Energy Levels and Observed Spectral Lines of Neutral and Singly Ionized Chromium, Cr I and Cr II

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The energy levels and observed spectral lines of neutral and singly ionized chromium atoms have been compiled. Tables of energy levels and spectral lines are generated for each stage. Experimental g-factors and leading percentages are included when available. An experimental value for the ionization energy for each stage is provided. © 2012 by the U.S. Secretary of Commerce on behalf of the United States. All rights reserved. [http://dx.doi.org/10.1063/1.4754694]

Key words: compilation; Cr; chromium; critically evaluated data; energy levels; observed spectral lines; singly ionized chromium; spectra.

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1. Introduction

1.1. Discussion

In 1952 Moore [52MOO] published a compilation of the energy levels of neutral chromium and some of its ions. This work was updated by Sugar and Corliss [85SUG/COR] in 1985. In 1970 Zaidel et al. [70ZAI/PRO] presented a compilation of chromium lines. Since these compilations were completed, additional measurements of neutral and singly ionized Cr were made at much higher resolution using Fourier transform spectrometers. This work leads to more precise values of the energy levels and many more classified lines.

The collection of lines and preliminary energy levels for neutral chromium was completed in July 2010. The collection for singly ionized chromium was completed in November 2010 but updated with new measurements provided in December 2011.

Only experimentally derived energy levels are used. We tabulate only those lines that have wavelengths consistent with differences in the tabulated levels. Decisions are made about which of several possible classifications to include by calculating the respective transition probabilities with the Cowan code [81COW]. As a result of this process, in a few cases the line classifications may differ from those given in the stated references. The coupling scheme used to describe the levels is usually LS coupling, also known as Russell-Saunders coupling [81COW], except for five levels in singly ionized chromium that are described using pair coupling [81COW].

The final energy levels of neutral chromium were determined by means of a least squares adjustment of preliminary levels using the observed spectral lines. For singly ionized chromium the values of Sansonetti et al. [12SAN/NAV] were used with a few additional levels determined from observed transitions involving these values.

The values compiled here are for the natural isotope mix of chromium. The natural isotope composition of chromium is

4

14

15

115

126

126

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83.79(2)% Cr^{52} , 9.50(2)% Cr^{53} , 4.35(2)% Cr^{50} , and 2.36(1)% Cr^{54} [10COU/SCH].

For the first ionization energy we try to provide the best available experimental values. We do not average experimental values by different authors.

All energy levels are given in customary units of cm⁻¹ and all wavelengths in units of Å (0.1 nm). As reported in Mohr *et al.* [07MOH/TAY], the unit cm⁻¹ is related to the SI unit for energy, the joule, by 1 cm⁻¹ = (1.986 445 501 \pm 0.000 000 099) \times 10⁻²³ J. Ionization energies are provided in both cm⁻¹ and eV. We use the conversion factor (8 065.544 65 \pm 0.000 20) cm⁻¹/eV as determined by Mohr *et al.* [07MOH/TAY].

Although often difficult to ascertain, uncertainties in the referenced publication of energy levels and lines are likely 1σ values. In many cases only the number of decimal places indicates the uncertainty in the quoted values. We generally use a "rule of 20" whereby an uncertainty of greater than 20 in the least significant digit serves as the criterion for dropping that digit.

The text for each ion does not attempt to provide a complete review of all work on that stage of ionization. Rather, it intends to credit the major contributions, especially those from which values are included in the line and level tables.

1.2. References for Introduction

52MOO C. E. Moore, Atomic Energy Levels Vol. II, National Bureau of Standards, (U.S.) Circular No. 467 (U.S. Government

Printing Office, Washington, DC, 1952).

70ZAI/PRO A. N. Zaidel', V. K. Prokof'ev, S. M. Raiskii, V. A. Slavnyi, and E. Ya. Shreider, *Tables of Spectral Lines* (IFI/Plenum, New York, 1970).

81COW R. D. Cowan, *The Theory of Atomic Structure and Spectra* (University of California, Berkeley, 1981).

85SUG/COR J. Sugar and C. Corliss, J. Phys. Chem. Ref. Data **14** (Suppl. 2), pp. 664 (1985).

(Suppl. 2), pp. 004 (1963).

07MOH/TAY P. J. Mohr, B. N. Taylor, and D. B. Newell (2007), "The 2006 CODATA Recommended Values of the Fundamental Physical Constants" (Web Version 5.2). This database was developed by J. Baker, M. Douma, and S. Kotochigova. Available: http://physics.nist.gov/constants [2009, July 13]. National Institute of Standards and Technology, Gaithers-

burg, MD, 20899.

10COU/SCH J. S. Coursey, D. J. Schwab, J. J. Tsai, and R. A. Dragoset, Atomic Weights and Isotopic Compositions (version 3.0) National Institute of Standards and Technology, Gaithersburg, MD, 20899, 2010); Available: http://physics.nist.gov/ Comp [2010, September 20].

12SAN/NAV C. J. Sansonetti, G. Nave, J. Reader, and F. Kerber, Astrophys. J. Suppl. Ser. 202, 15 (2012).

2. Explanation of Tables of Compiled Levels and Lines

2.1. Discussion

In the energy level tables the first column provides the energy level in units of cm⁻¹. The values have been rounded using the "rule of 20." The second column gives the uncer-

tainty of the energy level. The third column provides the parity of the energy level; "0" signifies even parity and "1" signifies odd parity. The next three columns specify the configuration, term, and J value of the level. The seventh column provides the magnetic Landé g-factor of the level (when known). When the information is available (as a result of calculations), we provide under the heading "Leading percentages" the eigenvector percentage composition of the level. We first give the percentage of the basis state used to name the level. Then we give that of the next highest basis state (or in some cases the highest) along with the classification of this basis state. Note that in some cases if the next highest is only a few percent, it is not specified in the source and so it is not included here. Note that when there are many terms with the same designation, in order to easily distinguish between them, we use "a" for the lowest energy even parity term and "b," "c," etc. for the next lowest ones. For odd parity terms we use "z" for the lowest with "y," "x," etc. for the next lowest ones. The use of seniority numbers in configuration and term designations follows the conventions of Nielson and Koster [63NIE/KOS].

In the line tables wave numbers between 5000 cm⁻¹ and 50000 cm⁻¹ (wavelengths between approximately 2000 Å and 20000 Å) are in air. All others are vacuum wavelengths. The first column is the observed wavelength in angstroms (Å). The second column is the vacuum wave number corresponding to the observed wavelength. The wave numbers are provided in units of cm⁻¹. The conversion between air wavelengths and vacuum wavelengths and wave numbers is made using the three-term formula given in Eq. (3) of Peck and Reeder. [72PEC/REE] The quoted wavelength uncertainties do not include the uncertainty in the vacuum to air conversion of wavelengths. The wave number values are rounded to the appropriate number of significant digits using the "rule of 20." The third column is the relative intensity assigned to the line. Some authors use an intensity of "0" to indicate an intensity somewhat less than one (but not zero intensity). An intensity of "00" is used to indicate an even smaller intensity. This system is maintained in this compilation. Also included here are codes which are defined for each ion. The next six columns specify the classification of the transition responsible for the line by providing the configuration, term, and J value first for the lower level and then for the upper level. The next-to-last column is an estimate of the uncertainty in the wavelength of the observed line. The last column identifies the source of the observed line. Some transitions may appear to be forbidden as listed (e.g., two-electron transitions) but are allowed since the designation of the levels often only specifies the leading component of a mixed level (see the energy level tables).

2.2. References for Section 2

63NIE/KOS C. W. Nielson and G. F. Koster, *Spectroscopic Coefficients* for the p", d", and f" Configurations (MIT, Cambridge, MA, 1062)

72PEC/REE E. R. Peck and K. Reeder, J. Opt. Soc. Am. **62**, 958 (1972)

3. Tables of Energy Levels and Observed Lines of Neutral Chromium, Cr I

3.1. Discussion

Ground state $1s^22s^22p^63s^23p^63d^54s$ a⁷S₃

Ionization energy 54575.6 cm⁻¹ \pm 0.3 cm⁻¹ (6.766 51 eV \pm 0.000 04 eV) [75HUB/SAN].

The energy levels of neutral chromium, Cr I, were compiled by Sugar and Corliss [85SUG/COR] based largely on the work of Kiess [53KIE], Huber *et al.* [75HUB/SAN], and Mansfield [78MAN]. Recent measurements of archived Fourier transform spectra of Cr I by Wallace and Hinkle [09WAL/HIN] have provided wavelength values with much smaller uncertainties. The preliminary levels for this fit were obtained from the work of Wallace and Hinkle [09WAL/HIN] and the compilation of Sugar and Corliss [85SUG/COR].

In the energy level table (Table 1) the levels are designated using LS coupling.

The observed spectral lines of Cr I are compiled from eight sources [53KIE], [75HUB/SAN], [78MAN], [95SCH/THO], [98ALL/GAR], [00WAG], [09WAL/HIN], [10HAS/WAL]. The sources used in this compilation are summarized in Table 2 (sources of Cr I lines). We only include observed lines. Table 2 specifies the reference from which the lines were obtained, the number of classifications that apply to lines from this reference, the light source used to produce the lines and the spectrometer used to observe them, the wavelength range from which lines from this reference are included in the table of lines, and the range of uncertainties for these lines in the lines table. Twenty-two lines that were inconsistent with the fit were removed from the line table (Table 3).

Wagatsuma [00WAG] observed lines and provided intensities for them but the wavelength values quoted are calculated from the energy levels of Sugar and Corliss [85SUG/COR] (Ritz values). We include these lines in our list but do not use them in the fit.

The uncertainties quoted for the Wallace and Hinkle [09WAL/HIN] lines are estimated from the deviations of lines of similar intensities from their Ritz values. An additional uncertainty was added to lines between 2366 Å and 5044 Å due to calibration uncertainty in this region. The uncertainty was doubled for asymmetric lines.

Connerade *et al.* [81CON/BAI], Bruhn *et al.* [82BRU/SCH], and Baig *et al.* [90BAI/RAS] report absorption measurements of some highly excited levels above the ionization energy. These levels are not included in our levels table.

The priority in our choice of lines which appear in more than one reference is in general specified as follows: [09WAL/HIN] over [98ALL/GAR] over [95SCH/THO] over [75HUB/SAN] over [53KIE] over [00WAG] over [78MAN], and finally [10HAS/WAL].

Lines from several other references [10SHA/HIL], [09SAH/LAM], [03WAG], [96WAL/LIV], [85BIE/BRA] were superseded by those from the above.

All candidate lines were passed through a program to determine if they correspond to a transition between the known

Cr I levels. Only classifiable lines are included in our compilation. Other lines are listed in the references but are not included since we cannot be sure that they are from Cr I when they do not fit the known levels.

Transition probability calculations using the Cowan codes [81COW] were used to help resolve choices between multiple possible classifications of lines.

Intensities have been taken from the stated sources and therefore are not on a common scale. Since no intensities were provided by Allende Prieto and Garcia López [98ALL/GAR], when available we used the intensities of Kiess [53KIE] for their lines.

The intensity codes given in the Cr I line table are taken from the specified sources. Their meaning is stated below:

| Code | Definition |
|------|--|
| A | Observed in absorption |
| D | Double |
| h | Hazy |
| H | Very hazy |
| I | Shows isotopic structure |
| 1 | Shaded to longer wavelengths |
| q | Asymmetric |
| r | Self reversed |
| R | Quoted wavelength calculated from energy levels (Ritz) |
| S | Shaded to shorter wavelengths |
| w | Wide |
| ? | Line may not be real |
| * | Multiply classified line (two or more classifications of this line share the same intensity) |

Once the classified line list was complete, a least squares adjustment of the energy levels was made using a modified version of the level optimization program ELCALC [69RAD]. This is an iterative procedure that minimizes the differences between the observed wave numbers and those predicted from the optimized level values. In the first iteration, the lines are weighted according to the inverse square of the uncertainties of their wave numbers. For succeeding iterations, the weight assigned to each line in determining a given level is recalculated based on both the uncertainty of the wave number and the uncertainty determined for the combining level of opposite parity in the previous iteration. Following Wallace and Hinkle [09WAL/HIN], 15 lines noted as being asymmetric were removed from the fit since their wavelengths were somewhat uncertain. Also the 80 lines taken from Wagatsuma [00WAG] were not included in the fit since their quoted wavelengths were obtained from the energy levels of Sugar and Corliss [85SUG/COR] (Ritz values).

The values of g_J and the leading percentages included in the level table were compiled by Sugar and Corliss [85SUG/COR].

The ionization energy was obtained by Huber *et al.* [75HUB/SAN] from absorption measurements of the Cr I $3d^5(^6S)np$ $^7P^o$ Rydberg series of levels.

Collection of lines and levels was completed in July 2010.

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{j} | | T. | eading percentages | |
|----------------------------------|---------------------------------|--------|---|--------------------------------------|--------|---------|------------|----|--------------------|----------------|
| 0.0000 | 0.0011 | 0 | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | 2.00183 | 100 | | caung percentages | |
| 7593.1484 | 0.0006 | 0 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | 2.006 | 100 | | | |
| 20517.4222 | 0.0007 | 0 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | 0.37 | 100 | | | |
| 20519.5515 | 0.0006 | 0 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | 1.33 | 100 | | | |
| 20520.9029 | 0.0005 | 0 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | 0.93 | 100 | | | |
| 20523.6290 | 0.0005 | 0 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | 1.13 | 100 | | | |
| 20523.8999 | 0.0005 | 0 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | 1.25 | 100 | | | |
| 21840.8096 | 0.0004 | 0 | $3d^5(^4P)4s$ | a ⁵ P | 3 | 1.6 | 96 | | | |
| 21847.8349 | 0.0004 | 0 | $3d^5(^4P)4s$ | a ⁵ P | 2 | 1.847 | 98 | | | |
| 21856.9287 | 0.0005 | 0 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | 2.500 | 100 | | | |
| 24277.0546 | 0.0009 | 0 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | | 100 | | | |
| 24282.3486 | 0.0005 | 0 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | 1.51 | 100 | | | |
| 24286.5418 | 0.0006 | 0 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | 1.48 | 100 | | | |
| 24299.8419 | 0.0005 | 0 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | 1.51 | 98 | | | |
| 24303.9025 | 0.0004 | 0 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | 1.55 | 98 | | | |
| 24833.7957 | 0.0006 | 0 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | | 100 | | | |
| 24897.4635 | 0.0006 | 0 | $3d^{5}(^{4}G)4s$ | a ³ G a ³ G | 4 | | 100 | | | |
| 25038.4981 | 0.0008 | 0 | 3d ⁵ (⁴ G)4s 3d ⁵ (⁴ P)4s | a ³ G b ³ P | 5 | | 100 | | | |
| 27163.1052 | 0.0008 | 0 | $3d^{5}(^{4}P)4s$ $3d^{5}(^{4}P)4s$ | b ³ P | 0 | | 100 | | | |
| 27176.1072 27222.9417 | 0.0005 0.0005 | 0 0 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 2 | | 100 98 | | | |
| 28636.9634 | 0.0003 | 0 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | | 100 | | | |
| 28679.4239 | 0.0006 | 0 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | | 100 | | | |
| 28682.2050 | 0.0005 | 0 | $3d^{5}(^{4}D)4s$ | a D a ³ D | 2 | | 98 | | | |
| 31008.9708 | 0.0003 | 0 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | | 56 | 18 | $3d^5(^2D1)4s$ | ^{3}D |
| 31028.2590 | 0.0007 | 0 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | | 50 | 24 | $3d^{5}(^{4}F)4s$ | 5 F |
| 31047.9572 | 0.0014 | 0 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | | 100 | 24 | 3a (17)43 | 1. |
| 31048.7488 | 0.0009 | 0 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | | 45 | 41 | $3d^5(^4F)4s$ | ⁵ F |
| 31049.2155 | 0.0014 | 0 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | | 100 | | 34 (1)15 | • |
| 31055.2777 | 0.0012 | 0 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | | 100 | | | |
| 31352.3828 | 0.0018 | 0 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | | 59 | 31 | $3d^5(^2D3)4s$ | ^{3}D |
| 31355.1192 | 0.0013 | 0 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | | 74 | 12 | $3d^5(^2D3)4s$ | ^{3}D |
| 31364.2327 | 0.0011 | 0 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | | 88 | 6 | $3d^5(^2D3)4s$ | ^{3}D |
| 31377.8624 | 0.0010 | 0 | $3d^5(^4F)4s$ | a ⁵ F | 4 | | 100 | | | |
| 31393.2968 | 0.0009 | 0 | $3d^5(^4F)4s$ | a ⁵ F | 5 | | 100 | | | |
| 33039.969 | 0.002 | 0 | $3d^5(^2F1)4s$ | b ³ F | 2 | | 79 | 14 | $3d^5(^2D3)4s$ | ^{3}D |
| 33060.661 | 0.003 | 0 | $3d^{5}(^{2}F1)4s$ | b ³ F | 3 | | 83 | 13 | $3d^5(^2D3)4s$ | ^{3}D |
| 33113.212 | 0.003 | 0 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | | 100 | | | |
| 33762.6622 | 0.0015 | 0 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | | 100 | | | |
| 35807.707 | 0.011 | 0 | $3d^{5}(^{4}F)4s$ | $c_{3}^{3}F$ | 2 | | 100 | | | |
| 35813.685 | 0.010 | 0 | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | | 100 | | | |
| 35862.764 | 0.002 | 0 | $3d^{3}(^{4}F)4s$ | c ³ F | 4 | | 98 | | | |
| 35870.458 | 0.003 | 0 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | | 98 | | | |
| 35884.255 | 0.003 | 0 | $3d^{5}(^{2}\text{H})4s$ | b ³ H b ³ H | 5 | | 98 | | | |
| 35933.906 | 0.003 | 0 | 3d ⁵ (² H)4s 3d ⁵ (² F2)4s | d ³ F | 6 | | 100 | | | |
| 36552.1351 36558.446 | 0.0017 0.003 | 0 0 | $3d^{5}(^{2}F2)4s$ $3d^{5}(^{2}F2)4s$ | d ³ F | 3 2 | | 100 100 | | | |
| 36577.6545 | 0.003 | 0 | $3d^{5}(^{2}F2)4s$ | d ³ F | 4 | | 100 | | | |
| 37205.851 | 0.007 | 0 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | | 98 | | | |
| 37233.423 | 0.004 | 0 | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | | 96 | | | |
| 37244.011 | 0.005 | 0 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | | 98 | | | |
| 38537.591 | 0.003 | 0 | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | | 98 | | | |
| 39158.64 | 0.05 | 0 | $3d^5(^2G2)4s$ | b ¹ G | 4 | | 98 | | | |
| 7750.7465 | 0.0009 | 0 | $3d^44s^2$ | a ⁵ D | 0 | | ,,, | | | |
| 7810.7795 | 0.0006 | 0 | $3d^44s^2$ | a ⁵ D | 1 | 1.50060 | | | | |
| 7927.4410 | 0.0005 | 0 | $3d^44s^2$ | a ⁵ D | 2 | 1.50060 | | | | |
| 8095.1842 | 0.0005 | 0 | $3d^44s^2$ | a ⁵ D | 3 | 1.50060 | | | | |
| 8307.5753 | 0.0006 | 0 | $3d^44s^2$ | a ⁵ D | 4 | 1.50060 | | | | |
| 23163.2205 | 0.0015 | 0 | $3d^44s^2$ | a ³ P | 0 | | | | | |
| 23511.9739 | 0.0009 | 0 | $3d^44s^2$ | a ³ P | 1 | | | | | |
| 23933.8561 | 0.0008 | 0 | $3d^44s^2$ | a ³ H | 4 | | | | | |
| 24056.0404 | 0.0008 | 0 | $3d^44s^2$ | a ³ H | 5 | | | | | |
| 24093.1182 | 0.0007 | 0 | $3d^44s^2$ | a ³ P | 2 | | | | | |
| 24200.1980 | 0.0008 | 0 | $3d^44s^2$ | a ³ H | 6 | | | | | |
| 24940.594 | 0.002 | 0 | $3d^44s^2$ | a ³ F | 2 | | | | | |

Table 1. Energy levels of Cr I—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | $g_{\rm j}$ | | Le | eading percentages | |
|----------------------------------|---------------------------------|--------|--|-------------------------------|--------|-------------|----------|----------|--|--|
| 25106.2953 | 0.0008 | 0 | $3d^44s^2$ | a ³ F | 3 | | | | - | |
| 25177.3539 | 0.0010 | 0 | $3d^44s^2$ | a ³ F | 4 | | | | | |
| 27597.2409 | 0.0008 | 0 | $3d^44s^2$ | b ³ G | 3 | | | | | |
| 27703.7743 | 0.0007 | 0 | $3d^44s^2$ | b ³ G | 4 | | | | | |
| 27816.7783 | 0.0007 | 0 | $3d^44s^2$ | b ³ G | 5 | | | | | |
| 31986.786 | 0.004 | 0 | $3d^44s^2$ | a ¹G | 4 | | | | | |
| 32097.2978 | 0.0018 | 0 | $3d^44s^2$ | a ¹I | 6 | | | | | |
| 33906.539 | 0.007 | 0 | $3d^44s^2$ | c ³ D | 1 | | | | | |
| 33934.757 | 0.005 | 0 | $3d^44s^2$ | c ³ D | 3 | | | | | |
| 33935.613 | 0.007 | 0 | $3d^44s^2$ | c ³ D | 2 | | | | 4.5 | - |
| 23305.0026 | 0.0006 | 1 | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 2 | 2.334 | 67 | 33 | $3d^4(^5D)4s4p(^3P^0)$ | ${}^{7}P^{o}$ |
| 23386.3419 | 0.0005 | 1 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 3 | 1.9176 | 67 | 33 | $3d^4(^5D)4s4p(^3P^0)$ | $^{7}P^{o}$ |
| 23498.8156 | 0.0008 | 1 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | 1.7510 | 67 | 31 | $3d^4(^5D)4s4p(^3P^0)$ | $^{7}P^{o}$ |
| 26787.4640 | 0.0005 | 1 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | 1.670 | 92 | | | |
| 26796.2691 | 0.0005 | 1 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 1.830 | 91 | | | |
| 26801.9009 | 0.0005 | 1 | $3d^{5}(^{6}S)4p$ | z ⁵ P ^o | 1 | 2.512 | 92 | | - 4.2 2-0 | 5 |
| 42515.3342 | 0.0015 | 1 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | 0.35 | 61 | 20 | $3d^4(^3H)4s4p(^3P^0)$ | ⁵ G ^o |
| 42538.7424 | 0.0014 | 1 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | | 57 | 19 | $3d^4(^3H)4s4p(^3P^0)$ | ⁵ G° |
| 42564.7783 | 0.0011 | 1 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | 4.00 | 53 | 18 | $3d^4(^3H)4s4p(^3P^0)$ | ⁵ G ^o |
| 42589.1721 | 0.0011 | 1 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 | 1.23 | 47 | 16 | $3d^4(^3H)4s4p(^3P^0)$ | ⁵ G ^o |
| 42605.7080 | 0.0017 | 1 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 6 | 1.32 | 37 | 27 | $3d^4(^3\text{H})4s4p(^3\text{P}^0)$ | ⁵ H ^o ⁵ S ^o |
| 43124.806 | 0.005 | 1 | $3d^{5}(^{4}P)4p$ | z ⁵ S° | 2 | 1.93 | 46 | 46 | $3d^4(^3P1)4s4p(^3P^0)$ | 5H° |
| 45348.6792 | 0.0011 | 1 | $3d^{5}(^{4}G)4p$ | $z^{3}H^{o}$ $z^{3}H^{o}$ | 6 | | 68 | 16 | $3d^{5}(^{4}G)4p$ | ⁵ H ^c |
| 45354.1500 | 0.0011 | 1 | $3d^{5}(^{4}G)4p$ | z ³ H ^o | 5 | | 49 | 32 | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ | ⁵ H ^c |
| 45358.5837 | 0.0012 | 1 | 3d ⁵ (⁴ G)4p 3d ⁵ (⁴ G)4p | y ⁵ H° | 4 | 0.52 | 59 76 | 25 22 | $3d^{4}(^{3}H)4s4p(^{3}P^{0})$ | ⁵ H ^o |
| 45566.0035 | 0.0018 | 1 | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 3 4 | 0.52 | 51 | | $3d^{5}(^{4}G)4p$ | ³ H ^o |
| 45614.8444 45663.2579 | 0.0014 0.0013 | 1 1 | $3d^{5}(^{4}G)4p$ | у п у ⁵ Н° | 5 | | 43 | 28 38 | $3d^{5}(^{4}G)4p$ | л ³ H° |
| 45707.3259 | 0.0015 | 1 | $3d^{5}(^{4}G)4p$ | у п у ⁵ Н° | 6 | | 58 | 20 | $3d^{5}(^{4}G)4p$ | л ³ Н° |
| 45719.2168 | 0.0013 | 1 | $3d^{5}(^{4}P)4p$ | y n y ³ P° | 1 | | 38 45 | 24 | $3d^4(^3P1)4s4p(^3P^0)$ | л ³ Р° |
| 45722.522 | 0.0017 | 1 | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 0 | | 39 | 31 | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | г 3 р о |
| 45734.2670 | 0.003 | 1 | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | | 49 | 20 | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | г ³ ро |
| 45741.4701 | 0.0008 | 1 | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 7 | 1.29 | 74 | 25 | $3d^4(^3\text{H})4s4p(^3\text{P}^0)$ | 5H° |
| 45966.3597 | 0.0017 | 1 | $3d^{5}(^{4}G)4p$ | y ³ F° | 2 | 1.2) | 75 | 8 | $3d^4(^3F1)4s4p(^3P^0)$ | ${}^{3}F^{o}$ |
| 46000.4213 | 0.0017 | 1 | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | | 80 | 8 | $3d^4(^3F1)4s4p(^3P^0)$ | ³ F ^o |
| 46058.1980 | 0.0017 | 1 | $3d^{5}(^{4}G)4p$ | y^3F^0 | 4 | | 83 | 7 | $3d^4(^3F1)4s4p(^3P^0)$ | ³ F° |
| 46077.0395 | 0.0014 | 1 | $3d^{5}(^{4}P)4p$ | y ³ D° | 1 | | 22 | 19 | $3d^{5}(^{4}D)4p$ | ⁵ F° |
| 46109.2219 | 0.0010 | 1 | $3d^{5}(^{4}P)4p$ | y ³ D° | 2 | 1.24 | 23 | 14 | $3d^{5}(^{4}D)4p$ | ⁵ F° |
| 46174.3884 | 0.0011 | 1 | $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | 1.33 | 37 | 15 | $3d^4(^3F1)4s4p(^3P^0)$ | 5D° |
| 46878.558 | 0.002 | 1 | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 1.68 | 47 | 20 | $3d^{5}(^{4}D)4p$ | 5P0 |
| 46967.6827 | 0.0009 | 1 | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 1.84 | 51 | 20 | $3d^{5}(^{4}D)4p$ | ⁵ P ^o |
| 47021.7112 | 0.0013 | 1 | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 2.42 | 55 | 20 | $3d^{5}(^{4}D)4p$ | ⁵ P ^o |
| 47048.4161 | 0.0014 | 1 | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | | 73 | 12 | $3d^4(^3H)4s4p(^3P^0)$ | $^{3}G^{\circ}$ |
| 47054.9072 | 0.0010 | 1 | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | | 69 | 16 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | $^{3}G^{\circ}$ |
| 47055.3416 | 0.0010 | 1 | $3d^{5}(^{4}G)4p$ | y ³ G° | 5 | | 62 | 24 | $3d^4(^3H)4s4p(^3P^0)$ | $^{3}G^{\circ}$ |
| 47772.2702 | 0.0016 | 1 | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 1.37 | 49 | 26 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{5}D^{\circ}$ |
| 47786.0959 | 0.0012 | 1 | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 1.39 | 49 | 26 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{5}D^{\circ}$ |
| 47787.993 | 0.003 | 1 | $3d^{5}(^{4}P)4p$ | v ⁵ D ^o | 0 | | 46 | 27 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{5}D^{\circ}$ |
| 47814.3823 | 0.0011 | 1 | $3d^{5}(^{4}P)4p$ | v ⁵ D ^o | 3 | 1.53 | 49 | 25 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{5}D^{\circ}$ |
| 47866.4604 | 0.0013 | 1 | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 4 | 1.50 | 52 | 23 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{5}D^{\circ}$ |
| 47877.596 | 0.002 | 1 | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 1 | 0.00 | 15 | 15 | $3d^4(^3P1)4s4p(^3P^0)$ | $^{3}P^{o}$ |
| 47917.9197 | 0.0015 | 1 | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 1.04 | 35 | 19 | $3d^4(^3F1)4s4p(^3P^0)$ | ⁵ F ^o |
| 47974.5512 | 0.0016 | 1 | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 1.36 | 35 | 20 | $3d^4(^3F1)4s4p(^3P^0)$ | ⁵ F ^o |
| 47985.787 | 0.004 | 1 | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | 1.38 | 39 | 25 | $3d^4(^3F1)4s4p(^3P^0)$ | ⁵ F ^o |
| 48014.3731 | 0.0012 | 1 | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | | 39 | 23 | $3d^4(^3F1)4s4p(^3P^0)$ | ⁵ F ^o |
| 49476.9847 | 0.0015 | 1 | $3d^5(^4P)4p$ | y ³ S ^o | 1 | | 73 | 17 | $3d^4(^3P1)4s4p(^3P^0)$ | $^{3}S^{o}$ |
| 49588.831 | 0.003 | 1 | $3d^5(^4D)4p$ | t ⁵ P° | 1 | 2.48 | 46 | 30 | $3d^{5}(^{4}P)4p$ | ³ P ^o |
| 49620.5640 | 0.0015 | 1 | $3d^5(^4D)4p$ | x ³ F ^o | 4 | | 56 | 15 | $3d^4(^3G)4s4p(^3P^o)$ | ³ F ^o |
| 49650.1320 | 0.0015 | 1 | $3d^5(^4D)4p$ | x ³ F ^o | 3 | | 43 | 18 | $3d^4(^3G)4s4p(^3P^0)$ | ³ F ^o |
| 49652.7224 | 0.0017 | 1 | $3d^5(^4D)4p$ | $x^{3}F^{o}$ | 2 | | 37 | 18 | $3d^4(^3G)4s4p(^3P^o)$ | ³ F ^o |
| 49812.430 | 0.003 | 1 | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 3 | 1.77 | 31 | 26 | $3d^5(^4P)4p$ | ³ P ^o |
| 50018.831 | 0.003 | 1 | $3d^5(^4D)4p$ | s ⁵ F° | 1 | | 44 | 29 | $3d^4(^3G)4s4p(^3P^0)$ | ⁵ F° |
| 50057.53 | 0.06 | 1 | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 2 | | 43 | 29 | $3d^4(^3G)4s4p(^3P^0)$ | ⁵ F° |
| 50102.07 | 0.12 | 1 | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 3 | 1.27 | 44 | 29 | $3d^4(^3G)4s4p(^3P^0)$ | ⁵ F° |
| 50105.4904 | 0.0015 | 1 | $3d^{5}(^{4}D)4p$ | w^3D^o | 1 | | 66 | 11 | $3d^5(^4P)4p$ | $^{3}D^{\circ}$ |

Table 1. Energy levels of Cr I—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_j | | Le | eading percentages | |
|----------------------------------|---------------------------------|--------|---|---|--------|-------|----------|----------|---|--|
| 50184.191 | 0.004 | 1 | $3d^{5}(^{4}D)4p$ | w ³ D ^o | 2 | | 57 | 14 | $3d^{5}(^{4}P)4p$ | ³ D ^o |
| 50210.70 | 0.10 | 1 | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 4 | 1.25 | 30 | 21 | $3d^4(^3G)4s4p(^3P^0)$ | ${}^{5}F^{o}$ |
| 50253.295 | 0.003 | 1 | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 5 | 1.39 | 46 | 33 | $3d^4(^3G)4s4p(^3P^0)$ | $^{5}F^{o}$ |
| 50264.4589 | 0.0020 | 1 | $3d^{5}(^{4}D)4p$ | w^3D^o | 3 | | 51 | 18 | $3d^{5}(^{4}P)4p$ | $^{3}D^{o}$ |
| 50557.4907 | 0.0015 | 1 | $3d^5(^4D)4p$ | u ⁵ D° | 4 | 1.54 | 44 | 15 | $3d^{5}(^{4}D)4p$ | ⁵ F ^o |
| 50628.0474 | 0.0014 | 1 | $3d^5(^4D)4p$ | u ⁵ D° | 3 | 1.54 | 60 | 7 | $3d^5(^4P)4p$ | $^{5}D^{o}$ |
| 50654.7121 | 0.0016 | 1 | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 2 | 1.51 | 68 | 8 | $3d^{5}(^{4}P)4p$ | ⁵ D ^o |
| 50661.150 | 0.008 | 1 | $3d^5(^4D)4p$ | u ⁵ D° | 0 | | 69 | 10 | $3d^5(^4P)4p$ | $^{5}D^{o}$ |
| 50662.729 | 0.002 | 1 | $3d^5(^4D)4p$ | u ⁵ D° | 1 | 1.46 | 71 | 9 | $3d^5(^4P)4p$ | $^{5}D^{o}$ |
| 51176.840 | 0.004 | 1 | $3d^5(^4D)4p$ | w^3P^o | 0 | | 71 | 11 | $3d^4(^3P1)4s4p(^3P^0)$ | $^{3}P^{o}$ |
| 51246.842 | 0.002 | 1 | $3d^5(^4D)4p$ | $w^{3}P^{o}$ | 1 | | 68 | 8 | $3d^4(^3P1)4s4p(^3P^0)$ | $^{3}P^{o}$ |
| 51286.5356 | 0.0020 | 1 | $3d^5(^4D)4p$ | $w^{3}P^{o}$ | 2 | | 45 | 32 | $3d^4(^3P1)4s4p(^3P^0)$ | $^{1}D^{o}$ |
| 54316.818 | 0.002 | 1 | $3d^{5}(^{2}I)4p$ | $z^{3}K^{o}$ | 6 | | 56 | 42 | $3d^4(^1I)4s4p(^3P^0)$ | $^{3}K^{o}$ |
| 54404.928 | 0.002 | 1 | $3d^5(^2I)4p$ | $z^{3}K^{o}$ | 7 | | 54 | 46 | $3d^4(^1I)4s4p(^3P^0)$ | $^{3}K^{o}$ |
| 54498.255 | 0.003 | 1 | $3d^5(^2I)4p$ | z ³ K° | 8 | | 59 | 41 | $3d^4(^1I)4s4p(^3P^0)$ | ³ K ^o |
| 54970.178 | 0.002 | 1 | $3d^{5}(^{2}I)4p$ | $z^{1}K^{o}$ | 7 | | 79 | 10 | $3d^{5}(^{2}I)4p$ | ³ K ^o |
| 54992.79 | 0.04 | 1 | $3d^5(^2D1)4p$ | v ³ F ^o | 2 | | 30 | 20 | $3d^5(^2F1)4p$ | ${}^{3}F^{o}$ |
| 55101.82 | 0.02 | 1 | $3d^5(^2D1)4p$ | v ³ F ^o | 3 | | 22 | 15 | $3d^5(^2F1)4p$ | $^{3}F^{o}$ |
| 55207.271 | 0.004 | 1 | $3d^5(^2D1)4p$ | v ³ F ^o | 4 | | 30 | 18 | $3d^5(^2F1)4p$ | ${}^{3}F^{o}$ |
| 55516.562 | 0.002 | 1 | $3d^{5}(^{2}I)4p$ | y ¹ I ^o | 6 | | 35 | 28 | $3d^4(^1I)4s4p(^3P^0)$ | ³ H ^o |
| 55686.334 | 0.003 | 1 | $3d^5(^2I)4p$ | x ³ I ^o | 5 | | 29 | 30 | $3d^4(^1I)4s4p(^3P^0)$ | $^{3}I^{o}$ |
| 55741.042 | 0.003 | 1 | $3d^{5}(^{2}I)4p$ | x ³ I ^o | 6 | | 34 | 30 | $3d^4(^1I)4s4p(^3P^0)$ | $^{3}I^{o}$ |
| 55799.017 | 0.004 | 1 | $3d^{5}(^{2}I)4p$ | x ³ I ^o | 7 | | 39 | 32 | $3d^4(^1I)4s4p(^3P^0)$ | $^{3}I^{o}$ |
| 55944.942 | 0.002 | 1 | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 | | 43 | 12 | $3d^4(^3G)4s4p(^3P^0)$ | ¹ H ^o |
| 56155.105 | 0.005 | 1 | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 2 | | 46 | 44 | $3d^3(^4F)4s24p$ | ⁵ G° |
| 56209.743 | 0.005 | 1 | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 3 | | 43 | 38 | $3d^3(^4F)4s24p$ | ⁵ G° |
| 56279.498 | 0.005 | 1 | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 4 | | 51 | 40 | $3d^3(^4F)4s24p$ | ⁵ G° |
| 56361.818 | 0.004 | 1 | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 5 | | 55 | 38 | $3d^3(^4F)4s24p$ | ⁵ G° |
| 56449.007 | 0.003 | 1 | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 6 | | 59 | 34 | $3d^3(^4F)4s24p$ | ⁵ G° |
| 57557.026 | 0.003 | 1 | $3d^{5}(^{2}\text{F1})4p$ | t ³ G ^o | 3 | | 40 | 14 | $3d^{5}(^{4}F)4p$ | ⁵ F ^o |
| 57587.299 | 0.007 | 1 | $3d^{5}(^{2}\text{F1})4p$ | t ³ G ^o | 4 | | 21 | 18 | $3d^{5}(^{4}F)4p$ | ⁵ F° |
| 57702.257 | 0.005 | 1 | $3d^{5}(^{2}\text{F1})4p$ | t ³ G ^o | 5 | | 58 | 20 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}G^{o}$ |
| 58162.776 | 0.008 | 1 | $3d^5(^2\text{F1})4p$ | $s^{3}F^{o}$ | 2 | | 26 | 15 | $3d^5(^2D1)4p$ | ${}^{3}F^{o}$ |
| 58167.81 | 0.04 | 1 | $3d^{5}(^{2}\text{F1})4p$ | $s^{3}F^{o}$ | 4 | | 25 | 20 | $3d^5(^2D1)4p$ | ³ F ^o |
| 58202.60 | 0.04 | 1 | $3d^{5}(^{2}\text{F1})4p$ | $s^{3}F^{o}$ | 3 | | 25 | 23 | $3d^5(^2D1)4p$ | $^{3}F^{o}$ |
| 58725.142 | 0.006 | 1 | $3d^{5}(^{4}F)4p$ | u ³ D° | 1 | | | | 2.525.4 | 30 |
| 58728.247 | 0.003 | 1 | $3d^{5}(^{2}\text{H})4p$ | t ³ H ^o | 4 | | 23 | 16 | $3d^5(^2I)4p$ | ³ H ^o |
| 58754.396 | 0.002 | 1 | $3d^{5}(^{2}\text{H})4p$ | t ³ H ^o | 5 | | 24 | 17 | $3d^{5}(^{2}I)4p$ | ³ H ^o |
| 58775.259 | 0.002 | 1 | $3d^{5}(^{2}\text{H})4p$ | t ³ H ^o | 6 | | 26 | 17 | $3d^5(^2I)4p$ | ³ H ^o |
| 58860.16 | 0.05 | 1 | $3d^{5}(^{4}F)4p$ | u ³ D ^o | 2 | | 39 | 28 | $3d^4(^3D)4s4p(^3P^0)$ | $^{3}D^{o}$ |
| 59122.01 | 0.07 | 1 | $3d^{5}(^{4}F)4p$ | u ³ D° | 3 | | 25 | 25 | $3d^4(^3D)4s4p(^3P^0)$ | $^{3}D^{o}$ |
| 60005.491 | 0.002 | 1 | $3d^{5}(^{2}G1)4p$ | $ \begin{array}{ccc} x & {}^{1}H^{o} \\ v & {}^{3}I^{o} \end{array} $ | 5 | | 50 | 16 | 2.520114 | 10 |
| 60427.592 | 0.003 | 1 | $3d^{5}(^{2}\text{H})4p$ | | 5 | | 50 | 16 | $3d^5(^2G1)4p$ | ¹ H ^o |
| 60441.310 | 0.003 | 1 | $3d^{5}(^{2}\text{H})4p$ | $x {}^{1}I^{o}$ $s {}^{3}G^{o}$ | 6 | | 49 | 17 | $3d^{5}(^{2}G1)4p$ | ³ H ^o ³ I ^o |
| 60467.918 | 0.016 | 1 | $3d^{5}(^{2}G1)4p$ | s ³ G° | 5 | | 30 | 21 | $3d^5(^2\text{H})4p$ $3d^5(^2\text{H})4p$ | ³ G ^o |
| 60503.911 | 0.009 | 1 | $3d^{5}(^{2}G1)4p$ | s Go | 4 | | 40 | 9 | | ¹ F° |
| 60518.074 | 0.009 | 1 | $3d^{5}(^{2}G1)4p$ | v ³ I° | 3 | | 33 | 16 | $3d^5(^2\text{F1})4p$ | ³ H ^o |
| 60527.387 | 0.003 | 1 | $3d^{5}(^{2}\text{H})4p$ | s ³ D ^o | 6 | | 74 24 | 11 | $3d^{5}(^{2}G1)4p$ | $^{3}D^{o}$ |
| 60615.666 | 0.013 | 1 | 3d ⁵ (⁴ F)4p 3d ⁵ (² D1)4p | s Do | 3 | | 24 | 17 | $3d^5(^2D1)4p$ | $^{3}D^{\circ}$ |
| 60629.81 60656.840 | 0.04 0.003 | 1 1 | 3a (D1)4p $3d^5(^2\text{H})4p$ | v ³ I ^o | 2 7 | | 25 85 | 24 | $3d^4(^1D1)4s4p(^3P^0)$ $3d^5(^2I)4p$ | $^{3}I^{o}$ |
| 60678.06 | 0.003 | 1 | $3d^{5}(^{2}D1)4p$ | s ³ D ^o | 1 | | 83 29 | 6 22 | $3d^4(^1D1)4s4p(^3P^0)$ | $^{3}D^{o}$ |
| | | 1 | $3d^{5}(^{2}F2)4p$ | p ³ F° | | | | | $3d^4(^{1}F)4s4p(^{3}P^{0})$ | ³ F° |
| 60819.35 60870.561 | 0.10 0.003 | 1 | $3d^{5}(^{2}G1)4p$ | рг s ³ H° | 3 4 | | 40 52 | 21 13 | $3d^{4}(^{3}\text{H})4s4p(^{1}\text{P}^{0})$ | ³ H ^o |
| | 0.003 | 1 | $3d^{5}(^{2}F2)4p$ | p ³ F° | 4 | | 32 | 24 | $3d^4(^1F)4s4p(^3P^0)$ | ³ F° |
| 60960.351 | | | | рг s ³ H° | | | | | | г ³H° |
| 61007.819 61078.175 | 0.005 0.005 | 1 | $3d^5(^2G1)4p$ $3d^5(^2H)4p$ | r ³ G° | 5 3 | | 41 24 | 11 19 | $3d^4(^3\text{H})4s4p(^1\text{P}^{\circ})$ $3d^5(^2\text{F2})4p$ | ³ G° |
| | | | | r ³ G° | 3 4 | | | | | ³ G° |
| 61123.111 | 0.003 | 1 | $3d^5(^2\text{H})4p$ | r ³ G° | | | 19 | 15 15 | $3d^{5}(^{2}F2)4p$ $3d^{5}(^{2}G1)4p$ | ³ H ^o |
| 61161.314 | 0.008 | 1 | $3d^{5}(^{2}\text{H})4p$ | r ³ G ^o s ³ H ^o | 5 | | 15 25 | 15 | | ¹ I ^o |
| 61191.578 | 0.003 | 1 | $3d^{5}(^{2}G1)4p$ | g ³ G° | 6 | | 35 | 27 | $3d^{5}(^{2}\text{H})4p$ | ³ G ^o |
| 61930.05 | 0.05 | 1 | $3d^{5}(^{4}F)4p$ | q "G" ³ G° | 3 | | 48 | 15 | $3d^4(^3G)4s4p(^1P^0)$ | ⁵ F° |
| 61976.53 | 0.06 | 1 | $3d^{5}(^{4}F)4p$ | q ³ G° | 4 | | 32 | 20 | $3d^3(^4F)4s24p$ | ³ H ^o |
| 62037.505 | 0.003 | 1 | $3d^{5}(^{4}F)4p$ | q ³ G° p ³ H° | 5 | | 31 | 15 | $3d^4(^3G)4s4p(^1P^0)$ | H |
| 63841.873 | 0.009 | 1 | 3d ⁵ 4p 3d ⁵ 4p | p H p 3H° | 4 | | | | | |
| 63927.207 | 0.004 | 1 | 3a-4p | р-н | 5 | | | | | |

Table 1. Energy levels of Cr I—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | gj | | L | eading percentages | |
|----------------------------------|------------------------------------|--------|---|--|--------|--------------|-----------|----------|--|------------------------------------|
| 63997.909 | 0.008 | 1 | $3d^{5}4p$ | p ³ H ^o | 6 | | | | | |
| 66008.86 | 0.05 | 1 | $3d^54p$ | p ³ G° | 3 | | | | | |
| 66093.96 | 0.05 | 1 | $3d^54p$ | p ³ G° | 4 | | | | | |
| 66180.45 | 0.12 | 1 | $3d^{5}4p$ | $p^{3}G^{o}$ | 5 | | | | | |
| 24971.092 | 0.003 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 0 | | 100 | | | |
| 25010.6397 | 0.0020 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 1 | 1.52 | 100 | | | |
| 25089.2497 | 0.0019 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 2 | 1.50 | 100 | | | |
| 25205.9980 | 0.0018 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 3 | 1.49 | 100 | | | |
| 25359.6141 | 0.0017 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z F^{o}$ $z F^{o}$ | 4 | 1.51 | 100 | | | |
| 25548.6093 | 0.0016 | 1 | $3d^4(^5D)4s4p(^3P^0)$ $3d^4(^5D)4s4p(^3P^0)$ | z F° z ⁷ F° | 5 6 | 1.51 | 100 | | | |
| 25771.417 27300.1433 | 0.002 0.0009 | 1 1 | $3d^4(^5D)4s4p(^3P^0)$ | z F z ⁷ D° | 1 | 1.53 3.01 | 100 99 | | | |
| 27382.1739 | 0.0009 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 2 | 1.99 | 99 | | | |
| 27500.3699 | 0.0011 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | 1.76 | 99 | | | |
| 27649.6960 | 0.0011 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | 1.66 | 99 | | | |
| 27728.8110 | 0.0007 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | 2.341 | 66 | 33 | $3d^{5}(^{6}S)4p$ | $^{7}\mathbf{p}^{\mathrm{o}}$ |
| 27820.1975 | 0.0006 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 3 | 1.929 | 66 | 33 | $3d^{5}(^{6}S)4p$ | ⁷ P ° |
| 27825.3207 | 0.0012 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 5 | 1.61 | 100 | | (-) T | _ |
| 27935.2412 | 0.0008 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | v^7P^o | 4 | 1.761 | 67 | 32 | $3d^{5}(^{6}S)4p$ | $^{7}P^{o}$ |
| 29420.8645 | 0.0006 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | 2.513 | 95 | | · / 1 | |
| 29584.5708 | 0.0005 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 2 | 1.836 | 95 | | | |
| 29824.6909 | 0.0005 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 3 | 1.669 | 96 | | | |
| 30787.2817 | 0.0008 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | 0.002 | 96 | | | |
| 30858.7516 | 0.0007 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | 0.997 | 96 | | | |
| 30965.3799 | 0.0006 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{o}$ | 3 | 1.245 | 96 | | | |
| 31106.3170 | 0.0009 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | 1.345 | 95 | | | |
| 31280.3147 | 0.0007 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{o}$ | 5 | 1.396 | 96 | | 4.5 | 2 |
| 33338.2563 | 0.0007 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | | 89 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | $^{3}P^{o}$ |
| 33423.7845 | 0.0005 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}D^{o}$ | 1 | 1.499 | 93 | | | |
| 33542.0985 | 0.0005 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 1.497 | 96 | | | |
| 33671.5273 | 0.0004 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}D^{o}$ | 3 | 1.497 | 97 | | 2 4.55 4 4 350 | 5-0 |
| 33762.5326 | 0.0007 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ $z^{5}D^{o}$ | 0 | 1 400 | 88 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | ⁵ D ^o |
| 33816.0334 | 0.0005 | 1 | $3d^4(^5D)4s4p(^3P^0)$ $3d^4(^5D)4s4p(^3P^0)$ | z ³ P° | 4 | 1.499 | 97 92 | | | |
| 33897.2506 34190.4320 | 0.0005 0.0005 | 1 1 | $3d^4(^5D)4s4p(^3P^0)$ | z P z ³ P° | 1 2 | 1.49 1.55 | 92 95 | | | |
| 35897.7833 | 0.0003 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 2 | 1.33 | 95 95 | | | |
| 36034.1524 | 0.0007 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | | 95 95 | | | |
| 36212.1339 | 0.0006 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 4 | | 95 | | | |
| 38596.9917 | 0.0006 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | | 96 | | | |
| 38730.6379 | 0.0005 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | | 96 | | | |
| 38911.3046 | 0.0006 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | | 96 | | | |
| 40906.418 | 0.007 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 1 | 0.004 | 84 | 12 | $3d^5(^4G)4p$ | ⁵ F ^o |
| 40930.2744 | 0.0007 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 1 | 2.455 | 68 | 7 | $3d^{5}(^{4}P)4p$ | ⁵ P ^o |
| 40971.2599 | 0.0020 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F ^o | 2 | 1.28 | 83 | 12 | $3d^{5}(^{4}G)4p$ | $^{5}F^{o}$ |
| 40982.7898 | 0.0010 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 2 | 1.76 | 56 | 7 | $3d^5(^4P)4p$ | ⁵ P ^o |
| 41043.3464 | 0.0006 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 1.640 | 55 | 8 | $3d^{5}(^{4}P)4p$ | ⁵ P ^o |
| 41086.218 | 0.006 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 1.246 | 83 | 12 | $3d^{5}(^{4}G)4p$ | ⁵ F ^o |
| 41224.7429 | 0.0015 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | 1.360 | 82 | 13 | $3d^{5}(^{4}G)4p$ | ⁵ F ^o |
| 41224.751 | 0.002 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 0 | | 52 | 14 | $3d^{5}(^{4}P)4p$ | ⁵ D° |
| 41289.1133 | 0.0016 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | 1.503 | 54 | 14 | $3d^{5}(^{4}P)4p$ | ⁵ D° |
| 41393.446 | 0.005 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 5 | | 82 | 14 | $3d^{5}(^{4}G)4p$ | ⁵ F° |
| 41408.9840 | 0.0018 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 1.504 | 56 | 13 | $3d^{5}(^{4}P)4p$ | ⁵ D° |
| 41575.099 | 0.002 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 1.503 | 58 | 13 | $3d^{5}(^{4}P)4p$ | ⁵ D° |
| 41782.1313 | 0.0019 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | 1.500 | 62 | 14 | $3d^{5}(^{4}P)4p$ | ⁵ D° |
| 42025.4956 | 0.0018 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 3 | | 61 | 20 | $3d^{5}(^{4}G)4p$ | ⁵ H ^o |
| 42079.7263 | 0.0017 | 1 | $3d^4(^3\text{H})4s4p(^3\text{P}^0)$ | z ⁵ H° z ⁵ H° | 4 | | 55 48 | 19 | 3d ⁵ (⁴ G)4p 3d ⁵ (⁴ G)4p | ⁵ H° ⁵ H° |
| 42153.499 42218.321 | 0.002 0.003 | 1 1 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\text{o}})$ $3d^4(^3\text{P}1)4s4p(^3\text{P}^{\text{o}})$ | z H x ⁵ D° | 5 0 | | 48 49 | 17 26 | $3d^{4}(^{5}D)4s4p(^{1}P^{0})$ | ⁵ D° |
| 42252.141 | 0.003 | 1 | $3d^{4}(^{3}H)4s4p(^{3}P^{o})$ | z ⁵ H° | 6 | | 38 | 26 25 | $3d^{5}(^{4}G)4p$ | ⁵ G° |
| 42292.8417 | 0.002 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | z п x ⁵ D° | 1 | 1.501 | 36 47 | 25 26 | $3d^{4}(^{5}D)4s4p(^{1}P^{0})$ | ⁵ D° |
| 42387.260 | 0.0019 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 7 | 1.501 | 65 | 24 | $3d^{5}(^{4}G)4p$ | ⁵ H° |
| 42438.751 | 0.002 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 2 | 1.494 | 43 | 21 | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | ⁵ D° |
| 42648.2577 | 0.0016 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 3 | 1.498 | 40 | 22 | $3d^4(^5D)4s4p(^1P^0)$ | ⁵ D° |
| 42908.3681 | 0.0020 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 4 | 1.497 | 45 | 20 | $3d^4(^5D)4s4p(^1P^0)$ | ⁵ D° |
| 42700.3001 | | | | | | | | | | |

Table 1. Energy levels of Cr I—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{j} | | L | eading percentages | |
|----------------------------------|---------------------------------|--------|--|--|--------|--------------|----------|----------|--|-----------------------------|
| 44299.9171 | 0.0019 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 2 | 0.35 | 85 | | <u> </u> | |
| 44307.97 | 0.09 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I° | 5 | 0.55 | 99 | | | |
| 44373.2928 | 0.0017 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | 0.93 | 80 | | | |
| 44393.02 | 0.10 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I ^o | 6 | 0.,, | 99 | | | |
| 44514.35 | 0.06 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I ^o | 7 | | 99 | | | |
| 44534.429 | 0.002 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 4 | | 68 | 18 | $3d^4(^3F1)4s4p(^3P^0)$ | ⁵ F ^o |
| 44591.3768 | 0.0017 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | 1.25 | 46 | 29 | $3d^4(^3F1)4s4p(^3P^0)$ | ⁵ F ^o |
| 44666.532 | 0.018 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I ^o | 8 | | 100 | | ··· () ··· • • (- ·) | |
| 44666.6907 | 0.0017 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 1 | 2.47 | 78 | 8 | $3d^5(^4D)4p$ | ⁵ P ^o |
| 44746.259 | 0.002 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G ^o | 6 | 1.34 | 85 | 5 | $3d^4(^3G)4s4p(^3P^0)$ | 5G° |
| 44875.1301 | 0.0013 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 2 | | 76 | 9 | $3d^{5}(^{4}D)4p$ | ⁵ P ^o |
| 45113.0874 | 0.0013 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 3 | 1.65 | 70 | 13 | $3d^{5}(^{4}D)4p$ | ⁵ P ^o |
| 45201.6676 | 0.0017 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | | 66 | 28 | $3d^{5}(^{4}G)4p$ | ⁵ F ^o |
| 45225.0686 | 0.0015 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | | 53 | 27 | $3d^{5}(^{4}G)4p$ | ⁵ F ^o |
| 45255.3842 | 0.0016 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | | 58 | 26 | $3d^{5}(^{4}G)4p$ | ⁵ F ^o |
| 45285.9649 | 0.0013 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 4 | | 50 | 23 | $3d^{5}(^{4}G)4p$ | ⁵ F ^o |
| 45306.3417 | 0.0014 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F ^o | 5 | 1.41 | 34 | 37 | $3d^4(^3F^1)4s4p(^3P^0)$ | ⁵ G ^c |
| 46081.255 | 0.002 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | w^5D^o | 0 | | 40 | 25 | $3d^4(^3P^1)4s4p(^3P^0)$ | ⁵ D ^o |
| 46298.2442 | 0.0011 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | w^5D^o | 1 | | 42 | 20 | $3d^4(^3P^1)4s4p(^3P^0)$ | ⁵ D ^o |
| 46349.4177 | 0.0010 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | w^5D^o | 2 | | 40 | 22 | $3d^4(^3P^1)4s4p(^3P^0)$ | ⁵ D ^o |
| 46368.2695 | 0.0010 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | w^5D^o | 3 | | 36 | 27 | $3d^4(^3P^1)4s4p(^3P^0)$ | ⁵ D ^o |
| 46422.4223 | 0.0016 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | | 39 | 34 | $3d^4(^3P^1)4s4p(^3P^0)$ | ⁵ D ^o |
| 46677.1634 | 0.0018 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F ^o | 2 | | 20 | 18 | $3d^{5}(^{4}D)4p$ | ⁵ F ^o |
| 46678.375 | 0.004 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | | 21 | 18 | $3d^{5}(^{4}D)4p$ | ⁵ F° |
| 46688.2265 | 0.0010 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F ^o | 3 | 1.25 | 23 | 22 | $3d^{5}(^{4}D)4p$ | ⁵ F ^o |
| 46704.9067 | 0.0010 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 5 | 1.37 | 33 | 30 | $3d^{5}(^{4}D)4p$ | ⁵ F° |
| 46720.4711 | 0.0009 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | $w^{5}F^{o}$ | 4 | | 23 | 24 | $3d^{5}(^{4}D)4p$ | ⁵ F ^o |
| 46846.7480 | 0.0011 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}G^{o}$ | 3 | | 42 | 20 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}G^{\circ}$ |
| 46905.0382 | 0.0011 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}G^{o}$ | 4 | | 40 | 21 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}G^{\circ}$ |
| 46985.8465 | 0.0012 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 5 | | 34 | 20 | $3d^5(^4G)4p$ | ³ G ^o |
| 47047.4845 | 0.0017 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 2 | 0.45 | 67 | 15 | $3d^{5}(^{4}G)4p$ | 5G ^o |
| 47088.389 | 0.004 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | z^3S^o | 1 | 0.06 | 72 | 8 | $3d^{5}(^{4}P)4p$ | $^{3}S^{o}$ |
| 47125.6412 | 0.0014 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° x ⁵ G° | 3 | 0.96 | 62 | 14 | $3d^{5}(^{4}G)4p$ | ⁵G° ⁵G° |
| 47189.9110 | 0.0019 | 1 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | x ⁵ G° | 4 | 1 44 | 60 70 | 15 19 | 3d ⁵ (⁴ G)4p 3d ⁵ (⁴ G)4p | ⁵G° |
| 47222.2081 47228.7599 | 0.0018 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 6 | 1.44 1.27 | | 16 | $3d^{5}(^{4}G)4p$ | ⁵Gʻ |
| 47228.7399 | 0.0014 0.0020 | 1 1 | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}I^{o}$ | 5 5 | 1.27 | 63 61 | 28 | $3d^{4}(^{3}G)4s4p(^{3}P^{0})$ | 5H° |
| 47621.363 | 0.0020 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 3 | | 79 | 12 | $3d^4(^3\text{H})4s4p(^3\text{P}^0)$ | л ⁵ H° |
| 47630.3750 | 0.004 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | z ³ I ^o | 6 | | 57 | 34 | $3d^4(^3G)4s4p(^3P^0)$ | ⁵ H ^o |
| 47688.489 | 0.0017 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 4 | | 82 | 11 | $3d^4(^3H)4s4p(^3P^0)$ | 5H° |
| 47692.5894 | 0.003 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}I^{o}$ | 7 | | 52 | 40 | $3d^4(^3G)4s4p(^3P^0)$ | ⁵ H ^o |
| 47793.715 | 0.003 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | | 56 | 30 | $3d^4(^3\text{H})4s4p(^3\text{P}^\circ)$ | $^{3}I^{o}$ |
| 47942.1990 | 0.0019 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 6 | | 53 | 35 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | $^{3}I^{o}$ |
| 48140.101 | 0.002 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 7 | | 49 | 42 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | $^{3}I^{o}$ |
| 48210.018 | 0.004 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{0}$ | 1 | | 59 | 7 | $3d^{5}(^{4}G)4p$ | ⁵ F° |
| 48217.842 | 0.002 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | | 61 | 6 | $3d^{5}(^{4}G)4p$ | ⁵ F° |
| 48226.171 | 0.013 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 0 | | 29 | 24 | $3d^{5}(^{4}P)4p$ | $^{3}P^{o}$ |
| 48251.933 | 0.004 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | | 64 | 5 | $3d^{5}(^{4}G)4p$ | ⁵ F ^o |
| 48288.3556 | 0.0018 | 1 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | y ³ H ^o | 4 | | 76 | | · · · · · · · · · · · · · · · · · · · | |
| 48310.3500 | 0.0013 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 5 | | 89 | | | |
| 48331.242 | 0.003 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 1 | | 28 | 15 | $3d^5(^4P)4p$ | $^{3}P^{o}$ |
| 48445.2943 | 0.0014 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 6 | | 83 | | ` ' ' | |
| 48458.5780 | 0.0018 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 2 | | 42 | 19 | $3d^5(^4P)4p$ | $^{3}P^{o}$ |
| 48636.0405 | 0.0016 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}F^{o}$ | 3 | | 60 | 15 | $3d^4(^3G)4s4p(^3P^0)$ | $^{3}F^{o}$ |
| 48839.778 | 0.002 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 1 | | 38 | 20 | $3d^{5}(^{4}P)4p$ | $^{3}D^{\circ}$ |
| 49027.3953 | 0.0020 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | | 46 | 14 | $3d^5(^4P)4p$ | $^{3}D^{\circ}$ |
| 49310.830 | 0.002 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | | 61 | 7 | $3d^{5}(^{4}P)4p$ | $^{3}D^{\circ}$ |
| 49370.619 | 0.006 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 3 | | 40 | 9 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\text{o}})$ | $^{3}G^{\circ}$ |
| 49453.867 | 0.002 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 4 | | 40 | 13 | $3d^4(^3H)4s4p(^3P^0)$ | $^{3}G^{\circ}$ |
| 49466.705 | 0.003 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 2 | | 65 | 18 | $3d^{5}(^{4}G)4p$ | ⁵ G ^c |
| 49519.7149 | 0.0020 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 1.04 | 53 | 14 | $3d^{5}(^{4}G)4p$ | ⁵ G ^c |
| 49537.9802 | 0.0018 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 5 | | 51 | 17 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\text{o}})$ | $^{3}G^{\circ}$ |
| 49572.9466 | 0.0016 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | $w^{5}G^{o}$ | 4 | | 63 | 19 | $3d^{5}(^{4}G)4p$ | ⁵ G ^c |
| 49597.855 | 0.003 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{1}D^{o}$ | 2 | 1.88 | 20 | 14 | $3d^{5}(^{4}D)4p$ | ⁵ P ^o |
| 49617.5488 | 0.0016 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 5 | 1.00 | | | $3d^{5}(^{4}G)4p$ | 5G° |

Table 1. Energy levels of Cr I—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | $g_{\rm j}$ | | Le | eading percentages | |
|----------------------------------|---------------------------------|--------|-------------------------|---|---|-------------|----------|----------|--|-----------------------------|
| 49635.184 | 0.002 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 6 | 1.35 | 73 | 17 | $3d^{5}(^{4}G)4p$ | ⁵ G' |
| 49822.5403 | 0.0019 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S ^o | 2 | 2.00 | 31 | 30 | $3d^{5}(^{4}P)4p$ | $^{5}S^{\circ}$ |
| 50890.077 | 0.003 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 2 | | 41 | 27 | $3d^{5}(^{4}D)4p$ | $^{3}F^{\circ}$ |
| 50950.3326 | 0.0018 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F ^o | 3 | | 42 | 26 | $3d^{5}(^{4}D)4p$ | $^{3}F^{\circ}$ |
| 51059.7045 | 0.0015 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F ^o | 4 | | 46 | 23 | $3d^{5}(^{4}D)4p$ | $^{3}F^{\circ}$ |
| 51401.25 | 0.04 | 1 | $3d^4(^3H)4s4p(^3P^0)$ | z ¹ H ^o | 5 | | 68 | 11 | $3d^{5}(^{2}I)4p$ | ¹ H' |
| 51999.61 | 0.06 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 0 | | 94 | | 3a (1) ip | |
| 52003.06 | 0.07 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 1 | | 94 | | | |
| 52012.37 | 0.06 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | | 93 | | | |
| 52031.72 | 0.05 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 3 | | 92 | | | |
| 52064.26 | 0.05 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | t D t ⁵ D° | 4 | | 92 | | | |
| 52591.7094 | 0.0020 | 1 | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 5 | | 48 | 33 | $3d^5(^2I)4p$ | $^{3}I^{o}$ |
| | | 1 | $3d^4(^1I)4s4p(^3P^0)$ | y ¹ y ³ I ^o | 6 | | 58 | 33 39 | $3d^{5}(^{2}I)4p$ | ³ I ^o |
| 52660.475 | 0.002 | | | y ¹ y ³ I ^o | 7 | | 58 59 | 39 39 | $3d^{5}(^{2}I)4p$ | $^{3}I^{o}$ |
| 52677.752 | 0.003 | 1 | $3d^4(^1I)4s4p(^3P^0)$ | $^{3}G^{\circ}$ | | | | | | ³ G |
| 52719.978 | 0.002 | 1 | $3d^4(^3G)4s4p(^3P^0)$ | | 4 | | 72 | 14 | $3d^4(^3H)4s4p(^3P^0)$ | |
| 52885.185 | 0.002 | 1 | $3d^4(^1G1)4s4p(^3P^0)$ | x ³ H ^o | 5 | | 57 | 27 | $3d^{5}(^{2}I)4p$ | ³ H' |
| 52914.9351 | 0.0019 | 1 | $3d^4(^1G1)4s4p(^3P^0)$ | x ³ H ^o | 6 | | 68 | 26 | $3d^{5}(^{2}I)4p$ | ³ H |
| 52963.371 | 0.002 | 1 | $3d^4(^1G1)4s4p(^3P^0)$ | x ³ H ^o | 4 | | 47 | 26 | $3d^{5}(^{2}I)4p$ | ³ H |
| 53011.703 | 0.009 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 1 | | 85 | 6 | $3d^{5}(^{4}D)4p$ | ⁵ F° |
| 53037.458 | 0.008 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | | 84 | 6 | $3d^{5}(^{4}D)4p$ | ${}^{5}F^{\circ}$ |
| 53073.759 | 0.009 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 3 | | 83 | 6 | $3d^5(^4D)4p$ | $^{5}F^{\circ}$ |
| 53117.519 | 0.008 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 4 | | 81 | 6 | $3d^5(^4D)4p$ | $^{5}F^{\circ}$ |
| 53172.212 | 0.007 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 5 | 1.52 | 85 | 7 | $3d^{5}(^{4}D)4p$ | $^{5}F^{\circ}$ |
| 54736.474 | 0.009 | 1 | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 4 | | 42 | 20 | $3d^{5}(^{2}I)4p$ | ³ H |
| 54799.091 | 0.012 | 1 | $3d^4(^3H)4s4p(^1P^0)$ | w^3H^o | 5 | | 41 | 21 | $3d^{5}(^{2}I)4p$ | ^{3}H |
| 54800.1623 | 0.0020 | 1 | $3d^4(^1I)4s4p(^3P^0)$ | 3 K o | 6 | | 55 | 40 | $3d^{5}(^{2}I)4p$ | ^{3}K |
| 54886.749 | 0.002 | 1 | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 6 | | 42 | 24 | $3d^{5}(^{2}I)4p$ | ³ H |
| 54956.44 | 0.07 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D ^o | 1 | | 33 | 28 | $3d^5(^2D1)4p$ | ^{3}D |
| 55152.59 | 0.07 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | v^3D^o | 2 | | 30 | 26 | $3d^{5}(^{2}D1)4p$ | ^{3}D |
| 55451.67 | 0.09 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D° | 3 | | 30 | 19 | $3d^{5}(^{2}D1)4p$ | ^{3}D |
| 55874.838 | 0.002 | 1 | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 5 | | 61 | 12 | $3d^{5}(^{2}\text{H})4p$ | ³ H |
| 55907.998 | 0.002 | | $3d^4(^1I)4s4p(^3P^0)$ | u H u ³ H° | 6 | | 37 | 37 | $3d^{5}(^{2}I)4p$ | $^{1}I^{o}$ |
| | | 1 | $3d^4(^1I)4s4p(^3P^0)$ | u H u ³ H° | 4 | | | 12 | $3d^{5}(^{2}\text{H})4p$ | 3 H |
| 55915.49 | 0.13 | 1 | | u ³ P ^o | | | 67 | | | $^{3}P^{\circ}$ |
| 56591.80 | 0.06 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 2 | | 42 | 18 | $3d^5(^2D1)4p$ | |
| 56722.50 | 0.05 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | | 1 | | 40 | 10 | $3d^4(^3D)4s4p(^3P^0)$ | 1Pe |
| 56802.40 | 0.06 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 0 | | 56 | 19 | $3d^5(^2D1)4p$ | $^{3}P^{\circ}$ |
| 56985.65 | 0.04 | 1 | $3d^4(^3F1)4s4p(^1P^0)$ | $^{3}G^{o}$ | 3 | | 21 | 16 | $3d^4(^3D)4s4p(^3P^0)$ | $^{3}F^{\circ}$ |
| 57033.52 | 0.04 | 1 | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G ^o | 4 | | 24 | 15 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | ³ G |
| 57087.645 | 0.019 | 1 | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 2 | | 43 | 22 | $3d^5(^2D1)4p$ | $^{3}P^{\circ}$ |
| 57088.25 | 0.04 | 1 | $3d^4(^3F1)4s4p(^1P^0)$ | u^3G^o | 5 | | 25 | 23 | $3d^4(^3H)4s4p(^3P^0)$ | ^{3}G |
| 57132.47 | 0.04 | 1 | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 1 | | 40 | 21 | $3d^5(^2D1)4p$ | $^{3}P^{\circ}$ |
| 57154.52 | 0.13 | 1 | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 0 | | 40 | 22 | $3d^5(^2D1)4p$ | $^{3}P^{\circ}$ |
| 57220.570 | 0.011 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | | 24 | 14 | $3d^3(^4F)4s24p$ | $^{3}F^{\circ}$ |
| 57276.363 | 0.006 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | | | | | |
| 57335.373 | 0.004 | 1 | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | | | | | |
| 59357.746 | 0.010 | 1 | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 2 | | 51 | 11 | $3d^5(^4F)4p$ | $^{3}F^{\circ}$ |
| 59416.921 | 0.005 | 1 | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | | 46 | 9 | $3d^{5}(^{4}F)4p$ | $^{3}F^{\circ}$ |
| 59487.536 | 0.004 | 1 | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 4 | | 50 | 9 | $3d^{5}(^{4}F)4p$ | ³ F |
| 59806.238 | 0.004 | 1 | $3d^4(^3H)4s4p(^1P^0)$ | w ³ I ^o | 5 | | 64 | 16 | $3d^{5}(^{2}\text{H})4p$ | $^{3}I^{o}$ |
| 59884.123 | 0.006 | 1 | $3d^4(^3H)4s4p(^1P^0)$ | w ¹ I ^o | 6 | | 74 | 13 | $3d^{5}(^{2}\text{H})4p$ | $^{3}I^{o}$ |
| 59957.4238 | 0.0020 | 1 | $3d^4(^3H)4s4p(^1P^0)$ | w 1 w ³ I ^o | 7 | | 77 | 13 | $3d^{5}(^{2}\text{H})4p$ | $^{3}I^{o}$ |
| | | | | x^3S^0 | | | | | | |
| 60084.14 | 0.13 | 1 | $3d^4(^3P1)4s4p(^1P^0)$ | | 1 | | 48 | 19 | $3d^4(^3P1)4s4p(^1P^0)$ | ³ P ^o |
| 61387.78 | 0.07 | 1 | $3d^4(^1D1)4s4p(^3P^0)$ | $t^{3}P^{o}$ | 0 | | 77 | 7 | $3d^5(^2D1)4p$ | ³ P ^o |
| 61527.31 | 0.05 | 1 | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P ^o | 1 | | 65 | 8 | $3d^{5}(^{2}D1)4p$ | ³ P ^o |
| 61675.76 | 0.06 | 1 | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P ^o | 2 | | 58 | 8 | $3d^3(^4F)4s^24p$ | ⁵ F ^o |
| 62762.056 | 0.003 | 1 | $3d^44s4p$ | r ³ H ^o | 4 | | | | | |
| 62830.256 | 0.003 | 1 | $3d^44s4p$ | r ³ H ^o | 5 | | | | | |
| 62903.083 | 0.002 | 1 | $3d^44s4p$ | r ³ H ^o | 6 | | | | | |
| 35397.9566 | 0.0008 | 0 | $3d^6$ | c ⁵ D | 4 | | | | | |
| 35501.1774 | 0.0006 | 0 | $3d^6$ | c ⁵ D | 3 | | | | | |
| 35572.9194 | 0.0005 | 0 | $3d^6$ | c ⁵ D | 2 | | | | | |
| 35618.4806 | 0.0007 | 0 | $3d^6$ | c ⁵ D | 1 | | | | | |
| 35640.6434 | 0.0010 | 0 | $3d^6$ | c ⁵ D | 0 | | | | | |
| 36895.8060 | 0.0005 | 0 | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | | | | | |
| _ 55,5.550 | 0.0005 | 0 | $3d^{5}(^{6}S)5s$ | e ⁵ S | _ | | | | | |

Table 1. Energy levels of Cr I—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | ${f g}_{f j}$ | Leading percentages |
|----------------------------------|---------------------------------|--------|--|--|--------|---------------|---------------------|
| 57350.57 | 0.08 | 0 | $3d^{5}(^{4}G)5s$ | e ⁵ G | 2 | | <u> </u> |
| 57361.253 | 0.006 | 0 | $3d^{5}(^{4}G)5s$ | e ⁵ G | 3 | | |
| 57372.69 | 0.04 | 0 | $3d^{5}(^{4}G)5s$ | e ⁵ G | 4 | | |
| 57382.838 | 0.011 | 0 | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | | |
| 57389.3358 | 0.0017 | 0 | $3d^{5}(^{4}G)5s$ | e ⁵ G | 6 | | |
| 42237.957 | 0.007 | 1 | $3d^{5}(^{6}S)5p$ | $x^{7}P^{o}$ | 2 | | |
| 42253.966 | 0.007 | 1 | $3d^{5}(^{6}S)5p$ | $x^{7}P^{o}$ | 3 | | |
| 42275.19 | 0.11 | 1 | $3d^{5}(^{6}S)5p$ | x ⁷ P ^o | 4 | | |
| 44125.7144 | 0.0014 | 1 | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 1 | 2.74 | |
| 44186.7624 | 0.0013 | 1 | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 2 | 1.79 | |
| 44259.182 | 0.002 | 1 | $3d^{5}(^{6}S)5p$ | w^5P^o | 3 | 1.68 | |
| 54810.852 | 0.005 | 1 | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 4 | | |
| 54866.4684 | 0.0019 | 1 | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 6 | | |
| 54929.66 | 0.03 | 1 | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 5 | | |
| 55120.646 | 0.004 | 1 | $3d^{5}(^{4}G)5p$ | u ³ F° | 4 | | |
| 55352.60 | 0.04 | 1 | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | | |
| 55473.671 | 0.011 | 1 | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | | |
| 58771.89 | 0.05 | 1 | $3d^{5}(^{4}P)5p$ | t ³ D ^o | 2 | | |
| 58870.27 | 0.07 | 1 | $3d^{5}(^{4}P)5p$ | t ³ D° | 1 | | |
| 58923.980 | 0.010 | 1 | $3d^{5}(^{4}P)5p$ | t ³ D° | 3 | | |
| 42253.2416 | 0.0012 | 0 | $3d^{5}(^{6}S)4d$ | e ⁷ D | 1 | | |
| 42254.3929 | 0.0011 | 0 | $3d^{5}(^{6}S)4d$ | e ⁷ D | 2 | | |
| 12256.0868 | 0.0008 | 0 | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | | |
| 42258.3607 | 0.0007 | 0 | $3d^{5}(^{6}S)4d$ | e ⁷ D | 4 | | |
| 42261.2258 | 0.0013 | 0 | $3d^{5}(^{6}S)4d$ | e ⁷ D | 5 | 1.55 | |
| 44050.9786 | 0.0013 | 0 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | 1.55 | |
| 14068.8470 | 0.0009 | 0 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | | |
| 44080.9973 | 0.0009 | 0 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | | |
| 44088.9776 | 0.0019 | 0 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | | |
| 44092.9034 | 0.0019 | 0 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 0 | | |
| 62646.61 | 0.12 | 0 | $3d^{5}(^{4}G)4d$ | f ⁵ G | 2 | | |
| 62661.93 | 0.10 | 0 | $3d^{5}(^{4}G)4d$ | f ⁵ G | 3 | | |
| 62671.04 | 0.07 | 0 | $3d^{5}(^{4}G)4d$ | f ⁵ G | 4 | | |
| 62673.869 | 0.018 | 0 | $3d^{5}(^{4}G)4d$ | f ⁵ G | 6 | | |
| 62690.90 | 0.06 | 0 | $3d^{5}(^{4}G)4d$ | f ⁵ G | 5 | | |
| 45643.231 | 0.016 | 0 | $3d^{5}(^{6}S)6s$ | f ⁷ S | 3 | 2.05 | |
| 45967.8057 | 0.0013 | 0 | $3d^{5}(^{6}S)6s$ | f ⁵ S | 2 | 2.03 | |
| 46448.6289 | 0.0013 | 0 | $3d^44s5s$ | f ⁷ D | 1 | 2.99 | |
| 46524.9187 | 0.0013 | 0 | $3d^44s5s$ | f ⁷ D | 2 | 1.99 | |
| 46637.2307 | 0.0012 | 0 | $3d^44s5s$ | f ⁷ D | 3 | 1.77 | |
| 46783.0528 | 0.0010 | 0 | $3d^44s5s$ | f ⁷ D | 4 | 1.63 | |
| 46959.0255 | 0.0011 | 0 | $3d^44s5s$ | f ⁷ D | 5 | 1.61 | |
| 48488.098 | 0.0011 | 0 | 3d ⁴ 4s5s | f ⁵ D | | 1.01 | |
| 48488.098 48507.408 | 0.009 | 0 | 3d ⁴ 4s5s | f ⁵ D | 0 1 | | |
| 48507.408 48558.403 | 0.003 | 0 | 3d ⁴ 4s5s | f ⁵ D | 2 | | |
| 48661.5083 | 0.002 | 0 | 3d ⁴ 4s5s | f ⁵ D | 3 | 1.46 | |
| | 0.0013 | 0 | 3d 4s5s 3d ⁴ 4s5s | f ⁵ D | 3 4 | 1.46 1.46 | |
| 18824.4834 54646.13 | 0.0012 | 0 | $3d^{4}4s5s$ $3d^{4}4s5s$ | g ⁵ D | 0 | 1.40 | |
| 54646.13 54671.754 | 0.03 | 0 | 3d 4s5s 3d ⁴ 4s5s | g ⁵ D | 0 1 | | |
| 54671.754 54804.63 | 0.010 | 0 | 3d ⁴ 4s5s | e ³ D | 1 | | |
| 54804.63 54818.479 | 0.04 | 0 | 3d 4s5s 3d ⁴ 4s5s | g ⁵ D | 2 | | |
| | 0.006 | 0 | 3d ⁴ 4s5s | e ³ D | 2 | | |
| 54974.566 54986.82 | | | $3d^{4}4s5s$ $3d^{4}4s5s$ | e ⁵ D g ⁵ D | | | |
| 54986.82 55204.79 | 0.03 | 0 | 3d 4s5s 3d ⁴ 4s5s | g D e ³ D | 3 | | |
| | 0.02 | 0 | $3d^{4}4s5s$ $3d^{4}4s5s$ | e ⁵ D g ⁵ D | | | |
| 55209.07 | 0.06 | 0 | | g ⁵ D e ⁵ P | 4 1 | | |
| 51558.09 | 0.07 | 0 | 3d ⁴ 4s5s 3d ⁴ 4s5s | e ⁵ P e ⁵ P | | | |
| 51687.61 | 0.07 | 0 | | e ⁵ P e ⁵ P | 2 | | |
| 61849.96 | 0.20 | 0 | $3d^44s5s$ | | 3 | | |
| 54711.93 | 0.05 | 0 | $3d^44s5s$ | e ⁵ H | 3 | | |
| 54751.33 | 0.04 | 0 | $3d^44s5s$ | e ⁵ H | 4 | | |
| 64801.993 | 0.011 | 0 | $3d^44s5s$ | e ⁵ H | 5 | | |
| 64836.29 | 0.06 | 0 | $3d^44s5s$ | e ⁵ H | 6 | | |
| 64940.241 | 0.008 | 0 | $3d^44s5s$ | e ⁵ H | 7 | | |
| 47629.672 47631.6771 | 0.002 | 1 | $3d^4(^5D)4s5p(^3P^o)$ $3d^4(^5D)4s5p(^3P^o)$ | v ⁵ F ^o v ⁵ F ^o | 1 2 | | |
| | 0.0014 | 1 | | | | | |

Table 1. Energy levels of Cr I—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | $\mathbf{g}_{\mathbf{i}}$ | L | eading percentages | |
|----------------------------------|---------------------------------|--------|--|--------------------------------------|---|---------------------------|-------|-------------------------------------|--|
| 47636.4837 | 0.0013 | 1 | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | <u> </u> | | <u> </u> | |
| 47640.0627 | 0.0010 | 1 | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | 1.34 | | | |
| 47644.9429 | 0.0015 | 1 | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | 1.5 1 | | | |
| 53541.16 | 0.10 | 1 | $3d^44s5p$ | s ⁵ D° | 2 | | | | |
| 53640.86 | 0.10 | 1 | $3d^44s5p$ | s ⁵ D° | 3 | | | | |
| 53782.78 | 0.02 | 1 | $3d^44s5p$ | s ⁵ D° | 4 | | | | |
| | | | $3d^44s5p$ | s D s ⁵ P° | | | | | |
| 53962.97 | 0.18 | 1 | 3a 4s5p 3d ⁴ 4s5p | s P s ⁵ P° | 1 | | | | |
| 54132.87 | 0.02 | 1 | | s Po s Po | 3 | | | | |
| 54032.7 | 0.2 | 1 | $3d^44s5p$ | s P | 2 | | | | |
| 54198.16 | 0.12 | 1 | $3d^44s5p$ | q 5F° | 1 | | | | |
| 54252.09 | 0.08 | 1 | $3d^44s5p$ | q ⁵ F° | 2 | | | | |
| 54329.017 | 0.010 | 1 | $3d^44s5p$ | q ⁵ F° | 3 | | | | |
| 54425.30 | 0.10 | 1 | $3d^44s5p$ | q ⁵ F° | 4 | | | | |
| 54536.45 | 0.13 | 1 | $3d^44s5p$ | q ⁵ F° | 5 | | | | |
| 57958.33 | 0.07 | 1 | $3d^44s5p$ | r ⁵ D° | 0 | | | | |
| 57995.061 | 0.013 | 1 | $3d^44s5p$ | r ⁵ D° | 1 | | | | |
| 58063.876 | 0.008 | 1 | $3d^44s5p$ | r ⁵ D° | 2 | | | | |
| 58147.845 | 0.013 | 1 | $3d^44s5p$ | r ⁵ D° | 3 | | | | |
| 58292.54 | 0.04 | 1 | $3d^44s5p$ | r ⁵ D° | 4 | | | | |
| 47698.6 | 0.5 | 1 | $3d^{5}(^{6}S)6p$ | $w^7 P^o$ | 2 | | | | |
| 47708.35 | 0.09 | 1 | $3d^{5}(^{6}S)6p$ | w ⁷ P ^o | 3 | | | | |
| 47719.18 | 0.15 | 1 | $3d^{5}(^{6}S)6p$ | w ⁷ P ^o | 4 | | | | |
| 47700.1 | 0.13 | 0 | $3d^{5}(^{6}S)5d$ | g ⁷ D | 1 | | | | |
| 47700.1 47700.905 | 0.013 | 0 | $3d^{5}(^{6}S)5d$ | g D g ⁷ D | 2 | | | | |
| 47700.903 47702.390 | 0.005 | | $3d^{5}(^{6}S)5d$ | g D g ⁷ D | 3 | | | | |
| | | 0 | 3d ⁵ (⁶ S)5d | g D g ⁷ D | | | | | |
| 47704.62 | 0.19 | 0 | | g D g ⁷ D | 4 | | | | |
| 47709.848 | 0.003 | 0 | $3d^{5}(^{6}S)5d$ | g D | 5 | | | | |
| 49177.87 | 0.10 | 0 | $3d^{5}(^{6}S)7s$ | g ⁷ S | 3 | | | | |
| 49321.573 | 0.008 | 0 | $3d^{5}(^{6}S)7s$ | g ⁵ S ⁷ P° | 2 | | | | |
| 50184.4 | 1.3 | 1 | $3d^{5}(^{6}S)7p$ | | 3 | | | | |
| 50196.84 | 0.17 | 1 | $3d^{5}(^{6}S)7p$ | $^{7}P^{o}$ | 4 | | | | |
| 51035.630 | 0.008 | 0 | $3d^{5}(^{6}S)8s$ | h ⁵ S | 2 | | | | |
| 51529.45 | 0.11 | 1 | $3d^5(^6S)8p$ | $^{7}P^{o}$ | 2 | | | | |
| 51531.555 | 0.006 | 1 | $3d^{5}(^{6}S)8p$ | $^{7}P^{o}$ | 3 | | | | |
| 51534.34 | 0.10 | 1 | $3d^{5}(^{6}S)8p$ | $^{7}P^{o}$ | 4 | | | | |
| 52857.34 | 0.14 | 1 | $3d^{5}(^{6}S)10p$ | $^{7}P^{o}$ | 2 | | | | |
| 52857.34 | 0.14 | 1 | $3d^5(^6S)10p$ | $^{7}P^{o}$ | 3 | | | | |
| 52857.34 | 0.14 | 1 | $3d^{5}(^{6}S)10p$ | $^{7}P^{o}$ | 4 | | | | |
| 53148.32 | 0.05 | 0 | $3d^{4}4s4d$ | e ⁷ G | 1 | | | | |
| 53177.70 | 0.10 | 0 | $3d^44s4d$ | e ⁷ G | 2 | | | | |
| 53195.061 | 0.007 | 0 | $3d^44s4d$ | h ⁷ D | 2 | | | | |
| 53215.356 | 0.004 | 0 | $3d^44s4d$ | e ⁷ F | 1 | | | | |
| 53228.462 | 0.012 | 0 | $3d^44s4d$ | e ⁷ G | 3 | | | | |
| 53279.783 | 0.012 | 0 | 3d ⁴ 4s4d | e ⁷ F | 2 | | | | |
| | | 0 | | h ⁷ D | | | | | |
| 53284.331 | 0.009 | | 3d ⁴ 4s4d 3d ⁴ 4s4d | e ⁷ G | 3 | | | | |
| 53298.751 | 0.006 | 0 | | e G | 4 | | | | |
| 53375.373 | 0.008 | 0 | $3d^44s4d$ | h ⁷ D | 4 | | | | |
| 53384.700 | 0.002 | 0 | $3d^44s4d$ | e ⁷ F | 3 | | | | |
| 53393.408 | 0.002 | 0 | $3d^{4}4s4d$ | e ⁷ G | 5 | | | | |
| 53517.822 | 0.010 | 0 | $3d^44s4d$ | e ⁷ G | 6 | | | | |
| 53526.194 | 0.011 | 0 | $3d^44s4d$ | e ⁷ F | 4 | | | | |
| 53627.80 | 0.07 | 0 | $3d^44s4d$ | h ⁷ D | 5 | | | | |
| 53662.62 | 0.16 | 0 | $3d^44s4d$ | e ⁷ G | 7 | | | | |
| 53706.011 | 0.008 | 0 | $3d^44s4d$ | e ⁷ F | 5 | | | | |
| 53927.412 | 0.012 | 0 | $3d^44s4d$ | e ⁷ F | 6 | | | | |
| 53217.0 | 0.3 | 1 | $3d^5(^6S)11p$ | $^{7}P^{o}$ | 2 | | | | |
| 53217.0 | 0.3 | 1 | $3d^5(^6S)11p$ | $^{7}P^{o}$ | 3 | | | | |
| 53217.0 | 0.3 | 1 | $3d^{5}(^{6}S)11p$ | $^{7}P^{o}$ | 4 | | | | |
| 53484.49 | 0.11 | 1 | $3d^{5}(^{6}S)12p$ | ⁷ p ° | 2 | | | | |
| 53484.49 | 0.11 | 1 | $3d^{5}(^{6}S)12p$ | $^{7}P^{o}$ | 3 | | | | |
| | | | $3d^{5}(^{6}S)12p$ $3d^{5}(^{6}S)12p$ | $^{7}P^{o}$ | | | | | |
| 53484.49 | 0.11 | 1 | | | 4 | | | | |
| 53671.45 | 0.12 | 1 | $3d^{5}(^{6}S)13p$ | ⁷ P° | 2 | | | | |
| 53671.45 | 0.12 | 1 | $3d^{5}(^{6}S)13p$ | ⁷ P° | 3 | | | | |
| 53671.45 | 0.12 | 1 | $3d^{5}(^{6}S)13p$ | ⁷ P° v ³ G° | 4 | | | 3d ⁵ (⁴ F)4p | |
| 53804.711 | 0.010 | 1 | $3d^3(^4F)4s^24p$ | 300 | 3 | | 28 22 | | |

Table 1. Energy levels of Cr I—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm^{-1}) | Parity | Configuration | Term | J | g_{j} | | L | eading percentages | |
|----------------------------------|-------------------------|--------|--|--|-----|---------|----|----|---|----------------|
| 53927.51 | 0.03 | 1 | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G ^o | 4 | ы | 26 | 22 | $\frac{3d^5(^4\text{F})4p}{3d^5(^4\text{F})4p}$ | ³ G |
| 54077.98 | 0.03 | 1 | $3d^3(^4F)4s^24p$ | v G v ³ G° | 5 | | 25 | 22 | $3d^{5}(^{4}F)4p$ | ³ G |
| 53815.78 | 0.12 | 1 | $3d^{5}(^{6}S)14p$ | $^{7}P^{o}$ | 2 | | 25 | | 5u (1) ip | Ü |
| 53815.78 | 0.12 | 1 | $3d^5(^6S)14p$ | $^{7}P^{o}$ | 3 | | | | | |
| 53815.78 | 0.12 | 1 | $3d^5(^6S)14p$ | $^{7}P^{o}$ | 4 | | | | | |
| 53927.98 | 0.12 | 1 | $3d^5(^6S)15p$ | $^{7}P^{o}$ | 2 | | | | | |
| 53927.98 | 0.12 | 1 | $3d^{5}(^{6}S)15p$ | ${}^{7}P^{o}$ | 3 | | | | | |
| 53927.98 | 0.12 | 1 | $3d^{5}(^{6}S)15p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54017.09 | 0.12 | 1 | $3d^5(^6S)16p$ | ⁷ P° | 2 | | | | | |
| 54017.09 | 0.12 | 1 | $3d^5(^6S)16p$ | ⁷ P ^o ⁷ P ^o | 3 | | | | | |
| 54017.09 54089.0 | 0.12 0.3 | 1 1 | 3d ⁵ (⁶ S)16p 3d ⁵ (⁶ S)17p | $^{7}P^{\circ}$ | 4 2 | | | | | |
| 54089.0 | 0.3 | 1 | $3d^{5}(^{6}S)17p$ | ⁷ P ^o | 3 | | | | | |
| 54089.0 | 0.3 | 1 | $3d^{5}(^{6}S)17p$ | $^{7}\mathrm{P}^{\mathrm{o}}$ | 4 | | | | | |
| 54147.71 | 0.12 | 1 | $3d^{5}(^{6}S)18p$ | $^{7}P^{o}$ | 2 | | | | | |
| 54147.71 | 0.12 | 1 | $3d^{5}(^{6}S)18p$ | $^{7}P^{o}$ | 3 | | | | | |
| 54147.71 | 0.12 | 1 | $3d^{5}(^{6}S)18p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54196.58 | 0.12 | 1 | $3d^{5}(^{6}S)19p$ | $^{7}P^{o}$ | 2 | | | | | |
| 54196.58 | 0.12 | 1 | $3d^5(^6S)19p$ | $^{7}P^{o}$ | 3 | | | | | |
| 54196.58 | 0.12 | 1 | $3d^5(^6S)19p$ | ${}^{7}P^{o}$ | 4 | | | | | |
| 54237.73 | 0.15 | 1 | $3d^5(^6S)20p$ | $^{7}P^{o}$ | 2 | | | | | |
| 54237.73 | 0.15 | 1 | $3d^{5}(^{6}S)20p$ | ⁷ P° | 3 | | | | | |
| 54237.73 | 0.15 | 1 | $3d^{5}(^{6}S)20p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54272.4 | 0.4 | 1 | $3d^{5}(^{6}S)21p$ | ⁷ P° | 2 | | | | | |
| 54272.4 | 0.4 | 1 | $3d^5(^6S)21p$ | ⁷ P ^o | 3 | | | | | |
| 54272.4 | 0.4 | 1 | $3d^{5}(^{6}S)21p$ | ⁷ P ^o ⁷ P ^o | 4 | | | | | |
| 54302.4 54302.4 | 0.2 0.2 | 1 1 | 3d ⁵ (⁶ S)22p 3d ⁵ (⁶ S)22p | ⁷ P° | 2 3 | | | | | |
| 54302.4 | 0.2 | 1 | $3d^{5}(^{6}S)22p$ | ⁷ P ^o | 4 | | | | | |
| 54327.19 | 0.15 | 1 | $3d^{5}(^{6}S)23p$ | г ⁷ ро | 2 | | | | | |
| 54327.19 | 0.15 | 1 | $3d^{5}(^{6}S)23p$ | $^{7}P^{o}$ | 3 | | | | | |
| 54327.19 | 0.15 | 1 | $3d^{5}(^{6}S)23p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54349.54 | 0.18 | 1 | $3d^{5}(^{6}S)24p$ | $^{7}P^{o}$ | 2 | | | | | |
| 54349.54 | 0.18 | 1 | $3d^{5}(^{6}S)24p$ | $^{7}P^{o}$ | 3 | | | | | |
| 54349.54 | 0.18 | 1 | $3d^5(^6S)24p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54368.63 | 0.12 | 1 | $3d^5(^6S)25p$ | $^{7}P^{o}$ | 2 | | | | | |
| 54368.63 | 0.12 | 1 | $3d^5(^6S)25p$ | $^{7}P^{o}$ | 3 | | | | | |
| 54368.63 | 0.12 | 1 | $3d^{5}(^{6}S)25p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54385.54 | 0.15 | 1 | $3d^{5}(^{6}S)26p$ | ⁷ P ^o | 2 | | | | | |
| 54385.54 | 0.15 | 1 | $3d^5(^6S)26p$ | ⁷ P° | 3 | | | | | |
| 54385.54 | 0.15 | 1 | $3d^{5}(^{6}S)26p$ | ⁷ P° | 4 | | | | | |
| 54400.54 54400.54 | 0.15 0.15 | 1 1 | 3d ⁵ (⁶ S)27p 3d ⁵ (⁶ S)27p | ⁷ P ^o | 2 3 | | | | | |
| 54400.54 | 0.15 | 1 | $3d^{5}(^{6}S)27p$ | ⁷ P ^o | 4 | | | | | |
| 54413.48 | 0.13 | 1 | $3d^{5}(^{6}S)28p$ | ⁷ P ^o | 2 | | | | | |
| 54413.48 | 0.12 | 1 | $3d^{5}(^{6}S)28p$ | $^{7}P^{o}$ | 3 | | | | | |
| 54413.48 | 0.12 | 1 | $3d^{5}(^{6}S)28p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54425.35 | 0.12 | 1 | $3d^5(^6S)29p$ | $^{7}P^{o}$ | 2 | | | | | |
| 54425.35 | 0.12 | 1 | $3d^5(^6S)29p$ | $^{7}P^{o}$ | 3 | | | | | |
| 54425.35 | 0.12 | 1 | $3d^5(^6S)29p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54436.14 | 0.18 | 1 | $3d^5(^6S)30p$ | $^{7}P^{o}$ | 2 | | | | | |
| 54436.14 | 0.18 | 1 | $3d^{5}(^{6}S)30p$ | ⁷ P° | 3 | | | | | |
| 54436.14 | 0.18 | 1 | $3d^{5}(^{6}S)30p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54445.03 | 0.18 | 1 | $3d^{5}(^{6}S)31p$ | ⁷ P° | 2 | | | | | |
| 54445.03 | 0.18 | 1 | $3d^{5}(^{6}S)31p$ | ⁷ P ^o ⁷ P ^o | 3 | | | | | |
| 54445.03 | 0.18 | 1 | 3d ⁵ (⁶ S)31p 3d ⁵ (⁶ S)32p | ⁷ P ^o | 4 | | | | | |
| 54453.39 54453.39 | 0.12 0.12 | 1 1 | 3d ⁵ (⁶ S)32p 3d ⁵ (⁶ S)32p | ⁷ P° | 2 3 | | | | | |
| 54453.39 | 0.12 | 1 | $3d^{5}(^{6}S)32p$ | $^{7}P^{\circ}$ | 4 | | | | | |
| 54461.69 | 0.12 | 1 | $3d^{5}(^{6}S)33p$ | $^{7}P^{o}$ | 2 | | | | | |
| 54461.69 | 0.12 | 1 | $3d^{5}(^{6}S)33p$ | г ⁷ Р ^о | 3 | | | | | |
| 54461.69 | 0.12 | 1 | $3d^{5}(^{6}S)33p$ | $^{7}P^{o}$ | 4 | | | | | |
| 54468.52 | 0.12 | 1 | $3d^{5}(^{6}S)34p$ | $^{7}\mathrm{P}^{\mathrm{o}}$ | 2 | | | | | |
| 54468.52 | 0.12 | 1 | $3d^{5}(^{6}S)34p$ | $^{7}P^{o}$ | 3 | | | | | |
| 54468.52 | 0.12 | 1 | $3d^{5}(^{6}S)34p$ | $^{7}P^{o}$ | 4 | | | | | |

Table 1. Energy levels of Cr I—Continued

| nergy level m ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | $g_{\rm j}$ | Leading percentages |
|----------------------------------|---------------------------------|--------|--------------------|----------------------------------|---|-------------|---------------------|
| | | | | ⁷ P° | | bJ | Zeading percentages |
| 1474.81 | 0.15 | 1 | $3d^5(^6S)35p$ | | 2 | | |
| 1474.81 | 0.15 | 1 | $3d^{5}(^{6}S)35p$ | ${}^{7}P^{o}$ | 3 | | |
| 1474.81 | 0.15 | 1 | $3d^5(^6S)35p$ | $^{7}P^{o}$ | 4 | | |
| 1480.62 | 0.12 | 1 | $3d^{5}(^{6}S)36p$ | $^{7}P^{o}$ | 2 | | |
| 1480.62 | 0.12 | 1 | $3d^{5}(^{6}S)36p$ | $^{7}P^{o}$ | 3 | | |
| 1480.62 | 0.12 | 1 | $3d^{5}(^{6}S)36p$ | $^{7}P^{o}$ | 4 | | |
| | | | | ⁷ P ^o | | | |
| 1485.37 | 0.12 | 1 | $3d^{5}(^{6}S)37p$ | | 2 | | |
| 485.37 | 0.12 | 1 | $3d^{5}(^{6}S)37p$ | ⁷ P° | 3 | | |
| 1485.37 | 0.12 | 1 | $3d^5(^6S)37p$ | $^{7}P^{o}$ | 4 | | |
| 491.35 | 0.08 | 1 | $3d^{5}(^{6}S)38p$ | $^{7}P^{o}$ | 2 | | |
| 1491.22 | 0.12 | 1 | $3d^{5}(^{6}S)38p$ | $^{7}\mathbf{P^{o}}$ | 3 | | |
| 1491.22 | 0.12 | 1 | $3d^{5}(^{6}S)38p$ | $^{7}P^{o}$ | 4 | | |
| 219.89 | 0.11 | 1 | $3d^44s(^6D)6p$ | 7 F $^{\circ}$ | 2 | | |
| | | | | г ⁷ Р ^о | 2 | | |
| 280.19 | 0.12 | 1 | $3d^44s(^6D)6p$ | | 2 | | |
| 310.2 | 0.2 | 1 | $3d^44s(^6D)6p$ | 7 F o | 3 | | |
| 442.16 | 0.06 | 1 | $3d^44s(^6D)6p$ | $^{7}P^{o}$ | 3 | | |
| 9442.85 | 0.11 | 1 | $3d^44s(^6D)6p$ | 7 F o | 4 | | |
| 486.95 | 0.14 | 1 | $3d^44s(^6D)6p$ | $^{7}\mathrm{D}^{\mathrm{o}}$ | 2 | | |
| 9480.93 | 0.14 | 1 | $3d^44s(^6D)6p$ | $^{7}P^{\circ}$ | 4 | | |
| | | | | ⁷ D° | | | |
| 0662.05 | 0.06 | 1 | $3d^44s(^6D)6p$ | | 3 | | |
| 945.90 | 0.06 | 1 | $3d^44s(^6D)6p$ | ⁵ P° | 2 | | |
| 2034.33 | 0.07 | 0 | $3d^44p^2$ | f ⁷ F | 3 | | |
| 2188.733 | 0.008 | 0 | $3d^44p^2$ | f ⁷ F | 4 | | |
| 472.9 | 0.3 | 0 | $3d^44p^2$ | f ⁷ F | 5 | | |
| 2658.42 | 0.05 | 0 | $3d^44p^2$ | f ⁷ F | 6 | | |
| | | | 3a 4p | 1 Г | | | |
| 042.7187 | 0.0014 | 1 | | | 4 | | |
| 514.992 | 0.008 | 1 | | $x^{3}G^{o}$ | 3 | | |
| 562.1792 | 0.0018 | 1 | | x ³ G ^o | 4 | | |
| 786.161 | 0.002 | 1 | | x ³ G° | 5 | | |
| 586.47 | 0.07 | 0 | | e ³ F | 2 | | |
| 717.808 | 0.011 | 0 | | e ³ F | 3 | | |
| | | | | e ³ F | | | |
| 863.458 | 0.004 | 0 | | | 4 | | |
| 296.66 | 0.12 | 0 | | e ⁵ F | 1 | | |
| 383.295 | 0.012 | 0 | | e ⁵ F | 2 | | |
| 476.299 | 0.003 | 0 | | e ⁵ F | 3 | | |
| 572.81 | 0.06 | 0 | | e ⁵ F | 4 | | |
| 660.241 | 0.010 | 0 | | e ⁵ F | 5 | | |
| 096.44 | 0.08 | 1 | | p ⁵ F° | 1 | | |
| | | | | р г 5 0 | | | |
| 100.73 | 0.06 | 1 | | p ⁵ F° | 2 | | |
| 186.47 | 0.06 | 1 | | p 5F° | 3 | | |
| 237.54 | 0.12 | 1 | | p ⁵ F ^o | 4 | | |
| 327.51 | 0.16 | 1 | | p ⁵ F° | 5 | | |
| 141.791 | 0.006 | 1 | | 0 | 3 | | |
| | | | | e ³ G | | | |
| 984.889 | 0.004 | 0 | | e G | 3 | | |
| 990.296 | 0.003 | 0 | | e ³ G | 5 | | |
| 992.173 | 0.006 | 0 | | e ³ G | 4 | | |
| | | | | | | | |
| 238.00 | 0.11 | 1 | | q ⁵ D° | 0 | | |
| 286.67 | 0.15 | 1 | | q ⁵ D° | 1 | | |
| 373.15 | 0.13 | | | q ⁵ D° | | | |
| | | 1 | | q D 5D0 | 2 | | |
| 491.129 | 0.007 | 1 | | q 5D° | 3 | | |
| 625.628 | 0.003 | 1 | | q ⁵ D° | 4 | | |
| 252.961 | 0.005 | 1 | | q ³ F° | 2 | | |
| 325.859 | 0.006 | 1 | | q ³ F° | 3 | | |
| 367.230 | 0.009 | 1 | | $q^{3}F^{o}$ | 4 | | |
| .57.250 | 0.007 | 1 | | | 7 | | |
| 678.383 | 0.010 | 1 | | o ⁵ F° | 1 | | |
| 781.1 | 0.3 | 1 | | o ⁵ F° | 2 | | |
|)901.8 | 0.8 | 1 | | o ⁵ F° | 3 | | |
| | | | | o F | | | |
| 052.49 | 0.08 | 1 | | | 4 | | |
| 193.89 | 0.11 | 1 | | o ⁵ F° | 5 | | |
| 065.83 | 0.05 | 1 | | r ⁵ P ^o | 1 | | |
| 107.07 | 0.11 | 1 | | r ⁵ P° | 2 | | |
| 107.87 | | | | | | | |
| 107.87 | 0.11 | 1 | | r ⁵ P ^o | 3 | | |

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TABLE 1. Energy levels of Cr I-Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | \mathbf{g}_{j} | Leading percentages |
|----------------------------------|---------------------------------|--------|----------------|-------------------------------|---|---------------------------|---------------------|
| 63144.156 | 0.003 | 1 | | q ³ H ^o | 5 | | |
| 63182.745 | 0.002 | 1 | | q ³ H ^o | 6 | | |
| 311284 | 78. | 1 | $3p^53d^54s^2$ | $^{7}P^{o}$ | 4 | | |
| 314228 | 79. | 1 | $3p^53d^54s^2$ | $^{7}P^{o}$ | 3 | | |
| 316817 | 80. | 1 | $3p^53d^54s^2$ | $^{7}P^{o}$ | 2 | | |

3.2. References for section 3

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4. Tables of Energy Levels and Observed Lines of Singly Ionized Chromium, Cr II

4.1. Discussion

Ground state $1s^22s^22p^63s^23p^63d^5$ a $^6S_{5/2}$

Ionization energy 132966. cm⁻¹ \pm 10. cm⁻¹ (16.4857 eV \pm 0.0010 eV) [85SUG/COR].

The energy levels of singly ionized chromium, Cr II, were compiled by Sugar and Corliss [85SUG/COR] based on privately communicated preliminary results of Johansson. Unfortunately, these results have never been published. Recent measurements of the Cr II spectrum have been made by means of Fourier transform spectroscopy by Sansonetti *et al.* [12SAN/NAV]. We have used their values of the energy levels in the energy level table (Table 4). A few additional levels were obtained from lines from other sources which involve one of their determined levels.

In the energy level table the levels are designated using LS coupling except for 5g and 6g configurations where pair coupling is used.

The vast majority of the wavelengths observed by Johansson are not available (a few were reported in Johansson [82JOH]). The observed spectral lines of Cr II are compiled from six sources [51KIE], [82JOH], [85BIE/BRA], [98ALL/GAR], [00WAG], [12SAN/NAV]. The sources used in this compilation are summarized in Table 5 (sources of Cr II lines).

TABLE 2. Sources of Cr I lines

(2010).

| Source | Number of classifications | Light source/spectrometers ^a | Wavelength range (Å) | Uncertainty (Å) |
|-----------|---------------------------|--|----------------------|-----------------|
| 53KIE | 2161 | Various arcs. grating and prism spectrographs | 1880-10631 | 0.01-0.10 |
| 75HUB/SAN | 100 | Tungsten strip lamp. 3-m spectrograph | 1835-1941 | 0.004-0.012 |
| 78MAN | 3 | Synchrotron radiation. GI VS | 316–321 | 0.08 |
| 95SCH/THO | 8 | Inductively coupled plasma. 20-cm FTS | 2717-3030 | 0.001 - 0.007 |
| 98ALL/GAR | 49 | The sun. FTS | 4130-6730 | 0.004-0.005 |
| 00WAG | 77 | Glow discharge lamp. Czerny-Turner monochromator | 2007-4296 | 0.01-0.02 |
| 09WAL/HIN | 1973 | Hollow cathode lamp. 1-m FTS | 2366-54286 | 0.0001-0.29 |
| 10HAS/WAL | 2 | The sun. satellite-borne FTS | 32157, 32283 | 0.1 |

^aAbbreviations used: FTS means Fourier transform spectrometer. VS means vacuum spectrograph. GI means grazing incidence.

| Observed vacuum wavelength | Observed wave number | Intensity and | | | | Classificatio | n | | | Uncertainty of observed wavelength | Source |
|----------------------------------|----------------------------|------------------|--|--------------------------|---|---------------|--|----------------------------------|--------|--|----------------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 315.64 | 316817 | A | 3d ⁵ (⁶ S)4s | a ⁷ S | 3 | _ | $3p^53d^54s^2$ | ⁷ P ^o | 2 | 0.08 | 78MAN |
| 318.24 | 314228 | A | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3p^53d^54s^2$ | $^{7}P^{o}$ | 3 | 0.08 | 78MAN |
| 321.25 | 311284 | A | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3p^53d^54s^2$ | $^{7}P^{o}$ | 4 | 0.08 | 78MAN |
| 835.158 | 54491.22 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)38p$ | $^{7}P^{o}$ | 2 | 0.004 | 75HUB/SA |
| 835.158 | 54491.22 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)38p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SA |
| 835.158 | 54491.22 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)38p$ | $^{7}P^{o}$ | 3 | 0.004 | 75HUB/SA |
| 835.355 | 54485.37 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)37p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SA |
| 835.355 | 54485.37 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)37p$ | $^{7}P^{o}$ | 2 | 0.004 | 75HUB/SA |
| 835.355 | 54485.37 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)37p$ | $^{7}P^{o}$ | 3 | 0.004 | 75HUB/SA |
| 835.515 | 54480.62 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)36p$ | $^{7}P^{o}$ | 3 | 0.004 | 75HUB/SA |
| 1835.515 | 54480.62 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)36p$ | $^{7}\mathbf{P}^{\mathrm{o}}$ | 2 | 0.004 | 75HUB/SA |
| 1835.515 | 54480.62 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)36p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SA |
| 1835.711 | 54474.81 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)35p$ | ⁷ P ° | 4 | 0.005 | 75HUB/SA |
| 1835.711 | 54474.81 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)35p$ | ⁷ P ° | 2 | 0.005 | 75HUB/SA |
| 1835.711 | 54474.81 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)35p$ | ⁷ P ^o | 3 | 0.005 | 75HUB/SA |
| 835.923 | 54468.52 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)34p$ | $^{7}P^{o}$ | 3 | 0.004 | 75HUB/SA |
| 835.923 | 54468.52 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)34p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SA |
| 835.923 | 54468.52 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)34p$ | $^{7}P^{o}$ | 2 | 0.004 | 75HUB/SA |
| 836.153 | 54461.69 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)33p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SA |
| 836.153 | 54461.69 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)33p$ | $^{7}P^{o}$ | 3 | 0.004 | 75HUB/SA |
| 836.153 | 54461.69 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)33p$ | $^{7}P^{o}$ | 2 | 0.004 | 75HUB/SA |
| 836.433 | 54453.39 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)32p$ | $^{7}P^{o}$ | 2 | 0.004 | 75HUB/SA |
| 1836.433 | 54453.39 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)32p$ | ⁷ P ^o | 3 | 0.004 | 75HUB/SA |
| 1836.433 | 54453.39 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)32p$ | г ⁷ Р ^о | 4 | 0.004 | 75HUB/SA |
| 1836.715 | 54445.03 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)31p$ | ⁷ P ^o | 2 | 0.004 | 75HUB/SA |
| | 54445.03 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)31p$ | 7 P ^o | 4 | 0.006 | |
| 1836.715 1836.715 | 54445.03 | 3 A * | $3d^{5}(^{6}S)4s$ | a S a ⁷ S | 3 | _ | $3d^{5}(^{6}S)31p$ | ⁷ P ^o | 3 | 0.006 | 75HUB/SA 75HUB/SA |
| 1837.015 | 54436.14 | 3 A * | $3d^{5}(^{6}S)4s$ | a S a ⁷ S | 3 | _ | $3a^{(8)}31p$ $3d^{(8)}30p$ | ⁷ P ^o | 3 | 0.006 | 75HUB/SA |
| | | 3 A * | $3d^{5}(^{6}S)4s$ | a S a ⁷ S | 3 | | $3d^{5}(^{6}S)30p$ | Р ⁷ Р ^о | 3 4 | 0.006 | |
| 1837.015 | 54436.14 | 3 A * | $3d^{5}(^{6}S)4s$ $3d^{5}(^{6}S)4s$ | a 'S a 'S | | - | $3d^{5}(^{6}S)30p$ $3d^{5}(^{6}S)30p$ | ⁷ P ^o | | | 75HUB/SA |
| 837.015 | 54436.14 | 3 A * | $3d^{5}(^{6}S)4s$ $3d^{5}(^{6}S)4s$ | a S a ⁷ S | 3 | - | 3d (S)30p | ⁷ P ^o | 2 2 | 0.006 | 75HUB/SA |
| 837.379 | 54425.35 | | $3d^{5}(^{6}S)4s$ $3d^{5}(^{6}S)4s$ | a 'S a 'S | 3 | _ | $3d^5(^6S)29p$ | ⁷ P ^o | | 0.004 | 75HUB/SA |
| 837.379 | 54425.35 | 3 A * | 3d*(*S)4s | a 'S a 'S | 3 | - | $3d^{5}(^{6}S)29p$ | ⁷ P° | 3 | 0.004 | 75HUB/SA |
| 837.379 | 54425.35 | 3 A * | $3d^{5}(^{6}S)4s$ | a 'S a ⁷ S | 3 | - | $3d^5(^6S)29p$ | ⁷ P ^o | 4 | 0.004 | 75HUB/SA |
| 837.780 | 54413.48 | 3 A * | $3d^{5}(^{6}S)4s$ | a 'S a ⁷ S | 3 | - | $3d^5(^6S)28p$ | ⁷ P ^o | 4 | 0.004 | 75HUB/SA |
| 837.780 | 54413.48 | 3 A * | $3d^{5}(^{6}S)4s$ | a 'S | 3 | - | $3d^5(^6S)28p$ | | 2 | 0.004 | 75HUB/SA |
| 837.780 | 54413.48 | 3 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)28p$ | ⁷ P° | 3 | 0.004 | 75HUB/SA |
| 838.217 | 54400.54 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)27p$ | ⁷ P° | 2 | 0.005 | 75HUB/SA |
| 838.217 | 54400.54 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)27p$ | ⁷ P° | 3 | 0.005 | 75HUB/SA |
| 838.217 | 54400.54 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)27p$ | ⁷ P° | 4 | 0.005 | 75HUB/SA |
| 838.724 | 54385.54 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)26p$ | ⁷ P° | 4 | 0.005 | 75HUB/SA |
| 838.724 | 54385.54 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)26p$ | ⁷ P° | 2 | 0.005 | 75HUB/SA |
| 838.724 | 54385.54 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^5(^6S)26p$ | ⁷ P° | 3 | 0.005 | 75HUB/SA |
| 839.296 | 54368.63 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^{5}(^{6}S)25p$ | ⁷ P° | 3 | 0.004 | 75HUB/SA |
| 1839.296 | 54368.63 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^{5}(^{6}S)25p$ | ${}^{7}P^{o}$ | 2 | 0.004 | 75HUB/SA |
| 839.296 | 54368.63 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^5(^6S)25p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SA |

TABLE 3. Spectral lines of Cr I—Continued

| Observed vacuum wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source of line |
|----------------------------------|----------------------------|------------------|--|-------------------------|---|---------------|--|----------------------------------|---|--|-------------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 1839.942 | 54349.54 | 4 A * | 3d ⁵ (⁶ S)4s | a ⁷ S | 3 | _ | 3d ⁵ (⁶ S)24p | ⁷ P ^o | 4 | 0.006 | 75HUB/SAN |
| 1839.942 | 54349.54 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)24p$ | $^{7}P^{o}$ | 3 | 0.006 | 75HUB/SAN |
| 1839.942 | 54349.54 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)24p$ | $^{7}P^{o}$ | 2 | 0.006 | 75HUB/SAN |
| 1840.699 | 54327.19 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)23p$ | $^{7}P^{o}$ | 2 | 0.005 | 75HUB/SAN |
| 1840.699 | 54327.19 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^5(^6S)23p$ | $^{7}P^{o}$ | 4 | 0.005 | 75HUB/SAN |
| 1840.699 | 54327.19 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)23p$ | $^{7}P^{o}$ | 3 | 0.005 | 75HUB/SAI |
| 1841.540 | 54302.4 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)22p$ | $^{7}P^{0}$ | 4 | 0.007 | 75HUB/SAN |
| 1841.540 | 54302.4 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)22p$ | $^{7}P^{o}$ | 3 | 0.007 | 75HUB/SAN |
| 1841.540 | 54302.4 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)22p$ | $^{7}P^{o}$ | 2 | 0.007 | 75HUB/SAN |
| 1842.556 | 54272.4 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)21p$ | $^{7}P^{o}$ | 4 | 0.012 | 75HUB/SAN |
| 1842.556 | 54272.4 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)21p$ | $^{7}P^{o}$ | 3 | 0.012 | 75HUB/SAN |
| 1842.556 | 54272.4 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)21p$ | г ⁷ Р ^о | 2 | 0.012 | 75HUB/SAN |
| 1843.735 | 54237.73 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | | $3d^{5}(^{6}S)20p$ | ⁷ P ^o | 2 | 0.012 | 75HUB/SAN |
| | 54237.73 | 4 A * | $3d^{5}(^{6}S)4s$ | a S a ⁷ S | 3 | _ | $3d^{5}(^{6}S)20p$ | Р ⁷ Р ^о | 4 | 0.005 | |
| 1843.735 | | | $3d^{5}(^{6}S)4s$ | a S a S | | _ | | ⁷ P ^o | | | 75HUB/SAN |
| 1843.735 | 54237.73 | 4 A * | | | 3 | _ | $3d^5(^6S)20p$ | ⁷ P ^o | 3 | 0.005 | 75HUB/SAN |
| 1845.135 | 54196.58 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^5(^6S)19p$ | | 2 | 0.004 | 75HUB/SAN |
| 1845.135 | 54196.58 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)19p$ | ⁷ P° | 3 | 0.004 | 75HUB/SAN |
| 1845.135 | 54196.58 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^{5}(^{6}S)19p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SAN |
| 1846.800 | 54147.71 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^{5}(^{6}S)18p$ | ⁷ P° | 4 | 0.004 | 75HUB/SAI |
| 1846.800 | 54147.71 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)18p$ | $^{7}P^{o}$ | 2 | 0.004 | 75HUB/SAI |
| 1846.800 | 54147.71 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)18p$ | ${}^{7}\mathrm{P}^{\mathrm{o}}$ | 3 | 0.004 | 75HUB/SAI |
| 1848.805 | 54089.0 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^5(^6S)17p$ | $^{7}P^{o}$ | 2 | 0.010 | 75HUB/SAI |
| 1848.805 | 54089.0 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^{5}(^{6}S)17p$ | $^{7}P^{o}$ | 3 | 0.010 | 75HUB/SA |
| 1848.805 | 54089.0 | 5 A * | $3d^5(^6S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)17p$ | $^{7}P^{o}$ | 4 | 0.010 | 75HUB/SAI |
| 1851.266 | 54017.09 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^5(^6S)16p$ | $^{7}P^{o}$ | 2 | 0.004 | 75HUB/SAI |
| 1851.266 | 54017.09 | 5 A * | $3d^5(^6S)4s$ | a ⁷ S | 3 | _ | $3d^5(^6S)16p$ | $^{7}P^{o}$ | 3 | 0.004 | 75HUB/SAN |
| 1851.266 | 54017.09 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)16p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SAN |
| 1854.325 | 53927.98 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)15p$ | $^{7}P^{o}$ | 2 | 0.004 | 75HUB/SAI |
| 1854.325 | 53927.98 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)15p$ | $^{7}P^{o}$ | 3 | 0.004 | 75HUB/SAI |
| 1854.325 | 53927.98 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)15p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SAI |
| 1858.191 | 53815.78 | 6 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^5(^6S)14p$ | $^{7}P^{o}$ | 2 | 0.004 | 75HUB/SAI |
| 1858.191 | 53815.78 | 6 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)14p$ | $^{7}P^{o}$ | 4 | 0.004 | 75HUB/SAI |
| 1858.191 | 53815.78 | 6 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)14p$ | $^{7}\mathbf{P}^{\mathrm{o}}$ | 3 | 0.004 | 75HUB/SAI |
| 1863.188 | 53671.45 | 7 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)13p$ | $^{7}\mathbf{P}^{\mathrm{o}}$ | 4 | 0.004 | 75HUB/SAI |
| 1863.188 | 53671.45 | 7 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)13p$ | ⁷ P ^o | 3 | 0.004 | 75HUB/SAI |
| 1863.188 | 53671.45 | 7 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)13p$ | ⁷ P ^o | 2 | 0.004 | 75HUB/SAI |
| 1869.701 | 53484.49 | 7 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)12p$ | ⁷ P ^o | 4 | 0.004 | 75HUB/SAI |
| | 53484.49 | 7 A * | $3d^{5}(^{6}S)4s$ | a S a ⁷ S | 3 | _ | $3d^{5}(^{6}S)12p$ | ⁷ P ^o | 3 | 0.004 | 75HUB/SAI |
| 1869.701 | | 7 A * 7 A * | $3d^{5}(^{6}S)4s$ $3d^{5}(^{6}S)4s$ | a 'S a 'S | 3 | | $3d^{5}(^{6}S)12p$ $3d^{5}(^{6}S)12p$ | ⁷ P ^o | | | |
| 1869.701 | 53484.49 | | | a 'S a 'S | | _ | | ⁷ P ^o | 2 | 0.004 | 75HUB/SAN |
| 1879.099 | 53217.0 | 4 A * | $3d^{5}(^{6}S)4s$ | | 3 | _ | $3d^5(^6S)11p$ | ⁷ P ^o | 2 | 0.012 | 75HUB/SAI |
| 1879.099 | 53217.0 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)11p$ | | 3 | 0.012 | 75HUB/SAI |
| 1879.099 | 53217.0 | 4 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^5(^6S)11p$ | ⁷ P° | 4 | 0.012 | 75HUB/SAI |
| 1880.39 | 53180.5 | 1 | $3d^44s^2$ | a ⁵ D | 2 | _ | | r ⁵ P ^o | 2 | 0.05 | 53KIE |
| 1881.87 | 53138.6 | 5 | $3d^44s^2$ | a ⁵ D | 2 | _ | | r ⁵ P° | 1 | 0.05 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| vavelength number | Intensity and | | | (| Classificatio | n | | | Uncertainty of observed wavelength | Source | |
|--------------------|---------------------|---------|-------------------------------------|-------------------------|---------------|---|-----------------------------------|--------------------------|--|--------|----------------|
| Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 883.11 | 53103.6 | 1 | $3d^44s^2$ | a ⁵ D | 3 | _ | | r ⁵ P° | 3 | 0.05 | 53KIE |
| 886.34 | 53012.7 | 10 | $3d^44s^2$ | a ⁵ D | 3 | _ | | r ⁵ P° | 2 | 0.05 | 53KIE |
| 887.60 | 52977.3 | 3 | $3d^44s^2$ | a ⁵ D | 2 | _ | | o ⁵ F° | 3 | 0.05 | 53KIE |
| 1887.85 | 52970.3 | 1 * | $3d^44s^2$ | a ⁵ D | 2 | _ | | o ⁵ F° | 3 | 0.05 | 53KIE |
| 1887.85 | 52970.3 | 1 * | $3d^44s^2$ | a ⁵ D | 1 | _ | | o ⁵ F° | 2 | 0.05 | 53KIE |
| 1888.313 | 52957.32 | 3 A | $3d^44s^2$ | a ⁵ D | 3 | _ | | o ⁵ F° | 4 | 0.004 | 75HUB/SAN |
| 889.368 | 52927.75 | 3 A | $3d^44s^2$ | a ⁵ D | 0 | _ | | o ⁵ F° | 1 | 0.004 | 75HUB/SAN |
| 890.430 | 52898.02 | 8 A | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | | q ⁵ D° | 3 | 0.005 | 75HUB/SAN |
| 890.845 | 52886.41 | 4 A | $3d^44s^2$ | a ⁵ D | 4 | _ | | o ⁵ F° | 5 | 0.004 | 75HUB/SAN |
| 891.885 | 52857.34 | 5 A * | 3d ⁵ (⁶ S)4s | a ⁷ S | 3 | _ | $3d^5(^6S)10p$ | $^{7}P^{o}$ | 3 | 0.005 | 75HUB/SAN |
| 891.885 | 52857.34 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)10p$ | $^{7}P^{o}$ | 4 | 0.005 | 75HUB/SAN |
| 891.885 | 52857.34 | 5 A * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)10p$ | $^{7}P^{o}$ | 2 | 0.005 | 75HUB/SAN |
| 892.01 | 52853.8 | 1 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 5 | 0.05 | 53KIE |
| 893.59 | 52809.7 | 1 | $3d^44s^2$ | a ⁵ D | 3 | | (/ Y | o ⁵ F° | 3 | 0.05 | 53KIE |
| 895.78 | 52748.7 | 1 * | $3d^44s^2$ | a ⁵ D | 2 | _ | | o ⁵ F° | 1 | 0.05 | 53KIE |
| 895.78 | 52748.7 | 1 * | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^5(^2D1)4p$ | s ³ D° | 1 | 0.05 | 53KIE |
| 902.496 | 52562.53 | 6 A | $3d^44s^2$ | a ⁵ D | 1 | _ | ··· (= -) · _T | q ⁵ D° | 2 | 0.004 | 75HUB/SAN |
| 903.30 | 52540.3 | 1 | $3d^44s^2$ | a ⁵ D | 0 | _ | | q ⁵ D° | 1 | 0.05 | 53KIE |
| 903.57 | 52532.9 | 1 * | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^5(^2D1)4p$ | s ³ D° | 2 | 0.05 | 53KIE |
| 903.57 | 52532.9 | 1 * | $3d^44s^2$ | a ⁵ D | 3 | _ | 54 (B1) Ip | q ⁵ D° | 4 | 0.05 | 53KIE |
| 906.67 | 52447.5 | 2 | $3d^44s^2$ | a ⁵ D | 2 | _ | | q ⁵ D° | 2 | 0.05 | 53KIE |
| 907.406 | 52427.22 | 4 A | $3d^44s^2$ | a ⁵ D | 1 | _ | | q ⁵ D° | 0 | 0.004 | 75HUB/SAN |
| 908.46 | 52398.3 | 4 | $3d^44s^2$ | a ⁵ D | 2 | _ | | q ³ F° | 3 | 0.05 | 53KIE |
| 908.542 | 52396.02 | 7 A | $3d^44s^2$ | a ⁵ D | 3 | _ | | q ⁵ D° | 3 | 0.004 | 75HUB/SAN |
| 909.887 | 52359.12 | 4 A | $3d^44s^2$ | a ⁵ D | 2 | _ | | q ⁵ D° | 1 | 0.004 | 75HUB/SAN |
| 1911.385 | 52318.08 | 5 A | $3d^44s^2$ | a ⁵ D | 4 | _ | | q ⁵ D° | 4 | 0.004 | 75HUB/SAN |
| 1912.79 | 52279.7 | 4 | $3d^44s^2$ | a ⁵ D | 3 | _ | | q ⁵ D° | 2 | 0.05 | 53KIE |
| 1916.309 | 52183.65 | 5 A | $3d^44s^2$ | a ⁵ D | 4 | _ | | q ⁵ D° | 3 | 0.004 | 75HUB/SAN |
| 940.452 | 51534.38 | 8 A | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)8p$ | $^{7}P^{0}$ | 4 | 0.004 | 75HUB/SAN |
| 1940.561 | 51531.49 | 8 A | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)8p$ | ⁷ P° | 3 | 0.004 | 75HUB/SAN |
| 1940.638 | 51529.45 | 8 A | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)8p$ | ⁷ P° | 2 | 0.004 | 75HUB/SAN |
| 1989.00 | 50276.5 | 4 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{2}\text{F1})4p$ | s 3F° | 3 | 0.05 | 53KIE |
| 1989.92 | 50253.3 | 15 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^44s5p$ | r ⁵ D° | 2 | 0.05 | 53KIE |
| 1989.92 | 50244.4 | 8 | $3d^44s^2$ | a D a ⁵ D | 0 | _ | $3d^{4}4s5p$ $3d^{4}4s5p$ | r ⁵ D° | 1 | 0.05 | 53KIE 53KIE |
| 1990.27 | 50220.5 | 15 | $3d^44s^2$ | a D a ⁵ D | 2 | _ | $3d^{4}4s5p$ $3d^{4}4s5p$ | r ⁵ D° | 3 | 0.05 | 53KIE 53KIE |
| 1992.12 | 50197.8 | 6 * | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{4}4s5p$ | r ⁵ D° | 4 | 0.05 | 53KIE 53KIE |
| 1992.12 | 50197.8 | 6* | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)7p$ | ⁷ P° | 4 | 0.05 | 53KIE 53KIE |
| 992.65 | 50184.4 | 5 * | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)7p$ | ⁷ P° | 3 | 0.05 | 53KIE 53KIE |
| 992.65 | 50184.4 | 5 * | $3d^44s^2$ | a 5 a ⁵ D | 1 | _ | $3d^{4}4s5p$ | r ⁵ D° | 1 | 0.05 | 53KIE 53KIE |
| 994.10 | 50147.9 | 8 | $3d^44s^2$ | a D a ⁵ D | 1 | _ | $3d^44s5p$ | r ⁵ D° | 0 | 0.05 | 53KIE 53KIE |
| 994.55 | 50136.6 | 15 | $3d^44s^2$ | a D a ⁵ D | 2 | _ | $3a^{4}4s5p$ $3d^{4}4s5p$ | r ⁵ D° | 2 | 0.05 | 53KIE 53KIE |
| 995.69 | 50108.0 | 5 | $3d^44s^2$ | a D a ⁵ D | 3 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 3 | 0.05 | 53KIE 53KIE |
| 997.09 | 50072.9 | 5 | $3d^44s^2$ | a D a ⁵ D | 3 | _ | $3d^{5}(^{2}F1)4p$ | s r s ³ F° | 3 4 | 0.05 | 53KIE 53KIE |
| | 50072.9 | 5 10 | $3d^44s^2$ | a D a ⁵ D | 2 | _ | 3d (F1)4p 3d ⁴ 4s5p | s F r ⁵ D° | 1 | 0.05 | 53KIE 53KIE |
| 1997.30 1997.90 | 50052.6 | 10 | $3d^44s^2$ | a D a D | 3 | _ | 3a 4s5p 3d ⁴ 4s5p | r ⁵ D° | 3 | 0.05 | 53KIE 53KIE |

| Observed | Observed | | | | | | | | | Uncertainty | |
|------------|---------------------|--------------|---|-------------------------|---|--------------|-------------------------------------|-------------------------------|---|-------------|---------|
| air | wave | Intensity | | | | Classificati | on | | | of observed | |
| wavelength | number | and | | | | Ciussificuti | | | | wavelength | Source |
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 1999.95 | 49985.1 | 35 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^44s5p$ | r ⁵ D° | 4 | 0.05 | 53KIE |
| 2000.60 | 49968.8 | 20 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^44s5p$ | r ⁵ D° | 2 | 0.01 | 53KIE |
| 2003.55 | 49895.3 | 5 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^5(^2F1)4p$ | s ³ F° | 3 | 0.01 | 53KIE |
| 2004.94 | 49860.7 | 8 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^5(^2F1)4p$ | s ³ F° | 4 | 0.01 | 53KIE |
| 2005.76 | 49840.3 | 10 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^44s5p$ | r ⁵ D° | 3 | 0.01 | 53KIE |
| 2006.88 | 49812.5 | 6 R | 3d ⁵ (⁶ S)4s | a ⁷ S | 3 | - | $3d^5(^4D)4p$ | t ⁵ P° | 3 | 0.01 | 00WA |
| 2025.86 | 49345.9 | 15 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 0 | 0.01 | 53KIE |
| 2028.13 | 49290.6 | 12 | $3d^44s^2$ | a ⁵ D | 1 | _ | | p ⁵ F° | 2 | 0.01 | 53KIE |
| 2028.33 | 49285.8 | 10 | $3d^44s^2$ | a ⁵ D | 1 | _ | | p ⁵ F° | 1 | 0.01 | 53KIE |
| 2029.42 | 49259.3 | 15 | $3d^44s^2$ | a ⁵ D | 2 | _ | | p ⁵ F° | 3 | 0.01 | 53KIE |
| 2031.27 | 49214.4 | 15 | $3d^44s^2$ | a ⁵ D | 2 | _ | | ō | 3 | 0.01 | 53KIE |
| 2032.65 | 49181.0 | 1 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.01 | 53KIE |
| 2032.95 | 49173.8 | 5 | $3d^44s^2$ | a ⁵ D | 2 | _ | . , 1 . , | p ⁵ F° | 2 | 0.01 | 53KIE |
| 2034.24 | 49142.6 | 35 | $3d^44s^2$ | a ⁵ D | 3 | _ | | p ⁵ F ^o | 4 | 0.01 | 53KIE |
| 2036.34 | 49091.9 | 8 | $3d^44s^2$ | a ⁵ D | 3 | _ | | p ⁵ F° | 3 | 0.01 | 53KIE |
| 2037.72 | 49058.7 | 1 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | ${}^{3}G^{\circ}$ | 3 | 0.01 | 53KIE |
| 2038.21 | 49046.9 | 7 | $3d^44s^2$ | a ⁵ D | 3 | _ | 5th (11) to tp(11) | 0 | 3 | 0.01 | 53KIE |
| 2038.98 | 49028.4 | 1 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.01 | 53KIE |
| 2039.30 | 49020.7 | 35 | $3d^44s^2$ | a ⁵ D | 4 | _ | 3a (D) is ip(1) | p ⁵ F° | 5 | 0.01 | 53KIE |
| 2042.72 | 48938.6 | 8 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.01 | 53KIE |
| 2043.06 | 48930.5 | 10 | $3d^44s^2$ | a ⁵ D | 4 | _ | 3a (11)+3+p(1) | p ⁵ F° | 4 | 0.01 | 53KIE |
| 2049.31 | 48781.3 | 8 * | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 2 | 0.01 | 53KIE |
| 2049.31 | 48781.3 | 8 * | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.01 | 53KIE |
| 2087.87 | 47880.5 | 3 R | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | 0.01 | 00WA |
| 2095.00 | 47717.5 | 12 h | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)6p$ | w ⁷ P° | 4 | 0.01 | 53KIE |
| 2095.40 | 47717.3 | 12 H 10 h | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)6p$ | w P w ⁷ P° | 3 | 0.02 | 53KIE |
| 2095.40 | 47698.6 | 8 h | $3d^{5}(^{6}S)4s$ | a S a ⁷ S | 3 | _ | 3d ⁵ (⁶ S)6p | w P w ⁷ P° | 2 | 0.02 | 53KIE |
| | | | $3d^44s^2$ | a S a ⁵ D | 3 | | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | | |
| 2109.99 | 47378.6 | 1 R | 3 <i>d</i> 4 <i>s</i> 3 <i>d</i> 5(6S)4 <i>s</i> | a D a ⁷ S | 3 | - | $3d^{5}(^{4}P)4p$ | uF u ⁵ P° | 3 | 0.01 | 00WA |
| 2132.50 | 46878.5 | 4 R | | a 'S a 'S | | _ | . `. / A | u ⁵ F° | | 0.01 | 00WA |
| 2141.20 | 46688.1 | 2 R | $3d^{5}(^{6}S)4s$ | a S a D | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w "F" v ³ H° | 3 | 0.01 | 00WA |
| 2144.24 | 46621.9 | 1 | $3d^44s^2$ | | 4 | _ | $3d^{5}(^{4}G)5p$ | | 5 | 0.01 | 53KIE |
| 2148.02 | 46539.9 | 10 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | - | $3d^44s5p$ | s ⁵ P° | 3 | 0.01 | 53KIE |
| 2150.25 | 46491.6 | 1 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^4(^3H)4s4p(^1P^0)$ | $w_{5-\alpha}^{3}H^{o}$ | 5 | 0.01 | 53KIE |
| 2152.27 | 46448.0 | 10 | $3d^44s^2$ | a ⁵ D | 0 | - | $3d^44s5p$ | q ⁵ F° | 1 | 0.01 | 53KIE |
| 2152.57 | 46441.5 | 15 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^44s5p$ | $q^{5}F^{o}$ | 2 | 0.01 | 53KIE |
| 2154.44 | 46401.2 | 25 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^44s5p$ | q ⁵ F° | 3 | 0.01 | 53KIE |
| 2155.09 | 46387.2 | 15 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^44s5p$ | q ⁵ F° | 1 | 0.01 | 53KIE |
| 2157.74 | 46330.2 | 30 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^44s5p$ | q ⁵ F° | 4 | 0.01 | 53KIE |
| 2158.00 | 46324.6 | 15 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^44s5p$ | q ⁵ F° | 2 | 0.01 | 53KIE |
| 2160.50 | 46271.0 | 4 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^44s5p$ | q ⁵ F° | 1 | 0.01 | 53KIE |
| 2162.25 | 46233.6 | 10 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^44s5p$ | q 5F° | 3 | 0.01 | 53KIE |
| 2162.47 | 46228.9 | 30 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^44s5p$ | q ⁵ F° | 5 | 0.01 | 53KIE |
| 2167.68 | 46117.8 | 4 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^44s5p$ | q ⁵ F° | 4 | 0.01 | 53KIE |
| 2171.44 | 46038.0 | 4 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^44s5p$ | s ⁵ P° | 3 | 0.01 | 53KIE |
| 2176.19 | 45937.5 | 3 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^44s5p$ | s ⁵ P° | 2 | 0.01 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air | Observed wave | Intensity | | | | Classificat | ion | | | Uncertainty of observed | |
|--------------------|----------------------------|-------------|-------------------------------------|--------------------------------------|---|-------------|--|---|--------|-------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2181.53 | 45825.0 | 4 | $3d^44s^2$ | a ⁵ D | 4 | | $3d^44s5p$ | s ⁵ P° | 3 | 0.01 | 53KIE |
| 2186.87 | 45713.2 | 5 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^44s5p$ | s ⁵ D° | 3 | 0.01 | 53KIE |
| 2188.09 | 45687.7 | 6 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^44s5p$ | s ⁵ D° | 4 | 0.01 | 53KIE |
| 2191.64 | 45613.7 | 8 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^44s5p$ | s ⁵ D° | 2 | 0.01 | 53KIE |
| 2194.90 | 45545.9 | 18 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^44s5p$ | s ⁵ D° | 3 | 0.01 | 53KIE |
| 2198.32 | 45475.1 | 22 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^44s5p$ | s ⁵ D° | 4 | 0.01 | 53KIE |
| 2199.72 | 45446.1 | 3 R | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^44s5p$ | s ⁵ D° | 2 | 0.01 | 00WA |
| 2205.20 | 45333.2 | 15 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^44s5p$ | s ⁵ D° | 3 | 0.01 | 53KIE |
| 2210.38 | 45227.0 | 7 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.01 | 53KIE |
| 2214.31 | 45146.7 | 8 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 3 | 0.01 | 53KIE |
| 2220.42 | 45022.5 | 10 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 4 | 0.01 | 53KIE |
| 2228.22 | 44864.9 | 18 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 5 | 0.01 | 53KIE |
| 2259.08 | 44252.11 | 12 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 1 | 0.01 | 53KIE |
| 2261.68 | 44201.24 | 18 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | 0.01 | 53KIE |
| 2262.15 | 44192.06 | 7 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 1 | 0.01 | 53KIE |
| 2262.32 | 44188.74 | 15 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 0 | 0.01 | 53KIE |
| 2262.41 | 44186.98 | 3 R | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 2 | 0.01 | 00WA |
| 2266.66 | 44104.14 | 18 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 3 | 0.01 | 53KIE |
| 2267.64 | 44085.08 | 15 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | 0.01 | 53KIE |
| 2268.13 | 44075.55 | 18 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 1 | 0.01 | 53KIE |
| 2273.62 | 43969.14 | 18 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 4 | 0.01 | 53KIE |
| 2275.31 | 43936.48 | 25 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 3 | 0.01 | 53KIE |
| 2276.31 | 43917.18 | 18 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | 0.01 | 53KIE |
| 2284.67 | 43756.50 | 25 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 4 | 0.01 | 53KIE |
| 2286.37 | 43723.96 | 20 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 3 | 0.01 | 53KIE |
| 2298.34 | 43496.27 | 1 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^{5}(^{4}D)4p$ | w ³ P° | 1 | 0.01 | 53KIE |
| 2299.42 | 43475.84 | 1 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | w ¹ w ³ P ^o | 2 | 0.01 | 53KIE |
| 2305.23 | 43366.27 | 2 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | w ¹ w ³ P ^o | 0 | 0.01 | 53KIE |
| 2305.60 | 43359.31 | 2 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w ¹ w ³ P ^o | 2 | 0.01 | 53KIE |
| 2307.71 | 43319.67 | 1 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w P w ³ P° | 1 | 0.01 | 53KIE |
| 2322.97 | 43035.12 | 2 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.01 | 53KIE |
| 2322.97 | 42912.10 | 10 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^{5}(^{4}D)4p$ | u D u ⁵ D° | 1 | 0.01 | 53KIE |
| 2329.03 2332.71 | 42855.45 | 10 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 3 | 0.01 | 53KIE 53KIE |
| 2332.71 | 42850.49 | 7 | $3d^44s^2$ | a D a ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 0 | 0.01 | 53KIE 53KIE |
| 2332.96 2333.33 | 42844.06 | 8 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | и D и ⁵ D° | 2 | 0.01 | 53KIE 53KIE |
| 2338.34 | 42752.28 | 2 | $3d^44s^2$ | a D a ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 4 | 0.01 | 53KIE 53KIE |
| 2338.34 2339.27 | 42735.28 | 15 | $3d^44s^2$ | a D a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w F u ⁵ D° | 1 | 0.01 | 53KIE 53KIE |
| 2339.27 | 42733.28 | 4 | $3d^44s^2$ | a D a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | u D u ⁵ D° | 2 | 0.01 | 53KIE |
| 2339.71 2341.17 | 42727.24 42700.60 | 20 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.01 | 53KIE 53KIE |
| 2341.17 2344.04 | 42648.32 | 20 1 | 3d ⁵ (⁶ S)4s | a D a 7S | 3 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | u ⁵ D° | 3 | 0.01 | 53KIE 53KIE |
| | | = | $3d^{4}(8)4s$ $3d^{4}4s^{2}$ | a S a D | | | $3d^{4}(^{3}G)4s4p(^{3}P^{0})$ | w ³ F° | | | |
| 2344.34 | 42642.87 | 1 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D a ⁵ D | 4 | - | $3d^{5}(^{4}D)4p$ | w ⁵ F o | 3 | 0.01 | 53KIE |
| 2348.92 | 42559.73 | 25 | | | 3 | _ | | | 2 | 0.01 | 53KIE |
| | | | | | - | | | | - | | 53KIE 53KIE |
| 2350.40 2354.30 | 42532.93 42462.48 | 12 15 | $3d^44s^2$ $3d^44s^2$ | a ⁵ D a ⁵ D | 3 | _ | 3d ⁵ (⁴ D)4p 3d ⁵ (⁴ D)4p | u ⁵ D° u ⁵ D° | 3 4 | 0.01 0.01 | |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | , | Classificat | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------------|--------|-------------|--------------------------------|--|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2362.19 | 42320.66 | 15 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.01 | 53KIE |
| 2364.73 | 42275.2 | 150 r | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)5p$ | $x^{7}P^{o}$ | 4 | 0.02 | 53KIE |
| 2365.13 | 42268.06 | 5 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 1 | 0.01 | 53KIE |
| 2365.77 | 42256.62 | 26 R | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w^3D^o | 2 | 0.01 | 00WAG |
| 2365.9188 | 42253.966 | 8 | $3d^5(^6S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)5p$ | $x^{7}P^{o}$ | 3 | 0.0004 | 09WAL/HIN |
| 2366.1453 | 42249.922 | 3 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.0006 | 09WAL/HIN |
| 2366.31 | 42246.98 | 50 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 2 | 0.01 | 53KIE |
| 2366.8156 | 42237.957 | 8 | $3d^5(^6S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)5p$ | x ⁷ P° | 2 | 0.0004 | 09WAL/HIN |
| 2367.29 | 42229.49 | 3 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S° | 2 | 0.01 | 53KIE |
| 2367.86 | 42219.33 | 10 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 3 | 0.01 | 53KIE |
| 2368.49 | 42208.10 | 12 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 1 | 0.01 | 53KIE |
| 2370.37 | 42174.6 | 35 r | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 3 | 0.02 | 53KIE |
| 2370.66 | 42169.47 | 3 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 3 | 0.01 | 53KIE |
| 2371.18 | 42160.22 | 2 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^54p$ | p ³ G° | 4 | 0.01 | 53KIE |
| 2372.88 | 42130.0 | 20 r | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 2 | 0.02 | 53KIE |
| 2373.69 | 42130.0 | 50 rh | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 4 | 0.02 | 53KIE 53KIE |
| 2375.06 | 42091.35 | 5 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 1 | 0.02 | 53KIE 53KIE |
| 2375.00 2375.98 | 42075.05 | <i>7</i> | $3d^44s^2$ | a ³ H | 4 | _ | $3a^{5}4p$ | p ³ G° | 3 | 0.01 | 53KIE 53KIE |
| 2378.07 | 42073.03 | 20 | $3d^44s^2$ | ап а ³ Н | 5 | _ | $3d^{5}4p$ $3d^{5}4p$ | p G p ³ G° | 3 4 | 0.01 | 53KIE 53KIE |
| | | 8 | $3d^44s^2$ | ап a ⁵ D | 3 1 | | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S° | 2 | | 53KIE 53KIE |
| 2379.56 2379.85 | 42011.76 42006.6 | 8 10 ws | $3d^44s^2$ | a D a ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | y S s ⁵ F° | 3 | 0.01 0.02 | 53KIE 53KIE |
| | | | 3d ⁵ (⁶ S)4s | a ⁵ S | | _ | $3d^4(^3F1)4s4p(^3P^0)$ | ¹ D ^o | | | |
| 2379.95 | 42004.87 | 10 | 3d ⁵ (⁶ S)4s | a S a S | 2 | _ | $3d^{5}(^{4}D)4s4p(^{4}P^{4})$ | t ⁵ P° | 2 | 0.01 | 53KIE |
| 2380.46 | 41995.88 | 7 | | a ³ H | 2 | - | | | • | 0.01 | 53KIE |
| 2381.36 | 41980.01 | 7 | $3d^44s^2$ | | 6 | - | $3d^{5}4p$ | p ³ G° s ⁵ F° | 5 | 0.01 | 53KIE |
| 2382.36 | 41962.4 | 7 w | $3d^44s^2$ $3d^44s^2$ | a ⁵ D | 3 | - | $3d^{5}(^{4}D)4p$ | s F w ³ D° | 2 | 0.02 | 53KIE |
| 2382.67 | 41956.93 | 1 | | a ⁵ D | 4 | - | $3d^5(^4D)4p$ | | 3 | 0.01 | 53KIE |
| 2383.3057 | 41945.736 | 4 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 5 | 0.0005 | 09WAL/HIN |
| 2385.72 | 41903.3 | 7 wh | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^5(^4D)4p$ | s ⁵ F° | 4 | 0.02 | 53KIE |
| 2386.18 | 41895.21 | 10 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | y_{5-0}^{5} So | 2 | 0.01 | 53KIE |
| 2386.77 | 41884.9 | 7 w | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 3 | 0.02 | 53KIE |
| 2389.21 | 41842.1 | 3 w | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 2 | 0.02 | 53KIE |
| 2389.43 | 41838.2 | 10 w | $3d^44s^2$ | a ⁵ D | 0 | - | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 1 | 0.02 | 53KIE |
| 2391.95 | 41794.2 | 3 w | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 3 | 0.02 | 53KIE |
| 2392.34 | 41787.3 | 10 w | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $^{1}D^{o}$ | 2 | 0.02 | 53KIE |
| 2392.86 | 41778.3 | 25 r | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^5(^4D)4p$ | t ⁵ P° | 1 | 0.02 | 53KIE |
| 2395.77 | 41727.53 | 8 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S° | 2 | 0.01 | 53KIE |
| 2395.84 | 41726.31 | 2 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^5(^4P)4p$ | y ³ S° | 1 | 0.01 | 53KIE |
| 2395.89 | 41725.44 | 2 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^5(^4D)4p$ | x ³ F ^o | 2 | 0.01 | 53KIE |
| 2396.04 | 41722.82 | 7 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 3 | 0.01 | 53KIE |
| 2396.3598 | 41717.256 | 4 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^5(^4D)4p$ | t ⁵ P° | 3 | 0.0005 | 09WAL/HIN |
| 2399.29 | 41666.31 | 3 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ S ^o | 1 | 0.01 | 53KIE |
| 2399.56 | 41661.62 | 20 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 1 | 0.01 | 53KIE |
| 2405.70 | 41555.30 | 2 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | x^3F^o | 3 | 0.01 | 53KIE |
| 2406.03 | 41549.60 | 5 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ S ^o | 1 | 0.01 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|------------------------------|-------------------------|---|--------------|-------------------------------|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2407.41 | 41525.79 | 8 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | x ³ F° | 4 | 0.01 | 53KIE |
| 2408.6228 | 41504.878 | 8 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 3 | 0.0004 | 09WAL/HIN |
| 2408.72 | 41503.2 | 35 r | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{1}D^{o}$ | 2 | 0.02 | 53KIE |
| 2410.18 | 41478.06 | 2 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 4 | 0.01 | 53KIE |
| 2419.82 | 41312.84 | 2 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | x ³ F° | 4 | 0.01 | 53KIE |
| 2419.98 | 41310.11 | 8 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 5 | 0.01 | 53KIE |
| 2424.65 | 41230.55 | 3 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G ^o | 5 | 0.01 | 53KIE |
| 2425.46 | 41216.78 | 1 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | 0.01 | 53KIE |
| 2425.52 | 41215.76 | 2 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.01 | 53KIE |
| 2426.66 | 41196.40 | 7 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}4p$ | p ³ G° | 4 | 0.01 | 53KIE |
| 2427.92 | 41175.02 | 8 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^54p$ | p ³ G° | 3 | 0.01 | 53KIE |
| 2428.89 | 41173.02 | 4 w | $3d^{5}(^{4}G)4s$ | a G a ⁵G | 2 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P° | 2 | 0.02 | 53KIE 53KIE |
| 2429.89 2429.89 | 41141.6 | 4 w 6 w | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}4p$ | p ³ G° | 5 | 0.02 | 53KIE 53KIE |
| 2429.89 2431.67 | 41141.6 | 3 w | $3d^{5}(^{4}G)4s$ | a G a ³ G | 4 | _ | 3a 4p 3d ⁵ 4p | p G p ³ G° | 3 | 0.02 | 53KIE 53KIE |
| 2431.07 2432.99 | 41111.33 | 3 | $3d^44s^2$ | a G a ⁵ D | 0 | | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 1 | 0.01 | 53KIE 53KIE |
| | | | $3a^{4}s^{2}$ $3d^{4}4s^{2}$ | а D a ³ F | - | _ | $3d^{5}4p$ | х D p ³ G° | • | | |
| 2434.22 | 41068.46 | 4 | | a ³ G | 2 | - | | | 3 | 0.01 | 53KIE |
| 2434.98 | 41055.65 | 1 | $3d^{5}(^{4}G)4s$ | | 5 | - | $3d^54p$ | p ³ G° | 4 | 0.01 | 53KIE |
| 435.69 | 41043.68 | 1 | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 0.01 | 53KIE |
| 2438.10 | 41003.1 | 3 w | $3d^44s^2$ | a ³ F | 4 | - | $3d^{5}4p$ | $p^{3}G^{o}$ | 5 | 0.02 | 53KIE |
| 2439.02 | 40987.65 | 7 | $3d^44s^2$ | a ³ F | 3 | - | $3d^{5}4p$ | $p^{3}G^{o}$ | 4 | 0.01 | 53KIE |
| 2442.31 | 40932.44 | 2 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | 0.01 | 53KIE |
| 2443.25 | 40916.69 | 2 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}4p$ | $p^{3}G^{o}$ | 4 | 0.01 | 53KIE |
| 2446.29 | 40865.85 | 2 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^{3}P1)4s4p(^{3}P^{0})$ | $x^{3}P^{o}$ | 2 | 0.01 | 53KIE |
| 2455.71 | 40709.10 | 2 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}F^{o}$ | 3 | 0.01 | 53KIE |
| 2457.86 | 40673.5 | 4 w | $3d^5(^4G)4s$ | a ⁵ G | 6 | _ | | o ⁵ F° | 5 | 0.02 | 53KIE |
| 2458.74 | 40658.93 | 2 | $3d^5(^6S)4s$ | a ⁵ S | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.01 | 53KIE |
| 2463.49 | 40580.54 | 5 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 1 | 0.01 | 53KIE |
| 2465.90 | 40540.89 | 2 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}F^{o}$ | 3 | 0.01 | 53KIE |
| 2466.49 | 40531.19 | 7 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 2 | 0.01 | 53KIE |
| 2467.14 | 40520.51 | 8 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 1 | 0.01 | 53KIE |
| 2469.70 | 40478.51 | 4 | $3d^44s^2$ | a ⁵ D | 4 | _ | | x ³ G ^o | 5 | 0.01 | 53KIE |
| 2470.8754 | 40459.257 | 6 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.0004 | 09WAL/HI |
| 2473.53 | 40415.8 | 1 w | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 0 | 0.02 | 53KIE |
| 2474.0667 | 40407.072 | 9 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.0004 | 09WAL/HI |
| 2474.27 | 40403.75 | 4 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 1 | 0.01 | 53KIE |
| 2474.5466 | 40399.237 | 2 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.0006 | 09WAL/HI |
| 2479.1334 | 40324.496 | 8 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.0004 | 09WAL/HI |
| 481.2314 | 40290.402 | 4 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.0006 | 09WAL/HI |
| 2485.48 | 40221.54 | 2 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.01 | 53KIE |
| 2487.24 | 40193.08 | 2 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.01 | 53KIE |
| 2489.48 | 40156.91 | 8 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.01 | 53KIE 53KIE |
| 2491.3453 | 40126.851 | 19 | $3d^44s^2$ | a D a ⁵D | 0 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 1 | 0.0002 | 09WAL/HI |
| 2491.5455 2492.5696 | 40120.831 | 36 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}G)4p$ | u ^F | 2 | 0.0002 | 09WAL/HI |
| 2492.3696 2495.0784 | 40066.818 | 36 12 | $3a^{4}s^{2}$ $3d^{4}4s^{2}$ | a D a ⁵ D | 1 | _ | $3d^{5}(^{4}G)4p$ | u F u ⁵ F° | 1 | 0.0002 | 09WAL/HI |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|----------------------------------|--------------------------------------|---|--------------|--------------------------------|-------------------------------|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 2496.3058 | 40047.118 | 55 | $3d^44s^2$ | a ⁵ D | 2 | | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.0002 | 09WAL/HIN |
| 2496.86 | 40038.23 | 8 R | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 2 | 0.01 | 00WAG |
| 2497.9032 | 40021.511 | 3 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.0006 | 09WAL/HIN |
| 2499.66 | 39993.38 | 2 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^5 4p$ | p ³ H ^o | 5 | 0.01 | 53KIE |
| 2499.8414 | 39990.483 | 12 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.0003 | 09WAL/HIN |
| 2500.44 | 39980.91 | 2 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 4 | 0.01 | 53KIE |
| 2500.6709 | 39977.219 | 11 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | y ⁵ D° | 0 | 0.0003 | 09WAL/HIN |
| 2500.79 | 39975.31 | 4 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.01 | 53KIE |
| 2501.6552 | 39961.490 | 6 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.0005 | 09WAL/HIN |
| 2502.5291 | 39947.536 | 56 | $3d^44s^2$ | a ⁵ D | 3 | _ | 3a (1) ip | 0 | 4 | 0.0002 | 09WAL/HIN |
| 2502.72 | 39944.49 | 2 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.01 | 53KIE |
| 2502.89 | 39941.78 | 3 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5} 4p$ | p ³ H° | 6 | 0.01 | 53KIE |
| 2504.3063 | 39919.189 | 68 | $3d^44s^2$ | a ¹ D | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.0002 | 09WAL/HIN |
| 2505.0075 | 39908.016 | 6 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5} 4p$ | p ³ H ^o | 4 | 0.0002 | 09WAL/HIN |
| 2506.33 | 39886.96 | 4 | $3d^44s^2$ | a 11 a ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | у ⁵ D° | 3 | 0.0003 | 53KIE |
| 2506.82 | 39879.16 | 25 * | $3d^44s^2$ | a D a ⁵ D | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.01 | 53KIE 53KIE |
| 2506.82 | 39879.16 | 25 * | $3d^44s^2$ | a D a ⁵D | 0 | | $3d^{4}(^{5}D)4s5p(^{3}P^{o})$ | v ⁵ F° | 1 | 0.01 | 53KIE 53KIE |
| | 39879.16 | | $3a^{4}s$ $3d^{4}4s^{2}$ | a ³ H | 5 | _ | $3d^{5} 4p$ | p ³ H ^o | 5 | | |
| 2507.3219 | | 9 | $3d^{4}s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D | | _ | | p H v ⁵ D° | | 0.0004 | 09WAL/HIN |
| 2508.1100 | 39858.653 | 25 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.0002 | 09WAL/HIN |
| 2508.9803 | 39844.829 | 23 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D a ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ F° | 1 | 0.0002 | 09WAL/HIN |
| 2510.37 | 39822.77 | 2 | | | 3 | - | $3d^{5}(^{4}G)4p$ | | 2 | 0.01 | 53KIE |
| 2510.4877 | 39820.906 | 7 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 2 | 0.0005 | 09WAL/HIN |
| 2510.63 | 39818.65 | 6 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 1 | 0.01 | 53KIE |
| 2511.96 | 39797.57 | 15 | $3d^44s^2$ | a ³ H | 6 | - | $3d^5 4p$ | $p^{3}H^{o}$ | 6 | 0.01 | 53KIE |
| 2513.6209 | 39771.273 | 12 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^5(^4P)4p$ | v ⁵ D° | 4 | 0.0003 | 09WAL/HIN |
| 2515.90 | 39735.25 | 7 | $3d^44s^2$ | a ⁵ D | 4 | _ | 5 | - | 4 | 0.01 | 53KIE |
| 2516.42 | 39727.04 | 1 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}4p$ | p ³ H ^o | 5 | 0.01 | 53KIE |
| 2516.9166 | 39719.199 | 56 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^5(^4P)4p$ | v ⁵ D° | 3 | 0.0002 | 09WAL/HIN |
| 2517.5609 | 39709.035 | 11 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | 0.0003 | 09WAL/HIN |
| 2517.8651 | 39704.237 | 10 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 2 | 0.0003 | 09WAL/HIN |
| 2517.99 | 39702.27 | 2 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 1 | 0.01 | 53KIE |
| 2518.52 | 39693.91 | 4 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 3 | 0.01 | 53KIE |
| 2518.7104 | 39690.913 | 27 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^5(^4P)4p$ | v ⁵ D° | 2 | 0.0002 | 09WAL/HIN |
| 2519.5177 | 39678.197 | 80 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^5(^4G)4p$ | u ⁵ F° | 5 | 0.0002 | 09WAL/HIN |
| 2520.23 | 39666.98 | 6 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.01 | 53KIE |
| 2527.1170 | 39558.888 | 73 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^5(^4P)4p$ | v ⁵ D° | 4 | 0.0002 | 09WAL/HIN |
| 2528.0122 | 39544.880 | 15 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | 0.0003 | 09WAL/HIN |
| 2528.2407 | 39541.306 | 9 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F ^o | 3 | 0.0004 | 09WAL/HIN |
| 2528.56 | 39536.31 | 8 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F ^o | 2 | 0.01 | 53KIE |
| 2529.20 | 39526.31 | 5 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 3 | 0.01 | 53KIE |
| 2530.4486 | 39506.808 | 24 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.0002 | 09WAL/HIN |
| 2531.76 | 39486.35 | 5 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | 0.01 | 53KIE |
| 2535.4702 | 39428.569 | 9 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.0004 | 09WAL/HIN |
| 2538.53 | 39381.05 | 2 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 4 | 0.01 | 53KIE |

