$3d^2$	$3d5p$	^3F	$^3D^\circ$	2	2	J1
	1621.267	1621.267	0	4883.57	66563.73	$3d^2$	$3d5p$	^3F	$^3F^\circ$	3	3	J1
	1623.137	1623.137	2	4883.57	66492.66	$3d^2$	$3d5p$	^3F	$^3D^\circ$	3	2	J1
	1623.480	1623.480	2	4987.79	66583.86	$3d^2$	$3d5p$	^3F	$^3D^\circ$	4	3	J1
	1623.723	1623.723	2*d*	4802.87	66389.74	$3d^2$	$3d5p$	^3F	$^3D^\circ$	2	1	J1
	1624.008	1624.008	3*d*	4883.57	66459.64	$3d^2$	$3d5p$	^3F	$^3F^\circ$	3	2	J1
	1624.011	1624.011	3*d*	4987.79	66563.73	$3d^2$	$3d5p$	^3F	$^3F^\circ$	4	3	J1
	1630.005	1630.005	3	14261.32	75610.83	$3d^2$	$3d4f$	^1G	$^3H^\circ$	4	5	J1
	1631.330	1631.330	1	14261.32	75561.00	$3d^2$	$3d4f$	^1G	$^3H^\circ$	4	4	J1
	1631.557	1631.557	1	14261.32	75552.46	$3d^2$	$3d4f$	^1G	$^1F^\circ$	4	3	J1
	1633.722	1633.722	2	14261.32	75471.25	$3d^2$	$3d4f$	^1G	$^3G^\circ$	4	5	J1
	1633.749	1633.749	2	14261.32	75470.24	$3d^2$	$3d4f$	^1G	$^3F^\circ$	4	4	J1
	1635.880	1635.880	3	14261.32	75390.49	$3d^2$	$3d4f$	^1G	$^3G^\circ$	4	4	J1
	1636.346	1636.346	1	14261.32	75373.10	$3d^2$	$3d4f$	^1G	$^3F^\circ$	4	3	J1
	1640.416	1640.416	4	14261.32	75221.47	$3d^2$	$3d4f$	^1G	$^1G^\circ$	4	4	J1
	1670.971	1670.972	0	25955.2	85800.62	$3d^2$	$3d5f$	^1S	$^3P^\circ$	0	1	J1
	1672.538	1672.538	1	27443.71	87233.09	$3d4p$	$3d6d$	$^3F^\circ$	^3G	2	3	J1
	1675.245	1675.244	1	27602.45	87295.23	$3d4p$	$3d6d$	$^3F^\circ$	^3G	3	4	J1
	1676.828	1676.829	0	25955.2	85591.59	$3d^2$	$3d5f$	^1S	$^3D^\circ$	0	1	J1
	1678.863	1678.863	1	27841.35	87405.48	$3d4p$	$3d6d$	$^3F^\circ$	^3G	4	5	J1
	1691.344	1691.344	2	30815.70	89940.27	$3d4p$	$4s4d$	$^1P^\circ$	^1D	1	2	J1
	1691.647	1691.647	0	27443.71	86557.7	$3d4p$	$3d7s$	$^3F^\circ$	^3D	2	1	J1
	1694.770	1694.770	0	27602.45	86607.5	$3d4p$	$3d7s$	$^3F^\circ$	^3D	3	2	J1
	1697.514	1697.515	1	27841.35	86751.0	$3d4p$	$3d7s$	$^3F^\circ$	^3D	4	2	J1
	1706.780	1706.781	0	28161.17	86751.0	$3d4p$	$3d7s$	$^3D^\circ$	^3D	3	2	J1
	1736.404	1736.404	3	32349.98	89940.27	$3d4p$	$4s4d$	$^1F^\circ$	^1D	3	2	J1
	1737.514	1737.514	2	10944.56	68498.06	$3d^2$	$3d5p$	^1D	$^1P^\circ$	2	1	J1
	1760.590	1760.589	2	10944.56	67743.72	$3d^2$	$3d5p$	^1D	$^1F^\circ$	2	3	J1
	1761.751	1761.751	5	11736.36	68498.06	$4s^2$	$3d5p$	^1S	$^1P^\circ$	0	1	J1
	1797.021	1797.021	0*g*	67.72	55715.36	$3d4s$	$4s4p$	^3D	$^1P^\circ$	2	1	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1808.492	1808.492	0	12101.50 –	67396.19	$3d^2$ –	$3d5p$	^3P –	$^3P^\circ$	1 –	2	J1
	1810.224	1810.224	1	12154.42 –	67396.19	$3d^2$ –	$3d5p$	^3P –	$^3P^\circ$	2 –	2	J1
	1810.821	1810.821	0	12074.10 –	67297.68	$3d^2$ –	$3d5p$	^3P –	$^3P^\circ$	0 –	1	J1
	1811.719	1811.720	0	12101.50 –	67297.68	$3d^2$ –	$3d5p$	^3P –	$^3P^\circ$	1 –	1	J1
	1813.458	1813.458	0	12154.42 –	67297.68	$3d^2$ –	$3d5p$	^3P –	$^3P^\circ$	2 –	1	J1
	1813.725	1813.723	0	12101.50 –	67236.7	$3d^2$ –	$3d5p$	^3P –	$^3P^\circ$	1 –	0	J1
	1814.756	1814.756	3	10944.56 –	66048.39	$3d^2$ –	$3d5p$	^1D –	$^1D^\circ$	2 –	2	J1
	1829.713	1829.713	0bl	11736.36 –	66389.74	$4s^2$ –	$3d5p$	^1S –	$^3D^\circ$	0 –	1	J1
	1841.145	1841.145	3	26081.34 –	80395.38	$3d4p$ –	$3d5d$	$^1D^\circ$ –	^1D	2 –	2	J1
	1843.062	1843.062	1	32349.98 –	86607.5	$3d4p$ –	$3d7s$	$^1F^\circ$ –	^3D	3 –	2	J1
	1869.774	1869.774	2	14261.32 –	67743.72	$3d^2$ –	$3d5p$	^1G –	$^1F^\circ$	4 –	3	J1
	1880.604	1880.604	8	2540.95 –	55715.36	$3d4s$ –	$4s4p$	^1D –	$^1P^\circ$	2 –	1	J1
	1882.442	1882.443	1	27917.78 –	81040.25	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3P	1 –	1	J1
	1883.861	1883.861	1	28021.29 –	81103.75	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3P	2 –	2	J1
	1884.520	1884.512	2	29742.16 –	82806.3	$3d4p$ –	$4s4d$	$^3P^\circ$ –	^3D	1 –	2	J1
	1884.759	1884.760	1	27917.78 –	80974.94	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3P	1 –	0	J1
	1884.814	1884.818	1	29736.27 –	82791.8	$3d4p$ –	$4s4d$	$^3P^\circ$ –	^3D	0 –	1	J1
	1885.032	1885.027	1	29742.16 –	82791.8	$3d4p$ –	$4s4d$	$^3P^\circ$ –	^3D	1 –	1	J1
	1886.118	1886.118	2	28021.29 –	81040.25	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3P	2 –	1	J1
	1886.641	1886.637	3	29823.93 –	82828.3	$3d4p$ –	$4s4d$	$^3P^\circ$ –	^3D	2 –	3	J1
	1887.438	1887.420	1	29823.93 –	82806.3	$3d4p$ –	$4s4d$	$^3P^\circ$ –	^3D	2 –	2	J1
	1888.839	1888.839	4bl	28161.17 –	81103.75	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3P	3 –	2	J1
	1898.393	1898.393	1	26081.34 –	78757.46	$3d4p$ –	$3d5d$	$^1D^\circ$ –	^1P	2 –	1	J1
	1908.094	1908.094	2	27443.71 –	79852.02	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3F	2 –	2	J1
	1911.200	1911.200	2	27602.45 –	79925.59	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3F	3 –	3	J1
	1911.581	1911.581	3	26081.34 –	78394.05	$3d4p$ –	$3d5d$	$^1D^\circ$ –	^1F	2 –	3	J1
	1913.891	1913.891	0	27602.45 –	79852.02	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3F	3 –	2	J1
	1917.182	1917.182	3	27841.35 –	80001.24	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3F	4 –	4	J1
	1919.967	1919.967	1	27841.35 –	79925.59	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3F	4 –	3	J1
	1925.512	1925.512	2	27917.78 –	79852.02	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3F	1 –	2	J1
	1926.623	1926.623	4	28021.29 –	79925.59	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3F	2 –	3	J1
	1929.010	1929.010	4	28161.17 –	80001.24	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3F	3 –	4	J1
	1929.357	1929.357	0	28021.29 –	79852.02	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3F	2 –	2	J1
	1931.829	1931.829	1	28161.17 –	79925.59	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3F	3 –	3	J1
	1932.272	1932.272	4	26081.34 –	77833.88	$3d4p$ –	$3d6s$	$^1D^\circ$ –	^1D	2 –	2	J1
	1946.980	1946.980	1	29742.16 –	81103.75	$3d4p$ –	$3d5d$	$^3P^\circ$ –	^3P	1 –	2	J1
	1949.167	1949.167	1	29736.27 –	81040.25	$3d4p$ –	$3d5d$	$^3P^\circ$ –	^3P	0 –	1	J1
	1949.390	1949.390	1	29742.16 –	81040.25	$3d4p$ –	$3d5d$	$^3P^\circ$ –	^3P	1 –	1	J1
	1950.085	1950.085	3	29823.93 –	81103.75	$3d4p$ –	$3d5d$	$^3P^\circ$ –	^3P	2 –	2	J1
	1951.875	1951.875	1	29742.16 –	80974.94	$3d4p$ –	$3d5d$	$^3P^\circ$ –	^3P	1 –	0	J1
	1952.503	1952.503	1	29823.93 –	81040.25	$3d4p$ –	$3d5d$	$^3P^\circ$ –	^3P	2 –	1	J1
	1952.959	1952.959	4	27443.71 –	78648.06	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3G	2 –	3	J1
	1954.059	1954.054	3bl	26081.34 –	77256.99	$3d4p$ –	$3d6s$	$^1D^\circ$ –	^3D	2 –	2	J1
	1954.317	1954.317	1	27443.71 –	78612.48	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3D	2 –	3	J1
	1956.535	1956.535	5	27602.45 –	78713.21	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3G	3 –	4	J1
	1959.032	1959.032	0	27602.45 –	78648.06	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3G	3 –	3	J1
	1959.419	1959.419	0	27443.71 –	78479.25	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3D	2 –	1	J1
	1961.596	1961.596	5	27841.35 –	78820.24	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3G	4 –	5	J1
	1963.190	1963.190	0	27602.45 –	78539.96	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3D	3 –	2	J1
	1965.723	1965.723	0	27841.35 –	78713.21	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3G	4 –	4	J1
	1969.623	1969.623	1	27841.35 –	78612.48	$3d4p$ –	$3d5d$	$^3F^\circ$ –	^3D	4 –	3	J1
	1975.419	1975.419	0	27917.78 –	78539.96	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3D	1 –	2	J1
	1976.629	1976.629	0	28021.29 –	78612.48	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3D	2 –	3	J1
	1977.790	1977.791	1	27917.78 –	78479.25	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3D	1 –	1	J1
	1979.466	1979.466	2	28021.29 –	78539.96	$3d4p$ –	$3d5d$	$^3D^\circ$ –	^3D	2 –	2	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1980.712	1980.712	0	28161.17	78648.06	$3d4p$	$3d5d$	$^3D^\circ$	^3G	3	3	J1
	1981.848	1981.848	0	28021.29	78479.25	$3d4p$	$3d5d$	$^3D^\circ$	^3D	2	1	J1
	1982.109	1982.109	2	28161.17	78612.48	$3d4p$	$3d5d$	$^3D^\circ$	^3D	3	3	J1
	1987.832	1987.832	2	30815.70	81121.77	$3d4p$	$4s5s$	$^1P^\circ$	^1S	1	0	J1
	1995.288	1995.288	5	25955.2	76073.28	$3d^2$	$3d4f$	^1S	$^1P^\circ$	0	1	J1
	2000.135v	2000.132	1	25955.2	75951.88	$3d^2$	$3d4f$	^1S	$^3P^\circ$	0	1	J1
	2006.848	2006.847	0	27443.71	77256.99	$3d4p$	$3d6s$	$^3F^\circ$	^3D	2	2	J1
	2008.000	2007.999	0	27602.45	77387.17	$3d4p$	$3d6s$	$^3F^\circ$	^3D	3	3	J1
	2009.340	2009.341	2	27443.71	77195.19	$3d4p$	$3d6s$	$^3F^\circ$	^3D	2	1	J1
	2013.265	2013.264	3	27602.45	77256.99	$3d4p$	$3d6s$	$^3F^\circ$	^3D	3	2	J1
	2016.304	2016.304	2	30815.70	80395.38	$3d4p$	$3d5d$	$^1P^\circ$	^1D	1	2	J1
	2017.683	2017.683	3	27841.35	77387.17	$3d4p$	$3d6s$	$^3F^\circ$	^3D	4	3	J1
	2022.089	2022.089	0	29736.27	79174.14	$3d4p$	$3d5d$	$^3P^\circ$	^3S	0	1	J1
	2022.330	2022.330	2	29742.16	79174.14	$3d4p$	$3d5d$	$^3P^\circ$	^3S	1	1	J1
	2025.038	2025.038	1	28021.29	77387.17	$3d4p$	$3d6s$	$^3D^\circ$	^3D	2	3	J1
	2025.681	2025.681	3	29823.93	79174.14	$3d4p$	$3d5d$	$^3P^\circ$	^3S	2	1	J1
	2026.132	2026.133	0	27917.78	77256.99	$3d4p$	$3d6s$	$^3D^\circ$	^3D	1	2	J1
	2028.674	2028.674	2	27917.78	77195.19	$3d4p$	$3d6s$	$^3D^\circ$	^3D	1	1	J1
	2030.392	2030.393	2	28021.29	77256.99	$3d4p$	$3d6s$	$^3D^\circ$	^3D	2	2	J1
	2030.793	2030.793	3	28161.17	77387.17	$3d4p$	$3d6s$	$^3D^\circ$	^3D	3	3	J1
	2032.945	2032.945	0	28021.29	77195.19	$3d4p$	$3d6s$	$^3D^\circ$	^3D	2	1	J1
	2036.178	2036.179	1	28161.17	77256.99	$3d4p$	$3d6s$	$^3D^\circ$	^3D	3	2	J1
	2040.709	2040.709	1	27602.45	76589.3	$3d4p$	$4p^2$	$^3F^\circ$	^3P	3	2	J1
	2047.510	2047.511	0	29823.93	78648.06	$3d4p$	$3d5d$	$^3P^\circ$	^3G	2	3	J1
	2048.616	2048.616	1	29742.16	78539.96	$3d4p$	$3d5d$	$^3P^\circ$	^3D	1	2	J1
	2049.004	2049.004	1	29823.93	78612.48	$3d4p$	$3d5d$	$^3P^\circ$	^3D	2	3	J1
	2050.920	2050.920	0	29736.27	78479.25	$3d4p$	$3d5d$	$^3P^\circ$	^3D	0	1	J1
	2051.168	2051.168	0	29742.16	78479.25	$3d4p$	$3d5d$	$^3P^\circ$	^3D	1	1	J1
	2053.931	2053.932	0	27917.78	76589.3	$3d4p$	$4p^2$	$^3D^\circ$	^3P	1	2	J1
	2058.309	2058.310	3	28021.29	76589.3	$3d4p$	$4p^2$	$^3D^\circ$	^3P	2	2	J1
	2063.675	2063.674	3	29823.93	78265.7	$3d4p$	$4s5s$	$^3P^\circ$	^3S	2	1	J1
	2064.255	2064.256	6	28161.17	76589.3	$3d4p$	$4p^2$	$^3D^\circ$	^3P	3	2	J1
	2067.091	2067.090	4	32349.98	80711.71	$3d4p$	$3d5d$	$^1F^\circ$	^1G	3	4	J1
	2067.231	2067.231	0	30815.70	79174.14	$3d4p$	$3d5d$	$^1P^\circ$	^3S	1	1	J1
	2067.517	2067.508	3	26081.34	74433.3	$3d4p$	$4p^2$	$^1D^\circ$	^1D	2	2	J1
	2068.041	2068.041	5	28021.29	76360.8	$3d4p$	$4p^2$	$^3D^\circ$	^3P	2	1	J1
	2068.643	2068.644	4	27917.78	76243.2	$3d4p$	$4p^2$	$^3D^\circ$	^3P	1	0	J1
	2080.702	2080.702	0	32349.98	80395.38	$3d4p$	$3d5d$	$^1F^\circ$	^1D	3	2	J1
	2085.200	2085.200	2	30815.70	78757.46	$3d4p$	$3d5d$	$^1P^\circ$	^1P	1	1	J1
	2101.797	2101.797	3	29823.93	77387.17	$3d4p$	$3d6s$	$^3P^\circ$	^3D	2	3	J1
	2103.938	2103.939	2	29742.16	77256.99	$3d4p$	$3d6s$	$^3P^\circ$	^3D	1	2	J1
	2106.417	2106.418	1	29736.27	77195.19	$3d4p$	$3d6s$	$^3P^\circ$	^3D	0	1	J1
	2106.679	2106.679	1	29742.16	77195.19	$3d4p$	$3d6s$	$^3P^\circ$	^3D	1	1	J1
	2107.566	2107.566	1	29823.93	77256.99	$3d4p$	$3d6s$	$^3P^\circ$	^3D	2	2	J1
	2108.791	2108.792	0	39345.52	86751.0	$4s4p$	$3d7s$	$^3P^\circ$	^3D	2	2	J1
	2126.165	2126.165	2	30815.70	77833.88	$3d4p$	$3d6s$	$^1P^\circ$	^1D	1	2	J1
	2160.440	2160.449	0	28161.17	74433.3	$3d4p$	$4p^2$	$^1D^\circ$	^1D	3	2	J1
	2171.151	2171.151	1	32349.98	78394.05	$3d4p$	$3d5d$	$^1F^\circ$	^1F	3	3	J1
	2197.894	2197.894	0	32349.98	77833.88	$3d4p$	$3d6s$	$^1F^\circ$	^1D	3	2	J1
	2232.905	2232.905	5	10944.56	55715.36	$3d^2$	$4s4p$	^1D	$^1P^\circ$	2	1	J1
UV2	2273.109	2273.110	11	11736.36	55715.36	$4s^2$	$4s4p$	^1S	$^1P^\circ$	0	1	J1
	2282.936	2282.943	4	39002.20	82791.8	$4s4p$	$4s4d$	$^3P^\circ$	^3D	0	1	J1
	2288.059	2288.082	9bl	39115.04	82806.3	$4s4p$	$4s4d$	$^3P^\circ$	^3D	1	2	J1
	2288.839	2288.841	5	39115.04	82791.8	$4s4p$	$4s4d$	$^3P^\circ$	^3D	1	1	J1
	2290.703	2290.703	3	12074.10	55715.36	$3d^2$	$4s4p$	^3P	$^1P^\circ$	0	1	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2299.050	2299.053	7	39345.52	82828.3	$4s4p$	$4s4d$	$^3P^\circ$	^3D	2	3	J1
	2300.219	2300.217	4	39345.52	82806.3	$4s4p$	$4s4d$	$^3P^\circ$	^3D	2	2	J1
	2300.992	2300.984	0	39345.52	82791.8	$4s4p$	$4s4d$	$^3P^\circ$	^3D	2	1	J1
	2375.503	2375.513	6	32349.98	74433.3	$3d4p$	$4p^2$	$^1F^\circ$	^1D	3	2	J1
	2378.071	2378.072	2	39002.20	81040.25	$4s4p$	$3d5d$	$^3P^\circ$	^3P	0	1	J1
	2380.867	2380.866	2	39115.04	81103.75	$4s4p$	$3d5d$	$^3P^\circ$	^3P	1	2	J1
	2384.473	2384.473	1	39115.04	81040.25	$4s4p$	$3d5d$	$^3P^\circ$	^3P	1	1	J1
	2388.193	2388.193	2	39115.04	80974.94	$4s4p$	$3d5d$	$^3P^\circ$	^3P	1	0	J1
	2394.009	2394.008	4	39345.52	81103.75	$4s4p$	$3d5d$	$^3P^\circ$	^3P	2	2	J1
	2397.655	2397.654	2	39345.52	81040.25	$4s4p$	$3d5d$	$^3P^\circ$	^3P	2	1	J1
	2488.549	2488.549	0	39002.20	79174.14	$4s4p$	$3d5d$	$^3P^\circ$	^3S	0	1	J1
	2495.558	2495.559	1	39115.04	79174.14	$4s4p$	$3d5d$	$^3P^\circ$	^3S	1	1	J1
	2510.000	2510.001	3	39345.52	79174.14	$4s4p$	$3d5d$	$^3P^\circ$	^3S	2	1	J1
UV1	2540.824	2540.822	3g	0.00	39345.52	$3d4s$	$4s4p$	^3D	$^3P^\circ$	1	2	J1
UV1	2545.196	2545.203	8g	67.72	39345.52	$3d4s$	$4s4p$	^3D	$^3P^\circ$	2	2	J1
UV1	2552.350	2552.354	10g	177.76	39345.52	$3d4s$	$4s4p$	^3D	$^3P^\circ$	3	2	J1
	2553.480	2553.469	0	39115.04	78265.7	$4s4p$	$4s5s$	$^3P^\circ$	^3S	1	1	J1
UV1	2555.789	2555.795	8g	0.00	39115.04	$3d4s$	$4s4p$	^3D	$^3P^\circ$	1	1	J1
UV1	2560.232	2560.227	10g	67.72	39115.04	$3d4s$	$4s4p$	^3D	$^3P^\circ$	2	1	J1
UV1	2563.192	2563.189	8g	0.00	39002.20	$3d4s$	$4s4p$	^3D	$^3P^\circ$	1	0	J1
	2568.605	2568.591	1	39345.52	78265.7	$4s4p$	$4s5s$	$^3P^\circ$	^3S	2	1	J1
	2588.253	2588.253	0	26081.34	64705.89	$3d4p$	$3d4d$	$^1D^\circ$	^3P	2	2	J1
UV3	2611.194	2611.186	7	26081.34	64366.68	$3d4p$	$3d4d$	$^1D^\circ$	^1D	2	2	J1
	2667.699	2667.695	3	29742.16	67216.56	$3d4p$	$3d4d$	$^3P^\circ$	^1S	1	0	J1
		2667.705		39115.04	76589.3	$4s4p$	$4p^2$	$^3P^\circ$	^3P	1	2	J1
	2675.958	2675.965	3	39002.20	76360.8	$4s4p$	$4p^2$	$^3P^\circ$	^3P	0	1	J1
	2680.653	2680.651	2	26081.34	63374.63	$3d4p$	$3d4d$	$^1D^\circ$	^3F	2	2	J1
	2684.089	2684.072	2	39115.04	76360.8	$4s4p$	$4p^2$	$^3P^\circ$	^3P	1	1	J1
	2684.219	2684.215	5	39345.52	76589.3	$4s4p$	$4p^2$	$^3P^\circ$	^3P	2	2	J1
	2692.579	2692.574	2	39115.04	76243.2	$4s4p$	$4p^2$	$^3P^\circ$	^3P	1	0	J1
	2700.828	2700.786	4d	39345.52	76360.8	$4s4p$	$4p^2$	$^3P^\circ$	^3P	2	1	J1
	2707.536	2707.538	0	27443.71	64366.68	$3d4p$	$3d4d$	$^3F^\circ$	^1D	2	2	J1
	2716.249	2716.249	0d	2540.95	39345.52	$3d4s$	$4s4p$	^1D	$^3P^\circ$	2	2	J1
	2721.843	2721.844	1	27917.78	64646.70	$3d4p$	$3d4d$	$^3D^\circ$	^3P	1	1	J1
	2724.140	2724.138	2	27917.78	64615.77	$3d4p$	$3d4d$	$^3D^\circ$	^3P	1	0	J1
	2725.129	2725.132	1	28021.29	64705.89	$3d4p$	$3d4d$	$^3D^\circ$	^3P	2	2	J1
	2729.539	2729.537	4	28021.29	64646.70	$3d4p$	$3d4d$	$^3D^\circ$	^3P	2	1	J1
	2733.378	2733.367	0	2540.95	39115.04	$3d4s$	$4s4p$	^1D	$^3P^\circ$	2	1	J1
	2735.568	2735.564	4	28161.17	64705.89	$3d4p$	$3d4d$	$^3D^\circ$	^3P	3	2	J1
	2746.363	2746.376	5bl	30815.70	67216.56	$3d4p$	$3d4d$	$^1P^\circ$	^1S	1	0	J1
	2761.194	2761.195	0	28161.17	64366.68	$3d4p$	$3d4d$	$^3D^\circ$	^1D	3	2	J1
UV4	2776.855	2776.846	1	27443.71	63445.16	$3d4p$	$3d4d$	$^3F^\circ$	^3F	2	3	J1
UV4	2782.306	2782.297	11	27443.71	63374.63	$3d4p$	$3d4d$	$^3F^\circ$	^3F	2	2	J1
UV4	2782.669	2782.671	2	27602.45	63528.54	$3d4p$	$3d4d$	$^3F^\circ$	^3F	3	4	J1
UV4	2789.151	2789.145	12	27602.45	63445.16	$3d4p$	$3d4d$	$^3F^\circ$	^3F	3	3	J1
UV4	2794.644	2794.644	5	27602.45	63374.63	$3d4p$	$3d4d$	$^3F^\circ$	^3F	3	2	J1
UV4	2801.306	2801.300	9	27841.35	63528.54	$3d4p$	$3d4d$	$^3F^\circ$	^3F	4	4	J1
UV4	2807.871	2807.861	3	27841.35	63445.16	$3d4p$	$3d4d$	$^3F^\circ$	^3F	4	3	J1
UV5	2819.491	2819.499	9	27917.78	63374.63	$3d4p$	$3d4d$	$^3D^\circ$	^3F	1	2	J1
UV5	2822.121	2822.125	9	28021.29	63445.16	$3d4p$	$3d4d$	$^3D^\circ$	^3F	2	3	J1
UV5	2826.639	2826.633	10	28161.17	63528.54	$3d4p$	$3d4d$	$^3D^\circ$	^3F	3	4	J1
UV5	2827.758	2827.755	3	28021.29	63374.63	$3d4p$	$3d4d$	$^3D^\circ$	^3F	2	2	J1
UV5	2833.316	2833.313	4	28161.17	63445.16	$3d4p$	$3d4d$	$^3D^\circ$	^3F	3	3	J1
	2859.271	2859.267	4	29742.16	64705.89	$3d4p$	$3d4d$	$^3P^\circ$	^3P	1	2	J1
	2863.639	2863.633	5	29736.27	64646.70	$3d4p$	$3d4d$	$^3P^\circ$	^3P	0	1	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2864.114	2864.116	4	29742.16 –	64646.70	$3d4p$ –	$3d4d$	$^3P°$ –	^3P	1 –	1	J1
	2865.978	2865.970	8	29823.93 –	64705.89	$3d4p$ –	$3d4d$	$^3P°$ –	^3P	2 –	2	J1
	2866.661	2866.656	5	29742.16 –	64615.77	$3d4p$ –	$3d4d$	$^3P°$ –	^3P	1 –	0	J1
	2870.848	2870.842	6	29823.93 –	64646.70	$3d4p$ –	$3d4d$	$^3P°$ –	^3P	2 –	1	J1
	2887.283	2887.280	3	29742.16 –	64366.68	$3d4p$ –	$3d4d$	$^3P°$ –	^1D	1 –	2	J1
	2894.122	2894.115		29823.93 –	64366.68	$3d4p$ –	$3d4d$	$^3P°$ –	^1D	2 –	2	J1
		2894.123	2	4802.87 –	39345.52	$3d^2$ –	$4s4p$	^3F –	$^3P°$	2 –	2	J1
	2912.977	2912.979	7	26081.34 –	60400.41	$3d4p$ –	$3d4d$	$^1D°$ –	^1P	2 –	1	J1
	2920.965	2920.993	3	55715.36 –	89940.27	$4s4p$ –	$4s4d$	$^1P°$ –	^1D	1 –	2	J1
	2924.340	2924.334	0	26081.34 –	60267.16	$3d4p$ –	$3d4d$	$^1D°$ –	^3G	2 –	3	J1
	2947.207	2947.202	2	26081.34 –	60001.91	$3d4p$ –	$3d4d$	$^1D°$ –	^3D	2 –	3	J1
	2949.844	2949.844	2*d*	30815.70 –	64705.89	$3d4p$ –	$3d4d$	$^1P°$ –	^3P	1 –	2	J1
	2955.009	2955.005	0	30815.70 –	64646.70	$3d4p$ –	$3d4d$	$^1P°$ –	^3P	1 –	1	J1
	2957.707	2957.710	0	30815.70 –	64615.77	$3d4p$ –	$3d4d$	$^1P°$ –	^3P	1 –	0	J1
	2958.273	2958.264	2	26081.34 –	59875.08	$3d4p$ –	$3d4d$	$^1D°$ –	^3D	2 –	1	J1
44	2979.676	2979.669	8	30815.70 –	64366.68	$3d4p$ –	$3d4d$	$^1P°$ –	^1D	1 –	2	J1
		2979.694		29823.93 –	63374.63	$3d4p$ –	$3d4d$	$^3P°$ –	^3F	2 –	2	J1
	2988.918	2988.926	12bl	26081.34 –	59528.42	$3d4p$ –	$3d4d$	$^1D°$ –	^1F	2 –	3	J1
	3015.379	3015.381	8bl	27917.78 –	61071.43	$3d4p$ –	$3d4d$	$^3D°$ –	^3S	1 –	1	J1
	3033.412	3033.401	1	27443.71 –	60400.41	$3d4p$ –	$3d4d$	$^3F°$ –	^1P	2 –	1	J1
47	3039.922	3039.917	12	32349.98 –	65236.04	$3d4p$ –	$3d4d$	$^1F°$ –	^1G	3 –	4	J1
37	3045.725	3045.716	12	27443.71 –	60267.16	$3d4p$ –	$3d4d$	$^3F°$ –	^3G	2 –	3	J1
37	3052.922	3052.919	14	27602.45 –	60348.46	$3d4p$ –	$3d4d$	$^3F°$ –	^3G	3 –	4	J1
37	3060.537	3060.518	7*d*	27602.45 –	60267.16	$3d4p$ –	$3d4d$	$^3F°$ –	^3G	3 –	3	J1
37	3065.117	3065.111	12	27841.35 –	60457.12	$3d4p$ –	$3d4d$	$^3F°$ –	^3G	4 –	5	J1
37	3075.358	3075.357	10	27841.35 –	60348.46	$3d4p$ –	$3d4d$	$^3F°$ –	^3G	4 –	4	J1
36	3077.401	3077.379	1	27443.71 –	59929.46	$3d4p$ –	$3d4d$	$^3F°$ –	^3D	2 –	2	J1
	3077.689	3077.674	0	27917.78 –	60400.41	$3d4p$ –	$3d4d$	$^3D°$ –	^1P	1 –	1	J1
36	3082.561	3082.539	6	27443.71 –	59875.08	$3d4p$ –	$3d4d$	$^3F°$ –	^3D	2 –	1	J1
37	3083.076	3083.068	0	27841.35 –	60267.16	$3d4p$ –	$3d4d$	$^3F°$ –	^3G	4 –	3	J1
36	3085.563	3085.575	1*d*	27602.45 –	60001.91	$3d4p$ –	$3d4d$	$^3F°$ –	^3D	3 –	3	J1
	3087.538	3087.513	1	28021.29 –	60400.41	$3d4p$ –	$3d4d$	$^3D°$ –	^1P	2 –	1	J1
	3089.750	3089.728	1	32349.98 –	64705.89	$3d4p$ –	$3d4d$	$^1F°$ –	^3P	3 –	2	J1
36	3092.487	3092.491	6	27602.45 –	59929.46	$3d4p$ –	$3d4d$	$^3F°$ –	^3D	3 –	2	J1
6	3096.803	3096.778	4*g*	67.72 –	32349.98	$3d4s$ –	$3d4p$	^3D –	^1F	2 –	3	J1
	3100.295	3100.273	2	28021.29 –	60267.16	$3d4p$ –	$3d4d$	$^3D°$ –	^3G	2 –	3	J1
	3105.927	3105.915	3*d*	28161.17 –	60348.46	$3d4p$ –	$3d4d$	$^3D°$ –	^3G	3 –	4	J1
6	3107.412	3107.370	3g,bl	177.76 –	32349.98	$3d4s$ –	$3d4p$	^3D –	^1F	3 –	3	J1
33	3107.519	3107.512	6bl	26081.34 –	58252.09	$3d4p$ –	$3d5s$	$^1D°$ –	^1D	2 –	2	J1
36	3108.491	3108.497	6	27841.35 –	60001.91	$3d4p$ –	$3d4d$	$^3F°$ –	^3D	4 –	3	J1
	3113.788	3113.780	1*d*	28161.17 –	60267.16	$3d4p$ –	$3d4d$	$^3D°$ –	^3G	3 –	3	J1
46	3122.459	3122.465	5	32349.98 –	64366.68	$3d4p$ –	$3d4d$	$^1F°$ –	^1D	3 –	2	J1
39	3122.949	3122.954	6	27917.78 –	59929.46	$3d4p$ –	$3d4d$	$^3D°$ –	^3D	1 –	2	J1
39	3126.012	3125.987	6	28021.29 –	60001.91	$3d4p$ –	$3d4d$	$^3D°$ –	^3D	2 –	3	J1
39	3128.271	3128.269	6*d*	27917.78 –	59875.08	$3d4p$ –	$3d4d$	$^3D°$ –	^3D	1 –	1	J1
39	3133.073	3133.086	5*d*	28021.29 –	59929.46	$3d4p$ –	$3d4d$	$^3D°$ –	^3D	2 –	2	J1
39	3138.438	3138.434	6	28021.29 –	59875.08	$3d4p$ –	$3d4d$	$^3D°$ –	^3D	2 –	1	J1
39	3139.718	3139.721	12	28161.17 –	60001.91	$3d4p$ –	$3d4d$	$^3D°$ –	^3D	3 –	3	J1
39	3146.883	3146.881	5	28161.17 –	59929.46	$3d4p$ –	$3d4d$	$^3D°$ –	^3D	3 –	2	J1
	3154.953	3154.948	1	27841.35 –	59528.42	$3d4p$ –	$3d4d$	$^3F°$ –	^1F	4 –	3	J1
32	3170.348	3170.357	6	26081.34 –	57614.40	$3d4p$ –	$3d5s$	$^1D°$ –	^3D	2 –	2	J1
32	3176.652	3176.656	1	26081.34 –	57551.88	$3d4p$ –	$3d5s$	$^1D°$ –	^3D	2 –	1	J1
	3187.121	3187.117	4	28161.17 –	59528.42	$3d4p$ –	$3d4d$	$^3D°$ –	^1F	3 –	3	J1
42	3190.385	3190.381	8	29736.27 –	61071.43	$3d4p$ –	$3d4d$	$^3P°$ –	^3S	0 –	1	J1
42	3190.984	3190.981	10	29742.16 –	61071.43	$3d4p$ –	$3d4d$	$^3P°$ –	^3S	1 –	1	J1
42	3199.331	3199.331	8	29823.93 –	61071.43	$3d4p$ –	$3d4d$	$^3P°$ –	^3S	2 –	1	J1
5	3244.162	3244.163	1*g*	0.00 –	30815.70	$3d4s$ –	$3d4p$	^3D –	$^1P°$	1 –	1	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3244.938	3244.934	4	27443.71	58252.09	$3d4p$	$3d5s$	$^3F^\circ$	^1D	2	2	J1
5	3251.316	3251.308	7*g*	67.72	30815.70	$3d4s$	$3d4p$	^3D	$^1P^\circ$	2	1	J1
	3260.187	3260.198	3	29736.27	60400.41	$3d4p$	$3d4d$	$^3P^\circ$	^1P	0	1	J1
	3260.812	3260.824	3	29742.16	60400.41	$3d4p$	$3d4d$	$^3P^\circ$	^1P	1	1	J1
	3261.743	3261.740	3	27602.45	58252.09	$3d4p$	$3d5s$	$^3F^\circ$	^1D	3	2	J1
	3269.543	3269.545	0	29823.93	60400.41	$3d4p$	$3d4d$	$^3P^\circ$	^1P	2	1	J1
	3295.648	3295.648	0	27917.78	58252.09	$3d4p$	$3d5s$	$^3D^\circ$	^1D	1	2	J1
35	3299.361	3299.357	3	27443.71	57743.92	$3d4p$	$3d5s$	$^3F^\circ$	^3D	2	3	J1
	3304.205	3304.208	4	30815.70	61071.43	$3d4p$	$3d4d$	$^1P^\circ$	^3S	1	1	J1
	3306.928	3306.933	4	28021.29	58252.09	$3d4p$	$3d5s$	$^3D^\circ$	^1D	2	2	J1
41	3311.698	3311.698	8	29742.16	59929.46	$3d4p$	$3d4d$	$^3P^\circ$	^3D	1	2	J1
41	3312.715	3312.721	9	29823.93	60001.91	$3d4p$	$3d4d$	$^3P^\circ$	^3D	2	3	J1
35	3313.516	3313.521	4	27443.71	57614.40	$3d4p$	$3d5s$	$^3F^\circ$	^3D	2	2	J1
35	3316.730	3316.734	6	27602.45	57743.92	$3d4p$	$3d5s$	$^3F^\circ$	^3D	3	3	J1
41	3317.023	3317.026	6	29736.27	59875.08	$3d4p$	$3d4d$	$^3P^\circ$	^3D	0	1	J1
41	3317.676	3317.675	5	29742.16	59875.08	$3d4p$	$3d4d$	$^3P^\circ$	^3D	1	1	J1
35	3320.400	3320.402	9	27443.71	57551.88	$3d4p$	$3d5s$	$^3F^\circ$	^3D	2	1	J1
41	3320.693	3320.693	5	29823.93	59929.46	$3d4p$	$3d4d$	$^3P^\circ$	^3D	2	2	J1
	3322.021	3322.013	0	61071.43	91165.0	$3d4d$	$3d6f$	^3S	$^3P^\circ$	1	2	J1
	3322.305	3322.306	1	28161.17	58252.09	$3d4p$	$3d5s$	$^3D^\circ$	^1D	3	2	J1
41	3326.720	3326.703	1	29823.93	59875.08	$3d4p$	$3d4d$	$^3P^\circ$	^3D	2	1	J1
35	3331.044	3331.048	10	27602.45	57614.40	$3d4p$	$3d5s$	$^3F^\circ$	^3D	3	2	J1
35	3343.233	3343.233	11	27841.35	57743.92	$3d4p$	$3d5s$	$^3F^\circ$	^3D	4	3	J1
4	3352.066	3352.049	5*g*,bl	0.00	29823.93	$3d4s$	$3d4p$	^3D	$^3P^\circ$	1	2	J1
12	3353.724	3353.724	13bl	2540.95	32349.98	$3d4s$	$3d4p$	^1D	$^1F^\circ$	2	3	J1
	3359.231	3359.232	3	25955.2	55715.36	$3d^2$	$4s4p$	^1S	$^1P^\circ$	0	1	J1
4	3359.668	3359.678	12*g*	67.72	29823.93	$3d4s$	$3d4p$	^3D	$^3P^\circ$	2	2	J1
4	3361.257	3361.265	11*g*	0.00	29742.16	$3d4s$	$3d4p$	^3D	$^3P^\circ$	1	1	J1
4	3361.926	3361.930	11*g*	0.00	29736.27	$3d4s$	$3d4p$	^3D	$^3P^\circ$	1	0	J1
38	3363.479	3363.473	5	28021.29	57743.92	$3d4p$	$3d5s$	$^3D^\circ$	^3D	2	3	J1
	3365.540	3365.527	1	29823.93	59528.42	$3d4p$	$3d4d$	$^3P^\circ$	^1F	2	3	J1
38	3366.430	3366.419	5	27917.78	57614.40	$3d4p$	$3d5s$	$^3D^\circ$	^3D	1	2	J1
4	3368.936	3368.936	12*g*	67.72	29742.16	$3d4s$	$3d4p$	^3D	$^3P^\circ$	2	1	J1
4	3372.150	3372.148	12*g*	177.76	29823.93	$3d4s$	$3d4p$	^3D	$^3P^\circ$	3	2	J1
38	3373.523	3373.522	5	27917.78	57551.88	$3d4p$	$3d5s$	$^3D^\circ$	^3D	1	1	J1
38	3378.199	3378.195	9	28021.29	57614.40	$3d4p$	$3d5s$	$^3D^\circ$	^3D	2	2	J1
43	3379.161	3379.154	6	30815.70	60400.41	$3d4p$	$3d4d$	$^1P^\circ$	^1P	1	1	J1
38	3379.377	3379.378	9	28161.17	57743.92	$3d4p$	$3d5s$	$^3D^\circ$	^3D	3	3	J1
38	3385.349	3385.347	5	28021.29	57551.88	$3d4p$	$3d5s$	$^3D^\circ$	^3D	2	1	J1
38	3394.242	3394.239	5	28161.17	57614.40	$3d4p$	$3d5s$	$^3D^\circ$	^3D	3	2	J1
	3433.827	3433.818	0	30815.70	59929.46	$3d4p$	$3d4d$	$^1P^\circ$	^3D	1	2	J1
	3516.644	3516.633	0	29823.93	58252.09	$3d4p$	$3d5s$	$^3P^\circ$	^1D	2	2	J1
	3535.019	3535.017	0*d*	57551.88	85832.20	$3d5s$	$3d5f$	^3D	$^3P^\circ$	1	0	J1
11	3535.713	3535.714	13	2540.95	30815.70	$3d4s$	$3d4p$	^1D	$^1P^\circ$	2	1	J1
3	3558.534	3558.532	12*g*	67.72	28161.17	$3d4s$	$3d4p$	^3D	$^3D^\circ$	2	3	J1
3	3567.702	3567.696	12*g*	0.00	28021.29	$3d4s$	$3d4p$	^3D	$^3D^\circ$	1	2	J1
3	3572.530	3572.526	13*g*	177.76	28161.17	$3d4s$	$3d4p$	^3D	$^3D^\circ$	3	3	J1
3	3576.340	3576.340	12*g*	67.72	28021.29	$3d4s$	$3d4p$	^3D	$^3D^\circ$	2	2	J1
40	3580.655	3580.641	8bl	29823.93	57743.92	$3d4p$	$3d5s$	$^3P^\circ$	^3D	2	3	J1
3	3580.928	3580.924	12*g*,bl	0.00	27917.78	$3d4s$	$3d4p$	^3D	$^3D^\circ$	1	1	J1
40	3586.776	3586.775	6	29742.16	57614.40	$3d4p$	$3d5s$	$^3P^\circ$	^3D	1	2	J1
3	3589.633	3589.632	11*g*	67.72	27917.78	$3d4s$	$3d4p$	^3D	$^3D^\circ$	2	1	J1
3	3590.474	3590.474	11*g*	177.76	28021.29	$3d4s$	$3d4p$	^3D	$^3D^\circ$	3	2	J1
	3591.113	3591.111	0*d*	57614.40	85452.99	$3d5s$	$3d5f$	^3D	$^\circ$	2	3	J1
40	3594.086	3594.078	4	29736.27	57551.88	$3d4p$	$3d5s$	$^3P^\circ$	^3D	0	1	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
40	3594.831	3594.839	4	29742.16	57551.88	$3d4p$	$3d5s$	$^3P^\circ$	^3D	1	1	J1
40	3597.331	3597.329	5	29823.93	57614.40	$3d4p$	$3d5s$	$^3P^\circ$	^3D	2	2	J1
40	3605.450	3605.441	1	29823.93	57551.88	$3d4p$	$3d5s$	$^3P^\circ$	^3D	2	1	J1
2	3613.831	3613.829	13*g*	177.76	27841.35	$3d4s$	$3d4p$	^3D	$^3F^\circ$	3	4	J1
	3615.344	3615.353	1	32349.98	60001.91	$3d4p$	$3d4d$	$^1F^\circ$	^3D	3	3	J1
18	3629.109	3629.110	1	4802.87	32349.98	$3d^2$	$3d4p$	^3F	$^1F^\circ$	2	3	J1
2	3630.742	3630.742	13*g*	67.72	27602.45	$3d4s$	$3d4p$	^3D	$^3F^\circ$	2	3	J1
	3642.407	3642.418	0*d*	63374.63	90821.1	$3d4d$	$3d6f$	^3F	$^3G^\circ$	2	3	J1
2	3642.782	3642.784	13*g*	0.00	27443.71	$3d4s$	$3d4p$	^3D	$^3F^\circ$	1	2	J1
	3643.751	3643.756	5	30815.70	58252.09	$3d4p$	$3d5s$	$^1P^\circ$	^1D	1	2	J1
2	3645.308	3645.310	12*g*	177.76	27602.45	$3d4s$	$3d4p$	^3D	$^3F^\circ$	3	3	J1
2	3651.798	3651.795	11*g*,bl	67.72	27443.71	$3d4s$	$3d4p$	^3D	$^3F^\circ$	2	2	J1
		3651.802		63445.16	90821.1	$3d4d$	$3d6f$	^3F	$^3G^\circ$	3	3	J1
18	3653.632	3653.637	0	4987.79	32349.98	$3d^2$	$3d4p$	^3F	$^1F^\circ$	4	3	J1
10	3664.245	3664.245	4	2540.95	29823.93	$3d4s$	$3d4p$	^1D	$^3P^\circ$	2	2	J1
2	3666.530	3666.534	7*g*	177.76	27443.71	$3d4s$	$3d4p$	^3D	$^3F^\circ$	3	2	J1
	3669.483	3669.485	2*d*	12101.50	39345.52	$3d^2$	$4s4p$	^3P	$^3P^\circ$	1	2	J1
10	3675.267	3675.260	4	2540.95	29742.16	$3d4s$	$3d4p$	^1D	$^3P^\circ$	2	1	J1
	3676.621	3676.627	4	12154.42	39345.52	$3d^2$	$4s4p$	^3P	$^3P^\circ$	2	2	J1
45	3678.331	3678.340	10	32349.98	59528.42	$3d4p$	$3d4d$	$^1F^\circ$	^1F	3	3	J1
	3697.038	3697.044	2	12074.10	39115.04	$3d^2$	$4s4p$	^3P	$^3P^\circ$	0	1	J1
	3700.789	3700.794	1	12101.50	39115.04	$3d^2$	$4s4p$	^3P	$^3P^\circ$	1	1	J1
	3708.061	3708.058	2	12154.42	39115.04	$3d^2$	$4s4p$	^3P	$^3P^\circ$	2	1	J1
	3716.317	3716.318	2	12101.50	39002.20	$3d^2$	$4s4p$	^3P	$^3P^\circ$	1	0	J1
	3778.345	3778.343	0	64705.89	91165.0	$3d4d$	$3d6f$	^3P	$^3P^\circ$	2	2	J1
1	3833.080	3833.071	13*g*	0.00	26081.34	$3d4s$	$3d4p$	^3D	$^1D^\circ$	1	2	J1
1	3843.049	3843.050	12*g*	67.72	26081.34	$3d4s$	$3d4p$	^3D	$^1D^\circ$	2	2	J1
	3851.415	3851.415	0*d*	59875.08	85832.20	$3d4d$	$3d5f$	^3D	$^3P^\circ$	1	0	J1
	3857.384	3857.388	0*d*	59528.42	85445.35	$3d4d$	$3d5f$	^1F	$^3H^\circ$	3	4	J1
1	3859.374	3859.376	5*g*,bl	177.76	26081.34	$3d4s$	$3d4p$	^3D	$^1D^\circ$	3	2	J1
	3859.592	3859.595	12	32349.98	58252.09	$3d4p$	$3d5s$	$^1F^\circ$	^1D	3	2	J1
	3864.247	3864.212	0*d*	59929.46	85800.62	$3d4d$	$3d5f$	^3D	$^3P^\circ$	2	1	J1
	3871.043	3871.038	1*d*	59528.42	85353.96	$3d4d$	$3d5f$	^1F	$^1G^\circ$	3	4	J1
	3878.329	3878.348	0*d*	60001.91	85778.78	$3d4d$	$3d5f$	^3D	$^3P^\circ$	3	2	J1
	3887.434	3887.451	0*d*	59875.08	85591.59	$3d4d$	$3d5f$	^3D	$^3D^\circ$	1	1	J1
	3890.135	3890.131	2bl	60001.91	85700.7	$3d4d$	$3d5f$	^3D	$^3D^\circ$	3	3	J1
9	3902.053	3902.062	0	2540.95	28161.17	$3d4s$	$3d4p$	^1D	$^3D^\circ$	2	3	J1
9	3923.483	3923.483	8	2540.95	28021.29	$3d4s$	$3d4p$	^1D	$^3D^\circ$	2	2	J1
	3924.163	3924.163	1	59929.46	85405.39	$3d4d$	$3d5f$	^3D	$^3G^\circ$	2	3	J1
	3929.187	3929.174	0*d*	60001.91	85445.35	$3d4d$	$3d5f$	^3D	$^3H^\circ$	3	4	J1
	3934.890	3934.900	3	55715.36	81121.77	$4s4p$	$4s5s$	$^1P^\circ$	^1S	1	0	J1
	3936.837	3936.832	0*d*	32349.98	57743.92	$3d4p$	$3d5s$	$^1F^\circ$	^3D	3	3	J1
		3936.848		60267.16	85661.0	$3d4d$	$3d5f$	^3G	$^3D^\circ$	3	2	J1
9	3939.490	3939.487	1*d*	2540.95	27917.78	$3d4s$	$3d4p$	^1D	$^1D^\circ$	2	1	J1
	3942.059	3942.044	1*d*	39345.52	64705.89	$4s4p$	$3d4d$	$^3P^\circ$	^3P	2	2	J1
		3942.058		60457.12	85817.40	$3d4d$	$3d5f$	^1G	$^1H^\circ$	5	5	J1
	3943.339	3943.338	0*d*	60001.91	85353.96	$3d4d$	$3d5f$	^1D	$^1G^\circ$	3	4	J1
	3945.392	3945.395	0*d*	60267.16	85605.99	$3d4d$	$3d5f$	^1G	$^1G^\circ$	3	4	J1
	3951.273	3951.266	0*d*	39345.52	64646.70	$4s4p$	$3d4d$	$^1P^\circ$	^1P	2	1	J1
	3953.383	3953.390	0*d*	60348.46	85636.05	$3d4d$	$3d5f$	^1G	$^1G^\circ$	4	5	J1
	3957.007	3957.016	7*d*	32349.98	57614.40	$3d4p$	$3d5s$	$^1F^\circ$	^1D	3	2	J1
	3957.759	3957.774	1*d*	55715.36	80974.94	$4s4p$	$3d5d$	$^1P^\circ$	^1P	1	0	J1
	3958.100	3958.095	0*d*	60348.46	85605.99	$3d4d$	$3d5f$	^1G	$^1G^\circ$	4	4	J1
	3965.694	3965.693	3	60457.12	85666.26	$3d4d$	$3d5f$	^3G	$^3H^\circ$	5	6	J1
	3970.459	3970.451	0bl	60457.12	85636.05	$3d4d$	$3d5f$	^3G	$^3G^\circ$	5	5	J1
	3970.558	3970.568	1	60267.16	85445.35	$3d4d$	$3d5f$	^3G	$^3H^\circ$	3	4	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	3973.782	3973.781	0	60400.41 –	85558.24	$3d4d$ –	$3d5f$	^1P –	$^1D^\circ$	1 –	2	J1
	3974.077	3974.077	2*d*	60348.46 –	85504.42	$3d4d$ –	$3d5f$	^3G –	$^3H^\circ$	4 –	5	J1
8	3989.056	3989.056	9	2540.95 –	27602.45	$3d4s$ –	$3d4p$	^1D –	$^3F^\circ$	2 –	3	J1
49	3995.507	3995.487	3	39345.52 –	64366.68	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^1D	2 –	2	J1
16		3995.503		4802.87 –	29823.93	$3d^2$ –	$3d4p$	^3F –	$^3P^\circ$	2 –	2	J1
	3997.985	3997.990	0	60348.46 –	85353.96	$3d4d$ –	$3d5f$	^3G –	$^1G^\circ$	4 –	4	J1
16	4008.416	4008.432	4	4883.57 –	29823.93	$3d^2$ –	$3d4p$	^3F –	$^3P^\circ$	3 –	2	J1
16	4008.608	4008.604	4	4802.87 –	29742.16	$3d^2$ –	$3d4p$	^3F –	$^3P^\circ$	2 –	1	J1
8	4014.475	4014.484	13	2540.95 –	27443.71	$3d4s$ –	$3d4p$	^1D –	$^3F^\circ$	2 –	2	J1
	4042.659	4042.662	0	61071.43 –	85800.62	$3d4d$ –	$3d5f$	^3S –	$^3P^\circ$	1 –	1	J1
	4046.257	4046.235	0*d*	61071.43 –	85778.78	$3d4d$ –	$3d5f$	^3S –	$^3P^\circ$	1 –	2	J1
	4050.720	4050.716	1	55715.36 –	80395.38	$4s4p$ –	$3d5d$	$^1P^\circ$ –	^1D	1 –	2	J1
	4184.304	4184.343	0*d*	66048.39 –	89940.27	$3d5p$ –	$4s4d$	$^1D^\circ$ –	^1D	2 –	2	J1
7	4246.820	4246.822	12	2540.95 –	26081.34	$3d4s$ –	$3d4p$	^1D –	$^1D^\circ$	2 –	2	J1
	4263.616	4263.627	1	66492.66 –	89940.27	$3d5p$ –	$4s4d$	$^3D^\circ$ –	^1D	2 –	2	J1
15	4279.928	4279.929	2	4802.87 –	28161.17	$3d^2$ –	$3d4p$	^3F –	$^3D^\circ$	2 –	3	J1
15	4294.764	4294.767	13	4883.57 –	28161.17	$3d^2$ –	$3d4p$	^3F –	$^3D^\circ$	3 –	3	J1
15	4305.711	4305.714	15	4802.87 –	28021.29	$3d^2$ –	$3d4p$	^3F –	$^3D^\circ$	2 –	2	J1
15	4314.082	4314.083	17	4987.79 –	28161.17	$3d^2$ –	$3d4p$	^3F –	$^3D^\circ$	4 –	3	J1
15	4320.745	4320.732	15	4883.57 –	28021.29	$3d^2$ –	$3d4p$	^3F –	$^3D^\circ$	3 –	2	J1
15	4324.998	4324.996	13	4802.87 –	27917.78	$3d^2$ –	$3d4p$	^3F –	$^3D^\circ$	2 –	1	J1
	4338.677	4338.662	0*d*	55715.36 –	78757.46	$4s4p$ –	$3d5d$	$^1P^\circ$ –	^1P	1 –	1	J1
14	4354.602	4354.598	12	4883.57 –	27841.35	$3d^2$ –	$3d4p$	^3F –	$^3F^\circ$	3 –	4	J1
14	4374.462	4374.457	16	4987.79 –	27841.35	$3d^2$ –	$3d4p$	^3F –	$^3F^\circ$	4 –	4	J1
14	4384.808	4384.814	12	4802.87 –	27602.45	$3d^2$ –	$3d4p$	^3F –	$^3F^\circ$	2 –	3	J1
14	4400.386	4400.389	10	4883.57 –	27602.45	$3d^2$ –	$3d4p$	^3F –	$^3F^\circ$	3 –	3	J1
14	4415.544	4415.557	10	4802.87 –	27443.71	$3d^2$ –	$3d4p$	^3F –	$^3F^\circ$	2 –	2	J11
4	4420.661	4420.669	4	4987.79 –	27602.45	$3d^2$ –	$3d4p$	^3F –	$^3F^\circ$	4 –	3	J1
14	4420.661	4420.669	4	4987.79 –	27602.45	$3d^2$ –	$3d4p$	^3F –	$^3F^\circ$	4 –	3	J1
14	4431.362	4431.352	8	4883.57 –	27443.71	$3d^2$ –	$3d4p$	^3F –	$^3F^\circ$	3 –	2	J1
	4433.282	4433.278	0	55715.36 –	78265.7	$4s4p$ –	$4s5s$	$^1P^\circ$ –	^3S	1 –	1	J1
	4503.954	4503.941	0*d*	67743.72 –	89940.27	$3d5p$ –	$4s4d$	$^1F^\circ$ –	^1D	3 –	2	J1
	4519.834	4519.830	2	55715.36 –	77833.88	$4s4p$ –	$3d6s$	$^1P^\circ$ –	^1D	1 –	2	J1
	4529.944	4529.925	7*d*	39002.20 –	61071.43	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^3S	0 –	1	J1
	4553.189	4553.206	7	39115.04 –	61071.43	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^3S	1 –	1	J1
	4559.840	4559.840	0*d*	63528.54 –	85452.99	$3d4d$ –	$3d5f$	^3F –	$^\circ$	4 –	3	J1
	4601.495	4601.510	10	39345.52 –	61071.43	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^3S	2 –	1	J1
	4662.390	4662.393	2	68498.06 –	89940.27	$3d5p$ –	$4s4d$	$^1P^\circ$ –	^1D	1 –	2	J1
24	4670.406	4670.407	18	10944.56 –	32349.98	$3d^2$ –	$3d4p$	^1D –	$^1F^\circ$	2 –	3	J1
13	4698.284	4698.271	11	4802.87 –	26081.34	$3d^2$ –	$3d4p$	^3F –	$^1D^\circ$	2 –	2	J1
	4739.202	4739.195	1	64705.89 –	85800.62	$3d4d$ –	$3d5f$	^3P –	$^3P^\circ$	2 –	1	J1
	4773.103	4773.100	0*d*	64646.70 –	85591.59	$3d4d$ –	$3d5f$	^3P –	$^3D^\circ$	1 –	1	J1
	4786.627	4786.627	0*d*	64705.89 –	85591.59	$3d4d$ –	$3d5f$	^3P –	$^3D^\circ$	2 –	1	J1
	4789.585	4789.567	8	39002.20 –	59875.08	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^3D	0 –	1	J1
	4803.030	4803.019	9	39115.04 –	59929.46	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^3D	1 –	2	J1
	4812.492	4812.492	2	66459.64 –	87233.09	$3d5p$ –	$3d6d$	$^3F^\circ$ –	^3G	2 –	3	J1
	4815.609	4815.600	6*d*	39115.04 –	59875.08	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^3D	1 –	1	J1
	4820.113	4820.154	0*d*	66492.66 –	87233.09	$3d5p$ –	$3d6d$	$^3D^\circ$ –	^3G	2 –	3	J1
	4822.231	4822.230	2*d*	66563.73 –	87295.23	$3d5p$ –	$3d6d$	$^3F^\circ$ –	^3G	3 –	4	J1
	4832.723	4832.722	4	66718.99 –	87405.48	$3d5p$ –	$3d6d$	$^3F^\circ$ –	^3G	4 –	5	J1
	4839.794	4839.765	10bl	39345.52 –	60001.91	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^3D	2 –	3	J1
	4856.809	4856.800	5	39345.52 –	59929.46	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^3D	2 –	2	J1
	4858.621	4858.617	0*d*	66718.99 –	87295.23	$3d5p$ –	$3d6d$	$^3F^\circ$ –	^3G	4 –	4	J1
	4869.687	4869.665	0*d*	39345.52 –	59875.08	$4s4p$ –	$3d4d$	$^3P^\circ$ –	^3D	2 –	1	J1
	4950.194	4950.202	8	12154.42 –	32349.98	$3d^2$ –	$3d4p$	^3P –	$^1F^\circ$	2 –	3	J1
	4974.221	4974.217	0	66459.64 –	86557.7	$3d5p$ –	$3d7s$	$^3F^\circ$ –	^3D	2 –	1	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	4987.787	4987.690	1bl	66563.73	86607.5	$3d5p$	$3d7s$	$^3F^\circ$	^3D	3	2	J1
	4990.609	4990.618	0*d*	66718.99	86751.0	$3d5p$	$3d7s$	$^3F^\circ$	^3D	4	2	J1
23	5031.010	5031.021	17	10944.56	30815.70	$3d^2$	$3d4p$	^1D	$^1P^\circ$	2	1	J1
26	5239.811	5239.813	16	11736.36	30815.70	$4s^2$	$3d4p$	^1S	$^1P^\circ$	0	1	J1
22	5295.313	5295.313	7	10944.56	29823.93	$3d^2$	$3d4p$	^1D	$^3P^\circ$	2	2	J1
22	5318.374	5318.348	12	10944.56	29742.16	$3d^2$	$3d4p$	^1D	$^3P^\circ$	2	1	J1
30	5334.241	5334.240	11	12074.10	30815.70	$3d^2$	$3d4p$	^3P	$^1P^\circ$	0	1	J1
	5340.983	5340.983	bl	55715.36	74433.3	$4s4p$	$4p^2$	$^1P^\circ$	^1D	1	2	J1
30	5342.075	5342.050	7	12101.50	30815.70	$3d^2$	$3d4p$	^3P	$^1P^\circ$	1	1	J1
30	5357.202	5357.199	12	12154.42	30815.70	$3d^2$	$3d4p$	^3P	$^1P^\circ$	2	1	J1
	5389.413	5389.430	2	39002.20	57551.88	$4s4p$	$3d5s$	$^3P^\circ$	^3D	0	1	J1
	5404.085	5404.090	3	39115.04	57614.40	$4s4p$	$3d5s$	$^3P^\circ$	^3D	1	2	J1
	5422.335	5422.416	6bl	39115.04	57551.88	$4s4p$	$3d5s$	$^3P^\circ$	^3D	1	1	J1
	5433.729	5433.745	3	39345.52	57743.92	$4s4p$	$3d5s$	$^3P^\circ$	^3D	2	3	J1
31	5526.785	5526.790	16	14261.32	32349.98	$3d^2$	$3d4p$	^1G	$^1F^\circ$	4	3	J1
25	5552.235	5552.224	6	11736.36	29742.16	$4s^2$	$3d4p$	^1S	$^3P^\circ$	0	1	J1
29	5641.000	5641.001	13	12101.50	29823.93	$3d^2$	$3d4p$	^3P	$^3P^\circ$	1	2	J1
29	5657.907	5657.896	15	12154.42	29823.93	$3d^2$	$3d4p$	^3P	$^3P^\circ$	2	2	J1
29	5658.362	5658.360	13	12074.10	29742.16	$3d^2$	$3d4p$	^3P	$^3P^\circ$	0	1	J1
29	5667.164	5667.149	12	12101.50	29742.16	$3d^2$	$3d4p$	^3P	$^3P^\circ$	1	1	J1
29	5669.055	5669.042	13	12101.50	29736.27	$3d^2$	$3d4p$	^3P	$^3P^\circ$	1	0	J1
29	5684.214	5684.201	15bl	12154.42	29742.16	$3d^2$	$3d4p$	^3P	$^3P^\circ$	2	1	J1
21	5806.770	5806.734	4	10944.56	28161.17	$3d^2$	$3d4p$	^1D	$^3D^\circ$	2	3	J1
21	5890.034	5890.002	5	10944.56	27917.78	$3d^2$	$3d4p$	^1D	$^3D^\circ$	2	1	J1
20	6059.290	6059.240	3	10944.56	27443.71	$3d^2$	$3d4p$	^1D	$^3F^\circ$	2	2	J1
	6175.950	6175.962	0	59528.42	75715.75	$3d4d$	$3d4f$	^1F	$^3D^\circ$	3	3	J1
	6178.200	6178.218	2	11736.36	27917.78	$4s^2$	$3d4p$	^1S	$^3D^\circ$	0	1	J1
	6224.022	6223.990	1	59528.42	75590.84	$3d4d$	$3d4f$	^1F	$^1D^\circ$	3	2	J1
	6235.568	6235.574	1	59528.42	75561.00	$3d4d$	$3d4f$	^1F	$^3H^\circ$	3	4	J1
	6238.849	6238.897	4bl	59528.42	75552.46	$3d4d$	$3d4f$	^1F	$^1F^\circ$	3	3	J1
28	6245.641	6245.637	15	12154.42	28161.17	$3d^2$	$3d4p$	^3P	$^3D^\circ$	2	3	J1
28	6279.781	6279.753	14bl	12101.50	28021.29	$3d^2$	$3d4p$	^3P	$^3D^\circ$	1	2	J1
	6283.366	6283.352	1	60001.91	75912.58	$3d4d$	$3d4f$	^3D	$^3P^\circ$	3	2	J1
28	6300.746	6300.698	7	12154.42	28021.29	$3d^2$	$3d4p$	^3P	$^3D^\circ$	2	2	J1
	6302.625	6302.604	5	59528.42	75390.49	$3d4d$	$3d4f$	^1F	$^3G^\circ$	3	4	J1
	6309.521	6309.522	1	59528.42	75373.10	$3d4d$	$3d4f$	^1F	$^3F^\circ$	3	3	J1
28	6309.914	6309.920	6	12074.10	27917.78	$3d^2$	$3d4p$	^3P	$^3D^\circ$	0	1	J1
28	6320.843	6320.851	7	12101.50	27917.78	$3d^2$	$3d4p$	^3P	$^3D^\circ$	1	1	J1
	6325.103	6325.118	0	59875.08	75680.69	$3d4d$	$3d4f$	^3D	$^3D^\circ$	1	2	J1
	6337.057	6337.062	4	59875.08	75650.90	$3d4d$	$3d4f$	^3D	$^3D^\circ$	1	1	J1
28	6342.032	6342.071	2	12154.42	27917.78	$3d^2$	$3d4p$	^3P	$^3D^\circ$	2	1	J1
	6346.981	6346.955	5	59929.46	75680.69	$3d4d$	$3d4f$	^3D	$^3D^\circ$	2	2	J1
	6358.995	6358.982	1	59929.46	75650.90	$3d4d$	$3d4f$	^3D	$^3D^\circ$	2	1	J1
	6361.286	6361.280	0	59875.08	75590.84	$3d4d$	$3d4f$	^3D	$^1D^\circ$	1	2	J1
	6362.040	6362.058	10	60001.91	75715.75	$3d4d$	$3d4f$	^3D	$^3D^\circ$	3	3	J1
	6370.467	6370.486	14	59528.42	75221.47	$3d4d$	$3d4f$	^1F	$^1G^\circ$	3	4	J1
	6376.292	6376.284	1	60001.91	75680.69	$3d4d$	$3d4f$	^3D	$^3D^\circ$	3	2	J1
	6383.368	6383.369	1	59929.46	75590.84	$3d4d$	$3d4f$	^1D	$^1D^\circ$	2	2	J1
	6420.300	6420.301	6	60348.46	75919.75	$3d4d$	$3d4f$	^1G	$^1H^\circ$	4	5	J1
	6425.342	6425.335	0	60001.91	75561.00	$3d4d$	$3d4f$	^3D	$^3H^\circ$	3	4	J1
	6428.491	6428.483	1	60400.41	75951.88	$3d4d$	$3d4f$	^1P	$^3P^\circ$	1	1	J1
	6428.865	6428.864	1	60001.91	75552.46	$3d4d$	$3d4f$	^3D	$^1F^\circ$	3	3	J1
	6463.013	6463.036	12	60001.91	75470.24	$3d4d$	$3d4f$	^3D	$^3F^\circ$	3	4	J1
	6471.496	6471.529	3	12154.42	27602.45	$3d^2$	$3d4p$	^3P	$^3F^\circ$	2	3	J1
	6473.360	6473.368	9	59929.46	75373.10	$3d4d$	$3d4f$	^3D	$^3F^\circ$	2	3	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	6477.790	6477.810	12	59875.08	75308.13	$3d4d$	$3d4f$	^3D	$^3F^\circ$	1	2	J1
	6496.510	6496.530	10	60001.91	75390.49	$3d4d$	$3d4f$	^3D	$^3G^\circ$	3	4	J1
	6500.461	6500.476	12	59929.46	75308.70	$3d4d$	$3d4f$	^3D	$^3G^\circ$	2	3	J1
	6516.137	6516.165	2	12101.50	27443.71	$3d^2$	$3d4p$	^3P	$^3F^\circ$	1	2	J1
	6531.264	6531.244	0	60001.91	75308.70	$3d4d$	$3d4f$	^3D	$^3G^\circ$	3	3	J1
	6536.765	6536.774	12	60267.16	75561.00	$3d4d$	$3d4f$	^3G	$^3H^\circ$	3	4	J1
	6540.435	6540.426	1	60267.16	75552.46	$3d4d$	$3d4f$	^3G	$^1F^\circ$	3	3	J1
	6542.572	6542.575	2	60400.41	75680.69	$3d4d$	$3d4f$	^1P	$^3D^\circ$	1	2	J1
	6550.215	6550.253	12	60348.46	75610.83	$3d4d$	$3d4f$	^3G	$^3H^\circ$	4	5	J1
	6555.370	6555.355	0	60400.41	75650.90	$3d4d$	$3d4f$	^1P	$^3D^\circ$	1	1	J1
	6558.681	6558.680	12	60457.12	75699.88	$3d4d$	$3d4f$	^3G	$^3H^\circ$	5	6	J1
	6568.670	6568.678	4	60001.91	75221.47	$3d4d$	$3d4f$	^3D	$^1G^\circ$	3	4	J1
	6571.725	6571.709	7	60348.46	75561.00	$3d4d$	$3d4f$	^3G	$^3H^\circ$	4	4	J1
	6575.401	6575.400	0	60348.46	75552.46	$3d4d$	$3d4f$	^3G	$^1F^\circ$	4	3	J1
	6575.815	6575.798	8	60267.16	75470.24	$3d4d$	$3d4f$	^3G	$^3F^\circ$	3	4	J1
	6581.267	6581.274	10	60400.41	75590.84	$3d4d$	$3d4f$	^1P	$^1D^\circ$	1	2	J1
	6597.210	6597.222	8	60457.12	75610.83	$3d4d$	$3d4f$	^3G	$^3H^\circ$	5	5	J1
19	6604.578	6604.601	14	10944.56	26081.34	$3d^2$	$3d4p$	^1D	$^1D^\circ$	2	2	J1
	6610.453	6610.474	3	60267.16	75390.49	$3d4d$	$3d4f$	^3G	$^3G^\circ$	3	4	J1
	6610.683	6610.711	10	60348.46	75471.25	$3d4d$	$3d4f$	^3G	$^3G^\circ$	4	5	J1
	6611.122	6611.152	2	60348.46	75470.24	$3d4d$	$3d4f$	^3G	$^3F^\circ$	4	4	J1
	6618.088	6618.085	3	60267.16	75373.10	$3d4d$	$3d4f$	^3G	$^3F^\circ$	3	3	J1
	6619.004	6618.987	0	60457.12	75561.00	$3d4d$	$3d4f$	^3G	$^3H^\circ$	5	4	J1
	6646.220	6646.203	1	60348.46	75390.49	$3d4d$	$3d4f$	^3G	$^3G^\circ$	4	4	J1
	6646.428	6646.420	4	60267.16	75308.70	$3d4d$	$3d4f$	^3G	$^3G^\circ$	3	3	J1
	6653.898	6653.896	1	60348.46	75373.10	$3d4d$	$3d4f$	^3G	$^3F^\circ$	4	3	J1
	6658.552	6658.554	5	60457.12	75471.25	$3d4d$	$3d4f$	^3G	$^3G^\circ$	5	5	J1
	6658.999	6659.002	0	60457.12	75470.24	$3d4d$	$3d4f$	^3G	$^3F^\circ$	5	4	J1
	6699.215	6699.216	3	61071.43	75994.43	$3d4d$	$3d4f$	^3S	$^3P^\circ$	1	0	J1
	6706.113	6706.082	0	60400.41	75308.13	$3d4d$	$3d4f$	^1P	$^3F^\circ$	1	2	J1
	6718.379	6718.372	5	61071.43	75951.88	$3d4d$	$3d4f$	^3S	$^3P^\circ$	1	1	J1
	6721.756	6721.733	1	60348.46	75221.47	$3d4d$	$3d4f$	^3G	$^1G^\circ$	4	4	J1
	6736.161	6736.163	8	61071.43	75912.58	$3d4d$	$3d4f$	^3S	$^3P^\circ$	1	2	J1
	6823.780	6823.818	0	66389.74	81040.25	$3d5p$	$3d5d$	$^3D^\circ$	^3P	1	1	J1
	6842.211	6842.228	0	66492.66	81103.75	$3d5p$	$3d5d$	$^3D^\circ$	^3P	2	2	J1
	6843.095	6843.085	4	61071.43	75680.69	$3d4d$	$3d4f$	^3S	$^3D^\circ$	1	2	J1
	6854.393	6854.374	3	66389.74	80974.94	$3d5p$	$3d5d$	$^3D^\circ$	^3P	1	0	J1
	6856.533	6856.532	3	66459.64	81040.25	$3d5p$	$3d5d$	$^3F^\circ$	^3P	2	1	J1
	6857.095	6857.068	3	61071.43	75650.90	$3d4d$	$3d4f$	^3S	$^3D^\circ$	1	1	J1
	6872.090	6872.095	3	66492.66	81040.25	$3d5p$	$3d5d$	$^3D^\circ$	^3P	2	1	J1
	6875.686	6875.672	3	66563.73	81103.75	$3d5p$	$3d5d$	$^3F^\circ$	^3P	3	2	J1
	6968.169	6968.181	7	66048.39	80395.38	$3d5p$	$3d5d$	$^1D^\circ$	^1D	2	2	J1
27	7151.216	7151.186	2	12101.50	26081.34	$3d^2$	$3d4p$	^3P	$^1D^\circ$	1	2	J1
	7190.848	7190.855	3	66492.66	80395.38	$3d5p$	$3d5d$	$^3D^\circ$	^1D	2	2	J1
	7192.359	7192.340	4	14261.32	28161.17	$3d^2$	$3d4p$	^1G	$^3D^\circ$	4	3	J1
	7241.206	7241.195	4	67297.68	81103.75	$3d5p$	$3d5d$	$^3P^\circ$	^3P	1	2	J1
	7242.492	7242.475	3	66048.39	79852.02	$3d5p$	$3d5d$	$^1D^\circ$	^3F	2	2	J1
		7242.517		67236.7	81040.25	$3d5p$	$3d5d$	$^3P^\circ$	^3P	0	1	J1
	7274.664	7274.655	4	67297.68	81040.25	$3d5p$	$3d5d$	$^3P^\circ$	^3P	1	1	J1
	7293.235	7293.235	7	67396.19	81103.75	$3d5p$	$3d5d$	$^3P^\circ$	^3P	2	2	J1
	7309.374	7309.392	4	67297.68	80974.94	$3d5p$	$3d5d$	$^3P^\circ$	^3P	1	0	J1
	7327.198	7327.178	5	67396.19	81040.25	$3d5p$	$3d5d$	$^3P^\circ$	^3P	2	1	J1
	7424.095	7424.093	9	66459.64	79925.59	$3d5p$	$3d5d$	$^3F^\circ$	^3F	2	3	J1
	7426.118	7426.117	8	66389.74	79852.02	$3d5p$	$3d5d$	$^3D^\circ$	^3F	1	2	J1
	7439.810	7439.806	10	66563.73	80001.24	$3d5p$	$3d5d$	$^3F^\circ$	^3F	3	4	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	7442.343	7442.342	7	66492.66	79925.59	$3d5p$	$3d5d$	$^3D^\circ$	^3F	2	3	J1
	7450.968	7450.968	9	66583.86	80001.24	$3d5p$	$3d5d$	$^3D^\circ$	^3F	3	4	J1
	7464.871	7464.877	1	66459.64	79852.02	$3d5p$	$3d5d$	$^3F^\circ$	^3F	2	2	J1
	7481.928	7481.927	5	66563.73	79925.59	$3d5p$	$3d5d$	$^3F^\circ$	^3F	3	3	J1
	7483.324	7483.328	9	66492.66	79852.02	$3d5p$	$3d5d$	$^3D^\circ$	^3F	2	2	J1
	7493.216	7493.216	10	66583.86	79925.59	$3d5p$	$3d5d$	$^3D^\circ$	^3F	3	3	J1
	7526.770	7526.772	11	66718.99	80001.24	$3d5p$	$3d5d$	$^3F^\circ$	^3F	4	4	J1
	7569.896	7569.887	2	66718.99	79925.59	$3d5p$	$3d5d$	$^3F^\circ$	^3F	4	3	J1
	7709.172	7709.173	15	67743.72	80711.71	$3d5p$	$3d5d$	$^1F^\circ$	^1G	3	4	J1
	7866.214	7866.232	9	66048.39	78757.46	$3d5p$	$3d5d$	$^1D^\circ$	^1P	2	1	J1
	7901.935	7901.927	2	67743.72	80395.38	$3d5p$	$3d5d$	$^1F^\circ$	^1D	3	2	J1
	7919.424	7919.423	2	68498.06	81121.77	$3d5p$	$4s5s$	$^1P^\circ$	^1S	1	0	J1
	7957.000	7957.003	2	66048.39	78612.48	$3d5p$	$3d5d$	$^1D^\circ$	^3D	2	3	J1
	8042.284	8042.284	2	66048.39	78479.25	$3d5p$	$3d5d$	$^1D^\circ$	^3D	2	1	J1
	8068.004	8068.018	0	63528.54	75919.75	$3d4d$	$3d4f$	^3F	$^1H^\circ$	4	5	J1
	8083.302	8083.342	1	66389.74	78757.46	$3d5p$	$3d5d$	$^3D^\circ$	^1P	1	1	J1
	8097.788	8097.786	15	66048.39	78394.05	$3d5p$	$3d5d$	$^1D^\circ$	^1F	2	3	J1
	8123.836	8123.844	0	63374.63	75680.69	$3d4d$	$3d4f$	^3F	$^3D^\circ$	2	2	J1
	8143.536	8143.557	3	63374.63	75650.90	$3d4d$	$3d4f$	^3F	$^3D^\circ$	2	1	J1
	8151.168	8151.173	2	66492.66	78757.46	$3d5p$	$3d5d$	$^3D^\circ$	^1P	2	1	J1
	8170.670	8170.673	4d	63445.16	75680.69	$3d4d$	$3d4f$	^3F	$^3D^\circ$	3	2	J1
	8183.617	8183.595	1	63374.63	75590.84	$3d4d$	$3d4f$	^3F	$^1D^\circ$	2	2	J1
	8202.246	8202.254	12	66459.64	78648.06	$3d5p$	$3d5d$	$^3F^\circ$	^3G	2	3	J1
	8203.057	8203.068	4	63528.54	75715.75	$3d4d$	$3d4f$	^3F	$^3D^\circ$	4	3	J1
	8209.377	8209.387	10	63374.63	75552.46	$3d4d$	$3d4f$	^3F	$^1F^\circ$	2	3	J1
	8224.537	8224.535	13	66492.66	78648.06	$3d5p$	$3d5d$	$^3D^\circ$	^3G	2	3	J1
	8226.265	8226.268	11	66459.64	78612.48	$3d5p$	$3d5d$	$^3F^\circ$	^3D	2	3	J1
	8228.045	8228.042	9	66389.74	78539.96	$3d5p$	$3d5d$	$^3D^\circ$	^3D	1	2	J1
	8228.532	8228.543	15	66563.73	78713.21	$3d5p$	$3d5d$	$^3F^\circ$	^3G	3	4	J1
	8242.215	8242.199	9	66583.86	78713.21	$3d5p$	$3d5d$	$^3D^\circ$	^3G	3	4	J1
	8251.374	8251.390	9	63445.16	75561.00	$3d4d$	$3d4f$	^3F	$^3H^\circ$	3	4	J1
	8257.214	8257.210	9	63445.16	75552.46	$3d4d$	$3d4f$	^3F	$^1F^\circ$	3	3	J1
	8261.340	8261.338	18	66718.99	78820.24	$3d5p$	$3d5d$	$^3F^\circ$	^3G	4	5	J1
	8269.356	8269.361	10	66389.74	78479.25	$3d5p$	$3d5d$	$^3D^\circ$	^3D	1	1	J1
	8272.908	8272.905	9	66563.73	78648.06	$3d5p$	$3d5d$	$^3F^\circ$	^3G	3	3	J1
	8274.238	8274.302	12	63528.54	75610.83	$3d4d$	$3d4f$	^3F	$^3H^\circ$	4	5	J1
	8275.655	8275.651	10	66459.64	78539.96	$3d5p$	$3d5d$	$^3F^\circ$	^3D	2	2	J1
	8286.686	8286.709	0	66583.86	78648.06	$3d5p$	$3d5d$	$^3D^\circ$	^3G	3	3	J1
	8297.347	8297.335	8	66563.73	78612.48	$3d5p$	$3d5d$	$^3F^\circ$	^3D	3	3	J1
	8298.331	8298.334	8	66492.66	78539.96	$3d5p$	$3d5d$	$^3D^\circ$	^3D	2	2	J1
	8308.560	8308.569	6	63528.54	75561.00	$3d4d$	$3d4f$	^3F	$^3H^\circ$	4	4	J1
	8311.220	8311.221	10	66583.86	78612.48	$3d5p$	$3d5d$	$^3D^\circ$	^3D	3	3	J1
	8313.667	8313.668	12	63445.16	75470.24	$3d4d$	$3d4f$	^3F	$^3F^\circ$	3	4	J1
	8314.458	8314.470	1	63528.54	75552.46	$3d4d$	$3d4f$	^1F	$^1F^\circ$	4	3	J1
	8332.116	8332.106	13	63374.63	75373.10	$3d4d$	$3d4f$	^1F	$^1F^\circ$	2	3	J1
	8335.042	8335.058	7	66718.99	78713.21	$3d5p$	$3d5d$	$^1F^\circ$	^1G	4	4	J1
	8340.352	8340.364	7	66492.66	78479.25	$3d5p$	$3d5d$	$^1D^\circ$	^1D	2	1	J1
	8347.600	8347.579	0	66563.73	78539.96	$3d5p$	$3d5d$	$^1F^\circ$	^1D	3	2	J1
	8361.635	8361.633	9	66583.86	78539.96	$3d5p$	$3d5d$	$^1D^\circ$	^1D	3	2	J1
	8369.166	8369.172	13	63445.16	75390.49	$3d4d$	$3d4f$	^1F	$^1G^\circ$	3	4	J1
	8371.008	8371.008	15	63528.54	75471.25	$3d4d$	$3d4f$	^1F	$^1G^\circ$	4	5	J1
	8371.724	8371.716	11	63528.54	75470.24	$3d4d$	$3d4f$	^1F	$^1F^\circ$	4	4	J1
	8377.067	8376.956	11	75471.25	87405.48	$3d4f$	$3d6d$	$^3G^\circ$	^1G	5	5	J1
		8377.069		63374.63	75308.70	$3d4d$	$3d4f$	^3F	$^3G^\circ$	2	3	J1
	8377.482	8377.469	9	63374.63	75308.13	$3d4d$	$3d4f$	^3F	$^3F^\circ$	2	2	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	8380.598	8380.580	0	66718.99	78648.06	$3d5p$	$3d5d$	$^3F^\circ$	^3G	4	3	J1
	8381.368	8381.374	10	63445.16	75373.10	$3d4d$	$3d4f$	^3F	$^3F^\circ$	3	3	J1
	8402.948	8402.945	9*d*	68498.06	80395.38	$3d5p$	$3d5d$	$^1P^\circ$	^1D	1	2	J1
	8405.659	8405.651	6	66718.99	78612.48	$3d5p$	$3d5d$	$^3F^\circ$	^3D	4	3	J1
	8417.708	8417.704	5*d*	67297.68	79174.14	$3d5p$	$3d5d$	$^3P^\circ$	^3S	1	1	J1
	8426.856	8426.871	2	63445.16	75308.70	$3d4d$	$3d4f$	^3F	$^3G^\circ$	3	3	J1
	8427.261	8427.276	1	63445.16	75308.13	$3d4d$	$3d4f$	^3F	$^3F^\circ$	3	2	J1
	8428.008	8428.001	3	63528.54	75390.49	$3d4d$	$3d4f$	^3F	$^3G^\circ$	4	4	J1
	8440.368	8440.375	0	63528.54	75373.10	$3d4d$	$3d4f$	^3F	$^3F^\circ$	4	3	J1
		8440.432		75561.00	87405.48	$3d4f$	$3d6d$	$^3H^\circ$	^3G	4	5	J1
	8450.550	8450.534	3	66563.73	78394.05	$3d5p$	$3d5d$	$^3F^\circ$	^1F	3	3	J1
	8464.925	8464.938	0	66583.86	78394.05	$3d5p$	$3d5d$	$^3D^\circ$	^1F	3	3	J1
	8482.684	8482.679	11	66048.39	77833.88	$3d5p$	$3d6s$	$^1D^\circ$	^1D	2	2	J1
	8486.525	8486.517	0	63528.54	75308.70	$3d4d$	$3d4f$	^3F	$^3G^\circ$	4	3	J1
	8488.100	8488.101	10	67396.19	79174.14	$3d5p$	$3d5d$	$^3P^\circ$	^3S	2	1	J1
	8489.303	8489.292	11	63445.16	75221.47	$3d4d$	$3d4f$	^3F	$^1G^\circ$	3	4	J1
	8539.849	8539.843	2	64366.68	76073.28	$3d4d$	$3d4f$	^1D	$^1P^\circ$	2	1	J1
	8549.780	8549.827	3*d*	63528.54	75221.47	$3d4d$	$3d4f$	^3F	$^1G^\circ$	4	4	J1
	8629.330	8629.332	1	64366.68	75951.88	$3d4d$	$3d4f$	^1D	$^1P^\circ$	2	1	J1
	8692.360	8692.357	1	55715.36	67216.56	$4s4p$	$3d4d$	$^1P^\circ$	^1S	1	0	J1
	8725.491	8725.503	0	64615.77	76073.28	$3d4d$	$3d4f$	^3P	$^1P^\circ$	0	1	J1
	8808.915	8808.875	0	64366.68	75715.75	$3d4d$	$3d4f$	^1D	$^3D^\circ$	2	3	J1
	8809.917	8809.916	2	64646.70	75994.43	$3d4d$	$3d4f$	^3P	$^3P^\circ$	1	0	J1
	8814.969	8814.973	0	66492.66	77833.88	$3d5p$	$3d6s$	$^3D^\circ$	^1D	2	2	J1
	8818.947	8818.946	0	64615.77	75951.88	$3d4d$	$3d4f$	^3P	$^3P^\circ$	0	1	J1
	8836.165	8836.173	1	64366.68	75680.69	$3d4d$	$3d4f$	^1D	$^3D^\circ$	2	2	J1
	8843.077	8843.074	2	64646.70	75951.88	$3d4d$	$3d4f$	^3P	$^3P^\circ$	1	1	J1
	8884.970	8884.972	0	67396.19	78648.06	$3d5p$	$3d5d$	$^3P^\circ$	^3G	2	3	J1
	8889.600	8889.617	0	64705.89	75951.88	$3d4d$	$3d4f$	^3P	$^3P^\circ$	2	1	J1
	8892.525	8892.551	3	67297.68	78539.96	$3d5p$	$3d5d$	$^3P^\circ$	^3D	1	2	J1
	8906.899	8906.907	4	64366.68	75590.84	$3d4d$	$3d4f$	^1D	$^1D^\circ$	2	2	J1
	8913.144	8913.157	4	67396.19	78612.48	$3d5p$	$3d5d$	$^3P^\circ$	^3D	2	3	J1
	8920.779	8920.792	5	64705.89	75912.58	$3d4d$	$3d4f$	^3P	$^3P^\circ$	2	2	J1
	8937.448	8937.468	7	64366.68	75552.46	$3d4d$	$3d4f$	^1D	$^1F^\circ$	2	3	J1
	8940.823	8940.833	0	67297.68	78479.25	$3d5p$	$3d5d$	$^3P^\circ$	^3D	1	1	J1
	8971.179	8971.161	1	67396.19	78539.96	$3d5p$	$3d5d$	$^3P^\circ$	^3D	2	2	J1
	9059.482	9059.481	4	64615.77	75650.90	$3d4d$	$3d4f$	^3P	$^3D^\circ$	0	1	J1
	9060.425	9060.417	5	64646.70	75680.69	$3d4d$	$3d4f$	^3P	$^3D^\circ$	1	2	J1
	9080.293	9080.275	7	64705.89	75715.75	$3d4d$	$3d4f$	^3P	$^3D^\circ$	2	3	J1
	9083.095	9083.113	2	64366.68	75373.10	$3d4d$	$3d4f$	^1D	$^3F^\circ$	2	3	J1
	9084.929	9084.945	0	64646.70	75650.90	$3d4d$	$3d4f$	^3P	$^3D^\circ$	1	1	J1
	9109.293	9109.283	0	64705.89	75680.69	$3d4d$	$3d4f$	^3P	$^3D^\circ$	2	2	J1
	9134.805	9134.803	1	64646.70	75590.84	$3d4d$	$3d4f$	^3P	$^1D^\circ$	1	2	J1
	9148.671	9148.688	0	66459.64	77387.17	$3d5p$	$3d6s$	$^3F^\circ$	^3D	2	3	J1
	9168.165	9168.144	0	67743.72	78648.06	$3d5p$	$3d5d$	$^1F^\circ$	^3G	3	3	J1
	9176.445	9176.416	0	66492.66	77387.17	$3d5p$	$3d6s$	$^3D^\circ$	^3D	2	3	J1
	9199.427	9199.435	0	66389.74	77256.99	$3d5p$	$3d6s$	$^3D^\circ$	^3D	1	2	J1
	9252.042	9252.050	2	66389.74	77195.19	$3d5p$	$3d6s$	$^3D^\circ$	^3D	1	1	J1
	9253.873	9253.883	6	66583.86	77387.17	$3d5p$	$3d6s$	$^3D^\circ$	^3D	3	3	J1
	9287.403	9287.393	3	66492.66	77256.99	$3d5p$	$3d6s$	$^3D^\circ$	^3D	2	2	J1
	9312.285	9312.291	4	66459.64	77195.19	$3d5p$	$3d6s$	$^3F^\circ$	^3D	2	1	J1
	9349.111	9349.120	4	66563.73	77256.99	$3d5p$	$3d6s$	$^3F^\circ$	^3D	3	2	J1
	9357.481	9357.477	9	65236.04	75919.75	$3d4d$	$3d4f$	^1G	$^1H^\circ$	4	5	J1
	9371.108	9371.099	5	66718.99	77387.17	$3d5p$	$3d6s$	$^3F^\circ$	^3D	4	3	J1
	9386.796	9386.805	3	67743.72	78394.05	$3d5p$	$3d5d$	$^1F^\circ$	^1F	3	3	J1