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Table 3. Spectral lines of Cr I—Continued

| air wave wavelength number | | Intensity | | | | Uncertainty of observed | Source | | | | |
|-------------------------------|---------------------|-------------|-------------------------------------|---|---|----------------------------|--|--|---|-------------------|----------------|
| (Å) | (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | of line |
| 2538.9498 | 39374.535 | 16 | 3d ⁵ (⁶ S)4s | a ⁵ S | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.0002 | 09WAL/HIN |
| 2540.03 | 39357.8 | 2 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | | r ⁵ P° | 3 | 0.02 | 53KIE |
| 2540.48 | 39350.8 | 2 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | | r ⁵ P° | 3 | 0.02 | 53KIE |
| 2541.3306 | 39337.651 | 9 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | z ³ S° | 1 | 0.0004 | 09WAL/HIN |
| 2541.3485 | 39337.374 | 22 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | 0.0004 | 09WAL/HIN |
| 2541.6639 | 39332.493 | 7 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | 0.0002 | 09WAL/HIN |
| 2541.91 | 39328.68 | 3 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | 0.01 | 53KIE |
| 2542.872 | 39313.81 | 3 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 3 | 0.01 | 53KIE |
| 2544.7094 | 39285.422 | 30 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.0002 | 09WAL/HIN |
| 2545.2160 | 39277.603 | 21 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | z ³ S° | 1 | 0.0002 | 09WAL/HIN |
| 2545.6463 | 39270.965 | 29 | $3d^44s^2$ | a D a ⁵D | 0 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.0002 | 09WAL/HIN |
| 2546.353 | 39260.1 | 5 w * | $3d^{5}(^{6}S)4p$ | a D z ⁷ P° | 3 | _ | $3d^{5}(^{4}G)4d$ | u P f ⁵G | 2 | 0.002 | 53KIE |
| 2546.353 | 39260.1 | 5 w * | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | 5a (G)4a | r ⁵ P° | 2 | 0.02 | 53KIE 53KIE |
| 2547.868 | 39236.72 | 3 w * | $3d^44s^2$ | a P a ⁵ D | 1 | _ | $3d^4(^3H)4s4p(^3P^0)$ | r P x ⁵ G° | 2 | 0.02 | 53KIE 53KIE |
| | | | $3a^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.001 | |
| 2549.5441 | 39210.931 | 54 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D | 2 | | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | u ⁵ P° x ⁵ G° | 3 | 0.0002 | 09WAL/HIN |
| 2550.3725 | 39198.195 | 7 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ³ H | 4 | _ | 3a (*H)4s4p(*P*) | x ³ G ^o q ³ H ^o | | | 09WAL/HIN |
| 2551.36 | 39183.02 | 2 | | a ⁵ H z ⁷ P ^o | - | _ | 254011 | q "H" | 4 | 0.01 | 53KIE |
| 2552.05 | 39172.4 | 2 w | $3d^{5}(^{6}S)4p$ | | 4 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 4 | 0.02 | 53KIE |
| 2552.7981 | 39160.953 | 13 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | z ³ S° | 1 | 0.0004 | 09WAL/HIN |
| 2553.0622 | 39156.902 | 27 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.0002 | 09WAL/HIN |
| 2555.42 | 39120.8 | 6 w | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.02 | 53KIE |
| 2557.1225 | 39094.731 | 13 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | 0.0004 | 09WAL/HIN |
| 2557.1526 | 39094.271 | 43 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^5(^4P)4p$ | u ⁵ P° | 1 | 0.0002 | 09WAL/HIN |
| 2557.56 | 39088.04 | 4 | $3d^44s^2$ | a ³ H | 5 | - | 4.2 2.0 | q ³ H° | 5 | 0.01 | 53KIE |
| 2557.82 | 39084.07 | 1 | $3d_4^5(^6S)4s$ | a ⁵ S | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.01 | 53KIE |
| 2560.6918 | 39040.241 | 81 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.0002 | 09WAL/HIN |
| 2561.3334 | 39030.462 | 3 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | 0.0007 | 09WAL/HIN |
| 2561.38 | 39029.75 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^5 4p$ | p ³ H ^o | 5 | 0.01 | 53KIE |
| 2564.4822 | 38982.542 | 5 | $3d^44s^2$ | a ³ H | 6 | _ | | q ³ H ^o | 6 | 0.0005 | 09WAL/HIN |
| 2565.21 | 38971.48 | 3 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^5(^2F2)4p$ | p ³ F° | 3 | 0.01 | 53KIE |
| 2565.51 | 38966.9 | 5 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F ^o | 4 | 0.02 | 53KIE |
| 2565.9837 | 38959.733 | 7 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^5(^4G)4p$ | y ³ G ^o | 4 | 0.0005 | 09WAL/HIN |
| 2566.41 | 38953.26 | 1 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^5(^4G)4p$ | y ³ G° | 3 | 0.01 | 53KIE |
| 2566.5511 | 38951.120 | 18 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^5(^4P)4p$ | u ⁵ P° | 3 | 0.0002 | 09WAL/HIN |
| 2568.0995 | 38927.636 | 28 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.0002 | 09WAL/HIN |
| 2568.29 | 38924.75 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^44s(^6D)6p$ | $^{7}P^{o}$ | 3 | 0.01 | 53KIE |
| 2568.5251 | 38921.187 | 13 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 5 | 0.0004 | 09WAL/HIN |
| 2568.6495 | 38919.302 | 9 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}G^{o}$ | 3 | 0.0004 | 09WAL/HIN |
| 2570.17 | 38896.28 | 1 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^44s4p$ | r ³ H ^o | 5 | 0.01 | 53KIE |
| 2571.10 | 38882.21 | 4 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | 0.01 | 53KIE |
| 2571.7424 | 38872.499 | 100 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.0001 | 09WAL/HI |
| 2572.0675 | 38867.586 | 18 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.0001 | 09WAL/HI |
| 2572.1469 | 38866.385 | 62 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.0002 | 09WAL/HI |
| 2312.1407 | 30000.303 | 6 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{4}4s4p$ | r ³ H° | 4 | 0.0002 | 09WAL/HII |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air | Observed wave | Intensity | | | , | Classificat | ion | | | Uncertainty of observed | G. |
|-------------------|----------------------------|----------------|-------------------------------|--------------------------------------|---|-------------|--|-------------------------------|---|-------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2575.35 | 38818.05 | 46 R | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | 0.01 | 00WAG |
| 2575.8937 | 38809.856 | 26 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | z ³ G° | 4 | 0.0002 | 09WAL/HIN |
| 2577.6526 | 38783.375 | 92 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.0002 | 09WAL/HIN |
| 2578.2608 | 38774.227 | 7 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^44s4p$ | r ³ H° | 5 | 0.0005 | 09WAL/HIN |
| 2579.1549 | 38760.786 | 90 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.0003 | 09WAL/HIN |
| 2579.7686 | 38751.566 | 4 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 3 | 0.0001 | 09WAL/HIN |
| 2579.8916 | 38749.718 | 9 | $3d^44s^2$ | a D a ⁵D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.0004 | 09WAL/HIN |
| 2580.0214 | 38747.769 | 12 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 5 | 0.0004 | 09WAL/HIN |
| 2580.0503 | 38747.335 | 3 | $3d^44s^2$ | a D a ⁵D | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | 0.0007 | 09WAL/HIN |
| 2580.48 | 38740.88 | 2 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.0007 | 53KIE |
| 2583.0136 | 38702.885 | 9 | $3d^44s^2$ | а D a ³ H | 6 | | $3d^{4}4s4p$ | r ³ H° | 6 | 0.0004 | |
| | | | $3d^44s^2$ | ан a ⁵ D | | _ | $3d^4(^3H)4s4p(^3P^0)$ | гн z ³ G° | | | 09WAL/HIN |
| 2584.6574 | 38678.272 | 79 | $3a^{4}s$ $3d^{4}4s^{2}$ | a ³ H | 4 | _ | | r ³ H ^o | 5 | 0.0002 | 09WAL/HIN |
| 2587.88 | 38630.11 | 2 | $3d^{4}s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D | 6 | _ | $3d^44s4p$ | r H w ⁵ F° | 5 | 0.01 | 53KIE |
| 2588.2032 | 38625.287 | 110 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D a ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | z ³ G° | 4 | 0.0001 | 09WAL/HIN |
| 2590.0691 | 38597.464 | 4 | | | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | | 4 | 0.0006 | 09WAL/HIN |
| 2590.37 | 38592.98 | 2 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.01 | 53KIE |
| 2591.16 | 38581.21 | 2 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | - | $3d^{5}(^{4}P)4p$ | $y^{3}D^{o}$ | 3 | 0.01 | 53KIE |
| 2591.8473 | 38570.984 | 180 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^5(^4P)4p$ | u ⁵ P° | 3 | 0.0001 | 09WAL/HIN |
| 2593.4267 | 38547.496 | 16 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.0002 | 09WAL/HIN |
| 2594.0229 | 38538.637 | 22 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0002 | 09WAL/HIN |
| 2600.6235 | 38440.828 | 16 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0002 | 09WAL/HIN |
| 2601.8994 | 38421.980 | 3 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0007 | 09WAL/HIN |
| 2602.5148 | 38412.894 | 14 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.0004 | 09WAL/HIN |
| 2602.62 | 38411.34 | 1 | $3d^44s^2$ | b ³ G | 3 | - | $3d^{5}4p$ | p ³ G ^o | 3 | 0.01 | 53KIE |
| 2603.5698 | 38397.330 | 99 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 5 | 0.0001 | 09WAL/HIN |
| 2604.08 | 38389.8 | 2 w | $3d^44s^2$ | b ³ G | 4 | _ | $3d^54p$ | p ³ G ^o | 4 | 0.02 | 53KIE |
| 2604.71 | 38380.52 | 3 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.01 | 53KIE |
| 2605.3698 | 38370.804 | 15 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.0003 | 09WAL/HIN |
| 2605.82 | 38364.17 | 6 * | $3d^44s^2$ | a ³ P | 0 | - | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P ^o | 1 | 0.01 | 53KIE |
| 2605.82 | 38364.17 | 6 * | $3d^44s^2$ | b ³ G | 5 | - | $3d^{5}4p$ | p ³ G ^o | 5 | 0.01 | 53KIE |
| 2608.3319 | 38327.231 | 4 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.0006 | 09WAL/HIN |
| 2608.3958 | 38326.292 | 26 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^{5}(^{4}P)4p$ | y^3D^o | 1 | 0.0002 | 09WAL/HIN |
| 2609.84 | 38305.09 | 1 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}4p$ | p ³ G ^o | 3 | 0.01 | 53KIE |
| 2610.2926 | 38298.444 | 27 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 2 | 0.0002 | 09WAL/HIN |
| 2611.342 | 38283.05 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | | q ³ H ^o | 4 | 0.01 | 53KIE |
| 2611.75 | 38277.07 | 1 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}4p$ | p ³ G ^o | 4 | 0.01 | 53KIE |
| 2612.0222 | 38273.085 | 45 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0002 | 09WAL/HIN |
| 2612.2004 | 38270.474 | 49 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D ^o | 0 | 0.0002 | 09WAL/HIN |
| 2612.4882 | 38266.259 | 17 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 1 | 0.0002 | 09WAL/HIN |
| 2613.3097 | 38254.231 | 50 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0002 | 09WAL/HI |
| 2613.8066 | 38246.958 | 8 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | $y^{3}D^{o}$ | 3 | 0.0005 | 09WAL/HIN |
| 2613.8248 | 38246.692 | 75 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | 5a (1)1p | q ³ H° | 5 | 0.0003 | 09WAL/HI |
| 2616.46 | 38208.2 | 3 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^5(^4F)4p$ | u ³ D° | 1 | 0.002 | 53KIE |
| 2618.2689 | 38181.778 | 65 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 2 | 0.002 | 09WAL/HI |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|------------------------------|-------------------------|--------|--------------|--|--|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 2619.504 | 38163.78 | 8 | $3d^44s^2$ | a ³ P | 1 | | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P° | 2 | 0.01 | 53KIE |
| 2620.4777 | 38149.597 | 80 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 1 | 0.0002 | 09WAL/HIN |
| 2620.8451 | 38144.250 | 12 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | | q ³ H° | 6 | 0.0004 | 09WAL/HIN |
| 2621.06 | 38141.12 | 1 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{4}P)4p$ | $y^{3}P^{o}$ | 2 | 0.01 | 53KIE |
| 2622.10 | 38126.00 | 1 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ P° | 1 | 0.01 | 53KIE |
| 2622.8671 | 38114.845 | 250 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.0002 | 09WAL/HII |
| 2625.3224 | 38079.201 | 87 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 3 | 0.0002 | 09WAL/HII |
| 2626.5992 | 38060.692 | 110 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0002 | 09WAL/HII |
| 2627.847 | 38042.62 | 4 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{4}F)4p$ | $^{3}G^{\circ}$ | 4 | 0.01 | 53KIE |
| 2629.8232 | 38014.034 | 74 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | y^3D^o | 2 | 0.0002 | 09WAL/HII |
| 2632.0774 | 37981.480 | 2 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | 5 | 0.0007 | 09WAL/HII |
| 2632.9811 | 37968.444 | 5 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^{5}(^{4}P)4p$ | y ³ P° | 1 | 0.0006 | 09WAL/HI |
| 2633.09 | 37966.87 | 2 | $3d^44s^2$ | a ³ F | 4 | _ | 3a (1)-p | q ³ H° | 5 | 0.01 | 53KIE |
| 2633.38 | 37962.69 | 2 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^5(^4G)4p$ | y ³ F° | 4 | 0.01 | 53KIE 53KIE |
| 2635.4562 | 37932.788 | 7 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{4}4s4p$ | r ³ H° | 5 | 0.0005 | 09WAL/HI |
| 2635.4302 | 37928.254 | 6 | $3d^{5}(^{4}G)4s$ | a G a ³ G | 3 | _ | $3d^44s4p$ | r ³ H° | 4 | 0.0005 | 09WAL/HI |
| 2636.1036 | 37923.473 | 4 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.0005 | 09WAL/HI |
| | 37923.473 | | $3d^44s^2$ | a D a ⁵ D | 1 | | $3d^{5}(^{4}P)4p$ | y P y ³ P ^o | 0 | 0.0006 | 09WAL/HI |
| 2636.9204 | | 4 | $3d^44s^2$ | a ⁵ D | 1 | - | | | 0 | | |
| 2637.1506 | 37908.418 | 3 | $3a^{4}s^{2}$ $3d^{4}4s^{2}$ | a ³ P | • | - | $3d^{5}(^{4}P)4p$ $3d^{4}(^{1}D1)4s4p(^{3}P^{o})$ | y ³ P ^o t ³ P ^o | 1 | 0.0007 | 09WAL/HI |
| 2639.42 | 37875.83 | 7 | $3d^44s^2$ | a ⁵ D | 1 4 | - | 3d (D1)4s4p(P) | y ³ D° | 0 | 0.01 0.0002 | 53KIE |
| 2640.0484 | 37866.811 | 26 | | | • | - | $3d^{5}(^{4}P)4p$ | | 3 | | 09WAL/HI |
| 2640.2038 | 37864.582 | 7 * | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^44s4p$ | r ³ H ^o | 4 | 0.0005 | 09WAL/HI |
| 2640.2038 | 37864.582 | 7 * | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^44s4p$ | r ³ H ^o | 6 | 0.0005 | 09WAL/HI |
| 2642.1072 | 37837.306 | 27 | $3d^44s^2$ | a ³ H | 6 | - | $3d^{5}(^{4}F)4p$ | $q^{3}G^{o}$ | 5 | 0.0002 | 09WAL/HI |
| 2644.2374 | 37806.825 | 7 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^{5}(^{4}P)4p$ | $y^{3}P^{o}$ | 2 | 0.0005 | 09WAL/HI |
| 2645.30 | 37791.64 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^44s4p$ | r ³ H ^o | 5 | 0.01 | 53KIE |
| 2648.17 | 37750.68 | 2 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^{5}(^{4}G)4p$ | $y^{3}F^{o}$ | 4 | 0.01 | 53KIE |
| 2652.24 | 37692.76 | 5 R | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.01 | 00WAG |
| 2654.412 | 37661.92 | 10 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | 0.01 | 53KIE |
| 2654.844 | 37655.79 | 5 | $3d^44s^2$ | a ³ F | 3 | - | $3d^44s4p$ | r ³ H ^o | 4 | 0.01 | 53KIE |
| 2655.0478 | 37652.899 | 2 | $3d^44s^2$ | a ³ F | 4 | - | $3d^44s4p$ | r ³ H° | 5 | 0.0007 | 09WAL/HI |
| 2656.02 | 37639.12 | 4 * | $3d^5(^4P)4s$ | a ⁵ P | 2 | - | $3d^44s(^6D)6p$ | $^{7}\mathrm{D^{o}}$ | 2 | 0.01 | 53KIE |
| 2656.02 | 37639.12 | 4 * | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^5(^4P)4p$ | y ³ P ^o | 2 | 0.01 | 53KIE |
| 2660.006 | 37582.7 | 8 w | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P ^o | 2 | 0.02 | 53KIE |
| 2664.4571 | 37519.938 | 8 | $3d^5(^6S)4s$ | a ⁵ S | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 3 | 0.0005 | 09WAL/HI |
| 2664.818 | 37514.86 | 3 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^5(^2D1)4p$ | s ³ D ^o | 1 | 0.01 | 53KIE |
| 669.3677 | 37450.920 | 99 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | 0.0002 | 09WAL/HI |
| 670.562 | 37434.17 | 10 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P° | 1 | 0.01 | 53KIE |
| 2671.9815 | 37414.287 | 190 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.0002 | 09WAL/HI |
| 2673.6538 | 37390.887 | 110 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | 0.0002 | 09WAL/HI |
| 2678.1627 | 37327.940 | 330 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | 0.0002 | 09WAL/HI |
| 2680.3395 | 37297.626 | 170 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.0002 | 09WAL/HI |
| 2681.4644 | 37281.981 | 37 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 2 | 0.0002 | 09WAL/HI |
| 2682.0224 | 37274.224 | 20 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | 0.0002 | 09WAL/HI |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | , | Classificat | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------|--------------------------------------|--------|-------------|---------------------------------|--|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2683.16 | 37258.42 | 4 | $3d^44s^2$ | a ⁵ D | 4 | | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 3 | 0.01 | 53KIE |
| 2685.40 | 37227.3 | 4 h | $3d^44s^2$ | a ³ H | 4 | _ | $3d^5(^2\text{H})4p$ | r ³ G° | 5 | 0.02 | 53KIE |
| 2686.52 | 37211.83 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | $3d^44s5s$ | e ⁵ H | 3 | 0.01 | 53KIE |
| 2688.0406 | 37190.777 | 540 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 4 | 0.0002 | 09WAL/HIN |
| 2689.8032 | 37166.407 | 3 | $3d^44s^2$ | a ³ P | 1 | _ | ou (11) is ip(1) | o ⁵ F° | 1 | 0.0007 | 09WAL/HIN |
| 2690.2527 | 37160.197 | 210 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | 0.0002 | 09WAL/HIN |
| 2690.82 | 37152.36 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | _ | $3d^44s5s$ | e ⁵ H | 5 | 0.01 | 53KIE |
| 2691.4023 | 37144.326 | 5 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 3 | 0.0006 | 09WAL/HIN |
| 2691.7136 | 37140.030 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | 5 | 0.0007 | 09WAL/HIN |
| 2692.4492 | 37129.884 | 23 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.0002 | 09WAL/HIN |
| 2693.315 | 37117.95 | 8 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{5}(^{2}D1)4p$ | s ³ D° | 2 | 0.01 | 53KIE |
| 2693.62 | 37117.55 | 4 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 4 | _ | $3d^44p^2$ | f ⁷ F | 5 | 0.02 | 53KIE |
| 2693.90 | 37109.9 | 5 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{\circ}$ | 5 | _ | $3d^44p^2$ | f ⁷ F | 6 | 0.02 | 53KIE |
| 2694.24 | 37105.21 | 2 w | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 5 | 0.01 | 53KIE 53KIE |
| 2694.887 | 37096.30 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | 3 | 0.01 | 53KIE |
| 2696.135 | 37079.13 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}F)4p$ | $^{3}G^{\circ}$ | 4 | 0.01 | 53KIE |
| 2696.5415 | 37073.539 | 61 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P° | 1 | 0.0002 | 09WAL/HIN |
| 2697.01 | 37073.339 | 15 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{2}H)4p$ | r ³ G ^o | 4 | 0.0002 | 53KIE |
| 2697.01 | 37064.347 | 15 | $3d^44s^2$ | ап a ⁵ D | 1 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | v ⁵ P° | 2 | 0.0003 | 09WAL/HIN |
| 2698.19 | 37050.89 | 2 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}G)4p$ | z ³ H° | 4 | 0.0003 | 53KIE |
| 2700.29 | 37030.89 | 3 | $3d^{5}(^{4}P)4s$ | a D a ⁵ P | 2 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 1 | 0.01 | 53KIE 53KIE |
| 2700.29 | 37022.08 | 100 | $3d^44s^2$ | a ⁵ D | 3 | | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | v ⁵ P° | 3 | 0.0002 | 09WAL/HIN |
| 2701.9916 | 36998.763 | 830 | $3d^44s^2$ | a D a ⁵ D | 3 4 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{0})$ | x ⁵ F° | 5 | 0.0002 | |
| 2702.5310 | 36991.379 | 830 67 | $3d^{4}4s^{2}$ | a ³ H | 6 | | $3d^{5}(^{2}G1)4p$ | s ³ H ^o | 6 | 0.0002 | 09WAL/HIN |
| | | | $3d^44s^2$ | a ³ F | | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | | | 09WAL/HIN |
| 2702.68 | 36989.34 36978.388 | 2 200 | $3a^{4}s^{2}$ $3d^{4}4s^{2}$ | a F a ⁵ D | 2 4 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | q G x ⁵ F° | 3 | 0.01 0.0002 | 53KIE |
| 2703.4804 | | | $3d^44s^2$ | a ³ H | - | _ | | r ³ G° | 4 | | 09WAL/HIN |
| 2704.7428 | 36961.130 | 14 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | а °Н а ³ Н | 6 | - | $3d^{5}(^{2}\text{H})4p$ | r "G" s ³ H° | 5 | 0.0004 | 09WAL/HIN |
| 2705.414 | 36951.96 | 12 | | | 5 | _ | $3d^5(^2G1)4p$ | s ⁵ H ^o x ⁵ F ^o | 5 | 0.01 | 53KIE |
| 2705.724 | 36947.73 | 10 | $3d^44s^2$ $3d^44s^2$ | a ⁵ D a ⁵ D | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F ^o v ⁵ P ^o | 3 | 0.01 | 53KIE |
| 2705.724 | 36947.73 | 10 | | | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | | 2 | 0.01 | 53KIE |
| 2705.92 | 36945.05 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 2 | - | $3d^44p^2$ | f ⁷ F | 3 | 0.01 | 53KIE |
| 2706.5314 | 36936.706 | 51 | $3d^44s^2$ | a ³ H | 4 | - | $3d^5(^2G1)4p$ | $s^{3}H^{o}$ | 4 | 0.0002 | 09WAL/HIN |
| 2707.46 | 36924.0 | 2 h * | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^{5}(^{4}P)5p$ | t ³ D ^o | 2 | 0.02 | 53KIE |
| 2707.46 | 36924.0 | 2 h * | $3d^4(^5D)4s4p(^3P^0)$ | $z_{2}^{7}F^{o}$ | 5 | - | $3d^44p^2$ | f ⁷ F | 5 | 0.02 | 53KIE |
| 2707.69 | 36920.9 | 7 w | $3d^44s^2$ | a ³ P | 0 | - | $3d^4(^3P1)4s4p(^1P^0)$ | x^3S^0 | 1 | 0.02 | 53KIE |
| 2708.14 | 36914.77 | 2 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | - | $3d^{5}(^{4}P)5p$ | t ³ D° | 2 | 0.01 | 53KIE |
| 2710.19 | 36886.8 | 25 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 6 | - | $3d^44p^2$ | f ⁷ F | 6 | 0.02 | 53KIE |
| 2710.29 | 36885.49 | 59 R | $3d^44s^2$ | a ³ H | 4 | _ | $3d^5(^2\text{F2})4p$ | $p^{3}F^{o}$ | 3 | 0.01 | 00WAG |
| 2711.40 | 36870.4 | 6 wl | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}F)4p$ | $^{3}G^{o}$ | 4 | 0.02 | 53KIE |
| 2714.48 | 36828.6 | 4 h * | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 4 | - | $3d^44p^2$ | f ⁷ F | 4 | 0.02 | 53KIE |
| 2714.48 | 36828.6 | 4 h * | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 3 | - | $3d^44p^2$ | f ⁷ F | 3 | 0.02 | 53KIE |
| 2714.834 | 36823.75 | 8 | $3d^44s^2$ | a ³ F | 3 | - | $3d^{5}(^{4}F)4p$ | q^3G^o | 3 | 0.01 | 53KIE |
| 2715.51 | 36814.58 | 2 * | $3d^44s^2$ | a ³ H | 5 | _ | $3d^5(^2G1)4p$ | s ³ H° | 4 | 0.01 | 53KIE |
| 2715.51 | 36814.58 | 2 * | $3d^{5}(^{4}G)4s$ | a ⁵G | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.01 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| Observed air wave wavelength number | Intensity | | | | Classificati | on | | | Uncertainty of observed wavelength | | |
|-------------------------------------|----------------------------|-------------|-------------------------------------|--------------------------|--------------|----|---------------------------------|-------------------------------|--|-------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2715.98 | 36808.2 | 4 w | 3d ⁵ (⁴ G)4s | a ⁵ G | 6 | _ | | p ⁵ F° | 5 | 0.02 | 53KIE |
| 2716.1796 | 36805.510 | 180 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 3 | 0.0002 | 09WAL/HIN |
| 2716.643 | 36799.23 | 10 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}F)4p$ | $^{3}G^{o}$ | 4 | 0.01 | 53KIE |
| 2717.507 | 36787.53 | 7.9 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | () I | r ⁵ P° | 1 | 0.004 | 95SCH/THO |
| 2718.07 | 36779.91 | 7 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 2 | 0.01 | 53KIE |
| 2719.10 | 36765.98 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | | r ⁵ P° | 1 | 0.01 | 53KIE |
| 2721.0794 | 36739.238 | 3 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 1 | 0.0008 | 09WAL/HIN |
| 2721.38 | 36735.2 | 2 h | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P ^o | 2 | 0.02 | 53KIE |
| 2722.05 | 36726.14 | 14 R | $3d^44s^2$ | a ³ P | 1 | _ | , , , , , | q ⁵ D° | 0 | 0.01 | 00WAG |
| 2722.085 | 36725.67 | 10 | $3d^5(^4D)4s$ | b ⁵ D | 4 | _ | $3d^5(^2G1)4p$ | s ³ H ^o | 5 | 0.01 | 53KIE |
| 2722.98 | 36713.6 | 2 w * | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | 211 (22) IF | p ⁵ F° | 4 | 0.02 | 53KIE |
| 2722.98 | 36713.6 | 2 w * | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | | p ⁵ F° | 4 | 0.02 | 53KIE |
| 2723.90 | 36701.2 | 2 h | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 6 | _ | $3d^44p^2$ | f ⁷ F | 5 | 0.02 | 53KIE |
| 2725.35 | 36681.7 | 2 h 1 h | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{4}F)4p$ | s ³ D° | 3 | 0.02 | 53KIE |
| 2725.86 | 36674.8 | 4 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 4 | _ | $3d^44p^2$ | f ⁷ F | 3 | 0.02 | 53KIE |
| 2726.5140 | 36666.012 | 370 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 3 | 0.0002 | 09WAL/HIN |
| 2728.44 | 36640.1 | 3 h | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 5 | _ | $3d^44p^2$ | f ⁷ F | 4 | 0.002 | 53KIE |
| 2729.58 | 36624.8 | 2 h | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | 5α ¬р | 0 | 3 | 0.02 | 53KIE |
| 2729.85 | 36621.2 | 3 w | $3d^{5}(^{4}G)4s$ | a G a ⁵G | 3 | _ | | o | 3 | 0.02 | 53KIE 53KIE |
| 2730.07 | 36618.26 | 3 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | | o | 3 | 0.02 | 53KIE 53KIE |
| 2731.9087 | 36593.612 | 370 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^5(^6S)5p$ | w ⁵ P° | 2 | 0.0002 | 09WAL/HIN |
| 2732.95 | 36579.67 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | 3a (3)3p | p ⁵ F° | 2 | 0.0002 | 53KIE |
| 2733.00 | 36579.0 | 1 h | $3d^{5}(^{4}G)4s$ | a G a ⁵ G | 2 | _ | | p ⁵ F° | 1 | 0.01 | 53KIE 53KIE |
| 2733.51 | 36572.18 | 8 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3P1)4s4p(^1P^0)$ | x^3S^0 | 1 | 0.02 | 53KIE 53KIE |
| 2733.76 | 36568.83 | 2 | $3d^{5}(^{4}G)4s$ | a F a ⁵ G | 6 | _ | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | u ³ G° | 5 | 0.01 | 53KIE 53KIE |
| 2736.4740 | 36532.565 | 300 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 3 1 | 0.0002 | 09WAL/HIN |
| 2737.222 | 36522.58 | 8 | $3d^44s^2$ | a S a ³ P | 2 | _ | $3d^{5}(^{4}F)4p$ | s ³ D° | 3 | 0.002 | 53KIE |
| 2738.17 | 36509.94 | 8 1 * | $3d^{5}(^{4}G)4s$ | a F a ⁵ G | 4 | _ | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | u ³ G° | 3 4 | 0.01 | |
| | | 1 * | $3d^{5}(^{4}G)4s$ | a G a ⁵ G | 5 | | $3d^4(^3F1)4s4p(^1P^0)$ | u G u ³ G° | 4 | 0.01 | 53KIE |
| 2738.17 | 36509.94 | 170 | $3d^44s^2$ | a G a ³ H | 3 4 | _ | $3d^{5}(^{2}H)4p$ | u G v ³ I° | 5 | 0.0002 | 53KIE |
| 2739.3858 | 36493.736 | | $3d^44s^2$ | a ⁵ D | • | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G ^o | | | 09WAL/HIN |
| 2739.7307 | 36489.141 | 3 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ³ H | 1 | | $3d^{5}(^{2}H)4p$ | y ³ I° | 2 | 0.0008 | 09WAL/HIN |
| 2741.0677 | 36471.344 | 200 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | а °Н а ³ Н | 5 | - | | v ³ I ^o | 6 7 | 0.0002 | 09WAL/HIN |
| 2742.1733 | 36456.641 | 220 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵H a ⁵D | 6 | - | $3d^{5}(^{2}\text{H})4p$ | y ⁵ G° | , | 0.0002 | 09WAL/HIN |
| 2742.9851 | 36445.851 | 10 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ³ H | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | y G x ¹ I° | 3 | 0.0004 | 09WAL/HIN |
| 2747.5529 | 36385.264 | 18 | | | 5 | - | $3d^5(^2\text{H})4p$ | | 6 | 0.0003 | 09WAL/HIN |
| 2748.2541 | 36375.981 | 150 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 2 | 0.0002 | 09WAL/HIN |
| 2748.3311 | 36374.961 | 210 | $3d^44s^2$ | a ⁵ D | 0 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 1 | 0.0002 | 09WAL/HIN |
| 2748.5884 | 36371.556 | 6 | $3d^44s^2$ | a ³ H | 5 | - | $3d^5(^2\mathrm{H})4p$ | v ³ I ^o | 5 | 0.0006 | 09WAL/HIN |
| 2750.7271 | 36343.279 | 800 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | - 5.6 | q ⁵ D° | 4 | 0.0002 | 09WAL/HIN |
| 2751.6008 | 36331.740 | 71 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 3 | 0.0002 | 09WAL/HIN |
| 2751.9456 | 36327.188 | 7 | $3d^44s^2$ | a ³ H | 6 | - | $3d^{5}(^{2}\text{H})4p$ | v ³ I ^o | 6 | 0.0006 | 09WAL/HIN |
| 2752.8743 | 36314.933 | 330 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 1 | 0.0002 | 09WAL/HIN |
| 2754.8179 | 36289.313 | 21 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | - | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 4 | 0.0003 | 09WAL/HIN |
| 2755.2366 | 36283.799 | 61 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | 0.0002 | 09WAL/HIN |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | ı | Classificati | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------|-------------------|---|--------------|---|-------------------------------|---|--|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2755.6688 | 36278.109 | 9 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | 0.0005 | 09WAL/HIN |
| 2756.7516 | 36263.860 | 24 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 5 | 0.0002 | 09WAL/HIN |
| 2757.0969 | 36259.319 | 380 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 2 | 0.0002 | 09WAL/HIN |
| 2758.2330 | 36244.384 | 6 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G ^o | 3 | 0.0006 | 09WAL/HIN |
| 2758.4823 | 36241.109 | 5 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{2}\text{H})4p$ | $x^{-1}I^{o}$ | 6 | 0.0006 | 09WAL/HIN |
| 2759.6597 | 36225.647 | 11 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G ^o | 4 | 0.0004 | 09WAL/HIN |
| 2759.8286 | 36223.431 | 31 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^5 4p$ | p ³ H ^o | 5 | 0.0002 | 09WAL/HIN |
| 2761.7469 | 36198.272 | 300 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 1 | 0.0002 | 09WAL/HIN |
| 2762.5895 | 36187.231 | 1160 | $3d^5(^4D)4s$ | b ⁵ D | 3 | _ | · / I | q ⁵ D° | 3 | 0.0002 | 09WAL/HIN |
| 2763.0552 | 36181.132 | 8 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^5 4p$ | p ³ H ^o | 6 | 0.0006 | 09WAL/HIN |
| 2763.09 | 36180.68 | 15 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{2}H)4p$ | r ³ G° | 3 | 0.01 | 53KIE |
| 2764.3645 | 36163.997 | 340 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 3 | 0.0002 | 09WAL/HIN |
| 2765.03 | 36155.29 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | · / 1 | o ⁵ F° | 5 | 0.01 | 53KIE |
| 2765.1987 | 36153.087 | 8 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^5(^2G1)4p$ | s ³ H ^o | 6 | 0.0006 | 09WAL/HIN |
| 2766.39 | 36137.52 | 10 * | $3d^44s^2$ | b ³ G | 4 | _ | $3d^5 4p$ | p ³ H ^o | 4 | 0.01 | 53KIE |
| 2766.39 | 36137.52 | 10 * | $3d^44s^2$ | a ³ F | 2 | _ | $3d^5(^2\text{H})4p$ | r ³ G° | 3 | 0.01 | 53KIE |
| 2767.21 | 36126.81 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{2}\text{F2})4p$ | p ³ F ^o | 4 | 0.01 | 53KIE |
| 2767.5175 | 36122.798 | 46 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 5 | 0.0002 | 09WAL/HIN |
| 2768.46 | 36110.50 | 2 * | $3d^44s^2$ | b ³ G | 5 | _ | $3d^5 4p$ | p ³ H ^o | 5 | 0.01 | 53KIE |
| 2768.46 | 36110.50 | 2 * | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^5(^2G1)4p$ | s ³ H ^o | 5 | 0.01 | 53KIE |
| 2769.9118 | 36091.575 | 460 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 2 | 0.0002 | 09WAL/HIN |
| 2770.4462 | 36084.614 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 4 | 0.0008 | 09WAL/HIN |
| 2771.4431 | 36071.635 | 47 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^5(^2G1)4p$ | x ¹ H ^o | 5 | 0.0002 | 09WAL/HIN |
| 2771.89 | 36065.82 | 740 R | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | 0.01 | 00WAG |
| 2774.13 | 36036.70 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 4 | 0.01 | 53KIE |
| 2775.6610 | 36016.823 | 15 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G ^o | 4 | 0.0003 | 09WAL/HIN |
| 2775.89 | 36013.85 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | | o ⁵ F° | 4 | 0.01 | 53KIE |
| 2776.603 | 36004.60 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | | o ⁵ F° | 3 | 0.01 | 53KIE |
| 2777.664 | 35990.9 | 10 w | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^3P1)4s4p(^1P^0)$ | x^3S^o | 1 | 0.02 | 53KIE |
| 2778.1952 | 35983.971 | 19 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G ^o | 5 | 0.0003 | 09WAL/HIN |
| 2779.1295 | 35971.874 | 11 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G ^o | 3 | 0.0004 | 09WAL/HIN |
| 2779.33 | 35969.28 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H ^o | 5 | 0.01 | 53KIE |
| 2780.699 | 35951.57 | 5.2 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 3 | 0.004 | 95SCH/THO |
| 2781.1491 | 35945.754 | 20 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 4 | 0.0003 | 09WAL/HIN |
| 2782.73 | 35925.33 | 1 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 6 | 0.01 | 53KIE |
| 2782.988 | 35922.00 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{2}\text{F2})4p$ | p ³ F° | 4 | 0.01 | 53KIE |
| 2784.63 | 35900.82 | 4 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 3 | 0.01 | 53KIE |
| 2786.597 | 35875.48 | 4 | $3d^44s^2$ | a ³ F | 4 | _ | / / T | o ⁵ F° | 4 | 0.01 | 53KIE |
| 2786.814 | 35872.69 | 1 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3\text{H})4s4p(^1\text{P}^{\text{o}})$ | w ³ I ^o | 5 | 0.01 | 53KIE |
| 2787.843 | 35859.45 | 15 | $3d^5(^6S)4p$ | z ⁵ P° | 3 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 2 | 0.01 | 53KIE |
| 2789.52 | 35837.89 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 5 | 0.01 | 53KIE |
| 2790.092 | 35830.54 | 8 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 5 | 0.01 | 53KIE |
| 2790.2841 | 35828.078 | 4 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ I° | 6 | 0.0007 | 09WAL/HIN |
| 2793.78 | 35783.25 | 3 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{2}F2)4p$ | p ³ F° | 4 | 0.01 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|-------------------------|---|--------------|---------------------------|-------------------------------|--------|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 2793.8882 | 35781.863 | 3 | 3d ⁵ (⁴ G)4s | a ³ G | 3 | _ | $3d^{5}(^{4}\text{F})4p$ | s ³ D° | 3 | 0.0008 | 09WAL/HIN |
| 2794.945 | 35768.33 | 7 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^44s(^6D)6p$ | $^{7}P^{o}$ | 2 | 0.01 | 53KIE |
| 2795.2640 | 35764.252 | 5 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H ^o | 4 | 0.0006 | 09WAL/HIN |
| 2795.8133 | 35757.226 | 41 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w^3I^o | 7 | 0.0002 | 09WAL/HIN |
| 2799.743 | 35707.04 | 3 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 1 | 0.01 | 53KIE |
| 2801.13 | 35689.36 | 15 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^5(^2D1)4p$ | s ³ D° | 2 | 0.01 | 53KIE |
| 2801.385 | 35686.11 | 1 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 3 | 0.01 | 53KIE |
| 2801.553 | 35683.97 | 3 * | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^5(^2G1)4p$ | s ³ G° | 3 | 0.01 | 53KIE |
| 2801.553 | 35683.97 | 3 * | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ I° | 6 | 0.01 | 53KIE |
| 2802.65 | 35670.00 | 8 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 4 | 0.01 | 53KIE |
| 2804.84 | 35642.16 | 3 R * | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{2}\text{F2})4p$ | p ³ F° | 3 | 0.01 | 00WAG |
| 2804.84 | 35642.16 | 3 R * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^44s(^6D)6p$ | ⁵ P° | 2 | 0.01 | 00WAG |
| 2805.19 | 35637.71 | 2 × | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 2 | 0.01 | 53KIE |
| 2805.456 | 35634.33 | 1 | $3d^{5}(^{4}G)4s$ | a G a ⁵G | 3 | _ | $3d^{5}(^{4}F)4p$ | v G v ⁵ G° | 2 | 0.01 | 53KIE |
| 2809.932 | 35577.57 | 10 | $3d^44s^2$ | a G a ³ F | 2 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 3 | 0.01 | 53KIE |
| 2810.4931 | 35570.467 | 3 | $3d^{5}(^{4}G)4s$ | аг а ³ G | 4 | _ | $3d^{5}(^{2}G1)4p$ | s G s ³ G° | 5 5 | 0.0008 | 09WAL/HIN |
| | 35561.923 | 9 | $3d^44s^2$ | a G a ³ P | 0 | | $3d^{5}(^{4}F)4p$ | u ³ D° | 3 1 | | |
| 2811.1684 | | 9 1 | $3d^{5}(^{4}G)4s$ | a ³ G | - | _ | 3a' (F)4p | q ³ F° | - | 0.0005 | 09WAL/HIN |
| 2813.41 | 35533.59 | • | 3d ⁵ (G)4s 3d ⁵ (⁶ S)4s | a G a S | 3 | _ | 2. 5/4D) 4 | q F z ⁵ S° | 4 | 0.01 | 53KIE |
| 2813.552 | 35531.80 | 4 | | a ³ G | 2 | _ | $3d^{5}(^{4}P)4p$ | z ³ I ^o | 2 | 0.01 | 53KIE |
| 2813.6835 | 35530.136 | 3 5 P | $3d^{5}(^{4}G)4s$ $3d^{4}4s^{2}$ | a ³ F | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | v T s ³ D° | 5 | 0.0008 | 09WAL/HIN |
| 2814.21 | 35523.49 | 5 R | | | 3 | - | $3d^5(^2\mathrm{D}1)4p$ | | 2 | 0.01 | 00WAG |
| 2814.5374 | 35519.358 | 10 | $3d^44s^2$ | b ³ G | 3 | - | 2.5.45 | $q^{3}H^{o}$ | 4 | 0.0004 | 09WAL/HIN |
| 2815.317 | 35509.52 | 2 | $3d^44s^2$ | a ³ F | 3 | - | $3d^5(^4\text{F})4p$ | s ³ D° | 3 | 0.01 | 53KIE |
| 2816.684 | 35492.29 | 12 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | - | 5.2 | $q^{3}F^{o}$ | 3 | 0.01 | 53KIE |
| 2816.95 | 35488.94 | 7 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^5(^2\mathrm{H})4p$ | v ³ I ^o | 6 | 0.01 | 53KIE |
| 2818.47 | 35469.80 | 12 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | | $q^{3}F^{o}$ | 4 | 0.01 | 53KIE |
| 2820.81 | 35440.38 | 15 | $3d^44s^2$ | b ³ G | 4 | _ | 5.4 | q ³ H° | 5 | 0.01 | 53KIE |
| 2820.97 | 35438.37 | 2 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}\text{F})4p$ | s ³ D ^o | 3 | 0.01 | 53KIE |
| 2821.69 | 35429.33 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^{5}(^{2}G1)4p$ | s ³ G° | 5 | 0.01 | 53KIE |
| 2821.76 | 35428.45 | 6 * | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.01 | 53KIE |
| 2821.76 | 35428.45 | 6 * | $3d^5(^4G)4s$ | a ³ G | 4 | _ | | q ³ F ^o | 3 | 0.01 | 53KIE |
| 2822.51 | 35419.03 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | | q^3F^o | 2 | 0.01 | 53KIE |
| 2823.08 | 35411.88 | 1 D? | $3d^44s^2$ | a ³ F | 3 | _ | $3d^5(^2G1)4p$ | s ³ G° | 3 | 0.01 | 53KIE |
| 2823.80 | 35402.85 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^5(^2H)4p$ | $x^{-1}I^{o}$ | 6 | 0.01 | 53KIE |
| 2824.2172 | 35397.624 | 3 | $3d^44s^2$ | a ³ F | 3 | - | $3d^5(^2G1)4p$ | s ³ G° | 4 | 0.0008 | 09WAL/HIN |
| 2824.87 | 35389.44 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^5(^2H)4p$ | v ³ I ^o | 5 | 0.01 | 53KIE |
| 2824.95 | 35388.44 | 7 R | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H ^o | 6 | 0.01 | 00WAG |
| 2825.196 | 35385.36 | 8 | $3d^44s^2$ | a ³ F | 2 | _ | • • • • | $q^{3}F^{o}$ | 3 | 0.01 | 53KIE |
| 2825.64 | 35379.80 | 25 R | $3d^5(^4P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.01 | 00WAG |
| 2826.20 | 35372.79 | 30 R | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F ^o | 2 | 0.01 | 00WAG |
| 2826.7454 | 35365.966 | 39 | $3d^44s^2$ | b ³ G | 5 | _ | . , 1 , , | q ³ H ^o | 6 | 0.0002 | 09WAL/HIN |
| 2828.167 | 35348.19 | 12 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^5(^4F)4p$ | u ³ D° | 2 | 0.01 | 53KIE |
| 2829.725 | 35328.73 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | (- / T | q ³ F° | 4 | 0.01 | 53KIE |
| 2829.903 | 35326.51 | 5 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^5(^2G1)4p$ | s ³ G° | 4 | 0.01 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------|-------------------------|--------|--------------|---------------------------------|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 2830.9022 | 35314.039 | 3 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | z ⁵ S° | 2 | 0.0008 | 09WAL/HIN |
| 2831.0362 | 35312.367 | 11 | $3d^44s^2$ | a ³ F | 2 | _ | (-) _T | q ³ F° | 2 | 0.0004 | 09WAL/HIN |
| 2832.794 | 35290.46 | 8 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^5(^2G1)4p$ | s ³ G° | 5 | 0.01 | 53KIE |
| 2835.16 | 35261.01 | 2 | $3d^44s^2$ | a ³ F | 3 | _ | 5th (51).p | q ³ F° | 4 | 0.01 | 53KIE |
| 2835.242 | 35259.99 | 7 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 2 | 0.01 | 53KIE |
| 2838.4944 | 35219.588 | 3 | $3d^44s^2$ | a ³ F | 3 | _ | eu (1)ep | q^3F^0 | 3 | 0.0008 | 09WAL/HIN |
| 2839.0126 | 35213.160 | 4 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 1 | 0.0007 | 09WAL/HIN |
| 2840.2862 | 35197.371 | 15 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | z ⁵ S° | 2 | 0.0004 | 09WAL/HIN |
| 2840.8914 | 35189.873 | 5 | $3d^44s^2$ | a ³ F | 4 | _ | 3a (1)+p | q ³ F° | 4 | 0.0007 | 09WAL/HIN |
| 2842.9156 | 35164.818 | 27 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^44s4p$ | r ³ H° | 4 | 0.0007 | 09WAL/HIN |
| 2844.38 | 35146.71 | 1 | $3d^44s^2$ | a ³ F | 3 | _ | 3a + 3+p | $q^{3}F^{o}$ | 2 | 0.002 | 53KIE |
| 2844.65 | 35143.4 | 2 w | $3d^44s^2$ | a ^r | 2 | _ | $3d^4(^3P1)4s4p(^1P^0)$ | x^3S^0 | 1 | 0.01 | 53KIE 53KIE |
| 2846.0185 | 35126.481 | 34 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{4}4s4p$ | r ³ H° | 5 | 0.002 | 09WAL/HIN |
| 2849.2775 | 35086.306 | 29 | $3d^44s^2$ | b G b ³ G | 5 | _ | $3d^{4}4s4p$ $3d^{4}4s4p$ | r ³ H° | 6 | 0.0002 | 09WAL/HIN |
| 2850.46 | 35071.8 | 29 2 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 1 | | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | | 0.002 | |
| | | | $3d^44s^2$ | въ b³G | 4 | _ | $3d^{4}4s4p$ | r r r ³ H° | 2 | | 53KIE |
| 2851.56 | 35058.22 | 3 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D | · · | _ | | z ⁵ S° | 4 | 0.01 | 53KIE |
| 2853.8881 | 35029.624 | 18 | | | 3 | - | $3d^{5}(^{4}P)4p$ | | 2 | 0.0003 | 09WAL/HIN |
| 2853.94 | 35028.99 | 8 | $3d^44s^2$ | a ³ P | 2 | - | $3d^{5}(^{4}F)4p$ | u ³ D ^o | 3 | 0.01 | 53KIE |
| 2855.2038 | 35013.484 | 3 | $3d^44s^2$ | b ³ G | 5 | - | $3d^44s4p$ | r ³ H ^o | 5 | 0.0008 | 09WAL/HIN |
| 2870.01 | 34832.9 | 10 w | $3d^4(^5D)4s4p(^3P^0)$ | $z_{2}^{7}D^{o}$ | 5 | - | $3d^44p^2$ | $f^{7}F$ | 6 | 0.02 | 53KIE |
| 2870.1744 | 34830.864 | 4 | $3d^44s^2$ | a ³ P | 2 | - | $3d^{5}(^{4}P)5p$ | $t^{3}D^{o}$ | 3 | 0.0008 | 09WAL/HIN |
| 2871.0262 | 34820.531 | 3 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H° | 5 | 0.0008 | 09WAL/HIN |
| 2871.6322 | 34813.183 | 320 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 4 | 0.0002 | 09WAL/HIN |
| 2873.1834 | 34794.389 | 58 | $3d^44s^2$ | a ³ H | 4 | - | $3d^{5}(^{2}\text{H})4p$ | t ³ H ^o | 4 | 0.0002 | 09WAL/HIN |
| 2875.44 | 34767.08 | 5 | $3d^44s^2$ | a ³ P | 2 | - | $3d^{5}(^{4}F)4p$ | u ³ D° | 2 | 0.01 | 53KIE |
| 2879.2720 | 34720.815 | 390 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 3 | 0.0002 | 09WAL/HIN |
| 2880.42 | 34706.98 | 2 | $3d^5(^4P)4s$ | b ³ P | 2 | _ | $3d^5(^4F)4p$ | q^3G^o | 3 | 0.01 | 53KIE |
| 2880.6198 | 34704.570 | 3 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^5(^4G)4p$ | z ⁵ G° | 2 | 0.0008 | 09WAL/HIN |
| 2881.1357 | 34698.356 | 65 | $3d^44s^2$ | a ³ H | 5 | - | $3d^{5}(^{2}\text{H})4p$ | t ³ H ^o | 5 | 0.0002 | 09WAL/HIN |
| 2882.76 | 34678.81 | 3 | $3d^44s^2$ | a ³ P | 2 | - | $3d^5(^4P)5p$ | t ³ D ^o | 2 | 0.01 | 53KIE |
| 2883.30 | 34672.31 | 2 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^5(^2H)4p$ | t ³ H ^o | 4 | 0.01 | 53KIE |
| 2884.83 | 34653.92 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 4 | 0.01 | 53KIE |
| 2884.96 | 34652.36 | 14 R | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | _ | $3d^44p^2$ | f ⁷ F | 3 | 0.01 | 00WAG |
| 2885.37 | 34647.44 | 55 R | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 5 | _ | $3d^44p^2$ | f ⁷ F | 5 | 0.01 | 00WAG |
| 2886.65 | 34632.08 | 2 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 1 | 0.01 | 53KIE |
| 2886.9926 | 34627.967 | 370 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 2 | 0.0002 | 09WAL/HIN |
| 2888.3846 | 34611.279 | 13 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | 0.0005 | 09WAL/HIN |
| 2889.2602 | 34600.791 | 850 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 4 | 0.0002 | 09WAL/HIN |
| 2890.1551 | 34590.077 | 11 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 4 | 0.0005 | 09WAL/HIN |
| 2890.35 | 34587.74 | 1 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | 0.01 | 53KIE |
| 2890.7359 | 34583.128 | 6 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | r ³ F° | 3 | 0.0006 | 09WAL/HIN |
| 2891.4103 | 34575.062 | 86 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{2}H)4p$ | t ³ H ^o | 6 | 0.0000 | 09WAL/HIN |
| 2893.2505 | 34553.072 | 630 | $3d^44s^2$ | а п a ⁵ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 3 | 0.0002 | 09WAL/HIN |
| 2894.1701 | 34535.072 | 260 | $3d^44s^2$ | a D a ⁵ D | 0 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x D x ⁵ D° | 3 1 | 0.0002 | 09WAL/HIN |

Table 3. Spectral lines of Cr I—Continued

| air w wavelength nui | Observed wave | Intensity | | | | Classification | ion | | | Uncertainty of observed | C |
|-------------------------|----------------------------|-------------|------------------------------------|--------------------------------------|---|----------------|--|--|--------|----------------------------|--------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2895.6914 | 34523.947 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 2 | 0.0008 | 09WAL/HIN |
| 2896.064 | 34519.51 | 6 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.01 | 53KIE |
| 2896.7512 | 34511.317 | 380 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 2 | 0.0002 | 09WAL/HIN |
| 2898.24 | 34493.59 | 4 | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 4 | _ | ~ (· ·) · · · · · · · · · · | e ³ G | 4 | 0.01 | 53KIE |
| 2899.2087 | 34482.065 | 110 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 1 | 0.0002 | 09WAL/HIN |
| 2899.68 | 34476.46 | 10 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.01 | 53KIE |
| 2900.2578 | 34469.593 | 27 | $3d^44s^2$ | a ¹ D | 3 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | 0.0002 | 09WAL/HIN |
| 2901.65 | 34453.1 | 5 w | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^{1}D1)4s4p(^{3}P^{0})$ | t ³ P° | 2 | 0.002 | 53KIE |
| 2901.98 | 34449.14 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 4 | 0.02 | 53KIE |
| 2902.4503 | 34443.556 | 5 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | 0.0007 | 09WAL/HIN |
| 2903.36 | 34432.8 | 4 w | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 3 | 0.0007 | 53KIE |
| 2903.30 | 34432.8 34417.19 | 12 | $3d^44s^2$ | a 3 a ³ F | 2 | _ | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | r ³ F° | 2 | 0.02 | 53KIE 53KIE |
| 2905.4884 | 34417.19 | 280 | $3d^44s^2$ | a F a ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 0 | 0.0002 | 09WAL/HIN |
| 2905.4884 | 34381.33 | 280 4 | $3d^44s^2$ | а D a ³ F | 3 | _ | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | r ³ F° | 4 | 0.0002 | 53KIE |
| 2907.704 2909.0516 | 34381.33 34365.399 | 400 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D | 2 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{0})$ | r Fo | 4 1 | 0.01 | 09WAL/HIN |
| 2909.0516 2910.252 | 34365.399 34351.22 | 400 3 | $3d^{4}s^{2}$ $3d^{5}(^{4}P)4s$ | a ⁵ D b ³ P | 1 | _ | $3d^{4}(^{1}D1)4s4p(^{2}P^{o})$ $3d^{4}(^{1}D1)4s4p(^{3}P^{o})$ | t ³ P° | 1 | 0.0002 | 09WAL/HIN 53KIE |
| 2910.252 2910.9013 | 34351.22 34343.563 | 3 440 | $3d^{4}(P)4s$ $3d^{4}4s^{2}$ | ь ⁵ Р a ⁵ D | 3 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{0})$ $3d^{4}(^{3}P1)4s4p(^{3}P^{0})$ | t ⁵ P° x ⁵ D° | _ | 0.01 | 53KIE 09WAL/HIN |
| | | | $3d^44s^2$ $3d^44s^2$ | a ⁵ D a ⁵ D | 3 | | 3d'("P1)4s4p("r") | x ⁵ D ⁶ x ⁵ D ⁶ | 2 3 | | |
| 2911.1455 | 34340.682 | 370 | | | - | _ | $3d^4(^3P1)4s4p(^3P^0)$ | | | 0.0002 | 09WAL/HIN |
| 2913.6961 | 34310.622 | 8 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F ^o | 3 | 0.0006 | 09WAL/HIN |
| 2913.7336 | 34310.180 | 16 | $3d^44s^2$ | a ³ F b ³ P | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F ^o t ³ P ^o | 4 | 0.0003 | 09WAL/HIN |
| 2914.224 | 34304.41 | 3 | $3d^{5}(^{4}P)4s$ | | 2 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | | 1 | 0.01 | 53KIE |
| 2916.1632 | 34281.596 | 39 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 | 0.0002 | 09WAL/HIN |
| 2916.70 | 34275.29 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | $w^{3}H^{o}$ | 5 | 0.01 | 53KIE |
| 2917.50 | 34265.9 | 3 h | $3d^44s^2$ | a ³ F | 4 | _ | $3d^44s(^6D)6p$ | ⁷ F° | 4 | 0.02 | 53KIE |
| 2918.2396 | 34257.205 | 7 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | 0.0006 | 09WAL/HIN |
| 2918.72 | 34251.57 | 1 | $3d^44s^2$ | a ³ F | 3 | - | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 2 | 0.01 | 53KIE |
| 2919.74 | 34239.60 | 1 | $3d^44s^2$ | a ³ F | 4 | - | $3d^4(^3F1)4s4p(^1P^0)$ | $r^{3}F^{o}$ | 3 | 0.01 | 53KIE |
| 2921.05 | 34224.25 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^{5}(^{4}F)4p$ | u ³ D° | 3 | 0.01 | 53KIE |
| 2921.3501 | 34220.732 | 7 | $3d^44s^2$ | b ³ G | 5 | - | $3d^{5}(^{4}F)4p$ | $q^{3}G^{o}$ | 5 | 0.0006 | 09WAL/HIN |
| 2922.12 | 34211.72 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | - | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P° | 0 | 0.01 | 53KIE |
| 2929.48 | 34125.8 | 4 h | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | - | $3d^44s4p$ | r ³ H° | 4 | 0.02 | 53KIE |
| 2930.53 | 34113.54 | 1 | $3d^44s^2$ | a ³ F | 3 | - | $3d^44s(^6D)6p$ | 7 F o | 2 | 0.01 | 53KIE |
| 2931.85 | 34098.18 | 1 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 3 | 0.01 | 53KIE |
| 2932.57 | 34089.8 | 3 h | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | - | $3d^5(^4P)5p$ | t ³ D° | 3 | 0.02 | 53KIE |
| 2938.03 | 34026.46 | 8 * | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^5(^4P)5p$ | t ³ D ^o | 3 | 0.01 | 53KIE |
| 2938.03 | 34026.46 | 8 * | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | - | $3d^{5}(^{4}\text{F})4p$ | u ³ D° | 2 | 0.01 | 53KIE |
| 2938.83 | 34017.2 | 7 h | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | - | $3d^44s5p$ | q ⁵ F° | 5 | 0.02 | 53KIE |
| 2939.44 | 34010.14 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^44s5p$ | r ⁵ D° | 4 | 0.01 | 53KIE |
| 2941.643 | 33984.67 | 2 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 4 | 0.01 | 53KIE |
| 2941.8782 | 33981.954 | 9 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.0005 | 09WAL/HIN |
| 2943.12 | 33967.62 | 1 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{6}S)5p$ | $x^{7}P^{o}$ | 4 | 0.01 | 53KIE |
| 2944.95 | 33946.51 | 3 R | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{6}S)5p$ | x ⁷ P° | 3 | 0.01 | 00WAG |
| | 33944.73 | 3 K | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 3 | 0.01 | 53KIE |
| 2945.104 | | | | | | | $3u + 1 \cdot 1 + \nu$ | u и | J | 0.01 | JJIXIL |

TABLE 3. Spectral lines of Cr I—Continued

| Dbserved iir vavelength Å) | Observed wave number | Intensity and comment | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------------|----------------------------|-----------------------------|-------------------------------------|-------------------------|--------|--------------|--|--|--------|--|----------------|
| (Å) | (cm^{-1}) | | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2952.15 | 33863.72 | 1 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^5(^2F1)4p$ | s ³ F° | 4 | 0.01 | 53KIE |
| 2953.68 | 33846.18 | 78 R | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 5 | 0.01 | 00WAG |
| 2956.3134 | 33816.033 | 13 | 3d ⁵ (⁶ S)4s | a ⁷ S | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | 0.0005 | 09WAL/HIN |
| 2956.3298 | 33815.845 | 12 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ D ^o | 2 | 0.0005 | 09WAL/HIN |
| 2957.28 | 33805.0 | 2 wh | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^44s5p$ | q ⁵ F° | 3 | 0.02 | 53KIE |
| 2959.07 | 33784.53 | 7 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^{5}(^{4}\text{F})4p$ | u ³ D° | 1 | 0.01 | 53KIE |
| 2961.77 | 33753.73 | 4 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}\text{F})4p$ | u ³ D ^o | 2 | 0.01 | 53KIE |
| 2962.40 | 33746.56 | 6 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 3 | 0.01 | 53KIE |
| 2963.26 | 33736.76 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H ^o | 6 | 0.01 | 53KIE |
| 2963.74 | 33731.3 | 4 wh | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^44s5p$ | q ⁵ F° | 2 | 0.02 | 53KIE |
| 2966.8497 | 33695.946 | 4 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | 0.0008 | 09WAL/HIN |
| 2967.6427 | 33686.942 | 460 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | 0.0002 | 09WAL/HIN |
| 2968.20 | 33680.6 | 2 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^44s5p$ | q ⁵ F° | 1 | 0.02 | 53KIE |
| 2969.0017 | 33671.523 | 4 | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}D^{o}$ | 3 | 0.0008 | 09WAL/HIN |
| 2969.53 | 33665.53 | 1 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 2 | 0.01 | 53KIE |
| 2971.1080 | 33647.654 | 350 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.0002 | 09WAL/HIN |
| 2973.26 | 33623.30 | 1 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^5(^2\text{F1})4p$ | t ³ G° | 3 | 0.01 | 53KIE |
| 2973.51 | 33620.47 | 1 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 1 | 0.01 | 53KIE |
| 2975.4813 | 33598.201 | 300 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.0002 | 09WAL/HIN |
| 2978.98 | 33558.74 | 1 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G° | 5 | 0.01 | 53KIE |
| 2980.7900 | 33538.366 | 240 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | 0.0002 | 09WAL/HIN |
| 2981.4204 | 33531.275 | 4 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}$ (2 F1)4 p | t ³ G° | 4 | 0.0008 | 09WAL/HIN |
| 2984.014 | 33502.13 | 7 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}$ (2 F1)4 p | t ³ G° | 5 | 0.01 | 53KIE |
| 2984.8229 | 33493.053 | 29 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 0.0002 | 09WAL/HIN |
| 2985.8493 | 33481.540 | 280 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.0002 | 09WAL/HIN |
| 2985.9998 | 33479.853 | 310 q | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.0004 | 09WAL/HIN |
| 2986.1353 | 33478.334 | 99 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | 0.0004 | 09WAL/HIN |
| 2986.4810 | 33474.459 | 430 q | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | 0.0002 | 09WAL/HIN |
| 2988.6474 | 33450.195 | 310 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 0.0004 | 09WAL/HIN |
| 2991.4073 | 33419.335 | 3 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 4 | 0.0002 | 09WAL/HIN |
| 2991.8875 | 33413.971 | 220 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 0 | 0.0002 | 09WAL/HIN |
| 2994.0678 | 33389.640 | 170 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | $x^{5}P^{o}$ | 2 | 0.0002 | 09WAL/HIN |
| 2994.0078 | 33378.113 | 230 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ F° | 2 | 0.0002 | 09WAL/HIN |
| 2995.42 | 33374.57 | 2 * | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 6 | 0.002 | 53KIE |
| 2995.42 2995.42 | 33374.57 | 2 * | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 3 | 0.01 | 53KIE 53KIE |
| 2996.5808 | 33361.640 | 250 q | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ D° | 1 | 0.0004 | 09WAL/HIN |
| 2998.118 | 33344.54 | 230 q 8 | $3d^44s^2$ | а Б b ³ G | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 5 | 0.0004 | 53KIE |
| 2998.118 2998.7845 | 33337.125 | 220 | 3d ⁵ (⁶ S)4s | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | 0.0002 | 09WAL/HIN |
| 2998.7843 3000.890 | 33313.74 | 5.7 | $3d^44s^2$ | a S a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.0002 | 95SCH/THO |
| 3001.55 | 33306.41 | 5.7 1 | $3a^{4}s^{2}$ $3d^{4}4s^{2}$ | b ³ G | 5 | _ | $3d^{5}(^{2}H)4p$ | r ³ G° | 4 | 0.004 | 53KIE |
| | | - | $3a^{4}4s^{2}$ $3d^{4}4s^{2}$ | b ³ G | 5 4 | | $3d^{5}(^{2}\text{G1})4p$ | s ³ H° | | | |
| 3001.76 | 33304.08 | 1 | $3d^{5}4s^{2}$ $3d^{5}(^{4}D)4s$ | a ³ D | · · | _ | $3d^{5}(^{4}F)4p$ | | 5 | 0.01 | 53KIE |
| 3002.757 | 33293.02 | 2 | $3d^{4}(^{4}D)4s$ $3d^{4}4s^{2}$ | a ³ D | 3 | _ | | q^3G^o v^3P^o | 3 | 0.01 | 53KIE |
| 3002.99 3004.80 | 33290.44 33270.39 | 2 150 R | $3d^{5}4s^{2}$ $3d^{5}(^{4}G)4s$ | a ³P a ³G | 1 4 | _ | $3d^4(^3D)4s4p(^3P^o)$ $3d^5(^2F1)4p$ | v ³ P ^o s ³ F ^o | 0 4 | 0.01 0.01 | 53KIE 00WAG |

043103-33

Table 3. Spectral lines of Cr I—Continued

| Observed air | Observed wave | Intensity | | | | Classificati | on | | | Uncertainty of observed | Source |
|------------------|----------------------------|-------------|-------------------|------------------|---|--------------|-------------------------------|-------------------------------|---|----------------------------|----------------|
| wavelength Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | of line |
| 005.0613 | 33267.495 | 260 q | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.0004 | 09WAL/HIN |
| 006.86 | 33247.60 | 1 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | 3 | 0.01 | 53KIE |
| 007.945 | 33235.60 | 2 | $3d^44s^2$ | b ³ G | 5 | _ | (-) ₊ | o ⁵ F° | 4 | 0.01 | 53KIE |
| 009.16 | 33222.18 | 2 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^5(^2F2)4p$ | p ³ F° | 3 | 0.01 | 53KIE |
| 009.16 | 33222.18 | 2 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^5$ (2F1)4p | s ³ F° | 2 | 0.01 | 53KIE |
| 010.22 | 33210.49 | 2 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 1 | 0.01 | 53KIE |
| 011.31 | 33198.47 | 51 R | $3d^44s^2$ | b ³ G | 4 | _ | | o ⁵ F° | 3 | 0.01 | 00WAG |
| 013.0289 | 33179.527 | 130 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 1 | 0.0002 | 09WAL/HIN |
| 013.7120 | 33172.006 | 260 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | 0.0002 | 09WAL/HIN |
| 014.7649 | 33160.421 | 260 q | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.0004 | 09WAL/HIN |
| 014.916 | 33158.76 | 14.7 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | v ⁵ F ^o | 3 | 0.002 | 95SCH/THO |
| 015.197 | 33155.7 | 50 r | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 1 | 0.02 | 53KIE |
| 016.29 | 33143.66 | 3 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^5(^2\text{F2})4p$ | p ³ F° | 4 | 0.01 | 53KIE |
| 017.577 | 33129.52 | 17.6 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | 0.002 | 95SCH/THO |
| 018.4907 | 33119.492 | 240 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | 0.0002 | 09WAL/HIN |
| 018.8178 | 33115.904 | 220 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 0.0002 | 09WAL/HIN |
| 20.6675 | 33095.626 | 180 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 1 | 0.0002 | 09WAL/HIN |
| 21.562 | 33085.829 | 23.6 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 5 | 0.001 | 95SCH/THO |
| 23.78 | 33061.56 | 1 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^5(^2\text{F1})4p$ | s ³ F° | 4 | 0.01 | 53KIE |
| 24.353 | 33055.30 | 8.9 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | 0.005 | 95SCH/THO |
| 24.689 | 33051.63 | 12 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | $^{3}G^{o}$ | 3 | 0.01 | 53KIE |
| 025.87 | 33038.73 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P° | 2 | 0.01 | 53KIE |
| 029.1610 | 33002.833 | 130 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | 0.0002 | 09WAL/HIN |
| 030.248 | 32990.99 | 5.9 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 0.007 | 95SCH/THO |
| 31.3515 | 32978.986 | 90 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 1 | 0.0002 | 09WAL/HIN |
| 031.498 | 32977.39 | 20 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.01 | 53KIE |
| 34.1875 | 32948.162 | 200 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 0.0002 | 09WAL/HIN |
| 35.55 | 32933.37 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | 24 (2) 15 17 (1) | p ⁵ F° | 4 | 0.01 | 53KIE |
| 36.707 | 32920.83 | 6 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^5(^2G1)4p$ | s ³ G° | 3 | 0.01 | 53KIE |
| 37.0447 | 32917.166 | 300 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | 0.0002 | 09WAL/HIN |
| 39.73 | 32888.09 | 15 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.01 | 53KIE |
| 39.7746 | 32887.606 | 42 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | 0.0003 | 09WAL/HIN |
|)40.8404 | 32876.079 | 210 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.0002 | 09WAL/HIN |
| 042.24 | 32860.96 | 1 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3P1)4s4p(^1P^0)$ | x^3S^0 | 1 | 0.01 | 53KIE |
|)43.46 | 32847.78 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P° | 1 | 0.01 | 53KIE |
| 43.714 | 32845.04 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P° | 1 | 0.01 | 53KIE |
| 46.10 | 32819.32 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | 54 (D1) 15 1p(1) | p ⁵ F° | 1 | 0.01 | 53KIE |
| 46.57 | 32814.25 | 3 * | $3d^44s^2$ | b ³ G | 4 | _ | $3d^5(^2G1)4p$ | s ³ G° | 3 | 0.01 | 53KIE |
| 46.57 | 32814.25 | 3 * | $3d^{5}(^{4}D)4s$ | b ⁵D | 1 | _ | 54 (51) ip | p ⁵ F° | 2 | 0.01 | 53KIE |
| 47.34 | 32805.96 | 37 R | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.01 | 00WAG |
| 47.445 | 32804.83 | 15 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}$ (2F1)4p | t ³ G° | 5 | 0.01 | 53KIE |
| 47.88 | 32800.15 | 6 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 4 | 0.01 | 53KIE |
| 149.878 | 32778.66 | 8 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 0.01 | 53KIE 53KIE |
| 052.2226 | 32773.484 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}$ (² F1)4p | t ³ G° | 4 | 0.0009 | 09WAL/HIN |

TABLE 3. Spectral lines of Cr I—Continued

| Observed ir vavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|------------------------------|----------------------------|------------------|---------------------------|-------------------------------|--------|--------------|---|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 3053.8779 | 32735.732 | 200 q | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 0.0004 | 09WAL/HIN |
| 3055.055 | 32723.12 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{2}\text{F1})4p$ | t ³ G° | 3 | 0.01 | 53KIE |
| 3056.435 | 32708.35 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P ^o | 0 | 0.01 | 53KIE |
| 3058.164 | 32689.85 | 6 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{2}F1)4p$ | t ³ G° | 4 | 0.01 | 53KIE |
| 3060.624 | 32663.58 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^5$ (2 F1)4p | t ³ G° | 5 | 0.01 | 53KIE |
| 3061.01 | 32659.46 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{2}\text{F1})4p$ | t ³ G° | 3 | 0.01 | 53KIE |
| 3061.6473 | 32652.663 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 5 | 0.0010 | 09WAL/HIN |
| 3061.814 | 32650.89 | 10 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^5(^2G1)4p$ | s ³ G° | 5 | 0.01 | 53KIE |
| 3062.05 | 32648.37 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 5 | 0.01 | 53KIE |
| 3063.83 | 32629.40 | 2 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 1 | 0.01 | 53KIE |
| 3064.21 | 32625.36 | 120 R* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 4 | _ | 3a (D)+3+p(1) | e ³ G | 3 | 0.01 | 00WAG |
| 3065.065 | 32616.26 | 25 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^5(^2F1)4p$ | t ³ G° | 3 | 0.01 | 53KIE |
| 3067.20 | 32593.55 | 10 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 4 | 0.01 | 53KIE |
| 3071.03 | 32552.91 | 3 | $3d^{5}(^{4}G)4s$ | a G a ⁵ G | 3 | _ | $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | r ⁵ F° | 3 | 0.01 | 53KIE 53KIE |
| 3071.03 | 32550.08 | 10 | $3d^{5}(^{4}G)4s$ | a G a ⁵ G | 4 | _ | $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | r ⁵ F° | 3 | 0.01 | 53KIE 53KIE |
| 3071.41 | 32548.88 | 2 | $3d^{5}(^{4}G)4s$ | a G a ³ G | 5 | _ | $3d^{5}$ (D)4s4p(F) $3d^{5}$ (2F1)4p | t ³ G° | 3 4 | 0.01 | 53KIE 53KIE |
| | | | $3d^4(G)4s$ $3d^44s^2$ | a ³ F | 3 4 | | $3d^{5}$ (F1)4p $3d^{5}$ (² F1)4p | t ³ G° | 5 | | |
| 3073.6743 | 32524.901 | 6 | | a ⁵ G | | - | | r ⁵ F° | | 0.0007 | 09WAL/HIN |
| 3074.13 | 32520.08 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.01 | 53KIE |
| 3074.465 | 32516.54 | 7 | $3d^{5}(^{4}G)4s$ | | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | | 2 | 0.01 | 53KIE |
| 3076.151 | 32498.72 | 6 | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 2 | 0.01 | 53KIE |
| 3076.57 | 32494.29 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 1 | 0.01 | 53KIE |
| 3077.8288 | 32481.001 | 6 | $3d^44s^2$ | a ³ F | 3 | - | $3d^5 (^2F1)4p$ | t ³ G ^o | 4 | 0.0007 | 09WAL/HIN |
| 3080.712 | 32450.60 | 6 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^5(^2F1)4p$ | t ³ G ^o | 3 | 0.01 | 53KIE |
| 3081.92 | 32437.88 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.01 | 53KIE |
| 3084.05 | 32415.48 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | | o ⁵ F° | 4 | 0.01 | 53KIE |
| 3084.579 | 32409.92 | 6 | $3d^44s^2$ | a ³ F | 4 | - | $3d^5$ (² F1)4p | t ³ G° | 4 | 0.01 | 53KIE |
| 3086.785 | 32386.76 | 8 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.01 | 53KIE |
| 3087.534 | 32378.91 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.01 | 53KIE |
| 3092.8373 | 32323.387 | 4 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | - | $3d^5(^2F2)4p$ | p ³ F ^o | 4 | 0.0009 | 09WAL/HIN |
| 3094.283 | 32308.3 | 1 w | $3d^5(^4G)4s$ | a ³ G | 3 | - | | o | 3 | 0.02 | 53KIE |
| 3095.3765 | 32296.873 | 4 | $3d^5(^4G)4s$ | a ³ G | 5 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.0009 | 09WAL/HIN |
| 3095.85 | 32291.9 | 15 w | $3d^5(^4P)4s$ | a ⁵ P | 3 | _ | $3d^44s5p$ | s ⁵ P° | 3 | 0.02 | 53KIE |
| 3096.516 | 32285.0 | 10 w | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^44s5p$ | s ⁵ P ^o | 3 | 0.02 | 53KIE |
| 3098.26 | 32266.82 | 1 * | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | • | p ⁵ F° | 2 | 0.01 | 53KIE |
| 3098.26 | 32266.82 | 1 * | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | _ | $3d^44s5s$ | e ⁵ P | 2 | 0.01 | 53KIE |
| 3099.497 | 32253.94 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 2 | 0.01 | 53KIE |
| 3100.26 | 32246.00 | 3 R | $3d^44s^2$ | a ³ F | 2 | _ | ` | p ⁵ F° | 3 | 0.01 | 00WAG |
| 3104.706 | 32199.83 | 7 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.01 | 53KIE |
| 3105.574 | 32190.83 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.01 | 53KIE |
| 3109.34 | 32151.84 | 20 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | $^{3}G^{\circ}$ | 3 | 0.01 | 53KIE |
| 3109.81 | 32146.98 | 1 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 2 | 0.01 | 53KIE |
| 3110.75 | 32137.27 | 5 * | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 1 | _ | $3d^44s5s$ | e ⁵ P | 1 | 0.01 | 53KIE |
| 3110.75 | 32137.27 | 5 * | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{2}F2)4p$ | p ³ F° | 3 | 0.01 | 53KIE |
| 3110.75 | 32136.07 | 15 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | u ³ G° | 4 | 0.01 | 53KIE 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------------------|--------|--------------|---------------------------------|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3110.9894 | 32134.793 | 3 | $3d^5(^2I)4s$ | a ³ I | 7 | _ | | q ³ H ^o | 6 | 0.0010 | 09WAL/HI |
| 3111.312 | 32131.46 | 2 | $3d^44s^2$ | a ³ F | 3 | _ | | p ⁵ F° | 4 | 0.01 | 53KIE |
| 3112.962 | 32114.43 | 5 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.01 | 53KIE |
| 3114.10 | 32102.7 | 1 w * | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 2 | _ | $3d^44s5s$ | e ⁵ P | 2 | 0.02 | 53KIE |
| 3114.10 | 32102.7 | 1 w * | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ I° | 5 | 0.02 | 53KIE |
| 3114.455 | 32099.04 | 6 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.01 | 53KIE |
| 3114.835 | 32095.12 | 10 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | 3a (D)+3+p(1) | q ³ H° | 5 | 0.01 | 53KIE |
| 3115.505 | 32088.22 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | $^{3}G^{\circ}$ | 3 | 0.01 | 53KIE |
| 3118.08 | 32061.72 | 19 R | $3d^44s^2$ | b ³ G | 3 | _ | $3d^44s(^6D)6p$ | ⁷ P° | 4 | 0.01 | 00WAG |
| 3118.13 | 32061.72 | 3 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | 3a 4s(D)0p | q ³ H° | 4 | 0.01 | 53KIE |
| 3119.252 | 32049.67 | 20 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.01 | 53KIE |
| 3119.232 3119.704 | 32045.03 | 20 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | $^{3}G^{\circ}$ | 3 | 0.01 | 53KIE 53KIE |
| 3120.6326 | 32035.496 | 9 | $3d^44s^2$ | a ^r F | 3 | _ | 3a (F1)434p(F) | 0 | 3 | 0.0006 | 09WAL/HI |
| 3120.0320 | 32035.496 | 3 whs | $3d^4(^5D)4s4p(^3P^0)$ | а г у ⁵ Р° | 3 | _ | $3d^44s5s$ | e ⁵ P | 3 | 0.000 | 53KIE |
| 3122.998 | 32023.6 | 3 wns | $3d^{4}4s^{2}$ | a ³ H | 3 4 | | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 5 | 0.02 | 53KIE 53KIE |
| 3122.998 3125.911 | 31981.40 | 8 | $3d^44s^2$ | ан а ³ Н | 4 | _ | $3d^{4}(^{1}I)4s4p(^{3}P^{o})$ | ун u ³ H° | 3 4 | 0.01 | 53KIE 53KIE |
| | | | $3d^{4}s$ $3d^{5}(^{4}D)4s$ | a ³ D | 3 | | | s ³ D° | | | |
| 3126.16 | 31978.86 | 17 R | $3d^{4}(5)4s$ $3d^{4}4s^{2}$ | a ³ F | - | - | $3d^5(^4F)4p$ | s D | 3 | 0.01 | 00WAG |
| 3127.589 | 31964.2 | 5 w | | a ⁵ P | 4 | _ | 2 144 5 | s ⁵ D° | 3 4 | 0.02 | 53KIE |
| 3129.76 | 31942.07 | 2 | $3d^{5}(^{4}P)4s$ $3d^{4}4s^{2}$ | a ³P a ³F | 3 | - | $3d^44s5p$ | u ³ G° | · · | 0.01 | 53KIE |
| 3131.213 | 31927.25 | 20 | | | 3 | - | $3d^4(^3F1)4s4p(^1P^0)$ | | 4 | 0.01 | 53KIE |
| 3132.816 | 31910.92 | 18 | $3d^44s^2$ | a ³ F | 4 | - | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.01 | 53KIE |
| 3133.969 | 31899.18 | 5 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^{5}(^{4}F)4p$ | u ³ D° | 3 | 0.01 | 53KIE |
| 3134.9786 | 31888.904 | 3 | $3d^44s^2$ | a ³ H | 5 | - | $3d^5(^2I)4p$ | y ¹ H ^o | 5 | 0.0010 | 09WAL/HI |
| 3135.917 | 31879.36 | 7 | $3d^44s^2$ | a ³ F | 3 | - | $3d^4(^3F1)4s4p(^1P^0)$ | ³ G ^o | 3 | 0.01 | 53KIE |
| 3138.20 | 31856.17 | 15 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.01 | 53KIE |
| 3138.31 | 31855.05 | 8 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | - | $3d^44s4p$ | r ³ H ^o | 6 | 0.01 | 53KIE |
| 3140.36 | 31834.26 | 5 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.01 | 53KIE |
| 3141.79 | 31819.77 | 10 R | $3d^44s^2$ | b ³ G | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.01 | 00WAG |
| 3141.885 | 31818.81 | 12 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 5 | 0.01 | 53KIE |
| 3143.74 | 31800.0 | 2 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^44s5p$ | s ⁵ D° | 3 | 0.02 | 53KIE |
| 3144.39 | 31793.5 | 12 w * | $3d^44s^2$ | a ³ P | 0 | - | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D ^o | 1 | 0.02 | 53KIE |
| 3144.39 | 31793.5 | 12 w * | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^44s5p$ | s ⁵ D° | 3 | 0.02 | 53KIE |
| 3145.62 | 31781.03 | 10 | $3d^5(^2I)4s$ | a ³ I | 6 | - | $3d^44s4p$ | r ³ H ^o | 5 | 0.01 | 53KIE |
| 3148.4483 | 31752.482 | 20 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^5(^2I)4p$ | $x^{3}I^{o}$ | 5 | 0.0004 | 09WAL/HI |
| 3149.21 | 31744.80 | 1 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 | 0.01 | 53KIE |
| 3150.65 | 31730.29 | 4 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | - | | q ³ F° | 4 | 0.01 | 53KIE |
| 3152.8842 | 31707.810 | 8 | $3d^44s^2$ | a ³ H | 6 | - | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 6 | 0.0007 | 09WAL/HI |
| 3152.99 | 31706.75 | 10 | $3d^5(^2I)4s$ | a ³ I | 5 | _ | $3d^44s4p$ | r ³ H ^o | 4 | 0.01 | 53KIE |
| 3153.547 | 31701.15 | 10 | $3d^5(^4P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}P)5p$ | t ³ D ^o | 3 | 0.01 | 53KIE |
| 3154.32 | 31693.38 | 2 R | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^44s5p$ | s ⁵ D° | 2 | 0.01 | 00WAG |
| 3154.62 | 31690.4 | 1 H | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | • | q ⁵ D° | 2 | 0.02 | 53KIE |
| 3155.1534 | 31685.006 | 22 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{2}I)4p$ | $x^{3}I^{o}$ | 6 | 0.0004 | 09WAL/H |
| 3155.25 | 31684.04 | 3 * | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^44s5p$ | s ⁵ D° | 2 | 0.01 | 53KIE |
| 3155.25 | 31684.04 | 3 * | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 2 | 0.01 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---------------------------------|--------------------------------------|---|--------------|--|--------------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 3159.58 | 31640.6 | 20 wh | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D° | 2 | 0.02 | 53KIE |
| 3159.909 | 31637.32 | 3 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 2 | 0.01 | 53KIE |
| 3160.617 | 31630.24 | 8 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{2}I)4p$ | x ³ I° | 5 | 0.01 | 53KIE |
| 3163.7590 | 31598.824 | 25 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{2}I)4p$ | x ³ I ^o | 7 | 0.0003 | 09WAL/HI |
| 3164.055 | 31595.87 | 3 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 2 | 0.01 | 53KIE |
| 3167.156 | 31564.93 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 4 | 0.01 | 53KIE |
| 3167.44 | 31562.10 | 5 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 1 | 0.01 | 53KIE |
| 3168.745 | 31549.11 | 5 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 1 | 0.01 | 53KIE |
| 3169.578 | 31540.81 | 8 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{2}I)4p$ | x ³ I° | 6 | 0.01 | 53KIE |
| 3175.598 | 31481.02 | 4 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F ^o | 2 | 0.01 | 53KIE |
| 3177.659 | 31460.61 | 3 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{2}I)4p$ | y ¹ I ^o | 6 | 0.01 | 53KIE |
| 3177.035 | 31444.54 | 10 w | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D° | 1 | 0.02 | 53KIE 53KIE |
| 3184.02 | 31397.76 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^44s4p$ | r ³ H° | 4 | 0.01 | 53KIE 53KIE |
| 3188.02 | 31358.36 | 15 wh | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D° | 3 | 0.02 | 53KIE 53KIE |
| 3192.1119 | 31318.168 | 8 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}D^{o}$ | 3 | 0.007 | 09WAL/HI |
| 3192.1119 | 31316.45 | 5 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{2}I)4p$ | y ¹ I ^o | 6 | 0.007 | 53KIE |
| 3196.67 | 31273.51 | 1 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 4 | 0.01 | 53KIE 53KIE |
| 3198.116 | 31259.37 | 20 | $3d^44s^2$ | a n a ³ P | 2 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.01 | 53KIE 53KIE |
| 3205.81 | 31239.37 | 20 1 | $3d^44s^2$ | a P a ³ F | 4 | _ | $3d^{5}(^{4}F)4p$ | иг v ⁵ G° | 5 5 | 0.01 | 53KIE 53KIE |
| 3203.81 | 31171.13 | 1 1 w | $3d^{5}(^{6}S)4p$ | аг z ⁷ P° | 2 | | 3a (F)4p | e ⁵ F | 3 | 0.01 | 53KIE 53KIE |
| 3207.17 3207.51 | | 1 W | 3a (8)4p $3d^44s^2$ | a ³ H | 4 | _ | $3d^5(^2D1)4p$ | e F v ³ F° | 3 | 0.02 | 53KIE 53KIE |
| 3210.6351 | 31167.83 31137.490 | - | $3d^{5}(^{6}S)4s$ | a n a ⁵ S | 2 | | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ³ D° | 2 | 0.001 | 09WAL/HI |
| 3210.0331 | | 2 4 | $3d^{4}4s^{2}$ | aS b ³ G | 3 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H° | 4 | | 09WAL/HI |
| | 31131.014 31081.97 | 2 | $3d^{4}s$ $3d^{5}(^{4}G)4s$ | a ³ G | 3 | - | $3d^{4}(^{1}I)4s4p(^{3}P^{0})$ | u ³ H° | 4 | 0.0009 | |
| 3216.37 | | 2 | $3d^{4}(G)4s$ $3d^{4}4s^{2}$ | a ³ H | 5 | _ | | u ³ F° | - | 0.01 | 53KIE |
| 3218.17 3218.70 | 31064.59 31059.47 | 2 7 wh | $3d^44s^2$ | ан а ³ Р | 2 | _ | $3d^{5}(^{4}G)5p$ $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | u r v ³ D° | 4 2 | 0.01 0.02 | 53KIE 53KIE |
| | | | $3d^44s^2$ $3d^44s^2$ | a ³ G | | _ | | t ³ H° | | | |
| 3219.6174 3219.97 | 31050.624 | 5 2 | $3d^{4}s$ $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{2}\text{H})4p$ $3d^{5}(^{2}\text{I})4p$ | t Н y ¹ Н ^о | 5 5 | 0.0009 | 09WAL/HI |
| | 31047.22 | | | a ³ G b ³ G | • | _ | | t ³ H° | | 0.01 | 53KIE |
| 3222.33 | 31024.49 | 2 | $3d^44s^2$ $3d^44s^2$ | ь ⁵ С a ⁵ D | 4 | - | $3d^{5}(^{2}\text{H})4p$ | t "H" z ³ D° | 4 | 0.01 | 53KIE |
| 3226.5545 | 30983.867 | 6 | | | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | | 3 | 0.0008 | 09WAL/HI |
| 3227.232 | 30977.36 | 7 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H ^o | 5 | 0.01 | 53KIE |
| 3228.26 | 30967.50 | 2 R | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | - | $3d^{5}(^{4}F)4p$ | ³ G ^o | 4 | 0.01 | 00WAG |
| 3229.1999 | 30958.486 | 6 | $3d^44s^2$ | b ³ G | 5 | - | $3d^5(^2\text{H})4p$ | t ³ H° | 6 | 0.0008 | 09WAL/HI |
| 3231.38 | 30937.60 | 2 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^5(^2\text{H})4p$ | $t^{3}H^{o}$ | 5 | 0.01 | 53KIE |
| 3233.2330 | 30919.870 | 9 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.0007 | 09WAL/HI |
| 3235.13 | 30901.74 | 6 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{4}F)4p$ | $q^{3}G^{o}$ | 3 | 0.01 | 53KIE |
| 3235.34 | 30899.73 | 1 | $3d^44s^2$ | a ³ P | 2 | - | $3d^5(^2D1)4p$ | v^3F^o | 2 | 0.01 | 53KIE |
| 3237.7223 | 30876.999 | 5 | $3d^44s^2$ | a ³ H | 4 | - | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 4 | 0.0009 | 09WAL/HI |
| 3238.088 | 30873.51 | 20 | $3d^44s^2$ | a ³ H | 5 | - | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 5 | 0.01 | 53KIE |
| 3238.504 | 30869.55 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H ^o | 6 | 0.01 | 53KIE |
| 3238.953 | 30865.27 | 6 | $3d^44s^2$ | a ³ H | 4 | - | $3d^4(^3H)4s4p(^1P^0)$ | w^3H^o | 5 | 0.01 | 53KIE |
| 3239.18 | 30863.10 | 4 | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | v^3D^o | 1 | 0.01 | 53KIE |
| 3240.9496 | 30846.253 | 9 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 1 | 0.0007 | 09WAL/HI |
| 3242.58 | 30830.74 | 2 | $3d^44s^2$ | a ³ H | 5 | - | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 6 | 0.01 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| Observed ir wave wavelength number (cm ⁻¹) | Intensity and | | | | Uncertainty of observed wavelength | Source | | | | | |
|---|----------------------|-------------|--|--------------------------------------|--|--------|--|--|--------|--------------|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3244.1182 | 30816.126 | 16 | $3d^44s^2$ | a ⁵ D | 3 | | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 3 | 0.0004 | 09WAL/HIN |
| 3244.713 | 30810.48 | 4 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 6 | 0.01 | 53KIE |
| 3245.4795 | 30803.201 | 19 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.0004 | 09WAL/HIN |
| 3245.543 | 30802.60 | 25 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w^3H^o | 4 | 0.01 | 53KIE |
| 3246.98 | 30788.97 | 1 R | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{2}I)4p$ | x ³ I ^o | 5 | 0.01 | 00WAG |
| 3247.2700 | 30786.217 | 14 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | 0.0006 | 09WAL/HIN |
| 3247.92 | 30780.06 | 2 R | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.01 | 00WAG |
| 3248.90 | 30770.77 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | _ | $3d^44s5s$ | e ⁵ P | 1 | 0.01 | 53KIE |
| 3248.98 | 30770.01 | 2 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{2}I)4p$ | z ¹K° | 7 | 0.01 | 53KIE |
| 3249.223 | 30767.71 | 10 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 | 0.01 | 53KIE |
| 3250.58 | 30754.87 | 10 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 4 | 0.01 | 53KIE |
| 3251.831 | 30743.04 | 40 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 5 | 0.01 | 53KIE |
| 3253.262 | 30729.52 | 10 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 5 | 0.01 | 53KIE |
| 3257.8166 | 30686.556 | 22 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H° | 6 | 0.0004 | 09WAL/HIN |
| 3259.61 | 30669.67 | 2 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | 0.01 | 53KIE |
| 3259.9715 | 30666.272 | 18 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 6 | 0.0004 | 09WAL/HIN |
| 3262.77 | 30639.97 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | 0.01 | 53KIE |
| 3266.6333 | 30603.735 | 9 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 3 | 0.0007 | 09WAL/HIN |
| 3267.038 | 30599.94 | 3 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^{1}I)4s4p(^{3}P^{0})$ | 3K° | 6 | 0.01 | 53KIE |
| 3270.708 | 30565.61 | 8 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}$ (2F1)4p | s ³ F° | 2 | 0.01 | 53KIE |
| 3270.708 | 30554.19 | 4 wh | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D° | 3 | 0.02 | 53KIE |
| 3275.73 | 30518.75 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.01 | 53KIE |
| 3277.873 | 30498.80 | 8 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^5(^2\text{F1})4p$ | s ³ F° | 3 | 0.01 | 53KIE |
| 3279.344 | 30485.12 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 3 | 0.01 | 53KIE |
| 3280.11 | 30478.00 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{2}I)4p$ | y ¹ I ^o | 6 | 0.01 | 53KIE |
| 3280.11 | 30475.68 | 2 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{4}4s5p$ | r ⁵ D° | 4 | 0.01 | 53KIE 53KIE |
| 3282.56 | 30455.25 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.01 | 53KIE |
| 3291.39 | 30373.55 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 4 | 0.01 | 53KIE 53KIE |
| 3292.07 | 30367.28 | 2 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | 0.01 | 53KIE 53KIE |
| 3292.07 | 30351.05 | 10 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{2}F1)4p$ | s ³ F° | 4 | 0.01 | 53KIE 53KIE |
| 3295.83 3296.837 | 30323.37 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P° | 2 | 0.01 | 53KIE 53KIE |
| 3290.837 | 30318.84 | 2 wh | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | v^3D^o | 2 | 0.01 | 53KIE 53KIE |
| 3298.313 | 30318.84 | 20 WII | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{2}D1)4p$ | v D v ³ F° | 4 | 0.02 | 53KIE 53KIE |
| 3300.79 | 30287.06 | 4 * | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 3 | 0.01 | 53KIE 53KIE |
| 3300.79 | 30287.06 | 4 * | $3d^{5}(^{4}G)4s$ | а Б а ³ G | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 4 | 0.01 | 53KIE 53KIE |
| 3300.79 | 30274.22 | 5 wh | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | v ³ D° | 3 | 0.01 | 53KIE 53KIE |
| 3302.19 | 30267.95 | 18 | $3d^{5}(^{4}G)4s$ | аг а ³ G | 3 | _ | $3d^{5}(^{2}D1)4p$ | v D v ³ F° | 3 | 0.02 | 53KIE 53KIE |
| 3304.39 | 30254.06 | 1 wh | $3d^{5}(^{4}D)4s$ | a G b ⁵ D | 3 4 | _ | $3d^{4}4s5p$ | q ⁵ F° | 5 | 0.01 | 53KIE 53KIE |
| 3304.39 3305.232 | 30234.06 | 1 Wn 5 * | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | 3a 4s5p 3d ⁵ 4p | q F | 5 5 | 0.02 | 53KIE 53KIE |
| 3305.232 | 30246.35 | 5 * | $3d^{4}4s^{2}$ | a ³ F | 3 | | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.01 | 53KIE 53KIE |
| | | | $3d^{5}(^{4}G)4s$ | a ³ G | 3 4 | - | | u ³ F° | | | |
| 3307.754 | 30223.29 30209.74 | 30 | $3d^{5}(^{2}\text{H})4s$ | a ³ G b ³ H | 4 5 | _ | $3d^{5}(^{4}G)5p$ $3d^{5}4p$ | u F° p ³ G° | 4 | 0.01 | 53KIE |
| 3309.238 | | 1 | | ь ³ G | 5 4 | _ | | p ³ G ^o v ³ F ^o | 4 | 0.01 | 53KIE |
| 3309.83 | 30204.34 30190.93 | 15 4 * | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}P)4s$ | a ⁵ G a ⁵ P | 4 | _ | $3d^{5}(^{2}D1)4p$ $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | v ⁵ F ^o t ⁵ D ^o | 3 | 0.01 0.01 | 53KIE 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|--------------------------------------|---|--------------|-------------------------------|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 3311.30 | 30190.93 | 4 * | 3d ⁵ (⁴ D)4s | a ³ D | 1 | | $3d^{5}(^{4}P)5p$ | t ³ D° | 1 | 0.01 | 53KIE |
| 3312.074 | 30183.87 | 10 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 3 | 0.01 | 53KIE |
| 3312.707 | 30178.11 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 2 | 0.01 | 53KIE |
| 3313.023 | 30175.23 | 7 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.01 | 53KIE |
| 3313.728 | 30168.81 | 12 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F ^o | 4 | 0.01 | 53KIE |
| 3314.19 | 30164.60 | 8 * | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | 0.01 | 53KIE |
| 3314.19 | 30164.60 | 8 * | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^5 4p$ | p ³ H ^o | 5 | 0.01 | 53KIE |
| 3314.804 | 30159.02 | 10 * | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^5(^2D1)4p$ | $v^{3}F^{o}$ | 2 | 0.01 | 53KIE |
| 3314.804 | 30159.02 | 10 * | $3d^44s^2$ | a ³ P | 2 | _ | $3d^44s5p$ | q ⁵ F° | 2 | 0.01 | 53KIE |
| 3315.20 | 30155.41 | 4 * | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | 0.01 | 53KIE |
| 3315.20 | 30155.41 | 4 * | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 1 | 0.01 | 53KIE |
| 3316.229 | 30146.06 | 5 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 1 | 0.01 | 53KIE |
| 3316.4983 | 30143.610 | 3 | $3d^{5}(^{2}I)4s$ | a ¹ I | 7 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 6 | 0.0011 | 09WAL/HI |
| 3316.4983 | 30142.69 | 3 | $3d^{5}(^{4}P)4s$ | a ¹ | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 0 | 0.0011 | 53KIE |
| 3317.06 | 30138.51 | 2 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | $3d^{5}4p$ | p ³ G° | 3 | 0.01 | 53KIE 53KIE |
| 3318.10 | 30138.31 | 5 wH | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | 3d 4p 3d ⁴ 4s4d | р О h ⁷ D | 5 5 | 0.01 | 53KIE 53KIE |
| | 30121.25 | 3 wn 1 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^44s5p$ | q ⁵ F° | | 0.02 | 53KIE 53KIE |
| 3318.96 | | | $3d^{5}(^{2}D3)4s$ | b ³ D | | | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 4 | | |
| 3319.73 | 30114.27 | 4 R | | | 3 | - | | r ³ G° | 4 | 0.01 | 00WAG |
| 3319.95 | 30112.27 | 3 | $3d^{5}(^{2}I)4s$ | a ³ I a ³ F | 6 | _ | $3d^5(^2\text{H})4p$ | r G v ³ F° | 5 | 0.01 | 53KIE |
| 3321.188 | 30101.05 | 8 | $3d^44s^2$ | | 3 | - | $3d^5(^2D1)4p$ | v Fo u Fo | 4 | 0.01 | 53KIE |
| 3323.27 | 30082.19 | 7 s | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^{5}(^{4}G)5p$ | | 4 | 0.02 | 53KIE |
| 3323.54 | 30079.75 | 5 R | $3d^{5}(^{6}S)4p$ | $z_{3}^{7}P^{o}$ | 2 | - | $3d^44s4d$ | e ⁷ F | 3 | 0.01 | 00WAG |
| 3324.86 | 30067.80 | 1 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | - | $3d^5(^2\text{H})4p$ | r ³ G ^o | 4 | 0.01 | 53KIE |
| 3326.588 | 30052.19 | 30 | $3d^44s^2$ | a ³ F | 2 | - | $3d^{5}(^{2}D1)4p$ | $v^{3}F^{o}$ | 2 | 0.01 | 53KIE |
| 3327.23 | 30046.39 | 3 w* | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^44s5p$ | $q^{5}F^{o}$ | 3 | 0.02 | 53KIE |
| 3327.23 | 30046.39 | 3 w* | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v^3D^o | 2 | 0.02 | 53KIE |
| 3327.26 | 30046.12 | 3 w | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | - | $3d^{5}(^{4}F)4p$ | u ³ D° | 1 | 0.02 | 53KIE |
| 3328.64 | 30033.66 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | - | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.01 | 53KIE |
| 3328.807 | 30032.15 | 15 | $3d^5(^4G)4s$ | a ³ G | 4 | - | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 5 | 0.01 | 53KIE |
| 3329.0554 | 30029.913 | 4 | $3d^44s^2$ | a ³ F | 4 | - | $3d^5(^2D1)4p$ | v ³ F ^o | 4 | 0.0010 | 09WAL/HI |
| 3330.596 | 30016.02 | 7 w | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v^3D^o | 1 | 0.02 | 53KIE |
| 3332.54 | 29998.51 | 3 | $3d^44s^2$ | b ³ G | 4 | - | $3d^5 (^2F1)4p$ | t ³ G° | 5 | 0.01 | 53KIE |
| 3332.88 | 29995.45 | 25 | $3d^44s^2$ | a ³ F | 3 | - | $3d^5(^2D1)4p$ | v^3F^o | 3 | 0.01 | 53KIE |
| 3333.50 | 29989.87 | 4 w | $3d^44s^2$ | b ³ G | 3 | - | $3d^5 (^2F1)4p$ | t ³ G° | 4 | 0.02 | 53KIE |
| 3333.61 | 29988.89 | 12 w | $3d^5(^6S)4p$ | $z^{7}P^{o}$ | 3 | - | $3d^44s4d$ | h ⁷ D | 4 | 0.02 | 53KIE |
| 3334.68 | 29979.26 | 10 w | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 2 | _ | $3d^44s4d$ | ${ m h}^{\ 7}{ m D}$ | 3 | 0.02 | 53KIE |
| 3334.78 | 29978.36 | 5 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 0 | 0.01 | 53KIE |
| 3334.922 | 29977.09 | 12 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 4 | 0.01 | 53KIE |
| 3335.771 | 29969.46 | 6 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 1 | 0.01 | 53KIE |
| 3336.19 | 29965.69 | 65 R | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^44s5p$ | q ⁵ F° | 2 | 0.01 | 00WAG |
| 3336.855 | 29959.72 | 5 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^5(^2F1)4p$ | t 3G° | 3 | 0.01 | 53KIE |
| 3336.9794 | 29958.606 | 3 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 5 | 0.0011 | 09WAL/H |
| 3337.219 | 29956.46 | 5 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^{1}S1)4s4p(^{3}P^{0})$ | u ³ P° | 1 | 0.01 | 53KIE |
| 3338.677 | 29943.37 | 7 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 4 | 0.01 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air | Observed wave | Intensity | | | (| Classificati | on | | | Uncertainty of observed | |
|---------------------|----------------------------|----------------|--|--------------------------------------|--------|--------------|--------------------------------------|-------------------------------|---|----------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 3341.454 | 29918.49 | 7 w | 3d ⁵ (⁴ P)4s | b ³ P | 2 | _ | | o | 3 | 0.02 | 53KIE |
| 3342.025 | 29913.38 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 4 | 0.01 | 53KIE |
| 3342.233 | 29911.52 | 12 * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^44s5p$ | q ⁵ F° | 1 | 0.01 | 53KIE |
| 3342.233 | 29911.52 | 12 * | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 2 | 0.01 | 53KIE |
| 3342.457 | 29909.51 | 5 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 1 | 0.01 | 53KIE |
| 3343.221 | 29902.68 | 12 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H° | 4 | 0.01 | 53KIE |
| 3343.344 | 29901.58 | 20 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3\text{H})4s4p(^1\text{P}^0)$ | w ³ H ^o | 5 | 0.01 | 53KIE |
| 3343.75 | 29897.95 | 5 wh | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 3 | _ | $3d^44s4d$ | h ⁷ D | 3 | 0.02 | 53KIE |
| 3344.507 | 29891.18 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{4}G)5p$ | v ³ H° | 5 | 0.01 | 53KIE |
| 3345.144 | 29885.49 | 9 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^5$ (2 F1)4p | t ³ G° | 5 | 0.01 | 53KIE |
| 3345.36 | 29883.56 | 8 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}$ (F1)4p | t ³ G° | 4 | 0.01 | 53KIE |
| 3346.008 | 29877.77 | 40 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G° | 5 | 0.01 | 53KIE |
| 3346.15 | 29876.50 | 7 w | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | $3d^{4}4s4d$ | h ⁷ D | 4 | 0.01 | 53KIE 53KIE |
| 3346.72 | 29871.41 | 30 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 4 | 0.02 | 53KIE 53KIE |
| 3346.79 | 29870.79 | 10 | $3d^44s^2$ | а п а ³ Н | 3 4 | | $3d^{3}(^{4}F)4s^{2}4p$ | v G v ³ G° | 3 | 0.01 | 53KIE 53KIE |
| 3340.79 3347.467 | 29870.79 29864.75 | 7 | $3a^{4s}$ $3d^{5}(^{4}P)4s$ | ан b³P | 2 | _ | $3d^{4}(^{1}S1)4s4p(^{3}P^{0})$ | u ³ P° | 2 | 0.01 | 53KIE 53KIE |
| | | | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | | | s ⁵ P° | | | |
| 3349.067 | 29850.48 | 20 w | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a ³ G | - | _ | $3d^44s5p$ | w ³ H° | 3 | 0.02 | 53KIE |
| 3349.3174 | 29848.250 | 9 | | a ⁵ G b ⁵ D | 5 | - | $3d^4(^3H)4s4p(^1P^0)$ | w "H" s ⁵ P° | 6 | 0.0007 | 09WAL/HIN |
| 3351.49 | 29828.90 | 3 w | $3d^{5}(^{4}D)4s$ | a ³ G | 3 | - | $3d^44s5p$ | v ³ H° | 3 | 0.02 | 53KIE |
| 3351.5946 | 29827.971 | 7 | $3d^{5}(^{4}G)4s$ | | 5 | - | $3d^{5}(^{4}G)5p$ | | 6 | 0.0008 | 09WAL/HIN |
| 3351.9632 | 29824.691 | 24 | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | 0.0003 | 09WAL/HIN |
| 3353.0208 | 29815.284 | 4 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^5(^2G1)4p$ | s ³ H° | 4 | 0.0010 | 09WAL/HIN |
| 3354.65 | 29800.80 | 1 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | - | | o ⁵ F° | 5 | 0.02 | 53KIE |
| 3356.38 | 29785.44 | 3 wh | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 4 | _ | $3d^44s4d$ | h ⁷ D | 3 | 0.02 | 53KIE |
| 3357.86 | 29772.32 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 4 | 0.01 | 53KIE |
| 3359.176 | 29760.65 | 6 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^4(^3H)4s4p(^1P^0)$ | w^3H^0 | 5 | 0.01 | 53KIE |
| 3360.145 | 29752.07 | 6 | $3d^44s^2$ | a ³ F | 4 | - | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 5 | 0.01 | 53KIE |
| 3362.216 | 29733.75 | 25 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | - | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 5 | 0.02 | 53KIE |
| 3362.70 | 29729.47 | 10 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 5 | 0.02 | 53KIE |
| 3365.52 | 29704.56 | 10 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 4 | 0.01 | 53KIE |
| 3366.28 | 29697.85 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H° | 4 | 0.01 | 53KIE |
| 3367.49 | 29687.18 | 64 R | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 4 | 0.01 | 00WAG |
| 3369.81 | 29666.74 | 6 R | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | - | $3d^5(^4D)4p$ | $w_a^3 D^o$ | 2 | 0.01 | 00WAG |
| 3370.22 | 29663.13 | 8 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^44s5p$ | s ⁵ P° | 1 | 0.02 | 53KIE |
| 3371.07 | 29655.65 | 6 | $3d^5(^4D)4s$ | a ³ D | 3 | _ | $3d^44s5p$ | r ⁵ D° | 4 | 0.01 | 53KIE |
| 3372.31 | 29644.75 | 2 w | $3d^5(^4D)4s$ | b ⁵ D | 4 | _ | $3d^3(^4F)4s^24p$ | v ³ G ^o | 4 | 0.02 | 53KIE |
| 3373.958 | 29630.27 | 6 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w^3H^o | 4 | 0.01 | 53KIE |
| 3374.406 | 29626.34 | 4 | $3d^5(^4P)4s$ | b ³ P | 1 | - | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 0 | 0.01 | 53KIE |
| 3374.74 | 29623.40 | 3 | $3d^44s^2$ | b ³ G | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.01 | 53KIE |
| 3374.927 | 29621.76 | 10 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 5 | 0.01 | 53KIE |
| 3376.3945 | 29608.889 | 6 | $3d^5(^2I)4s$ | a ³ I | 7 | _ | $3d^5(^2H)4p$ | v ³ I ^o | 7 | 0.0008 | 09WAL/HIN |
| 3376.628 | 29606.84 | 3 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^5(^4F)4p$ | s ³ D° | 3 | 0.01 | 53KIE |
| 3377.08 | 29602.88 | 2 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | $3d^54p$ | p ³ G ^o | 5 | 0.01 | 53KIE |
| 3377.24 | 29601.48 | 1 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^5(^2D1)4p$ | s ³ D ^o | 2 | 0.01 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|--------------------------------------|--------|--------------|---|-------------------------------|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 3379.1698 | 29584.572 | 17 | 3d ⁵ (⁶ S)4s | a ⁷ S | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | 0.0004 | 09WAL/HIN |
| 3379.56 | 29581.16 | 4 w | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^{5}(^{2}D1)4p$ | s ³ D° | 2 | 0.02 | 53KIE |
| 3379.85 | 29578.62 | 7 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 3 | 0.01 | 53KIE |
| 3380.55 | 29572.49 | 4 w | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.02 | 53KIE |
| 3381.33 | 29565.67 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 3 | 0.01 | 53KIE |
| 3382.068 | 29559.22 | 7 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 4 | 0.01 | 53KIE |
| 3383.54 | 29546.36 | 1 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | $v^{3}P^{o}$ | 1 | 0.01 | 53KIE |
| 3384.242 | 29540.23 | 10 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 2 | 0.02 | 53KIE |
| 3384.649 | 29536.68 | 18 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 2 | 0.02 | 53KIE |
| 3385.313 | 29530.89 | 15 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 4 | 0.01 | 53KIE |
| 3386.513 | 29520.42 | 12 s | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 3 | 0.02 | 53KIE |
| 3386.717 | 29518.65 | 3 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.02 | 53KIE 53KIE |
| 3388.705 | 29501.33 | 20 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 1 | 0.01 | 53KIE |
| 3388.894 | 29499.68 | 3 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P° | 1 | 0.01 | 53KIE 53KIE |
| 3389.44 | 29494.93 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 4 | 0.01 | 53KIE 53KIE |
| 3390.766 | 29494.93 | 18 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 1 | _ | $3d^{5}$ (G1)4p $3d^{5}$ (² F1)4p | s G s ³ F° | 2 | 0.01 | 53KIE 53KIE |
| | 29483.40 | 5 | $3d^{5}(^{4}D)4s$ | a D a ³ D | 2 | | $3d^{5}$ (F1)4p $3d^{5}$ (2F1)4p | s r s ³ F° | 2 | 0.01 | 53KIE 53KIE |
| 3391.08 | | | $3d^{5}(^{2}I)4s$ | a ³ I | | _ | 3a' (F1)4p | v ³ I° | | | |
| 3391.3661 | 29478.181 | 6 | | | 6 | - | $3d^{5}(^{2}\text{H})4p$ | v ³ I ^o | 6 | 0.0008 | 09WAL/HIN |
| 3392.06 | 29472.15 | 2 | $3d^{5}(^{2}I)4s$ | a ³ I a ⁵ P | 5 | - | $3d^{5}(^{2}\text{H})4p$ | | 6 | 0.01 | 53KIE |
| 3395.93 | 29438.57 | 2 R | $3d^{5}(^{4}P)4s$ | a ³ P b ³ G | 2 | - | $3d^5(^4D)4p$ | w ³ P ^o | 2 | 0.01 | 00WAG |
| 3396.02 | 29437.79 | 4 w | $3d^44s^2$ | | 4 | _ | 2.5.2 | | 3 | 0.02 | 53KIE |
| 3401.14 | 29393.47 | 2 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | - | $3d^5(^2\text{H})4p$ | $x^{-1}I^{o}$ | 6 | 0.01 | 53KIE |
| 3401.72 | 29388.46 | 5 * | $3d^44s^2$ | b ³ G | 3 | - | $3d^4(^3F1)4s4p(^1P^0)$ | $^{3}G^{o}$ | 3 | 0.01 | 53KIE |
| 3401.72 | 29388.46 | 5 * | $3d^44s^2$ | a ³ F | 2 | _ | $3d^44s5p$ | $q^{5}F^{o}$ | 3 | 0.01 | 53KIE |
| 3402.91 | 29378.18 | 1 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^{5}(^{2}\text{H})4p$ | v ³ I ^o | 5 | 0.01 | 53KIE |
| 3403.5901 | 29372.313 | 5 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | v ³ I ^o | 5 | 0.0010 | 09WAL/HIN |
| 3403.983 | 29368.92 | 5 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 2 | 0.01 | 53KIE |
| 3405.217 | 29358.28 | 10 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | - | | q ³ F° | 4 | 0.01 | 53KIE |
| 3407.23 | 29340.94 | 8 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^44s5p$ | s ⁵ D° | 3 | 0.02 | 53KIE |
| 3408.56 | 29329.49 | 2 | $3d^44s^2$ | b ³ G | 4 | - | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.01 | 53KIE |
| 3408.94 | 29326.22 | 7 | $3d^5(^4F)4s$ | a ⁵ F | 1 | - | | o ⁵ F° | 1 | 0.01 | 53KIE |
| 3409.76 | 29319.17 | 1 | $3d^44s^2$ | a ³ F | 3 | - | $3d^44s5p$ | q ⁵ F° | 4 | 0.01 | 53KIE |
| 3410.03 | 29316.84 | 1 | $3d^5(^2D3)4s$ | b ³ D | 3 | - | | q ³ F° | 3 | 0.01 | 53KIE |
| 3412.264 | 29297.65 | 8 | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | | q ³ F° | 3 | 0.01 | 53KIE |
| 3414.089 | 29281.99 | 2 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | $^{3}G^{o}$ | 3 | 0.01 | 53KIE |
| 3415.311 | 29271.51 | 7 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.01 | 53KIE |
| 3418.81 | 29241.56 | 1 w | $3d^5(^4D)4s$ | b ⁵ D | 2 | _ | $3d^44s5p$ | s ⁵ D° | 2 | 0.02 | 53KIE |
| 3419.89 | 29232.32 | 3 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | * | q ⁵ D° | 4 | 0.02 | 53KIE |
| 3421.02 | 29222.67 | 2 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^44s5p$ | q ⁵ F° | 3 | 0.01 | 53KIE |
| 3421.45 | 29218.99 | 3 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 4 | 0.01 | 53KIE |
| 3421.71 | 29216.77 | 5 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.01 | 53KIE |
| 3423.178 | 29204.25 | 7 | $3d^5(^2D3)4s$ | b ³ D | 1 | _ | υω (11) 10 η/(1) | q ³ F° | 2 | 0.01 | 53KIE |
| 3425.97 | 29180.45 | 12 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 5 | 0.01 | 53KIE |
| 3429.06 | 29154.15 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 3 | 0.01 | 53KIE 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|-------------------------|--------|--------------|---------------------------------|-------------------------------|--------|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3431.2792 | 29135.297 | 11 | 3d ⁵ (⁴ G)4s | a ⁵ G | 2 | _ | $3d^{5}(^{4}D)4p$ | x ³ F° | 2 | 0.0006 | 09WAL/HIN |
| 3431.5835 | 29132.714 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 3 | 0.0012 | 09WAL/HIN |
| 3431.6888 | 29131.820 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 2 | 0.0010 | 09WAL/HIN |
| 3431.9945 | 29129.225 | 9 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 3 | 0.0007 | 09WAL/HIN |
| 3432.3145 | 29126.509 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 3 | 0.0009 | 09WAL/HIN |
| 3433.5969 | 29115.631 | 150 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 6 | 0.0003 | 09WAL/HIN |
| 3434.1094 | 29111.286 | 22 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 6 | 0.0004 | 09WAL/HIN |
| 3434.30 | 29109.67 | 1 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 3 | 0.02 | 53KIE |
| 3435.14 | 29102.55 | 1 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F ^o | 3 | 0.01 | 53KIE |
| 3435.4817 | 29099.658 | 4 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 4 | 0.0011 | 09WAL/HIN |
| 3435.6779 | 29097.996 | 18 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 5 | 0.0004 | 09WAL/HIN |
| 3435.8035 | 29096.933 | 15 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}D)4p$ | x ³ F° | 4 | 0.0005 | 09WAL/HIN |
| 3435.8355 | 29096.662 | 10 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{0}$ | 4 | 0.0006 | 09WAL/HIN |
| 3436.1593 | 29093.920 | 24 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 5 | 0.0003 | 09WAL/HIN |
| 3436.1914 | 29093.648 | 110 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w G w ⁵ G° | 5 | 0.0003 | 09WAL/HIN |
| 3441.1125 | 29052.043 | 25 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w G w ⁵ G° | 4 | 0.0003 | 09WAL/HIN |
| 3441.4354 | 29049.317 | 95 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w G w ⁵ G° | 4 | 0.0003 | 09WAL/HIN |
| 3441.4674 | 29049.047 | 21 | $3d^{5}(^{4}G)4s$ | a G a ⁵ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w G w ⁵ G° | 4 | 0.0003 | 09WAL/HIN |
| 3442.592 | 29039.56 | 3 | $3d^{5}(^{4}G)4s$ | a G a ³ G | 5 | | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G ^o | 5 | 0.004 | 53KIE |
| 3442.392 3443.7832 | | | $3d^44s^2$ | a G a ³ H | 3 4 | - | $3d^{4}(^{1}G1)4s4p(^{3}P^{o})$ | x ³ H ^o | 3 4 | | |
| | 29029.513 | 36 | $3d^{4}s$ $3d^{5}(^{4}G)4s$ | a ⁵ G | - | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{0})$ | w ³ G° | | 0.0003 | 09WAL/HIN |
| 3445.0988 | 29018.428 | 8 | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | 3a (F1)4s4p(P) | w ³ G ^o | 5 | 0.0009 | 09WAL/HIN |
| 3445.5828 | 29014.352 | 22 | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 5 | 0.0004 | 09WAL/HIN |
| 3445.6150 | 29014.081 | 110 | | | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ G° | 5 | 0.0003 | 09WAL/HIN |
| 3447.0155 | 29002.293 | 19 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 0.0004 | 09WAL/HIN |
| 3447.4293 | 28998.812 | 84 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | | 3 | 0.0003 | 09WAL/HIN |
| 3447.762 | 28996.01 | 35 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 0.01 | 53KIE |
| 3452.48 | 28956.39 | 1 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | - | $3d^5(^2G1)4p$ | x ¹ H ^o | 5 | 0.01 | 53KIE |
| 3452.60 | 28955.38 | 1 | $3d^44s^2$ | a ³ F | 4 | - | $3d^44s5p$ | s ⁵ P° | 3 | 0.01 | 53KIE |
| 3453.2168 | 28950.212 | 6 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | - | $3d^5(^2G1)4p$ | x ¹ H ^o | 5 | 0.0009 | 09WAL/HIN |
| 3453.3279 | 28949.281 | 77 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G ^o | 2 | 0.0003 | 09WAL/HIN |
| 3453.7427 | 28945.804 | 17 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G ^o | 2 | 0.0004 | 09WAL/HIN |
| 3455.2757 | 28932.962 | 19 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 4 | 0.0004 | 09WAL/HIN |
| 3455.6013 | 28930.236 | 81 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G ^o | 4 | 0.0003 | 09WAL/HIN |
| 3455.6331 | 28929.970 | 14 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 4 | 0.0006 | 09WAL/HIN |
| 3456.31 | 28924.30 | 1 | $3d^5(^2F1)4s$ | b ³ F | 4 | - | $3d^5(^4F)4p$ | q ³ G° | 5 | 0.01 | 53KIE |
| 3458.0840 | 28909.466 | 11 | $3d^5(^2I)4s$ | a ³ I | 7 | - | $3d^4(^3H)4s4p(^1P^0)$ | w ³ I ^o | 7 | 0.0006 | 09WAL/HIN |
| 3458.34 | 28907.33 | 4 * | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^1G1)4s4p(^3P^0)$ | x ³ H ^o | 4 | 0.01 | 53KIE |
| 3458.34 | 28907.33 | 4 * | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^3(^4F)4s^24p$ | v^3G^o | 3 | 0.01 | 53KIE |
| 3459.14 | 28900.64 | 3 * | $3d^44s^2$ | a ³ F | 4 | - | $3d^3(^4F)4s^24p$ | v ³ G ^o | 5 | 0.01 | 53KIE |
| 3459.14 | 28900.64 | 3 * | $3d^5(^4F)4s$ | a ⁵ F | 1 | _ | | q ³ F° | 2 | 0.01 | 53KIE |
| 3460.4308 | 28889.861 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 5 | 0.0011 | 09WAL/HIN |
| 3462.237 | 28874.79 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 5 | 0.01 | 53KIE |
| 3462.894 | 28869.31 | 5 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}\text{F})4p$ | q ³ G° | 3 | 0.01 | 53KIE |
| 3463.511 | 28864.17 | 5 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^3(^4F)4s^24p$ | v ³ G ^o | 3 | 0.01 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---|-------------------------|---|--------------|-------------------------------------|-------------------------------|--------|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3463.616 | 28863.29 | 7 | 3d ⁵ (² F1)4s | b ³ F | 4 | _ | 3d ⁵ (⁴ F)4p | ³ G ^o | 4 | 0.01 | 53KIE |
| 3464.8292 | 28853.188 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 3 | 0.0009 | 09WAL/HIN |
| 3465.2473 | 28849.707 | 43 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 3 | 0.0003 | 09WAL/HIN |
| 3465.5746 | 28846.982 | 10 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 3 | 0.0006 | 09WAL/HIN |
| 3467.012 | 28835.02 | 20 * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 4 | 0.01 | 53KIE |
| 3467.012 | 28835.02 | 20 * | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | - | $3d^4(^3H)4s4p(^1P^0)$ | w^3I^o | 6 | 0.01 | 53KIE |
| 3467.7193 | 28829.142 | 47 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^1G1)4s4p(^3P^0)$ | $x^{3}H^{o}$ | 5 | 0.0003 | 09WAL/HIN |
| 3468.67 | 28821.24 | 3 R | $3d^44s^2$ | a ³ F | 3 | _ | $3d^3(^4F)4s^24p$ | v ³ G ^o | 4 | 0.01 | 00WAG |
| 3469.17 | 28817.09 | 1 | $3d^5(^2F1)4s$ | b ³ F | 4 | _ | $3d^{5}(^{4}\text{F})4p$ | q ³ G ^o | 3 | 0.01 | 53KIE |
| 3469.434 | 28814.89 | 8 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.01 | 53KIE |
| 3469.5877 | 28813.617 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 4 | 0.0009 | 09WAL/HIN |
| 3470.3993 | 28806.879 | 6 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 2 | 0.0009 | 09WAL/HIN |
| 3470.5286 | 28805.806 | 4 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.0011 | 09WAL/HIN |
| 3470.716 | 28804.25 | 8 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 0 | 0.01 | 53KIE |
| 3470.865 | 28803.01 | 4 | $3d^5(^2G2)4s$ | c ³ G | 3 | _ | $3d^54p$ | p ³ G ^o | 3 | 0.01 | 53KIE |
| 3471.492 | 28797.81 | 10 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 2 | 0.01 | 53KIE |
| 3472.7675 | 28787.235 | 6 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.0009 | 09WAL/HIN |
| 3472.9019 | 28786.121 | 27 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | $^{3}G^{\circ}$ | 4 | 0.0003 | 09WAL/HIN |
| 3473.6150 | 28780.212 | 7 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.0009 | 09WAL/HIN |
| 3474.3754 | 28773.913 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 3 | 0.0011 | 09WAL/HIN |
| 3474.865 | 28769.86 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 3 | 0.01 | 53KIE |
| 3477.1546 | 28750.916 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.0012 | 09WAL/HIN |
| 3477.243 | 28750.18 | 8 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 4 | 0.012 | 53KIE |
| 3478.763 | 28737.62 | 15 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.01 | 53KIE |
| 3479.122 | 28734.66 | 12 | $3d^{5}(^{4}D)4s$ | b ⁵D | 0 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 1 | 0.01 | 53KIE |
| 3479.251 | 28733.59 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.01 | 53KIE 53KIE |
| 3480.272 | 28725.16 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 1 | 0.01 | 53KIE |
| 3481.3002 | 28716.680 | 23 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.0003 | 09WAL/HIN |
| 3481.5358 | 28714.736 | 57 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{4}(^{1}G1)4s4p(^{3}P^{o})$ | x ³ H° | 6 | 0.0003 | 09WAL/HIN |
| 3481.87 | 28711.98 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | r ⁵ F° | 1 | 0.0003 | 53KIE |
| 3483.512 | 28698.45 | 2 8 * | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G° | 3 | 0.01 | 53KIE 53KIE |
| 3483.512 | 28698.45 | 8 * | $3d^{5}(^{4}D)4s$ | аг а ³ D | 3 | | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 4 | 0.01 | 53KIE 53KIE |
| 3485.14 | 28685.04 | 3 | $3d^44s^2$ | а Ъ а ³ Н | 6 | _ | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H° | 5 | 0.01 | 53KIE 53KIE |
| 3485.62 | 28681.09 | 2 R | $3d^{5}(^{4}D)4s$ | ап b ⁵ D | 4 | | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | х п х ³ Н° | 3 4 | 0.01 | 00WAG |
| | | | $3d^44s^2$ | a ³ H | - | _ | | y ³ I ^o | | | |
| 3488.4466 | 28657.853 | 24 | 3d 4s 3d ⁵ (² F1)4s | а н b ³ F | 4 | _ | $3d^4(^1I)4s4p(^3P^0)$ | t ³ P ^o | 5 | 0.0003 | 09WAL/HIN |
| 3491.15 | 28635.66 | 1 w | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | v ³ G° | 2 | 0.02 | 53KIE |
| 3492.14 | 28627.54 | 1 | | a F b ³ F | 4 | _ | $3d^3(^4F)4s^24p$ | t ³ P° | 3 | 0.01 | 53KIE |
| 3493.65 | 28615.17 | 2 w | $3d^{5}(^{2}\text{F1})4s$ | | 3 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | | 2 | 0.02 | 53KIE |
| 3494.9616 | 28604.433 | 44 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 6 | 0.0003 | 09WAL/HIN |
| 3496.215 | 28594.18 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.01 | 53KIE |
| 3497.75 | 28581.63 | 6 R | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^44s(^6D)6p$ | ⁵ P° | 2 | 0.01 | 00WAG |
| 3501.68 | 28549.55 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | - | - 4.3 3-6 | $p_{3-2}^{5}F^{o}$ | 3 | 0.01 | 53KIE |
| 3502.695 | 28541.28 | 2 w | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.02 | 53KIE |
| 3503.053 | 28538.36 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | $t^{3}F^{o}$ | 2 | 0.01 | 53KIE |
| 3503.37 | 28535.78 | 1 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I° | 5 | 0.01 | 53KIE |
| 3503.87 | 28531.71 | 1 wh | $3d^44s^2$ | a ¹G | 4 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 3 | 0.02 | 53KIE |
| 3506.54 | 28509.99 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | 0.01 | 53KIE |

TABLE 3. Spectral lines of CrI-Continued

| Observed air | Observed wave | Intensity | | | | Classificati | ion | | | Uncertainty of observed | |
|-------------------|----------------------------|----------------|------------------------|-------------------|---|--------------|--------------------------|-------------------------------|---|-------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | Ciassificati | Configuration | Term | | wavelength (Å) | Source of line |
| · · | | | | | | - | | | | | |
| 3507.06 | 28505.76 | 1 h | $3d^44s^2$ | b ³ G | 4 | - | $3d^5(^4F)4p$ | v ⁵ G° | 3 | 0.02 | 53KIE |
| 3507.223 | 28504.43 | 4 w | $3d^44s^2$ | a ¹G | 4 | - | 4.2 2.0 | q 5D° | 3 | 0.02 | 53KIE |
| 3508.83 | 28491.38 | 7 w | $3d^44s^2$ | a ³ P | 1 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D ^o | 1 | 0.02 | 53KIE |
| 3510.425 | 28478.43 | 3 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | - | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 4 | 0.01 | 53KIE |
| 3510.5335 | 28477.554 | 52 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 7 | 0.0003 | 09WAL/HI |
| 3512.66 | 28460.31 | 3 | $3d^44s^2$ | a ³ H | 6 | - | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 6 | 0.01 | 53KIE |
| 3512.70 | 28459.99 | 2 w | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | - | 4.1 | _ | 3 | 0.02 | 53KIE |
| 3513.52 | 28453.35 | 2 h | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | - | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 1 | 0.02 | 53KIE |
| 3513.88 | 28450.43 | 2 w* | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | - | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 2 | 0.02 | 53KIE |
| 3513.88 | 28450.43 | 2 w* | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | - | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 1 | 0.02 | 53KIE |
| 3515.79 | 28434.98 | 2 R | $3d^44s^2$ | a ³ F | 3 | - | $3d^44s5p$ | s ⁵ D° | 2 | 0.01 | 00WAG |
| 3517.21 | 28423.50 | 3 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | - | $3d^{5}(^{4}D)4p$ | w^3D^o | 3 | 0.01 | 53KIE |
| 3517.46 | 28421.48 | 2 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | - | $3d^44s5s$ | g ⁵ D | 4 | 0.01 | 53KIE |
| 3517.82 | 28418.57 | 1 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | - | | p ⁵ F° | 2 | 0.01 | 53KIE |
| 3518.08 | 28416.47 | 1 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^{5}(^{4}D)4p$ | w ³ D ^o | 3 | 0.01 | 53KIE |
| 3518.40 | 28413.89 | 3 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | - | $3d^44s(^6D)6p$ | $^{7}P^{o}$ | 3 | 0.01 | 53KIE |
| 3519.10 | 28408.23 | 1 w* | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | - | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 2 | 0.02 | 53KIE |
| 3519.10 | 28408.23 | 1 w* | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | - | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F ^o | 3 | 0.02 | 53KIE |
| 3519.445 | 28405.45 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | - | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 2 | 0.01 | 53KIE |
| 3521.523 | 28388.69 | 3 | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F ^o | 3 | 0.01 | 53KIE |
| 3523.50 | 28372.76 | 2 R | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | _ | $3d^44p^2$ | f ⁷ F | 4 | 0.01 | 00WAG |
| 3527.0744 | 28344.007 | 3 | $3d^44s^2$ | a ¹I | 6 | _ | $3d^{5}(^{2}\text{H})4p$ | $x^{-1}I^{o}$ | 6 | 0.0013 | 09WAL/HI |
| 3527.18 | 28343.16 | 1 h | $3d^5(^4P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}D)4p$ | w^3D^o | 2 | 0.02 | 53KIE |
| 3528.055 | 28336.13 | 5 | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^5(^4D)4p$ | w^3D^o | 2 | 0.01 | 53KIE |
| 3528.87 | 28329.58 | 1 | $3d^5(^2D3)4s$ | b ³ D | 2 | - | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F ^o | 2 | 0.01 | 53KIE |
| 3529.17 | 28327.18 | 1 | $3d^5(^4P)4s$ | a ⁵ P | 1 | - | $3d^5(^4D)4p$ | w^3D^o | 2 | 0.01 | 53KIE |
| 3531.442 | 28308.95 | 12 | $3d^5(^2D3)4s$ | b ³ D | 1 | - | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F ^o | 2 | 0.01 | 53KIE |
| 3532.89 | 28297.35 | 12 | $3d^5(^4P)4s$ | b ³ P | 1 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | 0.01 | 53KIE |
| 3536.50 | 28268.47 | 5 wh | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 4 | _ | $3d^44s4d$ | h ⁷ D | 5 | 0.02 | 53KIE |
| 3537.253 | 28262.45 | 12 1* | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | | $x^{3}G^{o}$ | 5 | 0.02 | 53KIE |
| 3537.253 | 28262.45 | 12 1* | $3d^5(^4G)4s$ | a ⁵ G | 5 | _ | | x ³ G ^o | 5 | 0.02 | 53KIE |
| 3538.736 | 28250.60 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | 0.01 | 53KIE |
| 3539.913 | 28241.21 | 6 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 | 0.01 | 53KIE |
| 3541.499 | 28228.56 | 2 w | $3d^5(^4P)4s$ | b ³ P | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D ^o | 3 | 0.02 | 53KIE |
| 3543.62 | 28211.67 | 6 R | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 4 | 0.01 | 00WAG |
| 3543.70 | 28211.03 | 1 w | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^44s(^6D)6p$ | 7 F o | 2 | 0.02 | 53KIE |
| 3544.51 | 28204.59 | 1 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 1 | _ | $3d^44s4d$ | e ⁷ F | 1 | 0.02 | 53KIE |
| 3545.19 | 28199.18 | 1 w | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | $3d^44s5s$ | g ⁵ D | 3 | 0.02 | 53KIE |
| 3545.71 | 28195.04 | 2 wh | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 2 | _ | $3d^44s4d$ | h ⁷ D | 3 | 0.02 | 53KIE |
| 3546.28 | 28190.51 | 2 wh* | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^44s5s$ | g ⁵ D | 3 | 0.02 | 53KIE |
| 3546.28 | 28190.51 | 2 wh* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 2 | _ | $3d^44s4d$ | e ⁷ F | 2 | 0.02 | 53KIE |
| 3547.04 | 28184.47 | 2 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 1 | _ | $3d^44s4d$ | h ⁷ D | 2 | 0.02 | 53KIE |
| 3547.76 | 28178.75 | 3 wh | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 3 | _ | $3d^44s4d$ | e ⁷ F | 3 | 0.02 | 53KIE |
| 3547.79 | 28178.51 | 3 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^44s5s$ | e ³ D | 2 | 0.01 | 53KIE |
| 3547.97 | 28177.08 | 6 wh | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 0 | _ | $3d^44s4d$ | e ⁷ G | 1 | 0.02 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificat | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|--|---|-------------|--------------------------------|-------------------------------|--------|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3548.7265 | 28171.074 | 2 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 5 | 0.0013 | 09WAL/HIN |
| 3548.89 | 28169.78 | 4 wh | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 3 | _ | $3d^44s4d$ | $h^{7}D$ | 4 | 0.02 | 53KIE |
| 3549.25 | 28166.92 | 4 wh* | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 1 | _ | $3d^44s4d$ | e ⁷ G | 2 | 0.02 | 53KIE |
| 3549.25 | 28166.92 | 4 wh* | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 4 | _ | $3d^44s4d$ | e ⁷ F | 4 | 0.02 | 53KIE |
| 3550.50 | 28157.00 | 4 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 5 | _ | $3d^44s4d$ | e ⁷ F | 5 | 0.02 | 53KIE |
| 3550.63 | 28155.97 | 20 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 6 | _ | $3d^44s4d$ | e ⁷ F | 6 | 0.02 | 53KIE |
| 3552.72 | 28139.41 | 5 wH | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 2 | _ | $3d^44s4d$ | e ⁷ G | 3 | 0.02 | 53KIE |
| 3552.95 | 28137.59 | 7 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 1 | _ | $3d^44s4d$ | e ⁷ G | 1 | 0.02 | 53KIE |
| 3553.9619 | 28129.576 | 6 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^1G1)4s4p(^3P^0)$ | x ³ H ^o | 4 | 0.0009 | 09WAL/HIN |
| 3554.39 | 28126.19 | 1 h | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 2 | _ | $3d^44s4d$ | e ⁷ F | 1 | 0.02 | 53KIE |
| 3554.78 | 28123.10 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 0 | 0.01 | 53KIE |
| 3555.34 | 28118.67 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}F^{o}$ | 3 | 0.01 | 53KIE |
| 3555.7869 | 28115.139 | 10 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | ${}^{3}F^{o}$ | 3 | 0.0007 | 09WAL/HIN |
| 3556.00 | 28113.45 | 1 w* | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^5 4p$ | p ³ H ^o | 6 | 0.02 | 53KIE |
| 3556.00 | 28113.45 | 1 w* | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 3 | 0.02 | 53KIE |
| 3556.1321 | 28112.410 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | ³ F° | 3 | 0.0009 | 09WAL/HIN |
| 3556.93 | 28106.10 | 3 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 2 | _ | $3d^44s4d$ | h ⁷ D | 2 | 0.02 | 53KIE |
| 3558.57 | 28093.15 | 10 wH | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{\circ}$ | 3 | _ | $3d^44s4d$ | e ⁷ G | 4 | 0.02 | 53KIE |
| 3558.80 | 28091.34 | 10 wii | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 6 | 0.01 | 53KIE 53KIE |
| 3559.19 | 28088.26 | 2 H | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 2 | _ | $3d^44s4d$ | e ⁷ G | 2 | 0.02 | 53KIE |
| 3559.7774 | 28083.623 | 9 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^{5}(^{4}D)4p$ | w ³ P° | 1 | 0.0008 | 09WAL/HIN |
| 3560.43 | 28078.48 | 3 wh | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 3 | _ | $3d^{4}4s4d$ | h ⁷ D | 3 | 0.02 | 53KIE |
| 3561.766 | 28067.94 | 2 w | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | 3a 434a | r ⁵ P° | 2 | 0.02 | 53KIE 53KIE |
| 3562.281 | 28063.89 | 2 w 8 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^5 4p$ | p ³ H ^o | 6 | 0.02 | 53KIE 53KIE |
| 3562.465 | 28062.44 | 8 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 4 | 0.01 | 53KIE 53KIE |
| 3562.87 | 28059.25 | o 5 w | $3d^4(^5D)4s4p(^3P^0)$ | ог z ⁷ F° | 2 | _ | $3d^{4}4s4d$ | e ⁷ G | 1 | 0.01 | 53KIE 53KIE |
| 3563.18 | 28056.81 | 1 w | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | $3d^{5} 4p$ | p ³ H° | 5 | 0.02 | 53KIE 53KIE |
| 3564.286 | 28048.10 | 1 w 15 | $3d^{5}(^{2}\text{F1})4s$ | ь п b ³ F | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | рп r ³ G° | 5 | 0.02 | 53KIE 53KIE |
| 3564.9406 | 28042.950 | 3 | $3d^{5}(^{2}\text{H})4s$ | ог b ³ H | 5 | _ | 3a (H)4p $3d^5 4p$ | p ³ H° | 5 | 0.0013 | 09WAL/HIN |
| 3565.08 | 28042.950 | 2 | $3d^44s^2$ | он с ³ D | 3 | _ | $3a^{4}p$ $3d^{5}(^{4}F)4p$ | рн ³ G° | 3 4 | 0.0013 | 53KIE |
| | | 10 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | | 3a (F)4p | $x^{3}G^{o}$ | 4 | | |
| 3565.153 | 28041.28 | | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | - | | x ³ G ^o | 4 | 0.01 | 53KIE |
| 3565.547 | 28038.18 | 5* 5* | $3d^{5}$ (G)4s $3d^{5}$ (² F1)4s | a G b ³ F | | - | $3d^5(^2\text{H})4p$ | r ³ G° | • | 0.01 | 53KIE |
| 3565.547 | 28038.18 | | | z ⁵ D° | 2 | - | | e ⁵ P | 3 | 0.01 | 53KIE |
| 3566.11 | 28033.75 | 20 wH* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° z ⁷ F° | 4 | - | $3d^44s5s$ $3d^44s4d$ | e ⁷ G | 3 | 0.02 | 53KIE |
| 3566.11 | 28033.75 | 20 wH* | $3d^4(^5D)4s4p(^3P^0)$ | | 4 | - | | | 5 | 0.02 | 53KIE |
| 3567.57 | 28022.28 | 3 wh* | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 3 | - | $3d^44s4d$ | e ⁷ G | 3 | 0.02 | 53KIE |
| 3567.57 | 28022.28 | 3 wh* | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | - | $3d^44s5s$ | g ⁵ D | 2 | 0.02 | 53KIE |
| 3568.29 | 28016.63 | 2 w | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | - | $3d^44s5s$ | g ⁵ D | 2 | 0.02 | 53KIE |
| 3568.37 | 28016.00 | 5 w* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | - | $3d^44s5s$ | e ⁵ P | 1 | 0.02 | 53KIE |
| 3568.37 | 28016.00 | 5 w* | $3d^4(^5D)4s4p(^3P^0)$ | $z_{3-}^{5}D^{o}$ | 3 | - | $3d^44s5s$ | e ⁵ P | 2 | 0.02 | 53KIE |
| 3568.98 | 28011.21 | 3 R | $3d^44s^2$ | a ³ F | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 4 | 0.01 | 00WAG |
| 3569.143 | 28009.93 | 10 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | - | $3d^5(^2\text{H})4p$ | r ³ G° | 4 | 0.02 | 53KIE |
| 3569.37 | 28008.15 | 1 w | $3d^44s^2$ | a ³ H | 5 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 4 | 0.02 | 53KIE |
| 3570.99 | 27995.45 | 1 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | 3 | 0.01 | 53KIE |

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TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | ı | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|--------------------------|-----|--------------|-------------------------------------|--------------------------------------|--------|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3571.13 | 27994.35 | 2 | $3d^44s^2$ | c ³ D | 2 | _ | 3d ⁵ (⁴ F)4p | q ³ G° | 3 | 0.01 | 53KIE |
| 3571.9748 | 27987.727 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^1G1)4s4p(^3P^0)$ | $x^{3}H^{o}$ | 5 | 0.0012 | 09WAL/HIN |
| 3572.7404 | 27981.730 | 11 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S° | 2 | 0.0007 | 09WAL/HIN |
| 3573.6375 | 27974.706 | 30 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S° | 2 | 0.0004 | 09WAL/HIN |
| 3574.0321 | 27971.617 | 22 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 3 | 0.0005 | 09WAL/HIN |
| 3574.38 | 27968.89 | 10 H | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 5 | _ | $3d^44s4d$ | e ⁷ G | 6 | 0.02 | 53KIE |
| 3574.7997 | 27965.611 | 40 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S° | 2 | 0.0004 | 09WAL/HIN |
| 3574.9299 | 27964.593 | 18 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 3 | 0.0005 | 09WAL/HIN |
| 3578.2088 | 27938.968 | 19 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 3 | 0.0005 | 09WAL/HIN |
| 3578.7038 | 27935.104 | 1380 q | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 4 | 0.0006 | 09WAL/HIN |
| 3582.15 | 27908.23 | 4 | $3d^44s^2$ | a ¹I | 6 | _ | $3d^{5}(^{2}G1)4p$ | $x^{-1}H^{o}$ | 5 | 0.01 | 53KIE |
| 3582.6212 | 27904.559 | 63 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{0}$ | 4 | 0.0004 | 09WAL/HIN |
| 3583.74 | 27895.85 | 3 wh | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{4}P)5p$ | $t^{3}D^{o}$ | 3 | 0.0004 | 53KIE |
| 3584.337 | 27891.20 | 15 wH | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 6 | _ | $3d^{4}4s4d$ | e ⁷ G | 7 | 0.02 | 53KIE 53KIE |
| 3586.2353 | 27876.438 | 6 * | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | 0.009 | 09WAL/HIN |
| 3586.2353 | 27876.438 | 6* | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{4}(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H ^o | 6 | 0.0009 | 09WAL/HII |
| 3588.726 | 27857.09 | 3 | $3d^44s^2$ | a G a ³ F | 3 | _ | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | х п х ³ Н° | 4 | 0.0009 | 53KIE |
| | | | $3d^4(^5D)4s4p(^3P^0)$ | a F z ⁷ F° | 6 | | $3d^{4}4s4d$ | h ⁷ D | | | |
| 3588.83 | 27856.28 | 15 R | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z F z ⁷ F° | | - | $3d^{4}4s4d$ $3d^{4}4s4d$ | e ⁷ G | 5 5 | 0.01 | 00WAG |
| 3590.33 | 27844.65 | 7 wh | $3d^{5}(^{6}S)4s$ | z F a ⁷ S | 5 | - | | e 'G y ⁷ P° | | 0.02 | 53KIE |
| 3593.5021 | 27820.068 | 1450 q | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a S a ⁵G | 3 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y P x ³ P ^o | 3 | 0.0006 | 09WAL/HIN |
| 3594.31 | 27813.82 | 8 | | | _ | - | $3d^4(^3P1)4s4p(^3P^0)$ | | 1 | 0.01 | 53KIE |
| 3595.755 | 27802.64 | 4 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ $w^{3}P^{o}$ | 2 | 0.01 | 53KIE |
| 3599.3900 | 27774.561 | 14 | $3d^44s^2$ | a ³ P | 1 | - | $3d^{5}(^{4}D)4p$ | | 2 | 0.0007 | 09WAL/HI |
| 3600.67 | 27764.69 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^4(^3H)4s4p(^3P^0)$ | $y_{3-0}^{3}H^{o}$ | 4 | 0.01 | 53KIE |
| 3600.88 | 27763.07 | 1 | $3d^5(^2D3)4s$ | b ³ D | 3 | - | $3d^{5}(^{4}P)5p$ | t ³ D° | 2 | 0.01 | 53KIE |
| 3601.22 | 27760.45 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 4 | 0.01 | 53KIE |
| 3601.6613 | 27757.046 | 51 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{1}D^{o}$ | 2 | 0.0004 | 09WAL/HIN |
| 3602.5736 | 27750.017 | 8 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | ¹ D ^o | 2 | 0.0009 | 09WAL/HIN |
| 3603.03 | 27746.50 | 17 R | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 6 | _ | $3d^44s4d$ | e ⁷ G | 6 | 0.01 | 00WAG |
| 3603.7451 | 27740.997 | 16 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 1 | 0.0005 | 09WAL/HI |
| 3604.5411 | 27734.871 | 6 | $3d^44s^2$ | a ³ P | 1 | - | $3d^{5}(^{4}D)4p$ | w^3P^o | 1 | 0.0009 | 09WAL/HI |
| 3604.9268 | 27731.903 | 8 | $3d^5(^4P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 1 | 0.0009 | 09WAL/HI |
| 3605.0403 | 27731.030 | 4 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D_{-}^{o}$ | 3 | 0.0012 | 09WAL/HI |
| 3605.3446 | 27728.690 | 1240 q | $3d^5(^6S)4s$ | a ⁷ S | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | 0.0006 | 09WAL/HI |
| 3605.5252 | 27727.301 | 22 | $3d^{5}(^{2}I)4s$ | a ³I | 7 | - | $3d^5(^2\text{H})4p$ | t ³ H° | 6 | 0.0005 | 09WAL/HI |
| 3605.6193 | 27726.577 | 4 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | 0.0012 | 09WAL/HI |
| 3607.37 | 27713.12 | 3 R | $3d^5(^4D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 0 | 0.01 | 00WAG |
| 3608.05 | 27707.90 | 2 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^1G1)4s4p(^3P^0)$ | x ³ H ^o | 5 | 0.01 | 53KIE |
| 3608.4042 | 27705.179 | 18 | $3d^5(^2I)4s$ | a ³ I | 6 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H ^o | 5 | 0.0005 | 09WAL/HIN |
| 3609.0234 | 27700.426 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.0011 | 09WAL/HI |
| 3609.10 | 27699.84 | 1 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^5(^2I)4p$ | $y^{-1}I^{o}$ | 6 | 0.01 | 53KIE |
| 3609.4780 | 27696.937 | 24 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.0004 | 09WAL/HII |
| 3610.0436 | 27692.598 | 20 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.0005 | 09WAL/HIN |
| 3611.48 | 27681.58 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | ${}^{3}G^{o}$ | 4 | 0.01 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|-------------------------|---|--------------|---|-------------------------------|--------|--|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3612.6042 | 27672.970 | 15 | $3d^5(^2I)4s$ | a ³ I | 5 | _ | 3d ⁵ (² H)4p | t ³ H ^o | 4 | 0.0006 | 09WAL/HIN |
| 3613.6623 | 27664.867 | 10 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{5}(^{4}D)4p$ | $w^{3}P^{o}$ | 0 | 0.0007 | 09WAL/HIN |
| 3615.6452 | 27649.696 | 91 | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 4 | 0.0003 | 09WAL/HIN |
| 3617.159 | 27638.12 | 4 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^{5}(^{2}D1)4p$ | s ³ D ^o | 1 | 0.01 | 53KIE |
| 3618.3342 | 27629.148 | 4 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ S ^o | 1 | 0.0012 | 09WAL/HIN |
| 3619.4606 | 27620.550 | 69 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 7 | 0.0004 | 09WAL/HIN |
| 3623.25 | 27591.66 | 2 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P ^o | 1 | 0.01 | 53KIE |
| 3623.49 | 27589.84 | 5 | $3d^5(^2F1)4s$ | b ³ F | 2 | _ | $3d^5(^2D1)4p$ | s ³ D° | 2 | 0.01 | 53KIE |
| 3626.208 | 27569.16 | 12 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^{5}(^{2}D1)4p$ | s ³ D° | 2 | 0.01 | 53KIE |
| 3628.054 | 27555.13 | 7 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}F)4p$ | s ³ D° | 3 | 0.01 | 53KIE |
| 3628.299 | 27553.27 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^1\text{I})4s4p(^3\text{P}^{\text{o}})$ | y ³ I ^o | 5 | 0.01 | 53KIE |
| 3631.67 | 27527.69 | 13 R | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}F)4p$ | y ⁵ G° | 3 | 0.01 | 00WAG |
| 3632.444 | 27521.83 | 4 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | 3a (1)-p | 0 | 4 | 0.01 | 53KIE |
| 3632.8057 | 27519.089 | 13 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | | o | 4 | 0.0007 | 09WAL/HIN |
| 3632.8412 | 27518.820 | 67 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | | o | 4 | 0.0007 | 09WAL/HIN |
| 3633.314 | 27515.24 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^5(^4P)5p$ | t ³ D° | 1 | 0.0004 | 53KIE |
| 3634.85 | 27503.61 | 5 R | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 4 | 0.01 | 00WAG |
| 3634.996 | 27502.51 | 20 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^{5}(^{4}F)4p$ | $s^{3}D^{o}$ | 3 | 0.01 | 53KIE |
| 3635.2785 | 27500.370 | 20 | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁷ D° | 3 | 0.0005 | 09WAL/HIN |
| | | 5 | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a S a SG | | | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 4 | | |
| 3636.193 | 27493.45 | | $3d^{5}(^{4}G)4s$ | a ¹G a ⁵G | 3 | - | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ | u Fo u ⁵ Fo | 4 | 0.01 | 53KIE |
| 3636.5513 | 27490.745 | 24 | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a ⁵G a ⁵G | 4 | - | 3 <i>d</i> ⁻ (*G)4 <i>p</i> | u ⁵ F° | - | 0.0004 | 09WAL/HIN |
| 3636.5873 | 27490.473 | 120 | $3d^{4}(3)4s$ $3d^{4}4s^{2}$ | a G c ³ D | 5 | - | $3d^{5}(^{4}G)4p$ | u "F" t ³ P° | 4 | 0.0003 | 09WAL/HIN |
| 3637.82 | 27481.16 | 2 w | | | 1 | - | $3d^4(^1D1)4s4p(^3P^0)$ | | 0 | 0.02 | 53KIE |
| 3639.7956 | 27466.242 | 180 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | 0.0003 | 09WAL/HIN |
| 3640.3746 | 27461.874 | 30 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | 0.0004 | 09WAL/HIN |
| 3641.011 | 27457.07 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.01 | 53KIE |
| 3641.4652 | 27453.649 | 28 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.0004 | 09WAL/HIN |
| 3641.8271 | 27450.921 | 100 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.0003 | 09WAL/HIN |
| 3645.5823 | 27422.646 | 12 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 6 | 0.0007 | 09WAL/HIN |
| 3646.1601 | 27418.300 | 57 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | - | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 6 | 0.0004 | 09WAL/HIN |
| 3646.68 | 27414.39 | 2 | $3d^44s^2$ | a ³ F | 4 | - | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 5 | 0.01 | 53KIE |
| 3648.5296 | 27400.494 | 20 | $3d^5(^4G)4s$ | a ⁵ G | 2 | _ | $3d^5(^4G)4p$ | u ⁵ F° | 2 | 0.0005 | 09WAL/HIN |
| 3648.9928 | 27397.016 | 80 | $3d^5(^4G)4s$ | a ⁵ G | 3 | - | $3d^5(^4G)4p$ | u ⁵ F° | 2 | 0.0004 | 09WAL/HIN |
| 3649.8632 | 27390.483 | 4 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^5(^2D1)4p$ | v ³ F ^o | 4 | 0.0012 | 09WAL/HIN |
| 3650.76 | 27383.75 | 1 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 5 | - | $3d^44s5s$ | g ⁵ D | 4 | 0.02 | 53KIE |
| 3652.61 | 27369.89 | 2 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | - | $3d^5(^4F)4p$ | u ³ D° | 1 | 0.02 | 53KIE |
| 3653.916 | 27360.10 | 100 | $3d^5(^4G)4s$ | a ⁵ G | 2 | _ | $3d^5(^4G)4p$ | u ⁵ F° | 1 | 0.01 | 53KIE |
| 3655.858 | 27345.57 | 5 | $3d^5(^4G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 4 | 0.01 | 53KIE |
| 3656.2239 | 27342.833 | 22 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 4 | 0.0005 | 09WAL/HIN |
| 3656.2603 | 27342.561 | 84 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 4 | 0.0004 | 09WAL/HIN |
| 3656.97 | 27337.25 | 4 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 4 | _ | $3d^44s5s$ | g ⁵ D | 3 | 0.01 | 53KIE |
| 3659.91 | 27315.30 | 1 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^{5}(^{6}S)38p$ | $^{7}P^{\circ}$ | 2 | 0.01 | 53KIE |
| 3661.4423 | 27303.864 | 3 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 4 | 0.0014 | 09WAL/HIN |
| 3662.376 | 27296.90 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.01 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength (Å) | Observed wave number | Intensity and comment | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|--------------------------------------|----------------------------|-----------------------------|-------------------------------------|--------------------------------------|---|--------------|---------------------------|--|-----|--|----------------|
| (Å) | (cm^{-1}) | | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3662.8355 | 27293.479 | 16 | 3d ⁵ (⁴ G)4s | a ⁵ G | 3 | | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.0005 | 09WAL/HI |
| 3663.2014 | 27290.753 | 49 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D ^o | 3 | 0.0004 | 09WAL/HI |
| 3664.163 | 27283.59 | 2 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^44s5p$ | r ⁵ D° | 4 | 0.01 | 53KIE |
| 3665.4294 | 27274.165 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 5 | 0.0010 | 09WAL/HI |
| 3665.9774 | 27270.088 | 52 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | 0.0004 | 09WAL/HI |
| 3666.0146 | 27269.811 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | 0.0010 | 09WAL/HI |
| 3666.1686 | 27268.666 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.0011 | 09WAL/HI |
| 3666.6355 | 27265.194 | 25 * | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | (-) 4 | q ³ F° | 3 | 0.0004 | 09WAL/HI |
| 3666.6355 | 27265.194 | 25 * | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^5(^4P)4p$ | v ⁵ D° | 2 | 0.0004 | 09WAL/HI |
| 3667.36 | 27259.81 | 2 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | 50 (1) p | q ³ H ^o | 5 | 0.01 | 53KIE |
| 3668.0275 | 27254.847 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^5(^4P)4p$ | v ⁵ D° | 1 | 0.0010 | 09WAL/HI |
| 3668.13 | 27254.09 | 1 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | 3u (1)+p | q ³ F° | 4 | 0.0010 | 53KIE |
| 3669.19 | 27246.21 | 2 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | | q ³ H ^o | 4 | 0.01 | 53KIE |
| 3671.93 | 27225.88 | 4 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^5(^4G)5p$ | v ³ H° | 5 | 0.01 | 53KIE 53KIE |
| 3673.58 | 27213.65 | 6 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}(^{4}G)5p$ | v H v ³ H° | 4 | 0.01 | 53KIE |
| 3673.68 | 27212.91 | 2 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | Sa (G)Sp | q ³ F° | 2 | 0.01 | 53KIE 53KIE |
| 3673.732 | 27212.53 | 2 | $3d^{5}(^{2}\text{F1})4s$ | ьг b³F | 4 | _ | | q r q ³ F° | 3 | 0.01 | 53KIE 53KIE |
| | | | $3d^44s^2$ | a ³ P | | | $3d^5(^4D)4p$ | q P ^o | | | |
| 3676.3134 | 27193.420 | 39 | $3d^44s^2$ | a P c ³ D | 2 | _ | | r ³ G° | 2 4 | 0.0004 | 09WAL/HI |
| 3677.00 | 27188.34 | 2 | $3d^{5}(^{4}P)4s$ | с ⁵ D а ⁵ P | 3 | _ | $3d^5(^2\text{H})4p$ | r ³ D ^o | | 0.01 | 53KIE |
| 3677.24 | 27186.57 | 1 | | a ³ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ^a D ^a s ³ F ^o | 2 | 0.01 | 53KIE |
| 3678.88 | 27174.45 | 6 | $3d^{5}(^{2}D3)4s$ | | 2 | - | $3d^5(^2\text{F1})4p$ | | 3 | 0.01 | 53KIE |
| 3679.0709 | 27173.039 | 37 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ I ^o | 7 | 0.0004 | 09WAL/HI |
| 3679.8093 | 27167.586 | 37 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 4 | 0.0004 | 09WAL/HI |
| 3680.1786 | 27164.860 | 7 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 4 | 0.0010 | 09WAL/HI |
| 3680.99 | 27158.87 | 10 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 4 | 0.01 | 53KIE |
| 3681.6883 | 27153.721 | 14 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ P ^o | 1 | 0.0007 | 09WAL/HI |
| 3682.30 | 27149.21 | 2 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 0 | 0.01 | 53KIE |
| 3683.17 | 27142.80 | 2 * | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 2 | 0.01 | 53KIE |
| 3683.17 | 27142.80 | 2 * | $3d^44s^2$ | c ³ D | 2 | - | $3d^5(^2\text{H})4p$ | r ³ G ^o | 3 | 0.01 | 53KIE |
| 3683.66 | 27139.19 | 10 | $3d^44s^2$ | b ³ G | 3 | - | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 4 | 0.01 | 53KIE |
| 3684.31 | 27134.40 | 2 * | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | - | $3d^5 (^2F1)4p$ | s ³ F° | 2 | 0.01 | 53KIE |
| 3684.31 | 27134.40 | 2 * | $3d^5(^4G)4s$ | a ³ G | 4 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 3 | 0.01 | 53KIE |
| 3685.5333 | 27125.393 | 26 | $3d^5(^4G)4s$ | a ⁵ G | 6 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | 0.0004 | 09WAL/HI |
| 3686.1272 | 27121.023 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F ^o | 5 | 0.0014 | 09WAL/HI |
| 3686.41 | 27118.94 | 2 w | $3d^5(^4G)4s$ | a ⁵ G | 2 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F ^o | 3 | 0.02 | 53KIE |
| 8686.7510 | 27116.434 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F ^o | 4 | 0.0010 | 09WAL/HI |
| 8686.7876 | 27116.165 | 28 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F ^o | 4 | 0.0004 | 09WAL/HI |
| 3686.8678 | 27115.575 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F ^o | 3 | 0.0010 | 09WAL/HI |
| 3687.0481 | 27114.249 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F ^o | 2 | 0.0011 | 09WAL/HI |
| 3687.2376 | 27112.856 | 25 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | 0.0004 | 09WAL/HI |
| 3687.3203 | 27112.248 | 18 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 1 | 0.0005 | 09WAL/H |
| 3687.5205 | 27110.776 | 24 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 2 | 0.0004 | 09WAL/H |
| 3688.1056 | 27106.475 | 19 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ I° | 6 | 0.0005 | 09WAL/HI |
| 3688.4506 | 27103.940 | 22 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 3 | 0.0005 | 09WAL/HI |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificat | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|-------------------------|--------|-------------|--|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3689.2942 | 27097.742 | 9 | 3d ⁵ (⁴ G)4s | a ⁵ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 3 | 0.0009 | 09WAL/HIN |
| 3689.65 | 27095.13 | 15 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w^3H^o | 5 | 0.01 | 53KIE |
| 3692.72 | 27072.60 | 1 wh | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | _ | () F () | e ⁵ F | 4 | 0.02 | 53KIE |
| 3693.0794 | 27069.969 | 4 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 6 | 0.0013 | 09WAL/HI |
| 3693.57 | 27066.37 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ I ^o | 5 | 0.01 | 53KIE |
| 3694.1113 | 27062.408 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ I ^o | 5 | 0.0010 | 09WAL/HI |
| 3695.86 | 27049.60 | 10 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 6 | 0.01 | 53KIE |
| 3698.18 | 27032.63 | 4 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 4 | 0.01 | 53KIE |
| 3699.12 | 27025.77 | 1 hl* | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 4 | 0.02 | 53KIE |
| 3699.12 | 27025.77 | 1 hl* | $3d^44s^2$ | c ³ D | 3 | _ | $3d^5(^2F2)4p$ | p ³ F° | 4 | 0.02 | 53KIE |
| 3700.088 | 27018.70 | 1 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^44s4p$ | r ³ H° | 6 | 0.01 | 53KIE |
| 3700.395 | 27016.45 | 2 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 3 | 0.01 | 53KIE |
| 3702.158 | 27003.59 | 2 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | $w^{3}F^{o}$ | 4 | 0.01 | 53KIE |
| 3702.664 | 26999.90 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | w^{-1} | 2 | 0.01 | 53KIE |
| 3704.91 | 26983.53 | 5 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^{1}I)4s4p(^{3}P^{0})$ | ${}^{3}K^{o}$ | 6 | 0.01 | 53KIE |
| 3705.94 | 26976.03 | 4 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | 3u(1)+3+p(1) | e ⁵ F | 3 | 0.01 | 53KIE 53KIE |
| 3706.82 | 26969.63 | 4 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^5(^4D)4p$ | w ³ P° | 1 | 0.02 | 53KIE 53KIE |
| 3706.82 | 26969.179 | 3 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^{4}4s4p$ | r ³ H ^o | 6 | 0.0014 | 09WAL/HI |
| 3700.8817 | 26946.95 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ P ^o | 1 | 0.0014 | 53KIE |
| 3710.08 | 26945.93 | 10 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | | $3d^44s4p$ | r ³ H ^o | 5 | 0.01 | 53KIE 53KIE |
| | 26943.93 26942.267 | 2 | $3d^44s^2$ | вн а ³ Р | 0 | _ | $3d^{5}(^{4}D)4p$ | гн w ³ D° | 3 1 | 0.0014 | 09WAL/HIN |
| 3710.5845 | | | $3d^{4}s$ $3d^{5}(^{2}G2)4s$ | b ¹ G | 4 | _ | | p ³ G° | • | | |
| 3711.55 | 26935.26 | 2 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | - | _ | 3d ⁵ 4p 3d ⁴ 4s5p | p G r ⁵ D° | 4 4 | 0.01 | 53KIE |
| 3712.52 | 26928.22 | | | a ⁵ F | 3 | _ | | r ⁵ D° | | 0.01 | 53KIE |
| 3714.39 | 26914.66 | 7 w | 3d ⁵ (⁴ F)4s 3d ⁵ (⁴ F)4s | a ⁵ F | 5 | _ | $3d^44s5p$ | r ⁵ D° | 4 | 0.02 | 53KIE |
| 3716.52 | 26899.24 | 20 w * | | a F c ³ F | 5 4 | - | $3d^44s5p$ | r ³ H ^o | 4 | 0.02 | 53KIE |
| 3716.52 | 26899.24 | 20 w * | $3d^{5}(^{4}F)4s$ | b ³ H | • | - | $3d^44s4p$ | r ³ H ^o | 4 | 0.02 | 53KIE |
| 3717.58 | 26891.57 | 7 | $3d^{5}(^{2}\text{H})4s$ | | 4 | - | $3d^44s4p$ | | 4 | 0.01 | 53KIE |
| 3717.76 | 26890.27 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | - | $3d^{5}(^{4}D)4p$ | $w^{3}P^{o}$ | 0 | 0.01 | 53KIE |
| 3718.57 | 26884.41 | 5 | $3d^44s^2$ | c ³ D | 3 | - | $3d^5(^2F2)4p$ | $p^{3}F^{o}$ | 3 | 0.01 | 53KIE |
| 3719.45 | 26878.05 | 3 w | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | - | $3d^44s4p$ | r ³ H ^o | 4 | 0.02 | 53KIE |
| 3722.73 | 26854.37 | 2 R | $3d^44s^2$ | a ³ F | 4 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 3 | 0.01 | 00WAG |
| 3723.69 | 26847.45 | 3 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 3 | 0.02 | 53KIE |
| 3724.93 | 26838.51 | 3 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 3 | 0.02 | 53KIE |
| 3726.845 | 26824.72 | 6 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 4 | - | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 3 | 0.01 | 53KIE |
| 3728.86 | 26810.22 | 3 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 1 | - | $3d^5 (^2F1)4p$ | s ³ F° | 2 | 0.01 | 53KIE |
| 3729.26 | 26807.35 | 2 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | - | $3d^{5}$ (2 F1)4p | s ³ F° | 2 | 0.02 | 53KIE |
| 3730.8019 | 26796.269 | 91 | $3d^5(^6S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.0003 | 09WAL/HI |
| 3731.64 | 26790.25 | 3 w | $3d^5(^4F)4s$ | a ⁵ F | 4 | - | $3d^5(^2F1)4p$ | s ³ F° | 4 | 0.02 | 53KIE |
| 3732.0282 | 26787.464 | 140 | $3d^5(^6S)4s$ | a ⁷ S | 3 | - | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | 0.0003 | 09WAL/HI |
| 3732.63 | 26783.15 | 3 w | $3d^5(^4F)4s$ | a ⁵ F | 3 | _ | $3d^44s5p$ | r ⁵ D° | 3 | 0.02 | 53KIE |
| 3733.4368 | 26777.358 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 4 | 0.0010 | 09WAL/HI |
| 3733.85 | 26774.39 | 10 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 5 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 4 | 0.01 | 53KIE |
| 3734.254 | 26771.50 | 3 | $3d^44s^2$ | c ³ D | 1 | _ | $3d^{5}(^{2}D1)4p$ | s ³ D ^o | 1 | 0.01 | 53KIE |
| 3734.52 | 26769.59 | 4 | $3d^5(^4D)4s$ | a ³ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D ^o | 3 | 0.01 | 53KIE |

43103-4

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength (Å) | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|--------------------------------------|----------------------------|------------------|--|--------------------------------------|--------|--------------|--|-------------------------------|-----|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3735.23 | 26764.50 | 2 w | $3d^5(^2G2)4s$ | c ³ G | 5 | _ | $3d^5 4p$ | p ³ H ^o | 6 | 0.02 | 53KIE |
| 3736.4449 | 26755.801 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | 1 3 F^{o} | 4 | 0.0013 | 09WAL/HI |
| 3739.81 | 26731.73 | 3 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^44s5p$ | q ⁵ F° | 3 | 0.01 | 53KIE |
| 3742.05 | 26715.73 | 7 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.01 | 53KIE |
| 3742.9631 | 26709.208 | 44 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 5 | 0.0004 | 09WAL/HI |
| 3743.5345 | 26705.131 | 61 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 5 | 0.0004 | 09WAL/HI |
| 3743.5725 | 26704.860 | 320 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 5 | 0.0003 | 09WAL/HI |
| 3743.8815 | 26702.656 | 400 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 6 | 0.0003 | 09WAL/HI |
| 3744.33 | 26699.46 | 2 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^44s5p$ | r ⁵ D° | 2 | 0.02 | 53KIE |
| 3744.4911 | 26698.309 | 50 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 6 | 0.0004 | 09WAL/HI |
| 3744.95 | 26695.04 | 5 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{2}D1)4p$ | s ³ D° | 2 | 0.01 | 53KIE |
| 3745.08 | 26694.11 | 3 * | $3d^44s^2$ | c ³ D | 2 | _ | $3d^{5}(^{2}D1)4p$ | s ³ D° | 2 | 0.01 | 53KIE 53KIE |
| 3745.08 3745.08 | 26694.11 | 3 * | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.01 | 53KIE 53KIE |
| 3745.08 3746.92 | 26681.00 | 1 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}F)4p$ | s ³ D° | 3 | 0.01 | 53KIE 53KIE |
| 3740.92 3747.2501 | 26678.652 | 18 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^{5}(^{2}\text{H})4p$ | $x^{-1}I^{\circ}$ | 6 | 0.0005 | 09WAL/HI |
| 3747.2301 3748.17 | 26672.10 | 2 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 2 | 0.0003 | 53KIE |
| 3748.6054 | 26669.007 | 56 | $3d^{5}(^{4}G)4s$ | a F a ⁵ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | 0.0004 | 09WAL/HI |
| | | | $3d^{5}(^{4}G)4s$ | a ⁵ G | | | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | | |
| 3749.0267 | 26666.010 | 66 | $3d^{5}(^{4}D)4s$ | a G b ⁵ D | 5 2 | - | | w ³ F° | · · | 0.0004 | 09WAL/HI |
| 3751.2109 | 26650.484 | 4 | $3d^{5}(^{4}D)4s$ $3d^{5}(^{4}D)4s$ | ь ⁵ D b ⁵ D | _ | - | $3d^4(^3G)4s4p(^3P^0)$ | w Fo w Fo | 3 | 0.0013 | 09WAL/HI |
| 3751.778 | 26646.46 | 4 | | ь ⁵ Б а ⁵ F | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w F r ⁵ D° | 3 | 0.01 | 53KIE |
| 3752.33 | 26642.54 | 4 ws | $3d^{5}(^{4}F)4s$ | | 1 | - | $3d^44s5p$ | | 1 | 0.02 | 53KIE |
| 3752.72 | 26639.77 | 5 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | - | $3d^44s5p$ | r ⁵ D° | 1 | 0.02 | 53KIE |
| 3755.8220 | 26617.765 | 11 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | - | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 2 | 0.0008 | 09WAL/HI |
| 3756.81 | 26610.77 | 2 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 2 | 0.01 | 53KIE |
| 3757.1695 | 26608.219 | 37 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | 0.0004 | 09WAL/HI |
| 3757.49 | 26605.95 | 3 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 1 | _ | $3d^44s5p$ | r ⁵ D° | 0 | 0.01 | 53KIE |
| 3757.6611 | 26604.738 | 200 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | 0.0003 | 09WAL/HI |
| 3758.0462 | 26602.012 | 65 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | x ⁵ G° | 3 | 0.0004 | 09WAL/HI |
| 3758.60 | 26598.09 | 3 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | - | $3d^5 4p$ | p ³ H ^o | 4 | 0.01 | 53KIE |
| 3758.713 | 26597.29 | 6 | $3d^5(^6S)4s$ | a ⁵ S | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P ^o | 2 | 0.01 | 53KIE |
| 3759.24 | 26593.56 | 6 w | $3d^44s^2$ | a ³ P | 1 | - | $3d^{5}(^{4}D)4p$ | w^3D^o | 1 | 0.02 | 53KIE |
| 3760.28 | 26586.21 | 3 | $3d^5(^4D)4s$ | b ⁵ D | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 2 | 0.01 | 53KIE |
| 3761.39 | 26578.36 | 10 | $3d^5(^2D3)4s$ | b ³ D | 3 | - | $3d^5 (^2F1)4p$ | t ³ G ^o | 4 | 0.01 | 53KIE |
| 3762.51 | 26570.45 | 3 w | $3d^5(^4D)4s$ | a ³ D | 3 | - | $3d^5(^2D1)4p$ | v^3F^o | 4 | 0.02 | 53KIE |
| 3764.605 | 26555.67 | 10 w | $3d^44s^2$ | c ³ D | 2 | _ | | q ⁵ D° | 3 | 0.02 | 53KIE |
| 3765.69 | 26548.02 | 2 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^5(^2F1)4p$ | t ³ G ^o | 3 | 0.01 | 53KIE |
| 3766.99 | 26538.85 | 2 | $3d^5(^2F2)4s$ | d ³ F | 4 | _ | | q ³ H ^o | 4 | 0.01 | 53KIE |
| 3767.4250 | 26535.789 | 30 | $3d^5(^4G)4s$ | a ⁵ G | 6 | - | $3d^5(^4G)4p$ | y ³ G ^o | 5 | 0.0004 | 09WAL/HI |
| 3768.0642 | 26531.288 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | 0.0010 | 09WAL/HI |
| 3768.1042 | 26531.006 | 21 * | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | 0.0005 | 09WAL/HI |
| 3768.1042 | 26531.006 | 21 * | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.0005 | 09WAL/HI |
| 3768.2383 | 26530.062 | 180 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 2 | 0.0003 | 09WAL/H |
| 3768.6008 | 26527.510 | 12 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.0008 | 09WAL/HI |
| 3768.7327 | 26526.582 | 46 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 2 | 0.0004 | 09WAL/HI |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | ı | Classificat | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------|---|-------------|-------------------------|-------------------------------|---|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3768.9880 | 26524.785 | 11 | 3d ⁵ (⁴ G)4s | a ⁵ G | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.0008 | 09WAL/HIN |
| 3774.22 | 26488.02 | 1 R | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^44s4d$ | h ⁷ D | 3 | 0.01 | 00WAG |
| 3776.17 | 26474.34 | 8 wl | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 1 | 0.02 | 53KIE |
| 3776.76 | 26470.20 | 4 h | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v^3D^o | 2 | 0.02 | 53KIE |
| 3777.3179 | 26466.293 | 7 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G ^o | 5 | 0.0010 | 09WAL/HI |
| 3777.508 | 26464.96 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{2}D1)4p$ | v^3F^o | 3 | 0.01 | 53KIE |
| 3777.90 | 26462.22 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G ^o | 5 | 0.01 | 53KIE |
| 3777.92 | 26462.08 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z^3G^o | 5 | 0.01 | 53KIE |
| 3779.994 | 26447.56 | 8 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 4 | 0.01 | 53KIE |
| 3780.12 | 26446.67 | 8 h | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.02 | 53KIE |
| 3780.99 | 26440.59 | 6 h | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | $3d^44s4d$ | e ⁷ G | 3 | 0.02 | 53KIE |
| 3782.96 | 26426.82 | 1 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 4 | 0.01 | 53KIE |
| 3783.98 | 26419.70 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{2}D1)4p$ | v^3F^o | 3 | 0.01 | 53KIE |
| 3786.2156 | 26404.098 | 6 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.0010 | 09WAL/HIN |
| 3788.06 | 26391.24 | 8 w | $3d^44s^2$ | c ³ D | 3 | _ | , , , , , | q ³ F° | 3 | 0.02 | 53KIE |
| 3788.8596 | 26385.673 | 28 | $3d^5(^4D)4s$ | b ⁵ D | 0 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.0004 | 09WAL/HIN |
| 3789.0819 | 26384.125 | 4 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G ^o | 4 | 0.0013 | 09WAL/HIN |
| 3789.50 | 26381.21 | 5 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}G^{o}$ | 4 | 0.02 | 53KIE |
| 3789.7244 | 26379.652 | 46 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P ^o | 2 | 0.0004 | 09WAL/HIN |
| 3790.2218 | 26376.190 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.0008 | 09WAL/HIN |
| 3790.4500 | 26374.602 | 30 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 0 | 0.0004 | 09WAL/HIN |
| 3791.12 | 26369.94 | 7 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.02 | 53KIE |
| 3791.3747 | 26368.170 | 44 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 2 | 0.0004 | 09WAL/HIN |
| 3792.1346 | 26362.886 | 46 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.0004 | 09WAL/HI |
| 3792.4174 | 26360.920 | 3 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.0015 | 09WAL/HI |
| 3792.86 | 26357.84 | 2 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.02 | 53KIE |
| 3793.2880 | 26354.870 | 43 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 2 | 0.0004 | 09WAL/HIN |
| 3793.545 | 26353.08 | 7 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.01 | 53KIE |
| 3793.8725 | 26350.810 | 47 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 2 | 0.0004 | 09WAL/HI |
| 3794.6084 | 26345.700 | 26 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.0004 | 09WAL/HI |
| 3796.833 | 26330.26 | 8 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 4 | 0.01 | 53KIE |
| 3796.9684 | 26329.325 | 10 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G ^o | 3 | 0.0008 | 09WAL/HII |
| 3797.1299 | 26328.205 | 42 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.0004 | 09WAL/HII |
| 3797.386 | 26326.43 | 5 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.01 | 53KIE |
| 3797.7156 | 26324.145 | 92 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.0003 | 09WAL/HI |
| 3799.2138 | 26313.764 | 4 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^{5}(^{4}P)4p$ | y ³ S° | 1 | 0.0013 | 09WAL/HI |
| 3800.65 | 26303.82 | 10 hl | $3d^5(^2\text{F1})4s$ | b ³ F | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.02 | 53KIE |
| 3804.7983 | 26275.143 | 170 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.0003 | 09WAL/HII |
| 3805.91 | 26267.47 | 2 w | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.02 | 53KIE |
| 3806.5587 | 26262.992 | 19 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.0005 | 09WAL/HI |
| 3806.83 | 26261.12 | 50 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 5 | 0.01 | 53KIE |
| 3807.9222 | 26253.588 | 30 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.0004 | 09WAL/HI |
| 3809.4830 | 26242.832 | 11 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^{5}(^{2}G1)4p$ | x ¹ H° | 5 | 0.0004 | 09WAL/HIN |
| 3811.94 | 26225.92 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^0 | 4 | 0.01 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | 1 | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---------------------------------|-------------------------|---|--------------|--------------------------------|----------------------------------|-----|--|----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3812.259 | 26223.72 | 65 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^3(^4F)4s^24p$ | v ³ G ^o | 4 | 0.01 | 53KIE |
| 8814.6232 | 26207.471 | 6 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v^3G^o | 3 | 0.0011 | 09WAL/HI |
| 3815.4331 | 26201.908 | 91 * | $3d^5(^4F)4s$ | a ⁵ F | 2 | _ | $3d^{5}(^{2}\text{F1})4p$ | t ³ G ^o | 3 | 0.0003 | 09WAL/HI |
| 3815.4331 | 26201.908 | 91 * | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | ` ' ' | o | 4 | 0.0003 | 09WAL/HI |
| 3815.7742 | 26199.566 | 24 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.0004 | 09WAL/HI |
| 3816.1709 | 26196.842 | 72 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.0004 | 09WAL/HI |
| 3816.2103 | 26196.572 | 32 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.0004 | 09WAL/HI |
| 3817.8451 | 26185.355 | 49 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F ^o | 5 | 0.0004 | 09WAL/HI |
| 3818.4392 | 26181.281 | 21 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 5 | 0.0005 | 09WAL/HI |
| 3818.4791 | 26181.007 | 91 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 5 | 0.0003 | 09WAL/HI |
| 3819.41 | 26174.63 | 2 | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | 5 | 0.01 | 53KIE |
| 3819.5652 | 26173.563 | 81 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.0004 | 09WAL/HI |
| 3819.88 | 26171.41 | 3 w | $3d^44s^2$ | a ³ P | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 3 | 0.02 | 53KIE |
| 3819.9678 | 26170.804 | 16 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.0005 | 09WAL/HI |
| 3820.36 | 26168.12 | 62 R | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{4}D)4p$ | s 5F° | 3 | 0.0003 | 00WAG |
| 3820.30 3820.4759 | 26167.324 | 52 K | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w ⁵ F° | 3 | 0.0004 | 09WAL/H |
| 3820.8741 | 26164.597 | 27 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ¹ w ⁵ F° | 3 | 0.0004 | 09WAL/H |
| 3821.2190 | 26162.235 | 8 | $3d^{5}(^{4}G)4s$ | a G a ³ G | 4 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w F w ³ F° | 4 | 0.0004 | 09WAL/H |
| 3821.2190 3821.39 | 26161.06 | 6 4 w | $3d^{5}(^{4}G)4s$ | a G a ⁵ G | 2 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w r w ⁵ F° | 1 | 0.0011 | 53KIE |
| | | | $3d^{5}(^{4}G)4s$ | a G a ⁵ G | 2 | | $3d^4(^3G)4s4p(^3P^0)$ | w r w ⁵ F° | - | 0.0004 | |
| 3821.5835 3822.0940 | 26159.740 26156.246 | 28 | $3d^{5}(^{4}G)4s$ | a G a ⁵G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w r w ⁵ F° | 2 2 | 0.0004 | 09WAL/H |
| | | 14 | $3d^{4}(6)4s$ $3d^{4}4s^{2}$ | a ⁵ D | | | | $z^{3}P^{o}$ | | | 09WAL/HI |
| 3823.5177 | 26146.507 | 120 | $3d^{4}s$ $3d^{5}(^{4}P)4s$ | a D a 5P | 0 | - | $3d^4(^5D)4s4p(^3P^0)$ | u ⁵ F° | 1 | 0.0003 | 09WAL/H |
| 3825.3856 | 26133.740 | 29 | | a ⁵ P | 3 | _ | $3d^{5}(^{4}G)4p$ | u "F" u ⁵ F° | 3 | 0.0004 | 09WAL/H |
| 3826.4142 | 26126.715 | 47 | $3d^{5}(^{4}P)4s$ | | 2 | _ | $3d^{5}(^{4}G)4p$ | | 3 | 0.0004 | 09WAL/H |
| 3827.88 | 26116.71 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | $w^{3}F^{o}$ | 3 | 0.01 | 53KIE |
| 3828.34 | 26113.57 | 23 R | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | . 4.1 | | 3 | 0.01 | 00WAG |
| 3829.50 | 26105.66 | 8 | $3d^5(^2D3)4s$ | b ³ D | 1 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 0 | 0.01 | 53KIE |
| 3829.714 | 26104.20 | 8 w | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | - | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 1 | 0.02 | 53KIE |
| 3829.95 | 26102.60 | 97 R | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{o}$ | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.01 | 00WAG |
| 3830.03 | 26102.05 | 150 H | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 5 | - | $3d^44s4d$ | e ⁷ F | 6 | 0.02 | 53KIE |
| 3831.0286 | 26095.247 | 100 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.0003 | 09WAL/H |
| 3831.49 | 26092.10 | 3 R | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{4}F)4p$ | ³ G ^o | 4 | 0.01 | 00WAG |
| 3831.56 | 26091.63 | 7 w | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | 4.5 | p ⁵ F° | 2 | 0.02 | 53KIE |
| 3832.3157 | 26086.483 | 21 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.0005 | 09WAL/H |
| 3832.73 | 26083.66 | 10 wh | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | - | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 1 | 0.02 | 53KIE |
| 3833.5067 | 26078.378 | 7 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.0011 | 09WAL/H |
| 3833.6959 | 26077.091 | 3 | $3d^5(^4P)4s$ | a ⁵ P | 3 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.0015 | 09WAL/H |
| 3834.7262 | 26070.085 | 23 | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^5(^4G)4p$ | u ⁵ F° | 2 | 0.0004 | 09WAL/H |
| 3836.0642 | 26060.992 | 12 | $3d^5(^4P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.0008 | 09WAL/H |
| 3836.30 | 26059.39 | 14 R | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 2 | 0.01 | 00WAG |
| 3836.73 | 26056.47 | 7 wH* | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 4 | _ | $3d^44s4d$ | e ⁷ F | 5 | 0.02 | 53KIE |
| 3836.73 | 26056.47 | 7 wH* | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F ^o | 2 | 0.02 | 53KIE |
| 3837.42 | 26051.78 | 2 h | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | . , 1 . , | p ⁵ F ^o | 2 | 0.02 | 53KIE |
| 3838.02 | 26047.71 | 3 h | $3d^5(^2D3)4s$ | b ³ D | 1 | _ | | p ⁵ F° | 1 | 0.02 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificat | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------|---|-------------|--|--|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 3840.6678 | 26029.755 | 4 | 3d ⁵ (⁴ P)4s | a ⁵ P | 2 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 1 | 0.0014 | 09WAL/HIN |
| 3841.2736 | 26025.650 | 180 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 4 | 0.0003 | 09WAL/HIN |
| 3841.93 | 26021.20 | 18 R | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F ^o | 4 | 0.01 | 00WAG |
| 3842.0101 | 26020.661 | 8 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 1 | 0.0011 | 09WAL/HIN |
| 3843.63 | 26009.70 | 10 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 3 | 0.01 | 53KIE |
| 3843.78 | 26008.68 | 4 | $3d^5(^2F1)4s$ | b ³ F | 4 | _ | $3d^{5}(^{4}\text{F})4p$ | u ³ D° | 3 | 0.01 | 53KIE |
| 3848.9757 | 25973.572 | 68 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.0004 | 09WAL/HIN |
| 3849.3649 | 25970.946 | 65 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 5 | 0.0004 | 09WAL/HIN |
| 3849.5334 | 25969.809 | 230 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.0003 | 09WAL/HIN |
| 3850.0170 | 25966.547 | 120 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.0003 | 09WAL/HIN |
| 3850.2443 | 25965.014 | 5 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ S° | 1 | 0.0012 | 09WAL/HIN |
| 3850.90 | 25960.59 | 3 h | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 3 | 0.02 | 53KIE |
| 3851.96 | 25953.45 | 10 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | $w^{3}F^{o}$ | 4 | 0.01 | 53KIE |
| 3852.2118 | 25951.753 | 220 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 0 | 0.0003 | 09WAL/HIN |
| 3852.56 | 25949.41 | 15 * | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | 3a (D) + 3 + $p(1)$ | p ⁵ F° | 5 | 0.0003 | 53KIE |
| 3852.56 | 25949.41 | 15 * | $3d^44s^2$ | a ^r | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 2 | 0.01 | 53KIE 53KIE |
| 3852.56 | 25949.41 | 15 * | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | 3a (G)434p(F) | q ³ H° | 6 | 0.01 | 53KIE 53KIE |
| 3852.6276 | 25948.952 | 5 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | | $3d^4(^5D)4s4p(^3P^0)$ | q п z ⁵ D° | 2 | 0.0012 | 09WAL/HIN |
| | | | $3d^{5}(^{4}P)4s$ | a S a SP | 3 | - | | z D° v ⁵ D° | | | |
| 3853.1719 | 25945.287 | 13 | $3d^{5}(P)4s$ $3d^{5}(^{4}P)4s$ | a ⁵ P | - | - | $3d^{5}(^{4}P)4p$ $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.0008 | 09WAL/HIN |
| 3854.2156 | 25938.261 | 87 | | a ⁵ F | 2 | _ | 3a (P)4p | | 2 | 0.0003 | 09WAL/HIN |
| 3854.80 | 25934.33 | 50 w | $3d^{5}(^{4}F)4s$ | a ⁵ P | 5 | - | 2.5.45 | p ⁵ F° v ⁵ D° | 5 | 0.02 | 53KIE |
| 3855.2855 | 25931.063 | 42 | $3d^{5}(^{4}P)4s$ | | 1 | - | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 0 | 0.0004 | 09WAL/HIN |
| 3855.5674 | 25929.167 | 56 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | - | $3d^{5}(^{4}P)4p$ | | 2 | 0.0004 | 09WAL/HIN |
| 3856.2709 | 25924.437 | 31 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.0004 | 09WAL/HIN |
| 3856.75 | 25921.22 | 3 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | $t^{3}F^{o}$ | 3 | 0.02 | 53KIE |
| 3857.6244 | 25915.341 | 83 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | - | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.0004 | 09WAL/HIN |
| 3858.89 | 25906.84 | 50 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 4 | 0.02 | 53KIE |
| 3859.59 | 25902.14 | 37 R | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 2 | _ | $3d^44s4d$ | h ⁷ D | 3 | 0.01 | 00WAG |
| 3860.0893 | 25898.793 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.0011 | 09WAL/HIN |
| 3860.1299 | 25898.521 | 10 | $3d^5(^4G)4s$ | a ⁵ G | 5 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.0008 | 09WAL/HIN |
| 3861.86 | 25886.92 | 2 h | $3d^6$ | c ⁵ D | 0 | - | $3d^4(^1D1)4s4p(^3P^0)$ | t ³ P ^o | 1 | 0.02 | 53KIE |
| 3862.26 | 25884.24 | 3 h* | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^{5}(^{4}D)4p$ | w^3D^o | 2 | 0.02 | 53KIE |
| 3862.26 | 25884.24 | 3 h* | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | - | $3d^44s4d$ | e ⁷ F | 3 | 0.02 | 53KIE |
| 3862.5418 | 25882.349 | 17 | $3d^44s^2$ | a ³ F | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 4 | 0.0005 | 09WAL/HIN |
| 3863.23 | 25877.74 | 8 R | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 1 | - | $3d^44s4d$ | e ⁷ G | 2 | 0.01 | 00WAG |
| 3863.68 | 25874.72 | 15 wh | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | _ | $3d^44s4d$ | $h^{7}D$ | 4 | 0.02 | 53KIE |
| 3863.96 | 25872.85 | 5 h | $3d^5(^6S)4p$ | z ⁷ P° | 2 | _ | $3d^5(^6S)7s$ | g ⁷ S | 3 | 0.02 | 53KIE |
| 3864.93 | 25866.36 | 77 R | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | - | $3d^44s4p$ | r ³ H ^o | 4 | 0.01 | 00WAG |
| 3865.03 | 25865.69 | 4 wh | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.02 | 53KIE |
| 3865.96 | 25859.47 | 20 wh | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | · / I · / | p ⁵ F° | 4 | 0.02 | 53KIE |
| 3867.75 | 25847.50 | 4 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.02 | 53KIE |
| 3868.1789 | 25844.632 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0015 | 09WAL/HIN |
| 3868.2678 | 25844.038 | 14 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^0 | 3 | 0.0008 | 09WAL/HIN |
| 3870.24 | 25830.87 | 50 wH | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}D^{o}$ | 1 | 0.02 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength (Å) | Observed wave number | Intensity and | | | | Classificati | ion | | | Uncertainty of observed wavelength | Source |
|--------------------------------------|----------------------------|------------------|---|--------------------------|---|--------------|---|--|--------|--|--------------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 3871.53 | 25822.26 | 10 h | $3d^5(^4F)4s$ | a ⁵ F | 3 | _ | | p ⁵ F° | 3 | 0.02 | 53KIE |
| 3872.74 | 25814.19 | 3 w | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.02 | 53KIE |
| 3873.58 | 25808.60 | 7 h | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | Ju (D) , | p ⁵ F° | 3 | 0.02 | 53KIE |
| 3874.55 | 25802.14 | 75 w* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 5 | _ | $3d^44s4d$ | h ⁷ D | 5 | 0.02 | 53KIE |
| 3874.55 | 25802.14 | 75 w* | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 3 | 0.02 | 53KIE |
| 3874.9808 | 25799.267 | 3 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | 0.0015 | 09WAL/HIN |
| 3875.1141 | 25798.379 | 9 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | _ | $3d^44s4d$ | e ⁷ G | 4 | 0.0019 | 09WAL/HIN |
| 3875.54 | 25795.54 | 2 w * | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | _ | $3d^44s4d$ | e ⁷ G | 2 | 0.02 | 53KIE |
| 3875.54 | 25795.54 | 2 w * | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | 0.02 | 53KIE |
| 3876.12 | 25793.54 | 4 w | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 3 | _ | $3d^{5}(^{6}S)7s$ | g ⁷ S | 3 | 0.02 | 53KIE |
| 3876.20 | 25791.08 | 4 w 4 h | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | y ⁵ F° | 2 | 0.02 | 53KIE 53KIE |
| 3876.20 3876.38 | 25791.15 25789.95 | 4 n 4 h | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | a P z ³ F° | 2 | _ | 3a (D)4s3p(P) $3d^44s5s$ | e ⁵ P | 2 | 0.02 | 53KIE 53KIE |
| 3876.38 3876.5752 | 25789.95 25788.656 | 4 n 2 | $3d^{5}(^{4}P)4s$ | z F a ⁵ P | 2 | _ | $3d^44s5s$ $3d^4(^5D)4s5p(^3P^0)$ | e ⁵ F ^o | 3 | 0.02 | 09WAL/HIN |
| 3876.88 | 25786.63 | 2 5 h | 3d (P)4s 3d ⁵ (⁴ F)4s | a P a ⁵ F | 2 | _ | 3a (1)4s3p(1) | V F | 3 | 0.0015 | 53KIE |
| | | 5 h 4 | $3d^{4}(18)4s$ $3d^{4}4s^{2}$ | a ³ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F ^o | 2 | | |
| 3877.3067 3877.79 | 25783.791 25780.58 | 4 3 w | $3d^{5}(^{4}G)4s$ | a F a ⁵G | 2 | | $3d^{4}(^{3}\text{G})4s4p(^{3}\text{P}^{\circ})$ $3d^{4}(^{3}\text{F1})4s4p(^{3}\text{P}^{\circ})$ | w ⁵ F° w ⁵ D° | 2 1 | 0.0014 0.02 | 09WAL/HIN 53KIE |
| 3877.79 | | | | a G a ⁵F | | - | | w ³ P ^o | - | | |
| | 25780.05 | 3 | $3d^{5}(^{4}F)4s$ | | 1 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u P | 1 | 0.01 | 53KIE |
| 3878.30 | 25777.19 | 10 ws* | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | - | 2 4/101/4 4 (3p0) | u ³ P° | 3 | 0.02 | 53KIE |
| 3878.30 | 25777.19 | 10 ws* | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | - | $3d^4(^1S1)4s4p(^3P^0)$ | | 1 | 0.02 | 53KIE |
| 3878.72 | 25774.40 | 3 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 2 | 0.02 | 53KIE |
| 3878.86 | 25773.47 | 3 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 3 | 0.01 | 53KIE |
| 3878.9333 | 25772.979 | 3 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | $w^3 F^0$ | 3 | 0.0015 | 09WAL/HIN |
| 3879.231 | 25771.00 | 50 w* | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | - | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 2 | 0.02 | 53KIE |
| 3879.231 | 25771.00 | 50 w* | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 4 | - | $3d^44s4d$ | e ⁷ F | 5 | 0.02 | 53KIE |
| 3880.35 | 25763.57 | 10 w* | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | - | 5.2 | 0 | 3 | 0.02 | 53KIE |
| 3880.35 | 25763.57 | 10 w* | $3d^{6}$ | c ⁵ D | 4 | - | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 5 | 0.02 | 53KIE |
| 3881.23 | 25757.73 | 50 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 2 | 0.02 | 53KIE |
| 3881.862 | 25753.53 | 25 * | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | - | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P° | 0 | 0.01 | 53KIE |
| 3881.862 | 25753.53 | 25 * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^5(^4D)4p$ | s ⁵ F° | 2 | 0.01 | 53KIE |
| 3882.67 | 25748.18 | 4 w | $3d^5(^4F)4s$ | a ⁵ F | 1 | - | | p ⁵ F° | 2 | 0.02 | 53KIE |
| 3883.2869 | 25744.085 | 910 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.0003 | 09WAL/HIN |
| 3883.6351 | 25741.777 | 19 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | - | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 1 | 0.0005 | 09WAL/HIN |
| 3884.45 | 25736.38 | 10 w | $3d^5(^4F)4s$ | a ⁵ F | 3 | - | | p 5F° | 2 | 0.02 | 53KIE |
| 3884.67 | 25734.92 | 3 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 4 | _ | $3d^44s4d$ | e ⁷ F | 3 | 0.02 | 53KIE |
| 3885.083 | 25732.18 | 100 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^5(^4D)4p$ | s ⁵ F° | 1 | 0.02 | 53KIE |
| 3885.2137 | 25731.318 | 810 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.0003 | 09WAL/HIN |
| 3885.50 | 25729.42 | 13 R | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S ^o | 2 | 0.01 | 00WAG |
| 3886.05 | 25725.78 | 10 hs | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 4 | _ | $3d^44s4d$ | $\mathrm{h}^{-7}\mathrm{D}$ | 4 | 0.02 | 53KIE |
| 3886.7953 | 25720.848 | 740 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | 0.0003 | 09WAL/HIN |
| 3887.08 | 25718.96 | 15 hl | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 1 | 0.02 | 53KIE |
| 3888.26 | 25711.16 | 10 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 2 | 0.01 | 53KIE |
| 3888.39 | 25710.30 | 1 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.01 | 53KIE |
| 3889.10 | 25705.61 | 1 h | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^44s4d$ | e ⁷ F | 4 | 0.02 | 53KIE |
| 3890.72 | 25694.90 | 8 hs * | $3d^{5}(^{4}F)4s$ | y F a ⁵F | 5 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.02 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificat | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---|--------------------------------------|--------|-------------|---------------------------------|--|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3890.72 | 25694.90 | 8 hs * | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | $3d^44s4d$ | h ⁷ D | 2 | 0.02 | 53KIE |
| 3890.826 | 25694.20 | 20 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v^3P^o | 1 | 0.01 | 53KIE |
| 3891.06 | 25692.66 | 7 wH* | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 4 | _ | $3d^44s4d$ | h ⁷ D | 5 | 0.02 | 53KIE |
| 3891.06 | 25692.66 | 7 wH* | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 5 | _ | $3d^44s4d$ | e ⁷ G | 6 | 0.02 | 53KIE |
| 3891.932 | 25686.90 | 100 w | $3d^44s^2$ | a ³ H | 4 | _ | $3d^5(^4D)4p$ | x^3F^o | 4 | 0.02 | 53KIE |
| 3893.14 | 25678.93 | 5 h | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | $3d^{5}(^{6}S)7s$ | g ⁷ S | 3 | 0.02 | 53KIE |
| 3893.50 | 25676.56 | 3 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 1 | 0.01 | 53KIE |
| 3894.0338 | 25673.037 | 480 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁵ D° | 1 | 0.0003 | 09WAL/HI |
| 3894.5466 | 25669.657 | 4 | $3d^5(^2G2)4s$ | c ³ G | 5 | _ | $3d^44s4p$ | r ³ H ^o | 6 | 0.0014 | 09WAL/HI |
| 3894.89 | 25667.39 | 1 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^5(^2\text{H})4p$ | t ³ H ^o | 4 | 0.01 | 53KIE |
| 3896.01 | 25660.02 | 4 R | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.01 | 00WAG |
| 3896.48 | 25656.92 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 3 | 0.01 | 53KIE |
| 3896.67 | 25655.67 | 10 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.01 | 53KIE |
| 3897.008 | 25653.44 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | 0.01 | 53KIE |
| 3897.42 | 25650.73 | 4 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | 0.01 | 53KIE |
| 3897.66 | 25649.15 | 75 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | _ | $3d^44s4d$ | e ⁷ G | 4 | 0.01 | 53KIE |
| 3899.012 | 25640.26 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.01 | 53KIE |
| 3899.20 | 25639.02 | 4 w | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 4 | 0.02 | 53KIE |
| 3902.9092 | 25614.657 | 590 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.0003 | 09WAL/H |
| 3903.1611 | 25613.004 | 130 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.0003 | 09WAL/H |
| 3904.006 | 25607.46 | 10 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | $^{3}G^{\circ}$ | 3 | 0.02 | 53KIE |
| 3904.407 | 25604.83 | 5 | $3d^44s^2$ | a ¹ I | 6 | _ | $3d^{5}$ (2F1)4p | t ³ G° | 5 | 0.02 | 53KIE |
| 3906.45 | 25591.44 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 2 | 0.02 | 53KIE |
| 3906.94 | 25588.2 | 3 w | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 2 | 0.04 | 53KIE |
| 3907.2421 | 25586.252 | 3 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^44s4p$ | r ³ H° | 5 | 0.0016 | 09WAL/HI |
| 3907.777 | 25582.75 | 30 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 2 | 0.02 | 53KIE |
| 3908.7561 | 25576.342 | 1310 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.0003 | 09WAL/HI |
| 3909.98 | 25568.3 | 2 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 5 | _ | $3d^44s4d$ | e ⁷ G | 5 | 0.0003 | 53KIE |
| 3910.56 | 25564.54 | 2 w 2 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{4}D)4p$ | x^3F^0 | 4 | 0.04 | 53KIE |
| 3910.30 3910.724 | 25563.47 | 12 | $3d^{5}(^{2}D3)4s$ | а п b ³ D | 2 | _ | $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | v ³ P° | 2 | 0.02 | 53KIE 53KIE |
| 3910.724 | 25561.4 | 7 w | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w ⁵ G° | 5 | 0.02 | 53KIE 53KIE |
| 3911.04 | 25556.222 | 7 w 3 | $3d^{5}(^{2}G2)4s$ | а п c ³ G | 3 | _ | $3d^{4}4s4p$ | r ³ H° | 4 | 0.0016 | 09WAL/H |
| 3911.8333 | 25555.1 | 5 7 w | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | y ⁷ P° | 3 | _ | $3d^{4}4s4d$ | h ⁷ D | 4 | 0.0018 | 53KIE |
| 3912.01 | 25552.78 | 7 W 4 | $3a^{4}4s^{2}$ | c ³ D | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 4 | 0.04 | 53KIE |
| 3912.36 3912.79 | 25550.0 | 4 2 h | $3d^{4}s$ $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁷ D° | 5 5 | _ | 3d (F1)4s4p(P) $3d^44s4d$ | r F h ⁷ D | 4 | 0.02 | 53KIE 53KIE |
| | 25542.7 | 2 n 1 w | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P° | · - | 0.04 | 53KIE |
| 3913.90 | 25542.7 25537.5 | | $3d^{5}(^{4}G)4s$ | a ⁵G | 3 | | $3d^{5}(^{4}G)4p$ | y ³ F° | 2 4 | 0.04 | |
| 3914.70 | 25535.9 25535.9 | 1 w 7 w | $3d^{5}(^{4}D)4s$ | a ⁵ G b ⁵ D | 3 1 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{0})$ | y ⁵ S° | · - | | 53KIE |
| 3914.948 | | | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}G)4p$ | у ³ F ^o | 2 4 | 0.04 | 53KIE |
| 3915.203 | 25534.23 | 4 | $3d^{5}(^{4}D)4s$ $3d^{5}(^{4}D)4s$ | a ⁵ G b ⁵ D | • | - | | y ⁵ F ^o t ⁵ P ^o | | 0.02 | 53KIE |
| 3915.8393 | 25530.079 | 32 | | | 4 | _ | $3d^{5}(^{4}D)4p$ | | 3 | 0.0004 | 09WAL/H |
| 3916.2386 | 25527.476 | 420 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | 0.0003 | 09WAL/H |
| 3916.9713 | 25522.701 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S° | 2 | 0.0013 | 09WAL/HI |
| 3917.5951 | 25518.637 | 11 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | - | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S° | 2 | 0.0008 | 09WAL/H |
| 917.85 | 25517.0 | 3 w | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 4 | 0.04 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------------------|--------|--------------|---|-------------------------------|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3918.0888 | 25515.422 | 3 | $3d^44s^2$ | a ³ P | 1 | | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D° | 2 | 0.0016 | 09WAL/HI |
| 3919.1586 | 25508.457 | 2030 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | 0.0003 | 09WAL/HII |
| 3921.0207 | 25496.343 | 740 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.0003 | 09WAL/HI |
| 3921.50 | 25493.2 | 2 h | $3d^6$ | c ⁵ D | 2 | _ | (=) ··· · · · · · · · · · · · · | r ⁵ P° | 1 | 0.04 | 53KIE |
| 3922.14 | 25489.1 | 2 h | $3d^6$ | c ⁵ D | 1 | _ | | r ⁵ P° | 2 | 0.04 | 53KIE |
| 3922.44 | 25487.1 | 2 w | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | _ | $3d^44s4d$ | e ⁷ F | 1 | 0.04 | 53KIE |
| 3923.26 | 25481.79 | 3 * | $3d^44s^2$ | $c^{3}D$ | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.02 | 53KIE |
| 3923.26 | 25481.79 | 3 * | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G ^o | 5 | 0.02 | 53KIE |
| 3923.345 | 25481.24 | 20 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.02 | 53KIE |
| 3923.66 | 25479.19 | 4 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F ^o | 3 | 0.02 | 53KIE |
| 3924.04 | 25476.73 | 4 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}G)4p$ | y^3F^0 | 3 | 0.02 | 53KIE |
| 3924.68 | 25472.6 | 1 w | $3d^6$ | c ⁵ D | 4 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 4 | 0.04 | 53KIE |
| 3925.65 | 25466.3 | 5 hs | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | _ | $3d^44s4d$ | h ⁷ D | 2 | 0.04 | 53KIE |
| 3926.00 | 25464.0 | 7 whl | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^44s4d$ | h ⁷ D | 3 | 0.04 | 53KIE 53KIE |
| 3926.6406 | 25459.853 | 9 | $3d^{5}(^{2}F2)4s$ | d ³ F | 4 | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | 5 | 0.0010 | 09WAL/HI |
| 3920.0400 3927.96 | 25451.30 | 2 | $3d^44s^2$ | c ³ D | 1 | _ | $3d^{4}(^{3}\text{F1})4s4p(^{1}\text{P}^{0})$ | r ³ F° | 2 | 0.0010 | 53KIE |
| 3927.30 3928.16 | 25450.01 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | $v^{3}P^{o}$ | 0 | 0.02 | 53KIE 53KIE |
| 3928.6374 | 25446.913 | 880 | $3d^44s^2$ | a ⁵ D | 3 | | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁵ D° | 2 | 0.0003 | 09WAL/HI |
| 3928.0374 3929.66 | 25440.3 | 20 wh* | $3d^44s^2$ | а Б b ³ G | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.0003 | 53KIE |
| | | 20 wh* | $3d^4s^6$ $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 4 | | $3d^{4}4s4d$ | h ⁷ D | 4 | 0.04 | 53KIE 53KIE |
| 3929.66 3931.17 | 25440.3 25430.5 | 20 wn - 2 w | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}D)4p$ | п D w ³ D° | 3 | 0.04 | 53KIE 53KIE |
| | | 2 W | $3d^{6}$ (G)4s | c ⁵ D | 0 | | 3a*(D)4p | r ⁵ P° | | | |
| 3932.01 | 25425.09 25422.0 | 1 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F ^o | 1 | 0.02 0.04 | 53KIE |
| 3932.48 | | 3 w | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | | | _ | | r F w ⁵ G° | 2 | | 53KIE |
| 3933.20 | 25417.39 | 4 | | a ³ H | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | | 5 | 0.02 | 53KIE |
| 3935.55 | 25402.2 | 8 w | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | - | $3d^44s5s$ | g ⁵ D | 3 | 0.04 | 53KIE |
| 3936.115 | 25398.57 | 20 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | - | $3d^{5}(^{4}F)4p$ | ³ G ^o | 4 | 0.02 | 53KIE |
| 3936.24 | 25397.8 | 7 hl* | $3d^44s^2$ | a ³ H | 5 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $w_{5-}^{3}G^{o}$ | 4 | 0.04 | 53KIE |
| 3936.24 | 25397.8 | 7 hl* | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 1 | - | $3d^44s5s$ | $g_{3}^{5}D$ | 2 | 0.04 | 53KIE |
| 3937.45 | 25390.0 | 6 h* | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | _ | $3d^44s5s$ | e ³ D | 2 | 0.04 | 53KIE |
| 3937.45 | 25390.0 | 6 h* | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^5 4p$ | p ³ H ^o | 5 | 0.04 | 53KIE |
| 3938.352 | 25384.1 | 25 w* | $3d^4(^5D)4s4p(^3P^0)$ | $y_{3}^{5}P^{o}$ | 3 | _ | $3d^44s5s$ | g ⁵ D | 4 | 0.04 | 53KIE |
| 3938.352 | 25384.1 | 25 w* | $3d^44s^2$ | a ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ S° | 1 | 0.04 | 53KIE |
| 3938.352 | 25384.1 | 25 w* | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 1 | _ | $3d^44s5s$ | e ³ D | 1 | 0.04 | 53KIE |
| 3938.98 | 25380.10 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 3 | - | $3d^44s5s$ | e ³ D | 3 | 0.02 | 53KIE |
| 3939.302 | 25378.0 | 10 w | $3d^5(^2\text{F2})4s$ | d ³ F | 3 | - | $3d^{5}(^{4}\text{F})4p$ | $q^{3}G^{o}$ | 3 | 0.04 | 53KIE |
| 3939.81 | 25374.8 | 3 w | $3d^4(^5D)4s4p(^3P^0)$ | $y^{7}P^{o}$ | 3 | - | $3d^44s4d$ | h ⁷ D | 2 | 0.04 | 53KIE |
| 3940.00 | 25373.53 | 1 | $3d^44s^2$ | c ³ D | 1 | - | $3d^44s(^6D)6p$ | $^{7}P^{o}$ | 2 | 0.02 | 53KIE |
| 3940.245 | 25372.0 | 7 w | $3d^5(^2F2)4s$ | d ³ F | 2 | _ | $3d^5(^4F)4p$ | q^3G^o | 3 | 0.04 | 53KIE |
| 3940.54 | 25370.05 | 3 * | $3d^5(^4F)4s$ | a ⁵ F | 1 | - | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 1 | 0.02 | 53KIE |
| 3940.54 | 25370.05 | 3 * | $3d^44s^2$ | b ³ G | 4 | - | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 3 | 0.02 | 53KIE |
| 3940.90 | 25367.73 | 8 | $3d^5(^4D)4s$ | b ⁵ D | 4 | - | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 3 | 0.02 | 53KIE |
| 3941.1485 | 25366.134 | 13 | $3d^44s^2$ | b ³ G | 3 | - | $3d^4(^1G1)4s4p(^3P^0)$ | x ³ H ^o | 4 | 0.0008 | 09WAL/HI |
| 3941.4876 | 25363.952 | 720 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.0003 | 09WAL/HI |
| 3942.82 | 25355.38 | 2 h | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 5 | 0.02 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|--------------------------------------|---|--------------|--------------------------------------|-------------------------------|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3943.2097 | 25352.875 | 4 | 3d ⁵ (⁴ D)4s | b ⁵ D | 2 | | $3d^{5}(^{4}D)4p$ | x ³ F° | 2 | 0.0014 | 09WAL/HIN |
| 3943.6112 | 25350.294 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 3 | 0.0013 | 09WAL/HIN |
| 3943.80 | 25349.08 | 18 R* | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 4 | _ | $3d^44s4d$ | h ⁷ D | 3 | 0.02 | 00WAG |
| 3944.2452 | 25346.219 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵D | 3 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 3 | 0.0013 | 09WAL/HIN |
| 3945.4902 | 25338.221 | 12 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 4 | 0.0008 | 09WAL/HIN |
| 3945.5583 | 25337.784 | 2 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 5 | 0.0016 | 09WAL/HIN |
| 3945.9603 | 25335.203 | 16 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 5 | 0.0006 | 09WAL/HIN |
| 3947.12 | 25327.76 | 5 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 1 | 0.02 | 53KIE |
| 3948.8500 | 25316.663 | 8 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{0}$ | 4 | 0.0011 | 09WAL/HIN |
| 3949.6132 | 25311.771 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 1 | 0.0011 | 09WAL/HIN |
| 3949.655 | 25311.771 | 20 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{1}D^{o}$ | 2 | 0.04 | 53KIE |
| 3950.32 | 25307.24 | 20 W | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 6 | 0.04 | 53KIE 53KIE |
| 3951.0925 | 25307.24 | <i>7</i> | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P ^o | 1 | 0.0011 | 09WAL/HIN |
| 3951.767 | 25298.0 | 20 w | $3d^{5}(^{4}D)4s$ | b D b ⁵D | 2 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | ¹ D° | 2 | 0.04 | 53KIE |
| 3952.398 | 25293.9 | 20 w 40 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | ¹ D° | 2 | 0.04 | 53KIE 53KIE |
| 3953.1720 | 25293.9 25288.985 | | $3d^{5}(^{4}D)4s$ | въ b⁵D | 2 | | $3d^{5}(^{4}D)4p$ | t ⁵ P° | | | 09WAL/HIN |
| | | 7 | | в ⁵ D a ⁵ P | | - | | т ⁵ G° | 1 | 0.0011 | |
| 3953.83 | 25284.78 | 2 | $3d^{5}(^{4}P)4s$ | | 3 | - | $3d^4(^3\text{H})4s4p(^3\text{P}^0)$ | | 3 | 0.02 | 53KIE |
| 3954.94 | 25277.7 | 21* | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | 0.04 | 53KIE |
| 3954.94 | 25277.7 | 21* | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^0 | 3 | 0.04 | 53KIE |
| 3956.075 | 25270.43 | 10 | $3d^{5}(^{4}F)4s$ | c ³ F | 2 | - | $3d^{5}(^{2}\text{H})4p$ | r ³ G ^o | 3 | 0.02 | 53KIE |
| 3956.2919 | 25269.043 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 4 | 0.0013 | 09WAL/HIN |
| 3957.62 | 25260.6 | 11 | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | - | $3d^{5}(^{2}\text{H})4p$ | r ³ G ^o | 4 | 0.04 | 53KIE |
| 3958.0720 | 25257.679 | 6 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^5(^2G1)4p$ | s ³ H ^o | 6 | 0.0011 | 09WAL/HIN |
| 3958.41 | 25255.52 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G ^o | 5 | 0.02 | 53KIE |
| 3959.14 | 25250.87 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | _ | $3d^44s5s$ | g ⁵ D | 1 | 0.02 | 53KIE |
| 3960.7570 | 25240.557 | 12 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | z ³ S° | 1 | 0.0008 | 09WAL/HIN |
| 3962.189 | 25231.43 | 12 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | - | $3d^4(^3P1)4s4p(^3P^0)$ | z^3S^o | 1 | 0.02 | 53KIE |
| 3962.80 | 25227.5 | 11* | $3d^6$ | c ⁵ D | 4 | - | | q ⁵ D° | 4 | 0.04 | 53KIE |
| 3962.80 | 25227.5 | 11* | $3d^5(^2H)4s$ | b ³ H | 6 | _ | $3d^5(^2H)4p$ | r ³ G° | 5 | 0.04 | 53KIE |
| 3963.6839 | 25221.919 | 620 | $3d^5(^4G)4s$ | a ⁵ G | 6 | - | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 7 | 0.0003 | 09WAL/HIN |
| 3963.99 | 25219.97 | 3 * | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 2 | - | $3d^44s5s$ | e ³ D | 1 | 0.02 | 53KIE |
| 3963.99 | 25219.97 | 3 * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 0.02 | 53KIE |
| 3964.3455 | 25217.710 | 5 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.0013 | 09WAL/HIN |
| 3964.65 | 25215.77 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 0.02 | 53KIE |
| 3964.91 | 25214.12 | 3 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ G ^o | 4 | 0.02 | 53KIE |
| 3965.94 | 25207.57 | 1 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 3 | 0.02 | 53KIE |
| 3967.16 | 25199.82 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^{5}(^{4}P)4p$ | y ³ S ^o | 1 | 0.02 | 53KIE |
| 3968.64 | 25190.42 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ S ^o | 1 | 0.02 | 53KIE |
| 3969.0572 | 25187.774 | 97 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 6 | 0.0003 | 09WAL/HIN |
| 3969.7427 | 25183.425 | 570 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 6 | 0.0003 | 09WAL/HIN |
| 3970.0597 | 25181.414 | 15 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H° | 5 | 0.0007 | 09WAL/HIN |
| 3970.39 | 25179.3 | 3 w | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^44s5p$ | r ⁵ D° | 4 | 0.04 | 53KIE |
| 3970.73 | 25177.2 | 4 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ S° | 1 | 0.04 | 53KIE |
| 3970.73 3971.2484 | 25173.877 | 32 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.004 | 09WAL/HIN |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Uncertainty of observed wavelength | Source | | | | |
|-------------------------------|----------------------------|------------------|--|------------------------|--------|--|--|--|--------|--------|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3972.35 | 25166.90 | 2 | 3d ⁵ (⁴ D)4s | b ⁵ D | 2 | | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 2 | 0.02 | 53KIE |
| 3972.6838 | 25164.781 | 7 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.0012 | 09WAL/HIN |
| 3973.08 | 25162.3 | 5 h* | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 2 | 0.04 | 53KIE |
| 3973.08 | 25162.3 | 5 h* | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 3 | 0.04 | 53KIE |
| 3973.76 | 25157.97 | 2 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 3 | 0.02 | 53KIE |
| 3975.03 | 25149.9 | 2 w* | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 4 | 0.04 | 53KIE |
| 3975.03 | 25149.9 | 2 w* | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | _ | $3d^44s5s$ | e ³ D | 2 | 0.04 | 53KIE 53KIE |
| 3975.56 | 25146.58 | 2 w | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | $3d^{5}(^{2}\text{F2})4p$ | p ³ F° | 4 | 0.04 | 53KIE 53KIE |
| 3976.0141 | 25143.704 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 5 | 0.02 | 09WAL/HIN |
| 3976.308 | 25141.85 | 18 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{5}(^{2}F1)4p$ | s ³ F° | 3 | 0.0010 | 53KIE |
| 3976.6587 | 25139.628 | 520 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 4 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 5 5 | 0.0003 | 09WAL/HIN |
| | 25139.628 25139.358 | 130 | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 5 | _ | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ | y ⁵ H° | 5 5 | 0.0003 | |
| 3976.7014 | | | $3d^{5}(^{4}\text{P})4s$ | a ⁵ P | | | | y ⁵ H ^o u ⁵ P ^o | | | 09WAL/HIN |
| 3978.6771 | 25126.875 | 29 | | | 3 | - | $3d^{5}(^{4}P)4p$ | | 2 | 0.0004 | 09WAL/HIN |
| 3979.2010 | 25123.567 | 5 | $3d^5(^2\text{H})4s$ | b ³ H | 5 | _ | $3d^5(^2G1)4p$ | s ³ H ^o | 5 | 0.0013 | 09WAL/HIN |
| 3979.3204 | 25122.813 | 2 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^5$ (² F1)4p | s ³ F° | 2 | 0.0016 | 09WAL/HIN |
| 3979.7900 | 25119.849 | 17 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^5(^4P)4p$ | u ⁵ P° | 2 | 0.0006 | 09WAL/HIN |
| 3980.70 | 25114.1 | 2 w | $3d^6$ | c ⁵ D | 3 | _ | $3d^{5}(^{4}F)4p$ | s ³ D° | 3 | 0.04 | 53KIE |
| 3981.2313 | 25110.755 | 31 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | - | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.0004 | 09WAL/HIN |
| 3981.93 | 25106.35 | 20 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | - | $3d^{5}(^{4}\text{F})4p$ | v ⁵ G ^o | 2 | 0.02 | 53KIE |
| 3982.613 | 25102.04 | 7 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^5 (^2F1)4p$ | s ³ F° | 2 | 0.02 | 53KIE |
| 3983.2300 | 25098.155 | 16 | $3d^44s^2$ | b ³ G | 5 | - | $3d^4(^1G1)4s4p(^3P^0)$ | x ³ H ^o | 6 | 0.0006 | 09WAL/HIN |
| 3983.8989 | 25093.941 | 470 | $3d^5(^4G)4s$ | a ⁵ G | 3 | _ | $3d^5(^4G)4p$ | y ⁵ H ^o | 4 | 0.0003 | 09WAL/HIN |
| 3984.3318 | 25091.215 | 130 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^5(^4G)4p$ | y ⁵ H ^o | 4 | 0.0003 | 09WAL/HIN |
| 3984.3762 | 25090.935 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 4 | 0.0013 | 09WAL/HIN |
| 3984.65 | 25089.21 | 1 | $3d^5(^2F1)4s$ | b ³ F | 4 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 3 | 0.02 | 53KIE |
| 3985.03 | 25086.8 | 1 w* | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | _ | $3d^44s5s$ | g ⁵ D | 1 | 0.04 | 53KIE |
| 3985.03 | 25086.8 | 1 w* | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 3 | 0.04 | 53KIE |
| 3988.65 | 25064.1 | 6 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 4 | 0.04 | 53KIE |
| 3989.77 | 25057.0 | 5 w* | $3d^{6}$ | c ⁵ D | 2 | _ | $3d^{5}(^{2}D1)4p$ | $s^{3}D^{o}$ | 2 | 0.04 | 53KIE |
| 3989.77 | 25057.0 | 5 w* | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H ^o | 4 | 0.04 | 53KIE 53KIE |
| 3989.9779 | 25055.710 | 86 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 6 | 0.0004 | 09WAL/HIN |
| 3990.16 | 25054.6 | 10 w | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^{5}(^{2}F1)4p$ | s ³ F° | 4 | 0.0004 | 53KIE |
| 3991.1135 | 25048.581 | 420 | $3d^{5}(^{4}G)4s$ | ог a ⁵ G | 2 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 3 | 0.0004 | 09WAL/HIN |
| | | 420 94 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ | y ⁵ H° | 3 | 0.0004 | |
| 3991.6680 | 25045.101 | | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a ⁵ G | | | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | | | 09WAL/HI |
| 3992.1026 | 25042.375 | 4 | | | 4 | - | | y ⁵ H ^o u ⁵ P ^o | 3 | 0.0015 | 09WAL/HII |
| 3992.8400 | 25037.750 | 84 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}P)4p$ | | 3 | 0.0004 | 09WAL/HI |
| 3993.9606 | 25030.725 | 23 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P ^o | 3 | 0.0004 | 09WAL/HI |
| 3994.317 | 25028.49 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.02 | 53KIE |
| 3996.277 | 25016.22 | 8 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | $^{3}G^{o}$ | 4 | 0.02 | 53KIE |
| 3996.84 | 25012.7 | 3 w | $3d^{5}(^{2}I)4s$ | b ¹I | 6 | - | $3d^5(^2H)4p$ | t ³ H ^o | 6 | 0.04 | 53KIE |
| 3997.1122 | 25010.990 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.0016 | 09WAL/HIN |
| 3997.76 | 25006.9 | 2 w | $3d^5(^4D)4s$ | b ⁵ D | 3 | - | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D ^o | 3 | 0.04 | 53KIE |
| 3997.92 | 25005.94 | 3 * | $3d^5(^4P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 3 | 0.02 | 53KIE |
| 3997.92 | 25005.94 | 3 * | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | $3d^5(^2F2)4p$ | p ³ F ^o | 3 | 0.02 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificat | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|--------------------------------------|---|-------------|--------------------------|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 3998.8527 | 25000.104 | 4 | 3d ⁵ (² H)4s | b ³ H | 4 | _ | $3d^5(^2G1)4p$ | s ³ H° | 4 | 0.0015 | 09WAL/HIN |
| 4000.60 | 24989.19 | 20 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 3 | 0.02 | 53KIE |
| 4001.4372 | 24983.957 | 17 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 5 | 0.0006 | 09WAL/HIN |
| 4003.9123 | 24968.513 | 1 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 5 | 0.0016 | 09WAL/HIN |
| 4004.697 | 24963.62 | 12 | $3d^44s^2$ | c ³ D | 1 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 1 | 0.02 | 53KIE |
| 4007.43 | 24946.60 | 1 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 2 | 0.02 | 53KIE |
| 4009.411 | 24934.27 | 4 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D ^o | 2 | 0.02 | 53KIE |
| 4010.836 | 24925.41 | 8 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 2 | 0.02 | 53KIE |
| 4010.983 | 24924.50 | 10 * | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 3 | 0.02 | 53KIE |
| 4010.983 | 24924.50 | 10 * | $3d^44s^2$ | c ³ D | 2 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 2 | 0.02 | 53KIE |
| 4012.00 | 24918.2 | 2 ws | $3d^6$ | c ⁵ D | 2 | _ | 3a (1)-ip | q ⁵ D° | 3 | 0.04 | 53KIE 53KIE |
| 4012.4696 | 24915.264 | 12 ws | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^5(^4F)4p$ | y ⁵G° | 4 | 0.0009 | 09WAL/HIN |
| 4014.44 | 24903.04 | 5 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | $^{3}G^{\circ}$ | 4 | 0.0009 | 53KIE |
| 4014.6654 | 24901.637 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^{5}(^{4}F)4p$ | v ⁵G° | 4 | 0.02 | 09WAL/HIN |
| 4016.26 | 24891.8 | 3 h | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | _ | 3a (r)4p | e ⁵ F | 3 | 0.0013 | 53KIE |
| 4016.60 | 24891.8 | 3 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | | $3d^5(^2I)4p$ | ег у ¹ Н° | 5 5 | 0.04 | 53KIE 53KIE |
| | | | $3d^{4}(1)4s$ $3d^{4}4s^{2}$ | b ³ G | - | - | | y H y ³ I° | | | |
| 4016.824 | 24888.26 | 30 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 4 | - | $3d^4(^1I)4s4p(^3P^0)$ | y ⁵ F ^o | 5 4 | 0.02 | 53KIE |
| 4018.2115 | 24879.662 | 16 | | | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w "F" u ³ H° | | 0.0006 | 09WAL/HIN |
| 4021.385 | 24860.03 | 12 * | $3d^{5}(^{2}I)4s$ | a ³ I a ³ I | 5 | - | $3d^4(^1I)4s4p(^3P^0)$ | | 4 | 0.02 | 53KIE |
| 4021.385 | 24860.03 | 12 * | $3d^{5}(^{2}I)4s$ | a ⁵ F | 7 | - | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 6 | 0.02 | 53KIE |
| 4022.2597 | 24854.622 | 10 | $3d^{5}(^{4}F)4s$ | | 2 | - | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 3 | 0.0009 | 09WAL/HIN |
| 4022.57 | 24852.71 | 2 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | - | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H ^o | 6 | 0.02 | 53KIE |
| 4023.43 | 24847.39 | 10 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.02 | 53KIE |
| 4023.7336 | 24845.518 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | - | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 3 | 0.0017 | 09WAL/HIN |
| 4024.03 | 24843.69 | 1 | $3d^44s^2$ | b ³ G | 5 | - | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 6 | 0.02 | 53KIE |
| 4024.5648 | 24840.387 | 8 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.0012 | 09WAL/HIN |
| 4025.0034 | 24837.680 | 51 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | - | $3d^{5}(^{4}G)4p$ | z ³ H ^o | 4 | 0.0005 | 09WAL/HIN |
| 4025.4457 | 24834.951 | 7 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^{5}(^{4}G)4p$ | z ³ H ^o | 4 | 0.0012 | 09WAL/HIN |
| 4025.95 | 24831.84 | 6 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | - | $3d^{5}(^{4}\text{F})4p$ | v ⁵ G° | 3 | 0.02 | 53KIE |
| 4026.1641 | 24830.520 | 74 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^{5}(^{4}G)4p$ | z ³ H ^o | 5 | 0.0005 | 09WAL/HIN |
| 4026.2074 | 24830.253 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | - | $3d^5(^4G)4p$ | z ³ H ^o | 5 | 0.0012 | 09WAL/HIN |
| 4027.0952 | 24824.779 | 69 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}G)4p$ | $z^{3}H^{o}$ | 6 | 0.0005 | 09WAL/HIN |
| 4027.61 | 24821.61 | 2 | $3d^5(^4P)4s$ | a ⁵ P | 1 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.02 | 53KIE |
| 4027.84 | 24820.19 | 3 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.02 | 53KIE |
| 4028.0423 | 24818.942 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^5(^4D)4p$ | $x^{3}F^{o}$ | 2 | 0.0015 | 09WAL/HIN |
| 4028.09 | 24818.65 | 10 | $3d^44s^2$ | c ³ D | 1 | _ | $3d^{5}(^{4}F)4p$ | u ³ D° | 1 | 0.02 | 53KIE |
| 4028.467 | 24816.33 | 10 * | $3d^5(^4G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 3 | 0.02 | 53KIE |
| 4028.467 | 24816.33 | 10 * | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | $3d^{5}(^{2}D1)4p$ | s ³ D ^o | 2 | 0.02 | 53KIE |
| 4030.6764 | 24802.723 | 12 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 2 | 0.0009 | 09WAL/HIN |
| 4031.1214 | 24799.985 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 2 | 0.0017 | 09WAL/HIN |
| 4032.18 | 24793.5 | 2 w* | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | 5 | 0.04 | 53KIE |
| 4032.18 | 24793.5 | 2 w* | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H° | 4 | 0.04 | 53KIE |
| 4032.63 | 24790.71 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 2 | 0.02 | 53KIE 53KIE |
| 4033.2672 | 24786.791 | 29 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | 0.005 | 09WAL/HIN |

TABLE 3. Spectral lines of CrI—Continued

| Observed air | Observed wave | Intensity | | | - | Classificat | ion | | | Uncertainty of observed | Source |
|--------------------|----------------------------|-------------|--------------------------------|--------------------------------------|-----|-------------|---------------------------------|--|--------|----------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | of line |
| 4033.94 | 24782.66 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | 0.02 | 53KIE |
| 4033.9737 | 24782.450 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | 0.0017 | 09WAL/HIN |
| 4035.1985 | 24774.928 | 5 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 5 | 0.0013 | 09WAL/HIN |
| 4035.88 | 24770.74 | 2 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | _ | $3d^{5}(^{4}F)4p$ | $^{3}G^{\circ}$ | 4 | 0.02 | 53KIE |
| 4036.8072 | 24765.055 | 1 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 4 | 0.0017 | 09WAL/HIN |
| 4037.2515 | 24762.330 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $x^{5}F^{0}$ | 4 | 0.0013 | 09WAL/HIN |
| 4037.2944 | 24762.067 | 23 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 4 | 0.0005 | 09WAL/HIN |
| 4038.8258 | 24752.678 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}D)4p$ | x^3F^0 | 3 | 0.0017 | 09WAL/HIN |
| 4039.0906 | 24751.055 | 110 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | _ | $3d^{5}(^{2}I)4p$ | x ³ I° | 7 | 0.0004 | 09WAL/HIN |
| 4039.2953 | 24749.801 | 8 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^{5}(^{2}I)4p$ | x ³ I° | 7 | 0.0012 | 09WAL/HIN |
| 4039.58 | 24748.06 | 4 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 3 | _ | or (-) T | e ⁵ F | 4 | 0.02 | 53KIE |
| 4040.753 | 24740.87 | 12 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | 0.02 | 53KIE |
| 4041.04 | 24739.12 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 4 | 0.02 | 53KIE 53KIE |
| 4041.7964 | 24734.486 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | 0.0012 | 09WAL/HIN |
| 4042.2425 | 24731.756 | 17 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | 0.0006 | 09WAL/HIN |
| 4042.2423 | 24727.61 | 3 | $3d^{5}(^{4}D)4s$ | a G b ⁵D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | 0.000 | 53KIE |
| 4043.6564 | 24723.109 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}P^{0}$ | 4 | 0.0015 | 09WAL/HIN |
| 4043.6838 | 24723.109 | 5 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^{5}(^{2}\text{H})4p$ | v ³ I ^o | 7 | 0.0013 | 09WAL/HIN |
| 4044.152 | 24722.941 | 20 | $3d^{5}(^{4}G)4s$ | оп a ³ G | 4 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w ⁵ G° | 5 | 0.0013 | 53KIE |
| 4045.12 | 24720.08 | 3 w* | $3d^44s^2$ | a G a ³ P | 1 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{0})$ | $x^{3}P^{o}$ | 0 | 0.02 | 53KIE |
| 4045.12 4045.12 | 24714.2 24714.2 | 3 w* | $3d^{4s}$ $3d^{6}$ | a ⁵ D | 2 | _ | 3a (P1)484p(P) | q ⁵ D° | 0 1 | 0.04 | 53KIE 53KIE |
| 4045.12 | 24714.2 | | $3a^{4}(^{5}D)4s4p(^{3}P^{o})$ | y ⁵ P° | | | | q D e ⁵ F | 1 | 0.04 | |
| 4045.47 | 24712.03 24710.32 | 3 5 | $3d^{5}(^{4}F)4s$ | y P c ³ F | 2 2 | _ | $3d^5(^2G1)4p$ | e F s Go | 3 | 0.02 | 53KIE 53KIE |
| | | | | c ⁵ F a ⁵ G | | | | s ⁵ G° x ⁵ F° | | | |
| 4046.1854 | 24707.656 | 4 | $3d^{5}(^{4}G)4s$ | a ⁵ G a ⁵ G | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.0015 | 09WAL/HIN |
| 4046.7563 | 24704.171 | 12 | $3d^{5}(^{4}G)4s$ | a ³ G a ³ I | 3 | - | $3d^4(^3F1)4s4p(^3P^0)$ | x ³ F ^o x ³ I ^o | 2 | 0.0009 | 09WAL/HIN |
| 4048.7797 | 24691.825 | 93 | $3d^{5}(^{2}I)4s$ | | 6 | - | $3d^{5}(^{2}I)4p$ | | 6 | 0.0004 | 09WAL/HIN |
| 4049.083 | 24689.98 | 15 | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | - | $3d^{5}(^{2}G1)4p$ | s ³ G ^o | 4 | 0.02 | 53KIE |
| 4049.7738 | 24685.764 | 8 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | - | $3d^5(^2I)4p$ | x ³ I ^o | 6 | 0.0012 | 09WAL/HIN |
| 4050.0220 | 24684.251 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $x^{5}F^{o}$ | 1 | 0.0012 | 09WAL/HIN |
| 4054.80 | 24655.16 | 3 | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | _ | $3d^5(^2G1)4p$ | s ³ G° | 3 | 0.02 | 53KIE |
| 4056.0422 | 24647.614 | 5 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | - | $3d^5(^2G1)4p$ | s ³ G ^o | 3 | 0.0013 | 09WAL/HIN |
| 4056.7790 | 24643.138 | 4 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | v ³ I ^o | 6 | 0.0015 | 09WAL/HIN |
| 4057.126 | 24641.03 | 10 | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | - | $3d^5(^2G1)4p$ | s ³ G ^o | 4 | 0.02 | 53KIE |
| 4057.214 | 24640.50 | 15 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 5 | 0.02 | 53KIE |
| 4057.83 | 24636.76 | 18 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | - | $3d^{5}(^{2}I)4p$ | x ³ I ^o | 5 | 0.02 | 53KIE |
| 4058.7693 | 24631.054 | 81 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | - | $3d^{5}(^{2}I)4p$ | $x^{3}I^{o}$ | 5 | 0.0005 | 09WAL/HIN |
| 4060.6487 | 24619.654 | 3 | $3d^5(^2\text{H})4s$ | b ³ H | 5 | - | $3d^5(^2G1)4p$ | s ³ G° | 4 | 0.0017 | 09WAL/HIN |
| 4062.84 | 24606.4 | 2 w | $3d^{5}(^{2}\text{H})4s$ | a ¹H | 5 | _ | | q^3H^o | 5 | 0.04 | 53KIE |
| 4063.08 | 24604.92 | 10 | $3d^5(^4F)4s$ | c ³ F | 4 | _ | $3d^5(^2G1)4p$ | s ³ G° | 5 | 0.02 | 53KIE |
| 4064.582 | 24595.83 | 30 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 3 | 0.02 | 53KIE |
| 4064.94 | 24593.66 | 5 | $3d^5(^2H)4s$ | b ³ H | 6 | _ | $3d^5(^2H)4p$ | v^3I^o | 6 | 0.02 | 53KIE |
| 4065.7036 | 24589.045 | 5 | $3d^5(^2F1)4s$ | b ³ F | 4 | _ | $3d^{5}$ (2 F1)4 p | t ³ G ^o | 5 | 0.0014 | 09WAL/HIN |
| 4066.610 | 24583.56 | 8 * | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 5 | 0.02 | 53KIE |
| 4066.610 | 24583.56 | 8 * | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 5 | 0.02 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificat | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|--------------------------------------|--------|-------------|---|---|---|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4066.8585 | 24582.062 | 13 | 3d ⁵ (⁴ G)4s | a ³ G | 5 | _ | $3d^{5}(^{4}D)4p$ | x ³ F° | 4 | 0.0009 | 09WAL/HIN |
| 4066.9328 | 24581.613 | 95 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.0004 | 09WAL/HIN |
| 4067.346 | 24579.12 | 10 * | $3d^44s^2$ | a ³ F | 2 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w ⁵ G ^o | 3 | 0.02 | 53KIE |
| 4067.346 | 24579.12 | 10 * | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G ^o | 5 | 0.02 | 53KIE |
| 4067.346 | 24579.12 | 10 * | $3d^{5}(^{2}\text{H})4s$ | a ¹H | 5 | _ | . , 1 . , | q ³ H ^o | 4 | 0.02 | 53KIE |
| 4067.90 | 24575.77 | 2 R | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 1 | _ | | e ³ F | 2 | 0.02 | 00WAG |
| 4068.70 | 24570.9 | 5 w | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^5(^2H)4p$ | r ³ G ^o | 4 | 0.04 | 53KIE |
| 4069.35 | 24567.0 | 2 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 | 0.04 | 53KIE |
| 4069.68 | 24565.0 | 3 w | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | v ³ I ^o | 5 | 0.04 | 53KIE |
| 4070.065 | 24562.70 | 8 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 1 | 0.02 | 53KIE |
| 4070.9881 | 24557.127 | 3 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | v^3I^o | 5 | 0.0017 | 09WAL/HIN |
| 4071.10 | 24556.45 | 1 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G ^o | 4 | 0.02 | 53KIE |
| 4072.25 | 24549.5 | 3 w | $3d^{5}(^{2}F2)4s$ | d ³ F | 2 | _ | ··· () ··· · · · · · · · · · · · · · · · | r ⁵ P° | 2 | 0.04 | 53KIE |
| 4072.7638 | 24546.420 | 6 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^5(^4D)4p$ | x ³ F° | 2 | 0.0012 | 09WAL/HIN |
| 4073.32 | 24543.07 | 6 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | v ³ I ^o | 5 | 0.02 | 53KIE |
| 4074.35 | 24536.86 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G ^o | 3 | 0.02 | 53KIE |
| 4074.857 | 24533.81 | 50 | $3d^5(^2H)4s$ | b ³ H | 6 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 5 | 0.02 | 53KIE |
| 4075.9120 | 24527.461 | 6 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0012 | 09WAL/HIN |
| 4076.0486 | 24526.639 | 5 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{5}$ (² F1)4p | t ³ G° | 4 | 0.0012 | 09WAL/HIN |
| 4077.0798 | 24520.436 | 43 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0005 | 09WAL/HIN |
| 4077.4594 | 24518.153 | 4 | $3d^{5}(^{4}F)4s$ | c ³ F | 2 | _ | 3α (11)+3+p(1) | q ³ F° | 3 | 0.0015 | 09WAL/HIN |
| 4077.679 | 24516.83 | 60 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^5(^2F1)4p$ | t ³ G° | 3 | 0.02 | 53KIE |
| 4078.095 | 24514.33 | 2 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}D)4p$ | x^3F^0 | 4 | 0.02 | 53KIE |
| 4078.475 | 24512.05 | 4 | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | 3a (B)-p | q ³ F° | 3 | 0.02 | 53KIE |
| 4079.04 | 24508.65 | 3 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.02 | 53KIE |
| 4079.70 | 24504.7 | 3 w | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | _ | 3α (11)+3+ρ(1) | q ³ F° | 4 | 0.04 | 53KIE |
| 4080.2167 | 24501.585 | 11 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0009 | 09WAL/HIN |
| 4080.564 | 24499.50 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 5 | 0.0009 | 53KIE |
| 4081.7318 | 24492.490 | 12 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w G w ⁵ D° | 2 | 0.0009 | 09WAL/HIN |
| 4081.896 | 24492.490 | 22 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | ¹ D° | 2 | 0.0009 | 53KIE |
| 4083.32 | 24482.96 | 10 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | 3a (Γ1)434ρ(Γ) | q ³ F° | 4 | 0.02 | 53KIE 53KIE |
| 4084.30 | 24477.09 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{0}$ | 3 | 0.02 | 53KIE 53KIE |
| 4085.0174 | 24477.09 | 8 | $3d^44s^2$ | a G a ³ F | 3 4 | _ | $3d^{5}(^{4}D)4p$ | x D x ³ F° | 3 | 0.0012 | 09WAL/HIN |
| | 24472.791 | | $3d^{5}(^{2}I)4s$ | аг а ³ I | 7 | _ | $3d^{5}(^{2}I)4p$ | y ¹ I ^o | | 0.0012 | 53KIE |
| 4085.71 | | 6 5 | $3d^{5}(^{2}I)4s$ | a I a ³ I | 6 | | $3a$ (1)4p $3d^5(^2I)4p$ | y ¹ I ^o | 6 | | |
| 4085.9269 | 24467.344 | | $3d^44s^2$ | a ¹ P | | - | $3d^{4}(^{5}D)4s5p(^{3}P^{o})$ | y ¹ v ⁵ F ^o | 6 | 0.0014 | 09WAL/HIN |
| 4086.05 | 24466.61 | 6 3 | $3d^{4s}$ $3d^{5}(^{2}I)4s$ | a P a ³ I | 0 5 | - | $3d^{5}(^{2}I)4p$ | y ¹ I ^o | 1 | 0.02 | 53KIE |
| 4086.9393 | 24461.283 | | | a ⁻ 1 b ³ H | | - | 3a*(1)4p | y 1 | 6 | 0.0017 | 09WAL/HIN |
| 4087.90 | 24455.53 | 1 | $3d^{5}(^{2}\text{H})4s$ $3d^{5}(^{4}\text{P})4s$ | b ⁵ H a ⁵ P | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | q ³ F° w ⁵ D° | 3 | 0.02 | 53KIE |
| 4088.766 | 24450.35 | 12 | $3d^{5}(^{2}\text{D3})4s$ | a ³P b ³D | 2 | - | | w ³ F° | 1 | 0.02 | 53KIE |
| 4089.627 | 24445.21 | 12 * | | | 2 | - | $3d^5(^4G)5p$ | | 2 | 0.02 | 53KIE |
| 4089.627 | 24445.21 | 12 * | $3d^{5}(^{4}F)4s$ | c ³ F | 2 | - | 2.435) / / 350 | $q^{3}F^{o}$ | 2 | 0.02 | 53KIE |
| 4090.07 | 24442.6 | 8 hs | $3d^5(^2D3)4s$ | b ³ D | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D° | 3 | 0.04 | 53KIE |
| 4090.2780 | 24441.317 | 8 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.0012 | 09WAL/HIN |
| 1090.4653 | 24440.198 | 3 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G ^o | 5 | 0.0017 | 09WAL/HI |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificat | ion _ | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------------------|---|-------------|--|-------------------------------|---|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4092.178 | 24429.97 | 30 | $3d^44s^2$ | a ³ F | 2 | | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 3 | 0.02 | 53KIE |
| 4093.059 | 24424.71 | 18 | $3d^5(^2D3)4s$ | b ³ D | 1 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | 0.02 | 53KIE |
| 4093.31 | 24423.2 | 7 h | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v^3D^o | 3 | 0.04 | 53KIE |
| 4094.62 | 24415.40 | 3 * | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 4 | 0.02 | 53KIE |
| 4094.62 | 24415.40 | 3 * | $3d^44s^2$ | b ³ G | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | 0.02 | 53KIE |
| 4094.9614 | 24413.364 | 6 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.0012 | 09WAL/HIN |
| 4097.6426 | 24397.390 | 5 | $3d^{5}(^{6}S)4p$ | z ⁷ P ^o | 2 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 3 | 0.0014 | 09WAL/HIN |
| 4097.89 | 24395.9 | 20 wH | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 2 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 2 | 0.04 | 53KIE |
| 4098.02 | 24395.1 | 8 w | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 2 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 1 | 0.04 | 53KIE |
| 4099.0095 | 24389.254 | 32 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H° | 6 | 0.0005 | 09WAL/HIN |
| 4101.1549 | 24376.496 | 25 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 5 | 0.0005 | 09WAL/HIN |
| 4102.22 | 24370.17 | 3 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.02 | 53KIE |
| 4103.02 | 24365.42 | 4 * | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^44s4p$ | r ³ H° | 6 | 0.02 | 53KIE |
| 4103.02 | 24365.42 | 4 * | $3d^44s^2$ | a ¹¹ | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 2 | 0.02 | 53KIE |
| 4103.8262 | 24360.629 | 5 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 5 | 0.0014 | 09WAL/HIN |
| 4104.29 | 24357.9 | 4 w | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{4}4s5p$ | r ⁵ D° | 4 | 0.0014 | 53KIE |
| 4104.8591 | 24354.499 | 62 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H° | 4 | 0.0005 | 09WAL/HIN |
| 4104.8391 | 24334.499 | 6 | $3d^44s^2$ | ап а ³ F | 3 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{0})$ | у п w ³ G° | 4 | 0.0003 | 09WAL/HIN |
| 4106.0267 | 24347.574 | 4 | $3d^{4}s$ $3d^{5}(^{2}D3)4s$ | a F b ³ D | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.0012 | 53KIE |
| | | | $3d^{5}(D3)4s$ $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 3 | | |
| 4108.3884 | 24333.578 24326.553 | 14 | $3d^{5}(P)4s$ $3d^{5}(^{4}P)4s$ | a P a ⁵ P | | | $3d^{5}(^{4}P)4p$ $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | 0.0009 0.0005 | 09WAL/HIN |
| 4109.5748 | | 43 | $3d^{5}(^{2}D3)4s$ | a ³ D | 2 | - | 3 <i>d</i> ² (12)4 <i>p</i> | u ³ F° | | | 09WAL/HIN |
| 4109.95 | 24324.3 | 3 w | | d ³ F | 2 | _ | $3d^{5}(^{4}G)5p$ | u "F" | 3 | 0.04 | 53KIE |
| 4110.95 | 24318.4 | 15 w* | $3d^5(^2F2)4s$ | | 3 | - | $3d^5(^2G1)4p$ | s ³ H° | 4 | 0.04 | 53KIE |
| 4110.95 | 24318.4 | 15 w* | $3d^5(^6S)4p$ | z ⁷ P° | 3 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 4 | 0.04 | 53KIE |
| 4111.3505 | 24316.047 | 11 | $3d^{5}(^{6}S)4p$ | z_{7-2}^{7} P° | 3 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 3 | 0.0009 | 09WAL/HIN |
| 4111.60 | 24314.6 | 4 w | $3d^{5}(^{6}S)4p$ | $z_{5}^{7}P^{o}$ | 3 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 2 | 0.04 | 53KIE |
| 4115.32 | 24292.6 | 15 w* | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^{5}(^{2}I)4p$ | x ³ I ^o | 5 | 0.04 | 53KIE |
| 4115.32 | 24292.6 | 15 w* | $3d^{5}(^{2}F2)4s$ | d ³ F | 4 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 4 | 0.04 | 53KIE |
| 4115.32 | 24292.6 | 15 w* | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | - | $3d^44s4p$ | r ³ H ^o | 5 | 0.04 | 53KIE |
| 4118.05 | 24276.49 | 4 | $3d^44s^2$ | a ³ F | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 4 | 0.02 | 53KIE |
| 4119.4197 | 24268.417 | 4 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | - | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 2 | 0.0016 | 09WAL/HIN |
| 4119.54 | 24267.71 | 1 | $3d^44s^2$ | c ³ D | 3 | - | $3d^5(^2F1)4p$ | s ³ F° | 3 | 0.02 | 53KIE |
| 4119.69 | 24266.8 | 6 w | $3d^44s^2$ | c ³ D | 2 | - | $3d^5(^2F1)4p$ | s ³ F° | 3 | 0.04 | 53KIE |
| 4120.11 | 24264.4 | 4 w | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 3 | 0.04 | 53KIE |
| 4120.6132 | 24261.388 | 44 | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^5(^4P)4p$ | y ³ D ^o | 2 | 0.0005 | 09WAL/HIN |
| 4121.487 | 24256.2 | 7 w | $3d^44s^2$ | c ³ D | 1 | - | $3d^5 (^2F1)4p$ | s ³ F° | 2 | 0.04 | 53KIE |
| 4121.8157 | 24254.310 | 93 | $3d^44s^2$ | a ³ H | 5 | - | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 5 | 0.0004 | 09WAL/HIN |
| 4122.1585 | 24252.293 | 27 | $3d^5(^4P)4s$ | a ⁵ P | 1 | _ | $3d^5(^4P)4p$ | y ³ D ^o | 2 | 0.0005 | 09WAL/HIN |
| 4122.87 | 24248.1 | 4 h | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | $3d^{5}(^{6}S)8s$ | h ⁵ S | 2 | 0.04 | 53KIE |
| 4123.3822 | 24245.096 | 128 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 6 | 0.0004 | 09WAL/HIN |
| 4124.35 | 24239.4 | 2 w* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | $3d^44s5s$ | e ³ D | 3 | 0.04 | 53KIE |
| 4124.35 | 24239.4 | 2 w* | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^5(^6S)8s$ | h ⁵ S | 2 | 0.04 | 53KIE |
| 4124.57 | 24238.1 | 3 w | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 1 | 0.04 | 53KIE |
| 4125.44 | 24233.0 | 15 w | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 4 | 0.04 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---------------------------------|-------------------------|--------|--------------|--|--------------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4125.5569 | 24232.316 | 5 | $3d^44s^2$ | a ³ H | 5 | | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 4 | 0.0014 | 09WAL/HIN |
| 4126.0866 | 24229.205 | 13 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 1 | 0.0009 | 09WAL/HII |
| 4126.5121 | 24226.707 | 390 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 6 | 0.0004 | 09WAL/HII |
| 4126.9173 | 24224.328 | 23 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 0 | 0.0005 | 09WAL/HI |
| 4127.2869 | 24222.159 | 13 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.0009 | 09WAL/HII |
| 4127.6357 | 24220.112 | 44 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 1 | 0.0005 | 09WAL/HII |
| 4128.08 | 24217.51 | 5 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 4 | 0.02 | 53KIE |
| 4128.3874 | 24215.702 | 6 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.0012 | 09WAL/HI |
| 4129.1837 | 24211.032 | 31 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 5 | 0.0005 | 09WAL/HII |
| 4130.10 | 24205.7 | 15 w | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 4 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 4 | 0.04 | 53KIE |
| 4130.454 | 24203.59 | 3 | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 4 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 3 | 0.004 | 98ALL/GAI |
| 4131.3560 | 24198.302 | 14 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 4 | 0.0009 | 09WAL/HI |
| 4132.1605 | 24193.591 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D° | 2 | 0.0016 | 09WAL/HI |
| 4134.3814 | 24180.595 | 3 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.0017 | 09WAL/HI |
| 4135.05 | 24176.7 | 3 w | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | 3a (B)+3+p(1) | p ⁵ F° | 4 | 0.04 | 53KIE |
| 4135.84 | 24172.07 | 3 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{0}$ | 2 | 0.02 | 53KIE 53KIE |
| 4137.374 | 24163.11 | 10 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.02 | 53KIE 53KIE |
| 4137.92 | 24159.92 | 10 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | t ³ F° | 2 | 0.02 | 53KIE 53KIE |
| 4137.95 | 24159.7 | 3 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F ^o | 3 | 0.02 | 53KIE 53KIE |
| 4139.18 | 24152.6 | 7 w | $3d^{5}(^{4}P)4s$ | a r a ⁵ P | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.04 | 53KIE 53KIE |
| 4139.18 | 24152.0 | 7 w 8 w | $3d^{5}(^{2}I)4s$ | a P a ³ I | 5 | _ | $3d^{5}(^{2}D1)4p$ | y r v ³ F° | 3 4 | 0.04 | 53KIE 53KIE |
| 4140.71 | 24132.0 | o w 5 wh | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | $v^{3}D^{o}$ | 2 | 0.04 | 53KIE 53KIE |
| | 24135.035 | 12 | $3d^{5}(^{2}\text{H})4s$ | ь ³ Н | 3 4 | _ | $3d^{5}(^{2}G1)4p$ | x ¹ H ^o | 5 | 0.0009 | 09WAL/HI |
| 4142.1861 | | 8 | $3d^{4}(1)4s$ $3d^{4}4s^{2}$ | a ³ F | | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x H | | | |
| 4142.4535 | 24133.477 | 8 5 | $3d^{4}s$ $3d^{5}(^{2}H)4s$ | аг b³H | 4 5 | | $3d^{5}(^{2}G1)4p$ | x D x ¹ H ^o | 3 5 | 0.0013 | 09WAL/HI |
| 4144.55 | 24121.27 | | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ | y ³ F° | | 0.02 | 53KIE |
| 4145.01 | 24118.59 | 3 | | a ⁵ F° | | - | | e ³ D | 2 | 0.02 | 53KIE |
| 4145.49 | 24115.8 | 5 w | $3d^4(^5D)4s4p(^3P^0)$ | | 2 | - | $3d^44s5s$ | | 2 | 0.04 | 53KIE |
| 4146.1989 | 24111.677 | 14 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | - | $3d^5(^4G)5p$ | u ³ F° | 4 | 0.0009 | 09WAL/HI |
| 4146.4606 | 24110.155 | 9 | $3d^44s^2$ | a ³ H | 6 | - | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 5 | 0.0011 | 09WAL/HII |
| 4146.6830 | 24108.862 | 8 | $3d^44s^2$ | a ³ H | 4 | - | 4.33-0 | 3-0 | 4 | 0.0013 | 09WAL/HII |
| 4147.55 | 24103.8 | 4 h | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | - | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D ^o | 2 | 0.04 | 53KIE |
| 4147.74 | 24102.7 | 8 h | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{o}$ | 4 | - | $3d^44s5s$ | g ⁵ D | 4 | 0.04 | 53KIE |
| 4148.49 | 24098.4 | 8 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{o}$ | 4 | - | $3d^44s5s$ | e ³ D | 3 | 0.04 | 53KIE |
| 4149.453 | 24092.77 | 30 | $3d^5(^2D3)4s$ | b ³ D | 3 | - | $3d^5(^2D1)4p$ | v^3F^o | 3 | 0.02 | 53KIE |
| 4150.48 | 24086.81 | 2 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | 0.02 | 53KIE |
| 4151.02 | 24083.7 | 6 w | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | - | $3d^{5}(^{4}D)4p$ | $w^{3}P^{o}$ | 1 | 0.04 | 53KIE |
| 4151.575 | 24080.5 | 15 w | $3d^44s^2$ | a ³ H | 4 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.04 | 53KIE |
| 4152.05 | 24077.7 | 5 w | $3d^5(^2F2)4s$ | d ³ F | 3 | _ | $3d^5(^2D1)4p$ | s ³ D ^o | 2 | 0.04 | 53KIE |
| 4152.765 | 24073.55 | 40 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | - | $3d^5(^2D1)4p$ | v ³ F° | 3 | 0.004 | 98ALL/GAI |
| 4153.0632 | 24071.825 | 38 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | 0.0005 | 09WAL/HI |
| 4153.8134 | 24067.478 | 320 | $3d^5(^4G)4s$ | a ⁵ G | 5 | - | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | 0.0004 | 09WAL/HII |
| 4154.17 | 24065.41 | 2 | $3d^5(^2I)4s$ | a ³I | 5 | - | $3d^5(^4G)5p$ | u ³ F° | 4 | 0.02 | 53KIE |
| 4154.99 | 24060.7 | 4 w | $3d^5(^2F1)4s$ | b ³ F | 2 | _ | - | p ⁵ F° | 2 | 0.04 | 53KIE |
| 4157.25 | 24047.6 | 2 w | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 2 | 0.04 | 53KIE |
| 4158.89 | 24038.1 | 15 w | $3d^{5}(^{2}F2)4s$ | d ³ F | 4 | _ | $3d^{5}(^{4}\text{F})4p$ | s ³ D ^o | 3 | 0.04 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Å) -160.03 -160.61 -160.82 -161.4145 -161.78 | (cm ⁻¹) | served Observed wave Intensity velength number and (cm^{-1}) comment | | Configuration Term J Configuration | | | | | | of observed wavelength | Source |
|--|-----------------------|--|--|--------------------------------------|--------|---|--|--|--------|---------------------------|--------------------|
| 160.61 160.82 161.4145 | 24031.5 | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 160.61 160.82 161.4145 | | 1 w | 3d ⁵ (⁴ D)4s | b ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 1 | 0.04 | 53KIE |
| 161.4145 | 24028.2 | 4 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 5 | 0.04 | 53KIE |
| 161.4145 | 24026.95 | 2 | $3d^{5}(^{2}F1)4s$ | b ³ F | 3 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 2 | 0.02 | 53KIE |
| 161 78 | 24023.518 | 47 | $3d^{5}(^{2}H)4s$ | b ³ H | 6 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w^3I^o | 7 | 0.0005 | 09WAL/HIN |
| | 24021.4 | 7 h | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | $3d^44s5s$ | g ⁵ D | 3 | 0.04 | 53KIE |
| 162.48 | 24017.4 | 4 h | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | _ | $3d^44s5s$ | e ³ D | 1 | 0.04 | 53KIE |
| 163.15 | 24013.50 | 4 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G ^o | 4 | 0.02 | 53KIE |
| 163.6187 | 24010.800 | 170 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 4 | 0.0004 | 09WAL/HIN |
| 163.91 | 24009.1 | 7 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | $3d^44s5s$ | e ³ D | 2 | 0.04 | 53KIE |
| 165.5149 | 23999.870 | 6 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ I ^o | 6 | 0.0013 | 09WAL/HIN |
| 166.44 | 23994.5 | 1 h | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ I ^o | 7 | 0.04 | 53KIE |
| 67.811 | 23986.65 | 12 | $3d^44s^2$ | a ³ H | 5 | _ | () / () | 0 | 4 | 0.02 | 53KIE |
| 168.309 | 23983.78 | 8 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^5(^2D1)4p$ | v^3F^o | 2 | 0.02 | 53KIE |
| 169.841 | 23974.97 | 65 | $3d^5(^2F1)4s$ | b ³ F | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 5 | 0.02 | 53KIE |
| 170.214 | 23972.83 | 50 | $3d^5(^2\text{F1})4s$ | b ³ F | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.02 | 53KIE |
| 170.75 | 23969.7 | 4 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.04 | 53KIE |
| 171.676 | 23964.43 | 40 | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 2 | 0.02 | 53KIE |
| 72.517 | 23959.6 | 10 w* | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{o}$ | 2 | _ | $3d^44s5s$ | g ⁵ D | 2 | 0.04 | 53KIE |
| 172.517 | 23959.6 | 10 w* | $3d^{5}(^{2}F2)4s$ | d ³ F | 2 | _ | $3d^5(^2G1)4p$ | s ³ G° | 3 | 0.04 | 53KIE |
| 172.7677 | 23958.156 | 25 * | $3d^44s^2$ | a ¹G | 4 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H° | 5 | 0.0005 | 09WAL/HIN |
| 172.7677 | 23958.156 | 25 * | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 6 | 0.0005 | 09WAL/HIN |
| 173.877 | 23951.79 | 7 | $3d^{5}(^{2}F2)4s$ | d ³ F | 3 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 4 | 0.0003 | 53KIE |
| 174.159 | 23950.17 | 7 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ I° | 6 | 0.02 | 53KIE |
| 174.139 174.96 | 23945.58 | 25 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | $^{3}G^{0}$ | 3 | 0.02 | 53KIE |
| 175.235 | 23944.00 | 35 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 2 | 0.02 | 53KIE |
| 175.9493 | 23939.903 | 74 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 7 | 0.0005 | 09WAL/HIN |
| 176.6688 | 23935.779 | 10 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | $3d^4(^3\text{H})4s4p(^1\text{P}^\circ)$ | w ³ I° | 5 | 0.0009 | 09WAL/HIN |
| 177.166 | 23933.779 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{9}D^{\circ}$ | 1 | 0.0009 | 53KIE |
| 177.166 177.46 | 23932.93 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}\mathrm{D}^{\mathrm{o}}$ | 2 | 0.02 | 53KIE |
| 177.40 177.84 | 23929.1 | 50 h* | $3d^44s^2$ | a ¹ G | 4 | _ | $3d^{4}(^{1}I)4s4p(^{3}P^{o})$ | u ³ H° | 4 | 0.02 | 53KIE |
| 177.84 177.84 | 23929.1 | 50 h* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 5 | _ | $3d^44s5s$ | g ⁵ D | 4 | 0.04 | 53KIE 53KIE |
| 177.84 177.98 | 23929.1 | 50 п [.] 7 R* | $3d^{5}(^{2}D3)4s$ | z г b ³ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | y ³ D° | 1 | 0.04 | 00WAG |
| 177.98 178.07 | 23928.27 | 25 w | $3d^{5}(^{2}G2)4s$ | в D c ³ G | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 5 | 0.02 | 53KIE |
| 178.07 178.36 | 23926.09 | 25 W 2 | $3d^{5}(G2)4s$ $3d^{5}(^{2}F2)4s$ | d ³ F | 3 4 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 3 4 | 0.04 | 53KIE 53KIE |
| 178.50 178.52 | 23926.09 | 4 w | $3d^{5}(^{2}F1)4s$ | ағ b³F | 3 | _ | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | s G ³ G° | 3 | 0.02 | 53KIE 53KIE |
| 178.52 178.78 | | 4 w 4 w | $3d^{5}(\text{F1})4s$ $3d^{5}(^{4}\text{D})4s$ | b ⁵ D | 3 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 1 | 0.04 | |
| 1 /8. /8 179.0362 | 23923.7 23922.220 | 4 W 8 | $3d^{5}$ (D)4s $3d^{5}$ (² I)4s | a ³ I | 1 7 | | $3d^{5}(^{2}I)4p$ | z ¹ K° | 7 | 0.04 | 53KIE 09WAL/HIN |
| 1 79.0362 179.2558 | | | $3d^{5}(^{-1})4s$ $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^{5}(^{-1})4p$ $3d^{5}(^{2}I)4p$ | z K° z ¹K° | 7 | | |
| | 23920.963 | 150 | 3a (1)48 2 4 ⁵ (² E1) 4 | a ³ I b ³ F | | _ | 5a (1)4p 2 A(3E1) 4 A (1E0) | z 'K' u ³ G° | | 0.0004 | 09WAL/HIN |
| 179.42 | 23920.02 | 20 | $3d^{5}(^{2}F1)4s$ $3d^{5}(^{4}D)4s$ | b ⁵ F b ⁵ D | 4 | - | $3d^4(^3F1)4s4p(^1P^0)$ | u G° ³D° | 4 | 0.02 | 53KIE |
| 179.78 | 23917.96 | 2 | 3a ⁻ (D)4s | | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{0}$ | 2 | 0.02 | 53KIE |
| 180.52 | 23913.7 | 8 h | $3d^{5}(^{4}D)4s$ | b ⁵ D b ³ D | 3 | - | $3d^4(^3F1)4s4p(^3P^0)$ | v ³ D° | 2 | 0.04 | 53KIE |
| 181.54 | 23907.9 | 4 h | $3d^{5}(^{2}D3)4s$ | | 1 | - | $3d^4(^3D)4s4p(^3P^0)$ | | 1 | 0.04 | 53KIE |
| 183.071 | 23899.15 | 30 | $3d^44s^2$ | a ³ F | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 1 | 0.02 | 53KIE |
| 184.662 | 23890.06 | 20 | $3d^5(^2\text{F2})4s$ | d ³ F | 4 | - | $3d^5(^2G1)4p$ | s ³ G° | 5 | 0.02 | 53KIE |
| 184.9001 185.04 | 23888.701 23887.90 | 55 12 | $3d^{5}(^{4}G)4s$ $3d^{4}4s^{2}$ | a ³ G a ¹ G | 4 4 | _ | $3d^4(^1I)4s4p(^3P^0)$ | x ³ G ^o u ³ H ^o | 5 5 | 0.0005 0.02 | 09WAL/HIN 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | ion | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|-------------------------|--------|--------------|--|--|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 4185.3454 | 23886.159 | 25 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 6 | 0.0005 | 09WAL/HIN |
| 4186.343 | 23880.47 | 45 * | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 5 | 0.004 | 98ALL/GAR |
| 4186.343 | 23880.47 | 45 * | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | _ | $3d^44s5s$ | g ⁵ D | 3 | 0.004 | 98ALL/GAR |
| 4186.59 | 23879.1 | 7 w | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | r ³ G° | 4 | 0.04 | 53KIE |
| 4186.888 | 23877.36 | 10 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.02 | 53KIE |
| 4189.9596 | 23859.855 | 8 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | 0.0013 | 09WAL/HIN |
| 4190.132 | 23858.87 | 40 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | _ | $3d^44s5s$ | g ⁵ D | 0 | 0.004 | 98ALL/GAR |
| 4190.6586 | 23855.875 | 7 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | 0.0013 | 09WAL/HIN |
| 4191.2711 | 23852.389 | 180 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | 0.0004 | 09WAL/HIN |
| 4191.7502 | 23849.663 | 52 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | 0.0005 | 09WAL/HIN |
| 4192.1049 | 23847.645 | 43 | $3d^44s^2$ | a ¹I | 6 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H° | 5 | 0.0005 | 09WAL/HIN |
| 4192.558 | 23845.07 | 12 | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | $3d^44s(^6D)6p$ | ⁷ P° | 4 | 0.02 | 53KIE |
| 4193.6619 | 23838.791 | 53 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | _ | $3d^4(^3\text{H})4s4p(^1\text{P}^{0})$ | w ³ H ^o | 6 | 0.0005 | 09WAL/HIN |
| 4193.8829 | 23837.535 | 4 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 6 | 0.0016 | 09WAL/HIN |
| 4194.9502 | 23831.470 | 40 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ¹¹ w ³ H ^o | 6 | 0.0005 | 09WAL/HIN |
| 4195.59 | 23827.8 | 2 w | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{6}S)8p$ | $^{7}P^{\circ}$ | 3 | 0.0003 | 53KIE |
| 4197.2328 | 23818.510 | 45 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 6 | 0.0005 | 09WAL/HIN |
| 4197.2528 | 23817.28 | 10 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 6 | 0.0003 | 53KIE |
| 4197.824 | 23815.16 | 8 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | Sa (G)Sp | q ³ F° | 4 | 0.02 | 53KIE 53KIE |
| 4198.02 | 23814.04 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^5(^2D1)4p$ | v ³ F° | 4 | 0.02 | 53KIE 53KIE |
| 4198.5230 | 23811.191 | 54 | $3d^{5}(^{2}I)4s$ | аг a ³ I | 5 | _ | $3d^{5}(^{4}G)5p$ | v r v ³ H° | 6 | 0.005 | 09WAL/HIN |
| 4200.1008 | 23802.246 | 41 | $3d^{5}(^{4}G)4s$ | a 1 a ³ G | 3 | | $3d^4(^3F1)4s4p(^3P^0)$ | v п ³ F ^o | 3 | 0.0005 | 09WAL/HIN |
| 4200.1008 | 23785.5 | 41 2 w | $3d^{4}(G)4s$ $3d^{4}4s^{2}$ | a ³ H | 6 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 5 | 0.0005 | |
| | | | $3d^{4}s$ $3d^{5}(^{4}G)4s$ | ан а ⁵ G | 2 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{0})$ | u F y ⁵ G° | 2 | | 53KIE |
| 4203.5890 | 23782.495 | 130 | $3d^{5}(^{4}G)4s$ | a ⁵ G | | - | $3d^{4}(^{3}F1)4s4p(^{3}P^{0})$ | y ⁵ G° | | 0.0004 | 09WAL/HIN |
| 4204.2042 | 23779.015 | 32 | $3d^{4}(G)4s$ $3d^{4}4s^{2}$ | | 3 6 | - | $3d^{4}(^{1}I)4s4p(^{3}P^{o})$ | y 'G' u ³ H° | 2 | 0.0005 | 09WAL/HIN |
| 4204.4650 | 23777.540 | 49 | $3d^{5}(^{2}G2)4s$ | a ¹I c ³G | - | - | | u H s ³ H° | 5 | 0.0005 | 09WAL/HIN |
| 4205.04 | 23774.29 | 8 | $3d^{5}(^{2}G2)4s$ $3d^{5}(^{2}F2)4s$ | d ³ F | 5 | _ | $3d^5(^2G1)4p$ | | 5 | 0.02 | 53KIE |
| 4206.22 | 23767.6 | 2 w | | | 2 | _ | 2.5261).4 | $q^{3}F^{o}$ | 3 | 0.04 | 53KIE |
| 4206.8952 | 23763.805 | 20 | $3d^5(^2G2)4s$ | c ³ G | 4 | - | $3d^5(^2G1)4p$ | s ³ H ^o | 5 | 0.0006 | 09WAL/HIN |
| 4207.503 | 23760.37 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | 2 *4 | | 4 | 0.02 | 53KIE |
| 4208.10 | 23757.00 | 4 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 1 | - | $3d^44s4d$ | e ⁷ G | 2 | 0.02 | 53KIE |
| 4208.3535 | 23755.570 | 10 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | - | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 4 | 0.0010 | 09WAL/HIN |
| 4208.50 | 23754.74 | 2 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | - | $3d^5(^2\text{F2})4p$ | $p^{3}F^{o}$ | 4 | 0.02 | 53KIE |
| 4209.1734 | 23750.943 | 5 | $3d^{5}(^{2}I)4s$ | $a^{3}I$ | 6 | _ | $3d^4(^1I)4s4p(^3P^0)$ | ³ K° | 6 | 0.0015 | 09WAL/HIN |
| 4209.3643 | 23749.866 | 5 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 5 | 0.0015 | 09WAL/HIN |
| 4209.7548 | 23747.663 | 84 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | 4.2 | $x^{3}G^{o}$ | 5 | 0.0005 | 09WAL/HIN |
| 4210.42 | 23743.9 | 3 ws | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 5 | 0.04 | 53KIE |
| 4210.7591 | 23741.999 | 7 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 6 | 0.0013 | 09WAL/HIN |
| 4211.3237 | 23738.816 | 12 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | - | 4.2 | 0 | 4 | 0.0010 | 09WAL/HIN |
| 4211.3663 | 23738.576 | 36 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}F^{o}$ | 3 | 0.0005 | 09WAL/HIN |
| 4211.5272 | 23737.669 | 4 | $3d^44s^2$ | a ³ H | 5 | - | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | 0.0016 | 09WAL/HIN |
| 4213.1754 | 23728.383 | 27 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | - | 4.2 | $x^{3}G^{o}$ | 4 | 0.0005 | 09WAL/HIN |
| 4214.1446 | 23722.926 | 15 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I ^o | 4 | 0.0008 | 09WAL/HIN |
| 4214.1915 | 23722.662 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | - | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I° | 4 | 0.0013 | 09WAL/HIN |
| 4215.00 | 23718.1 | 2 wh | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 3 | 0.04 | 53KIE |
| 4215.31 | 23716.4 | 1 w | $3d^5(^2G2)4s$ | c ³ G | 4 | - | $3d^5(^2F2)4p$ | p ³ F ^o | 4 | 0.04 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|--------------------------|--------|--------------|--|------------------------------------|--------|--|--------------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 4216.20 | 23711.4 | 2 h | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | 0.04 | 53KIE |
| 4216.3583 | 23710.471 | 19 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.0006 | 09WAL/HIN |
| 4216.96 | 23707.09 | 8 R | $3d^6$ | c ⁵ D | 2 | _ | $3d^44s(^6D)6p$ | $^{7}P^{o}$ | 2 | 0.02 | 00WAG |
| 4217.6083 | 23703.444 | 33 | $3d^5(^4D)4s$ | b ⁵ D | 4 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | 0.0005 | 09WAL/HIN |
| 4219.03 | 23695.46 | 1 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}F^{o}$ | 3 | 0.02 | 53KIE |
| 4219.61 | 23692.20 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.02 | 53KIE |
| 4220.4466 | 23687.503 | 3 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 3 | 0.0018 | 09WAL/HIN |
| 4221.5707 | 23681.196 | 5 * | $3d^5(^2I)4s$ | a ³ I | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w^3H^o | 4 | 0.0015 | 09WAL/HIN |
| 4221.5707 | 23681.196 | 5 * | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | - · · · · · · · · · · · · · · · · · · · | x ³ G ^o | 3 | 0.0015 | 09WAL/HIN |
| 4222.7280 | 23674.706 | 17 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.0006 | 09WAL/HIN |
| 4223.468 | 23670.56 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.02 | 53KIE |
| 4224.5104 | 23664.717 | 17 * | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | (-) _T | x ³ G ^o | 4 | 0.0006 | 09WAL/HIN |
| 4224.5104 | 23664.717 | 17 * | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | _ | $3d^5(^2G1)4p$ | s ³ H° | 4 | 0.0006 | 09WAL/HIN |
| 4226.7503 | 23652.177 | 120 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ I° | 5 | 0.0004 | 09WAL/HIN |
| 4230.2796 | 23632.444 | 3 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 4 | 0.0018 | 09WAL/HIN |
| 4230.4708 | 23631.376 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.0010 | 09WAL/HIN |
| 4231.03 | 23628.25 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{2}D1)4p$ | v^3F^0 | 2 | 0.02 | 53KIE |
| 4231.335 | 23626.55 | 18 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H° | 4 | 0.02 | 53KIE |
| 4231.515 | 23625.54 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | v ⁵ F° | 3 | _ | $3d^44s5s$ | e ⁵ H | 3 | 0.02 | 53KIE |
| 4231.65 | 23624.79 | 3 | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 4 | 0.02 | 53KIE |
| 4232.233 | 23621.54 | 15 | $3d^44s^2$ | c^{-1} | 2 | _ | $3d^{5}(^{2}F1)4p$ | t ³ G° | 3 | 0.02 | 53KIE 53KIE |
| 4232.8503 | 23618.092 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.0016 | 09WAL/HIN |
| 4234.5156 | 23608.804 | 18 | $3d^44s^2$ | a ³ F | 4 | _ | 3a (G)4p | x ³ G° | 5 | 0.0016 | 09WAL/HIN |
| 4234.78 | 23607.3 | 2 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | | e ⁵ F | 4 | 0.000 | 53KIE |
| 4235.50 | 23603.32 | 2 w 1 * | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 4 | 0.04 | 53KIE 53KIE |
| 4235.50 | 23603.32 | 1 * | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | r ³ F° | 3 | 0.02 | 53KIE 53KIE |
| 4235.30 4235.9978 | 23600.543 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 1 | 0.02 | 09WAL/HIN |
| 4233.9978 4236.79 | 23596.1 | 2 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | _ | 5a (G)4p | иг e ⁵ F | 2 | 0.0013 | 53KIE |
| | 23593.57 | 2 w 2 | $3d^44s^2$ | z г a ³ H | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | | |
| 4237.25 4237.7019 | 23593.57 | 3 | 3 <i>d</i> 4 <i>s</i> 3 <i>d</i> ⁵ (⁴ D)4 <i>s</i> | ан b ⁵ D | 0 1 | _ | $3d^{5}(^{4}G)4p$ | хн u ⁵ F° | 3 1 | 0.02 0.0018 | 53KIE 09WAL/HIN |
| | | | $3d^{5}(^{4}D)4s$ $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 4 | 0.0018 | |
| 4238.9491 | 23584.112 | 20 2 | $3d^{4}(D)4s$ $3d^{4}4s^{2}$ | a ³ P | 4 1 | - | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | z^3S^o | 4 1 | | 09WAL/HIN |
| 4240.33 | 23576.43 | | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ³P a ³H | 5 | - | 3d (°P1)4s4p(°P°) | $z^{3}I^{o}$ | • | 0.02 | 53KIE |
| 4240.7072 | 23574.335 | 130 | 3 <i>d</i> 4 <i>s</i> 3 <i>d</i> ⁵ (² H)4 <i>s</i> | а °H b ³ H | 5 4 | - | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ $3d^44s(^6\text{D})6p$ | Z 1 ⁷ P ^o | 6 | 0.0004 | 09WAL/HIN |
| 4241.179 | 23571.71 | 7 0. P | $3d^{5}(^{2}\text{H})4s$ $3d^{5}(^{2}\text{I})4s$ | b ¹ I | | - | 3a 4s("D)6p | p ⁵ F° | 3 | 0.02 | 53KIE |
| 4242.41 | 23564.87 | 9 R | | | 6 | - | a 5.4m | p F V SD° | 5 | 0.02 | 00WAG |
| 4242.8306 | 23562.537 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | v ³ F ^o | 4 | 0.0018 | 09WAL/HIN |
| 4244.34 | 23554.2 | 3 w* | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | | 3 | 0.04 | 53KIE |
| 1244.34 | 23554.2 | 3 w* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | - | 2 435 4 4 350 | e ⁵ F | 5 | 0.04 | 53KIE |
| 4244.78 | 23551.7 | 2 w* | $3d^5(^2F1)4s$ | b ³ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ P ^o | 2 | 0.04 | 53KIE |
| 4244.78 | 23551.7 | 2 w* | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | - | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 5 | 0.04 | 53KIE |
| 4245.66 | 23546.8 | 2 w | $3d^5(^2\text{H})4s$ | b ³ H | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.04 | 53KIE |
| 4248.3302 | 23532.035 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^5(^4P)4p$ | v ⁵ D° | 3 | 0.0013 | 09WAL/HIN |
| 1248.49 | 23531.15 | 68 R | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | $v^{3}P^{o}$ | 2 | 0.02 | 00WAG |
| 1248.6998 | 23529.988 | 12 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^0)$ | z ³ I ^o | 5 | 0.0010 | 09WAL/HIN |
| 4248.7437 | 23529.745 | 9 | $3d^44s^2$ | a ³ F | 3 | - | $3d^4(^3F1)4s4p(^3P^0)$ | ${}^{3}F^{o}$ | 3 | 0.0011 | 09WAL/HIN |
| 4249.68 | 23524.6 | 4 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | _ | | e ⁵ F | 2 | 0.04 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | - | Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---|---------------------------|--------|--------------|--|-------------------------------|--------|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4251.3782 | 23515.164 | 3 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.0018 | 09WAL/HIN |
| 4251.50 | 23514.49 | 1 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.02 | 53KIE |
| 4252.2249 | 23510.482 | 9 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.0011 | 09WAL/HIN |
| 4254.3517 | 23498.729 | 2480 q | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 4 | 0.0008 | 09WAL/HIN |
| 4254.98 | 23495.26 | 25 R | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.02 | 00WAG |
| 4255.4995 | 23492.391 | 170 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{\circ})$ | $z^{3}I^{o}$ | 7 | 0.0004 | 09WAL/HI |
| 4256.6124 | 23486.249 | 4 | $3d^5(^4D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.0017 | 09WAL/HIN |
| 4257.3476 | 23482.193 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.0013 | 09WAL/HIN |
| 4259.1186 | 23472.429 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.0017 | 09WAL/HI |
| 4260.18 | 23466.58 | 5 h | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | _ | | e ⁵ F | 4 | 0.02 | 53KIE |
| 4261.3370 | 23460.210 | 32 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | $3d^44s5s$ | f ⁷ D | 5 | 0.0005 | 09WAL/HIN |
| 4261.6138 | 23458.686 | 43 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | ${}^{3}F^{0}$ | 3 | 0.0005 | 09WAL/HIN |
| 4262.1229 | 23455.884 | 35 | $3d^44s^2$ | a ³ F | 3 | _ | 200 (11) 15 1p(11) | $x^{3}G^{o}$ | 4 | 0.0005 | 09WAL/HIN |
| 4262.3637 | 23454.559 | 25 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 4 | 0.0005 | 09WAL/HIN |
| 4263.1382 | 23450.298 | 200 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | _ | $3d^{5}(^{2}I)4p$ | $z^{3}K^{o}$ | 8 | 0.0004 | 09WAL/HI |
| 4264.11 | 23445.0 | 1 w* | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 4 | 0.04 | 53KIE |
| 4264.11 | 23445.0 | 1 w* | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | 0.04 | 53KIE |
| 4266.7999 | 23430.174 | 13 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ³ I ^o | 6 | 0.0010 | 09WAL/HI |
| 4268.7874 | 23419.265 | 16 | $3d^44s^2$ | a ¹ I | 6 | _ | $3d^{5}(^{2}I)4p$ | y ¹ I ^o | 6 | 0.0010 | 09WAL/HI |
| 4269.02 | 23417.203 | 5 h* | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{0}$ | 3 | 0.0007 | 53KIE |
| 4269.02 | 23417.99 | 5 h* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | 3a (11) + 3 + p(1) | e ⁵ F | 2 | 0.02 | 53KIE 53KIE |
| 4269.54 | 23417.39 | 1 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^5(^6S)6p$ | w ⁷ P° | 4 | 0.02 | 53KIE 53KIE |
| 4269.9505 | 23412.886 | 40 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | y ³ H ^o | 5 | 0.0005 | 09WAL/HI |
| 4271.0617 | 23412.880 | 40 77 | $3d^{5}(^{4}G)4s$ | a G a ³ G | 5 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | y H y ³ H° | 6 | 0.0005 | 09WAL/HII |
| | | | $3d^{5}(^{4}F)4s$ | a G a ⁵ F | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | у п w ³ H° | 5 | 0.0003 | |
| 4271.20 | 23406.0 23396.708 | 1 w 21 | $3d^{5}(^{6}S)4p$ | a F z ⁷ P° | 3 | _ | $3d^{4}4s5s$ | w н f ⁷ D | 3 4 | 0.04 | 53KIE |
| 4272.9031 | | 2 w | $3d^{5}(^{4}G)4s$ | a ³ G | 3 4 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | y ³ H° | 4 | 0.0007 | 09WAL/HII |
| 4274.01 | 23390.6 | | $3d^{5}(^{6}S)4s$ | a G a ⁷ S | = | | $3d^{5}(^{6}S)4p$ | ун z ⁷ P° | 3 | | 53KIE |
| 4274.8117 | 23386.262 | 2500 q | | a S z ⁵ F° | 3 | - | 3d*(*S)4p | z 'P" e ⁵ F | | 0.0008 | 09WAL/HII |
| 4275.98 | 23379.9 | 7 w | $3d^4(^5D)4s4p(^3P^0)$ $3d^5(^2I)4s$ | z "F" a ³ I | 5 | - | 2 *44 .5 | e F q Fo | 5 | 0.04 | 53KIE |
| 4277.80 | 23369.9 | 2 h* | | | 5 | - | $3d^44s5p$ | q °F° e ⁵ F | 4 | 0.04 | 53KIE |
| 4277.80 | 23369.9 | 2 h* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | - | 2 4 5 5 4 5 3 5 0 | | 3 | 0.04 | 53KIE |
| 4279.17 | 23362.4 | 1 h | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | 0.04 | 53KIE |
| 4280.1727 | 23356.971 | 10 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | - | $3d^{5}(^{2}I)4p$ | z ³ K° | 7 | 0.0010 | 09WAL/HI |
| 4280.4034 | 23355.712 | 180 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^{5}(^{2}I)4p$ | $z^{3}K^{o}$ | 7 | 0.0004 | 09WAL/HI |
| 4280.65 | 23354.4 | 3 w* | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | ³ D° | 3 | 0.04 | 53KIE |
| 4280.65 | 23354.4 | 3 w* | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | $v^{5}F^{o}$ | 3 | 0.04 | 53KIE |
| 4280.89 | 23353.1 | 4 w | $3d^44s^2$ | b ³ G | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 3 | 0.04 | 53KIE |
| 4281.04 | 23352.24 | 3 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 2 | 0.02 | 53KIE |
| 4282.75 | 23342.92 | 1 * | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 4 | 0.02 | 53KIE |
| 4282.75 | 23342.92 | 1 * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | - | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 1 | 0.02 | 53KIE |
| 4283.004 | 23341.53 | 4 | $3d^44s^2$ | c ³ D | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.02 | 53KIE |
| 4283.17 | 23340.63 | 1 | $3d^44s^2$ | c ³ D | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.02 | 53KIE |
| 4284.00 | 23336.1 | 3 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | 0.04 | 53KIE |
| 4284.7110 | 23332.232 | 10 | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 2 | - | $3d^44s5s$ | f ⁷ D | 3 | 0.0010 | 09WAL/HI |

TABLE 3. Spectral lines of CrI—Continued

| Observed air | Observed wave | Intensity | | | | Classificat | ion | | | Uncertainty of observed | |
|-------------------|----------------------------|-------------|--|----------------------------|--------|-------------|--|-------------------------------|--------|-------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | Clubsificat | Configuration | Term | | wavelength (Å) | Source of line |
| 4284.82 | 23331.64 | 13 R | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 2 | 0.02 | 00WAG |
| 1288.404 | 23312.14 | 6 | $3d^5(^2G2)4s$ | c ³ G | 3 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 3 | 0.02 | 53KIE |
| 1288.56 | 23311.29 | 3 R | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.02 | 00WAG |
| 1289.7307 | 23304.930 | 2380 q | $3d^{5}(^{6}S)4s$ | a ⁷ S | 3 | _ | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 2 | 0.008 | 09WAL/HIN |
| 291.9582 | 23292.835 | 50 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^0 | 2 | 0.0005 | 09WAL/HIN |
| 293.42 | 23284.90 | 2 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.0003 | 53KIE |
| 293.5427 | 23284.239 | 12 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | $3d^44s5s$ | f ⁷ D | 4 | 0.0010 | 09WAL/HIN |
| 294.84 | 23277.21 | 2 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.0010 | 53KIE |
| 295.43 | 23274.01 | 2 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^{5}(^{2}G1)4p$ | s ³ G° | 3 | 0.02 | 53KIE |
| 295.7493 | 23272.279 | 110 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P° | 3 | 0.004 | 09WAL/HIN |
| 295.8296 | 23272.279 | 3 | $3d^{5}(^{4}G)4s$ | a P a ³ G | 5 5 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | y ³ H ^o | 5 | 0.0004 | 09WAL/HIN |
| | | 2 | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | | $3d^{5}(^{2}G1)4p$ | у п s ³ G° | 3 4 | | |
| 296.11 | 23270.32 | 4 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | s G ³ D° | 1 | 0.02 | 53KIE |
| 296.2760 | 23269.426 | | $3a^{4s}$ $3d^{5}(^{2}I)4s$ | a ³ I | | | | z ³ K° | - | 0.0017 | 09WAL/HIN |
| 296.38 | 23268.86 | 3 R | $3d^{2}(1)4s$ | | 7 | - | $3d^{5}(^{2}I)4p$ | | 6 | 0.02 | 00WAG |
| 296.6130 | 23267.601 | 9 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | - | $3d^5(^2I)4p$ | $z^{3}K^{o}$ | 6 | 0.0012 | 09WAL/HIN |
| 297.0466 | 23265.253 | 37 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 3 | 0.0005 | 09WAL/HIN |
| 297.7325 | 23261.540 | 150 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^{5}(^{2}I)4p$ | $z^{3}K^{o}$ | 6 | 0.0004 | 09WAL/HIN |
| 298.048 | 23259.83 | 10 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | - | $3d^5(^2G1)4p$ | s ³ G° | 4 | 0.02 | 53KIE |
| 299.7015 | 23250.888 | 17 | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 3 | _ | $3d^44s5s$ | f ⁷ D | 3 | 0.0007 | 09WAL/HIN |
| 299.8912 | 23249.862 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | y ³ H ^o | 4 | 0.0010 | 09WAL/HIN |
| 300.28 | 23247.8 | 1 w | $3d^44s^2$ | c ³ D | 1 | - | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 0 | 0.04 | 53KIE |
| 300.5025 | 23246.557 | 62 | $3d^44s^2$ | b ³ G | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 3 | 0.0005 | 09WAL/HIN |
| 301.1744 | 23242.926 | 80 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 4 | 0.0005 | 09WAL/HIN |
| 302.784 | 23234.23 | 15 | $3d^5(^2G2)4s$ | c ³ G | 5 | - | $3d^5(^2G1)4p$ | s ³ G° | 5 | 0.02 | 53KIE |
| 304.331 | 23225.88 | 5 | $3d^44s^2$ | c ³ D | 1 | - | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 1 | 0.02 | 53KIE |
| 304.737 | 23223.69 | 3 * | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^44s5p$ | q ⁵ F° | 2 | 0.02 | 53KIE |
| 304.737 | 23223.69 | 3 * | $3d^5(^2G2)4s$ | c ³ G | 4 | _ | $3d^5(^2G1)4p$ | s ³ G° | 5 | 0.02 | 53KIE |
| 305.4379 | 23219.910 | 17 | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 2 | _ | $3d^44s5s$ | f ⁷ D | 2 | 0.0007 | 09WAL/HIN |
| 307.4761 | 23208.923 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | | o | 4 | 0.0017 | 09WAL/HIN |
| 307.6663 | 23207.898 | 5 | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | $3d^5(^2\text{H})4p$ | $x^{-1}I^{o}$ | 6 | 0.0015 | 09WAL/HIN |
| 309.73 | 23196.79 | 8 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P ^o | 1 | 0.02 | 53KIE |
| 312.4674 | 23182.061 | 20 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 4 | 0.0007 | 09WAL/HIN |
| 312.772 | 23180.42 | 8 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.02 | 53KIE |
| 315.3824 | 23166.402 | 2 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.0019 | 09WAL/HIN |
| 315.6065 | 23165.199 | 3 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.0019 | 09WAL/HIN |
| 316.88 | 23158.4 | 1 wh | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^44s5p$ | q ⁵ F° | 5 | 0.04 | 53KIE |
| 317.901 | 23152.89 | 15 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^4(^1S1)4s4p(^3P^0)$ | u ³ P° | 2 | 0.004 | 98ALL/GAR |
| 318.05 | 23152.09 | 3 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^4(^{1}S1)4s4p(^{3}P^{0})$ | u ³ P ^o | 2 | 0.004 | 53KIE |
| 318.615 | 23149.06 | 4 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 3 | 0.02 | 53KIE 53KIE |
| 319.308 | 23145.35 | 7 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 4 | _ | <i>σα</i> (1′)+ρ | v G | 3 4 | 0.02 | 53KIE 53KIE |
| | | | $3d^{5}(^{6}S)4p$ | a G z ⁷ P° | 2 | _ | $3d^44s5s$ | f ⁷ D | 4 1 | 0.008 | |
| 319.6295 | 23143.625 | 15 | $3d^{5}(^{6}S)4p$ $3d^{5}(^{6}S)4p$ | z 'P' z ⁷ P° | 3 | | $3d^{4}4s5s$ $3d^{4}4s5s$ | f ⁷ D | - | | 09WAL/HIN |
| 320.5725 | 23138.574 | 8 | | z 'P' a ³ P | - | - | | w ⁵ D° | 2 | 0.0014 | 09WAL/HIN |
| 321.2362 | 23135.020 | 16 | $3d^44s^2$ | | 0 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | | 1 | 0.0007 | 09WAL/HIN |
| 321.6145 | 23132.995 | 34 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 5 | 0.0005 | 09WAL/HIN |
| 323.847 | 23121.05 | 3 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^5(^4G)4p$ | y ³ G ^o | 4 | 0.02 | 53KIE |