Sc II – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	9447.417	9447.400	0*d*	75221.47	85803.49	$3d4f$	$3d(^2D_{5/2})5g$	$^1G^\circ$	$^2[^{11}/_2]$	4	5	J1
	9525.939	9525.915	0	75373.10	85867.9	$3d4f$	$3d(^2D_{5/2})5g$	$^3F^\circ$	$^2[^5/_2]$	3	3	J1
	9541.665	9541.726	0	75390.49	85867.9	$3d4f$	$3d(^2D_{5/2})5g$	$^3G^\circ$	$^2[^5/_2]$	4	3	J1
	9569.720	9569.592	0	75373.10	85820.00	$3d4f$	$3d(^2D_{5/2})5g$	$^3F^\circ$	$^2[^7/_2]$	3	4	J1
		9569.776		75373.10	85819.8	$3d4f$	$3d(^2D_{5/2})5g$	$^3F^\circ$	$^2[^7/_2]$	3	3	J1
	9577.567	9577.578	0	75221.47	85659.66	$3d4f$	$3d(^2D_{3/2})5g$	$^1G^\circ$	$^2[^{11}/_2]$	4	5	J1
	9585.546	9585.549	0	75390.49	85820.00	$3d4f$	$3d(^2D_{5/2})5g$	$^3G^\circ$	$^2[^7/_2]$	4	4	J1
		9585.732		75390.49	85819.8	$3d4f$	$3d(^2D_{5/2})5g$	$^3G^\circ$	$^2[^7/_2]$	4	3	J1
	9598.812	9598.793	0	75373.10	85788.22	$3d4f$	$3d(^2D_{5/2})5g$	$^3F^\circ$	$^2[^9/_2]$	3	4	J1
	9600.750	9600.747	0	75390.49	85803.49	$3d4f$	$3d(^2D_{5/2})5g$	$^3G^\circ$	$^2[^{11}/_2]$	4	5	J1
	9606.086	9606.070	0	75471.25	85878.48	$3d4f$	$3d(^2D_{5/2})5g$	$^3G^\circ$	$^2[^{13}/_2]$	5	6	J1
	9615.068	9615.041	1	75390.49	85788.01	$3d4f$	$3d(^2D_{3/2})5g$	$^3G^\circ$	$^2[^9/_2]$	4	5	J1
	9631.062	9631.084	0	75308.70	85688.9	$3d4f$	$3d(^2D_{3/2})5g$	$^3G^\circ$	$^2[^5/_2]$	3	3	J1
	9636.121	9636.106	0*d*	65236.04	75610.83	$3d4d$	$3d4f$	^1G	$^3H^\circ$	4	5	J1
	9643.932	9643.905	3	75221.47	85587.87	$3d4f$	$3d(^2D_{3/2})5g$	$^1G^\circ$	$^2[^9/_2]$	4	5	J1
	9659.394	9659.410	3	75470.24	85820.00	$3d4f$	$3d(^2D_{5/2})5g$	$^3F^\circ$	$^2[^7/_2]$	4	4	J1
		9659.597		75470.24	85819.8	$3d4f$	$3d(^2D_{5/2})5g$	$^3F^\circ$	$^2[^7/_2]$	4	3	J1
	9675.200	9675.209	1	75471.25	85804.11	$3d4f$	$3d(^2D_{5/2})5g$	$^3G^\circ$	$^2[^{11}/_2]$	5	6	J1
	9689.347	9689.162	2*d*	75470.24	85788.22	$3d4f$	$3d(^2D_{5/2})5g$	$^3F^\circ$	$^2[^9/_2]$	4	4	J1
		9689.359		75470.24	85788.01	$3d4f$	$3d(^2D_{5/2})5g$	$^3F^\circ$	$^2[^9/_2]$	4	5	J1
	9690.275	9690.111	0	75471.25	85788.22	$3d4f$	$3d(^2D_{5/2})5g$	$^3G^\circ$	$^2[^9/_2]$	5	4	J1
		9690.308		75471.25	85788.01	$3d4f$	$3d(^2D_{5/2})5g$	$^3G^\circ$	$^2[^9/_2]$	5	5	J1
	9691.203	9691.210	0	75373.10	85688.9	$3d4f$	$3d(^2D_{3/2})5g$	$^3F^\circ$	$^2[^5/_2]$	3	3	J1
	9703.015	9702.995	1*d*	75308.13	85611.4	$3d4f$	$3d(^2D_{3/2})5g$	$^3F^\circ$	$^2[^7/_2]$	2	3	J1
	9703.373	9703.391	0	75308.70	85611.55	$3d4f$	$3d(^2D_{3/2})5g$	$^3G^\circ$	$^2[^7/_2]$	3	4	J1
	9725.460	9725.461	2	75308.70	85588.17	$3d4f$	$3d(^2D_{3/2})5g$	$^3G^\circ$	$^2[^9/_2]$	3	4	J1
	9735.214	9735.215	2	75390.49	85659.66	$3d4f$	$3d(^2D_{3/2})5g$	$^3G^\circ$	$^2[^{11}/_2]$	4	5	J1
	9736.813	9736.656	1	75610.83	85878.48	$3d4f$	$3d(^2D_{5/2})5g$	$^3H^\circ$	$^2[^{13}/_2]$	5	6	J1
		9736.950		75552.46	85819.8	$3d4f$	$3d(^2D_{5/2})5g$	$^1F^\circ$	$^2[^7/_2]$	3	4	J1
	9744.487	9744.486	2	68498.06	78757.46	$3d5p$	$3d5d$	$^1P^\circ$	^1P	1	1	J1
	9757.260	9757.259	5	58252.09	68498.06	$3d5s$	$3d5p$	^1D	$^1P^\circ$	2	1	J1
	9760.579	9760.574	1	75561.00	85803.49	$3d4f$	$3d(^2D_{5/2})5g$	$^3H^\circ$	$^2[^{11}/_2]$	4	5	J1
	9764.455	9764.425	0*d*	75373.10	85611.55	$3d4f$	$3d(^2D_{3/2})5g$	$^3F^\circ$	$^2[^7/_2]$	3	4	J1
	9766.962	9766.992	1*d*	75552.46	85788.22	$3d4f$	$3d(^2D_{5/2})5g$	$^1F^\circ$	$^2[^9/_2]$	3	4	J1
	9767.496	9767.516	0	75680.69	85915.9	$3d4f$	$3d(^2D_{5/2})5g$	$^3D^\circ$	$^2[^3/_2]$	2	2	J1
		9767.516		65236.04	75471.25	$3d4d$	$3d4f$	^1G	$^3G^\circ$	4	5	J1
	9773.524	9773.485	2	75590.84	85819.8	$3d4f$	$3d(^2D_{5/2})5g$	$^1D^\circ$	$^2[^7/_2]$	2	3	J1
	9775.167	9775.147	0	75561.00	85788.22	$3d4f$	$3d(^2D_{5/2})5g$	$^3H^\circ$	$^2[^9/_2]$	4	5	J1
	9786.819	9786.774	0	75373.10	85588.17	$3d4f$	$3d(^2D_{3/2})5g$	$^3F^\circ$	$^2[^9/_2]$	3	4	J1
	9803.692	9803.752	1bl	75390.49	85587.87	$3d4f$	$3d(^2D_{3/2})5g$	$^3G^\circ$	$^2[^9/_2]$	4	5	J1
	9807.710	9807.695	2	75610.83	85804.11	$3d4f$	$3d(^2D_{5/2})5g$	$^3H^\circ$	$^2[^{11}/_2]$	5	6	J1
	9808.278	9808.292	0	75610.83	85803.49	$3d4f$	$3d(^2D_{5/2})5g$	$^3H^\circ$	$^2[^{11}/_2]$	5	5	J1
	9811.580	9811.411	3*d*	75470.24	85659.66	$3d4f$	$3d(^2D_{3/2})5g$	$^3F^\circ$	$^2[^{11}/_2]$	4	5	J1
		9811.651		75471.25	85660.42	$3d4f$	$3d(^2D_{3/2})5g$	$^3G^\circ$	$^2[^{11}/_2]$	5	6	J1
	9813.444	9813.539	0	75680.69	85867.9	$3d4f$	$3d(^2D_{5/2})5g$	$^3D^\circ$	$^2[^5/_2]$	2	3	J1
	9822.766	9822.767	4	75699.88	85877.52	$3d4f$	$3d(^2D_{5/2})5g$	$^3H^\circ$	$^2[^{11}/_2]$	6	7	J1
	9860.085	9860.095	1	75680.69	85819.8	$3d4f$	$3d(^2D_{5/2})5g$	$^3D^\circ$	$^2[^7/_2]$	2	3	J1
	9894.127	9894.112	1	75715.75	85820.00	$3d4f$	$3d(^2D_{5/2})5g$	$^3D^\circ$	$^2[^7/_2]$	3	4	J1
		9894.132		75699.88	85804.11	$3d4f$	$3d(^2D_{5/2})5g$	$^3H^\circ$	$^2[^{11}/_2]$	6	6	J1
	9899.585	9899.589	1	75561.00	85659.66	$3d4f$	$3d(^2D_{3/2})5g$	$^3H^\circ$	$^2[^{11}/_2]$	4	5	J1
	9900.160	9900.177	1	75590.84	85688.9	$3d4f$	$3d(^2D_{3/2})5g$	$^1D^\circ$	$^2[^5/_2]$	2	3	J1
	9907.899	9907.929	1	67743.72	77833.88	$3d5p$	$3d6s$	$^1F^\circ$	^1D	3	2	J1
	9936.365	9936.398	0*d*	81103.75	91165.0	$3d5d$	$3d6f$	^3P	$^3P^\circ$	2	2	J1
	9947.929	9947.927	0	75610.83	85660.42	$3d4f$	$3d(^2D_{3/2})5g$	$^3H^\circ$	$^2[^{11}/_2]$	5	6	J1
	9988.908	9989.058	0	75680.69	85688.9	$3d4f$	$3d(^2D_{3/2})5g$	$^3D^\circ$	$^2[^5/_2]$	2	3	J1
	10011.892	10011.846	1	65236.04	75221.47	$3d4d$	$3d4f$	^1G	$^1G^\circ$	4	4	J1
	10038.680	10038.689	1	75919.75	85878.48	$3d4f$	$3d(^2D_{5/2})5g$	$^1H^\circ$	$^2[^{13}/_2]$	5	6	J1

Sc III

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	557.995	557.990	1*g*	0.00	179214.70	3*d*	7*f*	^{2}D	^{2}F°	$^3/_2$	$^5/_2$	V1
	558.608	558.606	1*g*	197.64	179214.70	3*d*	7*f*	^{2}D	^{2}F°	$^5/_2$	$^7/_2$	V1
	582.114	582.114	2*g*	0.00	171787.64	3*d*	6*f*	^{2}D	^{2}F°	$^3/_2$	$^5/_2$	V1
	582.784	582.785	3*g*	197.64	171787.64	3*d*	6*f*	^{2}D	^{2}F°	$^5/_2$	$^7/_2$	V1
	589.320	589.324	1*g*	0.00	155575.20	3*d*	7*p*	^{2}D	^{2}P°	$^3/_2$	$^3/_2$	H1
	589.487	589.491	2*g*	0.00	169637.96	3*d*	7*p*	^{2}D	^{2}P°	$^3/_2$	$^1/_2$	H1
	590.006	590.011	3*g*	197.64	169685.9	3*d*	7*p*	^{2}D	^{2}P°	$^5/_2$	$^3/_2$	H1
	627.069	627.068	7*g*	0.00	159472.24	3*d*	5*f*	^{2}D	^{2}F°	$^3/_2$	$^5/_2$	V1
	627.846	627.846	8*g*	197.64	159472.24	3*d*	5*f*	^{2}D	^{2}F°	$^5/_2$	$^7/_2$	V1
	642.766	642.776	1*g*	0.00	155575.20	3*d*	6*p*	^{2}D	^{2}P°	$^3/_2$	$^3/_2$	H1
	643.133	643.129	2*g*	0.00	155489.78	3*d*	6*p*	^{2}D	^{2}P°	$^3/_2$	$^1/_2$	V1
	643.597	643.594	2*g*	197.64	155575.20	3*d*	6*p*	^{2}D	^{2}P°	$^5/_2$	$^3/_2$	V1
	693.724	693.738	3	25539.32	169685.9	4*s*	7*p*	^{2}S	^{2}P°	$^1/_2$	$^3/_2$	H1
	693.969	693.969	1	25539.32	169637.96	4*s*	7*p*	^{2}S	^{2}P°	$^1/_2$	$^1/_2$	H1
UV2	730.599	730.600	10*g*	0.00	136873.87	3*d*	4*f*	^{2}D	^{2}F°	$^3/_2$	$^5/_2$	V1
UV2	731.654	731.655	15*g*	197.64	136874.12	3*d*	4*f*	^{2}D	^{2}F°	$^5/_2$	$^7/_2$	V1
	769.019	769.019	1	25539.32	155575.20	4*s*	6*p*	^{2}S	^{2}P°	$^1/_2$	$^3/_2$	V1
	769.524	769.524	1	25539.32	155489.78	4*s*	6*p*	^{2}S	^{2}P°	$^1/_2$	$^1/_2$	V1
	779.538	779.526	4*g*	0.00	128283.15	3*d*	5*p*	^{2}D	^{2}P°	$^3/_2$	$^3/_2$	H1
	780.596	780.597	6*g*	0.00	128107.12	3*d*	5*p*	^{2}D	^{2}P°	$^3/_2$	$^1/_2$	V1
	780.729	780.728	8*g*	197.64	128283.15	3*d*	5*p*	^{2}D	^{2}P°	$^5/_2$	$^3/_2$	V1
	961.052	961.050	2	62104.30	166157.17	4*p*	7*s*	^{2}P°	^{2}S	$^1/_2$	$^1/_2$	V1
	965.448	965.447	4	62578.18	166157.17	4*p*	7*s*	^{2}P°	^{2}S	$^3/_2$	$^1/_2$	V1
	966.293	966.293	3	62104.30	165592.55	4*p*	6*d*	^{2}P°	^{2}D	$^1/_2$	$^3/_2$	V1
	970.637	970.637	4	62578.18	165603.29	4*p*	6*d*	^{2}P°	^{2}D	$^3/_2$	$^5/_2$	V1
	973.295	973.294	8	25539.32	128283.15	4*s*	5*p*	^{2}S	^{2}P°	$^1/_2$	$^3/_2$	V1
	974.965	974.965	6	25539.32	128107.12	4*s*	5*p*	^{2}S	^{2}P°	$^1/_2$	$^1/_2$	V1
	1148.241	1148.241	15	62104.30	149194.03	4*p*	6*s*	^{2}P°	^{2}S	$^1/_2$	$^1/_2$	V1
	1154.523	1154.523	20	62578.18	149194.03	4*p*	6*s*	^{2}P°	^{2}S	$^3/_2$	$^1/_2$	V1
	1162.443	1162.443	20	62104.30	148130.03	4*p*	5*d*	^{2}P°	^{2}D	$^1/_2$	$^3/_2$	V1
	1168.607	1168.607	25	62578.18	148150.14	4*p*	5*d*	^{2}P°	^{2}D	$^3/_2$	$^5/_2$	V1
	1168.883	1168.882	10	62578.18	148130.03	4*p*	5*d*	^{2}P°	^{2}D	$^3/_2$	$^3/_2$	V1
	1493.502	1493.494	1	112257.62	179214.70	4*d*	7*f*	^{2}D	^{2}F°	$^3/_2$	$^5/_2$	V1
	1494.506	1494.506	1	112302.95	179214.70	4*d*	7*f*	^{2}D	^{2}F°	$^5/_2$	$^7/_2$	V1
UV1	1598.002	1598.001	80*g*	0.00	62578.18	3*d*	4*p*	^{2}D	^{2}P°	$^3/_2$	$^3/_2$	V1
UV1	1603.063	1603.064	180*g*	197.64	62578.18	3*d*	4*p*	^{2}D	^{2}P°	$^5/_2$	$^3/_2$	V1
UV1	1610.194	1610.194	150*g*	0.00	62104.30	3*d*	4*p*	^{2}D	^{2}P°	$^3/_2$	$^1/_2$	V1
	1679.824	1679.825	5	112257.62	171787.64	4*d*	6*f*	^{2}D	^{2}F°	$^3/_2$	$^5/_2$	V1
	1681.105	1681.105	7	112302.95	171787.64	4*d*	6*f*	^{2}D	^{2}F°	$^5/_2$	$^7/_2$	V1
	1742.690	1742.678	2*d*	112302.95	169685.9	4*d*	7*p*	^{2}D	^{2}P°	$^5/_2$	$^3/_2$	V1
UV5	1895.441	1895.441	40	62104.30	114862.48	4*p*	5*s*	^{2}P°	^{2}S	$^1/_2$	$^1/_2$	V1
UV5	1912.620	1912.620	60	62578.18	114862.48	4*p*	5*s*	^{2}P°	^{2}S	$^3/_2$	$^1/_2$	V1
UV4	1993.886	1993.886	90	62104.30	112257.62	4*p*	4*d*	^{2}P°	^{2}D	$^1/_2$	$^3/_2$	V1
UV4	2010.420	2010.420	60	62578.18	112302.95	4*p*	4*d*	^{2}P°	^{2}D	$^3/_2$	$^5/_2$	V1
UV4	2012.256	2012.255	50	62578.18	112257.62	4*p*	4*d*	^{2}P°	^{2}D	$^3/_2$	$^3/_2$	V1
	2096.270	2096.271	1	128107.12	175795.73	5*p*	8*s*	^{2}P°	^{2}S	$^1/_2$	$^1/_2$	V1
	2104.042	2104.038	2	128283.15	175795.73	5*p*	8*s*	^{2}P°	^{2}S	$^3/_2$	$^1/_2$	V1
	2111.268	2111.268	2	128107.12	175457.03	5*p*	7*d*	^{2}P°	^{2}D	$^1/_2$	$^3/_2$	V1
	2111.682	2111.677	1	136873.87	184214.61	4*f*	8*g*	^{2}F°	^{2}G		–	V1
	2118.854	2118.853	5	128283.15	175463.56	5*p*	7*d*	^{2}P°	^{2}D	$^3/_2$	$^5/_2$	V1
	2119.158	2119.147	1	128283.15	175457.03	5*p*	7*d*	^{2}P°	^{2}D	$^3/_2$	$^3/_2$	V1
	2307.822	2307.821	5	112257.62	155575.20	4*d*	6*p*	^{2}D	^{2}P°	$^3/_2$	$^3/_2$	V1
	2310.239	2310.239	7	112302.95	155575.20	4*d*	6*p*	^{2}D	^{2}P°	$^5/_2$	$^3/_2$	V1
	2312.382	2312.382	6	112257.62	155489.78	4*d*	6*p*	^{2}D	^{2}P°	$^3/_2$	$^1/_2$	V1
	2346.519	2346.513	6	136873.87	179477.24	4*f*	7*g*	^{2}F°	^{2}G		–	V1

Sc III – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2455.52	2455.491	1	114862.48 –	155575.20	$5s$ –	$6p$	^2S –	$^2P^o$	$^1/_2$ –	$^3/_2$	V1
	2627.334	2627.334	1	128107.12 –	166157.17	$5p$ –	$7s$	$^2P^o$ –	^2S	$^1/_2$ –	$^1/_2$	V1
	2639.546	2639.546	2	128283.15 –	166157.17	$5p$ –	$7s$	$^2P^o$ –	^2S	$^3/_2$ –	$^1/_2$	V1
	2666.907	2666.910	6	128107.12 –	165592.55	$5p$ –	$6d$	$^2P^o$ –	^2D	$^1/_2$ –	$^3/_2$	V1
	2678.725	2678.722	8	128283.15 –	165603.29	$5p$ –	$6d$	$^2P^o$ –	^2D	$^3/_2$ –	$^5/_2$	V1
	2679.493	2679.494	1	128283.15 –	165592.55	$5p$ –	$6d$	$^2P^o$ –	^2D	$^3/_2$ –	$^3/_2$	V1
UV3	2699.067	2699.066	350	25539.32 –	62578.18	$4s$ –	$4p$	^2S –	$^2P^o$	$^1/_2$ –	$^3/_2$	V1
UV3	2734.048	2734.048	230	25539.32 –	62104.30	$4s$ –	$4p$	^2S –	$^2P^o$	$^1/_2$ –	$^1/_2$	V1
	2831.754	2831.744	10	136873.87 –	172177.41	$4f$ –	$6g$	$^2F^o$ –	^2G	–		V1
	3479.785	3479.787	6	136874.12 –	165603.29	$4f$ –	$6d$	$^2F^o$ –	^2D	$^7/_2$ –	$^5/_2$	V1
	3481.064	3481.058	5	136873.87	165592.55	$4f$	$6d$	$^2F^o$	^2D	$^5/_2$	$^3/_2$	V1
	4040.510	4040.508	6	159472.24 –	184214.61	$5f$ –	$8g$	$^2F^o$ –	^2G	–		V1
1	4061.209	4061.210	80	112257.62 –	136873.87	$4d$ –	$4f$	^2D –	$^2F^o$	$^3/_2$ –	$^5/_2$	V1
1	4068.661	4068.661	100	112302.95 –	136874.12	$4d$ –	$4f$	^2D –	$^2F^o$	$^5/_2$ –	$^7/_2$	V1
	4225.779	4225.779	6	148130.03 –	171787.64	$5d$ –	$6f$	^2D –	$^2F^o$	$^3/_2$ –	$^5/_2$	V1
	4229.371	4229.375	6	148150.14 –	171787.64	$5d$ –	$6f$	^2D –	$^2F^o$	$^5/_2$ –	$^7/_2$	V1
	4309.471	4309.447	40	136873.87 –	160072.18	$4f$ –	$5g$	$^2F^o$ –	^2G	–		V1
	4642.08	4642.140	2bl	148150.14	169685.9	$5d$	$7p$	^2D	$^2P^o$	$^5/_2$	$^3/_2$	V1
	4648.148	4648.146	1	148130.03 –	169637.96	$5d$ –	$7p$	^2D –	$^2P^o$	$^3/_2$ –	$^1/_2$	V1
	4740.954	4740.952	10	128107.12 –	149194.03	$5p$ –	$6s$	$^2P^o$ –	^2S	$^1/_2$ –	$^1/_2$	V1
	4780.868	4780.863	15	128283.15 –	149194.03	$5p$ –	$6s$	$^2P^o$ –	^2S	$^3/_2$ –	$^1/_2$	V1
	4944.072	4944.089	1	155575.20 –	175795.73	$6p$ –	$8s$	$^2P^o$ –	^2S	$^3/_2$ –	$^1/_2$	V1
	4992.886	4992.886	50	128107.12 –	148130.03	$5p$ –	$5d$	$^2P^o$ –	^2D	$^1/_2$ –	$^3/_2$	V1
	4997.365	4997.356	6	159472.24 –	179477.24	$5f$ –	$7g$	$^2F^o$ –	^2G	–		V1
	5006.804	5006.804	1	155489.78 –	175457.03	$6p$ –	$7d$	$^2P^o$ –	^2D	$^1/_2$ –	$^3/_2$	V1
	5026.665	5026.665	2	155575.20 –	175463.56	$6p$ –	$7d$	$^2P^o$ –	^2D	$^3/_2$ –	$^5/_2$	V1
	5032.087	5032.072	60	128283.15 –	148150.14	$5p$ –	$5d$	$^2P^o$ –	^2D	$^3/_2$ –	$^5/_2$	V1
	5037.176	5037.171	9	128283.15 –	148130.03	$5p$ –	$5d$	$^2P^o$ –	^2D	$^3/_2$ –	$^3/_2$	V1
	5143.609	5143.608	15	160072.18 –	179508.37	$5g$ –	7h	^2G –	$^2H^o$	–		H1
	6238.314	6238.317	10	112257.62 –	128283.15	$4d$ –	$5p$	^2D –	$^2P^o$	$^3/_2$ –	$^3/_2$	V1
	6251.698	6251.663	1	159472.24 –	175463.56	$5f$ –	$7d$	$^2F^o$ –	^2D	$^7/_2$ –	$^5/_2$	V1
	6254.264	6254.217	1	159472.24 –	175457.03	$5f$ –	$7d$	$^2F^o$ –	^2D	$^5/_2$ –	$^3/_2$	V1
	6256.010	6256.013	80	112302.95 –	128283.15	$4d$ –	$5p$	^2D –	$^2P^o$	$^5/_2$ –	$^3/_2$	V1
	6307.595	6307.603	60	112257.62 –	128107.12	$4d$ –	$5p$	^2D –	$^2P^o$	$^3/_2$ –	$^1/_2$	V1
	7339.033	7338.963	1	165592.55 –	179214.70	$6d$ –	$7f$	^2D –	$^2F^o$	$^3/_2$ –	$^5/_2$	V1
	7344.746	7344.754	1	165603.29 –	179214.70	$6d$ –	$7f$	^2D –	$^2F^o$	$^5/_2$ –		V1
	7449.155	7449.141	90	114862.48 –	128283.15	$5s$ –	$5p$	^2S –	$^2P^o$	$^1/_2$ –	$^3/_2$	V1
	7548.148	7548.146	70	114862.48 –	128107.12	$5s$ –	$5p$	^2S –	$^2P^o$	$^1/_2$ –	$^1/_2$	V1
	7868.648	7868.647	70	159472.24 –	172177.41	$5f$ –	$6g$	$^2F^o$ –	^2G	–		V1
	8044.799	8044.801	1	171787.64 –	184214.61	$6f$ –	$8g$	$^2F^o$ –	^2G	–		V1
	8226.570	8226.572	12	160072.18 –	172224.57	$5g$ –	6h	^2G –	$^2H^o$	–		H1
	8533.383	8533.385	2	160072.18 –	171787.64	$5g$ –	$6f$	^2G –	$^2F^o$	–		V1
	8814.293	8814.203	35	148130.03 –	159472.24	$5d$ –	$5f$	^2D –	$^2F^o$	$^3/_2$ –	$^5/_2$	V1
	8829.785	8829.859	50	148150.14 –	159472.24	$5d$ –	$5f$	^2D –	$^2F^o$	$^5/_2$ –	$^7/_2$	V1
	8865.891	8865.943	30	136874.12 –	148150.14	$4f$ –	$5d$	$^2F^o$ –	^2D	$^7/_2$ –	$^5/_2$	V1
	8881.585	8881.586	15	136873.87 –	148130.03	$4f$ –	$5d$	$^2F^o$ –	^2D	$^5/_2$ –	$^3/_2$	V1
	9371.74	9371.793	1	155489.78 –	166157.17	$6p$ –	$7s$	$^2P^o$ –	^2S	$^1/_2$ –	$^1/_2$	V1

Sc IV

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	153.210	153.210	g,a	0.0	652700.	$3s^23p^6$	$3s3p^65p$	^1S	$^1P^\circ$	0	1	K1
	184.484	184.484	1g	0.0	542052.	$3s^23p^6$	$3s^23p^5(^2P^\circ_{1/2})7s$	^1S	$^2[^1/_2]^\circ$	0	1	S1
	185.927	185.927	1g	0.0	537845.	$3s^23p^6$	$3s^23p^5(^2P^\circ_{3/2})7s$	^1S	$^2[^3/_2]^\circ$	0	1	S1
	193.897	193.897	3g	0.0	515738.	$3s^23p^6$	$3s^23p^5(^2P^\circ_{1/2})6s$	^1S	$^2[^1/_2]^\circ$	0	1	S1
	195.455	195.454	3g	0.0	511630.3	$3s^23p^6$	$3s^23p^5(^2P^\circ_{3/2})6s$	^1S	$^2[^3/_2]^\circ$	0	1	S1
UV4	215.304	215.305	5g	0.0	464457.2	$3s^23p^6$	$3s^23p^5(^2P^\circ_{1/2})5s$	^1S	$^2[^1/_2]^\circ$	0	1	S1
UV3	217.192	217.190	5g	0.0	460426.9	$3s^23p^6$	$3s^23p^5(^2P^\circ_{3/2})5s$	^1S	$^2[^3/_2]^\circ$	0	1	S1
	220.280	220.278	8g	0.0	453972.7	$3s^23p^6$	$3s^23p^54d$	^1S	$^1P^\circ$	0	1	S1
	223.407	223.403	5g,bl	0.0	447622.4	$3s^23p^6$	$3s^23p^54d$	^1S	$^3D^\circ$	0	1	S1
	226.764	226.766	1g	0.0	440983.0	$3s^23p^6$	$3s^23p^54d$	^1S	$^3P^\circ$	0	1	S1
	289.851	289.851	15g	0.0	345005.4	$3s^23p^6$	$3s^23p^53d$	^1S	$^1P^\circ$	0	1	S1
UV2	296.311	296.311	15g	0.0	337483.5	$3s^23p^6$	$3s^23p^54s$	^1S	$^1P^\circ$	0	1	S1
UV1	299.037	299.039	15g	0.0	334405.1	$3s^23p^6$	$3s^23p^54s$	^1S	$^3P^\circ$	0	1	S1
	371.160	371.159	10g	0.0	269426.5	$3s^23p^6$	$3s^23p^53d$	^1S	$^3D^\circ$	0	1	S1
	410.080	410.080	4	240403.0	484257.6	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3P^\circ$	$^2[^5/_2]$	1	2	S1
	412.468	412.467	1	241814.0	484257.6	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3P^\circ$	$^2[^5/_2]$	2	2	S1
	412.868	412.853	0	239723.2	481939.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})5p$	$^3P^\circ$	$^2[^1/_2]$	0	1	S1
	412.968	412.969	5	241814.0	483962.8	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3P^\circ$	$^2[^5/_2]$	2	3	S1
	413.948	413.955	1	240403.0	481975.2	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})5p$	$^3P^\circ$	$^2[^3/_2]$	1	2	S1
	415.968	415.968	7g	0.0	240403.0	$3s^23p^6$	$3s^23p^53d$	^1S	$^3P^\circ$	0	1	S1
	416.440	416.448	4	241814.0	481939.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})5p$	$^3P^\circ$	$^2[^1/_2]$	2	1	S1
	416.863	416.869	2	240403.0	480286.6	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^1/_2]$	1	0	S1
	417.195	417.197	2	240403.0	480097.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^5/_2]$	1	2	S1
	418.811	418.808	5	239723.2	478495.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^3/_2]$	0	1	S1
	419.524	419.525	6	240403.0	478767.7	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^3/_2]$	1	2	S1
	419.999	420.001	5	241814.0	479908.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^7/_2]$	2	3	S1
		420.004		240403.0	478495.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^3/_2]$	1	1	S1
	420.121	420.125	4	239723.2	477747.6	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^3/_2]$	0	1	S1
	420.504	420.503	5	240403.0	478213.2	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^3/_2]$	1	2	S1
	420.807	420.807	6	241814.0	479452.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^5/_2]$	2	3	S1
	421.324	421.328	3	240403.0	477747.6	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^3/_2]$	1	1	S1
	422.027	422.023	5	241814.0	478767.7	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^3/_2]$	2	2	S1
	422.507	422.508	2	241814.0	478495.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^3/_2]$	2	1	S1
	422.626	422.627	3	240403.0	477018.0	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^5/_2]$	1	2	S1
	425.520	425.524	4	241814.0	476818.5	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^5/_2]$	2	3	S1
	426.685	426.691	4	240403.0	474764.4	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^1/_2]$	1	1	S1
	429.281	429.276	2	241814.0	474764.4	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^1/_2]$	2	1	S1
	431.780	431.779	5	252108.3	483708.0	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3F^\circ$	$^2[^7/_2]$	3	4	S1
	433.749	433.732	0	253405.7	483962.8	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3F^\circ$	$^2[^5/_2]$	2	3	S1
	434.395	434.398	5	253405.7	483609.4	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3F^\circ$	$^2[^7/_2]$	2	3	S1
	436.144	436.138	5	250708.2	479993.2	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^7/_2]$	4	4	S1
	437.160	437.169	0	250708.2	479452.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^5/_2]$	4	3	S1
	438.477	438.481	3	250708.2	478768.4	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^9/_2]$	4	4	S1
	438.660	438.651	2	253405.7	481377.4	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})5p$	$^3F^\circ$	$^2[^3/_2]$	2	1	S1
	438.789	438.786	9	250708.2	478609.5	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^9/_2]$	4	5	S1
		438.818		252108.3	479993.2	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^7/_2]$	3	4	S1
	438.972	438.980	5	252108.3	479908.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^7/_2]$	3	3	S1
	439.836	439.861	1	252108.3	479452.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^5/_2]$	3	3	S1
	441.185	441.189	7	252108.3	478768.4	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^9/_2]$	3	4	S1
	441.494	441.495	7	253405.7	479908.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^7/_2]$	2	3	S1
	442.261	442.262	6	250708.2	476818.5	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3F^\circ$	$^2[^5/_2]$	4	3	S1
	444.268	444.266	0	253405.7	478495.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^3/_2]$	2	1	S1
	444.624	444.623	4	252108.3	477018.0	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3F^\circ$	$^2[^5/_2]$	3	2	S1
	445.021	445.018	1	252108.3	476818.5	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3F^\circ$	$^2[^5/_2]$	3	3	S1
	445.745	445.748	3	253405.7	477747.6	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3F^\circ$	$^2[^3/_2]$	2	1	S1
	447.194	447.203	1	253405.7	477018.0	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3F^\circ$	$^2[^5/_2]$	2	2	S1

Sc IV – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	461.184	461.184	1	267424.4	484257.6	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^1D^o$	$^2[5/2]$	2	2	S1
	461.817	461.812	3	267424.4	483962.8	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^1D^o$	$^2[5/2]$	2	3	S1
	462.570	462.567	6	267424.4	483609.4	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^1D^o$	$^2[7/2]$	2	3	S1
	463.118	463.116	1	268034.2	483962.8	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^3D^o$	$^2[5/2]$	3	3	S1
	463.666	463.663	4	268034.2	483708.0	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^3D^o$	$^2[7/2]$	3	4	S1
	463.934	463.937	1	269426.5	484972.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})5p$	$^3D^o$	$^2[1/2]$	1	0	S1
	465.485	465.482	5	269426.5	484257.6	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^3D^o$	$^2[5/2]$	1	2	S1
	466.192	466.194	5	269459.9	483962.8	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^3D^o$	$^2[5/2]$	2	3	S1
	466.964	466.963	3bl	269459.9	483609.4	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^3D^o$	$^2[7/2]$	2	3	S1
	467.398	467.392	3	267424.4	481377.4	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})5p$	$^1D^o$	$^2[3/2]$	2	1	S1
	469.692	469.688	2	271055.4	483962.8	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^1F^o$	$^2[5/2]$	3	3	S1
	470.249	470.251	5	271055.4	483708.0	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})4f$	$^1F^o$	$^2[7/2]$	3	4	S1
	470.625	470.623	5	267424.4	479908.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^1D^o$	$^2[7/2]$	2	3	S1
		470.633		269459.9	481939.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})5p$	$^3D^o$	$^2[1/2]$	2	1	S1
	471.632	471.635	2	267424.4	479452.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^1D^o$	$^2[5/2]$	2	3	S1
	471.790	471.789	5	268034.2	479993.2	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$^2[7/2]$	3	4	S1
	473.000	472.995	5	268034.2	479452.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$^2[5/2]$	3	3	S1
	474.120	474.114	4	271055.4	481975.2	$3s^23p^53d$	$3s^23p^5(^2P^o_{1/2})5p$	$^1F^o$	$^2[3/2]$	3	2	S1
	474.250	474.248	3	269426.5	480286.6	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3D^o$	$^2[1/2]$	1	0	S1
	474.533	474.531	4	268034.2	478768.4	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$^2[9/2]$	3	4	S1
	474.679	474.673	5bl	269426.5	480097.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$^2[5/2]$	1	2	S1
	475.176	475.175	2	269459.9	479908.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$^2[7/2]$	2	3	S1
	475.462	475.459	2	267424.4	477747.6	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})5p$	$^1D^o$	$^2[3/2]$	2	1	S1
	475.788	475.785	4	268034.2	478213.2	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3D^o$	$^2[3/2]$	3	2	S1
	476.210	476.206	3	269459.9	479452.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$^2[5/2]$	2	3	S1
	477.564	477.568	1	267424.4	476818.5	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})5p$	$^1D^o$	$^2[5/2]$	2	3	S1
	477.764	477.765	4	269459.9	478767.7	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$^2[3/2]$	2	2	S1
	478.299	478.310	7	269426.5	478495.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$^2[3/2]$	1	1	S1
	478.511	478.506	0	268034.2	477018.0	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3D^o$	$^2[5/2]$	3	2	S1
	478.609	478.611	3	271055.4	479993.2	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^1F^o$	$^2[7/2]$	3	4	S1
	478.804	478.805	2	271055.4	479908.9	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^1F^o$	$^2[7/2]$	3	3	S1
	480.106	480.105	1	269459.9	477747.6	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3D^o$	$^2[3/2]$	2	1	S1
	481.434	481.434	6	271055.4	478768.4	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})4f$	$^1F^o$	$^2[9/2]$	3	4	S1
	482.729	482.724	0	271055.4	478213.2	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})5p$	$^1F^o$	$^2[3/2]$	3	2	S1
	487.088	487.081	2bl	269459.9	474764.4	$3s^23p^53d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3D^o$	$^2[1/2]$	2	1	S1
	526.388	526.392	6	239723.2	429695.7	$3s^23p^53d$	$3s3p^63d$	$^3P^o$	^3D	0	1	S1
	527.879	527.873	7	240403.0	429842.4	$3s^23p^53d$	$3s3p^63d$	$^3P^o$	^3D	1	2	S1
	528.287	528.282	6	240403.0	429695.7	$3s^23p^53d$	$3s3p^63d$	$^3P^o$	^3D	1	1	S1
	531.170	531.168	7	241814.0	430078.5	$3s^23p^53d$	$3s3p^63d$	$^3P^o$	^3D	2	3	S1
	531.833	531.835	6	241814.0	429842.4	$3s^23p^53d$	$3s3p^63d$	$^3P^o$	^3D	2	2	S1
	532.245	532.250	2	241814.0	429695.7	$3s^23p^53d$	$3s3p^63d$	$^3P^o$	^3D	2	1	S1
	557.505	557.506	8	250708.2	430078.5	$3s^23p^53d$	$3s3p^63d$	$^3F^o$	^3D	4	3	S1
	561.891	561.892	4	252108.3	430078.5	$3s^23p^53d$	$3s3p^63d$	$^3F^o$	^3D	3	3	S1
	562.640	562.638	7	252108.3	429842.4	$3s^23p^53d$	$3s3p^63d$	$^3F^o$	^3D	3	2	S1
	566.773	566.776	12bl	253405.7	429842.4	$3s^23p^53d$	$3s3p^63d$	$^3F^o$	^1D	2	2	S1
	567.251	567.247	6	253405.7	429695.7	$3s^23p^53d$	$3s3p^63d$	$^1F^o$	^1D	2	1	S1
	572.667	572.667	7	267424.4	442046.0	$3s^23p^53d$	$3s3p^63d$	$^1D^o$	^1D	2	2	S1
	574.669	574.674	6	268034.2	442046.0	$3s^23p^53d$	$3s3p^63d$	$^1D^o$	^1D	3	2	S1
	579.427	579.421	4	269459.9	442046.0	$3s^23p^53d$	$3s3p^63d$	$^1D^o$	^1D	2	2	S1
	584.826	584.827	8	271055.4	442046.0	$3s^23p^53d$	$3s3p^63d$	$^1F^o$	^1D	3	2	S1
	615.694	615.695	3	267424.4	429842.4	$3s^23p^53d$	$3s3p^63d$	$^1D^o$	^3D	2	2	S1
	617.081	617.115	9bl	268034.2	430078.5	$3s^23p^53d$	$3s3p^63d$	$^3D^o$	^3D	3	3	S1
	622.598	622.593	5	269459.9	430078.5	$3s^23p^53d$	$3s3p^63d$	$^3D^o$	^3D	2	3	S1
	623.377	623.380	4	269426.5	429842.4	$3s^23p^53d$	$3s3p^63d$	$^3D^o$	^3D	1	2	S1
	623.507	623.509	6	269459.9	429842.4	$3s^23p^53d$	$3s3p^63d$	$^3D^o$	^3D	2	2	S1

Sc IV – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	623.951	623.950	6	269426.5	429695.7	$3s^23p^53d$	$3s3p^63d$	$^3D^\circ$	^3D	1	1	S1
	628.834	628.839	5	271055.4	430078.5	$3s^23p^53d$	$3s3p^63d$	$^1F^\circ$	^3D	3	3	S1
	681.323	681.319	1	337483.5	484257.6	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^1P^\circ$	$^2[^5/_2]$	1	2	S1
	685.654	685.651	4	239723.2	385570.0	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3P	0	1	S1
	686.377	686.376	1	334405.1	480097.9	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^5/_2]$	1	2	S1
	688.867	688.862	3	240403.0	385570.0	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3P	1	1	S1
	689.060	689.073	0	333090.8	478213.2	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^3/_2]$	2	2	S1
	691.550	691.564	0	337340.1	481939.9	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{1/2})5p$	$^3P^\circ$	$^2[^1/_2]$	0	1	S1
	692.089	692.081	2	337483.5	481975.2	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{1/2})5p$	$^1P^\circ$	$^2[^3/_2]$	1	2	S1
	692.453	692.450	5	240403.0	384817.8	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3P	1	0	S1
	693.201	693.201	4	240403.0	384661.3	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^1D	1	2	S1
	694.255	694.265	0	337340.1	481377.4	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{1/2})5p$	$^3P^\circ$	$^2[^3/_2]$	0	1	S1
	694.798	694.796	0	333090.8	477018.0	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^5/_2]$	2	2	S1
	694.949	694.956	0	337483.5	481377.4	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{1/2})5p$	$^1P^\circ$	$^2[^3/_2]$	1	1	S1
	695.391	695.391	1	239723.2	383527.1	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^1P	0	1	S1
	695.626	695.623	6	241814.0	385570.0	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3P	2	1	S1
	697.630	697.630	0	334405.1	477747.6	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^3/_2]$	1	1	S1
	698.698	698.694	3	240403.0	383527.1	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^1P	1	1	S1
	700.051	700.048	7	241814.0	384661.3	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^1D	2	2	S1
	701.194	701.191	3	337483.5	480097.9	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^1P^\circ$	$^2[^5/_2]$	1	2	S1
		701.199		334405.1	477018.0	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^5/_2]$	1	2	S1
	705.651	705.651	3	241814.0	383527.1	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^1P	2	1	S1
	705.846	705.848	3	333090.8	474764.4	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^1/_2]$	2	1	S1
	707.673	707.669	5	240403.0	381712.0	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3P	1	2	S1
	712.122	712.123	2	239723.2	380148.3	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3D	0	1	S1
	712.452	712.457	0	334405.1	474764.4	$3s^23p^54s$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^1/_2]$	1	1	S1
	714.805	714.807	7	241814.0	381712.0	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3P	2	2	S1
	716.880	716.882	0	371735.2	511228.2	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})6s$	^3S	$^2[^3/_2]^\circ$	1	2	S1
	718.128	718.122	3	345005.4	484257.6	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^1P^\circ$	$^2[^5/_2]$	1	2	S1
	722.881	722.887	2	241814.0	380148.3	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3D	2	1	S1
	724.561	724.556	3	240403.0	378418.6	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3D	1	2	S1
	733.881	733.875	4	241814.0	378077.0	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3D	2	3	S1
	740.228	740.234	3	345005.4	480097.9	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^1P^\circ$	$^2[^5/_2]$	1	2	S1
	747.596	747.595	1	345005.4	478767.7	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^1P^\circ$	$^2[^3/_2]$	1	2	S1
	750.698	750.685	2	378418.6	511630.3	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})6s$	^3D	$^2[^3/_2]^\circ$	2	1	S1
		750.707		345005.4	478213.2	$3s^23p^53d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^1P^\circ$	$^2[^3/_2]$	1	2	S1
	751.027	751.026	2	378077.0	511228.2	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})6s$	^3D	$^2[^3/_2]^\circ$	3	2	S1
	754.419	754.415	6	252108.3	384661.3	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^1D	3	2	S1
	756.616	756.634	0	253405.7	385570.0	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^3P	2	1	S1
	757.505	757.507	6	239723.2	371735.2	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3S	0	1	S1
	761.428	761.428	8	240403.0	371735.2	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3S	1	1	S1
	761.863	761.872	2	253405.7	384661.3	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^1D	2	2	S1
	768.515	768.513	5	253405.7	383527.1	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^1P	2	1	S1
	769.696	769.697	8	241814.0	371735.2	$3s^23p^53d$	$3s^23p^54p$	$^3P^\circ$	^3S	2	1	S1
	771.582	771.583	4	252108.3	381712.0	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^3P	3	2	S1
	779.393	779.385	1	253405.7	381712.0	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^3P	2	2	S1
	785.122	785.122	10	250708.2	378077.0	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^3D	4	3	S1
	789.001	789.001	8	253405.7	380148.3	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^3D	2	1	S1
	791.706	791.701	8	252108.3	378418.6	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^3D	3	2	S1
	793.851	793.848	6	252108.3	378077.0	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^3D	3	3	S1
	799.920	799.917	6	253405.7	378418.6	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^3D	2	2	S1
	802.108	802.109	0	253405.7	378077.0	$3s^23p^53d$	$3s^23p^54p$	$^3F^\circ$	^3D	2	3	S1
	846.411	846.413	1	267424.4	385570.0	$3s^23p^53d$	$3s^23p^54p$	$^1D^\circ$	^3P	2	1	S1
	852.980	852.974	4	267424.4	384661.3	$3s^23p^53d$	$3s^23p^54p$	$^1D^\circ$	^1D	2	2	S1
	857.434	857.434	6	268034.2	384661.3	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^1D	3	2	S1
	861.007	861.004	4	269426.5	385570.0	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3P	1	1	S1

Sc IV – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	861.243	861.252	8	269459.9	385570.0	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3P	2	1	S1
	861.298	861.306	8	267424.4	383527.1	$3s^23p^53d$	$3s^23p^54p$	$^1D^\circ$	^1P	2	1	S1
	866.619	866.616	5	269426.5	384817.8	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3P	1	0	S1
	874.981	874.986	2	267424.4	381712.0	$3s^23p^53d$	$3s^23p^54p$	$^1D^\circ$	^3P	2	2	S1
	876.674	876.676	1	269459.9	383527.1	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^1P	2	1	S1
	879.675	879.679	7	268034.2	381712.0	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3P	3	2	S1
	880.236	880.236	7	271055.4	384661.3	$3s^23p^53d$	$3s^23p^54p$	$^1F^\circ$	^1D	3	2	S1
	887.121	887.123	3	267424.4	380148.3	$3s^23p^53d$	$3s^23p^54p$	$^1D^\circ$	^3D	2	1	S1
	890.866	890.852	8	269459.9	381712.0	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3P	2	2	S1
	900.948	900.948	3	267424.4	378418.6	$3s^23p^53d$	$3s^23p^54p$	$^1D^\circ$	^3D	2	2	S1
	903.165	903.165	4	269426.5	380148.3	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3D	1	1	S1
	903.687	903.697	5bl	271055.4	381712.0	$3s^23p^53d$	$3s^23p^54p$	$^1F^\circ$	^3P	3	2	S1
	905.922	905.925	2	268034.2	378418.6	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3D	3	2	S1
	908.731	908.737	5	268034.2	378077.0	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3D	3	3	S1
	917.495	917.498	1	269426.5	378418.6	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3D	1	2	S1
	917.777	917.779	3	269459.9	378418.6	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3D	2	2	S1
	920.665	920.665	1	269459.9	378077.0	$3s^23p^53d$	$3s^23p^54p$	$^3D^\circ$	^3D	2	3	S1
	931.418	931.418	4	271055.4	378418.6	$3s^23p^53d$	$3s^23p^54p$	$^1F^\circ$	^3D	3	2	S1
	934.391	934.391	2	271055.4	378077.0	$3s^23p^53d$	$3s^23p^54p$	$^1F^\circ$	^3D	3	3	S1
	1139.449	1139.449	6	371735.2	459496.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^3S	$^2[^3/_2]^\circ$	1	2	S1
	1195.869	1195.878	1	380148.3	463768.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{1/2})5s$	^3D	$^2[^1/_2]^\circ$	1	0	S1
	1208.521	1208.529	2	381712.0	464457.2	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{1/2})5s$	^3P	$^2[^1/_2]^\circ$	2	1	S1
	1219.399	1219.389	8	378418.6	460426.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^3D	$^2[^3/_2]^\circ$	2	1	S1
	1228.204	1228.201	9	378077.0	459496.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^3D	$^2[^3/_2]^\circ$	3	2	S1
	1233.376	1233.376	6	378418.6	459496.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^3D	$^2[^3/_2]^\circ$	2	2	S1
	1235.627	1235.634	5	383527.1	464457.2	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{1/2})5s$	^1P	$^2[^1/_2]^\circ$	1	1	S1
	1245.661	1245.662	6	380148.3	460426.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^3D	$^2[^3/_2]^\circ$	1	1	S1
	1246.224	1246.233	3	383527.1	463768.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{1/2})5s$	^1P	$^2[^1/_2]^\circ$	1	0	S1
	1253.195	1253.197	7	384661.3	464457.2	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{1/2})5s$	^1D	$^2[^1/_2]^\circ$	2	1	S1
	1255.663	1255.660	1	384817.8	464457.2	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{1/2})5s$	^3P	$^2[^1/_2]^\circ$	0	1	S1
	1260.248	1260.262	0	380148.3	459496.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^3D	$^2[^3/_2]^\circ$	1	2	S1
	1267.628	1267.633	5	385570.0	464457.2	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{1/2})5s$	^3P	$^2[^1/_2]^\circ$	1	1	S1
	1270.408	1270.408	4	381712.0	460426.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^3P	$^2[^3/_2]^\circ$	2	1	S1
	1278.784	1278.790	4	385570.0	463768.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{1/2})5s$	^3P	$^2[^1/_2]^\circ$	1	0	S1
	1285.595	1285.597	6	381712.0	459496.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^3P	$^2[^3/_2]^\circ$	2	2	S1
	1300.393	1300.393	2	383527.1	460426.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^1P	$^2[^3/_2]^\circ$	1	1	S1
	1317.742	1317.745	7	371735.2	447622.4	$3s^23p^54p$	$3s^23p^54d$	^3S	$^3D^\circ$	1	1	S1
	1319.853	1319.860	0	384661.3	460426.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^1D	$^2[^3/_2]^\circ$	2	1	S1
	1322.588	1322.592	1	384817.8	460426.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^3P	$^2[^3/_2]^\circ$	0	1	S1
	1336.259	1336.262	2	384661.3	459496.9	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{3/2})5s$	^1D	$^2[^3/_2]^\circ$	2	2	S1
	1415.477	1415.466	1	378077.0	448725.1	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3D^\circ$	3	2	S1
	1417.824	1417.820	5	378077.0	448607.8	$3s^23p^54p$	$3s^23p^54d$	^3D	$^1F^\circ$	3	3	S1
	1419.537	1419.535	6	383527.1	453972.7	$3s^23p^54p$	$3s^23p^54d$	^1P	$^1P^\circ$	1	1	S1
	1422.343	1422.344	2	378418.6	448725.1	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3D^\circ$	2	2	S1
	1424.663	1424.662	9	371735.2	441927.3	$3s^23p^54p$	$3s^23p^54d$	^3S	$^3P^\circ$	1	2	S1
	1435.890	1435.886	1	378418.6	448062.0	$3s^23p^54p$	$3s^23p^54d$	^3D	$^1D^\circ$	2	2	S1
	1442.769	1442.764	1	384661.3	453972.7	$3s^23p^54p$	$3s^23p^54d$	^1D	$^1P^\circ$	2	1	S1
	1444.096	1444.089	9	371735.2	440983.0	$3s^23p^54p$	$3s^23p^54d$	^3S	$^3P^\circ$	1	1	S1
	1445.003	1445.007	4	378418.6	447622.4	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3D^\circ$	2	1	S1
	1453.861	1453.854	7	371735.2	440517.9	$3s^23p^54p$	$3s^23p^54d$	^3S	$^3P^\circ$	1	0	S1
	1458.212	1458.219	1	380148.3	448725.1	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3D^\circ$	1	2	S1
	1461.931	1461.931	4	385570.0	453972.7	$3s^23p^54p$	$3s^23p^54d$	^3P	$^1P^\circ$	1	1	S1
	1472.456	1472.457	4	380148.3	448062.0	$3s^23p^54p$	$3s^23p^54d$	^3D	$^1D^\circ$	1	2	S1
	1482.042	1482.050	7	380148.3	447622.4	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3D^\circ$	1	1	S1
	1489.637	1489.636	8	378077.0	445207.5	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3D^\circ$	3	3	S1

Sc IV – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1492.247	1492.246	7	381712.0	448725.1	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3D^\circ$	2	2	S1
	1493.722	1493.730	0	397510.7	464457.2	$3s^23p^54p$	$3s^23p^5(^2P^\circ_{1/2})5s$	^1S	$^2[^1/_2]^\circ$	0	1	S1
	1494.854	1494.862	2	381712.0	448607.8	$3s^23p^54p$	$3s^23p^54d$	^3P	$^1F^\circ$	2	3	S1
	1497.260	1497.255	1	378418.6	445207.5	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3D^\circ$	2	3	S1
	1507.156	1507.150	2	378077.0	444427.4	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3F^\circ$	3	2	S1
		1507.159		381712.0	448062.0	$3s^23p^54p$	$3s^23p^54d$	^3P	$^1D^\circ$	2	2	S1
	1514.961	1514.950	8	378418.6	444427.4	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3F^\circ$	2	2	S1
	1535.001	1535.002	0*d*	478495.9	543642.4	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})6g$	$^2[^3/_2]$	$^2[^5/_2]^\circ$	1	2	S1
	1535.762	1535.761	8	378077.0	443191.3	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3F^\circ$	3	3	S1
	1536.126	1536.127	1	478609.5	543708.3	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})6g$	$^2[^9/_2]$	$^2[^{11}/_2]^\circ$	5	6	S1
	1543.861	1543.860	9	378418.6	443191.3	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3F^\circ$	2	3	S1
	1549.552	1549.549	9	383527.1	448062.0	$3s^23p^54p$	$3s^23p^54d$	^1P	$^1D^\circ$	1	2	S1
	1550.797	1550.830	15bl	378077.0	442558.6	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3F^\circ$	3	4	S1
	1552.884	1552.884	1	483708.0	548104.3	$3s^23p^5(^2P^\circ_{1/2})4f$	$3s^23p^5(^2P^\circ_{1/2})6g$	$^2[^7/_2]$	$^2[^9/_2]^\circ$	4	5	S1
	1553.470	1553.470	0	479452.9	543824.9	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})6g$	$^2[^5/_2]$	$^2[^7/_2]^\circ$	3	4	S1
	1555.724	1555.716	8	380148.3	444427.4	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3F^\circ$	1	2	S1
	1559.014	1559.014	0	483962.8	548105.9	$3s^23p^5(^2P^\circ_{1/2})4f$	$3s^23p^5(^2P^\circ_{1/2})6g$	$^2[^5/_2]$	$^2[^7/_2]^\circ$	3	4	S1
	1560.916	1560.944	1	384661.3	448725.1	$3s^23p^54p$	$3s^23p^54d$	^1D	$^3D^\circ$	2	2	S1
	1562.911	1562.910	0	479908.9	543892.1	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})6g$	$^2[^7/_2]$	$^2[^9/_2]^\circ$	3	4	S1
	1563.811	1563.807	9	384661.3	448607.8	$3s^23p^54p$	$3s^23p^54d$	^1D	$^1F^\circ$	2	3	S1
	1564.942	1564.943	0	479993.2	543893.3	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})6g$	$^2[^7/_2]$	$^2[^9/_2]^\circ$	4	5	S1
	1566.155	1566.163	2	378077.0	441927.3	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3P^\circ$	3	2	S1
	1574.587	1574.587	1	378418.6	441927.3	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3P^\circ$	2	2	S1
	1574.923	1574.915	10	381712.0	445207.5	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3D^\circ$	2	3	S1
	1577.275	1577.270	7	384661.3	448062.0	$3s^23p^54p$	$3s^23p^54d$	^1D	$^1D^\circ$	2	2	S1
	1583.407	1583.403	9	385570.0	448725.1	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3D^\circ$	1	2	S1
	1584.645	1584.645	8	334405.1	397510.7	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^1S	1	0	S1
	1588.304	1588.282	0	384661.3	447622.4	$3s^23p^54p$	$3s^23p^54d$	^1D	$^3D^\circ$	2	1	S1
	1592.233	1592.240	8	384817.8	447622.4	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3D^\circ$	0	1	S1
	1598.347	1598.353	2	378418.6	440983.0	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3P^\circ$	2	1	S1
	1611.550	1611.541	1bl	385570.0	447622.4	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3D^\circ$	1	1	S1
	1656.457	1656.463	1	380148.3	440517.9	$3s^23p^54p$	$3s^23p^54d$	^3D	$^3P^\circ$	1	0	S1
	1660.708	1660.707	8	381712.0	441927.3	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3P^\circ$	2	2	S1
	1665.918	1665.911	10	337483.5	397510.7	$3s^23p^54s$	$3s^23p^54p$	$^1P^\circ$	^1S	1	0	S1
	1687.163	1687.166	6	381712.0	440983.0	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3P^\circ$	2	1	S1
	1746.233	1746.237	8	384661.3	441927.3	$3s^23p^54p$	$3s^23p^54d$	^1D	$^3P^\circ$	2	2	S1
	1771.103	1771.103	7	397510.7	453972.7	$3s^23p^54p$	$3s^23p^54d$	^1S	$^1P^\circ$	0	1	S1
	1774.399	1774.393	0	385570.0	441927.3	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3P^\circ$	1	2	S1
	1780.469	1780.462	4	384817.8	440983.0	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3P^\circ$	0	1	S1
	1804.636	1804.631	3	385570.0	440983.0	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3P^\circ$	1	1	S1
	1819.910	1819.906	3	385570.0	440517.9	$3s^23p^54p$	$3s^23p^54d$	^3P	$^3P^\circ$	1	0	S1
	1905.521	1905.517	6	333090.8	385570.0	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3P	2	1	S1
	1939.088	1939.093	7	333090.8	384661.3	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^1D	2	2	S1
	1982.704	1982.699	1	333090.8	383527.1	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^1P	2	1	S1
	1983.623	1983.627	6	334405.1	384817.8	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3P	1	0	S1
	1989.809	1989.804	5	334405.1	384661.3	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^1D	1	2	S1
	1995.567	1995.542	0	397510.7	447622.4	$3s^23p^54p$	$3s^23p^54d$	^1S	$^3D^\circ$	0	1	S1
	2035.095	2035.093	3	334405.1	383527.1	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^1P	1	1	S1
	2056.058	2056.058	10	333090.8	381712.0	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3P	2	2	S1
	2072.739	2072.741	7	337340.1	385570.0	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3P	0	1	S1
	2078.924	2078.923	8	337483.5	385570.0	$3s^23p^54s$	$3s^23p^54p$	$^1P^\circ$	^3P	1	1	S1
	2111.961	2111.964	3	337483.5	384817.8	$3s^23p^54s$	$3s^23p^54p$	$^1P^\circ$	^3P	1	0	S1
	2113.186	2113.187	7	334405.1	381712.0	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3P	1	2	S1
	2118.968	2118.971	12	337483.5	384661.3	$3s^23p^54s$	$3s^23p^54p$	$^1P^\circ$	^1D	1	2	S1
	2124.393	2124.388	6	333090.8	380148.3	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3D	2	1	S1
	2164.433	2164.432	9	337340.1	383527.1	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^1P	0	1	S1

Sc IV – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2171.170	2171.174	6	337483.5	383527.1	$3s^23p^54s$	$3s^23p^54p$	$^1P^\circ$	^1P	1	1	S1
	2185.430	2185.433	11	334405.1	380148.3	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3D	1	1	S1
	2205.464	2205.464	11bl	333090.8	378418.6	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3D	2	2	S1
	2222.215	2222.212	14	333090.8	378077.0	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3D	2	3	S1
	2260.282	2260.286	7	337483.5	381712.0	$3s^23p^54s$	$3s^23p^54p$	$^1P^\circ$	^3P	1	2	S1
	2271.331	2271.328	11	334405.1	378418.6	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3D	1	2	S1
	2297.968	2297.968	1	478495.9	521999.2	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})5g$	$^2[^3/_2]$	$^2[^5/_2]^\circ$	1	2	S1
	2298.108	2298.106	6	478609.5	522110.2	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})5g$	$^2[^9/_2]$	$^2[^{11}/_2]^\circ$	5	6	S1
	2306.504	2306.505	6	478768.4	522110.7	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})5g$	$^2[^9/_2]$	$^2[^{11}/_2]^\circ$	4	5	S1
	2312.119	2312.118	1	478767.7	522004.8	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})5g$	$^2[^3/_2]$	$^2[^5/_2]^\circ$	2	3	S1
	2327.456	2327.455	4	483609.4	526561.6	$3s^23p^5(^2P^\circ_{1/2})4f$	$3s^23p^5(^2P^\circ_{1/2})5g$	$^2[^7/_2]$	$^2[^9/_2]^\circ$	3	4	S1
	2332.731	2332.729	6	483708.0	526563.1	$3s^23p^5(^2P^\circ_{1/2})4f$	$3s^23p^5(^2P^\circ_{1/2})5g$	$^2[^7/_2]$	$^2[^9/_2]^\circ$	4	5	S1
	2332.918	2332.920	5	479452.9	522304.5	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})5g$	$^2[^5/_2]$	$^2[^7/_2]^\circ$	3	4	S1
	2335.287	2335.285	7	337340.1	380148.3	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3D	0	1	S1
	2343.135	2343.135	3	337483.5	380148.3	$3s^23p^54s$	$3s^23p^54p$	$^1P^\circ$	^3D	1	1	S1
	2346.237	2346.236	4	483962.8	526571.2	$3s^23p^5(^2P^\circ_{1/2})4f$	$3s^23p^5(^2P^\circ_{1/2})5g$	$^2[^5/_2]$	$^2[^7/_2]^\circ$	3	4	S1
	2351.342	2351.341	6	479908.9	522424.8	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})5g$	$^2[^7/_2]$	$^2[^9/_2]^\circ$	3	4	S1
	2355.962	2355.963	6	479993.2	522425.7	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})5g$	$^2[^7/_2]$	$^2[^9/_2]^\circ$	4	5	S1
	2362.429	2362.428	4	484257.6	526574.0	$3s^23p^5(^2P^\circ_{1/2})4f$	$3s^23p^5(^2P^\circ_{1/2})5g$	$^2[^5/_2]$	$^2[^7/_2]^\circ$	2	3	S1
	2368.415	2368.417	2	480097.9	522307.3	$3s^23p^5(^2P^\circ_{3/2})4f$	$3s^23p^5(^2P^\circ_{3/2})5g$	$^2[^5/_2]$	$^2[^7/_2]^\circ$	2	3	S1
	2378.200	2378.216	0	441927.3	483962.8	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3P^\circ$	$^2[^5/_2]$	2	3	S1
	2442.147	2442.151	2	337483.5	378418.6	$3s^23p^54s$	$3s^23p^54p$	$^1P^\circ$	^3D	1	2	S1
	2464.459	2464.458	9	345005.4	385570.0	$3s^23p^53d$	$3s^23p^54p$	$^1P^\circ$	^3P	1	1	S1
	2467.362	2467.372	0d	443191.3	483708.0	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3F^\circ$	$^2[^7/_2]$	3	4	S1
	2520.927	2520.934	8	345005.4	384661.3	$3s^23p^53d$	$3s^23p^54p$	$^1P^\circ$	^1D	1	2	S1
	2551.438	2551.427	0	444427.4	483609.4	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3F^\circ$	$^2[^7/_2]$	2	3	S1
	2586.933	2586.923	11	333090.8	371735.2	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3S	2	1	S1
	2595.167	2595.163	9	345005.4	383527.1	$3s^23p^53d$	$3s^23p^54p$	$^1P^\circ$	^1P	1	1	S1
	2632.331	2632.319	3	440517.9	478495.9	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^3/_2]$	0	1	S1
	2645.799	2645.786	5	440983.0	478767.7	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^3/_2]$	1	2	S1
	2664.058	2664.055	6	441927.3	479452.9	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^5/_2]$	2	3	S1
	2664.970	2664.957	1	440983.0	478495.9	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^3/_2]$	1	1	S1
	2670.527	2670.531	3	442558.6	479993.2	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^7/_2]$	4	4	S1
	2678.013	2678.008	8	334405.1	371735.2	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3S	1	1	S1
	2713.606	2713.607	0	441927.3	478767.7	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3P^\circ$	$^2[^3/_2]$	2	2	S1
	2722.693	2722.683	2	443191.3	479908.9	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^7/_2]$	3	3	S1
	2723.517	2723.499	8	345005.4	381712.0	$3s^23p^53d$	$3s^23p^54p$	$^1P^\circ$	^3P	1	2	S1
	2728.794	2728.807	3	447622.4	484257.6	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3D^\circ$	$^2[^5/_2]$	1	2	S1
	2755.070	2755.077	3	441927.3	478213.2	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3P^\circ$	$^2[^3/_2]$	2	2	S1
	2761.927	2761.951	0	448062.0	484257.6	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^1D^\circ$	$^2[^5/_2]$	2	2	S1
	2773.036	2773.037	8	442558.6	478609.5	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^9/_2]$	4	5	S1
	2809.960	2809.969	7	443191.3	478768.4	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^9/_2]$	3	4	S1
	2812.318	2812.317	6	448062.0	483609.4	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^1D^\circ$	$^2[^7/_2]$	2	3	S1
	2817.539	2817.541	6	444427.4	479908.9	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})4f$	$^3F^\circ$	$^2[^7/_2]$	2	3	S1
	2837.021	2837.035	6	448725.1	483962.8	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^3D^\circ$	$^2[^5/_2]$	2	3	S1
	2844.683	2844.689	5	345005.4	380148.3	$3s^23p^53d$	$3s^23p^54p$	$^1P^\circ$	^1D	1	1	S1
	2848.159	2848.149	7	448607.8	483708.0	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^1F^\circ$	$^2[^7/_2]$	3	4	S1
	2856.162	2856.173	0	448607.8	483609.4	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^1F^\circ$	$^2[^7/_2]$	3	3	S1
	2873.900	2873.901	6	445207.5	479993.2	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{1/2})4f$	$^1D^\circ$	$^2[^7/_2]$	3	4	S1
	2888.304	2888.299	0	477018.0	511630.3	$3s^23p^5(^2P^\circ_{3/2})5p$	$3s^23p^5(^2P^\circ_{3/2})6s$	$^2[^5/_2]$	$^2[^3/_2]^\circ$	2	1	S1
	2905.308	2905.306	1	476818.5	511228.2	$3s^23p^5(^2P^\circ_{3/2})5p$	$3s^23p^5(^2P^\circ_{3/2})6s$	$^2[^5/_2]$	$^2[^3/_2]^\circ$	3	2	S1
	2906.536	2906.539	7	337340.1	371735.2	$3s^23p^54s$	$3s^23p^54p$	$^3P^\circ$	^3S	0	1	S1
	2918.021	2918.010	6	442558.6	476818.5	$3s^23p^54d$	$3s^23p^5(^2P^\circ_{3/2})5p$	$^3F^\circ$	$^2[^5/_2]$	4	3	S1
	2918.710	2918.709	7	337483.5	371735.2	$3s^23p^54s$	$3s^23p^54p$	$^1P^\circ$	^3S	1	1	S1
	2922.195	2922.249	0	477018.0	511228.2	$3s^23p^5(^2P^\circ_{3/2})5p$	$3s^23p^5(^2P^\circ_{3/2})6s$	$^2[^5/_2]$	$^2[^3/_2]^\circ$	2	2	S1

Sc IV – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2934.407	2934.404	0	444427.4	478495.9	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3F^o$	$-\ ^2[^3/_2]$	2	1	S1
	2947.870	2947.843	0	448062.0	481975.2	$3s^23p^54d$	$3s^23p^5(^2P^o_{1/2})5p$	$^1D^o$	$-\ ^2[^3/_2]$	2	2	S1
	2955.388	2955.381	3	443191.3	477018.0	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3F^o$	$-\ ^2[^5/_2]$	3	2	S1
	2959.341	2959.344	1	440983.0	474764.4	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3P^o$	$-\ ^2[^1/_2]$	1	1	S1
	2972.913	2972.915	0	443191.3	476818.5	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3F^o$	$-\ ^2[^5/_2]$	3	3	S1
	2978.811	2978.788	0	445207.5	478768.4	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$-\ ^2[^9/_2]$	3	4	S1
	2991.980	2991.956	3	345005.4	378418.6	$3s^23p^53d$	$3s^23p^54p$	$^1P^o$	$-\ ^3D$	1	2	S1
	2996.074	2996.063	3	448607.8	481975.2	$3s^23p^54d$	$3s^23p^5(^2P^o_{1/2})5p$	$^1F^o$	$-\ ^2[^3/_2]$	3	2	S1
	3000.324	3000.308	1	444427.4	477747.6	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3F^o$	$-\ ^2[^3/_2]$	2	1	S1
	3000.754	3000.740	1	448062.0	481377.4	$3s^23p^54d$	$3s^23p^5(^2P^o_{1/2})5p$	$^1D^o$	$-\ ^2[^3/_2]$	2	1	S1
	3009.841	3009.829	2	448725.1	481939.9	$3s^23p^54d$	$3s^23p^5(^2P^o_{1/2})5p$	$^3D^o$	$-\ ^2[^1/_2]$	2	1	S1
	3028.900	3028.898	2	445207.5	478213.2	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3D^o$	$-\ ^2[^3/_2]$	3	2	S1
	3067.482	3067.478	0	444427.4	477018.0	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3F^o$	$-\ ^2[^5/_2]$	2	2	S1
	3078.356	3078.350	1	447622.4	480097.9	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})4f$	$^3D^o$	$-\ ^2[^5/_2]$	1	2	S1
	3224.850	3224.854	0*d*	453972.7	484972.9	$3s^23p^54d$	$3s^23p^5(^2P^o_{1/2})5p$	$^1P^o$	$-\ ^2[^1/_2]$	1	0	S1
	3301.038	3301.025	0	453972.7	484257.6	$3s^23p^54d$	$3s^23p^5(^2P^o_{1/2})4f$	$^1P^o$	$-\ ^2[^5/_2]$	1	2	S1
	3390.248	3390.225	0	448725.1	478213.2	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})5p$	$^3D^o$	$-\ ^2[^3/_2]$	2	2	S1
	3826.622	3826.636	5	453972.7	480097.9	$3s^23p^54d$	$3s^23p^5(^2P^o_{3/2})4f$	$^1P^o$	$-\ ^2[^5/_2]$	1	2	S1
	4072.801	4072.833	0	460426.9	484972.9	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{1/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^1/_2]$	1	0	S1
	4576.659	4576.654	3bl	521999.2	543843.1	$3s^23p^5(^2P^o_{3/2})5g$	$3s^23p^5(^2P^o_{3/2})6h$	$^2[^5/_2]^o$	$-\ ^2[^7/_2]$	2	3	S1
	4577.726	4577.828	4bl	522004.8	543843.1	$3s^23p^5(^2P^o_{3/2})5g$	$3s^23p^5(^2P^o_{3/2})6h$	$^2[^5/_2]^o$	$-\ ^2[^7/_2]$	3	4	S1
	4594.420	4594.385	8bl	522110.2	543869.8	$3s^23p^5(^2P^o_{3/2})5g$	$3s^23p^5(^2P^o_{3/2})6h$	$^2[^{11}/_2]^o$	$-\ ^2[^{13}/_2]$		–	S1
	4612.366	4612.339	4bl	526561.6	548236.5	$3s^23p^5(^2P^o_{1/2})5g$	$3s^23p^5(^2P^o_{1/2})6h$	$^2[^9/_2]^o$	$-\ ^2[^{11}/_2]$	4	5	S1
	4612.634	4612.659	5bl	526563.1	548236.5	$3s^23p^5(^2P^o_{1/2})5g$	$3s^23p^5(^2P^o_{1/2})6h$	$^2[^9/_2]^o$	$-\ ^2[^{11}/_2]$	5	6	S1
	4614.108	4614.106	4bl	526571.2	548237.8	$3s^23p^5(^2P^o_{1/2})5g$	$3s^23p^5(^2P^o_{1/2})6h$	$^2[^7/_2]^o$	$-\ ^2[^9/_2]$	4	5	S1
	4614.728	4614.703	3bl	526574.0	548237.8	$3s^23p^5(^2P^o_{1/2})5g$	$3s^23p^5(^2P^o_{1/2})6h$	$^2[^7/_2]^o$	$-\ ^2[^9/_2]$	3	4	S1
	4620.295	4620.290	5bl	522304.5	543942.1	$3s^23p^5(^2P^o_{3/2})5g$	$3s^23p^5(^2P^o_{3/2})6h$	$^2[^7/_2]^o$	$-\ ^2[^9/_2]$	4	5	S1
	4620.918	4620.888	4bl	522307.3	543942.1	$3s^23p^5(^2P^o_{3/2})5g$	$3s^23p^5(^2P^o_{3/2})6h$	$^2[^7/_2]^o$	$-\ ^2[^9/_2]$	3	4	S1
	4639.439	4639.438	2	460426.9	481975.2	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{1/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^3/_2]$	1	2	S1
	4639.961	4640.041	8bl	522425.7	543971.2	$3s^23p^5(^2P^o_{3/2})5g$	$3s^23p^5(^2P^o_{3/2})6h$	$^2[^9/_2]^o$	$-\ ^2[^{11}/_2]$		–	S1
	4872.980	4872.955	5	464457.2	484972.9	$3s^23p^5(^2P^o_{1/2})5s$	$3s^23p^5(^2P^o_{1/2})5p$	$^2[^1/_2]^o$	$-\ ^2[^1/_2]$	1	0	S1
	5033.917	5033.919	5	460426.9	480286.6	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^1/_2]$	1	0	S1
	5187.739	5187.753	4	459496.9	478767.7	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})4f$	$^2[^3/_2]^o$	$-\ ^2[^3/_2]$	2	2	S1
	5341.431	5341.451	5	459496.9	478213.2	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^3/_2]$	2	2	S1
	5477.711	5477.720	1	459496.9	477747.6	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^3/_2]$	2	1	S1
	5501.743	5501.746	8	463768.9	481939.9	$3s^23p^5(^2P^o_{1/2})5s$	$3s^23p^5(^2P^o_{1/2})5p$	$^2[^1/_2]^o$	$-\ ^2[^1/_2]$	0	1	S1
	5620.724	5620.744	9	460426.9	478213.2	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^3/_2]$	1	2	S1
	5677.516	5677.500	4	463768.9	481377.4	$3s^23p^5(^2P^o_{1/2})5s$	$3s^23p^5(^2P^o_{1/2})5p$	$^2[^1/_2]^o$	$-\ ^2[^3/_2]$	0	1	S1
	5705.793	5705.821	7	459496.9	477018.0	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^5/_2]$	2	2	S1
	5706.823	5706.831	10	464457.2	481975.2	$3s^23p^5(^4P^o_{1/2})5s$	$3s^23p^5(^4P^o_{1/2})5p$	$^4[^1/_2]^o$	$-\ ^4[^3/_2]$	1	2	S1
	5718.435	5718.354	3	464457.2	481939.9	$3s^23p^5(^2P^o_{1/2})5s$	$3s^23p^5(^2P^o_{1/2})5p$	$^2[^1/_2]^o$	$-\ ^2[^1/_2]$	1	1	S1
	5771.627	5771.538	14	459496.9	476818.5	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^5/_2]$	2	3	S1
	5908.472	5908.458	7	464457.2	481377.4	$3s^23p^5(^2P^o_{1/2})5s$	$3s^23p^5(^2P^o_{1/2})5p$	$^2[^1/_2]^o$	$-\ ^2[^3/_2]$	1	1	S1
	6025.636	6025.659	7	460426.9	477018.0	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^5/_2]$	1	2	S1
	6548.032	6548.052	9	459496.9	474764.4	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^1/_2]$	2	1	S1
	6972.779	6972.793	0	460426.9	474764.4	$3s^23p^5(^2P^o_{3/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^3/_2]^o$	$-\ ^2[^1/_2]$	1	1	S1
	7267.572	7267.552	0	464457.2	478213.2	$3s^23p^5(^2P^o_{1/2})5s$	$3s^23p^5(^2P^o_{3/2})5p$	$^2[^1/_2]^o$	$-\ ^2[^3/_2]$	1	2	S1
	7612.663	7612.543	0bl	543708.3	556840.9	$3s^23p^5(^2P^o_{3/2})6g$	$3s^23p^5(^2P^o_{3/2})7h$	$^2[^{11}/_2]^o$	$-\ ^2[^{13}/_2]$	6	–	S1
	7639.976	7639.243	0bl	548104.3	561191.0	$3s^23p^5(^2P^o_{1/2})6g$	$3s^23p^5(^2P^o_{1/2})7h$	$^2[^9/_2]^o$	$-\ ^2[^{11}/_2]$	5	–	S1
		7640.177		548105.9	561191.0	$3s^23p^5(^2P^o_{1/2})6g$	$3s^23p^5(^2P^o_{1/2})7h$	$^2[^7/_2]^o$	$-\ ^2[^9/_2]$	4	–	S1
	7654.284	7653.688	0bl	543824.9	556886.9	$3s^23p^5(^2P^o_{3/2})6g$	$3s^23p^5(^2P^o_{3/2})7h$	$^2[^7/_2]^o$	$-\ ^2[^9/_2]$	4	–	S1
	7678.338	7678.437	1bl	543843.6	556863.5	$3s^23p^5(^2P^o_{3/2})6h$	$3s^23p^5(^2P^o_{3/2})7i$	$^2[^7/_2]$	$-\ ^2[^9/_2]^o$		–	S1
	7683.782	7684.162	0bl	543893.3	556903.5	$3s^23p^5(^2P^o_{3/2})6g$	$3s^23p^5(^2P^o_{3/2})7h$	$^2[^9/_2]^o$	$-\ ^2[^{11}/_2]$	5	–	S1
	7689.282	7689.304	2bl	543869.8	556871.3	$3s^23p^5(^2P^o_{3/2})6h$	$3s^23p^5(^2P^o_{3/2})7i$	$^2[^{13}/_2]$	$-\ ^2[^{15}/_2]^o$		–	S1
	7703.943	7703.583	2bl	548236.5	561213.9	$3s^23p^5(^2P^o_{1/2})6h$	$3s^23p^5(^2P^o_{1/2})7i$	$^2[^{11}/_2]$	$-\ ^2[^{13}/_2]^o$		–	S1
		7704.355	2bl	548237.8	561213.9	$3s^23p^5(^2P^o_{1/2})6h$	$3s^23p^5(^2P^o_{1/2})7i$	$^2[^9/_2]$	$-\ ^2[^{11}/_2]^o$		–	S1