TABLE 3. Spectral lines of CrI—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Classificat | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------------|---|-------------|---|---|---|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4324.6208 | 23116.914 | 2 | 3d ⁵ (⁴ G)4s | a ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.0019 | 09WAL/HIN |
| 4325.0613 | 23114.560 | 100 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.0004 | 09WAL/HIN |
| 4325.6262 | 23111.541 | 5 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.0015 | 09WAL/HIN |
| 4328.007 | 23098.83 | 5 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.02 | 53KIE |
| 4328.86 | 23094.28 | 1 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 2 | 0.02 | 53KIE |
| 4330.76 | 23084.14 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.02 | 53KIE |
| 4332.13 | 23076.84 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.02 | 53KIE |
| 4332.24 | 23076.26 | 2 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | | e ³ F | 4 | 0.02 | 53KIE |
| 4332.5557 | 23074.577 | 7 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}\mathrm{D}^{\mathrm{o}}$ | 3 | 0.0014 | 09WAL/HIN |
| 4335.15 | 23060.8 | 1 w | $3d^5(^4F)4s$ | a ⁵ F | 3 | _ | $3d^44s5p$ | q ⁵ F° | 4 | 0.04 | 53KIE |
| 4335.78 | 23057.42 | 1 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 2 | 0.02 | 53KIE |
| 4336.55 | 23053.32 | 1 | $3d^5(^2\text{H})4s$ | b ³ H | 4 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 3 | 0.02 | 53KIE |
| 4337.5570 | 23047.972 | 1900 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | 0.0004 | 09WAL/HIN |
| 4338.7720 | 23041.518 | 16 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}D)4p$ | $w^{3}D^{o}$ | 3 | 0.0007 | 09WAL/HIN |
| 4339.4463 | 23037.938 | 2600 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{0}$ | 3 | 0.0004 | 09WAL/HIN |
| 4339.7105 | 23036.535 | 1120 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | 0.0004 | 09WAL/HIN |
| 4340.1277 | 23034.321 | 78 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P° | 2 | 0.0005 | 09WAL/HIN |
| 4341.196 | 23028.65 | 3 | $3d^{5}(^{2}I)4s$ | a ¹ I | 6 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v ¹ v ³ G ^o | 5 | 0.0003 | 53KIE |
| 4341.4519 | 23027.295 | 5 | $3d^{5}(^{4}P)4s$ | a ¹ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P° | 2 | 0.0015 | 09WAL/HIN |
| 4343.1670 | 23027.293 | 26 | $3d^{5}(^{4}P)4s$ | a F a ⁵ P | 1 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | v r v ⁵ P ^o | 2 | 0.0015 | 09WAL/HIN |
| 4344.5016 | 23011.131 | 3100 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁵ F° | 4 | 0.0003 | 09WAL/HIN |
| 4345.0747 | 23008.096 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^{5}(^{4}D)4p$ | w^3D^0 | 2 | 0.0004 | 09WAL/HIN |
| 4345.808 | 23008.090 | 7 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | | 3a (D)4p | w D | 4 | 0.0017 | 53KIE |
| 4346.8185 | 22998.866 | 135 | $3d^44s^2$ | a G a ³ H | 5 | _ | $3d^5(^4G)4p$ | y ³ G ^o | 4 | 0.004 | 09WAL/HIN |
| | 22998.800 | 8 | $3a^{4}s^{2}$ | a ³ P | 2 | | $3d^4(^3P1)4s4p(^3P^0)$ | z^3S^0 | | 0.0004 | |
| 4347.491 | | | $3d^44s^2$ | a P a ⁵ D | | - | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z S z ⁵ F° | 1 | | 53KIE |
| 4351.0495 | 22976.502 | 1080 | $3a^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D | 1 | - | | z ⁵ F° | 1 | 0.0004 | 09WAL/HIN |
| 4351.7625 | 22972.738 | 3500 | | a ⁵ F | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | | 5 | 0.0004 | 09WAL/HIN |
| 4353.28 | 22964.7 | 3 w | $3d^{5}(^{4}F)4s$ | | 3 | - | $3d^44s5p$ | q ⁵ F° | 3 | 0.04 | 53KIE |
| 4353.9390 | 22961.254 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^{5}(^{4}D)4p$ | w ³ D° | 2 | 0.0017 | 09WAL/HIN |
| 4355.28 | 22954.2 | 4 w | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 2 | 0.04 | 53KIE |
| 4356.56 | 22947.44 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | 0.02 | 53KIE |
| 4356.7554 | 22946.411 | 18 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | $3d^4(^3\text{H})4s4p(^3\text{P}^{\text{o}})$ | $x {}^{5}G^{o}$ | 5 | 0.0007 | 09WAL/HIN |
| 4357.5200 | 22942.385 | 14 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | - | $3d^{5}(^{4}D)4p$ | w^3D^o | 1 | 0.0010 | 09WAL/HIN |
| 4358.57 | 22936.86 | 2 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^5(^4G)4p$ | u ⁵ F° | 1 | 0.02 | 53KIE |
| 4358.6527 | 22936.423 | 4 | $3d^44s^2$ | a ³ F | 3 | _ | 4.5 | 0 | 4 | 0.0017 | 09WAL/HIN |
| 4359.6246 | 22931.310 | 1420 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | 0.0004 | 09WAL/HIN |
| 4359.9118 | 22929.799 | 3 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ³ G ^o | 5 | 0.0019 | 09WAL/HIN |
| 4359.9911 | 22929.382 | 17 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | - | $3d^{5}(^{4}D)4p$ | $w_{s}^{3}D^{o}$ | 1 | 0.0007 | 09WAL/HIN |
| 4360.955 | 22924.31 | 3 | $3d^44s^2$ | b ³ G | 4 | - | $3d^5(^4D)4p$ | u ⁵ D° | 3 | 0.02 | 53KIE |
| 4361.45 | 22921.71 | 3 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | | e ³ F | 3 | 0.02 | 53KIE |
| 4362.08 | 22918.40 | 3 | $3d^5(^2D3)4s$ | b ³ D | 3 | - | $3d^3(^4F)4s^24p$ | v^3G^o | 4 | 0.02 | 53KIE |
| 4362.9521 | 22913.821 | 6 | $3d^44s^2$ | a ³ P | 0 | - | $3d^5(^4P)4p$ | y ³ D ^o | 1 | 0.0014 | 09WAL/HIN |
| 4363.1290 | 22912.892 | 120 | $3d^44s^2$ | a ³ H | 4 | - | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G ^o | 3 | 0.0004 | 09WAL/HIN |
| 4363.693 | 22909.93 | 4 | $3d^5(^2F2)4s$ | d ³ F | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F ^o | 4 | 0.02 | 53KIE |
| 4364.09 | 22907.8 | 4 w | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.04 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|--------------------------------------|---|--------------|--|-------------------------------|--------|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 4364.1410 | 22907.579 | 3 | 3d ⁵ (⁴ D)4s | b ⁵ D | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | 0.0019 | 09WAL/HIN |
| 1364.8809 | 22903.696 | 8 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 6 | 0.0014 | 09WAL/HIN |
| 366.3009 | 22896.247 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | 0.0019 | 09WAL/HIN |
| 366.62 | 22894.57 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{6}S)8p$ | ⁷ P ° | 3 | 0.02 | 53KIE |
| 367.307 | 22890.97 | 2 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H° | 6 | 0.02 | 53KIE |
| 368.2542 | 22886.009 | 16 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | 0.0007 | 09WAL/HIN |
| 1368.35 | 22885.51 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{6}S)6p$ | $w^7 P^o$ | 4 | 0.02 | 53KIE |
| 1368.647 | 22883.95 | 2 | $3d^5(^2H)4s$ | b ³ H | 4 | _ | $3d^5(^2\text{H})4p$ | t ³ H ^o | 5 | 0.02 | 53KIE |
| 368.9148 | 22882.549 | 3 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ D ^o | 1 | 0.0019 | 09WAL/HIN |
| 369.122 | 22881.46 | 3 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 2 | 0.02 | 53KIE |
| 1369.624 | 22878.83 | 1 | $3d^5(^2G2)4s$ | $b^{-1}G$ | 4 | _ | $3d^{5}(^{4}\text{F})4p$ | q ³ G° | 5 | 0.02 | 53KIE |
| 1370.44 | 22874.56 | 2 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.02 | 53KIE |
| 370.7628 | 22872.874 | 4 | $3d^44s^2$ | a ¹I | 6 | _ | $3d^{5}(^{2}I)4p$ | $z^{-1}K^{o}$ | 7 | 0.0018 | 09WAL/HIN |
| 370.87 | 22872.31 | 5 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 4 | 0.02 | 53KIE |
| 371.2748 | 22870.195 | 1400 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | 0.0004 | 09WAL/HIN |
| 372.31 | 22864.78 | 4 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.02 | 53KIE |
| 373.2549 | 22859.840 | 170 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | 0.0004 | 09WAL/HIN |
| 373.6462 | 22857.795 | 15 | $3d^5(^2\text{H})4s$ | b ³ H | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H° | 4 | 0.0009 | 09WAL/HIN |
| 374.1537 | 22855.143 | 200 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 5 | 0.0004 | 09WAL/HIN |
| 375.3303 | 22848.997 | 130 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 4 | 0.0004 | 09WAL/HIN |
| 376.7953 | 22841.349 | 22 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H° | 6 | 0.0007 | 09WAL/HIN |
| 377.5441 | 22837.442 | 40 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0007 | 09WAL/HIN |
| 1379.7763 | 22825.803 | 9 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | 0.0012 | 09WAL/HIN |
| 1380.5558 | 22823.803 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | x ⁵ G° | 3 | 0.0012 | 09WAL/HIN |
| 1380.793 | 22820.51 | 4 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H° | 5 | 0.02 | 53KIE |
| 1381.1097 | 22818.856 | 43 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 1 | 0.0005 | 09WAL/HIN |
| 1382.47 | 22811.77 | 2 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.0003 | 53KIE |
| 1382.54 | 22811.77 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | z^3S^0 | 1 | 0.02 | 53KIE |
| 1382.8549 | 22809.770 | 12 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | v ⁵ P° | 1 | 0.0010 | 09WAL/HIN |
| 1384.373 | 22801.87 | 8 D? | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | $z^{3}S^{o}$ | 1 | 0.0010 | 53KIE |
| 384.9751 | 22798.741 | 1060 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁵ F° | 4 | 0.004 | 09WAL/HIN |
| 385.30 | 22797.05 | 2 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.004 | 53KIE |
| 386.465 | | 4 | $3d^{5}(^{4}G)4s$ | a r a ³ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | иг х ⁵ Н° | 3 4 | 0.02 | |
| 386.934 | 22791.00 22788.560 | 3 | $3d^{5}(^{4}D)4s$ | a G b ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | z ³ S° | 1 | 0.02 | 53KIE |
| 380.934 387.3749 | 22786.271 | 3 26 | $3d^44s^2$ | a ³ P | 1 | | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.002 | 09WAL/HIN |
| 387.3749 | | 100 | $3d^44s^2$ | аР а ³ Н | 6 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | z ³ G° | 5 | 0.0003 | 09WAL/HIN |
| | 22785.648 | | $3d^{5}(^{2}G2)4s$ | c ³ G | - | | | x ¹ H ^o | | | 09WAL/HIN |
| 390.07 | 22772.28 | 2 D | $3d^{6}$ (G2)4s | c G c 5D | 5 | - | $3d^{5}(^{2}G1)4p$ | s ³ F° | 5 | 0.02 | 53KIE |
| 390.53 | 22769.90 | 1 | $3d^{5}$ $3d^{5}(^{4}F)4s$ | c ⁵ D a ⁵ F | 4 | _ | $3d^5(^2\text{F1})4p$ | s ⁵ F° | 4 | 0.02 | 53KIE |
| 390.82 | 22768.39 | 1 | | | 3 | _ | $3d^44s5p$ | | 3 | 0.02 | 53KIE |
| 391.7509 | 22763.567 | 160 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{o}$ | 2 | 0.0004 | 09WAL/HIN |
| 392.257 | 22760.942 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | - | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 2 | 0.002 | 09WAL/HIN |
| 392.81 | 22758.1 | 2 w | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | - | $3d^44s(^6D)6p$ | ⁷ F° | 3 | 0.04 | 53KIE |
| 393.369 | 22755.18 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | - | $3d^44s5p$ | s ⁵ P° | 3 | 0.02 | 53KIE |
| 393.5269 | 22754.365 | 8 | $3d^44s^2$ | a ³ H | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | $w^{5}F^{o}$ | 3 | 0.0014 | 09WAL/HIN |
| 394.188 | 22750.94 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ G ^o | 4 | 0.02 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|--------------------------|---|--------------|--|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4394.67 | 22748.45 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.02 | 53KIE |
| 4394.84 | 22747.57 | 8 * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 2 | 0.02 | 53KIE |
| 4394.84 | 22747.57 | 8 * | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | 0.02 | 53KIE |
| 4395.416 | 22744.59 | 18 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.02 | 53KIE |
| 4396.16 | 22740.74 | 2 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.02 | 53KIE |
| 4397.2366 | 22735.169 | 12 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.0010 | 09WAL/HI |
| 4399.04 | 22725.85 | 2 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 3 | _ | $3d^44s5s$ | e ⁵ H | 4 | 0.02 | 53KIE |
| 4399.8111 | 22721.866 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.0010 | 09WAL/HI |
| 1403.3708 | 22703.498 | 54 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 5 | 0.0005 | 09WAL/HI |
| 4403.4936 | 22702.865 | 78 | $3d^44s^2$ | a ¹I | 6 | _ | $3d^4(^{1}I)4s4p(^{3}P^{0})$ | 3 K o | 6 | 0.0005 | 09WAL/HI |
| 4406.2688 | 22688.566 | 13 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}I^{o}$ | 5 | 0.0010 | 09WAL/HI |
| 4406.67 | 22686.50 | 20 * | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ H° | 3 | _ | $3d^44s5s$ | e ⁵ H | 3 | 0.02 | 53KIE |
| 4406.67 | 22686.50 | 20 * | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^{5}(^{4}F)4p$ | v ⁵ G° | 6 | 0.02 | 53KIE |
| 4407.027 | 22684.66 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 5 | 0.02 | 53KIE |
| 4407.7111 | 22681.142 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.0018 | 09WAL/HI |
| 1409.565 | 22671.61 | 12 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ H° | 4 | _ | $3d^44s5s$ | e ⁵ H | 4 | 0.02 | 53KIE |
| 1410.2977 | 22667.840 | 18 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.0007 | 09WAL/HI |
| 1410.9614 | 22664.429 | 19 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.0007 | 09WAL/HI |
| 1411.0878 | 22663.780 | 28 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.0007 | 09WAL/HI |
| 1412.2510 | 22657.805 | 71 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | 0.0005 | 09WAL/HI |
| 1412.2916 1412.996 | 22653.981 | 3 | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^{5}(^{2}G1)4p$ | s ³ H ^o | 6 | 0.0003 | 09WAL/HI |
| 4413.8551 | 22649.571 | 51 | $3d^{5}(^{4}D)4s$ | a ¹¹ | 3 | _ | $3d^{5}(^{4}D)4p$ | $w^{3}P^{0}$ | 2 | 0.002 | 09WAL/HI |
| 4414.065 | 22648.496 | 3 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ H° | 5 | _ | $3d^44s5s$ | e ⁵ H | 5 | 0.0003 | 09WAL/HI |
| 4414.38 | 22646.9 | 10 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{0}$ | 5 | _ | $3d^44s4d$ | e ⁷ F | 6 | 0.002 | 53KIE |
| 4414.47 | 22646.4 | 8 w | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ S° | 2 | 0.04 | 53KIE |
| 4417.24 | 22632.21 | 0 W | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ H° | 4 | _ | $3d^{4}4s5s$ | y S e ⁵H | 3 | 0.04 | 53KIE 53KIE |
| 4417.24 4417.71 | 22629.81 | 1 | $3d^6$ | c ⁵ D | 2 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 3 | 0.02 | 53KIE 53KIE |
| +417.71 4419.0998 | 22622.690 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵D | 4 | _ | $3d^{4}(^{3}H)4s4p(^{3}P^{0})$ | z ³ G° | 3 4 | 0.0016 | 09WAL/HI |
| 1419.0998 1420.34 | 22616.34 | 1 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | 0.0016 | 53KIE |
| 4420.34 4420.963 | 22613.16 | 10 | $3d^4(^5D)4s4p(^3P^0)$ | a F z ⁷ F° | 2 | _ | $3d^{5}(^{6}S)5d$ | х н g ⁷ D | 3 | 0.02 | 53KIE 53KIE |
| | 22604.331 | 10 14 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | g D w ³ P° | 2 | 0.0011 | 09WAL/HI |
| 1422.6890 | | 25 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 4 | | |
| 1423.3145 | 22601.135 | | $3d^{5}$ (D)4s $3d^{5}$ (4P)4s | b ³ P | | - | | y ⁵ S° | - | 0.0005 | 09WAL/HI |
| 4423.67 | 22599.3 | 7 wh* | | b ¹ I | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | y ⁵ G° | 2 | 0.04 | 53KIE |
| 1423.67 | 22599.3 | 7 wh* | $3d^{5}(^{2}I)4s$ $3d^{4}4s^{2}$ | ь 1 а ³ Р | 6 | - | $3d^{5}(^{4}F)4p$ | y ³ D° | 5 | 0.04 | 53KIE |
| 1424.0757 | 22597.246 | 16 | | | 1 | - | $3d^{5}(^{4}P)4p$ | y 5D° | 2 | 0.0007 | 09WAL/HI |
| 1424.2784 | 22596.211 | 56 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.0005 | 09WAL/HI |
| 1424.497 | 22595.093 | 1 | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | $w^{5}F^{o}$ $z^{3}I^{o}$ | 3 | 0.002 | 09WAL/HI |
| 1425.1269 | 22591.878 | 19 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | | 6 | 0.0007 | 09WAL/HI |
| 1425.61 | 22589.41 | 2 | $3d^5(^4P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 3 | 0.02 | 53KIE |
| 1426.653 | 22584.09 | 8 * | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 6 | - | $3d^44s5s$ | e ⁵ H | 6 | 0.02 | 53KIE |
| 1426.653 | 22584.09 | 8 * | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | $w^{5}F^{o}$ | 2 | 0.02 | 53KIE |
| 1427.02 | 22582.22 | 1 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 4 | 0.02 | 53KIE |
| 1427.709 | 22578.70 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.02 | 53KIE |
| 1428.5033 | 22574.654 | 17 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.0007 | 09WAL/H |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|--------------------------|---|--------------|--|---------------------------------------|---|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4429.54 | 22569.4 | 5 wh | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 0 | 0.04 | 53KIE |
| 4429.9239 | 22567.415 | 12 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^{5}(^{4}D)4p$ | $w^{3}P^{o}$ | 1 | 0.0011 | 09WAL/HI |
| 4430.4692 | 22564.637 | 30 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ P ^o | 1 | 0.0005 | 09WAL/HI |
| 4432.1663 | 22555.997 | 66 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 1 | 0.0006 | 09WAL/HI |
| 4432.7589 | 22552.982 | 6 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 7 | _ | $3d^44s5s$ | e ⁵ H | 7 | 0.0014 | 09WAL/HI |
| 4433.41 | 22549.67 | 1 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ H° | 6 | _ | $3d^44s5s$ | e ⁵ H | 5 | 0.02 | 53KIE |
| 1433.9529 | 22546.909 | 9 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ³ G° | 3 | 0.0012 | 09WAL/HI |
| 1434.474 | 22544.26 | 8 | $3d^{6}$ | c ⁵ D | 1 | _ | $3d^5 (^2F1)4p$ | s ³ F° | 2 | 0.02 | 53KIE |
| 1434.7530 | 22542.841 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵D | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 3 | 0.0018 | 09WAL/HI |
| 4436.44 | 22534.27 | 7 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 4 | 0.02 | 53KIE |
| 1436.49 | 22534.27 | 7 7 wh* | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | $3d^{5}(^{6}S)7s$ | g ⁵ S | 2 | 0.02 | 53KIE 53KIE |
| 1436.49 1436.49 | 22534.0 | 7 wh* | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{4}(^{5}D)4s5p(^{3}P^{o})$ | y ⁵ F° | 4 | 0.04 | 53KIE 53KIE |
| 1438.23 | 22525.2 | 5 wh* | $3d^44s^2$ | аг а ³ F | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v r v ⁵ F° | 2 | 0.04 | 53KIE 53KIE |
| 1438.23 1438.23 | 22525.2 | 5 wh* | 3d 4s 3d ⁵ (⁶ S)4p | a F z ⁵ P° | 2 | _ | $3d^{5}(^{6}S)7s$ | y F g ⁵ S | 2 | 0.04 | 53KIE 53KIE |
| 4438.23 4439.34 | 22525.2 | | | z ⁵ P° | | | $3d^{5}(^{6}S)7s$ $3d^{5}(^{6}S)7s$ | g 'S | | 0.04 | |
| | | 4 wh | $3d^{5}(^{6}S)4p$ $3d^{4}4s^{2}$ | a ³ F | 1 | - | | g ⁵ S x ⁵ H° | 2 | | 53KIE |
| 1441.02 | 22511.03 | 1 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.02 | 53KIE |
| 1442.2678 | 22504.707 | 28 | | a ³ H | 6 | - | $3d^4(^3G)4s4p(^3P^0)$ | | 5 | 0.0006 | 09WAL/HI |
| 1443.7077 | 22497.415 | 13 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^{5}(^{4}D)4p$ | $w^{3}P^{o}$ | 0 | 0.0011 | 09WAL/HI |
| 1447.85 | 22476.46 | 1 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | - | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 2 | 0.02 | 53KIE |
| 1449.61 | 22467.57 | 1 | $3d^44s^2$ | a ³ F | 4 | - | $3d^4(^5D)4s5p(^3P^0)$ | $v^{5}F^{o}$ | 5 | 0.02 | 53KIE |
| 4451.85 | 22456.27 | 1 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | - | $3d^44s(^6D)6p$ | $^{7}D_{5}^{o}$ | 3 | 0.02 | 53KIE |
| 4453.309 | 22448.91 | 3 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ H° | 7 | _ | $3d^44s5s$ | e ⁵ H | 6 | 0.02 | 53KIE |
| 4455.4524 | 22438.112 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^o)$ | w ⁵ F° | 4 | 0.0018 | 09WAL/HI |
| 4456.19 | 22434.40 | 3 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.02 | 53KIE |
| 4456.36 | 22433.54 | 3 | $3d^5(^2F1)4s$ | b ³ F | 2 | - | $3d^5(^4G)5p$ | u ³ F° | 2 | 0.02 | 53KIE |
| 1458.5065 | 22422.742 | 120 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | $w^{3}F^{o}$ | 4 | 0.0004 | 09WAL/HI |
| 4458.5429 | 22422.559 | 140 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 5 | 0.0004 | 09WAL/HI |
| 1459.3754 | 22418.373 | 12 | $3d^5(^4P)4s$ | a ⁵ P | 3 | _ | $3d^5(^6S)5p$ | w ⁵ P ^o | 3 | 0.0011 | 09WAL/HI |
| 4459.7343 | 22416.569 | 93 | $3d^5(^4D)4s$ | b ⁵ D | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.0004 | 09WAL/HI |
| 4460.7731 | 22411.349 | 9 | $3d^5(^4P)4s$ | a ⁵ P | 2 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 3 | 0.0013 | 09WAL/HI |
| 4461.3052 | 22408.676 | 7 | $3d^44s^2$ | a ³ F | 4 | - | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}I^{o}$ | 5 | 0.0015 | 09WAL/HI |
| 1462.09 | 22404.7 | 2 w | $3d^5(^4F)4s$ | a ⁵ F | 4 | _ | $3d^44s5p$ | s ⁵ D° | 4 | 0.04 | 53KIE |
| 4462.7690 | 22401.326 | 27 | $3d^5(^4D)4s$ | b ⁵ D | 0 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.0006 | 09WAL/HI |
| 1464.6620 | 22391.828 | 29 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.0006 | 09WAL/HI |
| 1464.9023 | 22390.623 | 55 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.0006 | 09WAL/HI |
| 1465.128 | 22389.49 | 20 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^44s5p$ | s ⁵ D° | 4 | 0.004 | 98ALL/GA |
| 1465.3486 | 22388.385 | 79 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.0006 | 09WAL/HI |
| 1466.1583 | 22384.326 | 21 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.0007 | 09WAL/HI |
| 1467.32 | 22378.51 | 7 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.02 | 53KIE |
| 1467.5560 | 22377.323 | 30 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.0006 | 09WAL/HI |
| 4468.376 | 22373.22 | 7 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.02 | 53KIE |
| 1468.65 | 22373.22 | 4 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 3 | 0.02 | 53KIE |
| 1469.765 | 22366.26 | 4 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.02 | 53KIE |
| 1469.84 | 22365.89 | 3 | $3d^{5}(^{4}P)4s$ | ан b ³ P | 2 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 1 | 0.02 | 53KIE 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength (Å) | wave number | Intensity and | | | Uncertainty of observed wavelength | Source | | | | | |
|--------------------------------------|----------------------|------------------|--|--------------------------------------|--|--------|---|--|--------|--------------|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4470.442 | 22362.88 | 3 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | | e ³ F | 4 | 0.02 | 53KIE |
| 4473.78 | 22346.19 | 40 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 3 | 0.02 | 53KIE |
| 4473.8270 | 22345.957 | 7 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 2 | 0.0015 | 09WAL/HIN |
| 4475.36 | 22338.30 | 50 w* | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v^3D^o | 3 | 0.04 | 53KIE |
| 4475.36 | 22338.30 | 50 w* | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 2 | _ | $3d^{5}(^{6}S)6s$ | f ⁷ S | 3 | 0.04 | 53KIE |
| 4476.131 | 22334.46 | 7 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 6 | _ | $3d^44s5s$ | e ⁵ H | 7 | 0.02 | 53KIE |
| 4477.0572 | 22329.835 | 7 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 2 | 0.0015 | 09WAL/HIN |
| 4480.2586 | 22313.879 | 17 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^{5}(^{4}P)4p$ | y ³ S ^o | 1 | 0.0007 | 09WAL/HIN |
| 4480.3604 | 22313.372 | 11 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 3 | 0.0011 | 09WAL/HIN |
| 4481.45 | 22307.95 | 18 | $3d^5(^2F2)4s$ | d ³ F | 3 | _ | $3d^{5}(^{4}\text{F})4p$ | u ³ D° | 2 | 0.02 | 53KIE |
| 4482.73 | 22301.58 | 1 | $3d^{5}(^{2}F2)4s$ | d ³ F | 2 | _ | $3d^{5}(^{4}\text{F})4p$ | u ³ D° | 2 | 0.02 | 53KIE |
| 4482.8708 | 22300.877 | 53 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ S ^o | 1 | 0.0006 | 09WAL/HIN |
| 4484.61 | 22292.23 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | 0.02 | 53KIE |
| 4484.683 | 22291.87 | 8 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | 0.02 | 53KIE |
| 4485.68 | 22286.91 | 1 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | _ | $3d^44s4d$ | e ⁷ G | 5 | 0.04 | 53KIE |
| 4486.38 | 22283.43 | 1 w | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{2}\text{F1})4p$ | s ³ F° | 4 | 0.04 | 53KIE |
| 4487.499 | 22277.875 | 3 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 1 | 0.002 | 09WAL/HIN |
| 4488.0482 | 22277.075 | 77 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0006 | 09WAL/HIN |
| 4489.329 | 22268.797 | 2 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 1 | 0.002 | 09WAL/HIN |
| 4489.4637 | 22268.128 | 83 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 3 | 0.0006 | 09WAL/HIN |
| 4490.55 | 22262.74 | 8 wl | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^44s5p$ | s ⁵ D° | 3 | 0.04 | 53KIE |
| 4491.687 | 22257.11 | 30 | $3d^{5}(^{6}S)4p$ | z ⁷ P ^o | 3 | _ | $3d^{5}(^{6}S)6s$ | f ⁷ S | 3 | 0.02 | 53KIE |
| 4491.8497 | 22256.300 | 37 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^3\text{F1})4s4p(^3\text{P}^\circ)$ | w ⁵ D° | 2 | 0.0006 | 09WAL/HIN |
| 4492.3052 | 22254.043 | 89 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ S ^o | 1 | 0.0004 | 09WAL/HIN |
| 4493.41 | 22248.57 | 2 | $3d^44s^2$ | c ³ D | 1 | _ | $3d^{5}(^{4}F)4p$ | y ⁵ G° | 2 | 0.0004 | 53KIE |
| 4495.041 | 22240.50 | 4 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | 0.02 | 53KIE 53KIE |
| 4495.282 | 22239.31 | 12 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.02 | 53KIE 53KIE |
| 4495.685 | 22237.31 | 2 * | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 5 | _ | $3d^44s4d$ | e ⁷ G | 6 | 0.02 | 53KIE 53KIE |
| 4495.685 | 22237.31 | 2 * | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | _ | $3d^44s5s$ | e ⁵ H | 5 | 0.02 | 53KIE 53KIE |
| 4496.8518 | 22231.543 | 1300 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | 0.0004 | 09WAL/HIN |
| 4498.7239 | 22222.292 | 95 | $3d^44s^2$ | a 3 a ³ P | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.0004 | 09WAL/HIN |
| 4498.7259 | 22219.66 | 95 5 * | $3d^{5}(^{2}\text{F2})4s$ | a P d ³ F | 3 | | $3d^{5}(^{4}P)5p$ | t ³ D° | 2 | 0.0004 | 53KIE |
| 4499.256 | 22219.66 | 5 * 5 * | $3d^44s^2$ | a ¹ I | 5 6 | _ | $3d^{5}(^{2}I)4p$ | z ³ K° | 6 | 0.02 | 53KIE 53KIE |
| | | 160 | $3d^{5}(^{4}G)4s$ | a 1 a ³ G | 3 | | $3d^{5}(^{4}G)4p$ | y ³ G° | | 0.004 | 09WAL/HIN |
| 4500.2778 | 22214.619 | | $3d^{5}(^{4}G)4p$ | a G z ⁵ G° | 5 5 | - | $3d^{4}4s5s$ | e ⁵ H | 3 5 | | |
| 4500.68 | 22212.63 | 2 w* | $3d^{5}(^{4}G)4p$ | z ⁵ G° | | - | 3d ⁴ 4s5s | e ⁵ H | | 0.04 | 53KIE |
| 4500.68 | 22212.63 | 2 w* | $3d^{4}(G)4p$ $3d^{4}4s^{2}$ | a ³ P | 3 | - | 3d 4s5s 3d ⁵ (⁴ P)4p | y ³ P ^o | 4 0 | 0.04 | 53KIE |
| 4501.0998 | 22210.562 | 58 | $3d^{5}(^{4}D)4s$ | a ³P a ³D | 1 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{0})$ | y ³ F° | | 0.0006 | 09WAL/HIN |
| 4501.6446 | 22207.874 | 10 | $3d^{3}(^{4}D)4s$ $3d^{4}4s^{2}$ | a ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.0011 | 09WAL/HIN |
| 4501.7724 | 22207.244 | 37 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ³P a ³P | 1 | _ | | y ⁵ P° w ⁵ D° | 1 | 0.0006 | 09WAL/HIN |
| 4502.210 | 22205.09 | 7 | | | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | | 1 | 0.02 | 53KIE |
| 4503.04 | 22200.99 | 12 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | - | $3d^4(^3P1)4s4p(^1P^0)$ | x ³ S ^o | 1 | 0.02 | 53KIE |
| 4503.91 | 22196.70 | 2 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | - | $3d^44s5s$ | e ⁵ H | 3 | 0.02 | 53KIE |
| 4505.22 4505.49 | 22190.25 22188.92 | 1 1 | 3d ⁵ (⁴ G)4s 3d ⁵ (⁴ F)4s | a ³ G a ⁵ F | 5 1 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\text{o}})$ $3d^44s5p$ | x ⁵ G° s ⁵ D° | 5 2 | 0.02 0.02 | 53KIE 53KIE |

43103-

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|------------------------------------|-------------------------------|--------|--------------|--|-------------------------------|--------|--|----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4505.88 | 22187.00 | 1 wh | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | _ | $3d^44s5s$ | e ⁵ H | 4 | 0.04 | 53KIE |
| 4506.08 | 22186.02 | 2 wh | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^44s5p$ | s ⁵ D° | 2 | 0.04 | 53KIE |
| 4506.8389 | 22182.279 | 48 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 | 0.0006 | 09WAL/HI |
| 4507.94 | 22176.86 | 4 w* | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^44s5p$ | s ⁵ D° | 2 | 0.04 | 53KIE |
| 4507.94 | 22176.86 | 4 w* | $3d^5(^2F2)4s$ | d ³ F | 4 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H° | 5 | 0.04 | 53KIE |
| 4508.758 | 22172.84 | 5 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 3 | 0.02 | 53KIE |
| 4510.005 | 22166.707 | 15 | $3d^5(^2F2)4s$ | d ³ F | 2 | _ | $3d^{5}(^{4}\text{F})4p$ | u ³ D° | 1 | 0.004 | 98ALL/GA |
| 4511.8909 | 22157.442 | 210 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | 0.0004 | 09WAL/HI |
| 4513.025 | 22151.87 | 3 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | r ³ F° | 2 | 0.02 | 53KIE |
| 4513.2122 | 22150.955 | 6 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.0015 | 09WAL/HI |
| 4513.88 | 22147.68 | 3 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 3 | 0.02 | 53KIE |
| 4514.3580 | 22145.333 | 31 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^4(^{1}I)4s4p(^{3}P^{0})$ | u ³ H° | 6 | 0.0006 | 09WAL/HI |
| 4514.53 | 22144.49 | 40 wl | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | $3d^{5}(^{6}S)6s$ | f ⁷ S | 3 | 0.04 | 53KIE |
| 4515.4301 | 22140.075 | 50 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.0006 | 09WAL/HI |
| 4518.579 | 22124.647 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 3 | 0.004 | 98ALL/GA |
| 4519.8290 | 22118.528 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.0015 | 09WAL/HI |
| 1521.1276 | 22112.175 | 53 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 5 | 0.0015 | 09WAL/HI |
| 1522.019 | 22112.173 | 12 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.000 | 53KIE |
| 4524.8341 | 22094.062 | 7 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^{5}(^{2}D1)4p$ | y G v ³ F° | 4 | 0.02 | 09WAL/HI |
| 4525.29 | 22091.84 | 2 wh | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | v r v ³ D° | 2 | 0.0013 | 53KIE |
| +525.29 4525.9975 | 22088.383 | 2 wn 7 | 3a (F1)4s $3d^5(^4\text{G})4s$ | в F a ³ G | 3 4 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{\circ})$ | z ³ G° | 5 | 0.0015 | 09WAL/HI |
| 4525.9975 4526.0987 | 22088.383 | 80 | $3d^{5}(^{4}P)4s$ | a G b ³ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D° | 3 | 0.0013 | 09WAL/HI |
| 4526.0987 4526.4537 | 22087.889 | 960 | $3a^{(P)4s}$ $3d^{5}(^{4}G)4s$ | вР a ⁵G | 6 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 6 | 0.0005 | 09WAL/HI |
| | | | $3d^{5}(^{4}G)4s$ | a ⁵G a ⁵G | | | $3d^{5}(^{4}G)4p$ | z ⁵ G° | - | | |
| 4527.335 | 22081.86 | 40 | $3d^{4}(3)4s$ $3d^{4}4s^{2}$ | a ³ P | 5 | - | $3d^{5}(^{4}P)4p$ $3d^{5}(^{4}P)4p$ | z ³ G ³ | 6 | 0.02 | 53KIE |
| 4527.4555 | 22081.270 | 85 | | a ³P a ³G | 2 | - | 3d (P)4p | y ³ G° | 3 | 0.0006 | 09WAL/HI |
| 4529.50 | 22071.30 | 3 | $3d^{5}(^{4}G)4s$ | a ⁵G a ⁵G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ G° | 4 | 0.02 | 53KIE |
| 4529.8450 | 22069.622 | 75 | $3d^{5}(^{4}G)4s$ | | 6 | - | $3d^{5}(^{4}G)4p$ | | 5 | 0.0006 | 09WAL/HI |
| 4530.4715 | 22066.570 | 8 | $3d^44s^2$ | a ³ H | 4 | - | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.0015 | 09WAL/HI |
| 4530.6824 | 22065.543 | 190 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 | 0.0005 | 09WAL/HI |
| 4530.7379 | 22065.273 | 770 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 | 0.0005 | 09WAL/HI |
| 1530.9243 | 22064.365 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0011 | 09WAL/HI |
| 4531.2305 | 22062.874 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0011 | 09WAL/HI |
| 4531.44 | 22061.85 | 1 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^{5}(^{2}D1)4p$ | $v^{3}F^{o}$ | 3 | 0.02 | 53KIE |
| 4531.825 | 22059.979 | 2 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}G)5p$ | $u^{3}F^{o}$ | 4 | 0.002 | 09WAL/HI |
| 4532.71 | 22055.67 | 2 | $3d^6$ | c ⁵ D | 3 | - | $3d^5(^2F1)4p$ | t ³ G° | 3 | 0.02 | 53KIE |
| 1532.7496 | 22055.480 | 12 | $3d^44s^2$ | b ³ G | 3 | - | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 2 | 0.0011 | 09WAL/HI |
| 1533.24 | 22053.09 | 2 | $3d^44s^2$ | b ³ G | 3 | - | $3d^5(^4D)4p$ | $x^{3}F^{o}$ | 3 | 0.02 | 53KIE |
| 1534.80 | 22045.51 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.02 | 53KIE |
| 4535.1357 | 22043.876 | 170 | $3d^5(^4G)4s$ | a ⁵ G | 3 | _ | $3d^5(^4G)4p$ | z ⁵ G° | 4 | 0.0005 | 09WAL/HI |
| 1535.6966 | 22041.150 | 600 | $3d^5(^4G)4s$ | a ⁵ G | 4 | - | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | 0.0005 | 09WAL/HI |
| 1535.7524 | 22040.879 | 120 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | - | $3d^5(^4G)4p$ | z ⁵ G° | 4 | 0.0005 | 09WAL/H |
| 1536.542 | 22037.04 | 4 | $3d^5(^6S)4p$ | z ⁵ P ^o | 3 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.02 | 53KIE |
| 4539.7810 | 22021.320 | 110 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | 0.0005 | 09WAL/HI |
| 1540.4984 | 22017.841 | 500 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | 0.0005 | 09WAL/H |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---|---------------------------------------|--------|--------------|--|---|--------|--|------------------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4540.7044 | 22016.842 | 460 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 5 | 0.0005 | 09WAL/HIN |
| 4540.7935 | 22016.410 | 12 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | 0.0011 | 09WAL/HIN |
| 4540.8568 | 22016.103 | 14 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 2 | 0.0011 | 09WAL/HIN |
| 4541.0606 | 22015.115 | 120 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | 0.0005 | 09WAL/HIN |
| 4541.5066 | 22012.953 | 57 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 3 | 0.0006 | 09WAL/HIN |
| 4541.7647 | 22011.702 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.0019 | 09WAL/HIN |
| 4542.64 | 22007.46 | 35 * | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 4 | 0.02 | 53KIE |
| 4542.64 | 22007.46 | 35 * | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 4 | 0.02 | 53KIE |
| 4543.7349 | 22002.158 | 18 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{4}G)4p$ | y^3F^o | 4 | 0.0007 | 09WAL/HIN |
| 4544.6119 | 21997.912 | 440 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | 0.0005 | 09WAL/HIN |
| 4545.3310 | 21994.432 | 90 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | 0.0005 | 09WAL/HIN |
| 4545.9527 | 21991.424 | 930 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | 0.0005 | 09WAL/HIN |
| 4546.53 | 21988.63 | 1 * | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.02 | 53KIE |
| 4546.53 | 21988.63 | 1 * | $3d^5(^2F1)4s$ | b ³ F | 4 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 3 | 0.02 | 53KIE |
| 4547.94 | 21981.81 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 0 | 0.02 | 53KIE |
| 4548.207 | 21980.52 | 5 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.02 | 53KIE |
| 4548.652 | 21978.37 | 3 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^{5}(^{2}I)4p$ | x ³ I° | 6 | 0.02 | 53KIE |
| 4552.877 | 21957.98 | 7 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | _ | 34 (1) ip | e ³ G | 4 | 0.02 | 53KIE |
| 4553.95 | 21952.80 | 18 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^5(^2D1)4p$ | v ³ F° | 2 | 0.02 | 53KIE |
| 4554.8204 | 21948.610 | 33 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | 0.0006 | 09WAL/HIN |
| 4555.0823 | 21947.348 | 31 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 5 | 0.0006 | 09WAL/HIN |
| 4555.2886 | 21946.354 | 16 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 3 | 0.0007 | 09WAL/HIN |
| 4556.1676 | 21942.120 | 99 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.0007 | 09WAL/HIN |
| 4558.246 | 21932.12 | 8 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 2 | 0.02 | 53KIE |
| 4560.01 | 21923.63 | 1 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^{5}(^{2}I)4p$ | x ³ I° | 5 | 0.02 | 53KIE |
| 4560.26 | 21922.43 | 1 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 0.02 | 53KIE 53KIE |
| 4560.51 | 21921.23 | 1 | $3d^{5}(^{4}G)4s$ | a ⁵G | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 2 | 0.02 | 53KIE 53KIE |
| 4561.20 | 21917.91 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵G | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 2 | 0.02 | 53KIE 53KIE |
| 4561.51 | 21916.42 | 10 w* | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 4 | 0.04 | 53KIE 53KIE |
| 4561.51 | 21916.42 | 10 w 10 w* | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D° | 1 | 0.04 | 53KIE 53KIE |
| 4563.2440 | 21908.094 | 20 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^{4}(^{1}G1)4s4p(^{3}P^{o})$ | x ³ H° | 4 | 0.0007 | 09WAL/HIN |
| 4563.4094 | 21907.300 | 7 | $3d^44s^2$ | a ¹ P | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.0007 | 09WAL/HIN |
| 4563.6484 | 21907.300 | 30 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | z ³ G° | 3 | 0.0013 | 09WAL/HIN |
| 4564.1551 | 21903.721 | 41 | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | $x^{-1}I^{o}$ | 6 | 0.0006 | 09WAL/HIN |
| 4565.5041 | 21897.249 | 250 | $3d^44s^2$ | ап a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | х 1 у ⁵ Р ^о | 3 | 0.0005 | 09WAL/HIN |
| | | 3 | $3d^{5}(^{4}D)4s$ | a D b ⁵ D | 4 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | | | |
| 4566.593 4567.018 | 21892.029 21889.99 | 2 | $3d^{5}$ (D)4s $3d^{5}$ (² H)4s | a ¹ H | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | y ³ I° | 3 5 | 0.002 0.02 | 09WAL/HIN 53KIE |
| 4569.5235 | 21889.99 | 55 | $3d^44s^2$ | ан а ³ F | 3 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ G ^o | 5 5 | 0.006 | |
| 4569.5235 4569.6146 | 21877.988 21877.552 | 55 130 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ³ F | 4 | _ | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ | y ³ G° | 5 4 | 0.0006 | 09WAL/HIN 09WAL/HIN |
| | | | $3d^{5}(^{4}D)4s$ | a ⁵ F b ⁵ D | | | $3d^{5}(^{4}P)4p$ | y ³ D° | | | |
| 4570.23 4570.24 | 21874.61 | 1 w | | ь ⁵ D z ⁵ P° | 2 | - | | y ⁵ D ⁵ f ⁵ D | 3 | 0.04 | 53KIE |
| 4570.34 | 21874.08 | 6 | $3d^{5}(^{6}S)4p$ | | 3 | - | $3d^44s5s$ | | 3 | 0.02 | 53KIE |
| 4570.515 | 21873.242 | 3 | $3d^44s^2$ | a ³ P | 2 | - | $3d^{5}(^{4}G)4p$ | $y^{3}F^{0}$ | 2 | 0.002 | 09WAL/HIN |
| 4570.9719 | 21871.056 | 8 | $3d^44s^2$ | a ³ F | 4 | - | $3d^{5}(^{4}G)4p$ | y ³ G ^o | 3 | 0.0015 | 09WAL/HIN |
| 571.0908 | 21870.487 | 16 | $3d^5(^4D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | 0.0008 | 09WAL/HI |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|-------------------|---|--------------|--|-------------------------------|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4571.6715 | 21867.709 | 480 | 3d ⁵ (⁴ G)4s | a ⁵ G | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 7 | 0.0005 | 09WAL/HIN |
| 4571.8239 | 21866.980 | 29 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | _ | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | $x^{3}H^{o}$ | 6 | 0.0006 | 09WAL/HIN |
| 4572.187 | 21865.245 | 3 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.002 | 09WAL/HIN |
| 4573.38 | 21859.54 | 1 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^4(^1G1)4s4p(^3P^0)$ | $x^{3}H^{o}$ | 6 | 0.02 | 53KIE |
| 4573.94 | 21856.86 | 3 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 4 | 0.02 | 53KIE |
| 4574.4491 | 21854.431 | 7 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.0015 | 09WAL/HIN |
| 4575.1071 | 21851.288 | 56 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | 0.0006 | 09WAL/HIN |
| 4576.7649 | 21843.373 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.0019 | 09WAL/HIN |
| 4578.3166 | 21835.970 | 21 | $3d^5(^2I)4s$ | a ³ I | 6 | _ | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H ^o | 5 | 0.0008 | 09WAL/HIN |
| 4579.5876 | 21829.910 | 4 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H ^o | 5 | 0.0019 | 09WAL/HIN |
| 4580.0477 | 21827.717 | 560 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | 0.0005 | 09WAL/HIN |
| 4581.0362 | 21823.007 | 14 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.0011 | 09WAL/HIN |
| 4582.04 | 21818.23 | 2 w* | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 6 | 0.04 | 53KIE |
| 4582.04 | 21818.23 | 2 w* | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^5$ (² F1)4p | t ³ G° | 5 | 0.04 | 53KIE 53KIE |
| 4582.04 | 21818.23 | 2 w* | $3d^44s^2$ | a ¹ G | 4 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G° | 3 | 0.04 | 53KIE 53KIE |
| 4582.40 | 21816.51 | 6 W | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^{5}(^{4}G)5p$ | v ³ H° | 5 | 0.04 | 53KIE 53KIE |
| 4583.8980 | 21809.383 | 13 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 2 | 0.0011 | 09WAL/HIN |
| | 21808.491 | | $3d^44s^2$ | a ³ F | 4 | | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | z ³ G° | 5 | 0.0011 | |
| 4584.0855 | | 46 | 3d 4s 3d ⁵ (⁴ D)4s | a F b ⁵D | | - | | y ³ D° | | | 09WAL/HIN |
| 4584.7519 | 21805.321 | 8 | $3d^{5}(^{4}P)4s$ | b ³ P | 3 | - | $3d^{5}(^{4}P)4p$ | $y^{a}D^{o}$ | 2 | 0.0015 | 09WAL/HIN |
| 4584.9342 | 21804.454 | 25 | | b ³ G | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ F ^o | 2 | 0.0006 | 09WAL/HIN |
| 4585.0747 | 21803.786 | 25 | $3d^44s^2$ | | 5 | - | $3d^{5}(^{4}D)4p$ | | 4 | 0.0006 | 09WAL/HIN |
| 4585.713 | 21800.75 | 3 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 5 | 0.02 | 53KIE |
| 4586.1354 | 21798.743 | 47 | $3d^44s^2$ | a ³ F | 3 | - | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}G^{o}$ | 4 | 0.0006 | 09WAL/HIN |
| 4586.990 | 21794.682 | 8 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 0 | 0.004 | 98ALL/GAR |
| 4587.817 | 21790.751 | 2 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | $w^{5}F^{o}$ | 3 | 0.002 | 09WAL/HIN |
| 4587.8705 | 21790.499 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^5(^4P)4p$ | $y_{3}^{3}D^{o}$ | 1 | 0.0019 | 09WAL/HIN |
| 4590.4676 | 21778.171 | 4 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 4 | _ | 5.4 | e ³ G | 5 | 0.0019 | 09WAL/HIN |
| 4590.6725 | 21777.199 | 9 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^5(^4P)4p$ | y ³ D° | 1 | 0.0013 | 09WAL/HIN |
| 4591.3908 | 21773.792 | 490 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 2 | 0.0005 | 09WAL/HIN |
| 4592.538 | 21768.355 | 3 | $3d^5(^2H)4s$ | b ³ H | 6 | - | $3d^5 (^2F1)4p$ | t ³ G° | 5 | 0.002 | 09WAL/HIN |
| 4593.8501 | 21762.136 | 4 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | - | $3d^44s5s$ | f ⁵ D | 2 | 0.0019 | 09WAL/HIN |
| 4595.039 | 21756.506 | 3 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.002 | 09WAL/HIN |
| 4595.5895 | 21753.899 | 170 | $3d^5(^2I)4s$ | b ¹ I | 6 | _ | $3d^5(^2I)4p$ | y ¹ I ^o | 6 | 0.0005 | 09WAL/HIN |
| 4596.395 | 21750.087 | 3 | $3d^44s^2$ | b ³ G | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G ^o | 4 | 0.002 | 09WAL/HIN |
| 4596.921 | 21747.60 | 3 | $3d^44s^2$ | a ³ F | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.02 | 53KIE |
| 4598.4321 | 21740.452 | 23 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}G^{o}$ | 3 | 0.0006 | 09WAL/HIN |
| 4598.9956 | 21737.788 | 10 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.0011 | 09WAL/HIN |
| 4599.25 | 21736.59 | 1 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.02 | 53KIE |
| 4600.099 | 21732.574 | 40 | $3d^5(^4G)4s$ | a ⁵ G | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 6 | 0.004 | 98ALL/GAR |
| 4600.7485 | 21729.506 | 1190 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 3 | 0.0005 | 09WAL/HIN |
| 4601.0164 | 21728.241 | 270 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ H° | 6 | 0.0005 | 09WAL/HIN |
| 4601.1343 | 21727.684 | 21 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 4 | 0.0008 | 09WAL/HIN |
| 4602.5078 | 21721.200 | 4 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 5 | 0.0019 | 09WAL/HIN |
| 4602.867 | 21719.51 | 7 | $3d^{6}$ | c ⁵ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.02 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---|-------------------------------|--------|--------------|---|--------------------------------------|---|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4603.44 | 21716.80 | 2 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | 3d ⁵ (² F1)4p | t ³ G° | 4 | 0.02 | 53KIE |
| 4603.84 | 21714.91 | 2 | $3d^{5}(^{2}F2)4s$ | d ³ F | 4 | _ | $3d^44s5p$ | r ⁵ D° | 4 | 0.02 | 53KIE |
| 4604.10 | 21713.69 | 2 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D ^o | 3 | 0.02 | 53KIE |
| 4604.59 | 21711.38 | 5 w | $3d^5(^6S)4p$ | z ⁵ P° | 2 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.04 | 53KIE |
| 4605.8359 | 21705.505 | 5 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.0017 | 09WAL/HI |
| 4606.364 | 21703.02 | 15 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^5 (^2F1)4p$ | t ³ G° | 4 | 0.02 | 53KIE |
| 4606.92 | 21700.40 | 1 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.04 | 53KIE |
| 4607.50 | 21697.67 | 1 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^{5}(^{4}G)5p$ | v ³ H° | 4 | 0.02 | 53KIE |
| 4609.896 | 21686.39 | 8 * | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | $3d^5(^2F1)4p$ | t ³ G° | 3 | 0.02 | 53KIE |
| 4609.896 | 21686.39 | 8 * | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | _ | $3d^44s5s$ | f ⁵ D | 0 | 0.02 | 53KIE |
| 4611.056 | 21680.93 | 4 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 4 | 0.02 | 53KIE |
| 4611.9620 | 21676.674 | 32 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 1 | 0.0006 | 09WAL/HII |
| 4613.3573 | 21670.118 | 590 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 1 | 0.0005 | 09WAL/HI |
| 4614.1468 | 21666.410 | 21 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w ⁵ F° | 5 | 0.0008 | 09WAL/HI |
| 4614.5106 | 21664.702 | 45 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | $^{3}G^{\circ}$ | 4 | 0.0006 | 09WAL/HI |
| 4614.7304 | 21663.670 | 22 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D° | 1 | 0.0008 | 09WAL/HI |
| 4616.1240 | 21657.130 | 1360 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | у ⁵ Р° | 2 | 0.0008 | 09WAL/HI |
| 1617.37 | 21651.29 | 2 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{4}G)4p$ | y F y ⁵ H ^o | 6 | 0.0003 | |
| 4617.560 | 21650.39 | 2 2 | 3 <i>d</i> 4 <i>s</i> 3 <i>d</i> ⁵ (² F2)4 <i>s</i> | ан d ³ F | 3 | _ | $3d^{5}(^{2}F1)4p$ | y H s ³ F° | 3 | 0.02 | 53KIE 53KIE |
| | | | $3d^{4}4s^{2}$ | a ³ P | | | $3d^{5}(^{4}P)4p$ | y ³ P ^o | | | |
| 4619.5328 | 21641.149 | 190 | $3d^{4}4s^{2}$ | b ³ G | 2 5 | - | $3d^{4}(^{3}F1)4s4p(^{3}P^{0})$ | y P w ³ G° | 2 | 0.0005 | 09WAL/HI |
| 4620.40 | 21637.09 | 2 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ³ H | 5 4 | - | 3a'(°F1)4s4p(°P°) | w ⁵ H ^o | 4 | 0.02 | 53KIE |
| 4621.47 | 21632.08 | 2 | | | | - | $3d^{5}(^{4}G)4p$ | y "H" | 3 | 0.02 | 53KIE |
| 4621.9418 | 21629.870 | 220 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 5 | 0.0005 | 09WAL/HI |
| 4622.4491 | 21627.496 | 83 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | - | $3d^{5}(^{4}D)4p$ | w^3D^0 | 3 | 0.0006 | 09WAL/HI |
| 4622.7475 | 21626.100 | 71 | $3d^44s^2$ | a ³ P | 2 | - | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 1 | 0.0006 | 09WAL/HI |
| 4625.2969 | 21614.180 | 6 | $3d^44s^2$ | a ³ F | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.0016 | 09WAL/HI |
| 4625.652 | 21612.521 | 4 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | - | $3d^4(^1I)4s4p(^3P^0)$ | $y^{3}I^{o}$ | 6 | 0.002 | 09WAL/HI |
| 4625.9217 | 21611.261 | 89 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | - | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 6 | 0.0005 | 09WAL/HI |
| 4626.1734 | 21610.085 | 1100 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | 0.0005 | 09WAL/HI |
| 4626.786 | 21607.222 | 3 | $3d^44s^2$ | a ³ H | 5 | - | $3d^5(^4G)4p$ | y ⁵ H° | 5 | 0.002 | 09WAL/HI |
| 4627.406 | 21604.329 | 3 | $3d^5(^2F2)4s$ | d ³ F | 2 | - | $3d^5 (^2F1)4p$ | s ³ F° | 2 | 0.002 | 09WAL/HI |
| 4627.652 | 21603.18 | 8 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 3 | - | $3d^{5}(^{4}G)4d$ | f ⁵ G | 2 | 0.02 | 53KIE |
| 4628.4607 | 21599.406 | 5 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 4 | - | $3d^44s5s$ | f ⁷ D | 5 | 0.0018 | 09WAL/HI |
| 4630.439 | 21590.18 | 5 | $3d^5(^2F2)4s$ | d ³ F | 4 | - | $3d^5(^2F1)4p$ | s ³ F ^o | 4 | 0.02 | 53KIE |
| 4632.1391 | 21582.254 | 21 | $3d^5(^4D)4s$ | a ³ D | 2 | - | $3d^5(^4D)4p$ | w^3D^o | 3 | 0.0008 | 09WAL/HI |
| 1633.2548 | 21577.057 | 13 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 3 | - | $3d^44s5s$ | f ⁷ D | 4 | 0.0012 | 09WAL/HI |
| 1634.581 | 21570.882 | 4 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.002 | 09WAL/HI |
| 1635.426 | 21566.95 | 6 | $3d^44s^2$ | c ³ D | 1 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | 0.02 | 53KIE |
| 4637.1736 | 21558.823 | 170 | $3d^5(^4G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 4 | 0.0005 | 09WAL/HI |
| 4637.7598 | 21556.098 | 160 | $3d^5(^4G)4s$ | a ⁵ G | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 4 | 0.0005 | 09WAL/HI |
| 4637.8183 | 21555.826 | 14 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\text{o}})$ | z ⁵ H° | 4 | 0.0012 | 09WAL/HI |
| 4639.5071 | 21547.980 | 22 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 2 | _ | $3d^44s5s$ | f ⁷ D | 3 | 0.0008 | 09WAL/HI |
| 4639.6675 | 21547.235 | 7 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{4}D)4p$ | w^3D^o | 2 | 0.0016 | 09WAL/HI |
| 4640.556 | 21543.108 | 4 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.002 | 09WAL/HI |

43103-7

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--------------------------------|------------------------|--------|---------------|--------------------------|---------------------------------------|---|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4640.68 | 21542.53 | 1 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 5 | 0.02 | 53KIE |
| 4640.82 | 21541.88 | 1 | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | $3d^{5}(^{2}\text{H})4p$ | t ³ H ^o | 6 | 0.02 | 53KIE |
| 4641.49 | 21538.77 | 3 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 2 | 0.02 | 53KIE |
| 4641.69 | 21537.85 | 4 * | $3d^44s^2$ | c ³ D | 2 | _ | $3d^{5}(^{4}G)5p$ | u ³ F ^o | 2 | 0.02 | 53KIE |
| 4641.69 | 21537.85 | 4 * | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | _ | $3d^44s5s$ | g ⁵ D | 4 | 0.02 | 53KIE |
| 1641.9946 | 21536.433 | 51 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^4(^1I)4s4p(^3P^0)$ | g ⁵ D y ³ I° | 5 | 0.0006 | 09WAL/HIN |
| 1642.4176 | 21534.471 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0018 | 09WAL/HIN |
| 1643.9094 | 21527.553 | 8 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 5 | 0.0016 | 09WAL/HIN |
| 646.1620 | 21517.116 | 2400 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | 0.0005 | 09WAL/HIN |
| 646.4849 | 21515.621 | 37 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0006 | 09WAL/HIN |
| 646.7747 | 21514.279 | 29 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 1 | _ | $3d^44s5s$ | f ⁷ D | 2 | 0.0006 | 09WAL/HIN |
| 648.1155 | 21508.073 | 157 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 3 | 0.0005 | 09WAL/HIN |
| 648.33 | 21507.08 | 2 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 6 | 0.02 | 53KIE |
| 648.8677 | 21504.593 | 82 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 3 | 0.0006 | 09WAL/HIN |
| 649.4318 | 21501.984 | 20 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 2 | 0.0008 | 09WAL/HIN |
| 651.291 | 21493.390 | 75 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 1 | 0.004 | 98ALL/GAR |
| 652.1573 | 21489.387 | 1750 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 2 | 0.0005 | 09WAL/HIN |
| 654.7242 | 21477.537 | 29 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{\circ}$ | 0 | _ | $3d^44s5s$ | f ⁷ D | 1 | 0.0003 | 09WAL/HIN |
| 656.1834 | 21477.337 | 49 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0006 | 09WAL/HIN |
| 656.8141 | 21467.898 | 8 | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^{5}(^{2}G1)4p$ | x ¹ H ^o | 5 | 0.0006 | 09WAL/HIN |
| 661.20 | 21447.70 | 2 | $3d^{5}(^{4}D)4s$ | ап b ⁵ D | 3 1 | _ | $3d^{5}(^{4}P)4p$ | х п у ³ Р ^о | 2 | 0.0016 | 53KIE |
| | | | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁵ D° | - | | $3d^44s5s$ | g ⁵ D | 3 | | |
| 661.88 | 21444.57 21442.09 | 2 w | $3d^{5}(^{4}D)4s4p(^{4}P^{4})$ | b ⁵ D | 2 | - | 3d 4s5s | y ³ P° | | 0.04 0.02 | 53KIE 53KIE |
| 662.42 | | 2 | | z ⁷ F° | - | - | $3d^{5}(^{4}P)4p$ | y "P" f ⁷ D | 1 | | |
| 663.3112 | 21437.989 | 58 | $3d^4(^5D)4s4p(^3P^0)$ | Z 'F° | 1 | _ | $3d^44s5s$ | | 1 | 0.0006 | 09WAL/HIN |
| 663.8159 | 21435.669 | 82 | $3d^4(^5D)4s4p(^3P^0)$ | z_{7-0}^{7} F° | 2 | - | $3d^44s5s$ | f ⁷ D | 2 | 0.0006 | 09WAL/HIN |
| 664.7815 | 21431.232 | 91 | $3d^4(^5D)4s4p(^3P^0)$ | $z_{3}^{7}F^{o}$ | 3 | - | $3d^44s5s$ | f ⁷ D | 3 | 0.0005 | 09WAL/HIN |
| 665.9060 | 21426.067 | 86 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | - | $3d^{5}(^{4}D)4p$ | w^3D^0 | 1 | 0.0005 | 09WAL/HIN |
| 666.1974 | 21424.729 | 74 | $3d^44s^2$ | a ³ H | 4 | - | $3d^{5}(^{4}G)4p$ | $z^{3}H^{o}$ | 4 | 0.0006 | 09WAL/HIN |
| 666.5117 | 21423.286 | 34 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | - | $3d^{5}(^{4}D)4p$ | $w_{3}^{3}D^{o}$ | 1 | 0.0006 | 09WAL/HIN |
| 667.1635 | 21420.294 | 31 | $3d^44s^2$ | a ³ H | 4 | - | $3d^{5}(^{4}G)4p$ | z ³ H ^o | 5 | 0.0006 | 09WAL/HIN |
| 667.71 | 21417.79 | 1 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.02 | 53KIE |
| 667.894 | 21416.94 | 2 | $3d^44s^2$ | c ³ D | 2 | - | $3d^{5}(^{4}G)5p$ | u ³ F° | 3 | 0.02 | 53KIE |
| 669.3166 | 21410.417 | 52 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 5 | - | $3d^44s5s$ | f ⁷ D | 5 | 0.0006 | 09WAL/HIN |
| 669.67 | 21408.80 | 10 | $3d^44s^2$ | a ³ F | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.02 | 53KIE |
| 670.08 | 21406.92 | 1 | $3d^5(^4F)4s$ | c ³ F | 3 | - | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.02 | 53KIE |
| 672.77 | 21394.59 | 5 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | _ | $3d^44s5s$ | g ⁵ D | 2 | 0.04 | 53KIE |
| 673.16 | 21392.81 | 10 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | - | $3d^44s5s$ | g ⁵ D | 4 | 0.04 | 53KIE |
| 675.03 | 21384.25 | 4 w | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.04 | 53KIE |
| 675.80 | 21380.73 | 2 w | $3d^5(^4D)4s$ | b ⁵ D | 4 | _ | $3d^5(^4G)4p$ | y ⁵ H° | 5 | 0.04 | 53KIE |
| 676.30 | 21378.44 | 8 w | $3d^5(^4F)4s$ | c ³ F | 2 | _ | - | p ⁵ F ^o | 3 | 0.04 | 53KIE |
| 677.62 | 21372.41 | 4 w | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F ^o | 5 | 0.04 | 53KIE |
| 680.4738 | 21359.380 | 36 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 2 | _ | $3d^44s5s$ | f ⁷ D | 1 | 0.0006 | 09WAL/HIN |
| 1680.864 | 21357.60 | 35 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.02 | 53KIE |
| 1684.5945 | 21340.592 | 11 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 3 | 0.0012 | 09WAL/HIN |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|--------------------------------------|--------|--------------|-------------------------|--|---|--|------------------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 4686.20 | 21333.28 | 15 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | | $3d^44s5s$ | g ⁵ D | 1 | 0.02 | 53KIE |
| 4689.3565 | 21318.921 | 82 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 3 | _ | $3d^44s5s$ | f ⁷ D | 2 | 0.0006 | 09WAL/HIN |
| 4690.15 | 21315.31 | 6 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | _ | $3d^44s5s$ | g ⁵ D | 3 | 0.04 | 53KIE |
| 4692.962 | 21302.544 | 4 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{4}G)4p$ | z ³ H° | 4 | 0.002 | 09WAL/HIN |
| 4693.9387 | 21298.110 | 85 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{4}G)4p$ | z ³ H ^o | 5 | 0.0006 | 09WAL/HIN |
| 4695.1446 | 21292.640 | 44 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{5}(^{4}G)4p$ | z ³ H° | 6 | 0.0006 | 09WAL/HIN |
| 4697.0499 | 21284.003 | 170 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{4}P)4p$ | z ⁵ S° | 2 | 0.0005 | 09WAL/HIN |
| 4697.3880 | 21282.471 | 27 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 2 | 0.0006 | 09WAL/HIN |
| 4698.4599 | 21277.616 | 140 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 4 | _ | $3d^44s5s$ | f ⁷ D | 3 | 0.0005 | 09WAL/HIN |
| 4698.6056 | 21276.956 | 190 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{4}P)4p$ | z ⁵ S° | 2 | 0.0005 | 09WAL/HIN |
| 4698.9433 | 21275.427 | 23 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 2 | 0.0006 | 09WAL/HIN |
| 4699.585 | 21272.522 | 25 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 4 | 0.004 | 98ALL/GAR |
| 4700.6101 | 21267.883 | 86 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{4}P)4p$ | z ⁵ S° | 2 | 0.0005 | 09WAL/HIN |
| 4701.9156 | 21261.978 | 5 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0018 | 09WAL/HIN |
| 4702.74 | 21258.25 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | 0.02 | 53KIE |
| 4705.67 | 21245.01 | 2 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.02 | 53KIE |
| 4706.0892 | 21243.122 | 38 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0006 | 09WAL/HIN |
| 4707.7482 | 21235.636 | 30 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 2 | 0.0006 | 09WAL/HIN |
| 4708.0125 | 21233.030 | 190 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 5 | _ | $3d^{4}4s5s$ | f ⁷ D | 4 | 0.0005 | 09WAL/HIN |
| 4710.24 | 21224.40 | 6 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | y^3F^0 | 4 | 0.0003 | 53KIE |
| 4713.9901 | 21224.40 | 12 | $3d^{5}(^{2}I)4s$ | a G b ¹I | 6 | _ | $3d^{5}(^{2}I)4p$ | уг z ¹K° | 7 | 0.0012 | 09WAL/HIN |
| 4717.6835 | 21190.915 | 25 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0012 | 09WAL/HIN |
| 4718.4197 | 21190.913 | 230 | $3d^4(^5D)4s4p(^3P^0)$ | аг z ⁷ F° | 6 | | $3d^{4}4s5s$ | f ⁷ D | 5 | 0.0005 | |
| 4718.4197 | 21185.883 | 6 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | | 0.0003 | 09WAL/HIN 09WAL/HIN |
| | | | $3d^{4}s$ $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 4 | | |
| 4721.14 4722.14 | 21175.40 21170.92 | 8 w | $3d^4(^5D)4s4p(^3P^0)$ | a D z ⁵ D° | 3 4 | - | $3d^{4}4s5s$ | | 3 | 0.04 0.04 | 53KIE 53KIE |
| | | 3 w | $3d^{4}4s^{2}$ | a ³ F | = | _ | | g ⁵ D | 3 | | |
| 4722.6503 | 21168.629 | 6 | $3d^{5}(^{4}P)4s$ | a F b ³ P | 2 | - | $3d^{5}(^{4}P)4p$ | y ³ D ^o x ³ P ^o | 2 | 0.0016 | 09WAL/HIN |
| 4722.7601 | 21168.137 | 15 | | a ³ G | 0 | - | $3d^4(^3P1)4s4p(^3P^0)$ | | 1 | 0.0010 | 09WAL/HIN |
| 4723.0972 | 21166.626 | 75 | $3d^{5}(^{4}G)4s$ $3d^{4}4s^{2}$ | a ³ G c ³ D | 3 | - | $3d^{5}(^{4}G)4p$ | y ³ F ^o v ³ F ^o | 3 | 0.0006 | 09WAL/HIN |
| 4723.18 | 21166.26 | 8 | | | 2 | - | $3d^5(^2D1)4p$ | | 3 | 0.02 | 53KIE |
| 4723.88 | 21163.12 | 1 | $3d^5(^2\text{H})4s$ | b ³ H | 4 | _ | $3d^4(^3F1)4s4p(^1P^0)$ | u ³ G° | 4 | 0.02 | 53KIE |
| 4724.4123 | 21160.734 | 95 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^{5}(^{4}G)4p$ | $y_{3-9}^{3}F^{0}$ | 4 | 0.0005 | 09WAL/HIN |
| 4725.6630 | 21155.134 | 5 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 1 | 0.0018 | 09WAL/HIN |
| 4725.923 | 21153.971 | 3 | $3d^44s^2$ | a ³ H | 6 | - | $3d^{5}(^{4}G)4p$ | $z^{3}H^{o}$ | 5 | 0.002 | 09WAL/HIN |
| 4727.1496 | 21148.481 | 130 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^{5}(^{4}G)4p$ | z ³ H° | 6 | 0.0005 | 09WAL/HIN |
| 4727.48 | 21147.00 | 4 1? | $3d^4(^5D)4s4p(^3P^0)$ | $z_{2}^{5}D^{o}$ | 3 | - | $3d^44s5s$ | $g^{5}D$ | 2 | 0.04 | 53KIE |
| 4729.8413 | 21136.446 | 11 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^5(^4P)4p$ | y^3D^o | 1 | 0.0012 | 09WAL/HIN |
| 4730.7101 | 21132.564 | 290 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | $y^{3}F^{o}$ | 2 | 0.0005 | 09WAL/HIN |
| 4731.19 | 21130.42 | 4 w | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^5(^4D)4p$ | t ⁵ P ^o | 3 | 0.04 | 53KIE |
| 4732.55 | 21124.35 | 2 w | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | - | $3d^4(^3H)4s4p(^1P^0)$ | w ³ H ^o | 6 | 0.04 | 53KIE |
| 4734.596 | 21115.22 | 4 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | - | $3d^4(^3F1)4s4p(^1P^0)$ | $^{3}G^{o}$ | 3 | 0.02 | 53KIE |
| 4736.147 | 21108.304 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 1 | 0.002 | 09WAL/HIN |
| 4736.60 | 21106.29 | 2 | $3d^44s^2$ | a ³ H | 6 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | 0.02 | 53KIE |
| 4737.3471 | 21102.958 | 360 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ F ^o | 3 | 0.0005 | 09WAL/HII |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source of line |
|-------------------------------|----------------------------|------------------|---|-------------------------------|---|--------------|---------------------------------|-------------------------------|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | |
| 4741.092 | 21086.29 | 12 | $3d^44s^2$ | c ³ D | 1 | _ | $3d^5(^2D1)4p$ | v ³ F° | 2 | 0.02 | 53KIE |
| 4742.00 | 21082.25 | 2 w | $3d^44s^2$ | b ³ G | 4 | _ | · / 1 | $x^{3}G^{o}$ | 5 | 0.04 | 53KIE |
| 1743.118 | 21077.28 | 12 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | _ | $3d^44s5s$ | e ³ D | 2 | 0.04 | 53KIE |
| 4745.1876 | 21068.090 | 8 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 3 | 0.0016 | 09WAL/HI |
| 4745.3065 | 21067.562 | 33 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 4 | 0.0006 | 09WAL/HI |
| 1747.03 | 21059.91 | 4 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^{5}(^{4}G)4p$ | y^3F^o | 3 | 0.02 | 53KIE |
| 1747.63 | 21057.25 | 3 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^{5}(^{2}D1)4p$ | v ³ F° | 2 | 0.02 | 53KIE |
| 1748.93 | 21051.49 | 1 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.02 | 53KIE |
| 1749.27 | 21049.98 | 1 w* | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 0 | 0.04 | 53KIE |
| 1749.27 | 21049.98 | 1 w* | $3d^44s^2$ | c ³ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D ^o | 1 | 0.04 | 53KIE |
| 4749.96 | 21046.92 | 1 w | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{\circ}$ | 1 | 0.04 | 53KIE |
| 4751.04 | 21042.14 | 5 w | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P ^o | 0 | _ | $3d^44s5s$ | e ³ D | 1 | 0.04 | 53KIE |
| 4752.0875 | 21037.500 | 210 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^4(^1I)4s4p(^3P^0)$ | ³ K° | 6 | 0.0005 | 09WAL/HI |
| 4752.896 | 21033.921 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.002 | 09WAL/HI |
| 4754.04 | 21028.86 | 25 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.002 | 53KIE |
| 1754.73 | 21025.81 | 20 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^{5}(^{4}G)4p$ | y^3F^0 | 2 | 0.02 | 53KIE 53KIE |
| 1755.1401 | 21023.995 | 37 | $3d^{5}(^{4}D)4s$ | a r b ⁵ D | 4 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{0})$ | y F x ⁵ F° | 5 | 0.0006 | 09WAL/HI |
| 1756.118 | 21023.993 | 100 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | | $3d^{4}4s5p$ | s ⁵ P° | 3 | 0.000 | 98ALL/GA |
| | | | $3d^{5}(\text{F1})4s$ $3d^{5}(^{4}\text{D})4s$ | a ³ D | = | _ | | x ³ F ^o | 2 | | |
| 1757.006 1757.216 | 21015.749 | 2 | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}P^{o}$ | 3 | - | $3d^{5}(^{4}D)4p$ | e ³ D | | 0.002 | 09WAL/HI |
| 4757.316 | 21014.379 | 15 | | z ³ D | 2 | - | $3d^44s5s$ | e ³ F ^o | 3 | 0.004 | 98ALL/GA |
| 1757.5902 | 21013.168 | 35 | $3d^{5}(^{4}D)4s$ | | 3 | - | $3d^5(^4D)4p$ | | 3 | 0.0006 | 09WAL/HI |
| 4759.7537 | 21003.617 | 7 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $x^{5}F^{o}$ | 4 | 0.0017 | 09WAL/HI |
| 4759.9103 | 21002.926 | 10 | $3d^44s^2$ | a ³ F | 3 | - | $3d^{5}(^{4}P)4p$ | $y^{3}D^{o}$ | 2 | 0.0012 | 09WAL/HI |
| 1761.2453 | 20997.037 | 13 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | 0.0012 | 09WAL/HI |
| 4761.731 | 20994.896 | 3 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.002 | 09WAL/HI |
| 4763.509 | 20987.06 | 3 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.02 | 53KIE |
| 4764.2940 | 20983.601 | 190 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{o}$ | 4 | 0.0005 | 09WAL/HI |
| 1764.6428 | 20982.065 | 25 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 4 | 0.0006 | 09WAL/HI |
| 1766.6341 | 20973.300 | 72 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | - | $3d^{5}(^{4}D)4p$ | x^3F^o | 2 | 0.0006 | 09WAL/HI |
| 1767.2662 | 20970.519 | 28 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | - | $3d^5(^4D)4p$ | x ³ F ^o | 2 | 0.0006 | 09WAL/HI |
| 1767.8553 | 20967.928 | 98 | $3d^5(^4D)4s$ | a ³ D | 2 | - | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 3 | 0.0005 | 09WAL/HI |
| 1768.56 | 20964.83 | 4 * | $3d^44s^2$ | b ³ G | 3 | - | | $x^{3}G^{o}$ | 4 | 0.02 | 53KIE |
| 4768.56 | 20964.83 | 4 * | $3d^5(^2F1)4s$ | b ³ F | 4 | - | $3d^3(^4F)4s^24p$ | v^3G^o | 5 | 0.02 | 53KIE |
| 4769.79 | 20959.42 | 4 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | - | | e ⁵ F | 2 | 0.04 | 53KIE |
| 1769.99 | 20958.54 | 4 w* | $3d^5(^2G2)4s$ | c ³ G | 4 | - | $3d^5(^2F1)4p$ | s ³ F° | 3 | 0.04 | 53KIE |
| 1769.99 | 20958.54 | 4 w* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | _ | - | e ⁵ F | 1 | 0.04 | 53KIE |
| 1770.34 | 20957.01 | 4 | $3d^5(^2G2)4s$ | c ³ G | 3 | _ | $3d^5 (^2F1)4p$ | s ³ F ^o | 2 | 0.02 | 53KIE |
| 1770.6725 | 20955.546 | 16 | $3d^5(^4D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x 5F° | 3 | 0.0008 | 09WAL/HI |
| 1771.5972 | 20951.485 | 9 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x 5F° | 3 | 0.0014 | 09WAL/HI |
| 1772.37 | 20948.09 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | _ | $3d^44p^2$ | f ⁷ F | 3 | 0.02 | 53KIE |
| 1774.5502 | 20938.527 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.0012 | 09WAL/H |
| 775.1297 | 20935.986 | 15 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 4 | 0.0012 | 09WAL/H |
| 1775.54 | 20934.19 | 10 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | _ | (-/ ··· · · · / | e ⁵ F | 3 | 0.04 | 53KIE |
| 4775.99 | 20932.21 | 10 w | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | ³ F ^o | 3 | 0.02 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---------------------------------|-------------------------------|---|--------------|--|-------------------------------|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4777.5849 | 20925.227 | 8 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.0017 | 09WAL/HIN |
| 4777.7233 | 20924.621 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | 0.0019 | 09WAL/HIN |
| 4778.514 | 20921.16 | 2 * | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | _ | $3d^44s5s$ | g ⁵ D | 2 | 0.02 | 53KIE |
| 4778.514 | 20921.16 | 2 * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.02 | 53KIE |
| 4779.8919 | 20915.128 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | 0.0019 | 09WAL/HIN |
| 4781.65 | 20907.44 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | _ | $3d^44s5s$ | e ³ D | 1 | 0.02 | 53KIE |
| 4782.16 | 20905.21 | 1 | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^44s(^6D)6p$ | 7 F $^{\circ}$ | 4 | 0.02 | 53KIE |
| 4783.06 | 20901.27 | 10 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | _ | · · · · · · · · · · · · · · · · · · · | e ⁵ F | 4 | 0.04 | 53KIE |
| 4787.302 | 20882.75 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 0.02 | 53KIE |
| 4787.736 | 20880.86 | 5 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ F ^o | 4 | 0.02 | 53KIE |
| 4789.340 | 20873.868 | 75 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 5 | 0.004 | 98ALL/GAR |
| 4790.3329 | 20869.542 | 31 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 5 | 0.0006 | 09WAL/HIN |
| 4790.91 | 20867.03 | 5 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G° | 4 | 0.02 | 53KIE |
| 4792.512 | 20860.053 | 75 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 2 | 0.004 | 98ALL/GAR |
| 4796.145 | 20844.25 | 40 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | _ | 3a (G)4p | e ⁵ F | 5 | 0.04 | 53KIE |
| 4796.84 | 20841.23 | 40 w 12 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | _ | | e ⁵ F | 2 | 0.04 | 53KIE 53KIE |
| 4797.6957 | 20837.515 | 7 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 0.0017 | 09WAL/HIN |
| | | | $3d^{5}(^{4}D)4s$ | a D b ⁵ D | 4 | | $3d^{4}(^{3}P1)4s4p(^{3}P^{0})$ | v ⁵ P° | | | |
| 4799.19 | 20831.03 | 8 | $3d^{4}(D)4s$ $3d^{4}4s^{2}$ | a ³ F | 4 | - | | y ³ F° | 3 | 0.02 | 53KIE |
| 4801.028 | 20823.052 | 75 | $3d^{5}(^{2}\text{F1})4s$ | a F b ³ F | - | - | $3d^{5}(^{4}G)4p$ $3d^{3}(^{4}F)4s^{2}4p$ | y ³ G° | 3 | 0.004 | 98ALL/GAR |
| 4803.08 | 20814.16 | 6 | | ь ⁵ D | 4 | - | | v ⁵ P ^o | 4 | 0.02 | 53KIE |
| 4803.22 | 20813.55 | 7 w | $3d^{5}(^{4}D)4s$ | | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | | 3 | 0.04 | 53KIE |
| 4804.23 | 20809.17 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P° | 3 | 0.02 | 53KIE |
| 4804.624 | 20807.466 | 4 | $3d^5(^4P)4s$ | a ⁵ P | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 3 | 0.002 | 09WAL/HIN |
| 4805.25 | 20804.76 | 15 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | - | . 4.3 3-0 | e ⁵ F | 3 | 0.04 | 53KIE |
| 4806.2500 | 20800.428 | 13 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 3 | 0.0012 | 09WAL/HIN |
| 4807.14 | 20796.58 | 3 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | _ | $3d^44s5s$ | g ⁵ D | 3 | 0.04 | 53KIE |
| 4809.285 | 20787.302 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 2 | 0.002 | 09WAL/HIN |
| 4810.01 | 20784.17 | 10 w* | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 2 | 0.04 | 53KIE |
| 4810.01 | 20784.17 | 10 w* | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | - | $3d^44s5s$ | e ³ D | 2 | 0.04 | 53KIE |
| 4810.23 | 20783.22 | 7 | $3d^5(^2F2)4s$ | d ³ F | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.02 | 53KIE |
| 4810.58 | 20781.71 | 3 w | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 2 | 0.04 | 53KIE |
| 4810.7307 | 20781.055 | 13 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^5(^4G)4p$ | y ⁵ H ^o | 4 | 0.0013 | 09WAL/HIN |
| 4814.2657 | 20765.796 | 21 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^5(^4G)4p$ | y ⁵ H ^o | 5 | 0.0008 | 09WAL/HIN |
| 4816.1390 | 20757.719 | 9 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.0015 | 09WAL/HIN |
| 4816.39 | 20756.64 | 10 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | _ | | e ⁵ F | 4 | 0.04 | 53KIE |
| 4817.55 | 20751.64 | 2 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^5(^4G)4p$ | u ⁵ F° | 3 | 0.02 | 53KIE |
| 4818.23 | 20748.71 | 5 w | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P ^o | 1 | - | $3d^44s5s$ | g ⁵ D | 0 | 0.04 | 53KIE |
| 4819.30 | 20744.10 | 4 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 3 | 0.02 | 53KIE |
| 4822.06 | 20732.23 | 5 | $3d^5(^4G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 3 | 0.02 | 53KIE |
| 4823.9219 | 20724.229 | 5 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.0019 | 09WAL/HIN |
| 4825.40 | 20717.88 | 7 | $3d^{5}(^{2}F2)4s$ | d ³ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 3 | 0.02 | 53KIE |
| 4825.517 | 20717.380 | 4 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 4 | 0.002 | 09WAL/HIN |
| 4826.84 | 20711.70 | 5 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | _ | · \ -> r | e ⁵ F | 2 | 0.04 | 53KIE |
| 4828.65 | 20703.94 | 8 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | 0.02 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--------------------------------|-------------------------|---|---------------|--|--|---|--|--------------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 4829.3084 | 20701.114 | 35 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | 0.0007 | 09WAL/HIN |
| 4829.3719 | 20700.842 | 12 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | 0.0013 | 09WAL/HIN |
| 4831.648 | 20691.090 | 15 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 4 | 0.004 | 98ALL/GAF |
| 4832.75 | 20686.37 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 4 | 0.02 | 53KIE |
| 4835.672 | 20673.871 | 4 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.002 | 09WAL/HIN |
| 1836.36 | 20670.93 | 10 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 4 | 0.02 | 53KIE |
| 1836.8515 | 20668.831 | 29 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 6 | 0.0007 | 09WAL/HIN |
| 4837.19 | 20667.38 | 8 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 3 | 0.02 | 53KIE |
| 1838.418 | 20662.14 | 15 | $3d^5(^2F2)4s$ | d ³ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 2 | 0.02 | 53KIE |
| 1838.88 | 20660.17 | 6 w* | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | _ | · / - I · / | e ⁵ F | 3 | 0.04 | 53KIE |
| 1838.88 | 20660.17 | 6 w* | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | 0.04 | 53KIE |
| 1838.88 | 20660.17 | 6 w* | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | - · · · · · · · · · · · · · · · · · · · | p ⁵ F° | 4 | 0.04 | 53KIE |
| 4839.57 | 20657.22 | 7 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | 0.02 | 53KIE |
| 1840.37 | 20653.81 | 10 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 3 | 0.02 | 53KIE |
| 1841.14 | 20650.52 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 1 | 0.02 | 53KIE |
| 1841.734 | 20647.99 | 12 * | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 2 | 0.02 | 53KIE |
| 1841.734 | 20647.99 | 12 * | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 1 | 0.02 | 53KIE |
| 1841.91 | 20647.24 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ⁵ D° | 0 | 0.02 | 53KIE |
| 1843.073 | 20642.28 | 6 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | $3d^{5}(^{2}I)4p$ | z ³ K° | 7 | 0.02 | 53KIE 53KIE |
| 1846.304 | 20628.519 | 2 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 6 | 0.002 | 09WAL/HIN |
| 1846.44 | 20627.94 | 18 * | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 2 | _ | 3 <i>u</i> (H)4 <i>s</i> 4 <i>p</i> (F) | p ⁵ F° | 3 | 0.002 | 53KIE |
| 4846.44 | 20627.94 | 18 * | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | _ | $3d^44s5s$ | g ⁵ D | 2 | 0.02 | 53KIE 53KIE |
| +846.44 1846.44 | 20627.94 | 18 * | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.02 | 53KIE 53KIE |
| 4847.1878 | 20624.757 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 5 | 0.0019 | 09WAL/HIN |
| | | | $3d^{5}(^{4}P)4s$ | a G b ³ P | 1 | | $3d^{5}(^{4}P)4p$ | у п v ⁵ D° | 0 | | |
| 1850.211 1850.96 | 20611.901 20608.72 | 8 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | 3a (P)4p | p ⁵ F° | | 0.004 0.04 | 98ALL/GAR 53KIE |
| | | 7 w | $3d^{4}4s^{2}$ | b ³ G | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H° | 3 | 0.04 | |
| 4851.464 4855.452 | 20606.580 | 1 4 | $3d^{4}s$ $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | y H x ⁵ D° | 5 | | 09WAL/HIN |
| 4855.152 | 20590.927 | 4 | | a ⁵ P | 2 | - | | x ⁵ D° | 2 | 0.002 | 09WAL/HIN |
| 4857.299 | 20581.823 | 4 | $3d^{5}(^{4}P)4s$ | a ⁵P b ⁵D | 1 | - | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D ⁶ v ⁵ P ⁶ | 2 | 0.002 | 09WAL/HIN |
| 4858.83 | 20575.34 | 4 | $3d^{5}(^{4}D)4s$ | | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o v ⁵ P ^o | 2 | 0.02 | 53KIE |
| 4859.80 | 20571.23 | 7 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | | 2 | 0.02 | 53KIE |
| 4860.37 | 20568.82 | 7 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 0.02 | 53KIE |
| 4861.1966 | 20565.322 | 28 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 0.0007 | 09WAL/HIN |
| 4861.8409 | 20562.597 | 150 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 0.0005 | 09WAL/HIN |
| 1863.84 | 20554.15 | 7 * | $3d^5(^2I)4s$ | b ¹ I | 6 | - | $3d^{5}(^{2}I)4p$ | z ³ K° | 6 | 0.02 | 53KIE |
| 1863.84 | 20554.15 | 7 * | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 2 | - | $3d^{5}(^{6}S)6s$ | f ⁷ S | 3 | 0.02 | 53KIE |
| 1865.18 | 20548.48 | 3 w | $3d^5(^2F2)4s$ | d ³ F | 3 | - | 1.2 | p ⁵ F° | 2 | 0.04 | 53KIE |
| 1865.71 | 20546.25 | 4 w | $3d^44s^2$ | a ³ H | 6 | - | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 6 | 0.04 | 53KIE |
| 1866.60 | 20542.49 | 10 | $3d^5(^2F2)4s$ | d ³ F | 2 | - | | p ⁵ F° | 2 | 0.02 | 53KIE |
| 868.29 | 20535.36 | 8 | $3d^44s^2$ | a ³ H | 5 | - | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | 0.02 | 53KIE |
| 1870.7975 | 20524.786 | 47 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | z ³ H ^o | 4 | 0.0007 | 09WAL/HIN |
| 1872.000 | 20519.719 | 3 | $3d^5(^4G)4s$ | a ⁵ G | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 0.002 | 09WAL/HIN |
| 4874.6522 | 20508.556 | 6 | $3d^44s^2$ | a ³ F | 3 | - | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 4 | 0.0017 | 09WAL/HIN |
| 4875.57 | 20504.70 | 20 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I° | 4 | _ | $3d^44s5s$ | e ⁵ H | 4 | 0.02 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air | Observed wave | Intensity | | | | Classificati | on | | | Uncertainty of observed | |
|---------------------|----------------------------|-------------|-------------------------|--------------------------------------|--------|--------------|---|--|--------|-------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 4878.05 | 20494.27 | 2 | $3d^44s^2$ | a ¹I | 6 | | $3d^4(^1I)4s4p(^3P^0)$ | y ³ I ^o | 5 | 0.02 | 53KIE |
| 4880.04 | 20485.91 | 22 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 5 | 0.02 | 53KIE |
| 4884.11 | 20468.84 | 4 | $3d^5(^2G2)4s$ | c ³ G | 5 | _ | $3d^{5}$ (² F1)4p | t ³ G° | 5 | 0.02 | 53KIE |
| 4884.9384 | 20465.372 | 12 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | 0.0013 | 09WAL/HII |
| 4885.7694 | 20461.891 | 64 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 2 | 0.0007 | 09WAL/HII |
| 4885.952 | 20461.127 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | z ³ H ^o | 4 | 0.002 | 09WAL/HI |
| 4887.0123 | 20456.687 | 75 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | z ³ H° | 5 | 0.0007 | 09WAL/HI |
| 4887.6916 | 20453.844 | 7 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.0017 | 09WAL/HI |
| 4888.5224 | 20450.368 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.0017 | 09WAL/HI |
| 4889.71 | 20445.40 | 20 | $3d^44s^2$ | b ³ G | 3 | _ | 5th (2) is ip(1) | 0 | 4 | 0.02 | 53KIE |
| 4890.22 | 20443.27 | 22 * | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I° | 5 | _ | $3d^44s5s$ | e ⁵ H | 4 | 0.02 | 53KIE |
| 4890.22 | 20443.27 | 22 * | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I° | 6 | _ | $3d^44s5s$ | e ⁵ H | 6 | 0.02 | 53KIE |
| 4891.59 | 20437.54 | 1 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 4 | 0.02 | 53KIE |
| 4891.978 | 20435.923 | 2 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 1 | 0.002 | 09WAL/HIN |
| 4894.37 | 20425.93 | 25 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I° | 7 | _ | $3d^44s5s$ | e ⁵ H | 7 | 0.02 | 53KIE |
| 4895.44 | 20423.93 | 3 w | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | 0.04 | 53KIE 53KIE |
| 4896.47 | 20417.17 | 4 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.02 | 53KIE |
| 4897.515 | 20417.17 | 5 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | x ⁵ P ^o | 1 | 0.02 | 53KIE 53KIE |
| 4898.461 | 20412.82 | 1 | $3d^{5}(^{4}G)4s$ | a G a ³ G | 4 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | x Fo | 5 | 0.002 | 09WAL/HIN |
| 4902.06 | 20393.89 | 10 w | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{4}4s5p$ | q ⁵ F° | 3 | 0.002 | 53KIE |
| 4903.2344 | 20393.89 | 10 w | $3d^{5}(^{4}G)4s$ | a ⁵G | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | чг у ⁵ F° | 3 1 | 0.04 | 09WAL/HIN |
| 4905.050 | 20389.008 | 20 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | _ | $3d^{5} (^{2}F1)4p$ | y r t ³ G° | 4 | 0.0013 | 53KIE |
| | 20381.46 | 20 7 | $3d^{5}(^{4}D)4s$ | b ⁵D | 3 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P° | 1 | | |
| 4905.37 4908.56 | 20366.89 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 1 | 0.02 0.02 | 53KIE 53KIE |
| | | · · | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 0 | | |
| 4909.878 4914.27 | 20361.42 20343.22 | 6 3 | $3d^{5}(^{2}G2)4s$ | a P c ³ G | 4 | _ | $3d^{5} (P1)4s4p(P)$ $3d^{5} (^{2}F1)4p$ | t ³ G° | | 0.02 0.02 | 53KIE 53KIE |
| | | | | z ⁵ I° | | _ | $3d^{4}(F1)4p$ $3d^{4}4s5s$ | e ⁵H | 4 | | |
| 4919.427 | 20321.897 | 20 | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G | 7 | - | | e ³ H ^o | 6 | 0.004 | 98ALL/GAI |
| 4920.9398 | 20315.650 | 12 | $3d^{5}(^{4}G)4s$ | | 5 | _ | $3d^{5}(^{4}G)4p$ | z ³ H° z ³ H° | 5 | 0.0013 | 09WAL/HI |
| 4922.2647 | 20310.182 | 230 | $3d^{5}(^{4}G)4s$ | a ³ G b ⁵ D | 5 | - | $3d^{5}(^{4}G)4p$ | z H | 6 | 0.0005 | 09WAL/HI |
| 4922.60 | 20308.80 | 5 | $3d^5(^4D)4s$ | | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | 0.02 | 53KIE |
| 4930.179 | 20277.58 | 30 | $3d^5(^2D3)4s$ | b ³ D | 3 | - | $3d^{5}(^{4}D)4p$ | w ³ P ^o | 2 | 0.02 | 53KIE |
| 4931.120 | 20273.709 | 15 | $3d^4(^3H)4s4p(^3P^0)$ | $z^{5}I^{o}$ | 8 | - | $3d^44s5s$ | e ⁵ H | 7 | 0.004 | 98ALL/GAI |
| 4932.545 | 20267.853 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | 0.002 | 09WAL/HI |
| 4932.62 | 20267.54 | 4 | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 4 | - | $3d^44s5s$ | e ⁵ H | 5 | 0.02 | 53KIE |
| 4934.879 | 20258.267 | 15 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | - | $3d^{5}(^{4}D)4p$ | $w^{3}P^{o}$ | 2 | 0.004 | 98ALL/GA |
| 4936.3354 | 20252.290 | 58 | $3d^44s^2$ | a ³ F | 3 | - | $3d^{5}(^{4}G)4p$ | $z^{3}H^{o}$ | 4 | 0.0007 | 09WAL/HII |
| 4937.51 | 20247.47 | 5 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | - | $3d^4(^3F1)4s4p(^3P^0)$ | $x^{5}F^{0}$ | 4 | 0.02 | 53KIE |
| 4942.4952 | 20227.050 | 220 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | 0.0005 | 09WAL/HIN |
| 4944.562 | 20218.597 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ P ^o | 1 | 0.002 | 09WAL/HI |
| 4949.582 | 20198.089 | 12 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | - | $3d^{5}(^{4}D)4p$ | $w^{3}P^{o}$ | 1 | 0.004 | 98ALL/GAI |
| 4953.717 | 20181.228 | 4 | $3d^44s^2$ | a ³ F | 4 | - | $3d^{5}(^{4}G)4p$ | $z^{3}H^{o}$ | 4 | 0.002 | 09WAL/HI |
| 4954.8055 | 20176.796 | 78 | $3d^44s^2$ | a ³ F | 4 | - | $3d^{5}(^{4}G)4p$ | z ³ H° | 5 | 0.0007 | 09WAL/HI |
| 4956.72 | 20169.00 | 6 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | 0.02 | 53KIE |
| 4962.28 | 20146.40 | 4 w | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | - | $3d^{5}(^{4}G)4d$ | f ⁵ G | 3 | 0.04 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| wavelength (Å) number (cm ⁻¹) 4964.9271 20135.664 4965.82 20132.04 4966.05 20131.11 4966.80 20128.07 4967.97 20123.33 4969.13 20118.63 4970.97 20111.19 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5005.08 19974.13 5008.75 19959.49 5007.83 19974.13 5008.75 19955.39 5013.3136 19941.325 5017.33 19925.36 5019.1762 19918.033 5020.608 19912.35 5023.63 19900.37 5025.83 19891.66 5027.029 19886.919 | and comment 130 3 w 4 w 25 5 7 w 3 w 6 w 4 w * 4 w* | Configuration $3d^{5}(^{6}S)4s$ $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ $3d^{5}(^{2}D3)4s$ $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ | Term a ⁵ S z ⁵ G° z ⁵ G° b ³ D z ⁵ G° | J 2 3 2 | _ | Configuration | Term | | wavelength | Source |
|---|--|--|---|------------------|---|--|-------------------------------|---|------------|----------------|
| 4965.82 20132.04 4966.05 20131.11 4966.80 20128.07 4967.97 20123.33 4969.13 20118.63 4970.97 20111.19 4972.22 20106.13 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19955.39 5013.3136 19941.325 5017.33 19925.36 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5025.83 19891.66 | 3 w 4 w 25 5 7 w 3 w 6 w 4 w * | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ $3d^{5}(^{2}D3)4s$ $3d^{5}(^{4}G)4p$ $3d^{4}4s^{2}$ | z ⁵ G° z ⁵ G° b ³ D | 3 | | - 4.5 | | | (Å) | of line |
| 4965.82 20132.04 4966.05 20131.11 4966.80 20128.07 4967.97 20123.33 4969.13 20118.63 4970.97 20111.19 4972.22 20106.13 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5013.3136 19941.325 5017.33 19925.36 5019.1762 19918.033 502.608 19912.35 5021.9017 19907.223 5025.83 19891.66 | 3 w 4 w 25 5 7 w 3 w 6 w 4 w * | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ $3d^{5}(^{2}D3)4s$ $3d^{5}(^{4}G)4p$ $3d^{4}4s^{2}$ | z ⁵ G° z ⁵ G° b ³ D | 3 | | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | 0.0005 | 09WAL/HIN |
| 4966.05 20131.11 4966.80 20128.07 4967.97 20123.33 4969.13 20118.63 4970.97 20111.19 4972.22 20106.13 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19955.39 5013.3136 19941.325 5017.33 19925.36 5019.1762 19918.033 502.608 19912.35 5021.9017 19907.223 5025.83 19891.66 | 4 w 25 5 7 w 3 w 6 w 4 w * | $3d^{5}(^{4}G)4p$ $3d^{5}(^{2}D3)4s$ $3d^{5}(^{4}G)4p$ $3d^{4}4s^{2}$ | z ⁵ G° b ³ D | | _ | $3d^{5}(^{4}G)4d$ | f ⁵G | 4 | 0.04 | 53KIE |
| 4966.80 20128.07 4967.97 20123.33 4969.13 20118.63 4970.97 20111.19 4972.22 20106.13 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19955.39 5013.3136 19941.325 5017.33 19925.36 5019.1762 19918.033 502.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.83 19891.66 | 25 5 7 w 3 w 6 w 4 w * | $3d^{5}(^{2}D3)4s$ $3d^{5}(^{4}G)4p$ $3d^{4}4s^{2}$ | b ³ D | _ | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 2 | 0.04 | 53KIE |
| 4967.97 20123.33 4969.13 20118.63 4970.97 20111.19 4972.22 20106.13 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19955.39 5013.3136 19941.325 5017.33 19925.36 5019.1762 19918.033 502.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.83 19891.66 | 5 7 w 3 w 6 w 4 w * | $3d^{5}(^{4}G)4p$ $3d^{4}4s^{2}$ | | 1 | _ | $3d^{5}(^{4}D)4p$ | $w^{3}P^{o}$ | 0 | 0.02 | 53KIE |
| 4969.13 20118.63 4970.97 20111.19 4972.22 20106.13 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19955.39 5013.3136 19941.325 5017.33 19925.36 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5025.83 19891.66 | 7 w 3 w 6 w 4 w * | $3d^44s^2$ | | 3 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 3 | 0.02 | 53KIE |
| 4970.97 20111.19 4972.22 20106.13 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5007.33 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.83 19891.66 | 3 w 6 w 4 w * | | a ³ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.04 | 53KIE |
| 4972.22 20106.13 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5007.33 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 6 w 4 w * | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}(^{6}S)6p$ | w ⁷ P° | 3 | 0.04 | 53KIE |
| 4973.30 20101.76 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 4 w * | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 4 | 0.04 | 53KIE 53KIE |
| 4973.30 20101.76 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5007.8 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.04 | 53KIE 53KIE |
| 4973.30 20101.76 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5009.78 19959.49 5007.33 19955.39 5013.3136 19941.325 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | $3d^{4}(^{1}\text{I})4s4p(^{3}\text{P}^{0})$ | u ³ H° | 4 | 0.04 | 53KIE 53KIE |
| 4977.54 20084.64 4981.607 20068.24 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 4 w* | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 5 | | $3d^{5}(^{4}G)4d$ | ип f ⁵ G | 5 | | |
| 4981.607 20068.24 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | | $3d^{5}(^{4}G)4p$ $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 5 | - | 3d ⁵ (⁴ G)4d | f ⁵ G | | 0.04 | 53KIE |
| 4983.45 20060.82 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 10 w | | z ⁵ G° | 5 6 | - | $3d^{5}(^{4}G)4d$ | f ⁵ G | 6 | 0.04 | 53KIE |
| 4985.956 20050.740 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 15 w | $3d^{5}(^{4}G)4p$ | | - | - | 3d (G)4d | | 6 | 0.04 | 53KIE |
| 4998.57 20000.14 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 1 | $3d^5(^2\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 | 0.02 | 53KIE |
| 5000.95 19990.62 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 4 | $3d^5(^2D3)4s$ | b ³ D | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | $w^{3}F^{o}$ | 4 | 0.002 | 09WAL/HIN |
| 5004.400 19976.842 5005.08 19974.13 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 2 | 0.02 | 53KIE |
| 5005.08 19974.13 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 4 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | - | $3d^4(^{1}I)4s4p(^{3}P^{o})$ | u ³ H ^o | 5 | 0.02 | 53KIE |
| 5008.75 19959.49 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^{5}(^{6}S)5p$ | $w_{3-2}^{5}P^{o}$ | 3 | 0.002 | 09WAL/HIN |
| 5009.78 19955.39 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 7 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H ^o | 6 | 0.02 | 53KIE |
| 5013.3136 19941.325 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 5 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 3 | 0.04 | 53KIE |
| 5017.33 19925.36 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 10 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 3 | 0.04 | 53KIE |
| 5018.158 19922.075 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 44 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | 0.0007 | 09WAL/HIN |
| 5019.1762 19918.033 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | z^3S^o | 1 | 0.02 | 53KIE |
| 5020.608 19912.35 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 3 | $3d^5(^2D3)4s$ | b ³ D | 2 | - | $3d^4(^3G)4s4p(^3P^o)$ | w^3F^o | 3 | 0.003 | 09WAL/HIN |
| 5021.9017 19907.223 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 6 | $3d^44s^2$ | a ⁵ D | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | 0.0018 | 09WAL/HIN |
| 5023.63 19900.37 5025.555 19892.753 5025.83 19891.66 | 15 | $3d^5(^4P)4s$ | b ³ P | 1 | - | $3d^4(^3P1)4s4p(^3P^0)$ | z ³ S° | 1 | 0.02 | 53KIE |
| 5025.555 19892.753 5025.83 19891.66 | 29 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | 0.0007 | 09WAL/HIN |
| 5025.83 19891.66 | 5 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 2 | 0.04 | 53KIE |
| 5025.83 19891.66 | 5 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 3 | 0.002 | 09WAL/HIN |
| 5027.029 19886.919 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^{5}(^{4}D)4p$ | $^{3}P^{o}$ | 1 | 0.02 | 53KIE |
| | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 2 | 0.003 | 09WAL/HIN |
| 5028.052 19882.875 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 2 | 0.003 | 09WAL/HIN |
| 5031.28 19870.12 | 10 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^3(^4F)4s^24p$ | v ³ G ^o | 3 | 0.02 | 53KIE |
| 5032.54 19865.14 | 12 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^{5}(^{2}I)4p$ | x ³ I ^o | 7 | 0.02 | 53KIE |
| 5033.37 19861.87 | 5 | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 2 | 0.02 | 53KIE |
| 5034.65 19856.82 | 7 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{2}I)4p$ | $x^{3}I^{o}$ | 6 | 0.02 | 53KIE |
| 5038.578 19841.335 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 2 | 0.003 | 09WAL/HIN |
| 5039.09 19839.32 | 5 w | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 1 | 0.04 | 53KIE |
| 5042.53 19825.79 | 4 w | $3d^{5}(^{4}D)4s$ | b ⁵D | 2 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 1 | 0.04 | 53KIE |
| 5042.85 19824.53 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^{5}(^{4}D)4p$ | w ³ P ^o | 0 | 0.02 | 53KIE |
| 5043.5907 19821.617 | 6 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{4}(^{3}P1)4s4p(^{3}P^{o})$ | x ³ P ^o | 2 | 0.0019 | 09WAL/HIN |
| 5045.04 19815.92 | | $3d^{5}(^{2}\text{H})4s$ | а D b ³ H | 3 4 | _ | $3d^{5}(^{2}I)4p$ | x P | 5 | 0.0019 | 53KIE |
| 5048.7479 19801.370 | 6 | $3d^44s^2$ | a ⁵D | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | y ⁷ P ^o | 2 | 0.005 | 09WAL/HIN |
| 5048.7479 19801.370 5049.42 19798.73 | 6 23 | $3d^{4}s$ $3d^{5}(^{4}P)4s$ | a D b ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | y P u ⁵ P° | 1 | 0.0005 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|--------------------------------------|---|--------------|--------------------------------|--|--------|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 5051.8970 | 19789.027 | 115 | 3d ⁵ (⁶ S)4s | a ⁵ S | 2 | | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | 0.0003 | 09WAL/HIN |
| 5055.13 | 19776.37 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 2 | 0.02 | 53KIE |
| 5063.24 | 19744.69 | 6 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.02 | 53KIE |
| 5065.9086 | 19734.294 | 11 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.0013 | 09WAL/HIN |
| 5067.7129 | 19727.268 | 22 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.0008 | 09WAL/HIN |
| 5068.2922 | 19725.013 | 32 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | 0.0005 | 09WAL/HIN |
| 5072.7290 | 19707.761 | 11 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 6 | 0.0013 | 09WAL/HIN |
| 5072.9259 | 19706.996 | 200 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 1 | 0.0003 | 09WAL/HIN |
| 5086.21 | 19655.53 | 8 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.02 | 53KIE |
| 5091.8830 | 19633.628 | 34 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | 0.0005 | 09WAL/HIN |
| 5093.427 | 19627.675 | 3 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 4 | 0.003 | 09WAL/HIN |
| 5107.70 | 19572.83 | 7 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | 0.02 | 53KIE |
| 5108.909 | 19568.197 | 12 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.004 | 98ALL/GAR |
| 5110.7489 | 19561.153 | 15 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.0010 | 09WAL/HIN |
| 5112.4846 | 19554.512 | 25 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | 0.0005 | 09WAL/HIN |
| 5113.1255 | 19552.061 | 10 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.0003 | 09WAL/HIN |
| 5119.46 | 19527.87 | 10 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.02 | 53KIE |
| 5122.116 | 19517.743 | 30 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 5 | 0.004 | 98ALL/GAR |
| 5122.770 | 19515.25 | 18 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.02 | 53KIE |
| 5123.4603 | 19512.622 | 88 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 3 | 0.0003 | 09WAL/HIN |
| 5126.168 | 19512.022 | 10 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | y r w ⁵ F° | 1 | 0.0003 | 53KIE |
| 5126.500 | 19501.052 | 15 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.004 | 98ALL/GAF |
| 5129.575 | 19301.032 | 4 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | wг z ⁷ D° | 1 | 0.004 | 09WAL/HIN |
| 5135.66 | 19466.27 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 2 | 0.002 | 53KIE |
| 5135.917 | 19465.297 | 2 | $3d^{5}(^{4}P)4s$ | a G b ³ P | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | y G w ⁵ F° | 3 | 0.02 | 09WAL/HIN |
| 5137.931 | 19463.297 | 4 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | wг у ³ G° | 3 4 | 0.003 | 09WAL/HIN |
| 5138.7065 | 19454.730 | 13 | $3d^44s^2$ | a ⁵ D | 2 | | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | | 0.002 | 09WAL/HIN |
| 5138.86 | | | $3a^{4s}$ $3d^{5}(^{4}P)4s$ | а D b ³ P | 2 | - | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | z D w ⁵F° | 2 | | |
| | 19454.15 | 10 w | $3d^{4}(19)4s$ $3d^{4}4s^{2}$ | b ³ G | 3 | - | $3d^{5}(^{4}G)4p$ | y ³ G° | 2 | 0.04 | 53KIE |
| 5139.6457 5142.262 | 19451.175 19441.280 | 75 | $3d^{4}s$ $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^{4}(^{5}D)4s4p(^{1}P^{0})$ | y ⁵ D° | 3 | 0.0005 0.002 | 09WAL/HIN |
| | | 4 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | - | | y ⁵ D° | 1 1 | | 09WAL/HIN |
| 5144.6674 | 19432.189 | 13 | | a ³P a ³F | | - | $3d^4(^5D)4s4p(^1P^0)$ | y 5D° | • | 0.0013 | 09WAL/HIN |
| 5149.481 | 19414.026 | 2 | $3d^44s^2$ $3d^44s^2$ | a ⁵ D | 4 | - | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° z ⁷ D° | 5 | 0.003 | 09WAL/HIN |
| 5151.8267 | 19405.185 | 13 | $3d^{4}4s^{2}$ $3d^{4}4s^{2}$ | a ⁵ D a ⁵ D | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° z ⁷ D° | 3 | 0.0013 | 09WAL/HIN |
| 5160.465 | 19372.702 | 3 | | a ⁵ D f ⁷ D | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | | 1 | 0.003 | 09WAL/HIN |
| 5160.77 | 19371.56 | 5 | $3d^44s5s$ | | 3 | - | $3d^54p$ | p ³ G ^o | 3 | 0.02 | 53KIE |
| 5161.763 | 19367.829 | 5 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 0 | 0.002 | 09WAL/HIN |
| 5166.2168 | 19351.134 | 90 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | 0.0003 | 09WAL/HIN |
| 5167.9506 | 19344.642 | 6 | $3d^44s^2$ | b ³ G | 4 | - | $3d^5(^4G)4p$ | y ³ G° | 3 | 0.0019 | 09WAL/HIN |
| 5168.625 | 19342.119 | 4 | $3d^44s^2$ | a ⁵ D | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | 0.002 | 09WAL/HIN |
| 5177.4019 | 19309.329 | 20 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | - | $3d^44s5s$ | f ⁷ D | 5 | 0.0008 | 09WAL/HIN |
| 5177.811 | 19307.803 | 10 | $3d^44s^2$ | b ³ G | 3 | - | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}G^{o}$ | 4 | 0.004 | 98ALL/GAF |
| 5183.3984 | 19286.991 | 10 | $3d^44s^2$ | a ⁵ D | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z_{7}^{7}D^{o}$ | 2 | 0.0013 | 09WAL/HIN |
| 5184.5564 | 19282.683 | 33 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | - | $3d^44s5s$ | f ⁷ D | 4 | 0.0005 | 09WAL/HIN |
| 5191.9947 | 19255.058 | 34 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 2 | _ | $3d^44s5s$ | f ⁷ D | 3 | 0.0005 | 09WAL/HII |

43103-8

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|---|--------|--------------|--------------------------------------|-------------------------------|--------|--|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 5193.4917 | 19249.508 | 27 | $3d^44s^2$ | b ³ G | 3 | | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 3 | 0.0005 | 09WAL/HI |
| 5194.60 | 19245.40 | 10 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F ^o | 3 | 0.02 | 53KIE |
| 5196.4461 | 19238.564 | 210 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 5 | 0.0003 | 09WAL/HII |
| 5196.563 | 19238.131 | 5 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | 0.002 | 09WAL/HI |
| 5200.1728 | 19224.777 | 24 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 1 | _ | $3d^44s5s$ | f ⁷ D | 2 | 0.0005 | 09WAL/HI |
| 5204.4981 | 19208.800 | 5900 q | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | 0.0005 | 09WAL/HI |
| 5206.0229 | 19203.174 | 7100 q | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.0005 | 09WAL/HI |
| 5206.1956 | 19202.537 | 45 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 3 | 0.0005 | 09WAL/HI |
| 5206.5405 | 19201.265 | 24 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 4 | 0.0005 | 09WAL/HI |
| 5208.1001 | 19195.515 | 14 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 0.0014 | 09WAL/HI |
| 5208.4094 | 19194.375 | 7800 q | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | 0.0005 | 09WAL/HI |
| 5208.8379 | 19192.796 | 12 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | 0.0014 | 09WAL/HI |
| 5212.2193 | 19180.345 | 16 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | $3d^{5}(^{6}S)6s$ | f ⁵ S | 2 | 0.0008 | 09WAL/HI |
| 5212.2173 | 19175.04 | 5 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 2 | 0.00 | 53KIE |
| 5214.1312 | 19173.312 | 57 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0005 | 09WAL/HI |
| 5214.6132 | 19173.512 | 11 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^{5}(^{6}S)6s$ | f ⁵ S | 2 | 0.0003 | 09WAL/HI |
| 5214.88 | 19170.56 | 4 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | _ | $3d^44s5s$ | e ³ D | 3 | 0.0014 | 53KIE |
| 5215.2843 | 19170.30 | 4 w 9 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 5 | 0.0016 | 09WAL/HI |
| 5215.2845 | 19165.914 | 9 7 | 3a 4s 3d ⁵ (⁶ S)4p | z ⁵ P° | 3 1 | _ | $3d^{5}(^{6}S)6s$ | f ⁵ S | 2 | 0.0016 | 09WAL/HI |
| | | | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | | |
| 5216.59 | 19164.28 | 10 wD? | | a F z ⁷ D° | | - | $3d^{4}4s5s$ | u D f ⁷ D | 4 1 | 0.04 0.0014 | 53KIE |
| 5220.8912 | 19148.487 | 13 | $3d^4(^5D)4s4p(^3P^0)$ $3d^5(^4P)4s$ | z ¹ D ² b ³ P | 1 | - | | w ⁵ D° | - | | 09WAL/HI |
| 5221.7524 | 19145.329 | 81 | $3d^{4}(8)$ | b ³ G | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w D° z ³ G° | 3 | 0.0005 | 09WAL/HI |
| 5222.392 | 19142.983 | 2 | | | 4 | - | $3d^4(^3\text{H})4s4p(^3\text{P}^0)$ | | 3 | 0.003 | 09WAL/HI |
| 5222.6662 | 19141.979 | 8 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | 0.0019 | 09WAL/HI |
| 5223.877 | 19137.542 | 3 | $3d^4(^5D)4s4p(^3P^0)$ | y_{7-0}^{5} P° | 1 | - | $3d^44s5s$ | f ⁵ D | 2 | 0.003 | 09WAL/HI |
| 5224.0635 | 19136.859 | 10 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | $3d^44s5s$ | f ⁷ D | 3 | 0.0014 | 09WAL/HI |
| 5224.5328 | 19135.140 | 29 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $w_{7}^{5}D^{o}$ | 1 | 0.0005 | 09WAL/HI |
| 5224.9247 | 19133.705 | 91 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 5 | _ | $3d^44s5s$ | f ⁷ D | 5 | 0.0003 | 09WAL/HI |
| 5225.0197 | 19133.357 | 44 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 4 | _ | $3d^44s5s$ | f ⁷ D | 4 | 0.0005 | 09WAL/HI |
| 5225.8121 | 19130.456 | 16 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.0008 | 09WAL/HI |
| 5226.8992 | 19126.477 | 34 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0005 | 09WAL/HI |
| 5227.066 | 19125.865 | 5 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 2 | 0.002 | 09WAL/HI |
| 5227.732 | 19123.432 | 4 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.002 | 09WAL/HI |
| 5228.0856 | 19122.137 | 32 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.0005 | 09WAL/HI |
| 5230.2190 | 19114.337 | 10 | $3d^5(^4P)4s$ | a ⁵ P | 1 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.0014 | 09WAL/HI |
| 5236.616 | 19090.988 | 3 | $3d^44s^2$ | b ³ G | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.003 | 09WAL/HI |
| 5237.06 | 19089.37 | 4 | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P ^o | 2 | - | $3d^44s4d$ | e ⁷ F | 2 | 0.02 | 53KIE |
| 5237.36 | 19088.28 | 2 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G ^o | 4 | 0.02 | 53KIE |
| 5238.9608 | 19082.443 | 22 | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 1 | 0.0008 | 09WAL/HI |
| 5240.4723 | 19076.939 | 10 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 2 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.0014 | 09WAL/HI |
| 5240.921 | 19075.306 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.002 | 09WAL/HI |
| 5241.458 | 19073.353 | 5 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | 0.002 | 09WAL/HI |
| 5243.3539 | 19066.455 | 26 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | _ | $3d^44s5s$ | f ⁷ D | 1 | 0.0006 | 09WAL/HI |
| 5247.5646 | 19051.156 | 1250 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^5(^6S)4p$ | z ⁵ P° | 1 | 0.0003 | 09WAL/HI |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------------------|---|--------------|--|---------------------------------------|---|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 5247.92 | 19049.87 | 15 | 3d ⁵ (² H)4s | a ¹ H | 5 | | $3d^5$ (² F1)4p | t ³ G° | 4 | 0.02 | 53KIE |
| 5254.9038 | 19024.549 | 39 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | $3d^44s5s$ | f ⁷ D | 2 | 0.0006 | 09WAL/HIN |
| 5255.117 | 19023.777 | 100 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 4 | _ | $3d^44s5s$ | f ⁷ D | 5 | 0.004 | 98ALL/GAR |
| 5257.0738 | 19016.696 | 6 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.0019 | 09WAL/HIN |
| 5261.7505 | 18999.794 | 24 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.0006 | 09WAL/HIN |
| 5263.76 | 18992.54 | 30 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 4 | _ | $3d^44s5s$ | e ³ D | 3 | 0.02 | 53KIE |
| 5264.1530 | 18991.123 | 2600 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | 0.0003 | 09WAL/HIN |
| 5265.1480 | 18987.534 | 40 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | _ | $3d^44s5s$ | f ⁷ D | 3 | 0.0006 | 09WAL/HIN |
| 5265.7143 | 18985.492 | 1050 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.0003 | 09WAL/HIN |
| 5268.948 | 18973.840 | 5 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.002 | 09WAL/HIN |
| 5271.9995 | 18962.858 | 33 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 3 | _ | $3d^44s5s$ | f ⁷ D | 4 | 0.0006 | 09WAL/HIN |
| 5273.4250 | 18957.732 | 28 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 5 | _ | $3d^44s5s$ | f ⁷ D | 4 | 0.0006 | 09WAL/HIN |
| 5275.1736 | 18951.448 | 100 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | 0.0003 | 09WAL/HIN |
| 5275.2747 | 18951.085 | 150 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | 0.0003 | 09WAL/HIN |
| 5275.7463 | 18949.391 | 220 | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 2 | 0.0003 | 09WAL/HIN |
| 5276.0670 | 18949.391 | 250 | $3d^{5}(^{6}S)4p$ | z P z ⁷ P° | 2 | _ | 3d ⁵ (⁶ S)4d | e D e ⁷ D | 1 | 0.0003 | 09WAL/HIN |
| 5278.235 | 18940.456 | 40 | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}F^{o}$ | 3 | | $3d^44s5s$ | e D e ³ D | _ | 0.0003 | |
| | | | $3d^{5}(^{4}P)4s$ | b ³ P | | _ | 3a 4s3s 3d ⁵ (⁴ P)4p | y ³ D° | 2 | | 98ALL/GAR |
| 5280.2814 | 18933.116 | 29 | | b ³ H | 1 | - | 3d*(P)4p | y ³ H ^o | 2 | 0.0006 | 09WAL/HIN |
| 5285.37 | 18914.89 | 7 | $3d^{5}(^{2}\text{H})4s$ | b ³ P | 5 | - | $3d^4(^3H)4s4p(^1P^0)$ | w H | 5 | 0.02 | 53KIE |
| 5285.6360 | 18913.936 | 10 | $3d^{5}(^{4}P)4s$ | | 0 | - | $3d^{5}(^{4}P)4p$ | y ³ D° f ⁷ D | 1 | 0.0014 | 09WAL/HIN |
| 5287.1780 | 18908.420 | 12 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | - | $3d^44s5s$ | | 3 | 0.0014 | 09WAL/HIN |
| 5287.63 | 18906.80 | 10 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 2 | - | $3d^44s5s$ | e ³ D | 1 | 0.04 | 53KIE |
| 5288.11 | 18905.09 | 7 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 0 | 0.02 | 53KIE |
| 5289.271 | 18900.937 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | - | $3d^{5}(^{4}P)4p$ | y ³ D° | 1 | 0.003 | 09WAL/HIN |
| 5292.857 | 18888.132 | 7 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 5 | 0.002 | 09WAL/HIN |
| 5293.3761 | 18886.280 | 11 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 2 | 0.0014 | 09WAL/HIN |
| 5296.6905 | 18874.462 | 2100 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | 0.0003 | 09WAL/HIN |
| 5297.3762 | 18872.019 | 460 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 3 | - | $3d^{5}(^{6}S)4d$ | e ⁷ D | 4 | 0.0003 | 09WAL/HIN |
| 5298.0143 | 18869.746 | 340 | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 3 | - | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | 0.0003 | 09WAL/HIN |
| 5298.2715 | 18868.830 | 3540 | $3d^44s^2$ | a ⁵ D | 2 | - | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.0003 | 09WAL/HIN |
| 5298.4900 | 18868.052 | 110 | $3d^5(^6S)4p$ | $z^{7}P^{o}$ | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 2 | 0.0003 | 09WAL/HIN |
| 5300.7451 | 18860.025 | 530 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^5(^6S)4p$ | z ⁵ P° | 3 | 0.0003 | 09WAL/HIN |
| 5304.1796 | 18847.813 | 19 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 4 | _ | $3d^44s5s$ | f ⁷ D | 4 | 0.0008 | 09WAL/HIN |
| 5307.275 | 18836.820 | 6 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 3 | - | $3d^44s5s$ | f ⁵ D | 3 | 0.002 | 09WAL/HIN |
| 5308.70 | 18831.76 | 4 | $3d^5(^4F)4s$ | a ⁵ F | 1 | - | $3d^5(^4D)4p$ | w^3D^o | 2 | 0.02 | 53KIE |
| 5309.469 | 18829.037 | 10 | $3d^{5}(^{2}I)4s$ | b ¹I | 6 | _ | $3d^4(^{1}I)4s4p(^{3}P^{0})$ | y ³ I ^o | 5 | 0.004 | 98ALL/GAR |
| 5312.8557 | 18817.034 | 27 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 3 | _ | $3d^44s5s$ | f ⁷ D | 3 | 0.0006 | 09WAL/HIN |
| 5318.7707 | 18796.108 | 21 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 2 | _ | $3d^44s5s$ | f ⁷ D | 2 | 0.0008 | 09WAL/HIN |
| 5324.06 | 18777.43 | 20 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.02 | 53KIE |
| 5328.3238 | 18762.409 | 930 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 5 | 0.0003 | 09WAL/HIN |
| 5329.1370 | 18759.546 | 290 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 4 | 0.0003 | 09WAL/HIN |
| 5329.7831 | 18757.272 | 51 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | 0.0006 | 09WAL/HIN |
| 5333.71 | 18743.46 | 12 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 2 | 0.02 | 53KIE |
| 5340.4469 | 18719.818 | 19 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | _ | $3d^44s5s$ | f ⁷ D | 1 | 0.0009 | 09WAL/HIN |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificatio | Classification | | | | | | | | |
|-------------------------------|----------------------------|------------------|--------------------------------------|-------------------------------|--------|---------------|--|-------------------------------|--------|-------------------|----------------|--|--|--|--|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line | | | | |
| 5344.7564 | 18704.724 | 10 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^44s5s$ | f ⁷ D | 2 | 0.0014 | 09WAL/HIN | | | | |
| 5345.541 | 18701.979 | * | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 4 | _ | $3d^44s5s$ | f ⁷ D | 3 | 0.004 | 98ALL/GAR | | | | |
| 5345.541 | 18701.979 | * | $3d^{5}(^{6}S)4d$ | e ⁷ D | 4 | _ | $3d^5(^2F2)4p$ | p ³ F° | 4 | 0.004 | 98ALL/GAR | | | | |
| 5345.7959 | 18701.087 | 5100 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{6}S)4p$ | $z^{5}P^{o}$ | 2 | 0.0003 | 09WAL/HIN | | | | |
| 5348.3141 | 18692.282 | 3200 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{6}S)4p$ | $z^{5}P^{o}$ | 3 | 0.0003 | 09WAL/HIN | | | | |
| 5355.72 | 18666.43 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 1 | 0.00 | 53KIE | | | | |
| 5356.30 | 18664.41 | 2 w | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.04 | 53KIE | | | | |
| 5356.51 | 18663.68 | 8 W | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^{5}(^{4}D)4p$ | s 5F° | 1 | 0.02 | 53KIE | | | | |
| 5362.99 | 18641.13 | 25 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{4}D)4p$ | x ³ F° | 3 | 0.02 | 53KIE 53KIE | | | | |
| 5365.99 | 18630.71 | 20 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^{4}(^{1}\text{I})4s4p(^{3}\text{P}^{0})$ | u ³ H° | 5 | 0.02 | 53KIE 53KIE | | | | |
| 5367.790 | 18624.461 | 20 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | x ³ F° | 2 | 0.003 | 09WAL/HIN | | | | |
| 5368.5365 | 18621.872 | 16 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | x Fo | 3 | 0.003 | 09WAL/HIN | | | | |
| 5371.48 | 18611.67 | 50 | $3d^{5}(^{2}D3)4s$ | b D b ³ D | 3 | _ | $3d^{5}(^{4}D)4p$ | $x^{3}F^{0}$ | 3 4 | 0.0009 | 53KIE | | | | |
| 5373.7013 | 18603.974 | 50 11 | $3d^{5}(^{2}D3)4s$ | вър в ³ D | 3 1 | _ | $3d^{5}(^{4}D)4p$ | x F x ³ F° | 2 | 0.02 | 09WAL/HIN | | | | |
| 5374.68 | 18603.974 | 7 w | $3d^{5}(^{2}F2)4s$ | d ³ F | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D ^o | 2 | 0.0014 | 53KIE | | | | |
| 53/4.68 5385.30 | 18563.91 | | $3d^{5}(P2)4s$ $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w ⁵ G° | 4 | 0.04 | | | | | |
| | | 20 s | | b ³ P | 3 1 | | $3d^{5}(^{4}P)4p$ | y ³ P° | · · | 0.006 | 53KIE | | | | |
| 5386.9674 | 18558.160 | 65 | $3d^{5}(^{4}P)4s$ | b ³ P | | - | 3a ² (1P)4p | y P | 2 | | 09WAL/HIN | | | | |
| 5387.5617 | 18556.113 | 41 | $3d^{5}(^{4}P)4s$ | ь ³ Р | 0 | - | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 1 | 0.0006 | 09WAL/HIN | | | | |
| 5390.3803 | 18546.410 | 32 | $3d^{5}(^{4}P)4s$ | | 1 | - | $3d^{5}(^{4}P)4p$ | y ³ P° | 0 | 0.0006 | 09WAL/HIN | | | | |
| 5391.34 | 18543.11 | 35 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 1 | 0.02 | 53KIE | | | | |
| 5400.5967 | 18511.326 | 110 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.0003 | 09WAL/HIN | | | | |
| 5404.993 | 18496.269 | 35 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^5(^4P)4p$ | y ³ P° | 1 | 0.004 | 98ALL/GAR | | | | |
| 5406.43 | 18491.35 | 10 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 0.02 | 53KIE | | | | |
| 5409.7834 | 18479.891 | 8500 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | 0.0003 | 09WAL/HIN | | | | |
| 5412.50 | 18470.62 | 10 | $3d^44s^2$ | b ³ G | 4 | - | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 3 | 0.02 | 53KIE | | | | |
| 5421.97 | 18438.36 | 5 w | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 2 | 0.04 | 53KIE | | | | |
| 5427.974 | 18417.961 | 12 * | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 2 | 0.004 | 98ALL/GAR | | | | |
| 5427.974 | 18417.961 | 12 * | $3d^5(^4D)4s$ | a ³ D | 3 | _ | $3d^5(^4G)4p$ | y ³ G ^o | 4 | 0.004 | 98ALL/GAR | | | | |
| 5432.35 | 18403.12 | 25 | $3d^44s^2$ | b ³ G | 3 | - | $3d^5(^4G)4p$ | y^3F^o | 3 | 0.02 | 53KIE | | | | |
| 5433.86 | 18398.01 | 8 | $3d^5(^2F2)4s$ | d ³ F | 2 | - | $3d^4(^3D)4s4p(^3P^0)$ | v ³ D ^o | 1 | 0.02 | 53KIE | | | | |
| 5437.79 | 18384.71 | 15 | $3d^{6}$ | c ⁵ D | 4 | _ | $3d^44s5p$ | s ⁵ D° | 4 | 0.02 | 53KIE | | | | |
| 5442.4069 | 18369.118 | 21 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | y^3F^o | 2 | 0.0009 | 09WAL/HIN | | | | |
| 5443.34 | 18365.97 | 10 | $3d^5(^4D)4s$ | b ⁵ D | 4 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 3 | 0.02 | 53KIE | | | | |
| 5446.764 | 18354.423 | 2 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | y^3F^o | 4 | 0.003 | 09WAL/HIN | | | | |
| 5447.50 | 18351.94 | 7 | $3d^5(^2F2)4s$ | d ³ F | 4 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 5 | 0.02 | 53KIE | | | | |
| 5447.92 | 18350.53 | 5 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I ^o | 5 | _ | $3d^44p^2$ | $f^{7}F$ | 6 | 0.02 | 53KIE | | | | |
| 5462.41 | 18301.85 | 15 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.02 | 53KIE | | | | |
| 5462.91 | 18300.18 | 10 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 2 | 0.02 | 53KIE | | | | |
| 5463.963 | 18296.650 | 40 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | y ³ F ^o | 3 | 0.004 | 98ALL/GAR | | | | |
| 5464.39 | 18295.22 | 10 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 3 | 0.02 | 53KIE | | | | |
| 5468.17 | 18282.57 | 10 | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.02 | 53KIE | | | | |
| 5476.03 | 18256.33 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{4}D)4p$ | x ³ F° | 4 | 0.02 | 53KIE | | | | |
| 5480.5063 | 18241.421 | 30 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 4 | 0.0006 | 09WAL/HIN | | | | |
| 5481.01 | 18239.74 | 30 7 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w ⁵ G° | 5 | 0.000 | 53KIE | | | | |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---|-------------------------|--------|--------------|---|-------------------------------|--------|--|--------------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 5485.19 | 18225.85 | 3 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}D)4p$ | w ³ P ^o | 2 | 0.02 | 53KIE |
| 5485.72 | 18224.08 | 8 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 5 | 0.02 | 53KIE |
| 5486.510 | 18221.460 | 10 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | $3d^4(^3H)4s4p(^1P^0)$ | w^3H^o | 5 | 0.004 | 98ALL/GAF |
| 5489.03 | 18213.09 | 10 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.02 | 53KIE |
| 5490.30 | 18208.88 | 8 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 4 | 0.02 | 53KIE |
| 5494.16 | 18196.09 | 4 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 6 | 0.02 | 53KIE |
| 5497.66 | 18184.50 | 18 | $3d^5(^2F2)4s$ | d ³ F | 3 | _ | $3d^4(^3\text{H})4s4p(^1\text{P}^{\text{o}})$ | w ³ H ^o | 4 | 0.02 | 53KIE |
| 5503.72 | 18164.48 | 4 * | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 3 | 0.02 | 53KIE |
| 5503.72 | 18164.48 | 4 * | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}G^{o}$ | 3 | 0.02 | 53KIE |
| 5505.00 | 18160.26 | 10 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 5 | 0.02 | 53KIE |
| 5507.45 | 18152.18 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 2 | 0.02 | 53KIE |
| 5509.94 | 18143.98 | 15 | $3d^{5}(^{2}H)4s$ | b ³ H | 6 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 5 | 0.02 | 53KIE |
| 5511.47 | 18138.94 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 2 | 0.02 | 53KIE |
| 5512.05 | 18137.03 | 7 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.02 | 53KIE |
| 5512.70 | 18134.89 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 2 | 0.02 | 53KIE |
| 5513.38 | 18132.66 | 5 | $3d^{5}(^{2}H)4s$ | b ³ H | 5 | _ | $3d^{5}(^{6}S)16p$ | $^{7}P^{o}$ | 4 | 0.02 | 53KIE |
| 5519.00 | 18114.19 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 2 | 0.02 | 53KIE |
| 5525.91 | 18091.54 | 4 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 3 | 0.02 | 53KIE |
| 5526.49 | 18089.64 | 7 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 4 | 0.02 | 53KIE |
| 5528.37 | 18083.49 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.02 | 53KIE |
| 5529.55 | 18079.63 | 10 * | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 4 | 0.02 | 53KIE |
| 5529.55 | 18079.63 | 10 * | $3d^{5}(^{4}G)4s$ | a ⁵G | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | 0.02 | 53KIE |
| 5534.63 | 18063.04 | 7 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | _ | $3d^44s5s$ | e ⁵ H | 4 | 0.02 | 53KIE |
| 5538.20 | 18051.39 | 6 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.02 | 53KIE |
| 5540.70 | 18043.25 | 15 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G° | 4 | 0.02 | 53KIE |
| 5543.33 | 18034.69 | 20 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | _ | $3d^44s5s$ | e ⁵ H | 3 | 0.02 | 53KIE |
| 5548.61 | 18017.53 | 15 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 4 | 0.02 | 53KIE |
| 5549.17 | 18017.33 | 7 | $3d^{5}(^{4}D)4s$ | b ⁵D | 0 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 1 | 0.02 | 53KIE 53KIE |
| 5554.32 | 17999.01 | 15 * | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | 0.02 | 53KIE |
| 5554.32 | 17999.01 | 15 * | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 4 | 0.02 | 53KIE 53KIE |
| 5554.32 | 17999.01 | 15 * | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w Fo | 1 | 0.02 | 53KIE 53KIE |
| 5555.59 | 17994.89 | 8 | $3d^{5}(^{4}D)4s$ | a D a ³ D | 2 | _ | $3d^{4}(^{3}G)4s4p(^{3}P^{o})$ | w F w ⁵ F° | 2 | 0.02 | 53KIE 53KIE |
| 5556.18 | 17994.89 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 1 | 0.02 | 53KIE 53KIE |
| 5559.17 | 17983.30 | 25 | $3d^{5}(^{2}G2)4s$ | b ¹ G | 4 | _ | 3a (F1)434p(F) | х D 0 | 3 | 0.02 | 53KIE 53KIE |
| 5563.66 | 17968.79 | 15 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^5(^4G)4p$ | y ⁵ H ^o | 3 | 0.02 | 53KIE 53KIE |
| 5565.40 | 17963.17 | 5 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 4 | _ | $3d^{5}(^{2}D1)4p$ | у п v ³ F° | 3 4 | 0.02 | 53KIE 53KIE |
| 5566.55 | 17959.46 | | $3d^44s^2$ | b ³ G | 4 | | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 5 | 0.02 | 53KIE 53KIE |
| | 17939.46 | 20 12 | $3d^{4}s$ $3d^{5}(^{2}H)4s$ | b ³ H | 4 | _ | $3d^3(^4F)4s^24p$ | y ³ G° | 3 | 0.02 | |
| 5574.387 5575.18 | 17934.212 17931.66 | 12 | $3d^{5}(^{4}D)4s$ $3d^{5}(^{4}D)4s$ | b °H b ⁵D | 4 1 | _ | $3d^{4}(^{3}P1)4s^{4}p$ $3d^{4}(^{3}P1)4s^{4}p(^{3}P^{0})$ | x ⁵ D° | 0 | 0.004 | 98ALL/GAR 53KIE |
| | | | $3d^{4}(^{3}\text{F1})4s4p(^{3}\text{P}^{0})$ | у ⁵ G° | • | | $3d^{5}(^{4}G)4d$ | f ⁵ G | | | |
| 5576.48 | 17927.48 | 8 | | y ⁷ P° | 6 | - | | f ⁷ S | 6 | 0.02 | 53KIE |
| 5580.48 | 17914.63 | 25 | $3d^4(^5D)4s4p(^3P^0)$ | | 2 | - | $3d^{5}(^{6}S)6s$ | | 3 | 0.02 | 53KIE |
| 5581.60 | 17911.04 | 15 | $3d^44s^2$ | b ³ G | 4 | - | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 4 | 0.02 | 53KIE |
| 5588.05 | 17890.36 | 30 | $3d^44s^2$ | b ³ G | 5 | - | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 6 | 0.02 | 53KIE |
| 588.23 | 17889.79 | 12 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 3 | 0.02 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---------------------------|-------------------------------|---|--------------|-------------------------------------|-------------------------------|---|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 5592.44 | 17876.32 | 10 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | _ | 3d ⁵ (⁶ S)5d | g ⁷ D | 2 | 0.02 | 53KIE |
| 5597.87 | 17858.98 | 18 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.02 | 53KIE |
| 5600.68 | 17850.02 | 12 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 2 | 0.02 | 53KIE |
| 5601.80 | 17846.45 | 12 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 5 | 0.02 | 53KIE |
| 5609.17 | 17823.00 | 35 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 3 | _ | $3d^{5}(^{6}S)6s$ | f ⁷ S | 3 | 0.02 | 53KIE |
| 5623.69 | 17776.98 | 10 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | 0.02 | 53KIE |
| 5623.69 | 17776.98 | 10 | $3d^5(^2F2)4s$ | d ³ F | 3 | _ | $3d^44s5p$ | q ⁵ F° | 3 | 0.02 | 53KIE |
| 5625.58 | 17771.01 | 10 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{o}$ | 1 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.02 | 53KIE |
| 5628.6425 | 17761.343 | 44 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^5(^4G)4p$ | $z^{3}H^{o}$ | 4 | 0.0006 | 09WAL/HI |
| 5638.1769 | 17731.308 | 9 | $3d^5(^4D)4s$ | a ³ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.0019 | 09WAL/HI |
| 5641.738 | 17720.117 | 3 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.003 | 09WAL/HII |
| 5642.359 | 17718.167 | 7 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.002 | 09WAL/HI |
| 5644.178 | 17712.456 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.003 | 09WAL/HI |
| 5647.890 | 17700.815 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | _ | $3d^44s5s$ | f ⁵ D | 0 | 0.003 | 09WAL/HI |
| 5648.261 | 17699.652 | 6 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}F^{o}$ | 2 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.002 | 09WAL/HI |
| 5649.386 | 17696.127 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.002 | 09WAL/HI |
| 5654.10 | 17681.37 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^5(^4G)4p$ | z ⁵ G° | 2 | 0.02 | 53KIE |
| 5658.6310 | 17667.216 | 10 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.0016 | 09WAL/HI |
| 5659.52 | 17664.44 | 10 | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 2 | _ | $3d^44s5s$ | e ⁵ H | 3 | 0.02 | 53KIE |
| 5662.64 | 17654.71 | 15 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | $z^{3}H^{o}$ | 4 | 0.02 | 53KIE |
| 5664.0302 | 17650.375 | 48 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^{5}(^{4}G)4p$ | $z^{3}H^{o}$ | 5 | 0.0006 | 09WAL/HI |
| 5664.580 | 17648.661 | 6 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.002 | 09WAL/HI |
| 5666.99 | 17641.16 | 10 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^5(^4G)4p$ | z ⁵ G° | 3 | 0.02 | 53KIE |
| 5667.83 | 17638.54 | 18 | $3d^{5}(^{2}I)4s$ | b ¹I | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | $z^{-1}H^{o}$ | 5 | 0.02 | 53KIE |
| 5671.99 | 17625.61 | 12 | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | _ | $3d^44s5s$ | e ⁵ H | 4 | 0.02 | 53KIE |
| 5674.175 | 17618.817 | 7 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.002 | 09WAL/HI |
| 5675.067 | 17616.049 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.003 | 09WAL/HI |
| 5676.32 | 17612.16 | 10 | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | _ | $3d^44s5s$ | e ⁵ H | 5 | 0.02 | 53KIE |
| 5677.78 | 17607.63 | 12 | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 5 | _ | $3d^44s5s$ | e ⁵ H | 6 | 0.02 | 53KIE |
| 5679.42 | 17602.55 | 8 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | 0.02 | 53KIE |
| 5681.07 | 17597.43 | 40 | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | _ | $3d^44p^2$ | f ⁷ F | 4 | 0.02 | 53KIE |
| 5682.4950 | 17593.022 | 15 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.0013 | 09WAL/HI |
| 5689.08 | 17572.66 | 10 | $3d^6$ | c ⁵ D | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 3 | 0.02 | 53KIE |
| 5690.961 | 17566.850 | 20 | $3d^5(^2G2)4s$ | c ³ G | 4 | _ | $3d^{5}(^{4}G)5p$ | v ³ H ^o | 4 | 0.004 | 98ALL/GA |
| 5694.7404 | 17555.192 | 32 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.0006 | 09WAL/HI |
| 5696.20 | 17550.69 | 50 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 | 0.02 | 53KIE |
| 5698.3185 | 17544.169 | 54 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 5 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.0006 | 09WAL/HI |
| 5700.5114 | 17537.420 | 10 | $3d^5(^4D)4s$ | a ³ D | 3 | _ | $3d^5(^4P)4p$ | y ³ D ^o | 3 | 0.0016 | 09WAL/HI |
| 5702.3063 | 17531.900 | 55 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^{5}(^{4}G)4p$ | z ³ H ^o | 6 | 0.0007 | 09WAL/HI |
| 5712.7714 | 17499.784 | 39 | $3d^5(^4D)4s$ | b ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | 0.0007 | 09WAL/HI |
| 5715.20 | 17492.35 | 15 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 3 | 0.02 | 53KIE |
| 5716.10 | 17489.59 | 10 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | 0.02 | 53KIE |
| 5719.8157 | 17478.232 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D ^o | 4 | 0.0016 | 09WAL/HI |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--------------------------------|-------------------------|---|--------------|--|-------------------------------|--------|--|--------------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 5721.78 | 17472.23 | 10 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 2 | 0.02 | 53KIE |
| 5729.200 | 17449.603 | 20 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}P^{o}$ | 2 | 0.004 | 98ALL/GAR |
| 5735.536 | 17430.327 | 1 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 2 | 0.003 | 09WAL/HIN |
| 5736.624 | 17427.021 | 4 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 2 | 0.003 | 09WAL/HIN |
| 5738.530 | 17421.233 | 8 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 4 | 0.002 | 09WAL/HIN |
| 5742.56 | 17409.01 | 8 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | 0.02 | 53KIE |
| 5743.11 | 17407.34 | 10 | $3d^{5}(^{2}H)4s$ | a ¹ H | 5 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 | 0.02 | 53KIE |
| 5746.4119 | 17397.338 | 23 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 6 | 0.0007 | 09WAL/HIN |
| 5747.83 | 17393.05 | 40 s* | $3d^{6}$ | c ⁵ D | 1 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 1 | 0.04 | 53KIE |
| 5747.83 | 17393.05 | 40 s* | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 5 | _ | εω (Σ) ω φ(Γ) | x ³ G° | 5 | 0.04 | 53KIE |
| 5753.66 | 17375.42 | 25 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 4 | 0.02 | 53KIE |
| 5755.30 | 17370.47 | 10 | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 6 | 0.02 | 53KIE |
| 5758.26 | 17361.54 | 25 s | $3d^44s^2$ | a ³ F | 4 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | 0.04 | 53KIE |
| 5761.51 | 17351.75 | 10 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}D)4p$ | w ³ P° | 2 | 0.02 | 53KIE |
| 5762.13 | 17349.88 | 15 | $3d^5(^2\text{F2})4s$ | d ³ F | 4 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G ^o | 4 | 0.02 | 53KIE |
| 5766.32 | 17337.27 | 15 | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^4(^1I)4s4p(^3P^0)$ | u ³ H° | 5 | 0.02 | 53KIE |
| 5772.663 | 17318.225 | 25 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.004 | 98ALL/GAR |
| 5774.94 | 17311.40 | 40 s | $3d^44s^2$ | c ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | $w^{3}P^{o}$ | 1 | 0.04 | 53KIE |
| 5777.32 | 17304.26 | 20 | $3d^{5}(^{4}G)4p$ | z ³ H° | 5 | _ | $3d^44p^2$ | f ⁷ F | 6 | 0.02 | 53KIE |
| 5777.748 | 17304.28 | 5 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P° | 1 | 0.003 | 09WAL/HIN |
| 5780.9050 | 17293.534 | 12 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.0017 | 09WAL/HIN |
| 5781.1791 | 17292.714 | 28 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | 0.0007 | 09WAL/HIN |
| 5781.7512 | 17291.003 | 33 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 0 | 0.0007 | 09WAL/HIN |
| 5783.0642 | 17287.077 | 77 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | 0.0007 | 09WAL/HIN |
| 5783.109 | 17286.942 | 3 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 2 | 0.003 | 09WAL/HIN |
| 5783.8498 | 17284.729 | 100 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.0003 | 09WAL/HIN |
| 5784.9694 | 17281.384 | 85 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | 0.0003 | 09WAL/HIN |
| 5785.7351 | 17279.097 | 62 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.0007 | 09WAL/HIN |
| 5785.92 | 17278.54 | 10 * | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 3 | 0.02 | 53KIE |
| 5785.92 | 17278.54 | 10 * | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 2 | 0.02 | 53KIE |
| 5787.021 | 17275.257 | 8 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ D° | 3 | 0.002 | 09WAL/HIN |
| 5787.9184 | 17273.237 | 170 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | 0.002 | 09WAL/HIN |
| 5788.3809 | 17272.379 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.0003 | 09WAL/HIN |
| 5790.10 | 17266.07 | 25 | $3d^{5}(^{4}F)4s$ | c ³ F | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 3 | 0.0017 | 53KIE |
| 5790.10 | 17264.429 | 23 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{7}F^{o}$ | 4 | 0.0007 | 09WAL/HIN |
| 5790.0507 | 17263.516 | 340 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | 0.0007 | 09WAL/HIN |
| 5790.9570 5791.758 | 17261.128 | 25 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^{4}(^{3}\text{H})4s4p(^{3}\text{P}^{0})$ | y ³ H° | 5 | 0.0003 | 98ALL/GAR |
| 5792.173 | 17259.891 | 6 | $3d^44s^2$ | a ⁵ D | 0 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁷ F° | 1 | 0.004 | 09WAL/HIN |
| 5794.59 | 17252.69 | 12 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^{3}(^{4}F)4s^{2}4p$ | v ³ G° | 3 | 0.002 | 53KIE |
| 5796.745 | 17232.69 | 40 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 2 | _ | $3d^3(^4F)4s^24p$ | v G v ³ G° | 3 | 0.02 | 98ALL/GAR |
| | | 40 30 s | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁷ F° | 1 | | $3d^{5}(^{6}S)4d$ | e ⁷ D | | | |
| 5797.90 5798.5083 | 17242.84 | 30 s 19 | $3d^{4}4s^{2}$ | z F a ⁵ D | 4 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | e D z ⁷ F° | 1 5 | 0.04 0.0010 | 53KIE 09WAL/HIN |
| | 17241.034 | 30 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | | $3d^4(^3H)4s4p(^3P^0)$ | z F y ³ H° | | | |
| 5801.14 | 17233.21 | 30 | 5a (1)4s | a I | 5 | _ | 3a (H)4s4p(P) | у Н | 4 | 0.03 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---|-------------------------------|--------|---------------|--|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 5815.865 | 17189.581 | 20 | 3d ⁵ (² D3)4s | b ³ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | ³ D ^o | 2 | 0.004 | 98ALL/GAR |
| 5818.49 | 17181.83 | 8 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.03 | 53KIE |
| 5822.87 | 17168.90 | 7 * | $3d^5(^2D3)4s$ | b ³ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.03 | 53KIE |
| 5822.87 | 17168.90 | 7 * | $3d^44s^2$ | a ³ H | 5 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ F° | 4 | 0.03 | 53KIE |
| 5824.05 | 17165.42 | 15 | $3d^4(^3H)4s4p(^3P^0)$ | z ³ I ^o | 5 | _ | $3d^44s5s$ | e ⁵ H | 4 | 0.03 | 53KIE |
| 5825.43 | 17161.36 | 10 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.03 | 53KIE |
| 5828.88 | 17151.20 | 15 | $3d^5(^2F1)4s$ | b ³ F | 4 | _ | $3d^{5}(^{4}D)4p$ | w ³ D ^o | 3 | 0.03 | 53KIE |
| 5837.814 | 17124.952 | 2 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 4 | 0.003 | 09WAL/HIN |
| 5838.38 | 17123.29 | 15 | $3d^5(^2G2)4s$ | c ³ G | 3 | _ | $3d^44s5p$ | q ⁵ F° | 3 | 0.03 | 53KIE |
| 5838.669 | 17122.444 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.002 | 09WAL/HIN |
| 5843.208 | 17109.143 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.003 | 09WAL/HIN |
| 5844.595 | 17105.113 | 6 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.002 | 09WAL/HIN |
| 5847.77 | 17095.80 | 20 | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 3 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 3 | 0.03 | 53KIE |
| 5849.019 | 17093.00 | 1 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 7 | 0.003 | 09WAL/HIN |
| 5852.083 | 17083.197 | 3 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{\circ}$ | 1 | 0.003 | 09WAL/HIN |
| 5854.27 | 17076.82 | 75 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 2 | 0.003 | 53KIE |
| 5856.437 | 17070.498 | 2 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 3 | 0.003 | 09WAL/HIN |
| 5858.15 | 17070.498 | 12 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 1 | 0.003 | 53KIE |
| 5862.80 | 17003.31 | 25 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.03 | 53KIE 53KIE |
| 5863.448 | 17050.086 | 3 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | 0.003 | 09WAL/HIN |
| 5864.028 | 17030.080 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{0}$ | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 2 | 0.003 | 09WAL/HIN |
| 5864.44 | 17047.20 | 20 w | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 4 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 3 | 0.003 | 53KIE |
| 5865.88 | 17047.20 | 20 w 10 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ P° | 0 | 0.03 | 53KIE 53KIE |
| 5865.88 | 17043.02 | 10 | $3d^{5}(^{6}S)6p$ | а D w ⁷ P° | 3 | | $3d^{4}4s5s$ | у Р e ⁵ H | 4 | 0.03 | 53KIE 53KIE |
| | | | $3d^{5}(^{4}D)4s$ | a ³ D | 3 1 | _ | $3d^{4}SSS$ $3d^{5}(^{4}P)4p$ | y ³ P ^o | 4 1 | | |
| 5867.05 | 17039.62 | 50 | $3d^{5}$ (D)4s $3d^{5}$ (⁴ D)4s | a D a ³ D | 2 | - | | y ³ P ^o | 1 | 0.03 | 53KIE |
| 5867.98 | 17036.92 | 10 | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4p$ | a ⁵D y ⁵H° | | _ | $3d^{5}(^{4}P)4p$ $3d^{5}(^{4}G)4d$ | y ⁵ G | • | 0.03 | 53KIE |
| 5871.18 | 17027.63 | 15 75 | | | 5 | - | | | 5 | 0.03 | 53KIE |
| 5873.04 | 17022.24 | 75 s | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | - | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H ^o | 5 | 0.06 | 53KIE |
| 5875.63 | 17014.74 | 25 | $3d^44s^2$ | c ³ D | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 3 | 0.03 | 53KIE |
| 5876.555 | 17012.058 | 3 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | 0.003 | 09WAL/HIN |
| 5878.04 | 17007.76 | 50 s | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 5 | - | $3d^{5}(^{4}G)4d$ | f ⁵ G | 4 | 0.06 | 53KIE |
| 5879.81 | 17002.64 | 20 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | 0.03 | 53KIE |
| 5881.43 | 16997.96 | 15 | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H ^o | 6 | - | $3d^44s5s$ | e ⁵ H | 7 | 0.03 | 53KIE |
| 5884.436 | 16989.274 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | 0.003 | 09WAL/HIN |
| 5885.070 | 16987.444 | 1 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | - | 4.2 2.0 | | 4 | 0.003 | 09WAL/HIN |
| 5886.423 | 16983.538 | 1 | $3d^44s^2$ | $c^{3}D$ | 1 | - | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^o | 2 | 0.003 | 09WAL/HIN |
| 5888.007 | 16978.970 | 3 | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | - | $3d^{5}(^{2}I)4p$ | $y_{\epsilon}^{1}I^{o}$ | 6 | 0.003 | 09WAL/HIN |
| 5892.33 | 16966.51 | 35 s | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 6 | - | $3d^{5}(^{4}G)4d$ | f ⁵ G | 6 | 0.06 | 53KIE |
| 5894.87 | 16959.20 | 3 | $3d^5(^2I)4s$ | a ³ I | 5 | - | $3d^5(^4G)4p$ | u ⁵ F° | 4 | 0.03 | 53KIE |
| 5902.176 | 16938.209 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 0 | 0.003 | 09WAL/HIN |
| 5904.198 | 16932.409 | 40 | $3d^5(^4G)4p$ | y ⁵ H° | 7 | _ | $3d^5(^4G)4d$ | f ⁵ G | 6 | 0.005 | 98ALL/GAR |
| 5915.959 | 16898.747 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 4 | _ | $3d^5(^6S)4d$ | e ⁷ D | 4 | 0.004 | 09WAL/HIN |
| 5916.756 | 16896.471 | 3 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 4 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | 0.004 | 09WAL/HIN |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|--------------------------------------|--------|--------------|-------------------------------------|---|--------|--|----------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 5917.97 | 16893.01 | 15 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 6 | 0.03 | 53KIE |
| 5919.90 | 16887.50 | 15 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | 0.03 | 53KIE |
| 5928.61 | 16862.69 | 7 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}\mathrm{D^{o}}$ | 2 | 0.03 | 53KIE |
| 5930.35 | 16857.74 | 12 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | 0.03 | 53KIE |
| 5933.240 | 16849.528 | 1 | $3d^{5}(^{2}H)4s$ | b ³ H | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | $^{3}G^{o}$ | 4 | 0.004 | 09WAL/HI |
| 5935.02 | 16844.48 | 15 | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | $3d^3(^4F)4s^24p$ | v^3G^o | 5 | 0.03 | 53KIE |
| 5935.37 | 16843.48 | 12 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | _ | $3d^{5}(^{6}S)5d$ | g ⁷ D | 3 | 0.03 | 53KIE |
| 5938.74 | 16833.92 | 15 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^3(^4F)4s^24p$ | v ³ G° | 5 | 0.03 | 53KIE |
| 5950.70 | 16800.09 | 10 | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 7 | _ | $3d^44s5s$ | e ⁵ H | 7 | 0.03 | 53KIE |
| 5954.75 | 16788.67 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 1 | _ | 3d ⁵ (⁶ S)4d | e ⁵ D | 1 | 0.03 | 53KIE |
| 5955.56 | 16786.38 | 7 * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 0.03 | 53KIE |
| 5955.56 | 16786.38 | 7 * | $3d^5(^2G2)4s$ | b ¹G | 4 | _ | $3d^{5}(^{2}I)4p$ | y ¹ H ^o | 5 | 0.03 | 53KIE |
| 5957.56 | 16780.75 | 7 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 1 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.03 | 53KIE |
| 5959.166 | 16776.223 | 3 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^4(^{1}I)4s4p(^{3}P^{0})$ | y ³ I° | 6 | 0.004 | 09WAL/HI |
| 5964.580 | 16760.998 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | x ⁵ P° | 3 | 0.004 | 09WAL/HI |
| 5965.23 | 16759.17 | 4 | 3a (D)+s | 0 D | 4 | _ | $3d^44s5s$ | e ⁵ H | 5 | 0.03 | 53KIE |
| 5970.69 | 16743.84 | 18 | $3d^5(^2\text{H})4s$ | b ³ H | 6 | _ | $3d^4(^{1}I)4s4p(^{3}P^{0})$ | y ³ I ^o | 7 | 0.03 | 53KIE |
| 5970.09 | 16739.33 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | $x^{5}P^{o}$ | 3 | 0.03 | 53KIE 53KIE |
| 5972.30 5978.69 | 16721.44 | 4 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^{5}(^{4}G)4p$ | z ³ H° | 3 4 | 0.03 | 53KIE 53KIE |
| 5978.73 | 16721.33 | | $3d^{5}(^{2}\text{H})4s$ | а D b ³ H | 3 4 | _ | $3d^{4}(^{1}I)4s4p(^{3}P^{0})$ | y ³ I ^o | 5 | 0.03 | 53KIE 53KIE |
| 5978.73 5981.852 | 16712.602 | 18 | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | вн z ⁷ F° | 5 | | $3d^{5}(^{6}S)4d$ | e ⁷ D | 5 5 | 0.03 | 09WAL/HI |
| | | 2 7 | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z F z ⁷ F° | 5 | _ | 3d ⁵ (⁶ S)4d | e D e ⁷ D | 3 4 | | |
| 5982.872 | 16709.751 | | 3a (*D)4s4p(*P*) | ZF | | _ | $3d^44s5s$ | e D e ⁵ H | 4 | 0.003 | 09WAL/HI |
| 5983.22 | 16708.78 | 20 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | _ | 3d ⁵ (⁶ S)4d | e ⁵ D | · · | 0.03 | 53KIE |
| 5991.20 | 16686.53 | 10 | | z 'D' | 2 | - | | e ³ D v ³ G ^o | 3 | 0.03 | 53KIE |
| 5992.31 | 16683.43 | 15 | $3d^{5}(^{2}G2)4s$ | c ³ G b ⁵ D | 4 | - | $3d^3(^4F)4s^24p$ | | 4 | 0.03 | 53KIE |
| 5998.09 | 16667.36 | 15 | $3d^{5}(^{4}D)4s$ | a ⁵ F | 3 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.03 | 53KIE |
| 5998.91 | 16665.08 | 1 | $3d^{5}(^{4}F)4s$ | | 4 | - | 5.60 | | 4 | 0.03 | 53KIE |
| 5999.97 | 16662.14 | 7 | $3d^44s^2$ | b ³ G | 3 | - | $3d^5(^6S)5p$ | w ⁵ P ^o | 3 | 0.03 | 53KIE |
| 5004.57 | 16649.37 | 10 * | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | - | - 4.3 3-0 | - | 4 | 0.03 | 53KIE |
| 5004.57 | 16649.37 | 10 * | $3d^44s^2$ | b ³ G | 3 | - | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ I ^o | 4 | 0.03 | 53KIE |
| 5004.57 | 16649.37 | 10 * | $3d^44s^2$ | a ¹G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}F^{o}$ | 3 | 0.03 | 53KIE |
| 5006.279 | 16644.634 | 4 | $3d^{5}(^{2}I)4s$ | a ³ I | 7 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ I ^o | 7 | 0.003 | 09WAL/HI |
| 5006.61 | 16643.72 | 1 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | 0.03 | 53KIE |
| 5011.37 | 16630.54 | 1 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | 0.03 | 53KIE |
| 6014.79 | 16621.08 | 10 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 5 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.03 | 53KIE |
| 019.58 | 16607.86 | 10 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | - | $3d^5(^4G)4p$ | u ⁵ F° | 5 | 0.03 | 53KIE |
| 022.85 | 16598.84 | 2 | $3d^5(^2G2)4s$ | c ³ G | 3 | _ | $3d^3(^4F)4s^24p$ | v ³ G ^o | 3 | 0.03 | 53KIE |
| 6023.68 | 16596.55 | 10 | $3d^5(^4F)4s$ | a ⁵ F | 4 | - | $3d^5(^4G)4p$ | u ⁵ F° | 3 | 0.03 | 53KIE |
| 5025.153 | 16592.494 | 4 | $3d^5(^4F)4s$ | a ⁵ F | 5 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | 0.003 | 09WAL/HI |
| 6027.75 | 16585.35 | 1 | 3d ⁵ (⁶ S)4d | e ⁵ D | 0 | _ | | o ⁵ F° | 1 | 0.03 | 53KIE |
| 6028.53 | 16583.20 | 1 | $3d^{5}(^{2}\text{H})4s$ | a ¹H | 5 | _ | $3d^{5}(^{4}G)5p$ | u ³ F° | 4 | 0.03 | 53KIE |
| 6029.30 | 16581.08 | 18 | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ I ^o | 6 | 0.03 | 53KIE |
| 6037.00 | 16559.93 | 8 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}D)4p$ | x^3F^o | 4 | 0.03 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---|---------------------------------|---|--------------|-------------------------------------|---------------------------------------|---|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 6039.27 | 16553.71 | 8 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.03 | 53KIE |
| 5040.44 | 16550.50 | 6 w | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | 0.06 | 53KIE |
| 5045.41 | 16536.90 | 12 * | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 3 | 0.03 | 53KIE |
| 5045.41 | 16536.90 | 12 * | $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}I^{o}$ | 5 | 0.03 | 53KIE |
| 5047.657 | 16530.753 | 4 | $3d^{5}(^{2}I)4s$ | a ³ I | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}I^{o}$ | 5 | 0.003 | 09WAL/HI |
| 6053.12 | 16515.83 | 30 | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | _ | $3d^{5}(^{4}P)5p$ | t ³ D° | 2 | 0.03 | 53KIE |
| 5054.41 | 16512.31 | 25 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ G° | 4 | 0.03 | 53KIE |
| 6062.674 | 16489.805 | 9 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{o}$ | 6 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 5 | 0.002 | 09WAL/HI |
| 5068.47 | 16474.06 | 10 | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 2 | _ | $3d^44s5s$ | e ³ D | 3 | 0.03 | 53KIE |
| 6087.74 | 16421.91 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.03 | 53KIE |
| 5098.39 | 16393.23 | 3 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 4 | 0.03 | 53KIE |
| 5099.54 | 16390.14 | 5 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 3 | 0.03 | 53KIE |
| 6104.20 | 16377.63 | 5 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | _ | $3d^44s5s$ | e ³ D | 2 | 0.03 | 53KIE |
| 6122.17 | 16329.56 | 7 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 3 | 0.03 | 53KIE |
| 6122.49 | 16328.70 | 5 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 3 | 0.03 | 53KIE |
| 5135.76 | 16293.39 | 25 | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 3 | _ | $3d^44s5s$ | e ³ D | 3 | 0.03 | 53KIE |
| 5138.24 | 16286.81 | 4 | $3d^{5}(^{6}S)6s$ | f ⁷ S | 3 | _ | $3d^{5}(^{4}F)4p$ | q ³ G° | 3 | 0.03 | 53KIE |
| 5141.71 | 16277.61 | 15 | $3d^44s^2$ | c ³ D | 1 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 2 | 0.03 | 53KIE 53KIE |
| 5152.080 | 16250.167 | 13 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D° | 3 | 0.004 | 09WAL/HI |
| 6152.71 | 16248.50 | 10 * | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | 0.03 | 53KIE |
| 6152.71 | 16248.50 | 10 * | $3d^44s^2$ | c ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 2 | 0.03 | 53KIE 53KIE |
| 6154.453 | 16243.902 | 25 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | _ | $3d^{4}4s5s$ | e ³ D | 2 | 0.004 | 98ALL/GA |
| 6159.424 | 16230.793 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | 3d ⁵ (⁶ S)4d | e D e ⁵ D | 4 | 0.004 | 09WAL/HI |
| 6168.21 | 16207.67 | 10 w | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 1 | _ | $3d^{4}4s5s$ | e D e ³ D | 1 | 0.06 | 53KIE |
| 6171.56 | 16198.88 | 10 w | $3d^44s^2$ | c ³ D | 1 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 1 | 0.03 | 53KIE 53KIE |
| 6172.040 | 16198.88 | 5 | 3d 4s 3d ⁵ (² F1)4s | с D b ³ F | 4 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D° | 3 | 0.003 | 09WAL/HI |
| | | | $3d^{4}(^{5}D)4s4p(^{1}P^{0})$ | ог у ⁵ F° | • | | $3d^{5}(^{4}G)5s$ | e ⁵ G | | | |
| 6187.137 | 16158.094 | 3 | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ³ D° | 4 | - | $3d^{4}4s5s$ | e ³ D | 5 | 0.004 | 09WAL/HI |
| 6219.52 | 16073.96 | • | | z ³ D° | 2 | - | $3d^{4}4s5s$ $3d^{4}4s5s$ | e ³ D | 1 | 0.03 | 53KIE |
| 5223.71 | 16063.14 | 7 | $3d^4(^5D)4s4p(^3P^0)$ $3d^5(^2D3)4s$ | z ³ D ³ D | 3 | - | | e D z 3S° | 2 | 0.03 | 53KIE |
| 5224.91 | 16060.05 | 1 | | | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | z ⁵ S° e ⁵ G | 1 | 0.03 | 53KIE |
| 6249.92 | 15995.78 | 8 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 5 | - | $3d^5(^4G)5s$ | | 6 | 0.03 | 53KIE |
| 6253.184 | 15987.431 | 1 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 2 | 0.004 | 09WAL/HI |
| 6261.288 | 15966.738 | 4 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D ^o | 2 | 0.004 | 09WAL/HI |
| 6286.87 | 15901.77 | 4 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^{5}(^{4}P)4p$ | z ⁵ S° | 2 | 0.03 | 53KIE |
| 5307.07 | 15850.84 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | - | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 5 | 0.03 | 53KIE |
| 5313.196 | 15835.459 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 5 | 0.004 | 09WAL/HI |
| 5315.808 | 15828.910 | 1 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 6 | 0.004 | 09WAL/HI |
| 6317.10 | 15825.67 | 1 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | 0.03 | 53KIE |
| 5322.57 | 15811.98 | 10 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | 0.03 | 53KIE |
| 5327.45 | 15799.79 | 12 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 1 | 0.03 | 53KIE |
| 5328.84 | 15796.32 | 2 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | - | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 4 | 0.06 | 53KIE |
| 6330.0911 | 15793.194 | 360 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | - | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 3 | 0.0004 | 09WAL/HI |
| 5342.87 | 15761.38 | 7 | $3d^5(^4F)4s$ | a ⁵ F | 3 | - | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | 0.03 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air | Observed wave | Intensity | | | (| Classificati | on | | | Uncertainty of observed | C |
|-------------------|----------------------------|-------------|--|--------------------------------------|----------|--------------|---|--|-----|----------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 6344.424 | 15757.515 | 1 | 3d ⁵ (² G2)4s | c ³ G | 3 | | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H° | 4 | 0.004 | 09WAL/HIN |
| 6348.40 | 15747.65 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 3 | 0.03 | 53KIE |
| 6349.01 | 15746.13 | 3 | $3d^44s^2$ | c ³ D | 1 | _ | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 2 | 0.03 | 53KIE |
| 6353.00 | 15736.24 | 2 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | 0.03 | 53KIE |
| 6361.82 | 15714.43 | 2 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^{5}(^{4}D)4p$ | x ³ F° | 3 | 0.03 | 53KIE |
| 6362.8621 | 15711.854 | 170 | $3d^{5}(^{6}S)4s$ | a ⁵ S | 2 | _ | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 2 | 0.0004 | 09WAL/HIN |
| 6369.69 | 15695.01 | 1 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 2 | 0.03 | 53KIE |
| 6370.78 | 15692.33 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | x ⁵ G° | 2 | 0.03 | 53KIE |
| 6373.45 | 15685.75 | 4 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}D)4p$ | x ³ F ^o | 4 | 0.03 | 53KIE |
| 6374.60 | 15682.92 | 3 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | x ⁵ G° | 2 | 0.06 | 53KIE |
| 6375.19 | 15681.47 | 7 | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H ^o | 6 | 0.03 | 53KIE |
| 6376.35 | 15678.62 | 3 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 5 | _ | $3d^44s5s$ | f ⁷ D | 5 | 0.06 | 53KIE |
| 6377.16 | 15676.63 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | _ | $3d^44s5s$ | f ⁷ D | 4 | 0.03 | 53KIE |
| 6378.69 | 15672.87 | 3 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | 34 1555 | x ³ G° | 5 | 0.03 | 53KIE |
| 6383.14 | 15661.94 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 5 | 0.03 | 53KIE |
| 6391.613 | 15641.178 | 1 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H° | 5 | 0.004 | 09WAL/HIN |
| 6411.546 | 15592.553 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\text{o}})$ | z ³ G° | 5 | 0.004 | 09WAL/HIN |
| 6428.14 | 15552.30 | 25 | $3d^6$ | c ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | 2 3 F° | 3 | 0.03 | 53KIE |
| 6438.541 | 15527.177 | 23 | $3d^5(^4F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ³ G° | 4 | 0.004 | 09WAL/HIN |
| 6452.234 | 15494.226 | 7 | $3d^44s^2$ | a ⁵ D | 1 | _ | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 2 | 0.004 | 09WAL/HIN |
| 6466.978 | 15458.901 | 8 | $3d^44s^2$ | a ⁵ D | 2 | _ | $3d^{5}(^{6}S)4p$ | z ^r z ⁷ P° | 3 | 0.003 | 09WAL/HIN |
| 6470.05 | 15451.56 | 6 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | x ⁵ G° | 6 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 6 | 0.003 | 53KIE |
| 6477.507 | 15433.774 | 3 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}D^{o}$ | 1 | 0.004 | 09WAL/HIN |
| 6490.181 | 15403.634 | 2 | $3d^44s^2$ | a r a ⁵ D | 3 | _ | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 4 | 0.004 | 09WAL/HIN |
| 6501.1855 | 15377.561 | | $3d^44s^2$ | a D a ⁵ D | 2 | _ | $3d^{5}(^{6}S)4p$ | z P z ⁷ P° | | 0.004 | |
| | | 23 5 | 3 <i>d</i> 4 <i>s</i> 3 <i>d</i> ⁵ (⁶ S)4 <i>d</i> | a D e ⁵D | 4 | | $3d^{4}(^{3}F1)4s4p(^{1}P^{0})$ | r ³ F° | 2 3 | | 09WAL/HIN |
| 6506.13 | 15365.87 15359.24 | 5 4 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.04 0.04 | 53KIE |
| 6508.94 | | 3 | 3d (D3)4s 3d ⁵ (² G2)4s | c ³ G | <i>5</i> | - | 3d (F1)4s4p(P) | y ³ I ^o | | 0.04 | 53KIE |
| 6509.37 | 15358.23 | - | 3d ⁵ (⁴ F)4s | a ⁵ F | | - | $3d^4(^{1}I)4s4p(^{3}P^{0})$ | y ⁵ F° | 5 | | 53KIE |
| 6510.214 | 15356.236 | 4 | $3d^{6}(F)4s$ $3d^{5}(^{4}F)4s$ | a F a ⁵ F | 3 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | w Fo | 4 | 0.004 | 09WAL/HIN |
| 6515.996 | 15342.608 | 6 | | | = | - | $3d^4(^3G)4s4p(^3P^0)$ | | 4 | 0.003 | 09WAL/HIN |
| 6516.95 | 15340.36 | 4 | $3d^5(^2D3)4s$ | b ³ D b ³ D | 3 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° w ⁵ D° | 2 | 0.04 | 53KIE |
| 6517.12 | 15339.96 | 3 | $3d^5(^2D3)4s$ | | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | | 3 | 0.04 | 53KIE |
| 6518.98 | 15335.59 | 3 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ H° | 3 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 3 | 0.04 | 53KIE |
| 6520.035 | 15333.105 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | $^{5}F^{\circ}$ | 3 | 0.004 | 09WAL/HIN |
| 6522.613 | 15327.045 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 5 | 0.004 | 09WAL/HIN |
| 6523.08 | 15325.95 | 8 | $3d^5(^4F)4s$ | a ⁵ F | 1 | - | $3d^4(^3G)4s4p(^3P^0)$ | $w_{5}^{5}F^{o}$ | 1 | 0.04 | 53KIE |
| 6523.51 | 15324.94 | 5 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ⁵ H° | 3 | - | $3d^5(^4G)5s$ | e ⁵ G | 2 | 0.04 | 53KIE |
| 6523.62 | 15324.68 | 8 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.04 | 53KIE |
| 6523.911 | 15323.996 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.004 | 09WAL/HIN |
| 6524.27 | 15323.15 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 1 | 0.04 | 53KIE |
| 6524.76 | 15322.00 | 15 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 2 | 0.04 | 53KIE |
| 6525.16 | 15321.06 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.04 | 53KIE |
| 6528.66 | 15312.85 | 6 | $3d^5(^4F)4s$ | a ⁵ F | 3 | - | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F ^o | 2 | 0.04 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificati | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---------------------------|-------------------|---|--------------|-------------------------|-------------------------------|---|--|----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 6529.188 | 15311.611 | 12 | $3d^5(^4F)4s$ | a ⁵ F | 5 | | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 5 | 0.002 | 09WAL/HI |
| 5529.718 | 15310.367 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | 0.004 | 09WAL/HI |
| 5533.94 | 15300.47 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.04 | 53KIE |
| 5537.15 | 15292.96 | 5 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 4 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 4 | 0.04 | 53KIE |
| 5537.9209 | 15291.158 | 36 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 3 | 0.0009 | 09WAL/HI |
| 5542.09 | 15281.41 | 10 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 4 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 3 | 0.04 | 53KIE |
| 5547.02 | 15269.91 | 3 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.04 | 53KIE |
| 5555.82 | 15249.41 | 4 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.04 | 53KIE |
| 5564.15 | 15230.06 | 7 | $3d^6$ | c ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.04 | 53KIE |
| 5564.57 | 15229.08 | 8 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.04 | 53KIE |
| 5569.066 | 15218.661 | 3 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.004 | 09WAL/HI |
| 5572.8846 | 15209.819 | 27 | $3d^44s^2$ | a ⁵ D | 3 | _ | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 2 | 0.0009 | 09WAL/HI |
| 5580.923 | 15191.241 | 7 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 4 | 0.003 | 09WAL/HI |
| 6590.499 | 15169.167 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.004 | 09WAL/HI |
| 5592.134 | 15165.406 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^5(^4P)4p$ | y^3D^o | 3 | 0.004 | 09WAL/HI |
| 6594.683 | 15159.545 | 3 | $3d^6$ | c ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.004 | 09WAL/HI |
| 5597.550 | 15152.956 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.003 | 09WAL/HI |
| 6600.524 | 15146.129 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^5(^4P)4p$ | y^3D^o | 3 | 0.004 | 09WAL/HI |
| 5603.77 | 15138.68 | 2 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.04 | 53KIE |
| 6604.46 | 15137.10 | 12 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 6 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 6 | 0.04 | 53KIE |
| 6605.542 | 15134.624 | 5 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.003 | 09WAL/HI |
| 6607.23 | 15130.76 | 15 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 6 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.04 | 53KIE |
| 6608.90 | 15126.93 | 15 | $3d^6$ | c ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.04 | 53KIE |
| 6612.189 | 15119.409 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.003 | 09WAL/HI |
| 6620.54 | 15100.34 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{4}P)4p$ | y^3D^o | 2 | 0.04 | 53KIE |
| 6623.92 | 15092.63 | 3 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D° | 2 | 0.04 | 53KIE |
| 5625.18 | 15089.76 | 10 | $3d^{6}$ | c ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.04 | 53KIE |
| 6627.264 | 15085.017 | 5 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | 0.004 | 09WAL/HI |
| 6627.83 | 15083.73 | 3 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.08 | 53KIE |
| 6628.69 | 15081.77 | 6 | $3d^6$ | c ⁵ D | 2 | _ | $3d^5(^4D)4p$ | u ⁵ D° | 2 | 0.04 | 53KIE |
| 6629.08 | 15080.88 | 2 | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y^3D^o | 2 | 0.04 | 53KIE |
| 5630.0106 | 15078.768 | 75 | $3d^44s^2$ | a ⁵ D | 4 | _ | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 3 | 0.0009 | 09WAL/HI |
| 6635.39 | 15066.54 | 2 | $3d^{5}(^{6}S)4d$ | e ⁷ D | 5 | _ | \ | p ⁵ F° | 5 | 0.04 | 53KIE |
| 6636.360 | 15064.341 | 10 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | _ | $3d^44s5s$ | f ⁵ D | 0 | 0.005 | 98ALL/GA |
| 6638.07 | 15060.46 | 1 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^5(^4P)4p$ | y ³ D ^o | 2 | 0.04 | 53KIE |
| 6639.06 | 15058.21 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.04 | 53KIE |
| 6639.91 | 15056.29 | 8 | $3d^6$ | c ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.04 | 53KIE |
| 5640.42 | 15055.13 | 8 | $3d^{6}$ | c ⁵ D | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 3 | 0.04 | 53KIE |
| 6642.27 | 15050.94 | 10 | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | _ | $3d^{5}(^{4}G)4d$ | f ⁵ G | 5 | 0.04 | 53KIE |
| 5643.027 | 15049.223 | 5 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F ^o | 4 | 0.004 | 09WAL/HI |
| 5645.12 | 15044.48 | 6 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.04 | 53KIE |
| 6645.93 | 15042.65 | 5 | $3d^6$ | c ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 0 | 0.04 | 53KIE |
| 6648.76 | 15036.25 | 7 | $3d^6$ | c ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 2 | 0.04 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air | Observed wave | Intensity | | | (| Classificati | on | | | Uncertainty of observed | _ |
|-------------------|----------------------------|-------------|--|-------------------------|---|--------------|---------------------------------|-------------------------------|---|-------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 6651.911 | 15029.124 | 3 | $3d^5(^4F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.004 | 09WAL/HIN |
| 6652.35 | 15028.13 | 3 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 1 | 0.04 | 53KIE |
| 6654.45 | 15023.39 | 4 | $3d^{5}(^{2}I)4s$ | b ¹ I | 6 | _ | 54 (1).p | x ³ G° | 5 | 0.04 | 53KIE |
| 6655.02 | 15022.10 | 5 | $3d^6$ | c ⁵ D | 0 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.04 | 53KIE |
| 6657.591 | 15016.302 | 4 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.004 | 09WAL/HIN |
| 6661.0744 | 15008.449 | 38 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}D^{o}$ | 4 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.0009 | 09WAL/HIN |
| 6663.93 | 15002.02 | 18 | $3d^4(^3H)4s4p(^3P^0)$ | z ⁵ H° | 7 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 6 | 0.04 | 53KIE |
| 6665.11 | 14999.36 | 2 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | _ | $3d^44s5s$ | e ⁵ P | 2 | 0.04 | 53KIE |
| 6667.40 | 14994.21 | 1 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.04 | 53KIE |
| 6668.67 | 14991.35 | 5 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{4}G)4p$ | y^3F^0 | 3 | 0.04 | 53KIE |
| 6669.2806 | 14989.982 | 15 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.0018 | 09WAL/HIN |
| 6677.24 | 14972.11 | 10 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.0018 | 53KIE |
| 6680.275 | 14965.311 | 4 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.004 | 09WAL/HIN |
| 6683.80 | 14957.42 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 2 | 0.004 | |
| | | | $3d^{5}(^{4}F)4s$ | a ⁵ F | | | $3d^{4}(^{3}F1)4s4p(^{3}P^{0})$ | y F w ⁵ D° | | | 53KIE |
| 6688.96 | 14945.88 | 2 | 3d (F)4s 3d ⁵ (² D3)4s | a F b ³ D | 1 | - | $3d^{5}(^{4}G)4p$ | y^3F^0 | 1 | 0.04 | 53KIE |
| 6692.48 | 14938.02 | • | | b ³ D | 2 | - | | | 2 | 0.04 | 53KIE |
| 6701.633 | 14917.617 | 5 | $3d^5(^2D3)4s$ | | 1 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 2 | 0.004 | 09WAL/HIN |
| 6715.471 | 14886.878 | 9 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.003 | 09WAL/HIN |
| 6729.734 | 14855.327 | 40 | $3d^6$ | c ⁵ D | 4 | _ | $3d^5(^4D)4p$ | s ⁵ F° | 5 | 0.004 | 98ALL/GAR |
| 6734.200 | 14845.475 | 11 | $3d^4(^5D)4s4p(^3P^0)$ | z_{7-}^{5} Do | 4 | - | $3d^44s5s$ | f ⁵ D | 3 | 0.002 | 09WAL/HIN |
| 6735.72 | 14842.13 | 8 w | $3d^{5}(^{6}S)4d$ | e ⁷ D | 2 | - | 5.4 | p ⁵ F° | 1 | 0.08 | 53KIE |
| 6738.81 | 14835.32 | 18 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | - | $3d^{5}(^{4}G)5s$ | e ⁵ G | 2 | 0.04 | 53KIE |
| 6739.41 | 14834.00 | 6 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 4 | 0.04 | 53KIE |
| 6744.64 | 14822.50 | 15 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 3 | 0.04 | 53KIE |
| 6746.6011 | 14818.188 | 15 | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.0018 | 09WAL/HIN |
| 6749.07 | 14812.77 | 6 w | $3d^6$ | c ⁵ D | 4 | - | $3d^5(^4D)4p$ | s ⁵ F° | 4 | 0.08 | 53KIE |
| 6749.43 | 14811.98 | 7 w | $3d^5(^4G)4p$ | z ⁵ G° | 3 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 2 | 0.08 | 53KIE |
| 6750.20 | 14810.29 | 2 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 3 | 0.04 | 53KIE |
| 6751.33 | 14807.81 | 40 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | - | $3d^{5}(^{4}G)5s$ | e ⁵ G | 4 | 0.04 | 53KIE |
| 6754.86 | 14800.07 | 5 w | $3d^5(^4G)4p$ | z ⁵ G° | 5 | - | $3d^5(^4G)5s$ | e ⁵ G | 6 | 0.08 | 53KIE |
| 6756.49 | 14796.50 | 15 * | $3d^5(^4F)4s$ | a ⁵ F | 4 | _ | $3d^5(^4P)4p$ | y ³ D ^o | 3 | 0.04 | 53KIE |
| 6756.49 | 14796.50 | 15 * | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 3 | 0.04 | 53KIE |
| 6757.76 | 14793.72 | 25 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.04 | 53KIE |
| 6762.41 | 14783.55 | 40 * | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 6 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 6 | 0.04 | 53KIE |
| 6762.41 | 14783.55 | 40 * | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 4 | 0.04 | 53KIE |
| 6765.30 | 14777.23 | 8 | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 6 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.04 | 53KIE |
| 6780.09 | 14745.00 | 8 * | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ D° | 2 | 0.04 | 53KIE |
| 6780.09 | 14745.00 | 8 * | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 0 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.04 | 53KIE |
| 6784.91 | 14734.52 | 8 w | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^{5}(^{4}D)4p$ | w ³ P° | 2 | 0.08 | 53KIE |
| 6789.1612 | 14725.296 | 29 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.0009 | 09WAL/HIN |
| 6796.52 | 14709.35 | 25 w | 3d ⁶ | c ⁵ D | 3 | _ | $3d^{5}(^{4}D)4p$ | s ⁵ F° | 4 | 0.08 | 53KIE |
| 6798.065 | 14706.010 | 23 w 8 | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 2 | 0.003 | 09WAL/HIN |
| 6805.00 | 14691.02 | 6 15 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 1 | 0.003 | 53KIE |