Sc IV – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	7714.772	7714.700	1bl	543942.1	– 556900.8	$3s^23p^5(^2P^o_{3/2})6h$	– $3s^23p^5(^2P^o_{3/2})7i$	$^2[^9/_2]$	– $^2[^{11}/_2]^o$	–		S1
	7726.160	7726.147	1bl	543971.2	– 556910.7	$3s^23p^5(^2P^o_{3/2})6h$	– $3s^23p^5(^2P^o_{3/2})7i$	$^2[^{11}/_2]$	– $^2[^{13}/_2]^o$	–		S1

Sc V

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	166.498	166.501	1g	0.0	– 600598.6	$3s^23p^5$	– $3s^23p^4(^1S)5s$	$^2P^o$	– ^2S	$^3/_2$	– $^1/_2$	S2
	167.711	167.708	0g	4325.7	– 600598.6	$3s^23p^5$	– $3s^23p^4(^1S)5s$	$^2P^o$	– ^2S	$^1/_2$	– $^1/_2$	S2
	174.437	174.433	4g	0.0	– 573286.7	$3s^23p^5$	– $3s^23p^4(^1D)5s$	$^2P^o$	– ^2D	$^3/_2$	– $^5/_2$	S2
	175.771	175.768	3g	4325.7	– 573258.1	$3s^23p^5$	– $3s^23p^4(^1D)5s$	$^2P^o$	– ^2D	$^1/_2$	– $^3/_2$	S2
	179.308	179.315	2g	0.0	– 557678.5	$3s^23p^5$	– $3s^23p^4(^3P)5s$	$^2P^o$	– ^2P	$^3/_2$	– $^1/_2$	S2
	180.036	180.034	5g	0.0	– 555449.2	$3s^23p^5$	– $3s^23p^4(^3P)5s$	$^2P^o$	– ^2P	$^3/_2$	– $^3/_2$	S2
	180.718	180.717	2g	4325.7	– 557678.5	$3s^23p^5$	– $3s^23p^4(^3P)5s$	$^2P^o$	– ^2P	$^1/_2$	– $^1/_2$	S2
	180.862	180.860	3g	0.0	– 552912.6	$3s^23p^5$	– $3s^23p^4(^3P)5s$	$^2P^o$	– ^4P	$^3/_2$	– $^3/_2$	S2
	181.447	181.448	1g	4325.7	– 555449.2	$3s^23p^5$	– $3s^23p^4(^3P)5s$	$^2P^o$	– ^2P	$^1/_2$	– $^3/_2$	S2
	181.574	181.574	0g	4325.7	– 555065.3	$3s^23p^5$	– $3s^23p^4(^3P)5s$	$^2P^o$	– ^4P	$^1/_2$	– $^1/_2$	S2
	182.285	182.287	0g	4325.7	– 552912.6	$3s^23p^5$	– $3s^23p^4(^3P)5s$	$^2P^o$	– ^4P	$^1/_2$	– $^3/_2$	S2
	185.162	185.161	3g	0.0	– 540070.3	$3s^23p^5$	– $3s^23p^4(^1D)4d$	$^2P^o$	– ^2D	$^3/_2$	– $^5/_2$	S2
	185.990	185.987	1g	0.0	– 537670.9	$3s^23p^5$	– $3s^23p^4(^1D)4d$	$^2P^o$	– ^2P	$^3/_2$	– $^3/_2$	S2
	186.370	186.364	1g	4325.7	– 540910.4	$3s^23p^5$	– $3s^23p^4(^1D)4d$	$^2P^o$	– ^2D	$^1/_2$	– $^3/_2$	S2
	186.596	186.590	2g	0.0	– 535934.3	$3s^23p^5$	– $3s^23p^4(^1D)4d$	$^2P^o$	– ^2S	$^3/_2$	– $^1/_2$	S2
	187.162	187.159	0g	4325.7	– 538631.5	$3s^23p^5$	– $3s^23p^4(^1D)4d$	$^2P^o$	– ^2P	$^1/_2$	– $^1/_2$	S2
	187.493	187.496	0g	4325.7	– 537670.9	$3s^23p^5$	– $3s^23p^4(^1D)4d$	$^2P^o$	– ^2P	$^1/_2$	– $^3/_2$	S2
	188.110	188.108	1g	4325.7	– 535934.3	$3s^23p^5$	– $3s^23p^4(^1D)4d$	$^2P^o$	– ^2S	$^1/_2$	– $^1/_2$	S2
	191.038	191.040	3g	0.0	– 523450.8	$3s^23p^5$	– $3s^23p^4(^3P)4d$	$^2P^o$	– ^2D	$^3/_2$	– $^5/_2$	S2
	191.603	191.604	8g,bl	0.0	– 521911.1	$3s^23p^5$	– $3s^23p^4(^3P)4d$	$^2P^o$	– ^2D	$^3/_2$	– $^3/_2$	S2
	191.870	191.867	0g	0.0	– 521195.6	$3s^23p^5$	– $3s^23p^4(^3P)4d$	$^2P^o$	– ^2F	$^3/_2$	– $^5/_2$	S2
	192.523	192.524	0g	0.0	– 519416.9	$3s^23p^5$	– $3s^23p^4(^3P)4d$	$^2P^o$	– ^4F	$^3/_2$	– $^5/_2$	S2
	193.204	193.205	0g	4325.7	– 521911.1	$3s^23p^5$	– $3s^23p^4(^3P)4d$	$^2P^o$	– ^2D	$^1/_2$	– $^3/_2$	S2
	228.577	228.572	5g	0.0	– 437498.0	$3s^23p^5$	– $3s^23p^4(^1S)4s$	$^2P^o$	– ^2S	$^3/_2$	– $^1/_2$	S2
	230.854	230.855	4g	4325.7	– 437498.0	$3s^23p^5$	– $3s^23p^4(^1S)4s$	$^2P^o$	– ^2S	$^1/_2$	– $^1/_2$	S2
	243.834	243.834	1g	0.0	– 410115.4	$3s^23p^5$	– $3s^23p^4(^1D)4s$	$^2P^o$	– ^2D	$^1/_2$	– $^3/_2$	S2
	243.874	243.877	7g	0.0	– 410043.4	$3s^23p^5$	– $3s^23p^4(^1D)4s$	$^2P^o$	– ^2D	$^3/_2$	– $^5/_2$	S2
	246.431	246.433	6g	4325.7	– 410115.4	$3s^23p^5$	– $3s^23p^4(^1D)4s$	$^2P^o$	– ^2D	$^1/_2$	– $^5/_2$	S2
	250.984	250.985	6g	0.0	– 398429.9	$3s^23p^5$	– $3s^23p^4(^3P)4s$	$^2P^o$	– ^2P	$^1/_2$	– $^1/_2$	S2
	252.852	252.850	8g	0.0	– 395491.8	$3s^23p^5$	– $3s^23p^4(^3P)4s$	$^2P^o$	– ^2P	$^1/_2$	– $^3/_2$	S2
	253.745	253.740	6g	4325.7	– 398429.9	$3s^23p^5$	– $3s^23p^4(^3P)4s$	$^2P^o$	– ^2P	$^1/_2$	– $^1/_2$	S2
	255.650	255.646	4g	4325.7	– 395491.8	$3s^23p^5$	– $3s^23p^4(^3P)4s$	$^2P^o$	– ^2P	$^1/_2$	– $^3/_2$	S2
	257.164	257.162	4g	0.0	– 388860.6	$3s^23p^5$	– $3s^23p^4(^3P)4s$	$^2P^o$	– ^4P	$^3/_2$	– $^3/_2$	S2
	258.815	258.808	3g	0.0	– 386386.3	$3s^23p^5$	– $3s^23p^4(^3P)4s$	$^2P^o$	– ^4P	$^3/_2$	– $^5/_2$	S2
	259.050	259.053	1g	4325.7	– 390346.8	$3s^23p^5$	– $3s^23p^4(^3P)4s$	$^2P^o$	– ^4P	$^1/_2$	– $^1/_2$	S2
	260.055	260.054	1g	4325.7	– 388860.6	$3s^23p^5$	– $3s^23p^4(^3P)4s$	$^2P^o$	– ^4P	$^1/_2$	– $^3/_2$	S2
	280.992	280.997	7g	0.0	– 355876.0	$3s^23p^5$	– $3s^23p^4(^3P)3d$	$^2P^o$	– ^2D	$^3/_2$	– $^3/_2$	S2
	283.913	283.913	12g	0.0	– 352220.3	$3s^23p^5$	– $3s^23p^4(^3P)3d$	$^2P^o$	– ^2D	$^3/_2$	– $^5/_2$	S2
	284.450	284.454	9g	4325.7	– 355876.0	$3s^23p^5$	– $3s^23p^4(^3P)3d$	$^2P^o$	– ^2D	$^1/_2$	– $^3/_2$	S2
	288.285	288.283	7g	0.0	– 346881.8	$3s^23p^5$	– $3s^23p^4(^3P)3d$	$^2P^o$	– ^2P	$^3/_2$	– $^1/_2$	S2

Sc v – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	289.593	289.588	9g	0.0 –	345317.9	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^2P	$^3/_2$ –	$^3/_2$	S2
	291.928	291.923	8g	4325.7 –	346881.8	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^2P	$^1/_2$ –	$^1/_2$	S2
	293.260	293.262	7g	4325.7 –	345317.9	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^2P	$^1/_2$ –	$^3/_2$	S2
	296.164	296.164	7g	0.0 –	337650.5	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2S	$^3/_2$ –	$^1/_2$	S2
	300.008	300.008	7g	4325.7 –	337650.5	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2S	$^1/_2$ –	$^1/_2$	S2
	319.806	319.807	4g	0.0 –	312688.3	$3s^23p^5$ –	$3s^23p^4(^1S)3d$	$^2P°$ –	^2D	$^3/_2$ –	$^5/_2$	S2
	320.645	320.646	5g	0.0 –	311870.5	$3s^23p^5$ –	$3s^23p^4(^1S)3d$	$^2P°$ –	^2D	$^3/_2$ –	$^3/_2$	S2
	325.159	325.156	5g	4325.7 –	311870.5	$3s^23p^5$ –	$3s^23p^4(^1S)3d$	$^2P°$ –	^2D	$^1/_2$ –	$^3/_2$	S2
	342.047	342.047	5g	0.0 –	292357.1	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2F	$^3/_2$ –	$^5/_2$	S2
	344.460	344.462	5	174411.9 –	464719.7	$3s3p^6$ –	$3s3p^5(^1P°)3d$	^2S –	$^2P°$	$^1/_2$ –	$^3/_2$	S2
	345.973	345.975	4	174411.9 –	463450.5	$3s3p^6$ –	$3s3p^5(^1P°)3d$	^2S –	$^2P°$	$^1/_2$ –	$^1/_2$	S2
	357.517	357.520	0	254637.1 –	534341.7	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P°)3d$	^2P –	$^2P°$	$^1/_2$ –	$^1/_2$	S2
	368.070	368.073	4g	0.0 –	271685.3	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^2F	$^3/_2$ –	$^5/_2$	S2
	370.023	370.018	3	264084.9 –	534341.7	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P°)3d$	^2D –	$^2P°$	$^3/_2$ –	$^1/_2$	S2
	373.442	373.442	2	266635.0 –	534414.0	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P°)3d$	^2D –	$^2P°$	$^5/_2$ –	$^3/_2$	S2
	375.044	375.045	8g,bl	0.0 –	266635.0	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2D	$^3/_2$ –	$^5/_2$	S2
	376.615	376.614	6g	0.0 –	265523.7	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4P	$^3/_2$ –	$^5/_2$	S2
	378.023	378.023	5g	0.0 –	264534.3	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4P	$^3/_2$ –	$^3/_2$	S2
	378.668	378.666	6g	0.0 –	264084.9	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2D	$^3/_2$ –	$^5/_2$	S2
	379.570	379.574	5g	0.0 –	263453.1	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4P	$^3/_2$ –	$^1/_2$	S2
	384.307	384.307	6g	4325.7 –	264534.3	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4P	$^1/_2$ –	$^3/_2$	S2
	384.969	384.972	7g	4325.7 –	264084.9	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2D	$^1/_2$ –	$^3/_2$	S2
	385.906	385.911	3g	4325.7 –	263453.1	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4P	$^1/_2$ –	$^1/_2$	S2
	388.680	388.680	8g	0.0 –	257280.9	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2P	$^3/_2$ –	$^3/_2$	S2
	390.099	390.094	5g	0.0 –	256348.4	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4F	$^3/_2$ –	$^3/_2$	S2
	391.096	391.098	6g	0.0 –	255690.7	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4F	$^3/_2$ –	$^5/_2$	S2
	392.716	392.716	5g	0.0 –	254637.1	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2P	$^3/_2$ –	$^1/_2$	S2
	395.327	395.327	6g	4325.7 –	257280.9	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2P	$^1/_2$ –	$^3/_2$	S2
	396.791	396.790	4g	4325.7 –	256348.4	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4F	$^1/_2$ –	$^3/_2$	S2
	399.500	399.502	7g	4325.7 –	254637.1	$3s^23p^5$ –	$3s^23p^4(^1D)3d$	$^2P°$ –	^2P	$^1/_2$ –	$^1/_2$	S2
	415.102	415.099	2	254637.1 –	495543.2	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2P –	$^2D°$	$^1/_2$ –	$^3/_2$	S2
	419.452	419.448	1	257280.9 –	495689.3	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2P –	$^2D°$	$^3/_2$ –	$^5/_2$	S2
	419.700	419.706	1	257280.9 –	495543.2	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2P –	$^2D°$	$^3/_2$ –	$^3/_2$	S2
	426.088	426.097	0g	0.0 –	234688.4	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4D	$^3/_2$ –	$^1/_2$	S2
	427.376	427.374	5g	0.0 –	233987.0	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4D	$^3/_2$ –	$^5/_2$	S2
	432.042	432.043	2	264084.9 –	495543.2	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2D –	$^2D°$	$^3/_2$ –	$^3/_2$	S2
	432.878	432.884	1	264534.3 –	495543.2	$3s^23p^4(^3P)3d$ –	$3s3p^5(^1P°)3d$	^4P –	$^2D°$	$^3/_2$ –	$^3/_2$	S2
	434.096	434.098	1g	4325.7 –	234688.4	$3s^23p^5$ –	$3s^23p^4(^3P)3d$	$^2P°$ –	^4D	$^1/_2$ –	$^1/_2$	S2
	436.586	436.578	4	266635.0 –	495689.3	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2D –	$^2D°$	$^5/_2$ –	$^5/_2$	S2
	439.215	439.225	0	268015.4 –	495689.3	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2G –	$^2D°$	$^7/_2$ –	$^5/_2$	S2
	458.226	458.233	1	254637.1 –	472866.7	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^1D)4p$	^2P –	$^2P°$	$^1/_2$ –	$^1/_2$	S2
	462.382	462.383	0	254637.1 –	470908.2	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^1D)4p$	^2P –	$^2P°$	$^1/_2$ –	$^3/_2$	S2
	463.848	463.852	0	257280.9 –	472866.7	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^1D)4p$	^2P –	$^2P°$	$^3/_2$ –	$^1/_2$	S2
	464.779	464.776	1	234370.5 –	449527.8	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4D –	$^2S°$	$^3/_2$ –	$^1/_2$	S2
	465.983	465.986	1	264084.9 –	478683.5	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2D –	$^2F°$	$^3/_2$ –	$^5/_2$	S2
	466.964	466.964	3bl	264534.3 –	478683.5	$3s^23p^4(^3P)3d$ –	$3s3p^5(^1P°)3d$	^4P –	$^2F°$	$^3/_2$ –	$^5/_2$	S2
	468.104	468.105	3	257280.9 –	470908.2	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^1D)4p$	^2P –	$^2P°$	$^3/_2$ –	$^3/_2$	S2
	469.502	469.501	2	266635.0 –	479627.0	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2D –	$^2F°$	$^5/_2$ –	$^7/_2$	S2
	471.318	471.320	0	254637.1 –	466807.3	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^1D)4p$	^2P –	$^2D°$	$^1/_2$ –	$^3/_2$	S2
	473.355	473.361	1	233711.1 –	444966.4	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4D –	$^4D°$	$^7/_2$ –	$^5/_2$	S2
	473.989	473.980	0	233987.0 –	444966.4	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4D –	$^4D°$	$^5/_2$ –	$^5/_2$	S2
	474.679	474.680	5bl	268015.4 –	478683.5	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2G –	$^2F°$	$^7/_2$ –	$^5/_2$	S2
	474.844	474.843	0	234370.5 –	444966.4	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4D –	$^4D°$	$^3/_2$ –	$^5/_2$	S2
	474.980	474.979	0	234688.4 –	445224.1	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4D –	$^4D°$	$^1/_2$ –	$^1/_2$	S2
	476.002	476.003	2	254637.1 –	464719.7	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P°)3d$	^2P –	$^2P°$	$^1/_2$ –	$^3/_2$	S2
		476.014		257280.9 –	467358.9	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^1D)4p$	^2P –	$^2D°$	$^3/_2$ –	$^5/_2$	S2

Sc v – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	477.271	477.267	0	257280.9	466807.3	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2P	$^2D^\circ$	$3/2$	$3/2$	S2
	477.357	477.355	1	233711.1	443198.8	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4D	$^4D^\circ$	$7/2$	$7/2$	S2
	478.895	478.896	1	254637.1	463450.5	$3s^23p^4(^1D)3d$	$3s3p^5(^1P^\circ)3d$	^2P	$^2P^\circ$	$1/2$	$1/2$	S2
	480.542	480.547	5	271531.0	479627.0	$3s^23p^4(^1D)3d$	$3s3p^5(^1P^\circ)3d$	^2G	$^2F^\circ$	$9/2$	$7/2$	S2
	481.141	481.141	0	271787.7	479627.0	$3s^23p^4(^3P)3d$	$3s3p^5(^1P^\circ)3d$	^2F	$^2F^\circ$	$7/2$	$7/2$	S2
	482.069	482.070	1	257280.9	464719.7	$3s^23p^4(^1D)3d$	$3s3p^5(^1P^\circ)3d$	^2P	$^2P^\circ$	$3/2$	$3/2$	S2
	483.104	483.096	0	271685.3	478683.5	$3s^23p^4(^3P)3d$	$3s3p^5(^1P^\circ)3d$	^2F	$^2F^\circ$	$5/2$	$5/2$	S2
	483.336	483.335	5	271787.7	478683.5	$3s^23p^4(^3P)3d$	$3s3p^5(^1P^\circ)3d$	^2F	$^2F^\circ$	$7/2$	$5/2$	S2
	483.520	483.505	0	264084.9	470908.2	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2D	$^2P^\circ$	$3/2$	$3/2$	S2
	486.605	486.603	4	233987.0	439493.5	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$5/2$	$3/2$	S2
	487.088	487.087	2bl	234370.5	439672.6	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$3/2$	$1/2$	S2
	487.319	487.320	4	233711.1	438915.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$7/2$	$5/2$	S2
	487.510	487.512	1	234370.5	439493.5	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$3/2$	$3/2$	S2
	487.837	487.842	1	234688.4	439672.6	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$1/2$	$1/2$	S2
	487.976	487.976	4	233987.0	438915.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$5/2$	$5/2$	S2
	488.270	488.269	1	234688.4	439493.5	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$1/2$	$3/2$	S2
	488.889	488.879	2	255690.7	460240.3	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^4F	$^2F^\circ$	$5/2$	$5/2$	S2
		488.891		234370.5	438915.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$3/2$	$5/2$	S2
	489.541	489.540	2	266635.0	470908.2	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2D	$^2P^\circ$	$5/2$	$3/2$	S2
	489.753	489.752	6	233711.1	437896.2	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$7/2$	$7/2$	S2
	490.413	490.414	3	233987.0	437896.2	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4D^\circ$	$5/2$	$7/2$	S2
	491.805	491.806	1	292357.1	495689.3	$3s^23p^4(^1D)3d$	$3s3p^5(^1P^\circ)3d$	^2F	$^2D^\circ$	$5/2$	$5/2$	S2
	491.949	491.947	0	264084.9	467358.9	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2D	$^2D^\circ$	$3/2$	$5/2$	S2
	492.160	492.160	4	292357.1	495543.2	$3s^23p^4(^1D)3d$	$3s3p^5(^1P^\circ)3d$	^2F	$^2D^\circ$	$5/2$	$3/2$	S2
	493.283	493.285	3	264084.9	466807.3	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2D	$^2D^\circ$	$3/2$	$3/2$	S2
	493.852	493.847	5	234370.5	436862.5	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4D	$^4P^\circ$	$3/2$	$1/2$	S2
	493.995	493.994	5	293257.8	495689.3	$3s^23p^4(^1D)3d$	$3s3p^5(^1P^\circ)3d$	^2F	$^2D^\circ$	$7/2$	$5/2$	S2
	494.380	494.381	2	264534.3	466807.3	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^4P	$^2D^\circ$	$3/2$	$3/2$	S2
	494.621	494.623	4	234688.4	436862.5	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4D	$^4P^\circ$	$1/2$	$1/2$	S2
	495.453	495.454	0	265523.7	467358.9	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^4P	$^2D^\circ$	$5/2$	$5/2$	S2
	495.820	495.817	5	233987.0	435674.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4D	$^4P^\circ$	$5/2$	$3/2$	S2
	496.462	496.461	6	233711.1	435136.9	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4D	$^4P^\circ$	$7/2$	$5/2$	S2
	496.761	496.761	5	234370.5	435674.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4D	$^4P^\circ$	$3/2$	$3/2$	S2
	497.141	497.142	5	233987.0	435136.9	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4D	$^4P^\circ$	$5/2$	$5/2$	S2
	497.546	497.547	3	234688.4	435674.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4D	$^4P^\circ$	$1/2$	$3/2$	S2
	498.093	498.091	3	234370.5	435136.9	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4D	$^4P^\circ$	$3/2$	$5/2$	S2
	498.190	498.197	5	266635.0	467358.9	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2D	$^2D^\circ$	$5/2$	$5/2$	S2
	498.407	498.418	0	264084.9	464719.7	$3s^23p^4(^1D)3d$	$3s3p^5(^1P^\circ)3d$	^2D	$^2P^\circ$	$3/2$	$3/2$	S2
	499.549	499.537	0	264534.3	464719.7	$3s^23p^4(^3P)3d$	$3s3p^5(^1P^\circ)3d$	^4P	$^2P^\circ$	$3/2$	$3/2$	S2
		499.570		266635.0	466807.3	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2D	$^2D^\circ$	$5/2$	$3/2$	S2
	501.598	501.591	3	264084.9	463450.5	$3s^23p^4(^1D)3d$	$3s3p^5(^1P^\circ)3d$	^2D	$^2P^\circ$	$3/2$	$1/2$	S2
	502.719	502.724	1	264534.3	463450.5	$3s^23p^4(^3P)3d$	$3s3p^5(^1P^\circ)3d$	^4P	$^2P^\circ$	$1/2$	$1/2$	S2
	504.839	504.835	4	266635.0	464719.7	$3s^23p^4(^1D)3d$	$3s3p^5(^1P^\circ)3d$	^2D	$^2P^\circ$	$5/2$	$3/2$	S2
	505.593	505.592	3	254637.1	452425.1	$3s^23p^4(^1D)3d$	$3s3p^5(^3P^\circ)3d$	^2P	$^2D^\circ$	$1/2$	$3/2$	S2
	509.804	509.800	0	264084.9	460240.3	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2D	$^2F^\circ$	$3/2$	$5/2$	S2
	511.057	511.055	1	271685.3	467358.9	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^2F	$^2D^\circ$	$5/2$	$5/2$	S2
	512.495	512.500	1	271685.3	466807.3	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^2F	$^2D^\circ$	$5/2$	$3/2$	S2
	513.109	513.108	2	254637.1	449527.8	$3s^23p^4(^1D)3d$	$3s^23p^4(^1P)4p$	^2P	$^2S^\circ$	$1/2$	$1/2$	S2
	514.034	514.037	4	257280.9	451819.4	$3s^23p^4(^1D)3d$	$3s3p^5(^3P^\circ)3d$	^2P	$^2D^\circ$	$3/2$	$5/2$	S2
	515.196	515.196	1	266635.0	460735.7	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2D	$^2F^\circ$	$5/2$	$7/2$	S2
	518.900	518.887	0	268015.4	460735.7	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2G	$^2F^\circ$	$7/2$	$7/2$	S2
	520.176	520.164	6	257280.9	449527.8	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2P	$^2S^\circ$	$3/2$	$1/2$	S2
	522.399	522.398	1	233987.0	425412.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4F^\circ$	$5/2$	$3/2$	S2
	523.447	523.446	5	234370.5	425412.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4F^\circ$	$3/2$	$3/2$	S2
	524.315	524.319	5	234688.4	425412.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4F^\circ$	$1/2$	$3/2$	S2

Sc v – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	524.430	524.428	4	233987.0 –	424671.0	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4D –	$^4F^\circ$	$^5/_2$ –	$^5/_2$	S2
	525.420	525.418	6	254641.6 –	444966.4	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4F –	$^4D^\circ$	$^7/_2$ –	$^5/_2$	S2
	525.486	525.485	6	234370.5 –	424671.0	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4D –	$^4F^\circ$	$^3/_2$ –	$^5/_2$	S2
	526.212	526.204	6	253158.3 –	443198.8	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4F –	$^4D^\circ$	$^9/_2$ –	$^7/_2$	S2
	526.236	526.243	4	233711.1 –	423737.5	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4D –	$^4F^\circ$	$^7/_2$ –	$^7/_2$	S2
	527.010	527.008	6	233987.0 –	423737.5	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4D –	$^4F^\circ$	$^5/_2$ –	$^7/_2$	S2
	528.246	528.241	1	254637.1 –	443944.7	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^3P)4p$	^2P –	$^2P^\circ$	$^1/_2$ –	$^3/_2$	S2
	528.528	528.528	6	271531.0 –	460735.7	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^1D)4p$	^2G –	$^2F^\circ$	$^9/_2$ –	$^7/_2$	S2
	528.665	528.672	5	255690.7 –	444843.9	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4F –	$^4D^\circ$	$^5/_2$ –	$^3/_2$	S2
	528.832	528.832	0	345317.9 –	534414.0	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^2P –	$^2P^\circ$	$^3/_2$ –	$^3/_2$	S2
	528.956	528.959	0	271685.3 –	460735.7	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^1D)4p$	^2F –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	S2
	529.041	529.034	0	345317.9 –	534341.7	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^2P –	$^2P^\circ$	$^3/_2$ –	$^1/_2$	S2
	529.174	529.168	6	233711.1 –	422686.9	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4D –	$^4F^\circ$	$^7/_2$ –	$^9/_2$	S2
	529.452	529.449	4	256348.4 –	445224.1	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4F –	$^4D^\circ$	$^3/_2$ –	$^1/_2$	S2
	529.858	529.857	4	254637.1 –	443367.4	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^3P)4p$	^2P –	$^2P^\circ$	$^1/_2$ –	$^1/_2$	S2
	530.348	530.343	2	254641.6 –	443198.8	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4F –	$^4D^\circ$	$^7/_2$ –	$^7/_2$	S2
		530.349		271685.3 –	460240.3	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^1D)4p$	^2F –	$^2F^\circ$	$^5/_2$ –	$^5/_2$	S2
	530.526	530.517	1	256348.4 –	444843.9	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4F –	$^4D^\circ$	$^3/_2$ –	$^3/_2$	S2
	530.639	530.637	6	271787.7 –	460240.3	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^1D)4p$	^2F –	$^2F^\circ$	$^7/_2$ –	$^5/_2$	S2
	530.958	530.954	1	264084.9 –	452425.1	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P^\circ)3d$	^2D –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	S2
	532.667	532.667	0	264084.9 –	451819.4	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P^\circ)3d$	^2D –	$^2D^\circ$	$^3/_2$ –	$^5/_2$	S2
	533.050	533.060	1	256348.4 –	443944.7	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4F –	$^2P^\circ$	$^3/_2$ –	$^3/_2$	S2
	533.150	533.154	4	257280.9 –	444843.9	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^3P)4p$	^2P –	$^4D^\circ$	$^3/_2$ –	$^3/_2$	S2
	533.442	533.447	12bl	346881.8 –	534341.7	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^2P –	$^2P^\circ$	$^1/_2$ –	$^1/_2$	S2
	534.700	534.705	0	256348.4 –	443367.4	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4F –	$^2P^\circ$	$^3/_2$ –	$^1/_2$	S2
	535.722	535.723	3	257280.9 –	443944.7	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^3P)4p$	^2P –	$^2P^\circ$	$^3/_2$ –	$^3/_2$	S2
	536.070	536.067	4	263453.1 –	449996.8	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4P –	$^4S^\circ$	$^1/_2$ –	$^3/_2$	S2
	536.568	536.569	4	293257.8 –	479627.0	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P^\circ)3d$	^2F –	$^2F^\circ$	$^7/_2$ –	$^7/_2$	S2
	536.689	536.693	3	292357.1 –	478683.5	$3s^23p^4(^1D)3d$ –	$3s3p^5(^1P^\circ)3d$	^2F –	$^2F^\circ$	$^5/_2$ –	$^5/_2$	S2
	537.418	537.419	0	263453.1 –	449527.8	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4P –	$^2S^\circ$	$^1/_2$ –	$^1/_2$	S2
	539.190	539.193	5	264534.3 –	449996.8	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4P –	$^4S^\circ$	$^3/_2$ –	$^3/_2$	S2
	539.824	539.819	1	264084.9 –	449332.3	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P^\circ)3d$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	S2
	540.012	540.002	0	266635.0 –	451819.4	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P^\circ)3d$	^2D –	$^2D^\circ$	$^5/_2$ –	$^5/_2$	S2
	540.567	540.560	0	264534.3 –	449527.8	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4P –	$^2S^\circ$	$^3/_2$ –	$^1/_2$	S2
	540.775	540.782	2	257280.9 –	442198.3	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^3P)4p$	^2P –	$^2D^\circ$	$^3/_2$ –	$^5/_2$	S2
	541.136	541.131	3	264534.3 –	449332.3	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4P –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	S2
	541.305	541.307	7	253158.3 –	437896.2	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4F –	$^4D^\circ$	$^9/_2$ –	$^7/_2$	S2
	542.082	542.084	6	265523.7 –	449996.8	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4P –	$^4S^\circ$	$^5/_2$ –	$^3/_2$	S2
	542.672	542.672	7	254641.6 –	438915.0	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4F –	$^4D^\circ$	$^7/_2$ –	$^5/_2$	S2
	544.061	544.058	7	268015.4 –	451819.4	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P^\circ)3d$	^2G –	$^2D^\circ$	$^7/_2$ –	$^5/_2$	S2
		544.061		255690.7 –	439493.5	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4F –	$^4D^\circ$	$^5/_2$ –	$^3/_2$	S2
	544.453	544.447	1	311870.5 –	495543.2	$3s^23p^4(^1S)3d$ –	$3s3p^5(^1P^\circ)3d$	^2D –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	S2
	545.485	545.482	5	256348.4 –	439672.6	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4F –	$^4D^\circ$	$^3/_2$ –	$^1/_2$	S2
	545.690	545.689	4	254641.6 –	437896.2	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4F –	$^4D^\circ$	$^7/_2$ –	$^7/_2$	S2
	545.779	545.779	4	255690.7 –	438915.0	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4F –	$^4D^\circ$	$^5/_2$ –	$^5/_2$	S2
	546.016	546.015	3	256348.4 –	439493.5	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^4F –	$^4D^\circ$	$^3/_2$ –	$^3/_2$	S2
	546.443	546.445	2	312688.3 –	495689.3	$3s^23p^4(^1S)3d$ –	$3s3p^5(^1P^\circ)3d$	^2D –	$^2D^\circ$	$^5/_2$ –	$^5/_2$	S2
	547.356	547.353	2	266635.0 –	449332.3	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P^\circ)3d$	^2D –	$^2F^\circ$	$^5/_2$ –	$^5/_2$	S2
	549.736	549.735	1	264534.3 –	446440.2	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4P –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	S2
	550.144	550.143	2	263453.1 –	445224.1	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4P –	$^4D^\circ$	$^1/_2$ –	$^1/_2$	S2
	551.295	551.296	2	263453.1 –	444843.9	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4P –	$^4D^\circ$	$^1/_2$ –	$^3/_2$	S2
	552.372	552.372	0	254637.1 –	435674.4	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^3P)4p$	^2P –	$^4P^\circ$	$^1/_2$ –	$^3/_2$	S2
	552.853	552.848	1	264084.9 –	444966.4	$3s^23p^4(^1D)3d$ –	$3s^23p^4(^3P)4p$	^2D –	$^4D^\circ$	$^3/_2$ –	$^5/_2$	S2
	553.719	553.715	3	266635.0 –	447233.2	$3s^23p^4(^1D)3d$ –	$3s3p^5(^3P^\circ)3d$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	S2
	554.226	554.225	4	264534.3 –	444966.4	$3s^23p^4(^3P)3d$ –	$3s^23p^4(^3P)4p$	^4P –	$^4D^\circ$	$^3/_2$ –	$^5/_2$	S2
	555.454	555.458	2	271787.7 –	451819.4	$3s^23p^4(^3P)3d$ –	$3s3p^5(^3P^\circ)3d$	^2F –	$^2D^\circ$	$^7/_2$ –	$^5/_2$	S2

Sc v – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	555.602	555.606	1	255690.7	435674.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4F	$^4P^\circ$	$5/2$	$3/2$	S2
	555.982	555.989	3	264084.9	443944.7	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^2P^\circ$	$3/2$	$3/2$	S2
	556.157	556.157	2	266635.0	446440.2	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^2D^\circ$	$5/2$	$3/2$	S2
	557.281	557.270	3	255690.7	435136.9	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4F	$^4P^\circ$	$5/2$	$5/2$	S2
		557.281		265523.7	444966.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^4D^\circ$	$5/2$	$5/2$	S2
	557.657	557.662	0	265523.7	444843.9	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^4D^\circ$	$5/2$	$3/2$	S2
	557.775	557.779	3	264084.9	443367.4	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^2P^\circ$	$3/2$	$1/2$	S2
	557.984	557.971	5	311870.5	491091.3	$3s^23p^4(^1S)3d$	$3s^23p^4(^1S)4p$	^2D	$^2P^\circ$	$3/2$	$1/2$	S2
		557.980		268015.4	447233.2	$3s^23p^4(^1D)3d$	$3s3p^5(^3P^\circ)3d$	^2G	$^2F^\circ$	$7/2$	$7/2$	S2
	559.179	559.181	2	264534.3	443367.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^2P^\circ$	$3/2$	$1/2$	S2
	560.652	560.664	4	312688.3	491048.1	$3s^23p^4(^1S)3d$	$3s^23p^4(^1S)4p$	^2D	$^2P^\circ$	$5/2$	$3/2$	S2
	560.745	560.754	0	266635.0	444966.4	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^4D^\circ$	$5/2$	$5/2$	S2
	561.428	561.440	0	264084.9	442198.3	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^2D^\circ$	$3/2$	$5/2$	S2
	562.266	562.253	0	257280.9	435136.9	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2P	$^4P^\circ$	$3/2$	$5/2$	S2
	562.827	562.825	6	265523.7	443198.8	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^4D^\circ$	$5/2$	$7/2$	S2
	562.916	562.914	4	271685.3	449332.3	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^2F	$^2F^\circ$	$5/2$	$5/2$	S2
	563.238	563.239	3	271787.7	449332.3	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^2F	$^2F^\circ$	$7/2$	$5/2$	S2
	563.990	563.985	4	266635.0	443944.7	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^2P^\circ$	$5/2$	$3/2$	S2
	565.125	565.128	4	268015.4	444966.4	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2G	$^4D^\circ$	$7/2$	$5/2$	S2
	566.011	566.012	1	265523.7	442198.3	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^2D^\circ$	$5/2$	$5/2$	S2
	566.360	566.368	0	266635.0	443198.8	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^4D^\circ$	$5/2$	$7/2$	S2
	567.476	567.474	1	263453.1	439672.6	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4P	$^4D^\circ$	$1/2$	$1/2$	S2
	568.049	568.051	2	263453.1	439493.5	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4P	$^4D^\circ$	$1/2$	$3/2$	S2
	569.148	569.145	2	271531.0	447233.2	$3s^23p^4(^1D)3d$	$3s3p^5(^3P^\circ)3d$	^2G	$^2F^\circ$	$9/2$	$7/2$	S2
	569.979	569.978	3	271787.7	447233.2	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^2F	$^2F^\circ$	$7/2$	$7/2$	S2
	570.094	570.097	0	264084.9	439493.5	$3s^23p^4(^1D)3d$	$3s3p^5(^3P^\circ)3d$	^2D	$^4D^\circ$	$3/2$	$3/2$	S2
	571.562	571.562	0	264534.3	439493.5	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4P	$^4D^\circ$	$3/2$	$3/2$	S2
	572.232	572.230	5	271685.3	446440.2	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^2F	$^2D^\circ$	$5/2$	$3/2$	S2
	573.355	573.355	15*g*	0.0	174411.9	$3s^23p^5$	$3s3p^6$	$^2P^\circ$	^2S	$3/2$	$1/2$	S2
	574.101	574.109	6	268015.4	442198.3	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2G	$^2D^\circ$	$7/2$	$5/2$	S2
	574.382	574.379	5	293257.8	467358.9	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2F	$^2D^\circ$	$7/2$	$5/2$	S2
	576.666	576.670	0	263453.1	436862.5	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$1/2$	$1/2$	S2
	577.438	577.438	0	271787.7	444966.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^2F	$^4D^\circ$	$7/2$	$5/2$	S2
	578.773	578.779	1	264084.9	436862.5	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^4P^\circ$	$3/2$	$1/2$	S2
	580.102	580.099	6	233711.1	406095.6	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4P^\circ$	$7/2$	$5/2$	S2
	580.282	580.288	2	264534.3	436862.5	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$3/2$	$1/2$	S2
	580.518	580.520	4	271685.3	443944.7	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^2F	$^2P^\circ$	$5/2$	$3/2$	S2
	580.649	580.648	4	263453.1	435674.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$1/2$	$3/2$	S2
	581.020	581.028	4	233987.0	406095.6	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4P^\circ$	$5/2$	$5/2$	S2
	582.333	582.326	1	234370.5	406095.6	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4P^\circ$	$3/2$	$5/2$	S2
	584.319	584.317	1	264534.3	435674.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$1/2$	$1/2$	S2
	584.626	584.618	0	264084.9	435136.9	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^4P^\circ$	$3/2$	$5/2$	S2
	585.052	585.055	5	233987.0	404911.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4P^\circ$	$5/2$	$3/2$	S2
	586.158	586.158	2	264534.3	435136.9	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$3/2$	$5/2$	S2
	586.235	586.238	1	253158.3	423737.5	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4F	$^4F^\circ$	$9/2$	$7/2$	S2
	586.363	586.371	3	234370.5	404911.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4P^\circ$	$3/2$	$3/2$	S2
	586.820	586.818	2	271787.7	442198.3	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^2F	$^2D^\circ$	$7/2$	$5/2$	S2
	587.466	587.466	1	234688.4	404911.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4P^\circ$	$1/2$	$3/2$	S2
	587.716	587.714	2	265523.7	435674.4	$3s^23p^4(^3P)3d$	$3s^23p^4(^1P)4p$	^4P	$^4P^\circ$	$5/2$	$3/2$	S2
	587.936	587.937	12*g*	4325.7	174411.9	$3s^23p^5$	$3s3p^6$	$^2P^\circ$	^2S	$1/2$	$1/2$	S2
	588.123	588.134	2	254641.6	424671.0	$3s^23p^4(^1P)3d$	$3s3p^5(^1P^\circ)3d$	^4F	$^4F^\circ$	$7/2$	$5/2$	S2
	588.676	588.680	3	234370.5	404242.1	$3s^23p^4(^1P)3d$	$3s3p^5(^1P^\circ)3d$	^4D	$^4P^\circ$	$3/2$	$1/2$	S2
	589.205	589.201	1	255690.7	425412.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4F	$^4F^\circ$	$5/2$	$3/2$	S2
	589.576	589.577	4	265523.7	435136.9	$3s^23p^4(^1P)3d$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$5/2$	$5/2$	S2
	589.788	589.784	3	234688.4	404242.1	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4D	$^4P^\circ$	$1/2$	$1/2$	S2

Sc v – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	589.868	589.871	5	253158.3	422686.9	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4F	$^4F^\circ$	$^9/_2$	$^9/_2$	S2
	591.383	591.380	5	254641.6	423737.5	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4F	$^4F^\circ$	$^7/_2$	$^7/_2$	S2
	591.492	591.493	4	256348.4	425412.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4F	$^4F^\circ$	$^3/_2$	$^3/_2$	S2
	591.789	591.785	4	255690.7	424671.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4F	$^4F^\circ$	$^5/_2$	$^5/_2$	S2
	593.472	593.465	0	266635.0	435136.9	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2D	$^4P^\circ$	$^5/_2$	$^5/_2$	S2
	594.100	594.097	1	256348.4	424671.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4F	$^4F^\circ$	$^3/_2$	$^5/_2$	S2
	595.076	595.072	3	255690.7	423737.5	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4F	$^4F^\circ$	$^5/_2$	$^7/_2$	S2
		595.078		254641.6	422686.9	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4F	$^4F^\circ$	$^7/_2$	$^9/_2$	S2
	595.651	595.652	2	292357.1	460240.3	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2F	$^2F^\circ$	$^5/_2$	$^5/_2$	S2
	597.102	597.094	3	293257.8	460735.7	$3s^23p^4(^1D)3d$	$3s^23p^4(^1D)4p$	^2F	$^2F^\circ$	$^7/_2$	$^7/_2$	S2
	599.027	599.022	0	312688.3	479627.0	$3s^23p^4(^1S)3d$	$3s3p^5(^1P^\circ)3d$	^2D	$^2F^\circ$	$^5/_2$	$^7/_2$	S2
	621.125	621.133	0	311870.5	472866.7	$3s^23p^4(^1S)3d$	$3s^23p^4(^1D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	S2
	632.025	632.032	0	312688.3	470908.2	$3s^23p^4(^1S)3d$	$3s^23p^4(^1D)4p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	S2
	645.421	645.424	1	311870.5	466807.3	$3s^23p^4(^1S)3d$	$3s^23p^4(^1D)4p$	^2D	$^2D^\circ$	$^3/_2$	$^3/_2$	S2
	646.549	646.535	0	312688.3	467358.9	$3s^23p^4(^1S)3d$	$3s^23p^4(^1D)4p$	^2D	$^2D^\circ$	$^5/_2$	$^5/_2$	S2
	649.001	649.000	0	292357.1	446440.2	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2F	$^2D^\circ$	$^5/_2$	$^3/_2$	S2
	649.469	649.454	0	293257.8	447233.2	$3s^23p^4(^1D)3d$	$3s3p^5(^3P^\circ)3d$	^2F	$^2F^\circ$	$^7/_2$	$^7/_2$	S2
	659.687	659.685	0	292357.1	443944.7	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2F	$^2P^\circ$	$^5/_2$	$^3/_2$	S2
	671.405	671.409	0	293257.8	442198.3	$3s^23p^4(^1D)3d$	$3s^23p^4(^3P)4p$	^2F	$^2D^\circ$	$^7/_2$	$^5/_2$	S2
	691.365	691.379	0	293257.8	437896.2	$3s^23p^4(^1D)3d$	$3s3p^5(^3P^\circ)3d$	^2F	$^4D^\circ$	$^7/_2$	$^7/_2$	S2
	706.411	706.408	0	264534.3	406095.6	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4P	$^4P^\circ$	$^3/_2$	$^5/_2$	S2
	706.922	706.924	1	263453.1	404911.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4P	$^4P^\circ$	$^1/_2$	$^3/_2$	S2
	711.375	711.380	1	265523.7	406095.6	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4P	$^4P^\circ$	$^5/_2$	$^5/_2$	S2
	717.436	717.425	0	265523.7	404911.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^4P	$^4P^\circ$	$^5/_2$	$^3/_2$	S2
	726.440	726.442	0	311870.5	449527.8	$3s^23p^4(^1S)3d$	$3s^23p^4(^3P)4p$	^2D	$^2S^\circ$	$^3/_2$	$^1/_2$	S2
	793.747	793.746	1	346881.8	472866.7	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^2P	$^2P^\circ$	$^1/_2$	$^1/_2$	S2
	796.245	796.240	2	345317.9	470908.2	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^2P	$^2P^\circ$	$^3/_2$	$^3/_2$	S2
	806.282	806.280	0	346881.8	470908.2	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^2P	$^2P^\circ$	$^1/_2$	$^3/_2$	S2
	819.390	819.397	0	345317.9	467358.9	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^2P	$^2D^\circ$	$^3/_2$	$^5/_2$	S2
	842.555	842.546	2	352220.3	470908.2	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	S2
	854.760	854.769	2	355876.0	472866.7	$3s^23p^4(^3P)3d$	$3s^23p^4(^1D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	S2
	882.995	882.995	1	442198.3	555449.2	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)5s$	$^2D^\circ$	^2P	$^5/_2$	$^3/_2$	S2
	884.816	884.816	0	460240.3	573258.1	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)5s$	$^2F^\circ$	^2D	$^5/_2$	$^3/_2$	S2
	888.486	888.486	1	460735.7	573286.7	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)5s$	$^2F^\circ$	^2D	$^7/_2$	$^5/_2$	S2
	898.971	898.971	1	446440.2	557678.5	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)5s$	$^2D^\circ$	^2P	$^3/_2$	$^1/_2$	S2
	994.282	994.265	0	439493.5	540070.3	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^1D)4d$	$^4D^\circ$	^2D	$^3/_2$	$^5/_2$	S2
	1111.394	1111.383	2	352220.3	442198.3	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^2D	$^2D^\circ$	$^5/_2$	$^5/_2$	S2
	1122.037	1122.027	0	447233.2	536357.6	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^1D)4d$	$^2F^\circ$	^2G	$^7/_2$	$^9/_2$	S2
	1135.482	1135.477	1	355876.0	443944.7	$3s^23p^4(^3P)3d$	$3s^23p^4(^3P)4p$	^2D	$^2P^\circ$	$^3/_2$	$^3/_2$	S2
	1148.129	1148.104	3	435136.9	522237.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4P	$^5/_2$	$^5/_2$	S2
	1150.271	1150.267	0	449332.3	536268.6	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^1D)4d$	$^2F^\circ$	^2G	$^5/_2$	$^7/_2$	S2
	1153.459	1153.473	0	352220.3	438915.0	$3s^23p^4(^3P)3d$	$3s3p^5(^3P^\circ)3d$	^2D	$^4D^\circ$	$^5/_2$	$^5/_2$	S2
	1155.237	1155.233	6	435674.4	522237.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4P	$^3/_2$	$^5/_2$	S2
	1165.318	1165.327	2	435136.9	520949.7	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4P	$^5/_2$	$^3/_2$	S2
	1188.326	1188.329	4	435674.4	519826.2	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4P	$^3/_2$	$^1/_2$	S2
	1189.261	1189.242	8	436862.5	520949.7	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4P	$^1/_2$	$^3/_2$	S2
	1200.316	1200.327	3	436862.5	520173.1	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4F	$^1/_2$	$^3/_2$	S2
	1205.346	1205.346	1	436862.5	519826.2	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4P	$^1/_2$	$^1/_2$	S2
	1212.619	1212.615	0	437896.2	520362.6	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^2F	$^7/_2$	$^7/_2$	S2
	1223.945	1223.959	5	439493.5	521195.6	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^2F	$^3/_2$	$^5/_2$	S2
	1226.682	1226.682	0	437896.2	519416.9	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^7/_2$	$^5/_2$	S2
	1227.778	1227.783	5	438915.0	520362.6	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^2F	$^5/_2$	$^7/_2$	S2
	1230.355	1230.359	6	439672.6	520949.7	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4P	$^1/_2$	$^3/_2$	S2
	1230.442	1230.453	6	460240.3	541511.2	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2F^\circ$	^2F	$^5/_2$	$^5/_2$	S2
	1236.340	1236.343	6	460735.7	541619.4	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2F^\circ$	^2F	$^7/_2$	$^7/_2$	S2

Sc V – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1239.466	1239.471	2	439493.5	520173.1	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^3/_2$	$^3/_2$	S2
	1239.613	1239.617	0	460240.3	540910.4	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2F^\circ$	^2D	$^5/_2$	$^3/_2$	S2
	1242.214	1242.207	5	438915.0	519416.9	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^5/_2$	$^5/_2$	S2
		1242.228		439672.6	520173.1	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^1/_2$	$^3/_2$	S2
	1246.605	1246.611	1	444843.9	525061.4	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^2P	$^3/_2$	$^3/_2$	S2
	1247.023	1247.029	3	437896.2	518086.8	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^7/_2$	$^7/_2$	S2
	1251.193	1251.198	6	439493.5	519416.9	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^3/_2$	$^5/_2$	S2
	1261.384	1261.387	7	437896.2	517174.0	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^7/_2$	$^9/_2$	S2
	1263.082	1263.076	7	438915.0	518086.8	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^5/_2$	$^7/_2$	S2
	1265.861	1265.866	3	442198.3	521195.6	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2D^\circ$	^2F	$^5/_2$	$^5/_2$	S2
	1268.382	1268.377	6	435136.9	513977.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4D	$^5/_2$	$^3/_2$	S2
		1268.390		435674.4	514514.5	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4D	$^3/_2$	$^1/_2$	S2
	1269.801	1269.811	6	443367.4	522119.3	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2P^\circ$	^2P	$^1/_2$	$^1/_2$	S2
	1271.921	1271.922	3	446440.2	525061.4	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2D^\circ$	^2P	$^3/_2$	$^3/_2$	S2
	1272.155	1272.153	4	444843.9	523450.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^2D	$^3/_2$	$^5/_2$	S2
	1273.181	1273.177	6	443367.4	521911.1	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2P^\circ$	^2D	$^1/_2$	$^3/_2$	S2
	1274.124	1274.139	0	444966.4	523450.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^2D	$^5/_2$	$^5/_2$	S2
	1276.440	1276.437	7	435136.9	513480.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4D	$^5/_2$	$^5/_2$	S2
	1277.075	1277.084	7	435674.4	513977.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4D	$^3/_2$	$^3/_2$	S2
	1277.258	1277.265	6	443944.7	522237.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2P^\circ$	^4P	$^3/_2$	$^5/_2$	S2
	1279.360	1279.356	7	442198.3	520362.6	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2D^\circ$	^2F	$^5/_2$	$^7/_2$	S2
	1280.982	1280.982	9	435136.9	513202.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4D	$^5/_2$	$^7/_2$	S2
	1282.611	1282.604	4	443944.7	521911.1	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2P^\circ$	^2D	$^3/_2$	$^3/_2$	S2
	1285.255	1285.255	8	435674.4	513480.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4D	$^3/_2$	$^5/_2$	S2
	1287.799	1287.797	7	436862.5	514514.5	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4D	$^1/_2$	$^1/_2$	S2
	1292.416	1292.409	1	395491.8	472866.7	$3s^23p^4(^3P)4s$	$3s^23p^4(^1D)4p$	^2P	$^2P^\circ$	$^3/_2$	$^1/_2$	S2
	1294.140	1294.153	2	444966.4	522237.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4P	$^5/_2$	$^5/_2$	S2
	1294.480	1294.483	2	443944.7	521195.6	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2P^\circ$	^2F	$^3/_2$	$^5/_2$	S2
	1295.026	1295.025	5	442198.3	519416.9	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2D^\circ$	^4F	$^5/_2$	$^5/_2$	S2
	1296.746	1296.760	6	436862.5	513977.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4P^\circ$	^4D	$^1/_2$	$^3/_2$	S2
	1297.578	1297.569	5	444843.9	521911.1	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^2D	$^3/_2$	$^3/_2$	S2
	1298.524	1298.523	8	446440.2	523450.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2D^\circ$	^2D	$^3/_2$	$^5/_2$	S2
	1301.993	1301.987	2	443367.4	520173.1	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2P^\circ$	^4F	$^1/_2$	$^3/_2$	S2
	1309.724	1309.729	7	444843.9	521195.6	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^2F	$^3/_2$	$^5/_2$	S2
	1311.839	1311.833	7	444966.4	521195.6	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^2F	$^5/_2$	$^5/_2$	S2
	1313.982	1313.960	7	444843.9	520949.7	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4P	$^3/_2$	$^3/_2$	S2
	1315.303	1315.300	8	460240.3	536268.6	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2F^\circ$	^2G	$^5/_2$	$^7/_2$	S2
	1319.316	1319.317	6	446440.2	522237.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2D^\circ$	^4P	$^3/_2$	$^5/_2$	S2
	1320.540	1320.557	7	445224.1	520949.7	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4P	$^1/_2$	$^3/_2$	S2
	1322.365	1322.368	9	460735.7	536357.6	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2F^\circ$	^2G	$^7/_2$	$^9/_2$	S2
	1323.033	1323.035	2	437896.2	513480.0	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4D	$^7/_2$	$^5/_2$	S2
	1323.922	1323.914	8	449527.8	525061.4	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2S^\circ$	^2P	$^1/_2$	$^3/_2$	S2
		1323.926		460735.7	536268.6	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2F^\circ$	^2G	$^7/_2$	$^7/_2$	S2
	1324.987	1324.991	8	443944.7	519416.9	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2P^\circ$	^4F	$^3/_2$	$^5/_2$	S2
		1325.014		446440.2	521911.1	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2D^\circ$	^2D	$^3/_2$	$^3/_2$	S2
		1325.200		491048.1	566508.4	$3s^23p^4(^1S)4p$	$3s^23p^4(^1S)4d$	$^2P^\circ$	^2D	$^1/_2$	$^3/_2$	S2
	1325.972	1325.959	8	491091.3	566508.4	$3s^23p^4(^1S)4p$	$3s^23p^4(^1S)4d$	$^2P^\circ$	^2D	$^1/_2$	$^3/_2$	S2
	1326.315	1326.316	9	491048.1	566444.9	$3s^23p^4(^1S)4p$	$3s^23p^4(^1S)4d$	$^2P^\circ$	^2D	$^3/_2$	$^5/_2$	S2
	1327.921	1327.919	6	437896.2	513202.0	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4D	$^7/_2$	$^7/_2$	S2
	1330.122	1330.123	0	463450.5	538631.5	$3s3p^5(^1P^\circ)3d$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2P	$^1/_2$	$^1/_2$	S2
	1332.222	1332.218	2	438915.0	513977.8	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^1P)4d$	$^4D^\circ$	^4D	$^5/_2$	$^3/_2$	S2
	1334.252	1334.241	5	445224.1	520173.1	$3s^23p^4(^3P)4p$	$3s^23p^4(^1P)4d$	$^4D^\circ$	^4F	$^1/_2$	$^3/_2$	S2
	1335.330	1335.327	1	443198.8	518086.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^7/_2$	$^7/_2$	S2
	1337.692	1337.696	4	446440.2	521195.6	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2D^\circ$	^2F	$^3/_2$	$^5/_2$	S2
	1338.617	1338.618	10	466807.3	541511.2	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2D^\circ$	^2F	$^3/_2$	$^5/_2$	S2
	1340.968	1340.968	3	444843.9	519416.9	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^3/_2$	$^5/_2$	S2

Sc v – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1341.105	1341.112	0	438915.0	513480.0	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4D	$^5/_2$	$^5/_2$	S2
	1346.129	1346.131	2	438915.0	513202.0	$3s3p^5(^3P^\circ)3d$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4D	$^5/_2$	$^7/_2$	S2
	1346.614	1346.611	8	467358.9	541619.4	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2D^\circ$	^2F	$^5/_2$	$^7/_2$	S2
	1348.580	1348.576	1	467358.9	541511.2	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2D^\circ$	^2F	$^5/_2$	$^5/_2$	S2
	1349.474	1349.471	6	466807.3	540910.4	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2D^\circ$	^2D	$^3/_2$	$^3/_2$	S2
	1351.806	1351.804	9	443198.8	517174.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^7/_2$	$^9/_2$	S2
	1361.387	1361.396	6	449996.8	523450.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4S^\circ$	^2D	$^3/_2$	$^5/_2$	S2
	1364.938	1364.945	5	466807.3	540070.3	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2D^\circ$	^2D	$^3/_2$	$^5/_2$	S2
	1367.603	1367.607	5	444966.4	518086.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4F	$^5/_2$	$^7/_2$	S2
	1370.772	1370.779	1	464719.7	537670.9	$3s3p^5(^1P^\circ)3d$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	S2
	1375.303	1375.300	7	467358.9	540070.3	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2D^\circ$	^2D	$^5/_2$	$^5/_2$	S2
	1377.582	1377.572	4	449527.8	522119.3	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2S^\circ$	^2P	$^1/_2$	$^1/_2$	S2
	1390.552	1390.544	1	449996.8	521911.1	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4S^\circ$	^2D	$^3/_2$	$^3/_2$	S2
	1392.293	1392.288	0	466807.3	538631.5	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2D^\circ$	^2P	$^3/_2$	$^1/_2$	S2
	1404.538	1404.518	5	449996.8	521195.6	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4S^\circ$	^2F	$^3/_2$	$^5/_2$	S2
	1409.376	1409.386	6	449996.8	520949.7	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4S^\circ$	^4P	$^3/_2$	$^3/_2$	S2
	1416.381	1416.370	0	470908.2	541511.2	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2F	$^3/_2$	$^5/_2$	S2
	1417.041	1417.037	1	443944.7	514514.5	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^2P^\circ$	^4D	$^3/_2$	$^1/_2$	S2
	1422.231	1422.232	3	467358.9	537670.9	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2D^\circ$	^2P	$^5/_2$	$^3/_2$	S2
	1422.850	1422.856	0	443198.8	513480.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4D	$^7/_2$	$^5/_2$	S2
	1424.987	1424.983	4	449996.8	520173.1	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4S^\circ$	^4F	$^3/_2$	$^3/_2$	S2
	1428.509	1428.506	7	443198.8	513202.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4D	$^7/_2$	$^7/_2$	S2
	1432.065	1432.062	5	449996.8	519826.2	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4S^\circ$	^4P	$^3/_2$	$^1/_2$	S2
	1445.877	1445.879	3	470908.2	540070.3	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2D	$^3/_2$	$^5/_2$	S2
	1446.475	1446.468	0	444843.9	513977.8	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4D	$^3/_2$	$^3/_2$	S2
	1459.574	1459.564	1	444966.4	513480.0	$3s^23p^4(^3P)4p$	$3s^23p^4(^3P)4d$	$^4D^\circ$	^4D	$^5/_2$	$^5/_2$	S2
	1469.646	1469.644	1	472866.7	540910.4	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2D	$^1/_2$	$^3/_2$	S2
	1476.607	1476.597	0	470908.2	538631.5	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2P	$^3/_2$	$^1/_2$	S2
	1497.834	1497.842	3	470908.2	537670.9	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	S2
	1520.555	1520.570	2	472866.7	538631.5	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2P	$^1/_2$	$^1/_2$	S2
	1537.853	1537.844	2	470908.2	535934.3	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2S	$^3/_2$	$^1/_2$	S2
	1543.130	1543.110	2	472866.7	537670.9	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2P	$^1/_2$	$^3/_2$	S2
	1572.067	1572.068	5	386386.3	449996.8	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4S^\circ$	$^5/_2$	$^3/_2$	S2
	1582.030	1582.016	6	460240.3	523450.8	$3s^23p^4(^1D)4p$	$3s^23p^4(^3P)4d$	$^2F^\circ$	^2D	$^5/_2$	$^5/_2$	S2
	1585.590	1585.600	0	472866.7	535934.3	$3s^23p^4(^1D)4p$	$3s^23p^4(^1D)4d$	$^2P^\circ$	^2S	$^1/_2$	$^1/_2$	S2
	1588.312	1588.340	0	388860.6	451819.4	$3s^23p^4(^3P)4s$	$3s3p^5(^3P^\circ)3d$	^4P	$^2D^\circ$	$^3/_2$	$^5/_2$	S2
	1593.593	1593.592	5	410115.4	472866.7	$3s^23p^4(^1D)4s$	$3s^23p^4(^1D)4p$	^2D	$^2P^\circ$	$^3/_2$	$^1/_2$	S2
	1635.693	1635.692	5	388860.6	449996.8	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4S^\circ$	$^3/_2$	$^3/_2$	S2
	1642.987	1642.986	6	410043.4	470908.2	$3s^23p^4(^1D)4s$	$3s^23p^4(^1D)4p$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	S2
	1676.457	1676.446	5	390346.8	449996.8	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4S^\circ$	$^1/_2$	$^3/_2$	S2
	1707.068	1707.064	1	386386.3	444966.4	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4D^\circ$	$^5/_2$	$^5/_2$	S2
	1736.720	1736.726	4	388860.6	446440.2	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^2D^\circ$	$^3/_2$	$^3/_2$	S2
	1744.732	1744.729	6	410043.4	467358.9	$3s^23p^4(^1D)4s$	$3s^23p^4(^1D)4p$	^2D	$^2D^\circ$	$^5/_2$	$^5/_2$	S2
	1746.917	1746.923	1	410115.4	467358.9	$3s^23p^4(^1D)4s$	$3s^23p^4(^1D)4p$	^2D	$^2D^\circ$	$^3/_2$	$^5/_2$	S2
	1774.203	1774.198	1	388860.6	445224.1	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4D^\circ$	$^3/_2$	$^1/_2$	S2
	1775.355	1775.329	1	395491.8	451819.4	$3s^23p^4(^3P)4s$	$3s3p^5(^3P^\circ)3d$	^2P	$^2D^\circ$	$^3/_2$	$^5/_2$	S2
	1782.342	1782.347	7	388860.6	444966.4	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4D^\circ$	$^3/_2$	$^5/_2$	S2
	1782.752	1782.741	1	390346.8	446440.2	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^2D^\circ$	$^1/_2$	$^3/_2$	S2
	1786.248	1786.247	4	388860.6	444843.9	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4D^\circ$	$^3/_2$	$^3/_2$	S2
	1815.406	1815.406	1	388860.6	443944.7	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^2P^\circ$	$^3/_2$	$^3/_2$	S2
	1822.243	1822.247	6	390346.8	445224.1	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4D^\circ$	$^1/_2$	$^1/_2$	S2
	1828.944	1828.946	0	410043.4	464719.7	$3s^23p^4(^1D)4s$	$3s3p^5(^1P^\circ)3d$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	S2
	1834.960	1834.960	4	390346.8	444843.9	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4D^\circ$	$^1/_2$	$^3/_2$	S2
	1850.620	1850.618	4	395491.8	449527.8	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^2P	$^2S^\circ$	$^3/_2$	$^1/_2$	S2
	1852.015	1852.016	0	398429.9	452425.1	$3s^23p^4(^3P)4s$	$3s3p^5(^3P^\circ)3d$	^2P	$^2D^\circ$	$^1/_2$	$^3/_2$	S2

Sc V – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	1865.746	1865.745	2	390346.8	443944.7	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^2P^\circ$	$^1/_2$	$^3/_2$	S2
	1865.912	1865.905	6	437498.0	491091.3	$3s^23p^4(^1S)4s$	$3s^23p^4(^1S)4p$	^2S	$^2P^\circ$	$^1/_2$	$^1/_2$	S2
	1867.407	1867.410	6	437498.0	491048.1	$3s^23p^4(^1S)4s$	$3s^23p^4(^1S)4p$	^2S	$^2P^\circ$	$^1/_2$	$^3/_2$	S2
	1874.859	1874.846	6	388860.6	442198.3	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^2D^\circ$	$^3/_2$	$^5/_2$	S2
	1941.374	1941.374	7	386386.3	437896.2	$3s^23p^4(^3P)4s$	$3s3p^5(^3P^\circ)3d$	^4P	$^4D^\circ$	$^5/_2$	$^7/_2$	S2
	1957.027	1957.028	4	398429.9	449527.8	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^2P	$^2S^\circ$	$^1/_2$	$^1/_2$	S2
	1962.755	1962.770	0	395491.8	446440.2	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^2P	$^2D^\circ$	$^3/_2$	$^3/_2$	S2
	1972.679	1972.686	7	410043.4	460735.7	$3s^23p^4(^1D)4s$	$3s^23p^4(^1D)4p$	^2D	$^2F^\circ$	$^5/_2$	$^7/_2$	S2
	1974.996	1975.000	1	388860.6	439493.5	$3s^23p^4(^3P)4s$	$3s3p^5(^3P^\circ)3d$	^4P	$^4D^\circ$	$^3/_2$	$^3/_2$	S2
	1995.019	1995.016	7	410115.4	460240.3	$3s^23p^4(^1D)4s$	$3s^23p^4(^1D)4p$	^2D	$^2F^\circ$	$^3/_2$	$^5/_2$	S2
	1997.832	1997.826	6	388860.6	438915.0	$3s^23p^4(^3P)4s$	$3s3p^5(^3P^\circ)3d$	^4P	$^4D^\circ$	$^3/_2$	$^5/_2$	S2
	2020.587	2020.587	6	395491.8	444966.4	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^2P	$^4D^\circ$	$^3/_2$	$^5/_2$	S2
	2025.622	2025.604	0	395491.8	444843.9	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^2P	$^4D^\circ$	$^3/_2$	$^3/_2$	S2
	2026.680	2026.684	0	390346.8	439672.6	$3s^23p^4(^3P)4s$	$3s3p^5(^3P^\circ)3d$	^4P	$^4D^\circ$	$^1/_2$	$^1/_2$	S2
	2028.237	2028.234	7	386386.3	435674.4	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$^5/_2$	$^3/_2$	S2
	2034.071	2034.070	2	390346.8	439493.5	$3s^23p^4(^3P)4s$	$3s3p^5(^3P^\circ)3d$	^4P	$^4D^\circ$	$^1/_2$	$^3/_2$	S2
	2050.600	2050.600	10	386386.3	435136.9	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$^5/_2$	$^5/_2$	S2
	2063.202	2063.200	5	395491.8	443944.7	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^2P	$^2P^\circ$	$^3/_2$	$^3/_2$	S2
	2082.222	2082.223	7	398429.9	446440.2	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^2P	$^2D^\circ$	$^1/_2$	$^3/_2$	S2
	2082.576	2082.588	6	388860.6	436862.5	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$^3/_2$	$^1/_2$	S2
	2088.084	2088.082	4	395491.8	443367.4	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^2P	$^2P^\circ$	$^3/_2$	$^1/_2$	S2
	2135.452	2135.449	3	388860.6	435674.4	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$^3/_2$	$^3/_2$	S2
	2140.342	2140.355	7	395491.8	442198.3	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^2P	$^2D^\circ$	$^3/_2$	$^5/_2$	S2
	2149.152	2149.135	3	390346.8	436862.5	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$^1/_2$	$^1/_2$	S2
	2160.256	2160.255	2	388860.6	435136.9	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$^3/_2$	$^5/_2$	S2
	2205.464	2205.473	11bl	390346.8	435674.4	$3s^23p^4(^3P)4s$	$3s^23p^4(^3P)4p$	^4P	$^4P^\circ$	$^1/_2$	$^3/_2$	S2

Sc VI

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	148.18	148.170	3g	0.0	674900.	$3s^23p^4$	$3s^23p^3(^2D^\circ)5s$	^1P	$^1D^\circ$	2	3	F2
	152.60	152.600	5	21393.0	676700.	$3s^23p^4$	$3s^23p^3(^2D^\circ)5s$	^1D	$^1D^\circ$	2	2	F2
	154.29	154.297	5g	0.0	648100.	$3s^23p^4$	$3s^23p^3(^4S^\circ)5s$	^1P	$^1S^\circ$	2	1	F2
	154.52	154.518	1	49224.6	696400.	$3s^23p^4$	$3s^23p^3(^2P^\circ)5s$	^1S	$^1P^\circ$	0	1	F2
	155.10	155.098	3g	3346.1	648100.	$3s^23p^4$	$3s^23p^3(^4S^\circ)5s$	^1P	$^3S^\circ$	1	1	F2
	155.36	155.366	1g	4457.1	648100.	$3s^23p^4$	$3s^23p^3(^4S^\circ)5s$	^3P	$^3S^\circ$	0	1	F2
	166.35	166.360	7	21393.0	622500.	$3s^23p^4$	$3s^23p^3(^2D^\circ)4d$	^1D	$^1F^\circ$	2	3	F2
	167.17	167.166	4	21393.0	619600.	$3s^23p^4$	$3s^23p^3(^2D^\circ)4d$	^1D	$^1D^\circ$	2	2	F2
	169.26	169.262	7g	0.0	590800.	$3s^23p^4$	$3s^23p^3(^4S^\circ)4d$	^3P	$^3D^\circ$	2		F2
	170.25	170.226	5g	3346.1	590800.	$3s^23p^4$	$3s^23p^3(^4S^\circ)4d$	^3P	$^3D^\circ$	1		F2

Sc VI – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	170.54	170.549	3g	4457.1 –	590800.	$3s^23p^4$ –	$3s^23p^3(^4S^\circ)4d$	^3P –	$^3D^\circ$	0 –	1	F2
	202.921	202.922	2g	0.0 –	492800.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)4s$	^3P –	$^3P^\circ$	2 –	2	B2
	203.216	203.217	0g	0.0 –	492086.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)4s$	^3P –	$^3P^\circ$	2 –	1	B2
	204.310	204.309	1g	3346.1 –	492800.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)4s$	^3P –	$^3P^\circ$	1 –	2	B2
	204.610	204.608	0g	3346.1 –	492086.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)4s$	^3P –	$^3P^\circ$	1 –	1	B2
	204.719	204.719	2g	3346.1 –	491820.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)4s$	^3P –	$^3P^\circ$	1 –	0	B2
	205.072	205.074	1g	4457.1 –	492086.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)4s$	^3P –	$^3P^\circ$	0 –	1	B2
	209.821	209.821	2	21393.0 –	497990.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)4s$	^1D –	$^1P^\circ$	2 –	1	B2
	210.523	210.523	0g	3346.1 –	478354.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)4s$	^3P –	$^1D^\circ$	1 –	2	B2
	211.416	211.416	4g	0.0 –	473001.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)4s$	^3P –	$^3D^\circ$	2 –	3	B2
	211.612	211.611	2g	0.0 –	472566.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)4s$	^3P –	$^3D^\circ$	2 –	2	B2
	213.118	213.120	2g	3346.1 –	472566	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)4s$	^3P –	$^3D^\circ$	1 –	2	B2
	213.192	213.194	1g	3346.1 –	472402.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)4s$	^3P –	$^3D^\circ$	1 –	1	B2
	213.702	213.700	1g	4457.1 –	472402.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)4s$	^3P –	$^3D^\circ$	0 –	1	B2
	218.837	218.837	4	21393.0 –	478354.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)4s$	^1D –	$^1D^\circ$	2 –	2	B2
	221.204	221.205	3g	0.0 –	452070.	$3s^23p^4$ –	$3s^23p^3(^4S^\circ)4s$	^3P –	$^3S^\circ$	2 –	1	B2
	222.850	222.834	3	49224.6 –	497990.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)4s$	^1S –	$^1P^\circ$	0 –	1	B2
		222.854	g	3346.1 –	452070.	$3s^23p^4$ –	$3s^23p^3(^4S^\circ)4s$	^3P –	$^3S^\circ$	1 –	1	B2
	223.407	223.407	5g,bl	4457.1 –	452070.	$3s^23p^4$ –	$3s^23p^3(^4S^\circ)4s$	^3P –	$^3S^\circ$	0 –	1	B2
	247.03					$3s^23p^3(^2D^\circ)3d$ –	$3s^23p^3(^2D^\circ)4f$	$^3F^\circ$ –	^3G	2 –	3	F1
	247.31					$3s^23p^3(^2D^\circ)3d$ –	$3s^23p^3(^2D^\circ)4f$	$^3F^\circ$ –	^3G	3 –	4	F1
	247.62					$3s^23p^3(^2D^\circ)3d$ –	$3s^23p^3(^2D^\circ)4f$	$^3F^\circ$ –	^3G	4 –	5	F1
	249.60					$3s^23p^3(^4S^\circ)3d$ –	$3s^23p^3(^4S^\circ)4f$	$^5D^\circ$ –	^5F	4 –	5	F1
	281.327	281.325	2g	0.0 –	355461.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3D^\circ$	2 –	1	S4
	282.209	282.209	7	21393.0 –	375740.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^1D –	$^1F^\circ$	2 –	3	S4
	282.497	282.499	6g	0.0 –	353983.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3D^\circ$	2 –	2	S4
	282.587	282.587	3	49224.6 –	403098.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^1S –	$^1P^\circ$	0 –	1	S4
	283.99	283.998	0g	3346.1 –	355461.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3D^\circ$	1 –	1	S4
	284.263	284.263	9g	0.0 –	351787.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3D^\circ$	2 –	3	S4
	284.884	284.897	6g	4457.1 –	355461.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3D^\circ$	0 –	1	S4
	285.191	285.195	8g	3346.1 –	353983.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3D^\circ$	1 –	2	S4
	292.344	292.344	6bl	21393.0 –	363456.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^1D –	$^1D^\circ$	2 –	2	S4
	294.292	294.285	7g	0.0 –	339807.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3P^\circ$	2 –	1	S4
	295.478	295.478	9g,bl	0.0 –	338435.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3P^\circ$	2 –	2	S4
	298.194	298.196	8g	4457.1 –	339807.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3P^\circ$	0 –	1	S4
	298.428	298.419	8g	0.0 –	335099.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)3d$	^3P –	$^3S^\circ$	2 –	1	S4
		298.428	g	3346.1 –	338435.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^3P –	$^3P^\circ$	1 –	2	S4
	300.677	300.670	3	21393.0 –	353983.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^1D –	$^3D^\circ$	2 –	2	S4
	301.426	301.429	4g	3346.1 –	335099.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)3d$	^1P –	$^3S^\circ$	1 –	1	S4
	302.436	302.442	1g,bl	4457.1 –	335099.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)3d$	^3P –	$^3S^\circ$	0 –	1	S4
	311.947	311.952	4	21393.0 –	341955.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)3d$	^1D –	$^1P^\circ$	2 –	1	S4
	314.049	314.057	4	21393.0 –	339807.	$3s^23p^4$ –	$3s^23p^3(^2P^\circ)3d$	^1D –	$^3P^\circ$	2 –	1	S4
	331.309	331.309	2	21393.0 –	323226.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)3d$	^1D –	$^1F^\circ$	2 –	3	S4
	341.62	341.611	2	49224.6 –	341955.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)3d$	^1S –	$^1P^\circ$	0 –	1	S4
	375.044	375.047	8bl	21393.0 –	288026.	$3s^23p^4$ –	$3s^23p^3(^2D^\circ)3d$	^1D –	$^1D^\circ$	2 –	2	S4
	445.493	445.493	2g	0.0 –	224470.4	$3s^23p^4$ –	$3s3p^5$	^3P –	$^1P^\circ$	2 –	1	S3
	492.423	492.423	13	21393.0 –	224470.4	$3s^23p^4$ –	$3s3p^5$	^1D –	$^1P^\circ$	2 –	1	S3
	561.160	561.161	12g	0.0 –	178202.1	$3s^23p^4$ –	$3s3p^5$	^3P –	$^3P^\circ$	2 –	1	S3
	566.773	566.770	12g,bl	3346.1 –	179784.5	$3s^23p^4$ –	$3s3p^5$	^3P –	$^3P^\circ$	1 –	0	S3
	570.300	570.299	15g	0.0 –	175346.6	$3s^23p^4$ –	$3s3p^5$	^3P –	$^3P^\circ$	2 –	2	S3
	570.627	570.627	4	49224.6 –	224470.4	$3s^23p^4$ –	$3s3p^5$	^1S –	$^1P^\circ$	0 –	1	S3
	571.900	571.899	11g	3346.1 –	178202.1	$3s^23p^4$ –	$3s3p^5$	^3P –	$^3P^\circ$	1 –	1	S3
	575.556	575.556	12g	4457.1 –	178202.1	$3s^23p^4$ –	$3s3p^5$	^3P –	$^3P^\circ$	0 –	1	S3
	581.393	581.394	12g	3346.1 –	175346.6	$3s^23p^4$ –	$3s3p^5$	^3P –	$^3P^\circ$	1 –	2	S3

Sc VII

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	182.743	182.743	1	50300.9 –	597518.	$3s^23p^3$ –	$3s^23p^2(^1S)4s$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	E1
	182.993	182.993	12*g*	0.0 –	546469.	$3s^23p^3$ –	$3s^23p^2(^3P)4s$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^5/_2$	E1
	183.96	183.959	5*g*,bl	0.0 –	543600.	$3s^23p^3$ –	$3s^23p^2(^3P)4s$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^3/_2$	E1
	184.607	184.607	7*g*	0.0 –	541691.	$3s^23p^3$ –	$3s^23p^2(^3P)4s$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^1/_2$	E1
	185.526	185.525	7	29562.5 –	568574.	$3s^23p^3$ –	$3s^23p^2(^1D)4s$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	E1
	185.575	185.574	1	29562.5 –	568431.	$3s^23p^3$ –	$3s^23p^2(^1D)4s$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	E1
	185.808	185.808	10	30239.9 –	568431.	$3s^23p^3$ –	$3s^23p^2(^1D)4s$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	E1
	190.654	190.642	8	30239.9 –	554782.	$3s^23p^3$ –	$3s^23p^2(^3P)4s$	$^2D^\circ$ –	^2P	$^5/_2$ –	$^3/_2$	E1
	191.603	191.599	8bl	29562.5 –	551487.	$3s^23p^3$ –	$3s^23p^2(^3P)4s$	$^2D^\circ$ –	^2P	$^3/_2$ –	$^1/_2$	E1
	192.607	192.609	8	49387.1 –	568574.	$3s^23p^3$ –	$3s^23p^2(^1D)4s$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	E1
	193.000	193.002	15	50300.9 –	568431.	$3s^23p^3$ –	$3s^23p^2(^1D)4s$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	E1
	197.871	197.865	1	49387.1 –	554782.	$3s^23p^3$ –	$3s^23p^2(^3P)4s$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^3/_2$	E1
	198.229	198.223	5	50300.9 –	554782.	$3s^23p^3$ –	$3s^23p^2(^3P)4s$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	E1
	199.163	199.164	2	49387.1 –	551487.	$3s^23p^3$ –	$3s^23p^2(^3P)4s$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^1/_2$	E1
	199.524	199.527	1	50300.9 –	551487.	$3s^23p^3$ –	$3s^23p^2(^3P)4s$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^1/_2$	E1
	286.927	286.927	10	30239.9 –	378760.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2D^\circ$ –	2F	$^3/_2$ –	$^5/_2$	E1
		286.930		29562.5 –	378080.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2D^\circ$ –	2F	$^5/_2$ –	$^7/_2$	E1
	290.232	290.236	8	30239.9 –	374787.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2D^\circ$ –	^2P	$^5/_2$ –	$^3/_2$	E1
	290.700	290.700	6	49387.1 –	393384.	$3s^23p^3$ –	$3s^23p^2(^1S)3d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	E1
	292.344	292.344	6bl	50300.9 –	392364.	$3s^23p^3$ –	$3s^23p^2(^1S)3d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	E1
	296.539	296.539	4*g*	0.0 –	337224.	$3s^23p^3$ –	$3s^23p^2(^3P)3d$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^1/_2$	E1
	297.269	297.269	7*g*	0.0 –	336396.	$3s^23p^3$ –	$3s^23p^2(^3P)3d$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^3/_2$	E1
	298.557	298.557	6*g*	0.0 –	334944.	$3s^23p^3$ –	$3s^23p^2(^3P)3d$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^5/_2$	E1
	301.301	301.301	3	50300.9 –	382195.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	E1
	301.820	301.820	5	29562.5 –	360886.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	E1
	302.436	302.438	1bl	30239.9 –	360886.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^3/_2$	E1
	307.320	307.314	2*d*	49387.1 –	374787.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^3/_2$	E1
	308.180	308.180	6	50300.9 –	374787.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	E1
	309.161	309.164	5*d*	49387.1 –	372840.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^1/_2$	E1
	310.043	310.040	20bl	50300.9 –	372840.	$3s^23p^3$ –	$3s^23p^2(^1D)3d$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^1/_2$	E1
	329.640	329.641	3	29562.5 –	332923.	$3s^23p^3$ –	$3s^23p^2(^3P)3d$	$^2D^\circ$ –	^2P	$^3/_2$ –	$^1/_2$	E1
	333.386	333.385	2	29562.5 –	329516.	$3s^23p^3$ –	$3s^23p^2(^3P)3d$	$^2D^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	E1
	334.138	334.140	5	30239.9 –	329516.	$3s^23p^3$ –	$3s^23p^2(^3P)3d$	$^2D^\circ$ –	^2P	$^5/_2$ –	$^3/_2$	E1
	447.560	447.562	6	29562.5 –	252995.3	$3s^23p^3$ –	$3s3p^4$	$^2D^\circ$ –	^2P	$^3/_2$ –	$^1/_2$	S3
	452.734	452.732	4	29562.5 –	250443.6	$3s^23p^3$ –	$3s3p^4$	$^2D^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	S3
	454.125	454.125	7	30239.9 –	250443.6	$3s^23p^3$ –	$3s3p^4$	$^2D^\circ$ –	^2P	$^5/_2$ –	$^3/_2$	S3
	470.780	470.780	5	49387.1 –	261800.6	$3s^23p^3$ –	$3s3p^4$	$^2P^\circ$ –	^2S	$^1/_2$ –	$^1/_2$	S3
	472.814	472.814	8	50300.9 –	261800.6	$3s^23p^3$ –	$3s3p^4$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	S3
	491.141	491.139	5	49387.1 –	252995.3	$3s^23p^3$ –	$3s3p^4$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^1/_2$	S3
	497.369	497.373	2	49387.1 –	250443.6	$3s^23p^3$ –	$3s3p^4$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^3/_2$	S3
	499.645	499.644	5	50300.9 –	250443.6	$3s^23p^3$ –	$3s3p^4$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	S3
	532.585	532.583	2	29562.5 –	217326.5	$3s^23p^3$ –	$3s3p^4$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	S3
	533.442	533.443	12bl	29562.5 –	217023.9	$3s^23p^3$ –	$3s3p^4$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	S3
	534.513	534.512	12	30239.9 –	217326.5	$3s^23p^3$ –	$3s3p^4$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	S3
	535.377	535.378	2	30239.9 –	217023.9	$3s^23p^3$ –	$3s3p^4$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^3/_2$	S3
	558.044	558.044	10*g*	0.0 –	179197.3	$3s^23p^3$ –	$3s3p^4$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^1/_2$	S3
	562.504	562.504	12*g*	0.0 –	177776.5	$3s^23p^3$ –	$3s3p^4$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^3/_2$	S3
	571.249	571.249	12*g*	0.0 –	175055.0	$3s^23p^3$ –	$3s3p^4$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^5/_2$	S3
	596.530	596.528	4	49387.1 –	217023.9	$3s^23p^3$ –	$3s3p^4$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	S3
	598.707	598.711	6	50300.9 –	217326.5	$3s^23p^3$ –	$3s3p^4$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	S3

Sc VIII

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	164.772	164.771	3*g*	2271.9	609174.	$3s^23p^2$	$3s^23p4s$	^3P	$^3P^\circ$	1	2	E1
	165.395	165.396	3*g*	0.0	604609.	$3s^23p^2$	$3s^23p4s$	^3P	$^3P^\circ$	0	1	E1
	165.654	165.654	4*g*	5507.7	609174.	$3s^23p^2$	$3s^23p4s$	^3P	$^3P^\circ$	2	2	E1
	166.022	166.020	2*g*	2271.9	604609.	$3s^23p^2$	$3s^23p4s$	^3P	$^3P^\circ$	1	1	E1
	166.317	166.317	3*g*	2271.9	603533.	$3s^23p^2$	$3s^23p4s$	^3P	$^3P^\circ$	1	0	E1
	166.916	166.917	3*g*	5507.7	604609.	$3s^23p^2$	$3s^23p4s$	^3P	$^3P^\circ$	2	1	E1
	169.759	169.761	4	25026.9	614090.	$3s^23p^2$	$3s^23p4s$	^1D	$^1P^\circ$	2	1	E1
	178.821	178.819	2	54864.4	614090.	$3s^23p^2$	$3s^23p4s$	^1S	$^1P^\circ$	0	1	E1
	287.55	287.552	0	25026.9	372790.	$3s^23p^2$	$3s^23p3d$	^1D	$^1P^\circ$	2	1	E1
	295.478	295.478	9bl	25026.9	363462.	$3s^23p^2$	$3s^23p3d$	^1D	$^1F^\circ$	2	3	E1
	303.157	303.157	*g*	0.0	329862.	$3s^23p^2$	$3s^23p3d$	^3P	$^3D^\circ$	0	1	E1
	304.456	304.466	1*g*	2271.9	330716.	$3s^23p^2$	$3s^23p3d$	^3P	$^3D^\circ$	1	2	E1
	305.260	305.260	1*g*	2271.9	329862.	$3s^23p^2$	$3s^23p3d$	^3P	$^3D^\circ$	1	1	E1
	307.083	307.083	6*g*	5507.7	331153.	$3s^23p^2$	$3s^23p3d$	^3P	$^3D^\circ$	2	3	E1
	310.043	310.038	20*g*,bl	0.0	322541.	$3s^23p^2$	$3s^23p3d$	^3P	$^3P^\circ$	0	1	E1
	311.138	311.138	8*g*	2271.9	323673.	$3s^23p^2$	$3s^23p3d$	^3P	$^3P^\circ$	1	0	E1
	312.239	312.237	8*g*	2271.9	322541.	$3s^23p^2$	$3s^23p3d$	^3P	$^3P^\circ$	1	1	E1
	314.53	314.539	2*d*	54864.4	372790.	$3s^23p^2$	$3s^23p3d$	^1S	$^1P^\circ$	0	1	E1
	315.163	315.162	15*g*	2271.9	319569.	$3s^23p^2$	$3s^23p3d$	^3P	$^3P^\circ$	1	2	E1
	315.420	315.424	12*g*	5507.7	322541.	$3s^23p^2$	$3s^23p3d$	^3P	$^3P^\circ$	2	1	E1
	318.408	318.409	20*g*	5507.7	319569.	$3s^23p^2$	$3s^23p3d$	^3P	$^3P^\circ$	2	2	E1
	358.107	358.102	2*g*	2271.9	281522.1	$3s^23p^2$	$3s3p^3$	^3P	$^1P^\circ$	1	1	E1
	362.300	362.300	2*g*	5507.7	281522.1	$3s^23p^2$	$3s3p^3$	^3P	$^1P^\circ$	2	1	S3
	367.085	367.084	3*g*	0.0	272417.4	$3s^23p^2$	$3s3p^3$	^3P	$^3S^\circ$	0	1	S3
	370.169	370.171	5*g*	2271.9	272417.4	$3s^23p^2$	$3s3p^3$	^3P	$^3S^\circ$	1	1	S3
	374.660	374.659	6*g*	5507.7	272417.4	$3s^23p^2$	$3s3p^3$	^3P	$^3S^\circ$	2	1	S3
	389.883	389.871	10bl	25026.9	281522.1	$3s^23p^2$	$3s3p^3$	^1D	$^1P^\circ$	2	1	S3
	404.201	404.219	4bl	25026.9	272417.4	$3s^23p^2$	$3s3p^3$	^1D	$^3S^\circ$	2	1	S3
	441.194	441.194	5	54864.4	281522.1	$3s^23p^2$	$3s3p^3$	^1S	$^1P^\circ$	0	1	S3
	481.321	481.322	2*g*,bl	0.0	207761.0	$3s^23p^2$	$3s3p^3$	^3P	$^3P^\circ$	0	1	S3
	486.525	486.517	3*g*	2271.9	207814.4	$3s^23p^2$	$3s3p^3$	^3P	$^3P^\circ$	1	2	S3
	486.645	486.644	3*g*	2271.9	207761.0	$3s^23p^2$	$3s3p^3$	^3P	$^3P^\circ$	1	1	S3
	486.810	486.810	3*g*	2271.9	207690.9	$3s^23p^2$	$3s3p^3$	^3P	$^3P^\circ$	1	0	S3
	491.180	491.180	10	25026.9	228618.3	$3s^23p^2$	$3s3p^3$	^1D	$^1D^\circ$	2	2	S3
	494.295	494.299	5*g*	5507.7	207814.4	$3s^23p^2$	$3s3p^3$	^3P	$^3P^\circ$	2	2	S3
	494.430	494.430	2*g*	5507.7	207761.0	$3s^23p^2$	$3s3p^3$	^3P	$^3P^\circ$	2	1	S3
	555.672	555.672	7*g*	0.0	179962.3	$3s^23p^2$	$3s3p^3$	^3P	$^3D^\circ$	0	1	S3
	562.547	562.554	10*g*	2271.9	180032.7	$3s^23p^2$	$3s3p^3$	^3P	$^3D^\circ$	1	2	S3
	562.777	562.777	4*g*	2271.9	179962.3	$3s^23p^2$	$3s3p^3$	^3P	$^3D^\circ$	1	1	S3
	571.442	571.442	12*g*	5507.7	180503.6	$3s^23p^2$	$3s3p^3$	^3P	$^3D^\circ$	2	3	S3
	572.987	572.984	2*g*	5507.7	180032.7	$3s^23p^2$	$3s3p^3$	^3P	$^3D^\circ$	2	2	S3
	573.206	573.215	0*g*	5507.7	179962.3	$3s^23p^2$	$3s3p^3$	^3P	$^3D^\circ$	2	1	S3
	643.183	643.183	1bl	25026.9	180503.6	$3s^23p^2$	$3s3p^3$	^1D	$^3D^\circ$	2	3	S3

Sc IX

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	93.393	93.393	1*g*	0.0	1070740.	$3s^23p$	$3s^25d$	$^2P^\circ$	^2D	$1/2$	$3/2$	E1
	93.889	93.889	1*g*,*d*	5761.1	1070850.	$3s^23p$	$3s^25d$	$^2P^\circ$	^2D	$3/2$	$5/2$	E1
	102.047	102.048	0*g*	0.0	979930.	$3s^23p$	$3s^25s$	$^2P^\circ$	^2S	$1/2$	$1/2$	E1
	102.653	102.652	1*g*	5761.1	979930.	$3s^23p$	$3s^25s$	$^2P^\circ$	^2S	$3/2$	$1/2$	E1
	110.718	110.710	1*d*	191987.1	1095250.	$3s3p^2$	$3s^25f$	^2D	$^2F^\circ$	$5/2$	$7/2$	E1
	119.444	119.444	4*g*	0.0	837212.	$3s^23p$	$3s^24d$	$^2P^\circ$	^2D	$1/2$	$3/2$	E1
	120.236	120.236	5*g*	5761.1	837459.	$3s^23p$	$3s^24d$	$^2P^\circ$	^2D	$3/2$	$5/2$	E1
	127.985	127.985	0	313860.	1095200.	$3s^23d$	$3s^25f$	^2D	$^2F^\circ$	$3/2$	$5/2$	E1
	128.035	128.035	0	314214.	1095250.	$3s^23d$	$3s^25f$	^2D	$^2F^\circ$	$5/2$	$7/2$	E1
	143.324	143.324	2	191609.3	889330.	$3s3p^2$	$3s^24f$	^2D	$^2F^\circ$	$3/2$	$5/2$	E1
	143.393	143.390	2	191987.1	889384.	$3s3p^2$	$3s^24f$	^2D	$^2F^\circ$	$5/2$	$7/2$	E1
	146.628	146.628	3	145622.	827620.	$3s3p^2$	$3s3p(^3P^\circ)4s$	^4P	$^4P^\circ$	$3/2$	$5/2$	E1
	146.954	146.954	4bl	143500.	823985.	$3s3p^2$	$3s3p(^3P^\circ)4s$	^4P	$^4P^\circ$	$1/2$	$3/2$	E1
	147.310	147.310	3	148779.	827620.	$3s3p^2$	$3s3p(^3P^\circ)4s$	^4P	$^4P^\circ$	$5/2$	$5/2$	E1
	147.834	147.834	2	145622.	822056.	$3s3p^2$	$3s3p(^3P^\circ)4s$	^4P	$^4P^\circ$	$3/2$	$1/2$	E1
	148.103	148.103	2	148779.	823985.	$3s3p^2$	$3s3p(^3P^\circ)4s$	^4P	$^4P^\circ$	$5/2$	$3/2$	E1
	150.092	150.092	*g*,bl	0.0	666259.	$3s^23p$	$3s^24s$	$^2P^\circ$	^2S	$1/2$	$1/2$	E1
	151.401	151.401	4*g*	5761.1	666259.	$3s^23p$	$3s^24s$	$^2P^\circ$	^2S	$3/2$	$1/2$	E1
	173.771	173.771	3	313860.	889330.	$3s^23d$	$3s^24f$	^2D	$^2F^\circ$	$3/2$	$5/2$	E1
	173.858	173.862	4	314214.	889384.	$3s^23d$	$3s^24f$	^2D	$^2F^\circ$	$5/2$	$7/2$	E1
	318.615	318.613	8*g*	0.0	313860.	$3s^23p$	$3s^23d$	$^2P^\circ$	^2D	$1/2$	$3/2$	E1
	324.199	324.199	12*g*	5761.1	314214.	$3s^23p$	$3s^23d$	$^2P^\circ$	^2D	$3/2$	$5/2$	E1
	324.570	324.571	1*g*	5761.1	313860.	$3s^23p$	$3s^23d$	$^2P^\circ$	^2D	$3/2$	$3/2$	E1
	385.867	385.871	6*g*	0.0	259153.7	$3s^23p$	$3s3p^2$	$^2P^\circ$	^2P	$1/2$	$3/2$	S3
	390.888	390.885	8*g*	0.0	255829.4	$3s^23p$	$3s3p^2$	$^2P^\circ$	^2P	$1/2$	$1/2$	S3
	394.647	394.645	8*g*	5761.1	259153.7	$3s^23p$	$3s3p^2$	$^2P^\circ$	^2P	$3/2$	$3/2$	S3
	399.888	399.891	6*g*	5761.1	255829.4	$3s^23p$	$3s3p^2$	$^2P^\circ$	^2P	$3/2$	$1/2$	S3
	416.041	416.040	4*g*	0.0	240361.4	$3s^23p$	$3s3p^2$	$^2P^\circ$	^2S	$1/2$	$1/2$	S3
	417.46	417.455		143500.	383047.	$3s3p^2$	$3p^3$	^4P	$^4S^\circ$	$1/2$	$3/2$	E1
	421.18	421.186		145622.	383047.	$3s3p^2$	$3p^3$	^4P	$^4S^\circ$	$3/2$	$3/2$	E1
	426.256	426.257	4*g*	5761.1	240361.4	$3s^23p$	$3s3p^2$	$^2P^\circ$	^2S	$3/2$	$1/2$	S3
	426.86	426.862		148779.	383047.	$3s3p^2$	$3p^3$	^4P	$^4S^\circ$	$5/2$	$3/2$	E1
	521.894	521.895	8*g*	0.0	191609.3	$3s^23p$	$3s3p^2$	$^2P^\circ$	^2D	$1/2$	$3/2$	S3
	536.982	536.982	10*g*	5761.1	191987.1	$3s^23p$	$3s3p^2$	$^2P^\circ$	^2D	$3/2$	$5/2$	S3
	538.075	538.074	1*g*	5761.1	191609.3	$3s^23p$	$3s3p^2$	$^2P^\circ$	^2D	$3/2$	$3/2$	S3

Sc X

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	76.343	76.343	1*g*	0.	1309880.	$3s2$	$3s5p$	^1S	$^1P^\circ$	0	1	E2
	83.760	83.760	0	158177.	1352060.	$3s3p$	$3s5d$	$^3P^\circ$	^3D	0	1	E2
	83.901	83.901	1	160141.	1352020.	$3s3p$	$3s5d$	$^3P^\circ$	^3D	1	2	E2
	84.204	84.204	2	164451.	1352040.	$3s3p$	$3s5d$	$^3P^\circ$	^3D	2	3	E2
	89.736	89.736	0*d*	236610.	1350990.	$3s3p$	$3s5d$	$^1P^\circ$	^1D	1	2	E2

Sc x – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	95.022	95.022	0	455898.	1508290.	$3s3d$	$3s6f$	^3D	$^3F^\circ$	1	2	E2
	95.052	95.052	0	456088.	1508140.	$3s3d$	$3s6f$	^3D	$^3F^\circ$	2	3	E2
	95.093	95.090	5bl	456414.	1508050.	$3s3d$	$3s6f$	^3D	$^3F^\circ$	3	4	E2
	98.010	98.016	0*d*	158177.	1178420.	$3s3p$	$3p4p$	$^3P^\circ$	^3P	0	1	E2
	98.192	98.192	1	164451.	1182860.	$3s3p$	$3p4p$	$^3P^\circ$	^3S	2	1	E2
	98.210	98.205	0	160141.	1178420.	$3s3p$	$3p4p$	$^3P^\circ$	^3P	1	1	E2
	98.323	98.323	3	164451.	1181510.	$3s3p$	$3p4p$	$^3P^\circ$	^3P	2	2	E2
	98.363	98.363	0	160141.	1176780.	$3s3p$	$3p4p$	$^3P^\circ$	^3P	1	0	E2
	98.889	98.889	3*d*	164451.	1175690.	$3s3p$	$3p4p$	$^3P^\circ$	^3D	2	3	E2
	98.911	98.911	1	160141.	1171150.	$3s3p$	$3p4p$	$^3P^\circ$	^3D	1	2	E2
	101.978	101.978	6*g*	0.	980604.	$3s2$	$3s4p$	^1S	$^1P^\circ$	0	1	E2
	109.072	109.072	1	158177.	1075000.	$3s3p$	$3s4d$	$^3P^\circ$	^3D	0	1	E2
	109.202	109.202	0	455898.	1371630.	$3s3d$	$3s5f$	^3D	$^3F^\circ$	1	2	E2
	109.227	109.227	1	456088.	1371610.	$3s3d$	$3s5f$	^3D	$^3F^\circ$	2	3	E2
	109.285	109.285	3bl	456414.	1371450.	$3s3d$	$3s5f$	^3D	$^3F^\circ$	3	4	E2
		109.286		160141.	1075170.	$3s3p$	$3s4d$	$^3P^\circ$	^3D	1	2	E2
	109.307	109.306	00	160141.	1075000.	$3s3p$	$3s4d$	$^3P^\circ$	^3D	1	1	E2
	109.765	109.765	4	164451.	1075490.	$3s3p$	$3s4d$	$^3P^\circ$	^3D	2	3	E2
	109.805	109.803	2	164451.	1075170.	$3s3p$	$3s4d$	$^3P^\circ$	^3D	2	2	E2
	109.897	109.916		372403.	1282190.	$3p2$	$3p4d$	^1D	$^1F^\circ$	2	3	K2
	110.306	110.313		377805.	1284320.	$3p2$	$3p4d$	^3P	$^3P^\circ$	1	1	K2
	110.920	110.912		382708.	1284320.	$3p2$	$3p4d$	^3P	$^3P^\circ$	2	1	K2
	112.210	112.212		375192.	1266360.	$3p2$	$3p4d$	^3P	$^3D^\circ$	0	1	K2
	112.544	112.542		377805.	1266360.	$3p2$	$3p4d$	^3P	$^3D^\circ$	1	1	K2
	118.297	118.297	3	236610.	1081940.	$3s3p$	$3s4d$	$^1P^\circ$	^1D	1	2	E2
	118.616	118.616		440596.	1283650.	$3p2$	$3p4d$	^1S	$^1P^\circ$	0	1	K2
	130.558	130.531		516087.	1282190.	$3s3d$	$3p4d$	^1D	$^1F^\circ$	2	3	K2
	132.318	132.318	4bl	372403.	1128160.	$3p2$	$3s4f$	^1D	$^1F^\circ$	2	3	E2
	134.767	134.770	3	158177.	900183.	$3s3p$	$3s4s$	$^3P^\circ$	^3S	0	1	E2
	135.128	135.127	4	160141.	900183.	$3s3p$	$3s4s$	$^3P^\circ$	^3S	1	1	E2
	135.921	135.919	5	164451.	900183.	$3s3p$	$3s4s$	$^3P^\circ$	^3S	2	1	E2
	137.418	137.418	1	377805.	1105510.	$3p2$	$3p4s$	^3P	$^3P^\circ$	1	2	E2
	137.870	137.871	2	375192.	1100510.	$3p2$	$3p4s$	^3P	$^3P^\circ$	0	1	E2
	138.381	138.350	5bl	382708.	1105510.	$3p2$	$3p4s$	^3P	$^3P^\circ$	2	2	E2
	138.662	138.663	2	377805.	1098980.	$3p^2$	$3p4s$	^3P	$^3P^\circ$	1	0	E2
	139.319	139.318	1*d*	382708.	1100490.	$3p^2$	$3p4s$	^3P	$^3P^\circ$	2	1	E2
	146.816	146.816		629767.	1310890.	$3p3d$	$3p4f$	$^3F^\circ$	^3G	4	5	F3
	146.954	146.960	4bl	626453.	1306910.	$3p3d$	$3p4f$	$^3F^\circ$	^3G	3	4	F3
	147.346	147.346	2	236610.	915285.	$3s3p$	$3s4s$	$^1P^\circ$	^1S	1	0	E2
	148.262	148.262		633107.	1307590.	$3p3d$	$3p4f$	$^1D^\circ$	^3F	2	3	F3
	150.900	150.900	3	455898.	1118590.	$3s3d$	$3s4f$	^3D	$^3F^\circ$	1	2	E2
	150.939	150.938	4	456088.	1118610.	$3s3d$	$3s4f$	^3D	$^3F^\circ$	2	3	E2
	150.995	150.994	5	456414.	1118690.	$3s3d$	$3s4f$	^3D	$^3F^\circ$	3	4	E2
	152.702	152.703		666472.	1321340.	$3p3d$	$3p4f$	$^3D^\circ$	^3D	2	2	F3
	154.897	154.896		666417.	1312010.	$3p3d$	$3p4f$	$^3D^\circ$	^3F	3	4	F3
	163.062	163.023		713188.	1326600.	$3p3d$	$3p4f$	$^1F^\circ$	^1G	3	4	F3
	163.416	163.417	4	516087.	1128020.	$3s3d$	$3s4f$	^1D	$^1F^\circ$	2	3	E2
	293.44	293.440	2	372403.	713188.	$3p^2$	$3p3d$	^1D	$^1F^\circ$	2	3	L1
	335.89	335.885	5	158177.	455898.	$3s3p$	$3s3d$	$^3P^\circ$	^3D	0	1	L1
	337.89	337.898	5	160141.	456088.	$3s3p$	$3s3d$	$^3P^\circ$	^3D	1	2	L1
	338.12	338.115	2	160141.	455898.	$3s3p$	$3s3d$	$^3P^\circ$	^3D	1	1	L1
	340.12	340.120	3	372403.	666417.	$3p^2$	$3p3d$	^1D	$^3D^\circ$	2	3	L1
	342.50	342.509	7	164451.	456414.	$3s3p$	$3s3d$	$^3P^\circ$	^3D	2	3	L1
	342.89	342.892	3	164451.	456088.	$3s3p$	$3s3d$	$^3P^\circ$	^3D	2	2	L1
	346.42	346.420	3	377805.	666472.	$3p^2$	$3p3d$	^3P	$^3D^\circ$	1	2	L1
	347.04	347.039	3	377805.	665957.	$3p^2$	$3p3d$	^3P	$^3P^\circ$	1	1	L1

Sc x – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	347.95	347.947	2	377805. –	665205.	$3p^2$ –	$3p3d$	^3P –	$^3P^\circ$	1 –	0	L1
	348.18	348.179	3	375192. –	662401.	$3p^2$ –	$3p3d$	^3P –	$^3D^\circ$	0 –	1	L1
	352.48	352.406	5bl	382708. –	666472.	$3p^2$ –	$3p3d$	^3P –	$^3D^\circ$	2 –	2	L1
		352.474		382708. –	666417.	$3p^2$ –	$3p3d$	^3P –	$^3D^\circ$	2 –	3	L1
	352.64	352.642	3	377805. –	661379.	$3p^2$ –	$3p3d$	^3P –	$^3P^\circ$	1 –	2	L1
	354.18	354.170	4	440596. –	722946.	$3p^2$ –	$3p3d$	^1S –	$^1P^\circ$	0 –	1	L1
	357.79	357.811	7	236610. –	516087.	$3s3p$ –	$3s3d$	$^1P^\circ$ –	^1D	1 –	2	L1
	358.86	358.846	2	382708. –	661379.	$3p^2$ –	$3p3d$	^3P –	$^3P^\circ$	2 –	2	L1
	383.58	383.577	4	372403. –	633107.	$3p^2$ –	$3p3d$	^1D –	$^1D^\circ$	2 –	2	L1
	397.94	397.945	1	372403. –	623694.	$3p^2$ –	$3p3d$	^1D –	$^3F^\circ$	2 –	2	L1
	422.63	422.636	10g	0. –	236610.	$3s^2$ –	$3s3p$	^1S –	$^1P^\circ$	0 –	1	L1
	449.30	449.303	6	160141. –	382708.	$3s3p$ –	$3p^2$	$^3P^\circ$ –	^3P	1 –	2	L1
	455.31	455.315	5	158177. –	377805.	$3s3p$ –	$3p^2$	$^3P^\circ$ –	^3P	0 –	1	L1
	458.18	458.175	8	164451. –	382708.	$3s3p$ –	$3p^2$	$^3P^\circ$ –	^3P	2 –	2	L1
	459.42	459.424	6	160141. –	377805.	$3s3p$ –	$3p^2$	$^3P^\circ$ –	^3P	1 –	1	L1
	465.00	465.006	5	160141. –	375192.	$3s3p$ –	$3p^2$	$^3P^\circ$ –	^3P	1 –	0	L1
	468.71	468.705	5	164451. –	377805.	$3s3p$ –	$3p^2$	$^3P^\circ$ –	^3P	2 –	1	L1
	471.12	471.116	2	160141. –	372403.	$3s3p$ –	$3p^2$	$^3P^\circ$ –	^1D	1 –	2	L1
	475.32	475.321	3	456088. –	666472.	$3s3d$ –	$3p3d$	^3D –	$^3D^\circ$	2 –	2	L1
	476.05	476.057	2	455898. –	665957.	$3s3d$ –	$3p3d$	^3D –	$^3P^\circ$	1 –	1	L1
	476.18	476.184	4	456414. –	666417.	$3s3d$ –	$3p3d$	^3D –	$^3D^\circ$	3 –	3	L1
	480.88	480.880	2	164451. –	372403.	$3s3p$ –	$3p^2$	$^3P^\circ$ –	^1D	2 –	2	L1
	483.41	483.421	4	516087. –	722946.	$3s3d$ –	$3p3d$	^1D –	$^1P^\circ$	2 –	1	L1
	484.70	484.700	2	456088. –	662401.	$3s3d$ –	$3p3d$	^3D –	$^3D^\circ$	2 –	1	L1
	487.89	487.888	4	456414. –	661379.	$3s3d$ –	$3p3d$	^3D –	$^3P^\circ$	3 –	2	L1
	490.24	490.230	5	236610. –	440596.	$3s3p$ –	$3p^2$	$^1P^\circ$ –	^1S	1 –	0	L1
	507.35	507.354	5	516087. –	713188.	$3s3d$ –	$3p3d$	^1D –	$^1F^\circ$	2 –	3	L1
	576.86	576.858	6	456414. –	629767.	$3s3d$ –	$3p3d$	^3D –	$^3F^\circ$	3 –	4	L1
	586.97	586.975	4	456088. –	626453.	$3s3d$ –	$3p3d$	^3D –	$^3F^\circ$	2 –	3	L1
	588.10	588.100	1	456414. –	626453.	$3s3d$ –	$3p3d$	^3D –	$^3F^\circ$	3 –	3	L1
	595.96	595.962	3	455898. –	623694.	$3s3d$ –	$3p3d$	^3D –	$^3F^\circ$	1 –	2	L1
	596.60	596.637	1	456088. –	623694.	$3s3d$ –	$3p3d$	^3D –	^3F	2 –	2	L1
	624.5	624.500	g	0. –	160141.	$3s^2$ –	$3s3p$	^1S –	$^3P^\circ$	0 –	1	F9
	736.41	736.415	3	236610. –	372403.	$3s3p$ –	$3p^2$	$^1P^\circ$ –	^1D	1 –	2	L1