TABLE 3. Spectral lines of Cr I—Continued

| Configuration $3d^{5}(^{2}D3)4s$ $3d^{5}(^{2}D3)4s$ $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ $3d^{5}(^{6}S)5s$ $3d^{4}4s^{2}$ $3d^{5}(^{6}S)7p$ $3d^{5}(^{2}I)4s$ $3d^{4}(^{3}D)4s4p(^{3}P^{o})$ | Term b ³ D b ³ D z ³ P e ⁷ S a ³ P ⁷ P° | J 1 1 1 3 | - | Configuration $3d^5(^4P)4p$ | Term | | wavelength | Source |
|---|--|---|--|--|--|--|--|--|
| 3d ⁵ (² D3)4s 3d ⁴ (⁵ D)4s4p(³ P°) 3d ⁵ (⁶ S)5s 3d ⁴ 4s ² 3d ⁵ (⁶ S)7p 3d ⁵ (² I)4s | b ³ D z ³ P° e ⁷ S a ³ P | 1 1 | | $3d^{5}(^{4}P)4n$ | | | (Å) | of line |
| 3d ⁵ (² D3)4s 3d ⁴ (⁵ D)4s4p(³ P°) 3d ⁵ (⁶ S)5s 3d ⁴ 4s ² 3d ⁵ (⁶ S)7p 3d ⁵ (² I)4s | b ³ D z ³ P° e ⁷ S a ³ P | 1 1 | _ | | y ³ P ^o | 0 | 0.003 | 09WAL/HIN |
| 3d ⁴ (⁵ D) ⁴ s ⁴ p(³ P°) 3d ⁵ (⁶ S)5s 3d ⁴ 4s ² 3d ⁵ (⁶ S)7p 3d ⁵ (² I)4s | z ³ P ^o e ⁷ S a ³ P | 1 | | $3d^{5}(^{4}P)4p$ | y ³ P ^o | 1 | 0.04 | 53KIE |
| $3d^{5}(^{6}S)5s$ $3d^{4}4s^{2}$ $3d^{5}(^{6}S)7p$ $3d^{5}(^{2}I)4s$ | e ⁷ S a ³ P | 3 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.04 | 53KIE |
| 3d ⁴ 4s ² 3d ⁵ (⁶ S)7p 3d ⁵ (² I)4s | a ³ P | | _ | $3d^{5}(^{6}S)8p$ | ⁷ P ° | 4 | 0.08 | 53KIE |
| $3d^{5}(^{6}S)7p$ $3d^{5}(^{2}I)4s$ | | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.002 | 09WAL/HII |
| $3d^{5}(^{2}I)4s$ | | 4 | _ | $3d^44s5s$ | e ⁵ H | 5 | 0.08 | 53KIE |
| | $a^{3}I$ | 5 | _ | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 4 | 0.08 | 53KIE |
| | y ⁷ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | 0.04 | 53KIE |
| $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 2 | 0.04 | 53KIE |
| $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 1 | 0.04 | 53KIE |
| $3d^{5}(^{6}S)4p$ | z ⁷ P° | 3 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.04 | 53KIE |
| $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^0 | 4 | 0.08 | 53KIE |
| $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 4 | 0.0005 | 09WAL/HII |
| $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | 0.0005 | 09WAL/HII |
| $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 2 | 0.0010 | 09WAL/HII |
| $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^4(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H° | 4 | 0.04 | 53KIE |
| $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 2 | _ | $3d^44s4d$ | e ⁷ G | 1 | 0.08 | 53KIE |
| $3d^6$ | c ⁵ D | 4 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 3 | 0.08 | 53KIE |
| $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 4 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 5 | 0.0005 | 09WAL/HI |
| $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 4 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 4 | 0.0005 | 09WAL/HII |
| $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 4 | _ | $3d^{5}(^{6}S)4d$ | e ⁷ D | 3 | 0.0010 | 09WAL/HII |
| $3d^{5}(^{2}I)4s$ | a ³ I | 6 | _ | $3d^{5}(^{4}G)4p$ | z ³ H° | 5 | 0.04 | 53KIE |
| $3d^{5}(^{2}I)4s$ | a ³ I | 7 | _ | $3d^{5}(^{4}G)4p$ | z ³ H° | 6 | 0.04 | 53KIE |
| $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | $^{3}G^{\circ}$ | 4 | 0.004 | 09WAL/HI |
| $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ¹H° | 5 | 0.04 | 53KIE |
| $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | _ | $3d^44s5s$ | g ⁵ D | 4 | 0.04 | 53KIE |
| $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | _ | $3d^44s5s$ | e ³ D | 3 | 0.08 | 53KIE 53KIE |
| $3d^{5}(^{2}F2)4s$ | d ³ F | 2 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.04 | 53KIE 53KIE |
| $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | _ | $3d^44s5s$ | e ³ D | 2 | 0.04 | 53KIE 53KIE |
| $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{1}D^{0}$ | 2 | 0.08 | 53KIE 53KIE |
| $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}D^{o}$ | 3 | 0.04 | 53KIE 53KIE |
| $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | 0.003 | 09WAL/HI |
| $3d^{5}(^{2}\text{F1})4s$ | ьг b ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | y G y ³ G° | 3 4 | 0.003 | 09WAL/HII |
| $3d^4(^5D)4s4p(^1P^0)$ | ог х ⁵ Р° | 2 | _ | $3d^44s5s$ | e ³ D | 2 | 0.003 | 53KIE |
| | х Р 5 _{го} | _ | | | | | | |
| | у Г 5го | 15 | | | g D | | | 53KIE 53KIE |
| | y F | · · | | | | | | |
| | | · · | | 3a (D)4p | u D | | | 53KIE 53KIE |
| | | • | | | y G | | | |
| | | 15 | | | | | | 09WAL/HI |
| | | | | | | | | 09WAL/HII |
| | | | | | | | | 09WAL/HII |
| | | | | | | - | | 09WAL/HI |
| | | | | | | | | 09WAL/HI |
| 3.4 | | | | | | | | 53KIE 09WAL/HII |
| | 3d ⁴ (⁵ D)4s4p(¹ P ⁹) 3d ⁴ (⁵ D)4s4p(¹ P ⁹) 3d ⁵ (² F2)4s 3d ⁵ (² F1)4s 3d ⁵ (⁴ F)4s 3d ⁵ (⁴ F)4s | $3d^4(^5D)4s4p(^1P^0)$ y $^5F^0$ $3d^4(^5D)4s4p(^1P^0)$ y $^5F^0$ $3d^5(^2F2)4s$ d 3F $3d^5(^2F1)4s$ b 3F $3d^5(^4F)4s$ a 5F $3d^5(^4F)4s$ c 5D | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|---|--------|---------------|--|---------------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 7196.8429 | 13891.153 | 20 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | 0.0016 | 09WAL/HIN |
| 7198.2965 | 13888.348 | 17 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | _ | $3d^44s5s$ | e ³ D | 2 | 0.0016 | 09WAL/HIN |
| 7203.911 | 13877.523 | 7 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | 0.004 | 09WAL/HIN |
| 7205.57 | 13874.33 | 3 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 1 | _ | $3d^44s5s$ | e ³ D | 1 | 0.04 | 53KIE |
| 7206.444 | 13872.647 | 7 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G ^o | 5 | 0.004 | 09WAL/HIN |
| 7207.843 | 13869.953 | 12 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.003 | 09WAL/HIN |
| 7212.584 | 13860.837 | 7 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 2 | 0.004 | 09WAL/HIN |
| 7218.599 | 13849.287 | 9 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | 0.003 | 09WAL/HIN |
| 7220.026 | 13846.549 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | 0.005 | 09WAL/HIN |
| 7221.15 | 13844.39 | 5 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | $z^{3}G^{o}$ | 4 | 0.04 | 53KIE |
| 7226.89 | 13833.40 | 4 w | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | _ | $3d^44s5s$ | e ³ D | 1 | 0.08 | 53KIE |
| 7230.613 | 13826.276 | 5 | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 4 | 0.004 | 09WAL/HIN |
| 7236.22 | 13815.56 | 50 * | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^0 | 4 | 0.04 | 53KIE |
| 7236.22 | 13815.56 | 50 * | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 5 | _ | $3d^44s5s$ | g ⁵ D | 4 | 0.04 | 53KIE |
| 7264.30 | 13762.16 | 40 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | _ | $3d^44s5s$ | g ⁵ D | 3 | 0.04 | 53KIE |
| 7276.22 | 13739.61 | 8 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 1 | _ | $3d^44s5s$ | g ⁵ D | 0 | 0.04 | 53KIE |
| 7293.90 | 13706.31 | 8 | $3d^{5}(^{2}G2)4s$ | c ³ G | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ³ F° | 3 | 0.04 | 53KIE |
| 7303.29 | 13688.69 | 6 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 2 | _ | $Sa(S) \otimes p(T)$ | e ³ F | 2 | 0.04 | 53KIE |
| 7304.32 | 13686.76 | 4 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | $3d^5(^4D)4p$ | w ³ D° | 3 | 0.04 | 53KIE |
| 7305.69 | 13684.19 | 12 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w^3F^0 | 2 | 0.04 | 53KIE |
| 7306.01 | 13683.59 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 3 | _ | 3α (G)+3+ρ(I) | e ³ F | 3 | 0.04 | 53KIE |
| 7311.56 | 13673.20 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P° | 2 | 0.04 | 53KIE |
| 7323.278 | 13651.326 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 4 | _ | $\mathcal{S}a \in \mathcal{D}$ (\mathcal{D}) + \mathcal{S} + \mathcal{D} (\mathcal{D}) | e ³ F | 4 | 0.004 | 09WAL/HIN |
| 7332.55 | 13634.06 | 5 w | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | _ | $3d^44s5s$ | g ⁵ D | 4 | 0.08 | 53KIE |
| 7348.717 | 13604.070 | 6 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 5 | 0.004 | 09WAL/HIN |
| 7355.8905 | 13590.803 | 1400 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 2 | _ | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | 0.0005 | 09WAL/HIN |
| 7367.37 | 13569.63 | 10 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 4 | 0.0003 | 53KIE |
| 7379.61 | 13547.12 | 3 | $3d^5(^2F2)4s$ | d ³ F | 2 | _ | $3d^{5}(^{4}D)4p$ | w ³ D° | 1 | 0.04 | 53KIE |
| 7389.26 | 13529.43 | 7 w* | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | _ | 3a (D)¬p | e ⁵ F | 4 | 0.04 | 53KIE 53KIE |
| 7389.26 | 13529.43 | 7 w* | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | _ | $3d^44s5s$ | g ⁵ D | 2 | 0.08 | 53KIE |
| 7400.1798 | 13509.464 | 1900 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 3 | _ | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | 0.0005 | 09WAL/HIN |
| 7405.283 | 13500.155 | 10 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 3 | 0.003 | 09WAL/HIN |
| 7445.68 | 13426.91 | 25 | $3d^4(^5D)4s4p(^1P^0)$ | у ⁵ D° | 4 | _ | $3d^44s5s$ | g ⁵ D | 4 | 0.003 | 53KIE |
| 7454.05 | 13420.91 | 2 w* | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | _ | 34 4333 | e ⁵ F | 2 | 0.04 | 53KIE 53KIE |
| 7454.05 | 13411.83 | 2 w* | $3d^{4}(^{5}D)4s4p(^{1}P^{0})$ | у г у ⁵ D° | 3 | _ | $3d^44s5s$ | g ⁵ D | 3 | 0.08 | 53KIE 53KIE |
| 7462.3081 | 13396.990 | 800 | $3d^{5}(^{6}S)4p$ | $z^{7}P^{o}$ | 4 | _ | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | 0.0006 | 09WAL/HIN |
| 7484.69 | 13356.93 | 5 | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ D° | 1 | _ | $3d^{4}4s5s$ | g ⁵ D | 0 | 0.000 | 53KIE |
| 7486.75 | 13353.25 | 5 6 w | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | g D y ⁵G° | 6 | 0.04 | 53KIE 53KIE |
| 7535.55 | 13353.25 | 18 | $3d^{4}(^{5}D)4s4p(^{1}P^{0})$ | y ⁵ F° | 5 5 | | за (F1)484p(P*) | e ⁵ F | 5 | 0.08 | 53KIE 53KIE |
| 7565.918 | 13213.528 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 5 | 0.006 | 09WAL/HIN |
| | | | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | a ⁵ F y ⁵ D ^o | | | $3d^{4}(^{4}F1)4s4p(^{4}P^{3})$ $3d^{4}4s5s$ | y ⁵G° g ⁵D | | | |
| 7570.79 | 13205.03 | 4 w | $3d^{5}(^{4}F)4s$ | y ⁵ D ⁵ a ⁵ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | g ⁵ D y ⁵ G° | 3 | 0.08 | 53KIE |
| 7574.769 | 13198.089 | 4 | $3d^{3}(^{4}F)4s$ $3d^{4}4s^{2}$ | a ³ F c ³ D | 5 | _ | | y "G" | 5 | 0.005 | 09WAL/HIN |
| 7623.45 | 13113.81 | 5 | 3a 4s | c "D | 3 | - | $3d^{5}(^{4}G)4p$ | y ³ G ^o | 3 | 0.04 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | C | Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---------------------------------------|---|--------|---------------|---------------------------|-------------------------------|--------|--|----------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 7679.452 | 13018.179 | 1 | 3d ⁵ (⁴ F)4s | a ⁵ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | 0.006 | 09WAL/HII |
| 7684.829 | 13009.071 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | 0.006 | 09WAL/HI |
| 7691.50 | 12997.79 | 7 w* | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | _ | , , , , , | e ⁵ F | 4 | 0.08 | 53KIE |
| 7691.50 | 12997.79 | 7 w* | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | y^3F^o | 4 | 0.08 | 53KIE |
| 7697.35 | 12987.91 | 2 | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 3 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 3 | 0.04 | 53KIE |
| 7705.40 | 12974.34 | 5 w | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ D° | 2 | _ | , , | e ⁵ F | 2 | 0.08 | 53KIE |
| 7722.875 | 12944.983 | 8 | $3d^5(^2F1)4s$ | b ³ F | 4 | _ | $3d^5(^4G)4p$ | y ³ F ^o | 4 | 0.004 | 09WAL/HI |
| 7722.997 | 12944.779 | 2 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 2 | 0.006 | 09WAL/HI |
| 7726.00 | 12939.75 | 12 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.04 | 53KIE |
| 7733.987 | 12926.384 | 5 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ F ^o | 2 | 0.005 | 09WAL/HI |
| 7748.77 | 12901.72 | 2 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 4 | 0.04 | 53KIE |
| 7749.15 | 12901.09 | 6 w | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | _ | 54 (11) is ip(1) | e ⁵ F | 3 | 0.08 | 53KIE |
| 7762.46 | 12878.97 | 2 | $3d^44s5s$ | f ⁷ D | 4 | _ | $3d^44s(^6D)6p$ | $^{7}D^{o}$ | 3 | 0.04 | 53KIE |
| 7762.979 | 12878.109 | 2 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | _ | 54 15(D)0p | e ⁵ F | 5 | 0.006 | 09WAL/HI |
| 7771.69 | 12863.67 | 22 | $3d^{5}(^{2}\text{H})4s$ | a ¹ H | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ¹ H° | 5 | 0.04 | 53KIE |
| 7778.73 | 12852.03 | 4 w | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 6 | _ | 3a (11) is ip(1) | $x^{3}G^{o}$ | 5 | 0.08 | 53KIE |
| 7785.92 | 12840.16 | 4 wl | $3d^6$ | c ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 2 | 0.08 | 53KIE |
| 7802.90 | 12812.22 | 5 | $3d^5(^2\text{F2})4s$ | d ³ F | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 3 | 0.04 | 53KIE |
| 7815.49 | 12791.58 | 5 w | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵G | 5 | 0.04 | 53KIE |
| 7816.13 | 12790.54 | 5 w | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | _ | 3a (G)33 | e ⁵ F | 4 | 0.08 | 53KIE |
| 7851.32 | 12733.21 | 4 | $3d^{5}(^{2}F2)4s$ | d ³ F | 4 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | $x^{3}D^{o}$ | 3 | 0.08 | 53KIE |
| 7870.58 | 12702.05 | 8 | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{1}D^{0}$ | 2 | 0.04 | 53KIE |
| 7877.11 | 12691.52 | 2 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | 3a (11)434p(11) | x ³ G° | 4 | 0.04 | 53KIE |
| 7884.92 | 12678.95 | 4 | $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.04 | 53KIE 53KIE |
| 7906.21 | 12644.81 | 2 | $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | 0.04 | 53KIE |
| 7900.21 | 12643.02 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | y ⁵ G° | 6 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 6 | 0.04 | 53KIE 53KIE |
| 7908.206 | 12641.615 | 13 | $3d^{5}(^{4}G)4p$ | z ³ H° | 6 | _ | 3a (G)3s | e ³ G | 5 | 0.003 | 09WAL/HI |
| 7908.200 | 12638.021 | 5 | $3d^{5}(^{4}G)4p$ | z n z ³ H° | 5 | _ | | e G e ³ G | 4 | 0.005 | 09WAL/HI |
| 7910.433 | 12636.021 | 3 1 w | $3d^{5}(^{4}G)4p$ | z n z ³ H° | 5 | _ | | e G e ³ G | 5 | 0.003 | 53KIE |
| 7911.00 | 12633.57 | 1 W | $3d^{5}(^{4}G)4p$ | z H z ³ H° | 3 4 | _ | | e G e ³ G | 3 4 | 0.08 | 53KIE 53KIE |
| 7913.24 7917.796 | 12633.37 | 8 | $3d^{5}(^{4}G)4p$ | z ³ H° | 4 | | | e ³ G | 3 | 0.04 | 09WAL/HI |
| | | 8 | $3d^{6}$ | c ⁵ D | 4 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | - | | |
| 7924.006 | 12616.409 | 1 | 3 <i>a</i> 3 <i>d</i> ⁶ | c D c D | • | - | 3 <i>a</i> (G)4 <i>p</i> | u F ³ D° | 4 | 0.006 | 09WAL/HI |
| 7934.69 | 12599.42 | 1 | $3d^6$ | c ⁵ D | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | u ⁵ F° | 2 | 0.04 | 53KIE |
| 7941.9920 | 12587.837 | 18 | | c ⁵ D | 4 | - | $3d^5(^4G)4p$ | u F | 5 | 0.0019 | 09WAL/H |
| 7971.307 | 12541.544 | 3 | $3d^6$ | c ⁵ D y ⁵ F ^o | 3 | - | . 4 | e ⁷ F | 4 | 0.006 | 09WAL/HI |
| 7976.10 | 12534.01 | 5 w | $3d^4(^5D)4s4p(^1P^0)$ | | 5 | - | $3d^44s4d$ | | 6 | 0.08 | 53KIE |
| 7989.367 | 12513.195 | 7 | $3d^6$ | c ⁵ D | 3 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.004 | 09WAL/HI |
| 7990.52 | 12511.39 | 20 | $3d^5(^2\text{H})4s$ | b ³ H | 6 | - | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 6 | 0.04 | 53KIE |
| 8007.92 | 12484.20 | 10 w | $3d^5(^6S)4p$ | z ⁷ P° | 3 | - | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | 0.08 | 53KIE |
| 8014.873 | 12473.374 | 2 | $3d^{6}$ | c ⁵ D | 3 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.006 | 09WAL/HI |
| 8018.001 | 12468.507 | 2 | $3d^6$ | c ⁵ D | 4 | - | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 4 | 0.006 | 09WAL/H |
| 8034.42 | 12443.03 | 5 w | $3d^44s^2$ | c ³ D | 1 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.08 | 53KIE |
| 8040.568 | 12433.513 | 3 | $3d^44s^2$ | c ³ D | 3 | - | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.006 | 09WAL/H |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | C | Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------------------|---|---------------|--------------------------|-------------------------------|---|--|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 8045.3686 | 12426.094 | 16 | 3d ⁵ (² H)4s | b ³ H | 5 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 5 | 0.0019 | 09WAL/HII |
| 8050.67 | 12417.91 | 7 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 4 | _ | $3d^4(^3H)4s4p(^3P^0)$ | y ³ H ^o | 4 | 0.04 | 53KIE |
| 8053.335 | 12413.802 | 3 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 2 | 0.006 | 09WAL/HI |
| 8061.239 | 12401.631 | 6 | $3d^6$ | c ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.005 | 09WAL/HI |
| 8065.04 | 12395.79 | 7 | $3d^6$ | c ⁵ D | 4 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 5 | 0.04 | 53KIE |
| 8067.693 | 12391.710 | 3 | $3d^44s^2$ | $c^{3}D$ | 1 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 1 | 0.007 | 09WAL/HI |
| 8084.935 | 12365.283 | 9 | $3d^6$ | c ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 4 | 0.004 | 09WAL/HI |
| 8098.226 | 12344.989 | 3 | $3d^6$ | c ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.007 | 09WAL/HI |
| 8099.796 | 12342.596 | 2 | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.007 | 09WAL/HI |
| 8105.769 | 12333.501 | 2 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.007 | 09WAL/HI |
| 8119.133 | 12313.201 | 3 | $3d^6$ | c ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.007 | 09WAL/HI |
| 8124.844 | 12304.545 | 3 | $3d^5(^2G2)4s$ | c ³ G | 5 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G ^o | 5 | 0.007 | 09WAL/HI |
| 8128.218 | 12299.438 | 5 | $3d^6$ | c ⁵ D | 1 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.005 | 09WAL/HI |
| 8140.16 | 12281.39 | 5 | $3d^5(^2F2)4s$ | d ³ F | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ D ^o | 1 | 0.04 | 53KIE |
| 8154.955 | 12259.113 | 3 | $3d^6$ | c ⁵ D | 1 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 1 | 0.007 | 09WAL/HI |
| 8163.0300 | 12246.986 | 46 | $3d^6$ | c ⁵ D | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | 0.0013 | 09WAL/HI |
| 8166.285 | 12242.105 | 6 | $3d^{6}$ | c ⁵ D | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | 0.005 | 09WAL/HI |
| 8166.41 | 12241.92 | 20 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 1 | _ | $3d^44s4d$ | e ⁷ G | 1 | 0.04 | 53KIE |
| 8166.713 | 12241.463 | 5 | $3d^6$ | c ⁵ D | 2 | _ | $3d^5(^4P)4p$ | v ⁵ D° | 3 | 0.005 | 09WAL/HI |
| 8167.92 | 12239.65 | 15 | $3d^44s^2$ | $c^{3}D$ | 3 | _ | $3d^{5}(^{4}P)4p$ | y^3D^o | 3 | 0.04 | 53KIE |
| 8169.726 | 12236.949 | 3 | $3d^6$ | c ⁵ D | 0 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 1 | 0.007 | 09WAL/HI |
| 8185.626 | 12213.179 | 3 | $3d^6$ | c ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.007 | 09WAL/HI |
| 8187.84 | 12209.88 | 5 | $3d^5(^2G2)4s$ | c ³ G | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 4 | 0.04 | 53KIE |
| 8188.76 | 12208.50 | 8 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | _ | | x ³ G° | 5 | 0.04 | 53KIE |
| 8194.87 | 12199.40 | 4 | $3d^6$ | c ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.04 | 53KIE |
| 8197.037 | 12196.177 | 1 | $3d^5(^6S)4p$ | $z^{7}P^{o}$ | 2 | _ | $3d^6$ | c ⁵ D | 3 | 0.007 | 09WAL/HI |
| 8212.234 | 12173.608 | 2 | $3d^44s^2$ | $c^{-3}D$ | 2 | _ | $3d^{5}(^{4}P)4p$ | y ³ D ^o | 2 | 0.007 | 09WAL/HI |
| 8213.149 | 12172.252 | 1 | $3d^5(^2H)4s$ | b ³ H | 4 | _ | . , , | ó | 4 | 0.007 | 09WAL/HI |
| 8216.281 | 12167.612 | 2 | $3d^6$ | c ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.007 | 09WAL/HI |
| 8218.198 | 12164.774 | 2 | $3d^5(^2G2)4s$ | c ³ G | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 3 | 0.007 | 09WAL/HI |
| 8224.0659 | 12156.094 | 31 | $3d^44s^2$ | a ³ H | 5 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z^3F^o | 4 | 0.0014 | 09WAL/HI |
| 8225.624 | 12153.791 | 1 | $3d^6$ | c ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.007 | 09WAL/HI |
| 8235.7250 | 12138.885 | 32 | $3d^6$ | c ⁵ D | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | 0.0014 | 09WAL/HI |
| 8238.153 | 12135.307 | 8 | $3d^6$ | c ⁵ D | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | 0.005 | 09WAL/HI |
| 8240.65 | 12131.63 | 8 1 | $3d^6$ | c ⁵ D | 0 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.08 | 53KIE |
| 8246.23 | 12123.42 | 6 | $3d^44s^2$ | $c^{-3}D$ | 3 | _ | $3d^{5}(^{4}G)4p$ | y^3F^o | 4 | 0.04 | 53KIE |
| 8250.38 | 12117.32 | 3 w | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 4 | 0.08 | 53KIE |
| 8261.988 | 12100.298 | 20 | $3d^44s^2$ | a ³ H | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | 0.002 | 09WAL/HI |
| 8264.28 | 12096.94 | 5 w | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F ^o | 4 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.08 | 53KIE |
| 8268.61 | 12090.61 | 4 w | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 1 | _ | | e ⁵ F | 2 | 0.08 | 53KIE |
| 8271.57 | 12086.28 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^{5}(^{4}\text{F})4p$ | v ⁵ G° | 2 | 0.04 | 53KIE |
| 8273.20 | 12083.90 | 8 | $3d^5(^2F2)4s$ | d ³ F | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}F^{o}$ | 3 | 0.04 | 53KIE |
| 8273.84 | 12082.97 | 7 w | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 6 | 0.08 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | C | Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|--------------------------------------|--------|---------------|---|---------------------------------------|---|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 8278.38 | 12076.34 | 4 w | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.08 | 53KIE |
| 8285.69 | 12065.68 | 5 | $3d^44s^2$ | c ³ D | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.04 | 53KIE |
| 8286.40 | 12064.65 | 5 | $3d^44s^2$ | c ³ D | 2 | _ | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | 0.04 | 53KIE |
| 8287.146 | 12063.564 | 20 | $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | 0.002 | 09WAL/HI |
| 8290.449 | 12058.758 | 8 | $3d^{6}$ | c ⁵ D | 2 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 2 | 0.005 | 09WAL/HI |
| 8295.30 | 12051.71 | 2 w | $3d^5(^2H)4s$ | b ³ H | 6 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | 0.08 | 53KIE |
| 8296.876 | 12049.417 | 5 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P ^o | 1 | 0.006 | 09WAL/HI |
| 8297.57 | 12048.41 | 7 | $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^3G)4s4p(^3P^0)$ | x ⁵ H° | 3 | 0.04 | 53KIE |
| 8303.143 | 12040.323 | 12 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.003 | 09WAL/HI |
| 8307.37 | 12034.20 | 3 w | $3d^{5}(^{4}G)4p$ | z ³ H° | 6 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.08 | 53KIE |
| 8318.202 | 12018.525 | 5 | $3d^{5}(^{4}G)4p$ | $y^{3}F^{o}$ | 2 | _ | 5u (G)55 | e ³ G | 3 | 0.006 | 09WAL/HII |
| 8321.894 | 12013.193 | 12 | $3d^6$ | c ⁵ D | 1 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 2 | 0.003 | 09WAL/HII |
| 8322.988 | 12013.173 | 5 | $3d^{5}(^{6}S)4p$ | z ⁷ P° | 3 | _ | $3d^6$ | c ⁵ D | 4 | 0.006 | 09WAL/HI |
| 8323.282 | 12011.014 | 6 | $3d^6$ | c ⁵ D | 1 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 1 | 0.005 | 09WAL/HI |
| 8328.45 | 12003.74 | 7 | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | _ | $3d^{5}(^{4}P)4p$ | v ¹ v ⁵ D° | 4 | 0.04 | 53KIE |
| 8336.773 | 11991.753 | 4 | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 | _ | 3u (1)4p | e ³ G | 4 | 0.006 | 09WAL/HI |
| 8338.669 | 11989.026 | 5 | $3d^6$ | c ⁵ D | 0 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 1 | 0.006 | 09WAL/HI |
| 8348.2801 | 11975.224 | 210 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{5}D^{o}$ | 4 | 0.000 | 09WAL/HI |
| 8378.51 | 11973.224 | 40 | $3d^{5}(^{4}G)4p$ | y ³ F° | 3 4 | _ | 5a (D)4s4p(P) | e ³ G | 5 | 0.0007 | 53KIE |
| 8380.080 | 11932.02 | 40 1 | $3d^{5}(^{4}D)4s$ | уг b ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 4 | 0.04 | 09WAL/HI |
| 8380.53 | 11929.782 | 3 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | _ | $3d^{5}(^{4}D)4p$ | t ⁵ P° | 3 | 0.007 | 53KIE |
| 8397.098 | 11929.14 | 3 14 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 0 | 0.04 | 09WAL/HI |
| 8418.34 | 11875.56 | 3 w | 3a (P)4s $3d^5(^4\text{P})4p$ | a P y ³ D° | 2 | | 3a (D)4s4p(P) | e ³ G | 3 | 0.004 | 53KIE |
| | | | $3d^{4}(^{1}G1)4s4p(^{3}P^{0})$ | x ³ H° | 4 | _ | $3d^44s5s$ | e ⁵ H | 5 | | |
| 8444.56 | 11838.69 | 5 w | $3d^{5}(^{4}P)4s$ | a ⁵ P | • | | $3d^4(^5D)4s4p(^3P^0)$ | e ⁵ H z ⁵ D° | | 0.08 | 53KIE |
| 8450.2504 | 11830.718 | 140 | $3d^{5}(^{4}P)4s$ $3d^{5}(^{4}P)4s$ | a ⁵ P a ⁵ P | 3 | _ | | z ⁵ D° | 3 | 0.0007 | 09WAL/HI |
| 8455.2711 | 11823.693 | 100 | $3d^{5}(^{6}S)4d$ | a ⁷ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ $3d^3(^4F)4s^24p$ | z ³ G° | 3 | 0.0007 | 09WAL/HI |
| 8458.11 | 11819.72 | 10 | | | 4 | - | $3d^{5}(^{4}G)5s$ | v °G° e ⁵G | 5 | 0.04 | 53KIE |
| 8475.656 | 11795.256 | 1 | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 3 | _ | $3d^{5}(^{4}G)5s$ $3d^{5}(^{4}G)5s$ | e ⁵G e ⁵G | 3 | 0.007 | 09WAL/HI |
| 8483.34 | 11784.57 | 15 w | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 3 | - | | e ⁵ G v ⁵ F° | 2 | 0.08 | 53KIE |
| 8496.74 | 11765.99 | 4 w | $3d^5(^2\text{H})4s$ | b ³ H | 4 | - | $3d^4(^5D)4s5p(^3P^0)$ | | 3 | 0.08 | 53KIE |
| 8502.60 | 11757.88 | 4 w | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 4 | - | $3d^5(^4G)5s$ | e ⁵ G | 4 | 0.08 | 53KIE |
| 8506.90 | 11751.93 | 4 w* | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 4 | - | - 4.5 3-0 | e ⁵ F | 5 | 0.08 | 53KIE |
| 8506.90 | 11751.93 | 4 w* | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | 0.08 | 53KIE |
| 8510.99 | 11746.29 | 20 | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 4 | - | $3d^{5}(^{4}G)5s$ | e ⁵ G | 3 | 0.04 | 53KIE |
| 8530.41 | 11719.55 | 4 h | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 5 | - | $3d^{5}(^{4}G)5s$ | e ⁵ G | 5 | 0.08 | 53KIE |
| 8537.78 | 11709.43 | 30 w | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 4 | 0.08 | 53KIE |
| 8543.7198 | 11701.289 | 37 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.0015 | 09WAL/HI |
| 8548.8522 | 11694.264 | 150 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}D^{o}$ | 2 | 0.0007 | 09WAL/HI |
| 8553.169 | 11688.362 | 19 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.002 | 09WAL/HI |
| 8555.5054 | 11685.170 | 42 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.0015 | 09WAL/HI |
| 8562.55 | 11675.56 | 25 | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 6 | - | $3d^5(^4G)5s$ | e ⁵ G | 5 | 0.04 | 53KIE |
| 8563.488 | 11674.278 | 2 | $3d^5(^2F2)4s$ | d ³ F | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 3 | 0.007 | 09WAL/HI |
| 8582.9058 | 11647.866 | 310 | $3d^{5}(^{4}G)4p$ | y ⁵ H ^o | 7 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 6 | 0.0007 | 09WAL/HI |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | C | Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|---------------------------------|--------|---------------|--|---|--------|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | of line |
| 8607.009 | 11615.247 | 5 | $3d^44s5s$ | f ⁷ D | 1 | | $3d^44s5p$ | r ⁵ D° | 2 | 0.006 | 09WAL/HIN |
| 8609.20 | 11612.29 | 7 w | | e ³ F | 2 | _ | | r ⁵ P° | 3 | 0.08 | 53KIE |
| 8636.2269 | 11575.951 | 59 | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.0015 | 09WAL/HIN |
| 8643.0176 | 11566.856 | 92 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.0007 | 09WAL/HIN |
| 8652.238 | 11554.530 | 15 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.003 | 09WAL/HIN |
| 8653.56 | 11552.76 | 2 w | $3d^{5}(^{2}G2)4s$ | c ³ G | 5 | _ | 24 (2) is ip(1) | x ³ G° | 5 | 0.08 | 53KIE |
| 8681.88 | 11515.08 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 4 | 0.04 | 53KIE |
| 8685.23 | 11510.64 | 1 | $3d^44s5s$ | f ⁷ D | 3 | _ | $3d^44s5p$ | r ⁵ D° | 3 | 0.04 | 53KIE |
| 8686.38 | 11509.11 | 1 w | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | _ | $3d^{5}(^{2}G2)4s$ | b ¹ G | 4 | 0.08 | 53KIE |
| 8687.4507 | 11507.696 | 55 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 2 | 0.0015 | 09WAL/HIN |
| 8707.4024 | 11481.328 | 49 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | 0.0015 | 09WAL/HIN |
| 8707.9644 | 11480.587 | 31 | $3d^6$ | c ⁵ D | 4 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.0015 | 09WAL/HIN |
| 8716.072 | 11469.908 | 1 | $3d^6$ | c ⁵ D | 1 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | z^3S^o | 1 | 0.0013 | 09WAL/HIN |
| 8718.659 | 11466.505 | 11 | $3d^6$ | c ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.004 | 09WAL/HIN |
| 8732.151 | 11448.788 | 4 | $3d^6$ | c ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P ^o | 1 | 0.004 | 09WAL/HIN |
| 8743.531 | 11443.887 | 16 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ³ D° | 1 | 0.007 | 09WAL/HIN |
| 8746.40 | 11430.14 | 2 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | ³ F ^o | 3 | 0.002 | 53KIE |
| 8753.4849 | 11430.14 | 38 | $3d^{5}(^{4}P)4s$ | b ³ P | 3 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 1 | 0.0015 | 09WAL/HIN |
| 8767.038 | 11420.885 | 38 5 | $3d^6$ | в Р с ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.0015 | 09WAL/HIN |
| | | | $3d^6$ | c ⁵ D | 2 | | $3d^{5}(^{4}P)4p$ | u ⁵ P° | | | |
| 8773.553 8784.11 | 11394.762 | 6 | $3d^6$ | c ⁵ D | | - | $3d^{5}(^{4}P)4p$ $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.005 | 09WAL/HIN |
| | 11381.07 | 3 w | $3d^{5}(^{4}G)4s$ | a ³ G | 0 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ³ F° | 1 | 0.10 | 53KIE |
| 8786.218 | 11378.337 | 3 | 3d (G)4s 3d ⁶ | a G c ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | z F u ⁵ P° | 4 | 0.008 | 09WAL/HIN |
| 8786.955 | 11377.382 | 6 | | c ⁵ H° | 3 | - | | u ² P ² h ⁷ D | 3 | 0.005 | 09WAL/HIN |
| 8788.28 | 11375.67 | 1 | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ³ H ³ P | 6 | - | $3d^44s4d$ | | 5 | 0.05 | 53KIE |
| 8789.5324 | 11374.046 | 27 | $3d^{5}(^{4}P)4s$ | | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° u ⁵ P° | 1 | 0.0015 | 09WAL/HIN |
| 8808.769 | 11349.208 | 2 | $3d^{6}$ | c ⁵ D | 1 | - | $3d^{5}(^{4}P)4p$ | | 2 | 0.008 | 09WAL/HIN |
| 8829.526 | 11322.527 | 1 | 3d ⁶ | c ⁵ D | 4 | - | $3d^4(^3G)4s4p(^3P^0)$ | $w^{5}F^{o}$ | 4 | 0.008 | 09WAL/HIN |
| 8835.6567 | 11314.671 | 110 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 4 | 0.0008 | 09WAL/HIN |
| 8859.654 | 11284.024 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | - | $3d^4(^3P1)4s4p(^3P^0)$ | $x \stackrel{5}{=} D^{o}$ | 3 | 0.008 | 09WAL/HIN |
| 8870.369 | 11270.394 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | - | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 3 | 0.008 | 09WAL/HIN |
| 8898.60 | 11234.64 | 1 | $3d^{5}(^{4}\text{F})4s$ | c ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ G ^o | 3 | 0.05 | 53KIE |
| 8910.769 | 11219.296 | 1 | $3d^6$ | c ⁵ D | 3 | _ | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | 0.008 | 09WAL/HIN |
| 8916.2404 | 11212.411 | 75 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 6 | 0.0016 | 09WAL/HIN |
| 8917.1168 | 11211.309 | 58 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | - | $3d^5(^4G)4p$ | z ⁵ G° | 5 | 0.0016 | 09WAL/HIN |
| 8925.6864 | 11200.545 | 44 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 3 | - | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | 0.0016 | 09WAL/HIN |
| 8925.8363 | 11200.357 | 120 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | 0.0008 | 09WAL/HIN |
| 8929.410 | 11195.875 | 5 | $3d^5(^4F)4s$ | a ⁵ F | 5 | - | $3d^5(^4G)4p$ | z ⁵ G° | 5 | 0.006 | 09WAL/HIN |
| 8936.561 | 11186.916 | 7 | $3d^{5}(^{4}\text{F})4s$ | a ⁵ F | 4 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | 0.006 | 09WAL/HIN |
| 8939.1912 | 11183.624 | 32 | $3d^5(^4F)4s$ | a ⁵ F | 2 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | 0.0016 | 09WAL/HIN |
| 8943.718 | 11177.963 | 5 | $3d^5(^2H)4s$ | b ³ H | 4 | - | $3d^5(^4G)4p$ | y ³ G° | 3 | 0.006 | 09WAL/HIN |
| 8946.480 | 11174.512 | 7 | $3d^5(^4F)4s$ | a ⁵ F | 3 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | 0.006 | 09WAL/HIN |
| 8947.1819 | 11173.636 | 3100 | $3d^5(^4G)4s$ | a ³ G | 5 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 4 | 0.0008 | 09WAL/HIN |
| 8949.55 | 11170.68 | 3 | $3d^{5}(^{2}\text{H})4s$ | b ³ H | 5 | _ | $3d^{5}(^{4}G)4p$ | y ³ G ^o | 4 | 0.05 | 53KIE |

Table 3. Spectral lines of Cr I—Continued

| air wavelength n | Observed wave number | Intensity and | | | C | Classificatio | on | | | Uncertainty of observed wavelength | Source |
|------------------|----------------------------|------------------|---------------------------|-------------------|---|---------------|--|-------------------------------|---|--|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 8955.7452 | 11162.952 | 23 | $3d^5(^4F)4s$ | a ⁵ F | 1 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | 0.0016 | 09WAL/HIN |
| 8957.941 | 11160.216 | 6 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | 0.006 | 09WAL/HIN |
| 8976.8651 | 11136.689 | 1700 | $3d^5(^4G)4s$ | a ³ G | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | 0.0008 | 09WAL/HIN |
| 8989.14 | 11121.48 | 3 | $3d^5(^2H)4s$ | b ³ H | 6 | _ | $3d^{5}(^{4}G)4p$ | y ³ G ^o | 5 | 0.05 | 53KIE |
| 9009.8337 | 11095.938 | 3600 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.0008 | 09WAL/HI |
| 9016.9898 | 11087.132 | 2500 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.0008 | 09WAL/HIN |
| 9021.5718 | 11081.501 | 1500 | $3d^5(^6S)4p$ | z ⁵ P° | 1 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.0008 | 09WAL/HIN |
| 9027.261 | 11074.517 | 2 | $3d^5(^4F)4s$ | a ⁵ F | 3 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | x ⁵ D° | 2 | 0.008 | 09WAL/HIN |
| 9035.8519 | 11063.988 | 1300 | $3d^{5}(^{4}G)4s$ | a ³ G | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 2 | 0.0008 | 09WAL/HIN |
| 9059.7699 | 11034.779 | 32 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 4 | 0.0016 | 09WAL/HIN |
| 9068.28 | 11024.42 | 2 | $3d^6$ | c ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 4 | 0.05 | 53KIE |
| 9098.95 | 10987.26 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | _ | , , , , , | e ³ F | 3 | 0.05 | 53KIE |
| 9113.008 | 10970.314 | 2 | $3d^6$ | c ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ⁵ D° | 3 | 0.008 | 09WAL/HIN |
| 9124.01 | 10957.09 | 1 | $3d^44s^2$ | a ³ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 2 | 0.05 | 53KIE |
| 9128.119 | 10952.153 | 6 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | _ | . , 1 . , | e ³ F | 4 | 0.006 | 09WAL/HIN |
| 9140.53 | 10937.28 | 8 | $3d^{5}(^{4}G)4p$ | y ³ G° | 4 | _ | | e ³ G | 4 | 0.05 | 53KIE |
| 9141.209 | 10936.471 | 9 | $3d^{5}(^{4}G)4p$ | y ³ G° | 3 | _ | | e ³ G | 3 | 0.005 | 09WAL/HI |
| 9142.477 | 10934.954 | 14 | $3d^{5}(^{4}G)4p$ | y ³ G° | 5 | _ | | e ³ G | 5 | 0.004 | 09WAL/HI |
| 9148.4142 | 10927.857 | 41 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 3 | 0.0017 | 09WAL/HI |
| 9208.2918 | 10856.798 | 930 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | 0.0008 | 09WAL/HIN |
| 9264.0205 | 10791.488 | 780 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 2 | 0.0009 | 09WAL/HIN |
| 9290.4720 | 10760.763 | 5700 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 5 | 0.0009 | 09WAL/HI |
| 9293.994 | 10756.685 | 18 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 5 | 0.003 | 09WAL/HI |
| 9294.2275 | 10756.415 | 470 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 5 | 0.0009 | 09WAL/HIN |
| 9313.6099 | 10734.030 | 54 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.0017 | 09WAL/HIN |
| 9362.0793 | 10678.458 | 79 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.0018 | 09WAL/HI |
| 9409.78 | 10624.33 | 3 | $3d^{5}(^{6}S)7s$ | g ⁵ S | 2 | _ | $3d^44s(^6D)6p$ | ⁵ P ^o | 2 | 0.05 | 53KIE |
| 9444.3707 | 10585.414 | 34 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | 0.0018 | 09WAL/HI |
| 9446.296 | 10583.257 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 1 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.006 | 09WAL/HII |
| 9446.8043 | 10582.687 | 690 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | 0.0009 | 09WAL/HI |
| 9447.0454 | 10582.417 | 4400 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | 0.0009 | 09WAL/HI |
| 9518.689 | 10502.767 | 2 | $3d^5(^2F2)4s$ | d ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ G ^o | 4 | 0.009 | 09WAL/HII |
| 9520.083 | 10501.229 | 6 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.006 | 09WAL/HII |
| 9530.306 | 10489.965 | 1 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 2 | _ | $3d^5(^4G)4p$ | y ³ G ^o | 3 | 0.009 | 09WAL/HII |
| 9568.6246 | 10447.957 | 31 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | 0.0018 | 09WAL/HII |
| 9571.8127 | 10444.477 | 700 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | 0.0009 | 09WAL/HII |
| 9574.3116 | 10441.751 | 3400 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | 0.0009 | 09WAL/HI |
| 9605.181 | 10408.193 | 5 | $3d^5(^2\text{F2})4s$ | d ³ F | 4 | _ | $3d^4(^3\text{H})4s4p(^3\text{P}^{\circ})$ | z ³ G° | 5 | 0.007 | 09WAL/HI |
| 9626.3759 | 10385.277 | 40 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.0019 | 09WAL/HI |
| 9628.459 | 10383.030 | 2 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.009 | 09WAL/HI |
| 9656.479 | 10352.902 | 3 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 4 | 0.009 | 09WAL/HI |
| 9667.2857 | 10341.329 | 480 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | 0.009 | 09WAL/HIN |
| 9670.5399 | 10347.849 | 2500 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{5}F^{o}$ | 2 | 0.0009 | 09WAL/HIN |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---------------------------|-------------------------------|---|---------------|---------------------------------|-------------------------------|--------|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 9717.117 | 10288.297 | 2 | $3d^5(^2F2)4s$ | d ³ F | 2 | _ | $3d^4(^3H)4s4p(^3P^0)$ | z ³ G° | 3 | 0.009 | 09WAL/HIN |
| 9730.3159 | 10274.341 | 1200 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.0009 | 09WAL/HIN |
| 9734.5624 | 10269.859 | 1750 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | 0.0009 | 09WAL/HIN |
| 9743.382 | 10260.563 | 6 | $3d^44s^2$ | a ³ P | 0 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}D^{o}$ | 1 | 0.007 | 09WAL/HIN |
| 9752.8910 | 10250.559 | 51 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 0 | 0.0019 | 09WAL/HIN |
| 9758.71 | 10244.45 | 2 | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | y ³ F ^o | 4 | 0.05 | 53KIE |
| 9773.3520 | 10229.099 | 180 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.0010 | 09WAL/HIN |
| 9845.064 | 10154.590 | 5 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 2 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.008 | 09WAL/HIN |
| 9900.9092 | 10097.314 | 250 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.0010 | 09WAL/HIN |
| 9904.4797 | 10093.674 | 160 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D ^o | 2 | 0.0010 | 09WAL/HIN |
| 9934.467 | 10063.206 | 7 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.007 | 09WAL/HIN |
| 9946.3200 | 10053.200 | 160 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 2 | 0.0010 | 09WAL/HIN |
| 9949.0727 | 10048.433 | 620 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.0010 | 09WAL/HIN |
| 9967.234 | 10030.124 | 2 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.010 | 09WAL/HIN |
| 10080.3539 | 9917.568 | 400 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | 0.0010 | 09WAL/HIN |
| 10083.1813 | 9914.787 | 140 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 1 | 0.0010 | 09WAL/HIN |
| 10086.209 | 9911.811 | 4 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.009 | 09WAL/HIN |
| 10089.694 | 9908.387 | 20 | $3d^{6}$ | c ⁵ D | 4 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | 0.003 | 09WAL/HIN |
| 10094.275 | 9903.891 | 8 | $3d^5(^4D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.007 | 09WAL/HIN |
| 10107.850 | 9890.590 | 7 | $3d^{5}(^{4}D)4s$ | b ⁵D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.007 | 09WAL/HIN |
| 10110.481 | 9888.016 | 4 | $3d^6$ | c ⁵ D | 4 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | $x^{5}F^{0}$ | 4 | 0.007 | 09WAL/HIN |
| 10112.000 | 9886.530 | 12 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.005 | 09WAL/HIN |
| 10174.000 | 9826.282 | 14 | $3d^44s^2$ | a ³ P | 1 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁵ D° | 0 | 0.005 | 09WAL/HIN |
| 10196.986 | 9804.132 | 78 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}P^{o}$ | 1 | 0.003 | 09WAL/HIN |
| 10204.117 | 9797.281 | 6 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | w ⁵ D° | 2 | 0.002 | 09WAL/HIN |
| 10217.144 | 9797.281 | 13 | 3d ⁶ | c ⁵ D | 3 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | x ⁵ F° | 4 | 0.007 | 09WAL/HIN |
| 10249.177 | 9754.208 | 4 | $3d^6$ | c D c ⁵ D | 3 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | x F x ⁵ F° | 3 | 0.003 | 09WAL/HIN |
| | 9739.797 | 5 | $3d^5(^2F2)4s$ | d ³ F | 2 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | w ⁵ D° | 3 1 | 0.009 | 09WAL/HIN |
| 10264.341 | | | 3d ⁶ | c ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 3 | | |
| 10325.118 | 9682.466 | 8 4 | 3a 3d ⁶ | c D c ⁵ D | 2 | _ | $3d^{4}(^{3}F1)4s4p(^{3}P^{o})$ | x F x ⁵ F° | 2 | 0.007 | 09WAL/HIN |
| 10357.545 | 9652.152 9620.196 | 22 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ³ P ^o | 1 | 0.010 0.003 | 09WAL/HIN |
| 10391.951 | | | $3d^{5}(^{4}D)4s$ | ь ⁵ D | | - | | $z^{3}P^{o}$ | | | 09WAL/HIN |
| 10402.208 | 9610.710 | 4 | $3d^{6}$ (D)4s | 6 D c 5D | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | z P x ⁵ F° | 1 | 0.010 | 09WAL/HIN |
| 10406.670 | 9606.589 | 5 | | b ⁵ D | • | - | $3d^4(^3F1)4s4p(^3P^0)$ | z ³ P° | 2 | 0.009 | 09WAL/HIN |
| 10416.624 | 9597.409 | 46 | $3d^{5}(^{4}D)4s$ | d ³ F | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | | 1 | 0.002 | 09WAL/HIN |
| 10417.356 | 9596.735 | 7 | $3d^5(^2\text{F2})4s$ | | 4 | - | $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | 0.008 | 09WAL/HI |
| 10432.078 | 9583.192 | 2 | $3d^6$ | c ⁵ D | 1 | - | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | 0.011 | 09WAL/HIN |
| 10437.284 | 9578.412 | 1 | $3d^44s^2$ | a ³ P | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.011 | 09WAL/HIN |
| 10456.261 | 9561.028 | 2 | 3d ⁶ | c ⁵ D | 0 | - | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 1 | 0.011 | 09WAL/HIN |
| 10460.573 | 9557.087 | 2 | $3d^5(^2\text{F2})4s$ | d ³ F | 3 | - | $3d^5(^4P)4p$ | y ³ D° | 2 | 0.011 | 09WAL/HI |
| 10486.2502 | 9533.685 | 1400 | $3d^5(^4D)4s$ | b ⁵ D | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | 0.0011 | 09WAL/HIN |
| 10510.0116 | 9512.131 | 340 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{5}D^{o}$ | 4 | 0.0011 | 09WAL/HI |
| 10545.031 | 9480.542 | 8 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 4 | - | $3d^{5}(^{4}G)4p$ | $y^{3}F^{o}$ | 4 | 0.008 | 09WAL/HIN |
| 10550.095 | 9475.991 | 45 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 0 | 0.002 | 09WAL/HIN |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|---|---|---|---------------|---|-------------------------------|---|--|----------------------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 10580.254 | 9448.980 | 7 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.008 | 09WAL/HIN |
| 10626.439 | 9407.913 | 5 | $3d^5(^2F2)4s$ | d ³ F | 2 | _ | $3d^{5}(^{4}G)4p$ | y^3F^o | 2 | 0.009 | 09WAL/HIN |
| 10631.42 | 9403.50 | 2 * | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | _ | $3d^{5}(^{4}G)5s$ | e ⁵G | 6 | 0.05 | 53KIE |
| 10631.42 | 9403.50 | 2 * | $3d^{5}(^{2}G2)4s$ | b ¹ G | 4 | _ | (| $x^{3}G^{o}$ | 4 | 0.05 | 53KIE |
| 10647.6414 | 9389.179 | 300 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.0011 | 09WAL/HII |
| 10667.5172 | 9371.685 | 400 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.0011 | 09WAL/HI |
| 10672.1406 | 9367.625 | 570 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.0011 | 09WAL/HI |
| 0714.413 | 9330.666 | 13 | $3d^44s^2$ | a ³ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.006 | 09WAL/HI |
| 10801.3612 | 9255.557 | 330 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.0012 | 09WAL/HI |
| 0816.9049 | 9242.257 | 180 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.0012 | 09WAL/HI |
| 10821.6599 | 9238.196 | 360 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.0012 | 09WAL/HI |
| 10905.7131 | 9166.995 | 610 I | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | _ | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | 0.0012 | 09WAL/HI |
| 10929.8752 | 9146.730 | 160 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.0012 | 09WAL/HI |
| 10941.224 | 9137.243 | 33 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.002 | 09WAL/HI |
| 10957.1726 | 9123.943 | 270 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.0012 | 09WAL/HI |
| 11015.5274 | 9075.609 | 820 I | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | 0.0012 | 09WAL/HI |
| 1044.6054 | 9051.715 | 140 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | 0.0012 | 09WAL/HI |
| 1156.9553 | 8960.565 | 1120 I | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 4 | _ | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | 0.0012 | 09WAL/HI |
| 1209.495 | 8918.566 | 3 | $3d^{5}(^{4}G)4s$ | a ³ G | 4 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁵ D° | 4 | 0.0012 | 09WAL/HI |
| 11282.027 | 8861.229 | 8 | $3d^6$ | c ⁵ D | 4 | _ | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 3 | 0.009 | 09WAL/HI |
| 11310.7289 | 8838.743 | 1460 | $3d^5(^6S)4p$ | z ⁵ P° | 1 | _ | $3d^6$ | c ⁵ D | 0 | 0.003 | 09WAL/HI |
| 11310.7289 | 8826.274 | 1 | $3d^{5}(^{6}S)7s$ | g ⁵ S | 2 | _ | $3d^44s5p$ | r ⁵ D° | 3 | 0.0013 | 09WAL/HI |
| 11320.708 | 8822.211 | 1170 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | 3d ⁶ | c ⁵ D | 1 | 0.013 | 09WAL/HI |
| 11331.9242 | 8816.580 | 3500 | $3d^{5}(^{6}S)4p$ | $z^{-5}P^{o}$ | 1 | _ | $3d^6$ | c ⁵ D | 1 | 0.0013 | 09WAL/HI |
| 11379.3341 | 8785.455 | 590 | $3d^{5}(^{6}S)4p$ | $z^{-5}P^{o}$ | 3 | _ | $3d^6$ | c ⁵ D | 2 | 0.0013 | 09WAL/HI |
| 11379.3341 | 8777.532 | 9 | $3d^{5}(^{4}G)4s$ | a ³ G | 5 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | 0.0013 | 09WAL/HI |
| 11389.000 | 8776.650 | 5300 | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | _ | 3 <i>d</i> (<i>D</i>)4 <i>s</i> 4 <i>p</i> (<i>P</i>) 3 <i>d</i> ⁶ | c ⁵ D | 2 | 0.008 | 09WAL/HI |
| | 8770.030 8771.019 | 3200 | 3a (S)4p $3d^5(^6S)4p$ | z P z ⁵ P° | 1 | _ | 3a 3d ⁶ | c D c ⁵ D | 2 | 0.0013 | |
| 11398.0631 | | | $3d^{6}$ $3d^{6}$ | c ⁵ D | - | | $3a^{5}$ $(^{6}S)5p$ | w ⁵ P° | 3 | | 09WAL/HI |
| 11415.000 | 8758.005 | 3 | 3 <i>a</i> 3 <i>d</i> ⁵ (⁶ S)4 <i>p</i> | z ⁵ P° | 3 | _ | 3d ⁶ (*8)5p | c ⁵ D | 3 | 0.013 | 09WAL/HI 09WAL/HI |
| 11473.0230 | 8713.713 | 5000 | $3d^{4}4s^{2}$ | c ³ D | | - | $3a^{4}(^{3}P1)4s4p(^{3}P^{0})$ | x ⁵ D° | | 0.0013 | |
| 11474.414 | 8712.657 | 2 | | c ⁵ D z ⁵ P ^o | 2 | _ | | c ⁵ D | 3 | 0.013 | 09WAL/HI |
| 11484.6280 | 8704.908 | 1020 | $3d^{5}(^{6}S)4p$ | z ⁵ P | 2 | - | 3d ⁶ | c D w 5P° | 3 | 0.0013 | 09WAL/HI |
| 11510.171 | 8685.590 | 8 | 3d ⁶ | | 3 | - | $3d^{5}(^{6}S)5p$ | | 2 | 0.009 | 09WAL/HI |
| 11526.228 | 8673.491 | 2 | $3d^{5}(^{6}S)7s$ | g ⁵ S | 2 | _ | $3d^44s5p$ | r ⁵ D° | 1 | 0.013 | 09WAL/HI |
| 1605.446 | 8614.286 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 3 | _ | - 5.6m - | e ³ G | 3 | 0.013 | 09WAL/HI |
| 1606.042 | 8613.844 | 6 | $3d^6$ | c ⁵ D | 2 | - | $3d^{5}(^{6}S)5p$ | $w_{5-}^{5}P^{o}$ | 2 | 0.009 | 09WAL/HI |
| 1610.5598 | 8610.492 | 2500 | $3d^5(^6S)4p$ | z ⁵ P° | 3 | - | 3d ⁶ | c ⁵ D | 4 | 0.0013 | 09WAL/HI |
| 11667.753 | 8568.285 | 2 | $3d^6$ | c ⁵ D | 1 | - | $3d^5(^6S)5p$ | w ⁵ P° | 2 | 0.014 | 09WAL/HI |
| 11688.882 | 8552.797 | 4 | $3d^{6}$ | c ⁵ D | 2 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 1 | 0.012 | 09WAL/HI |
| 11749.930 | 8508.360 | 19 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 4 | 0.004 | 09WAL/HI |
| 11751.481 | 8507.237 | 6 | $3d^6$ | c ⁵ D | 1 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 1 | 0.010 | 09WAL/HI |
| 11769.558 | 8494.171 | 6 | $3d^44s^2$ | a ³ F | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.010 | 09WAL/HI |
| 11782.179 | 8485.072 | 2 | $3d^6$ | c ⁵ D | 0 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 1 | 0.014 | 09WAL/HI |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air | Observed wave | Intensity | | | C | Classificatio | on | | | Uncertainty of observed | C |
|-------------------|----------------------------|-------------|-----------------------------------|-------------------------------|---|---------------|-------------------------------------|-------------------------------|---|----------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 11813.557 | 8462.535 | 10 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 1 | _ | 3d ⁵ (⁶ S)5s | e ⁵ S | 2 | 0.007 | 09WAL/HIN |
| 11849.436 | 8436.911 | 27 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | 0.003 | 09WAL/HIN |
| 11850.994 | 8435.802 | 2 | $3d^44s^2$ | a ³ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.014 | 09WAL/HIN |
| 11901.974 | 8399.669 | 5 | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | _ | $3d^44s4d$ | e ⁷ F | 5 | 0.011 | 09WAL/HIN |
| 11908.0894 | 8395.355 | 430 | $3d^44s^2$ | b ³ G | 5 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 4 | 0.0014 | 09WAL/HIN |
| 11986.408 | 8340.500 | 19 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 1 | _ | $3d^6$ | c ⁵ D | 0 | 0.004 | 09WAL/HIN |
| 12000.9728 | 8330.378 | 440 | $3d^44s^2$ | b ³ G | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 3 | 0.0014 | 09WAL/HIN |
| 12018.343 | 8318.338 | 44 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 1 | _ | $3d^6$ | c ⁵ D | 1 | 0.003 | 09WAL/HIN |
| 12044.1100 | 8300.542 | 410 | $3d^44s^2$ | b ³ G | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 2 | 0.0015 | 09WAL/HIN |
| 12046.595 | 8298.830 | 11 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.007 | 09WAL/HIN |
| 12084.534 | 8272.776 | 35 | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 1 | _ | $3d^6$ | c ⁵ D | 2 | 0.003 | 09WAL/HIN |
| 12138.042 | 8236.307 | 6 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | _ | $3d^6$ | c ⁵ D | 1 | 0.010 | 09WAL/HIN |
| 12162.339 | 8219.853 | 2 | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 5 | _ | $3d^44s4d$ | e ⁷ F | 4 | 0.015 | 09WAL/HIN |
| 12205.560 | 8190.746 | 24 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | _ | $3d^6$ | c ⁵ D | 2 | 0.003 | 09WAL/HIN |
| 12313.412 | 8119.004 | 43 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | _ | $3d^6$ | c ⁵ D | 3 | 0.003 | 09WAL/HIN |
| 12344.231 | 8098.734 | 31 | $3d^4(^3F1)4s4p(^3P^0)$ | x ⁵ F° | 4 | _ | $3d^44s4d$ | e ⁷ F | 3 | 0.003 | 09WAL/HIN |
| 12384.268 | 8072.552 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | $3d^6$ | c ⁵ D | 2 | 0.015 | 09WAL/HIN |
| 12405.541 | 8058.709 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | _ | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | 0.011 | 09WAL/HIN |
| 12495.321 | 8000.807 | 5 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | $3d^6$ | c ⁵ D | 3 | 0.012 | 09WAL/HIN |
| 12521.8110 | 7983.881 | 2400 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | 0.0016 | 09WAL/HIN |
| 12532.8386 | 7976.856 | 1230 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 3 | 0.0016 | 09WAL/HIN |
| 12651.0282 | 7902.334 | 590 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.0016 | 09WAL/HIN |
| 12658.631 | 7897.588 | 34 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 3 | _ | $3d^6$ | c ⁵ D | 4 | 0.003 | 09WAL/HIN |
| 12671.338 | 7889.668 | 6 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 2 | _ | $3d^6$ | c ⁵ D | 1 | 0.011 | 09WAL/HIN |
| 12681.984 | 7883.045 | 76 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.003 | 09WAL/HIN |
| 12727.966 | 7854.566 | 2 | $3d^{5}(^{4}G)4p$ | y ⁵ H° | 5 | _ | $3d^44s4d$ | e ⁷ G | 6 | 0.016 | 09WAL/HIN |
| 12744.934 | 7844.109 | 26 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 2 | _ | $3d^6$ | c ⁵ D | 2 | 0.003 | 09WAL/HIN |
| 12848.079 | 7781.136 | 6 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.012 | 09WAL/HIN |
| 12862.575 | 7772.367 | 38 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P ^o | 2 | _ | $3d^6$ | c ⁵ D | 3 | 0.003 | 09WAL/HIN |
| 12895.165 | 7752.724 | 4 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^6$ | c ⁵ D | 2 | 0.015 | 09WAL/HIN |
| 12910.0904 | 7743.761 | 1570 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | 0.0017 | 09WAL/HIN |
| 12921.8128 | 7736.736 | 200 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | 0.0017 | 09WAL/HIN |
| 12937.0194 | 7727.642 | 1300 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | y ⁵ P ^o | 2 | 0.0017 | 09WAL/HIN |
| 12947.0301 | 7721.667 | 100 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.0017 | 09WAL/HIN |
| 12979.4516 | 7702.379 | 340 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 2 | 0.0017 | 09WAL/HIN |
| 12997.323 | 7691.788 | 1 | $3d^44s5s$ | f ⁷ D | 3 | _ | $3d^44s5p$ | q ⁵ F° | 3 | 0.017 | 09WAL/HIN |
| 13014.072 | 7681.889 | 78 | $3d^5(^2D3)4s$ | b ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.003 | 09WAL/HIN |
| 13015.610 | 7680.981 | 26 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | $3d^6$ | c ⁵ D | 3 | 0.003 | 09WAL/HIN |
| 13019.468 | 7678.705 | 1 | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | x ⁵ P° | 2 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.003 | 09WAL/HIN |
| 13123.960 | 7617.568 | 1 | υα (D) 15 1ρ(1) | e ³ F | 3 | _ | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | 0.017 | 09WAL/HIN |
| 13152.592 | 7600.985 | 2 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 1 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.017 | 09WAL/HIN |
| 13154.747 | 7599.740 | 6 | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ F° | 4 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.017 | 09WAL/HIN |
| 13186.110 | 7581.664 | 2 | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ F° | 1 | _ | $3d^44s5s$ | f ⁵ D | 0 | 0.012 | 09WAL/HIN |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|-------------------------------|--------|---------------|--------------------------------------|-------------------------------|-----|--|------------------------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 13192.9055 | 7577.759 | 95 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 3 | _ | 3d ⁶ | c ⁵ D | 4 | 0.0017 | 09WAL/HIN |
| 13196.641 | 7575.614 | 4 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 2 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.016 | 09WAL/HIN |
| 13197.212 | 7575.286 | 8 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F ^o | 3 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.012 | 09WAL/HIN |
| 13197.413 | 7575.171 | 64 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 4 | 0.003 | 09WAL/HIN |
| 13201.1456 | 7573.029 | 1500 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | 0.0017 | 09WAL/HIN |
| 13208.6386 | 7568.733 | 93 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | 0.0017 | 09WAL/HIN |
| 13217.0172 | 7563.935 | 520 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | 0.0017 | 09WAL/HIN |
| 13244.4940 | 7548.243 | 230 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 1 | 0.0018 | 09WAL/HIN |
| 13246.547 | 7547.073 | 1 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.018 | 09WAL/HIN |
| 13265.756 | 7536.145 | 2 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.018 | 09WAL/HIN |
| 13286.090 | 7524.611 | 4 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.016 | 09WAL/HIN |
| 13379.313 | 7472.182 | 12 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.009 | 09WAL/HIN |
| 13443.031 | 7436.765 | 28 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.004 | 09WAL/HIN |
| 13453.384 | 7431.042 | 45 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 5 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.004 | 09WAL/HIN |
| 13514.949 | 7397.191 | 1 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | 0.018 | 09WAL/HIN |
| 13549.642 | 7378.251 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 2 | 0.018 | 09WAL/HIN |
| 13554.665 | 7375.517 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 2 | 0.018 | 09WAL/HI |
| 13571.436 | 7366.403 | 1 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}D^{o}$ | 2 | 0.018 | 09WAL/HIN |
| 13598.119 | 7351.948 | 56 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}F^{o}$ | 3 | 0.004 | 09WAL/HIN |
| 13684.070 | 7305.770 | 16 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{7}D^{o}$ | 5 | 0.004 | 09WAL/HIN |
| 13692.224 | 7301.419 | 2 | $3d^{5}(^{4}G)4s$ | a G a ⁵G | 5 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁷ D° | 5 | 0.000 | 09WAL/HIN |
| 13727.504 | 7301.419 | 3 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 0 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.019 | 09WAL/HIN |
| 13752.749 | 7269.286 | 2 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.019 | 09WAL/HIN |
| 13784.536 | 7252.523 | 3 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.019 | 09WAL/HIN |
| 13790.509 | 7249.382 | 4 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.019 | 09WAL/HIN |
| 13790.509 | 7249.582 7244.609 | 4 | $3d^{5}(^{4}F)4s$ | y D a ⁵F | 3 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | 0.017 | 09WAL/HIN |
| 13804.810 | 7244.809 | 1 | $3d^{5}(^{4}F)4s$ | аг a ⁵ F | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}D^{o}$ | 1 | 0.017 | |
| 13828.075 | 7241.872 | 40 I | 3d ⁵ (⁶ S)5s | a F e ⁵ S | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | z D v ⁵ P° | 3 | 0.019 | 09WAL/HIN |
| 13849.776 | 7229.688 | 40 I 27 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{0}$ | 2 | | 09WAL/HIN 09WAL/HIN |
| 13983.324 | 7218.360 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | - | $3d^{4}4s5s$ | z F f ⁵ D | 2 | 0.004 0.020 | 09WAL/HIN |
| 13983.324 | | 1 | $3d^{5}(^{4}G)4s4p(P)$ | a ⁵ G | 4 | | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 4 | | |
| | 7126.066 | • | $3d^{5}(^{4}G)4s$ $3d^{5}(^{4}G)4s$ | a ⁵ G | • | - | | z ⁷ D° | · - | 0.020 | 09WAL/HIN |
| 14029.684 | 7125.796 | 6 1 | | | 5 | - | $3d^4(^5D)4s4p(^3P^0)$ $3d^44s5s$ | z D f ⁵ D | 4 | 0.014 | 09WAL/HI |
| 14083.778 | 7098.427 | • | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | - | | | 1 | 0.020 | 09WAL/HIN |
| 14107.667 | 7086.407 | 7 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | - | $3d^44s5s$ | f ⁵ D | 3 | 0.014 | 09WAL/HIN |
| 14138.19 | 7071.109 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | - | $3d^{5}(^{6}S)5s$ | e ⁷ S | 3 | 0.02 | 09WAL/HI |
| 14195.923 | 7042.351 | 18 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | - | $3d^44s5s$ | f ⁵ D | 4 | 0.006 | 09WAL/HIN |
| 14252.643 | 7014.325 | 670 | $3d^5(^4P)4s$ | b ³ P | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P° | 2 | 0.002 | 09WAL/HIN |
| 14285.963 | 6997.965 | 47 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 5 | 0.004 | 09WAL/HIN |
| 14298.703 | 6991.730 | 69 I | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | - | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P ^o | 2 | 0.004 | 09WAL/HIN |
| 14315.96 | 6983.301 | 2 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | - | $3d^44s5s$ | f ⁵ D | 2 | 0.02 | 09WAL/HI |
| 14323.82 | 6979.470 | 1 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | 0.02 | 09WAL/HIN |
| 14329.42 | 6976.742 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 3 | 0.02 | 09WAL/HIN |
| 14348.449 | 6967.490 | 1700 | $3d^5(^4P)4s$ | b ³ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.002 | 09WAL/HIN |

TABLE 3. Spectral lines of Cr I—Continued

| Observed air wavelength (Å) | Observed wave number (cm ⁻¹) | Intensity and comment | Classification | | | | | | | Uncertainty of observed wavelength | Course |
|--------------------------------------|---|-----------------------------|-------------------------|-------------------|--------|---|--------------------------------|---------------------------------------|---|--|----------------|
| | | | Configuration | Term | J | | Configuration | Term | | (Å) | Source of line |
| 14532.23 | 6879.376 | 2 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.02 | 09WAL/HIN |
| 14563.171 | 6864.760 | 6 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | 0.015 | 09WAL/HIN |
| 14650.228 | 6823.967 | 36 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | 0.004 | 09WAL/HIN |
| 14696.649 | 6802.413 | 21 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | 0.006 | 09WAL/HIN |
| 14738.079 | 6783.291 | 79 I | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | _ | $3d^4(^3P1)4s4p(^3P^0)$ | v ⁵ P° | 1 | 0.004 | 09WAL/HIN |
| 14808.36 | 6751.097 | 3 | $3d^{5}(^{4}F)4s$ | c ³ F | 3 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 4 | 0.02 | 09WAL/HIN |
| 14845.638 | 6734.145 | 530 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.002 | 09WAL/HIN |
| 14874.357 | 6721.143 | 300 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.002 | 09WAL/HIN |
| 14959.18 | 6683.030 | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | 0.02 | 09WAL/HIN |
| 14974.984 | 6675.979 | 23 | $3d^{5}(^{4}F)4s$ | c ³ F | 4 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 3 | 0.004 | 09WAL/HIN |
| 14978.731 | 6674.309 | 850 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.002 | 09WAL/HIN |
| 14998.443 | 6665.537 | 11 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | 0.011 | 09WAL/HIN |
| 15007.584 | 6661.477 | 33 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | 0.005 | 09WAL/HIN |
| 15022.47 | 6654.878 | 4 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 4 | _ | $3d^44s4d$ | h ⁷ D | 4 | 0.003 | 09WAL/HIN |
| 15178.595 | 6586.425 | 510 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 0 | 0.002 | 09WAL/HIN |
| 15207.81 | 6573.774 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 1 | 0.002 | 09WAL/HIN |
| 15211.425 | 6572.210 | 7 * | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | 0.016 | 09WAL/HIN |
| 15211.425 | 6572.210 | 7 * | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 0 | 0.016 | 09WAL/HIN |
| 15242.271 | 6558.910 | 21 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁵ F° | 2 | 0.016 | 09WAL/HIN |
| 15251.711 | 6554.850 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{5}F^{0}$ | 2 | 0.019 | 09WAL/HIN |
| 15356.249 | 6510.228 | 5 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁵ F° | 1 | 0.019 | 09WAL/HIN |
| 15364.261 | 6506.833 | 8 | $3d^4(^3G)4s4p(^3P^0)$ | w ⁵ F° | 3 | _ | $3d^{4}4s4d$ | h ⁷ D | 2 | 0.019 | 09WAL/HIN |
| 15365.05 | 6506.499 | o 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 4 | _ | $3d^{5}(^{4}D)4p$ | u ⁵ D° | 4 | 0.017 | 09WAL/HIN |
| 15378.662 | 6500.740 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | 0.012 | 09WAL/HIN |
| | | 4 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z F z ⁵ F° | 1 | 0.012 | 09WAL/HIN |
| 15410.17 | 6487.447 6487.238 | 4 11 | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P° | 1 | | $3d^44s5s$ | g ⁵ D | - | | 09WAL/HIN |
| 15410.670 | | | $3d^{4}4s5s$ | f ⁷ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.012 | |
| 15411.75 | 6486.784 | 2 | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P° | 0 | _ | $3d^{4}4s5s$ | | 1 | 0.02 | 09WAL/HIN |
| 15510.26 | 6445.583 | | $3d^{6}$ | c ⁵ D | 4 | - | $3d^4(^5D)4s4p(^1P^0)$ | g ⁵ D y ⁵ D° | _ | 0.02 | 09WAL/HIN |
| 15659.447 | 6384.177 | 9 | | e ⁵ S | · · | _ | | y D w ⁵ P° | 4 | 0.015 | 09WAL/HIN |
| 15680.064 | 6375.783 | 910 | $3d^{5}(^{6}S)5s$ | e ³ P | 2 | _ | $3d^5(^6S)5p$ | w ⁵ D° | 3 | 0.002 | 09WAL/HIN |
| 15704.182 | 6365.991 | 5 | $3d^{5}(^{4}P)4s$ | | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | | 2 | 0.020 | 09WAL/HIN |
| 15820.573 | 6319.157 | 19 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.008 | 09WAL/HIN |
| 15860.214 | 6303.363 | 610 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 2 | 0.003 | 09WAL/HIN |
| 15912.96 | 6282.470 | 1 | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | - | $3d^44s4d$ | e ⁷ F | 6 | 0.03 | 09WAL/HIN |
| 15916.80 | 6280.954 | 3 | $3d^{6}$ | c ⁵ D | 3 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 4 | 0.03 | 09WAL/HIN |
| 15968.346 | 6260.679 | 36 | $3d^{5}(^{4}P)4s$ | b ³ P | 0 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.005 | 09WAL/HIN |
| 15974.015 | 6258.457 | 41 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 2 | - | 1 | e ⁵ F | 3 | 0.005 | 09WAL/HIN |
| 15975.00 | 6258.073 | 1 | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | - | $3d^44s4d$ | e ⁷ F | 2 | 0.03 | 09WAL/HIN |
| 16001.577 | 6247.677 | 22 * | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.008 | 09WAL/HIN |
| 16001.577 | 6247.677 | 22 * | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | _ | $3d^44s4d$ | e ⁷ F | 1 | 0.008 | 09WAL/HIN |
| 16002.312 | 6247.390 | 8 | $3d^44s5s$ | g ⁵ D | 2 | - | | r ⁵ P° | 1 | 0.018 | 09WAL/HIN |
| 16015.322 | 6242.315 | 310 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | - | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 1 | 0.003 | 09WAL/HIN |
| 16073.356 | 6219.777 | 23 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 1 | _ | $3d^6$ | c ⁵ D | 0 | 0.005 | 09WAL/HIN |

Table 3. Spectral lines of Cr I—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|----------------------------------|-------------------------------|--------|---------------|---|-------------------------------|--------|--|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 16090.42 | 6213.182 | 1 | $3d^4(^3P1)4s4p(^3P^0)$ | x ³ P ^o | 2 | _ | $3d^44s5s$ | g ⁵ D | 1 | 0.03 | 09WAL/HIN |
| 16122.435 | 6200.843 | 68 | $3d^{5}(^{4}P)4s$ | b ³ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.005 | 09WAL/HIN |
| 16130.835 | 6197.614 | 51 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | _ | $3d^6$ | c ⁵ D | 1 | 0.005 | 09WAL/HIN |
| 16141.180 | 6193.642 | 6 | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | _ | $3d^44s4d$ | e ⁷ F | 1 | 0.018 | 09WAL/HIN |
| 16184.287 | 6177.145 | 12 | $3d^6$ | c ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D ^o | 3 | 0.013 | 09WAL/HIN |
| 16194.43 | 6173.275 | 1 | $3d^4(^3F1)4s4p(^3P^0)$ | $^{3}D^{o}$ | 1 | _ | . , 1. , | e ⁵ F | 2 | 0.03 | 09WAL/HIN |
| 16223.673 | 6162.149 | 100 | $3d^{5}(^{4}P)4s$ | b ³ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | 0.003 | 09WAL/HIN |
| 16250.297 | 6152.053 | 38 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | _ | $3d^6$ | c ⁵ D | 2 | 0.005 | 09WAL/HIN |
| 16568.465 | 6033.914 | 28 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | _ | $3d^6$ | c ⁵ D | 1 | 0.005 | 09WAL/HIN |
| 16656.07 | 6002.177 | 1 | $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.03 | 09WAL/HIN |
| 16674.666 | 5995.484 | 37 | $3d^6$ | c ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 5 | 0.006 | 09WAL/HIN |
| 16694.542 | 5988.346 | 46 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | _ | $3d^6$ | c ⁵ D | 2 | 0.006 | 09WAL/HIN |
| 16861.696 | 5928.982 | 19 | $3d^44s^2$ | a ³ F | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | 0.009 | 09WAL/HIN |
| 16896.972 | 5916.604 | 68 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | _ | $3d^6$ | c ⁵ D | 3 | 0.006 | 09WAL/HIN |
| 16922.130 | 5907.808 | 9 | $3d^6$ | c ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | 0.017 | 09WAL/HIN |
| 17087.48 | 5850.641 | 2 | $3d^5(^2F1)4s$ | b ³ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.03 | 09WAL/HIN |
| 17148.863 | 5829.698 | 37 | $3d^{5}(^{6}S)8p$ | $^{7}P^{\circ}$ | 3 | _ | $3d^{5}(^{4}G)5s$ | e ⁵ G | 3 | 0.006 | 09WAL/HIN |
| 17157.43 | 5826.788 | 4 | $3d^6$ | c ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | 0.03 | 09WAL/HIN |
| 17242.347 | 5798.091 | 9 | $3d^5(^2F1)4s$ | b ³ F | 4 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}D^{o}$ | 3 | 0.03 | 09WAL/HIN |
| 17264.94 | 5790.505 | 1 | $3d^6$ | c ⁵ D | 1 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ D° | 2 | 0.016 | 09WAL/HIN |
| 17391.92 | 5748.226 | 3 * | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | _ | 3d ⁶ | c ⁵D | 2 | 0.03 | 09WAL/HIN |
| 17391.92 | 5748.226 | 3 * | $3d^4(^5D)4s5p(^3P^0)$ | y ⁵ F ^o | 3 | _ | $3d^44s4d$ | e ⁷ F | 3 | 0.03 | 09WAL/HIN |
| 17466.855 | 5723.566 | 14 | $3d^{6}$ | c ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | 0.03 | 09WAL/HIN |
| 17489.38 | 5716.196 | 3 | $3d^6$ | c ⁵ D | 2 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ D ^o | 1 | 0.013 | 09WAL/HIN |
| 17567.822 | 5690.671 | 37 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}D^{o}$ | 2 | 0.006 | 09WAL/HIN |
| 17575.25 | 5688.266 | 8 | 3d ⁶ | ог с ⁵ D | 4 | _ | $3d^4(^5D)4s4p(^1P^0)$ | у ⁵ F° | 3 | 0.000 | 09WAL/HIN |
| 17611.729 | 5676.484 | 22 | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | _ | 3 <i>a</i> (D)484 <i>p</i> (P) 3 <i>d</i> ⁶ | c ⁵ D | 3 | 0.02 | 09WAL/HIN |
| 17629.90 | 5670.632 | 1 | $3d^6$ | c ⁵ D | 3 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 1 | 0.009 | 09WAL/HIN |
| 17631.93 | 5669.980 | 6 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | $z^{3}D^{o}$ | 2 | 0.03 | 09WAL/HIN |
| 17664.39 | 5659.560 | 8 | $3a$ (F1)4s $3d^5(^4P)4s$ | о F a ⁵ P | 3 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z D z ⁷ D° | 3 | 0.02 | 09WAL/HIN |
| 17686.35 | 5652.535 | 3 | $3d^{5}(^{4}P)4s$ | a P a ⁵ P | 2 | _ | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | z ⁷ D° | 3 | 0.02 | 09WAL/HIN |
| | | | $3d^{6}$ | c ⁵ D | 4 | | | x ⁵ P° | 3 | | |
| 17708.732 | 5645.390 | 320 | $3d^4$ $3d^4$ $(^5D)4s5p(^3P^0)$ | v ⁵ F° | | - | $3d^4(^5D)4s4p(^1P^0)$ $3d^44s4d$ | e ⁷ F | 3 | 0.003 | 09WAL/HIN |
| 17898.058 | 5585.673 | 9 | | | 1 | - | | f ⁷ D | 1 | 0.019 | 09WAL/HIN |
| 17986.23 | 5558.290 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 4 | - | $3d^44s5s$ | | 4 | 0.03 | 09WAL/HIN |
| 17990.35 | 5557.017 | 4 | $3d^5(^2\text{F1})4s$ | b ³ F | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 1 | 0.03 | 09WAL/HIN |
| 18001.847 | 5553.469 | 740 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P° | 2 | 0.003 | 09WAL/HIN |
| 18037.988 | 5542.342 | 410 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 4 | - | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | 0.003 | 09WAL/HIN |
| 18038.555 | 5542.168 | 88 | $3d^6$ | c ⁵ D | 3 | - | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 0.003 | 09WAL/HIN |
| 18041.175 | 5541.363 | 9 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ D° | 2 | 0.020 | 09WAL/HIN |
| 18064.08 | 5534.338 | 2 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 2 | 0.03 | 09WAL/HIN |
| 18093.807 | 5525.244 | 10 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | - | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 2 | 0.016 | 09WAL/HIN |
| 18095.101 | 5524.849 | 33 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | - | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | 0.007 | 09WAL/HIN |
| 18108.408 | 5520.789 | 180 | $3d^5(^4D)4s$ | b ⁵ D | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 3 | 0.003 | 09WAL/HIN |

ENERGY LEVELS AND SPECTRAL LINES OF CR I AND CR II

TABLE 3. Spectral lines of Cr I—Continued

| Observed air | Observed wave number | Intensity and | | | C | lassificatio | on | | | Uncertainty of observed wavelength | S |
|-------------------|----------------------------|------------------|------------------------|-------------------------------|---|--------------|--------------------------------|-------------------------------|---|--|----------------|
| wavelength (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | | (Å) | Source of line |
| 18133.00 | 5513.303 | 8 | $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 0.02 | 09WAL/HIN |
| 18140.547 | 5511.008 | 19 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.010 | 09WAL/HIN |
| 18149.706 | 5508.227 | 220 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.003 | 09WAL/HIN |
| 18237.829 | 5481.612 | 53 | $3d^6$ | c ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 2 | 0.007 | 09WAL/HIN |
| 18275.12 | 5470.426 | 9 | $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 3 | 0.02 | 09WAL/HIN |
| 18276.271 | 5470.082 | 55 | $3d^6$ | c ⁵ D | 3 | _ | $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ F° | 2 | 0.007 | 09WAL/HIN |
| 18335.853 | 5452.307 | 16 | $3d^5(^4P)4s$ | a ⁵ P | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 1 | 0.010 | 09WAL/HIN |
| 18366.49 | 5443.213 | 5 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}D^{o}$ | 1 | 0.03 | 09WAL/HIN |
| 18479.687 | 5409.870 | 16 | $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 2 | 0.010 | 09WAL/HIN |
| 18519.167 | 5398.337 | 120 | $3d^{6}$ | c ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.003 | 09WAL/HIN |
| 18549.215 | 5389.592 | 31 * | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F ^o | 5 | _ | $3d^44s5s$ | f ⁷ D | 4 | 0.007 | 09WAL/HIN |
| 18549.215 | 5389.592 | 31 * | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | _ | $3d^44s4d$ | h ⁷ D | 4 | 0.007 | 09WAL/HIN |
| 18564.88 | 5385.044 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w^3G^o | 4 | 0.03 | 09WAL/HIN |
| 18585.620 | 5379.035 | 37 | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | _ | $3d^44s4d$ | e ⁷ G | 5 | 0.007 | 09WAL/HIN |
| 18629.34 | 5366.411 | 4 | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | _ | $3d^44s4d$ | h ⁷ D | 3 | 0.03 | 09WAL/HIN |
| 18636.641 | 5364.309 | 18 | $3d^6$ | c ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 2 | 0.010 | 09WAL/HIN |
| 18660.832 | 5357.355 | 46 | $3d^6$ | c ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 1 | 0.007 | 09WAL/HIN |
| 18676.75 | 5352.788 | 7 | $3d^6$ | c ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | 0.02 | 09WAL/HIN |
| 18733.56 | 5336.557 | 5 | $3d^{5}(^{6}S)5d$ | g ⁷ D | 2 | _ | $3d^4(^3D)4s4p(^3P^0)$ | r ⁵ F° | 2 | 0.03 | 09WAL/HIN |
| 18820.892 | 5311.794 | 56 | $3d^6$ | c ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | 0.007 | 09WAL/HIN |
| 18825.32 | 5310.545 | 1 | $3d^5(^4G)4p$ | u ⁵ F° | 2 | _ | $3d^44s4d$ | e ⁷ G | 3 | 0.04 | 09WAL/HIN |
| 18829.15 | 5309.464 | 9 | $3d^{5}(^{2}G2)4s$ | c ³ G | 3 | _ | $3d^{5}(^{4}G)4p$ | z ⁵ G° | 2 | 0.02 | 09WAL/HIN |
| 18869.792 | 5298.029 | 36 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 2 | 0.007 | 09WAL/HIN |
| 18899.750 | 5289.631 | 27 * | $3d^6$ | c ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 1 | 0.007 | 09WAL/HIN |
| 18899.750 | 5289.631 | 27 * | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^4(^3F1)4s4p(^3P^0)$ | w ³ G° | 3 | 0.007 | 09WAL/HIN |
| 18905.77 | 5287.947 | 3 | $3d^6$ | c ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 1 | 0.04 | 09WAL/HIN |
| 18917.281 | 5284.729 | 100 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P° | 2 | 0.004 | 09WAL/HIN |
| 18931.829 | 5280.668 | 110 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 2 | 0.004 | 09WAL/HIN |
| 19035.65 | 5251.866 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 6 | 0.04 | 09WAL/HIN |
| 19073.62 | 5241.413 | 1 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | _ | $3d^{5}(^{4}P)4p$ | z ⁵ S° | 2 | 0.04 | 09WAL/HIN |
| 19159.839 | 5217.826 | 89 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.004 | 09WAL/HIN |
| 19170.056 | 5215.045 | 170 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.004 | 09WAL/HIN |
| 19213.83 | 5203.163 | 2 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 4 | 0.04 | 09WAL/HIN |
| 19435.536 | 5143.810 | 26 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | 0.008 | 09WAL/HIN |
| 19471.452 | 5134.322 | 50 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | 0.008 | 09WAL/HIN |
| 19522.022 | 5121.022 | 27 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁵ P ^o | 1 | 0.008 | 09WAL/HIN |
| 19667.630 | 5083.109 | 51 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 0 | 0.008 | 09WAL/HIN |
| 19845.577 | 5037.531 | 33 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | _ | $3d^{5}(^{6}S)6s$ | f ⁵ S | 2 | 0.008 | 09WAL/HIN |
| 19857.28 | 5034.562 | 1 | $3d^{5}(^{4}D)4s$ | a ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.04 | 09WAL/HIN |
| 19879.02 | 5029.056 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 6 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 5 | 0.04 | 09WAL/HIN |
| 19894.35 | 5025.182 | 5 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 3 | 0.03 | 09WAL/HIN |
| 19896.21 | 5024.710 | 2 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{7}F^{0}$ | 5 | 0.04 | 09WAL/HIN |

ENERGY LEVELS AND SPECTRAL LINES OF CR I AND CR II

TABLE 3. Spectral lines of Cr I—Continued

| Observed vacuum wavelength | Observed wave number | Intensity and | | | (| Classificatio | n | | | Uncertainty of observed wavelength | Source |
|----------------------------------|----------------------------|------------------|---|--|--------|---------------|-------------------------------------|--------------------------------------|--------|--|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 20013.841 | 4996.542 | 34 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | _ | 3d ⁵ (⁶ S)6s | f ⁵ S | 2 | 0.008 | 09WAL/HIN |
| 20060.116 | 4985.016 | 18 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 2 | _ | $3d^{5}(^{6}S)6s$ | f ⁵ S | 2 | 0.012 | 09WAL/HIN |
| 20179.769 | 4955.458 | 76 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.008 | 09WAL/HIN |
| 20185.444 | 4954.065 | 69 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | 0.008 | 09WAL/HIN |
| 20208.417 | 4948.433 | 27 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.008 | 09WAL/HIN |
| 20215.689 | 4946.653 | 280 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 3 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | 0.004 | 09WAL/HIN |
| 20222.566 | 4944.971 | 23 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | 0.008 | 09WAL/HIN |
| 20244.440 | 4939.628 | 140 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 2 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | 0.004 | 09WAL/HIN |
| 20245.624 | 4939.339 | 110 | $3d^{5}(^{4}P)4s$ | a ⁵ P | 1 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.004 | 09WAL/HIN |
| 20306.799 | 4924.459 | 73 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 3 | _ | $3d^{5}(^{6}S)6s$ | f ⁵ S | 2 | 0.008 | 09WAL/HIN |
| 20355.04 | 4912.790 | 1 | - · · · · · · · · · · · · · · · · · · · | e ³ G | 5 | _ | $3d^44s4p$ | r ³ H ^o | 6 | 0.04 | 09WAL/HIN |
| 20386.80 | 4905.135 | 11 | $3d^5(^4D)4s$ | a ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.02 | 09WAL/HIN |
| 20485.15 | 4881.585 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | _ | $3d^{5}(^{6}S)6s$ | f ⁵ S | 2 | 0.04 | 09WAL/HIN |
| 20535.88 | 4869.525 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 2 | 0.04 | 09WAL/HIN |
| 20576.59 | 4859.893 | 6 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.03 | 09WAL/HIN |
| 20604.28 | 4853.359 | 6 * | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | _ | $3d^6$ | c ⁵ D | 0 | 0.03 | 09WAL/HIN |
| 20604.28 | 4853.359 | 6 * | $3d^4(^3D)4s4p(^3P^0)$ | t ³ F° | 4 | _ | $3d^44p^2$ | f ⁷ F | 4 | 0.03 | 09WAL/HIN |
| 20622.67 | 4849.032 | 1 | $3d^5(^2D3)4s$ | b ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 2 | 0.04 | 09WAL/HIN |
| 20679.47 | 4835.712 | 1 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 5 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 4 | 0.04 | 09WAL/HIN |
| 20698.81 | 4831.196 | 6 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | _ | $3d^6$ | c ⁵ D | 1 | 0.03 | 09WAL/HIN |
| 20895.86 | 4785.637 | 1 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 1 | _ | $3d^6$ | c ⁵ D | 2 | 0.04 | 09WAL/HIN |
| 21009.61 | 4759.725 | 11 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | _ | $3d^6$ | c ⁵ D | 1 | 0.02 | 09WAL/HIN |
| 21077.66 | 4744.360 | 11 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.02 | 09WAL/HIN |
| 21090.021 | 4741.579 | 16 | $3d^{5}(^{4}D)4s$ | a ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.013 | 09WAL/HIN |
| 21212.67 | 4714.165 | 8 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | _ | $3d^6$ | c ⁵ D | 2 | 0.03 | 09WAL/HIN |
| 21356.71 | 4682.369 | 1 | $3d^{5}(^{4}G)4s$ | a ⁵ G | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁷ F° | 3 | 0.05 | 09WAL/HIN |
| 21457.25 | 4660.431 | 2 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | _ | $3d^{5}(^{6}S)6s$ | f ⁷ S | 3 | 0.05 | 09WAL/HIN |
| 21464.61 | 4658.832 | 13 | $3d^{5}(^{4}D)4s$ | a ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | 0.02 | 09WAL/HIN |
| 21540.50 | 4642.419 | 13 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 2 | _ | $3d^6$ | c ⁵ D | 3 | 0.02 | 09WAL/HIN |
| 21703.57 | 4607.537 | 14 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | $3d^6$ | c ⁵ D | 2 | 0.02 | 09WAL/HIN |
| 21703.37 | 4565.296 | 5 | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 3 | _ | $3d^44s5s$ | f ⁵ D | 4 | 0.02 | 09WAL/HIN |
| 22046.86 | 4535.794 | 3 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 3 | _ | $3d^6$ | c ⁵ D | 3 | 0.05 | 09WAL/HIN |
| 22347.66 | 4474.742 | 4 | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 2 | _ | $3d^44s5s$ | f ⁵ D | 3 | 0.03 | 09WAL/HIN |
| 22559.70 | 4432.684 | 2 | $3d^{5}(^{6}S)5p$ | w P w ⁵ P° | 1 | _ | $3d^44s5s$ | f ⁵ D | 2 | 0.04 | 09WAL/HIN |
| | | | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o | 3 | | 3d 4s5s 3d ⁴ 4s5s | f ⁵ D | 3 | | |
| 22715.29 | 4402.322 | 2 | | z ⁵ F° | | _ | 3d 4s5s 3d ⁶ | c ⁵ D | | 0.05 | 09WAL/HIN |
| 22753.859 | 4394.859 | 19 | $3d^4(^5D)4s4p(^3P^0)$ $3d^5(^6S)5p$ | z Fo w ⁵ Po | 4 1 | _ | $3d^3$ $3d^44s5s$ | c ⁵ D f ⁵ D | 3 1 | 0.016 | 09WAL/HIN |
| 22822.24 | 4381.691 | 4 | | w ⁵ P ^o | 2 | _ | $3d^{4}4s5s$ $3d^{4}4s5s$ | f ⁵ D | • | 0.05 | 09WAL/HIN |
| 22874.73 | 4371.637 | 4 | $3d^{5}(^{6}S)5p$ | w ⁵ P ^o w ⁵ P ^o | | _ | | f ⁵ D f ⁵ D | 2 | 0.05 | 09WAL/HIN |
| 22923.30 | 4362.372 | 2 | $3d^{5}(^{6}S)5p$ | | 1 | - | $3d^44s5s$ | | 0 | 0.05 | 09WAL/HIN |
| 23144.69 | 4320.645 | 2 | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 2 | _ | $3d^44s5s$ | f ⁵ D | 1 | 0.05 | 09WAL/HIN |
| 23301.14 | 4291.637 | 5 | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ F° | 4 | _ | $3d^{6}$ | c ⁵ D | 4 | 0.04 | 09WAL/HIN |
| 24285.762 | 4117.639 | 32 | $3d^4(^5D)4s4p(^3P^0)$ | $z {}^{5}F^{o}$ | 5 | - | $3d^6$ | c ⁵ D | 4 | 0.012 | 09WAL/HIN |
| 25164.36 | 3973.873 | 1 | $3d^5(^6S)4d$ | e ⁵ D | 3 | _ | | U | 4 | 0.06 | 09WAL/HI |

TABLE 3. Spectral lines of Cr I—Continued

| Observed vacuum wavelength | Observed wave number | Intensity and | | | (| Classificatio | n | | | Uncertainty of observed wavelength | Source |
|----------------------------------|----------------------------|------------------|--|--------------------------------------|---|---------------|--|----------------------------------|--------|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 25230.89 | 3963.395 | 1 | 3d ⁵ (⁶ S)4d | e ⁵ D | 4 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.06 | 09WAL/HIN |
| 25345.16 | 3945.526 | 4 | 3d ⁵ (⁶ S)4d | e ⁵ D | 3 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 4 | 0.06 | 09WAL/HIN |
| 25414.15 | 3934.816 | 14 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 5 | 0.03 | 09WAL/HIN |
| 25603.58 | 3905.703 | 2 | 3d ⁵ (⁶ S)4d | e ⁵ D | 3 | - | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 3 | 0.07 | 09WAL/HI |
| 25683.48 | 3893.554 | 4 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^5(^4G)4p$ | u ⁵ F° | 3 | 0.06 | 09WAL/HI |
| 26062.55 | 3836.923 | 2 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.07 | 09WAL/HI |
| 26116.86 | 3828.944 | 3 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | 0.07 | 09WAL/HI |
| 26209.00 | 3815.483 | 2 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D ^o | 4 | 0.07 | 09WAL/HIN |
| 26279.42 | 3805.259 | 4 | $3d^{5}(^{4}G)4p$ | y ³ F ^o | 4 | _ | | e ³ F | 4 | 0.06 | 09WAL/HIN |
| 26332.32 | 3797.614 | 9 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^5(^4P)4p$ | v ⁵ D ^o | 4 | 0.04 | 09WAL/HIN |
| 26394.84 | 3788.620 | 2 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 1 | 0.07 | 09WAL/HIN |
| 26422.23 | 3784.693 | 2 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 0 | _ | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 1 | 0.07 | 09WAL/HIN |
| 26698.45 | 3745.535 | 3 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.07 | 09WAL/HIN |
| 26785.34 | 3733.386 | 7 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 3 | 0.05 | 09WAL/HIN |
| 26901.59 | 3717.253 | 0 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.07 | 09WAL/HI |
| 26989.83 | 3705.099 | 2 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.07 | 09WAL/HIN |
| 27048.07 | 3697.122 | 5 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 2 | 0.06 | 09WAL/HI |
| 27087.79 | 3691.700 | 6 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | 0.05 | 09WAL/HIN |
| 27107.11 | 3689.069 | 1 | $3d^{5}(^{4}P)4p$ | y ³ D° | 3 | _ | 54 (2) is ip(1) | e ³ F | 4 | 0.07 | 09WAL/HIN |
| 27149.62 | 3683.292 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | _ | $3d^5(^4P)4p$ | v ⁵ D° | 1 | 0.07 | 09WAL/HI |
| 27178.58 | 3679.368 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 0 | _ | $3d^{5}(^{4}P)4p$ | v ⁵ D° | 1 | 0.07 | 09WAL/HI |
| 27824.438 | 3593.963 | 170 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 5 | 0.008 | 09WAL/HIN |
| 27862.262 | 3589.084 | 23 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | 0.016 | 09WAL/HI |
| 27890.09 | 3585.504 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | 0.08 | 09WAL/HIN |
| 28001.675 | 3571.215 | 110 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 4 | 0.008 | 09WAL/HI |
| 28029.758 | 3567.637 | 28 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | 0.016 | 09WAL/HIN |
| 28027.738 | 3562.829 | 3 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ¹ v ⁵ F° | 2 | 0.08 | 09WAL/HI |
| 28125.543 | 3555.487 | 58 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 3 | 0.016 | 09WAL/HI |
| 28163.627 | 3550.679 | 24 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^4(^5D)4s5p(^3P^0)$ | $v^{5}F^{0}$ | 2 | 0.016 | 09WAL/HI |
| 28179.54 | 3548.674 | 2 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^4(^5D)4s5p(^3P^0)$ | v ⁵ F° | 1 | 0.010 | 09WAL/HI |
| 28227.058 | 3542.700 | 31 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | _ | $3d^{4}(^{5}D)4s5p(^{3}P^{o})$ | v ⁵ F° | 2 | 0.016 | 09WAL/HI |
| 28247.038 28243.04 | 3540.695 | 15 | $3d^{5}(^{6}S)4d$ | e D e ⁵D | 1 | _ | $3d^{4}(^{5}D)4s5p(^{3}P^{o})$ | v F v ⁵ F° | 1 | 0.010 | 09WAL/HII |
| 28243.04 28265.78 | 3537.847 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵D | 4 | | $3d^{4}(^{5}D)4s4p(^{3}P^{o})$ | y ⁷ P° | 3 | 0.03 | 09WAL/HII |
| 28274.39 | 3536.769 | 14 | $3d^{5}(^{6}S)4d$ | e ⁵D | • | _ | $3d^4(^5D)4s5p(^3P^0)$ | y F v ⁵ F° | 3 1 | 0.08 | |
| | | | $3d^{5}(^{6}S)4d$ $3d^{5}(^{6}S)5s$ | e ⁵ S | 0 | | $3d^{4}(^{5}D)4s3p(^{1}P^{o})$ $3d^{4}(^{5}D)4s4p(^{1}P^{o})$ | y ⁵ D° | - | | 09WAL/HII |
| 28364.08 | 3525.586 | 4 | | e ⁵ S b ⁵ D | 2 | _ | | | 2 | 0.07 | 09WAL/HI |
| 29163.24 | 3428.974 | 0 | $3d^{5}(^{4}D)4s$ | ь ⁵ D ь ⁵ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | 0.09 | 09WAL/HII |
| 29197.87 | 3424.907 | 1 | $3d^{5}(^{4}D)4s$ | | 3 | - | $3d^4(^5D)4s4p(^3P^0)$ | y ⁷ P° | 2 | 0.09 | 09WAL/HI |
| 30110.01 | 3321.154 | 1 | $3d^{5}(^{4}G)4p$ | $y^{3}F^{o}$ | 3 | - | $3d^{5}(^{6}S)7s$ | g ⁵ S | 2 | 0.09 | 09WAL/HIN |
| 31222.47 | 3202.821 | 4 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 3 | 0.09 | 09WAL/HIN |
| 31432.08 | 3181.463 | 5 | $3d^5(^2D3)4s$ | b ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.08 | 09WAL/HII |

70.00

Table 3. Spectral lines of Cr I—Continued

| Observed vacuum wavelength | Observed wave number | Intensity and | | | (| Classificatio | on | | | Uncertainty of observed wavelength | Source |
|----------------------------------|----------------------------|------------------|---------------------------|-------------------------------|---|---------------|-------------------------------------|-------------------------------|---|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 31619.29 | 3162.626 | 9 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | | 3d ⁵ (⁶ S)4d | e ⁵ D | 0 | 0.06 | 09WAL/HIN |
| 31623.81 | 3162.174 | 1 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.10 | 09WAL/HIN |
| 31646.121 | 3159.945 | 210 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | 0.010 | 09WAL/HIN |
| 31658.60 | 3158.699 | 21 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P ^o | 1 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | 0.03 | 09WAL/HIN |
| 31738.77 | 3150.720 | 18 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.03 | 09WAL/HIN |
| 32074.83 | 3117.710 | 5 | $3d^{5}(^{4}G)4p$ | u ⁵ F° | 2 | _ | $3d^{5}(^{6}S)8s$ | h ⁵ S | 2 | 0.08 | 09WAL/HIN |
| 32157.2 | 3109.723 | - | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.1 | 10HAS/WAL |
| 32193.84 | 3106.184 | 3 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | 0.10 | 09WAL/HIN |
| 32264.43 | 3099.389 | 56 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | 0.02 | 09WAL/HIN |
| 32269.29 | 3098.922 | 2 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 4 | 0.10 | 09WAL/HIN |
| 32276.75 | 3098.205 | 12 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.05 | 09WAL/HIN |
| 32283.3 | 3097.577 | | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | 0.1 | 10HAS/WAL |
| 32403.83 | 3086.055 | 22 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | 0.03 | 09WAL/HIN |
| 32820.534 | 3046.873 | 100 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 1 | 0.011 | 09WAL/HIN |
| 32920.21 | 3037.648 | 4 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.10 | 09WAL/HIN |
| 33052.41 | 3025.498 | 34 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | 0.02 | 09WAL/HIN |
| 33079.42 | 3023.028 | 1 | $3d^{5}(^{6}S)5s$ | e ⁵ S | 2 | _ | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ F° | 1 | 0.11 | 09WAL/HIN |
| 33248.771 | 3007.630 | 140 | $3d^4(^5D)4s4p(^1P^0)$ | x ⁵ P° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | 0.011 | 09WAL/HIN |
| 33630.45 | 2973.496 | 2 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ F° | 3 | 0.11 | 09WAL/HIN |
| 34005.33 | 2940.715 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.12 | 09WAL/HIN |
| 34097.87 | 2932.735 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 1 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 1 | 0.12 | 09WAL/HIN |
| 34496.62 | 2898.835 | 2 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.12 | 09WAL/HIN |
| 34641.79 | 2886.687 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 2 | 0.12 | 09WAL/HIN |
| 34855.44 | 2868.992 | 4 | $3d^{5}(^{2}D3)4s$ | b ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P ^o | 1 | 0.11 | 09WAL/HIN |
| 34991.84 | 2857.809 | 1 | $3d^{5}(^{2}\text{F1})4s$ | b ³ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}F^{o}$ | 2 | 0.12 | 09WAL/HIN |
| 35106.17 | 2848.502 | 2 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.12 | 09WAL/HIN |
| 35269.47 | 2835.314 | 1 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.12 | 09WAL/HIN |
| 35365.92 | 2827.581 | 4 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.11 | 09WAL/HIN |
| 35383.20 | 2826.200 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 2 | 0.13 | 09WAL/HIN |
| 35590.81 | 2809.714 | 1 | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | _ | $3d^{5}(^{4}P)4p$ | u ⁵ P° | 3 | 0.13 | 09WAL/HIN |
| 35818.27 | 2791.872 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 1 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.13 | 09WAL/HIN |
| 36848.92 | 2713.784 | 3 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 0 | 0.14 | 09WAL/HIN |
| 37425.03 | 2672.008 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 2 | 0.14 | 09WAL/HIN |
| 37557.88 | 2662.557 | 1 | $3d^{5}(^{2}D3)4s$ | b ³ D | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.14 | 09WAL/HIN |
| 37595.98 | 2659.859 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 2 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 3 | 0.14 | 09WAL/HIN |
| 39294.78 | 2544.867 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ P° | 1 | 0.15 | 09WAL/HIN |
| 39337.07 | 2542.131 | 5 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 1 | 0.12 | 09WAL/HIN |
| 39606.39 | 2524.845 | 10 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 0 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | 0.08 | 09WAL/HIN |
| 39755.77 | 2515.358 | 24 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P ^o | 1 | 0.03 | 09WAL/HIN |
| 39779.78 | 2513.840 | 1 | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.03 | 09WAL/HIN |

TABLE 3. Spectral lines of Cr I—Continued

| Observed vacuum wavelength | Observed wave number | Intensity and | | | (| Classificatio | n | | | Uncertainty of observed wavelength | Source |
|----------------------------------|----------------------------|------------------|---------------------------|-------------------|---|---------------|------------------------|-------------------|---|--|-----------|
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 39844.98 | 2509.726 | 7 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 1 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.11 | 09WAL/HIN |
| 39918.343 | 2505.114 | 98 | $3d^5(^4D)4s$ | b ⁵ D | 4 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | 0.016 | 09WAL/HIN |
| 39967.12 | 2502.057 | 21 | $3d^5(^4D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 1 | 0.05 | 09WAL/HIN |
| 40057.27 | 2496.426 | 28 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.03 | 09WAL/HIN |
| 40122.54 | 2492.365 | 54 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 2 | 0.03 | 09WAL/HIN |
| 40199.07 | 2487.620 | 2 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 2 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | 0.16 | 09WAL/HIN |
| 40264.77 | 2483.561 | 19 | $3d^{5}(^{4}D)4s$ | b ⁵ D | 3 | _ | $3d^{5}(^{6}S)4p$ | z ⁵ P° | 3 | 0.05 | 09WAL/HIN |
| 40389.78 | 2475.874 | 1 | $3d^4(^5D)4s4p(^1P^0)$ | y ⁵ D° | 3 | _ | $3d^{5}(^{6}S)4d$ | e ⁵ D | 4 | 0.16 | 09WAL/HIN |
| 40786.36 | 2451.800 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | 0.17 | 09WAL/HIN |
| 41014.35 | 2438.171 | 25 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | 0.03 | 09WAL/HIN |
| 41275.632 | 2422.737 | 150 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 5 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 4 | 0.017 | 09WAL/HIN |
| 41491.19 | 2410.150 | 4 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}P^{o}$ | 0 | 0.15 | 09WAL/HIN |
| 41744.48 | 2395.526 | 1 | $3d^5(^2D3)4s$ | b ³ D | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.17 | 09WAL/HIN |
| 42104.63 | 2375.036 | 1 | $3d^{5}(^{2}D3)4s$ | b ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.18 | 09WAL/HIN |
| 42387.81 | 2359.169 | 6 | $3d^5(^2F2)4s$ | d ³ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.13 | 09WAL/HIN |
| 42851.33 | 2333.650 | 49 | $3d^5(^2F2)4s$ | d ³ F | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 3 | 0.04 | 09WAL/HIN |
| 43170.29 | 2316.408 | 3 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.19 | 09WAL/HIN |
| 43340.82 | 2307.294 | 26 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.04 | 09WAL/HIN |
| 43598.35 | 2293.665 | 80 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 4 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 3 | 0.04 | 09WAL/HIN |
| 43677.47 | 2289.510 | 1 | $3d^5(^2D3)4s$ | b ³ D | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | 0.19 | 09WAL/HIN |
| 45668.02 | 2189.716 | 2 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.21 | 09WAL/HIN |
| 45725.18 | 2186.979 | 19 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.06 | 09WAL/HIN |
| 45903.08 | 2178.503 | 26 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.04 | 09WAL/HIN |
| 45916.51 | 2177.866 | 40 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 3 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 2 | 0.04 | 09WAL/HIN |
| 46036.45 | 2172.192 | 4 | $3d^{5}(^{2}\text{F2})4s$ | d ³ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | $z^{3}D^{o}$ | 2 | 0.19 | 09WAL/HIN |
| 48276.48 | 2071.402 | 9 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.14 | 09WAL/HIN |
| 48340.36 | 2068.665 | 17 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 1 | 0.07 | 09WAL/HIN |
| 49054.57 | 2038.546 | 13 | $3d^5(^2F2)4s$ | d ³ F | 2 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ³ D° | 1 | 0.12 | 09WAL/HIN |
| 50355.69 | 1985.873 | 6 | $3d^{5}(^{4}F)4s$ | a ⁵ F | 1 | _ | $3d^4(^5D)4s4p(^3P^0)$ | z ⁵ D° | 0 | 0.18 | 09WAL/HIN |
| 54286.23 | 1842.088 | 1 | $3d^{5}(^{6}S)5p$ | w ⁵ P° | 1 | _ | $3d^{5}(^{6}S)6s$ | f ⁵ S | 2 | 0.29 | 09WAL/HIN |

We only include observed lines. Table 5 specifies the reference from which the lines were obtained, the number of classifications that apply to lines from this reference, the light source used to produce the lines and the spectrometer used to observe them, the wavelength range from which lines from this reference are included in the table of lines, and the range of uncertainties for these lines in the lines table (Table 6).

Wagatsuma [00WAG] observed lines and provided intensities for them but the wavelength values quoted are calculated from the energy levels of Sugar and Corliss [85SUG/COR] (Ritz values). We include these lines in our list only when there is no other source for them. These lines should not be used for fitting the energy levels to the wavelengths.

The priority in our choice of lines which appear in more than one reference is in general specified as follows: [12SAN/NAV] over [85BIE/BRA] over [98ALL/GAR] over [82JOH] over [51KIE], and finally [00WAG].

Lines from six other references [75MEG], [95SCH/THO], [98NOO/LAN], [04SAN/KER], [09ALD], [09SAH] were superseded by those from the above.

All candidate lines were passed through a program to determine if they correspond to a transition between the known Cr II levels. Only classifiable lines are included in our compilation. Other lines are listed in the references but are not included since we cannot be sure that they are from Cr II when they do not fit the known levels.

Transition probability calculations using the Cowan codes [81COW] were used to help resolve choices between multiple possible classifications of lines.

Intensities have been taken from the stated sources and therefore are not on a common scale. Since no intensities were provided by Allende Prieto and Garcia López [98ALL/GAR], when available we used the intensities of Kiess [51KIE] for their lines.

The intensity codes given in the Cr II line table are taken from the specified sources. Their meaning is stated below:

| Code | Definition |
|------|--|
| a | Asymmetric |
| bh | Blend on high side (in wavelength) |
| bl | Blend on low side (in wavelength) |
| c | Complex |
| h | Hazy |
| 1 | Shaded to longer wavelengths |
| p | Perturbed |
| R | Quoted wavelength calculated from energy levels (Ritz) |
| S | Shaded to shorter wavelengths |
| W | Wide |
| W | Very wide |
| X | Extrapolated standard used to determine the wavelength |
| * | Multiply classified line (two or more classifications of this line share |
| | the same intensity) |

Table 4. Energy levels of Cr II

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{J} | | I | eading % | |
|----------------------------------|---------------------------------|--------|---------------|-------------------|------|------------------|----|----|---------------|---------|
| 0.0000 | 0.0008 | 0 | $3d^5$ | a ⁶ S | 5/2 | | | | | |
| 20512.0634 | 0.0008 | 0 | $3d^{5}$ | a ⁴ G | 5/2 | 0.599 | | | | |
| 20512.0968 | 0.0008 | 0 | $3d^5$ | ${ m a}~^4{ m G}$ | 11/2 | 1.278 | | | | |
| 20517.7924 | 0.0006 | 0 | $3d^{5}$ | a ⁴ G | 7/2 | 0.994 | | | | |
| 20519.2704 | 0.0006 | 0 | $3d^{5}$ | a ⁴ G | 9/2 | 1.161 | | | | |
| 21822.5050 | 0.0008 | 0 | $3d^5$ | a ⁴ P | 5/2 | 1.590 | | | | |
| 21823.725 | 0.004 | 0 | $3d^5$ | a ⁴ P | 1/2 | 2.693 | | | | |
| 21824.1411 | 0.0008 | 0 | $3d^5$ | a ⁴ P | 3/2 | 1.717 | | | | |
| 25033.6674 | 0.0008 | 0 | $3d^{5}$ | b ⁴ D | 7/2 | 1.432 | | | | |
| 25035.3445 | 0.0012 | 0 | $3d^5$ | b ⁴ D | 1/2 | -0.045 | | | | |
| 25042.7600 | 0.0006 | 0 | $3d^{5}$ | b ⁴ D | 3/2 | 1.207 | | | | |
| 25046.7148 | 0.0006 | 0 | $3d^{5}$ | b ⁴ D | 5/2 | 1.381 | | | | |
| 30143.2461 | 0.0015 | 0 | $3d^5$ | a ² I | 11/2 | | | | | |
| 30149.8778 | 0.0016 | 0 | $3d^{5}$ | a ² I | 13/2 | | | | | |
| 31350.875 | 0.002 | 0 | $3d^5$ | a ² D | 5/2 | | | | | |
| 31531.171 | 0.005 | 0 | $3d^{5}$ | a ² D | 3/2 | | | | | |
| 32355.6567 | 0.0019 | 0 | $3d^5$ | a ² F | 7/2 | | | | | |
| 32603.356 | 0.003 | 0 | $3d^5$ | a ² F | 5/2 | | | | | |
| 32836.658 | 0.002 | 0 | $3d^5$ | b ⁴ F | 7/2 | | | | | |
| 32844.702 | 0.005 | 0 | $3d^5$ | b ⁴ F | 3/2 | | | | | |
| 32854.2474 | 0.0013 | 0 | $3d^5$ | b ⁴ F | 9/2 | | | | | |
| 32854.9396 | 0.0019 | 0 | $3d^5$ | b ⁴ F | 5/2 | | | | | |
| 35610.3064 | 0.0016 | 0 | $3d^5$ | b ² H | 9/2 | | 61 | 37 | $3d^4(^3H)4s$ | ^{2}H |
| 35707.4723 | 0.0011 | 0 | $3d^5$ | b ² H | 11/2 | | 58 | 42 | $3d^4(^3H)4s$ | ^{2}H |
| 36101.526 | 0.003 | 0 | $3d^5$ | a ² G | 7/2 | | | | | |
| 36272.5248 | 0.0020 | 0 | $3d^5$ | a ² G | 9/2 | | | | | |
| 39742.037 | 0.003 | 0 | $3d^5$ | c ² F | 5/2 | | | | | |
| 39877.0374 | 0.0014 | 0 | $3d^5$ | c ² F | 7/2 | | | | | |
| 44307.077 | 0.004 | 0 | $3d^5$ | b ² S | 1/2 | | | | | |
| 47354.371 | 0.003 | 0 | $3d^{5}$ | d ² D | 5/2 | | | | | |
| 47372.431 | 0.005 | 0 | $3d^5$ | d^2D | 3/2 | | | | | |
| 52297.764 | 0.009 | 0 | $3d^5$ | $d^{2}G$ | 7/2 | | | | | |
| 52321.022 | 0.003 | 0 | $3d^5$ | $d^{2}G$ | 9/2 | | | | | |

Table 4. Energy levels of Cr II—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{J} | | I | Leading % | |
|----------------------------------|---------------------------------|--------|---|--------------------------------------|------------|------------------|-----|----|-----------|----------------|
| 11961.7466 | 0.0005 | 0 | 3d ⁴ (⁵ D)4s | a ⁶ D | 1/2 | 3.323 | | | | |
| 12032.5447 | 0.0005 | 0 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | 1.867 | | | | |
| 12147.7715 | 0.0006 | 0 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | 1.669 | | | | |
| 12303.8198 | 0.0005 | 0 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | 1.578 | | | | |
| 12496.4562 | 0.0005 | 0 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | 1.554 | | | | |
| 19528.2298 | 0.0007 | 0 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | 0.000 | | | | |
| 19631.2061 | 0.0005 | 0 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | 1.192 | | | | |
| 19797.8596 | 0.0005 | 0 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | 1.370 | | | | |
| 20024.0112 | 0.0006 | 0 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | 1.427 | | | | |
| 29951.818 | 0.003 | 0 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | 2.685 | | | | |
| 30156.7327 | 0.0019 | 0 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | 0.667 | | | | |
| 30218.7796 | 0.0006 | 0 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | 0.978 | | | | |
| 30298.4703 | 0.0008 | 0 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | 1.162 | | | | |
| 30307.3647 | 0.0019 | 0 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | 1.756 | | | | |
| 30391.8325 | 0.0008 | 0 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | 1.234 | | | | |
| 30864.4332 | 0.0007 | 0 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | 1.572 | | | | |
| 31082.8852 | 0.0008 | 0 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | 0.418 | | | | |
| 31117.3277 | 0.0010 | 0 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | 1.032 | | | | |
| 31168.5768 | 0.0006 | 0 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | 1.246 | | | | |
| 31219.3345 | 0.0009 | 0 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | 1.340 | | | | |
| 33417.9815 | 0.0009 | 0 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | 0.588 | | | | |
| 33521.0913 | 0.0007 | 0 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | 1.024 | | | | |
| 33618.9405 | 0.0008 | 0 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | 1.185 | | | | |
| 33694.1422 | 0.0011 | 0 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | 1.276 | | | 5 | 2 |
| 34630.9134 | 0.0011 | 0 | $3d^4(^3H)4s$ | a ² H | 9/2 | | 62 | 35 | $3d^5$ | ² H |
| 34659.2435 | 0.0014 | 0 | $3d^4(^3P)4s$ | a ² P | 1/2 | 0.670 | | | 2.15 | 2 |
| 34812.9306 | 0.0008 | 0 | $3d^4(^3H)4s$ | a ² H | 11/2 | | 57 | 41 | $3d^5$ | ² H |
| 35355.8989 | 0.0013 | 0 | $3d^4(^3P)4s$ | a ² P | 3/2 | 1.331 | | | | |
| 35569.178 | 0.002 | 0 | $3d^4(^3F)4s$ | b ² F | 5/2 | 0.876 | | | | |
| 35607.5095 | 0.0013 | 0 | $3d^4(^3F)4s$ | b ² F | 7/2 | 1.144 | | | | |
| 38269.5685 | 0.0011 | 0 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | | | | | |
| 38314.8354 | 0.0016 | 0 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | | | | | |
| 38362.3812 | 0.0012 | 0 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | | | | | |
| 38396.1880 | 0.0016 | 0 | $3d^4(^3D)4s$ | c ⁴ D b ² G | 1/2 | 0.010 | | | | |
| 38508.935 | 0.004 | 0 | $3d^4(^3G)4s$ | b ² G | 7/2 | 0.910 | | | | |
| 38563.0072 | 0.0014 | 0 | 3d ⁴ (³ G)4s 3d ⁴ (¹ G1)4s | c ² G | 9/2 | 1.100 | | | | |
| 39683.7201 39824.370 | 0.0020 0.003 | 0 | $3d^{4}(^{1}G1)4s$ $3d^{4}(^{1}G1)4s$ | c G c ² G | 7/2 9/2 | | | | | |
| 40202.1107 | 0.003 | 0 | $3d^{4}(^{1}I)4s$ | b ² I | 13/2 | | | | | |
| 40228.293 | 0.0014 | 0 | $3d^{4}(^{1}I)4s$ | b ¹ | 11/2 | | | | | |
| 40415.088 | 0.002 | 0 | $3d^{4}(^{1}S)4s$ | a ² S | 1/2 | | | | | |
| 42897.944 | 0.012 | 0 | $3d^4(^3D)4s$ | b ² D | 5/2 | | | | | |
| 42986.567 | 0.004 | 0 | $3d^4(^3D)4s$ | b ² D | 3/2 | | | | | |
| 45669.3977 | 0.0018 | 0 | $3d^{4}(^{1}D)4s$ | c ² D | 3/2 | | | | | |
| 45730.5973 | 0.0013 | 0 | $3d^{4}(^{1}D)4s$ | c ² D | 5/2 | | | | | |
| 50667.2330 | 0.0009 | 0 | $3d^4(^1F)4s$ | d ² F | 7/2 | | | | | |
| 50687.6219 | 0.0011 | 0 | $3d^4(^1F)4s$ | d ² F | 5/2 | | | | | |
| 54867.5117 | 0.0011 | 0 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | | | | | |
| 54868.5075 | 0.0011 | 0 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | | | | | |
| 54883.4946 | 0.0019 | 0 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | | | | | |
| 54887.9989 | 0.0020 | 0 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | | | | | |
| 55023.0294 | 0.0013 | 0 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | | | | | |
| 55398.670 | 0.003 | 0 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | | | | | |
| 55626.102 | 0.003 | 0 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | | | | | |
| 59130.340 | 0.005 | 0 | $3d^4(^3P)4s$ | b ² P | 3/2 | | | | | |
| 59526.683 | 0.010 | 0 | $3d^4(^3P)4s$ | b ² P | 1/2 | | | | | |
| 59570.201 | 0.004 | 0 | $3d^4(^3F)4s$ | e ² F | 7/2 | | | | | |
| 59577.660 | 0.004 | 0 | $3d^4(^3F)4s$ | e ² F | 5/2 | | | | | |
| 62688.962 | 0.004 | 0 | $3d^4(^3G)4s$ | e ² G | 9/2 | | | | | |
| 62701.736 | 0.005 | 0 | $3d^4(^3G)4s$ | e ² G | 7/2 | | | | | |
| 46823.3061 | 0.0009 | 1 | $3d^4(^5D)4p$ | z ⁶ F° | 1/2 | -0.689 | 100 | | | |
| 46905.1367 | 0.0008 | 1 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | 1.124 | 100 | | | |
| 47040.2754 | 0.0005 | 1 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | 1.314 | 100 | | | |
| 47227.2185 | 0.0005 | 1 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | 1.378 | 100 | | | |

Table 4. Energy levels of Cr II—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{J} | | I | Leading % | |
|----------------------------------|---------------------------------|--------|--|--|------------|----------------|----------|----------|--|---|
| 47464.5573 | 0.0008 | 1 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | 1.416 | 100 | | | |
| 47751.5999 | 0.0008 | 1 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | | 100 | | | |
| 48398.8722 | 0.0005 | 1 | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | 2.382 | 83 | | | |
| 48491.0571 | 0.0005 | 1 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | 1.875 | 98 | | | |
| 48632.0587 | 0.0007 | 1 | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | 1.710 | 100 | 2.4 | 2.455 | 650 |
| 48749.2783 | 0.0006 | 1 | $3d^4(^5D)4p$ | z ⁴ P ^o | 1/2 | 2.844 | 67 | 31 | $3d^4(^5D)4p$ | ⁶ D° |
| 49005.8477 | 0.0006 | 1 | $3d^4(^5D)4p$ | z ⁴ P ^o z ⁶ D ^o | 3/2 | 1.802 | 55 | 42 | $3d^4(^5D)4p$ | ⁶ D ^o ⁴ P ^o |
| 49351.7334 | 0.0006 | 1 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 1.628 | 73 | 26 | $3d^4(^5D)4p$ $3d^4(^5D)4p$ | ⁴ P ^o |
| 49492.7112 49564.5042 | 0.0006 | 1 1 | $3d^4(^5D)4p$ $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | 3.155 | 69 58 | 31 | $3d^{4}(^{5}D)4p$ $3d^{4}(^{5}D)4p$ | ⁴ P ^o |
| 49645.8052 | 0.0006 0.0006 | 1 | 3a (D)4p $3d^4(^5\text{D)4}p$ | z D z ⁶ D° | 3/2 7/2 | 1.824 1.577 | 38 99 | 41 | 3a (D)4p | Р |
| 49706.2605 | 0.0006 | 1 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | 1.624 | 71 | 27 | $3d^4(^5D)4p$ | ⁶ D ^o |
| 49838.3794 | 0.0006 | 1 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | 1.570 | 98 | 21 | 3a (D)4p | D |
| 51584.1006 | 0.0007 | 1 | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 3/2 | 0.406 | 97 | | | |
| 51669.4062 | 0.0007 | 1 | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | 1.025 | 97 | | | |
| 51788.8146 | 0.0007 | 1 | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | 1.248 | 96 | | | |
| 51942.6642 | 0.0007 | 1 | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | 1.338 | 96 | | | |
| 54417.9557 | 0.0007 | 1 | $3d^4(^5D)4p$ | z ⁴ D ^o | 1/2 | 0.007 | 98 | | | |
| 54499.4911 | 0.0007 | 1 | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 3/2 | 1.178 | 98 | | | |
| 54625.5948 | 0.0007 | 1 | $3d^4(^5D)4p$ | z ⁴ D ^o | 5/2 | 1.376 | 98 | | | |
| 54784.4498 | 0.0007 | 1 | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 7/2 | 1.430 | 98 | | | |
| 63600.862 | 0.002 | 1 | $3d^4(^3H)4p$ | z ⁴ H° | 7/2 | 0.680 | 82 | 16 | $3d^4(^3G)4p$ | $^{4}H^{o}$ |
| 63706.2512 | 0.0010 | 1 | $3d^4(^3H)4p$ | z ⁴ H° | 9/2 | 1.030 | 80 | 16 | $3d^4(^3G)4p$ | ⁴ H ^o |
| 63801.755 | 0.004 | 1 | $3d^4(^3P1)4p$ | y ⁴ D° | 1/2 | 0.000 | 87 | 7 | $3d^4(^3F1)4p$ | ⁴ D ^o |
| 63848.6986 | 0.0010 | 1 | $3d^4(^3H)4p$ | z ⁴ H° | 11/2 | 1.138 | 80 | 15 | $3d^4(^3G)4p$ | ⁴ H ^o |
| 64030.5053 | 0.0012 | 1 | $3d^4(^3H)4p$ | z ⁴ H° | 13/2 | 1.234 | 83 | 13 | $3d^4(^3G)4p$ | ⁴ H ^o |
| 64061.681 | 0.005 | 1 | $3d^4(^3P1)4p$ | y ⁴ D° | 3/2 | 1.199 | 86 | 8 | $3d^4(^3F1)4p$ | ⁴ D ^o |
| 64448.7497 | 0.0014 | 1 | $3d^4(^3P1)4p$ | y ⁴ D° | 5/2 | 1.380 | 85 | 10 | $3d^4(^3F1)4p$ | ⁴ D ^o |
| 64924.4618 | 0.0011 | 1 | $3d^4(^3P1)4p$ | y ⁴ D° | 7/2 | 1.411 | 80 | 14 | $3d^4(^3F1)4p$ | ⁴ D ^o |
| 65029.3362 | 0.0015 | 1 | $3d^4(^3P1)4p$ | z ² S° | 1/2 | 0.500 | 73 | 7 | $3d^4(^3P1)4p$ | ⁴ P ^o |
| 65156.4906 | 0.0012 | 1 | $3d^4(^3F1)4p$ | z ⁴ G° z ⁴ I° | 5/2 | 0.593 | 79 | 14 | $3d^4(^3G)4p$ | ⁴ G ^o |
| 65217.501 | 0.003 | 1 1 | $3d^4(^3H)4p$ $3d^4(^3F1)4p$ | z ¹G° | 9/2 7/2 | 0.020 | 96 70 | 10 | $3d^4(^3G)4p$ | ⁴ G ^o |
| 65256.8523 65383.9046 | 0.0015 0.0010 | 1 | 3a (F1)4p $3d^4(^3F1)4p$ | z G z ⁴ G° | 9/2 | 0.920 1.120 | 70 59 | 12 10 | $3d^{4}(^{3}G)4p$ | ⁴ G° |
| 65419.5164 | 0.0010 | 1 | $3d^4(^3H)4p$ | z ⁴ I° | 11/2 | 1.120 | 95 | 10 | 3a (G)4p | U |
| 65542.8977 | 0.0010 | 1 | $3d^4(^3H)4p$ | $z^{-2}G^{o}$ | 7/2 | | 49 | 33 | $3d^4(^3F1)4p$ | $^{2}G^{o}$ |
| 65617.9482 | 0.0019 | 1 | $3d^4(^3H)4p$ | z ⁴ I° | 13/2 | | 96 | 33 | 5a (11)¬p | Ü |
| 65680.0145 | 0.0011 | 1 | $3d^4(^3H)4p$ | z ² G° | 9/2 | | 41 | 31 | $3d^4(^3F1)4p$ | $^{2}G^{o}$ |
| 65709.4440 | 0.0012 | 1 | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | 1.265 | 73 | 13 | $3d^4(^3G)4p$ | 4 G $^{\rm o}$ |
| 65812.6508 | 0.0013 | 1 | $3d^4(^3H)4p$ | $z^{4}I^{o}$ | 15/2 | | 100 | | · / I | |
| 66256.4404 | 0.0019 | 1 | $3d^4(^3P1)4p$ | v ⁴ P ^o | 1/2 | 2.545 | 76 | 13 | $3d^4(^3P1)4p$ | $^2S^o$ |
| 66354.7574 | 0.0014 | 1 | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 1.671 | 90 | | _ | |
| 66649.390 | 0.003 | 1 | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | | 53 | 15 | $3d^4(^3F1)4p$ | $^{2}D^{o}$ |
| 66726.7818 | 0.0012 | 1 | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 1.502 | 92 | | | |
| 66871.831 | 0.002 | 1 | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 1/2 | | 79 | 14 | $3d^4(^3P1)4p$ | ² S ^o |
| 67012.0762 | 0.0011 | 1 | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | | 71 | 13 | $3d^4(^3F1)4p$ | $^{2}D^{o}$ |
| 67070.4417 | 0.0018 | 1 | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | | 51 | 21 | $3d^4(^3P1)4p$ | ² P ^o |
| 67333.7786 | 0.0011 | 1 | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | | 60 | 18 | $3d^4(^3F1)4p$ | ⁴ F ^o |
| 67344.0057 | 0.0015 | 1 | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | | 66 | 13 | $3d^4(^3F1)4p$ | ⁴ G ^o |
| 67353.2688 | 0.0011 | 1 | $3d^4(^3H)4p$ | y ⁴ G° y ⁴ G° | 9/2 | | 51 | 32 | $3d^4(^3F1)4p$ | ⁴ F° ⁴ G° |
| 67369.0711 67379.2960 | 0.0011 | 1 | $3d^4(^3H)4p$ | y G z ² D° | 11/2 | | 65 | 22 | $3d^4(^3F1)4p$ | ⁴ F° |
| 67387.0924 | 0.0011 0.0011 | 1 1 | 3d ⁴ (³ F1)4p 3d ⁴ (³ F1)4p | z D z ² D° | 3/2 5/2 | | 28 50 | 32 18 | $3d^4(^3F1)4p$ $3d^4(^3F1)4p$ | ⁴ F ^o |
| 67393.4498 | 0.0011 | 1 | $3a^{4}(^{3}F1)4p$ $3d^{4}(^{3}F1)4p$ | y ⁴ F° | 3/2 7/2 | | 76 | 10 | $3d^4(^3H)4p$ | г ⁴G° |
| 67448.5423 | 0.0011 | 1 | $3d^4(^3F1)4p$ | у F у ⁴ F° | 9/2 | | 63 | 18 | $3d^{4}(^{3}\text{H})4p$ | ⁴ G⁰ |
| 67506.0884 | 0.0011 | 1 | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 11/2 | | 93 | 10 | 3α (11) 4 ρ | U |
| 67588.8774 | 0.0012 | 1 | $3d^4(^3H)4p$ | z^{-1} | 13/2 | | 95 95 | | | |
| 67859.5612 | 0.0011 | 1 | $3d^4(^3F1)4p$ | x ⁴ D° | 1/2 | | 88 | 11 | $3d^4(^3P1)4p$ | $^{4}D^{o}$ |
| 67867.7875 | 0.0012 | 1 | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | | 77 | 13 | $3d^4(^3P1)4p$ | ⁴ D° |
| 67870.2120 | 0.0011 | 1 | $3d^4(^3F1)4p$ | x ⁴ D° | 3/2 | | 84 | 12 | $3d^4(^3P1)4p$ | ⁴ D ^o |
| 67875.3702 | 0.0011 | 1 | $3d^4(^3F1)4p$ | x ⁴ D° | 7/2 | | 69 | 19 | $3d^4(^3P1)4p$ | $^{4}D^{o}$ |
| 68305.5521 | 0.0013 | 1 | $3d^4(^3P1)4p$ | z^4S^o | 3/2 | 1.978 | 70 | 17 | $3d^4(^3P1)4p$ | $^{2}P^{o}$ |
| 68476.8740 | 0.0011 | 1 | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 9/2 | | 81 | 12 | $3d^4(^1G1)4p$ | $^{2}H^{o}$ |
| 68583.302 | 0.006 | 1 | $3d^4(^3F1)^4p$ | $z^{2}F^{o}$ | 5/2 | | 50 | 21 | $3d^4(^3G)4p$ | $^{2}F^{o}$ |
| | | | 1.2 | 20 | | | 0.4 | 10 | - 4.1 | 2, , , 0 |
| 68737.7750 | 0.0011 | 1 | $3d^4(^3H)4p$ $3d^4(^3F1)4p$ | $z^{2}H^{o}$ $z^{2}F^{o}$ | 11/2 | | 84 | 10 | $3d^4(^{1}G1)4p$ $3d^4(^{3}G)4p$ | ² H ^o ² F ^o |

Table 4. Energy levels of Cr II—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{J} | , | I | eading % | |
|----------------------------------|---------------------------------|--------|---|---|------------|------------------|----------|----------|----------------------------------|--|
| 68843.2730 | 0.0011 | 1 | $3d^4(^3G)4p$ | y ⁴ H° | 7/2 | | 83 | 16 | $3d^4(^3H)4p$ | ⁴ H ^o |
| 68992.3473 | 0.0011 | 1 | $3d^4(^3G)4p$ | y ⁴ H° | 9/2 | | 82 | 14 | $3d^4(^3H)4p$ | 4 H $^{\rm o}$ |
| 69170.3546 | 0.0012 | 1 | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | | 82 | 13 | $3d^4(^3H)4p$ | 4 H $^{\rm o}$ |
| 69348.1441 | 0.0015 | 1 | $3d^4(^3P1)4p$ | $^{2}\mathrm{D^{o}}$ | 3/2 | | 65 | 28 | $3d^4(^3F1)4p$ | $^{2}D^{o}$ |
| 69388.1518 | 0.0012 | 1 | $3d^4(^3G)4p$ | y ⁴ H° | 13/2 | | 85 | 13 | $3d^4(^3H)4p$ | 4 H $^{\rm o}$ |
| 69477.9006 | 0.0011 | 1 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 5/2 | | 71 | 11 | $3d^4(^3D)4p$ | 4 F $^{\rm o}$ |
| 69498.2143 | 0.0011 | 1 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 9/2 | | 60 | 13 | $3d^4(^3F1)4p$ | $^{2}G^{o}$ |
| 69506.0679 | 0.0011 | 1 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 7/2 | | 60 | 11 | $3d^4(^3F1)4p$ | $^{2}G^{o}$ |
| 69638.5919 | 0.0013 | 1 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 3/2 | | 81 | 13 | $3d^4(^3D)4p$ | 4 F $^{\rm o}$ |
| 69903.4798 | 0.0018 | 1 | $3d^4(^3F1)4p$ | $y^{2}G^{o}$ | 7/2 | | 42 | 25 | $3d^4(^3H)4p$ | ² G ^o |
| 69954.0545 | 0.0017 | 1 | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | | 66 | 20 | $3d^4(^3F1)4p$ | $^{2}D^{o}$ |
| 70107.6256 | 0.0012 | 1 | $3d^4(^3F1)4p$ | y ² G° | 9/2 | | 37 | 25 | $3d^4(^3H)4p$ | ² G ^o |
| 70316.8226 | 0.0013 | 1 | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | | 60 | 17 | $3d^4(^3H)4p$ | ⁴ G ^o |
| 70394.1507 | 0.0018 | 1 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | | 57 | 19 | $3d^4(^3G)4p$ | ⁴ G ^o |
| 70398.8012 | 0.0012 | 1 | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | | 47 | 34 | $3d^4(^3G)4p$ | ⁴ G ^o |
| 70426.9904 | 0.0016 | 1 | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | | 61 | 19 | $3d^4(^3H)4p$ | ⁴ G ^o |
| 70584.393 | 0.003 | 1 | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | | 45 | 32 | $3d^4(^3F1)4p$ | ${}^{2}F^{o}$ |
| 70679.0962 | 0.0019 | 1 | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | | 44 | 22 | $3d^4(^3G)4p$ | ² H ^o |
| 70852.163 | 0.003 | 1 | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 7/2 | | 59 | 20 | $3d^4(^3F1)4p$ | ${}^{2}F^{o}$ |
| 70879.730 | 0.002 | 1 | $3d^4(^3G)4p$ | x ⁴ G° | 11/2 | | 41 | 38 | $3d^4(^3G)4p$ | ² H ^o |
| 72648.516 | 0.002 | 1 | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 7/2 | | 79 | 11 | $3d^4(^3H)4p$ | $^{2}G^{o}$ |
| 72716.7217 | 0.0012 | 1 | $3d^4(^3G)4p$ | x ² G ^o | 9/2 | | 75 | 13 | $3d^4(^3\mathrm{H})4p$ | $^{2}G^{o}$ |
| 73406.8885 | 0.0018 | 1 | $3d^4(^3D)4p$ | w ⁴ D ^o | 1/2 | | 96 | | | |
| 73411.8795 | 0.0020 | 1 | $3d^4(^3D)4p$ | w ⁴ D ^o | 3/2 | | 91 | | | |
| 73436.128 | 0.003 | 1 | $3d^4(^3D)4p$ | w ⁴ D ^o | 5/2 | | 87 | | | |
| 73485.6068 | 0.0019 | 1 | $3d^4(^3D)4p$ | w^4D^0 | 7/2 | | 89 | | - 41.3 | 4-0 |
| 74114.365 | 0.004 | 1 | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | | 64 | 19 | $3d^4(^3D)4p$ | ⁴ F ^o |
| 74273.3371 | 0.0018 | 1 | $3d^4(^3D)4p$ | w ⁴ F° | 3/2 | | 82 | 13 | $3d^4(^3G)4p$ | ⁴ F ^o |
| 74318.8415 | 0.0015 | 1 | $3d^4(^3D)4p$ | ${^{4}F^{o}}$ | 5/2 | | 48 | 40 | $3d^4(^3D)4p$ | ⁴ P ^o |
| 74421.727 | 0.004 | 1 | $3d^4(^1I)4p$ | $^{2}I^{o}$ $w^{4}F^{o}$ | 11/2 | | 85 | 12 | $3d^4(^1G1)4p$ | ² H ^o ⁴ F ^o |
| 74423.6749 | 0.0018 | 1 | $3d^4(^3D)4p$ | | 7/2 | | 89 | 6 | $3d^4(^3D)4p$ | _ |
| 74424.1533 | 0.0013 | 1 | $3d^4(^1I)4p$ | ² K ^o | 13/2 | | 65 | 33 | $3d^4(^1I)4p$ | $^{2}I^{o}$ $^{2}F^{o}$ |
| 74436.115 | 0.003 | 1 | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ $x^{2}H^{o}$ | 5/2 | | 77 | 7 | $3d^4(^3D)4p$ | ² H ^o |
| 74455.805 | 0.002 | 1 | $3d^4(^1G1)4p$ | x ⁴ P° | 9/2 | | 82 | 11 | $3d^4(^3H)4p$ | ⁴ F ^o |
| 74483.9066 | 0.0013 | 1 | $3d^4(^3D)4p$ $3d^4(^3D)4p$ | w ⁴ F° | 5/2 9/2 | | 53 86 | 30 | $3d^4(^3D)4p$ $3d^4(^3G)4p$ | ⁴ F ^o |
| 74504.0983 74707.389 | 0.0013 0.003 | 1 | $3d^{4}(^{1}G1)4p$ | x ² H ^o | 11/2 | | 80 72 | 13 11 | $3d^{4}(^{1}I)4p$ | ² I ^o |
| 74707.589 74717.5565 | 0.003 | 1 1 | $3d^4(^3D)4p$ | х п х ⁴ Р° | 3/2 | | 93 | 11 | 5a (1)4p | 1 |
| 74717.3303 | 0.007 | 1 | $3d^4(^1I)4p$ | ² I ^o | 13/2 | | 64 | 35 | $3d^4(^1I)4p$ | 2 K o |
| 74743.182 | 0.007 | 1 | $3d^4(^3D)4p$ | y ² P ^o | 1/2 | | 55 | 40 | $3d^{4}(^{1}S1)4p$ | $^{2}P^{o}$ |
| 74920.379 | 0.003 | 1 | $3d^4(^3D)4p$ | y F x ⁴ P ^o | 1/2 | | 96 | 40 | 5a (51)4p | Г |
| 74958.8558 | 0.003 | 1 | $3d^4(^1I)4p$ | ${}^{2}K^{o}$ | 15/2 | | 100 | | | |
| 74984.694 | 0.0017 | 1 | $3d^4(^3D)4p$ | y ² P ^o | 3/2 | | 61 | 33 | $3d^4(^1S1)4p$ | $2\mathbf{p}^{o}$ |
| 75716.4967 | 0.0017 | 1 | $3d^4(^1G1)4p$ | w ² G ^o | 7/2 | | 82 | 8 | $3d^4(^3G)4p$ | ² G ^o |
| 75809.984 | 0.003 | 1 | $3d^4(^{1}G1)4p$ | w G w ² G ^o | 9/2 | | 80 | 12 | $3d^4(^3G)4p$ | ² G° |
| 76878.954 | 0.003 | 1 | $3d^4(^3D)4p$ | w G w ² F° | 7/2 | | 73 | 12 | $3d^4(^1G1)4p$ | ${}^{2}F^{o}$ |
| 76987.6704 | 0.004 | 1 | $3d^4(^3D)4p$ | $w^{-2}F^{o}$ | 5/2 | | 72 | 13 | $3d^4(^1G1)4p$ | ${}^{2}F^{o}$ |
| 77078.860 | 0.003 | 1 | $3d^4(^1I)4p$ | w ¹ w ² H ^o | 11/2 | | 88 | 8 | $3d^4(^3G)4p$ | ² H ^o |
| 77270.2167 | 0.0020 | 1 | $3d^{4}(^{1}\text{I})4p$ | w ² H ^o | 9/2 | | 90 | 8 | $3d^4(^3G)4p$ | ² H ^o |
| 77713.270 | 0.007 | 1 | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | | 31 | 26 | $3d^4(^3D)4p$ | $^{2}D^{o}$ |
| 77777.324 | 0.007 | 1 | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 1/2 | | 48 | 32 | $3d^4(^3D)4p$ | $^{2}P^{o}$ |
| 77935.202 | 0.004 | 1 | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 5/2 | | 65 | 26 | $3d^4(^1D1)4p$ | $^{2}D^{o}$ |
| 78109.452 | 0.009 | 1 | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 3/2 | | 48 | 22 | $3d^4(^1S1)4p$ | $^{2}P^{o}$ |
| 80288.021 | 0.003 | 1 | $3d^4(^1D1)4p$ | w^2D^o | 3/2 | | 74 | 13 | $3d^4(^3D)4p$ | $^{2}D^{o}$ |
| 80420.1672 | 0.0017 | 1 | $3d^4(^1D1)4p$ | w^2D^o | 5/2 | | 65 | 21 | $3d^4(^3D)4p$ | $^{2}D^{o}$ |
| 81232.8790 | 0.0018 | 1 | $3d^4(^1D1)4p$ | v^2F^o | 5/2 | | 86 | | 54 (Z) .p | |
| 81432.2228 | 0.0014 | 1 | $3d^4(^1D1)4p$ | v^2F^o | 7/2 | | 89 | | | |
| 82853.894 | 0.005 | 1 | $3d^4(^1D1)4p$ | w^2P^o | 1/2 | | 89 | 9 | $3d^4(^3D)4p$ | $^{2}\mathbf{P}^{\mathrm{o}}$ |
| 82919.916 | 0.002 | 1 | $3d^4(^1D1)4p$ | w^2P^o | 3/2 | | 78 | 11 | $3d^4(^3D)4p$ | $^{2}P^{o}$ |
| 84604.6438 | 0.0018 | 1 | $3d^4(^1F)4p$ | u ² F° | 5/2 | | 89 | | \ -/ T | - |
| 84677.1138 | 0.0015 | 1 | $3d^4(^1F)4p$ | u ² F° | 7/2 | | 87 | | | |
| | 0.0015 | 1 | $3d^4(^1F)4p$ | v ² G° | 7/2 | | 95 | | | |
| 85573.1236 | 0.0013 | | | | | | | | | |
| 85573.1236 85939.0227 | 0.0015 | 1 | $3d^4(^1F)4p$ | v^2G^o | 9/2 | | 97 | | | |
| | | | $3d^4(^1F)4p$ | | 9/2 5/2 | | 97 | 13 | $3d^4(^3P2)4p$ | $^{2}\mathrm{D}^{\mathrm{o}}$ |
| 85939.0227 | 0.0015 | 1 | 3d ⁴ (¹ F)4p 3d ⁴ (¹ F)4p 3d ⁴ (¹ F)4p | v^2G^o | | | | 13 12 | $3d^4(^3P2)4p$ $3d^4(^3P2)4p$ | $^{2}D^{o}$ $^{2}D^{o}$ |

Table 4. Energy levels of Cr II—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{J} | | I | eading % | |
|----------------------------------|---------------------------------|--------|--------------------------------|--|------|------------------|----|----|----------------|-----------------|
| 89453.031 | 0.002 | 1 | $3d^4(^3P2)4p$ | y ⁴ P ^o | 5/2 | | 82 | 7 | $3d^4(^3P2)4p$ | ⁴ D' |
| 89507.959 | 0.006 | 1 | $3d^4(^3P2)4p$ | y ⁴ P ^o | 1/2 | | 95 | | ` ' ' ' | |
| 90218.406 | 0.003 | 1 | $3d^4(^3P2)4p$ | v ⁴ D° | 7/2 | | 69 | 26 | $3d^4(^3F2)4p$ | ⁴ D' |
| 90258.195 | 0.005 | 1 | $3d^4(^3P2)4p$ | v ⁴ D ^o | 5/2 | | 51 | 20 | $3d^4(^3F2)4p$ | 4D' |
| 90262.128 | 0.007 | 1 | $3d^4(^3F2)4p$ | v ⁴ F° | 3/2 | | 97 | | (<i>)</i> | _ |
| 90441.764 | 0.003 | 1 | $3d^4(^3F2)4p$ | v ⁴ F ^o | 5/2 | | 93 | | | |
| 90450.627 | 0.006 | 1 | $3d^4(^3P2)4p$ | v ⁴ D ^o | 3/2 | | 61 | 24 | $3d^4(^3F2)4p$ | ⁴ D' |
| 90475.372 | 0.010 | 1 | $3d^{4}(^{3}P2)4p$ | v ⁴ D° | 1/2 | | 70 | 26 | $3d^4(^3F2)4p$ | ⁴ D' |
| 90473.372 | 0.003 | 1 | $3d^{4}(^{3}F2)4p$ | v ⁴ F ^o | 7/2 | | 95 | 20 | 3a (F2)4p | D |
| | | | | v r v ⁴ F ^o | | | | | | |
| 90588.5568 | 0.0017 | 1 | $3d^4(^3F2)4p$ | t ² F° | 9/2 | | 98 | _ | 2.4/3522.4 | ⁴ G |
| 90706.803 | 0.006 | 1 | $3d^4(^3F2)4p$ | | 5/2 | | 85 | 5 | $3d^4(^3F2)4p$ | |
| 90830.840 | 0.004 | 1 | $3d^4(^3F2)4p$ | t ² F ^o | 7/2 | | 87 | 5 | $3d^4(^1G2)4p$ | $^{2}F^{\circ}$ |
| 91078.710 | 0.003 | 1 | $3d^4(^3F2)4p$ | w ⁴ G ^o | 5/2 | | | | | |
| 91122.858 | 0.002 | 1 | $3d^4(^3F2)4p$ | w ⁴ G ^o | 7/2 | | 95 | | | |
| 91189.479 | 0.002 | 1 | $3d^4(^3F2)4p$ | $w\ ^4G^{\rm o}$ | 9/2 | | 98 | | | |
| 91291.9688 | 0.0016 | 1 | $3d^4(^3F2)4p$ | w^4G^o | 11/2 | | | | | |
| 91426.049 | 0.005 | 1 | $3d^4(^3P2)4p$ | t ² D ^o | 5/2 | | 50 | 18 | $3d^4(^1F)4p$ | $^{2}D'$ |
| 91556.355 | 0.008 | 1 | $3d^4(^3P2)4p$ | t ² D ^o | 3/2 | | 53 | 21 | $3d^4(^3F2)4p$ | $^{2}D'$ |
| 92612.203 | 0.002 | 1 | $3d^4(^3P2)4p$ | y ⁴ S ^o | 3/2 | | 97 | | ` ' * | |
| 93531.6933 | 0.0017 | 1 | $3d^4(^3F2)4p$ | t ⁴ D° | 7/2 | | 73 | 27 | $3d^4(^3P2)4p$ | ⁴ D' |
| 93641.529 | 0.004 | 1 | $3d^4(^3F2)4p$ | u ² G° | 9/2 | | 98 | | 24 (12) p | _ |
| 93670.983 | 0.004 | 1 | $3d^4(^3F2)4p$ | t ⁴ D° | 5/2 | | 72 | 27 | $3d^4(^3P2)4p$ | ⁴ D' |
| 93769.989 | 0.002 | 1 | $3d^4(^3F2)4p$ | t ⁴ D° | 3/2 | | 72 | 27 | $3d^4(^3P2)4p$ | ⁴ D |
| 93800.487 | 0.002 | 1 | $3d^{4}(^{3}F2)4p$ | t ⁴ D° | 1/2 | | 72 | 27 | $3d^4(^3P2)4p$ | ⁴ D' |
| | | | | u ² G° | | | 98 | 21 | 3a (P2)4p | ט |
| 93801.524 | 0.008 | 1 | $3d^4(^3F2)4p$ | u ⁻ G ³ v ² P ⁰ | 7/2 | | | | | |
| 94383.155 | 0.009 | 1 | $3d^4(^3P2)4p$ | | 3/2 | | 94 | | | |
| 94624.700 | 0.016 | 1 | $3d^4(^3P2)4p$ | v ² P ^o | 1/2 | | 92 | | . 4.1 | 2 |
| 97480.148 | 0.006 | 1 | $3d^4(^1G2)4p$ | v ² H ^o | 9/2 | | 86 | 12 | $3d^4(^1G2)4p$ | ² G |
| 97728.226 | 0.014 | 1 | $3d^4(^1G2)4p$ | s ² G° | 7/2 | | 97 | | | |
| 97899.364 | 0.006 | 1 | $3d^4(^1G2)4p$ | v ² H ^o | 11/2 | | 97 | | | |
| 97904.354 | 0.005 | 1 | $3d^4(^1G2)4p$ | s ² G ^o | 9/2 | | 86 | 12 | $3d^4(^1G2)4p$ | $^{2}H'$ |
| 98207.464 | 0.004 | 1 | $3d^4(^3F2)4p$ | s ² D ^o | 5/2 | | 71 | 29 | $3d^4(^3P2)4p$ | $^{2}D'$ |
| 98314.984 | 0.006 | 1 | $3d^4(^3F2)4p$ | s ² D° | 3/2 | | 70 | 29 | $3d^4(^3P2)4p$ | $^{2}D'$ |
| 99069.276 | 0.009 | 1 | $3d^4(^1G2)4p$ | r ² F ^o | 7/2 | | 87 | 8 | $3d^4(^3F2)4p$ | $^{2}F^{\circ}$ |
| 99243.940 | 0.011 | 1 | $3d^4(^1G2)4p$ | $r^{2}F^{o}$ | 5/2 | | 86 | 6 | $3d^4(^3F2)4p$ | $^{2}F^{\circ}$ |
| 53051.271 | 0.006 | 0 | $3d^34s^2$ | c ⁴ F | 3/2 | | 00 | Ü | 24 (12) p | • |
| 53271.008 | 0.003 | 0 | $3d^34s^2$ | c ⁴ F | 5/2 | | | | | |
| 53566.2598 | 0.003 | 0 | $3d^34s^2$ | c ⁴ F | 7/2 | | | | | |
| 53923.5215 | 0.0017 | 0 | $3d^34s^2$ | c ⁴ F | 9/2 | | | | | |
| 65882.4356 | | | $3d^34s^2$ | d ⁴ P | 1/2 | | | | | |
| | 0.0018 | 0 | $3d^{3}4s^{2}$ | d P d ⁴ P | | | | | | |
| 66010.2710 | 0.0012 | 0 | | | 3/2 | | | | | |
| 66256.5785 | 0.0016 | 0 | $3d^34s^2$ | d ⁴ P | 5/2 | | | | | |
| 81648.64 | 0.10 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 1/2 | | | | | |
| 81707.33 | 0.10 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 3/2 | | | | | |
| 81734.65 | 0.09 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F° | 1/2 | | | | | |
| 81815.88 | 0.08 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 5/2 | | | | | |
| 81824.07 | 0.09 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F° | 3/2 | | | | | |
| 81961.87 | 0.07 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o | 5/2 | | | | | |
| 81978.045 | 0.006 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | v ⁶ D° | 7/2 | | | | | |
| 82142.71 | 0.05 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F° | 7/2 | | | | | |
| 82192.18 | 0.17 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 9/2 | | | | | |
| 82361.98 | 0.02 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F° | 9/2 | | | | | |
| 82612.57 | 0.02 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F° | 11/2 | | | | | |
| 85486.162 | 0.02 | 1 | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | u ⁴ D° | 1/2 | | | | | |
| | | | | u ¹ D° | | | | | | |
| 85586.522 | 0.006 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | | 3/2 | | | | | |
| 85778.653 | 0.005 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 5/2 | | | | | |
| 86078.820 | 0.003 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 7/2 | | | | | |
| 86566.458 | 0.004 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 5/2 | | | | | |
| 86797.246 | 0.003 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 7/2 | | | | | |
| 87092.565 | 0.004 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 9/2 | | | | | |
| 87450.435 | 0.002 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 11/2 | | | | | |
| 87628.738 | 0.005 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 3/2 | | | | | |
| | 0.006 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | | | | | |
| 87766.597 | | | JU (17 1454771 F) | | | | | | | |

Table 4. Energy levels of Cr II—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{J} | Leading % |
|----------------------------------|---------------------------------|--------|--|--------------------------------------|------------|------------------|-----------|
| 88073.437 | 0.003 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 9/2 | | |
| 88604.248 | 0.008 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 3/2 | | |
| 89164.517 | 0.005 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | u ² D ^o | 5/2 | | |
| 91752.175 | 0.009 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | t ² G ^o | 7/2 | | |
| 92144.165 | 0.011 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | t ² G° | 9/2 | | |
| 92234.91 | 0.09 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ P ^o | 3/2 | | |
| 92417.89 | 0.11 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ P ^o | 5/2 | | |
| 92653.16 | 0.08 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ P ^o | 7/2 | | |
| 93890.658 | 0.010 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 5/2 | | |
| 93968.67 | 0.13 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D ^o | 1/2 | | |
| 94098.17 | 0.08 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° | 3/2 | | |
| 94218.668 | 0.007 | 1 | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 7/2 | | |
| 14265.93 | 0.06 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° | 5/2 | | |
| 4452.67 | 0.10 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° | 7/2 | | |
| 4656.216 | 0.009 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D ^o | 9/2 | | |
| 7070.940 | 0.017 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 5/2 | | |
| 7168.47 | 0.05 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | w^4P^o | 1/2 | | |
| 7182.553 | 0.010 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ P ^o | 5/2 | | |
| 7187.100 | 0.015 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 7/2 | | |
| 7294.05 | 0.02 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | w^4P^o | 3/2 | | |
| 7333.133 | 0.013 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G ^o | 9/2 | | |
| 7493.525 | 0.013 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G ^o | 11/2 | | |
| 7875.014 | 0.015 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | z ⁶ S ^o | 5/2 | | |
| 8578.558 | 0.011 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F ^o | 3/2 | | |
| 8641.89 | 0.02 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 5/2 | | |
| 8719.33 | 0.04 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 7/2 | | |
| 8812.54 | 0.07 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 9/2 | | |
| 0691.82 | 0.02 | 1 | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 3/2 | | |
| 1074.524 | 0.014 | 1 | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 5/2 | | |
| 1157.774 | 0.014 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | u ² P° | 3/2 | | |
| 01170.47 | 0.05 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^\circ)$ | w ⁴ H° | 7/2 | | |
| 01296.55 | 0.06 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^\circ)$ | w ⁴ H° | 9/2 | | |
| 1514.193 | 0.009 | 1 | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 7/2 | | |
| 1696.15 | 0.03 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | u ² H° | 9/2 | | |
| 1782.97 | 0.10 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^\circ)$ | w ⁴ H° | 11/2 | | |
| 01864.18 | 0.03 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | p ² F ^o | 7/2 | | |
| 01900.58 | 0.09 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | w ⁴ H° | 13/2 | | |
| 1932.236 | 0.09 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | u ² H° | 11/2 | | |
| 1932.230 | 0.013 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | r ² G° | 9/2 | | |
| 1986.996 | 0.020 | | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 3/2 | | |
| | 0.020 | 1 | $3d^3(^2G)4s4p(^3P^0)$ | r ² G° | 3/2 7/2 | | |
| 2121.99 | | 1 | $3d^3(^2G)4s4p(^3P^0)$ | p ² F° | 5/2 | | |
| 2145.644 2297.06 | 0.018 0.02 | 1 1 | $3d^3(^2D)4s4p(^3P^0)$ | р F s ⁴ F ^o | 5/2 | | |
| | | | | s r s ⁴ F° | | | |
| 2492.54 | 0.02 | 1 | $3d^3(^2D)4s4p(^3P^0)$ | | 7/2 | | |
| 2602.312 | 0.007 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 3/2 | | |
| 2619.64 | 0.04 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 1/2 | | |
| 2655.91 | 0.04 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 5/2 | | |
| 2678.943 | 0.007 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 5/2 | | |
| 2684.39 | 0.07 | 1 | $3d^3(^2P)4s4p(^3P^0)$ | x ⁴ S ^o | 3/2 | | |
| 2725.548 | 0.008 | 1 | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 9/2 | | |
| 2831.604 | 0.019 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 7/2 | | |
| 2914.943 | 0.004 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 7/2 | | |
| 3199.814 | 0.003 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 9/2 | | |
| 3513.551 | 0.002 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 11/2 | | |
| 4274.57 | 0.04 | 1 | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 3/2 | | |
| 4439.572 | 0.012 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 1/2 | | |
| 4446.671 | 0.007 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 3/2 | | |
| 4467.807 | 0.012 | 1 | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 5/2 | | |
| 4616.250 | 0.006 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 3/2 | | |
| 4630.109 | 0.007 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 5/2 | | |
| 4680.79 | 0.02 | 1 | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 7/2 | | |
|)4869.116 | 0.003 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 5/2 | | |
|)4875.310 | 0.003 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 7/2 | | |
| 05203.460 | 0.003 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 9/2 | | |
| 05206.719 | 0.002 | 1 | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 7/2 | | |
| 15200.717 | | | | | | | |

Table 4. Energy levels of Cr II—Continued

| nergy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{J} | Leading % |
|---------------------------------|---------------------------------|--------|---|-------------------------------|------|------------------|-----------|
| 06165.349 | 0.012 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ | t ² H ^o | 9/2 | | |
| 5719.38 | 0.04 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | r ⁴ G ^o | 5/2 | | |
| 6726.086 | 0.009 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ S° | 3/2 | | |
| 5779.248 | 0.014 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | r ⁴ G ^o | 7/2 | | |
| 6791.98 | 0.02 | 1 | $3d^3(^2H)4s4p(^3P^0)$ | r ⁴ G ^o | 9/2 | | |
| 06827.353 | 0.008 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | r ⁴ G ^o | 11/2 | | |
| 07022.15 | 0.07 | 1 | $3d^3(^2D)4s4p(^3P^0)$ | o ² F° | 5/2 | | |
| 7153.04 | 0.02 | 1 | $3d^3(^2D)4s4p(^3P^0)$ | o ² F° | 7/2 | | |
| 07212.34 | 0.02 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | q^2D^o | 3/2 | | |
|)7355.514 | 0.018 | 1 | $3d^3(^4P)4s4p(^3P^0)$ | q ² D ^o | 5/2 | | |
| 07739.236 | 0.012 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | q^2G^o | 9/2 | | |
| 07850.15 | 0.09 | 1 | $3d^3(^2H)4s4p(^3P^0)$ | $x^{2}I^{o}$ | 11/2 | | |
| 7918.545 | 0.017 | 1 | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | q ² G° | 7/2 | | |
|)9914.49 | 0.04 | 1 | $3d^3(^2D)4s4p(^3P^0)$ | p ² D ^o | 3/2 | | |
|)9943.38 | 0.04 | 1 | $3d^3(^2D)4s4p(^3P^0)$ | p ² D ^o | 5/2 | | |
| 5943.610 | 0.002 | 1 | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 1/2 | | |
| 15966.553 | 0.002 | 1 | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 3/2 | | |
| 6041.552 | 0.002 | 1 | $3d^3(^4P)4s4p(^1P^0)$ | $^4P^{o}$ | 5/2 | | |
| 8622.562 | 0.002 | 1 | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D ^o | 3/2 | | |
| 8640.183 | 0.002 | 1 | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D ^o | 5/2 | | |
| 8661.22 | 0.02 | 1 | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 1/2 | | |
| 8753.670 | 0.002 | 1 | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 7/2 | | |
| 2692.0107 | 0.0018 | 0 | $3d^4(^5D)5s$ | e ⁶ D | 1/2 | | |
| 2692.0107 2763.6652 | 0.0018 | 0 0 | $3d^{4}(^{5}D)5s$ $3d^{4}(^{5}D)5s$ | e D e ⁶ D | 3/2 | | |
| | | | $3d^{4}(^{5}D)5s$ | e ⁶ D | 5/2 | | |
| 2881.0971 | 0.0015 | 0 | | e D e ⁶ D | | | |
| 3041.3186 | 0.0015 | 0 | $3d^4(^5D)5s$ | | 7/2 | | |
| 3240.4193 | 0.0015 | 0 | $3d^4(^5D)5s$ | e ⁶ D | 9/2 | | |
| 4209.7839 | 0.0015 | 0 | $3d^4(^5D)5s$ | e ⁴ D | 1/2 | | |
| 4320.1376 | 0.0015 | 0 | $3d^4(^5D)5s$ | e ⁴ D | 3/2 | | |
| 4495.6134 | 0.0015 | 0 | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | | |
| 4726.6769 | 0.0015 | 0 | $3d^4(^5D)5s$ | e ⁴ D | 7/2 | | |
| 9677.828 | 0.008 | 0 | $3d^4(^3P1)5s$ | f ⁴ P | 1/2 | | |
| 0040.168 | 0.005 | 0 | $3d^4(^3P1)5s$ | f ⁴ P | 3/2 | | |
| 00068.856 | 0.004 | 0 | $3d^4(^3H)5s$ | e ⁴ H | 7/2 | | |
| 0135.7777 | 0.0018 | 0 | $3d^4(^3H)5s$ | e ⁴ H | 9/2 | | |
| 0221.5949 | 0.0018 | 0 | $3d^4(^3H)5s$ | e ⁴ H | 11/2 | | |
| 0322.077 | 0.002 | 0 | $3d^4(^3H)5s$ | e ⁴ H | 13/2 | | |
| 0650.462 | 0.005 | 0 | $3d^4(^3P1)5s$ | f ⁴ P | 5/2 | | |
| 0782.820 | 0.009 | 0 | $3d^4(^3P1)5s$ | e ² P | 1/2 | | |
| 1021.7953 | 0.0019 | 0 | $3d^4(^3H)5s$ | e ² H | 9/2 | | |
| 1194.7872 | 0.0019 | 0 | $3d^4(^3H)5s$ | e ² H | 11/2 | | |
| 1245.003 | 0.005 | 0 | $3d^4(^3F1)5s$ | f ⁴ F | 3/2 | | |
| 1276.547 | 0.004 | 0 | $3d^4(^3F1)5s$ | f ⁴ F | 5/2 | | |
| 1321.812 | 0.004 | 0 | $3d^4(^3F1)5s$ | f ⁴ F | 7/2 | | |
| 1382.941 | 0.003 | 0 | $3d^4(^3F1)5s$ | f ⁴ F | 9/2 | | |
| 1492.822 | 0.004 | 0 | $3d^4(^3P1)5s$ | e ² P | 3/2 | | |
| 2148.705 | 0.005 | 0 | $3d^4(^3F1)5s$ | f ² F | 5/2 | | |
| 2243.154 | 0.004 | 0 | $3d^4(^3F1)5s$ | f ² F | 7/2 | | |
| 3627.039 | 0.002 | 0 | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | | |
| 3736.999 | 0.002 | 0 | $3d^4(^3G)5s$ | f ⁴ G | 11/2 | | |
| 4543.110 | 0.004 | 0 | $3d^45s$ | $g^{2}G$ | 7/2 | | |
| 1666.357 | 0.003 | 0 | $3d^45s$ | g ² G | 9/2 | | |
| 165 2696 | 0.0015 | 0 | $3d^4(^5D)4d$ | e ⁴ S | 2/2 | | |
| 6165.2686 | 0.0015 | 0 | | | 3/2 | | |
| 6594.3759 | 0.0020 | 0 | $3d^4(^5D)4d$ | e ⁶ G | 3/2 | | |
| 6654.1725 | 0.0015 | 0 | $3d^4(^5D)4d$ | e ⁶ G | 5/2 | | |
| 6667.7179 | 0.0015 | 0 | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | | |
| 6691.5175 | 0.0015 | 0 | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | | |
| 6738.2737 | 0.0015 | 0 | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | | |
| 36782.0488 | 0.0015 | 0 | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | | |
| 36847.0098 | 0.0015 | 0 | $3d^4(^5D)4d$ | e ⁶ G | 9/2 | | |
| 6980.0758 | 0.0015 | 0 | $3d^4(^5D)4d$ | e ⁶ G | 11/2 | | |
| 7137.0220 | 0.0015 | 0 | $3d^4(^5D)4d$ | e ⁶ G | 13/2 | | |
| 7453.4854 | 0.0016 | 0 | $3d^4(^5D)4d$ | f ⁶ D | 1/2 | | |

Table 4. Energy levels of Cr II—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{J} | Leading % |
|----------------------------------|---------------------------------|--------|--|--------------------------------------|--------------|------------------|-----------|
| 87470.5420 | 0.0016 | 0 | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | | |
| 37514.7989 | 0.0016 | 0 | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | | |
| 37587.8654 | 0.0016 | 0 | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | | |
| 87594.564 | 0.002 | 0 | $3d^4(^5D)4d$ | e ⁶ F | 1/2 | | |
| 37666.2065 | 0.0016 | 0 | $3d^4(^5D)4d$ | e ⁶ F | 3/2 | | |
| 37687.5076 | 0.0016 | 0 | $3d^4(^5D)4d$ | f ⁶ D | 9/2 | | |
| 87759.0615 | 0.0016 | 0 | $3d^4(^5D)4d$ | e ⁶ F e ⁶ F | 5/2 | | |
| 37858.4675 379.48.53.49 | 0.0016 | 0 | 3d ⁴ (⁵ D)4d 3d ⁴ (⁵ D)4d | e "F e ⁶ F | 7/2 | | |
| 37948.5349 38001.3359 | 0.0016 0.0020 | 0 | $3d^{4}(^{5}D)4d$ | e ⁶ F | 9/2 11/2 | | |
| 39055.9435 | 0.0020 | 0 | $3d^{4}(^{5}D)4d$ | e F e ⁴ G | 5/2 | | |
| 39033.9433 39173.9914 | 0.0016 | 0 | $3d^{4}(^{5}D)4d$ | e ⁴ G | 7/2 | | |
| 39173.9914 39254.4711 | 0.0010 | 0 | $3d^{4}(^{5}D)4d$ | e ⁴ P | 1/2 | | |
| 39277.9225 | 0.0019 | 0 | $3d^{4}(^{5}D)4d$ | e ⁴ P | 3/2 | | |
| 39325.2777 | 0.0016 | 0 | $3d^4(^5D)4d$ | e ⁴ G | 9/2 | | |
| 89336.8108 | 0.0016 | 0 | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | | |
| 39508.5003 | 0.0016 | 0 | $3d^4(^5D)4d$ | e ⁴ G | 11/2 | | |
| 39651.618 | 0.004 | 0 | $3d^4(^5D)4d$ | f ⁴ D | 1/2 | | |
| 39724.1742 | 0.0016 | 0 | $3d^4(^5D)4d$ | f ⁴ D | 3/2 | | |
| 39812.4002 | 0.0016 | 0 | $3d^4(^5D)4d$ | f ⁴ D | 5/2 | | |
| 39885.0089 | 0.0016 | 0 | $3d^4(^5D)4d$ | f ⁴ D | 7/2 | | |
| 00512.5123 | 0.0016 | 0 | $3d^4(^5D)4d$ | e ⁴ F | 3/2 | | |
| 90608.9585 | 0.0016 | 0 | $3d^4(^5D)4d$ | e ⁴ F | 5/2 | | |
| 00725.8127 | 0.0016 | 0 | $3d^4(^5D)4d$ | e ⁴ F | 7/2 | | |
| 90850.9638 | 0.0016 | 0 | $3d^4(^5D)4d$ | e ⁴ F | 9/2 | | |
| 91955.3346 | 0.0017 | 0 | $3d^4(^5D)4d$ | e ⁶ S | 5/2 | | |
|)3755.383 | 0.006 | 0 | $3d^44d$ | f ⁴ I | 9/2 | | |
| 03843.3111 | 0.0019 | 0 | $3d^44d$ | f ⁴ I | 11/2 | | |
| 3948.2490 | 0.0019 | 0 | $3d^44d$ | f ⁴ I | 13/2 | | |
|)3949.274 | 0.002 | 0 | $3d^44d$ | f ⁴ H | 7/2 | | |
| 04023.9577 | 0.0019 | 0 | $3d^44d$ | f ⁴ H | 9/2 | | |
| 04069.9077 | 0.0019 | 0 | $3d^44d$ | f ⁴ I | 15/2 | | |
| 04106.4786 | 0.0019 | 0 | $3d^44d$ | f ⁴ H | 11/2 | | |
| 04190.525 | 0.004 | 0 | $3d^44d$ | f ⁴ H | 13/2 | | |
| 04460.164 | 0.003 | 0 | $3d^44d$ $3d^44d$ | a ⁴ K | 11/2 | | |
|)4539.9817)4633.0956 | 0.0019 | 0 | $3d^44d$ $3d^44d$ | a ⁴ K a ⁴ K | 13/2 | | |
| | 0.0019 | 0 | 3a 4a 3d ⁴ 4d | a K a ⁴ K | 15/2 17/2 | | |
|)4734.5100)5124.8352 | 0.0019 0.0019 | 0 | $3d^44d$ | a K a ² K | 13/2 | | |
|)5124.8332)5198.9905 | 0.0019 | 0 | $3d^44d$ | a K g ⁴ H | 7/2 | | |
| 05255.3052 | 0.0019 | 0 | $3d^44d$ | g ⁴ H | 9/2 | | |
| 05285.4214 | 0.0020 | 0 | $3d^44d$ | a ² K | 15/2 | | |
|)5337.9171 | 0.0019 | 0 | $3d^44d$ | g ⁴ H | 11/2 | | |
| 05365.5049 | 0.0019 | 0 | $3d^44d$ | g ⁴ G | 9/2 | | |
| 05423.3429 | 0.0020 | 0 | $3d^44d$ | g ⁴ G | 11/2 | | |
| 5434.3556 | 0.0020 | 0 | $3d^44d$ | g ⁴ H | 13/2 | | |
| 06145.2299 | 0.0020 | 0 | $3d^44d$ | f ² I | 11/2 | | |
| 06342.8998 | 0.0020 | 0 | $3d^44d$ | f ² I | 13/2 | | |
| 06924.011 | 0.002 | 0 | $3d^44d$ | i ² G | 9/2 | | |
| 07706.7411 | 0.0020 | 0 | $3d^44d$ | g ⁴ I | 9/2 | | |
| 07760.7045 | 0.0020 | 0 | $3d^44d$ | g ⁴ I | 11/2 | | |
| 07829.509 | 0.002 | 0 | $3d^44d$ | h ⁴ H | 7/2 | | |
|)7846.662 | 0.003 | 0 | $3d^44d$ | g ⁴ I | 13/2 | | |
| 07922.4558 | 0.0020 | 0 | $3d^44d$ | h ⁴ H | 9/2 | | |
| 07981.7151 | 0.0020 | 0 | $3d^44d$ | g ⁴ I | 15/2 | | |
| 08017.9853 | 0.0020 | 0 | $3d^44d$ | h ⁴ H | 11/2 | | |
|)8103.956 | 0.002 | 0 | $3d^44d$ | h ⁴ H | 13/2 | | |
| 92988.815 | 0.002 | 1 | $3d^4(^5D)5p$ | ⁶ F° | 1/2 | | |
| 93047.31 | 0.03 | 1 | $3d^4(^5D)5p$ | ⁶ F° | 3/2 | | |
| 93143.856 | 0.002 | 1 | $3d^4(^5D)5p$ | ⁶ F° | 5/2 | | |
| 93444.140 | 0.001 | 1 | $3d^4(^5D)5p$ | ⁶ F⁰ | 9/2 | | |
| 93574.43 | 0.05 | 1 | $3d^4(^5D)5p$ $3d^4(^5D)5p$ | ⁶ D° | 3/2 | | |
| 93643.377 | 0.002 | 1 | 3a (TD)5p | · F " | 11/2 | | |

Table 4. Energy levels of Cr II—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_{J} | Leading % |
|-------------------------------------|---------------------------------|--------|---|----------------------------------|-------------|------------------|-----------|
| 93776.128 | 0.008 | 1 | 3d ⁴ (⁵ D)5p | ⁶ D° | 5/2 | | |
| 93966.43 | 0.07 | 1 | $3d^4(^5D)5p$ | 6 D $^{\rm o}$ | 7/2 | | |
| 93973.992 | 0.006 | 1 | $3d^4(^5D)5p$ | $^{4}P^{o}$ | 5/2 | | |
| 94002.50 | 0.08 | 1 | $3d^4(^5D)5p$ | ⁶ P ^o | 3/2 | | |
| 94144.43 | 0.06 | 1 | $3d^4(^5D)5p$ | ⁶ P ^o | 5/2 | | |
| 94177.10 | 0.03 | 1 | $3d^4(^5D)5p$ | 6 D $^{\rm o}$ | 9/2 | | |
| 94255.975 | 0.015 | 1 | $3d^4(^5D)5p$ | ${}^{4}F^{o}$ | 3/2 | | |
| 94363.56 | 0.08 | 1 | $3d^4(^5D)5p$ | ⁶ P ^o | 7/2 | | |
| 94365.201 | 0.018 | 1 | $3d^4(^5D)5p$ | ${}^{4}F^{o}$ | 5/2 | | |
| 94522.308 | 0.007 | 1 | $3d^4(^5D)5p$ | ${}^{4}F^{o}$ | 7/2 | | |
| 94749.231 | 0.007 | 1 | $3d^4(^5D)5p$ | ${}^{4}F^{o}$ | 9/2 | | |
| 94839.21 | 0.03 | 1 | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 1/2 | | |
| 94932.933 | 0.012 | 1 | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 3/2 | | |
| 95076.720 | 0.002 | 1 | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 5/2 | | |
| 95250.677 | 0.003 | 1 | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 7/2 | | |
| | | | | | | | |
| 05098.863 | 0.011 | 0 | $3d^4(^5D)6s$ | 6 D | 1/2 | | |
| 05168.769 | 0.010 | 0 | $3d^4(^5D)6s$ | ^{6}D | 3/2 | | |
| 05446.998 | 0.004 | 0 | $3d^4(^5D)6s$ | ^{6}D | 7/2 | | |
| 05650.528 | 0.003 | 0 | $3d^4(^5D)6s$ | ^{6}D | 9/2 | | |
| 05285.309 | 0.007 | 0 | $3d^4(^5D)6s$ | $^{6}\mathrm{D}$ | 5/2 | | |
| 05923.442 | 0.002 | 0 | $3d^4(^5D)6s$ | ^{4}D | 1/2 | | |
| 06030.899 | 0.002 | 0 | $3d^4(^5D)6s$ | $^{4}\mathrm{D}$ | 3/2 | | |
| 06095.601 | 0.003 | 0 | $3d^4(^5D)6s$ | $^{4}\mathrm{D}$ | 5/2 | | |
| 06275.178 | 0.002 | 0 | $3d^4(^5D)6s$ | ^{4}D | 7/2 | | |
| | | | | | | | |
| 05121.97 | 0.04 | 1 | $3d^4(^5D)4f$ | $^{4}P^{o}$ | 5/2 | | |
| 05173.41 | 0.09 | 1 | $3d^44f$ | $^{6}P^{o}$ | 7/2 | | |
| 05197.31 | 0.03 | 1 | $3d^4(^5D)4f$ | ⁶ H ^o | 7/2 | | |
| 05263.44 | 0.03 | 1 | $3d^4(^5D)4f$ | $^{6}\text{H}^{\text{o}}$ | 9/2 | | |
| 05282.623 | 0.006 | 1 | $3d^4(^5D)4f$ | 4 H $^{\rm o}$ | 7/2 | | |
| 05283.428 | 0.019 | 1 | $3d^4(^5D)4f$ | $^{4}P^{o}$ | 3/2 | | |
| 05367.84 | 0.36 | 1 | $3d^4(^5D)4f$ | $^6\mathrm{H}^\mathrm{o}$ | 11/2 | | |
| 05392.51 | 0.18 | 1 | $3d^4(^5D)4f$ | $^{4}P^{o}$ | 1/2 | | |
| 05398.154 | 0.006 | 1 | $3d^4(^5D)4f$ | 6 D $^{\rm o}$ | 9/2 | | |
| 05406.90 | 0.03 | 1 | $3d^4(^5D)4f$ | 4 H $^{\rm o}$ | 9/2 | | |
| 05419.96 | 0.05 | 1 | $3d^4(^5D)4f$ | 6 D $^{\rm o}$ | 7/2 | | |
| 05438.27 | 0.02 | 1 | $3d^4(^5D)4f$ | 6 G $^{\rm o}$ | 5/2 | | |
| 05507.529 | 0.006 | 1 | $3d^4(^5D)4f$ | $^{4}D^{o}$ | 7/2 | | |
| 05532.07 | 0.02 | 1 | $3d^4(^5D)4f$ | $^{4}D^{o}$ | 5/2 | | |
| 05559.52 | 0.09 | 1 | $3d^4(^5D)4f$ | $^{4}H^{o}$ | 11/2 | | |
| 05609.4 | 0.3 | 1 | $3d^4(^5D)4f$ | 6 G $^{\rm o}$ | 3/2 | | |
| 05623.55 | 0.06 | 1 | $3d^4(^5D)4f$ | 6 G $^{\rm o}$ | 9/2 | | |
| 05639.18 | 0.14 | 1 | $3d^4(^5D)4f$ | ⁶ F° | 11/2 | | |
| 05677.61 | 0.05 | 1 | $3d^4(^5D)4f$ | 4 G $^{\rm o}$ | 5/2 | | |
| 05724.656 | 0.008 | 1 | $3d^4(^5D)4f$ | ${}^{4}G^{o}$ | 7/2 | | |
| 05742.45 | 0.15 | 1 | $3d^4(^5D)4f$ | ⁴ H ^o | 13/2 | | |
| 05789.958 | 0.003 | 1 | $3d^4(^5D)4f$ | ⁴ F ^o | 9/2 | | |
| 05895.46 | 0.15 | 1 | $3d^4(^5D)4f$ | ⁶ G ^o | 13/2 | | |
| 05902.970 | 0.011 | 1 | $3d^4(^5D)4f$ | ⁴ F° | 5/2 | | |
| 05985.553 | 0.005 | 1 | $3d^4(^5D)4f$ | ⁴ F ^o | 7/2 | | |
| 06032.143 | 0.004 | 1 | $3d^4(^5D)4f$ | $^{4}G^{o}$ | 11/2 | | |
| 06045.466 | 0.003 | 1 | $3d^4(^5D)4f$ | ${}^{4}G^{o}$ | 9/2 | | |
| | 3.002 | - | (-) 9 | J | 2.2 | | |
| 06877.168 | 0.012 | 0 | $3d^4(^5D)5d$ | ⁶ G | 3/2 | | |
| 06924.795 | 0.009 | 0 | $3d^4(^5D)5d$ | ⁴ S | 3/2 | | |
| 06929.376 | 0.009 | 0 | $3d^4(^5D)5d$ | ⁶ G | 5/2 | | |
| 07006.265 | 0.007 | 0 | $3d^4(^5D)5d$ | ⁶ G | 7/2 | | |
| 07005.247 | 0.007 | 0 | $3d^{4}(^{5}D)5d$ | ⁶ Р | 5/2 | | |
| 07056.492 | 0.008 | 0 | $3d^{4}(^{5}D)5d$ | ⁶ P | 3/2 | | |
| 07111.763 | 0.005 | 0 | $3d^{4}(^{5}D)5d$ | ⁶ G | 9/2 | | |
| | 0.003 | 0 | $3d^{4}(^{5}D)5d$ | ⁶ Р | 9/2 7/2 | | |
| 77114 726 | | U | $\mathcal{I}u \in \mathcal{D}/\mathcal{I}u$ | 1 | 114 | | |
| | | | | ^{6}C | 11/2 | | |
| 07114.726 07246.795 07259.817 | 0.004 0.017 | 0 | $3d^4(^5D)5d$ $3d^4(^5D)5d$ | ⁶ G ⁶ F | 11/2 3/2 | | |

Table 4. Energy levels of Cr II—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_J | Leading % |
|----------------------------------|---------------------------------|--------|-------------------|------------------------------------|-------------|-------|-----------|
| 07386.156 | 0.009 | 0 | $3d^4(^5D)5d$ | ⁶ F | 7/2 | | |
| 7400.784 | 0.003 | 0 | $3d^4(^5D)5d$ | ⁴ G | 5/2 | | |
| 7412.033 | 0.003 | 0 | $3d^4(^5D)5d$ | ⁶ G | 13/2 | | |
| 07414.690 | 0.006 | 0 | $3d^4(^5D)5d$ | ⁶ D | 3/2 | | |
|)7455.485 | 0.005 | 0 | $3d^4(^5D)5d$ | ⁶ F | 9/2 | | |
| 07500.345 | 0.002 | 0 | $3d^4(^5D)5d$ | ⁴ G | 7/2 | | |
| 07516.7079 | 0.0020 | 0 | $3d^4(^5D)5d$ | ⁴ F | 3/2 | | |
| 7519.424 | 0.004 | 0 | $3d^4(^5D)5d$ | ^{6}D | 5/2 | | |
| 7597.6105 | 0.0020 | 0 | $3d^4(^5D)5d$ | ^{4}D | 5/2 | | |
| 07627.370 | 0.003 | 0 | $3d^4(^5D)5d$ | ^{6}D | 7/2 | | |
| 7632.224 | 0.003 | 0 | $3d^4(^5D)5d$ | 4 G | 9/2 | | |
| 7696.276 | 0.003 | 0 | $3d^4(^5D)5d$ | ^{6}D | 9/2 | | |
| 7701.284 | 0.004 | 0 | $3d^4(^5D)5d$ | ⁶ F | 11/2 | | |
| 7716.2638 | 0.0020 | 0 | $3d^4(^5D)5d$ | ^{4}D | 7/2 | | |
| 7726.7717 | 0.0020 | 0 | $3d^4(^5D)5d$ | ⁴ F | 5/2 | | |
| 7794.0975 | 0.0020 | 0 | $3d^4(^5D)5d$ | ^{4}G | 11/2 | | |
| 7850.5571 | 0.0020 | 0 | $3d^4(^5D)5d$ | ⁴ F | 7/2 | | |
| 7947.9979 | 0.0020 | 0 | $3d^4(^5D)5d$ | ⁴ F | 9/2 | | |
| 9394.428 | 0.005 | 0 | $3d^4(^5D)5d$ | ⁶ S | 5/2 | | |
| | ***** | - | (-) | ~ | | | |
| 09661.351 | 0.016 | 1 | $3d^4(^5D)6p$ | 4 P $^{\rm o}$ | 3/2 | | |
| 09694.30 | 0.010 | 1 | $3d^4(^5D)6p$ | ⁶ F° | 5/2 | | |
|)9772.28 | 0.03 | 1 | $3d^4(^5D)6p$ | Б 6 Бо | 3/2 | | |
| 09812.04 | 0.05 | 1 | $3d^4(^5D)6p$ | ⁶ F ^o | 7/2 | | |
| 19864.89 | 0.03 | 1 | $3d^4(^5D)6p$ | г ⁶ Ро | 5/2 | | |
| 09974.000 | 0.02 | 1 | $3d^4(^5D)6p$ | г ⁴ Р ^о | 5/2 | | |
| | | | $3d^4(^5D)6p$ | ⁶ D° | | | |
| 0007.51 | 0.04 | 1 | | Б 6 Р 0 | 3/2 | | |
| 0097.09 | 0.07 | 1 | $3d^4(^5D)6p$ | - | 7/2 | | |
| 0272.116 | 0.004 | 1 | $3d^4(^5D)6p$ | ⁶ D⁰ ⁴ F⁰ | 7/2 | | |
| 0315.06 | 0.07 | 1 | $3d^4(^5D)6p$ | - | 5/2 | | |
| .0471.28 | 0.02 | 1 | $3d^4(^5D)6p$ | ⁴ F° | 7/2 | | |
| 0665.48 | 0.03 | 1 | $3d^4(^5D)6p$ | ⁴ F° | 9/2 | | |
| 10931.63 | 0.03 | 1 | $3d^4(^5D)6p$ | ⁴ D ^o | 3/2 | | |
| 1082.313 | 0.016 | 1 | $3d^4(^5D)6p$ | ⁴ D° | 5/2 | | |
| 11269.162 | 0.012 | 1 | $3d^4(^5D)6p$ | $^{4}\mathrm{D^{o}}$ | 7/2 | | |
| 5209 216 | 0.002 | 1 | $3d^4(^5D)5f$ | ⁶ H° | <i>51</i> 0 | | |
| 5208.316 | 0.003 | 1 | $3d^{4}(^{5}D)5f$ | н ⁶ Р ^о | 5/2 | | |
| 5249.248 | 0.003 | 1 | | ⁶ H ^o | 7/2 | | |
| .5288.747 | 0.002 | 1 | $3d^4(^5D)5f$ | °Н° ⁴ Р° | 9/2 | | |
| 5298.57 | 0.03 | 1 | $3d^4(^5D)5f$ | - | 3/2 | | |
| 5309.092 | 0.003 | 1 | $3d^4(^5D)5f$ | ⁶ H ^o | 7/2 | | |
| 5309.564 | 0.005 | 1 | $3d^4(^5D)5f$ | ⁶ D° | 5/2 | | |
| 5393.395 | 0.002 | 1 | $3d^4(^5D)5f$ | ⁶ D° | 9/2 | | |
| 5396.770 | 0.002 | 1 | $3d^4(^5D)5f$ | ⁶ H ^o | 11/2 | | |
| 5398.393 | 0.013 | 1 | $3d^4(^5D)5f$ | ⁴ H ^o | 7/2 | | |
| 5408.070 | 0.018 | 1 | $3d^4(^5D)5f$ | ⁴ G ^o | 5/2 | | |
| 5430.406 | 0.004 | 1 | $3d^4(^5D)5f$ | ⁴ H ^o | 9/2 | | |
| 5430.877 | 0.007 | 1 | $3d^4(^5D)5f$ | ⁶ D° | 3/2 | | |
| 5447.575 | 0.011 | 1 | $3d^4(^5D)5f$ | ⁶ G° | 7/2 | | |
| 5461.74 | 0.02 | 1 | $3d^4(^5D)5f$ | ⁶ G° | 5/2 | | |
| 5546.521 | 0.002 | 1 | $3d^4(^5D)5f$ | ⁶ H ^o | 13/2 | | |
| 5570.857 | 0.006 | 1 | $3d^4(^5D)5f$ | 6 F $^{\rm o}$ | 5/2 | | |
| 5585.121 | 0.005 | 1 | $3d^4(^5D)5f$ | 6 G $^{\rm o}$ | 11/2 | | |
| 5591.146 | 0.008 | 1 | $3d^4(^5D)5f$ | $^6\mathrm{D^o}$ | 7/2 | | |
| 5592.356 | 0.002 | 1 | $3d^4(^5D)5f$ | 6 G $^{\rm o}$ | 9/2 | | |
| 5598.879 | 0.002 | 1 | $3d^4(^5D)5f$ | 4 H $^{\rm o}$ | 11/2 | | |
| 5605.896 | 0.011 | 1 | $3d^4(^5D)5f$ | 6 F $^{\rm o}$ | 3/2 | | |
| 5627.721 | 0.010 | 1 | $3d^4(^5D)5f$ | 4 G $^{\rm o}$ | 7/2 | | |
| 5672.794 | 0.017 | 1 | $3d^4(^5D)5f$ | ⁴ F ^o | 9/2 | | |
| 5734.767 | 0.002 | 1 | $3d^4(^5D)5f$ | ⁶ H ^o | 15/2 | | |
| 5747.539 | 0.002 | 1 | $3d^4(^5D)5f$ | ⁶ P ^o | 3/2 | | |
| 5767.047 | 0.004 | 1 | $3d^4(^5D)5f$ | ⁶ P ^o | 5/2 | | |
| 5782.793 | 0.002 | 1 | $3d^4(^5D)5f$ | ⁴ H ^o | 13/2 | | |
| 15797.203 | 0.002 | 1 | $3d^{4}(^{5}D)5f$ | ⁶ F ^o | 7/2 | | |
| | 0.011 | 1 | וטוע אוו | 1. | 114 | | |

Table 4. Energy levels of Cr II—Continued

| Energy level (cm ⁻¹) | Uncertainty (cm ⁻¹) | Parity | Configuration | Term | J | g_J | Leading % |
|----------------------------------|---------------------------------|--------|--|----------------------------------|------------|-------|-----------|
| 15824.432 | 0.002 | 1 | 3d ⁴ (⁵ D)5f | ⁶ F° | 9/2 | | |
| 15836.535 | 0.004 | 1 | $3d^4(^5D)5f$ | 6 G $^{\rm o}$ | 13/2 | | |
| 15840.388 | 0.003 | 1 | $3d^4(^5D)5f$ | ⁶ F ^o | 11/2 | | |
| 15882.164 | 0.014 | 1 | $3d^4(^5D)5f$ | $^{4}F^{o}$ | 7/2 | | |
| 15916.146 | 0.010 | 1 | $3d^4(^5D)5f$ | ${}^{4}G^{o}$ | 11/2 | | |
| 15927.319 | 0.008 | 1 | $3d^4(^5D)5f$ | ⁴G° | 9/2 | | |
| 13927.319 | 0.008 | 1 | 3u (D)3j | G | 912 | | |
| 15234.46 | 0.05 | 0 | $3d^4(^5D)7s$ | ⁶ D | 1/2 | | |
| 15301.98 | 0.04 | 0 | $3d^4(^5D)7s$ | $^{6}\mathrm{D}$ | 3/2 | | |
| 15417.80 | 0.06 | 0 | $3d^4(^5D)7s$ | $^{6}\mathrm{D}$ | 5/2 | | |
| 15581.64 | 0.06 | 0 | $3d^4(^5D)7s$ | ⁶ D | 7/2 | | |
| | | | $3d^{4}(^{5}D)7s$ | ⁴ D | | | |
| 15640.30 | 0.05 | 0 | | | 3/2 | | |
| 15788.28 | 0.05 | 0 | $3d^4(^5D)7s$ | ⁶ D | 9/2 | | |
| 15818.39 | 0.03 | 0 | $3d^4(^5D)7s$ | ⁴ D | 5/2 | | |
| 16047.82 | 0.04 | 0 | $3d^4(^5D)7s$ | ⁴ D | 7/2 | | |
| 15371.14 | 0.05 | 0 | $3d^4(^5D_0)5g$ | ² [4] | 9/2 | | |
| | 0.05 | 0 | $3d^{4}(^{5}D_{2})5g$ $3d^{4}(^{5}D_{2})5g$ | 2r41 | | | |
| 15556.43 | 0.05 | 0 | | ² [4] | 7/2 | | |
| 15926.811 | 0.017 | 0 | $3d^4(^5D_4)5g$ | ² [2] | 5/2 | | |
| 15975.44 | 0.07 | 0 | $3d^4(^5D_4)5g$ | ² [5] | 9/2 | | |
| 16171.63 | 0.10 | 0 | 3d ⁴ (⁵ D)6d | 6 G | 3/2 | | |
| 16213.32 | 0.06 | 0 | $3d^{4}(^{5}D)6d$ | ⁶ G | 5/2 | | |
| | | | | ⁶ P | | | |
| 16253.27 | 0.06 | 0 | $3d^4(^5D)6d$ | | 3/2 | | |
| 16282.002 | 0.004 | 0 | $3d^4(^5D)6d$ | ⁶ G | 7/2 | | |
| 16294.97 | 0.08 | 0 | $3d^4(^5D)6d$ | ⁶ P | 5/2 | | |
| 16355.43 | 0.06 | 0 | $3d^4(^5D)6d$ | ⁴ S | 3/2 | | |
| 16361.018 | 0.006 | 0 | $3d^4(^5D)6d$ | ⁶ F | 1/2 | | |
| 16385.57 | 0.04 | 0 | $3d^4(^5D)6d$ | $^6\mathrm{P}$ | 7/2 | | |
| 16388.86 | 0.06 | 0 | $3d^4(^5D)6d$ | ⁶ G | 9/2 | | |
| 16429.158 | 0.009 | 0 | $3d^4(^5D)6d$ | ⁶ F | 3/2 | | |
| 16477.41 | 0.05 | 0 | $3d^4(^5D)6d$ | ⁶ F | 5/2 | | |
| | | | $3d^{4}(^{5}D)6d$ | ⁶ G | | | |
| 16531.12 | 0.07 | 0 | | | 11/2 | | |
| 16572.39 | 0.04 | 0 | $3d^4(^5D)6d$ | ⁶ F | 7/2 | | |
| 16581.773 | 0.003 | 0 | $3d^4(^5D)6d$ | ⁶ D | 3/2 | | |
| 16601.50 | 0.05 | 0 | $3d^4(^5D)6d$ | ⁶ F | 9/2 | | |
| 16687.08 | 0.06 | 0 | $3d^4(^5D)6d$ | ^{6}D | 5/2 | | |
| 16708.66 | 0.03 | 0 | $3d^4(^5D)6d$ | ^{6}G | 13/2 | | |
| 16790.26 | 0.07 | 0 | $3d^4(^5D)6d$ | $^{6}\mathrm{D}$ | 7/2 | | |
| 16828.92 | 0.09 | 0 | $3d^4(^5D)6d$ | ⁶ F | 11/2 | | |
| 16831.57 | 0.02 | 0 | $3d^4(^5D)6d$ | $^{6}\mathrm{D}$ | 9/2 | | |
| 16877.07 | 0.02 | 0 | $3d^{4}(^{5}D)6d$ | ⁴G | 5/2 | | |
| 16985.358 | | | | G ⁴G | | | |
| | 0.008 | 0 | $3d^4(^5D)6d$ | | 7/2 | | |
| 17072.742 | 0.012 | 0 | $3d^4(^5D)6d$ | ⁴ D | 5/2 | | |
| 17141.496 | 0.020 | 0 | $3d^4(^5D)6d$ | ${}^{4}G$ | 9/2 | | |
| 17228.405 | 0.013 | 0 | $3d^4(^5D)6d$ | ⁴ F | 5/2 | | |
| 17263.376 | 0.015 | 0 | $3d^4(^5D)6d$ | ^{4}D | 7/2 | | |
| 17342.332 | 0.009 | 0 | $3d^4(^5D)6d$ | ^{4}G | 11/2 | | |
| 17381.580 | 0.002 | 0 | $3d^4(^5D)6d$ | ^{4}P | 3/2 | | |
| 17481.172 | 0.017 | 0 | $3d^4(^5D)6d$ | ^{4}P | 5/2 | | |
| 17488.425 | 0.010 | 0 | $3d^4(^5D)6d$ | ⁴ F | 9/2 | | |
| 17520.660 | 0.004 | 0 | $3d^{4}(^{5}D)6d$ | ⁴ F | 7/2 | | |
| | | | $3d^{4}(^{5}D)6d$ | ⁶ S | | | |
| 17672.45 | 0.05 | 0 | 5a (D)6a | | 5/2 | | |
| 20702.90 | 0.27 | 0 | $3d^4(^5D)8s$ | ⁶ D | 1/2 | | |
| 20870.63 | 0.05 | 0 | $3d^4(^5D)8s$ | ⁶ D | 5/2 | | |
| 21036.36 | 0.09 | 0 | $3d^4(^5D)8s$ | ⁶ D | 7/2 | | |
| 21246.77 | 0.09 | 0 | $3d^4(^5D)8s$ | ⁶ D | 9/2 | | |
| 21344.962 | 0.002 | 0 | $3d^4(^5D_4)6g$ | ² [6] | 11/2 | | |
| 24210.15 | 0.10 | 0 | 2.4/5500 | 615 | 7.10 | | |
| 24310.15 24523.73 | 0.12 0.02 | 0 | 3d ⁴ (⁵ D)9s 3d ⁴ (⁵ D)9s | ⁶ D ⁶ D | 7/2 9/2 | | |
| | | | | | | | |

Table 5. Sources of Cr II lines

| Source | Number of classifications | Light source/spectrometers ^a | Wavelength range (Å) | Uncertainty (Å) |
|-----------|---------------------------|--|----------------------|-----------------|
| 51KIE | 563 | Various arcs/grating and prism spectrographs | 1786–7312 | 0.01-0.05 |
| 82JOH | 2 | Hollow cathode lamp/10.7-m NI VS | 1435, 1436 | 0.008 |
| 85BIE/BRA | 74 | Hollow cathode lamp/FTS | 11563-22984 | 0.001 - 0.020 |
| 98ALL/GAR | 57 | The sun/FTS | 4049-6195 | 0.004 |
| 00WAG | 55 | Glow discharge lamp/Czerny-Turner monochromator | 2006-4139 | 0.01 |
| 12SAN/NAV | 3600 | Cr/Ne hollow cathode lamp/10.7-m NI VS and 20-cm FTS | 1142-3954 | 0.00005 - 0.008 |

^aAbbreviations used: FTS means Fourier transform spectrometer. NI means normal incidence. VS means vacuum spectrograph. GI means grazing incidence.

TABLE 6. Spectral lines of Cr II

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | |
|------------------------|----------------------------|----------------|-----------------------|--------------------------------------|------------|---------|--|-------------------------------|------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 1142.4089 | 87534.33 | 2 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1143.229 | 87471.5 | 2 w | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 5/2 | 0.005 | 12SAN/NAV |
| 1167.5133 | 85652.13 | 1 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^5D)4f$ | $^4P^{\rm o}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1169.309 | 85520.6 | 4 p | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^5D)4f$ | 4 G $^{\rm o}$ | 11/2 | 0.005 | 12SAN/NAV |
| 1169.8158 | 85483.54 | 3 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^5D)4f$ | $^{4}\mathrm{D^{o}}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1169.9821 | 85471.39 | 1 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^5D)5f$ | 4 G $^{\rm o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1170.8401 | 85408.76 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1171.1883 | 85383.37 | 2 | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^5D)4f$ | $^{6}G^{o}$ | 13/2 | 0.0020 | 12SAN/NAV |
| 1171.321 | 85373.7 | 2 p | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^4(^5D)5f$ | $^{4}F^{o}$ | 9/2 | 0.005 | 12SAN/NAV |
| 1172.7365 | 85270.65 | 3 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^5D)4f$ | $^{4}F^{o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1173.1878 | 85237.85 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1173.2909 | 85230.36 | 14 | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^5D)4f$ | ⁴ H ^o | 13/2 | 0.0020 | 12SAN/NAV |
| 1173.638 | 85205.1 | 4 a | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^5D)4f$ | 4 G $^{\rm o}$ | 7/2 | 0.005 | 12SAN/NAV |
| 1173.9483 | 85182.63 | 7 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1173.9912 | 85179.51 | 5 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1174.8133 | 85119.91 | 3 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^5D)4f$ | ⁶ F ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1175.254 | 85088.0 | 2 a | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 3/2 | 0.005 | 12SAN/NAV |
| 1175.4020 | 85077.28 | 2 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1175.4856 | 85071.23 | 3 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1175.4650 | 85040.11 | 14 | $3d^{5}$ | a ⁴ G | 9/2 | _ | $3d^4(^5D)4f$ | ⁴ H° | 11/2 | 0.0020 | 12SAN/NAV |
| 1178.0081 | 84889.06 | 12 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^{4}(^{5}D)4f$ | ⁴ H ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1178.536 | 84851.0 | 4 p | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^{3}(^{4}F)4s4p(^{1}P^{0})$ | r ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1178.530 | 84848.6 | 4 р 7 р | $3d^{5}$ | a ⁴ G | 9/2 | _ | $3d^{4}(^{5}D)4f$ | ⁶ H ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1178.370 | 84832.10 | 7 p 3 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^{3}(^{4}F)4s4p(^{1}P^{0})$ | r ⁴ F° | 5/2 | 0.003 | 12SAN/NAV |
| 1178.7990 | 84815.6 | 2 p | $3d^{4}(^{5}D)4s$ | a ⁴ D | 3/2 | _ | $3d^{3}(^{4}F)4s4p(^{1}P^{o})$ | r ⁴ F° | 3/2 | 0.0020 | 12SAN/NAV |
| | 84808.34 | 2 p 1 | $3d^{4}(^{5}D)4s$ | a D a ⁴ D | 3/2 | _ | $3d^{3}(^{4}F)4s4p(^{1}P^{0})$ | p ⁴ D ^o | 1/2 | 0.003 | |
| 1179.1293 1179.6579 | 84770.34 | 12 | $3d^{5}$ | a D a ⁴G | 5/2 | _ | $3d^{4}(^{5}D)4f$ | р D ⁴ H° | 7/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1179.0379 | 84770.34 84764.84 | 3 * | 3a ⁵ | a G a ⁴ G | 7/2 | _ | $3d^{4}(^{5}D)4f$ | и ⁴ Н° | 7/2 | 0.0020 | 12SAN/NAV |
| | | 3 * | $3d^4(^3F)4s$ | a G a ⁴ F | 5/2 | | $3d^4(^5D)5f$ | п ⁴ F° | 7/2 | | |
| 1179.7344 | 84764.84 | | $3d^{4}(^{3}F)4s$ | а F a ⁴ F | 3/2 7/2 | _ | $3d^{4}(^{5}D)5f$ $3d^{4}(^{5}D)5f$ | ⁴ G ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1179.8187 | 84758.79 | 2 | $3a^{(1)}4s$ $3d^{5}$ | a F a ⁴ G | | | | ⁶ H° | | 0.0020 | 12SAN/NAV |
| 1180.0037 | 84745.50 | 7 | $3d^{4}$ $(^{3}F)4s$ | a G a ⁴ F | 7/2 | - | $3d^4(^5D)4f$ | ⁴ G ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1180.5284 | 84707.83 | 1 | | | 9/2 | - | $3d^4(^5D)5f$ | ⁴ G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1180.6838 | 84696.68 | 4 | $3d^4(^3F)4s$ | a ⁴ F a ⁴ G | 9/2 | - | $3d^4(^5D)5f$ | ⁶ H ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1180.8438 | 84685.21 | 7 | 3d ⁵ | a G | 5/2 | - | $3d^4(^5D)4f$ | | 7/2 | 0.0020 | 12SAN/NAV |
| 1181.0554 | 84670.03 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1183.2876 | 84510.31 | 1 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^5D)5f$ | ⁴ G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1183.3734 | 84504.18 | 2 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^5D)5f$ | ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1185.136 | 84378.5 | 2 a | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^5D)5f$ | ⁶ G ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1191.8641 | 83902.18 | 3 | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4f$ | ⁴ G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1192.529 | 83855.4 | 4 w | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4f$ | ⁴ G ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1194.608 | 83709.5 | 4 a | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4f$ | ⁴ D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1194.9567 | 83685.04 | 9 | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4f$ | ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1195.947 | 83615.7 | 3 a | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4f$ | ⁶ G ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1196.213 | 83597.2 | 3 a | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4f$ | ⁶ D ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1196.6220 | 83568.58 | 3 * | $3d^{5}$ | a ⁴ P | 1/2 | - | $3d^4(^5D)4f$ | ⁴ P ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1196.6220 | 83568.58 | 3 * | $3d^5$ | a ⁴ P | 3/2 | - | $3d^4(^5D)4f$ | ⁴ P ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1198.1797 | 83459.94 | 3 | $3d^5$ | a ⁴ P | 1/2 | - | $3d^4(^5D)4f$ | ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1200.5055 | 83298.24 | 9 * | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4f$ | ⁴ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1200.5055 | 83298.24 | 9 * | $3d^5$ | a ⁴ P | 3/2 | - | $3d^4(^5D)4f$ | $^4P^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1203.5028 | 83090.79 | 7 | $3d^{5}$ | b ⁴ F | 7/2 | _ | $3d^4(^5D)5f$ | 4 G $^{\rm o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1203.7613 | 83072.95 | 9 | $3d^{5}$ | b ⁴ F | 9/2 | _ | $3d^4(^5D)5f$ | 4 G $^{\rm o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 120011010 | | | $3d^{5}$ | b ⁴ F | 9/2 | | $3d^4(^5D)5f$ | 4 G $^{\rm o}$ | | | |

TABLE 6. Spectral lines of Cr II—Continued

| wavelength (Å) 1204.1579 1204.4218 1205.4656 | number (cm ⁻¹) | and | | | C | lassifi | cation | | | of observed | C |
|--|----------------------------|------------|--|--------------------------------------|-------------|---------|---|--|------------|-------------------|------------------------|
| 1204.4218 | | comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| | 83045.59 | 5 | $3d^5$ | b ⁴ F | 7/2 | _ | 3d ⁴ (⁵ D)5f | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1205 4656 | 83027.39 | 3 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^5D)5f$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| | 82955.50 | 4 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^5D)5f$ | ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1207.2020 | 82836.18 | 11 | $3d^{5}$ | b ⁴ F | 7/2 | - | $3d^4(^5D)5f$ | ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1208.1249 | 82772.90 | 9 | 3d ⁵ 3d ⁵ | b ⁴ F b ⁴ F | 5/2 | - | $3d^4(^5D)5f$ | ⁴ G ^o ⁶ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1208.2951 1208.4442 | 82761.24 82751.03 | 3 1 | $3d^5$ | в F b ⁴ F | 3/2 5/2 | _ | 3d ⁴ (⁵ D)5f 3d ⁴ (⁵ D)5f | ⁶ F ^o | 3/2 3/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1208.4442 | 82730.93 | 4 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^5D)5f$ | ⁶ G ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1208.7378 | 82726.28 | 4 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^5D)5f$ | ⁶ F⁰ | 5/2 | 0.0020 | 12SAN/NAV |
| 1209.166 | 82701.6 | 2 a | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 9/2 | 0.005 | 12SAN/NAV |
| 1209.266 | 82694.8 | 1 w | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 7/2 | 0.005 | 12SAN/NAV |
| 1210.4031 | 82617.10 | 5 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^5D)5f$ | 6 G $^{\rm o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1210.7529 | 82593.24 | 4 * | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^5D)5f$ | $^{4}H^{o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1210.7529 | 82593.24 | 4 * | $3d^{5}$ | b ⁴ F | 5/2 | - | $3d^4(^5D)5f$ | ⁶ G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1212.794 | 82454.2 | 2 a | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^5D)5f$ | ⁶ H ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1212.9194 | 82445.71 | 1 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1214.2966 | 82352.20 | 2 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° | 9/2 | 0.0020 | 12SAN/NAV |
| 1215.753 | 82253.5 | 11 p | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o x ⁶ D ^o | 9/2 | 0.005 | 12SAN/NAV |
| 1216.0509 1216.0509 | 82233.40 | 3 * 3 * | $3d^4(^5D)4s$ $3d^4(^3G)4s$ | a ⁶ D b ⁴ G | 3/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ $3d^4(^5D)5f$ | x ⁵ D ⁵ ⁴ G ^o | 5/2 9/2 | 0.0020 | 12SAN/NAV |
| 1216.0309 | 82233.40 82215.77 | 5 | $3d^{4}(^{5}D)4s$ | a ⁶ D | 11/2 5/2 | _ | $3d^{4}(^{5}D)5p$ | 6 P ° | 9/2 7/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1210.3117 | 82159.86 | 5 | $3d^{4}(^{5}D)4s$ | a ⁶ D | 9/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | x ⁶ D° | 9/2 | 0.0020 | 12SAN/NAV |
| 1217.3017 | 82148.90 | 4 | $3d^{4}(^{5}D)4s$ | a ⁶ D | 7/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1217.4867 | 82136.42 | 3 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1217.7568 | 82118.20 | 7 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | x ⁶ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1217.8497 | 82111.94 | 9 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^4(^5D)5p$ | $^{6}P^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1218.5376 | 82065.58 | 7 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1218.6242 | 82059.75 | 12 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^4(^5D)5p$ | ⁶ P ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1218.9068 | 82040.73 | 10 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | - | $3d^4(^5D)5p$ | ⁶ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1219.1278 | 82025.85 | 1 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1219.5611 | 81996.71 | 11 | $3d^4(^5D)4s$ $3d^4(^3G)4s$ | a ⁶ D b ⁴ G | 5/2 11/2 | - | 3d ⁴ (⁵ D)5p 3d ⁴ (⁵ D)5f | ⁶ P ^o ⁴ F ^o | 5/2 9/2 | 0.0020 | 12SAN/NAV |
| 1219.8297 1219.9585 | 81978.66 81970.00 | 3 9 | $3d^{4}(^{5}D)4s$ | a ⁶ D | 3/2 | _ | $3d^{4}(^{5}D)5p$ | ⁶ P ^o | 3/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1219.9383 | 81970.00 | 19 | $3d^{4}(^{5}D)4s$ | a D a ⁶ D | 3/2 7/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | x ⁶ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1220.0704 | 81956.16 | 28 | $3d^{4}(^{5}D)4s$ | a ⁶ D | 9/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1220.2497 | 81950.44 | 11 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{0})$ | x ⁶ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1220.3879 | 81941.16 | 1 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^4(^5D)5p$ | $^{4}P^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1220.4628 | 81936.13 | 3 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | x ⁶ D ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1221.4918 | 81867.11 | 5 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | _ | $3d^4(^5D)5p$ | ⁶ P ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1221.6768 | 81854.71 | 1 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | - | $3d^4(^5D)5p$ | ⁶ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1221.8884 | 81840.53 | 3 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^4(^5D)5p$ | ⁶ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1222.064 | 81828.8 | 3 p | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^5D)5f$ | ⁶ G ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1222.100 | 81826.4 | 3 p | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | - | $3d^4(^5D)5p$ | ⁴ P ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1224.4382 | 81670.11 | 4 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^4(^5D)5p$ | ⁴ P ^o ⁶ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1224.544 | 81663.1 | 2 a 4 | 3d ⁴ (⁵ D)4s 3d ⁴ (⁵ D)4s | a ⁶ D a ⁴ D | 7/2 1/2 | - | $3d^4(^5D)5p$ $3d^3(^4P)4s4p(^3P^0)$ | u ² P° | 7/2 3/2 | 0.005 0.0020 | 12SAN/NAV |
| 1225.0464 1225.602 | 81629.56 81592.6 | | $3d^{4}(^{5}D)4s$ | а D a ⁶ D | 5/2 | _ | $3d^{4}(^{5}D)5p$ | u P ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1223.002 | 81392.0 | 2 p 4 | $3d^{4}(^{5}D)4s$ | a D a ⁴ D | 7/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 312 7/2 | 0.003 | 12SAN/NAV |
| 1227.1416 | 81472.1 | 3 p | $3d^{4}(^{5}D)4s$ | a ⁶ D | 7/2 | _ | $3d^4(^5D)5p$ | $^{6}D^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1227.445 | 81470.0 | 4 p | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | _ | $3d^4(^5D)5p$ | $^{6}D^{o}$ | 7/2 | 0.005 | 12SAN/NAV |
| 1230.3660 | 81276.63 | 1 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1234.3881 | 81011.80 | 10 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^5D)4f$ | 4 G $^{\rm o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1235.3015 | 80951.90 | 4 | $3d^{5}$ | b ⁴ D | 7/2 | _ | $3d^4(^5D)4f$ | $^{4}F^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1235.5013 | 80938.81 | 9 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1236.195 | 80893.4 | 3 w | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 3/2 | 0.005 | 12SAN/NAV |
| 1236.7027 | 80860.18 | 4 * | $3d^5$ | a ⁴ P | 3/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | x ⁴ S ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1236.7027 | 80860.18 | 4 * | $3d^{5}$ | b ⁴ D | 3/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1236.7629 | 80856.24 | 5 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1238.2937 | 80756.29 | 10 | $3d^5$ | b ⁴ D | 7/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1239.2953 | 80691.02 | 4 | $3d^5$ | b ⁴ D | 7/2 | - | $3d^4(^5D)4f$ | ⁴ G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1240.2212 1242.1525 | 80630.78 80505.41 | 2 | 3d ⁵ 3d ⁴ (⁵ D)4s | b ⁴ D a ⁶ D | 5/2 5/2 | - | 3d ⁴ (⁵ D)4f 3d ³ (⁴ P)4s4p(³ P ^o) | ⁴ G ^o x ⁶ P ^o | 5/2 7/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| | 80505.41 80489.33 | 4 5 | $3d^{5}$ | a ^a D b ⁴ D | 3/2 | _ | $3d^{4}(^{5}D)4f$ | x P ⁴ D o | 5/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | Uncertainty of observed | C | | | | | | |
|------------------------|----------------------------|----------------|--|--------------------------------------|------------|---|--|--|------------|-------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 1242.4678 | 80484.98 | 4 | $3d^5$ | b ⁴ D | 5/2 | | 3d ⁴ (⁵ D)4f | ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1242.6396 | 80473.86 | 3 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^5D)4f$ | $^{4}\mathrm{D^{o}}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1242.8410 | 80460.82 | 7 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^5D)4f$ | $^{4}\mathrm{D^{o}}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1244.0065 | 80385.43 | 10 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1244.5646 | 80349.38 | 14 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ P° | 7/2 | 0.0020 | 12SAN/NAV |
| 1245.748 | 80273.1 | 12 bh | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ P° | 3/2 | 0.005 | 12SAN/NAV |
| 1245.793 | 80270.2 | 19 bl | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ P° | 5/2 | 0.005 | 12SAN/NAV |
| 1246.8456 | 80202.39 | 12 | 3d ⁴ (⁵ D)4s 3d ⁵ | a ⁶ D b ⁴ D | 3/2 | - | $3d^3(^4P)4s4p(^3P^0)$ $3d^3(^4F)4s4p(^1P^0)$ | x ⁶ P ^o p ⁴ D ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1247.3015 1247.5575 | 80173.08 80156.63 | 3 41 | $3d^4(^5D)4s$ | в D a ⁶ D | 7/2 9/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | р D х ⁶ Р° | 7/2 7/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1247.3373 | 80130.03 | 28 | $3d^{4}(^{5}D)4s$ | a ⁶ D | 7/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | x ⁶ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1248.6402 | 80087.12 | 12 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1284.5032 | 77851.11 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | z ⁶ S° | 5/2 | 0.0020 | 12SAN/NAV |
| 1285.8090 | 77772.05 | 12 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1286.558 | 77726.8 | 3 a | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}P^{o}$ | 5/2 | 0.005 | 12SAN/NAV |
| 1287.615 | 77663.0 | 1 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | w^4P^o | 3/2 | 0.005 | 12SAN/NAV |
| 1287.8009 | 77651.76 | 10 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1288.5885 | 77604.29 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1288.9694 | 77581.36 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1289.5321 | 77547.51 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o w ⁴ P ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1290.3868 | 77496.14 | 3 | $3d^4(^5D)4s$ | a ⁴ D a ⁴ D | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | 4 - | 3/2 | 0.0020 | 12SAN/NAV |
| 1296.032 1297.706 | 77158.6 77059.1 | 4 bh 3 w | 3d ⁴ (⁵ D)4s 3d ⁴ (⁵ D)4p | а D z ⁶ F° | 7/2 9/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ $3d^4(^5D)9s$ | w ⁴ P ^o ⁶ D | 5/2 9/2 | 0.005 0.005 | 12SAN/NAV 12SAN/NAV |
| 1300.9767 | 76865.33 | 2 w | $3d^{4}(^{3}H)4s$ | a ⁴ H | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ² F° | 5/2 | 0.003 | 12SAN/NAV |
| 1301.3107 | 76845.60 | 2 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | _ | $3d^4(^5D)9s$ | ⁶ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1302.5540 | 76772.25 | 3 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | _ | $3d^4(^5D)9s$ | $^{6}\mathrm{D}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1306.122 | 76562.5 | 4 p | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^3(^2H)4s4p(^3P^0)$ | r ⁴ G ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1306.156 | 76560.5 | 7 p | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | r ⁴ G ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1307.3024 | 76493.40 | 11 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^3(^2H)4s4p(^3P^0)$ | r ⁴ G ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1308.2951 | 76435.35 | 12 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | r ⁴ G° | 11/2 | 0.0020 | 12SAN/NAV |
| 1322.047 | 75640.3 | 1 a | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | _ | $3d^4(^5D)4f$ | ⁴ G ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1323.6141 | 75550.72 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | r ⁴ G° | 5/2 | 0.0020 | 12SAN/NAV |
| 1325.454 | 75445.8 | 1 x | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^5D)5p$ | ⁴ D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1327.822 1327.990 | 75311.3 75301.8 | 1 x 3 x | 3d ⁴ (⁵ D)4s 3d ⁴ (⁵ D)4s | a ⁴ D a ⁴ D | 1/2 3/2 | _ | $3d^4(^5D)5p$ $3d^4(^5D)5p$ | $^{4}D^{o}$ $^{4}D^{o}$ | 1/2 3/2 | 0.005 0.005 | 12SAN/NAV 12SAN/NAV |
| 1328.391 | 75279.0 | 3 x 4 x | $3d^{4}(^{5}D)4s$ | a D a ⁴ D | 5/2 | _ | $3d^{4}(^{5}D)5p$ | ⁴ D° | 5/2 | 0.005 | 12SAN/NAV |
| 1329.313 | 75226.8 | 7 x | $3d^{4}(^{5}D)4s$ | a ⁴ D | 7/2 | _ | $3d^{4}(^{5}D)5p$ | $^{4}D^{o}$ | 7/2 | 0.005 | 12SAN/NAV |
| 1330.934 | 75135.2 | 2 x | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 3/2 | 0.005 | 12SAN/NAV |
| 1332.397 | 75052.7 | 2 xa | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 5/2 | 0.005 | 12SAN/NAV |
| 1336.4285 | 74826.30 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | 4 G $^{\rm o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1336.5939 | 74817.04 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^5D)4f$ | $^{4}F^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1336.6680 | 74812.89 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | ⁴ G ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1337.152 | 74785.8 | 1 a | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1338.0743 | 74734.27 | 3 * | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1338.0743 | 74734.27 | 3 * | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1338.951 | 74685.3 | 2 w | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)9s$ | ⁶ D | 9/2 | 0.005 | 12SAN/NAV |
| 1339.903 | 74632.3 | 2 a | $3d^4(^5D)4s$ | a ⁴ D a ⁴ F | 7/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° ⁴ F° | 9/2 | 0.005 | 12SAN/NAV |
| 1340.095 1340.3500 | 74621.6 74607.38 | 3 a 3 | $3d^4(^3F)4s$ $3d^4(^3F)4s$ | а F a ⁴ F | 7/2 5/2 | _ | 3d ⁴ (⁵ D)4f 3d ⁴ (⁵ D)4f | ⁴ G ^o | 9/2 7/2 | 0.005 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1341.0087 | 74570.73 | 1 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^{4}(^{5}D)4f$ | ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1345.1284 | 74342.35 | 4 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^{3}(^{4}F)4s4p(^{1}P^{o})$ | p ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1346.1046 | 74288.43 | 1 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | $^{4}D^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1347.0333 | 74237.21 | 4 | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^5D)5p$ | ${}^{4}F^{o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1348.1413 | 74176.20 | 1 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^5D)5p$ | 4 P $^{\rm o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1348.4215 | 74160.79 | 10 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1348.7235 | 74144.18 | 4 | $3d^5$ | a ⁴ G | 11/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° | 9/2 | 0.0020 | 12SAN/NAV |
| 1351.2938 | 74003.15 | 7 | $3d^5$ | a ⁴ G | 9/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1351.5818 | 73987.38 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1351.9493 | 73967.27 | 1 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1352.2645 | 73950.03 | 3 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^5D)5p$ | ⁴ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1352.406 | 73942.3 | 3 p* | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^5D)5p$ | ⁴ P ^o r ⁴ G ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1352.406 | 73942.3 | 3 p* | 3d ⁵ 3d ⁵ | b ⁴ F a ⁴ G | 7/2 7/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ $3d^4(^5\text{D})5p$ | r ⁴G° ⁴F° | 7/2 5/2 | 0.005 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | Uncertainty of observed | | | | | | | |
|------------------------|----------------------------|----------------|--|---|------------|---|--|--|------------|-------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 1354.4578 | 73830.28 | 2 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | _ | 3d ⁴ (⁵ D)8s | ⁶ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1354.7130 | 73816.37 | 5 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1354.856 | 73808.6 | 2 w | $3d^4(^5D)4p$ | z ⁶ F ^o | 7/2 | _ | $3d^4(^5D)8s$ | ⁶ D | 7/2 | 0.005 | 12SAN/NAV |
| 1355.055 | 73797.7 | 2 a | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 3/2 | - | $3d^4(^5D)8s$ | ⁶ D | 1/2 | 0.005 | 12SAN/NAV |
| 1356.0425 | 73744.00 | 4 | $3d^{5}$ | a ⁴ G | 5/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1356.8414 | 73700.58 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1357.8939 | 73643.46 | 3 | $3d^4(^5D)4p$ | z ⁶ F ^o b ⁴ P | 7/2 | - | $3d^4(^5D)8s$ $3d^3(^2D)4s4p(^3P^0)$ | ⁶ D o ⁴ D⁰ | 5/2 | 0.0020 | 12SAN/NAV |
| 1358.627 1358.627 | 73603.7 73603.7 | 4 p* 4 p* | $3d^4(^3P)4s$ $3d^4(^3G)4s$ | вР b ⁴ G | 5/2 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ $3d^3(^2D)4s4p(^3P^0)$ | o D o ² F° | 5/2 5/2 | 0.005 0.005 | 12SAN/NAV 12SAN/NAV |
| 1358.027 | 73571.76 | 4 p. | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | _ | $3d^4(^5D)8s$ | 6 Б | 7/2 | 0.003 | 12SAN/NAV |
| 1359.9271 | 73533.35 | 1 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1360.3164 | 73512.31 | 1 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1360.5645 | 73498.90 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1360.6340 | 73495.15 | 4 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | _ | $3d^4(^5D)8s$ | ^{6}D | 9/2 | 0.0020 | 12SAN/NAV |
| 1361.2566 | 73461.54 | 9 * | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1361.2566 | 73461.54 | 9 * | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1363.2007 | 73356.77 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1363.3185 | 73350.43 | 1 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1363.560 | 73337.4 | 2 w | $3d^{5}$ | a ² D | 3/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1363.7094 | 73329.41 | 2 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 3/2 | 0.0020 | 12SAN/NAV |
| 1364.231 | 73301.4 | 4 bh | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^0)$ | r ⁴ G ^o o ⁴ D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1364.267 | 73299.4 | 4 bl | 3d ⁴ (³ F)4s 3d ⁴ (³ H)4s | a ⁴ F a ² H | 7/2 | - | $3d^3(^2D)4s4p(^3P^o)$ $3d^3(^2H)4s4p(^3P^o)$ | o D° q ² G° | 5/2 7/2 | 0.005 | 12SAN/NAV |
| 1364.4872 1365.0341 | 73287.61 73258.24 | 3 4 | $3d^4(^3G)4s$ | ан b ⁴ G | 9/2 7/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^\circ)$ | q G° r ⁴ G° | 7/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1365.9554 | 73238.24 | 9 | $3a^{5}$ | b ⁴ F | 7/2 | _ | $3d^{4}(^{5}D)4f$ | ⁴ G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1366.2815 | 73191.36 | 4 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^{4}(^{5}D)4f$ | ⁴G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1366.5327 | 73177.90 | 19 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | ⁴ G° | 11/2 | 0.0020 | 12SAN/NAV |
| 1366.6216 | 73173.14 | 9 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ | r ⁴ G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1366.8619 | 73160.28 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^3(^2H)4s4p(^3P^0)$ | r ⁴ G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1367.0741 | 73148.92 | 4 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1367.3667 | 73133.27 | 11 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | r ⁴ G ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1367.412 | 73130.8 | 4 p | $3d^{5}$ | b ⁴ F | 5/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1367.5820 | 73121.76 | 10 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 11/2 | 0.0020 | 12SAN/NAV |
| 1368.031 | 73097.8 | 3 a | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^\circ)$ | r ⁴ G° | 9/2 | 0.005 | 12SAN/NAV |
| 1368.7686 | 73058.37 | 1 | $3d^5$ $3d^5$ | b ⁴ F b ⁴ F | 3/2 5/2 | _ | $3d^4(^5D)4f$ $3d^4(^5D)4f$ | ⁴ F ^o ⁴ F ^o | 5/2 5/2 | 0.0020 | 12SAN/NAV |
| 1368.9620 1369.582 | 73048.05 73015.0 | 3 3 p* | 3a 3d ⁵ | в F a ⁴ P | 1/2 | _ | $3d^{4}(^{5}D)5p$ | $^{4}\mathrm{D^{o}}$ | 1/2 | 0.0020 0.005 | 12SAN/NAV 12SAN/NAV |
| 1369.582 | 73015.0 | 3 p* | $3d^5$ | a r a ⁴ P | 3/2 | _ | $3d^{4}(^{5}D)5p$ | $^{4}D^{o}$ | 1/2 | 0.005 | 12SAN/NAV |
| 1370.7376 | 72953.42 | э р 9 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^{4}(^{5}D)4f$ | ⁴ F ^o | 9/2 | 0.003 | 12SAN/NAV |
| 1371.2447 | 72926.44 | 2 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^3(^2H)4s4p(^3P^0)$ | q ² G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1371.7143 | 72901.48 | 4 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1371.969 | 72887.9 | 1 w | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^5D)4f$ | 4 G $^{\rm o}$ | 7/2 | 0.005 | 12SAN/NAV |
| 1372.3103 | 72869.82 | 9 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^5D)4f$ | 4 G $^{\rm o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1373.0054 | 72832.93 | 7 | $3d^{5}$ | b ⁴ F | 3/2 | _ | $3d^4(^5D)4f$ | ⁴ G ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1373.1989 | 72822.66 | 3 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^5D)4f$ | ⁴ G ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1374.896 | 72732.8 | 1 w | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | x ⁴ S ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1375.4144 | 72705.36 | 1 | $3d^{5}$ | b ⁴ F | 9/2 | - | $3d^4(^5D)4f$ | ⁴ H ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1375.5860 | 72696.29 | 5 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 7/2 | 0.0020 | 12SAN/NAV |
| 1375.7506 | 72687.59 | 4 | $3d^5$ $3d^5$ | b ⁴ F b ⁴ F | 3/2 | - | $3d^4(^5D)4f$ | $^{4}D^{o}$ $^{4}D^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1376.4075 | 72652.90 | 3 * 3 * | 3 <i>a</i> 3 <i>a</i> ⁵ | ьғ b ⁴ F | 9/2 5/2 | _ | 3d ⁴ (⁵ D)4f 3d ⁴ (⁵ D)4f | ⁴ D° | 7/2 7/2 | 0.0020 | 12SAN/NAV |
| 1376.4075 1377.130 | 72652.90 72614.8 | 1 a | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | _ | $3d^{4}(^{5}D)8s$ | ^{6}D | 9/2 | 0.0020 0.005 | 12SAN/NAV 12SAN/NAV |
| 1377.130 | 72522.48 | 4 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^{3}(^{4}F)4s4p(^{1}P^{o})$ | s ⁴ G° | 5/2 | 0.003 | 12SAN/NAV |
| 1379.9828 | 72322.46 | 1 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^5D)4f$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1380.7036 | 72426.84 | 4 * | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1380.7036 | 72426.84 | 4 * | $3d^{5}$ | b ⁴ F | 7/2 | _ | $3d^4(^5D)4f$ | ⁶ H ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1381.5579 | 72382.06 | 1 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^5D)4f$ | ${}^{4}F^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1381.6063 | 72379.52 | 2 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | _ | $3d^4(^5D)8s$ | ^{6}D | 5/2 | 0.0020 | 12SAN/NAV |
| 1381.6531 | 72377.07 | 3 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | x^4S^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1381.8481 | 72366.85 | 4 * | $3d^5$ | b ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1381.8481 | 72366.85 | 4 * | $3d^{4}(^{3}G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^5D)4f$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1382.138 | 72351.7 | 4 p* | $3d^5$ | b ⁴ F | 5/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1382.138 | 72351.7 | 4 p* | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^5D)4f$ | 4 G $^{\rm o}$ | 9/2 | 0.005 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | C. |
|------------------------|----------------------------|-------------|------------------------------------|--------------------------------------|------------|---------|--|--|------------|----------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 1382.1820 | 72349.37 | 10 * | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1382.1820 | 72349.37 | 10 * | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^3(^2H)4s4p(^3P^o)$ | q^2G^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1382.3965 | 72338.15 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^4(^5D)4f$ | ⁴ G ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1383.216 | 72295.3 | 3 a | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q^4D^o | 3/2 | 0.005 | 12SAN/NAV |
| 1386.8489 | 72105.91 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^5D)4f$ | ⁴ G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1387.0400 | 72095.97 | 5 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1388.1408 | 72038.80 | 4 | $3d^5$ | b ⁴ F b ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1388.264 | 72032.4 | 3 w | 3d ⁵ 3d ⁵ | b ⁴ F | 7/2 9/2 | _ | $3d^{3}(^{4}F)4s4p(^{1}P^{o})$ $3d^{3}(^{4}F)4s4p(^{1}P^{o})$ | p ⁴ D ^o r ⁴ F ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1388.4872 | 72020.83 72011.12 | 4 1 | $3d^4(^3G)4s$ | ьг b ⁴ G | 9/2 7/2 | _ | $3d^4(^5D)4f$ | $^{4}D^{o}$ | 7/2 5/2 | 0.0020 0.0020 | 12SAN/NAV |
| 1388.6744 1389.5584 | 71965.31 | 4 | $3d^{4}(^{3}H)4s$ | a ⁴ H | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | r ² G° | 312 7/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1391.0384 | 71888.74 | 3 | $3d^{4}(^{3}G)4s$ | а п b ⁴ G | 9/2 | _ | $3d^4(^5D)4f$ | ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1391.2646 | 71877.05 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^5D)4f$ | $^{6}D^{o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1391.8521 | 71846.71 | 4 | $3d^{5}$ | a ⁴ P | 3/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1392.3709 | 71819.94 | 5 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | x ⁴ S° | 3/2 | 0.0020 | 12SAN/NAV |
| 1393.2338 | 71775.46 | 4 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1393.7643 | 71748.14 | 3 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | q^2D^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1394.3245 | 71719.32 | 7 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | $r^{2}G^{o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1394.459 | 71712.4 | 1 w | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^5D)4f$ | 4 H $^{\rm o}$ | 9/2 | 0.005 | 12SAN/NAV |
| 1394.5531 | 71707.56 | 4 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | $p^{2}F^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1394.6179 | 71704.23 | 4 * | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^4(^5D)4f$ | $^{6}\mathrm{D^{o}}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1394.6179 | 71704.23 | 4 * | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | - | $3d^4(^5D)6p$ | 4 P $^{\rm o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1395.8037 | 71643.31 | 1 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q^2D^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1396.4068 | 71612.37 | 10 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1396.608 | 71602.1 | 4 a* | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | - | $3d^3(^2H)4s4p(^3P^0)$ | w ⁴ H° | 13/2 | 0.005 | 12SAN/NAV |
| 1396.608 | 71602.1 | 4 a* | $3d^{5}$ | b ⁴ F | 3/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1396.8851 | 71587.85 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1396.9483 | 71584.61 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1397.344 | 71564.3 | 3 a* | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^0)$ | w ⁴ H ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1397.344 | 71564.3 | 3 a* | $3d^5$ | a ² D b ² F | 5/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G ^o o ² F ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1397.709 1397.847 | 71545.7 71538.6 | 1 w | $3d^4(^3F)4s$ $3d^4(^3F)4s$ | ь -F a ⁴ F | 7/2 5/2 | _ | $3d^3(^2D)4s4p(^3P^o)$ $3d^3(^4P)4s4p(^3P^o)$ | 4- 0 | 7/2 5/2 | 0.005 0.005 | 12SAN/NAV |
| 1397.847 | 71536.8 | 3 p 4 p | $3d^{4}(^{3}F)4s$ | аг а ⁴ F | 3/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | q ⁴ D° q ⁴ D° | 1/2 | 0.005 | 12SAN/NAV 12SAN/NAV |
| 1397.881 | 71536.6 | 4 p 3 p | $3d^{4}(^{3}H)4s$ | a ² H | 9/2 | _ | $3d^{3}(^{2}\text{H})4s4p(^{3}\text{P}^{0})$ | t ² H° | 9/2 | 0.005 | 12SAN/NAV |
| 1398.4283 | 71508.85 | 28 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | w ⁴ H ^o | 13/2 | 0.0020 | 12SAN/NAV |
| 1398.8489 | 71487.35 | 5 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1398.9042 | 71484.52 | 14 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | w ⁴ H° | 11/2 | 0.0020 | 12SAN/NAV |
| 1399.0431 | 71477.43 | 5 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | u ² H ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1400.395 | 71408.4 | 3 a | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | _ | $3d^4(^5D)8s$ | ⁶ D | 9/2 | 0.005 | 12SAN/NAV |
| 1400.742 | 71390.7 | 3 a* | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ | w ⁴ H ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1400.742 | 71390.7 | 3 a* | $3d^4(^5D)4p$ | $z^{6}D^{o}$ | 7/2 | _ | $3d^4(^5D)8s$ | ^{6}D | 7/2 | 0.005 | 12SAN/NAV |
| 1401.4610 | 71354.11 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1401.538 | 71350.2 | 2 p | $3d^4(^3H)4s$ | a ² H | 11/2 | - | $3d^3(^2H)4s4p(^3P^0)$ | t ² H ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1401.580 | 71348.1 | 3 p | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 5/2 | 0.005 | 12SAN/NAV |
| 1402.056 | 71323.8 | 3 w | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 7/2 | 0.005 | 12SAN/NAV |
| 1403.3834 | 71256.37 | 5 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1404.003 | 71224.9 | 1 a | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)8s$ | ⁶ D | 5/2 | 0.005 | 12SAN/NAV |
| 1404.2549 | 71212.14 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1404.5326 | 71198.06 | 2 * | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1404.5326 | 71198.06 | 2 * | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)8s$ | ⁶ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1406.2912 | 71109.03 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1406.9107 | 71077.72 | 4 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^0)$ | w ⁴ H° | 9/2 | 0.0020 | 12SAN/NAV |
| 1407.224 | 71061.9 | 2 a | $3d^4(^3G)4s$ | b ⁴ G a ⁴ H | 9/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D ^o w ⁴ H ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1408.1816 | 71013.57 | 5 | $3d^4(^3H)4s$ $3d^4(^3G)4s$ | a ¹ H b ⁴ G | 7/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ $3d^3(^2\text{D})4s4p(^3\text{P}^{\text{o}})$ | w 'H' o ⁴ D° | 7/2 5/2 | 0.0020 | 12SAN/NAV |
| 1409.5079 1410.8241 | 70946.75 70880.56 | 3 1 | $3d^{5}$ (*G)4s | a ² G | 7/2 9/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o D o ² F° | 5/2 7/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1410.8241 | 70880.56 70856.46 | 1 | $3d^4(^3G)4s$ | a ⁻ G b ⁴ G | 9/2 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ $3d^3(^2D)4s4p(^3P^0)$ | o F° o ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1411.3039 | 70836.46 | 3 | $3d^{4}(^{5}D)4s$ | a ⁴ D | 3/2 | _ | $3d^{4}(^{3}F2)4p$ | v ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1412.2200 | 70789.5 | 3 4 p | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^{4}(^{3}P2)4p$ | y ⁴ S ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1412.659 | 70788.5 | 4 p* | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^3P2)4p$ | y ⁴ S ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1412.659 | 70788.5 | ∙р 4 р* | $3d^5$ | a ⁴ P | 3/2 | _ | $3d^4(^3P2)4p$ | y ⁴ S° | 3/2 | 0.005 | 12SAN/NAV |
| 1414.5885 | 70691.94 | 4 P | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| | 70659.28 | 4 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 11/2 | 0.0020 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | ication | | | Uncertainty of observed | |
|------------------------|----------------------------|-------------|--|--|------------|---------|--|--|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 1433111 | Configuration | Term | | wavelength (Å) | Source of line |
| 1417.1427 | 70564.52 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1419.2389 | 70460.30 | 3 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1420.6517 | 70390.23 | 3 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1421.2009 | 70363.03 | 2 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1421.555 | 70345.5 | 2 p* | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 7/2 | 0.005 | 12SAN/NAV |
| 1421.555 | 70345.5 | 2 p* | $3d^5$ | b ⁴ F | 9/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 9/2 | 0.005 | 12SAN/NAV |
| 1421.977 | 70324.6 | 1 | $3d^{5}$ | b ² H | 11/2 | - | $3d^4(^5D)4f$ | ⁴ G ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1422.5802 | 70294.81 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1424.6154 | 70194.38 | 5 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1426.210 | 70115.9 | 60 w | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o v ⁴ F ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1427.0142 | 70076.39 | 3 | $3d^5$ | a ⁴ G a ⁶ D | 11/2 | - | $3d^4(^3F2)4p$ | y ⁶ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1427.3878 | 70058.05 70040.55 | 28 | $3d^4(^5D)4s$ $3d^4(^3F)4s$ | a ⁴ F | 7/2 5/2 | _ | $3d^3(^4F)4s4p(^3P^o)$ $3d^3(^4P)4s4p(^3P^o)$ | y Fo u Po | 9/2 3/2 | 0.0020 | 12SAN/NAV |
| 1427.7443 1428.670 | 70040.55 69995.2 | 4 4 bl* | $3d^{4}(^{5}D)4s$ | а F а ⁶ D | 5/2 5/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | | 3/2 7/2 | 0.0020 0.005 | 12SAN/NAV |
| 1428.670 | 69995.2 | 4 bl* | $3d^{5}$ | а Б b ⁴ F | 7/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | y °F° q ⁴ D° | 7/2 | 0.005 | 12SAN/NAV 12SAN/NAV |
| 1429.0353 | 69977.28 | 3 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | q ⁴ D° | 7/2 | 0.003 | 12SAN/NAV |
| 1429.1734 | 69970.52 | 3 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3\text{F2})4p$ | v ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1430.0134 | 69929.41 | 7 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1430.1266 | 69923.88 | 2 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1430.494 | 69905.9 | 3 a | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 5/2 | 0.005 | 12SAN/NAV |
| 1430.854 | 69888.3 | 41 w* | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D ^o | 9/2 | 0.005 | 12SAN/NAV |
| 1430.854 | 69888.3 | 41 w* | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 9/2 | 0.005 | 12SAN/NAV |
| 1431.216 | 69870.7 | 4 p | $3d^{5}$ | b ⁴ F | 9/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F ^o | 9/2 | 0.005 | 12SAN/NAV |
| 1431.324 | 69865.4 | 41 w | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | v ⁶ F ^o | 9/2 | 0.005 | 12SAN/NAV |
| 1431.384 | 69862.5 | 12 bl | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1431.867 | 69838.9 | 41 w | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F° | 7/2 | 0.005 | 12SAN/NAV |
| 1431.963 | 69834.2 | 9 p | $3d^5$ | b ⁴ F | 3/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1432.057 | 69829.6 | 41 w* | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 7/2 | 0.005 | 12SAN/NAV |
| 1432.057 | 69829.6 | 41 w* | $3d^5$ | b ⁴ F | 5/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | x ⁴ S ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1432.2685 | 69819.31 | 10 * | $3d^{5}$ | b ⁴ F | 7/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1432.2685 | 69819.31 | 10 * | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 11/2 | 0.0020 | 12SAN/NAV |
| 1432.3761 | 69814.07 | 28 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1432.5813 | 69804.07 | 5 | 3d ⁵ | b ⁴ D a ⁶ D | 1/2 | - | $3d^4(^5D)5p$ $3d^3(^4F)4s4p(^3P^0)$ | ⁴ D ^o y ⁶ F ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1432.8387 1433.007 | 69791.53 69783.3 | 14 41 w | 3d ⁴ (⁵ D)4s 3d ⁴ (⁵ D)4s | a D a ⁶ D | 3/2 3/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | y ⁶ D ^o | 3/2 5/2 | 0.0020 0.005 | 12SAN/NAV 12SAN/NAV |
| 1433.2194 | 69772.99 | 41 W | $3d^{4}(^{5}D)4s$ | а D а ⁶ D | 1/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | у Б у ⁶ F° | 1/2 | 0.003 | 12SAN/NAV |
| 1433.697 | 69749.7 | 4 p | $3d^{5}$ | a ⁴ G | 5/2 | _ | $3d^4(^3\text{F2})4p$ | y F v ⁴ F° | 3/2 | 0.0020 | 12SAN/NAV |
| 1433.7825 | 69745.59 | 4 p | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | y ⁶ D° | 3/2 | 0.003 | 12SAN/NAV |
| 1433.886 | 69740.6 | 3 p | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1434.6788 | 69702.01 | 28 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F° | 1/2 | 0.0020 | 12SAN/NAV |
| 1434.807 | 69695.8 | 41 w | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 9/2 | 0.005 | 12SAN/NAV |
| 1434.9900 | 69686.90 | 28 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 1/2 | 0.0020 | 12SAN/NAV |
| 1435.211 | 69676.2 | 41 p | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^{3}(^{4}\text{F})4s4p(^{3}\text{P}^{0})$ | y ⁶ F ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1435.369 | 69668.5 | 0 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D ^o | 5/2 | 0.008 | 82JOH |
| 1435.5851 | 69658.01 | 41 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1435.8262 | 69646.31 | 28 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1436.446 | 69616.3 | 0 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 1/2 | 0.008 | 82JOH |
| 1437.1756 | 69580.92 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1437.995 | 69541.3 | 3 w | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | - | $3d^4(^5D)6d$ | ⁶ D | 3/2 | 0.005 | 12SAN/NAV |
| 1438.5990 | 69512.07 | 19 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1439.2425 | 69480.99 | 28 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1439.6802 | 69459.87 | 3 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | - | $3d^4(^5D)6d$ | ⁶ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1439.8783 | 69450.31 | 2 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | _ | $3d^4(^5D)6d$ | ⁴ S | 3/2 | 0.0020 | 12SAN/NAV |
| 1440.0507 | 69442.00 | 4 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1440.1513 | 69437.15 | 4 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | - | $3d^4(^5D)6d$ | ⁶ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1441.0483 | 69393.93 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 7/2 | 0.0020 | 12SAN/NAV |
| 1441.456 | 69374.3 | 2 a | $3d^4(^5D)4p$ | z ⁶ F ^o z ⁶ F ^o | 7/2 | - | 3d ⁴ (⁵ D)6d | ⁶ F | 9/2 | 0.005 | 12SAN/NAV |
| 1441.598 | 69367.5 | 4 bl | $3d^4(^5D)4p$ | z ⁶ F ^o | 9/2 | - | 3d ⁴ (⁵ D)6d | ⁶ D ⁶ G | 9/2 | 0.005 | 12SAN/NAV |
| 1441.9959 | 69348.32 | 10 7 * | $3d^4(^5D)4p$ | z ⁶ F ^o | 1/2 | - | 3d ⁴ (⁵ D)6d 3d ⁴ (⁵ D)6d | °G ⁶ P | 3/2 7/2 | 0.0020 | 12SAN/NAV |
| 1442.0614 | 69345.17 | 7 * | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | - | 3d ⁴ (⁵ D)6d | ⁶ F | | 0.0020 | 12SAN/NAV |
| 1442.0614 1442.4663 | 69345.17 69325.71 | 4 | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4p | z ⁶ F° | 7/2 9/2 | _ | 3d ⁴ (⁵ D)6d | ⁶ D | 7/2 7/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1444.4003 | 69308.18 | 12 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | 3/2 | _ | 3d ⁴ (⁵ D)6d | ⁶ G | 5/2 | 0.0020 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | ication | | | Uncertainty of observed | 6 |
|------------------------|----------------------------|----------------|--|--|--------------|---------|--|----------------------------------|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 1443.5504 | 69273.65 | 12 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | 3d ⁴ (⁵ D)6d | ⁶ S | 5/2 | 0.0020 | 12SAN/NAV |
| 1443.8141 | 69260.99 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 5/2 | 0.0020 | 12SAN/NAV |
| 1443.9451 | 69254.71 | 4 * | $3d^{5}$ | a ⁴ P | 3/2 | - | $3d^4(^3F2)4p$ | w^4G^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1443.9451 | 69254.71 | 4 * | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 5/2 | - | $3d^4(^5D)6d$ | ⁶ P | 5/2 | 0.0020 | 12SAN/NAV |
| 1444.2188 | 69241.59 | 12 | $3d^4(^5D)4p$ | z ⁶ F ^o | 5/2 | - | $3d^4(^5D)6d$ | ⁶ G | 7/2 | 0.0020 | 12SAN/NAV |
| 1444.8203 | 69212.76 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1445.4761 | 69181.36 | 14 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | _ | $3d^4(^5D)6d$ | ⁶ S | 5/2 | 0.0020 | 12SAN/NAV |
| 1445.6494 | 69173.07 | 4 | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 5/2 | - | $3d^4(^5D)6d$ | ⁶ G | 5/2 | 0.0020 | 12SAN/NAV |
| 1445.8888 | 69161.61 | 12 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | - | $3d^4(^5D)6d$ | ⁶ G | 9/2 | 0.0020 | 12SAN/NAV |
| 1445.9559 | 69158.40 | 4 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | - | $3d^4(^5D)6d$ | ⁶ P ⁶ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1446.4043 | 69136.96 | 7 | $3d^4(^5D)4p$ $3d^4(^3G)4s$ | z ⁶ F° b ⁴ G | 9/2 | - | $3d^4(^5D)6d$ | s ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1447.037 | 69106.7 | 1 w | $3a^{4}(^{5}G)4s$ $3d^{4}(^{5}D)4p$ | z ⁶ F° | 9/2 | - | $3d^3(^2D)4s4p(^3P^0)$ $3d^4(^5D)6d$ | s F | 9/2 | 0.005 | 12SAN/NAV |
| 1447.5931 1447.6531 | 69080.19 69077.32 | 4 9 | $3d^{4}(^{5}D)4p$ | z F z ⁶ F° | 11/2 11/2 | _ | $3d^{4}(^{5}D)6d$ | Б ⁶ F | 9/2 11/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1447.8792 | 69066.54 | 14 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | 9/2 | _ | $3d^{4}(^{5}D)6d$ | ⁶ G | 11/2 | 0.0020 | 12SAN/NAV |
| 1448.1297 | 69054.59 | 3 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | 7/2 | _ | $3d^{4}(^{5}D)6d$ | ⁶ G | 7/2 | 0.0020 | 12SAN/NAV |
| 1448.4276 | 69040.39 | 28 | $3d^{4}(^{5}D)4p$ | z ⁶ P° | 7/2 | _ | $3d^4(^5D)6d$ | ⁶ S | 5/2 | 0.0020 | 12SAN/NAV |
| 1448.6155 | 69031.43 | 9 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1449.885 | 68971.0 | 4 w | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 7/2 | 0.005 | 12SAN/NAV |
| 1450.1802 | 68956.95 | 19 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | _ | $3d^4(^5D)6d$ | ⁶ G | 13/2 | 0.0020 | 12SAN/NAV |
| 1450.5281 | 68940.41 | 5 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^5D)5p$ | $^{4}P^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1450.805 | 68927.3 | 3 a | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^5D)5p$ | $^{4}P^{o}$ | 5/2 | 0.005 | 12SAN/NAV |
| 1450.8659 | 68924.36 | 3 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | _ | $3d^4(^5D)6d$ | ^{6}G | 9/2 | 0.0020 | 12SAN/NAV |
| 1451.9336 | 68873.67 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1453.921 | 68779.5 | 1 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | - | $3d^4(^5D)6d$ | ^{6}G | 11/2 | 0.005 | 12SAN/NAV |
| 1453.9952 | 68776.02 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1455.6543 | 68697.63 | 1 | $3d^5$ | b ⁴ D | 3/2 | - | $3d^4(^5D)5p$ | ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1455.7370 | 68693.73 | 3 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^5D)5p$ | ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1456.4531 | 68659.95 | 1 | $3d^5$ | b ⁴ F | 9/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1457.2042 | 68624.56 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | $p^{2}F^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1458.3835 | 68569.07 | 4 * | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 3/2 | 0.0020 | 12SAN/NAV |
| 1458.3835 | 68569.07 | 4 * | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1461.7502 | 68411.14 | 4 * | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ S ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1461.7502 | 68411.14 | 4 * | $3d^4(^5D)4p$ | z ⁶ F ^o z ⁶ F ^o | 1/2 | - | 3d ⁴ (⁵ D)7s 3d ⁴ (⁵ D)7s | ⁶ D ⁶ D | 1/2 | 0.0020 | 12SAN/NAV |
| 1462.059 | 68396.7 | 5 a | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4p | z ⁶ F° | 3/2 | _ | $3d^4(^5D)7s$ $3d^4(^5D)7s$ | ⁶ D | 3/2 | 0.005 | 12SAN/NAV |
| 1462.469 | 68377.5 68375.9 | 5 a | $3d^{4}(^{5}D)4p$ | z F z ⁴ P° | 5/2 3/2 | _ | $3d^{4}(^{5}D)6d$ | ⁴ P | 5/2 3/2 | 0.005 0.005 | 12SAN/NAV |
| 1462.503 1462.9640 | 68354.38 | 3 p 4 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | 7/2 | _ | $3d^{4}(^{5}D)7s$ | ^{6}D | 312 7/2 | 0.003 | 12SAN/NAV 12SAN/NAV |
| 1463.5000 | 68329.35 | 3 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | 3/2 | _ | $3d^{4}(^{5}D)7s$ | $^{6}\mathrm{D}$ | 1/2 | 0.0020 | 12SAN/NAV |
| 1463.6192 | 68323.78 | 4 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | 9/2 | _ | $3d^4(^5D)7s$ | ^{6}D | 9/2 | 0.0020 | 12SAN/NAV |
| 1463.6872 | 68320.61 | 3 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)6d$ | ⁶ S | 5/2 | 0.0020 | 12SAN/NAV |
| 1463.7800 | 68316.28 | 3 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ | w ⁴ H° | 7/2 | 0.0020 | 12SAN/NAV |
| 1464.9508 | 68261.68 | 5 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | _ | $3d^4(^5D)7s$ | ⁶ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1466.1389 | 68206.36 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ | w ⁴ H ^o | 13/2 | 0.0020 | 12SAN/NAV |
| 1466.2801 | 68199.79 | 4 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)6d$ | ^{6}D | 9/2 | 0.0020 | 12SAN/NAV |
| 1466.3589 | 68196.13 | 4 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | - | $3d^4(^5D)6d$ | $^{6}\mathrm{D}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1466.4766 | 68190.66 | 9 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | _ | $3d^4(^5D)7s$ | ⁶ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1466.9416 | 68169.04 | 3 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1467.048 | 68164.1 | 2 w | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^3(^2H)4s4p(^3P^o)$ | w ⁴ H ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1467.1732 | 68158.28 | 5 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | - | $3d^4(^5D)6d$ | ⁶ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1467.6655 | 68135.42 | 3 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1467.7919 | 68129.55 | 3 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)6d$ | ⁴ P | 5/2 | 0.0020 | 12SAN/NAV |
| 1468.025 | 68118.7 | 4 p | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1468.062 | 68117.0 | 11 p | $3d^4(^5D)4p$ | z ⁶ F ^o | 9/2 | - | $3d^4(^5D)7s$ | ⁶ D | 7/2 | 0.005 | 12SAN/NAV |
| 1468.418 | 68100.5 | 2 w | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 3/2 | 0.005 | 12SAN/NAV |
| 1468.6297 | 68090.68 | 4 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | - | $3d^4(^5D)6d$ | ⁶ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1468.8310 | 68081.35 | 3 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | - | $3d^4(^5D)6d$ | ⁶ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1468.8910 | 68078.57 | 4 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | - | $3d^4(^5D)6d$ | ⁶ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1469.1406 | 68067.00 | 4 | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | 3d ⁴ (⁵ D)6d | ⁴ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1469.400 | 68055.0 | 4 a | $3d^4(^5D)4p$ | z ⁶ P° a ⁴ D | 7/2 | - | $3d^4(^5D)6d$ | ⁶ D u ⁴F° | 5/2 | 0.005 | 12SAN/NAV |
| 1469.5190 1469.7950 | 68049.48 | 4 | $3d^4(^5D)4s$ | a D z ⁶ F° | 7/2 | - | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ $3d^{4}(^{5}D)7s$ | u F° ⁶ D | 9/2 | 0.0020 | 12SAN/NAV |
| 1409./930 | 68036.70 | 12 | $3d^4(^5D)4p$ | ZF | 11/2 | _ | $3d^4(^5D)/s$ $3d^4(^5D)6d$ | υ | 9/2 | 0.0020 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassif | cation | | | Uncertainty of observed | Ça |
|------------------------|----------------------------|--------------|---|--|-------------|--------|--|---|-------------|----------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 1469.9371 | 68030.12 | 4 * | 3d ⁴ (⁵ D)4p | z ⁶ D° | 5/2 | _ | 3d ⁴ (⁵ D)6d | ⁴ P | 3/2 | 0.0020 | 12SAN/NAV |
| 1471.2492 | 67969.45 | 3 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 9/2 | 0.0020 | 12SAN/NAV |
| 1471.3186 | 67966.24 | 3 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | - | $3d^4(^5D)6d$ | ⁶ S | 5/2 | 0.0020 | 12SAN/NAV |
| 1471.8801 | 67940.32 | 5 | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | - | $3d^4(^5D)6d$ | ⁶ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1471.9270 | 67938.15 | 4 | $3d^4(^5D)4p$ | $z^{6}P^{o}$ | 5/2 | - | $3d^4(^5D)6d$ | ⁶ F | 3/2 | 0.0020 | 12SAN/NAV |
| 1472.432 | 67914.9 | 1 | $3d^4(^1G1)4s$ | c ² G | 9/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^\circ)$ | q^2G^o | 9/2 | 0.005 | 12SAN/NAV |
| 1472.4996 | 67911.73 | 2 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)6d$ | ⁴ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1472.840 1472.871 | 67896.0 67894.6 | 9 bh 9 bl | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4p | z ⁶ P ^o z ⁶ P ^o | 3/2 5/2 | _ | 3d ⁴ (⁵ D)6d 3d ⁴ (⁵ D)6d | ⁶ P ⁶ P | 5/2 7/2 | 0.005 0.005 | 12SAN/NAV |
| 1472.871 | 67876.53 | 9 bi 1 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 5/2 | _ | $3d^{4}(^{5}D)6d$ | ⁴ F | 5/2 | 0.003 | 12SAN/NAV 12SAN/NAV |
| 1473.2032 | 67854.40 | 4 | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | _ | $3d^4(^5D)6d$ | ⁶ P | 3/2 | 0.0020 | 12SAN/NAV |
| 1473.899 | 67847.3 | 1 p | 3d ⁵ | b ⁴ F | 3/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1473.9395 | 67845.39 | 2 | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1474.559 | 67816.9 | 2 p | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)6d$ | ⁴ P | 3/2 | 0.005 | 12SAN/NAV |
| 1474.6141 | 67814.35 | 5 * | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)6d$ | ^{6}G | 5/2 | 0.0020 | 12SAN/NAV |
| 1474.6141 | 67814.35 | 5 * | $3d^4(^5D)4p$ | z^4P^o | 5/2 | _ | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1475.4713 | 67774.95 | 5 | $3d^4(^5D)4p$ | z^4P^o | 5/2 | _ | $3d^4(^5D)6d$ | ^{4}P | 5/2 | 0.0020 | 12SAN/NAV |
| 1475.750 | 67762.2 | 3 a | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | _ | $3d^4(^5D)6d$ | ^{6}P | 3/2 | 0.005 | 12SAN/NAV |
| 1475.9596 | 67752.53 | 10 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ | w ⁴ H ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1476.024 | 67749.6 | 3 p | $3d^{5}$ | a ² I | 13/2 | - | $3d^4(^1G2)4p$ | v ² H ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1477.4540 | 67684.00 | 2 * | $3d^{5}$ | a ⁴ P | 1/2 | _ | $3d^4(^3P2)4p$ | y ⁴ P ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1477.4540 | 67684.00 | 2 * | $3d^{5}$ | a ⁴ P | 3/2 | - | $3d^4(^3P2)4p$ | y ⁴ P ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1477.5437 | 67679.89 | 2 | $3d^4(^5D)4p$ | z ⁴ P ^o | 1/2 | - | $3d^4(^5D)6d$ | ⁶ F | 3/2 | 0.0020 | 12SAN/NAV |
| 1477.6436 | 67675.32 | 3 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | - | $3d^4(^5D)6d$ | ⁴ P ⁶ P | 3/2 | 0.0020 | 12SAN/NAV |
| 1477.913 | 67663.0 | 3 a 2 w | 3d ⁴ (⁵ D)4p 3d ⁴ (¹ I)4s | z ⁶ P ^o b ² I | 7/2 | _ | $3d^4(^5D)6d$ | x ² I ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1478.239 1478.3267 | 67648.1 67644.05 | 2 w 1 | 3a (1)4s $3d^4$ (³ F)4s | вт a ⁴ F | 13/2 7/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ $3d^3(^2\text{G})4s4p(^3\text{P}^{\text{o}})$ | t ⁴ F° | 11/2 9/2 | 0.005 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1478.6216 | 67630.56 | 1 | $3d^{5}$ | a ⁴ P | 5/2 | _ | $3d^4(^3P2)4p$ | y ⁴ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1478.8117 | 67621.86 | 12 | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^3(^2H)4s4p(^3P^0)$ | $x^{2}I^{0}$ | 11/2 | 0.0020 | 12SAN/NAV |
| 1479.0357 | 67611.62 | 2 | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 1/2 | 0.0020 | 12SAN/NAV |
| 1479.4395 | 67593.17 | 12 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1480.003 | 67567.4 | 2 w | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | z ⁶ S ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1480.1367 | 67561.33 | 5 | $3d^{5}$ | a ⁴ G | 11/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1480.192 | 67558.8 | 2 p | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1480.227 | 67557.2 | 3 p | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)6d$ | ⁴ D | 7/2 | 0.005 | 12SAN/NAV |
| 1480.3706 | 67550.65 | 10 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1480.9445 | 67524.48 | 7 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1480.992 | 67522.3 | 3 p | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)6d$ | ⁴ F | 5/2 | 0.005 | 12SAN/NAV |
| 1481.034 | 67520.4 | 3 p | 3d ⁴ (³ D)4s 3d ⁴ (¹ I)4s | c ⁴ D b ² I | 7/2 | - | $3d^4(^5D)4f$ $3d^3(^2H)4s4p(^3P^0)$ | ${}^4F^{\circ}$ $q {}^2G^{\circ}$ | 9/2 | 0.005 | 12SAN/NAV |
| 1481.2433 | 67510.85 | 1 | $3d^{4}(^{5}D)4p$ | в I z ⁶ D° | 11/2 | - | $3d^4(^5D)6d$ | q G ⁴D | 9/2 5/2 | 0.0020 0.0020 | 12SAN/NAV |
| 1481.3025 1481.3937 | 67508.16 67504.00 | 3 4 * | $3d^{4}(^{5}D)4p$ | z ⁴ P° | 3/2 1/2 | _ | $3d^{4}(^{5}D)6d$ | Б ⁶ Р | 3/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1481.3937 | 67504.00 | 4 * | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | _ | $3d^4(^5D)6d$ | ⁴ G | 11/2 | 0.0020 | 12SAN/NAV |
| 1481.4819 | 67499.98 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1481.5808 | 67495.48 | 5 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 3/2 | 0.0020 | 12SAN/NAV |
| 1481.957 | 67478.3 | 3 w | $3d^5$ | c ² F | 7/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | q^2D^o | 5/2 | 0.005 | 12SAN/NAV |
| 1482.070 | 67473.2 | 3 p | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t 4F° | 5/2 | 0.005 | 12SAN/NAV |
| 1482.105 | 67471.6 | 3 p | $3d^4(^5D)4p$ | z^4P^o | 3/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 5/2 | 0.005 | 12SAN/NAV |
| 1482.337 | 67461.0 | 3 a | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^3(^2G)4s4p(^3P^o)$ | t ⁴ F ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1483.4427 | 67410.76 | 3 | $3d^5$ | c ² F | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ² F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1483.5004 | 67408.14 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | - | $3d^4(^5D)4f$ | ⁴ G ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1483.7373 | 67397.38 | 4 | $3d^{5}$ | a ⁴ G | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1484.7905 | 67349.57 | 3 | $3d^4(^5D)4p$ | z ⁴ P° | 3/2 | _ | $3d^4(^5D)6d$ | ⁴ S | 3/2 | 0.0020 | 12SAN/NAV |
| 1485.0352 | 67338.47 | 4 | $3d^4(^1G1)4s$ | c ² G z ⁶ D° | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ² F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1485.1070 | 67335.22 | 3 | $3d^4(^5D)4p$ | | 5/2 | - | $3d^4(^5D)6d$ | ⁶ D o ² F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1485.2526 | 67328.61 | 10 | 3d ⁴ (¹ G1)4s 3d ⁴ (⁵ D)4p | c ² G z ⁴ P ^o | 9/2 | - | $3d^3(^2D)4s4p(^3P^0)$ $3d^4(^5D)6d$ | o ² F° ⁶ P | 7/2 | 0.0020 | 12SAN/NAV |
| 1486.124 1487.016 | 67289.1 67248.8 | 4 x 4 xa | $3d^{5}$ (5D)4p $3d^{5}$ | z 'P" a ⁴ G | 3/2 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 5/2 | 0.005 0.005 | 12SAN/NAV 12SAN/NAV |
| 1487.016 | 67230.0 | 4 xa 4 x | 3d ⁴ (⁵ D)4p | a G z ⁶ D° | 5/2 | _ | $3d^{4}(^{5}D)6d$ | u F ⁶ D | 3/2 | 0.005 | 12SAN/NAV |
| 1487.431 | 67220.7 | 4 x 4 x | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 5/2 | _ | $3d^{4}(^{5}D)6d$ | ⁶ F | 3/2 7/2 | 0.005 | 12SAN/NAV |
| 1488.402 | 67186.1 | 4 x | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 7/2 | _ | $3d^{4}(^{5}D)6d$ | $^{6}\mathrm{D}$ | 9/2 | 0.005 | 12SAN/NAV |
| 1489.068 | 67156.1 | 9 x | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | _ | $3d^4(^5D)7s$ | $^{6}\mathrm{D}$ | 9/2 | 0.005 | 12SAN/NAV |
| 1489.322 | 67144.6 | 4 xa | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)6d$ | $^{6}\mathrm{D}$ | 7/2 | 0.005 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | G |
|------------------------|----------------------------|----------------|--------------------------------|--|------------|---------|---|----------------------------------|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 1491.617 | 67041.3 | 5 x | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | 3d ⁴ (⁵ D)6d | ⁶ D | 5/2 | 0.005 | 12SAN/NAV |
| 1491.769 | 67034.5 | 10 x | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t 4G° | 9/2 | 0.005 | 12SAN/NAV |
| 1492.117 | 67018.9 | 4 x | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)7s$ | ^{6}D | 5/2 | 0.005 | 12SAN/NAV |
| 1492.303 | 67010.5 | 4 x | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | z ⁶ S° | 5/2 | 0.005 | 12SAN/NAV |
| 1492.685 | 66993.4 | 12 xbh | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)6d$ | ⁶ D | 9/2 | 0.005 | 12SAN/NAV |
| 1492.749 | 66990.5 | 12 xbl | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)6d$ | ⁶ F | 11/2 | 0.005 | 12SAN/NAV |
| 1493.2396 | 66968.49 | 12 * | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 7/2 | 0.0020 | 12SAN/NAV |
| 1493.2396 | 66968.49 | 12 * | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^4(^5D)4f$ | ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1493.3416 | 66963.92 | 5 | $3d^5$ | a ² D | 5/2 | - | $3d^4(^3F2)4p$ | s ² D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1493.5246 | 66955.71 | 12 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)6d$ | ⁶ F | 9/2 | 0.0020 | 12SAN/NAV |
| 1493.6118 | 66951.80 | 5 | $3d^4(^5D)4p$ | z ⁶ D° z ⁶ P° | 9/2 | - | $3d^4(^5D)6d$ | ⁶ D ⁶ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1493.6624 | 66949.53 | 4 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)7s$ | °D | 7/2 | 0.0020 | 12SAN/NAV |
| 1493.8056 | 66943.11 | 2 | $3d^4(^5D)4p$ | z ⁴ D | 5/2 | _ | 3d ⁴ (⁵ D)6d 3d ³ (⁴ F)4s4p(¹ P ^o) | p ⁴ D° | 5/2 7/2 | 0.0020 | 12SAN/NAV |
| 1493.9411 1494.0135 | 66937.04 66933.80 | 3 3 | $3d^4(^3D)4s$ $3d^4(^3D)4s$ | c ⁴ D | 7/2 7/2 | _ | $3d^{3}(^{4}F)4s4p(^{1}P^{o})$ | r ⁴ F° | 9/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1494.0133 | 66930.31 | 12 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 5/2 | _ | $3d^{4}(^{5}D)6d$ | ⁶ G | 9/2 7/2 | 0.0020 | 12SAN/NAV |
| 1494.0914 | 66926.61 | 9 * | $3d^{4}(^{5}D)4p$ | z ⁶ P° | 5/2 | _ | $3d^{4}(^{5}D)7s$ | $^{6}\mathrm{D}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1494.1740 | 66926.61 | 9 * | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 7/2 | _ | $3d^{4}(^{5}D)6d$ | ⁶ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1494.1740 | 66921.00 | 8 | $3d^{4}(^{3}D)4s$ | c ⁴ D | 3/2 | _ | $3d^{4}(^{5}D)4f$ | ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1494.703 | 66902.9 | 4 a | $3d^{4}(^{5}D)4p$ | z ⁶ P° | 3/2 | _ | $3d^4(^5D)7s$ | ^{6}D | 3/2 | 0.0020 | 12SAN/NAV |
| 1494.954 | 66891.7 | 3 a | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 7/2 | 0.005 | 12SAN/NAV |
| 1495.0570 | 66887.08 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^5D)4f$ | ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1495.3210 | 66875.27 | 4 * | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1495.3210 | 66875.27 | 4 * | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | _ | $3d^4(^5D)6d$ | 6D | 3/2 | 0.0020 | 12SAN/NAV |
| 1495.4838 | 66867.99 | 4 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 1/2 | 0.0020 | 12SAN/NAV |
| 1495.527 | 66866.1 | 4 c | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 7/2 | 0.005 | 12SAN/NAV |
| 1495.560 | 66864.6 | 5 c | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 3/2 | 0.005 | 12SAN/NAV |
| 1495.601 | 66862.8 | 4 c | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)6d$ | ⁴ S | 3/2 | 0.005 | 12SAN/NAV |
| 1495.629 | 66861.5 | 3 p | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)6d$ | ^{6}G | 5/2 | 0.005 | 12SAN/NAV |
| 1495.8327 | 66852.40 | 5 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^5D)4f$ | $^4P^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1496.061 | 66842.2 | 3 a | $3d^5$ | c ² F | 7/2 | - | $3d^3(^2H)4s4p(^3P^0)$ | r ⁴ G ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1496.2113 | 66835.48 | 4 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | - | $3d^4(^5D)7s$ | ^{6}D | 1/2 | 0.0020 | 12SAN/NAV |
| 1496.727 | 66812.5 | 3 p | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | $3d^4(^5D)7s$ | ⁴ D | 5/2 | 0.005 | 12SAN/NAV |
| 1496.763 | 66810.8 | 2 p | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | - | $3d^4(^5D)7s$ | ⁶ D | 3/2 | 0.005 | 12SAN/NAV |
| 1496.8461 | 66807.14 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^4(^5D)4f$ | ⁴ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1497.6546 | 66771.07 | 3 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)6d$ | ⁶ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1497.8338 | 66763.08 | 3 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)6d$ | ⁶ F | 9/2 | 0.0020 | 12SAN/NAV |
| 1498.2841 | 66743.02 | 4 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)6d$ | ⁶ G | 9/2 | 0.0020 | 12SAN/NAV |
| 1498.3573 | 66739.76 | 4 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | 3d ⁴ (⁵ D)6d 3d ⁴ (⁵ D)6d | ⁶ P | 7/2 | 0.0020 | 12SAN/NAV |
| 1498.4890 | 66733.89 | 3 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | _ | | ⁶ F ⁶ P | 7/2 | 0.0020 | 12SAN/NAV |
| 1498.5669 1499.3389 | 66730.42 | 4 | $3d^4(^5D)4p$ | z ⁶ D° z ⁶ D° | 3/2 5/2 | - | $3d^4(^5D)6d$ | | 5/2 | 0.0020 | 12SAN/NAV |
| 1499.3389 1499.4130 | 66696.06 66692.77 | 3 4 | $3d^4(^5D)4p$ $3d^4(^5D)4p$ | z ⁶ D° | 5/2 9/2 | _ | 3d ⁴ (⁵ D)7s 3d ⁴ (⁵ D)6d | ⁴D ⁶ G | 7/2 11/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1499.4130 | 66679.26 | 3 | $3d^{4}(^{5}D)4p$ | z ⁴ P° | 5/2 | _ | $3d^{4}(^{5}D)6d$ | ⁶ P | 7/2 | 0.0020 | 12SAN/NAV |
| 1500.3993 | 66648.92 | 3 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)6d$ | ⁶ G | 5/2 | 0.0020 | 12SAN/NAV |
| 1500.7258 | 66634.42 | 2 | $3d^{4}(^{5}D)4p$ | $z^{4}P^{o}$ | 3/2 | _ | $3d^4(^5D)7s$ | ⁴ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1500.7236 | 66605.72 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1502.0482 | 66575.76 | 3 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | _ | $3d^4(^5D)6d$ | ⁶ G | 7/2 | 0.0020 | 12SAN/NAV |
| 1502.533 | 66554.3 | 1 p* | $3d^5$ | a ² G | 7/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 5/2 | 0.005 | 12SAN/NAV |
| 1502.533 | 66554.3 | 1 p* | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 5/2 | 0.005 | 12SAN/NAV |
| 1502.570 | 66552.6 | 2 p* | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | r ² G° | 7/2 | 0.005 | 12SAN/NAV |
| 1502.570 | 66552.6 | 2 p* | $3d^4(^5D)4p$ | z ⁴ P ^o | 1/2 | _ | $3d^4(^5D)7s$ | ⁶ D | 3/2 | 0.005 | 12SAN/NAV |
| 1503.608 | 66506.7 | 3 a | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 504.513 | 66466.7 | 2 w | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)7s$ | ^{4}D | 5/2 | 0.005 | 12SAN/NAV |
| 505.3516 | 66429.66 | 2 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | w^4P^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1505.7678 | 66411.30 | 10 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1506.7958 | 66365.99 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1506.9197 | 66360.54 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1507.3499 | 66341.60 | 4 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 5/2 | _ | $3d^4(^5D)7s$ | ⁴ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1507.8830 | 66318.14 | 2 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1507.9477 | 66315.30 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1508.7287 | 66280.97 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1508.8830 | 66274.19 | 5 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t 4G° | 11/2 | 0.0020 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| | | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | |
|------------------------|----------------------------|----------------|--|--|-------------|---------|--|--|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 1433111 | Configuration | Term | | wavelength (Å) | Source of line |
| 1509.2805 | 66256.74 | 1 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | p ² F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1509.3459 | 66253.87 | 4 * | $3d^5$ | b ² H | 9/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | p ² F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1509.3459 | 66253.87 | 4 * | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 509.3459 | 66253.87 | 4 * | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)7s$ | ⁴ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1509.895 | 66229.8 | 4 p | $3d^4(^5D)4p$ | z ⁶ D ^o | 5/2 | - | $3d^4(^5D)7s$ | ⁶ D | 7/2 | 0.005 | 12SAN/NAV |
| 1509.914 | 66228.9 | 4 p | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | $3d^4(^5D)7s$ | ⁶ D | 1/2 | 0.005 | 12SAN/NAV |
| 1510.0100 | 66224.73 | 2 | $3d^5$ | b ² H c ⁴ D | 11/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | u ² H ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1510.118 1510.616 | 66220.0 66198.2 | 1 a 3 a | $3d^4(^3D)4s$ $3d^4(^3D)4s$ | с D c ⁴ D | 1/2 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ $3d^3(^2D)4s4p(^3P^0)$ | p ⁴ D ^o o ⁴ D ^o | 3/2 5/2 | 0.005 0.005 | 12SAN/NAV |
| 1510.010 | 66164.55 | 3 a 4 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 9/2 | 0.003 | 12SAN/NAV |
| 1511.6499 | 66152.88 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1511.7738 | 66147.46 | 4 * | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1511.7738 | 66147.46 | 4 * | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)7s$ | ⁴ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1511.8892 | 66142.41 | 4 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)7s$ | ⁶ D | 9/2 | 0.0020 | 12SAN/NAV |
| 1512.7380 | 66105.30 | 2 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1513.381 | 66077.2 | 2 c | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 1/2 | 0.005 | 12SAN/NAV |
| 1513.5517 | 66069.76 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^3(^2G)4s4p(^3P^o)$ | t ⁴ G° | 7/2 | 0.0020 | 12SAN/NAV |
| 1513.6374 | 66066.02 | 3 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)7s$ | ⁶ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1513.8159 | 66058.23 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1513.8954 | 66054.76 | 12 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1515.4254 | 65988.07 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 5/2 | 0.0020 | 12SAN/NAV |
| 1515.5946 | 65980.70 | 7 12 | $3d^4(^5D)4s$ | a ⁴ D b ² I | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° t ² H° | 5/2 | 0.0020 | 12SAN/NAV |
| 1516.0513 | 65960.83 65958.1 | 4 bl* | 3d ⁴ (¹ I)4s 3d ⁴ (⁵ D)4s | в 1 a ⁴ D | 13/2 1/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ $3d^3(^4\text{F})4s4p(^3\text{P}^{\text{o}})$ | и ⁴ D° | 11/2 1/2 | 0.0020 0.005 | 12SAN/NAV 12SAN/NAV |
| 1516.115 1516.115 | 65958.1 | 4 bl* | $3d^{5}$ | а Б b ⁴ F | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 9/2 | 0.005 | 12SAN/NAV |
| 1516.1799 | 65955.23 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 3/2 | 0.003 | 12SAN/NAV |
| 1516.3030 | 65949.88 | 12 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | _ | $3d^4(^5D)7s$ | ⁶ D | 9/2 | 0.0020 | 12SAN/NAV |
| 1516.602 | 65936.9 | 12 a | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ | t ² H ^o | 9/2 | 0.005 | 12SAN/NAV |
| 1517.8478 | 65882.76 | 2 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1517.9460 | 65878.50 | 1 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1518.0154 | 65875.48 | 2 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)7s$ | ⁶ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1518.486 | 65855.1 | 4 bh | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 1/2 | 0.005 | 12SAN/NAV |
| 1518.523 | 65853.5 | 4 bl | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)7s$ | ⁶ D | 5/2 | 0.005 | 12SAN/NAV |
| 1519.5430 | 65809.26 | 3 | $3d^4(^5D)4p$ | z ⁶ D° a ⁴ D | 1/2 | - | $3d^4(^5D)7s$ | ⁶ D u ⁴D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1520.0161 | 65788.78 65787.2 | 4 | 3d ⁴ (⁵ D)4s 3d ⁵ | a D b ⁴ F | 5/2 5/2 | _ | $3d^3(^4F)4s4p(^3P^o)$ $3d^3(^2G)4s4p(^3P^o)$ | u D t ⁴ F° | 3/2 5/2 | 0.0020 0.005 | 12SAN/NAV 12SAN/NAV |
| 1520.053 1520.4019 | 65772.08 | 1 p 5 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)7s$ | ⁶ D | 5/2 | 0.003 | 12SAN/NAV |
| 1520.8033 | 65754.72 | 4 | $3d^{4}(^{5}D)4s$ | a ⁴ D | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1521.070 | 65743.2 | 4 a | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | _ | $3d^4(^5D)7s$ | ⁶ D | 7/2 | 0.005 | 12SAN/NAV |
| 1521.6045 | 65720.10 | 5 | $3d^5$ | a ² D | 5/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1521.7954 | 65711.86 | 2 | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^3F2)4p$ | s ² D ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1522.2459 | 65692.41 | 3 | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | - | $3d^4(^5D)6d$ | ⁴ P | 5/2 | 0.0020 | 12SAN/NAV |
| 1522.7657 | 65669.98 | 3 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)7s$ | ⁶ D | 1/2 | 0.0020 | 12SAN/NAV |
| 1524.4896 | 65595.72 | 3 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)7s$ | ⁶ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1524.9019 | 65577.99 | 4 | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | - | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1525.3407 | 65559.12 | 3 | $3d^4(^5D)4p$ | z ⁴ F ^o z ⁴ F ^o | 5/2 | - | $3d^4(^5D)6d$ | ⁴ F ⁴ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1525.6509 1527.3108 | 65545.79 65474.56 | 11 7 | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4p | $z^{4}F^{o}$ | 9/2 7/2 | _ | 3d ⁴ (⁵ D)6d 3d ⁴ (⁵ D)6d | ⁴ D | 9/2 7/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1528.1213 | 65439.83 | 1 | $3d^{4}(^{5}D)4p$ | z ⁴ F° | 7/2 | _ | $3d^{4}(^{5}D)6d$ | ⁴ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1528.865 | 65408.0 | 2 a* | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1528.865 | 65408.0 | 2 a* | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D° | 3/2 | 0.005 | 12SAN/NAV |
| 1528.9723 | 65403.41 | 4 | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | _ | $3d^4(^5D)6d$ | ⁴ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1529.0604 | 65399.64 | 14 | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | _ | $3d^4(^5D)6d$ | ^{4}G | 11/2 | 0.0020 | 12SAN/NAV |
| 1530.1600 | 65352.64 | 14 * | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3F2)4p$ | s ² D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1530.1600 | 65352.64 | 14 * | $3d^4(^5D)4p$ | z ⁴ F ^o | 7/2 | - | $3d^4(^5D)6d$ | ⁴ G | 9/2 | 0.0020 | 12SAN/NAV |
| 1531.0211 | 65315.89 | 12 | $3d^4(^5D)4p$ | z ⁴ F ^o | 5/2 | - | $3d^4(^5D)6d$ | ⁴ G | 7/2 | 0.0020 | 12SAN/NAV |
| 1531.5565 | 65293.05 | 12 | $3d^4(^5D)4p$ | z^4F^0 | 3/2 | - | $3d^4(^5D)6d$ | ⁴ G | 5/2 | 0.0020 | 12SAN/NAV |
| 1534.101 | 65184.8 | 4 w | $3d^5$ | b ⁴ D | 7/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1534.408 | 65171.7 | 1 a | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1542.4910 | 64830.20 | 4 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1548.8955 1551.409 | 64562.13 64457.5 | 3 4 bh | $3d^4(^3D)4s$ $3d^4(^3D)4s$ | c ⁴ D b ² D | 7/2 5/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | q ⁴ D ^o q ² D ^o | 7/2 5/2 | 0.0020 0.005 | 12SAN/NAV 12SAN/NAV |
| | 0441/7 | 4 DN | эи (D)4S | υυ | 312 | _ | эи (Г)484P(Р) | ųν | 312 | 0.003 | 143AIN/INA |