Sc xi

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	53.334	53.333	g	0. –	1875000.	$3s$ –	$10p$	^2S –	$^2P^\circ$	$1/2$ –	$3/2$	C1
	54.346	54.345	g	0. –	1840100.	$3s$ –	$9p$	^2S –	$^2P^\circ$	$1/2$ –	$3/2$	F3
	55.788	55.788	g	0. –	1792470.	$3s$ –	$8p$	^2S –	$^2P^\circ$	$1/2$ –	$3/2$	F3
	58.082	58.082	g	0. –	1721700.	$3s$ –	$7p$	^2S –	$^2P^\circ$	$1/2$ –	$3/2$	C1
	60.637	60.638		197979. –	1847100.	$3p$ –	$9d$	$^2P^\circ$ –	^2D	$3/2$ –	$5/2$	F3
	62.132	62.131	0g	0. –	1609500.	$3s$ –	$6p$	^2S –	$^2P^\circ$	$1/2$ –	$3/2$	B2
	62.316	62.316		197979. –	1802700.	$3p$ –	$8d$	$^2P^\circ$ –	^2D	$3/2$ –	$5/2$	F3
	64.70	64.699	00	191286. –	1736900.	$3p$ –	$7d$	$^2P^\circ$ –	^2D	$1/2$ –	$3/2$	B2
	64.98	64.980	0	197979. –	1736900.	$3p$ –	$7d$	$^2P^\circ$ –	^2D	$3/2$ –	$5/2$	B2
	69.252	69.252	0	191286. –	1635280.	$3p$ –	$6d$	$^2P^\circ$ –	^2D	$1/2$ –	$3/2$	B2

Sc XI – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	69.575	69.575	1	197979. –	1635280.	$3p$ –	$6d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B2
	70.445	70.445	2g	0. –	1419550.	$3s$ –	$5p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^3/_2$	B2
	70.509	70.509	1g	0. –	1418260.	$3s$ –	$5p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^1/_2$	B2
	71.520	71.520		460049. –	1858260.	$3d$ –	$9f$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	F3
	71.887	71.887	0	197979. –	1589050.	$3p$ –	$6s$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	B2
	74.221	74.220		460049. –	1807400.	$3d$ –	$8f$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	F3
	75.02	75.016	0	459429. –	1792470.	$3d$ –	$8p$	^2D –	$^2P^\circ$	$^3/_2$ –	$^3/_2$	B2
	77.87	77.877		459429. –	1743500.	$3d$ –	$7f$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	C1
	77.917	77.915	0	460049. –	1743500.	$3d$ –	$7f$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	B2
	78.509	78.507	1	191286. –	1465060.	$3p$ –	$5d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B2
	78.917	78.917	3	197979. –	1465130.	$3p$ –	$5d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B2
		78.922		197979. –	1465060.	$3p$ –	$5d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B2
	83.958	83.959	0	191286. –	1382350.	$3p$ –	$5s$	$^2P^\circ$ –	^2S	$^1/_2$ –	$^1/_2$	B2
	84.351	84.350	0	459429. –	1644970.	$3d$ –	$6f$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	B2
		84.393		460049. –	1644980.	$3d$ –	$6f$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	B2
	84.393	84.394	0+	460049. –	1644970.	$3d$ –	$6f$	^2D –	$^2F^\circ$	$^5/_2$ –	$^5/_2$	B2
	84.433	84.433	1	197979. –	1382350.	$3p$ –	$5s$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	B2
	94.865	94.879	6g	0. –	1053970.	$3s$ –	$4p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^3/_2$	E3
	95.093	95.108	5g,bl	0. –	1051430.	$3s$ –	$4p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^1/_2$	E3
	97.788	97.788	2	459429. –	1482050.	$3d$ –	$5f$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	K3
	97.841	97.841	4	460049. –	1482120.	$3d$ –	$5f$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	K3
		97.847		460049. –	1482050.	$3d$ –	$5f$	^2D –	$^2F^\circ$	$^5/_2$ –	$^5/_2$	K3
	104.441	104.438	3	191286. –	1148790.	$3p$ –	$4d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	K3
	105.145	105.145	5	197979. –	1149050.	$3p$ –	$4d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	K3
	105.170	105.173	2	197979. –	1148790.	$3p$ –	$4d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	B2
	127.154	127.155	5	191286. –	977730.	$3p$ –	$4s$	$^2P^\circ$ –	^2S	$^1/_2$ –	$^1/_2$	E3
	128.246	128.246	5	197979. –	977730.	$3p$ –	$4s$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	E3
	138.281	138.282	5	459429. –	1182590.	$3d$ –	$4f$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	R1
	138.380	138.379	5bl	460049. –	1182700.	$3d$ –	$4f$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	R1
	168.396	168.316	4	460049. –	1054170.	$3d$ –	$4p$	^2D –	$^2P^\circ$	$^5/_2$ –	$^3/_2$	E3
	168.942	168.859	2	459429. –	1051640.	$3d$ –	$4p$	^2D –	$^2P^\circ$	$^3/_2$ –	$^1/_2$	E3
	372.939	372.935	3	191286. –	459429.	$3p$ –	$3d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	R1
	381.577	381.577	7	197979. –	460049.	$3p$ –	$3d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	R1
	382.479	382.482		197979. –	459429.	$3p$ –	$3d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	R1
	505.105	505.104	4g	0. –	197979.	$3s$ –	$3p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^3/_2$	R1
	522.778	522.777	2g	0. –	191286.	$3s$ –	$3p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^1/_2$	R1

Sc XII

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	20.298	20.298	2g	0. –	4926600.	$2s^22p^6$ –	$2s^22p^5(^2P^\circ_{1/2})5d$	^1S –	$^2[^3/_2]^\circ$	0 –	1	F4
	20.438	20.438	1g	0. –	4892800.	$2s^22p^6$ –	$2s^22p^5(^2P^\circ_{3/2})5d$	^1S –	$^2[^3/_2]^\circ$	0 –	1	F4
	21.940	21.940	5g	0. –	4557900.	$2s^22p^6$ –	$2s^22p^5(^2P^\circ_{1/2})4d$	^1S –	$^2[^3/_2]^\circ$	0 –	1	F4
	22.119	22.119	4g	0. –	4521000.	$2s^22p^6$ –	$2s^22p^5(^2P^\circ_{3/2})4d$	^1S –	$^2[^3/_2]^\circ$	0 –	1	F4
	22.839	22.837	4g,bl	0. –	4378800.	$2s^22p^6$ –	$2s^22p^5(^2P^\circ_{1/2})4s$	^1S –	$(^1/_2,^1/_2)^\circ$	0 –	1	F4

Sc XII – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	23.045	23.045	1g	0. –	4339300.	$2s^22p^6$ –	$2s^22p^5(^2P^o_{3/2})4s$	^1S –	$(^3/_2,^1/_2)^o$	0 –	1	F4
	23.728	23.725	8g,bl	0. –	4215000.	$2s^22p^6$ –	$2s^2p^63p$	^1S –	$^1P^o$	0 –	1	F4
	23.821	23.821	1g	0. –	4198000.	$2s^22p^6$ –	$2s^2p^63p$	^1S –	$^3P^o$	0 –	1	F4
	26.544	26.544	g	0. –	3767300.	$2s^22p^6$ –	$2s^22p^5(^2P^o_{1/2})3d$	^1S –	$^2[^3/_2]^o$	0 –	1	E4
	26.920	26.920	g	0. –	3714700.	$2s^22p^6$ –	$2s^22p^5(^2P^o_{3/2})3d$	^1S –	$^2[^3/_2]^o$	0 –	1	E4
	27.260	27.259	g	0. –	3668546.	$2s^22p^6$ –	$2s^22p^5(^2P^o_{3/2})3d$	^1S –	$^2[^1/_2]^o$	0 –	1	E4
	30.480	30.480	g	0. –	3280800.	$2s^22p^6$ –	$2s^22p^5(^2P^o_{1/2})3s$	^1S –	$(^1/_2,^1/_2)^o$	0 –	1	E4
	30.816	30.816	g	0. –	3245100.	$2s^22p^6$ –	$2s^22p^5(^2P^o_{3/2})3s$	^1S –	$(^3/_2,^1/_2)^o$	0 –	1	E4
	85.163	85.163	4	3235171. –	4409384.	$2s^22p^5(^2P^o_{3/2})3s$ –	$2s^22p^5(^2P^o_{3/2})4p$	$(^3/_2,^1/_2)^o$ –	$^2[^5/_2]$	2 –	2	J3
	85.456	85.456	2	3280800. –	4450987.	$2s^22p^5(^2P^o_{1/2})3s$ –	$2s^22p^5(^2P^o_{1/2})4p$	$(^1/_2,^1/_2)^o$ –	$^2[^3/_2]$	1 –	2	J3
	90.727	90.727	2	3401413. –	4503623.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4d$	$^2[^1/_2]$ –	$^2[^3/_2]^o$	1 –	2	J3
	91.007	91.007	3	3401413. –	4500231.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4d$	$^2[^1/_2]$ –	$^2[^1/_2]^o$	1 –	1	J3
	92.607	92.601	4	3463292. –	4543198.	$2s^22p^5(^2P^o_{1/2})3p$ –	$2s^22p^5(^2P^o_{1/2})4d$	$^2[^3/_2]$ –	$^2[^3/_2]^o$	1 –	2	J3
	92.787	92.787	6	3427225. –	4504960.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4d$	$^2[^5/_2]$ –	$^2[^7/_2]^o$	2 –	3	J3
	92.901	92.900	1	3428533. –	4504960.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4d$	$^2[^5/_2]$ –	$^2[^7/_2]^o$	3 –	3	J3
		92.902		3427225. –	4503623.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4d$	$^2[^5/_2]$ –	$^2[^3/_2]^o$	2 –	2	J3
	93.075	93.075	20	3428533. –	4502941.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4d$	$^2[^5/_2]$ –	$^2[^7/_2]^o$	3 –	4	J3
	93.390	93.390	5	3437344. –	4508125.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4d$	$^2[^3/_2]$ –	$^2[^5/_2]^o$	1 –	2	J3
	93.506	93.506	10	3474958. –	4544404.	$2s^22p^5(^2P^o_{1/2})3p$ –	$2s^22p^5(^2P^o_{1/2})4d$	$^2[^3/_2]$ –	$^2[^5/_2]^o$	2 –	3	J3
	93.612	93.612	3	3474958. –	4543198.	$2s^22p^5(^2P^o_{1/2})3p$ –	$2s^22p^5(^2P^o_{1/2})4d$	$^2[^3/_2]$ –	$^2[^3/_2]^o$	2 –	2	J3
		93.612		3474958. –	4543198.	$2s^22p^5(^2P^o_{1/2})3p$ –	$2s^22p^5(^2P^o_{1/2})4d$	$^2[^1/_2]$ –	$^2[^3/_2]^o$	1 –	2	J3
	93.924	93.923	10	3445090. –	4509787.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4d$	$^2[^3/_2]$ –	$^2[^5/_2]^o$	2 –	3	J3
	94.470	94.470	1	3445090. –	4503623.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4d$	$^2[^3/_2]$ –	$^2[^3/_2]^o$	2 –	2	J3
	109.875	109.875	1	3427225. –	4337350.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4s$	$^2[^5/_2]$ –	$(^3/_2,^1/_2)^o$	2 –	2	J3
	110.030	110.033	1	3428533. –	4337350.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4s$	$^2[^5/_2]$ –	$(^3/_2,^1/_2)^o$	3 –	2	J3
	112.076	112.075	1	3445090. –	4337350.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})4s$	$^2[^3/_2]$ –	$(^3/_2,^1/_2)^o$	2 –	2	J3
	113.927	113.926	25bl	3668546. –	4546312.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^1/_2]^o$ –	$^2[^3/_2]$	1 –	2	J3
	114.903	114.903	8	3675982. –	4546279.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^3/_2]^o$ –	$^2[^5/_2]$	2 –	3	J3
	115.433	115.434	9	3678797. –	4545094.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^7/_2]^o$ –	$^2[^7/_2]$	4 –	4	J3
	115.837	115.833	20	3678797. –	4542110.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^7/_2]^o$ –	$^2[^9/_2]$	4 –	4	J3
		115.836		3678797. –	4542083.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^7/_2]^o$ –	$^2[^9/_2]$	4 –	5	J3
	116.069	116.069	4	3683330. –	4544885.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^7/_2]^o$ –	$^2[^7/_2]$	3 –	3	J3
	116.445	116.444	20	3683330. –	4542110.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^7/_2]^o$ –	$^2[^9/_2]$	3 –	4	J3
	116.535	116.535	12	3722705. –	4580818.	$2s^22p^5(^2P^o_{1/2})3d$ –	$2s^22p^5(^2P^o_{1/2})4f$	$^2[^5/_2]^o$ –	$^2[^7/_2]$	2 –	3	J3
	116.760	116.760	15	3726769. –	4583224.	$2s^22p^5(^2P^o_{1/2})3d$ –	$2s^22p^5(^2P^o_{1/2})4f$	$^2[^3/_2]^o$ –	$^2[^5/_2]$	2 –	3	J3
	117.043	117.043	1	3691702. –	4546089.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^5/_2]^o$ –	$^2[^5/_2]$	2 –	2	J3
	117.172	117.172	20	3727574. –	4581021.	$2s^22p^5(^2P^o_{1/2})3d$ –	$2s^22p^5(^2P^o_{1/2})4f$	$^2[^5/_2]^o$ –	$^2[^7/_2]$	3 –	4	J3
	117.209	117.208	5	3691702. –	4544885.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^5/_2]^o$ –	$^2[^7/_2]$	2 –	3	J3
	117.735	117.735	3	3696911. –	4546279.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^5/_2]^o$ –	$^2[^5/_2]$	3 –	3	J3
	117.901	117.899	15	3696911. –	4545094.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^5/_2]^o$ –	$^2[^7/_2]$	3 –	4	J3
	120.226	120.248	2	3714700. –	4546312.	$2s^22p^5(^2P^o_{3/2})3d$ –	$2s^22p^5(^2P^o_{3/2})4f$	$^2[^3/_2]^o$ –	$^2[^3/_2]$	1 –	2	J3
	352.158	352.159	2	3280800. –	3564763.	$2s^22p^5(^2P^o_{1/2})3s$ –	$2s^22p^5(^2P^o_{1/2})3p$	$(^1/_2,^1/_2)^o$ –	$^2[^1/_2]$	1 –	0	J2
	364.203	364.207	2	3401413. –	3675982.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})3d$	$^2[^1/_2]$ –	$^2[^3/_2]^o$	1 –	2	J2
	374.345	374.345	1	3401413. –	3668546.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})3d$	$^2[^1/_2]$ –	$^2[^1/_2]^o$	1 –	1	J2
	378.099	378.105	2	3427225. –	3691702.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})3d$	$^2[^5/_2]$ –	$^2[^5/_2]^o$	2 –	2	J2
	385.486	385.486	3	3463292. –	3722705.	$2s^22p^5(^2P^o_{1/2})3p$ –	$2s^22p^5(^2P^o_{1/2})3d$	$^2[^1/_2]$ –	$^2[^1/_2]^o$	1 –	2	J2
	390.462	390.465	3	3427225. –	3683330.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{1/2})3d$	$^2[^1/_2]$ –	$^2[^7/_2]^o$	2 –	3	J2
	393.161	393.147	3	3437344. –	3691702.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{1/2})3d$	$^2[^1/_2]$ –	$^2[^5/_2]^o$	1 –	2	J2
	395.857	395.858	4	3474958. –	3727574.	$2s^22p^5(^2P^o_{1/2})3p$ –	$2s^22p^5(^2P^o_{1/2})3d$	$^2[^1/_2]$ –	$^2[^5/_2]^o$	2 –	3	J2
	397.124	397.123	4	3474958. –	3726769.	$2s^22p^5(^2P^o_{1/2})3p$ –	$2s^22p^5(^2P^o_{1/2})3d$	$^2[^1/_2]$ –	$^2[^3/_2]^o$	2 –	2	J2
		397.123		3474958. –	3726769.	$2s^22p^5(^2P^o_{1/2})3p$ –	$2s^22p^5(^2P^o_{1/2})3d$	$^2[^1/_2]$ –	$^2[^3/_2]^o$	1 –	2	J2
	399.563	399.578	4	3428533. –	3678797.	$2s^22p^5(^2P^o_{3/2})3p$ –	$2s^22p^5(^2P^o_{3/2})3d$	$^2[^5/_2]$ –	$^2[^7/_2]^o$	3 –	4	J2
	456.417	456.417	2	3245100. –	3464198.	$2s^22p^5(^2P^o_{3/2})3s$ –	$2s^22p^5(^2P^o_{3/2})3p$	$(^3/_2,^1/_2)^o$ –	$^2[^1/_2]$	1 –	0	J2
	500.015	500.025	1	3245100. –	3445090.	$2s^22p^5(^2P^o_{3/2})3s$ –	$2s^22p^5(^2P^o_{3/2})3p$	$(^3/_2,^1/_2)^o$ –	$^2[^3/_2]$	1 –	2	J2
	515.045	515.044	3	3280800. –	3474958.	$2s^22p^5(^2P^o_{1/2})3s$ –	$2s^22p^5(^2P^o_{1/2})3p$	$(^1/_2,^1/_2)^o$ –	$^2[^1/_2]$	1 –	1	J2
		515.044		3280800. –	3474958.	$2s^22p^5(^2P^o_{1/2})3s$ –	$2s^22p^5(^2P^o_{1/2})3p$	$(^1/_2,^1/_2)^o$ –	$^2[^3/_2]$	1 –	2	J2

Sc XII – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	517.179	517.165	5	3235171. –	3428533.	$2s^22p^5(^2P^o_{3/2})3s$ –	$2s^22p^5(^2P^o_{3/2})3p$	$(^3/_2,^1/_2)^o$ –	$^2[^5/_2]$	2 –	3	J2
	520.191	520.172	2bl	3245100. –	3437344.	$2s^22p^5(^2P^o_{3/2})3s$ –	$2s^22p^5(^2P^o_{3/2})3p$	$(^3/_2,^1/_2)^o$ –	$^2[^3/_2]$	1 –	1	J2
	520.674	520.687	3	3235171. –	3427225.	$2s^22p^5(^2P^o_{3/2})3s$ –	$2s^22p^5(^2P^o_{3/2})3p$	$(^3/_2,^1/_2)^o$ –	$^2[^5/_2]$	2 –	2	J2
	524.764	524.764	2	3272730. –	3463292.	$2s^22p^5(^2P^o_{1/2})3s$ –	$2s^22p^5(^2P^o_{1/2})3p$	$(^1/_2,^1/_2)^o$ –	$^2[^3/_2]$	0 –	1	J2
	547.969	547.969	1	3280800. –	3463292.	$2s^22p^5(^2P^o_{1/2})3s$ –	$2s^22p^5(^2P^o_{1/2})3p$	$(^1/_2,^1/_2)^o$ –	$^2[^3/_2]$	1 –	1	J2
	549.069	549.073	3	3245100. –	3427225.	$2s^22p^5(^2P^o_{3/2})3s$ –	$2s^22p^5(^2P^o_{3/2})3p$	$(^3/_2,^1/_2)^o$ –	$^2[^5/_2]$	1 –	2	J2
	601.528	601.533	2	3235171. –	3401413.	$2s^22p^5(^2P^o_{3/2})3s$ –	$2s^22p^5(^2P^o_{3/2})3p$	$(^3/_2,^1/_2)^o$ –	$^2[^1/_2]$	2 –	1	J2

Sc XIII

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	24.061	24.061	1*g*	0. –	4156100.	$2s^22p^5$ –	$2s^22p^4(^1S)3d$	$^2P^o$ –	^2D	$^3/_2$ –	$^3/_2$	F5
	24.097	24.097	9*g*	0. –	4149900.	$2s^22p^5$ –	$2s^22p^4(^1S)3d$	$^2P^o$ –	^2D	$^3/_2$ –	$^5/_2$	F5
	24.284	24.283	9*g*	37908. –	4156100.	$2s^22p^5$ –	$2s^22p^4(^1S)3d$	$^2P^o$ –	^2D	$^1/_2$ –	$^3/_2$	F5
	24.484	24.484	10*g*	0. –	4084300.	$2s^22p^5$ –	$2s^22p^4(^1D)3d$	$^2P^o$ –	^2D	$^3/_2$ –	$^3/_2$	F5
	24.560	24.560	20*g*	0. –	4071700.	$2s^22p^5$ –	$2s^22p^4(^1D)3d$	$^2P^o$ –	^2D	$^3/_2$ –	$^5/_2$	F5
	24.648	24.648	7*g*	0. –	4057100.	$2s^22p^5$ –	$2s^22p^4(^1D)3d$	$^2P^o$ –	^2F	$^3/_2$ –	$^5/_2$	F5
	24.666	24.666	9*g*	0. –	4054200.	$2s^22p^5$ –	$2s^22p^4(^1D)3d$	$^2P^o$ –	^2S	$^3/_2$ –	$^1/_2$	F5
	24.715	24.713	12*g*	37908. –	4084300.	$2s^22p^5$ –	$2s^22p^4(^1D)3d$	$^2P^o$ –	^2D	$^1/_2$ –	$^3/_2$	F5
	24.791	24.791	7*g*	37908. –	4071600.	$2s^22p^5$ –	$2s^22p^4(^1D)3d$	$^2P^o$ –	^2P	$^1/_2$ –	$^3/_2$	F5
	24.899	24.899	2*g*	37908. –	4054200.	$2s^22p^5$ –	$2s^22p^4(^1D)3d$	$^2P^o$ –	^2S	$^1/_2$ –	$^1/_2$	F5
	24.970	24.970	10*g*,bl	0. –	4004800.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^2D	$^3/_2$ –	$^5/_2$	F5
	24.998	24.998	2*g*	0. –	4000300.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^2P	$^3/_2$ –	$^3/_2$	F5
	25.079	25.079	5*g*	0. –	3987400.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^2F	$^3/_2$ –	$^5/_2$	F5
	25.099	25.099	6*g*	0. –	3984200.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^2D	$^3/_2$ –	$^3/_2$	F5
	25.133	25.133	8*g*	0. –	3978800.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^4P	$^3/_2$ –	$^5/_2$	F5
	25.163	25.163	1*g*	0. –	3974100.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^2P	$^3/_2$ –	$^1/_2$	F5
	25.200	25.200	12*g*	0. –	3968300.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^4P	$^3/_2$ –	$^3/_2$	F5
		25.237	*g*	37908. –	4000300.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^2P	$^1/_2$ –	$^3/_2$	F5
	25.242	25.242	12*g*	0. –	3961700.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^4P	$^3/_2$ –	$^1/_2$	F5
	25.341	25.340	8*g*	37908. –	3984200.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^2D	$^1/_2$ –	$^3/_2$	F5
	25.402	25.405	4*g*,bl	37908. –	3974100.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^2P	$^1/_2$ –	$^1/_2$	F5
	25.440	25.443	9*g*,bl	37908. –	3968300.	$2s^22p^5$ –	$2s^22p^4(^3P)3d$	$^2P^o$ –	^4P	$^1/_2$ –	$^3/_2$	F5
	26.893	26.893	4*g*	0. –	3718400.	$2s^22p^5$ –	$2s^22p^4(^1S)3s$	$^2P^o$ –	^2S	$^3/_2$ –	$^1/_2$	F5
	27.170	27.170	3*g*	37908. –	3718400.	$2s^22p^5$ –	$2s^22p^4(^1S)3s$	$^2P^o$ –	^2S	$^1/_2$ –	$^1/_2$	F5
	27.628	27.628	12*g*	0. –	3619500.	$2s^22p^5$ –	$2s^22p^4(^1D)3s$	$^2P^o$ –	^2D	$^3/_2$ –	$^5/_2$	F5
	27.911	27.910	10*g*	37908. –	3620800.	$2s^22p^5$ –	$2s^22p^4(^1D)3s$	$^2P^o$ –	^2D	$^1/_2$ –	$^3/_2$	F5
	27.979	27.979	8*g*	0. –	3574100.	$2s^22p^5$ –	$2s^22p^4(^3P)3s$	$^2P^o$ –	^2P	$^3/_2$ –	$^1/_2$	F5
	28.131	28.131	15*g*	0. –	3554800.	$2s^22p^5$ –	$2s^22p^4(^3P)3s$	$^2P^o$ –	^2P	$^3/_2$ –	$^3/_2$	F5
	28.280	28.279	10*g*	37908. –	3574100.	$2s^22p^5$ –	$2s^22p^4(^3P)3s$	$^2P^o$ –	^2P	$^1/_2$ –	$^1/_2$	F5
	28.324	28.324	15*g*	0. –	3530600.	$2s^22p^5$ –	$2s^22p^4(^3P)3s$	$^2P^o$ –	^4P	$^3/_2$ –	$^3/_2$	F5
	28.434	28.434	4*g*	37908. –	3554800.	$2s^22p^5$ –	$2s^22p^4(^3P)3s$	$^2P^o$ –	^2P	$^1/_2$ –	$^3/_2$	F5
	28.463	28.463	4*g*	0. –	3513300.	$2s^22p^5$ –	$2s^22p^4(^3P)3s$	$^2P^o$ –	^4P	$^3/_2$ –	$^5/_2$	F5
	28.497	28.496	3*g*	37908. –	3547200.	$2s^22p^5$ –	$2s^22p^4(^3P)3s$	$^2P^o$ –	^4P	$^1/_2$ –	$^1/_2$	F5
	28.566	28.567	3	763621. –	4264200.	$2s2p^6$ –	$2s2p^5(^3P^o)3s$	^2S –	$^2P^o$	$^1/_2$ –	$^1/_2$	F5
	28.633	28.631	2*g*	37908. –	3530600.	$2s^22p^5$ –	$2s^22p^4(^3P)3s$	$^2P^o$ –	^4P	$^1/_2$ –	$^3/_2$	F5

Sc XIII – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	28.748	28.748	4	763621.	– 4242100.	$2s2p^6$	– $2s2p^5(^3P^\circ)3s$	^2S	– $^2P^\circ$	$^1/_2$	– $^3/_2$	F5
	130.952	130.955	900*g*	0.	– 763621.	$2s^22p^5$	– $2s2p^6$	$^2P^\circ$	– ^2S	$^3/_2$	– $^1/_2$	K4
	137.799	137.796	500*g*	37908.	– 763621.	$2s^22p^5$	– $2s2p^6$	$^2P^\circ$	– ^2S	$^1/_2$	– $^1/_2$	K4
	2637.2	2637.2	M1	0.	– 37908.	$2s^22p^5$	– $2s^22p^5$	$^2P^\circ$	– $^2P^\circ$	$^3/_2$	– $^1/_2$	S5

Sc XIV

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	22.558	22.558	3*g*	0.	– 4433000.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3d$	^3P	– $^3D^\circ$	2	– 3	F6
	22.657	22.656	2*g*	31174.	– 4445000.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3d$	^3P	– $^3D^\circ$	1	– 2	F6
	22.697	22.691	4*g*	0.	– 4407000.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3d$	^3P	– $^3P^\circ$	2	– 2	F6
	22.754	22.745	5*g*,bl	35351.	– 4432000.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3d$	^3P	– $^3D^\circ$	0	– 1	B3
		22.752		97793.	– 4493000.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3d$	^1D	– $^1P^\circ$	2	– 1	B3
		22.754	*g*	31174.	– 4426000.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3d$	^3P	– $^1D^\circ$	1	– 2	B3
	22.810	22.812	*g*	35351.	– 4419000.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3d$	^3P	– $^3P^\circ$	0	– 1	B3
	22.839	22.841	4*g*,bl	0.	– 4378000.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3d$	^3P	– $^3S^\circ$	2	– 1	F6
	22.926	22.925	7*g*	0.	– 4362000.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3d$	^3P	– $^3P^\circ$	2	– 2	B3
	22.957	22.956		97793.	– 4454000.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3d$	^1D	– $^1F^\circ$	2	– 3	B3
	22.968	22.967	8*g*,bl	0.	– 4354000.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3d$	^3P	– $^3D^\circ$	2	– 3	F6
	23.057	23.058	*g*	31174.	– 4368000.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3d$	^3P	– $^3P^\circ$	1	– 1	B3
	23.156	23.154	4*g*	31174.	– 4350000.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3d$	^3P	– $^3D^\circ$	1	– 2	F6
	23.271	23.269	8*g*,bl	35351.	– 4333000.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3d$	^3P	– $^3D^\circ$	0	– 1	F6
		23.271		97793.	– 4395000.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3d$	^1D	– $^1F^\circ$	2	– 3	F6
		23.272		195985.	– 4493000.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3d$	^1S	– $^1P^\circ$	0	– 1	F6
	23.422	23.424	4	97793.	– 4367000.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3d$	^1D	– $^1D^\circ$	2	– 2	F6
	23.536	23.535	7*g*	0.	– 4249000.	$2s^22p^4$	– $2s^22p^3(^4S^\circ)3d$	^3P	– $^3D^\circ$	2	– 3	F6
	23.728	23.731	8*g*,bl	31174.	– 4245000.	$2s^22p^4$	– $2s^22p^3(^4S^\circ)3d$	^3P	– $^3D^\circ$	1	– 2	F6
	24.970	24.971	10*g*,bl	0.	– 4004600.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3s$	^3P	– $^3P^\circ$	2	– 2	G2
	25.392	25.392	7*g*	0.	– 3938200.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3s$	^3P	– $^3D^\circ$	2	– 3	D1
	25.402	25.406	4bl	97793.	– 4033900.	$2s^22p^4$	– $2s^22p^3(^2P^\circ)3s$	^1D	– $^1P^\circ$	2	– 1	D1
	25.440	25.440	9*g*,bl	0.	– 3930800.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3s$	^3P	– $^3D^\circ$	2	– 2	D1
	25.644	25.643	3*g*	31174.	– 3930800.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3s$	^3P	– $^3D^\circ$	1	– 2	D1
	25.680	25.680	2*g*	35351.	– 3929400.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3s$	^3P	– $^3D^\circ$	0	– 1	D1
	25.921	25.921	6	97793.	– 3955700.	$2s^22p^4$	– $2s^22p^3(^2D^\circ)3s$	^1D	– $^1D^\circ$	2	– 2	D1
	25.985	25.984	6*g*	0.	– 3848500.	$2s^22p^4$	– $2s^22p^1(^4S^\circ)3s$	^1P	– $^1S^\circ$	2	– 1	D1
	26.056	26.056	3	195985.	– 4033900.	$2s^22p^4$	– $2s^22p^1(^2P^\circ)3s$	^1S	– $^1P^\circ$	0	– 1	D1
	26.197	26.196	3*g*	31174.	– 3848500.	$2s^22p^4$	– $2s^22p^1(^4S^\circ)3s$	^1P	– $^1S^\circ$	1	– 1	D1
	26.224	26.225	2*g*	35351.	– 3848500.	$2s^22p^4$	– $2s^22p^1(^4S^\circ)3s$	^1P	– $^1S^\circ$	0	– 1	D1
	109.528	109.530	200*g*	0.	– 912990.	$2s^22p^4$	– $2s2p^5$	^1P	– $^1P^\circ$	2	– 1	K4
	113.927	113.942	25*g*,bl	35351.	– 912990.	$2s^22p^4$	– $2s2p^5$	^3P	– $^1P^\circ$	0	– 1	K4
	122.671	122.670	5000	97793.	– 912990.	$2s^22p^4$	– $2s2p^5$	^1D	– $^1P^\circ$	2	– 1	K4
	139.469	139.469	400	195985.	– 912990.	$2s^22p^4$	– $2s2p^5$	^1S	– $^1P^\circ$	0	– 1	K4
	145.047	145.044	2000*g*	0.	– 689445.	$2s^22p^4$	– $2s2p^5$	^3P	– $^3P^\circ$	2	– 1	K4
	148.498	148.498	600*g*	31174.	– 704584.	$2s^22p^4$	– $2s2p^5$	^3P	– $^3P^\circ$	1	– 0	K4

Sc XIV – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	150.490	150.493	5000*g*	0. –	664483.	$2s^22p^4$ –	$2s2p^5$	^3P –	$^3P^\circ$	2 –	2	K4
	151.910	151.913	1000*g*,bl	31174. –	689445.	$2s^22p^4$ –	$2s2p^5$	^3P –	$^3P^\circ$	1 –	1	K4
	152.880	152.883	2000*g*	35351. –	689445.	$2s^22p^4$ –	$2s2p^5$	^3P –	$^3P^\circ$	0 –	1	K4
	157.820	157.821	500	912990. –	1546620.	$2s2p^5$ –	$2p^6$	$^1P^\circ$ –	^1S	1 –	0	K4
	157.904	157.901	1500*g*	31174. –	664483.	$2s^22p^4$ –	$2s2p^5$	^3P –	$^3P^\circ$	1 –	2	K4
	176.455	176.463	30	97793. –	664483.	$2s^22p^4$ –	$2s2p^5$	^1D –	$^3P^\circ$	2 –	2	K4
	606.5	606.76	M1	31174. –	195985.	$2s^22p^4$ –	$2s^22p^4$	^3P –	^1S	1 –	0	H2
	3206.1	3206.9	M1	0. –	31174.	$2s^22p^4$ –	$2s^22p^4$	^3P –	^3P	2 –	1	S5

Sc XV

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	21.26	21.262		184840. –	4888000.	$2s^22p^3$ –	$2s^22p^2(^1S)3d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B4
	21.372	21.370	8bl	200450. –	4880000.	$2s^22p^3$ –	$2s^22p^2(^1S)3d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B4
		21.372	*g*	0. –	4679000.	$2s^22p^3$ –	$2s^22p^2(^3P)3d$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^3/_2$	F6
	21.405	21.405	8*g*	0. –	4671800.	$2s^22p^3$ –	$2s^22p^2(^3P)3d$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^5/_2$	F6
	21.426	21.426	4bl	111200. –	4778400.	$2s^22p^3$ –	$2s^22p^2(^1D)3d$	$^2D^\circ$ –	^2F	$^3/_2$ –	$^5/_2$	F6
		21.426		121960. –	4789200.	$2s^22p^3$ –	$2s^22p^2(^1D)3d$	$^2D^\circ$ –	^2P	$^5/_2$ –	$^3/_2$	F6
	21.49	21.476	5*d*	121960. –	4778400.	$2s^22p^3$ –	$2s^22p^2(^1D)3d$	$^2D^\circ$ –	^2F	$^5/_2$ –	$^5/_2$	F6
	21.521	21.520	8	111200. –	4758000.	$2s^22p^3$ –	$2s^22p^2(^1D)3d$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	F6
		21.521		121960. –	4768600.	$2s^22p^3$ –	$2s^22p^2(^1D)3d$	$^2D^\circ$ –	^2F	$^5/_2$ –	$^7/_2$	F6
	21.57	21.570		121960. –	4758000.	$2s^22p^3$ –	$2s^22p^2(^1D)3d$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	B4
	21.705	21.698	1	111200. –	4720000.	$2s^22p^3$ –	$2s^22p^2(^3P)3d$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	F6
	21.78	21.792		200450. –	4789200.	$2s^22p^3$ –	$2s^22p^2(1P)3d$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	B4
	21.926	21.924	4bl	121960. –	4683200.	$2s^22p^3$ –	$2s^22p^2(^3P)3d$	$^2D^\circ$ –	^2F	$^5/_2$ –	$^7/_2$	F6
	22.05	22.050		184840. –	4720000.	$2s^22p^3$ –	$2s^22p^2(^3P)3d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B4
	22.061	22.061	4	200450. –	4733300.	$2s^22p^3$ –	$2s^22p^2(^3P)3d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	F6
	22.544	22.544	3	200450. –	4636200.	$2s^22p^3$ –	$2s^22p^2(^3P)3d$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	F6
	109.084	109.085	50*g*	0. –	916720.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^4S^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	K5
	118.980	118.982	500	111200. –	951660.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^2D^\circ$ –	^2P	$^3/_2$ –	$^1/_2$	K5
	124.140	124.143	2000	111200. –	916720.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^2D^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	K5
	125.817	125.824	6000	121960. –	916720.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^2D^\circ$ –	^2P	$^5/_2$ –	$^3/_2$	K5
	129.751	129.754	500	111200. –	881890.	$2s^22p^3$ –	$2s(^2S)2p^4(^1S)$	$^2D^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	K5
	130.409	130.409	50	184840. –	951660.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^1/_2$	K5
	133.118	133.119	2000	200450. –	951660.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^1/_2$	K5
	136.638	136.634	200	184840. –	916720.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^3/_2$	K5
	138.715	138.708	150	761250. –	1482190.	$2s(^2S)2p^4(^1D)$ –	$2p^5$	^2D –	$^2P^\circ$	$^3/_2$ –	$^1/_2$	K5
	139.615	139.612	500	200450. –	916720.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	K5
	143.465	143.462	500	184840. –	881890.	$2s^22p^3$ –	$2s(^2S)2p^4(^1S)$	$^2P^\circ$ –	^2S	$^1/_2$ –	$^1/_2$	K5
	146.754	146.748	80	200450. –	881890.	$2s^22p^3$ –	$2s(^2S)2p^4(^1S)$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	K5
	146.966	146.959	150	761250. –	1441710.	$2s(^2S)2p^4(^1D)$ –	$2p^5$	^2D –	$^2P^\circ$	$^3/_2$ –	$^3/_2$	K5
	147.558	147.554	200	763990. –	1441710.	$2s(^2S)2p^4(^1D)$ –	$2p^5$	^2D –	$^2P^\circ$	$^5/_2$ –	$^3/_2$	K5
	153.197	153.189	6	111200. –	763990.	$2s^22p^3$ –	$2s(^2S)2p^4(^1D)$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	K5
	153.843	153.834	3000	111200. –	761250.	$2s^22p^3$ –	$2s(^2S)2p^4(^1D)$	$^2D^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	K5
	155.765	155.756	4000	121960. –	763990.	$2s^22p^3$ –	$2s(^2S)2p^4(^1D)$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^5/_2$	K5
	156.436	156.424	6	121960. –	761250.	$2s^22p^3$ –	$2s(^2S)2p^4(^1D)$	$^2D^\circ$ –	^2D	$^5/_2$ –	$^3/_2$	K5
	169.964	169.964	300*g*	0. –	588360.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^1/_2$	K5
	173.245	173.244	600*g*	0. –	577220.	$2s^22p^3$ –	$2s(^2S)2p^4(^3P)$	$^4S^\circ$ –	^4P	$^3/_2$ –	$^3/_2$	K5

Sc XV – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	173.481	173.488	50	184840.	761250.	$2s^22p^3$	$2s(^2S)2p^4(^1D)$	$^2P^\circ$	^2D	1/2	3/2	K5
	176.834	176.844	50	916720.	1482190.	$2s(^2S)2p^4(^3P)$	$2p^5$	^2P	$^2P^\circ$	3/2	1/2	K5
	177.436	177.450	200	200450.	763990.	$2s^22p^3$	$2s(^2S)2p^4(^1D)$	$^2P^\circ$	^2D	3/2	5/2	K5
	178.631	178.629	20	881890.	1441710.	$2s(^2S)2p^4(^1S)$	$2p^5$	^2S	$^2P^\circ$	1/2	3/2	K5
	181.165	181.166	1200g	0.	551980.	$2s^22p^3$	$2s(^2S)2p^4(^3P)$	$^4S^\circ$	^4P	3/2	5/2	K5
	188.476	188.491	60	951660.	1482190.	$2s(^2S)2p^4(^3P)$	$2p^5$	^2P	$^2P^\circ$	1/2	1/2	K5
	190.479	190.480	200	916720.	1441710.	$2s(^2S)2p^4(^3P)$	$2p^5$	^2P	$^2P^\circ$	3/2	3/2	K5
	204.038	204.061	4	951660.	1441710.	$2s(^2S)2p^4(^3P)$	$2p^5$	^2P	$^2P^\circ$	1/2	3/2	K5
	899.8	899.3	M1	0.	111200.	$2s^22p^3$	$2s^22p^3$	$^4S^\circ$	$^2D^\circ$	3/2	3/2	H2

Sc XVI

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	20.149	20.149	g	22959.	4986000.	$2s^22p^2$	$2s^22p3d$	^3P	$^3P^\circ$	1	1	B5
	20.224	20.218	1g	0.	4946000.	$2s^22p^2$	$2s^22p3d$	^3P	$^3D^\circ$	0	1	G3
	20.251	20.251	g,bl	45026.	4983000.	$2s^22p^2$	$2s^22p3d$	^3P	$^3P^\circ$	2	2	B5
		20.255		22959.	4960000.	$2s^22p^2$	$2s^22p3d$	^3P	$^3D^\circ$	1	2	B5
	20.284	20.284	g	45026.	4975000.	$2s^22p^2$	$2s^22p3d$	^3P	$^3D^\circ$	2	3	B5
	20.331	20.313	g	22959.	4946000.	$2s^22p^2$	$2s^22p3d$	^3P	$^3D^\circ$	1	1	B5
		20.346	g	45026.	4960000.	$2s^22p^2$	$2s^22p3d$	^3P	$^3D^\circ$	2	2	B5
	20.390	20.385		123360.	5029000.	$2s^22p^2$	$2s^22p3d$	^1D	$^1P^\circ$	2	1	B5
		20.389		123360.	5028000.	$2s^22p^2$	$2s^22p3d$	^1D	$^1F^\circ$	2	3	B5
	20.458	20.458	4	542030.	5430000.	$2s(^2S)2p^3(^2D^\circ)$	$2s2p^2(^2D)3d$	$^3D^\circ$	^3F	3	4	G3
	20.597	20.597	g	45026.	4900000.	$2s^22p^2$	$2s^22p3d$	^3P	$^3F^\circ$	2	2	B5
	20.787	20.789		218720.	5029000.	$2s^22p^2$	$2s^22p3d$	^1S	$^1P^\circ$	0	1	B5
	21.114	21.113	1	536610.	5273000.	$2s(^2S)2p^3(^2D^\circ)$	$2s2p^2(^4P)3d$	$^3D^\circ$	^3F	2	3	G3
	21.637	21.631	2g	22959.	4646000.	$2s^22p^2$	$2s^22p3s$	^3P	$^3P^\circ$	1	2	G3
	21.670	21.655	3g	45026.	4663000.	$2s^22p^2$	$2s^22p3s$	^3P	$^1P^\circ$	2	1	G3
	21.732	21.735	4g,bl	45026.	4646000.	$2s^22p^2$	$2s^22p3s$	^3P	$^3P^\circ$	2	2	G3
	21.816	21.818	2g	536610.	5120000.	$2s(^2S)2p^3(^2D^\circ)$	$2s2p^2(^2D)3s$	$^3D^\circ$	^3D	2	2	G3
		21.820		22959.	4606000.	$2s^22p^2$	$2s^22p3s$	^3P	$^3P^\circ$	1	1	G3
	21.926	21.925	4g,bl	45026.	4606000.	$2s^22p^2$	$2s^22p3s$	^1P	$^1P^\circ$	2	1	G3
	22.016	22.028	1	123360.	4663000.	$2s^22p^2$	$2s^22p3s$	^1D	$^1P^\circ$	2	1	G3
	22.522	22.501	1	218720.	4663000.	$2s^22p^2$	$2s^22p3s$	^1S	$^1P^\circ$	0	1	G3
	117.090	117.090	15g	22959.	877000.	$2s^22p^2$	$2s(^2S)2p^1(^2P^\circ)$	^3P	$^1P^\circ$	1	1	S6
	127.813	127.818	300g	0.	782360.	$2s^22p^2$	$2s(^2S)2p^1(^4S^\circ)$	^3P	$^3S^\circ$	0	1	S6
	131.684	131.683	1000g	22959.	782360.	$2s^22p^2$	$2s(^2S)2p^1(^4S^\circ)$	^1P	$^3S^\circ$	1	1	S6
	132.688	132.689	2000	123360.	877000.	$2s^22p^2$	$2s(^2S)2p^1(^2P^\circ)$	^1D	$^1P^\circ$	2	1	S6
	134.503	134.508	15	542030.	1285480.	$2s(^2S)2p^1(^2D^\circ)$	$2p^4$	$^3D^\circ$	^1D	3	2	S6
	135.004	135.005	60g	45026.	785740.	$2s^22p^2$	$2s(^2S)2p^1(^2D^\circ)$	^3P	$^1D^\circ$	2	2	S6
	135.631	135.624	3000g	45026.	782360.	$2s^22p^2$	$2s(^2S)2p^1(^4S^\circ)$	^3P	$^3S^\circ$	2	1	S6
	144.913	144.919	150	537720.	1227760.	$2s(^2S)2p^3(^2D^\circ)$	$2p^4$	$^3D^\circ$	^3P	1	0	S6
	146.052	146.051	500	536610.	1221300.	$2s(^2S)2p^3(^2D^\circ)$	$2p^4$	$^3D^\circ$	^3P	2	1	S6

Sc XVI – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	146.286	146.289	200	537720. –	1221300.	$2s(^2S)2p^3(^2D^\circ)$ –	$2p^4$	$^3D^\circ$ –	^3P	1 –	1	S6
	150.973	150.971	3000	123360. –	785740.	$2s^22p^2$ –	$2s(^2S)2p^3(^2D^\circ)$	^1D –	$^1D^\circ$	2 –	2	S6
	151.910	151.911	1000bl	218720. –	877000.	$2s^22p^2$ –	$2s(^2S)2p^3(^2P^\circ)$	^1S –	$^1P^\circ$	0 –	1	S6
	153.564	153.558	200	536610. –	1187830.	$2s(^2S)2p^3(^2D^\circ)$ –	$2p^4$	$^3D^\circ$ –	^3P	2 –	2	S6
	154.849	154.847	500	542030. –	1187830.	$2s(^2S)2p^3(^2D^\circ)$ –	$2p^4$	$^3D^\circ$ –	^3P	3 –	2	S6
	158.671	158.667	60g	0. –	630250.	$2s^22p^2$ –	$2s(^2S)2p^3(^4P^\circ)$	^3P –	$^3P^\circ$	0 –	1	S6
	163.541	163.540	20g	22959. –	634430.	$2s^22p^2$ –	$2s(^2S)2p^3(^2P^\circ)$	^3P –	$^3P^\circ$	1 –	2	S6
	164.665	164.666	300g	22959. –	630250.	$2s^22p^2$ –	$2s(^2S)2p^3(^2P^\circ)$	^3P –	$^3P^\circ$	1 –	1	S6
	165.113	165.114	200g	22959. –	628600.	$2s^22p^2$ –	$2s(^2S)2p^3(^2P^\circ)$	^3P –	$^3P^\circ$	1 –	0	S6
	167.369	167.361	15	630250. –	1227760.	$2s(^2S)2p^3(^2P^\circ)$ –	$2p^4$	$^3P^\circ$ –	^3P	1 –	0	S6
	169.664	169.663	400g	45026. –	634430.	$2s^22p^2$ –	$2s(^2S)2p^3(^2P^\circ)$	^3P –	$^3P^\circ$	2 –	2	S6
	170.400	170.395	30	634430. –	1221300.	$2s(^2S)2p^3(^2P^\circ)$ –	$2p^4$	$^3P^\circ$ –	^3P	2 –	1	S6
	170.867	170.875	40g	45026. –	630250.	$2s^22p^2$ –	$2s(^2S)2p^3(^2P^\circ)$	^3P –	$^3P^\circ$	2 –	1	S6
	174.111	174.110	50	877000. –	1451350.	$2s(^2S)2p^3(^2P^\circ)$ –	$2p^4$	$^1P^\circ$ –	^1S	1 –	0	S6
	179.343	179.346	20	630250. –	1187830.	$2s(^2S)2p^3(^2P^\circ)$ –	$2p^4$	$^3P^\circ$ –	^3P	1 –	2	S6
	180.687	180.701	800bl	634430. –	1187830.	$2s(^2S)2p^3(^2P^\circ)$ –	$2p^4$	$^3P^\circ$ –	^3P	2 –	2	S6
	185.972	185.970	200g	0. –	537720.	$2s^22p^2$ –	$2s(^2S)2p^3(^2D^\circ)$	^3P –	$^3D^\circ$	0 –	1	S6
	194.263	194.265	20g	22959. –	537720.	$2s^22p^2$ –	$2s(^2S)2p^3(^2D^\circ)$	^3P –	$^3D^\circ$	1 –	1	S6
	194.685	194.685	600g	22959. –	536610.	$2s^22p^2$ –	$2s(^2S)2p^3(^2D^\circ)$	^3P –	$^3D^\circ$	1 –	2	S6
	200.115	200.104	400	785740. –	1285480.	$2s(^2S)2p^3(^2D^\circ)$ –	$2p^4$	$^1D^\circ$ –	^1D	2 –	2	S6
	201.205	201.206	700g	45026. –	542030.	$2s^22p^2$ –	$2s(^2S)2p^3(^2D^\circ)$	^3P –	$^3D^\circ$	2 –	3	S6
	203.447	203.424	30g,bl	45026. –	536610.	$2s^22p^2$ –	$2s(^2S)2p^3(^2D^\circ)$	^3P –	$^3D^\circ$	2 –	2	S6
	511.2	510.83	M1	22959. –	218720.	$2s^22p^2$ –	$2s^22p^2$	^3P –	^1S	1 –	0	H2
	4354.3	4354.4	M1	0. –	22959.	$2s^22p^2$ –	$2s^22p^2$	^3P –	^3P	0 –	1	S5
	4530.3	4530.4	M1	22959. –	45026.	$2s^22p^2$ –	$2s^22p^2$	^3P –	^3P	1 –	2	S5

Sc XVII

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	18.412	18.413	1g	0. –	5431000.	$2s^22p$ –	$2s2p(^3P^\circ)3p$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	F6
	18.48	18.480	2g,bl	45637. –	5457000.	$2s^22p$ –	$2s2p(^3P^\circ)3p$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	F6
	18.78	18.779	1g	0. –	5325000.	$2s^22p$ –	$2s2p(^3P^\circ)3p$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^1/_2$	F6
	18.83	18.831	1g	45637. –	5356000.	$2s^22p$ –	$2s2p(^3P^\circ)3p$	$^2P^\circ$ –	^2P	$^3/_2$ –	$^3/_2$	F6
	19.069	19.068	6	520630. –	5765000.	$2s2p^2$ –	$2s2p(^1P^\circ)3d$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	F6
	19.16	19.161	7g,bl	0. –	5219000.	$2s^22p$ –	$2s^23d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	F6
	19.22	19.221	6bl	329320. –	5532000.	$2s2p^2$ –	$2s2p(^3P^\circ)3d$	^4P –	$^4P^\circ$	$^5/_2$ –	$^5/_2$	F6
		19.221		329320. –	5532000.	$2s2p^2$ –	$2s2p(^3P^\circ)3d$	^4P –	$^4D^\circ$	$^5/_2$ –	$^7/_2$	F6
	19.311	19.311	9g	45637. –	5224000.	$2s^22p$ –	$2s^23d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	F6
	19.598	19.600	5	694950. –	5797000.	$2s2p^2$ –	$2s2p(^1P^\circ)3d$	^2P –	$^2D^\circ$	$^3/_2$ –	$^5/_2$	F6
	19.651	19.653	5	520630. –	5609000.	$2s2p^2$ –	$2s2p(^3P^\circ)3d$	^2D –	$^2F^\circ$	$^5/_2$ –	$^7/_2$	F6
	19.732	19.730	3	516640. –	5585000.	$2s2p^2$ –	$2s2p(^3P^\circ)3d$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	F6
	19.967	19.967	3	520630. –	5529000.	$2s2p^2$ –	$2s2p(^3P^\circ)3d$	^2D –	$^2D^\circ$	$^5/_2$ –	$^5/_2$	F6
	142.617	142.570	1	306680. –	1008090.	$2s2p^2$ –	$2p^3$	^4P –	$^2D^\circ$	$^3/_2$ –	$^3/_2$	S7
	143.888	143.895	250g	0. –	694950.	$2s^22p$ –	$2s2p^2$	$^2P^\circ$ –	^2P	$^1/_2$ –	$^3/_2$	S7

Sc XVII – Continued

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	145.836	145.787	1	329320.	1015250.	$2s2p^2$	$2p^3$	^4P	$^2D^\circ$	$^5/_2$	$^5/_2$	S7
	146.574	146.580	100*g*	0.	682220.	$2s^22p$	$2s2p^2$	$^2P^\circ$	^2P	$^1/_2$	$^1/_2$	S7
	154.018	154.009	3000*g*	45637.	694950.	$2s^22p$	$2s2p^2$	$^2P^\circ$	^2P	$^3/_2$	$^3/_2$	S7
	157.095	157.089	900*g*	45637.	682220.	$2s^22p$	$2s2p^2$	$^2P^\circ$	^2P	$^3/_2$	$^1/_2$	S7
	158.136	158.135	1000*g*	0.	632370.	$2s^22p$	$2s2p^2$	$^2P^\circ$	^2S	$^1/_2$	$^1/_2$	S7
	159.768	159.770	20	516640.	1142540.	$2s2p^2$	$2p^3$	^2D	$^2P^\circ$	$^3/_2$	$^3/_2$	S7
	160.777	160.795	80	520630.	1142540.	$2s2p^2$	$2p^3$	^2D	$^2P^\circ$	$^5/_2$	$^3/_2$	S7
	164.293	164.347	100bl	288400.	896870.	$2s2p^2$	$2p^3$	^4P	$^4S^\circ$	$^1/_2$	$^3/_2$	S7
	169.451	169.437	90	306680.	896870.	$2s2p^2$	$2p^3$	^4P	$^4S^\circ$	$^3/_2$	$^3/_2$	S7
	176.181	176.196	400	329320.	896870.	$2s2p^2$	$2p^3$	^4P	$^4S^\circ$	$^5/_2$	$^3/_2$	S7
	193.558	193.558	400*g*	0.	516640.	$2s^22p$	$2s2p^2$	$^2P^\circ$	^2D	$^1/_2$	$^3/_2$	S7
	196.010	196.013	20	632370.	1142540.	$2s2p^2$	$2p^3$	^2S	$^2P^\circ$	$^1/_2$	$^3/_2$	S7
	200.559	200.558	10	516640.	1015250.	$2s2p^2$	$2p^3$	^2D	$^2D^\circ$	$^3/_2$	$^5/_2$	S7
	202.172	202.175	150	520630.	1015250.	$2s2p^2$	$2p^3$	^2D	$^2D^\circ$	$^5/_2$	$^5/_2$	S7
	203.467	203.479	60	516640.	1008090.	$2s2p^2$	$2p^3$	^2D	$^2D^\circ$	$^3/_2$	$^3/_2$	S7
	205.154	205.145	1	520630.	1008090.	$2s2p^2$	$2p^3$	^2D	$^2D^\circ$	$^5/_2$	$^3/_2$	S7
	210.531	210.529	500*g*	45637.	520630.	$2s^22p$	$2s2p^2$	$^2P^\circ$	^2D	$^3/_2$	$^5/_2$	S7
	223.424	223.419	50	694950.	1142540.	$2s2p^2$	$2p^3$	^2P	$^2P^\circ$	$^3/_2$	$^3/_2$	S7
	223.821	223.804	20	682220.	1129040.	$2s2p^2$	$2p^3$	^2P	$^2P^\circ$	$^1/_2$	$^1/_2$	S7
	230.357	230.367	1	694950.	1129040.	$2s2p^2$	$2p^3$	^2P	$^2P^\circ$	$^3/_2$	$^1/_2$	S7
	352.5	352.51	*g*	45637.	329320.	$2s^22p$	$2s2p^2$	$^2P^\circ$	^4P	$^3/_2$	$^5/_2$	D2
	2190.5	2190.5	M1	0.	45637.	$2s^22p$	$2s^22p$	$^2P^\circ$	$^2P^\circ$	$^1/_2$	$^3/_2$	S5