Table 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | G |
|----------------------|----------------------------|----------------|--|--------------------------------------|-------------|---------|---|---|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 1552.3265 | 64419.44 | 4 | 3d ⁵ | b ⁴ D | 7/2 | _ | $3d^4(^3P2)4p$ | y ⁴ P ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1552.641 | 64406.4 | 3 c | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3P2)4p$ | y ⁴ P ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1553.1260 | 64386.28 | 4 * | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^5D)5p$ | ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1553.1260 | 64386.28 | 4 * | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | q^4D^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1553.280 | 64379.9 | 4 w | $3d^{5}$ | b ⁴ D | 3/2 | - | $3d^4(^3P2)4p$ | y ⁴ P ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1553.3808 | 64375.72 | 4 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^3P2)4p$ | y ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1556.2032 | 64258.96 | 3 | $3d^4(^5D)4p$ | z ⁴ F ^o | 7/2 | - | $3d^4(^5D)7s$ | ⁴ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1556.5406 | 64245.03 | 3 | $3d^4(^1D)4s$ | c ² D | 3/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | $p^{2}D^{o}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1557.0066 | 64225.80 | 3 | $3d^4(^3D)4s$ | b ² D | 3/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q^2D^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1557.325 | 64212.7 | 4 a | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | p^2D^o | 5/2 | 0.005 | 12SAN/NAV |
| 1557.4812 | 64206.23 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1558.1724 | 64177.75 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1558.871 | 64149.0 | 3 a | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | - | $3d^4(^5D)7s$ | ⁴ D | 5/2 | 0.005 | 12SAN/NAV |
| 1559.9358 | 64105.20 | 12 | $3d^4(^5D)4p$ | z ⁴ F ^o | 9/2 | - | $3d^4(^5D)7s$ | ⁴ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1560.4961 | 64082.19 | 1 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^5D)5p$ | ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1561.736 | 64031.3 | 9 bh* | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^4(^5D)5p$ | ⁴ D ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1561.736 | 64031.3 | 9 bh* | $3d^4(^1S)4s$ | a ² S | 1/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1561.776 | 64029.7 | 12 bl | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | - | $3d^4(^5D)7s$ | ⁴ D | 5/2 | 0.005 | 12SAN/NAV |
| 1563.2087 | 63970.98 | 9 | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | - | $3d^4(^5D)7s$ | ⁴ D s ⁴ F ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1564.088 | 63935.0 | 3 p | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | s F ⁴ D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1564.7446 | 63908.19 | 4 | $3d^4(^3F)4s$ | a ⁴ F d ⁴ F | 7/2 | - | $3d^4(^5D)5p$ | ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1565.2839 | 63886.17 63865.67 | 19 | 3d ⁴ (³ F)4s 3d ⁴ (³ F)4s | d F d ⁴ F | 9/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D° | 7/2 7/2 | 0.0020 | 12SAN/NAV |
| 1565.7865 | | 4 | $3d^{4}(^{3}F)4s$ $3d^{4}(^{3}F)4s$ | a ⁴ F | 7/2 5/2 | - | $3d^3(^4P)4s4p(^1P^0)$ $3d^4(^5D)5p$ | ⁴ D ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1567.0108 | 63815.77 | 4 | $3d^{4}(^{3}G)4s$ | a F b ⁴ G | | - | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | | 0.0020 | 12SAN/NAV |
| 1567.4121 | 63799.43 63793.3 | 4 19 bl | $3d^{4}(^{3}F)4s$ | d ⁴ F | 11/2 3/2 | _ | $3d^{3}(^{4}P)4s4p(^{1}P^{o})$ | ⁴ D ^o | 11/2 1/2 | 0.0020 0.005 | 12SAN/NAV |
| 1567.562 1567.683 | 63788.4 | 19 bi 1 w | $3d^4(^3P)4s$ | иг b ⁴ P | 1/2 | _ | $3d^{4}(^{5}D)5p$ | ⁴ P ^o | 3/2 | 0.005 | 12SAN/NAV 12SAN/NAV |
| 1567.8072 | 63783.35 | 1 w 1 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | p ² F ^o | 5/2 | 0.003 | 12SAN/NAV |
| 1568.4633 | 63756.67 | 9 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^{3}(^{4}P)4s4p(^{1}P^{o})$ | ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1568.528 | 63754.0 | 10 bh | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^{3}(^{4}P)4s4p(^{1}P^{o})$ | $^{4}D^{o}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1568.574 | 63752.17 | 19 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 5/2 | 0.002 | 12SAN/NAV |
| 1568.8974 | 63739.03 | 28 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1569.0992 | 63730.83 | 12 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1569.5076 | 63714.25 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1570.6921 | 63666.20 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 7/2 | 0.0020 | 12SAN/NAV |
| 1571.0155 | 63653.10 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 5/2 | 0.0020 | 12SAN/NAV |
| 1571.4184 | 63636.78 | 2 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | p ² F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1571.9016 | 63617.21 | 7 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1572.0029 | 63613.11 | 3 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | r ² G° | 7/2 | 0.0020 | 12SAN/NAV |
| 1572.3387 | 63599.53 | 2 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1572.5507 | 63590.95 | 2 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 3/2 | 0.0020 | 12SAN/NAV |
| 1573.3425 | 63558.95 | 1 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | r ² G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1577.908 | 63375.1 | 4 p | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | $r^{2}G^{o}$ | 9/2 | 0.005 | 12SAN/NAV |
| 1578.0509 | 63369.31 | 3 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | u ² H ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1578.434 | 63353.9 | 3 p* | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1578.434 | 63353.9 | 3 p* | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^5D)5p$ | $^{4}F^{o}$ | 7/2 | 0.005 | 12SAN/NAV |
| 1579.0328 | 63329.91 | 12 | $3d^5$ | $d^{2}G$ | 7/2 | _ | $3d^4(^5D)5f$ | 4 G $^{\rm o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1579.7490 | 63301.20 | 1 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | $p^{2}F^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1581.162 | 63244.63 | 12 bh | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 7/2 | 0.005 | 12SAN/NAV |
| 1581.210 | 63242.71 | 41 a | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 5/2 | 0.005 | 12SAN/NAV |
| 1581.6805 | 63223.89 | 14 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 3/2 | 0.0015 | 12SAN/NAV |
| 1584.545 | 63109.60 | 3 a | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^5D)5p$ | 4 P $^{\rm o}$ | 5/2 | 0.005 | 12SAN/NAV |
| 1584.8525 | 63097.35 | 1 * | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1584.8525 | 63097.35 | 1 * | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^1G2)4p$ | s ² G° | 7/2 | 0.0020 | 12SAN/NAV |
| 1584.9998 | 63091.49 | 3 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^1G2)4p$ | s ² G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1586.486 | 63032.39 | 3 p | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3P2)4p$ | v ² P ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1587.391 | 62996.45 | 12 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D ^o | 3/2 | 0.002 | 12SAN/NAV |
| 1589.945 | 62895.26 | 4 p | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | - | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.005 | 12SAN/NAV |
| 1590.630 | 62868.17 | 3 a | $3d^5$ | a ² D | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1590.9464 | 62855.67 | 4 | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | _ | $3d^4(^5D)6d$ | ⁴ P | 5/2 | 0.0020 | 12SAN/NAV |
| 1592.2290 | 62805.04 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1592.4371 | 62796.83 | 3 | $3d^5$ | a ² G | 9/2 | _ | $3d^4(^1G2)4p$ | r ² F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1593.3769 | 62759.79 | 9 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | Caumaa |
|------------------------|----------------------------|-------------|-----------------------------------|---------------------------------------|------------|---------|--|--|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 1593.4719 | 62756.05 | 5 | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | _ | 3d ⁴ (⁵ D)6d | ⁴ P | 3/2 | 0.0020 | 12SAN/NAV |
| 1593.9745 | 62736.26 | 12 | $3d^4(^5D)4p$ | z ⁴ D ^o | 7/2 | - | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1594.0416 | 62733.62 | 4 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^3(^2H)4s4p(^3P^0)$ | w ⁴ H ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1594.1561 | 62729.11 | 5 | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 3/2 | - | $3d^4(^5D)6d$ | ⁴ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1594.7962 | 62703.94 | 28 | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 7/2 | - | $3d^4(^5D)6d$ | ⁴ F | 9/2 | 0.0009 | 12SAN/NAV |
| 1594.9774 | 62696.81 | 7 2 | $3d^4(^5D)4p$ $3d^4(^3G)4s$ | z ⁴ D° b ² G | 7/2 | - | $3d^4(^5D)6d$ $3d^3(^2H)4s4p(^3P^0)$ | ⁴ P w ⁴ H ^o | 5/2 7/2 | 0.0020 | 12SAN/NAV |
| 1595.8790 1596.4790 | 62661.39 62637.84 | 12 | $3a^{(1)}4s$ $3d^{4}(^{5}D)4p$ | z ⁴ D° | 7/2 5/2 | _ | $3d^4(^5D)6d$ | W H | 7/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1590.4790 | 62602.90 | 5 bh | $3d^{4}(^{5}D)4p$ | z ⁴ D° | 5/2 | _ | $3d^{4}(^{5}D)6d$ | ⁴ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1598.123 | 62573.41 | 7 bl | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | _ | $3d^4(^5D)6d$ | ^{4}D | 5/2 | 0.005 | 12SAN/NAV |
| 1598.9927 | 62539.37 | 1 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^5D)5f$ | $^{4}D^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1601.5820 | 62438.26 | 4 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | r ² G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1602.2030 | 62414.06 | 3 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1602.2965 | 62410.42 | 4 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^4(^5D)5f$ | 6 G $^{\rm o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1602.656 | 62396.42 | 14 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^5D)5p$ | ⁴ D ^o | 7/2 | 0.002 | 12SAN/NAV |
| 1603.092 | 62379.45 | 2 w | $3d^34s^2$ | c ⁴ F | 3/2 | - | $3d^4(^5D)5f$ | ⁶ D ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1603.1512 | 62377.15 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1603.566 | 62361.01 | 1 p | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^4(^5D)5f$ | ⁴ G ^o | 9/2 | 0.005 | 12SAN/NAV |
| 1603.598 | 62359.77 | 1 p | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | - | $3d^4(^5D)6d$ | 4 G 4 G o | 7/2 | 0.005 | 12SAN/NAV |
| 1603.6772 1604.2374 | 62356.69 62334.91 | 7 2 | $3d^34s^2$ $3d^34s^2$ | c ⁴ F c ⁴ F | 5/2 5/2 | _ | 3d ⁴ (⁵ D)5f 3d ⁴ (⁵ D)5f | ⁶ F ^o | 7/2 3/2 | 0.0020 0.0020 | 12SAN/NAV |
| 1604.2374 | 62329.49 | 4 * | $3d^5$ | сг а ² F | 5/2 | _ | $3d^{4}(^{5}D)5p$ | $^{4}D^{o}$ | 3/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1604.3769 | 62329.49 | 4 * | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1604.7314 | 62315.72 | 12 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)5f$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1606.2149 | 62258.17 | 2 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^4(^5D)5f$ | $^{6}D^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1606.558 | 62244.87 | 4 a* | $3d^5$ | c ² F | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 3/2 | 0.005 | 12SAN/NAV |
| 1606.558 | 62244.87 | 4 a* | $3d^5$ | c ² F | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | $r^{2}G^{o}$ | 7/2 | 0.005 | 12SAN/NAV |
| 1606.6808 | 62240.12 | 11 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^5D)5p$ | ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1607.1537 | 62221.80 | 3 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^5D)5p$ | ⁴ D ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1607.7957 | 62196.96 | 2 | $3d^5$ | b ² H | 11/2 | - | $3d^4(^1G2)4p$ | s ² G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1608.2235 | 62180.41 | 3 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | $p^{2}F^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1608.3216 | 62176.62 | 3 9 | $3d^34s^2$ $3d^4(^1G1)4s$ | c ⁴ F c ² G | 5/2 | - | $3d^4(^5D)5f$ $3d^3(^2G)4s4p(^3P^0)$ | ⁶ G ^o r ² G ^o | 7/2 9/2 | 0.0020 | 12SAN/NAV |
| 1609.9515 1610.104 | 62113.67 62107.79 | 9 6 bh | $3d^{4}(^{1}G1)4s$ | c ² G | 9/2 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | u ² H° | 11/2 | 0.0020 0.005 | 12SAN/NAV 12SAN/NAV |
| 1610.104 | 62107.79 | 7 bl | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^{4}(^{5}D)5f$ | и п ⁴ F° | 9/2 | 0.005 | 12SAN/NAV |
| 1610.6099 | 62088.28 | 3 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1610.8755 | 62078.04 | 9 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1611.8681 | 62039.82 | 1 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | $p^{2}F^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1611.9133 | 62038.08 | 1 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^5D)5f$ | ⁶ H ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1612.8038 | 62003.82 | 7 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)5f$ | 4 G $^{\rm o}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1613.043 | 61994.63 | 7 bl | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 1/2 | 0.005 | 12SAN/NAV |
| 1613.0944 | 61992.65 | 9 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^5D)5f$ | ⁴ G ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1615.641 | 61894.94 | 4 bh | $3d^{5}$ | b ⁴ F | 9/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 9/2 | 0.005 | 12SAN/NAV |
| 1615.9979 | 61881.27 | 3 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^4(^5D)5f$ | ⁶ G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1616.4466 | 61864.09 | 1 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^4(^5D)5f$ | ⁴ H ^o ⁴ H ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1617.2818 | 61832.14 | 2 | $3d^34s^2$ $3d^5$ | c ⁴ F c ² F | 7/2 | - | $3d^4(^5D)5f$ $3d^3(^2G)4s4p(^3P^0)$ | u ² H° | 7/2 | 0.0020 | 12SAN/NAV |
| 1617.622 1618.0670 | 61819.14 61802.14 | 2 w 12 | $3a^5$ | с F b ⁴ F | 7/2 9/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | и н х ⁶ D° | 9/2 9/2 | 0.005 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1619.451 | 61749.32 | 4 bh | $3d^34s^2$ | ог c ⁴ F | 9/2 | _ | $3d^{4}(^{5}D)5f$ | ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1619.493 | 61747.72 | 3 p | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^3P2)4p$ | y ⁴ S ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1619.9562 | 61730.06 | 12 P | $3d^4(^1I)4s$ | b ² I | 13/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | u ² H° | 11/2 | 0.0016 | 12SAN/NAV |
| 1620.4905 | 61709.71 | 1 | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | r ² G ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1621.5919 | 61667.80 | 12 * | $3d^5$ | b ⁴ F | 9/2 | - | $3d^4(^5D)5p$ | $^{4}F^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1621.5919 | 61667.80 | 12 * | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)5f$ | 6 D $^{\rm o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1621.7540 | 61661.63 | 3 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)5f$ | ⁶ G ^o | 11/2 | 0.0020 | 12SAN/NAV |
| 1625.2608 | 61528.59 | 3 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^5D)5p$ | ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1625.7453 | 61510.25 | 3 | $3d^{5}$ | b ⁴ F | 5/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1625.8318 | 61506.98 | 4 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^5D)5f$ | ⁴ H ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1626.7532 | 61472.14 | 7 | $3d^4(^1G1)4s$ | c ² G | 9/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^0)$ | w ⁴ H° | 9/2 | 0.0020 | 12SAN/NAV |
| 1626.8670 | 61467.84 | 5 | $3d^4(^1I)4s$ | b ² I | 11/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | u ² H° | 9/2 | 0.0020 | 12SAN/NAV |
| 1628.3640 | 61411.33 | 3 | $3d^{5}$ | b ⁴ F z ⁴ D° | 3/2 3/2 | - | 3d ⁴ (⁵ D)5p 3d ⁴ (⁵ D)7s | ⁴ F ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1630.8183 | 61318.91 | 4 | $3d^4(^5D)4p$ | 7 7130 | 2/7 | _ | 3d+(3D)7e | ^{4}D | 5/2 | 0.0020 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | G |
|------------------------|----------------------------|----------------|--|--|------------|---------|---|---|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 1632.2974 | 61263.35 | 12 | $3d^4(^5D)4p$ | z ⁴ D° | 7/2 | _ | 3d ⁴ (⁵ D)7s | ⁴ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1633.392 | 61222.29 | 3 a | $3d^4(^5D)4p$ | z ⁴ D° | 1/2 | - | $3d^4(^5D)7s$ | ^{4}D | 3/2 | 0.005 | 12SAN/NAV |
| 1634.1787 | 61192.82 | 12 | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | - | $3d^4(^5D)7s$ | ⁴ D | 5/2 | 0.0009 | 12SAN/NAV |
| 1635.232 | 61153.40 | 5 a | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1635.5677 | 61140.85 | 4 | $3d^4(^5D)4p$ | z ⁴ D ^o | 3/2 | _ | $3d^4(^5D)7s$ | ⁴ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1636.343 | 61111.88 | 3 a | $3d^5$ | b ⁴ F | 9/2 | - | $3d^4(^5D)5p$ | ⁶ D° | 7/2 | 0.005 | 12SAN/NAV |
| 1638.012 | 61049.61 | 3 w | $3d^4(^1D)4s$ | c ² D | 3/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^0)$ | r ⁴ G° | 5/2 | 0.005 | 12SAN/NAV |
| 1638.1323 | 61045.13 | 3 | $3d^5$ | b ⁴ D z ⁴ D° | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° ⁴ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1638.4345 | 61033.87 61018.51 | 4 12 | $3d^4(^5D)4p$ $3d^4(^3P)4s$ | c ⁴ P | 7/2 5/2 | _ | 3d ⁴ (⁵ D)7s 3d ³ (⁴ P)4s4p(¹ P ^o) | ⁴ P ^o | 5/2 5/2 | 0.0020 0.0019 | 12SAN/NAV |
| 1638.8470 1638.9485 | 61014.73 | 4 * | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | _ | $3d^{4}(^{5}D)5f$ | ⁴ F ^o | 7/2 | 0.0019 | 12SAN/NAV 12SAN/NAV |
| 1638.9485 | 61014.73 | 4 * | $3d^{4}(^{5}D)4p$ | z ⁴ D° | 5/2 | _ | $3d^{4}(^{5}D)7s$ | ⁴ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1639.318 | 61000.98 | 3 p | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^5D)5p$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1639.390 | 60998.30 | 3 р 4 р | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^{4}(^{5}D)5f$ | ⁴ F ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1639.4632 | 60995.57 | 12 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)5d$ | ⁶ S | 5/2 | 0.0008 | 12SAN/NAV |
| 1640.8635 | 60943.52 | 5 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}P^{o}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1641.9468 | 60903.31 | 12 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ S | 5/2 | 0.0020 | 12SAN/NAV |
| 1644.6677 | 60802.56 | 10 | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 3/2 | _ | $3d^4(^5D)7s$ | $^{6}\mathrm{D}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1645.7554 | 60762.37 | 25 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^{4}(^{5}D)5d$ | ⁶ S | 5/2 | 0.0006 | 12SAN/NAV |
| 1648.9989 | 60642.85 | 12 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^4P^{o}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1651.667 | 60544.89 | 4 bh | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | 4 P $^{\rm o}$ | 1/2 | 0.005 | 12SAN/NAV |
| 1651.719 | 60542.99 | 11 bl | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F ^o | 9/2 | 0.005 | 12SAN/NAV |
| 1653.0068 | 60495.82 | 2 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | - | $3d^4(^5D)5d$ | 4 G | 5/2 | 0.0020 | 12SAN/NAV |
| 1654.2651 | 60449.80 | 2 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | - | $3d^3(^2G)4s4p(^3P^o)$ | t ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1654.634 | 60436.33 | 3 p | $3d^4(^5D)4p$ | z ⁶ F ^o | 1/2 | - | $3d^4(^5D)5d$ | ⁶ F | 3/2 | 0.005 | 12SAN/NAV |
| 1655.5062 | 60404.49 | 9 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1655.6262 | 60400.11 | 4 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1656.3324 | 60374.35 | 5 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | - | $3d^4(^5D)5d$ | ⁶ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1656.4476 | 60370.16 | 12 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | - | $3d^4(^5D)5d$ | ⁴ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1656.8736 | 60354.63 | 11 | $3d^4(^5D)4p$ | z ⁶ F ^o c ⁴ P | 3/2 | - | $3d^4(^5D)5d$ | ⁶ F ⁴ P ^o | 3/2 | 0.0014 | 12SAN/NAV |
| 1657.2624 | 60340.47 60327.05 | 7 | $3d^4(^3P)4s$ $3d^4(^3D)4s$ | c P c ⁴ D | 1/2 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 3/2 5/2 | 0.0008 0.0020 | 12SAN/NAV |
| 1657.6311 1657.901 | 60327.03 | 3 4 a | $3d^{4}(^{3}P)4s$ | c ⁴ P | 1/2 | _ | $3d^{3}(^{4}P)4s4p(^{1}P^{o})$ | ι Γ ⁴ P ^o | 1/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1658.1330 | 60308.79 | 4 a 19 | $3d^{4}(^{3}F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3P2)4p$ | t ² D ^o | 5/2 | 0.003 | 12SAN/NAV |
| 1658.5896 | 60292.19 | 7 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | 7/2 | _ | $3d^4(^5D)5d$ | 6D | 5/2 | 0.0020 | 12SAN/NAV |
| 1658.9400 | 60279.46 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1659.2258 | 60269.07 | 12 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1660.2543 | 60231.74 | 11 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 9/2 | 0.0020 | 12SAN/NAV |
| 1660.591 | 60219.52 | 3 a | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 3/2 | 0.005 | 12SAN/NAV |
| 1661.6192 | 60182.26 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1662.1572 | 60162.78 | 9 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | _ | $3d^4(^5D)5d$ | ^{6}D | 7/2 | 0.0020 | 12SAN/NAV |
| 1662.2634 | 60158.94 | 18 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 7/2 | 0.0006 | 12SAN/NAV |
| 1664.3878 | 60082.15 | 3 | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1665.1718 | 60053.864 | 36 | $3d^4(^5D)4p$ | z ⁶ F° | 1/2 | - | $3d^4(^5D)5d$ | ⁶ G | 3/2 | 0.0003 | 12SAN/NAV |
| 1665.9936 | 60024.240 | 53 | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 3/2 | - | $3d^4(^5D)5d$ | ⁶ G | 5/2 | 0.0003 | 12SAN/NAV |
| 1666.9195 | 59990.90 | 20 | $3d^4(^5D)4p$ | z ⁶ F ^o | 9/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 9/2 | 0.0010 | 12SAN/NAV |
| 1667.0832 | 59985.01 | 4 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | - | $3d^4(^5D)5d$ | ⁶ P | 5/2 | 0.0020 | 12SAN/NAV |
| 1667.4447 | 59972.00 | 12 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | - | $3d^4(^5D)5d$ | ⁶ G | 3/2 | 0.0015 | 12SAN/NAV |
| 1667.61224 | 59965.979 | 70 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ G | 7/2 | 0.00019 | 12SAN/NAV |
| 1668.0654 | 59949.688 | 40 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | - | $3d^4(^5D)5d$ | ⁶ F | 11/2 | 0.0003 | 12SAN/NAV |
| 1668.2067 | 59944.61 | 14 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | - | $3d^4(^5D)5d$ | ⁶ D | 9/2 | 0.0006 | 12SAN/NAV |
| 1668.8475 | 59921.59 | 2 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | - | $3d^4(^5D)5d$ | ⁶ F ⁶ G | 7/2 | 0.0020 | 12SAN/NAV |
| 1669.7535 1669.788 | 59889.08 59887.84 | 14 5 p | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4p | z ⁶ F ^o z ⁶ F ^o | 5/2 | _ | 3d ⁴ (⁵ D)5d 3d ⁴ (⁵ D)5d | ⁶ P | 5/2 7/2 | 0.0015 0.005 | 12SAN/NAV 12SAN/NAV |
| 1669.788 1669.87997 | 59887.84 59884.544 | 5 p 91 | $3a^{4}(^{5}D)4p$ $3d^{4}(^{5}D)4p$ | z ⁶ F° | 7/2 7/2 | _ | $3d^{4}(^{5}D)5d$ $3d^{4}(^{5}D)5d$ | ⁶ G | 9/2 | 0.005 | 12SAN/NAV |
| 1672.73767 | 59884.544 | 120 | $3d^{4}(^{5}D)4p$ $3d^{4}(^{5}D)4p$ | z Fo | 9/2 | _ | $3d^{4}(^{5}D)5d$ | ⁶ G | 11/2 | 0.00015 | 12SAN/NAV |
| 1672.73767 | 59782.237 | 17 | $3a^{(1)}4p$ $3d^{4}(^{5}D)4p$ | z ⁶ F° | 912 7/2 | _ | $3d^{4}(^{5}D)5d$ | ⁶ G | 7/2 | 0.00011 | 12SAN/NAV |
| 1676.15276 | 59660.433 | 170 | $3d^{4}(^{5}D)4p$ | z F z ⁶ F° | 11/2 | _ | $3d^{4}(^{5}D)5d$ | ⁶ G | 13/2 | 0.0003 | 12SAN/NAV |
| 1676.13276 | 59647.22 | 170 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | 9/2 | _ | $3d^{4}(^{5}D)5d$ | ⁶ G | 9/2 | 0.00009 | 12SAN/NAV |
| 1677.6985 | 59647.22 59605.47 | 7 | $3d^{4}(^{3}D)4s$ | c ⁴ D | 7/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | z ⁶ S° | 5/2 | 0.0007 | 12SAN/NAV |
| 1678.976 | 59560.11 | 3 a* | $3d^{4}(^{3}D)4s$ | c ⁴ D | 5/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | $z^{6}S^{0}$ | 5/2 | 0.0020 | 12SAN/NAV |
| 1678.976 | 59560.11 | 3 a* | $3d^{4}(^{1}G1)4s$ | c ² G | 7/2 | _ | $3d^{4}(^{1}G2)4p$ | r ² F° | 5/2 | 0.005 | 12SAN/NAV |
| 1680.8078 | 59495.20 | 6 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | _ | $3d^4(^5D)5d$ | ⁶ G | 11/2 | 0.0020 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | |
|------------------------|----------------------------|----------------|--|---------------------------------------|-------------|---------|---|--|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 143311 | Configuration | Term | | wavelength (Å) | Source of line |
| 1683.714 | 59392.51 | 4 a | 3d ⁴ (³ F)4s | a ⁴ F | 3/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 1/2 | 0.005 | 12SAN/NAV |
| 1685.3937 | 59333.32 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1687.0195 | 59276.14 | 31 | $3d^4(^1F)4s$ | d ² F | 7/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | p^2D^o | 5/2 | 0.0009 | 12SAN/NAV |
| 1687.099 | 59273.34 | 3 p | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^3F2)4p$ | v ⁴ F° | 5/2 | 0.005 | 12SAN/NAV |
| 1687.591 | 59256.06 | 3 p | $3d^4(^1F)4s$ | d ² F | 5/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | p^2D^o | 5/2 | 0.005 | 12SAN/NAV |
| 1688.4205 | 59226.95 | 24 | 3d ⁴ (¹ F)4s 3d ⁴ (³ H)4s | d ² F a ² H | 5/2 9/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ $3d^4(^3F2)4p$ | p ² D ^o u ² G ^o | 3/2 7/2 | 0.0013 | 12SAN/NAV |
| 1690.0269 | 59170.66 59136.34 | 5 3 | $3d^{4}(^{5}D)4p$ | ан z ⁶ P° | 5/2 | _ | $3d^{4}(^{5}D)5d$ | u G ⁶ D | 7/2 | 0.0020 0.0020 | 12SAN/NAV |
| 1691.0077 1692.3489 | 59089.47 | 6 | $3d^{4}(^{3}F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D° | 5/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1692.4984 | 59084.25 | 5 | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | _ | $3d^4(^5D)5d$ | √ D ⁴ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1692.8946 | 59070.42 | 4 | $3d^5$ | $a^{2}F$ | 7/2 | _ | $3d^4(^3P2)4p$ | t ² D° | 5/2 | 0.0020 | 12SAN/NAV |
| 1693.0724 | 59064.22 | 14 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)5d$ | ^{6}D | 9/2 | 0.0028 | 12SAN/NAV |
| 1693.620 | 59045.12 | 1 p | $3d^4(^3F)4s$ | e ² F | 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 3/2 | 0.005 | 12SAN/NAV |
| 1694.1017 | 59028.33 | 9 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 5/2 | 0.0011 | 12SAN/NAV |
| 1694.462 | 59015.78 | 5 bl | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)5d$ | ^{6}D | 3/2 | 0.005 | 12SAN/NAV |
| 1694.9414 | 58999.09 | 11 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.0007 | 12SAN/NAV |
| 1695.0507 | 58995.29 | 16 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 7/2 | 0.0008 | 12SAN/NAV |
| 1695.5107 | 58979.28 | 5 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | w^4P^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1695.8883 | 58966.15 | 1 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^3(^2G)4s4p(^3P^o)$ | $p^{2}F^{o}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1696.881 | 58931.65 | 5 p | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ P° | 3/2 | 0.005 | 12SAN/NAV |
| 1696.914 | 58930.51 | 5 p | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 11/2 | 0.005 | 12SAN/NAV |
| 1697.115 | 58923.53 | 13 | $3d^4(^5D)4p$ | $z_{4}^{6}P^{o}$ | 5/2 | - | $3d^4(^5D)5d$ | ⁶ D | 3/2 | 0.003 | 12SAN/NAV |
| 1697.420 | 58912.94 | 9 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ P ^o | 5/2 | 0.003 | 12SAN/NAV |
| 1697.478 | 58910.93 | 34 bl | $3d^{5}$ | a ² D | 5/2 | - | $3d^4(^3F2)4p$ | v ⁴ F ^o | 3/2 | 0.005 | 12SAN/NAV |
| 1698.1572 | 58887.36 | 5 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | - | $3d^4(^5D)5d$ | ⁶ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1698.7215 | 58867.80 | 3 | $3d^4(^3D)4s$ | c ⁴ D a ² H | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ P° u ² G° | 5/2 | 0.0020 | 12SAN/NAV |
| 1699.8540 1700.0031 | 58828.58 58823.42 | 5 15 | $3d^4(^3H)4s$ $3d^4(^5D)4p$ | ан z ⁶ P° | 11/2 7/2 | _ | 3d ⁴ (³ F2)4p 3d ⁴ (⁵ D)5d | u ² G° ⁶ F | 9/2 9/2 | 0.0020 0.0007 | 12SAN/NAV 12SAN/NAV |
| 1700.0031 | 58819.90 | 51 a | $3d^{4}(^{3}D)4s$ | c ⁴ D | 3/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | w ⁴ P ^o | 5/2 | 0.0007 | 12SAN/NAV |
| 1700.103 | 58805.94 | 51 a | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | w ⁴ P ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 1700.3000 | 58772.26 | 5 p | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ P ^o | 1/2 | 0.005 | 12SAN/NAV |
| 1701.585 | 58768.74 | 8 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | _ | $3d^4(^5D)5d$ | 6 _F | 3/2 | 0.003 | 12SAN/NAV |
| 1702.0089 | 58754.099 | 19 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 7/2 | 0.0005 | 12SAN/NAV |
| 1703.1082 | 58716.18 | 3 | $3d^4(^1D)4s$ | $c^{2}D$ | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1704.2385 | 58677.23 | 8 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 5/2 | 0.0014 | 12SAN/NAV |
| 1704.591 | 58665.10 | 4 p | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 1/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 3/2 | 0.005 | 12SAN/NAV |
| 1704.8065 | 58657.68 | 11 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | - | $3d^4(^5D)5d$ | ⁶ P | 3/2 | 0.0020 | 12SAN/NAV |
| 1705.7172 | 58626.365 | 37 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)5d$ | ⁶ P | 5/2 | 0.0005 | 12SAN/NAV |
| 1705.7954 | 58623.678 | 39 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁶ P | 7/2 | 0.0003 | 12SAN/NAV |
| 1706.0113 | 58616.26 | 5 | $3d^4(^3D)4s$ | b ² D | 5/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1706.1601 | 58611.15 | 8 | $3d^4(^3F)4s$ | $b^2 F$ | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | $s^{2}F^{o}$ | 7/2 | 0.0014 | 12SAN/NAV |
| 1707.4916 | 58565.44 | 7 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁶ P | 3/2 | 0.0020 | 12SAN/NAV |
| 1708.1174 | 58543.99 | 3 | $3d^4(^1D)4s$ | $c^{2}D$ $z^{6}P^{o}$ | 5/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D ^o ⁴ S | 3/2 | 0.0020 | 12SAN/NAV |
| 1708.6419 | 58526.01 | 6 | $3d^4(^5D)4p$ $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | 3d ⁴ (⁵ D)5d 3d ⁴ (⁵ D)5d | ⁶ F | 3/2 | 0.0020 | 12SAN/NAV |
| 1709.0918 1709.9084 | 58510.61 58482.66 | 5 22 | $3d^{4}(^{5}D)4p$ | z P z ⁶ P° | 1/2 7/2 | _ | $3d^{4}(^{5}D)5d$ | F ⁶ P | 3/2 7/2 | 0.0020 0.0006 | 12SAN/NAV 12SAN/NAV |
| 1710.1261 | 58475.22 | 11 | $3d^5$ | a ² F | 5/2 | _ | $3d^{4}(^{3}F2)4p$ | w ⁴ G° | 5/2 | 0.0000 | 12SAN/NAV |
| 1710.1281 | 58475.13 | 12 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^3F2)4p$ | t ² F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1711.2235 | 58437.72 | 10 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3F2)4p$ | w ⁴ G° | 11/2 | 0.0008 | 12SAN/NAV |
| 1711.3398 | 58433.75 | 12 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | _ | $3d^4(^5D)5d$ | 4S | 3/2 | 0.0014 | 12SAN/NAV |
| 1712.0686 | 58408.87 | 5 | $3d^4(^5D)4p$ | z ⁴ P° | 3/2 | _ | $3d^4(^5D)5d$ | $^{6}\mathrm{D}$ | 3/2 | 0.0020 | 12SAN/NAV |
| 1712.132 | 58406.71 | 4 a | $3d^4(^5D)4p$ | z ⁶ F ^o | 5/2 | _ | $3d^4(^5D)6s$ | ^{6}D | 7/2 | 0.005 | 12SAN/NAV |
| 1712.5288 | 58393.18 | 13 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ P | 5/2 | 0.0012 | 12SAN/NAV |
| 1712.9107 | 58380.16 | 5 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | _ | $3d^4(^5D)6s$ | ^{6}D | 5/2 | 0.0020 | 12SAN/NAV |
| 1713.369 | 58364.54 | 4 a | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)5d$ | ^{4}D | 7/2 | 0.005 | 12SAN/NAV |
| 1713.707 | 58353.03 | 3 p | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^3F2)4p$ | w ⁴ G° | 9/2 | 0.005 | 12SAN/NAV |
| 1713.9279 | 58345.51 | 4 | $3d^4(^5D)4p$ | z ⁶ F ^o | 1/2 | - | $3d^4(^5D)6s$ | ⁶ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1714.631 | 58321.59 | 5 bh | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1715.1636 | 58303.48 | 11 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 3/2 | - | $3d^4(^5D)5d$ | ⁶ F | 5/2 | 0.0019 | 12SAN/NAV |
| 1715.9831 | 58275.63 | 14 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)5d$ | ⁶ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1715.9840 | 58275.60 | 11 | $3d^4(^5D)4p$ | z ⁶ F° | 1/2 | - | $3d^4(^5D)6s$ | ⁶ D | 1/2 | 0.0010 | 12SAN/NAV |
| 1716.3366 | 58263.63 | 17 11 | $3d^4(^5D)4p$ $3d^4(^3D)4s$ | z ⁶ F° b ² D | 3/2 5/2 | - | 3d ⁴ (⁵ D)6s 3d ³ (⁴ P)4s4p(³ P ^o) | ⁶ D u ² P⁰ | 3/2 3/2 | 0.0007 0.0015 | 12SAN/NAV |
| 1716.4490 | 58259.81 | 11 | 3a (*11)4s | n ~I) | 3/2 | _ | 10 (P)4(4n(P) | 11 ~P~ | 3/7 | 0.0015 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | G |
|------------------------|----------------------------|----------------|--|---------------------------------------|------------|---------|---|---|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 1716.629 | 58253.71 | 16 bl | 3d ⁴ (⁵ D)4p | z ⁴ P ^o | 3/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 3/2 | 0.005 | 12SAN/NAV |
| 1716.8845 | 58245.036 | 20 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | _ | $3d^4(^5D)6s$ | $^{6}\mathrm{D}$ | 5/2 | 0.0005 | 12SAN/NAV |
| 1717.6290 | 58219.79 | 17 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | - | $3d^4(^5D)6s$ | $^{6}\mathrm{D}$ | 7/2 | 0.0007 | 12SAN/NAV |
| 1718.3985 | 58193.72 | 11 | $3d^4(^5D)4p$ | z ⁶ F ^o | 3/2 | - | $3d^4(^5D)6s$ | ^{6}D | 1/2 | 0.0008 | 12SAN/NAV |
| 1718.4715 | 58191.25 | 13 | $3d^5$ | b ² H | 9/2 | - | $3d^4(^3F2)4p$ | u ² G° | 7/2 | 0.0017 | 12SAN/NAV |
| 1718.6273 | 58185.97 | 13 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | - | $3d^4(^5D)6s$ | ⁶ D | 9/2 | 0.0007 | 12SAN/NAV |
| 1718.9348 | 58175.56 | 7 | $3d^4(^5D)4p$ | $z^4 P^0$ | 1/2 | - | $3d^4(^5D)5d$ | ⁴ S | 3/2 | 0.0018 | 12SAN/NAV |
| 1719.1687 | 58167.65 | 9 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)5d$ | ⁶ D | 5/2 | 0.0010 | 12SAN/NAV |
| 1719.7294 | 58148.68 | 4 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)5d$ | ⁴ G | 7/2 | 0.0020 | 12SAN/NAV |
| 1719.8593 | 58144.29 | 4 | $3d^4(^5D)4p$ | z ⁴ P° b ⁴ G | 5/2 | - | $3d^4(^5D)5d$ | ⁴ F t ² G° | 7/2 | 0.0020 | 12SAN/NAV |
| 1720.192 1720.3265 | 58133.05 | 5 p | 3d ⁴ (³ G)4s 3d ⁴ (⁵ D)4p | z ⁶ F° | 9/2 | - | 3d ³ (⁴ F)4s4p(³ P ^o) 3d ⁴ (⁵ D)6s | t -G. 6D | 7/2 3/2 | 0.005 | 12SAN/NAV |
| | 58128.501 | 22 | $3d^{4}(^{5}D)4p$ | z ⁶ D ^o | 5/2 | - | $3d^{4}(^{5}D)5d$ | ⁶ D | | 0.0005 | 12SAN/NAV |
| 1722.2705 1722.4127 | 58062.89 58058.095 | 12 36 | 3a (D)4p $3d^4(^5\text{D)}4p$ | z ⁶ F° | 5/2 7/2 | _ | $3d^{4}(^{5}D)6s$ | ⁶ D | 3/2 5/2 | 0.0009 0.0003 | 12SAN/NAV |
| 1722.4127 | 58050.47 | 9 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5d$ | ^{6}D | 9/2 | 0.0003 | 12SAN/NAV 12SAN/NAV |
| 1723.1155 | 58034.415 | 34 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 5/2 | _ | $3d^{4}(^{5}D)5d$ | ⁶ F | 7/2 | 0.0017 | 12SAN/NAV |
| 1723.1133 | 58031.54 | 4 w | $3d^5$ | b ² H | 9/2 | _ | $3d^4(^3F2)4p$ | u ² G° | 9/2 | 0.005 | 12SAN/NAV |
| 1723.5606 | 58019.43 | 14 | $3d^4(^5D)4p$ | z ⁴ P° | 3/2 | _ | $3d^4(^5D)5d$ | 6 _Р | 5/2 | 0.003 | 12SAN/NAV |
| 1724.66008 | 57982.440 | 58 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | _ | $3d^4(^5D)6s$ | $^{6}\mathrm{D}$ | 7/2 | 0.00011 | 12SAN/NAV |
| 1724.6867 | 57981.545 | 30 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5d$ | ^{6}D | 7/2 | 0.0004 | 12SAN/NAV |
| 1724.851 | 57976.02 | 6 w | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3F2)4p$ | t ² F° | 7/2 | 0.005 | 12SAN/NAV |
| 1725.4003 | 57957.56 | 10 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 5/2 | 0.0017 | 12SAN/NAV |
| 1725.563 | 57952.10 | 6 bl* | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 3/2 | 0.005 | 12SAN/NAV |
| 1725.563 | 57952.10 | 6 bl* | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5d$ | ^{4}D | 5/2 | 0.005 | 12SAN/NAV |
| 1726.1015 | 57934.02 | 14 | $3d^5$ | b ² H | 11/2 | _ | $3d^4(^3F2)4p$ | u ² G° | 9/2 | 0.0009 | 12SAN/NAV |
| 1726.4844 | 57921.17 | 3 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 5/2 | _ | $3d^4(^5D)5d$ | $^{6}\mathrm{D}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1726.5490 | 57919.00 | 6 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 3/2 | _ | $3d^4(^5D)5d$ | ⁴ S | 3/2 | 0.0020 | 12SAN/NAV |
| 1727.14769 | 57898.928 | 86 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | _ | $3d^4(^5D)6s$ | $^{6}\mathrm{D}$ | 9/2 | 0.00013 | 12SAN/NAV |
| 1727.3722 | 57891.40 | 6 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 5/2 | - | $3d^4(^5D)5d$ | ^{4}D | 5/2 | 0.0020 | 12SAN/NAV |
| 1727.7029 | 57880.32 | 5 | $3d^34s^2$ | c ⁴ F | 3/2 | - | $3d^4(^5D)6p$ | ⁴ D ^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1727.7750 | 57877.91 | 15 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)5d$ | ⁴ D | 7/2 | 0.0006 | 12SAN/NAV |
| 1727.9044 | 57873.57 | 20 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)5d$ | ⁶ D | 5/2 | 0.0009 | 12SAN/NAV |
| 1728.22303 | 57862.902 | 95 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)5d$ | ⁶ F | 11/2 | 0.00012 | 12SAN/NAV |
| 1728.37303 | 57857.880 | 65 | $3d^4(^5D)4p$ | $z^{6}D^{o}$ | 9/2 | - | $3d^4(^5D)5d$ | ⁶ D | 9/2 | 0.00017 | 12SAN/NAV |
| 1728.5985 | 57850.33 | 6 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)5d$ | ⁶ D | 3/2 | 0.0020 | 12SAN/NAV |
| 1728.6888 | 57847.31 | 4 | $3d^5$ | a ² F | 5/2 | - | $3d^4(^3P2)4p$ | v ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1729.710 | 57813.16 | 6 bl | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | - | $3d^4(^5D)5d$ | ⁶ D | 5/2 | 0.005 | 12SAN/NAV |
| 1729.773 | 57811.05 | 8 p | $3d^34s^2$ | c ⁴ F z ⁶ D° | 5/2 | - | $3d^4(^5D)6p$ | ⁴ D ^o ⁶ F | 5/2 | 0.005 | 12SAN/NAV |
| 1729.81412 | 57809.680 | 76 | $3d^4(^5D)4p$ $3d^4(^3D)4s$ | b ² D | 7/2 | - | $3d^4(^5D)5d$ $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 9/2 | 0.00014 | 12SAN/NAV |
| 1730.2870 | 57793.88 | 6 * 6 * | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 5/2 9/2 | - | $3d^{4}(^{5}D)5d$ | т Б ⁴ G | 3/2 9/2 | 0.0020 0.0020 | 12SAN/NAV |
| 1730.2870 1730.4353 | 57793.88 57788.93 | 13 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 9/2 | _ | $3d^{4}(^{5}D)5d$ | ⁶ D | 9/2 7/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1730.4333 | 57767.11 | 12 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 1/2 | _ | $3d^{4}(^{5}D)5d$ | ⁶ F | 3/2 | 0.0012 | 12SAN/NAV |
| 1731.0007 | 57762.97 | 13 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ P | 7/2 | 0.0008 | 12SAN/NAV |
| 1731.5459 | 57751.86 | 5 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 9/2 | 0.0020 | 12SAN/NAV |
| 1731.7575 | 57744.81 | 15 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 5/2 | 0.0014 | 12SAN/NAV |
| 1731.8914 | 57740.34 | 6 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1732.0722 | 57734.314 | 26 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 9/2 | 0.0005 | 12SAN/NAV |
| 1732.8503 | 57708.39 | 11 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 3/2 | 0.0011 | 12SAN/NAV |
| 1732.9581 | 57704.80 | 6 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ P | 3/2 | 0.0020 | 12SAN/NAV |
| 1733.0125 | 57702.99 | 6 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)6p$ | $^{4}\mathrm{D^{o}}$ | 7/2 | 0.0020 | 12SAN/NAV |
| 1733.1016 | 57700.02 | 7 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^3F2)4p$ | u ² G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1733.1650 | 57697.91 | 6 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 7/2 | 0.0020 | 12SAN/NAV |
| 1733.2425 | 57695.33 | 10 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 3/2 | 0.0009 | 12SAN/NAV |
| 1733.7059 | 57679.910 | 16 * | $3d^5$ | b ² S | 1/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s 4F° | 3/2 | 0.0006 | 12SAN/NAV |
| 1733.7059 | 57679.910 | 16 * | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁶ F | 7/2 | 0.0006 | 12SAN/NAV |
| 1733.8980 | 57673.52 | 6 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)5d$ | ⁶ P | 5/2 | 0.0020 | 12SAN/NAV |
| 1734.1971 | 57663.57 | 8 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 5/2 | 0.0017 | 12SAN/NAV |
| 1734.2856 | 57660.63 | 13 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^5D)6p$ | ⁴ D ^o | 3/2 | 0.0009 | 12SAN/NAV |
| 1734.469 | 57654.53 | 6 bh* | $3d^5$ | a ² F | 5/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1734.469 | 57654.53 | 6 bh* | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)5d$ | ⁶ G | 7/2 | 0.005 | 12SAN/NAV |
| 1734.5096 | 57653.18 | 10 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^3F2)4p$ | v ⁴ F ^o | 7/2 | 0.0014 | 12SAN/NAV |
| 1735.0389 | 57635.595 | 19 | $3d^{5}$ | b ⁴ F | 9/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F ^o | 7/2 | 0.0006 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | r | lassifi | ication | | | Uncertainty of observed | |
|------------------------|----------------------------|---------------|--------------------------------|---|------------|---------|---|-------------------------------------|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and | C | Т | | 143311 | | Т | | wavelength (Å) | Source of line |
| 1735.1870 | 57630.68 | comment 13 | Configuration $3d^5$ | Term b ⁴ F | J 3/2 | | Configuration $3d^4(^3\text{P2})4p$ | Term v ⁴ D° | J 1/2 | 0.0007 | 12SAN/NAV |
| 1735.1870 | 57617.14 | 13 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | _ | $3d^{4}(^{5}D)5d$ | V D ⁶ F | 9/2 | 0.0007 | 12SAN/NAV |
| 1735.9571 | 57605.110 | 30 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 5/2 | 0.0013 | 12SAN/NAV |
| 1736.027 | 57602.79 | 6 bl | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^{1}G2)4p$ | v ² H ^o | 9/2 | 0.005 | 12SAN/NAV |
| 1736.2410 | 57595.69 | 18 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 3/2 | 0.0007 | 12SAN/NAV |
| 1736.9229 | 57573.08 | 6 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)5d$ | ⁴ S | 3/2 | 0.0020 | 12SAN/NAV |
| 1737.2032 | 57563.79 | 11 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)5d$ | ⁶ P | 3/2 | 0.0009 | 12SAN/NAV |
| 1737.6854 | 57547.82 | 7 | $3d^4(^5D)4p$ | $z^{6}D^{o}$ | 9/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1738.6451 | 57516.051 | 22 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)6p$ | $^{4}\mathrm{D^{o}}$ | 5/2 | 0.0005 | 12SAN/NAV |
| 1738.7341 | 57513.11 | 16 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | t ² G ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1739.3729 | 57491.98 | 6 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)5d$ | ⁶ P | 3/2 | 0.0020 | 12SAN/NAV |
| 1740.0713 | 57468.91 | 16 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ P | 7/2 | 0.0007 | 12SAN/NAV |
| 1740.1602 | 57465.97 | 7 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5d$ | ^{6}G | 9/2 | 0.0020 | 12SAN/NAV |
| 1740.3177 | 57460.77 | 9 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)5d$ | ⁶ P | 5/2 | 0.0012 | 12SAN/NAV |
| 1741.508 | 57421.50 | 6 p | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1741.6320 | 57417.41 | 15 | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^3F2)4p$ | v ⁴ F ^o | 3/2 | 0.0012 | 12SAN/NAV |
| 1741.750 | 57413.52 | 4 a | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 1741.9046 | 57408.43 | 9 * | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁶ P | 7/2 | 0.0010 | 12SAN/NAV |
| 1741.9046 | 57408.43 | 9 * | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)5d$ | ⁶ G | 11/2 | 0.0010 | 12SAN/NAV |
| 1742.0616 | 57403.25 | 15 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 5/2 | 0.0007 | 12SAN/NAV |
| 1742.7143 | 57381.75 | 15 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.0007 | 12SAN/NAV |
| 1742.7882 | 57379.32 | 4 | $3d^4(^5D)4p$ | $z^{6}D^{o}$ | 7/2 | - | $3d^4(^5D)5d$ | ⁶ P | 5/2 | 0.0020 | 12SAN/NAV |
| 1743.1018 | 57369.00 | 6 | $3d^5$ | a ² G | 9/2 | - | $3d^4(^3F2)4p$ | u ² G ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1743.2490 | 57364.152 | 26 | $3d^{5}$ | b ⁴ F | 9/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 1743.6735 | 57350.19 | 8 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 5/2 | - | $3d^4(^5D)5d$ | ⁶ P | 3/2 | 0.0018 | 12SAN/NAV |
| 1743.8118 | 57345.638 | 29 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^5D)6p$ | ⁴ D ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 1744.2499 | 57331.234 | 32 | $3d^4(^3H)4s$ | a ² H | 11/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | t ² G ^o | 9/2 | 0.0004 | 12SAN/NAV |
| 1744.6211 | 57319.04 | 3 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | - | $3d^4(^5D)5d$ | ⁶ P | 5/2 | 0.0020 | 12SAN/NAV |
| 1745.9210 | 57276.36 | 7 | $3d^4(^5D)4p$ | $z^{6}D^{o}$ | 9/2 | - | $3d^4(^5D)5d$ | ⁶ P | 7/2 | 0.0020 | 12SAN/NAV |
| 1747.3079 | 57230.898 | 27 | $3d^4(^1F)4s$ | $d^{2}F$ | 5/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^\circ)$ | q ² G ^o | 7/2 | 0.0006 | 12SAN/NAV |
| 1747.6855 | 57218.53 | 9 | $3d^4(^5D)4p$ | z ⁴ P ^o a ⁴ H | 5/2 | - | $3d^4(^5D)5d$ | ⁴ S u ⁴ G° | 3/2 | 0.0020 | 12SAN/NAV |
| 1749.720 | 57152.00 | 4 p | $3d^4(^3H)4s$ | a H a ² H | 11/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | t ² G° | 11/2 | 0.005 | 12SAN/NAV |
| 1750.6616 | 57121.262 | 27 | $3d^4(^3H)4s$ $3d^4(^5D)4p$ | a ⁻ H z ⁴ P ^o | 9/2 | - | 3d ³ (⁴ F)4s4p(³ P ^o) 3d ⁴ (⁵ D)6s | 1 -G" ⁴ D | 7/2 5/2 | 0.0004 | 12SAN/NAV |
| 1751.6271 1752.1727 | 57089.78 57072.000 | 6 21 | $3d^{4}(^{1}F)4s$ | d ² F | 3/2 7/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | 2 - | 9/2 | 0.0012 0.0005 | 12SAN/NAV 12SAN/NAV |
| 1752.1727 | 57058.603 | 130 | $3d^4(^3H)4s$ | а ⁴ Н | 13/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | 1 4 0 | 11/2 | 0.0003 | 12SAN/NAV |
| 1753.0312 | 57038.003 | 7 | $3d^34s^2$ | а п c ⁴ F | 5/2 | _ | $3d^{4}(^{5}D)6p$ | u "G" ⁴ F° | 5/2 | 0.00009 | 12SAN/NAV |
| 1753.0512 | 57018.469 | 47 | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | _ | $3d^{4}(^{5}D)6s$ | $^{6}\mathrm{D}$ | 9/2 | 0.0020 | 12SAN/NAV |
| 1755.3223 | 56969.59 | 7 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 9/2 | 0.0002 | 12SAN/NAV |
| 1755.7431 | 56955.941 | 28 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | _ | $3d^4(^5D)6s$ | ⁶ D | 7/2 | 0.0003 | 12SAN/NAV |
| 1756.7433 | 56923.51 | 9 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)6s$ | ⁴ D | 7/2 | 0.0020 | 12SAN/NAV |
| 1756.8335 | 56920.59 | 12 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1757.3144 | 56905.01 | 11 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)6p$ | ⁴ F ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1757.6418 | 56894.414 | 26 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F ^o | 9/2 | 0.0004 | 12SAN/NAV |
| 1757.8884 | 56886.43 | 11 | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | _ | $3d^4(^5D)6s$ | ⁶ D | 5/2 | 0.0007 | 12SAN/NAV |
| 1758.2772 | 56873.85 | 7 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1758.3679 | 56870.92 | 12 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F ^o | 7/2 | 0.0008 | 12SAN/NAV |
| 1758.8877 | 56854.113 | 29 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 9/2 | 0.0003 | 12SAN/NAV |
| 1759.1958 | 56844.16 | 8 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F ^o | 3/2 | 0.0009 | 12SAN/NAV |
| 1760.1005 | 56814.94 | 12 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)6s$ | $^{6}\mathrm{D}$ | 7/2 | 0.0008 | 12SAN/NAV |
| 1760.545 | 56800.59 | 7 bh | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.005 | 12SAN/NAV |
| 760.580 | 56799.46 | 7 p | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 7/2 | 0.005 | 12SAN/NAV |
| 1760.74635 | 56794.098 | 120 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 9/2 | 0.00016 | 12SAN/NAV |
| 1761.4972 | 56769.89 | 13 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)6s$ | ^{6}D | 3/2 | 0.0007 | 12SAN/NAV |
| 1762.1738 | 56748.091 | 21 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 7/2 | 0.0004 | 12SAN/NAV |
| 1762.301 | 56744.00 | 6 p | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)6s$ | ⁴ D | 5/2 | 0.005 | 12SAN/NAV |
| 1762.3642 | 56741.96 | 20 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)6p$ | $^{4}F^{o}$ | 9/2 | 0.0009 | 12SAN/NAV |
| 1762.5151 | 56737.10 | 7 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3P2)4p$ | v^4D^o | 5/2 | 0.0013 | 12SAN/NAV |
| 1763.6678 | 56700.020 | 11 | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | _ | $3d^4(^5D)6s$ | ^{6}D | 1/2 | 0.0006 | 12SAN/NAV |
| 1763.7515 | 56697.33 | 7 * | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 7/2 | 0.0017 | 12SAN/NAV |
| 1763.7515 | 56697.33 | 7 * | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.0017 | 12SAN/NAV |
| 1764.1749 | 56683.72 | 2 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.0020 | 12SAN/NAV |
| 1764.3616 | 56677.72 | 6 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | _ | $3d^4(^5D)6s$ | ^{6}D | 3/2 | 0.0020 | 12SAN/NA |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | C | lassifi | cation | | | Uncertainty of observed | a |
|------------------------|----------------------------|----------------|------------------------------------|---------------------------------------|------------|---------|--|---|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 140011 | Configuration | Term | | wavelength (Å) | Source of line |
| 1765.1231 | 56653.27 | 2 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | 3d ⁴ (⁵ D)6s | ⁶ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1765.2482 | 56649.258 | 20 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F ^o | 5/2 | 0.0004 | 12SAN/NAV |
| 1765.5218 | 56640.48 | 5 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 7/2 | 0.0013 | 12SAN/NAV |
| 1765.9208 | 56627.68 | 7 | $3d^4(^1D)4s$ | c ² D | 3/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 5/2 | 0.0012 | 12SAN/NAV |
| 1766.8004 | 56599.49 | 8 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.0010 | 12SAN/NAV |
| 1766.846 | 56598.03 | 5 * | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.002 | 12SAN/NAV |
| 1766.846 | 56598.03 | 5 * | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^3P2)4p$ | y ⁴ P ^o | 5/2 | 0.002 | 12SAN/NAV |
| 1767.45690 | 56578.466 | 100 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 7/2 | 0.00009 | 12SAN/NAV |
| 1767.7552 | 56568.919 | 23 | $3d^4(^5D)4p$ $3d^34s^2$ | z ⁴ P° c ⁴ F | 5/2 | - | $3d^4(^5D)6s$ | ⁴ D ⁴ F ^o | 7/2 | 0.0003 | 12SAN/NAV |
| 1768.4161 1768.4762 | 56547.78 56545.856 | 5 13 | $3d^{4}s^{2}$ $3d^{4}(^{3}F)4s$ | a ⁴ F | 9/2 3/2 | _ | $3d^4(^5D)6p$ $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 7/2 3/2 | 0.0012 0.0006 | 12SAN/NAV 12SAN/NAV |
| 1768.7625 | 56536.70 | 8 | $3d^{4}(^{3}D)4s$ | a r c ⁴ D | 1/2 | _ | $3d^{4}(^{5}D)5p$ | u r ⁴ D° | 3/2 | 0.0000 | 12SAN/NAV |
| 1768.7623 | 56536.65 | 6 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | t ² G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1768.9371 | 56531.12 | 8 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)6s$ | ⁴ D | 5/2 | 0.002 | 12SAN/NAV |
| 1769.5535 | 56511.43 | 7 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 3/2 | 0.0020 | 12SAN/NAV |
| 1770.3559 | 56485.82 | 6 | $3d^4(^1F)4s$ | d ² F | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ² F° | 7/2 | 0.0013 | 12SAN/NAV |
| 1770.5468 | 56479.73 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^5D)5p$ | ⁴ F ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 1770.6565 | 56476.23 | 8 | $3d^4(^1D)4s$ | c ² D | 3/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | p ² F ^o | 5/2 | 0.0020 | 12SAN/NAV |
| 1770.8570 | 56469.83 | 5 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3D)4p$ | w ² F ^o | 5/2 | 0.0012 | 12SAN/NAV |
| 1771.8968 | 56436.695 | 18 | $3d^5$ | b ² H | 11/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | t ² G ^o | 9/2 | 0.0006 | 12SAN/NAV |
| 1772.4363 | 56419.52 | 5 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 1/2 | - | $3d^4(^5D)6s$ | ^{6}D | 3/2 | 0.0015 | 12SAN/NAV |
| 1772.552 | 56415.83 | 8 a | $3d^5$ | a ² D | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.005 | 12SAN/NAV |
| 1772.74393 | 56409.726 | 82 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 5/2 | 0.00011 | 12SAN/NAV |
| 1772.9985 | 56401.63 | 8 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | - | $3d^4(^5D)6p$ | $^{4}D^{o}$ | 7/2 | 0.0018 | 12SAN/NAV |
| 1773.321 | 56391.37 | 7 bh | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | r ² G ^o | 7/2 | 0.005 | 12SAN/NAV |
| 1773.385 | 56389.33 | 5 bl | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)6s$ | ⁴ D | 5/2 | 0.005 | 12SAN/NAV |
| 1776.8454 | 56279.52 | 8 | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | $3d^4(^5D)6s$ | ⁶ D | 5/2 | 0.0020 | 12SAN/NAV |
| 1778.3754 | 56231.097 | 24 | $3d^4(^3F)4s$ | a ⁴ F d ⁴ F | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° ⁴ D° | 11/2 | 0.0004 | 12SAN/NAV |
| 1779.5373 1779.8979 | 56194.38 56183.00 | 4 7 | $3d^4(^3F)4s$ $3d^4(^3F)4s$ | а F b ² F | 7/2 5/2 | _ | $3d^4(^5D)6p$ $3d^3(^4F)4s4p(^3P^0)$ | t ² G° | 5/2 7/2 | 0.0020 0.0009 | 12SAN/NAV |
| 1779.8979 | 56141.86 | 13 | $3d^{5}$ | вг b²H | 9/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | t ² G° | 7/2 | 0.0009 | 12SAN/NAV 12SAN/NAV |
| 1781.2021 | 56133.58 | 8 * | $3d^4(^1D)4s$ | c ² D | 5/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | p ² F° | 7/2 | 0.0007 | 12SAN/NAV |
| 1781.4649 | 56133.58 | 8 * | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | _ | $3d^44d$ | h ⁴ H | 9/2 | 0.0017 | 12SAN/NAV |
| 1782.6813 | 56095.28 | 8 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)6s$ | ⁶ D | 7/2 | 0.0017 | 12SAN/NAV |
| 1782.7517 | 56093.06 | 7 | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | _ | $3d^4(^5D)6s$ | ⁶ D | 1/2 | 0.0008 | 12SAN/NAV |
| 1783.7480 | 56061.73 | 9 | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 7/2 | 0.0007 | 12SAN/NAV |
| 1783.8873 | 56057.35 | 7 | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | - | $3d^4(^5D)5d$ | ⁴ F | 5/2 | 0.0020 | 12SAN/NAV |
| 1785.5445 | 56005.325 | 20 | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 9/2 | 0.0004 | 12SAN/NAV |
| 1785.5635 | 56004.729 | 12 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)6s$ | ^{6}D | 9/2 | 0.0006 | 12SAN/NAV |
| 1786.07 | 55988.8 | 2 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3P2)4p$ | t ² D ^o | 3/2 | 0.05 | 51KIE |
| 1787.8353 | 55933.56 | 7 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)6s$ | ⁶ D | 5/2 | 0.0015 | 12SAN/NAV |
| 1787.866 | 55932.60 | 5 | $3d^4(^5D)4p$ | z^4F^0 | 3/2 | - | $3d^4(^5D)5d$ | ⁴ F | 3/2 | 0.003 | 12SAN/NAV |
| 1788.007 | 55928.19 | 5 | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | _ | $3d^4(^5D)5d$ | ⁴ D | 5/2 | 0.003 | 12SAN/NAV |
| 1788.0311 | 55927.44 | 6 | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | - | $3d^4(^5D)5d$ | ⁴ D | 7/2 | 0.0010 | 12SAN/NAV |
| 1788.1416 | 55923.983 | 22 | $3d^4(^3F)4s$ | a ⁴ F c ⁴ D | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° ⁶ D° | 9/2 | 0.0004 | 12SAN/NAV |
| 1788.6665 | 55907.57 55907.57 | 6 * 6 * | $3d^4(^3D)4s$ $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | _ | 3d ⁴ (⁵ D)5p 3d ⁴ (⁵ D)5d | 6D 2D2 | 9/2 | 0.0020 | 12SAN/NAV |
| 1788.6665 1789.7599 | 55873.42 | 9 | $3d^{4}(^{3}F)4s$ | a ⁴ F | 7/2 9/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | u ⁴ G° | 9/2 9/2 | 0.0020 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1789.7399 | 55871.52 | 9 | $3d^5$ | аг а ² G | 9/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | t ² G° | 9/2 | 0.0020 | 12SAN/NAV |
| 1790.46436 | 55851.433 | 44 | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | _ | $3d^4(^5D)5d$ | ⁴G | 11/2 | 0.0020 | 12SAN/NAV |
| 1790.72146 | 55843.414 | 40 | $3d^{4}(^{5}D)4p$ | $z^{4}F^{0}$ | 7/2 | _ | $3d^4(^5D)5d$ | ⁴G | 9/2 | 0.00017 | 12SAN/NAV |
| 1790.72140 | 55830.945 | 32 | $3d^{4}(^{5}D)4p$ | $z^{4}F^{0}$ | 5/2 | _ | $3d^4(^5D)5d$ | ⁴G | 7/2 | 0.0001 | 12SAN/NAV |
| 1791.525 | 55818.37 | 8 p | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^3P2)4p$ | t ² D° | 5/2 | 0.005 | 12SAN/NAV |
| 1791.5675 | 55817.04 | 12 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)6s$ | ⁶ D | 3/2 | 0.0010 | 12SAN/NAV |
| 1791.5790 | 55816.685 | 26 | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 5/2 | 0.0003 | 12SAN/NAV |
| 1791.72460 | 55812.149 | 60 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | _ | $3d^4(^5D)6s$ | ⁶ D | 9/2 | 0.00013 | 12SAN/NAV |
| 1791.8310 | 55808.83 | 8 | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ^{4}D | 5/2 | 0.0020 | 12SAN/NAV |
| 1792.0764 | 55801.192 | 28 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)6s$ | ⁶ D | 7/2 | 0.0003 | 12SAN/NAV |
| 1794.0203 | 55740.73 | 7 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | _ | $3d^4(^5D)6s$ | ⁶ D | 7/2 | 0.0018 | 12SAN/NAV |
| 1794.3227 | 55731.34 | 2 | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | - | $3d^4(^5D)5d$ | ⁴ G | 5/2 | 0.0020 | 12SAN/NAV |
| 1794.6620 | 55720.80 | 10 | $3d^4(^5D)4p$ | z ⁶ D ^o | 3/2 | - | $3d^4(^5D)6s$ | ⁶ D | 5/2 | 0.0008 | 12SAN/NAV |
| 1794.963 | 55711.45 | 8 a | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | - | $3d^4(^5D)5d$ | ⁴ G | 7/2 | 0.005 | 12SAN/NAV |
| 1795.9799 | 55679.910 | 19 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 7/2 | 0.0004 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum wavelength (Å) | Observed wave number (cm ⁻¹) | Intensity and comment | | Uncertainty of observed | | | | | | | |
|---|---|-----------------------------|--|---|------------|---|--|---|------------|-------------------|------------------------|
| | | | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 1796.1035 | 55676.08 | 8 | 3d ⁴ (⁵ D)4p | z ⁶ D° | 1/2 | _ | 3d ⁴ (⁵ D)6s | ⁶ D | 3/2 | 0.0013 | 12SAN/NAV |
| 1796.7631 | 55655.640 | 29 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 7/2 | 0.0003 | 12SAN/NAV |
| 1796.9255 | 55650.61 | 6 | $3d^{5}$ | a ² G | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | t ² G ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1797.2844 | 55639.497 | 21 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)6s$ | ⁶ D | 5/2 | 0.0003 | 12SAN/NAV |
| 1797.4390 | 55634.711 | 22 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 3/2 | 0.0003 | 12SAN/NAV |
| 1797.6347 | 55628.65 | 7 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 7/2 | 0.0013 | 12SAN/NAV |
| 1797.8867 | 55620.86 | 5 | $3d^{5}$ | d ² G | 7/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | q ² G° | 7/2 | 0.0016 | 12SAN/NAV |
| 1798.283 | 55608.60 | 27 bh | $3d^4(^5D)4p$ | $z^{6}D^{o}$ | 9/2 | - | $3d^4(^5D)6s$ | ⁶ D | 7/2 | 0.005 | 12SAN/NAV |
| 1799.235 | 55579.18 | 5 p | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)6s$ | ⁶ D | 5/2 | 0.005 | 12SAN/NAV |
| 1800.6874 | 55534.348 | 28 * | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 1/2 | 0.0003 | 12SAN/NAV |
| 1800.6874 | 55534.348 | 28 * | $3d^4(^5D)4p$ $3d^4(^3P)4s$ | z ⁶ D ^o c ⁴ P | 3/2 | - | 3d ⁴ (⁵ D)6s 3d ⁴ (⁵ D)6p | ⁶ D ⁴ D ^o | 1/2 | 0.0003 | 12SAN/NAV |
| 1800.729 1801.4934 | 55533.06 55509.50 | 9 p | $3d^{4}(^{3}F)4s$ | b ² F | 3/2 5/2 | _ | $3d^{4}(^{3}F2)4p$ | w ⁴ G° | 3/2 5/2 | 0.005 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1802.3348 | 55483.59 | 3 17 | $3d^4(^3F)4s$ | ог a ⁴ F | 3/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | u ⁴ G° | 5/2 | 0.0020 | 12SAN/NAV |
| 1802.73446 | 55471.287 | 50 * | $3d^{4}(^{3}P)4s$ | b ⁴ P | 3/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | u ⁴ D° | 5/2 | 0.0009 | 12SAN/NAV |
| 1802.73446 | 55471.287 | 50 * | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^3F2)4p$ | w ⁴ G° | 5/2 | 0.00016 | 12SAN/NAV |
| 1803.0204 | 55462.49 | 6 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | _ | $3d^4(^5D)6s$ | 6D | 3/2 | 0.0011 | 12SAN/NAV |
| 1805.4529 | 55387.76 | 6 | $3d^5$ | a ² D | 3/2 | _ | $3d^4(^1F)4p$ | v^2D^o | 3/2 | 0.0020 | 12SAN/NAV |
| 1805.6485 | 55381.765 | 27 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F° | 5/2 | 0.0003 | 12SAN/NAV |
| 1809.0002 | 55279.154 | 28 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 3/2 | 0.0003 | 12SAN/NAV |
| 1809.5622 | 55261.99 | 6 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D ^o | 7/2 | 0.0020 | 12SAN/NAV |
| 1810.08 | 55246.2 | 5 * | $3d^5$ | d^2D | 5/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | q^4D^o | 3/2 | 0.05 | 51KIE |
| 1810.08 | 55246.2 | 5 * | $3d^{5}$ | d^2D | 3/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 1/2 | 0.05 | 51KIE |
| 1810.8310 | 55223.26 | 8 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3F2)4p$ | t 2F° | 7/2 | 0.0009 | 12SAN/NAV |
| 1810.9648 | 55219.185 | 19 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 9/2 | 0.0004 | 12SAN/NAV |
| 1811.0208 | 55217.477 | 19 | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | - | $3d^4(^5D)5d$ | ^{6}G | 7/2 | 0.0006 | 12SAN/NAV |
| 1811.12222 | 55214.385 | 92 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 7/2 | 0.00008 | 12SAN/NAV |
| 1812.2913 | 55178.77 | 4 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 1/2 | 0.0017 | 12SAN/NAV |
| 1813.0245 | 55156.45 | 7 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^1F)4p$ | v ² D ^o | 5/2 | 0.0008 | 12SAN/NAV |
| 1813.50 | 55142.0 | 1 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^4(^3F1)4p$ | $y_{2}^{4}F^{o}$ | 9/2 | 0.05 | 51KIE |
| 1813.6433 | 55137.63 | 7 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3F2)4p$ | $t^{2}F^{o}$ $x^{4}P^{o}$ | 5/2 | 0.0009 | 12SAN/NAV |
| 1815.3310 | 55086.37 | 6 | $3d^4(^5D)4s$ | a ⁴ D b ⁴ F | 3/2 | - | $3d^4(^3D)4p$ | 4 - | 3/2 | 0.0010 | 12SAN/NAV |
| 1815.5407 | 55080.010 | 15 | $3d^5$ $3d^5$ | b F a ² G | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ $3d^4(^3F2)4p$ | 4 - | 7/2 | 0.0005 | 12SAN/NAV |
| 1818.9377 1819.7999 | 54977.14 54951.10 | 5 9 | 3a $3d^4(^3P)4s$ | a G c ⁴ P | 7/2 5/2 | _ | $3d^{4}(^{5}D)6p$ | w ⁴ G ^o ⁴ P ^o | 5/2 5/2 | 0.0020 0.0020 | 12SAN/NAV |
| 1820.8405 | 54931.10 | 8 | $3d^{4}(^{5}D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | 0.0020 | 12SAN/NAV 12SAN/NAV |
| 1821.0216 | 54914.231 | 20 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | u ⁴ D° | 5/2 | 0.0007 | 12SAN/NAV |
| 1821.1082 | 54911.62 | 9 | $3d^{5}$ | b ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.0014 | 12SAN/NAV |
| 1821.1543 | 54910.23 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 7/2 | 0.0014 | 12SAN/NAV |
| 1821.58 | 54897.4 | 8 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | 0.05 | 51KIE |
| 1822.8389 | 54859.483 | 42 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 7/2 | 0.0003 | 12SAN/NAV |
| 1823.07 | 54852.5 | 1 | $3d^5$ | $a^{2}G$ | 9/2 | _ | $3d^4(^3F2)4p$ | w^4G^o | 7/2 | 0.05 | 51KIE |
| 1825.344 | 54784.19 | 11 a* | $3d^5$ | a ⁶ S | 5/2 | - | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 7/2 | 0.005 | 12SAN/NAV |
| 1825.344 | 54784.19 | 11 a* | $3d^{5}$ | b ⁴ F | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 3/2 | 0.005 | 12SAN/NAV |
| 1825.7112 | 54773.18 | 3 | $3d^5$ | d ² D | 3/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | $p^{2}F^{o}$ | 5/2 | 0.0019 | 12SAN/NAV |
| 1828.6199 | 54686.05 | 6 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | 0.0012 | 12SAN/NAV |
| 1829.447 | 54661.33 | 5 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 5/2 | 0.003 | 12SAN/NAV |
| 1830.61 | 54626.6 | 5 * | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^3D)4p$ | w ⁴ F° | 7/2 | 0.05 | 51KIE |
| 1830.61 | 54626.6 | 5 * | $3d^{5}$ | a ⁶ S | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.05 | 51KIE |
| 1831.1636 | 54610.085 | 31 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 5/2 | 0.0002 | 12SAN/NAV |
| 1831.3244 | 54605.290 | 16 | $3d^{5}$ | a ² G | 7/2 | - | $3d^4(^3F2)4p$ | t ² F ^o | 5/2 | 0.0004 | 12SAN/NAV |
| 1831.6292 | 54596.20 | 6 | $3d^5$ | b ⁴ F | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 11/2 | 0.0020 | 12SAN/NAV |
| 1832.9021 | 54558.29 | 15 | $3d^5$ | a ² G | 9/2 | - | $3d^4(^3F2)4p$ | t ² F° | 7/2 | 0.0008 | 12SAN/NAV |
| 1833.6866 | 54534.95 | 5 | $3d^4(^1G1)4s$ | c ² G | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | s ² F° | 7/2 | 0.0014 | 12SAN/NAV |
| 1834.7402 | 54503.63 | 7 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 3/2 | 0.0020 | 12SAN/NAV |
| 1835.3211 | 54486.38 | 10 | $3d^4(^5D)4p$ $3d^4(^3F)4s$ | z ⁴ F° a ⁴ F | 7/2 | - | $3d^4(^5D)6s$ | ⁴ D u ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 1835.9001 1836.2137 | 54469.195 54459.89 | 20 12 | $3d^{4}(^{5}P)4s$ $3d^{4}(^{5}D)4s$ | a F a ⁴ D | 5/2 7/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ $3d^{4}(^{3}D)4p$ | u 'D' x ⁴ P° | 3/2 5/2 | 0.0003 0.0011 | 12SAN/NAV 12SAN/NAV |
| 1836.2137 1836.3974 | 54454.44 | 6 | $3d^{4}(^{3}G)4s$ | а Б b ⁴ G | 9/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | u ⁴ F° | 9/2 | 0.0011 | 12SAN/NAV |
| 1830.3974 1837.3502 | 54426.21 | 7 | $3d^{4}(^{5}D)4p$ | z ⁴ F° | 5/2 | _ | $3d^{4}(^{5}D)6s$ | u r ⁴ D | 9/2 5/2 | 0.0020 | 12SAN/NAV |
| 1838.1257 | 54403.24 | 10 | $3d^{4}(^{3}F)4s$ | гг а ⁴ F | 3/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | u ⁴ D° | 1/2 | 0.0007 | 12SAN/NAV |
| 1838.385 | 54395.57 | 5 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | u ⁴ F° | 7/2 | 0.0011 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave number (cm ⁻¹) | Intensity and comment | | | Uncertainty of observed | | | | | | |
|------------------------|---|-----------------------------|--|---------------------------------------|----------------------------|---|--|--|------------|-------------------|------------------------|
| wavelength (Å) | | | Configuration | Term | J | | ication Configuration | Term | J | wavelength (Å) | Source of line |
| 1838.4295 | 54394.25 | 6 | 3d ⁴ (¹ G1)4s | c ² G | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 7/2 | 0.0012 | 12SAN/NAV |
| 1838.93503 | 54379.300 | 43 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 9/2 | 0.00015 | 12SAN/NAV |
| 1839.5369 | 54361.508 | 11 | $3d^4(^5D)4p$ | z ⁴ F ^o | 5/2 | _ | $3d^4(^5D)6s$ | ^{4}D | 3/2 | 0.0006 | 12SAN/NAV |
| 1839.974 | 54348.59 | 5 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.004 | 12SAN/NAV |
| 1840.213 | 54341.54 | 6 w | $3d^5$ | c ² F | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | s ² F° | 7/2 | 0.005 | 12SAN/NAV |
| 1840.2879 | 54339.32 | 7 | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | - | $3d^4(^5D)6s$ | ⁴ D | 1/2 | 0.0008 | 12SAN/NAV |
| 1840.51860 | 54332.513 | 47 | $3d^{4}(^{5}D)4p$ | $z^{4}F^{o}$ | 9/2 | _ | $3d^4(^5D)6s$ | ⁴ D | 7/2 | 0.00014 | 12SAN/NAV |
| 1841.0896 | 54315.66 | 4 | $3d^{5}$ | a ² F | 5/2 | - | $3d^4(^1F)4p$ | v ² D ^o | 3/2 | 0.0018 | 12SAN/NAV |
| 1841.3903 | 54306.792 | 30 | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | - | $3d^4(^5D)6s$ | ⁴ D | 5/2 | 0.0002 | 12SAN/NAV |
| 1841.69773 | 54297.727 | 38 | $3d^4(^3G)4s$ | b ⁴ G b ⁴ G | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° u ⁴ F° | 7/2 | 0.00017 | 12SAN/NAV |
| 1843.4714 | 54245.485 | 32 | $3d^4(^3G)4s$ | b G b ⁴ G | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.0002 | 12SAN/NAV |
| 1844.6523 | 54210.758 | 25 | $3d^4(^3G)4s$ $3d^5$ | в G a ² F | 5/2 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ $3d^4(^1F)4p$ | u F v ² D ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 1846.6656 1846.770 | 54151.66 54148.59 | 5 4 | $3d^5$ | a F c ² F | 5/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{0})$ | s^2F^0 | 5/2 5/2 | 0.0018 0.002 | 12SAN/NAV 12SAN/NAV |
| 1852.12605 | 53992.006 | 62 | $3d^5$ | с г a ⁴ G | 11/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 9/2 | 0.002 | 12SAN/NAV |
| 1852.3728 | 53992.000 | 4 | $3d^5$ | a G a ⁴ G | 9/2 | _ | $3d^4(^3D)4p$ | w r w ⁴ F ^o | 9/2 | 0.00011 | 12SAN/NAV |
| 1853.7396 | 53945.009 | 22 | $3d^4(^3P)4s$ | a ² P | 1/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | w r u ² D° | 3/2 | 0.0011 | 12SAN/NAV |
| 1854.46 | 53924.1 | 1 | $3d^{5}$ | c ² F | 7/2 | _ | $3d^4(^3\text{F2})4p$ | u ² G° | 7/2 | 0.003 | 51KIE |
| 1854.68 | 53924.1 | 3 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^1G1)4p$ | x ² F° | 5/2 | 0.05 | 51KIE 51KIE |
| 1855.0855 | 53905.871 | 6 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 7/2 | 0.0006 | 12SAN/NAV |
| 1855.13590 | 53904.407 | 41 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 7/2 | 0.00016 | 12SAN/NAV |
| 1857.6483 | 53831.50 | 6 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 11/2 | 0.00010 | 12SAN/NAV |
| 1858.43830 | 53808.620 | 40 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 5/2 | 0.00019 | 12SAN/NAV |
| 1858.7000 | 53801.044 | 26 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 5/2 | 0.0003 | 12SAN/NAV |
| 1860.0747 | 53761.282 | 21 | $3d^5$ | a ⁴ G | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 1860.24739 | 53756.291 | 49 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 11/2 | 0.00014 | 12SAN/NAV |
| 1865.80 | 53596.3 | 1 * | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.05 | 51KIE |
| 1865.80 | 53596.3 | 1 * | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u^2D^o | 5/2 | 0.05 | 51KIE |
| 1866.3275 | 53581.16 | 12 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | t ² G° | 9/2 | 0.0011 | 12SAN/NAV |
| 1866.6651 | 53571.47 | 8 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 9/2 | 0.0008 | 12SAN/NAV |
| 1867.1694 | 53557.005 | 22 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ² D ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 1870.08089 | 53473.623 | 39 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 9/2 | 0.00016 | 12SAN/NAV |
| 1870.46 | 53462.8 | 1 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^3D)4p$ | w^4D^o | 7/2 | 0.05 | 51KIE |
| 1873.3867 | 53379.26 | 5 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 7/2 | 0.0013 | 12SAN/NAV |
| 1875.248 | 53326.28 | 4 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^1F)4p$ | u ² F ^o | 7/2 | 0.003 | 12SAN/NAV |
| 1877.01224 | 53276.158 | 33 * | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 7/2 | 0.00018 | 12SAN/NAV |
| 1877.01224 | 53276.158 | 33 * | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | - | $3d^4(^5D)6d$ | ⁴ G | 5/2 | 0.00018 | 12SAN/NAV |
| 1877.993 | 53248.33 | 5 | $3d^4(^3P)4s$ | a ² P | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 3/2 | 0.002 | 12SAN/NAV |
| 1878.1724 | 53243.25 | 8 | $3d^4(^3G)4s$ | b ² G | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | t ² G° | 7/2 | 0.0008 | 12SAN/NAV |
| 1878.8178 | 53224.96 | 6 | $3d^4(^5D)4p$ | z ⁴ D ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁴ F | 7/2 | 0.0020 | 12SAN/NAV |
| 1878.8318 | 53224.56 | 7 | $3d^{5}$ | b ⁴ F | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 7/2 | 0.0008 | 12SAN/NAV |
| 1879.05 | 53218.4 | 10 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^1F)4p$ | v ² G ^o | 7/2 | 0.05 | 51KIE |
| 1880.467 | 53178.28 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 7/2 | 0.003 | 12SAN/NAV |
| 1880.9879 | 53163.553 | 16 | $3d^4(^5D)4p$ | z ⁴ D° b ⁴ G | 7/2 | - | $3d^4(^5D)5d$ | ⁴ F u ⁴ G° | 9/2 | 0.0004 | 12SAN/NAV |
| 1881.5219 | 53148.465 | 24 | $3d^4(^3G)4s$ $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u 'G' ⁴ F | 5/2 | 0.0004 | 12SAN/NAV |
| 1883.1975 | 53101.17 | 7 | $3d^{4}(^{5}D)4p$ $3d^{4}(^{5}D)4p$ | z D z ⁴ D° | 5/2 | - | $3d^4(^5D)5d$ | F ⁴ F | 5/2 | 0.0008 | 12SAN/NAV |
| 1883.2844 1883.3057 | 53098.725 | 7 | $3d^{4}(^{5}D)4p$ | z ⁴ D° | 1/2 | - | 3d ⁴ (⁵ D)5d 3d ⁴ (⁵ D)5d | ^F D | 3/2 | 0.0007 | 12SAN/NAV |
| 1883.373 | 53098.124 53096.23 | 10 | $3d^{5}$ | a ⁴ P | 3/2 3/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 1/2 | 0.0005 0.002 | 12SAN/NAV 12SAN/NAV |
| 1883.5695 | 53090.23 | 5 6 | $3d^4(^5D)4p$ | a P z ⁴ D° | 5/2 | _ | $3d^4(^5D)5d$ | ⁴ D | 7/2 | 0.002 | 12SAN/NAV |
| 1884.12 | 53075.2 | 1 | $3d^5$ | a ² D | 3/2 | _ | $3d^{4}(^{1}F)4p$ | u ² F° | 5/2 | 0.05 | 51KIE |
| 1884.4419 | 53075.2 | 9 | $3d^4(^5D)4p$ | z ⁴ D° | 7/2 | _ | $3d^4(^5D)5d$ | u r ⁴ F | 7/2 | 0.0007 | 12SAN/NAV |
| 1885.5450 | 53035.064 | 12 * | $3d^{4}(^{3}F)4s$ | b ² F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 3/2 | 0.0007 | 12SAN/NAV |
| 1885.5450 | 53035.064 | 12 * | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^\circ)$ | q ² G° | 7/2 | 0.0005 | 12SAN/NAV |
| 1885.7355 | 53029.706 | 8 | $3d^{5}$ | a ⁴ P | 3/2 | _ | $3d^4(^3D)4p$ | y ² P ^o | 1/2 | 0.0006 | 12SAN/NAV |
| 1887.96 | 52967.2 | 6 | $3d^4(^3P)4s$ | a ² P | 1/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 3/2 | 0.05 | 51KIE |
| 1888.859 | 52942.01 | 4 | $3d^{5}$ | b ⁴ F | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 5/2 | 0.002 | 12SAN/NAV |
| 1889.2228 | 52931.82 | 4 | $3d^4(^5D)4p$ | z ⁴ D° | 7/2 | _ | $3d^4(^5D)5d$ | 4D | 7/2 | 0.0012 | 12SAN/NAV |
| 1890.5361 | 52895.049 | 17 | $3d^{5}$ | a ⁴ P | 5/2 | _ | $3d^4(^3D)4p$ | x ⁴ P° | 3/2 | 0.0012 | 12SAN/NAV |
| 1890.5796 | 52893.832 | 18 * | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^3D)4p$ | x^4P^0 | 3/2 | 0.0004 | 12SAN/NAV |
| 1890.5796 | 52893.832 | 18 * | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 5/2 | 0.0003 | 12SAN/NAV |
| 1890.595 | 52893.40 | 5 | $3d^5$ | a ⁴ P | 3/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | 0.002 | 12SAN/NAV |
| 1896.08950 | 52740.126 | 76 | $3d^34s^2$ | d ⁴ P | 1/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D° | 3/2 | 0.00009 | 12SAN/NAV |
| 1898.92388 | 52661.405 | 51 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^3D)4p$ | x^4P^o | 5/2 | 0.00012 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed vacuum | Observed wave | Intensity | | | Cl | lassif | ication | | | Uncertainty of observed | S |
|-------------------------|----------------------------|----------------|-------------------------------------|--------------------------------------|-------------|--------|--|--|-------------|----------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 1898.9829 | 52659.769 | 19 | $3d^5$ | a ⁴ P | 3/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 1899.3010 | 52650.95 | 9 | $3d^34s^2$ | d ⁴ P | 3/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D ^o | 1/2 | 0.0009 | 12SAN/NAV |
| 1899.9864 | 52631.956 | 14 | $3d^34s^2$ | c ⁴ F | 5/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 5/2 | 0.0004 | 12SAN/NAV |
| 1900.06019 | 52629.9117 | 170 | $3d^34s^2$ $3d^34s^2$ | d ⁴ P | 3/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D ^o | 5/2 | 0.00005 | 12SAN/NAV |
| 1900.69654 | 52612.2913 | 110 | $3d^34s^2$ $3d^34s^2$ | d ⁴ P d ⁴ P | 3/2 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ $3d^3(^4P)4s4p(^1P^0)$ | ⁴ D ^o | 3/2 7/2 | 0.00007 0.00005 | 12SAN/NAV |
| 1904.86745 1905.4597 | 52497.0911 52480.774 | 270 16 | $3d^{3}4s^{2}$ | аР с ⁴ F | 3/2 | _ | $3d^4(^5D)4f$ | ⁴ D° | 5/2 | 0.0004 | 12SAN/NAV 12SAN/NAV |
| 1905.4597 | 52453.648 | 23 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^5D)4f$ | ⁴ G° | 7/2 | 0.0004 | 12SAN/NAV |
| 1907.36 | 52428.5 | 3 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 7/2 | 0.0003 | 51KIE |
| 1907.69455 | 52419.293 | 31 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)4f$ | ⁴ F° | 7/2 | 0.00018 | 12SAN/NAV |
| 1908.158 | 52406.56 | 3 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^5D)4f$ | 4 G $^{\rm o}$ | 5/2 | 0.003 | 12SAN/NAV |
| 1908.99429 | 52383.604 | 59 | $3d^34s^2$ | d ⁴ P | 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^4D^{o}$ | 5/2 | 0.00011 | 12SAN/NAV |
| 1909.6368 | 52365.98 | 7 * | $3d^5$ | b ² H | 11/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 9/2 | 0.0019 | 12SAN/NAV |
| 1909.6368 | 52365.98 | 7 * | $3d^34s^2$ | d ⁴ P | 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}D^{o}$ | 3/2 | 0.0019 | 12SAN/NAV |
| 1910.7044 | 52336.719 | 80 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)4f$ | ⁴ F ^o | 5/2 | 0.0007 | 12SAN/NAV |
| 1911.2614 | 52321.47 | 12 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^1F)4p$ | u ² F° | 7/2 | 0.0009 | 12SAN/NAV |
| 1911.3211 | 52319.83 | 5 | $3d^4(^1G1)4s$ | c ² G | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | t ² G° | 9/2 | 0.0009 | 12SAN/NAV |
| 1913.4687 | 52261.111 | 10 | $3d^34s^2$ | c ⁴ F | 5/2 | - | $3d^4(^5D)4f$ | ⁴ D° | 5/2 | 0.0006 | 12SAN/NAV |
| 1914.3699 | 52236.509 | 15 | $3d^34s^2$ $3d^34s^2$ | c ⁴ F c ⁴ F | 5/2 | - | $3d^4(^5D)4f$ | ⁴ D ^o ⁴ F ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 1914.83941 | 52223.701 | 37 | $3d^{4}4s^{-}$ $3d^{4}(^{3}H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^5D)4f$ $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F° | 9/2 | 0.00016 0.0008 | 12SAN/NAV |
| 1914.9478 1916.9110 | 52220.74 52167.26 | 9 5 | $3d^{3}(^{3}H)4s$ $3d^{3}4s^{2}$ | a H c ⁴ F | 13/2 5/2 | _ | $3d^{4}(^{5}D)4f$ | y F | 11/2 5/2 | 0.0008 | 12SAN/NAV 12SAN/NAV |
| 1916.9110 | 52157.26 | 3 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ² F° | 5/2 | 0.0008 | 12SAN/NAV |
| 1918.25658 | 52130.670 | 67 | $3d^{5}$ | a ⁴ G | 7/2 | _ | $3d^4(^3G)4p$ | x ² G° | 7/2 | 0.00014 | 12SAN/NAV |
| 1918.57769 | 52130.070 | 66 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | ⁴ G° | 9/2 | 0.00014 | 12SAN/NAV |
| 1919.06825 | 52108.621 | 39 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | ${}^{4}G^{o}$ | 11/2 | 0.00015 | 12SAN/NAV |
| 1920.7863 | 52062.01 | 11 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | ⁴ F ^o | 7/2 | 0.0008 | 12SAN/NAV |
| 1923.0291 | 52001.293 | 9 | $3d^{5}$ | a ² F | 5/2 | _ | $3d^4(^1F)4p$ | u^2F^o | 5/2 | 0.0005 | 12SAN/NAV |
| 1924.5632 | 51959.842 | 24 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\text{o}})$ | r ⁴ G ^o | 11/2 | 0.0003 | 12SAN/NAV |
| 1925.2513 | 51941.271 | 30 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)4f$ | $^{4}D^{o}$ | 7/2 | 0.0002 | 12SAN/NAV |
| 1926.6347 | 51903.98 | 16 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | r ⁴ G° | 9/2 | 0.0009 | 12SAN/NAV |
| 1926.9400 | 51895.752 | 12 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | - | $3d^3(^2H)4s4p(^3P^0)$ | r ⁴ G° | 7/2 | 0.0005 | 12SAN/NAV |
| 1928.02919 | 51866.435 | 50 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^5D)4f$ | ⁴ F ^o | 9/2 | 0.00013 | 12SAN/NAV |
| 1928.502 | 51853.72 | 3 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^4(^5D)4f$ | ⁶ D° ⁴₽° | 7/2 | 0.002 | 12SAN/NAV |
| 1928.6067 | 51850.90 | 6 * | $3d^34s^2$ $3d^4(^3F)4s$ | c ⁴ F d ⁴ F | 5/2 | - | $3d^4(^5D)4f$ | r ⁴ G° | 5/2 | 0.0013 | 12SAN/NAV |
| 1928.6067 1928.9882 | 51850.90 51840.65 | 6 * 7 | $3d^{3}4s^{2}$ | a F c ⁴ F | 3/2 7/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ $3d^4(^5\text{D})4f$ | r G ⁴ H° | 5/2 9/2 | 0.0013 0.0009 | 12SAN/NAV 12SAN/NAV |
| 1929.3133 | 51831.91 | 4 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)4f$ | $^{6}D^{o}$ | 9/2 | 0.0009 | 12SAN/NAV |
| 1929.9680 | 51814.33 | 5 | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^3P2)4p$ | t ² D° | 3/2 | 0.0008 | 12SAN/NAV |
| 1930.4599 | 51801.13 | 8 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | $^{4}G^{\circ}$ | 7/2 | 0.0008 | 12SAN/NAV |
| 1932.6540 | 51742.32 | 4 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3P2)4p$ | t ² D° | 5/2 | 0.0017 | 12SAN/NAV |
| 1934.1215 | 51703.060 | 21 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | w ⁴ S ^o | 3/2 | 0.0004 | 12SAN/NAV |
| 1934.235 | 51700.03 | 3 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | 6 G $^{\rm o}$ | 9/2 | 0.002 | 12SAN/NAV |
| 1935.618 | 51663.09 | 5 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | 0.002 | 12SAN/NAV |
| 1936.5881 | 51637.21 | 8 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 9/2 | 0.0008 | 12SAN/NAV |
| 1936.635 | 51635.96 | 3 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^5D)4f$ | ⁴ H ^o | 11/2 | 0.005 | 12SAN/NAV |
| 1937.536 | 51611.94 | 4 | $3d^5$ | a ⁴ P | 3/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 5/2 | 0.003 | 12SAN/NAV |
| 1937.716 | 51607.15 | 3 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^44f$ | ⁶ P ^o | 7/2 | 0.003 | 12SAN/NAV |
| 1937.8232 | 51604.295 | 10 | $3d^34s^2$ $3d^5$ | c ⁴ F a ⁴ P | 5/2 | - | $3d^{3}(^{4}F)4s4p(^{1}P^{0})$ $3d^{4}(^{3}D)4p$ | r ⁴ F ^o w ⁴ D ^o | 7/2 | 0.0005 | 12SAN/NAV |
| 1938.4301 1938.506 | 51588.14 51586.12 | 4 5 | $3d^4(^3P)4s$ | a P c ⁴ P | 1/2 1/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | q ² D° | 3/2 3/2 | 0.0009 0.002 | 12SAN/NAV 12SAN/NAV |
| 1938.7826 | 51578.76 | 8 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 5/2 | 0.002 | 12SAN/NAV |
| 1939.1482 | 51569.03 | 5 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^1D1)4p$ | w ² P ^o | 3/2 | 0.0019 | 12SAN/NAV |
| 1939.9006 | 51549.03 | 4 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3P2)4p$ | t ² D ^o | 5/2 | 0.0013 | 12SAN/NAV |
| 1941.882 | 51496.43 | 4 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | ⁶ D° | 7/2 | 0.003 | 12SAN/NAV |
| 1942.0972 | 51490.729 | 16 | $3d^4(^5D)4p$ | z ⁴ D ^o | 7/2 | _ | $3d^4(^5D)6s$ | ^{4}D | 7/2 | 0.0003 | 12SAN/NAV |
| 1942.376 | 51483.34 | 3 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^5D)4f$ | 4 H o | 9/2 | 0.003 | 12SAN/NAV |
| 1942.7046 | 51474.630 | 26 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^5D)4f$ | ⁶ D ^o | 9/2 | 0.0002 | 12SAN/NAV |
| 1942.8783 | 51470.03 | 5 | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | - | $3d^4(^5D)6s$ | ⁴ D | 5/2 | 0.0010 | 12SAN/NAV |
| 1945.69944 | 51395.399 | 35 | $3d^34s^2$ | c ⁴ F | 3/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F ^o | 3/2 | 0.00018 | 12SAN/NAV |
| 1945.9682 | 51388.301 | 16 | $3d^34s^2$ | c ⁴ F | 3/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 1/2 | 0.0004 | 12SAN/NAV |
| 1947.0746 | 51359.100 | 48 * | $3d^34s^2$ | c ⁴ F | 5/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 5/2 | 0.0002 | 12SAN/NAV |
| 1947.0746 | 51359.100 | 48 * | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^5D)4f$ | 4 H $^{\rm o}$ | 7/2 | 0.0002 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed vacuum wavelength | Observed wave number | Intensity and | | | Cl | lassif | ication | | | Uncertainty of observed wavelength | Source |
|----------------------------------|----------------------------|------------------|---------------|------------------|------|--------|------------------------|-------------------------------|------|--|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 1947.60012 | 51345.242 | 33 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 3/2 | 0.00019 | 12SAN/NAV |
| 1947.8020 | 51339.92 | 5 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | ⁶ H ^o | 9/2 | 0.0014 | 12SAN/NAV |
| 1948.2767 | 51327.412 | 17 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | w^4S^o | 3/2 | 0.0005 | 12SAN/NAV |
| 1948.4550 | 51322.71 | 4 | $3d^5$ | a ² D | 3/2 | _ | $3d^4(^1D1)4p$ | w^2P^o | 1/2 | 0.0018 | 12SAN/NAV |
| 1948.5319 | 51320.69 | 5 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 7/2 | 0.0010 | 12SAN/NAV |
| 1948.97388 | 51309.051 | 85 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 7/2 | 0.00008 | 12SAN/NAV |
| 1949.20919 | 51302.857 | 63 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | $p\ ^4D^{\rm o}$ | 5/2 | 0.00010 | 12SAN/NAV |
| 1949.95643 | 51283.197 | 85 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D° | 7/2 | 0.00008 | 12SAN/NAV |
| 1950.08036 | 51279.938 | 140 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | r ⁴ F° | 9/2 | 0.00008 | 12SAN/NAV |
| 1950.3142 | 51273.79 | 5 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)4f$ | 6 H $^{ m o}$ | 7/2 | 0.0013 | 12SAN/NAV |
| 1952.2384 | 51223.25 | 7 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D ^o | 3/2 | 0.0013 | 12SAN/NAV |
| 1953.2472 | 51196.797 | 15 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 5/2 | 0.0005 | 12SAN/NAV |
| 1955.9490 | 51126.077 | 19 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^1F)4p$ | v^2G^o | 9/2 | 0.0005 | 12SAN/NAV |
| 1956.3917 | 51114.51 | 8 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 7/2 | 0.0008 | 12SAN/NAV |
| 1956.9478 | 51099.98 | 9 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ S ^o | 3/2 | 0.0018 | 12SAN/NAV |
| 1963.0094 | 50942.191 | 13 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^1F)4p$ | v ² G ^o | 7/2 | 0.0007 | 12SAN/NAV |
| 1964.4785 | 50904.09 | 4 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 5/2 | 0.0015 | 12SAN/NAV |
| 1985.4022 | 50367.628 | 26 | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^3G)4p$ | x 4G° | 11/2 | 0.0002 | 12SAN/NAV |
| 1985.52 | 50364.6 | 22 | $3d^4(^3H)4p$ | $z^{4}I^{o}$ | 9/2 | _ | $3d^4(^5D)7s$ | ^{6}D | 7/2 | 0.05 | 51KIE |
| 1985.67 | 50360.8 | 12 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | x 4G° | 11/2 | 0.05 | 51KIE |
| 1986.5229 | 50339.213 | 15 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 1987.43 | 50316.2 | 5 | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^1D1)4p$ | w^2P^o | 3/2 | 0.05 | 51KIE |
| 1989.6377 | 50260.407 | 7 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^4(^5D)4f$ | $^4P^{\rm o}$ | 3/2 | 0.0007 | 12SAN/NAV |
| 1990.7805 | 50231.555 | 10 | $3d^5$ | b ² H | 11/2 | _ | $3d^4(^1F)4p$ | v^2G^o | 9/2 | 0.0006 | 12SAN/NAV |
| 1993.37 | 50166.3 | 15 | $3d^{5}$ | a ⁴ G | 11/2 | _ | $3d^4(^3G)4p$ | x^4G^o | 9/2 | 0.05 | 51KIE |
| 1993.569 | 50161.29 | 3 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3G)4p$ | x 4G° | 9/2 | 0.004 | 12SAN/NAV |
| 1993.6273 | 50159.827 | 18 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | x 4G° | 9/2 | 0.0003 | 12SAN/NAV |
| 1996.0483 | 50098.99 | 4 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^4(^5D)4f$ | ⁴ P ^o | 5/2 | 0.0014 | 12SAN/NAV |
| 1996.64092 | 50084.1183 | 140 | $3d^34s^2$ | d ⁴ P | 1/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | 4 P $^{\rm o}$ | 3/2 | 0.00006 | 12SAN/NAV |
| 1997.5560 | 50061.175 | 27 | $3d^34s^2$ | d ⁴ P | 1/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}P^{o}$ | 1/2 | 0.0002 | 12SAN/NAV |
| 1998.14 | 50046.5 | 2 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^1F)4p$ | u ² F° | 7/2 | 0.05 | 51KIE |
| 1998.74949 | 50031.2823 | 190 | $3d^34s^2$ | d ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 5/2 | 0.00006 | 12SAN/NAV |

| Observed air wavelength | Observed wave number | Intensity and | | | Clas | sific | ation | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|----------------|-------------------------------|------|-------|------------------------|-------------------------------|------|--|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2000.1079 | 49981.11 | 5 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 5/2 | 0.0010 | 12SAN/NAV |
| 2000.4227 | 49973.244 | 7 * | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | _ | $3d^4(^5D)6d$ | ^{4}G | 7/2 | 0.0008 | 12SAN/NAV |
| 2000.4227 | 49973.244 | 7 * | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | _ | $3d^4(^5D)6d$ | ^{4}G | 11/2 | 0.0008 | 12SAN/NAV |
| 2000.8405 | 49962.81 | 6 | $3d^5$ | b ² H | 9/2 | _ | $3d^4(^1F)4p$ | $v^{2}G^{o}$ | 7/2 | 0.0010 | 12SAN/NAV |
| 2001.1020 | 49956.283 | 18 | $3d^34s^2$ | d ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | $^{4}P^{o}$ | 3/2 | 0.0003 | 12SAN/NAV |
| 2001.36 | 49949.8 | 3 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^3D)4p$ | y^2P^o | 3/2 | 0.05 | 51KIE |
| 2001.6768 | 49941.94 | 4 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3D)4p$ | y ² P ^o | 3/2 | 0.0011 | 12SAN/NAV |
| 2001.834 | 49938.02 | 4 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3D)4p$ | y ² P ^o | 3/2 | 0.002 | 12SAN/NAV |
| 2002.02162 | 49933.339 | 78 | $3d^34s^2$ | d ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 1/2 | 0.00009 | 12SAN/NAV |
| 2002.7602 | 49914.927 | 7 | $3d^5$ | a ⁴ G | 5/2 | _ | $3d^4(^3G)4p$ | x 4G° | 7/2 | 0.0007 | 12SAN/NAV |
| 2002.99020 | 49909.196 | 41 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3G)4p$ | x 4G° | 7/2 | 0.00014 | 12SAN/NAV |
| 2003.0491 | 49907.729 | 8 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | x 4G° | 7/2 | 0.0008 | 12SAN/NAV |
| 2003.611 | 49893.73 | 3 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | _ | $3d^4(^5D)6d$ | ^{4}G | 11/2 | 0.003 | 12SAN/NAV |
| 2003.89343 | 49886.704 | 41 | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.00014 | 12SAN/NAV |
| 2003.9600 | 49885.047 | 11 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 1/2 | 0.0005 | 12SAN/NAV |
| 2004.0789 | 49882.09 | 4 | $3d^{5}$ | a ⁴ G | 11/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0015 | 12SAN/NAV |
| 2004.180 | 49879.57 | 4 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.003 | 12SAN/NAV |
| 2004.2580 | 49877.631 | 12 | $3d^{5}$ | b ⁴ D | 3/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 1/2 | 0.0004 | 12SAN/NAV |
| 2004.3084 | 49876.38 | 4 | $3d^{5}$ | a ⁴ G | 7/2 | _ | $3d^4(^3G)4p$ | $y^{2}H^{o}$ | 9/2 | 0.0010 | 12SAN/NAV |
| 2004.3685 | 49874.882 | 23 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2005.50 | 49846.7 | 4 * | $3d^5$ | $d^{2}G$ | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | p ² F ^o | 5/2 | 0.05 | 51KIE |
| 2005.50 | 49846.7 | 4 * | $3d^4(^3P)4s$ | $c^{4}P$ | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | p ⁴ D ^o | 5/2 | 0.05 | 51KIE |
| 2005.89 | 49837.1 | 2 R | $3d^5$ | $a^{2}G$ | 7/2 | _ | $3d^4(^1F)4p$ | v ² G ^o | 9/2 | 0.01 | 00WAG |

TABLE 6. Spectral lines of Cr II—Continued

| wavelength | wave | Intensity | | | Cla | ssific | eation | | | Uncertainty of observed | |
|------------------------|----------------------------|-------------|--------------------------------|---|------------|--------|---|--|------------|-------------------------|------------------------|
| (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 551110 | Configuration | Term | | wavelength (Å) | Source of line |
| 2006.6374 | 49818.497 | 11 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^3D)4p$ | y ² P ^o | 1/2 | 0.0005 | 12SAN/NAV |
| 2006.9358 | 49811.090 | 15 | $3d^5$ | b ⁴ D | 3/2 | - | $3d^4(^3D)4p$ | y ² P ^o | 1/2 | 0.0004 | 12SAN/NAV |
| 2007.19091 | 49804.760 | 37 | $3d^5$ | a ⁴ G | 5/2 | - | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | 0.00016 | 12SAN/NAV |
| 2007.2271 | 49803.86 | 12 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 9/2 | 0.0009 | 12SAN/NAV |
| 2007.3825 | 49800.01 | 4 | $3d^34s^2$ | d ⁴ P | 3/2 | - | $3d^4(^5D)5f$ | ⁴ D ^o | 5/2 | 0.0017 | 12SAN/NAV |
| 2007.4215 | 49799.040 | 6 | $3d^5$ | a ⁴ G | 7/2 | - | $3d^4(^3G)4p$ | $x^{4}G^{o}$ | 5/2 | 0.0008 | 12SAN/NAV |
| 2007.858 | 49788.22 | 4 | $3d^4(^3H)4p$ | y ⁴ G ^o | 9/2 | - | $3d^4(^5D)6d$ | ⁴ G | 9/2 | 0.003 | 12SAN/NAV |
| 2007.98880 | 49784.9731 | 230 | $3d^34s^2$ $3d^34s^2$ | d ⁴ P d ⁴ P | 5/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o ⁴ P ^o | 5/2 | 0.00006 | 12SAN/NAV |
| 2011.01877 | 49709.9738 49706.259 | 88 16 | $3d^{5}$ | a ⁶ S | 5/2 5/2 | _ | $3d^3(^4P)4s4p(^1P^0)$ $3d^4(^5D)4p$ | z ⁴ P° | 3/2 5/2 | 0.00008 0.0004 | 12SAN/NAV |
| 2011.1691 2012.1445 | 49700.239 | 7 | 3d ⁵ | a S b ⁴ D | 1/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | 0.0004 | 12SAN/NAV 12SAN/NAV |
| 2012.1443 | 49674.799 | 26 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | 0.0001 | 12SAN/NAV |
| 2012.4430 | 49670.844 | 71 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3D)4p$ | x^4P^0 | 3/2 | 0.0002 | 12SAN/NAV |
| 2012.7795 | 49666.495 | 16 | $3d^5$ | a ² G | 9/2 | _ | $3d^4(^1F)4p$ | v ² G ^o | 9/2 | 0.0007 | 12SAN/NAV |
| 2013.3845 | 49651.573 | 21 | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | _ | $3d^4(^5D)6d$ | ⁴ G | 7/2 | 0.0003 | 12SAN/NAV |
| 2013.6182 | 49645.81 | 6 | $3d^5$ | a ⁶ S | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | 0.0010 | 12SAN/NAV |
| 2013.69430 | 49643.935 | 53 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 7/2 | 0.00013 | 12SAN/NAV |
| 2014.11555 | 49633.554 | 59 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 9/2 | 0.00012 | 12SAN/NAV |
| 2014.35437 | 49627.670 | 44 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 5/2 | 0.00015 | 12SAN/NAV |
| 2014.4389 | 49625.588 | 12 | $3d^34s^2$ | d ⁴ P | 5/2 | _ | $3d^4(^5D)5f$ | ${}^{4}F^{o}$ | 7/2 | 0.0005 | 12SAN/NAV |
| 2015.4045 | 49601.815 | 10 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 7/2 | 0.0006 | 12SAN/NAV |
| 2015.88357 | 49590.0294 | 100 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 11/2 | 0.00007 | 12SAN/NAV |
| 2016.2983 | 49579.83 | 4 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 5/2 | 0.0017 | 12SAN/NAV |
| 2016.921 | 49564.53 | 3 | $3d^5$ | a ⁶ S | 5/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | 0.002 | 12SAN/NAV |
| 2017.0817 | 49560.578 | 9 * | $3d^34s^2$ | c ⁴ F | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 7/2 | 0.0007 | 12SAN/NAV |
| 2017.0817 | 49560.578 | 9 * | $3d^34s^2$ | d ⁴ P | 3/2 | - | $3d^4(^5D)5f$ | ⁶ F ^o | 5/2 | 0.0007 | 12SAN/NAV |
| 2017.3611 | 49553.715 | 22 | $3d^34s^2$ | d ⁴ P | 5/2 | - | $3d^4(^5D)5f$ | ⁴ D ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2017.48 | 49550.8 | 2 | $3d^34s^2$ | c ⁴ F z ⁴ F ^o | 3/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 3/2 | 0.05 | 51KIE |
| 2018.2027 | 49533.05 | 4 * 4 * | $3d^4(^5D)4p$ $3d^4(^3H)4p$ | z F y ⁴ G° | 7/2 5/2 | _ | 3d ⁴ (³ F1)5s 3d ⁴ (⁵ D)6d | f ⁴ F ⁴ G | 7/2 | 0.0014 | 12SAN/NAV |
| 2018.2027 2019.88 | 49533.05 49491.9 | 2 | $3d^34s^2$ | d ⁴ P | 5/2 | _ | $3d^{4}(^{5}D)5f$ | 6 p ⁰ | 5/2 3/2 | 0.0014 0.05 | 12SAN/NAV 51KIE |
| 2019.88 | 49491.9 | 1 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 5/2 | 0.05 | 51KIE 51KIE |
| 2020.7099 | 49471.604 | 15 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^1F)4p$ | v ² G° | 7/2 | 0.0004 | 12SAN/NAV |
| 2021.58302 | 49450.2403 | 130 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3D)4p$ | x ⁴ P° | 5/2 | 0.00006 | 12SAN/NAV |
| 2021.89 | 49442.7 | 5 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 5/2 | 0.05 | 51KIE |
| 2022.1166 | 49437.194 | 15 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | 0.0007 | 12SAN/NAV |
| 2023.3114 | 49408.00 | 7 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 5/2 | 0.0010 | 12SAN/NAV |
| 2023.4675 | 49404.193 | 7 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.0006 | 12SAN/NAV |
| 2023.5386 | 49402.46 | 4 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.0010 | 12SAN/NAV |
| 2024.002 | 49391.15 | 3 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 3/2 | 0.002 | 12SAN/NAV |
| 2024.0486 | 49390.01 | 3 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 7/2 | 0.0015 | 12SAN/NAV |
| 2024.1310 | 49388.00 | 4 | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | - | $3d^4(^5D)6d$ | ⁴ D | 7/2 | 0.0010 | 12SAN/NAV |
| 2024.8223 | 49371.142 | 17 | $3d^34s^2$ | d ⁴ P | 5/2 | - | $3d^4(^5D)5f$ | ⁴ G ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 2025.61863 | 49351.735 | 57 | $3d^5$ | a ⁶ S | 5/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 0.00011 | 12SAN/NAV |
| 2025.7179 | 49349.317 | 14 | $3d^34s^2$ | d ⁴ P | 5/2 | - | $3d^4(^5D)5f$ | ⁶ F ^o | 3/2 | 0.0005 | 12SAN/NAV |
| 2025.7445 | 49348.67 | 9 | $3d^34s^2$ | c ⁴ F d ⁴ P | 7/2 | - | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 7/2 | 0.0012 | 12SAN/NAV |
| 2026.3231 | 49334.58 | 4 | $3d^34s^2$ $3d^34s^2$ | a P c ⁴ F | 5/2 | - | $3d^4(^5D)5f$ | ⁶ D° q ⁴D° | 7/2 | 0.0016 | 12SAN/NAV |
| 2026.4577 | 49331.304 | 28 25 | $3d^{3}4s^{2}$ | c F d ⁴ P | 5/2 5/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ $3d^4(^5D)5f$ | q D ⁶ F⁰ | 3/2 | 0.0003 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2027.1574 2027.7195 | 49314.279 49300.61 | 23 7 | $3d^5$ | a ² G | 9/2 | _ | $3d^4(^1F)4p$ | v ² G° | 5/2 7/2 | 0.0003 | 12SAN/NAV |
| 2027.7193 | 49299.31 | 5 | $3d^34s^2$ | d ⁴ P | 3/2 | _ | $3d^4(^5D)5f$ | ⁶ D° | 5/2 | 0.0019 | 12SAN/NAV |
| 2028.22 | 49288.4 | 3 R | $3d^5$ | c ² F | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 5/2 | 0.003 | 00WAG |
| 2028.722 | 49276.25 | 4 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 9/2 | 0.003 | 12SAN/NAV |
| 2028.894 | 49272.07 | 4 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 5/2 | 0.003 | 12SAN/NAV |
| 2029.49 | 49257.6 | 3 R | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.01 | 00WAG |
| 2029.84 | 49249.1 | 1 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^1F)4p$ | u ² F° | 5/2 | 0.05 | 51KIE |
| 2029.980 | 49245.72 | 3 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F ^o | 5/2 | 0.004 | 12SAN/NAV |
| 2030.523 | 49232.55 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 3/2 | 0.003 | 12SAN/NAV |
| 2030.978 | 49221.52 | 7 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F ^o | 7/2 | 0.002 | 12SAN/NAV |
| 2031.34 | 49212.8 | 4 R | $3d^5$ | a ² F | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 5/2 | 0.01 | 00WAG |
| 2031.6531 | 49205.17 | 13 * | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^1D1)4p$ | w ² D ^o | 3/2 | 0.0009 | 12SAN/NAV |
| 2031.6531 | 49205.17 | 13 * | $3d^34s^2$ | d ⁴ P | 5/2 | - | $3d^4(^5D)5f$ | ⁶ G° | 5/2 | 0.0009 | 12SAN/NAV |
| 2032.2383 | 49191.003 | 13 | $3d^34s^2$ | d ⁴ P | 5/2 | _ | $3d^4(^5D)5f$ | 6 G $^{\rm o}$ | 7/2 | 0.0005 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | ~ |
|------------------------|----------------------------|-------------|--|--------------------------------------|-------------|--------|---|--|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | ,51110 | Configuration | Term | | wavelength (Å) | Source of line |
| 2033.5495 | 49159.290 | 9 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 9/2 | 0.0006 | 12SAN/NAV |
| 2033.8722 | 49151.491 | 15 | $3d^34s^2$ | d ⁴ P | 5/2 | - | $3d^4(^5D)5f$ | ⁴ G ^o | 5/2 | 0.0008 | 12SAN/NAV |
| 2034.2720 | 49141.833 | 17 | $3d^34s^2$ | d ⁴ P | 5/2 | - | $3d^4(^5D)5f$ | ⁴ H ^o | 7/2 | 0.0003 | 12SAN/NAV |
| 2034.9057 | 49126.531 | 15 | $3d^5$ | a ⁴ G | 5/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 3/2 | 0.0004 | 12SAN/NAV |
| 2036.44 | 49089.5 | 1 R | $3d^34s^2$ $3d^5$ | c ⁴ F a ² F | 7/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | $q^{4}D^{o}$ | 5/2 | 0.01 | 00WAG |
| 2036.9775 2037.2679 | 49076.57 | 5 7 | $3d^4(^3F)4s$ | a ⁻ F b ² F | 7/2 7/2 | _ | 3d ⁴ (¹ D1)4p 3d ⁴ (¹ F)4p | v ² F ^o u ² F ^o | 7/2 7/2 | 0.0012 0.0017 | 12SAN/NAV |
| 2037.2879 | 49069.58 49069.28 | 10 | $3d^{5}$ | a ² D | 5/2 | _ | $3d^4(^1D1)4p$ | u r w ² D° | 5/2 | 0.0017 | 12SAN/NAV 12SAN/NAV |
| 2037.2803 | 49009.28 | 5 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^1F)4p$ | u ² F° | 5/2 | 0.0011 | 12SAN/NAV |
| 2039.0769 | 49026.05 | 3 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 5/2 | 0.002 | 12SAN/NAV |
| 2039.91769 | 49005.8462 | 81 | $3d^5$ | a ⁶ S | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ P° | 3/2 | 0.00008 | 12SAN/NAV |
| 2040.42 | 48993.8 | 4 | $3d^5$ | a ⁴ G | 5/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 7/2 | 0.05 | 51KIE |
| 2040.6496 | 48988.272 | 25 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 7/2 | 0.0002 | 12SAN/NAV |
| 2040.7110 | 48986.798 | 31 | $3d^{5}$ | a ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 7/2 | 0.0002 | 12SAN/NAV |
| 2040.7397 | 48986.109 | 35 | $3d^5$ | a 4 G | 11/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 9/2 | 0.0003 | 12SAN/NAV |
| 2041.0379 | 48978.953 | 23 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 9/2 | 0.0003 | 12SAN/NAV |
| 2041.5847 | 48965.837 | 15 | $3d^5$ | a ⁴ G | 5/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 5/2 | 0.0004 | 12SAN/NAV |
| 2041.8236 | 48960.109 | 27 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 5/2 | 0.0002 | 12SAN/NAV |
| 2042.8419 | 48935.71 | 4 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 3/2 | 0.0017 | 12SAN/NAV |
| 2043.2356 | 48926.28 | 6 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 7/2 | 0.0014 | 12SAN/NAV |
| 2043.93 | 48909.7 | 3 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 7/2 | 0.05 | 51KIE |
| 2044.76 | 48889.8 | 1 | $3d^5$ | a ² D | 3/2 | - | $3d^4(^1D1)4p$ | w ² D ^o | 5/2 | 0.05 | 51KIE |
| 2045.289 | 48877.17 | 3 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^1D1)4p$ | v ² F ^o | 5/2 | 0.002 | 12SAN/NAV |
| 2045.33561 | 48876.052 | 37 | $3d^{5}$ | a ⁴ G | 11/2 | - | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | 0.00015 | 12SAN/NAV |
| 2045.9147 | 48862.22 | 4 | $3d^{5}$ | c ² F | 5/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 3/2 | 0.0019 | 12SAN/NAV |
| 2047.0097 | 48836.085 | 10 | $3d^5$ | a ⁴ G | 5/2 | - | $3d^4(^3P1)4p$ | ² D ^o | 3/2 | 0.0007 | 12SAN/NAV |
| 2047.32 | 48828.7 | 2 | $3d^5$ | a ² F | 5/2 | - | $3d^4(^1D1)4p$ | $v^{2}F^{o}$ | 7/2 | 0.05 | 51KIE |
| 2048.4385 | 48802.026 | 18 | $3d^34s^2$ $3d^5$ | c ⁴ F a ² D | 9/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F ^o w ² D ^o | 9/2 | 0.0004 | 12SAN/NAV |
| 2050.3375 | 48756.83 | 7 4 | $3d^34s^2$ | a D c ⁴ F | 3/2 | _ | $3d^4(^1D1)4p$ $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 3/2 | 0.0015 | 12SAN/NAV |
| 2051.432 2052.055 | 48730.82 | 3 | $3d^34s^2$ | c F c ⁴ F | 7/2 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s F s ⁴ F° | 5/2 3/2 | 0.003 0.004 | 12SAN/NAV 12SAN/NAV |
| 2054.44 | 48716.03 48659.5 | 3 4 * | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3P2)4p$ | t ² D ^o | 3/2 | 0.004 | 51KIE |
| 2054.44 | 48659.5 | 4 * | $3d^{5}$ | a ⁴ G | 11/2 | _ | $3d^4(^3G)4p$ | y ⁴ H° | 11/2 | 0.05 | 51KIE 51KIE |
| 2054.79437 | 48651.092 | 33 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | 0.00017 | 12SAN/NAV |
| 2055.0074 | 48646.05 | 8 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^1P^0)$ | s ⁴ G° | 11/2 | 0.0017 | 12SAN/NAV |
| 2055.59869 | 48632.0587 | 3200 | $3d^5$ | a ⁶ S | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | 0.00005 | 12SAN/NAV |
| 2057.95 | 48576.5 | 1 * | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^1D1)4p$ | v^2F^o | 7/2 | 0.05 | 51KIE |
| 2057.95 | 48576.5 | 1 * | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^1F)4p$ | u ² F° | 7/2 | 0.05 | 51KIE |
| 2058.2678 | 48569.00 | 7 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F ^o | 7/2 | 0.0014 | 12SAN/NAV |
| 2061.0639 | 48503.121 | 21 | $3d^5$ | $a^{2}G$ | 7/2 | _ | $3d^4(^1F)4p$ | $u^{2}F^{o}$ | 5/2 | 0.0003 | 12SAN/NAV |
| 2061.57673 | 48491.0569 | 2500 | $3d^5$ | a ⁶ S | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | 0.00006 | 12SAN/NAV |
| 2062.2787 | 48474.553 | 28 | $3d^{5}$ | a ${}^4\mathrm{G}$ | 7/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 9/2 | 0.0002 | 12SAN/NAV |
| 2062.3416 | 48473.08 | 4 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 9/2 | 0.0012 | 12SAN/NAV |
| 2063.24135 | 48451.939 | 69 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | 0.00010 | 12SAN/NAV |
| 2063.7972 | 48438.891 | 10 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | 0.0006 | 12SAN/NAV |
| 2065.2603 | 48404.580 | 17 | $3d^5$ | a ² G | 9/2 | - | $3d^4(^1F)4p$ | u ² F° | 7/2 | 0.0006 | 12SAN/NAV |
| 2065.50389 | 48398.8725 | 1700 | $3d^5$ | a ⁶ S | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | 0.00006 | 12SAN/NAV |
| 2065.7387 | 48393.372 | 16 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3D)4p$ | w ⁴ D ^o | 5/2 | 0.0008 | 12SAN/NAV |
| 2065.90778 | 48389.412 | 46 | $3d_{5}^{5}$ | b ⁴ D | 5/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 5/2 | 0.00014 | 12SAN/NAV |
| 2066.45953 | 48376.493 | 40 | $3d^{5}$ | b ⁴ D | 1/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 3/2 | 0.00016 | 12SAN/NAV |
| 2066.6706 | 48371.553 | 14 | $3d^5$ | b ⁴ D | 1/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 1/2 | 0.0005 | 12SAN/NAV |
| 2066.7746 | 48369.119 | 25 | $3d^5$ | b ⁴ D | 3/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2066.9435 | 48365.167 | 11 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 3/2 | 0.0006 | 12SAN/NAV |
| 2066.9876 | 48364.136 | 9 | $3d^5$ | b ⁴ D e ² F | 3/2 | - | $3d^4(^3D)4p$ | w ⁴ D° q ² G° | 1/2 | 0.0008 | 12SAN/NAV |
| 2067.984 | 48340.84 | 4 | 3d ⁴ (³ F)4s 3d ⁵ | e ² F a ⁴ G | 5/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | q ² G° y ⁴ H° | 7/2 | 0.005 | 12SAN/NAV |
| 2068.3958 | 48331.213 | 27 | $3d^5$ | a G a G | 5/2 | - | $3d^4(^3G)4p$ | y ⁴ H ^o | 7/2 | 0.0002 | 12SAN/NAV |
| 2068.6403 2068.961 | 48325.501 48318.01 | 5 4 | $3d^4(^3G)4p$ | a G y ⁴ H° | 7/2 11/2 | _ | 3d ⁴ (³ G)4p 3d ⁴ (⁵ D)6d | ун ⁴ F | 7/2 9/2 | 0.0008 0.004 | 12SAN/NAV 12SAN/NAV |
| 2072.56 | 48234.1 | 2 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3a^{(1)}0a$ $3d^{3}(^{4}F)4s4p(^{3}P^{0})$ | u ⁴ F° | 9/2 7/2 | 0.004 | 51KIE |
| 2072.56 | 48234.1 | 4 | $3d^{5}$ | a ⁴ G | 11/2 | _ | $3d^4(^3H)4p$ | u r z ² H° | 11/2 | 0.002 | 12SAN/NAV |
| 2072.922 | 48219.0 | 4 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 11/2 | 0.002 | 51KIE |
| 2079.27 | 48078.5 | 20 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | 0.05 | 51KIE 51KIE |
| | | | (/ 10 | | 5,2 | | \/ P | $z^{2}F^{o}$ | .,_ | 0.00 | |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | |
|-------------------------|----------------------------|-------------|--|--------------------------------------|------------|-------|--|--|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | SITIC | Configuration | Term | | wavelength (Å) | Source of line |
| 2079.65 | 48069.7 | 2 * | 3d ⁴ (⁵ D)4s | a ⁴ D | 5/2 | _ | 3d ⁴ (³ F1)4p | x ⁴ D ^o | 5/2 | 0.05 | 51KIE |
| 2079.8745 | 48064.510 | 21 | $3d^5$ | a ² F | 7/2 | - | $3d^4(^1D1)4p$ | w^2D^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2080.96 | 48039.4 | 1 R | $3d^5$ | c ² F | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 7/2 | 0.01 | 00WAG |
| 2081.6965 | 48022.447 | 7 | $3d^4(^3G)4p$ | ⁴ F ^o | 9/2 | - | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.0007 | 12SAN/NAV |
| 2082.0379 | 48014.57 | 4 * | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^3(^2G)4s4p(^3P^o)$ | r ² G° | 9/2 | 0.0019 | 12SAN/NAV |
| 2082.0379 | 48014.57 | 4 * | $3d^4(^3G)4p$ | ⁴ F° | 7/2 | - | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.0019 | 12SAN/NAV |
| 2083.7496 | 47975.14 | 5 | $3d^4(^3G)4p$ | ⁴ F° | 7/2 | - | $3d^4(^5D)6d$ | ⁴ P | 5/2 | 0.0011 | 12SAN/NAV |
| 2084.2304 | 47964.071 47959.5 | 15 | 3d ⁴ (³ F)4s 3d ⁵ | d ⁴ F a ⁴ G | 9/2 7/2 | - | $3d^3(^4P)4s4p(^3P^0)$ $3d^4(^3H)4p$ | q^4D^o z^2H^o | 7/2 | 0.0008 | 12SAN/NAV |
| 2084.43 | 47939.3 47947.94 | 4 5 | $3d^34s^2$ | a G c ⁴ F | 7/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 9/2 7/2 | 0.05 0.0014 | 51KIE |
| 2084.9317 2086.8593 | 47947.94 | 5 | $3d^4(^3G)4p$ | ⁴ F° | 5/2 | _ | $3d^4(^5D)6d$ | г D ⁴ Р | 3/2 | 0.0014 | 12SAN/NAV 12SAN/NAV |
| 2089.1531 | 47851.067 | 18 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.0001 | 12SAN/NAV |
| 2089.4576 | 47844.09 | 5 | $3d^4(^3G)4p$ | ⁴ F° | 9/2 | _ | $3d^4(^5D)6d$ | ² G | 11/2 | 0.0003 | 12SAN/NAV |
| 2090.70 | 47815.7 | 20 * | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^1D1)4p$ | w ² D° | 5/2 | 0.05 | 51KIE |
| 2090.70 | 47815.7 | 20 * | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | x ⁴ S° | 3/2 | 0.05 | 51KIE |
| 2090.70 | 47815.7 | 20 * | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^1D1)4p$ | v ² F ^o | 5/2 | 0.05 | 51KIE |
| 2090.70 | 47815.7 | 20 * | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 3/2 | 0.05 | 51KIE |
| 2090.9806 | 47809.250 | 11 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 7/2 | 0.0006 | 12SAN/NAV |
| 2091.2323 | 47803.50 | 5 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D ^o | 5/2 | 0.0013 | 12SAN/NAV |
| 2092.0283 | 47785.310 | 17 | $3d^4(^3F)4s$ | e ² F | 7/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | q^2D^o | 5/2 | 0.0008 | 12SAN/NAV |
| 2092.790 | 47767.92 | 6 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 5/2 | 0.002 | 12SAN/NAV |
| 2092.9114 | 47765.15 | 4 | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 9/2 | _ | $3d^4(^5D)6d$ | ^{4}D | 7/2 | 0.0018 | 12SAN/NAV |
| 2093.3174 | 47755.887 | 30 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.0002 | 12SAN/NAV |
| 2093.5259 | 47751.13 | 5 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q ⁴ D° | 1/2 | 0.0016 | 12SAN/NAV |
| 2093.6591 | 47748.09 | 7 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.0009 | 12SAN/NAV |
| 2094.941 | 47718.88 | 5 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | q 4D° | 3/2 | 0.002 | 12SAN/NAV |
| 2095.20 | 47713.0 | 7 R | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | 0.01 | 00WAG |
| 2096.4443 | 47684.667 | 20 | $3d^5$ | a ² F ⁴ F° | 5/2 | - | $3d^4(^1D1)4p$ | w ² D ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2098.6116 | 47635.43 | 5 | 3d ⁴ (³ G)4p 3d ⁴ (³ F)4s | e ² F | 7/2 5/2 | _ | $3d^4(^5D)6d$ $3d^3(^4P)4s4p(^3P^0)$ | 4G q ${}^2D^o$ | 9/2 | 0.0010 | 12SAN/NAV |
| 2098.6445 2100.36831 | 47634.681 47595.591 | 17 39 | $3d^{4}(^{5}D)4s$ | е г a ⁴ D | 5/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 7/2 | 0.0008 0.00016 | 12SAN/NAV 12SAN/NAV |
| 2100.5854 | 47593.591 | 20 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | уг r ⁴ D° | 7/2 | 0.00016 | 12SAN/NAV |
| 2100.5854 | 47589.234 | 10 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.0007 | 12SAN/NAV |
| 2100.96 | 47582.2 | 2 | $3d^4(^3F)4s$ | e ² F | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ² F° | 7/2 | 0.02 | 51KIE |
| 2101.69 | 47565.7 | 4 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^1D1)4p$ | w^2D^o | 5/2 | 0.02 | 51KIE |
| 2102.55 | 47546.2 | 5 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 5/2 | 0.02 | 51KIE |
| 2102.727 | 47542.21 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 3/2 | 0.002 | 12SAN/NAV |
| 2103.0056 | 47535.910 | 12 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 7/2 | 0.0005 | 12SAN/NAV |
| 2104.2294 | 47508.267 | 12 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D ^o | 5/2 | 0.0007 | 12SAN/NAV |
| 2104.2687 | 47507.38 | 4 | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 5/2 | _ | $3d^4(^5D)6d$ | ^{4}G | 7/2 | 0.0018 | 12SAN/NAV |
| 2106.2004 | 47463.81 | 5 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 5/2 | 0.0009 | 12SAN/NAV |
| 2107.28 | 47439.5 | 2 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | 0.02 | 51KIE |
| 2107.94526 | 47424.530 | 68 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 9/2 | 0.00010 | 12SAN/NAV |
| 2108.1122 | 47420.78 | 5 | $3d^34s^2$ | c ⁴ F | 5/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 3/2 | 0.0018 | 12SAN/NAV |
| 2108.314 | 47416.24 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D ^o | 5/2 | 0.003 | 12SAN/NAV |
| 2109.8878 | 47380.873 | 11 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.0005 | 12SAN/NAV |
| 2110.1034 | 47376.03 | 5 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^1F)4p$ | v ² G ^o y ⁴ F ^o | 9/2 | 0.0013 | 12SAN/NAV |
| 2110.396 | 47369.46 47363.1 | 5 | 3d ⁴ (⁵ D)4s 3d ⁴ (⁵ D)4s | a ⁴ D a ⁴ D | 7/2 7/2 | _ | 3d ⁴ (³ F1)4p 3d ⁴ (³ F1)4p | $z^{2}D^{o}$ | 7/2 5/2 | 0.003 0.02 | 12SAN/NAV 51KIE |
| 2110.68 2110.9253 | 47357.59 | 4 8 | $3d^{5}$ | a ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 3/2 7/2 | 0.02 | 12SAN/NAV |
| 2110.9233 | 47356.081 | 12 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 7/2 | 0.0018 | 12SAN/NAV |
| 2111.2631 | 47350.001 | 6 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | 0.0001 | 12SAN/NAV |
| 2111.57 | 47343.1 | 3 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 1/2 | 0.02 | 51KIE |
| 2112.1885 | 47329.269 | 7 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 9/2 | 0.0008 | 12SAN/NAV |
| 2113.04 | 47310.2 | 8 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | 0.02 | 51KIE |
| 2114.5905 | 47275.51 | 5 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 3/2 | 0.0011 | 12SAN/NAV |
| 2115.6313 | 47252.259 | 10 | $3d^5$ | d ² D | 3/2 | _ | $3d^4(^3P2)4p$ | v^2P^o | 1/2 | 0.0007 | 12SAN/NAV |
| 2115.81 | 47248.3 | 4 R | $3d^4(^1I)4s$ | b ² I | 13/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 11/2 | 0.01 | 00WAG |
| 2116.17 | 47240.2 | 1 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 1/2 | 0.02 | 51KIE |
| 2116.8904 | 47224.16 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 3/2 | 0.0017 | 12SAN/NAV |
| 2118.407 | 47190.35 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 3/2 | 0.003 | 12SAN/NAV |
| 2121.25635 | 47126.972 | 63 | $3d^5$ | a ² I | 11/2 | - | $3d^4(^1I)4p$ | w ² H ^o | 9/2 | 0.00011 | 12SAN/NAV |
| 2121.278 | 47126.49 | 4 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | _ | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.002 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | ssific | ration | | | Uncertainty of observed | |
|--------------------------|----------------------------|-------------|--|---------------------------------------|-------------|--------|--|--|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 531110 | Configuration | Term | | wavelength (Å) | Source of line |
| 2121.3997 | 47123.79 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 1/2 | 0.0013 | 12SAN/NAV |
| 2121.5176 | 47121.169 | 5 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | - | $3d^4(^3P1)4p$ | z ² P ^o | 3/2 | 0.0008 | 12SAN/NAV |
| 2122.9386 | 47089.632 | 6 | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | - | $3d^4(^5D)6d$ | ⁴ F | 9/2 | 0.0009 | 12SAN/NAV |
| 2124.0861 | 47064.196 | 7 | $3d^4(^3G)4s$ | b ² G | 7/2 | - | $3d^4(^1F)4p$ | $v^{2}G^{o}$ | 7/2 | 0.0008 | 12SAN/NAV |
| 2125.6857 | 47028.784 | 16 | $3d^5$ | d ² D | 5/2 | - | $3d^4(^3P2)4p$ | v ² P ^o | 3/2 | 0.0004 | 12SAN/NAV |
| 2127.2602 | 46993.979 | 7 | 3d ⁵ 3d ⁴ (⁵ D)4s | a ⁴ G a ⁴ D | 11/2 7/2 | - | $3d^4(^3\text{H})4p$ | z ² I ^o y ⁴ F ^o | 11/2 | 0.0009 | 12SAN/NAV |
| 2127.5282 | 46988.060 46946.12 | 20 8 | $3d^{5}$ | а Б d ² G | 7/2 | _ | 3d ⁴ (³ F1)4p 3d ⁴ (¹ G2)4p | y F r ² F ^o | 5/2 5/2 | 0.0003 0.0018 | 12SAN/NAV 12SAN/NAV |
| 2129.4291 2129.8292 | 46937.302 | 8 14 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^3F1)4p$ | z ² F° | 7/2 | 0.0018 | 12SAN/NAV |
| 2129.86809 | 46936.4447 | 260 | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 9/2 | 0.0004 | 12SAN/NAV |
| 2130.1266 | 46930.749 | 8 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | 0.0007 | 12SAN/NAV |
| 2130.19377 | 46929.2695 | 110 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | 0.00007 | 12SAN/NAV |
| 2130.20722 | 46928.9733 | 97 * | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.00008 | 12SAN/NAV |
| 2130.20722 | 46928.9733 | 97 * | $3d^5$ | a ² I | 13/2 | _ | $3d^4(^1I)4p^7$ | w ² H ^o | 11/2 | 0.00008 | 12SAN/NAV |
| 2132.3700 | 46881.381 | 15 | $3d^{5}$ | a ⁴ G | 5/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 2132.63036 | 46875.6577 | 230 | $3d^{5}$ | a ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.00006 | 12SAN/NAV |
| 2132.65890 | 46875.030 | 71 | $3d^5$ | a ⁴ G | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.00010 | 12SAN/NAV |
| 2132.69757 | 46874.1806 | 98 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.00008 | 12SAN/NAV |
| 2132.91968 | 46869.3000 | 150 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.00006 | 12SAN/NAV |
| 2133.01380 | 46867.2321 | 140 | $3d^5$ | a ⁴ G | 5/2 | - | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.00006 | 12SAN/NAV |
| 2133.48087 | 46856.9729 | 590 | $3d^{5}$ | a ⁴ G | 11/2 | - | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | 0.00006 | 12SAN/NAV |
| 2133.728 | 46851.55 | 5 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^3P1)4p$ | z ² P ^o | 3/2 | 0.002 | 12SAN/NAV |
| 2133.8077 | 46849.797 | 29 | $3d^5$ | a ⁴ G | 9/2 | - | $3d^4(^3H)4p$ | y ⁴ G ^o | 11/2 | 0.0002 | 12SAN/NAV |
| 2134.20066 | 46841.1715 | 130 | $3d^5$ | a ⁴ G | 11/2 | - | $3d^4(^3H)4p$ | y ⁴ G ^o | 9/2 | 0.00006 | 12SAN/NAV |
| 2134.46008 | 46835.479 | 35 | 3d ⁵ 3d ⁵ | a ⁴ G a ⁴ G | 7/2 9/2 | - | $3d^4(^3H)4p$ | y ⁴ G° y ⁴ G° | 9/2 | 0.00018 | 12SAN/NAV |
| 2134.52756 2134.62122 | 46833.9987 46831.9440 | 390 300 | $3d^5$ | a G a ⁴ G | 5/2 | _ | $3d^4(^3\text{H})4p$ $3d^4(^3\text{H})4p$ | у ⁴ G° у ⁴ G° | 9/2 5/2 | 0.00006 0.00006 | 12SAN/NAV |
| 2134.8242 | 46826.2148 | 300 77 | $3d^5$ | a G a ⁴ G | 7/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | 0.00008 | 12SAN/NAV 12SAN/NAV |
| 2135.0874 | 46821.720 | 19 | $3d^5$ | a ⁴ G | 5/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | 0.0003 | 12SAN/NAV |
| 2135.34891 | 46815.9863 | 190 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | 0.00006 | 12SAN/NAV |
| 2135.41635 | 46814.5080 | 220 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | 0.00006 | 12SAN/NAV |
| 2137.96 | 46758.8 | 15 * | $3d^5$ | a ⁴ P | 3/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 2137.96 | 46758.8 | 15 * | $3d^{5}$ | a ² D | 5/2 | _ | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 3/2 | 0.02 | 51KIE |
| 2138.4422 | 46748.274 | 11 | $3d^5$ | $d^{2}G$ | 9/2 | _ | $3d^4(^1G2)4p$ | $r^{2}F^{o}$ | 7/2 | 0.0008 | 12SAN/NAV |
| 2139.3602 | 46728.217 | 15 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.0004 | 12SAN/NAV |
| 2139.5740 | 46723.548 | 23 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2140.52604 | 46702.7689 | 76 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.00009 | 12SAN/NAV |
| 2140.9076 | 46694.446 | 8 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 1/2 | 0.0008 | 12SAN/NAV |
| 2143.102 | 46646.64 | 5 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 7/2 | 0.003 | 12SAN/NAV |
| 2143.853 | 46630.30 | 3 | $3d^5$ | c ² F | 7/2 | - | $3d^4(^1F)4p$ | v^2D^o | 5/2 | 0.003 | 12SAN/NAV |
| 2144.0857 | 46625.241 | 15 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o ⁴ F | 1/2 | 0.0004 | 12SAN/NAV |
| 2144.8456 | 46608.72 | 5 | 3d ⁴ (³ G)4p 3d ⁵ | x ⁴ G° a ² D | 11/2 | - | $3d^4(^5D)6d$ $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 9/2 | 0.0015 | 12SAN/NAV |
| 2145.9690 2146.2474 | 46584.327 46578.29 | 28 7 | $3d^5$ | a D a ² D | 5/2 3/2 | _ | $3d^{4}(^{3}D)4p$ | x D x ² D° | 5/2 3/2 | 0.0002 0.0018 | 12SAN/NAV 12SAN/NAV |
| 2140.2474 | 46558.375 | 27 * | $3d^5$ | a ⁴ G | 5/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | 0.0018 | 12SAN/NAV |
| 2147.1653 | 46558.375 | 27 * | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | _ | $3d^4(^5D)6d$ | ⁴ G | 7/2 | 0.0002 | 12SAN/NAV |
| 2147.23331 | 46556.901 | 51 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P° | 3/2 | 0.00012 | 12SAN/NAV |
| 2150.12554 | 46494.282 | 56 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.00012 | 12SAN/NAV |
| 2150.64523 | 46483.0483 | 140 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^3P1)4p$ | z ⁴ S° | 3/2 | 0.00006 | 12SAN/NAV |
| 2150.70151 | 46481.832 | 69 | $3d^{5}$ | a ⁴ P | 1/2 | _ | $3d^4(^3P1)4p$ | z^4S^o | 3/2 | 0.00010 | 12SAN/NAV |
| 2150.72094 | 46481.4121 | 120 | $3d^{5}$ | a ⁴ P | 3/2 | _ | $3d^4(^3P1)4p$ | z ⁴ S° | 3/2 | 0.00007 | 12SAN/NAV |
| 2156.24219 | 46362.406 | 34 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | 0.00019 | 12SAN/NAV |
| 2160.710 | 46266.55 | 5 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 5/2 | 0.003 | 12SAN/NAV |
| 2161.6646 | 46246.121 | 25 | $3d^5$ | a ² D | 3/2 | - | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 1/2 | 0.0003 | 12SAN/NAV |
| 2163.4041 | 46208.94 | 5 | $3d^5$ | a ⁴ G | 7/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.0011 | 12SAN/NAV |
| 2164.457 | 46186.46 | 5 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | - | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 5/2 | 0.003 | 12SAN/NAV |
| 2164.6620 | 46182.091 | 13 | $3d^{5}$ | a ² D | 3/2 | - | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | 0.0008 | 12SAN/NAV |
| 2166.7626 | 46137.324 | 22 | $3d^5$ | a ⁴ G | 5/2 | - | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.0003 | 12SAN/NAV |
| 2167.8282 | 46114.65 | 10 | $3d^4(^{1}G1)4s$ | c ² G | 9/2 | - | $3d^4(^1F)4p$ | v^2G^o | 9/2 | 0.0010 | 12SAN/NAV |
| 2170.73672 | 46052.8663 | 190 | 3d ⁵ 3d ⁵ | a ⁴ P a ⁴ P | 5/2 | - | 3d ⁴ (³ F1)4p 3d ⁴ (³ F1)4p | x ⁴ D° x ⁴ D° | 7/2 | 0.00006 | 12SAN/NAV |
| 2170.9803 2171.03722 | 46047.70 46046.493 | 4 43 | $3d^5$ | a P a ⁴ P | 5/2 1/2 | _ | $3d^{4}(^{3}F1)4p$ $3d^{4}(^{3}F1)4p$ | x ⁴ D ^o | 3/2 3/2 | 0.0013 0.00016 | 12SAN/NAV 12SAN/NAV |
| 2171.05722 | 46046.493 | 43 65 | $3d^5$ | a P a ⁴ P | 3/2 | _ | $3d^4(^3F1)4p$ | x D° x ⁴ D° | 3/2 | 0.00016 | 12SAN/NAV 12SAN/NAV |
| 41/1.03/13 | 40040.070 | 03 | зи | a r | 312 | _ | эа (F1) 4 p | х D | 314 | 0.00011 | 123AIN/INA V |