Sc XVIII

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	17.443	17.444	2*g*	321240.	6054000.	$2s2p$	$2p3p$	$^3P^\circ$	^3D	2	3	F6
	17.570	17.569	1bl	0.	5692000.	$2s^2$	$2s3p$	^1S	$^1P^\circ$	0	1	F6
	18.213	18.214	3*g*	286860.	5777000.	$2s2p$	$2s3d$	$^3P^\circ$	^3D	1	2	F6
	18.337	18.336	4*g*	321240.	5775000.	$2s2p$	$2s3d$	$^3P^\circ$	^3D	2	3	F6
	18.581	18.582	2	778400.	6160000.	$2p^2$	$2p3d$	^1P	$^1D^\circ$	2	3	F6
	18.649	18.650	3	856160.	6218000.	$2p^2$	$2p3d$	^1D	$^1F^\circ$	2	3	F6
	180.687	180.688	800bl	0.	553440.	$2s^2$	$2s2p$	^1S	$^1P^\circ$	0	1	K6
	186.944	186.944	2*g*	321240.	856160.	$2s2p$	$2p^2$	$^1P^\circ$	^1D	2	2	K6
	203.447	203.442	30*g*,bl	286860.	778400.	$2s2p$	$2p^2$	$^1P^\circ$	^1P	1	2	K6
	207.614	207.615	30*g*	273200.	754860.	$2s2p$	$2p^2$	$^1P^\circ$	^1P	0	1	K6
	207.981	207.982	20	553440.	1034250.	$2s2p$	$2p^2$	$^1P^\circ$	^1S	1	0	K6
	213.670	213.675	15*g*	286860.	754860.	$2s2p$	$2p^2$	$^1P^\circ$	^3P	1	1	K6
	218.737	218.742	60*g*	321240.	778400.	$2s2p$	$2p^2$	$^1P^\circ$	^3P	2	2	K6
	224.612	224.613	6*g*	286860.	732070.	$2s2p$	$2p^2$	$^3P^\circ$	^3P	1	0	K6
	230.622	230.617	6*g*	321240.	754860.	$2s2p$	$2p^2$	$^3P^\circ$	^3P	2	1	K6
	348.6	348.60		0.	286860.	$2s^2$	$2s2p$	^1S	$^3P^\circ$	0	1	D2
	2907.9	2907.8	M1	286860.	321240.	$2s2p$	$2s2p$	$^3P^\circ$	$^3P^\circ$	1	2	S8

Sc XIX

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
	2.8827	2.8831		357400. –	35047000.	$1s^22p$ –	$1s2p^2$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	B6
	2.8848	2.8848	g,bl	0. –	34664000.	$1s^22s$ –	$1s(^2S)2s2p(^1P^\circ)$	^{S} –	$^2P^\circ$	$^1/_2$ –		B6
	2.8964	2.8941		306700. –	34860000.	$1s^22p$ –	$1s2p^2$	$^2P^\circ$ –	^2P	$^1/_2$ –		B6
		2.8958		306700. –	34840000.	$1s^22p$ –	$1s2p^2$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B6
	2.8999	2.9000		357400. –	34840000.	$1s^22p$ –	$1s2p^2$	$^2P^\circ$ –	^2D	$^3/_2$ –		B6
		2.9000		357400. –	34840000.	$1s^22p$ –	$1s2p^2$	$^2P^\circ$ –	^2P	$^3/_2$ –		B6
	10.443	10.443	g	0. –	9576000.	$1s^22s$ –	$1s^27p$	^2S –	$^2P^\circ$	$^1/_2$ –		B6
	10.576	10.574		306700. –	9764000.	$1s^22p$ –	$1s^28d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B6
	10.628	10.631		357400. –	9764000.	$1s^22p$ –	$1s^28d$	$^2P^\circ$ –	^2D	$^3/_2$ –		B6
	10.785	10.785	g	0. –	9272000.	$1s^22s$ –	$1s^26p$	^2S –	$^2P^\circ$	$^1/_2$ –		B6
		10.786		306700. –	9578000.	$1s^22p$ –	$1s^27d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B6
	10.846	10.845		357400. –	9578000.	$1s^22p$ –	$1s^27d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	B6
	11.204	11.204		357400. –	9283000.	$1s^22p$ –	$1s^26d$	$^2P^\circ$ –	^2D	$^3/_2$ –		B6
	11.377	11.377	g	0. –	8790000.	$1s^22s$ –	$1s^25p$	^2S –	$^2P^\circ$	$^1/_2$ –		B6
	11.777	11.774		306700. –	8800000.	$1s^22p$ –	$1s^25d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	B6
	11.845	11.845		357400. –	8800000.	$1s^22p$ –	$1s^25d$	$^2P^\circ$ –	^2D	$^3/_2$ –		B6
	12.674	12.674	g	0. –	7890000.	$1s^22s$ –	$1s^24p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^1/_2$	B6
	13.160	13.154	0	306700. –	7909000.	$1s^22p$ –	$1s^24d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	G4
	13.236	13.240	1	357400. –	7910000.	$1s^22p$ –	$1s^24d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	G4
		13.242		357400. –	7909000.	$1s^22p$ –	$1s^24d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	G4
	16.819	16.818	2g	0. –	5946000.	$1s^22s$ –	$1s^23p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^3/_2$	G4
	16.861	16.861	2g	0. –	5931000.	$1s^22s$ –	$1s^23p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^1/_2$	G4
	17.634	17.633	2	306700. –	5978000.	$1s^22p$ –	$1s^23d$	$^2P^\circ$ –	^2D	$^1/_2$ –	$^3/_2$	G4
	17.779	17.779	3	357400. –	5982000.	$1s^22p$ –	$1s^23d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^5/_2$	G4
		17.792		357400. –	5978000.	$1s^22p$ –	$1s^23d$	$^2P^\circ$ –	^2D	$^3/_2$ –	$^3/_2$	G4
	18.026	18.020		306700. –	5856000.	$1s^22p$ –	$1s^23s$	$^2P^\circ$ –	^2S	$^1/_2$ –	$^1/_2$	G4
	18.182	18.186		357400. –	5856000.	$1s^22p$ –	$1s^23s$	$^2P^\circ$ –	^2S	$^3/_2$ –	$^1/_2$	G4
	51.75	51.76		5978000. –	7910000.	$1s^23d$ –	$1s^24f$	^2D –	$^2F^\circ$	$^3/_2$ –	$^5/_2$	F8
	51.85	51.87		5982000. –	7910000.	$1s^23d$ –	$1s^24f$	^2D –	$^2F^\circ$	$^5/_2$ –		F8
	279.75	279.80	g	0. –	357400.	$1s^22s$ –	$1s^22p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^3/_2$	F7
	326.0	326.05	g	0. –	306700.	$1s^22s$ –	$1s^22p$	^2S –	$^2P^\circ$	$^1/_2$ –	$^1/_2$	S5

Sc XX

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
		2.2720	g	0. –	44013600.	$1s^2$ –	$1s5p$	^1S –	$^1P^\circ$	0 –	1	V2
		2.3242	g	0. –	43025100.	$1s^2$ –	$1s4p$	^1S –	$^1P^\circ$	0 –	1	V2
		2.4456	g	0. –	40890075.	$1s^2$ –	$1s3p$	^1S –	$^1P^\circ$	0 –	1	D3
	2.8717	2.8731	g	0. –	34806057.	$1s^2$ –	$1s2p$	^1S –	$^1P^\circ$	0 –	1	D3
	2.8848	2.8870	g,bl	0. –	34638377.	$1s^2$ –	$1s2p$	^1S –	$^3P^\circ$	0 –	1	D3

Sc XXI

Mult. No.	Wavelength (Å) Observed	Calculated	Relative intensity	Levels (cm^{-1}) Lower	Upper	Configurations Lower	Upper	Terms Lower	Upper	J values Lower	Upper	Ref.
		2.1401	*g*	0. –	46726587.	$1s - 5p$		$^2S - ^2P^\circ$		$^1/_2 - ^3/_2$		E5
		2.1403	*g*	0. –	46721966.	$1s - 5p$		$^2S - ^2P^\circ$		$^1/_2 - ^1/_2$		E5
		2.1913	*g*	0. –	45635363.	$1s - 4p$		$^2S - ^2P^\circ$		$^1/_2 - ^3/_2$		E5
		2.1917	*g*	0. –	45626334.	$1s - 4p$		$^2S - ^2P^\circ$		$^1/_2 - ^1/_2$		E5
		2.3106	*g*	0. –	43277925.	$1s - 3p$		$^2S - ^2P^\circ$		$^1/_2 - ^3/_2$		E5
		2.3118	*g*	0. –	43256511.	$1s - 3p$		$^2S - ^2P^\circ$		$^1/_2 - ^1/_2$		E5
		2.7360	*g*	0. –	36549404.	$1s - 2p$		$^2S - ^2P^\circ$		$^1/_2 - ^3/_2$		M1
		2.7414	*g*	0. –	36477160.	$1s - 2p$		$^2S - ^2P^\circ$		$^1/_2 - ^1/_2$		M1

5. Finding List for Sc I through Sc III

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
557.995	1g	III	1358.246	2	II	1558.13	g,a	I	1675.245	1	II
558.608	1g	III	1359.439	1	II	1558.62	g,a	I	1676.828	0	II
582.114	2g	III	1359.688	2	II	1558.99	g,a	I	1678.863	1	II
582.784	3g	III	1360.221	1	II	1560.00	g,a	I	1679.824	5	III
589.320	1g	III	1361.345	1	II	1560.39	g,a	I	1681.105	7	III
589.487	2g	III	1366.591	0	II	1562.67	g,a	I	1691.344	2	II
590.006	3g	III	1368.927	2	II	1564.488	0	II	1691.647	0	II
627.069	7g	III	1369.647	2	II	1564.52	g,a	I	1694.770	0	II
627.846	8g	III	1373.020	1	II	1565.118	2	II	1697.514	1	II
642.766	1g	III	1397.505	3	II	1565.47	g,a	I	1706.780	0	II
643.133	2g	III	1403.645	1	II	1565.490	0	II	1736.083	g,a	I
643.597	2g	III	1406.615	0	II	1565.952	0	II	1736.404	3	II
693.724	3	III	1409.802	0	II	1566.161	2	II	1736.661	g,a	I
693.969	1	III	1411.472	1	II	1566.75	g,a	I	1736.811	g,a	I
730.599	10g	III	1412.487	1	II	1567.126	0	II	1737.514	2	II
731.654	15g	III	1412.669	0	II	1567.460	2	II	1739.01	g,a	I
769.019	1	III	1413.436	3	II	1568.427	5	II	1739.786	g,a	I
769.524	1	III	1413.868	2	II	1569.13	g,a	I	1739.992	a	I
779.538	4g	III	1414.879	3	II	1569.61	g,a	I	1740.515	g,a	I
780.596	6g	III	1415.050	2	II	1572.842	6	II	1741.178	g,a	I
780.729	8g	III	1415.968	4	II	1572.901	6	II	1741.391	g,a	I
961.052	2	III	1416.698	3	II	1573.28	g,a	I	1741.749	g,a	I
965.448	4	III	1416.968	4	II	1573.283	5	II	1741.892	g,a	I
966.293	3	III	1417.028	4	II	1573.579	2	II	1742.408	g,a	I
970.637	4	III	1417.139	0	II	1573.98	g,a	I	1742.690	2d	III
973.295	8	III	1418.301	5	II	1574.152	1	II	1744.12	g,a	I
974.965	6	III	1418.322	5	II	1574.619	2	II	1744.63	a	I
1148.241	15	III	1418.334	5	II	1575.068	2	II	1744.67	g,a	I
1154.523	20	III	1418.650	3	II	1578.16	g,a	I	1744.884	g,a	I
1160.212	0	II	1418.773	6	II	1580.61	g,a	I	1745.631	g,a	I
1161.347	1	II	1418.793	6	II	1581.811	2	II	1746.28	a	I
1161.624	0	II	1419.948	2	II	1582.112	0	II	1746.511	g,a	I
1161.781	0	II	1419.959	2	II	1583.424	0	II	1747.541	g,a	I
1162.443	20	III	1420.400	2	II	1583.438	0	II	1747.80	a	I
1162.544	0	II	1421.709	3	II	1584.81	g,a	I	1748.42	a	I
1163.464	0	II	1423.818	1	II	1590.16	g,a	I	1748.774	a	I
1168.607	25	III	1493.502	1	III	1594.45	g,a	I	1749.160	g,a	I
1168.883	10	III	1494.506	1	III	1598.002	80g	III	1749.290	g,a	I
1203.635	0	II	1502.828	2g	II	1603.063	180g	III	1749.470	g,a	I
1237.170	0	II	1503.395	0g	II	1604.02	g,a	I	1751.705	g,a	I
1237.317	1	II	1503.850	1g	II	1608.34	g,a	I	1752.500	a	I
1238.571	1	II	1504.673	1g	II	1610.194	150g	III	1753.443	g,a	I
1238.813	3	II	1505.459	0g	II	1619.926	2	II	1754.321	g,a	I
1238.963	0	II	1505.886	1g	II	1620.738	1	II	1754.411	g,a	I
1239.952	4	II	1506.208	0g	II	1621.014	1	II	1754.452	g,a	I
1240.415	1	II	1506.257	0g	II	1621.267	0	II	1754.547	a	I
1240.656	2	II	1516.137	2	II	1623.137	2	II	1754.644	g,a	I
1240.810	1	II	1533.677	0	II	1623.480	2	II	1754.898	a	I
1241.166	2	II	1535.421	1	II	1623.723	2d	II	1755.060	a	I
1241.283	1	II	1538.288	0	II	1624.008	3d	II	1756.66	a	I
1241.979	0	II	1543.896	2	II	1624.011	3d	II	1756.887	g,a	I
1242.693	0	II	1544.241	0	II	1626.08	g,a	I	1757.468	g,a	I
1247.834	0	II	1544.733	2	II	1630.005	3	II	1757.710	a	I
1265.653	0	II	1546.880	5	II	1630.52	g,a	I	1757.812	g,a	I
1266.246	0	II	1547.798	6	II	1631.330	1	II	1758.649	g,a	I
1299.787	1	II	1552.107	4	II	1631.557	1	II	1758.830	a	I
1304.182	0	II	1553.32	g,a	I	1633.722	2	II	1758.932	a	I
1337.684	0	II	1553.660	1	II	1633.749	2	II	1759.250	g,a	I
1338.413	1	II	1553.674	1	II	1635.880	3	II	1759.33	a	I
1339.077	2	II	1554.05	g,a	I	1636.346	1	II	1760.590	2	II
1340.237	1	II	1554.91	g,a	I	1640.416	4	II	1761.751	5	II
1342.130	2	II	1555.76	g,a	I	1664.16	g,a	I	1761.952	a	I
1356.287	0	II	1555.90	g,a	I	1668.83	g,a	I	1762.176	g,a	I
1356.868	0	II	1556.22	g,a	I	1670.971	0	II	1762.47	a	I
1357.843	0	II	1556.75	g,a	I	1672.538	1	II	1762.664	g,a	I

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
1764.469	g,a	I	1813.07	g,a	I	1886.118	2	II	1944.838	3g,a	I
1764.63	a	I	1813.42	g,a	I	1886.641	3	II	1945.013	2g,a	I
1764.93	a	I	1813.458	0	II	1886.989	g,a	I	1945.694	3g,a	I
1765.06	a	I	1813.725	0	II	1887.438	1	II	1946.596	1g,a	I
1766.152	g,a	I	1813.80	g,a	I	1888.839	4bl	II	1946.841	3g,a	I
1767.882	g,a	I	1814.005	g,a	I	1891.924	0g,a	I	1946.980	1	II
1768.506	g,a	I	1814.06	g,a	I	1893.638	0g,a	I	1947.653	1g,a	I
1770.07	a	I	1814.24	g,a	I	1894.492	1g,a	I	1948.324	2g,a	I
1771.413	g,a	I	1814.73	g,a	I	1895.441	40	III	1948.702	1g,a	I
1771.782	g,a	I	1814.756	3	II	1895.818	1g,a	I	1949.167	1	II
1772.0	a	I	1815.29	g,a	I	1897.525	1g,a	I	1949.390	1	II
1772.6	a	I	1815.345	g,a	I	1897.969	3g,a	I	1950.085	3	II
1773.785	g,a	I	1815.40	g,a	I	1898.393	1	II	1950.869	2g,a	I
1774.315	g,a	I	1815.91	g,a	I	1899.694	1g,a	I	1951.148	1g,a	I
1775.613	g,a	I	1816.63	g,a	I	1900.553	2g,a	I	1951.786	2g,a	I
1777.086	g,a	I	1816.91	g,a	I	1901.375	1g,a	I	1951.875	1	II
1778.039	g,a	I	1816.98	g,a	I	1901.887	3g,a	I	1952.503	1	II
1779.621	g,a	I	1817.167	g,a	I	1903.606	3g,a	I	1952.877	2g,a	I
1779.991	g,a	I	1817.460	g,a	I	1904.434	1g,a	I	1952.959	4	II
1780.6	a	I	1818.43	g,a	I	1905.243	0g,a	I	1953.132	0g,a	I
1782.5	a	I	1819.147	g,a	I	1907.294	0g,a	I	1954.059	3g,bl	I,II
1783.381	g,a	I	1819.56	g,a	I	1907.480	3g,a	I	1954.109	2g,a	I
1785.	a	I	1820.90	g,a	I	1907.818	3g,a	I	1954.317	1	II
1785.345	g,a	I	1821.22	g,a	I	1908.094	2	II	1954.735	3g,a	I
1786.392	g,a	I	1821.29	g,a	I	1910.559	3g,a	I	1955.115	2g,a	I
1788.69	a	I	1821.648	g,a	I	1911.200	2	II	1956.535	5	II
1791.3	a	I	1822.50	g,a	I	1911.374	3g,a	I	1956.541	2g,a	I
1796.1	a	I	1824.08	g,a	I	1911.581	3	II	1957.296	0g,a	I
1797.021	0g	II	1824.43	g,a	I	1912.620	60	III	1957.577	2g,a	I
1798.0	a	I	1824.696	g,a	I	1913.437	1g,a	I	1958.220	2g,a	I
1799.07	a	I	1826.81	g,a	I	1913.891	0	II	1959.032	0	II
1802.161	g,a	I	1826.977	g,a	I	1913.966	3g,a	I	1959.319	0g,a	I
1802.547	a	I	1827.273	g,a	I	1917.182	3	II	1959.419	0	II
1806.065	g,a	I	1827.76	g,a	I	1918.894	2g,a	I	1959.575	2g,a	I
1806.26	g,a	I	1828.572	g,a	I	1919.799	3g,a	I	1960.559	2g,a	I
1806.48	g,a	I	1829.713	0g,bl	I,II	1919.967	1	II	1961.196	1g,a	I
1806.71	g,a	I	1830.341	g,a	I	1925.113	2g,a	I	1961.365	1g,a	I
1806.965	g,a	I	1832.97	g,a	I	1925.512	2	II	1961.596	5	II
1807.245	g,a	I	1833.065	g,a	I	1926.024	0g,a	I	1961.986	1g,a	I
1807.56	g,a	I	1833.38	g,a	I	1926.623	4	II	1962.383	1g,a	I
1807.91	g,a	I	1833.540	g,a	I	1927.871	0g,a	I	1963.006	g,a	I
1808.28	g,a	I	1834.206	g,a	I	1929.010	4	II	1963.190	0	II
1808.492	0	II	1838.62	g,a	I	1929.357	0	II	1964.485	2g,a	I
1808.705	g,a	I	1839.214	g,a	I	1929.571	2g,a	I	1965.723	0	II
1808.73	g,a	I	1839.40	g,a	I	1930.994	2g,a	I	1966.738	0g,a	I
1809.19	g,a	I	1840.142	g,a	I	1931.829	1	II	1966.839	1g,a	I
1809.215	g,a	I	1841.145	3	II	1932.091	0g,a	I	1967.693	2g,a	I
1809.74	g,a	I	1843.062	1	II	1932.272	4	II	1967.863	1g,a	I
1809.77	g,a	I	1845.04	g,a	I	1934.149	0g,a	I	1968.488	2g,a	I
1810.224	1	II	1845.858	g,a	I	1935.753	2g,a	I	1968.888	2g,a	I
1810.36	g,a	I	1849.129	g,a	I	1935.831	3g,a	I	1968.965	0g,a	I
1810.405	g,a	I	1853.79	g,a	I	1935.860	2g,a	I	1969.564	1g,a	I
1810.821	0	II	1854.866	g,a	I	1936.235	2g,a	I	1969.623	1	II
1811.09	g,a	I	1861.952	g,a	I	1936.411	2g,a	I	1971.003	1g,a	I
1811.125	g,a	I	1865.1	g,a	I	1937.292	3g,a	I	1973.271	2g,a	I
1811.27	g,a	I	1867.852	g,a	I	1937.600	1g,a	I	1973.373	2g,a	I
1811.42	g,a	I	1868.309	g,a	I	1938.396	3g,a	I	1975.083	1g,a	I
1811.59	g,a	I	1869.774	2	II	1938.492	2g,a	I	1975.419	0	II
1811.719	0	II	1880.604	8	II	1938.666	3g,a	I	1975.512	2g,a	I
1811.78	g,a	I	1881.018	g,a	I	1939.342	0g,a	I	1976.117	1g,a	I
1811.915	g,a	I	1882.442	1	II	1940.239	2g,a	I	1976.629	0	II
1811.96	g,a	I	1883.861	1	II	1940.482	0g,a	I	1977.790	1	II
1812.23	g,a	I	1884.520	2	II	1942.081	3g,a	I	1979.466	2	II
1812.48	g,a	I	1884.759	1	II	1942.159	2g,a	I	1980.712	0	II
1812.76	g,a	I	1884.814	1	II	1942.566	3g,a	I	1981.671	2g,a	I
1812.88	g,a	I	1884.85	g,a	I	1942.745	4g,a	I	1981.848	0	II
1812.935	g,a	I	1885.032	1	II	1943.940	2g,a	I	1982.109	2	II

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
1987.832	2	II	2061.637	9	I	2180.822	2g,a	I	2380.867	2	II
1993.886	90	III	2062.680	0g,a	I	2182.515	1g,a	I	2384.473	1	II
1995.288	5	II	2062.969	0g,a	I	2184.210	0g,a	I	2388.193	2	II
1997.206	3g,a	I	2063.675	3	II	2185.752	2g,a	I	2394.009	4	II
1998.293	3g,a	I	2064.071	1g,a	I	2186.051	2g,a	I	2397.655	2	II
1999.618	3g,a	I	2064.187	0g,a	I	2188.681	0g,a	I	2397.937	3	I
2000.135v	1	II	2064.255	6	II	2197.894	0	II	2405.956	4	I
2000.150	0g,a	I	2064.866	1g,a	I	2232.905	5	II	2412.208	3	I
2000.190v	0g,a	I	2065.412	0g,a	I	2262.292	6g	I	2412.248	3	I
2001.420	2g,a	I	2065.592	2g,a	I	2266.594	9g	I	2414.177	3	I
2001.823	2g,a	I	2065.666	2g,a	I	2270.944	9g	I	2414.215	3	I
2003.293	3g,a	I	2065.742	2g,a	I	2273.109	11	II	2424.453	3	I
2004.172	0g,a	I	2066.158	2g,a	I	2280.833	9g	I	2424.729	4	I
2004.387	1g,a	I	2066.282	2g,a	I	2282.936	4	II	2428.554	4	I
2005.723	2g,a	I	2067.062	0g,a	I	2288.059	9g,bl	I,II	2428.659	5g	I
2006.039	0g,a	I	2067.091	4	II	2288.839	5	II	2429.191	5g	I
2006.298	2g,a	I	2067.231	0	II	2289.628	2g	I	2432.228	4	I
2006.848	0	II	2067.517	3	II	2290.703	3	II	2432.722	4	I
2006.911	0g,a	I	2067.769	0g,a	I	2299.050	7	II	2435.023	2	I
2008.000	0	II	2068.041	5	II	2300.219	4	II	2438.627	5g	I
2008.189	0g,a	I	2068.643	4	II	2300.992	0	II	2439.165	5g	I
2008.594	0g,a	I	2068.846	1g,a	I	2301.947	4	I	2443.363	2	I
2009.340	2	II	2069.871	1g,a	I	2305.827	2	I	2449.408	4	I
2010.420	60	III	2070.159	1g,a	I	2306.886	2	I	2452.120	2	I
2010.961	2g,a	I	2071.272	3g,a	I	2307.822	5	III	2455.330	2g,a	I
2012.256	50	III	2072.622	1g,a	I	2310.239	7	III	2455.52	1	III
2012.839	0g,a	I	2072.802	1g,a	I	2311.291	4g	I	2459.602	3g,a	I
2013.265	3	II	2073.497	2g,a	I	2312.382	6	III	2462.664	4g	I
2016.304	2	II	2074.283	3g,a	I	2314.050	4	I	2465.516	3g	I
2017.683	3	II	2074.994	3g,a	I	2314.581	2	I	2468.403	5g	I
2022.089	0	II	2080.702	0	II	2315.687	5g	I	2469.829	4g	I
2022.330	2	II	2085.200	2	II	2318.482	4	I	2472.925	5g	I
2025.038	1	II	2096.270	1	III	2319.714	4	I	2477.727	4g	I
2025.681	3	II	2101.797	3	II	2319.900	2	I	2487.860	4g	I
2026.132	0	II	2103.938	2	II	2320.226	2	I	2488.113	2g,a	I
2028.674	2	II	2104.042	2	III	2320.321	5g	I	2488.549	0	II
2030.392	2	II	2106.417	1	II	2324.753	4g	I	2491.263	3g,a	I
2030.793	3	II	2106.679	1	II	2327.246	4	I	2491.396	2	I
2032.682	2g,a	I	2107.566	1	II	2327.750	3	I	2492.749	4g	I
2032.945	0	II	2108.791	0	II	2328.186	5g	I	2494.660	3g,a	I
2036.178	1	II	2111.268	2	III	2330.826	3	I	2495.558	1	II
2039.665	2g,a	I	2111.682	1	III	2330.936	3	I	2498.336	0g,a	I
2040.709	1	II	2112.846	7g	I	2332.130	4	I	2499.898	2g,a	I
2042.586	2g,a	I	2116.650	9g	I	2334.671	5g	I	2501.765	3g	I
2044.195	3g,a	I	2118.854	5	III	2335.165	5g	I	2503.264	3g,a	I
2046.426	9g	I	2119.158	1	III	2335.762	4	I	2505.185	2g,a	I
2047.510	0	II	2120.392	9g	I	2336.635	3	I	2510.000	3	II
2047.623	9	I	2124.223	5g	I	2336.707	2	I	2510.466	1g,a	I
2048.259	4	I	2125.172	4g,a	I	2336.806	4g	I	2535.120	4	I
2048.616	1	II	2125.206	9	I	2337.342	2g	I	2540.824	3g	II
2049.004	1	II	2126.165	2	II	2340.202	3	I	2545.196	8g	II
2049.636	4g,a	I	2128.881	9	I	2343.481	2	I	2548.084	4	I
2049.654	9	I	2132.840	5	I	2344.485	3	I	2549.581	4	I
2050.025	9	I	2138.430	2g	I	2346.034	5g	I	2549.620	2	I
2050.920	0	II	2146.159	2g	I	2346.519	6	III	2552.350	10g	II
2051.168	0	II	2160.440	0	II	2347.094	3	I	2553.480	0	II
2051.257	4g,a	I	2161.232	2g,a	I	2356.210	3	I	2555.789	8g	II
2051.328	4	I	2169.126	1g,a	I	2358.118	4	I	2560.232	10g	II
2053.500	3g,a	I	2171.151	1	II	2360.012	3	I	2563.192	8g	II
2053.931	0	II	2172.293	1g,a	I	2367.825	2	I	2568.605	1	II
2057.038	3g,a	I	2172.843	2g,a	I	2368.148	2	I	2571.399	2	I
2057.711	2g,a	I	2174.522	1g,a	I	2372.748	4	I	2588.253	0	II
2058.147	4	I	2176.209	2g	I	2373.637	2	I	2588.444	3	I
2058.309	3	II	2177.738	1g,a	I	2375.503	6	II	2592.438	3	I
2058.503	2g,a	I	2178.034	2g	I	2376.409	4	I	2594.999	2	I
2058.581	2g,a	I	2180.269	1g,a	I	2378.071	2	II	2611.194	7	II
2058.994	3g,a	I	2180.645	2g,a	I	2378.750	4	I	2627.334	1	III

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
2633.223	3g	I	2763.397	3	I	2920.965	3	II	3030.759	6g	I
2637.142	3g	I	2776.855	1	II	2921.098	4	I	3033.412	1	II
2639.280	3g	I	2782.306	11	II	2924.167	5	I	3033.770	2	I
2639.546	2	III	2782.669	2	II	2924.309	4	I	3034.929	3	I
2642.155	1	I	2786.749	2	I	2924.340	0	II	3035.160	3	I
2642.859	2	I	2789.151	12	II	2927.152	1	I	3035.221	3	I
2644.954	3g	I	2794.644	5	II	2929.462	1	I	3038.737	2	I
2648.906	3g	I	2800.717	3	I	2930.111	1	I	3038.826	4	I
2666.802	0g,a	I	2801.306	9	II	2930.806	1	I	3039.779	5g	I
2666.907	6	III	2807.871	3	II	2932.508	5	I	3039.922	12	II
2667.699	3	II	2819.491	9	II	2932.778	5	I	3042.346	3	I
2671.476	2	I	2822.121	9	II	2933.088	5	I	3042.427	3	I
2674.646	4	I	2826.639	10	II	2933.330	5	I	3042.541	2	I
2674.857	4	I	2827.758	3	II	2934.163	2	I	3043.463	5	I
2675.958	3	II	2828.319	1g	I	2935.757	3	I	3043.551	5	I
2678.038	4	I	2831.754	10	III	2937.317	2	I	3044.012	3	I
2678.725	8	III	2832.180	4	I	2939.118	2	I	3044.704	4	I
2678.833	4g	I	2833.316	4	II	2941.282	1	I	3045.725	12	II
2679.493	1	III	2835.897	4	I	2943.080	3	I	3045.836	1	I
2680.653	2	II	2843.411	4	I	2945.246	3	I	3046.009	5	I
2684.089	2	II	2849.463	2	I	2945.364	2	I	3047.121	5	I
2684.219	5	II	2850.067	3	I	2946.892	2	I	3049.797	5	I
2688.251	3	I	2853.750	3	I	2947.207	2	II	3050.438	5	I
2692.579	2	II	2855.261	4	I	2947.715	1	I	3050.558	4	I
2692.776	6g	I	2855.870	4	I	2948.991	2	I	3051.193	4	I
2695.635	5g	I	2856.507	4	I	2949.844	2d	II	3051.746	4	I
2696.029	4	I	2859.127	4	I	2955.009	0	II	3052.922	14	II
2699.018	6g	I	2859.228	5	I	2957.198	1	I	3053.049	5	I
2699.067	350	III	2859.271	4	II	2957.707	0	II	3054.111	4	I
2700.828	4d	II	2859.579	5	I	2958.273	2	II	3054.553	5	I
2704.573	2	I	2863.639	5	II	2965.233	3	I	3055.245	4	I
2705.075	1	I	2864.114	4	II	2965.879	6g	I	3056.309	5	I
2705.790	2	I	2865.978	8	II	2969.364	1	I	3057.520	5g	I
2706.088	2	I	2866.661	5	II	2969.604	2	I	3059.864	3	I
2706.738	6g	I	2867.235	1	I	2974.010	6g	I	3060.537	7d	II
2707.536	0	II	2870.848	6	II	2978.481	2	I	3061.031	5g	I
2707.931	6g	I	2875.249	2	I	2978.943	1	I	3062.083	5	I
2709.503	3	I	2876.117	2	I	2979.676	8	II	3062.384	3	I
2710.045	5	I	2878.064	2	I	2980.755	6g	I	3063.080	4g	I
2710.709	3	I	2879.213	3	I	2981.358	2	I	3063.508	1	I
2711.341	6g	I	2879.601	4	I	2981.465	3	I	3065.117	12	II
2711.901	2	I	2880.299	3	I	2981.990	3	I	3066.625	4	I
2712.148	3g	I	2881.188	5	I	2985.467	2	I	3066.920	2	I
2713.076	2	I	2881.672	3	I	2985.666	3	I	3068.186	5g	I
2713.171	2	I	2882.095	5	I	2986.993	1	I	3068.741	5	I
2714.530	3	I	2884.659	4	I	2987.814	3	I	3069.002	5	I
2716.249	0d	II	2885.232	2	I	2987.896	3	I	3070.581	1	I
2717.053	5g	I	2885.563	3	I	2988.918	12bl	II	3071.066	2	I
2717.267	4g	I	2887.283	3	II	2988.965	6g	I	3073.341	5g	I
2719.130	5g	I	2888.106	1	I	2989.961	5	I	3073.762	2	I
2719.231	3g	I	2890.263	2	I	2991.111	5	I	3075.358	10	II
2721.843	1	II	2892.501	2	I	2992.255	3	I	3077.401	1	II
2723.095	2	I	2894.122	2	II	2992.792	5	I	3077.689	0	II
2724.140	2	II	2894.868	5	I	2996.702	1	I	3080.303	2	I
2724.594	5g	I	2895.144	5	I	3001.118	5	I	3081.223	1	I
2725.129	1	II	2896.784	3	I	3002.641	3	I	3081.347	2	I
2726.481	5g	I	2898.320	3	I	3002.727	2	I	3081.718	1	I
2729.539	4	II	2899.262	3	I	3006.417	1	I	3082.307	1	I
2733.378	0	II	2900.515	3	I	3006.480	3	I	3082.561	6	II
2734.048	230	III	2911.128	1	I	3008.923	3	I	3082.677	5	I
2734.287	5g	I	2912.478	2	I	3015.367	6g	I	3083.076	0	II
2735.568	4	II	2912.977	7	II	3015.379	8bl	II	3083.415	3	I
2739.057	5g	I	2917.747	4	I	3017.916	3	I	3084.822	2	I
2740.994	4	I	2918.126	1	I	3018.355	3	I	3085.563	1d	II
2746.363	5bl	II	2918.408	1	I	3019.349	6g	I	3085.710	2	I
2760.244	4	I	2919.864	4	I	3023.707	2	I	3085.881	3	I
2761.194	0	II	2920.523	4	I	3028.742	2	I	3086.157	2	I

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
3086.626	1	I	3171.057	3	I	3236.288	2	I	3313.516	4	II
3087.538	1	II	3172.271	2	I	3238.429	4	I	3314.593	3	I
3087.567	4	I	3172.515	2	I	3238.898	3	I	3315.231	1	I
3089.750	1	II	3172.717	2	I	3240.711	5	I	3315.637	3	I
3089.913	3	I	3173.934	2	I	3243.383	3	I	3316.514	5	I
3090.133	3	I	3174.542	2	I	3243.792	3	I	3316.730	6	II
3090.256	1	I	3175.135	3	I	3243.960	5	I	3317.023	6	II
3090.367	3	I	3175.234	3	I	3244.162	1g	II	3317.458	5	I
3090.569	3	I	3175.792	2	I	3244.938	4	II	3317.676	5	II
3092.487	6	II	3176.652	1	II	3245.458	2	I	3317.990	5	I
3092.883	1	I	3177.099	2	I	3247.515	2	I	3318.927	4	I
3093.646	4	I	3177.358	1	I	3251.316	7g	II	3320.164	2	I
3093.953	2	I	3178.316	2	I	3252.444	3	I	3320.400	9	II
3094.740	5	I	3179.561	5	I	3253.393	3	I	3320.512	5	I
3094.808	3	I	3181.536	3	I	3255.676	6g	I	3320.693	5	II
3096.803	4g	II	3182.140	2	I	3260.187	3	II	3321.143	4	I
3097.050	1	I	3182.298	1	I	3260.257	1	I	3321.579	4	I
3097.701	5	I	3183.515	3	I	3260.812	3	II	3322.021	0	II
3100.295	2	II	3184.320	2	I	3260.997	5	I	3322.305	1	II
3100.842	3	I	3184.427	2	I	3261.743	3	II	3324.085	4	I
3101.329	2	I	3186.037	5	I	3264.648	4	I	3325.356	5	I
3101.589	4	I	3187.121	4	II	3267.260	5	I	3326.720	1	II
3102.024	4	I	3188.475	2	I	3267.666	3	I	3326.895	5	I
3105.927	3d	II	3188.618	2	I	3269.543	0	II	3327.577	5	I
3106.375	2	I	3188.909	2	I	3269.897	6g	I	3329.377	5	I
3106.424	2	I	3190.385	8	II	3273.628	6g	I	3330.157	1	I
3107.412	3g,bl	II	3190.984	10	II	3275.429	5	I	3330.262	1	I
3107.519	6bl	II	3192.874	3	I	3276.768	1	I	3330.591	5	I
3108.324	5	I	3193.196	4	I	3278.051	3	I	3330.705	1	I
3108.491	6	II	3193.831	4	I	3278.505	3	I	3331.044	10	II
3113.788	1d	II	3194.052	1	I	3280.172	5	I	3331.500	3	I
3115.767	4	I	3194.293	1	I	3280.777	3	I	3332.423	3	I
3117.459	3	I	3194.881	2	I	3282.040	3	I	3332.850	5	I
3117.903	3	I	3195.553	3	I	3282.433	4	I	3333.487	5	I
3118.112	3	I	3196.134	3	I	3284.541	5	I	3333.867	2	I
3122.459	5	II	3196.503	2	I	3284.955	2	I	3334.523	2	I
3122.949	6	II	3197.372	2	I	3285.064	5	I	3336.158	3	I
3123.771	2	I	3199.331	8	II	3286.602	2	I	3336.556	3	I
3125.982	2	I	3200.822	4	I	3287.149	5	I	3336.663	3	I
3126.012	6	II	3201.587	2	I	3288.148	2	I	3336.768	3	I
3128.271	6d	II	3202.580	5g	I	3290.152	4	I	3336.899	5	I
3128.632	1	I	3202.683	2	I	3290.632	5	I	3339.315	4	I
3133.073	5d	II	3202.875	2	I	3292.956	3	I	3339.805	5	I
3138.438	6	II	3203.172	2	I	3295.648	0	II	3340.168	3	I
3139.718	12	II	3203.532	5	I	3295.836	5	I	3340.660	4	I
3143.077	3	I	3205.162	2	I	3297.267	5	I	3341.014	5	I
3143.333	3	I	3205.844	3	I	3297.360	5	I	3341.502	4	I
3143.419	3	I	3207.015	5g	I	3298.570	3	I	3342.573	4	I
3146.629	1	I	3207.316	2	I	3299.361	3	II	3342.700	2	I
3146.883	5	II	3209.257	2	I	3301.352	5	I	3342.844	2	I
3147.256	1	I	3209.743	2	I	3302.375	3	I	3343.233	10bl	I,II
3147.592	4	I	3210.930	2	I	3303.496	5	I	3343.290	5	I
3148.607	3	I	3213.774	5g	I	3303.733	3	I	3345.049	4	I
3153.456	3	I	3215.271	3	I	3304.205	4	II	3345.457	3	I
3153.600	1	I	3216.198	1	I	3304.234	5	I	3345.949	3	I
3154.953	1	II	3218.708	3	I	3305.077	5	I	3346.808	3	I
3155.497	3	I	3219.943	5g	I	3306.162	4	I	3348.281	3	I
3157.655	1	I	3222.740	3	I	3306.763	4	I	3348.517	5	I
3158.303	1	I	3224.424	4g	I	3306.928	4	II	3348.841	1	I
3159.359	4	I	3226.762	2	I	3307.299	5	I	3349.203	5	I
3160.948	4	I	3228.337	5	I	3308.758	5	I	3349.764	5	I
3161.047	4	I	3230.665	3	I	3310.021	5	I	3349.995	5	I
3169.511	1	I	3231.149	3	I	3311.131	4	I	3351.162	5	I
3169.604	5	I	3231.571	4	I	3311.563	5	I	3352.066	5g,bl	II
3169.829	1	I	3233.464	3	I	3311.698	8	II	3352.425	3	I
3170.348	6	II	3235.085	4	I	3312.715	9	II	3353.046	4	I
3170.915	3	I	3236.070	5	I	3313.096	5	I	3353.724	13bl	I,II

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
3353.963	4	I	3456.854	1	I	3556.886	1	I	3690.332	1	I
3357.292	5	I	3456.938	1	I	3558.534	12g	II	3690.659	1	I
3357.852	4	I	3457.442	5	I	3559.262	1	I	3692.997	1	I
3358.925	1	I	3458.725	1	I	3559.621	3	I	3697.038	2	II
3359.231	3	II	3460.664	4	I	3563.776	3	I	3700.789	1	II
3359.668	12g	II	3460.802	4	I	3564.309	1	I	3708.061	2	II
3361.257	11g	II	3462.166	4	I	3566.924	4	I	3712.111	3	I
3361.926	11g	II	3463.046	1	I	3567.702	12g	II	3712.512	2	I
3362.955	4	I	3464.667	1g	I	3568.293	3	I	3714.244	2	I
3363.479	5	II	3466.604	3	I	3572.530	13g	II	3716.221	3	I
3364.393	3	I	3469.021	3	I	3574.727	3	I	3716.317	2	II
3364.841	5	I	3469.209	3	I	3575.310	4	I	3717.086	3	I
3365.540	1	II	3469.326	2	I	3576.340	12g	II	3717.742	4	I
3366.430	5	II	3469.609	4	I	3578.474	3	I	3724.638	3	I
3368.936	12g	II	3469.705	4	I	3580.655	8bl	II	3729.740	4	I
3372.150	12g	II	3470.556	3	I	3580.928	12g,bl	II	3730.238	3	I
3373.160	4	I	3471.056	4	I	3581.962	1	I	3733.503	2	I
3373.271	4	I	3471.133	3	I	3582.950	1	I	3736.467	1	I
3373.523	5	II	3475.025	3	I	3586.776	6	II	3736.700	1	I
3374.746	4	I	3478.267	1	I	3589.633	11g	II	3746.092	1	I
3377.856	5	I	3478.904	1	I	3590.474	11g	II	3749.963	1	I
3378.199	9	II	3479.566	2	I	3591.113	0d	II	3751.159	3	I
3379.161	6	II	3479.785	6	III	3594.086	4	II	3755.162	2	I
3379.234	4	I	3480.125	1	I	3594.831	4	II	3759.973	2	I
3379.377	9	II	3481.064	5	III	3597.331	5	II	3769.065	2	I
3380.606	4	I	3483.181	1	I	3598.417	3	I	3778.345	0	II
3381.418	4	I	3483.620	1	I	3599.031	2	I	3780.412	2	I
3381.722	4	I	3485.494	1	I	3601.397	1	I	3783.524	3	I
3385.349	5	II	3486.647	1	I	3601.640	1	I	3791.189	3	I
3385.841	5	I	3487.102	4	I	3605.450	1	II	3794.533	3	I
3386.785	5	I	3487.623	1	I	3606.792	1	I	3800.543	1	I
3388.524	1	I	3490.191	1	I	3613.831	13g	II	3808.533	1	I
3389.310	4	I	3495.421	1	I	3615.344	1	II	3811.729	3	I
3391.419	4	I	3496.265	4	I	3617.455	4	I	3812.293	3	I
3392.911	4	I	3498.788	2	I	3621.305	1	I	3815.053	1	I
3394.242	5	II	3498.899	4	I	3623.099	3	I	3817.815	3	I
3394.803	4	I	3499.212	2	I	3625.388	3	I	3819.192	2	I
3398.623	1	I	3500.330	1	I	3629.109	1	II	3819.368	2	I
3401.877	3	I	3501.193	1	I	3630.742	13g	II	3822.402	2	I
3409.671	1	I	3502.040	1	I	3633.022	3	I	3822.489	2	I
3410.156	1	I	3503.641	4	I	3635.288	3	I	3824.926	1	I
3410.950	1	I	3504.729	2	I	3636.426	1	I	3825.364	3	I
3416.670	4	I	3505.564	3	I	3642.407	0d	II	3827.307	3	I
3416.966	1	I	3505.815	3	I	3642.600	5	I	3833.080	13g	II
3418.529	4	I	3508.006	2	I	3642.782	13g	II	3833.370	3	I
3419.350	4	I	3511.644	3	I	3643.751	5	II	3834.397	3	I
3425.405	4	I	3513.442	3	I	3644.687	4	I	3836.418	5	I
3427.669	3	I	3515.357	1	I	3645.308	12g	II	3836.518	3	I
3429.199	5	I	3516.180	1	I	3646.910	4	I	3837.270	4	I
3429.479	5	I	3516.409	1	I	3647.552	2	I	3843.049	12g	II
3431.351	5	I	3516.644	0	II	3649.136	2	I	3844.866	6	I
3433.135	4	I	3520.633	1	I	3650.680	2	I	3845.409	3	I
3433.399	2	I	3521.425	4	I	3651.798	11bl	I,II	3846.688	2	I
3433.827	0	II	3522.112	1	I	3653.632	0	II	3848.075	4	I
3435.541	5	I	3522.695	1	I	3656.803	1	I	3851.415	0d	II
3437.563	4	I	3527.671	1	I	3657.574	3	I	3851.814	3	I
3439.382	4	I	3529.340	1	I	3662.709	2	I	3854.081	5	I
3440.158	4	I	3530.042	1	I	3664.245	4	II	3855.060	1	I
3443.986	4	I	3535.019	0d	II	3666.530	7g	II	3857.384	0d	II
3444.577	4g	I	3535.713	13	II	3669.483	2d	II	3858.101	5	I
3445.141	3	I	3537.395	2	I	3675.267	4	II	3859.374	5g,bl	I,II
3448.031	1	I	3539.511	3	I	3676.621	4	II	3859.592	12	II
3448.500	4	I	3540.761	3	I	3678.331	10	II	3859.911	4	I
3449.209	4	I	3543.744	4	I	3680.066	2	I	3862.306	3	I
3452.065	1	I	3552.414	1	I	3683.096	1	I	3862.631	4	I
3452.443	2	I	3553.009	2	I	3688.766	1	I	3863.725	6	I
3455.892	3g	I	3556.711	1	I	3689.104	1	I	3864.247	0d	II

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
3865.271	4	I	3973.782	0	II	4126.547	5	I	4252.690	1	I
3869.637	3	I	3974.077	2d	II	4130.045	2	I	4257.287	2	I
3871.043	1d	II	3975.215	3	I	4132.984	6	I	4259.648	4	I
3871.880	4	I	3978.152	5	I	4136.741	1	I	4260.304	2	I
3874.157	4	I	3987.827	5	I	4136.794	1	I	4261.312	5	I
3874.334	5	I	3989.056	9	II	4140.272	6	I	4263.616	1	II
3875.718	4	I	3993.814	2	I	4146.272	1	I	4267.914	2	I
3878.253	1	I	3995.507	3	II	4147.378	5	I	4268.901	2	I
3878.295	1	I	3996.601	7g	I	4151.355	1	I	4270.404	2	I
3878.329	0d	II	3997.985	0	II	4152.341	6	I	4270.774	4	I
3879.737	5	I	4007.049	2	I	4154.736	5	I	4274.210	2	I
3883.794	2	I	4007.837	4	I	4155.738	1	I	4274.922	1	I
3884.022	5	I	4008.416	4	II	4156.970	3	I	4279.928	2	II
3884.220	3	I	4008.608	4	II	4158.359	4	I	4282.037	4	I
3885.434	3	I	4014.475	13	II	4161.695	5	I	4283.235	3	I
3886.541	5	I	4017.761	4	I	4161.847	5	I	4283.549	5	I
3887.434	0d	II	4020.387	7g	I	4165.187	6	I	4283.724	2	I
3890.107	2	I	4023.215	5	I	4170.112	3	I	4284.274	1	I
3890.135	2bl	II	4023.678	7g	I	4171.534	5	I	4285.824	1	I
3890.867	1	I	4030.622	6	I	4177.466	5	I	4286.554	5	I
3894.802	1	I	4031.376	5	I	4177.557	2	I	4294.764	13	II
3894.971	5	I	4031.955	3	I	4178.919	3	I	4305.711	15	II
3898.974	2	I	4032.882	1	I	4179.723	1	I	4308.641	3	I
3899.686	1	I	4034.211	5	I	4184.304	0d	II	4309.300	2	I
3900.201	4	I	4034.363	4	I	4184.729	2	I	4309.471	40	III
3902.053	0	II	4036.858	5	I	4186.421	5	I	4309.473	2	I
3904.660	5	I	4039.157	3	I	4186.986	1	I	4314.082	17	II
3906.427	4	I	4040.510	6	III	4187.605	5	I	4320.745	15	II
3907.484	7g	I	4042.659	0	II	4190.638	4	I	4322.372	4	I
3911.812	7g	I	4043.803	5	I	4193.528	5	I	4324.998	13	II
3914.954	5	I	4046.257	0d	II	4193.683	1	I	4329.247	1	I
3918.203	5	I	4046.479	5	I	4195.100	2	I	4329.405	1	I
3923.094	3	I	4047.797	7g	I	4195.730	2	I	4331.729	4	I
3923.483	8	II	4049.937	5	I	4196.451	1	I	4338.269	3	I
3924.163	1	II	4050.720	1	II	4199.470	4	I	4338.677	0d	II
3927.687	3	I	4051.826	5	I	4204.518	5	I	4340.624	1	I
3927.829	2	I	4052.600	5	I	4205.197	5	I	4348.520	4	I
3929.187	0d	II	4054.544	7g	I	4206.781	3	I	4352.127	3	I
3930.150	4	I	4056.593	5	I	4209.879	4	I	4354.338	1	I
3932.008	4	I	4060.103	4	I	4210.922	1	I	4354.602	12	II
3932.594	4	I	4061.209	80	III	4212.318	5	I	4356.854	1	I
3933.375	7g	I	4061.888	3	I	4212.481	5	I	4357.456	3	I
3934.890	3	II	4062.626	3	I	4216.083	5	I	4358.649	5	I
3936.837	0d	II	4067.001	5	I	4218.225	5	I	4359.079	5	I
3938.589	2	I	4067.259	3	I	4218.396	3	I	4359.649	3	I
3939.011	1	I	4067.632	5	I	4219.703	5	I	4364.922	4	I
3939.307	1	I	4068.661	100	III	4221.383	1	I	4374.462	16	II
3939.490	1d	II	4074.962	6	I	4221.463	1	I	4375.167	4	I
3940.966	3	I	4075.111	2	I	4221.848	5	I	4375.314	3	I
3941.388	2	I	4078.564	5	I	4224.203	1	I	4376.289	2	I
3942.059	1d	II	4080.567	4	I	4224.847	2	I	4381.243	3	I
3943.339	0d	II	4082.387	7g	I	4224.902	1	I	4384.808	12	II
3943.663	2	I	4085.031	1	I	4225.540	5	I	4389.590	5	I
3945.392	0d	II	4086.019	5	I	4225.692	5	I	4391.704	2	I
3946.172	5	I	4086.664	5	I	4225.779	6	III	4394.700	1	I
3949.990	3	I	4087.150	6	I	4227.459	2	I	4395.935	2	I
3951.273	0d	II	4087.474	5	I	4229.371	6	III	4398.119	3	I
3952.269	5	I	4093.119	5	I	4231.636	5	I	4400.386	10	II
3953.383	0d	II	4094.861	5	I	4231.915	5	I	4400.397	6	I
3957.007	7d	II	4096.843	2	I	4232.422	1	I	4404.426	3	I
3957.759	1d	II	4098.360	5	I	4233.591	5	I	4413.797	2	I
3958.100	0d	II	4100.313	5	I	4235.280	4	I	4415.544	10	II
3958.191	3	I	4100.525	5	I	4237.799	5	I	4418.490	1	I
3965.694	3	II	4102.831	1	I	4238.053	6	I	4420.661	4	II
3968.193	3	I	4104.694	1	I	4239.552	5	I	4425.275	2	I
3970.459	0bl	II	4107.375	1	I	4246.139	4	I	4428.891	4	I
3970.558	1	II	4107.451	1	I	4246.820	12	II	4430.520	4	I

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
4431.362	8	II	4670.406	18	II	4883.631	4	I	5083.721	7	I
4433.282	0	II	4673.396	4	I	4890.373	4	I	5085.549	7	I
4496.213	3	I	4680.428	4	I	4892.546	1	I	5086.688	4	I
4503.954	0d	II	4686.938	1	I	4892.984	4	I	5087.123	5	I
4511.372	4	I	4698.284	11	II	4896.068	3	I	5087.834	4	I
4515.829	4	I	4701.283	3	I	4901.633	3	I	5089.930	6	I
4519.834	2	II	4706.938	5	I	4906.661	4	I	5092.458	5	I
4520.846	3	I	4709.313	5	I	4909.748	5	I	5093.501	2	I
4521.916	3	I	4711.721	4	I	4922.633	1	I	5093.654	3	I
4523.815	3	I	4713.845	5	I	4922.837	5	I	5096.225	2	I
4529.944	7d	II	4714.303	4	I	4934.257	4	I	5096.721	6	I
4531.691	3	I	4716.245	4	I	4935.719	4	I	5097.410	1	I
4532.392	3	I	4717.023	4	I	4935.940	3	I	5099.186	5	I
4534.222	4	I	4718.829	3	I	4940.885	2	I	5099.274	5	I
4542.551	5	I	4719.308	4	I	4941.310	4	I	5101.119	6	I
4542.985	4	I	4720.810	4	I	4944.072	1	III	5105.644	2	I
4549.276	4	I	4728.766	6	I	4950.194	8	II	5107.371	4	I
4552.665	2	I	4729.209	6	I	4951.673	4	I	5109.070	5	I
4553.189	7	II	4732.083	3	I	4954.058	5	I	5112.864	5	I
4557.221	5	I	4732.294	5	I	4973.665	5	I	5116.648	5	I
4557.798	2	I	4734.109	6	I	4974.221	0	II	5116.748	5	I
4559.840	0d	II	4735.076	5	I	4980.360	5	I	5118.912	1	I
4562.708	3	I	4737.647	5	I	4983.426	5	I	5124.388	3	I
4568.285	4	I	4739.202	1	II	4987.787	1bl	II	5130.323	3	I
4571.682	4	I	4740.954	10	III	4990.149	1	I	5131.574	1	I
4573.982	5	I	4741.024	6	I	4990.609	0d	II	5132.794	1	I
4578.780	2	I	4743.821	6	I	4992.886	50	III	5143.609	15	III
4578.964	5	I	4746.100	4	I	4994.997	4	I	5147.069	3	I
4582.029	4	I	4748.961	4	I	4997.365	6	III	5156.986	1	I
4585.017	4	I	4753.165	6g	I	5005.102	1	I	5193.793	1	I
4587.769	1	I	4758.926	4	I	5006.804	1	III	5202.250	1	I
4590.476	4	I	4763.073	4	I	5016.784	2	I	5210.547	6	I
4592.927	5	I	4771.453	4	I	5017.486	2	I	5211.370	4	I
4594.514	4	I	4773.103	0d	II	5018.408	5	I	5215.176	1	I
4594.694	4	I	4779.354	6g	I	5020.132	5	I	5218.247	1	I
4595.678	4	I	4780.868	15	III	5020.548	3	I	5218.874	3	I
4598.145	5	I	4784.322	3	I	5020.848	2	I	5219.634	5	I
4598.456	5	I	4786.627	0d	II	5021.521	5	I	5239.811	16	II
4601.495	10	II	4789.585	8	II	5026.609	3	I	5258.364	6	I
4603.909	4	I	4791.520	5g	I	5026.665	2	III	5284.981	4	I
4604.723	5	I	4792.924	1	I	5030.251	4	I	5285.771	5	I
4606.858	2	I	4803.030	9	II	5031.010	17	II	5295.313	7	II
4609.528	5	I	4812.492	2	II	5032.087	60	III	5301.980	5g	I
4609.949	5	I	4815.609	6d	II	5032.708	5	I	5314.684	3	I
4610.408	5	I	4820.113	0d	II	5037.034	4	I	5315.588	3	I
4613.785	3	I	4822.231	2d	II	5037.176	9	III	5318.374	12	II
4619.818	2	I	4827.283	5	I	5040.157	2	I	5323.069	4	I
4628.119	4	I	4832.723	4	II	5044.453	3	I	5323.775	3	I
4629.186	2	I	4833.664	5	I	5046.084	2	I	5325.386	2	I
4634.547	1	I	4839.434	5	I	5053.076	3	I	5325.749	1	I
4636.983	4	I	4839.794	10bl	II	5053.983	3	I	5331.788	5	I
4639.427	3	I	4840.456	4	I	5054.251	2	I	5334.241	11	II
4639.836	3	I	4840.864	4	I	5054.489	2	I	5339.431	5	I
4640.480	3	I	4847.673	5	I	5056.779	2	I	5340.983	bl	II
4642.08	2bl	III	4852.071	3	I	5057.143	3	I	5341.074	5	I
4647.131	2	I	4852.679	5	I	5061.916	1	I	5342.075	7	II
4648.148	1	III	4856.809	5	II	5064.306	5	I	5342.992	6g	I
4651.485	3	I	4858.621	0d	II	5066.384	4	I	5349.342	5	I
4652.423	1	I	4859.146	3	I	5068.635	1	I	5349.726	5g	I
4654.504	3	I	4864.599	1	I	5068.845	5	I	5350.278	5	I
4655.166	1	I	4864.814	3	I	5070.167	5	I	5355.793	5	I
4655.536	3	I	4869.687	0d	II	5070.257	5	I	5356.097	5	I
4661.673	3	I	4875.267	3	I	5072.714	3	I	5356.820	1	I
4662.390	2	II	4878.129	4	I	5075.820	3	I	5357.202	12	II
4664.249	3	I	4878.343	4	I	5080.215	4	I	5375.373	5	I
4665.810	4	I	4880.758	4	I	5081.080	4	I	5389.413	2	II
4668.690	3	I	4883.374	3	I	5081.561	7	I	5390.912	2	I

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
5392.058	5	I	5647.566	4	I	6178.200	2	II	6413.35	6g	I
5399.330	2g	I	5649.561	5	I	6178.24	1	I	6420.300	6	II
5402.735	4g	I	5657.907	15	II	6193.70	6	I	6422.03	1	I
5404.085	3	II	5658.362	13	II	6198.43	6	I	6422.38	3	I
5416.161	4	I	5661.712	3	I	6210.66	7g	I	6425.342	0	II
5416.414	3	I	5667.164	12	II	6224.022	1	II	6428.491	1	II
5422.335	6bl	I,II	5668.750	3	I	6231.75	3g	I	6428.865	1	II
5425.550	4	I	5669.055	13	II	6235.568	1	II	6433.96	4	I
5429.421	4	I	5671.828	7	I	6238.314	10	III	6434.18	4	I
5432.977	4	I	5680.197	2	I	6238.849	4bl	II	6437.72	3	I
5433.246	4	I	5684.214	15bl	I,II	6239.44	6g	I	6438.34	4	I
5433.729	3	II	5686.856	7	I	6239.80	6g	I	6442.57	4	I
5438.279	4	I	5691.375	2	I	6244.55	2g	I	6446.72	3	I
5439.042	4	I	5700.186	7	I	6245.641	15	II	6448.08	5g	I
5440.729	3	I	5708.639	6	I	6249.96	6	I	6450.86	1	I
5442.617	4	I	5711.793	7	I	6251.698	1	III	6451.93	1	I
5443.784	1	I	5717.314	6	I	6254.264	1	III	6461.52	3	I
5446.195	6	I	5720.955	3	I	6256.010	80	III	6463.013	12	II
5447.397	4	I	5724.129	6	I	6258.90	7g	I	6463.11	2	I
5448.885	4g	I	5735.232	2	I	6260.52	2	I	6471.496	3	II
5451.369	5	I	5738.666	1	I	6262.22	5	I	6473.360	9	II
5452.291	1	I	5739.325	4	I	6269.92	1	I	6477.790	12	II
5455.236	4	I	5741.382	4	I	6273.14	4	I	6484.98	3	I
5464.952	2	I	5802.242	1	I	6276.28	6g	I	6488.89	2	I
5465.229	3	I	5806.770	4	II	6279.74	5	I	6489.30	1	I
5468.401	4	I	5823.532	4	I	6279.781	14bl	II	6495.36	9	I
5468.715	2	I	5890.034	5	II	6280.13	5	I	6496.510	10	II
5472.194	4	I	5894.558	5	I	6283.366	1	II	6500.461	12	II
5474.654	3	I	5919.068	5	I	6284.16	5	I	6516.137	2	II
5482.012	6	I	5931.250	3	I	6284.73	5	I	6525.55	40	I
5483.997	2	I	5940.499	3	I	6288.07	1	I	6531.264	0	II
5484.628	6	I	5942.646	1	I	6293.02	5	I	6536.765	12	II
5514.230	6	I	5945.321	2	I	6297.64	4	I	6540.435	1	II
5514.963	1	I	5951.069	1	I	6300.746	7	II	6542.572	2	II
5515.380	3	I	5952.139	4	I	6302.625	5	II	6547.88	4	I
5519.729	3	I	5961.470	4	I	6305.65	7g	I	6550.215	12	II
5520.519	6	I	5968.204	4	I	6305.99	6g	I	6555.370	0	II
5526.103	4	I	5968.481	1	I	6306.84	4	I	6557.84	35	I
5526.384	4	I	5969.169	4	I	6307.595	60	III	6558.20	30	I
5526.785	16	II	5978.879	1	I	6309.521	1	II	6558.42	1	I
5536.478	3	I	5983.510	1	I	6309.88	5	I	6558.681	12	II
5541.068	4	I	5988.431	1	I	6309.914	6	II	6568.670	4	II
5546.433	3	I	5988.923	1	I	6316.75	1	I	6569.30	7	I
5549.693	3	I	5992.850	3	I	6318.50	2	I	6571.725	7	II
5550.420	3	I	6002.14	1	I	6320.843	7	II	6575.35	7	I
5551.854	3	I	6017.24	1	I	6322.04	1	I	6575.401	0	II
5552.235	6	II	6021.65	3	I	6322.74	4	I	6575.815	8	II
5553.605	3	I	6026.16	5	I	6325.103	0	II	6578.10	10	I
5554.000	2	I	6030.24	4	I	6327.21	4	I	6581.267	10	II
5557.523	1	I	6034.28	2	I	6331.96	1	I	6597.210	8	II
5561.134	3	I	6035.34	3	I	6337.057	4	II	6600.16	1	I
5564.896	4	I	6041.47	1	I	6342.032	2	II	6604.578	14	II
5571.250	3	I	6048.89	3	I	6344.83	5g	I	6610.453	3	II
5579.764	3	I	6059.290	3	II	6346.981	5	II	6610.683	10	II
5591.364	5	I	6061.43	2	I	6358.995	1	II	6611.122	2	II
5593.381	3	I	6068.43	4	I	6361.286	0	II	6618.088	3	II
5604.196	3	I	6079.56	4	I	6362.040	10	II	6619.004	0	II
5608.925	1	I	6085.94	2	I	6362.26	4g	I	6620.21	21	I
5610.127	3	I	6093.78	2	I	6362.88	2	I	6642.83	8	I
5620.037	1	I	6095.89	3	I	6370.467	14	II	6646.220	1	II
5623.732	2	I	6108.46	3	I	6376.10	1	I	6646.428	4	II
5624.036	2	I	6110.82	3	I	6376.292	1	II	6653.898	1	II
5631.043	3	I	6112.76	4	I	6376.84	2	I	6658.552	5	II
5634.855	3	I	6125.88	4	I	6378.82	6g	I	6658.999	0	II
5641.000	13	II	6146.20	6	I	6383.368	1	II	6699.215	3	II
5645.066	1	I	6151.19	3	I	6398.54	3	I	6706.09	7	I
5646.357	4	I	6175.950	0	II	6408.15	1	I	6706.113	0	II

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
6707.51	4	I	7216.15	1	I	7582.35	2	I	8106.10	3	I
6714.25	2	I	7216.30	1	I	7584.48	4	I	8110.91	2	I
6714.61	40	I	7224.31	1	I	7596.34	2	I	8123.836	0	II
6717.68	32	I	7241.206	4	II	7604.18	2	I	8139.73	1	I
6718.379	5	II	7242.492	3	II	7617.44	9	I	8143.536	3	II
6720.20	6	I	7244.03	1	I	7623.94	1	I	8147.07	3	I
6721.756	1	II	7244.81	2	I	7627.73	1	I	8151.168	2	II
6730.76	18	I	7251.67	2	I	7662.56	2	I	8165.74	1	I
6731.55	7	I	7257.58	14	I	7665.68	7	I	8169.50	3	I
6736.161	8	II	7265.03	1	I	7667.31	3	I	8170.670	4d	II
6737.19	11	I	7265.03	1	I	7695.42	2	I	8181.32	3	I
6737.88	465	I	7274.664	4	II	7696.40	3	I	8183.26	1	I
6739.45	360	I	7275.50	7	I	7697.76	45	I	8183.617	1	II
6751.13	6	I	7277.62	1	I	7698.65	2	I	8194.80	2	I
6769.14	5	I	7287.44	2	I	7709.172	15	II	8196.99	12	I
6769.83	4	I	7293.235	7	II	7726.98	3	I	8202.246	12	II
6786.31	1	I	7300.61	4	I	7729.76	29	I	8203.057	4	II
6793.75	6	I	7309.374	4	II	7738.16	3	I	8208.23	2	I
6794.37	1	I	7320.22	1	I	7741.16	24	I	8209.377	10	II
6794.60	5	I	7323.72	7	I	7741.28	30	I	8224.537	13	II
6794.86	8	I	7327.198	5	II	7742.84	3	I	8226.265	11	II
6794.96	2	I	7332.49	1	I	7750.35	4	I	8226.570	12	III
6797.26	7	I	7338.54	1	I	7752.81	3	I	8228.045	9	II
6799.62	10	I	7339.033	1	III	7771.06	6	I	8228.532	15	II
6803.68	14	I	7344.746	1	III	7784.18	2	I	8228.90	2	I
6804.61	17	I	7357.81	1	I	7785.17	17	I	8239.04	2	I
6817.11	345	I	7364.19	1	I	7794.72	6	I	8241.12	14	I
6819.49	485	I	7379.14	1	I	7798.71	4	I	8242.215	9	II
6823.780	0	II	7424.095	9	II	7800.42	28	I	8251.374	9	II
6829.51	335	I	7426.118	8	II	7811.06	1	I	8257.214	9	II
6835.02	640	I	7439.810	10	II	7821.56	7	I	8261.340	18	II
6842.211	0	II	7442.343	7	II	7830.75	4	I	8269.356	10	II
6843.095	4	II	7449.155	90	III	7862.16	4	I	8272.908	9	II
6854.393	3	II	7450.968	9	II	7865.18	4	I	8274.238	12	II
6856.533	3	II	7453.13	3	I	7866.214	9	II	8275.655	10	II
6857.095	3	II	7458.43	3	I	7868.648	70	III	8283.18	1	I
6872.090	3	II	7463.85	2	I	7868.70	4	I	8286.686	0	II
6874.25	13	I	7464.871	1	II	7894.58	2	I	8297.347	8	II
6875.686	3	II	7474.85	3	I	7899.44	3	I	8298.331	8	II
6877.37	18	I	7481.928	5	II	7900.08	3	I	8308.560	6	II
6881.02	26	I	7483.324	9	II	7901.935	2	II	8311.220	10	II
6885.10	27	I	7493.216	10	II	7907.96	3	I	8313.667	12	II
6914.56	1	I	7495.75	1	I	7915.76	3	I	8314.458	1	II
6924.00	6	I	7503.26	2	I	7919.424	2	II	8316.55	1	I
6947.36	1	I	7503.90	2	I	7925.59	3	I	8324.74	1	I
6949.12	4	I	7511.14	2	I	7926.56	3	I	8332.116	13	II
6950.44	6	I	7511.91	3	I	7932.62	3	I	8335.042	7	II
6961.66	11	I	7516.90	2	I	7939.50	3	I	8340.352	7	II
6968.169	7	II	7521.74	7	I	7957.000	2	II	8347.600	0	II
6985.55	8	I	7524.04	8	I	7971.72	3	I	8361.635	9	II
7010.20	6	I	7524.36	3	I	7977.78	3	I	8364.17	2	I
7056.71	1	I	7526.65	1	I	7983.81	3	I	8369.166	13	II
7073.75	1	I	7526.770	11	II	7984.32	1	I	8371.008	15	II
7074.65	1	I	7534.60	1	I	7989.92	3	I	8371.724	11	II
7083.01	1	I	7544.80	2	I	7996.14	2	I	8377.067	11	II
7097.73	9	I	7546.10	1	I	8001.45	1	I	8377.482	9	II
7102.91	5	I	7548.148	70	III	8002.46	1	I	8377.81	2	I
7108.07	1	I	7550.37	1	I	8010.99	2	I	8380.598	0	II
7127.16	4	I	7552.08	1	I	8042.284	2	II	8381.368	10	II
7127.76	2	I	7553.95	8	I	8043.55	5	I	8382.56	2	I
7138.10	19	I	7555.52	2	I	8043.83	8	I	8396.83	1	I
7151.216	2	II	7559.33	3	I	8044.799	1	III	8402.948	9d	II
7169.09	27	I	7563.47	7	I	8050.60	3	I	8405.659	6	II
7190.848	3	II	7564.56	1	I	8068.004	0	II	8412.27	2	I
7192.359	4	II	7569.896	2	II	8083.302	1	II	8417.708	5d	II
7198.32	2	I	7573.31	2	I	8097.788	15	II	8426.41	4	I
7209.41	3	I	7574.41	18	I	8098.81	4	I	8426.856	2	II

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
8427.261	1	II	9386.796	3	II	10767.67	1	I	16707.11	2	I
8428.008	3	II	9447.417	0d	II	10791.40	1	I	16723.30	2	I
8434.90	4	I	9525.939	0	II	10916.07	1	I	16747.58	2	I
8435.57	4	I	9541.665	0	II	10993.62	2	I	17190.29	3	I
8440.368	0	II	9569.720	0	II	11029.45	2	I	17213.14	4	I
8450.550	3	II	9577.567	0	II	11049.58	3	I	17370.24	2	I
8464.925	0	II	9585.546	0	II	11068.15	1	I	17444.68	2	I
8482.684	11	II	9598.812	0	II	11113.18	3	I	17522.84	3	I
8486.525	0	II	9600.750	0	II	11207.15	4	I	17528.43	2	I
8488.100	10	II	9606.086	0	II	11475.41	8	I	17590.85	2	I
8489.303	11	II	9615.068	1	II	11590.75	1	I	17628.54	1	I
8533.383	2	III	9631.062	0	II	11679.67	6	I	17680.64	2	I
8539.849	2	II	9636.121	0d	II	11713.57	1	I	17692.28	5	I
8549.780	3d	II	9643.932	3	II	11772.90	1	I	17700.20	7	I
8563.93	6	I	9659.394	0	II	11796.40	1	I	17714.07	15	I
8603.64	2	I	9675.200	1	II	11855.04	1	I	17776.08	3	I
8629.330	1	II	9689.347	2d	II	11871.42	2	I	17783.10	2	I
8691.25	2	I	9690.275	0	II	11876.60	1	I	17873.04	3	I
8692.360	1	II	9691.203	0	II	12153.30	13	I	17903.74	3	I
8694.47	3	I	9703.015	1d	II	12252.94	1	I	17920.46	15	I
8724.54	7	I	9703.373	0	II	12320.29	1	I	17952.54	11	I
8725.491	0	II	9717.30	1	I	12370.97	13	I	17958.83	7	I
8758.71	7	I	9720.56	1	I	12905.06	4	I	17977.73	2	I
8761.51	14	I	9725.460	2	II	13026.50	6	I	17982.35	4	I
8775.02	14	I	9735.214	2	II	13078.41	80	I	18046.10	2	I
8794.75	5	I	9736.813	1	II	13099.86	50	I	18055.20	3	I
8808.915	0	II	9744.487	2	II	13490.02	2	I	18056.37	3	I
8809.917	2	II	9757.260	5	II	13506.90	1	I	18081.52	1	I
8814.293	35	III	9760.579	1	II	13578.46	2	I	18088.25	2	I
8814.969	0	II	9764.455	0d	II	13602.13	5	I	18145.12	2	I
8818.947	0	II	9766.962	1d	II	13725.61	3	I	18217.33	26	I
8823.86	14	I	9767.496	0	II	13761.32	2	I	18226.66	2	I
8829.785	50	III	9773.524	2	II	13870.26	2	I	18232.51	1	I
8834.34	12	I	9775.167	0	II	13902.41	1	I	18235.27	4	I
8836.165	1	II	9778.02	1	I	13984.24	3	I	18280.86	1	I
8843.077	2	II	9786.819	0	II	13985.32	1	I	18455.87	6	I
8865.891	30	III	9803.692	1bl	II	14211.26	2	I	18523.93	4	I
8881.585	15	III	9807.710	2	II	14244.35	1	I	18549.32	3	I
8884.970	0	II	9808.278	0	II	14361.60	1	I	18704.10	40	I
8889.600	0	II	9811.580	3d	II	14368.12	1	I	19382.41	2	I
8892.525	3	II	9813.444	0	II	14437.53	1	I	19513.57	3	I
8906.899	4	II	9822.766	4	II	14442.74	1	I	19610.84	3	I
8913.144	4	II	9860.085	1	II	14476.94	1	I	19807.32	2	I
8920.779	5	II	9894.127	1	II	15003.66	1	I	19840.10	3	I
8937.448	7	II	9899.585	1	II	15037.44	1	I	19849.99	2	I
8940.823	0	II	9900.160	1	II	15104.08	2	I	19959.21	4	I
8971.179	1	II	9907.899	1	II	15784.35	2	I	20142.5	5	I
9059.482	4	II	9911.58	1	I	15807.08	1	I	20499.7	1	I
9060.425	5	II	9936.365	0d	II	16033.03	2	I	20689.8	1	I
9080.293	7	II	9947.01	1	I	16068.13	2	I	20703.9	1	I
9083.095	2	II	9947.929	0	II	16111.58	2	I	21088.2	2	I
9084.929	0	II	9976.31	1	I	16196.60	2	I	21259.5	3	I
9109.293	0	II	9988.908	0	II	16217.12	5	I	21284.0	50	I
9134.805	1	II	10011.892	1	II	16229.96	2	I	21378.5	2	I
9148.671	0	II	10025.06	1	I	16260.40	10	I	21455.1	18	I
9168.165	0	II	10038.680	1	II	16367.12	20	I	21468.3	3	I
9176.445	0	II	10057.49	2	I	16371.09	3	I	21484.9	7	I
9199.427	0	II	10152.68	1	I	16407.52	1	I	21606.2	2	I
9252.042	2	II	10233.47	1	I	16438.88	1	I	21625.4	6	I
9253.873	6	II	10526.62	1	I	16445.72	1	I	21634.1	16	I
9287.403	3	II	10684.09	2	I	16447.15	1	I	21706.4	2	I
9312.285	4	II	10704.67	1	I	16458.77	27	I	21719.6	4	I
9349.111	4	II	10711.00	3	I	16483.65	1	I	21730.4	165	I
9357.481	9	II	10716.85	1	I	16540.98	6	I	21806.4	19	I
9371.108	5	II	10726.62	1	I	16626.37	1	I	21812.0	305	I
9371.74	1	III	10728.12	3	I	16650.07	1	I	21833.9	9	I
9379.52	3	I	10747.84	2	I	16687.65	1	I	21842.7	190	I

Finding List for Sc I through Sc III — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
22024.2	305	I	23119.9	85	I	24945.8	45	I	28936.1	2	I
22052.1	995	I	23280.0	13	I	25148.0	5	I	29052.0	3	I
22065.4	990	I	23404.8	460	I	25392.9	7	I	29159.4	2	I
22207.2	60	I	23597.4	70	I	25493.2	2	I	29423.8	2	I
22266.7	710	I	23778.2	50	I	25612.4	2	I	30312.7	2	I
22390.1	12	I	23809.3	365	I	26145.5	2	I	31172.8	2	I
22394.8	695	I	23889.7	7	I	26162.0	3	I	31196.1	2	I
22551.5	3	I	24074.7	405	I	26178.1	2	I	32120.7	3	I
22637.0	60	I	24111.4	55	I	26456.4	40	I	32749.5	14	I
22656.7	250	I	24295.4	27	I	26475.0	7	I	33174.0	12	I
22661.5	4	I	24544.7	85	I	26520.0	15	I	33317.0	2	I
22693.0	4	I	24611.2	2	I	26805.1	3	I	33379.8	8	I
22986.3	510	I	24869.0	4	I	27494.0	7	I			

6. Finding List for Sc IV through Sc XXI

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
[2.1401]	g	XXI	21.426	4bl	XV	27.170	3	XIII	95.093	5bl	X,XI
[2.1403]	g	XXI	21.49	5d	XV	27.260		XII	97.788	2	XI
[2.1913]	g	XXI	21.521	8	XV	27.628	12	XIII	97.841	4	XI
[2.1917]	g	XXI	21.57		XV	27.911	10	XIII	98.010	0d	X
[2.2720]	g	XX	21.637	2	XVI	27.979	8	XIII	98.192	1	X
[2.3106]	g	XXI	21.670	3	XVI	28.131	15	XIII	98.210	0	X
[2.3118]	g	XXI	21.705	1	XV	28.280	10	XIII	98.323	3	X
[2.3242]	g	XX	21.732	4bl	XVI	28.324	15	XIII	98.363	0	X
[2.4456]	g	XX	21.78		XV	28.434	4	XIII	98.889	3d	X
[2.7360]	g	XXI	21.816	2	XVI	28.463	4	XIII	98.911	1	X
[2.7414]	g	XXI	21.926	4bl	XV,XVI	28.497	3	XIII	101.978	6	X
2.8717		XX	21.940	5	XII	28.566	3	XIII	102.047	0	IX
2.8827		XIX	22.016	1	XVI	28.633	2	XIII	102.653	1	IX
2.8848		XIX,XX	22.05		XV	28.748	4	XIII	104.441	3	XI
2.8964		XIX	22.061	4	XV	30.480		XII	105.145	5	XI
2.8999		XIX	22.119	4	XII	30.816		XII	105.170	2	XI
10.443		XIX	22.522	1	XVI	51.75		XIX	109.072	1	X
10.576		XIX	22.544	3	XV	51.85		XIX	109.084	50	XV
10.628		XIX	22.558	3	XIV	53.334		XI	109.202	0	X
10.785		XIX	22.657	2	XIV	54.346		XI	109.227	1	X
10.846		XIX	22.697	4	XIV	55.788		XI	109.285	3bl	X
11.204		XIX	22.754	5bl	XIV	58.082		XI	109.307	00	X
11.377		XIX	22.810		XIV	60.637		XI	109.528	200	XIV
11.777		XIX	22.839	4bl	XII,XIV	62.132	0	XI	109.765	4	X
11.845		XIX	22.926	7	XIV	62.316		XI	109.805	2	X
12.674		XIX	22.957		XIV	64.70	00	XI	109.876	1	XII
13.160	0	XIX	22.968	8bl	XIV	64.98	0	XI	109.897		X
13.236	1	XIX	23.045	1	XII	69.252	0	XI	110.030	1	XII
16.819	2	XIX	23.057		XIV	69.575	1	XI	110.306		X
16.861	2	XIX	23.156	4	XIV	70.445	2	XI	110.718	1d	IX
17.443	2	XVIII	23.271	8bl	XIV	70.509	1	XI	110.920		X
17.570	1bl	XVIII	23.422	4	XIV	71.520		XI	112.076	1	XII
17.634	2	XIX	23.536	7	XIV	71.887	0	XI	112.210		X
17.779	3	XIX	23.728	8bl	XII,XIV	74.221		XI	112.544		X
18.026		XIX	23.821	1	XII	75.02	0	XI	113.927	25bl	XII,XIV
18.182		XIX	24.061	1	XIII	76.343	1	X	114.903	8	XII
18.213	3	XVIII	24.097	9	XIII	77.87		XI	115.433	9	XII
18.337	4	XVIII	24.284	9	XIII	77.917	0	XI	115.837	20	XII
18.412	1	XVII	24.484	10	XIII	78.509	1	XI	116.069	4	XII
18.48	2bl	XVII	24.560	20	XIII	78.917	3	XI	116.445	20	XII
18.581	2	XVIII	24.648	7	XIII	83.760	0	X	116.535	12	XII
18.649	3	XVIII	24.666	9	XIII	83.901	1	X	116.760	15	XII
18.78	1	XVII	24.715	12	XIII	83.958	0	XI	117.043	1	XII
18.83	1	XVII	24.791	7	XIII	84.204	2	X	117.090	15	XVI
19.069	6	XVII	24.899	2	XIII	84.351	0	XI	117.172	20	XII
19.16	7bl	XVII	24.970	10bl	XIII,XIV	84.393	0+	XI	117.209	5	XII
19.22	6bl	XVII	24.998	2	XIII	84.433	1	XI	117.735	3	XII
19.311	9	XVII	25.079	5	XIII	85.163	4	XII	117.901	15	XII
19.598	5	XVII	25.099	6	XIII	85.456	2	XII	118.297	3	X
19.651	5	XVII	25.133	8	XIII	89.736	0d	X	118.616		X
19.732	3	XVII	25.163	1	XIII	90.727	2	XII	118.980	500	XV
19.967	3	XVII	25.200	12	XIII	91.007	3	XII	119.444	4	IX
20.149		XVI	25.242	12	XIII	92.607	4	XII	120.226	2	XII
20.224	1	XVI	25.341	8	XIII	92.787	6	XII	120.236	5	IX
20.251	bl	XVI	25.392	7	XIV	92.901	1	XII	122.671	5000	XIV
20.284		XVI	25.402	4bl	XIII,XIV	93.075	20	XII	124.140	2000	XV
20.298	2	XII	25.440	9bl	XIII,XIV	93.390	5	XII	125.817	6000	XV
20.331		XVI	25.644	3	XIV	93.393	1	IX	127.154	5	XI
20.390		XVI	25.680	2	XIV	93.506	10	XII	127.813	300	XVI
20.438	1	XII	25.921	6	XIV	93.612	3	XII	127.985	0	IX
20.458	4	XVI	25.985	6	XIV	93.699		XII	128.035	0	IX
20.597		XVI	26.056	3	XIV	93.889	1d	IX	128.246	5	XI
20.787		XVI	26.197	3	XIV	93.924	10	XII	129.751	500	XV
21.114	1	XVI	26.224	2	XIV	94.470	1	XII	130.409	50	XV
21.26		XV	26.544		XII	94.865	6	XI	130.558		X
21.372	8bl	XV	26.893	4	XIII	95.022	0	X	130.952	900	XIII
21.405	8	XV	26.920		XII	95.052	0	X	131.684	1000	XVI

Finding List for Sc IV through Sc XXI — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
132.318	4bl	X	156.436	6	XV	185.808	10	VII	228.577	5	V
132.688	2000	XVI	157.095	900	XVII	185.927	1	IV	230.357	1	XVII
133.118	2000	XV	157.820	500	XIV	185.972	200	XVI	230.622	6	XVIII
134.503	15	XVI	157.904	1500	XIV	185.990	1	V	230.854	4	V
134.767	3	X	158.136	1000	XVII	186.370	1	V	243.834	1	V
135.004	60	XVI	158.671	60	XVI	186.596	2	V	243.874	7	V
135.128	4	X	159.768	20	XVII	186.944	2	XVIII	246.431	6	V
135.631	3000	XVI	160.777	80	XVII	187.162	0	V	247.03		VI
135.921	5	X	163.062		X	187.493	0	V	247.31		VI
136.638	200	XV	163.416	4	X	188.110	1	V	247.62		VI
137.418	1	X	163.541	20	XVI	188.476	60	XV	249.60		VI
137.799	500	XIII	164.293	100bl	XVII	190.479	200	XV	250.984	6	V
137.870	2	X	164.665	300	XVI	190.654	8	VII	252.852	8	V
138.281	5	XI	164.772	3	VIII	191.038	3	V	253.745	6	V
138.380	5bl	X,XI	165.113	200	XVI	191.603	8bl	V,VII	255.650	4	V
138.662	2	X	165.395	3	VIII	191.870	0	V	257.164	4	V
138.715	150	XV	165.654	4	VIII	192.523	0	V	258.815	3	V
139.319	1d	X	166.022	2	VIII	192.607	8	VII	259.050	1	V
139.469	400	XIV	166.317	3	VIII	193.000	15	VII	260.055	1	V
139.615	500	XV	166.35	7	VI	193.204	0	V	279.75		XIX
142.617	1	XVII	166.498	1	V	193.558	400	XVII	280.992	7	V
143.324	2	IX	166.916	3	VIII	193.897	3	IV	281.327	2	VI
143.393	2	IX	167.17	4	VI	194.263	20	XVI	282.209	7	VI
143.465	500	XV	167.369	15	XVI	194.685	600	XVI	282.497	6	VI
143.888	250	XVII	167.711	0	V	195.455	3	IV	282.587	3	VI
144.913	150	XVI	168.396	4	XI	196.010	20	XVII	283.913	12	V
145.047	2000	XIV	168.942	2	XI	197.871	1	VII	283.99	0	VI
145.836	1	XVII	169.26	7	VI	198.229	5	VII	284.263	9	VI
146.052	500	XVI	169.451	90	XVII	199.163	2	VII	284.450	9	V
146.286	200	XVI	169.664	400	XVI	199.524	1	VII	284.884	6	VI
146.574	100	XVII	169.759	4	VIII	200.115	400	XVI	285.191	8	VI
146.628	3	IX	169.964	300	XV	200.559	10	XVII	286.927	10	VII
146.754	80	XV	170.25	5	VI	201.205	700	XVI	287.55	0	VIII
146.816		X	170.400	30	XVI	202.172	150	XVII	288.285	7	V
146.954	4bl	IX,X	170.54	3	VI	202.921	2	VI	289.593	9	V
146.966	150	XV	170.867	40	XVI	203.216	0	VI	289.851	15	IV
147.310	3	IX	173.245	600	XV	203.447	30bl	XVI,XVIII	290.232	8	VII
147.346	2	X	173.481	50	XV	203.467	60	XVII	290.700	6	VII
147.558	200	XV	173.771	3	IX	204.038	4	XV	291.928	8	V
147.834	2	IX	173.858	4	IX	204.310	1	VI	292.344	6bl	VI,VII
148.103	2	IX	174.111	50	XVI	204.610	0	VI	293.260	7	V
148.18	3	VI	174.437	4	V	204.719	2	VI	293.44	2	X
148.262		X	175.771	3	V	205.072	1	VI	294.292	7	VI
148.498	600	XIV	176.181	400	XVII	205.154	1	XVII	295.478	9bl	VI,VIII
150.092	bl	IX	176.455	30	XIV	207.614	30	XVIII	296.164	7	V
150.490	5000	XIV	176.834	50	XV	207.981	20	XVIII	296.311	15	IV
150.900	3	X	177.436	200	XV	209.821	2	VI	296.539	4	VII
150.939	4	X	178.631	20	XV	210.523	0	VI	297.269	7	VII
150.973	3000	XVI	178.821	2	VIII	210.531	500	XVII	298.194	8	VI
150.995	5	X	179.308	2	V	211.416	4	VI	298.428	8	VI
151.401	4	IX	179.343	20	XVI	211.612	2	VI	298.557	6	VII
151.910	1000bl	XIV,XVI	180.036	5	V	213.118	2	VI	299.037	15	IV
152.60	5	VI	180.687	800bl	XVI,XVIII	213.192	1	VI	300.008	7	V
152.702		X	180.718	2	V	213.670	15	XVIII	300.677	3	VI
152.880	2000	XIV	180.862	3	V	213.702	1	VI	301.301	3	VII
153.197	6	XV	181.165	1200	XV	215.304	5	IV	301.426	4	VI
153.210	a	IV	181.447	1	V	217.192	5	IV	301.820	5	VII
153.564	200	XVI	181.574	0	V	218.737	60	XVIII	302.436	1bl	VI,VII
153.843	3000	XV	182.285	0	V	218.837	4	VI	303.157		VIII
154.018	3000	XVII	182.743	1	VII	220.280	8	IV	304.456	1	VIII
154.29	5	VI	182.993	12	VII	221.204	3	VI	305.260	1	VIII
154.52	1	VI	183.96	5bl	VII	222.850	3	VI	307.083	6	VIII
154.849	500	XVI	184.484	1	IV	223.407	5bl	IV,VI	307.320	2d	VII
154.897		X	184.607	7	VII	223.424	50	XVII	308.180	6	VII
155.10	3	VI	185.162	3	V	223.821	20	XVII	309.161	5d	VII
155.36	1	VI	185.526	7	VII	224.612	6	XVIII	310.043	20bl	VII,VIII
155.765	4000	XV	185.575	1	VII	226.764	1	IV	311.138	8	VIII

Finding List for Sc IV through Sc XXI — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
311.947	4	VI	388.680	8	V	441.194	5	VIII	478.511	0	IV
312.239	8	VIII	389.883	10bl	VIII	441.494	7	IV	478.609	3	IV
314.049	4	VI	390.099	5	V	442.261	6	IV	478.804	2	IV
314.53	2d	VIII	390.462	3	XII	444.268	0	IV	478.895	1	V
315.163	15	VIII	390.888	8	IX	444.624	4	IV	480.106	1	IV
315.420	12	VIII	391.096	6	V	445.021	1	IV	480.542	5	V
318.408	20	VIII	392.716	5	V	445.493	2	VI	480.88	2	X
318.615	8	IX	393.161	3	XII	445.745	3	IV	481.141	0	V
319.806	4	V	394.647	8	IX	447.194	1	IV	481.321	2bl	VIII
320.645	5	V	395.327	6	V	447.560	6	VII	481.434	6	IV
324.199	12	IX	395.857	4	XII	449.30	6	X	482.069	1	V
324.570	1	IX	396.791	4	V	452.734	4	VII	482.729	0	IV
325.159	5	V	397.124	4	XII	454.125	7	VII	483.104	0	V
326.0		XIX	397.94	1	X	455.31	5	X	483.336	5	V
329.640	3	VII	399.500	7	V	456.417	2	XII	483.41	4	X
331.309	2	VI	399.563	4	XII	458.18	8	X	483.520	0	V
333.386	2	VII	399.888	6	IX	458.226	1	V	484.70	2	X
334.138	5	VII	404.201	4bl	VIII	459.42	6	X	486.525	3	VIII
335.89	5	X	410.080	4	IV	461.184	1	IV	486.605	4	V
337.89	5	X	412.468	1	IV	461.817	3	IV	486.645	3	VIII
338.12	2	X	412.868	0	IV	462.382	0	V	486.810	3	VIII
340.12	3	X	412.968	5	IV	462.570	6	IV	487.088	2bl	IV,V
341.62	2	VI	413.948	1	IV	463.118	1	IV	487.319	4	V
342.047	5	V	415.102	2	V	463.666	4	IV	487.510	1	V
342.50	7	X	415.968	7	IV	463.848	0	V	487.837	1	V
342.89	3	X	416.041	4	IX	463.934	1	IV	487.89	4	X
344.460	5	V	416.440	4	IV	464.779	1	V	487.976	4	V
345.973	4	V	416.863	2	IV	465.00	5	X	488.270	1	V
346.42	3	X	417.195	2	IV	465.485	5	IV	488.889	2	V
347.04	3	X	417.46		IX	465.983	1	V	489.541	2	V
347.95	2	X	418.811	5	IV	466.192	5	IV	489.753	6	V
348.18	3	X	419.452	1	V	466.964	3bl	IV,V	490.24	5	X
348.6		XVIII	419.524	6	IV	467.398	3	IV	490.413	3	V
352.158	2	XII	419.700	1	V	468.104	3	V	491.141	5	VII
352.48	5bl	X	419.999	5	IV	468.71	5	X	491.180	10	VIII
352.5		XVII	420.121	4	IV	469.502	2	V	491.805	1	V
352.64	3	X	420.504	5	IV	469.692	2	IV	491.949	0	V
354.18	4	X	420.807	6	IV	470.249	5	IV	492.160	4	V
357.517	0	V	421.18		IX	470.625	5	IV	492.423	13	VI
357.79	7	X	421.324	3	IV	470.780	5	VII	493.283	3	V
358.107	2	VIII	422.027	5	IV	471.12	2	X	493.852	5	V
358.86	2	X	422.507	2	IV	471.318	0	V	493.995	5	V
362.300	2	VIII	422.626	3	IV	471.632	2	IV	494.295	5	VIII
364.203	2	XII	422.63	10	X	471.790	5	IV	494.380	2	V
367.085	3	VIII	425.520	4	IV	472.814	8	VII	494.430	2	VIII
368.070	4	V	426.088	0	V	473.000	5	IV	494.621	4	V
370.023	3	V	426.256	4	IX	473.355	1	V	495.453	0	V
370.169	5	VIII	426.685	4	IV	473.989	0	V	495.820	5	V
371.160	10	IV	426.86		IX	474.120	4	IV	496.462	6	V
372.939	3	XI	427.376	5	V	474.250	3	IV	496.761	5	V
373.442	2	V	429.281	2	IV	474.533	4	IV	497.141	5	V
374.345	1	XII	431.780	5	IV	474.679	5bl	IV,V	497.369	2	VII
374.660	6	VIII	432.042	2	V	474.844	0	V	497.546	3	V
375.044	8bl	V,VI	432.878	1	V	474.980	0	V	498.093	3	V
376.615	6	V	433.749	0	IV	475.176	2	IV	498.190	5	V
378.023	5	V	434.096	1	V	475.32	3	X	498.407	0	V
378.099	2	XII	434.395	5	IV	475.462	2	IV	499.549	0	V
378.668	6	V	436.144	5	IV	475.788	4	IV	499.645	5	VII
379.570	5	V	436.586	4	V	476.002	2	V	500.015	1	XII
381.577	7	XI	437.160	0	IV	476.05	2	X	501.598	3	V
382.479		XI	438.477	3	IV	476.18	4	X	502.719	1	V
383.58	4	X	438.660	2	IV	476.210	3	IV	504.839	4	V
384.307	6	V	438.789	9	IV	477.271	0	V	505.105	4	XI
384.969	7	V	438.972	5	IV	477.357	1	V	505.593	3	V
385.486	3	XII	439.215	0	V	477.564	1	IV	507.35	5	X
385.867	6	IX	439.836	1	IV	477.764	4	IV	509.804	0	V
385.906	3	V	441.185	7	IV	478.299	7	IV	511.057	1	V

Finding List for Sc IV through Sc XXI — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
511.2	M1	XVI	544.453	1	V	576.666	0	V	689.060	0	IV
512.495	1	V	545.485	5	V	576.86	6	X	691.365	0	V
513.109	2	V	545.690	4	V	577.438	0	V	691.550	0	IV
514.034	4	V	545.779	4	V	578.773	1	V	692.089	2	IV
515.045	3	XII	546.016	3	V	579.427	4	IV	692.453	5	IV
515.196	1	V	546.443	2	V	580.102	6	V	693.201	4	IV
517.179	5	XII	547.356	2	V	580.282	2	V	694.255	0	IV
518.900	0	V	547.969	1	XII	580.518	4	V	694.798	0	IV
520.176	6	V	549.069	3	XII	580.649	4	V	694.949	0	IV
520.191	2bl	XII	549.736	1	V	581.020	4	V	695.391	1	IV
520.674	3	XII	550.144	2	V	581.393	12	VI	695.626	6	IV
521.894	8	IX	551.295	2	V	582.333	1	V	697.630	0	IV
522.399	1	V	552.372	0	V	584.319	1	V	698.698	3	IV
522.778	2	XI	552.853	1	V	584.626	0	V	700.051	7	IV
523.447	5	V	553.719	3	V	584.826	8	IV	701.194	3	IV
524.315	5	V	554.226	4	V	585.052	5	V	705.651	3	IV
524.430	4	V	555.454	2	V	586.158	2	V	705.846	3	IV
524.764	2	XII	555.602	1	V	586.235	1	V	706.411	0	V
525.420	6	V	555.672	7	VIII	586.363	3	V	706.922	1	V
525.486	6	V	555.982	3	V	586.820	2	V	707.673	5	IV
526.212	6	V	556.157	2	V	586.97	4	X	711.375	1	V
526.236	4	V	557.281	3	V	587.466	1	V	712.122	2	IV
526.388	6	IV	557.505	8	IV	587.716	2	V	712.452	0	IV
527.010	6	V	557.657	0	V	587.936	12	V	714.805	7	IV
527.879	7	IV	557.775	3	V	588.10	1	X	716.880	0	IV
528.246	1	V	557.984	5	V	588.123	2	V	717.436	0	V
528.287	6	IV	558.044	10	VII	588.676	3	V	718.128	3	IV
528.528	6	V	559.179	2	V	589.205	1	V	722.881	2	IV
528.665	5	V	560.652	4	V	589.576	4	V	724.561	3	IV
528.832	0	V	560.745	0	V	589.788	3	V	726.440	0	V
528.956	0	V	561.160	12	VI	589.868	5	V	733.881	4	IV
529.041	0	V	561.428	0	V	591.383	5	V	736.41	3	X
529.174	6	V	561.891	4	IV	591.492	4	V	740.228	3	IV
529.452	4	V	562.266	0	V	591.789	4	V	747.596	1	IV
529.858	4	V	562.504	12	VII	593.472	0	V	750.698	2	IV
530.348	2	V	562.547	10	VIII	594.100	1	V	751.027	2	IV
530.526	1	V	562.640	7	IV	595.076	3	V	754.419	6	IV
530.639	6	V	562.777	4	VIII	595.651	2	V	756.616	0	IV
530.958	1	V	562.827	6	V	595.96	3	X	757.505	6	IV
531.170	7	IV	562.916	4	V	596.530	4	VII	761.428	8	IV
531.833	6	IV	563.238	3	V	596.60	1	X	761.863	2	IV
532.245	2	IV	563.990	4	V	597.102	3	V	768.515	5	IV
532.585	2	VII	565.125	4	V	598.707	6	VII	769.696	8	IV
532.667	0	V	566.011	1	V	599.027	0	V	771.582	4	IV
533.050	1	V	566.360	0	V	601.528	2	XII	779.393	1	IV
533.150	4	V	566.773	12bl	IV,VI	606.5	M1	XIV	785.122	10	IV
533.442	12bl	V,VII	567.251	6	IV	615.694	3	IV	789.001	8	IV
534.513	12	VII	567.476	1	V	617.081	9bl	IV	791.706	8	IV
534.700	0	V	568.049	2	V	621.125	0	V	793.747	1	V
535.377	2	VII	569.148	2	V	622.598	5	IV	793.851	6	IV
535.722	3	V	569.979	3	V	623.377	4	IV	796.245	2	V
536.070	4	V	570.094	0	V	623.507	6	IV	799.920	6	IV
536.568	4	V	570.300	15	VI	623.951	6	IV	802.108	0	IV
536.689	3	V	570.627	4	VI	624.5		X	806.282	0	V
536.982	10	IX	571.249	12	VII	628.834	5	IV	819.390	0	V
537.418	0	V	571.442	12	VIII	632.025	0	V	842.555	2	V
538.075	1	IX	571.562	0	V	643.183	1bl	VIII	846.411	1	IV
539.190	5	V	571.900	11	VI	645.421	1	V	852.980	4	IV
539.824	1	V	572.232	5	V	646.549	0	V	854.760	2	V
540.012	0	V	572.667	7	IV	649.001	0	V	857.434	6	IV
540.567	0	V	572.987	2	VIII	649.469	0	V	861.007	4	IV
540.775	2	V	573.206	0	VIII	659.687	0	V	861.243	8	IV
541.136	3	V	573.355	15	V	671.405	0	V	861.298	8	IV
541.305	7	V	574.101	6	V	681.323	1	IV	866.619	5	IV
542.082	6	V	574.382	5	V	685.654	4	IV	874.981	2	IV
542.672	7	V	574.669	6	IV	686.377	1	IV	876.674	1	IV
544.061	7	V	575.556	12	VI	688.867	3	IV	879.675	7	IV

Finding List for Sc IV through Sc XXI — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
880.236	7	IV	1276.440	7	V	1422.850	0	V	1736.720	4	V
882.995	1	V	1277.075	7	V	1424.663	9	IV	1744.732	6	V
884.816	0	V	1277.258	6	V	1424.987	4	V	1746.233	8	IV
887.121	3	IV	1278.784	4	IV	1428.509	7	V	1746.917	1	V
888.486	1	V	1279.360	7	V	1432.065	5	V	1771.103	7	IV
890.866	8	IV	1280.982	9	V	1435.890	1	IV	1774.203	1	V
898.971	1	V	1282.611	4	V	1442.769	1	IV	1774.399	0	IV
899.8	M1	XV	1285.255	8	V	1444.096	9	IV	1775.355	1	V
900.948	3	IV	1285.595	6	IV	1445.003	4	IV	1780.469	4	IV
903.165	4	IV	1287.799	7	V	1445.877	3	V	1782.342	7	V
903.687	5bl	IV	1292.416	1	V	1446.475	0	V	1782.752	1	V
905.922	2	IV	1294.140	2	V	1453.861	7	IV	1786.248	4	V
908.731	5	IV	1294.480	2	V	1458.212	1	IV	1804.636	3	IV
917.495	1	IV	1295.026	5	V	1459.574	1	V	1815.406	1	V
917.777	3	IV	1296.746	6	V	1461.931	4	IV	1819.910	3	IV
920.665	1	IV	1297.578	5	V	1469.646	1	V	1822.243	6	V
931.418	4	IV	1298.524	8	V	1472.456	4	IV	1828.944	0	V
934.391	2	IV	1300.393	2	IV	1476.607	0	V	1834.960	4	V
994.282	0	V	1301.993	2	V	1482.042	7	IV	1850.620	4	V
1111.394	2	V	1309.724	7	V	1489.637	8	IV	1852.015	0	V
1122.037	0	V	1311.839	7	V	1492.247	7	IV	1865.746	2	V
1135.482	1	V	1313.982	7	V	1493.722	0	IV	1865.912	6	V
1139.449	6	IV	1315.303	8	V	1494.854	2	IV	1867.407	6	V
1148.129	3	V	1317.742	7	IV	1497.260	1	IV	1874.859	6	V
1150.271	0	V	1319.316	6	V	1497.834	3	V	1905.521	6	IV
1153.459	0	V	1319.853	0	IV	1507.156	2	IV	1939.088	7	IV
1155.237	6	V	1320.540	7	V	1514.961	8	IV	1941.374	7	V
1165.318	2	V	1322.365	9	V	1520.555	2	V	1957.027	4	V
1188.326	4	V	1322.588	1	IV	1535.001	0d	IV	1962.755	0	V
1189.261	8	V	1323.033	2	V	1535.762	8	IV	1972.679	7	V
1195.869	1	IV	1323.922	8	V	1536.126	1	IV	1974.996	1	V
1200.316	3	V	1324.987	8	V	1537.853	2	V	1982.704	1	IV
1205.346	1	V	1325.186	2	V	1543.130	2	V	1983.623	6	IV
1208.521	2	IV	1325.972	8	V	1543.861	9	IV	1989.809	5	IV
1212.619	0	V	1326.315	9	V	1549.552	9	IV	1995.019	7	V
1219.399	8	IV	1327.921	6	V	1550.797	15bl	IV	1995.567	0	IV
1223.945	5	V	1330.122	0	V	1552.884	1	IV	1997.832	6	V
1226.682	0	V	1332.222	2	V	1553.470	0	IV	2020.587	6	V
1227.778	5	V	1334.252	5	V	1555.724	8	IV	2025.622	0	V
1228.204	9	IV	1335.330	1	V	1559.014	0	IV	2026.680	0	V
1230.355	6	V	1336.259	2	IV	1560.916	1	IV	2028.237	7	V
1230.442	6	V	1337.692	4	V	1562.911	0	IV	2034.071	2	V
1233.376	6	IV	1338.617	10	V	1563.811	9	IV	2035.095	3	IV
1235.627	5	IV	1340.968	3	V	1564.942	0	IV	2050.600	10	V
1236.340	6	V	1341.105	0	V	1566.155	2	IV	2056.058	10	IV
1239.466	2	V	1346.129	2	V	1572.067	5	V	2063.202	5	V
1239.613	0	V	1346.614	8	V	1574.587	1	IV	2072.739	7	IV
1242.214	5	V	1348.580	1	V	1574.923	10	IV	2078.924	8	IV
1245.661	6	IV	1349.474	6	V	1577.275	7	IV	2082.222	7	V
1246.224	3	IV	1351.806	9	V	1582.030	6	V	2082.576	6	V
1246.605	1	V	1361.387	6	V	1583.407	9	IV	2088.084	4	V
1247.023	3	V	1364.938	5	V	1584.645	8	IV	2111.961	3	IV
1251.193	6	V	1367.603	5	V	1585.590	0	V	2113.186	7	IV
1253.195	7	IV	1370.772	1	V	1588.304	0	IV	2118.968	12	IV
1255.663	1	IV	1375.303	7	V	1588.312	0	V	2124.393	6	IV
1260.248	0	IV	1377.582	4	V	1592.233	8	IV	2135.452	3	V
1261.384	7	V	1390.552	1	V	1593.593	5	V	2140.342	7	V
1263.082	7	V	1392.293	0	V	1598.347	2	IV	2149.152	3	V
1265.861	3	V	1404.538	5	V	1611.550	1bl	IV	2160.256	2	V
1267.628	5	IV	1409.376	6	V	1635.693	5	V	2164.433	9	IV
1268.382	6	V	1415.477	1	IV	1642.987	6	V	2171.170	6	IV
1269.801	6	V	1416.381	0	V	1656.457	1	IV	2185.430	11	IV
1270.408	4	IV	1417.041	1	V	1660.708	8	IV	2190.5	M1	XVII
1271.921	3	V	1417.824	5	IV	1665.918	10	IV	2205.464	11bl	IV,V
1272.155	4	V	1419.537	6	IV	1676.457	5	V	2222.215	14	IV
1273.181	6	V	1422.231	3	V	1687.163	6	IV	2260.282	7	IV
1274.124	0	V	1422.343	2	IV	1707.068	1	V	2271.331	11	IV

Finding List for Sc IV through Sc XXI — Continued

Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum	Wavelength (Å)	Int.	Spectrum
[illegible]968	1	IV	2678.013	8	IV	2978.811	0	IV	4872.980	5	IV
[illegible]108	6	IV	2713.606	0	IV	2991.980	3	IV	5033.917	5	IV
[illegible]504	6	IV	2722.693	2	IV	2996.074	3	IV	5187.739	4	IV
[illegible]119	1	IV	2723.517	8	IV	3000.324	1	IV	5341.431	5	IV
[illegible]456	4	IV	2728.794	3	IV	3000.754	1	IV	5477.711	1	IV
[illegible]731	6	IV	2755.070	3	IV	3009.841	2	IV	5501.743	8	IV
[illegible]918	5	IV	2761.927	0	IV	3028.900	2	IV	5620.724	9	IV
[illegible]287	7	IV	2773.036	8	IV	3067.482	0	IV	5677.516	4	IV
[illegible]135	3	IV	2809.960	7	IV	3078.356	1	IV	5705.793	7	IV
[illegible]237	4	IV	2812.318	6	IV	3206.1	M1	XIV	5706.823	10	IV
[illegible]342	6	IV	2817.539	6	IV	3224.850	0d	IV	5718.435	3	IV
[illegible]962	6	IV	2837.021	6	IV	3301.038	0	IV	5771.627	14	IV
[illegible]429	4	IV	2844.683	5	IV	3390.248	0	IV	5908.472	7	IV
[illegible]415	2	IV	2848.159	7	IV	3826.622	5	IV	6025.636	7	IV
[illegible]200	0	IV	2856.162	0	IV	4072.801	0	IV	6548.032	9	IV
[illegible]147	2	IV	2873.900	6	IV	4354.3	M1	XVI	6972.779	0	IV
2464.459	9	IV	2888.304	0	IV	4530.3	M1	XVI	7267.572	0	IV
2467.362	0d	IV	2905.308	1	IV	4576.659	3bl	IV	7612.663	0bl	IV
[illegible]927	8	IV	2906.536	7	IV	4577.726	4bl	IV	7639.976	0bl	IV
[illegible]438	0	IV	2907.9	M1	XVIII	4594.420	8bl	IV	7654.284	0bl	IV
2586.933	11	IV	2918.021	6	IV	4612.366	4bl	IV	7678.338	1bl	IV
2595.167	9	IV	2918.710	7	IV	4612.634	5bl	IV	7683.782	0bl	IV
2632.331	3	IV	2922.195	0	IV	4614.108	4bl	IV	7689.282	2bl	IV
2637.2	M1	XIII	2934.407	0	IV	4614.728	3bl	IV	7703.943	2bl	IV
2645.799	5	IV	2947.870	0	IV	4620.295	5bl	IV	7714.772	1bl	IV
2664.058	6	IV	2955.388	3	IV	4620.918	4bl	IV	7726.160	1bl	IV
2664.970	1	IV	2959.341	1	IV	4639.439	2	IV			
2670.527	3	IV	2972.913	0	IV	4639.961	8bl	IV			