TABLE 6. Spectral lines of Cr II—Continued

| wavelength (Å) | | Intensity | | | Clas | ssific | ation | | | of observed | _ |
|--------------------------|----------------------------|-------------|---|--------------------------------------|------------|--------|--|--|------------|--------------------|------------------------|
| | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2171.09433 | 46045.282 | 49 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.00014 | 12SAN/NAV |
| 2171.17133 | 46043.6487 | 110 | $3d^5$ | a ⁴ P | 3/2 | - | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | 0.00007 | 12SAN/NAV |
| 2171.53984 | 46035.836 | 46 | $3d^5$ | a ⁴ P | 1/2 | - | $3d^4(^3F1)4p$ | x ⁴ D° | 1/2 | 0.00015 | 12SAN/NAV |
| 2171.5599 | 46035.411 | 8 | $3d^5$ | a ⁴ P | 3/2 | - | $3d^4(^3F1)4p$ | x^4D^0 | 1/2 | 0.0008 | 12SAN/NAV |
| 2178.4704 2178.5860 | 45889.394 45886.96 | 14 7 | 3d ⁴ (¹ G1)4s 3d ⁴ (¹ D)4s | c ² G c ² D | 7/2 3/2 | _ | $3d^4(^{1}F)4p$ $3d^4(^{3}P2)4p$ | v ² G° t ² D° | 7/2 3/2 | 0.0005 0.0015 | 12SAN/NAV 12SAN/NAV |
| 2178.3860 2179.39 | 45880.90 45870.0 | 1 | $3d^{4}(^{3}F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3D)4p$ | w ² F° | 5/2 | 0.0015 | 51KIE |
| 2179.72 | 45863.1 | 2 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^1D1)4p$ | v^2F^o | 7/2 | 0.02 | 51KIE |
| 2181.5461 | 45824.702 | 8 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^1D1)4p$ | v ² F ^o | 7/2 | 0.0007 | 12SAN/NAV |
| 2182.328 | 45808.29 | 3 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D ^o | 3/2 | 0.004 | 12SAN/NAV |
| 2183.03 | 45793.6 | 2 R | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | - | $3d^4(^5D)5d$ | ⁶ S | 5/2 | 0.01 | 00WAG |
| 2187.7175 | 45695.448 | 9 | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^3P2)4p$ | t ² D ^o | 5/2 | 0.0008 | 12SAN/NAV |
| 2189.2384 | 45663.706 | 8 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^1D1)4p$ | v ² F° | 5/2 | 0.0008 | 12SAN/NAV |
| 2190.1157 | 45645.42 | 5 | 3d ⁵ 3d ⁵ | b ⁴ D | 7/2 | - | $3d^4(^3G)4p$ | $x {}^{4}G^{o}$ $w {}^{2}F^{o}$ | 9/2 | 0.0012 | 12SAN/NAV |
| 2190.52 2190.916 | 45637.0 45628.74 | 2 4 | $3d^{4}$ $3d^{4}$ (³ P)4s | a ² D a ² P | 5/2 1/2 | _ | $3d^4(^3D)4p$ $3d^4(^1D1)4p$ | w F° w ² D° | 5/2 3/2 | 0.02 0.003 | 51KIE 12SAN/NAV |
| 2190.910 | 45625.3 | 2 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^1D1)4p$ | v ² F ^o | 5/2 | 0.003 | 51KIE |
| 2191.08 | 45617.66 | 5 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 3/2 | 0.0012 | 12SAN/NAV |
| 2192.7476 | 45590.635 | 5 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F° | 5/2 | 0.0009 | 12SAN/NAV |
| 2193.0981 | 45583.35 | 8 | $3d^5$ | d ² G | 9/2 | _ | $3d^4(^1G2)4p$ | s ² G° | 9/2 | 0.0019 | 12SAN/NAV |
| 2193.28115 | 45579.545 | 51 | $3d^{5}$ | a ² F | 7/2 | _ | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 5/2 | 0.00013 | 12SAN/NAV |
| 2195.7594 | 45528.107 | 8 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3D)4p$ | w^2F^o | 7/2 | 0.0008 | 12SAN/NAV |
| 2196.8209 | 45506.110 | 32 | $3d^5$ | a ² F | 5/2 | - | $3d^4(^3D)4p$ | x ² D ^o | 3/2 | 0.0004 | 12SAN/NAV |
| 2197.0617 | 45501.12 | 3 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | $z^{2}S^{o}$ | 1/2 | 0.0017 | 12SAN/NAV |
| 2199.09 | 45459.2 | 2 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^3F1)4p$ | z^4G^0 | 7/2 | 0.02 | 51KIE |
| 2199.2201 | 45456.471 | 7 9 | 3d ⁵ 3d ⁵ | a ² D d ² G | 3/2 | _ | $3d^4(^3D)4p$ | w^2F^o s^2G^o | 5/2 | 0.0009 | 12SAN/NAV |
| 2200.4806 2202.04 | 45430.435 45398.3 | 3 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 3/2 | _ | 3d ⁴ (¹ G2)4p 3d ⁴ (³ P1)4p | z^2S^0 | 7/2 1/2 | 0.0009 0.02 | 12SAN/NAV 51KIE |
| 2202.30 | 45392.9 | 3 * | $3d^{5}$ | b ⁴ D | 7/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | 0.02 | 51KIE 51KIE |
| 2202.30 | 45392.9 | 3 * | $3d^4(^1D)4s$ | $c^{-2}D$ | 5/2 | _ | $3d^4(^3F2)4p$ | w ⁴ G° | 7/2 | 0.02 | 51KIE |
| 2202.9125 | 45380.287 | 10 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3G)4p$ | $x^{4}G^{o}$ | 7/2 | 0.0006 | 12SAN/NAV |
| 2203.8743 | 45360.485 | 9 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0007 | 12SAN/NAV |
| 2205.3230 | 45330.69 | 5 | $3d^{5}$ | a ² G | 7/2 | - | $3d^4(^1D1)4p$ | $v^{2}F^{o}$ | 7/2 | 0.0016 | 12SAN/NAV |
| 2206.449 | 45307.56 | 3 | $3d^34s^2$ | c ⁴ F | 5/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F ^o | 3/2 | 0.003 | 12SAN/NAV |
| 2208.08 | 45274.1 | 3 | $3d^5$ | b ⁴ D b ⁴ D | 3/2 | - | $3d^4(^3G)4p$ | x ⁴ G° x ⁴ G° | 5/2 | 0.02 | 51KIE |
| 2208.27 2209.0347 | 45270.2 45254.53 | 2 4 | $3d^5$ $3d^5$ | ь D b ⁴ F | 5/2 5/2 | _ | $3d^4(^3G)4p$ $3d^4(^3D)4p$ | $x G^{\circ}$ $x ^{2}D^{\circ}$ | 5/2 3/2 | 0.02 0.0016 | 51KIE |
| 2209.0347 | 45247.945 | 4 11 | $3d^5$ | ог а ⁴ Р | 5/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | 0.0016 | 12SAN/NAV 12SAN/NAV |
| 2209.4162 | 45246.718 | 10 | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 3/2 | 0.0006 | 12SAN/NAV |
| 2210.8807 | 45216.75 | 10 | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | q ² G° | 7/2 | 0.0018 | 12SAN/NAV |
| 2211.82943 | 45197.357 | 71 | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | 0.00011 | 12SAN/NAV |
| 2212.1807 | 45190.180 | 12 | $3d^{5}$ | a ⁴ G | 9/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | 0.0005 | 12SAN/NAV |
| 2212.2109 | 45189.564 | 21 | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^3F1)4p$ | y^4F^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2212.2911 | 45187.93 | 5 | $3d_{5}^{5}$ | a ⁴ P | 3/2 | - | $3d^4(^3F1)4p$ | y^4F^0 | 5/2 | 0.0016 | 12SAN/NAV |
| 2213.5500 | 45162.229 | 5 | $3d^5$ | a ⁴ G | 7/2 | - | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | 0.0009 | 12SAN/NAV |
| 2213.6229 | 45160.742 | 11 | $3d^5$ | a ⁴ G a ² G | 9/2 | - | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | 0.0005 | 12SAN/NAV |
| 2213.67401 2215.06443 | 45159.6990 45131.3546 | 120 96 | 3d ⁵ 3d ⁵ | a ⁻ G a ² G | 9/2 7/2 | _ | 3d ⁴ (¹ D1)4p 3d ⁴ (¹ D1)4p | v^2F^o v^2F^o | 7/2 5/2 | 0.00007 0.00008 | 12SAN/NAV 12SAN/NAV |
| 2215.30 | 45126.6 | 5 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 7/2 | 0.000 | 51KIE |
| 2216.3168 | 45105.85 | 6 | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ I° | 13/2 | 0.0010 | 12SAN/NAV |
| 2216.595 | 45100.19 | 4 | $3d^4(^1D)4s$ | c ² D | 5/2 | _ | $3d^4(^3F2)4p$ | t ² F° | 7/2 | 0.003 | 12SAN/NAV |
| 2216.68 | 45098.5 | 3 R | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 5/2 | 0.01 | 00WAG |
| 2217.8857 | 45073.951 | 13 | $3d^{5}$ | b ⁴ D | 7/2 | _ | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.0005 | 12SAN/NAV |
| 2218.3620 | 45064.274 | 11 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^1D1)4p$ | w ² D ^o | 5/2 | 0.0006 | 12SAN/NAV |
| 2219.0514 | 45050.275 | 11 | $3d^4(^3G)4s$ | e ² G | 9/2 | - | $3d^3(^2H)4s4p(^3P^0)$ | $q^{2}G^{o}$ | 9/2 | 0.0008 | 12SAN/NAV |
| 2219.159 | 45048.09 | 4 | $3d^5$ | a ⁴ P | 1/2 | - | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 1/2 | 0.002 | 12SAN/NAV |
| 2220.01 | 45030.8 | 2 | $3d^5$ | a ⁴ G a ⁴ G | 5/2 | - | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | 0.02 | 51KIE |
| 2220.291 | 45025.13 44993.391 | 2 39 | 3d ⁵ 3d ⁴ (¹ G1)4s | a G c ² G | 7/2 7/2 | _ | $3d^4(^3H)4p$ $3d^4(^1F)4p$ | z ² G ^o u ² F ^o | 7/2 7/2 | 0.004 0.00017 | 12SAN/NAV |
| 2221.85719 2224.7410 | 44993.391 | 39 4 | 3d (G1)4s 3d ⁵ | c G c ² F | 5/2 | _ | $3d^{4}(^{1}F)4p$ | u F u ² F° | 7/2 | 0.00017 | 12SAN/NAV 12SAN/NAV |
| 2224.7410 | 44932.5 | 1 * | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 1/2 | 0.0017 | 51KIE |
| | 44932.5 | 1 * | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^1D1)4p$ | w ² D° | 3/2 | 0.02 | 51KIE |
| 2224.87 | | | | c ² G | | | $3d^4(^1F)4p$ | u ² F° | | | |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | ssific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|-------------|------------------------------------|--------------------------------------|--------------|--------|--|--|--------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2225.919 | 44911.30 | 3 | $3d^5$ | b ⁴ D | 3/2 | _ | 3d ⁴ (³ P1)4p | ² D ^o | 5/2 | 0.004 | 12SAN/NAV |
| 2226.2674 | 44904.268 | 42 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2226.34803 | 44902.642 | 49 | $3d^{5}$ | a ⁴ P | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.00013 | 12SAN/NAV |
| 2226.459 | 44900.40 | 5 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 7/2 | 0.002 | 12SAN/NAV |
| 2226.468 | 44900.22 | 5 | 3d ⁵ 3d ⁵ | a ⁴ G a ⁴ G | 9/2 | - | $3d^4(^3H)4p$ | z ⁴ I ^o z ⁴ G ^o | 11/2 | 0.003 | 12SAN/NAV |
| 2227.8781 2228.1607 | 44871.807 | 20 8 | $3d^5$ | a G a ⁴ G | 11/2 7/2 | _ | 3d ⁴ (³ F1)4p 3d ⁴ (³ F1)4p | z Go z ⁴ Go | 9/2 9/2 | 0.0003 0.0007 | 12SAN/NAV 12SAN/NAV |
| 2228.1007 | 44866.116 44864.634 | 23 | $3d^5$ | a G a ⁴ G | 9/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | 0.0007 | 12SAN/NAV |
| 2228.33510 | 44862.6051 | 91 | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^1F)4p$ | u ² F° | 5/2 | 0.00008 | 12SAN/NAV |
| 2228.8246 | 44852.753 | 14 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^1F)4p$ | u ² F° | 7/2 | 0.0004 | 12SAN/NAV |
| 2230.172 | 44825.66 | 5 | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.003 | 12SAN/NAV |
| 2230.57 | 44817.7 | 2 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | 0.02 | 51KIE |
| 2231.0023 | 44808.976 | 14 | $3d^5$ | $a^{2}I$ | 13/2 | _ | $3d^4(^1I)4p$ | ² K ^o | 15/2 | 0.0005 | 12SAN/NAV |
| 2231.44565 | 44800.0745 | 75 | $3d^{5}$ | c ² F | 7/2 | _ | $3d^4(^1F)4p$ | u ² F ^o | 7/2 | 0.00009 | 12SAN/NAV |
| 2234.2035 | 44744.78 | 5 | $3d^5$ | a ⁴ G | 5/2 | _ | $3d^4(^3F1)4p$ | z^4G^o | 7/2 | 0.0014 | 12SAN/NAV |
| 2234.4894 | 44739.055 | 14 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | 0.0005 | 12SAN/NAV |
| 2234.5637 | 44737.57 | 12 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | 0.0010 | 12SAN/NAV |
| 2236.4574 | 44699.69 | 5 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3H)4p$ | z ⁴ I ^o | 9/2 | 0.0012 | 12SAN/NAV |
| 2236.8659 | 44691.53 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3D)4p$ | x^2D^o | 3/2 | 0.0015 | 12SAN/NAV |
| 2238.9008 | 44650.913 | 14 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | 0.0005 | 12SAN/NAV |
| 2239.2260 | 44644.429 | 14 | $3d^{5}$ | a ⁴ G | 5/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.0004 | 12SAN/NAV |
| 2239.5136 | 44638.696 | 8 | $3d^5$ | a ⁴ G | 7/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.0008 | 12SAN/NAV |
| 2241.2935 | 44603.250 | 35 | $3d^{5}$ | b ⁴ D | 1/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 3/2 | 0.0002 | 12SAN/NAV |
| 2241.4587 | 44599.96 | 4 | $3d^5$ | a ² I | 11/2 | - | $3d^4(^1I)4p$ | ² I ^o | 13/2 | 0.0019 | 12SAN/NAV |
| 2241.6661 | 44595.837 | 20 | $3d^5$ | b ⁴ D a ² I | 3/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o ² I ^o | 3/2 | 0.0004 | 12SAN/NAV |
| 2241.79250 | 44593.323 | 65 | 3d ⁵ 3d ⁵ | a ² I | 13/2 | - | $3d^4(^1I)4p$ | $x^{2}H^{o}$ | 13/2 | 0.00011 | 12SAN/NAV |
| 2243.26094 | 44564.135 44557.5084 | 58 110 | $3d^5$ | a 1 a ² I | 11/2 13/2 | _ | 3d ⁴ (¹ G1)4p 3d ⁴ (¹ G1)4p | x H x ² H ^o | 11/2 11/2 | 0.00012 0.00008 | 12SAN/NAV |
| 2243.59457 2244.8067 | 44537.3084 | 26 | $3d^4(^5D)4s$ | a 1 a ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | х п y ⁴ D° | 3/2 | 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2244.86700 | 44532.255 | 66 | $3d^{5}$ | a ⁴ P | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2244.9281 | 44531.043 | 25 | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2245.3175 | 44523.321 | 16 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^3D)4p$ | 9 2 F^{o} | 7/2 | 0.0004 | 12SAN/NAV |
| 2247.88876 | 44472.397 | 49 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 7/2 | 0.00015 | 12SAN/NAV |
| 2248.0113 | 44469.973 | 12 | $3d^4(^3P1)4p$ | y ⁴ D ^o | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ S | 5/2 | 0.0005 | 12SAN/NAV |
| 2248.28563 | 44464.5478 | 300 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 9/2 | 0.00007 | 12SAN/NAV |
| 2248.3090 | 44464.09 | 8 | $3d^4(^3G)4s$ | e ² G | 9/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ² F° | 7/2 | 0.0011 | 12SAN/NAV |
| 2248.54839 | 44459.3523 | 220 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 7/2 | 0.00007 | 12SAN/NAV |
| 2249.32 | 44444.1 | 2 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 2249.77370 | 44435.1404 | 140 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 5/2 | 0.00007 | 12SAN/NAV |
| 2249.8961 | 44432.72 | 6 | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.0020 | 12SAN/NAV |
| 2249.9175 | 44432.301 | 31 | $3d^5$ | a ⁴ P | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.0002 | 12SAN/NAV |
| 2249.97395 | 44431.186 | 56 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3G)4p$ | ⁴ F° | 5/2 | 0.00013 | 12SAN/NAV |
| 2252.3515 | 44384.29 | 9 | $3d^5$ | a ² F | 5/2 | - | $3d^4(^3D)4p$ | w^2F^o | 5/2 | 0.0013 | 12SAN/NAV |
| 2253.29 | 44365.8 | 1 2 P | $3d^5$ | a ² D | 5/2 | - | $3d^4(^1G1)4p$ | w ² G ^o | 7/2 | 0.02 | 51KIE |
| 2253.54 | 44360.88 | 2 R | $3d^5$ $3d^5$ | a ² I a ² G | 11/2 | - | $3d^4(^3D)4p$ $3d^4(^1D1)4p$ | w ⁴ F ^o w ² D ^o | 9/2 | 0.01 | 00WAG |
| 2255.6871 | 44318.662 | 23 54 | $3d^5$ | a G b ⁴ D | 7/2 1/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 3/2 | 0.0003 0.00016 | 12SAN/NAV |
| 2255.98589 2255.99792 | 44312.793 44312.557 | 130 | $3d^5$ | a ² I | 11/2 | _ | $3d^4(^{1}G1)4p$ | x ² H° | 9/2 | 0.00010 | 12SAN/NAV 12SAN/NAV |
| 2256.3628 | 44305.392 | 18 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.00011 | 12SAN/NAV |
| 2256.56 | 44303.392 | 2 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.004 | 51KIE |
| 2257.6108 | 44280.902 | 13 | $3d^5$ | a ² I | 11/2 | _ | $3d^4(^1I)4p$ | ² K ^o | 13/2 | 0.0005 | 12SAN/NAV |
| 2257.73410 | 44278.4842 | 120 | $3d^5$ | a ² I | 11/2 | _ | $3d^4(^1I)4p$ | ${}^{2}I^{o}$ | 11/2 | 0.00007 | 12SAN/NAV |
| 2257.94874 | 44274.2755 | 140 | $3d^5$ | a ² I | 13/2 | _ | $3d^4(^1I)4p$ | ${}^{2}K^{o}$ | 13/2 | 0.00006 | 12SAN/NAV |
| 2257.9840 | 44273.584 | 7 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 1/2 | 0.0007 | 12SAN/NAV |
| 2258.07209 | 44271.857 | 56 | $3d^5$ | a ² I | 13/2 | _ | $3d^4(^1I)4p$ | ${}^{2}I^{o}$ | 11/2 | 0.00012 | 12SAN/NAV |
| 2260.2786 | 44228.643 | 13 | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | _ | $3d^44d$ | h ⁴ H | 7/2 | 0.0005 | 12SAN/NAV |
| 2260.9144 | 44216.206 | 13 | $3d^4(^3H)4p$ | $z^{4}H^{o}$ | 9/2 | _ | $3d^44d$ | h ⁴ H | 9/2 | 0.0005 | 12SAN/NAV |
| 2262.5668 | 44183.917 | 8 | $3d^5$ | d^2D | 3/2 | - | $3d^4(^3P2)4p$ | t ² D ^o | 3/2 | 0.0007 | 12SAN/NAV |
| 2262.9437 | 44176.56 | 4 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | - | $3d^4(^3D)4p$ | x^4P^o | 5/2 | 0.0016 | 12SAN/NAV |
| 2263.3161 | 44169.291 | 18 | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | - | $3d^44d$ | h ⁴ H | 11/2 | 0.0003 | 12SAN/NAV |
| 2266.5703 | 44105.881 | 15 | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | - | $3d^44d$ | g ⁴ I | 9/2 | 0.0004 | 12SAN/NAV |
| 2268.2385 | 44073.446 | 21 | $3d^4(^3H)4p$ | z ⁴ H° | 13/2 | - | $3d^44d$ | h ⁴ H | 13/2 | 0.0003 | 12SAN/NAV |
| 2268.3297 | 44071.674 | 12 | $3d^5$ | d ² D | 5/2 | _ | $3d^4(^3P2)4p$ | t ² D ^o | 5/2 | 0.0005 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|-------------|--|---------------------------------------|------------|--------|--|--|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 551110 | Configuration | Term | J | wavelength (Å) | Source of line |
| 2269.2164 | 44054.455 | 16 | $3d^4(^3H)4p$ | z ⁴ H° | 9/2 | _ | $3d^44d$ | g ⁴ I | 11/2 | 0.0004 | 12SAN/NAV |
| 2269.7021 | 44045.028 | 18 | $3d^4(^3D)4p$ | w^4D^o | 5/2 | - | $3d^4(^5D)6d$ | ⁴ P | 5/2 | 0.0007 | 12SAN/NAV |
| 2270.2162 | 44035.055 | 32 | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | _ | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.0002 | 12SAN/NAV |
| 2271.0108 | 44019.65 | 7 | $3d^34s^2$ | c ⁴ F | 3/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 5/2 | 0.0011 | 12SAN/NAV |
| 2271.880 | 44002.81 | 4 | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | _ | $3d^4(^5D)6d$ | ⁴ F | 9/2 | 0.003 | 12SAN/NAV |
| 2272.1299 | 43997.970 | 18 | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | - | $3d^44d$ | g ⁴ I | 13/2 | 0.0003 | 12SAN/NAV |
| 2273.336 | 43974.63 | 3 | $3d^4(^3D)4p$ | w ⁴ D° | 1/2 | - | $3d^4(^5D)6d$ | ⁴ P | 3/2 | 0.004 | 12SAN/NAV |
| 2273.8998 | 43963.727 | 7 | $3d^34s^2$ | d ⁴ P | 3/2 | - | $3d^4(^5D)6p$ | ⁴ P ^o | 5/2 | 0.0007 | 12SAN/NAV |
| 2274.5474 | 43951.211 | 22 | $3d^4(^3H)4p$ $3d^34s^2$ | z ⁴ H° c ⁴ F | 13/2 | - | $3d^44d$ $3d^3(^2G)4s4p(^3P^0)$ | g ⁴ I t ⁴ G° | 15/2 | 0.0003 | 12SAN/NAV |
| 2276.3669 | 43916.084 | 9 4 | $3d^{4}4s^{-}$ $3d^{4}(^{3}P)4s$ | b ⁴ P | 5/2 5/2 | - | $3d^{4}(^{3}D)4p$ | x ⁴ P° | 7/2 | 0.0006 | 12SAN/NAV |
| 2279.633 2280.981 | 43853.17 43827.26 | 4 | $3d^4(^3D)4p$ | w ⁴ D° | 5/2 | _ | $3d^{4}(^{5}D)6d$ | ⁴ D | 3/2 7/2 | 0.003 0.003 | 12SAN/NAV 12SAN/NAV |
| 2282.4038 | 43799.938 | 7 * | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 5/2 | 0.003 | 12SAN/NAV |
| 2282.4038 | 43799.938 | 7 * | $3d^4(^3H)4p$ | z ⁴ H° | 7/2 | _ | $3d^4(^5D)5d$ | ¹G ⁴G | 5/2 | 0.0010 | 12SAN/NAV |
| 2282.7086 | 43794.090 | 9 | $3d^4(^3H)4p$ | z ⁴ H° | 9/2 | _ | $3d^4(^5D)5d$ | ⁴G | 7/2 | 0.0006 | 12SAN/NAV |
| 2282.8042 | 43792.256 | 8 | $3d^4(^3D)4p$ | w ⁴ D° | 5/2 | _ | $3d^4(^5D)6d$ | ⁴ F | 5/2 | 0.0009 | 12SAN/NAV |
| 2283.2599 | 43783.517 | 8 | $3d^4(^3H)4p$ | z ⁴ H° | 11/2 | _ | $3d^4(^5D)5d$ | ⁴ G | 9/2 | 0.0008 | 12SAN/NAV |
| 2283.5000 | 43778.913 | 5 | $3d^34s^2$ | d ⁴ P | 1/2 | _ | $3d^4(^5D)6p$ | $^{4}P^{o}$ | 3/2 | 0.0010 | 12SAN/NAV |
| 2283.560 | 43777.76 | 3 | $3d^4(^3D)4p$ | w ⁴ D° | 7/2 | _ | $3d^4(^5D)6d$ | ^{4}D | 7/2 | 0.004 | 12SAN/NAV |
| 2284.1283 | 43766.872 | 9 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 9/2 | 0.0007 | 12SAN/NAV |
| 2284.2996 | 43763.59 | 7 | $3d^4(^3H)4p$ | z ⁴ H ^o | 13/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 11/2 | 0.0019 | 12SAN/NAV |
| 2285.3860 | 43742.788 | 5 | $3d^4(^3D)4p$ | w^4D^o | 7/2 | _ | $3d^4(^5D)6d$ | ^{4}F | 5/2 | 0.0008 | 12SAN/NAV |
| 2286.2571 | 43726.12 | 9 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.0013 | 12SAN/NAV |
| 2286.713 | 43717.41 | 7 | $3d^34s^2$ | d ⁴ P | 5/2 | _ | $3d^4(^5D)6p$ | $^4P^{o}$ | 5/2 | 0.002 | 12SAN/NAV |
| 2287.1802 | 43708.477 | 21 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D° | 7/2 | 0.0003 | 12SAN/NAV |
| 2289.674 | 43660.88 | 4 | $3d^4(^3D)4p$ | w ⁴ D ^o | 3/2 | _ | $3d^4(^5D)6d$ | ⁴ D | 5/2 | 0.003 | 12SAN/NAV |
| 2289.8310 | 43657.88 | 4 | $3d^34s^2$ | d ⁴ P | 5/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | p^2D^o | 3/2 | 0.0018 | 12SAN/NAV |
| 2290.947 | 43636.62 | 3 | $3d^4(^3D)4p$ | w ⁴ D° | 5/2 | - | $3d^4(^5D)6d$ | ⁴ D | 5/2 | 0.005 | 12SAN/NAV |
| 2291.0935 | 43633.828 | 12 | $3d^{5}$ | a ² D | 5/2 | - | $3d^4(^3D)4p$ | $y^{2}P^{o}$ | 3/2 | 0.0005 | 12SAN/NAV |
| 2291.8469 | 43619.485 | 7 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | 0.0009 | 12SAN/NAV |
| 2292.3784 | 43609.37 | 3 | $3d^4(^3D)4s$ | b ² D | 5/2 | - | $3d^4(^1F)4p$ | v^2D^o | 5/2 | 0.0014 | 12SAN/NAV |
| 2292.4342 | 43608.31 | 5 | $3d^34s^2$ | d ⁴ P w ⁴ D° | 5/2 | - | $3d^4(^5D)6p$ | ⁶ P ^o | 5/2 | 0.0012 | 12SAN/NAV |
| 2293.5488 | 43587.12 | 6 | $3d^4(^3D)4p$ $3d^34s^2$ | w D ^o c ⁴ F | 7/2 | - | $3d^4(^5D)6d$ | ⁴ D t ⁴ G° | 5/2 | 0.0013 | 12SAN/NAV |
| 2294.4500 2295.16330 | 43570.002 43556.4626 | 11 160 | 3d 4s 3d ⁴ (⁵ D)4p | с F z ⁶ P° | 9/2 3/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ $3d^4(^5D)4d$ | e ⁶ S | 11/2 5/2 | 0.0007 0.00006 | 12SAN/NAV 12SAN/NAV |
| 2295.10550 | 43536.4020 | 4 | $3d^{5}$ | b ⁴ D | 5/2 | _ | $3d^4(^3F1)4p$ | z ² F° | 5/2 | 0.0006 | 12SAN/NAV |
| 2290.2103 | 43520.77 | 4 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^{1}F)4p$ | v ² D ^o | 5/2 | 0.0010 | 12SAN/NAV |
| 2297.040 | 43518.4092 | 220 | $3d^{5}$ | a ⁴ G | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ H° | 13/2 | 0.002 | 12SAN/NAV |
| 2299.3909 | 43476.388 | 6 * | $3d^5$ | d ² D | 5/2 | _ | $3d^4(^3F2)4p$ | t ² F° | 7/2 | 0.0010 | 12SAN/NAV |
| 2299.3909 | 43476.388 | 6 * | $3d^4(^3G)4s$ | e ² G | 9/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | t ² H ^o | 9/2 | 0.0010 | 12SAN/NAV |
| 2299.511 | 43474.12 | 5 | $3d^4(^3G)4s$ | e ² G | 9/2 | _ | $3d^3(^2\text{H})4s4p(^3\text{P}^\circ)$ | t ² H ^o | 11/2 | 0.003 | 12SAN/NAV |
| 2300.03163 | 43464.2776 | 260 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ S | 5/2 | 0.00006 | 12SAN/NAV |
| 2300.0669 | 43463.611 | 7 | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^3(^2H)4s4p(^3P^0)$ | t ² H ^o | 9/2 | 0.0007 | 12SAN/NAV |
| 2300.5595 | 43454.306 | 17 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^1G1)4p$ | w^2G^o | 9/2 | 0.0008 | 12SAN/NAV |
| 2303.1850 | 43404.77 | 4 | $3d^34s^2$ | d ⁴ P | 5/2 | _ | $3d^4(^5D)6p$ | $^4P^{o}$ | 3/2 | 0.0014 | 12SAN/NAV |
| 2304.0112 | 43389.211 | 11 | $3d^5$ | a ² D | 3/2 | _ | $3d^4(^3D)4p$ | x^4P^o | 1/2 | 0.0005 | 12SAN/NAV |
| 2305.5182 | 43360.85 | 4 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^1G1)4p$ | w^2G^o | 7/2 | 0.0014 | 12SAN/NAV |
| 2305.9660 | 43352.43 | 4 | $3d^5$ | d ² D | 5/2 | _ | $3d^4(^3F2)4p$ | t ² F ^o | 5/2 | 0.0019 | 12SAN/NAV |
| 2306.8086 | 43336.599 | 13 | $3d^5$ | a ⁴ G | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | 0.0005 | 12SAN/NAV |
| 2307.19045 | 43329.4272 | 180 | $3d^5$ | a ⁴ G | 9/2 | _ | $3d^4(^3H)4p$ | z ⁴ H° | 11/2 | 0.00006 | 12SAN/NAV |
| 2307.51808 | 43323.2757 | 380 | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ S | 5/2 | 0.00006 | 12SAN/NAV |
| 2307.5517 | 43322.645 | 10 | $3d^{5}$ | a ² D | 3/2 | - | $3d^4(^3D)4p$ | $y^{2}P^{o}$ | 1/2 | 0.0010 | 12SAN/NAV |
| 2307.723 | 43319.43 | 3 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | - | $3d^4(^3F2)4p$ | s ² D° | 5/2 | 0.003 | 12SAN/NAV |
| 2310.727 | 43263.12 | 3 | $3d^4(^3H)4p$ | z ⁴ H° | 11/2 | - | $3d^4(^5D)5d$ | ⁶ G ⁴a⁰ | 9/2 | 0.005 | 12SAN/NAV |
| 2310.96 | 43258.76 | 2 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^3P1)4p$ | $z^{4}S^{o}$ | 3/2 | 0.01 | 51KIE |
| 2313.803 | 43205.61 | 3 | $3d^5$ | a ⁴ P | 1/2 | - | $3d^4(^3\text{P1})4p$ | z^2S^0 | 1/2 | 0.004 | 12SAN/NAV |
| 2314.72179 | 43188.4599 | 150 | $3d^5$ | a ⁴ G | 7/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o | 9/2 | 0.00006 | 12SAN/NAV |
| 2314.8010 | 43186.982 | 18 | $3d^5$ | a ⁴ G | 9/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o x ² P ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2318.49 | 43118.27 | 2 | $3d^4(^3P)4s$ | a ² P | 1/2 | - | $3d^4(^1S1)4p$ | | 1/2 | 0.01 | 51KIE |
| 2318.7661 | 43113.139 | 10 | $3d^5$ | a ² F a ⁴ P | 5/2 | - | $3d^4(^1G1)4p$ | w ² G° | 7/2 | 0.0006 | 12SAN/NAV |
| 2319.36774 2320.07608 | 43101.9561 43088.7978 | 240 130 | $3d^5$ $3d^5$ | a ¹ P a ⁴ G | 5/2 5/2 | _ | $3d^4(^3P1)4p$ $3d^4(^3H)4p$ | y ⁴ D° z ⁴ H° | 7/2 7/2 | 0.00006 0.00006 | 12SAN/NAV 12SAN/NAV |
| | | | 3// | | 1// | | | | | | |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | - |
|------------------------|----------------------------|--------------|--|--|------------|-------|---|---------------------------------------|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2320.3847 | 43083.067 | 15 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 2320.94 | 43072.76 | 1 | $3d^5$ | a ² D | 5/2 | - | $3d^4(^3D)4p$ | w ⁴ F ^o | 7/2 | 0.01 | 51KIE |
| 2321.3716 | 43064.75 | 5 | $3d^4(^3D)4p$ | w^4F^0 | 7/2 | - | $3d^4(^5D)6d$ | ⁴ F | 9/2 | 0.0017 | 12SAN/NAV |
| 2321.95 | 43054.03 | 4 | $3d^4(^3P)4s$ | a ² P | 1/2 | - | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | 0.01 | 51KIE |
| 2322.7243 | 43039.68 | 5 | $3d^4(^3P1)4p$ | y ⁴ P ^o x ⁴ P ^o | 3/2 | - | $3d^4(^5D)5d$ | ⁶ S ⁴ F | 5/2 | 0.0011 | 12SAN/NAV |
| 2322.8822 2325.04 | 43036.750 42996.81 | 17 1 | $3d^4(^3D)4p$ $3d^4(^3F)4s$ | a ⁴ F | 5/2 5/2 | _ | 3d ⁴ (⁵ D)6d 3d ⁴ (¹ G1)4p | $x^{2}F^{o}$ | 7/2 7/2 | 0.0004 0.01 | 12SAN/NAV 51KIE |
| 2325.7154 | 42990.81 | 7 | $3d^4(^3D)4p$ | w ⁴ F° | 9/2 | _ | $3d^4(^5D)6d$ | ⁴ F | 9/2 | 0.0010 | 12SAN/NAV |
| 2326.26 | 42974.26 | 3 | $3d^4(^1F)4s$ | d ² F | 7/2 | _ | $3d^4(^3F2)4p$ | u ² G° | 9/2 | 0.010 | 51KIE |
| 2326.600 | 42967.98 | 3 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 5/2 | 0.005 | 12SAN/NAV |
| 2327.603 | 42949.47 | 5 * | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ S | 5/2 | 0.003 | 12SAN/NAV |
| 2327.603 | 42949.47 | 5 * | $3d^4(^3D)4p$ | w^4D^o | 5/2 | _ | $3d^4(^5D)6d$ | ⁶ P | 7/2 | 0.003 | 12SAN/NAV |
| 2327.6209 | 42949.140 | 22 | $3d^4(^3D)4p$ | w^4D^o | 3/2 | - | $3d^4(^5D)6d$ | ⁶ F | 1/2 | 0.0003 | 12SAN/NAV |
| 2330.0193 | 42904.935 | 13 | $3d^5$ | a ² D | 3/2 | - | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.0005 | 12SAN/NAV |
| 2332.39 | 42861.33 | 3 | $3d^{5}$ | b ⁴ F | 5/2 | - | $3d^4(^1G1)4p$ | w ² G ^o | 7/2 | 0.01 | 51KIE |
| 2332.8985 | 42851.987 | 14 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | z ⁶ S ^o | 5/2 | 0.0010 | 12SAN/NAV |
| 2333.45864 | 42841.7014 | 110 | $3d^5$ | b ⁴ D w ⁴ F ^o | 7/2 | - | $3d^4(^3F1)4p$ | x ⁴ D° | 7/2 | 0.00007 | 12SAN/NAV |
| 2333.568 2333.6473 | 42839.69 42838.238 | 3 12 | $3d^4(^3D)4p$ $3d^4(^3D)4p$ | w F° w ⁴ F° | 7/2 9/2 | _ | 3d ⁴ (⁵ D)6d 3d ⁴ (⁵ D)6d | ⁴ D ⁴ G | 7/2 11/2 | 0.004 0.0005 | 12SAN/NAV 12SAN/NAV |
| 2333.8312 | 42834.863 | 28 | 3d ⁵ | wг b ⁴ D | 1/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 3/2 | 0.0003 | 12SAN/NAV |
| 2333.8716 | 42834.122 | 26 16 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | 0.0002 | 12SAN/NAV |
| 2334.16964 | 42828.653 | 33 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 7/2 | 0.0004 | 12SAN/NAV |
| 2334.2352 | 42827.450 | 31 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 3/2 | 0.0002 | 12SAN/NAV |
| 2334.36723 | 42825.028 | 40 | $3d^{5}$ | b ⁴ D | 3/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.00016 | 12SAN/NAV |
| 2334.4116 | 42824.214 | 22 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^3F1)4p$ | $x^{4}D^{o}$ | 1/2 | 0.0003 | 12SAN/NAV |
| 2334.4505 | 42823.500 | 24 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^3F1)4p$ | x ⁴ D ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2334.5832 | 42821.066 | 58 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.0002 | 12SAN/NAV |
| 2334.8159 | 42816.799 | 19 | $3d^{5}$ | b ⁴ D | 3/2 | - | $3d^4(^3F1)4p$ | x ⁴ D ^o | 1/2 | 0.0003 | 12SAN/NAV |
| 2336.406 | 42787.66 | 3 | $3d^5$ | a ² D | 3/2 | - | $3d^4(^3D)4p$ | w ⁴ F ^o | 5/2 | 0.004 | 12SAN/NAV |
| 2336.8536 | 42779.47 | 9 | $3d^4(^3D)4p$ $3d^5$ | x ⁴ P ^o a ² D | 5/2 | - | $3d^4(^5D)6d$ | ${}^{4}D$ $x {}^{2}F^{o}$ | 7/2 | 0.0014 | 12SAN/NAV |
| 2337.7242 2337.7242 | 42763.536 42763.536 | 36 * 36 * | $3d^4(^3D)4p$ | а D х ⁴ P° | 5/2 3/2 | _ | 3d ⁴ (¹ G1)4p 3d ⁴ (⁵ D)6d | х F ⁴ Р | 7/2 5/2 | 0.0002 0.0002 | 12SAN/NAV 12SAN/NAV |
| 2338.27 | 42753.56 | 1 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^3D)4p$ | x ² D° | 3/2 | 0.002 | 51KIE |
| 2338.7652 | 42744.50 | 6 | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | _ | $3d^4(^5D)6d$ | ⁴ F | 5/2 | 0.0011 | 12SAN/NAV |
| 2339.8914 | 42723.93 | 3 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^1D1)4p$ | v ² F ^o | 5/2 | 0.0016 | 12SAN/NAV |
| 2340.225 | 42717.84 | 7 | $3d^4(^3D)4p$ | w^4F^o | 7/2 | _ | $3d^4(^5D)6d$ | ^{4}G | 9/2 | 0.003 | 12SAN/NAV |
| 2342.6832 | 42673.022 | 7 | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | _ | $3d^44d$ | h ⁴ H | 7/2 | 0.0008 | 12SAN/NAV |
| 2343.090 | 42665.61 | 4 | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | - | $3d^44d$ | h ⁴ H | 9/2 | 0.003 | 12SAN/NAV |
| 2344.5361 | 42639.300 | 21 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^1I)4p$ | w ² H ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2344.8230 | 42634.08 | 7 | $3d_{5}^{4}(^{3}\text{F1})4p$ | $z {}^{4}G^{o}$ | 9/2 | - | $3d^44d$ | h ⁴ H | 11/2 | 0.0016 | 12SAN/NAV |
| 2345.25413 | 42626.2465 | 59 | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 5/2 | 0.00011 | 12SAN/NAV |
| 2345.34412 | 42624.6111 | 110 | $3d^5$ | a ⁴ P b ⁴ P | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | 0.00008 | 12SAN/NAV |
| 2345.533 2346.4967 | 42621.18 42603.68 | 4 5 * | 3d ⁴ (³ P)4s 3d ⁴ (⁵ D)4p | z ⁶ D° | 5/2 5/2 | _ | $3d^4(^3D)4p$ $3d^4(^5D)4d$ | w ⁴ D° e ⁶ S | 7/2 5/2 | 0.003 0.0020 | 12SAN/NAV 12SAN/NAV |
| 2346.4967 | 42603.68 | 5 * | $3d^4(^3D)4p$ | w ⁴ F° | 3/2 | _ | $3d^4(^5D)6d$ | ⁴ G | 5/2 | 0.0020 | 12SAN/NAV |
| 2346.782 | 42598.50 | 3 | $3d^4(^3H)4p$ | z ⁴ I° | 11/2 | _ | $3d^44d$ | h ⁴H | 11/2 | 0.0020 | 12SAN/NAV |
| 2347.0836 | 42593.024 | 3 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.0011 | 12SAN/NAV |
| 2347.3143 | 42588.838 | 8 | $3d^4(^3D)4p$ | x^4P^0 | 5/2 | _ | $3d^4(^5D)6d$ | ⁴ D | 5/2 | 0.0007 | 12SAN/NAV |
| 2348.259 | 42571.71 | 3 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^3D)4p$ | w^4D^o | 5/2 | 0.004 | 12SAN/NAV |
| 2348.8186 | 42561.56 | 3 | $3d^4(^3D)4p$ | w^4F^o | 7/2 | - | $3d^4(^5D)6d$ | ^{4}G | 7/2 | 0.0020 | 12SAN/NAV |
| 2350.00 | 42540.17 | 2 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 3/2 | 0.01 | 51KIE |
| 2350.1344 | 42537.74 | 3 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.0015 | 12SAN/NAV |
| 2350.6906 | 42527.672 | 6 | $3d^4(^3D)4p$ | y ² P ^o | 1/2 | - | $3d^4(^5D)6d$ | ⁴ P | 3/2 | 0.0009 | 12SAN/NAV |
| 2351.619 | 42510.88 | 4 | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | - | $3d^4(^5D)6d$ | ⁴ F | 5/2 | 0.002 | 12SAN/NAV |
| 2351.96 | 42504.72 | 4 | $3d^4(^1S)4s$ | a ² S | 1/2 | - | $3d^4(^1D1)4p$ | $w^2 P^o$ $z^4 D^o$ | 3/2 | 0.01 | 51KIE |
| 2353.293 | 42480.65 | 3 | $3d^4(^5D)4s$ | a ⁶ D a ⁶ D | 7/2 | - | $3d^4(^5D)4p$ $3d^4(^5D)4p$ | z ⁴ D° | 7/2 | 0.004 | 12SAN/NAV |
| 2353.4499 2353.5318 | 42477.815 42476.34 | 5 7 | 3d ⁴ (⁵ D)4s 3d ⁴ (³ P)4s | a ³ D c ⁴ P | 5/2 3/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | z ⁶ S ^o | 5/2 5/2 | 0.0011 0.0016 | 12SAN/NAV 12SAN/NAV |
| 2353.5318 | 42476.34 42476.06 | 3 | $3d^4(^3P1)4p$ | y ⁴ D° | 5/2 | _ | $3d^4(^5D)5d$ | z S | 3/2 | 0.0016 | 12SAN/NAV 12SAN/NAV |
| 2353.887 | 42470.00 | 5 | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 5/2 | 0.004 | 12SAN/NAV |
| 2354.052 | 42466.95 | 6 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.002 | 12SAN/NAV |
| 2354.0688 | 42466.65 | 7 | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 7/2 | 0.0016 | 12SAN/NAV |
| 2354.3738 | 42461.15 | 4 | $3d^4(^3D)4p$ | x^4P^o | 1/2 | _ | $3d^4(^5D)6d$ | ^{4}P | 3/2 | 0.0015 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | ssific | ation | | | Uncertainty of observed | |
|-----------------------|----------------------------|-------------|--|--|-------------|--------|---|------------------------------------|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 331110 | Configuration | Term | | wavelength (Å) | Source of line |
| 2354.59 | 42457.25 | 3 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^1I)4p$ | w ² H ^o | 9/2 | 0.01 | 51KIE |
| 2354.649 | 42456.19 | 4 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | - | $3d^4(^5D)4p$ | z ⁴ D ^o | 1/2 | 0.003 | 12SAN/NAV |
| 2354.999 | 42449.88 | 4 | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | - | $3d^44d$ | g ⁴ I | 9/2 | 0.002 | 12SAN/NAV |
| 2355.10 | 42448.06 | 3 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^1I)4p$ | w ² H ^o | 11/2 | 0.01 | 51KIE |
| 2355.62 | 42438.69 | 3 | $3d^4(^1S)4s$ | a^2S | 1/2 | - | $3d^4(^1D1)4p$ | $w^2 P^0$ | 1/2 | 0.01 | 51KIE |
| 2356.5749 | 42421.49 | 4 | 3d ⁴ (³ P)4s 3d ⁵ | a ² P b ⁴ D | 3/2 7/2 | - | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ $y^{4}F^{o}$ | 1/2 9/2 | 0.0017 | 12SAN/NAV |
| 2356.942 2357.204 | 42414.88 42410.17 | 4 3 | $3d^{4}$ $(^{3}F1)4p$ | z ⁴ G° | 9/2 | _ | 3d ⁴ (³ F1)4p 3d ⁴ (⁵ D)5d | y F ⁴ G | 11/2 | 0.003 0.005 | 12SAN/NAV 12SAN/NAV |
| 2358.0747 | 42394.512 | 3 14 | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | _ | $3d^44d$ | h ⁴ H | 13/2 | 0.003 | 12SAN/NAV |
| 2358.752 | 42382.34 | 3 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | _ | $3d^4(^5D)5d$ | 6S | 5/2 | 0.004 | 12SAN/NAV |
| 2358.807 | 42381.35 | 3 | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^3D)4p$ | y ² P ^o | 3/2 | 0.004 | 12SAN/NAV |
| 2359.0627 | 42376.76 | 5 | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | _ | $3d^44d$ | g ⁴ I | 11/2 | 0.0013 | 12SAN/NAV |
| 2359.136 | 42375.44 | 3 | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 9/2 | 0.006 | 12SAN/NAV |
| 2359.9831 | 42360.23 | 6 | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 3/2 | 0.0016 | 12SAN/NAV |
| 2360.1419 | 42357.382 | 7 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | 0.0008 | 12SAN/NAV |
| 2360.7354 | 42346.734 | 9 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.0007 | 12SAN/NAV |
| 2360.8700 | 42344.32 | 5 | $3d^{5}$ | b ⁴ D | 3/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.0019 | 12SAN/NAV |
| 2360.892 | 42343.93 | 3 * | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.006 | 12SAN/NAV |
| 2360.892 | 42343.93 | 3 * | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 7/2 | 0.006 | 12SAN/NAV |
| 2361.045 | 42341.18 | 3 | $3d^4(^3H)4p$ | z ⁴ I ^o | 11/2 | _ | $3d^44d$ | g ⁴ I | 11/2 | 0.004 | 12SAN/NAV |
| 2361.0685 | 42340.761 | 7 | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | - | $3d^4(^5D)5d$ | ⁴ D | 5/2 | 0.0008 | 12SAN/NAV |
| 2361.2229 | 42337.99 | 3 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | - | $3d^44d$ | h ⁴ H | 11/2 | 0.0015 | 12SAN/NAV |
| 2361.31 | 42336.43 | 1 | $3d^{5}$ | b ⁴ D | 3/2 | - | $3d^4(^3F1)4p$ | z ² D° | 3/2 | 0.01 | 51KIE |
| 2361.5370 | 42332.361 | 10 | $3d^4(^3F1)4p$ | $z {}^{4}G^{o}$ | 9/2 | - | $3d^4(^5D)5d$ | ⁴ D | 7/2 | 0.0006 | 12SAN/NAV |
| 2361.79 | 42327.83 | 3 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3D)4p$ | x^2D^o | 5/2 | 0.01 | 51KIE |
| 2362.001 | 42324.05 | 5 * | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 1/2 | 0.002 | 12SAN/NAV |
| 2362.001 | 42324.05 | 5 * | $3d^4(^3F1)4p$ | y ⁴ F ^o | 3/2 | - | $3d^4(^5D)5d$ | ⁶ S y ⁴G° | 5/2 | 0.002 | 12SAN/NAV |
| 2362.26 | 42319.41 | 2 1 w* | 3d ⁵ 3d ⁵ | b ⁴ D b ⁴ D | 7/2 3/2 | - | $3d^4(^3H)4p$ $3d^4(^3H)4p$ | y ⁴ G° | 9/2 | 0.01 0.02 | 51KIE |
| 2363.32 2363.32 | 42300.4 42300.4 | 1 w* | 3 <i>a</i> 3 <i>d</i> ⁵ | вър в ⁴ D | 3/2 7/2 | _ | $3d^4(^3H)4p$ | y G y ⁴ G° | 5/2 7/2 | 0.02 | 51KIE 51KIE |
| 2363.645 | 42294.61 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3D)4p$ | y G w ⁴ D° | 3/2 | 0.004 | 12SAN/NAV |
| 2364.0145 | 42288.000 | 10 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 7/2 | 0.0005 | 12SAN/NAV |
| 2364.98 | 42270.74 | 2 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ P ^o | 3/2 | 0.01 | 51KIE |
| 2365.15 | 42267.70 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ D° | 5/2 | 0.01 | 51KIE |
| 2365.229 | 42266.29 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^3D)4p$ | w ⁴ D° | 7/2 | 0.003 | 12SAN/NAV |
| 2365.2490 | 42265.931 | 30 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^{4}(^{1}I)4p$ | w^2H^o | 11/2 | 0.0002 | 12SAN/NAV |
| 2365.41703 | 42262.9286 | 72 | $3d^4(^3D)4p$ | w 4F° | 5/2 | _ | $3d^4(^5D)6d$ | ^{6}D | 3/2 | 0.00010 | 12SAN/NAV |
| 2366.2351 | 42248.318 | 12 | $3d^4(^3F1)4p$ | $z^{4}G^{o}$ | 9/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 9/2 | 0.0010 | 12SAN/NAV |
| 2366.4605 | 42244.295 | 16 | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 5/2 | 0.0004 | 12SAN/NAV |
| 2366.5056 | 42243.490 | 19 | $3d^4(^3F1)4p$ | z ⁴ G ^o | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ G | 7/2 | 0.0003 | 12SAN/NAV |
| 2366.7469 | 42239.183 | 10 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 3/2 | 0.0009 | 12SAN/NAV |
| 2366.7806 | 42238.58 | 21 | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | - | $3d^4(^5D)5d$ | ⁴ F | 9/2 | 0.0012 | 12SAN/NAV |
| 2366.81624 | 42237.9457 | 530 | $3d^5$ | a ⁴ P | 1/2 | - | $3d^4(^3P1)4p$ | y^4D^0 | 3/2 | 0.00006 | 12SAN/NAV |
| 2366.8396 | 42237.529 | 58 | $3d^5$ | a ⁴ P | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 3/2 | 0.0002 | 12SAN/NAV |
| 2367.334 | 42228.71 | 4 | $3d^4(^3H)4p$ | z ⁴ I ^o | 13/2 | - | $3d^44d$ | g ⁴ I | 13/2 | 0.002 | 12SAN/NAV |
| 2370.683 | 42169.06 | 5 | $3d^4(^3H)4p$ | z ⁴ I ^o y ⁶ F ^o | 15/2 | - | 3d ⁴ 4d 3d ⁴ (⁵ D)9s | g ⁴ I ⁶ D | 15/2 | 0.005 | 12SAN/NAV |
| 2371.0940 | 42161.749 | 14 | $3d^3(^4F)4s4p(^3P^0)$ $3d^4(^3P)4s$ | y ⁴ P | 9/2 | - | | w ⁴ P ^o | 9/2 | 0.0004 | 12SAN/NAV |
| 2371.2191 2372.474 | 42159.525 42137.23 | 14 5 | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 11/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ $3d^44d$ | g ⁴ I | 5/2 13/2 | 0.0006 0.002 | 12SAN/NAV 12SAN/NAV |
| 2372.474 | 42137.23 | 2 | $3d^{5}$ | a ² D | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ D° | 7/2 | 0.002 | 51KIE |
| 2372.03 | 42121.50 | 32 R | $3d^4(^3P1)4p$ | y ⁴ D° | 1/2 | _ | $3d^4(^5D)6s$ | ⁴ D | 1/2 | 0.01 | 00WAG |
| 2373.70 | 42115.47 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^1G1)4p$ | w ² G° | 9/2 | 0.01 | 51KIE |
| 2373.7409 | 42114.739 | 6 | $3d^4(^3H)4p$ | z ⁴ H° | 13/2 | _ | $3d^44d$ | f ² I | 11/2 | 0.0007 | 12SAN/NAV |
| 2373.9908 | 42110.307 | 7 | $3d^4(^3D)4p$ | w ⁴ F ^o | 5/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 3/2 | 0.0009 | 12SAN/NAV |
| 2374.57 | 42100.04 | 1 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^1G1)4p$ | x ² H ^o | 9/2 | 0.01 | 51KIE |
| 2375.43790 | 42084.655 | 37 | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | _ | $3d^4(^5D)5d$ | ⁴ G | 11/2 | 0.00016 | 12SAN/NAV |
| 2375.69 | 42080.19 | 4 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.01 | 51KIE |
| 2376.3774 | 42068.02 | 5 | $3d^{5}$ | a ² F | 7/2 | - | $3d^4(^3D)4p$ | w^4F^o | 7/2 | 0.0012 | 12SAN/NAV |
| 2377.130 | 42054.70 | 3 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ D | 5/2 | 0.003 | 12SAN/NAV |
| 2377.3258 | 42051.237 | 17 | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | - | $3d^44d$ | g ⁴ I | 11/2 | 0.0004 | 12SAN/NAV |
| 2377.7384 | 42043.94 | 3 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | - | $3d^4(^5D)4d$ | e ⁴ G | 11/2 | 0.0017 | 12SAN/NAV |
| 2378.28 | 42034.37 | 3 * | $3d^4(^3H)4p$ | z ⁴ I ^o | 15/2 | - | $3d^44d$ | g ⁴ I | 13/2 | 0.01 | 51KIE |
| 2378.28 | 42034.37 | 3 * | $3d^4(^3P1)4p$ | y ⁴ D ^o | 3/2 | _ | $3d^4(^5D)6s$ | ^{4}D | 5/2 | 0.01 | 51KIE |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | |
|------------------------|----------------------------|-------------|--|--------------------------------------|------------|-------|--|--|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 2378.6724 | 42027.433 | 10 | $3d^4(^3P)4s$ | b ² P | 3/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | u ² P ^o | 3/2 | 0.0008 | 12SAN/NAV |
| 2378.90 | 42023.41 | 3 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | 0.01 | 51KIE |
| 2380.689 | 41991.84 | 4 * | $3d^4(^3G)4s$ | e ² G | 9/2 | - | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D° | 7/2 | 0.002 | 12SAN/NAV |
| 2380.689 | 41991.84 | 4 * | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | - | $3d^4(^5D)5d$ | ⁶ F | 11/2 | 0.002 | 12SAN/NAV |
| 2381.4493 | 41978.431 | 18 | $3d^{5}$ | b ⁴ D | 7/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.0004 | 12SAN/NAV |
| 2381.47201 | 41978.031 | 46 | $3d^5$ | a ⁴ P | 1/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 1/2 | 0.00014 | 12SAN/NAV |
| 2381.4964 | 41977.601 | 13 | $3d^5$ | a ⁴ P | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 1/2 | 0.0004 | 12SAN/NAV |
| 2381.954 | 41969.54 | 2 | $3d^4(^3D)4p$ | x ⁴ P° | 3/2 | - | $3d^4(^5D)6d$ | ⁶ D y ⁴ F ^o | 5/2 | 0.005 | 12SAN/NAV |
| 2381.967 | 41969.31 | 2 | 3d ⁵ 3d ⁵ | b ⁴ D b ⁴ D | 3/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | 0.006 | 12SAN/NAV |
| 2382.1907 | 41965.367 | 7 4 | $3d^4(^3H)4p$ | z ² G° | 5/2 7/2 | - | $3d^4(^3F1)4p$ $3d^4(^5D)5d$ | y F | 5/2 | 0.0009 0.0015 | 12SAN/NAV |
| 2382.6407 2382.9377 | 41957.44 41952.213 | 4 14 | $3d^{4}(^{3}\text{H})4p$ | z G z ² G° | 9/2 | _ | $3d^4(^5D)5d$ | G ⁴G | 7/2 9/2 | 0.0013 | 12SAN/NAV 12SAN/NAV |
| 2383.2139 | 41932.213 | 6 | $3d^4(^3H)4p$ | z ² G ^o | 9/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 912 7/2 | 0.0004 | 12SAN/NAV |
| 2383.3330 | 41947.332 | 14 | $3d^4(^3D)4p$ | x ⁴ P° | 5/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 3/2 | 0.0007 | 12SAN/NAV |
| 2386.040 | 41897.67 | 3 | $3d^5$ | d ² G | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | $s^{2}F^{o}$ | 7/2 | 0.005 | 12SAN/NAV |
| 2386.08 | 41896.97 | 3 | $3d^4(^3H)4p$ | z ⁴ I° | 9/2 | _ | $3d^4(^5D)5d$ | ⁶ P | 7/2 | 0.01 | 51KIE |
| 2386.9551 | 41881.61 | 5 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^4(^5D)5p$ | ⁴ D ^o | 3/2 | 0.0014 | 12SAN/NAV |
| 2387.03 | 41880.30 | 4 * | $3d^5$ | a ² D | 3/2 | _ | $3d^4(^3D)4p$ | w ⁴ D° | 3/2 | 0.01 | 51KIE |
| 2387.03 | 41880.30 | 4 * | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^3D)4p$ | x^4P^o | 5/2 | 0.01 | 51KIE |
| 2389.74266 | 41832.7607 | 62 | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.00011 | 12SAN/NAV |
| 2390.4549 | 41820.298 | 5 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 7/2 | 0.0011 | 12SAN/NAV |
| 2391.2890 | 41805.711 | 9 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 5/2 | 0.0007 | 12SAN/NAV |
| 2391.72458 | 41798.098 | 37 | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | _ | $3d^4(^5D)6d$ | ^{6}G | 7/2 | 0.00016 | 12SAN/NAV |
| 2392.3074 | 41787.92 | 11 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 1/2 | 0.0012 | 12SAN/NAV |
| 2392.5392 | 41783.87 | 7 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | w^4P^o | 5/2 | 0.0016 | 12SAN/NAV |
| 2392.8098 | 41779.143 | 5 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^1F)4p$ | $u^{2}F^{o}$ | 7/2 | 0.0010 | 12SAN/NAV |
| 2393.3432 | 41769.83 | 4 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | w ⁴ P ^o | 1/2 | 0.0018 | 12SAN/NAV |
| 2393.98129 | 41758.700 | 92 | $3d^5$ | a ² F | 7/2 | - | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.00013 | 12SAN/NAV |
| 2396.4615 | 41715.49 | 8 | $3d^5$ | a ² F | 5/2 | - | $3d^4(^3D)4p$ | w ⁴ F ^o | 5/2 | 0.0015 | 12SAN/NAV |
| 2397.74754 | 41693.1130 | 91 | $3d^5$ | b ⁴ D | 7/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.00008 | 12SAN/NAV |
| 2398.2480 | 41684.413 | 7 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^4(^5D)5p$ | ⁴ D ^o | 7/2 | 0.0008 | 12SAN/NAV |
| 2398.4983 | 41680.064 | 17 | $3d^5$ | b ⁴ D c ⁴ P | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2399.1960 2399.2233 | 41667.94 | 6 | 3d ⁴ (³ P)4s 3d ⁵ | с Р b ⁴ F | 1/2 7/2 | - | $3d^3(^4P)4s4p(^3P^0)$ $3d^4(^3D)4p$ | w ⁴ P ^o w ⁴ F ^o | 3/2 | 0.0014 0.0008 | 12SAN/NAV |
| 2399.2233 | 41667.470 41661.936 | 7 14 | $3d^34s^2$ | оғ c ⁴ F | 5/2 | _ | $3d^{4}(^{5}D)5p$ | $^{4}D^{o}$ | 9/2 3/2 | 0.0008 | 12SAN/NAV 12SAN/NAV |
| 2399.57310 | 41661.3959 | 71 | $3d^4(^3D)4p$ | x ⁴ P ^o | 1/2 | _ | $3d^4(^5D)6d$ | ⁶ D | 3/2 | 0.0003 | 12SAN/NAV |
| 2399.6587 | 41659.910 | 28 | $3d^{5}$ | b ² H | 9/2 | _ | $3d^4(^1I)4p$ | w ² H° | 9/2 | 0.00003 | 12SAN/NAV |
| 2399.6968 | 41659.249 | 6 | $3d^4(^3H)4p$ | z ⁴ H° | 9/2 | _ | $3d^44d$ | g ⁴ G | 9/2 | 0.0002 | 12SAN/NAV |
| 2400.2387 | 41649.844 | 29 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 9/2 | 0.0004 | 12SAN/NAV |
| 2401.285 | 41631.70 | 2 | $3d^4(^3H)4p$ | z ⁴ H° | 9/2 | _ | $3d^44d$ | g ⁴ H | 11/2 | 0.005 | 12SAN/NAV |
| 2401.324 | 41631.02 | 2 | $3d^4(^3P)4s$ | b ² P | 1/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | u ² P° | 3/2 | 0.007 | 12SAN/NAV |
| 2402.0726 | 41618.05 | 4 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^1F)4p$ | u ² F ^o | 5/2 | 0.0014 | 12SAN/NAV |
| 2402.31 | 41613.94 | 2 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.01 | 51KIE |
| 2402.73 | 41606.66 | 3 | $3d^{5}$ | b ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.01 | 51KIE |
| 2402.98 | 41602.3 | 4 W | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.04 | 51KIE |
| 2403.5266 | 41592.87 | 4 * | $3d^5$ | d ² G | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F° | 5/2 | 0.0019 | 12SAN/NAV |
| 2403.5266 | 41592.87 | 4 * | $3d^4(^3F)4s$ | e ² F | 5/2 | - | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | w ⁴ H ^o | 7/2 | 0.0019 | 12SAN/NAV |
| 2403.62 | 41591.26 | 3 | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.01 | 51KIE |
| 2403.8647 | 41587.024 | 15 | $3d^{5}$ | b ⁴ F | 7/2 | - | $3d^4(^3D)4p$ | w ⁴ F ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 2404.204 | 41581.16 | 2 | $3d^{5}$ | b ⁴ F | 5/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.004 | 12SAN/NAV |
| 2404.5800 | 41574.65 | 5 | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | - | $3d^44d$ | g ⁴ G | 11/2 | 0.0012 | 12SAN/NAV |
| 2404.72 | 41572.2 | 2 W | $3d^4(^3H)4p$ | z ² G ^o | 7/2 | - | $3d^4(^5D)5d$ | ⁶ P | 7/2 | 0.04 | 51KIE |
| 2404.8844 | 41569.392 | 7 | $3d^5$ | b ⁴ F | 9/2 | - | $3d^4(^3D)4p$ | w ⁴ F ^o | 7/2 | 0.0008 | 12SAN/NAV |
| 2404.9214 | 41568.75 | 4 | $3d^5$ | b ⁴ F b ² H | 5/2 | - | $3d^4(^3D)4p$ | w^4F^0 w^2H^0 | 7/2 | 0.0015 | 12SAN/NAV |
| 2405.266 | 41562.80 | 2 | $3d^5$ | b ² H b ² P | 11/2 | - | $3d^4(^1I)4p$ | w ² H ^o r ⁴ D ^o | 9/2 | 0.002 | 12SAN/NAV |
| 2405.3420 2405.72 | 41561.48 | 4 | $3d^4(^3P)4s$ $3d^5$ | c ² F | 3/2 7/2 | - | $3d^3(^2P)4s4p(^3P^0)$ $3d^4(^1D1)4p$ | r Do v ² F ^o | 3/2 7/2 | 0.0014 0.01 | 12SAN/NAV |
| 2405.72 2407.8003 | 41554.95 41519.054 | 1 23 | $3d^4(^3F1)4p$ | c F x ⁴ D° | 7/2 | _ | $3d^{4}(^{5}D)5d$ | o F | 5/2 | 0.01 | 51KIE 12SAN/NAV |
| 2407.8003 | 41519.034 | 36 | $3d^4(^3H)4p$ | z ⁴ H° | 11/2 | _ | $3d^{4}4d$ | g ⁴ G | 9/2 | 0.0003 | 12SAN/NAV |
| 2407.93003 | 41510.463 | 21 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)5p$ | ⁴ D° | 5/2 | 0.00017 | 12SAN/NAV |
| 2408.2987 | 41510.403 | 17 | $3d^5$ | d ² G | 7/2 | _ | $3d^4(^3F2)4p$ | u ² G° | 7/2 | 0.0003 | 12SAN/NAV |
| 2409.45 | 41490.63 | 1 | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^1D1)4p$ | v ² F° | 5/2 | 0.0003 | 51KIE |
| 2409.9406 | 41482.184 | 5 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 5/2 | 0.0009 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| (Å) (cm 2410.43 41473 2410.75 41468 2411.0032 41463 2413.0557 41428 2413.64 41418 2413.64 41418 2415.0778 41393 2415.14291 41392 2415.8274 41381 2416.39492 41371 2417.31 41355 2419.3708 41327 2420.10075 41308 2420.1390 41307 2420.73 41297 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2425.6423 41213 2427.12 41182 2427.12 41182 2427.12 41182 2427.68 41179 2433.2059 41083 2437.121 41019 | 68.26 63.903 28.637 18.6 18.6 93.952 92.836 | and comment | Configuration | | | SSITIC | ation | | | of observed | |
|---|---|-------------|--|--|-------------|--------|---|---------------------------------------|-------------|-------------------|------------------------|
| 2410.75 41468 2411.0032 41463 2413.0557 41428 2413.64 41418 2415.0778 41393 2415.14291 41392 2415.8274 41381 2416.39492 41371 2417.31 41355 2419.3708 41327 2420.10075 41308 2420.1390 41307 2420.73 41297 2422.93 41257 2422.93 41252 2422.93 41252 2422.93 41252 2422.93 41252 2422.93 41252 2422.93 41252 2422.93 41252 2422.93 41252 2422.93 41252 2422.93 41252 2422.93 41252 2425.6423 41213 2425.6423 41213 2427.68 41179 2427.68 41179 2433.059 4108 | 68.26 63.903 28.637 18.6 18.6 93.952 92.836 | | - | Term | J | 881110 | Configuration | Term | | wavelength (Å) | Source of line |
| 2411.0032 41463 2413.0557 41428 2413.64 41418 2413.64 41418 2415.0778 41393 2415.14291 41392 2415.8274 41381 2416.39492 41371 2417.31 41355 2419.8708 41327 2419.8692 41311 2420.1390 41307 2420.1390 41307 2420.93 41257 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2425.6423 41213 2426.1703 41204 2427.68 41179 2427.68 41179 2433.011 41088 <tr< td=""><td>63.903 28.637 18.6 18.6 93.952 92.836</td><td>_</td><td>$3d^5$</td><td>b ⁴F</td><td>3/2</td><td>_</td><td>$3d^4(^3D)4p$</td><td>w ⁴F^o</td><td>5/2</td><td>0.01</td><td>51KIE</td></tr<> | 63.903 28.637 18.6 18.6 93.952 92.836 | _ | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 5/2 | 0.01 | 51KIE |
| 2413.0557 41428 2413.64 41418 2413.64 41418 2415.0778 41393 2415.14291 41392 2415.8274 41381 2416.39492 41371 2417.31 41355 2419.3708 41327 2420.10075 41308 2420.1390 41307 2420.73 41297 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2422.93 41255 2425.6423 41213 2426.6703 41204 2427.68 41179 2427.68 41179 2433.059 4108 | 28.637 18.6 18.6 93.952 92.836 | 2 | $3d^5$ | b ² H | 9/2 | _ | $3d^4(^1I)4p$ | w ² H ^o | 11/2 | 0.01 | 51KIE |
| 2413.64 41418 2413.64 41418 2415.0778 41393 2415.14291 41392 2415.8274 41381 2416.39492 41371 2417.31 41355 2419.3708 41320 2419.8692 41311 2420.1390 41307 2420.73 41297 2422.93 41252 2422.93 41252 2422.93 41252 2425.6423 41213 2427.12 41182 2427.45 41182 2427.45 41182 2427.68 41179 2433.059 4108 2437.121 41019 2437.50 41013 2438.4061 40997 2438.9175 40985 2444.09018 40963 2444.0904 40902 2444.19825 40937 2444.197 40900 24445.1346 40886 2445.1346 40886 <td>18.6 18.6 93.952 92.836</td> <td>16</td> <td>$3d^5$</td> <td>b ⁴F</td> <td>5/2</td> <td>_</td> <td>$3d^4(^3D)4p$</td> <td>w ⁴F^o</td> <td>5/2</td> <td>0.0004</td> <td>12SAN/NAV</td> | 18.6 18.6 93.952 92.836 | 16 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 5/2 | 0.0004 | 12SAN/NAV |
| 2413.64 41418 2415.0778 41393 2415.14291 41392 2415.8274 41381 2416.39492 41371 2417.31 41355 2419.3708 41320 2419.8692 41311 2420.1390 41307 2420.1390 41307 2420.73 41297 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.94 4126 2425.6058 41249 2425.6423 41213 2427.12 41182 2427.45 41182 2427.68 41179 2430.59 4108 2437.121 41019 2437.121 41019 2438.4225 40997 | 18.6 93.952 92.836 | 6 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 3/2 | 0.0009 | 12SAN/NAV |
| 2415.0778 41393 2415.14291 41392 2415.8274 41381 2416.39492 41371 2417.31 41355 2419.3708 41320 2419.8692 41311 2420.1390 41307 2420.1390 41307 2420.33 41297 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2425.6423 4121 2427.12 41182 2427.12 41182 2427.68 41179 2433.011 4108 2433.26964 41094 | 93.952 92.836 | 15 W* | $3d_{5}^{4}(^{3}F)4s$ | b ² F | 5/2 | - | $3d^4(^3D)4p$ | w^2F^o | 5/2 | 0.04 | 51KIE |
| 2415.14291 41392 2415.8274 41381 2416.39492 41371 2417.31 41355 2418.9815 41327 2419.8692 41311 2420.10075 41308 2420.1390 41307 2420.73 41297 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2422.93 41259 2425.6423 41213 2427.12 41188 2427.12 41188 2427.68 41179 2433.059 4108 2433.011 4108 2437.121 41019 2438.4225 40997 2438.9112 40989 2439.7785 40977 2440.48 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 </td <td>92.836</td> <td>15 W*</td> <td>$3d^5$</td> <td>b ⁴F</td> <td>5/2</td> <td>-</td> <td>$3d^4(^3D)4p$</td> <td>w ⁴F°</td> <td>3/2</td> <td>0.04</td> <td>51KIE</td> | 92.836 | 15 W* | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^3D)4p$ | w ⁴ F° | 3/2 | 0.04 | 51KIE |
| 2415.8274 41381 2416.39492 41371 2417.31 41355 2418.9815 41327 2419.3708 41320 2419.8692 41311 2420.1390 41307 2420.73 41297 2421.90 41277 2422.93 41259 2422.93 41259 2425.2058 41229 2425.6423 41213 2427.12 41182 2427.45 41182 2427.45 41182 2427.45 41182 2433.059 41084 2433.011 41088 2433.2059 41083 2437.121 41019 2438.4225 40997 2438.9112 40989 2439.175 40985 2441.9825 40997 2444.0904 40902 2444.19825 40937 2444.197 40900 24445.1346 40886 2445.1346 40886 2445.1346 40868 | | 5 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | - | $3d^4(^5D)4d$ | f ⁴ D | 7/2 | 0.0011 | 12SAN/NAV |
| 2416.39492 41371 2417.31 41355 2418.9815 41327 2419.8692 41311 2420.10075 41308 2420.1390 41307 2420.73 41297 2422.93 41259 2422.93 41259 2422.93 41259 2425.2058 4121 2427.12 41188 2427.45 41182 2427.45 41182 2427.68 41179 2433.011 41088 2433.059 41088 2437.121 41013 2438.4225 40997 2438.4225 40997 2438.4225 40997 2439.7785 4094 2440.9018 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 24445.3146 40886 2445.3146 40886 2445.3146 40886 2445.3146 40886 | | 43 | $3d^4(^3H)4p$ | z ⁴ H ^o z ² G ^o | 13/2 | - | $3d^44d$ $3d^44d$ | g ⁴ G i ² G | 11/2 | 0.00014 | 12SAN/NAV |
| 2417.31 41355 2418.9815 41327 2419.3708 41320 2419.8692 41311 2420.10075 41308 2420.1390 41307 2420.73 41297 2422.93 41259 2422.93 41259 2422.93 41259 2425.2058 41221 2425.6423 41213 2427.12 41188 2427.45 41182 2427.46 41179 2438.29 41168 2430.59 41129 2433.011 41088 2437.121 41013 2437.50 41013 2438.4225 40997 2438.4225 40997 2439.175 40985 2440.901 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.11069 40902 24445.1346 40886 2445.1346 40886 <td></td> <td>5</td> <td>3d⁴(³H)4p 3d⁵</td> <td>z ⁻G ⁻ b ²H</td> <td>7/2 11/2</td> <td>_</td> <td>$3d^{4}d^{4}$ $3d^{4}(^{1}I)4p$</td> <td>w ²H^o</td> <td>9/2 11/2</td> <td>0.0012</td> <td>12SAN/NAV</td> | | 5 | 3d ⁴ (³ H)4p 3d ⁵ | z ⁻ G ⁻ b ² H | 7/2 11/2 | _ | $3d^{4}d^{4}$ $3d^{4}(^{1}I)4p$ | w ² H ^o | 9/2 11/2 | 0.0012 | 12SAN/NAV |
| 2418.9815 41327 2419.3708 41320 2419.8692 41311 2420.10075 41308 2420.1390 41307 2420.73 41297 2422.93 41259 2422.93 41259 2425.2058 41221 2425.6423 41213 2427.12 41188 2427.45 41182 2427.68 41179 2433.2059 41085 2433.011 41088 2437.121 41019 2437.121 41019 2438.4225 40997 2438.4225 40997 2439.175 40985 2440.48 40963 2440.9018 40963 2444.0904 40902 2444.1069 40902 2444.114 40900 24445.1346 40886 2445.1346 40886 2446.1167 40868 | | 41 2 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^1D1)4p$ | v ² F ^o | 5/2 | 0.00015 0.01 | 12SAN/NAV 51KIE |
| 2419.3708 41320 2419.8692 41311 2420.10075 41308 2420.1390 41307 2420.73 41297 2421.90 41277 2422.93 41259 2422.93 41259 2423.5296 41249 2425.6423 41213 2426.1703 41204 2427.12 41188 2427.45 41182 2427.68 41179 2430.59 41129 2433.011 41088 2437.121 41013 2437.50 41013 2438.4225 40997 2438.46061 40997 2439.175 40985 2440.48 40963 2440.9018 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.114 40900 24445.1346 40886 2446.1167 40868 | | 29 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^5D)5p$ | 4D° | 7/2 | 0.0002 | 12SAN/NAV |
| 2419.8692 41311 2420.10075 41308 2420.1390 41307 2420.73 41297 2421.90 41277 2422.93 41259 2422.93 41259 2423.5296 41249 2425.6423 41213 2427.12 41188 2427.45 41182 2428.29 41168 2433.059 41094 2433.011 41088 2437.121 41019 2438.4225 40997 2437.121 41019 2437.121 4001 2438.4225 40997 2438.46061 40997 2438.7785 40985 2440.48 40963 2440.9018 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.114 40900 24445.1346 40886 2445.1346 40886 2446.1167 40868 | | 18 | $3d^5$ | d ² G | 9/2 | _ | $3d^4(^3F2)4p$ | u ² G° | 9/2 | 0.0002 | 12SAN/NAV |
| 2420.10075 41308 2420.1390 41307 2420.73 41297 2421.90 41277 2422.93 41259 2422.93 41259 2423.5296 41245 2425.6423 41213 2427.12 41188 2427.45 41182 2427.68 41179 243.599 41129 243.6964 41094 2433.011 41088 2437.121 41019 2437.121 41019 2437.121 41019 2438.4225 40997 2438.4225 40997 2438.7785 40974 2440.48 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.3146 40886 2445.1346 40886 2446.1167 40868 | | 21 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P° | 3/2 | 0.0003 | 12SAN/NAV |
| 2420.1390 41307 2420.73 41297 2421.90 41277 2422.93 41259 2422.93 41259 2422.93 41259 2423.5296 41249 2425.2058 41221 2425.6423 41213 2427.12 41182 2427.45 41182 2427.68 41179 2430.59 41129 2433.011 41088 2437.121 41019 2437.121 41019 2438.4225 40997 2438.4225 40997 2438.7785 40974 2440.901 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.197 40900 24445.0764 40886 2445.1346 40886 2446.1167 40868 | | 43 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2420.73 41297 2421.90 41277 2422.93 41259 2422.93 41259 2422.93 41259 2423.5296 41249 2425.6423 41213 2426.1703 41204 2427.12 41182 2427.45 41182 2427.68 41179 2430.59 41129 2433.011 41088 2437.121 41019 2437.50 41013 2438.4225 40997 2438.46061 40997 2439.175 40985 2440.9018 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.1107 40900 24445.0764 40886 2445.1346 40886 2446.1167 40868 | | 4 | $3d^4(^3H)4p$ | z ⁴ H° | 13/2 | _ | $3d^44d$ | g ⁴ H | 11/2 | 0.0011 | 12SAN/NAV |
| 2421.90 41277 2422.93 41259 2422.93 41259 2422.93 41259 2423.5296 41249 2425.2058 41221 2425.6423 41213 2426.1703 41204 2427.12 41182 2427.68 41179 2430.59 41129 2433.011 41088 2437.121 41019 2437.121 41019 2437.50 41013 2438.4225 40997 2438.9112 40985 2439.175 40985 2440.9018 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.197 40906 24445.0764 40886 2445.1346 40886 2446.1167 40868 | | 2 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 7/2 | 0.01 | 51KIE |
| 2422.93 41259 2422.93 41259 2423.5296 41249 2425.2058 41221 2425.6423 41213 2426.1703 41204 2427.12 41182 2427.45 41182 2428.29 41168 2430.59 41129 2433.011 41088 2437.121 41019 2437.121 41019 2438.4225 40997 2438.4225 40997 2439.175 40988 2440.9018 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.197 40906 2444.214 40906 2445.3764 40886 2445.1346 40886 2446.1167 40868 | | 3 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.01 | 51KIE |
| 2422.93 41259 2422.93 41259 2423.5296 41249 2425.2058 41221 2425.6423 41213 2426.1703 41204 2427.12 41182 2427.45 41182 2428.29 41168 2430.59 41129 2433.011 41088 2437.121 41019 2437.121 41019 2438.4225 40997 2438.4225 40997 2439.175 40988 2440.9018 40963 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.197 40900 2444.214 40900 24445.0764 40886 2445.1346 40886 2446.1167 40868 | | 2 * | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 3/2 | 0.01 | 51KIE |
| 2422.93 41259 2423.5296 41249 2425.2058 41221 2425.6423 41213 2426.1703 41204 2427.12 41182 2427.68 41179 2428.29 41168 2430.59 41129 2432.6964 41094 2433.011 41088 2437.121 41019 2437.50 41013 2438.4225 40997 2438.49112 40985 2439.175 40985 2440.9018 40965 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.214 40906 24445.0764 40886 2445.1346 40885 2446.1167 40868 | | 2 * | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.01 | 51KIE |
| 2425.2058 41221 2425.6423 41213 2426.1703 41204 2427.12 41188 2427.45 41182 2427.68 41179 2428.29 41168 2433.059 41094 2433.011 41088 2437.121 41019 2437.50 41013 2438.4225 40997 2438.9112 40985 2439.7785 4097 2440.9018 40963 2441.9825 40937 2444.0904 40902 2444.197 40900 2444.214 4090 2445.3764 40886 2445.1346 40886 2446.1167 40868 | 59.81 | 2 * | $3d^{5}$ | b ⁴ F | 5/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.01 | 51KIE |
| 2425.6423 41213 2426.1703 41204 2427.12 41188 2427.45 41182 2427.68 41179 2428.29 41168 2430.59 41094 2433.011 41088 2437.121 41019 2438.4225 40997 2438.4225 40997 2439.175 40985 2439.7785 40974 2440.48 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | 49.606 | 13 | $3d^4(^1D)4s$ | $c^{2}D$ | 3/2 | _ | $3d^4(^1F)4p$ | v^2D^o | 3/2 | 0.0005 | 12SAN/NAV |
| 2426.1703 41204 2427.12 41188 2427.45 41182 2427.68 41179 2428.29 41168 2430.59 41129 2433.011 41088 2437.121 41019 2438.4225 40997 2438.46061 40997 2439.175 40985 2439.7785 40974 2440.9018 40963 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.214 40900 24445.0764 40886 2445.1346 40868 2446.1167 40868 | 21.098 | 13 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.0004 | 12SAN/NAV |
| 2427.12 41188 2427.45 41182 2427.68 41179 2428.29 41168 2430.59 41129 2433.011 41088 2437.121 41019 2437.50 41013 2438.4225 40997 2438.9112 40989 2439.175 40985 2439.7785 40974 2440.48 40963 2441.9825 40937 2444.0904 40902 2444.0904 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | 13.681 | 12 | $3d^{5}$ | b ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.0005 | 12SAN/NAV |
| 2427.45 41182 2427.68 41179 2428.29 41168 2430.59 41129 2432.6964 41094 2433.2059 41085 2437.121 41019 2438.4225 40997 2438.4225 40997 2438.9112 40985 2439.175 40985 2439.7785 40974 2440.48 40963 2441.9825 40937 2444.0904 40902 2444.0904 40902 2444.197 40900 2444.214 40906 2445.0764 40886 2445.1346 40886 2446.1167 40868 | 04.712 | 9 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^4(^5D)5p$ | ⁴ F ^o | 3/2 | 0.0006 | 12SAN/NAV |
| 2427.68 41179 2428.29 41168 2430.59 41129 2432.6964 41094 2433.011 41085 2437.121 41019 2438.4225 40997 2438.4112 40989 2439.175 40985 2439.175 40985 2440.48 40963 2441.9825 40937 2444.0904 40902 2444.0904 40902 2444.1069 40902 2444.214 40906 2445.0764 40886 2445.1346 40886 2446.1167 40868 | 88.59 | 1 | $3d^4(^1D)4s$ | c ² D | 5/2 | _ | $3d^4(^1F)4p$ | v^2D^o | 3/2 | 0.01 | 51KIE |
| 2428.29 41168 2430.59 41129 2432.6964 41094 2433.011 41088 2433.2059 41085 2437.121 41013 2438.4225 40997 2438.4121 40989 2438.4912 40985 2439.175 40985 2439.7785 40974 2440.48 40963 2441.9825 40937 2444.0904 40902 2444.0904 40902 2444.1069 40902 2444.214 40906 2445.0764 40886 2445.1346 40886 2446.1167 40868 | 82.99 | 5 R | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)5p$ | $^{4}F^{o}$ | 9/2 | 0.01 | 00WAG |
| 2430.59 41129 2432.6964 41094 2433.011 41088 2433.2059 41085 2437.121 41019 2438.4225 40997 2438.46061 40997 2439.175 40985 2439.7785 40974 2440.48 40963 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 4 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^1G1)4p$ | w ² G ^o | 9/2 | 0.01 | 51KIE |
| 2432.6964 41094 2433.011 41088 2433.2059 41085 2437.121 41019 2437.50 41013 2438.4225 40997 2438.9112 40989 2439.175 40985 2440.48 40963 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 2 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^1I)4p$ | w ² H ^o | 9/2 | 0.01 | 51KIE |
| 2433.011 41088 2433.2059 41085 2437.121 41019 2437.50 41013 2438.4225 40997 2438.46061 40997 2439.175 40985 2439.7785 40974 2440.48 40963 2441.9825 40937 2443.349 40913 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 1 | $3d^{5}$ | a ² F | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | 0.01 | 51KIE |
| 2433.2059 41085 2437.121 41019 2437.50 41013 2438.4225 40997 2438.46061 40997 2438.9112 40985 2439.7785 40974 2440.48 40963 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 10 | $3d^34s^2$ | c ⁴ F | 5/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 5/2 | 0.0011 | 12SAN/NAV |
| 2437.121 41019 2437.50 41013 2438.4225 40997 2438.46061 40997 2438.9112 40989 2439.175 40985 2449.785 40974 2440.48 40963 2441.9825 40937 2443.349 40913 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 5 | $3d^4(^3P1)4p$ | $z^{4}S^{o}$ | 3/2 | - | $3d^4(^5D)5d$ | 6S | 5/2 | 0.002 | 12SAN/NAV |
| 2437.50 41013 2438.4225 40997 2438.46061 40997 2438.9112 40989 2439.175 40985 2439.7785 40974 2440.48 40963 2440.9018 40956 2441.9825 40937 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 29 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^1G1)4p$ | w ² G ^o | 7/2 | 0.0002 | 12SAN/NAV |
| 2438.4225 40997 2438.46061 40997 2438.9112 40989 2439.175 40985 2439.7785 40974 2440.48 40963 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 3 | $3d^4(^5D)4p$ | z ⁴ P° b ⁴ G | 5/2 | - | $3d^4(^5D)4d$ | e ⁴ F x ² H° | 7/2 | 0.002 | 12SAN/NAV |
| 2438.46061 40997 2438.9112 40989 2439.175 40985 2439.7785 40974 2440.48 40963 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 1 | $3d^4(^3G)4s$ $3d^5$ | a ² G | 11/2 9/2 | - | 3d ⁴ (¹ G1)4p 3d ⁴ (¹ I)4p | w ² H° | 11/2 | 0.01 0.0010 | 51KIE |
| 2438.9112 40989 2439.175 40985 2439.7785 40974 2440.48 40963 2440.9018 40956 2441.9825 40937 2444.3349 40915 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 3 39 | $3d^4(^3H)4s$ | a G a ² H | 11/2 | _ | $3d^{4}(^{1}G1)4p$ | w H w ² G ^o | 9/2 9/2 | 0.0010 | 12SAN/NAV 12SAN/NAV |
| 2439.175 40985 2439.7785 40974 2440.48 40963 2440.9018 40956 2441.9825 40937 2444.3349 40915 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 39 9 | $3d^4(^3P1)4p$ | ап у ⁴ Р° | 5/2 | _ | $3d^4(^5D)5d$ | w G ⁴D | 7/2 | 0.00013 | 12SAN/NAV |
| 2439.7785 40974 2440.48 40963 2440.9018 40956 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.1069 40902 2444.197 40902 2444.214 40902 2445.0764 40886 2446.1167 40868 | | 2 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^5D)5p$ | ⁴ F° | 3/2 | 0.005 | 12SAN/NAV |
| 2440.48 40963 2440.9018 40956 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.1069 40902 2444.197 40906 2444.214 40906 2445.0764 40886 2446.1167 40868 | | 10 | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 3/2 | 0.0012 | 12SAN/NAV |
| 2440.9018 40956 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.1069 40902 2444.197 40902 2444.214 40900 2445.0764 40886 2446.1167 40868 | | 2 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3D)4p$ | x ⁴ P° | 5/2 | 0.0012 | 51KIE |
| 2441.9825 40937 2443.349 40915 2444.0904 40902 2444.1069 40902 2444.197 40902 2444.214 40902 2445.0764 40886 2446.1167 40868 | | 14 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^5D)5p$ | ⁴ F ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 2443.349 40915 2444.0904 40902 24444.0904 40902 24444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2445.1346 40885 2446.1167 40868 | 37.925 | 6 | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | 0.0009 | 12SAN/NAV |
| 2444.0904 40902 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2445.1346 40885 2446.1167 40868 | | 2 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.003 | 12SAN/NAV |
| 2444.0904 40902 2444.1069 40902 2444.197 40900 2444.214 40900 2445.0764 40886 2445.1346 40885 2446.1167 40868 | | 6 * | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3D)4p$ | w^4F^o | 7/2 | 0.0017 | 12SAN/NAV |
| 2444.197 40900 2444.214 40900 2445.0764 40886 2445.1346 40885 2446.1167 40868 | | 6 * | $3d^4(^5D)4p$ | z^4P^o | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ F | 5/2 | 0.0017 | 12SAN/NAV |
| 2444.214 40900 2445.0764 40886 2445.1346 40885 2446.1167 40868 | 02.345 | 26 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 1/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 1/2 | 0.0002 | 12SAN/NAV |
| 2445.0764 40886 2445.1346 40885 2446.1167 40868 | 00.84 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3D)4p$ | w^4F^o | 5/2 | 0.004 | 12SAN/NAV |
| 2445.1346 40885 2446.1167 40868 | 00.55 | 2 | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | _ | $3d^4(^5D)5d$ | $^{6}\mathrm{D}$ | 7/2 | 0.004 | 12SAN/NAV |
| 2446.1167 40868 | 86.128 | 10 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^3D)4p$ | w^2F^o | 5/2 | 0.0007 | 12SAN/NAV |
| | 85.15 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 9/2 | 0.0014 | 12SAN/NAV |
| 2446.905 40855 | 68.741 | 18 | $3d^4(^1F)4s$ | d ² F | 5/2 | _ | $3d^4(^3P2)4p$ | t ² D ^o | 3/2 | 0.0003 | 12SAN/NAV |
| | | 4 | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | - | $3d^4(^5D)4d$ | e ⁴ P | 1/2 | 0.003 | 12SAN/NAV |
| | 55.362 | 27 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^4(^3D)4p$ | w ⁴ F ^o | 3/2 | 0.0002 | 12SAN/NAV |
| | 53.925 | 27 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | 0.0002 | 12SAN/NAV |
| 2447.4931 40845 | | 3 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | - | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | 0.0018 | 12SAN/NAV |
| | 42.898 | 20 | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 1/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 3/2 | 0.0003 | 12SAN/NAV |
| | 37.96 | 3 | $3d^4(^1D)4s$ | c ² D | 3/2 | - | $3d^4(^1F)4p$ | v ² D° | 5/2 | 0.0016 | 12SAN/NAV |
| | 25.707 | 15 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 9/2 | 0.0004 | 12SAN/NAV |
| | | 27 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 7/2 | 0.0004 | 12SAN/NAV |
| | 18.197 | 16 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | - | $3d^44d$ | h ⁴ H | 7/2 | 0.0003 | 12SAN/NAV |
| 2449.64052 40809 2449.8447 40806 | 18.197 17.428 | 56 29 | 3d ⁴ (³ G)4s 3d ⁴ (⁵ D)4p | b ⁴ G z ⁴ P° | 11/2 3/2 | _ | 3d ⁴ (³ D)4p 3d ⁴ (⁵ D)4d | w ⁴ F° f ⁴ D | 9/2 5/2 | 0.00011 0.0002 | 12SAN/NAV 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | ssific | ation | | | Uncertainty of observed | |
|------------------------|----------------------------|-------------|--|--|------------|--------|---|---|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | ээтте | Configuration | Term | | wavelength (Å) | Source of line |
| 2449.9533 | 40804.746 | 40 | 3d ⁴ (³ G)4s | b ⁴ G | 9/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 7/2 | 0.0003 | 12SAN/NAV |
| 2450.301 | 40798.96 | 5 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 5/2 | 0.002 | 12SAN/NAV |
| 2450.3734 | 40797.751 | 29 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3D)4p$ | w ⁴ F ^o | 5/2 | 0.0002 | 12SAN/NAV |
| 2451.6367 | 40776.730 | 18 | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^1F)4p$ | v ² D ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2451.9657 | 40771.259 | 24 | $3d^4(^5D)4p$ | z ⁶ F° | 1/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 1/2 | 0.0002 | 12SAN/NAV |
| 2452.5788 | 40761.067 | 24 22 | 3d ⁴ (⁵ D)4p 3d ⁴ (¹ F)4s | z ⁶ F ^o d ² F | 3/2 7/2 | _ | 3d ⁴ (⁵ D)4d 3d ⁴ (³ P2)4p | e ⁶ F t ² D° | 3/2 5/2 | 0.0002 0.0003 | 12SAN/NAV |
| 2452.7147 2453.1619 | 40758.809 40751.379 | 6 | $3d^4(^3P1)4p$ | z ² P° | 3/2 | _ | $3d^4(^5D)5d$ | ¹G | 5/2 | 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2453.944 | 40731.379 | 2 | $3d^4(^1F)4s$ | d ² F | 5/2 | _ | $3d^4(^3P2)4p$ | t ² D° | 5/2 | 0.0010 | 12SAN/NAV |
| 2454.0612 | 40736.447 | 17 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^1D1)4p$ | w ² D° | 5/2 | 0.0003 | 12SAN/NAV |
| 2454.1557 | 40734.878 | 9 | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | _ | $3d^44d$ | h ⁴ H | 13/2 | 0.0006 | 12SAN/NAV |
| 2454.2875 | 40732.691 | 12 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D ^o | 9/2 | 0.0005 | 12SAN/NAV |
| 2454.45858 | 40729.852 | 36 | $3d^5$ | $a^{2}I$ | 13/2 | _ | $3d^4(^3G)4p$ | x^4G^o | 11/2 | 0.00016 | 12SAN/NAV |
| 2454.9732 | 40721.315 | 25 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 9/2 | 0.0002 | 12SAN/NAV |
| 2455.12575 | 40718.785 | 47 | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | 0.00013 | 12SAN/NAV |
| 2455.15323 | 40718.3290 | 50 | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | $3d^4(^5D)4d$ | f ⁴ D | 3/2 | 0.00012 | 12SAN/NAV |
| 2455.373 | 40714.68 | 3 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 5/2 | 0.004 | 12SAN/NAV |
| 2456.0065 | 40704.18 | 6 | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | - | $3d^4(^5D)5d$ | ⁴ D | 7/2 | 0.0017 | 12SAN/NAV |
| 2456.4748 | 40696.424 | 15 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^4(^1G1)4p$ | x ² F ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 2456.7847 | 40691.291 | 4 | $3d^4(^3H)4p$ | z ⁴ H° | 11/2 | - | $3d^44d$ | a ⁴ K | 13/2 | 0.0011 | 12SAN/NAV |
| 2456.89714 | 40689.4292 | 61 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 1/2 | 0.00010 | 12SAN/NAV |
| 2457.581 | 40678.11 | 2 | $3d^5$ $3d^4(^3H)4p$ | c ² F y ⁴ G ^o | 5/2 9/2 | - | 3d ⁴ (¹ D1)4p 3d ⁴ 4d | w ² D ^o h ⁴ H | 5/2 | 0.003 0.0006 | 12SAN/NAV |
| 2458.3898 | 40664.726 40652.414 | 9 10 | $3d^{3}(^{3}H)^{4}p$ $3d^{3}4s^{2}$ | c ⁴ F | 9/2 7/2 | _ | $3d^{3}(^{4}F)4s4p(^{3}P^{o})$ | n H s ² F° | 11/2 7/2 | 0.0006 | 12SAN/NAV 12SAN/NAV |
| 2459.1344 2459.3439 | 40632.414 | 10 | $3d^5$ | с F b ⁴ F | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ D° | 7/2 | 0.0003 | 12SAN/NAV |
| 2459.3439 | 40647.235 | 20 | $3d^4(^5D)4p$ | z ⁶ F° | 1/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | 0.0003 | 12SAN/NAV |
| 2459.5363 | 40645.771 | 14 | $3d^4(^5D)4p$ | z ⁴ P° | 3/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 1/2 | 0.0004 | 12SAN/NAV |
| 2460.207 | 40634.69 | 3 | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ S | 5/2 | 0.003 | 12SAN/NAV |
| 2460.41406 | 40631.2718 | 110 * | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | 0.00008 | 12SAN/NAV |
| 2460.41406 | 40631.2718 | 110 * | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 7/2 | 0.00008 | 12SAN/NAV |
| 2460.48039 | 40630.177 | 29 | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 1/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 1/2 | 0.00018 | 12SAN/NAV |
| 2460.73748 | 40625.9320 | 110 | $3d^4(^5D)4p$ | z ⁶ F ^o | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 3/2 | 0.00007 | 12SAN/NAV |
| 2461.3829 | 40615.28 | 6 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁶ D | 7/2 | 0.0018 | 12SAN/NAV |
| 2461.7236 | 40609.659 | 29 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | 0.0004 | 12SAN/NAV |
| 2461.9172 | 40606.466 | 5 | $3d^{5}$ | a ² G | 9/2 | - | $3d^4(^3D)4p$ | $w^2 F^o$ | 7/2 | 0.0011 | 12SAN/NAV |
| 2462.152 | 40602.59 | 3 | $3d^4(^3H)4p$ | z ⁴ H° | 13/2 | - | $3d^44d$ | a ⁴ K | 15/2 | 0.002 | 12SAN/NAV |
| 2462.3412 | 40599.474 | 25 | $3d^5$ $3d^34s^2$ | b ⁴ F c ⁴ F | 7/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o ⁴ F ^o | 5/2 | 0.0002 | 12SAN/NAV |
| 2462.3829 2462.7126 | 40598.79 | 4 11 | $3d^44s$ $3d^4(^3G)4s$ | с F b ⁴ G | 9/2 7/2 | _ | $3d^4(^5D)5p$ $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 7/2 | 0.0015 0.0006 | 12SAN/NAV 12SAN/NAV |
| 2462.7126 | 40593.352 40591.58 | _ | $3d^{5}$ | b ⁴ F | 3/2 | _ | $3d^4(^3D)4p$ | w ⁴ D ^o | 5/2 | 0.000 | 51KIE |
| 2462.9961 | 40591.58 | 5 | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | _ | $3d^44d$ | h ⁴ H | 9/2 | 0.0011 | 12SAN/NAV |
| 2463.4505 | 40581.193 | 12 | $3d^{5}$ | b ⁴ F | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ D° | 5/2 | 0.0006 | 12SAN/NAV |
| 2464.3024 | 40567.166 | 6 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^3D)4p$ | w ⁴ D° | 3/2 | 0.0010 | 12SAN/NAV |
| 2464.40930 | 40565.406 | 56 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | 0.00018 | 12SAN/NAV |
| 2464.6052 | 40562.182 | 10 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^3D)4p$ | w^4D^o | 1/2 | 0.0006 | 12SAN/NAV |
| 2464.9235 | 40556.945 | 16 | $3d^{5}$ | b ⁴ F | 5/2 | _ | $3d^4(^3D)4p$ | w^4D^o | 3/2 | 0.0004 | 12SAN/NAV |
| 2465.4920 | 40547.593 | 23 | $3d^4(^5D)4p$ | z ⁶ F ^o | 5/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | 0.0002 | 12SAN/NAV |
| 2465.5908 | 40545.969 | 25 | $3d^5$ | c ² F | 5/2 | - | $3d^4(^1D1)4p$ | w ² D ^o | 3/2 | 0.0005 | 12SAN/NAV |
| 2465.7635 | 40543.129 | 25 | $3d^{5}$ | c ² F | 7/2 | _ | $3d^4(^1D1)4p$ | w ² D° | 5/2 | 0.0002 | 12SAN/NAV |
| 2466.1498 | 40536.779 | 15 | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 9/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 11/2 | 0.0004 | 12SAN/NAV |
| 2466.2066 | 40535.845 | 11 | $3d^{5}$ | a ² I | 11/2 | - | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | 0.0006 | 12SAN/NAV |
| 2466.36296 | 40533.2757 | 79 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)4d$ | f ⁴ D | 7/2 | 0.00009 | 12SAN/NAV |
| 2466.45015 | 40531.8429 | 140 | $3d^4(^5D)4p$ | z ⁶ F ^o z ⁴ P ^o | 7/2 | - | 3d ⁴ (⁵ D)4d | e ⁶ F e ⁴ P | 5/2 | 0.00007 | 12SAN/NAV |
| 2466.64484 | 40528.6440 | 95 24 | $3d^4(^5D)4p$ $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | - | 3d ⁴ (⁵ D)4d 3d ⁴ (⁵ D)4d | e ⁴ P | 3/2 | 0.00007 | 12SAN/NAV |
| 2468.0730 | 40505.194 40498.96 | 24 | $3d^{3}(^{3}D)4p$ $3d^{3}4s^{2}$ | z P c ⁴ F | 1/2 5/2 | _ | $3d^{4}(^{3}\text{D})4d$ $3d^{4}(^{3}\text{F2})4p$ | e P t ⁴ D° | 1/2 3/2 | 0.0002 0.0013 | 12SAN/NAV |
| 2468.4528 2468.67 | 40498.96 40495.40 | 4 1 | $3d^{4}s^{-}$ $3d^{4}(^{3}G)4s$ | b ⁴ G | 5/2 9/2 | _ | $3d^{4}(^{1}\text{G1})4p$ $3d^{4}(^{1}\text{G1})4p$ | $x^{2}F^{o}$ | 3/2 7/2 | 0.0013 | 12SAN/NAV 51KIE |
| 2469.12688 | 40493.40 | 37 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | _ | $3d^4(^3G)4p$ | х г х ⁴ G° | 11/2 | 0.00018 | 12SAN/NAV |
| 2469.12088 | 40485.491 | 9 | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | _ | $3d^44d$ | h ⁴ H | 7/2 | 0.00018 | 12SAN/NAV |
| 2469.36614 | 40483.9837 | 220 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 9/2 | 0.00012 | 12SAN/NAV |
| 2469.94331 | 40474.5242 | 98 | $3d^4(^5D)4p$ | $z^{6}F^{0}$ | 5/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | 0.00007 | 12SAN/NAV |
| 2470.0966 | 40472.013 | 24 | $3d^4(^1G1)4p$ | w ² G° | 9/2 | _ | $3d^4(^5D)6d$ | ⁶ G | 7/2 | 0.0003 | 12SAN/NAV |
| 2470.513 | 40465.19 | 3 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | _ | $3d^44d$ | f ² I | 11/2 | 0.003 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | ssific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|-------------|--|---|--------------|--------|--|---|--------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | SSITIC | Configuration | Term | | wavelength (Å) | Source of line |
| 2470.78938 | 40460.666 | 46 | 3d ⁴ (⁵ D)4p | z ⁶ D° | 5/2 | _ | 3d ⁴ (⁵ D)4d | f ⁴ D | 5/2 | 0.00013 | 12SAN/NAV |
| 2470.8121 | 40460.293 | 14 * | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | - | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | 0.0004 | 12SAN/NAV |
| 2470.8121 | 40460.293 | 14 * | $3d^4(^5D)4p$ | z ⁶ F ^o | 7/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 9/2 | 0.0004 | 12SAN/NAV |
| 2472.34 | 40435.29 | 5 R | $3d^4(^1F)4s$ | d ² F | 5/2 | - | $3d^4(^3F2)4p$ | w ⁴ G° | 7/2 | 0.01 | 00WAG |
| 2472.8070 2473.084 | 40427.66 40423.13 | 4 2 | $3d^4(^3\text{H})4s$ $3d^4(^3\text{H})4p$ | a ⁴ H z ⁴ H° | 7/2 7/2 | _ | $3d^4(^3G)4p$ $3d^44d$ | y ² F ^o f ⁴ H | 5/2 9/2 | 0.0014 0.005 | 12SAN/NAV 12SAN/NAV |
| 2473.084 | 40423.13 | 12 | 3a (H)4p $3d^34s^2$ | c ⁴ F | 7/2 | _ | 3d ⁴ (⁵ D)5p | 1 н ⁴ Р ^о | 9/2 5/2 | 0.003 | 12SAN/NAV |
| 2474.50 | 40400.00 | 10 R | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 5/2 | 0.0004 | 00WAG |
| 2474.87293 | 40393.9100 | 150 * | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 7/2 | 0.00007 | 12SAN/NAV |
| 2474.87293 | 40393.9100 | 150 * | $3d^4(^3D)4p$ | w^2F^o | 5/2 | _ | $3d^4(^5D)6d$ | 4 P | 3/2 | 0.00007 | 12SAN/NAV |
| 2474.938 | 40392.85 | 3 | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 13/2 | _ | $3d^44d$ | g ⁴ I | 15/2 | 0.003 | 12SAN/NAV |
| 2475.5315 | 40383.165 | 15 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | - | $3d^4(^5D)5p$ | ⁴ D ^o | 7/2 | 0.0003 | 12SAN/NAV |
| 2475.6879 | 40380.614 | 27 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^4(^3G)4p$ | $x^{4}G^{o}$ | 9/2 | 0.0004 | 12SAN/NAV |
| 2476.1891 | 40372.441 | 10 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)4d$ | f ⁴ D | 3/2 | 0.0006 | 12SAN/NAV |
| 2476.88709 | 40361.0647 | 49 | $3d^5$ | a ² F z ⁶ F° | 7/2 | - | $3d^4(^3G)4p$ | x ² G° f ⁶ D | 9/2 | 0.00012 | 12SAN/NAV |
| 2476.91274 | 40360.6468 | 150 | $3d^4(^5D)4p$ $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 7/2 | _ | 3d ⁴ (⁵ D)4d 3d ⁴ 4d | f ⁴ H | 7/2 | 0.00007 | 12SAN/NAV |
| 2477.66390 2478.73593 | 40348.4114 40330.9623 | 83 110 | $3d^{4}(^{5}D)4p$ | z H z ⁴ P° | 3/2 | _ | 3 <i>d</i> ⁴ (⁵ D)4 <i>d</i> | гн e ⁴ P | 7/2 5/2 | 0.00008 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2478.847 | 40330.9023 | 2 | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | _ | $3d^4(^5D)5d$ | ⁴ D | 7/2 | 0.0007 | 12SAN/NAV |
| 2479.55094 | 40317.7068 | 90 | $3d^4(^3H)4p$ | z ⁴ H° | 9/2 | _ | $3d^44d$ | f ⁴ H | 9/2 | 0.00008 | 12SAN/NAV |
| 2479.823 | 40313.28 | 2 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | _ | $3d^44d$ | g ⁴ I | 9/2 | 0.003 | 12SAN/NAV |
| 2481.0796 | 40292.87 | 5 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 7/2 | 0.0013 | 12SAN/NAV |
| 2482.3617 | 40272.059 | 4 | $3d^4(^5D)4p$ | z^4P^o | 3/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 3/2 | 0.0011 | 12SAN/NAV |
| 2482.4723 | 40270.26 | 4 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^3G)4p$ | $x {}^4G^o$ | 7/2 | 0.0015 | 12SAN/NAV |
| 2482.6299 | 40267.71 | 4 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | - | $3d^4(^5D)5d$ | ^{4}D | 7/2 | 0.0014 | 12SAN/NAV |
| 2483.24215 | 40257.7808 | 110 * | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | - | $3d^44d$ | f ⁴ H | 11/2 | 0.00007 | 12SAN/NAV |
| 2483.24215 | 40257.7808 | 110 * | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 13/2 | - | $3d^44d$ | g ⁴ I | 13/2 | 0.00007 | 12SAN/NAV |
| 2483.6670 | 40250.895 | 23 | $3d^5$ | a ² I | 11/2 | - | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2483.73840 2483.78904 | 40249.7379 40248.917 | 520 36 | 3d ⁴ (⁵ D)4p 3d ⁵ | z ⁶ F ^o a ² I | 11/2 13/2 | _ | 3d ⁴ (⁵ D)4d 3d ⁴ (³ G)4p | e ⁶ F y ² H ^o | 11/2 11/2 | 0.00007 0.00014 | 12SAN/NAV 12SAN/NAV |
| 2483.78904 2483.80710 | 40248.917 | 50 50 | $3d^4(^5D)4p$ | a 1 z ⁴ P ^o | 3/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 1/2 | 0.00014 | 12SAN/NAV 12SAN/NAV |
| 2483.8521 | 40248.0247 | 20 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 5/2 | 0.00012 | 12SAN/NAV |
| 2484.1530 | 40243.021 | 9 | $3d^4(^3H)4p$ | z ⁴ H° | 9/2 | _ | $3d^44d$ | f ⁴ H | 7/2 | 0.0006 | 12SAN/NAV |
| 2484.325 | 40240.23 | 3 | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 7/2 | 0.004 | 12SAN/NAV |
| 2484.8661 | 40231.473 | 4 | $3d^4(^5D)4p$ | $z^{6}D^{o}$ | 1/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 3/2 | 0.0009 | 12SAN/NAV |
| 2485.1025 | 40227.646 | 13 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 7/2 | 0.0004 | 12SAN/NAV |
| 2485.39300 | 40222.9443 | 190 | $3d^4(^5D)4p$ | z ⁶ F ^o | 9/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 9/2 | 0.00007 | 12SAN/NAV |
| 2486.201 | 40209.87 | 2 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^4(^5D)5p$ | ⁶ D ^o | 5/2 | 0.004 | 12SAN/NAV |
| 2486.30367 | 40208.2127 | 64 * | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | - | $3d^4(^3G)4p$ | $x^{4}G^{o}$ | 7/2 | 0.00010 | 12SAN/NAV |
| 2486.30367 | 40208.2127 | 64 * | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | - | $3d^4(^5D)5p$ | ⁴ D° | 5/2 | 0.00010 | 12SAN/NAV |
| 2486.6594 | 40202.461 | 19 | $3d^4(^3F)4s$ $3d^5$ | b ² F | 7/2 | - | $3d^4(^1G1)4p$ | w^2G^o w^2G^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2486.86 2486.9353 | 40199.22 40198.00 | 1 3 | $3d^{4}$ $(^{3}P1)4p$ | b ² H y ⁴ P ^o | 9/2 5/2 | _ | $3d^4(^1G1)4p$ $3d^4(^5D)5d$ | w -G" ⁴ S | 9/2 | 0.01 0.0020 | 51KIE 12SAN/NAV |
| 2480.9333 | 40196.9329 | 130 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 3/2 9/2 | 0.0020 | 12SAN/NAV |
| 2487.232 | 40193.21 | 3 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{0}$ | 5/2 | 0.004 | 12SAN/NAV |
| 2487.5097 | 40188.72 | 7 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 5/2 | 0.0016 | 12SAN/NAV |
| 2487.8213 | 40183.69 | 3 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 9/2 | 0.0014 | 12SAN/NAV |
| 2488.12707 | 40178.7486 | 130 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 7/2 | 0.00007 | 12SAN/NAV |
| 2488.3410 | 40175.295 | 12 * | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0012 | 12SAN/NAV |
| 2488.3410 | 40175.295 | 12 * | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | - | $3d^44d$ | f ⁴ H | 9/2 | 0.0012 | 12SAN/NAV |
| 2489.28719 | 40160.0248 | 170 * | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | 0.00007 | 12SAN/NAV |
| 2489.28719 | 40160.0248 | 170 * | $3d^4(^3H)4p$ | z ⁴ H ^o | 13/2 | - | $3d^44d$ | f ⁴ H | 13/2 | 0.00007 | 12SAN/NAV |
| 2489.30952 | 40159.665 | 31 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)4d$ | f ⁴ D | 3/2 | 0.00018 | 12SAN/NAV |
| 2489.3565 | 40158.907 | 12 | $3d^4(^5D)4p$ | z ⁶ D° z ⁴ H° | 1/2 | - | $3d^4(^5D)4d$ | f ⁴ D f ⁴ I | 1/2 | 0.0005 | 12SAN/NAV |
| 2489.62882 2490.0753 | 40154.5144 40147.315 | 110 13 | 3d ⁴ (³ H)4p 3d ⁴ (³ F)4s | z ⁴ H ^o b ² F | 7/2 5/2 | _ | $3d^44d$ $3d^4(^1G1)4p$ | f Tl w ² G ^o | 9/2 7/2 | 0.00007 0.0004 | 12SAN/NAV 12SAN/NAV |
| 2490.0753 | 40147.315 | 110 | $3d^{4}(^{3}\text{H})4p$ | в ⁻ F z ⁴ H° | 5/2 9/2 | _ | $3d^{4}4d$ | w -G ^a | 11/2 | 0.0004 | 12SAN/NAV 12SAN/NAV |
| 2490.71162 | 40137.0390 | 3 | $3d^4(^3G)4s$ | гп e ² G | 9/2 7/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{0})$ | q ⁴ D° | 7/2 | 0.0007 | 12SAN/NAV |
| 2492.63136 | 40106.1489 | 110 * | $3d^{5}$ | b ² H | 9/2 | _ | $3d^4(^1\text{G1})4p$ | w ² G° | 7/2 | 0.00007 | 12SAN/NAV |
| 2492.63136 | 40106.1489 | 110 * | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 5/2 | 0.00007 | 12SAN/NAV |
| 2492.7203 | 40104.718 | 9 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 5/2 | 0.0004 | 12SAN/NAV |
| 2492.85782 | 40102.506 | 37 | $3d^{5}$ | b ² H | 11/2 | _ | $3d^4(^1G1)4p$ | w^2G^o | 9/2 | 0.00015 | 12SAN/NAV |
| 2493.04157 | 40099.5502 | 140 | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | _ | $3d^44d$ | f ⁴ I | 13/2 | 0.00007 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed | Observed | | | | | | | | | Uncertainty | |
|------------------------|-------------------------|------------|--|--|-------------|-------|--|---|-------------|-------------------|------------------------|
| air | wave | Intensity | | | Clas | sific | ation | | | of observed | |
| wavelength | number | and | | | | SITTE | | | | wavelength | Source |
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2493.28243 | 40095.677 | 35 | $3d^4(^3H)4s$ $3d^4(^5D)4p$ | a ⁴ H z ⁶ D° | 11/2 | - | $3d^4(^3G)4p$ $3d^4(^5D)4d$ | y ² H ^o f ⁴ D | 9/2 | 0.00016 | 12SAN/NAV |
| 2493.8155 2494.5087 | 40087.107 40075.968 | 11 11 | $3d^{4}(^{3}H)4p$ | z ⁴ H° | 3/2 13/2 | _ | 3 <i>d</i> (D)4 <i>a</i> 3 <i>d</i> ⁴ 4 <i>d</i> | f ⁴ H | 1/2 11/2 | 0.0004 0.0005 | 12SAN/NAV 12SAN/NAV |
| 2494.3087 | 40073.908 | 7 wl | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{0}$ | 3/2 | 0.0003 | 51KIE |
| 2496.1786 | 40049.159 | 13 | $3d^4(^3H)4p$ | z ⁴ H° | 9/2 | _ | $3d^44d$ | f ⁴ I | 9/2 | 0.0005 | 12SAN/NAV |
| 2496.42859 | 40045.149 | 46 | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 7/2 | 0.00014 | 12SAN/NAV |
| 2496.59373 | 40042.5005 | 110 | $3d^4(^3F1)4p$ | $z^{4}G^{o}$ | 5/2 | _ | $3d^44d$ | g ⁴ H | 7/2 | 0.00007 | 12SAN/NAV |
| 2496.78688 | 40039.4030 | 190 * | $3d^4(^1F)4s$ | d ² F | 7/2 | _ | $3d^4(^3F2)4p$ | t ² F ^o | 5/2 | 0.00007 | 12SAN/NAV |
| 2496.78688 | 40039.4030 | 190 * | $3d^4(^3H)4p$ | z ⁴ H ^o | 13/2 | _ | $3d^44d$ | f ⁴ I | 15/2 | 0.00007 | 12SAN/NAV |
| 2496.78688 | 40039.4030 | 190 * | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | - | $3d^44d$ | g ⁴ G | 11/2 | 0.00007 | 12SAN/NAV |
| 2497.8741 | 40021.977 | 13 | $3d^4(^3D)4s$ | b ² D | 5/2 | - | $3d^4(^1D1)4p$ | w ² P ^o | 3/2 | 0.0006 | 12SAN/NAV |
| 2497.9021 2498.1277 | 40021.528 | 24 22 | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ $z^{4}P^{o}$ | 3/2 5/2 | - | 3d ⁴ (⁵ D)5d 3d ⁴ (⁵ D)4d | ⁴ G f ⁴ D | 5/2 | 0.0002 | 12SAN/NAV |
| 2498.1277 | 40017.914 40006.9688 | 47 | 3d ⁴ (⁵ D)4p 3d ⁴ (³ H)4s | a ⁴ H | 13/2 | _ | $3a^{4}(^{3}G)4p$ | y ² H ^o | 3/2 11/2 | 0.0002 0.00012 | 12SAN/NAV 12SAN/NAV |
| 2499.34318 | 39998.4540 | 63 | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | _ | $3d^44d$ | g ⁴ H | 9/2 | 0.00012 | 12SAN/NAV |
| 2499.5831 | 39994.615 | 9 | $3d^4(^3H)4p$ | z ⁴ H° | 11/2 | _ | $3d^44d$ | f ⁴ I | 11/2 | 0.00010 | 12SAN/NAV |
| 2499.623 | 39993.98 | 3 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | z ² S ^o | 1/2 | 0.004 | 12SAN/NAV |
| 2500.07 | 39986.83 | 5 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | z^2S^o | 1/2 | 0.01 | 51KIE |
| 2500.17935 | 39985.0777 | 58 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | 0.00011 | 12SAN/NAV |
| 2500.3967 | 39981.602 | 25 | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | _ | $3d^44d$ | g ⁴ G | 9/2 | 0.0002 | 12SAN/NAV |
| 2501.0762 | 39970.74 | 4 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | - | $3d^4(^5D)5p$ | ⁴ D ^o | 1/2 | 0.0018 | 12SAN/NAV |
| 2501.4743 | 39964.380 | 14 | $3d^5$ | a ² I | 11/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.0004 | 12SAN/NAV |
| 2502.12360 | 39954.0098 | 65 | $3d^4(^3F1)4p$ | z ⁴ G° z ⁴ G° | 9/2 | - | $3d^44d$ $3d^44d$ | g ⁴ H | 11/2 | 0.00009 | 12SAN/NAV |
| 2502.8690 2502.96 | 39942.112 39940.7 | 20 2 w | 3d ⁴ (³ F1)4p 3d ⁴ (³ F1)4p | z ⁴ G° | 7/2 11/2 | _ | 3d ⁴ (⁵ D)6s | g ⁴ H ⁶ D | 7/2 9/2 | 0.0005 0.02 | 12SAN/NAV 51KIE |
| 2503.2577 | 39935.910 | 10 | $3d^4(^5D)4p$ | z ⁶ F° | 11/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 9/2 | 0.0006 | 12SAN/NAV |
| 2503.41 | 39933.48 | 2 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^1D1)4p$ | $w^{2}P^{o}$ | 3/2 | 0.01 | 51KIE |
| 2503.62 | 39930.13 | 3 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^1I)4p$ | $^{2}I^{o}$ | 13/2 | 0.01 | 51KIE |
| 2503.86713 | 39926.190 | 32 | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 3/2 | 0.00018 | 12SAN/NAV |
| 2504.55 | 39915.3 | 3 w | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 5/2 | 0.02 | 51KIE |
| 2505.8588 | 39894.459 | 5 | $3d^4(^3H)4s$ | a ² H | 11/2 | - | $3d^4(^1G1)4p$ | x ² H ^o | 11/2 | 0.0010 | 12SAN/NAV |
| 2506.0899 | 39890.78 | 5 | $3d^5$ | b ⁴ D | 7/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 7/2 | 0.0020 | 12SAN/NAV |
| 2506.243 | 39888.34 | 4 * | $3d^4(^3H)4p$ | z ⁴ H ^o ⁴ F ^o | 11/2 | - | $3d^4(^3G)5s$ | f ⁴ G | 11/2 | 0.002 | 12SAN/NAV |
| 2506.243 2506.76 | 39888.34 39880.1 | 4 * 5 w | 3d ⁴ (³ G)4p 3d ⁵ | b ⁴ F | 7/2 7/2 | _ | $3d^4(^5D)5d$ $3d^4(^3G)4p$ | 6 S x 2 G o | 5/2 9/2 | 0.002 0.02 | 12SAN/NAV 51KIE |
| 2506.70 | 39877.73 | 3 w | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 7/2 | 0.002 | 12SAN/NAV |
| 2507.3075 | 39871.410 | 11 | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | _ | $3d^44d$ | g ⁴ H | 9/2 | 0.0010 | 12SAN/NAV |
| 2507.5665 | 39867.292 | 10 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^1D1)4p$ | w^2P^o | 1/2 | 0.0004 | 12SAN/NAV |
| 2509.10 | 39842.9 | 12 wl | $3d^{4}(^{1}D)4s$ | c ² D | 5/2 | _ | $3d^4(^1F)4p$ | v^2G^o | 7/2 | 0.02 | 51KIE |
| 2510.2371 | 39824.881 | 9 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 9/2 | 0.0006 | 12SAN/NAV |
| 2510.3808 | 39822.601 | 12 * | $3d^4(^1F)4s$ | d ² F | 7/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 7/2 | 0.0008 | 12SAN/NAV |
| 2510.3808 | 39822.601 | 12 * | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | - | $3d^44d$ | g ⁴ G | 9/2 | 0.0008 | 12SAN/NAV |
| 2510.48758 | 39820.9075 | 44 | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | - | $3d^4(^5D)5d$ | ⁶ D y ² G° | 9/2 | 0.00012 | 12SAN/NAV |
| 2511.2287 | 39809.156 | 11 | 3d ⁴ (³ H)4s 3d ⁵ | a ⁴ H b ⁴ F | 11/2 5/2 | _ | $3d^4(^3F1)4p$ $3d^4(^3G)4p$ | y G° x ² G° | 9/2 7/2 | 0.0004 0.002 | 12SAN/NAV |
| 2512.212 2512.386 | 39793.58 39790.82 | 4 3 * | $3d^4(^3H)4s$ | ог a ² H | 9/2 | _ | $3d^4(^1I)4p$ | $^{2}I^{o}$ | 11/2 | 0.002 | 12SAN/NAV 12SAN/NAV |
| 2512.386 | 39790.82 | 3 * | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | s ⁴ F° | 7/2 | 0.003 | 12SAN/NAV |
| 2512.74019 | 39785.211 | 39 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 3/2 | 0.00015 | 12SAN/NAV |
| 2513.1747 | 39778.333 | 16 | $3d^4(^3H)4p$ | $z^{4}H^{o}$ | 11/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | 0.0006 | 12SAN/NAV |
| 2513.303 | 39776.30 | 4 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^5D)5p$ | $^{6}F^{o}$ | 3/2 | 0.002 | 12SAN/NAV |
| 2513.55544 | 39772.3083 | 69 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | 0.00009 | 12SAN/NAV |
| 2513.63377 | 39771.0690 | 440 | $3d^4(^5D)4p$ | z ⁶ F° | 1/2 | _ | $3d^4(^5D)4d$ | e ⁶ G | 3/2 | 0.00007 | 12SAN/NAV |
| 2514.2228 | 39761.752 | 10 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | - | $3d^4(^5D)4d$ | e ⁴ P | 1/2 | 0.0006 | 12SAN/NAV |
| 2515.02721 | 39749.0355 | 610 | $3d^4(^5D)4p$ | $z^{6}F^{0}$ | 3/2 | - | $3d^4(^5D)4d$ | e ⁶ G | 5/2 | 0.00007 | 12SAN/NAV |
| 2515.3882 | 39743.331 39741.88 | 9 | $3d^4(^3\text{H})4p$ $3d^4(^3\text{P1})4p$ | z ² G ^o y ⁴ D ^o | 9/2 7/2 | _ | $3d^44d$ $3d^45s$ | g ⁴ G g ² G | 11/2 9/2 | 0.0005 0.0013 | 12SAN/NAV |
| 2515.4800 2515.5458 | 39741.88 | 5 6 | $3d^4(^3P1)4p$ | y ⁴ P° | 3/2 | _ | 3 <i>d</i> ⁴ (⁵ D)6 <i>s</i> | g G ⁴ D | 5/2 | 0.0013 | 12SAN/NAV 12SAN/NAV |
| 2515.3438 | 39740.84 | 4 | $3d^4(^3F)4s$ | у Р a ⁴ F | 5/2 | _ | $3d^4(^3G)4p$ | y ² F ^o | 7/2 | 0.0018 | 51KIE |
| 2516.55470 | 39724.9104 | 200 | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | _ | $3d^44d$ | g ⁴ H | 13/2 | 0.00011 | 12SAN/NAV |
| 2517.25246 | 39713.8998 | 51 | $3d^4(^3F1)4p$ | $z^{4}G^{o}$ | 11/2 | _ | $3d^44d$ | g ⁴ G | 11/2 | 0.00011 | 12SAN/NAV |
| 2517.292 | 39713.28 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | - | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 3/2 | 0.003 | 12SAN/NAV |
| 2517.34723 | 39712.4048 | 52 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | - | $3d^44d$ | g ⁴ H | 9/2 | 0.00011 | 12SAN/NAV |
| 2517.7217 | 39706.499 | 22 | $3d^4(^3H)4p$ | z ⁴ H ^o | 13/2 | - | $3d^4(^3G)5s$ | f ⁴ G | 11/2 | 0.0002 | 12SAN/NAV |

| Table 6. Spectr | al lines of Cr I | I | | | | | | | | | |
|--------------------------|--------------------------|------------|--|--|-------------|-------|--|--------------------------------------|-------------|--------------------|------------------------|
| Observed | Observed | | | | | | | | | Uncertainty | |
| air | wave | Intensity | | | Clas | sific | ation | | | of observed | |
| wavelength | number | and | | | | 51110 | | | | wavelength | Source |
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2517.7971 | 39705.31 | 4 | $3d^4(^3H)4p$ | z ⁴ I ^o z ⁶ D ^o | 11/2 | - | 3d ⁴ 4d 3d ⁴ (⁵ D)4d | a ² K | 13/2 | 0.0016 | 12SAN/NAV |
| 2517.86485 2518.26081 | 39704.2413 39697.9988 | 58 870 | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4p | z ⁶ F° | 5/2 5/2 | _ | $3d^{4}(^{5}D)4d$ $3d^{4}(^{5}D)4d$ | e ⁴ G e ⁶ G | 5/2 7/2 | 0.00010 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2518.77071 | 39689.963 | 31 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 1/2 | 0.00007 | 12SAN/NAV |
| 2518.81614 | 39689.247 | 210 | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ G | 3/2 | 0.00015 | 12SAN/NAV |
| 2519.0544 | 39685.493 | 12 | $3d^4(^3H)4p$ | z ² G° | 9/2 | _ | $3d^44d$ | g ⁴ G | 9/2 | 0.0003 | 12SAN/NAV |
| 2519.1052 | 39684.693 | 9 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | 0.0003 | 12SAN/NAV |
| 2520.0286 | 39670.153 | 7 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)4d$ | e ⁴ G | 11/2 | 0.0005 | 12SAN/NAV |
| 2520.2306 | 39666.973 | 10 | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | - | $3d^4(^5D)6s$ | ⁴ D | 1/2 | 0.0004 | 12SAN/NAV |
| 2520.64903 | 39660.3890 | 62 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 11/2 | 0.00010 | 12SAN/NAV |
| 2520.80692 | 39657.9050 | 78 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ $x^{4}D^{o}$ | 9/2 | - | $3d^44d$ $3d^4(^5D)5d$ | g ⁴ H ⁴ F | 11/2 | 0.00008 | 12SAN/NAV |
| 2520.8554 2520.9234 | 39657.142 39656.073 | 11 15 * | $3d^4(^3F1)4p$ $3d^4(^3H)4p$ | z ² G° | 1/2 7/2 | _ | $3d^{4}4d$ | g ⁴ H | 3/2 7/2 | 0.0005 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2520.9234 | 39656.073 | 15 * | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | _ | $3d^44d$ | g п g ⁴ G | 9/2 | 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2521.232 | 39651.22 | 3 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | 0.003 | 12SAN/NAV |
| 2521.50 | 39647.01 | 1 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.01 | 51KIE |
| 2521.76 | 39642.92 | 5 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 9/2 | 0.01 | 51KIE |
| 2522.018 | 39638.86 | 3 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 9/2 | 0.003 | 12SAN/NAV |
| 2522.309 | 39634.29 | 3 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | - | $3d^4(^5D)5p$ | $^{4}F^{o}$ | 7/2 | 0.002 | 12SAN/NAV |
| 2522.54703 | 39630.5499 | 92 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | 0.00008 | 12SAN/NAV |
| 2522.67919 | 39628.474 | 29 | $3d^4(^3F1)4p$ | z ⁴ G ^o | 11/2 | - | $3d^44d$ | g ⁴ H | 11/2 | 0.00018 | 12SAN/NAV |
| 2523.23206 | 39619.7914 | 1200 | $3d^4(^5D)4p$ | z ⁶ F ^o z ⁶ F ^o | 7/2 | - | $3d^4(^5D)4d$ | e ⁶ G e ⁶ G | 9/2 | 0.00007 | 12SAN/NAV |
| 2523.60747 2523.779 | 39613.8980 39611.21 | 260 3 | 3d ⁴ (⁵ D)4p 3d ⁴ (³ H)4s | z "F" a ² H | 5/2 11/2 | _ | 3d ⁴ (⁵ D)4d 3d ⁴ (¹ I)4p | e G ² K° | 5/2 13/2 | 0.00007 0.006 | 12SAN/NAV 12SAN/NAV |
| 2523.779 | 39608.77 | 2 | $3d^4(^3H)4s$ | ан а ² Н | 11/2 | _ | $3d^{4}(^{1}I)4p$ | $^{2}I^{o}$ | 11/2 | 0.004 | 12SAN/NAV 12SAN/NAV |
| 2523.9724 | 39608.171 | 12 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 7/2 | 0.0005 | 12SAN/NAV |
| 2524.2229 | 39604.24 | 4 | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 1/2 | _ | $3d^4(^5D)6d$ | ⁴ P | 3/2 | 0.0014 | 12SAN/NAV |
| 2524.55 | 39599.1 | 15 wl | $3d^34s^2$ | d^4P | 3/2 | _ | $3d^4(^5D)4f$ | 6 G $^{\rm o}$ | 3/2 | 0.02 | 51KIE |
| 2526.0689 | 39575.300 | 14 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | _ | $3d^44d$ | g ⁴ H | 9/2 | 0.0004 | 12SAN/NAV |
| 2526.30114 | 39571.6625 | 61 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 3/2 | 0.00010 | 12SAN/NAV |
| 2527.3759 | 39554.84 | 4 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | - | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | 0.0016 | 12SAN/NAV |
| 2527.4242 | 39554.080 | 18 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ G | 3/2 | 0.0003 | 12SAN/NAV |
| 2527.57 | 39551.80 | 7 | $3d^4(^5D)4s$ | a ⁶ D y ⁴ P° | 3/2 5/2 | - | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)6s | z ⁴ F° ⁴ D | 3/2 | 0.01 | 51KIE |
| 2527.7867 2527.9050 | 39548.408 39546.56 | 9 | $3d^4(^3P1)4p$ $3d^5$ | d ² D | 3/2 | _ | $3d^4(^1F)4p$ | v ² D° | 7/2 3/2 | 0.0005 0.0015 | 12SAN/NAV 12SAN/NAV |
| 2527.946 | 39545.92 | 3 * | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | _ | $3d^44d$ | g ⁴ H | 9/2 | 0.0013 | 12SAN/NAV |
| 2527.946 | 39545.92 | 3 * | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 5/2 | _ | $3d^4(^5D)6d$ | ⁴ P | 5/2 | 0.004 | 12SAN/NAV |
| 2528.6927 | 39534.239 | 5 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 3/2 | 0.0009 | 12SAN/NAV |
| 2529.5011 | 39521.61 | 7 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | 0.0013 | 12SAN/NAV |
| 2529.89067 | 39515.5200 | 1500 | $3d^4(^5D)4p$ | z ⁶ F ^o | 9/2 | - | $3d^4(^5D)4d$ | e ⁶ G | 11/2 | 0.00007 | 12SAN/NAV |
| 2530.17656 | 39511.0554 | 270 | $3d^4(^5D)4p$ | z ⁶ F ^o | 7/2 | - | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | 0.00007 | 12SAN/NAV |
| 2530.21115 | 39510.515 | 47 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 9/2 | 0.00013 | 12SAN/NAV |
| 2530.788 | 39501.51 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | 0.005 | 12SAN/NAV |
| 2530.9412 | 39499.12 | 6 2 B | 3d ⁴ (³ F)4s 3d ⁴ (³ P)4s | e ² F a ² P | 7/2 | _ | $3d^4(^1G2)4p$ | $r^{2}F^{o}$ y $^{2}P^{o}$ | 7/2 | 0.0014 | 12SAN/NAV |
| 2531.02 2531.11 | 39497.89 39496.49 | 3 R 4 R | $3d^{4}(^{3}F)4s$ | a P d ⁴ F | 3/2 3/2 | _ | $3d^4(^3D)4p$ $3d^4(^5D)5p$ | y P | 1/2 5/2 | 0.01 0.01 | 00WAG 00WAG |
| 2531.8462 | 39485.001 | 32 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | _ | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | 0.0003 | 12SAN/NAV |
| 2532.63091 | 39472.7681 | 61 | $3d^4(^3H)4p$ | z ⁴ I° | 15/2 | _ | $3d^44d$ | a ² K | 15/2 | 0.00010 | 12SAN/NAV |
| 2532.99 | 39467.17 | 6 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | 0.01 | 51KIE |
| 2533.4651 | 39459.77 | 6 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | 0.0016 | 12SAN/NAV |
| 2534.2069 | 39448.222 | 9 | $3d^4(^3P)4s$ | b ² P | 3/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ F ^o | 3/2 | 0.0006 | 12SAN/NAV |
| 2534.33625 | 39446.2089 | 99 * | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | 0.00007 | 12SAN/NAV |
| 2534.33625 | 39446.2089 | 99 * | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | - | $3d^4(^5D)6s$ | ⁴ D | 5/2 | 0.00007 | 12SAN/NAV |
| 2534.4844 | 39443.903 | 6 * | $3d^5$ | a ² G | 9/2 | - | $3d^4(^1G1)4p$ | w ² G° | 7/2 | 0.0012 | 12SAN/NAV |
| 2534.4844 | 39443.903 | 6 * | $3d^4(^3G)4s$ | e ² G a ⁶ D | 7/2 | - | $3d^3(^2G)4s4p(^3P^0)$ | $p^{2}F^{o}$ $z^{4}F^{o}$ | 5/2 | 0.0012 | 12SAN/NAV |
| 2534.96 2535.42 | 39436.50 39429.35 | 3 | 3d ⁴ (⁵ D)4s 3d ⁴ (³ P)4s | a ^a D c ⁴ P | 5/2 5/2 | _ | $3d^4(^5D)4p$ $3d^3(^4P)4s4p(^3P^0)$ | z F x ⁶ D° | 3/2 7/2 | 0.01 0.01 | 51KIE 51KIE |
| 2535.42 2535.5744 | 39429.33 39426.948 | 22 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | 3/2 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ G | 5/2 | 0.01 | 12SAN/NAV |
| 2536.02 | 39420.948 | 2 w | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | r ² G° | 7/2 | 0.002 | 51KIE |
| 2536.3173 | 39415.40 | 4 | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | _ | $3d^44d$ | a ² K | 13/2 | 0.0018 | 12SAN/NAV |
| 2536.338 | 39415.08 | 3 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 5/2 | 0.003 | 12SAN/NAV |
| 2536.922 | 39406.01 | 3 | $3d^{5}$ | b ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | 0.006 | 12SAN/NAV |
| 2537.19 | 39401.84 | 2 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 5/2 | 0.01 | 51KIE |
| 2538.24796 | 39385.4221 | 1900 | $3d^4(^5D)4p$ | z ⁶ F ^o | 11/2 | - | $3d^4(^5D)4d$ | e ⁶ G | 13/2 | 0.00006 | 12SAN/NAV |
| | | | | | | | | | | | |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | _ |
|-------------------------|----------------------------|-------------|--|---|------------|--------|--|---|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | ,51110 | Configuration | Term | | wavelength (Å) | Source of line |
| 2538.43936 | 39382.4526 | 220 | 3d ⁴ (⁵ D)4p | z ⁶ F ^o | 9/2 | _ | 3d ⁴ (⁵ D)4d | e ⁶ G | 9/2 | 0.00007 | 12SAN/NAV |
| 2538.54 | 39380.89 | 2 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | - | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 1/2 | 0.01 | 51KIE |
| 2539.321 | 39368.78 | 4 | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | - | $3d^4(^5D)6s$ | ⁴ D | 5/2 | 0.002 | 12SAN/NAV |
| 2539.41048 | 39367.3930 | 62 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 7/2 | 0.00010 | 12SAN/NAV |
| 2539.490 | 39366.16 | 3 | $3d^4(^3H)4p$ | z ² H° a ⁶ D | 11/2 | - | $3d^44d$ | h ⁴ H z ⁴ F° | 13/2 | 0.003 | 12SAN/NAV |
| 2539.5279 2539.8752 | 39365.573 | 4 14 | 3d ⁴ (⁵ D)4s 3d ⁴ (⁵ D)4p | a D z P° | 7/2 3/2 | _ | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4d | z F e ⁶ F | 5/2 5/2 | 0.0011 0.0004 | 12SAN/NAV |
| 2540.2137 | 39360.190 39354.95 | 4 | 3 <i>a</i> (D)4 <i>p</i> 3 <i>d</i> ⁵ | a ² I | 11/2 | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 9/2 | 0.0004 | 12SAN/NAV 12SAN/NAV |
| 2540.3738 | 39352.466 | 22 | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | _ | $3d^{4}4d$ | h ⁴ H | 7/2 | 0.0020 | 12SAN/NAV |
| 2540.48 | 39350.8 | 2 w | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F° | 7/2 | 0.02 | 51KIE |
| 2541.74 | 39331.31 | 2 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 3/2 | 0.01 | 51KIE |
| 2542.38 | 39321.41 | 3 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 5/2 | 0.01 | 51KIE |
| 2542.69957 | 39316.4729 | 120 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 9/2 | 0.00007 | 12SAN/NAV |
| 2543.14049 | 39309.6569 | 93 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3G)4p$ | $x^{4}G^{o}$ | 7/2 | 0.00008 | 12SAN/NAV |
| 2543.321 | 39306.87 | 3 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | - | $3d^4(^5D)5p$ | $^{4}D^{o}$ | 3/2 | 0.004 | 12SAN/NAV |
| 2544.2611 | 39292.34 | 5 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | 0.0017 | 12SAN/NAV |
| 2544.58 | 39287.42 | 2 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 7/2 | 0.01 | 51KIE |
| 2544.6550 | 39286.262 | 13 | $3d^4(^3F1)4p$ | z ⁴ G ^o | 7/2 | - | $3d^45s$ | $g^{2}G$ | 7/2 | 0.0003 | 12SAN/NAV |
| 2544.9024 | 39282.44 | 4 | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | - | $3d^45s$ | g ² G | 9/2 | 0.0013 | 12SAN/NAV |
| 2545.4694 | 39273.694 | 15 | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | - | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | 0.0004 | 12SAN/NAV |
| 2545.83821 | 39268.0048 | 63 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | 0.00010 | 12SAN/NAV |
| 2545.88178 | 39267.333 | 30 | $3d^4(^5D)4p$ | z ⁶ P° a ⁴ F | 3/2 | - | $3d^4(^5D)4d$ | e ⁶ F x ⁴ G ^o | 3/2 | 0.00017 | 12SAN/NAV |
| 2546.4603 | 39258.412 | 16 | 3d ⁴ (³ F)4s 3d ⁴ (³ F)4s | a F d ⁴ F | 7/2 7/2 | _ | $3d^4(^3G)4p$ $3d^4(^5D)5p$ | х 'G" ⁶ Р° | 7/2 5/2 | 0.0003 0.005 | 12SAN/NAV |
| 2546.589 2547.04 | 39256.43 39249.5 | 2 1 w | $3d^4(^3G)4s$ | e ² G | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | r ² G° | 9/2 | 0.003 | 12SAN/NAV |
| 2547.4426 | 39249.3 39243.275 | 1 w | $3d^4(^3G)4s$ | e ² G | 9/2 | _ | $3d^3(^2G)4s4p(^3P^0)$ | u ² H° | 11/2 | 0.0009 | 51KIE 12SAN/NAV |
| 2547.4420 | 39242.6626 | 190 | $3d^4(^3H)4p$ | z ⁴ I° | 9/2 | _ | $3d^44d$ | a ⁴ K | 11/2 | 0.0009 | 12SAN/NAV |
| 2547.7674 | 39238.273 | 6 | $3d^5$ | $a^{2}I$ | 13/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | 0.0009 | 12SAN/NAV |
| 2548.04893 | 39233.9376 | 58 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | 0.00010 | 12SAN/NAV |
| 2548.2696 | 39230.54 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3G)4p$ | x ² G° | 7/2 | 0.0018 | 12SAN/NAV |
| 2548.40381 | 39228.4744 | 150 | $3d^4(^5D)4p$ | z ⁶ F ^o | 11/2 | _ | $3d^4(^5D)4d$ | e ⁶ G | 11/2 | 0.00007 | 12SAN/NAV |
| 2548.53794 | 39226.4099 | 69 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 7/2 | 0.00008 | 12SAN/NAV |
| 2548.59198 | 39225.578 | 63 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.00015 | 12SAN/NAV |
| 2549.72 | 39208.23 | 1 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 7/2 | 0.01 | 51KIE |
| 2550.2882 | 39199.491 | 11 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | 0.0004 | 12SAN/NAV |
| 2550.54 | 39195.6 | 1 w | $3d^4(^5D)4p$ | $z^{6}P^{o}$ | 3/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 1/2 | 0.02 | 51KIE |
| 2550.990 | 39188.71 | 2 | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁶ P | 3/2 | 0.004 | 12SAN/NAV |
| 2551.25 | 39184.71 | 2 | $3d^4(^3P)4s$ | b ² P | 3/2 | - | $3d^4(^3F2)4p$ | s ² D ^o | 3/2 | 0.01 | 51KIE |
| 2551.59197 | 39179.4624 | 100 | 3d ⁴ (³ F)4s 3d ⁴ (⁵ D)4p | a ⁴ F z ⁶ P ^o | 9/2 5/2 | - | 3d ⁴ (³ G)4p 3d ⁴ (⁵ D)4d | y ² H ^o e ⁶ F | 11/2 | 0.00011 | 12SAN/NAV |
| 2551.8729 | 39175.150 39174.816 | 25 | $3d^{4}(^{3}F)4s$ | a ⁴ F | 9/2 | - | $3d^4(^3G)4p$ | e r y ² H ^o | 3/2 9/2 | 0.0002 | 12SAN/NAV 12SAN/NAV |
| 2551.8946 2552.15 | 39174.810 | 8 2 | $3d^4(^3P)4s$ | аг b ⁴ P | 3/2 | _ | $3d^4(^3G)4p$ | у п ⁴ F ^o | 5/2 | 0.0013 0.01 | 51KIE |
| 2553.3195 | 39170.90 | 4 | $3d^{5}$ | d ² D | 5/2 | _ | $3d^4(^1F)4p$ | v ² D ^o | 5/2 | 0.0014 | 12SAN/NAV |
| 2553.62 | 39148.35 | 3 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | 0.01 | 51KIE |
| 2554.23 | 39139.0 | 4 wh | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | _ | $3d^4(^5D)5d$ | ⁶ G | 7/2 | 0.02 | 51KIE |
| 2555.0135 | 39126.999 | 17 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | 0.0003 | 12SAN/NAV |
| 2555.1463 | 39124.965 | 8 | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ S | 3/2 | 0.0006 | 12SAN/NAV |
| 2555.2455 | 39123.45 | 2 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | _ | $3d^45s$ | $g^{2}G$ | 9/2 | 0.0020 | 12SAN/NAV |
| 2555.44024 | 39120.4654 | 210 | $3d^4(^3H)4p$ | z ⁴ I ^o | 11/2 | _ | $3d^44d$ | a ⁴ K | 13/2 | 0.00007 | 12SAN/NAV |
| 2555.7372 | 39115.920 | 8 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | 0.0006 | 12SAN/NAV |
| 2556.98661 | 39096.8083 | 55 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | 0.00010 | 12SAN/NAV |
| 2557.4539 | 39089.665 | 9 * | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | - | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | 0.0006 | 12SAN/NAV |
| 2557.4539 | 39089.665 | 9 * | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.0006 | 12SAN/NAV |
| 2557.8555 | 39083.53 | 2 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | - | $3d^4(^5D)6s$ | ⁴ D | 5/2 | 0.0019 | 12SAN/NAV |
| 2558.1398 | 39079.185 | 12 | $3d^4(^3G)4p$ | y ⁴ H° | 7/2 | - | $3d^44d$ | h ⁴ H | 9/2 | 0.0004 | 12SAN/NAV |
| 2558.2773 | 39077.085 | 7 | $3d^4(^3P)4s$ | b ² P | 3/2 | - | $3d^4(^3F2)4p$ | s $^2D^o$ | 5/2 | 0.0006 | 12SAN/NAV |
| 2558.3336 | 39076.225 | 8 * | 3d ⁵ 3d ⁴ (³ F1)4p | a ² D z ⁴ G° | 5/2 | - | 3d ⁴ (³ G)4p 3d ⁴ 4d | x ⁴ G° a ⁴ K | 7/2 | 0.0009 | 12SAN/NAV |
| 2558.3336 2558.63193 | 39076.225 39071.6689 | 8 * 52 | $3d^{4}(^{5}F1)4p$ $3d^{4}(^{5}D)4p$ | z G° z ⁶ P° | 9/2 3/2 | _ | 3d ⁴ d ⁴ (⁵ D)4d | a K f ⁶ D | 11/2 3/2 | 0.0009 0.00011 | 12SAN/NAV 12SAN/NAV |
| 2558.63193 | 390/1.6689 | 52 19 | $3d^{4}(^{5}D)4p$ $3d^{4}(^{5}D)4p$ | z ⁴ F ^o | 3/2 7/2 | _ | 3 <i>d</i> (D)4 <i>d</i> 3 <i>d</i> ⁴ (D)4 <i>d</i> | e ⁴ F | 3/2 9/2 | 0.00011 | 12SAN/NAV 12SAN/NAV |
| 2559.5929 | 39057.001 | 8 | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | _ | $3d^4(^5D)5d$ | ⁴ S | 3/2 | 0.0003 | 12SAN/NAV |
| 2559.6307 | 39057.001 | 6 19 * | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ F | 7/2 | 0.0008 | 12SAN/NAV |
| | JJ JJ JJ J. T2-7 | ., | $\omega \in \mathcal{D}_{\mathcal{F}}$ | z ² H ^o | 312 | | ca (D) Tu | U 1 | 112 | 0.0005 | 1 7 0 1 11 11 11 1 V |

TABLE 6. Spectral lines of Cr II—Continued

| Observed | Observed | | | | | | | | | Uncertainty | |
|--------------------------|-------------------------|-----------|--|---|-------------|--------|---|--|-------------|--------------------|------------------------|
| air | Observed wave | Intensity | | | | | | | | of observed | |
| wavelength | number | and | | | Clas | ssific | ation | | | wavelength | Source |
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2559.69453 | 39055.4502 | 260 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | 3d ⁴ (⁵ D)4d | f ⁶ D | 9/2 | 0.00007 | 12SAN/NAV |
| 2559.74938 | 39054.6134 | 83 * | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 1/2 | 0.00008 | 12SAN/NAV |
| 2559.74938 | 39054.6134 | 83 * | $3d^4(^3F1)4p$ | x ⁴ D ^o | 3/2 | - | $3d^4(^5D)5d$ | ⁴ S | 3/2 | 0.00008 | 12SAN/NAV |
| 2559.842 | 39053.20 | 2 | $3d^5$ | a ² D x ⁴ D° | 3/2 | _ | $3d^4(^3G)4p$ | y ² F ^o i ² G | 5/2 | 0.002 | 12SAN/NAV |
| 2560.140 2560.9870 | 39048.65 39035.741 | 2 11 | 3d ⁴ (³ F1)4p 3d ⁵ | b ² H | 7/2 11/2 | _ | $3d^44d$ $3d^4(^1I)4p$ | ¹ G ² I ^o | 9/2 13/2 | 0.004 0.0010 | 12SAN/NAV 12SAN/NAV |
| 2561.6500 | 39033.741 | 17 | $3d^4(^3G)4p$ | у ⁴ Н° | 9/2 | _ | $3d^44d$ | h ⁴ H | 11/2 | 0.0010 | 12SAN/NAV |
| 2561.7016 | 39024.853 | 11 | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁴ F | 5/2 | 0.0005 | 12SAN/NAV |
| 2561.77450 | 39023.7421 | 110 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | 0.00007 | 12SAN/NAV |
| 2561.8506 | 39022.58 | 4 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | 0.0014 | 12SAN/NAV |
| 2562.0959 | 39018.847 | 8 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | _ | $3d^4(^5D)6s$ | ^{4}D | 3/2 | 0.0007 | 12SAN/NAV |
| 2562.33887 | 39015.1474 | 260 | $3d^4(^3H)4p$ | z ⁴ I ^o | 13/2 | - | $3d^44d$ | a ⁴ K | 15/2 | 0.00007 | 12SAN/NAV |
| 2563.32045 | 39000.208 | 29 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | - | $3d^45s$ | g ² G | 7/2 | 0.00018 | 12SAN/NAV |
| 2563.33969 | 38999.9155 | 42 | $3d^5$ | b ² H | 11/2 | - | $3d^4(^1G1)4p$ | x ² H ^o | 11/2 | 0.00013 | 12SAN/NAV |
| 2563.5765 2563.701 | 38996.313 38994.42 | 110 3 | 3d ⁴ (³ H)4s 3d ⁴ (³ G)4s | a ⁴ H e ² G | 13/2 7/2 | _ | $3d^4(^3G)4p$ $3d^3(^2G)4s4p(^3P^0)$ | y ⁴ H ^o u ² H ^o | 13/2 9/2 | 0.0002 0.002 | 12SAN/NAV |
| 2564.23904 | 38986.238 | 3 42 | $3d^4(^3G)4p$ | y ⁴ H° | 7/2 | _ | $3d^44d$ | ил h ⁴ H | 7/2 | 0.002 | 12SAN/NAV 12SAN/NAV |
| 2564.68337 | 38979.4841 | 66 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | 0.00014 | 12SAN/NAV |
| 2564.76 | 38978.32 | 7 | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 9/2 | 0.000 | 51KIE |
| 2565.59 | 38965.71 | 1 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | 0.01 | 51KIE |
| 2566.24229 | 38955.8067 | 140 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | 0.00007 | 12SAN/NAV |
| 2566.5209 | 38951.578 | 12 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | 0.0003 | 12SAN/NAV |
| 2566.8544 | 38946.518 | 24 | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^1F)4p$ | u ² F ^o | 7/2 | 0.0002 | 12SAN/NAV |
| 2567.059 | 38943.41 | 2 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | - | $3d^4(^5D)5p$ | ⁶ D ^o | 7/2 | 0.004 | 12SAN/NAV |
| 2567.31371 | 38939.5503 | 75 | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | - | $3d^4(^5D)4d$ | e ⁴ F | 5/2 | 0.00009 | 12SAN/NAV |
| 2567.3462 | 38939.058 | 10 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^3F1)4p$ | $y^{2}G^{o}$ | 9/2 | 0.0005 | 12SAN/NAV |
| 2567.48197 | 38936.9985 | 110 | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 7/2 | - | $3d^4(^5D)4d$ | e ⁴ F u ² F° | 7/2 | 0.00007 | 12SAN/NAV |
| 2567.5975 2567.7068 | 38935.247 38933.589 | 15 18 | $3d^4(^1D)4s$ $3d^4(^3G)4p$ | c ² D y ⁴ H ^o | 3/2 11/2 | _ | 3d ⁴ (¹ F)4p 3d ⁴ 4d | u -F- h ⁴ H | 5/2 13/2 | 0.0003 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2567.722 | 38933.36 | 4 | $3d^4(^3F1)4p$ | уп z ² F° | 5/2 | _ | $3d^4(^5D)5d$ | и п ⁴ F | 3/2 | 0.003 | 12SAN/NAV |
| 2567.8130 | 38931.979 | 20 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 1/2 | 0.002 | 12SAN/NAV |
| 2567.93630 | 38930.1101 | 56 | $3d^4(^3G)4p$ | y ⁴ H° | 9/2 | _ | $3d^44d$ | h ⁴ H | 9/2 | 0.00011 | 12SAN/NAV |
| 2568.04844 | 38928.4102 | 56 | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁴ F | 3/2 | 0.00011 | 12SAN/NAV |
| 2568.48070 | 38921.8592 | 320 | $3d^4(^3H)4p$ | $z^{4}I^{o}$ | 15/2 | _ | $3d^44d$ | $a^{4}K$ | 17/2 | 0.00007 | 12SAN/NAV |
| 2568.8058 | 38916.93 | 3 | $3d^4(^5D)4p$ | z ⁴ P ^o | 1/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 3/2 | 0.0015 | 12SAN/NAV |
| 2569.37587 | 38908.2997 | 190 | $3d^4(^5D)4p$ | z ⁴ F ^o | 9/2 | - | $3d^4(^5D)4d$ | e ⁴ F | 9/2 | 0.00007 | 12SAN/NAV |
| 2569.8263 | 38901.480 | 10 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | - | $3d^4(^3F2)4p$ | t ⁴ D° | 3/2 | 0.0005 | 12SAN/NAV |
| 2570.4118 | 38892.620 | 4 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | - | $3d^4(^5D)5p$ | ⁶ D° | 5/2 | 0.0010 | 12SAN/NAV |
| 2570.7079 | 38888.140 | 19 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | - | $3d^4(^5D)5p$ | ⁶ D° | 5/2 | 0.0003 | 12SAN/NAV |
| 2570.81680 | 38886.493 38882.7408 | 40 | $3d^4(^3F)4s$ $3d^4(^5D)4p$ | d ⁴ F z ⁶ P° | 5/2 7/2 | _ | 3d ⁴ (³ F2)4p 3d ⁴ (⁵ D)4d | t ⁴ D ⁶ f ⁶ D | 3/2 5/2 | 0.00014 0.00013 | 12SAN/NAV 12SAN/NAV |
| 2571.06491 2571.78303 | 38871.8843 | 39 120 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^4(^3G)4p$ | y ⁴ H° | 11/2 | 0.00013 | 12SAN/NAV |
| 2572.06890 | 38867.5642 | 140 * | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | $s^{2}F^{o}$ | 5/2 | 0.00007 | 12SAN/NAV |
| 2572.06890 | 38867.5642 | 140 * | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ D | 7/2 | 0.00008 | 12SAN/NAV |
| 2572.1127 | 38866.902 | 20 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.0005 | 12SAN/NAV |
| 2572.34000 | 38863.4682 | 120 | $3d^4(^3G)4p$ | y ⁴ H° | 7/2 | _ | $3d^44d$ | g ⁴ I | 9/2 | 0.00007 | 12SAN/NAV |
| 2572.7742 | 38856.910 | 7 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^4(^5D)5p$ | ⁴ P ^o | 3/2 | 0.0008 | 12SAN/NAV |
| 2573.0302 | 38853.044 | 15 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 3/2 | - | $3d^4(^5D)6s$ | ⁴ D | 1/2 | 0.0004 | 12SAN/NAV |
| 2573.32 | 38848.67 | 4 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^{1}G1)4p$ | x ² H ^o | 9/2 | 0.01 | 51KIE |
| 2573.38886 | 38847.6292 | 70 | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | - | $3d^44d$ | h ⁴ H | 11/2 | 0.00009 | 12SAN/NAV |
| 2573.53037 | 38845.493 | 44 | $3d^5$ | b ² H z ⁴ P ^o | 9/2 | - | $3d^4(^1G1)4p$ | x ² H ^o e ⁶ F | 9/2 | 0.00017 | 12SAN/NAV |
| 2573.5453 2573.6891 | 38845.268 38843.098 | 43 18 | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4p | z ⁴ F° | 1/2 5/2 | _ | 3d ⁴ (⁵ D)4d 3d ⁴ (⁵ D)4d | e ⁴ F | 1/2 3/2 | 0.0002 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2574.0404 | 38837.80 | 4 | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ D | 5/2 | 0.0005 | 12SAN/NAV |
| 2574.084 | 38837.14 | 2 | $3d^4(^3G)4p$ | y ⁴ H ^o | 9/2 | _ | $3d^44d$ | h ⁴ H | 7/2 | 0.0013 | 12SAN/NAV |
| 2574.1853 | 38835.611 | 7 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^3G)4p$ | y ⁴ H° | 9/2 | 0.0006 | 12SAN/NAV |
| 2574.7806 | 38826.632 | 7 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | _ | $3d^4(^5D)6s$ | ⁴ D | 7/2 | 0.0008 | 12SAN/NAV |
| 2575.1951 | 38820.38 | 10 | $3d^4(^3H)4p$ | z ⁴ I ^o | 15/2 | _ | $3d^44d$ | a ⁴ K | 15/2 | 0.0015 | 12SAN/NAV |
| 2575.2098 | 38820.162 | 27 | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 7/2 | - | $3d^4(^5D)4d$ | e ⁴ F | 5/2 | 0.0003 | 12SAN/NAV |
| 2575.3853 | 38817.516 | 13 | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | - | $3d^4(^5D)5d$ | ⁴ G | 5/2 | 0.0004 | 12SAN/NAV |
| 2575.4732 | 38816.19 | 3 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3D)4p$ | $^{4}F^{o}$ | 7/2 | 0.0015 | 12SAN/NAV |
| 2575.7897 | 38811.422 | 21 | $3d^5$ | b ² H | 9/2 | - | $3d^4(^1I)4p$ | ² I ^o | 11/2 | 0.0003 | 12SAN/NAV |
| 2576.45 | 38801.5 | 2 w | $3d^5$ | d ² G | 9/2 | - | $3d^4(^3F2)4p$ | w ⁴ G° | 7/2 | 0.02 | 51KIE |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Class | ific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|----------------|---|---|--------------|------|---|--|--------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2577.3857 | 38787.391 | 25 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 5/2 | 0.0003 | 12SAN/NAV |
| 2577.5033 | 38785.62 | 10 | $3d^5$ | a ² D | 3/2 | _ | $3d^4(^3G)4p$ | x 4G° | 5/2 | 0.0017 | 12SAN/NAV |
| 2577.67076 | 38783.102 | 56 | $3d^4(^5D)4p$ | z ⁴ F ^o | 9/2 | - | $3d^4(^5D)4d$ | e ⁴ F | 7/2 | 0.00016 | 12SAN/NAV |
| 2577.6795 | 38782.970 | 43 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 5/2 | 0.0002 | 12SAN/NAV |
| 2577.8151 | 38780.930 | 8 | $3d^5$ | d ² G | 7/2 | - | $3d^4(^3F2)4p$ | w ⁴ G ^o | 5/2 | 0.0004 | 12SAN/NAV |
| 2577.9744 | 38778.53 | 5 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | - | $3d^4(^3G)4p$ | у ⁴ Н ^о | 11/2 | 0.0016 | 12SAN/NAV |
| 2578.1324 | 38776.157 38773.5685 | 7 96 | $3d^4(^3\text{H})4p$ $3d^4(^3\text{H})4s$ | y ⁴ G ^o a ⁴ H | 11/2 9/2 | _ | $3d^44d$ $3d^4(^3G)4p$ | f ² I y ⁴ H° | 11/2 9/2 | 0.0007 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2578.30456 2578.65114 | 38768.3575 | 150 | $3d^4(^3G)4p$ | ан у ⁴ Н° | 9/2 | _ | $3d^44d$ | уп g ⁴ I | 11/2 | 0.00007 | 12SAN/NAV |
| 2579.1227 | 38761.270 | 23 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^1I)4p$ | w ² H ^o | 9/2 | 0.0004 | 12SAN/NAV |
| 2579.30 | 38758.61 | 1 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 1/2 | 0.01 | 51KIE |
| 2579.60507 | 38754.0220 | 62 | $3d^4(^3H)4p$ | z ² I ^o | 13/2 | _ | $3d^44d$ | f ² I | 13/2 | 0.00010 | 12SAN/NAV |
| 2579.6625 | 38753.159 | 11 * | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^4(^5D)5p$ | 6 D $^{\rm o}$ | 5/2 | 0.0006 | 12SAN/NAV |
| 2579.6625 | 38753.159 | 11 * | $3d^4(^5D)4p$ | z^4P^o | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | 0.0006 | 12SAN/NAV |
| 2579.732 | 38752.12 | 3 | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | _ | $3d^44d$ | h ⁴ H | 9/2 | 0.003 | 12SAN/NAV |
| 2579.8104 | 38750.938 | 6 | $3d^4(^3P1)4p$ | z ⁴ S ^o | 3/2 | _ | $3d^4(^5D)5d$ | ^{6}P | 3/2 | 0.0006 | 12SAN/NAV |
| 2579.88 | 38749.89 | 4 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^3D)4p$ | w 4F° | 5/2 | 0.01 | 51KIE |
| 2580.077 | 38746.93 | 3 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | - | $3d^4(^3F2)4p$ | t ⁴ D° | 3/2 | 0.003 | 12SAN/NAV |
| 2580.7171 | 38737.324 | 20 | $3d^4(^3F)4s$ | e ² F | 5/2 | - | $3d^4(^3F2)4p$ | s ² D° | 3/2 | 0.0003 | 12SAN/NAV |
| 2580.88 | 38734.9 | 1 w | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | 0.02 | 51KIE |
| 2581.0875 | 38731.765 | 10 | $3d^4(^3H)4p$ | z ⁴ I ^o | 9/2 | - | $3d^44d$ | f ⁴ H | 7/2 | 0.0005 | 12SAN/NAV |
| 2581.78751 | 38721.2644 | 56 | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | - | $3d^4(^5D)4d$ | f ⁶ D ⁴ P ^o | 3/2 | 0.00011 | 12SAN/NAV |
| 2582.0574 | 38717.217 | 21 | 3d ⁴ (³ P)4s 3d ⁵ | c ⁴ P b ² H | 5/2 | - | $3d^4(^5D)5p$ | ² K° | 3/2 | 0.0003 | 12SAN/NAV |
| 2582.0931 | 38716.682 | 18 | $3d^{4}$ $3d^{4}(^{3}G)4p$ | 4 - | 11/2 | _ | $3d^4(^1I)4p$ $3d^44d$ | h ⁴ H | 13/2 | 0.0003 | 12SAN/NAV |
| 2582.15181 2582.2547 | 38715.8018 38714.259 | 83 14 | $3d^{5}$ | y ⁴ H ⁶ b ² H | 13/2 11/2 | _ | $3d^{4}(^{1}I)4p$ | п н ² I ⁰ | 13/2 11/2 | 0.00008 0.0010 | 12SAN/NAV 12SAN/NAV |
| 2582.76 | 38706.7 | 7 wl | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^{4}(^{1}I)4p$ | w ² H ^o | 9/2 | 0.0010 | 51KIE |
| 2582.9252 | 38704.210 | 26 | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 1/2 | 0.0002 | 12SAN/NAV |
| 2583.0617 | 38702.165 | 17 | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | _ | $3d^4(^5D)6s$ | ^{4}D | 5/2 | 0.0003 | 12SAN/NAV |
| 2583.4254 | 38696.717 | 6 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | _ | $3d^44d$ | $f^{2}I$ | 11/2 | 0.0011 | 12SAN/NAV |
| 2583.6151 | 38693.876 | 11 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 9/2 | 0.0004 | 12SAN/NAV |
| 2583.810 | 38690.96 | 2 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^4(^5D)5p$ | 6 D $^{\rm o}$ | 3/2 | 0.005 | 12SAN/NAV |
| 2584.0800 | 38686.915 | 11 * | $3d^4(^3H)4p$ | z ⁴ I ^o | 11/2 | _ | $3d^44d$ | f ⁴ H | 11/2 | 0.0006 | 12SAN/NAV |
| 2584.0800 | 38686.915 | 11 * | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | _ | $3d^4(^5D)6s$ | ⁴ D | 3/2 | 0.0006 | 12SAN/NAV |
| 2584.10504 | 38686.5398 | 88 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | - | $3d^4(^3G)4p$ | y ⁴ H ^o | 7/2 | 0.00008 | 12SAN/NAV |
| 2584.78848 | 38676.3114 | 180 | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | - | $3d^44d$ | g ⁴ I | 13/2 | 0.00007 | 12SAN/NAV |
| 2585.59937 | 38664.1826 | 68 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | - | $3d^4(^3F2)4p$ | t ⁴ D° | 7/2 | 0.00009 | 12SAN/NAV |
| 2585.85507 | 38660.3595 | 42 | $3d^4(^5D)4p$ | z ⁴ P° c ⁴ P | 3/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 3/2 | 0.00013 | 12SAN/NAV |
| 2586.6847 | 38647.961 | 21 | 3d ⁴ (³ P)4s 3d ⁴ (³ F1)4p | z ² D ^o | 5/2 5/2 | - | 3d ⁴ (³ F2)4p 3d ⁴ (⁵ D)6s | t ⁴ D° ⁴ D | 5/2 | 0.0003 | 12SAN/NAV |
| 2586.96283 2587.2237 | 38643.8059 38639.910 | 56 5 | $3d^4(^3G)4p$ | y ⁴ H° | 9/2 | _ | $3d^4(^5D)5d$ | ⁴ G | 3/2 9/2 | 0.00011 0.0013 | 12SAN/NAV 12SAN/NAV |
| 2587.27515 | 38639.1413 | 63 | $3d^4(^3H)4p$ | z ² I ^o | 11/2 | _ | $3d^{4}4d$ | f ² I | 11/2 | 0.00009 | 12SAN/NAV |
| 2587.40159 | 38637.253 | 29 | $3d^4(^3F)4s$ | e ² F | 7/2 | _ | $3d^4(^3F2)4p$ | s ² D ^o | 5/2 | 0.00009 | 12SAN/NAV |
| 2587.90042 | 38629.8062 | 240 * | $3d^4(^3F)4s$ | e ² F | 5/2 | _ | $3d^4(^3F2)4p$ | s ² D ^o | 5/2 | 0.00007 | 12SAN/NAV |
| 2587.90042 | 38629.8062 | 240 * | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | _ | $3d^44d$ | h ⁴ H | 11/2 | 0.00007 | 12SAN/NAV |
| 2588.20295 | 38625.2911 | 390 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^4(^3D)4p$ | w^2F^o | 5/2 | 0.00007 | 12SAN/NAV |
| 2588.259 | 38624.45 | 13 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 7/2 | 0.002 | 12SAN/NAV |
| 2588.6084 | 38619.242 | 4 | $3d^4(^3P1)4p$ | z^4S^o | 3/2 | _ | $3d^4(^5D)5d$ | ⁴ S | 3/2 | 0.0009 | 12SAN/NAV |
| 2589.03795 | 38612.835 | 26 | $3d^5$ | b ² S | 1/2 | _ | $3d^4(^1D1)4p$ | $w^2 P^o$ | 3/2 | 0.00019 | 12SAN/NAV |
| 2589.2666 | 38609.43 | 2 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^3D)4p$ | $\mathrm{w}^{2}\mathrm{F}^{\mathrm{o}}$ | 7/2 | 0.0014 | 12SAN/NAV |
| 2589.6010 | 38604.440 | 13 | $3d^4(^3H)4p$ | z ⁴ I ^o | 11/2 | - | $3d^44d$ | f ⁴ H | 9/2 | 0.0004 | 12SAN/NAV |
| 2589.68546 | 38603.181 | 35 | $3d^{5}$ | a ² D | 5/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.00016 | 12SAN/NAV |
| 2590.33085 | 38593.5633 | 220 | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | - | $3d^44d$ | g ⁴ I | 15/2 | 0.00007 | 12SAN/NAV |
| 2590.65626 | 38588.716 | 27 | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 1/2 | 0.00019 | 12SAN/NAV |
| 2590.71119 | 38587.8977 | 120 | $3d^5$ | a ² I | 13/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 11/2 | 0.00007 | 12SAN/NAV |
| 2592.32 | 38563.95 | 2 | $3d^4(^3D)4s$ | c ⁴ D y ⁴ H ^o | 5/2 | - | $3d^4(^3D)4p$ | $^{\mathrm{w}}$ $^{2}\mathrm{F}^{\mathrm{o}}$ $^{4}\mathrm{G}$ | 7/2 | 0.01 | 51KIE |
| 2592.7527 2592.8326 | 38557.516 | 9 4 | $3d^4(^3G)4p$ $3d^4(^3H)4p$ | $\frac{y}{z} \frac{H^{o}}{I^{o}}$ | 7/2 13/2 | _ | 3d ⁴ (⁵ D)5d 3d ⁴ 4d | f ² I | 5/2 | 0.0004 0.0008 | 12SAN/NAV |
| 2592.8326 | 38556.328 38555.73 | 4 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | _ | $3d^4(^3G)4p$ | 1 1 ⁴ F ^o | 11/2 3/2 | 0.0008 | 12SAN/NAV 12SAN/NAV |
| 2593.0736 | 38552.745 | 6 | $3d^5$ | a r a ² D | 5/2 | _ | $3d^4(^3F1)4p$ | y ² G° | 312 7/2 | 0.0013 | 12SAN/NAV |
| 2593.4713 | 38546.833 | 12 | $3d^5$ | b ² S | 1/2 | _ | $3d^4(^1D1)4p$ | w ² P° | 1/2 | 0.0008 | 12SAN/NAV |
| 2593.579 | 38545.23 | 5 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{0}$ | 7/2 | 0.003 | 12SAN/NAV |
| 2593.65219 | 38544.1448 | 43 | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | _ | $3d^4(^5D)6s$ | ^{4}D | 1/2 | 0.00013 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | CI. | :c | | | | Uncertainty of observed | |
|-------------------------|----------------------------|--------------|--|---|-------------|--------|---|------------------------------------|--------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | Cla J | ssific | cation Configuration | Term | | wavelength (Å) | Source of line |
| 2593.92 | 38540.17 | 3 | $3d^4(^1S1)4p$ | x ² P ^o | 3/2 | _ | 3 <i>d</i> ⁴ (⁵ D)6 <i>d</i> | ⁶ P | 3/2 | 0.01 | 51KIE |
| 2594.07261 | 38537.8983 | 60 | $3d^4(^3H)4p$ | z ⁴ I ^o | 9/2 | _ | $3d^44d$ | f ⁴ I | 9/2 | 0.00013 | 12SAN/NAV |
| 2594.1769 | 38536.349 | 6 | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | _ | $3d^44d$ | g ⁴ I | 9/2 | 0.0009 | 12SAN/NAV |
| 2594.3170 | 38534.268 | 7 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^1D1)4p$ | v ² F° | 7/2 | 0.0006 | 12SAN/NAV |
| 2594.6900 | 38528.729 | 7 | $3d^4(^3H)4p$ | z ⁴ I ^o | 11/2 | _ | $3d^44d$ | f ⁴ I | 13/2 | 0.0008 | 12SAN/NAV |
| 2595.293 | 38519.78 | 2 | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 9/2 | _ | $3d^44d$ | h ⁴ H | 11/2 | 0.006 | 12SAN/NAV |
| 2595.346 | 38518.99 | 2 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3H)4p$ | z ² H ^o | 11/2 | 0.006 | 12SAN/NAV |
| 2595.5574 | 38515.854 | 19 | $3d^{4}(^{3}G)4s$ | b ² G | 9/2 | - | $3d^4(^1I)4p$ | w ² H ^o | 11/2 | 0.0003 | 12SAN/NAV |
| 2595.9645 | 38509.814 | 16 | $3d^5$ | d ² G | 9/2 | - | $3d^4(^3F2)4p$ | t ² F° | 7/2 | 0.0003 | 12SAN/NAV |
| 2596.02272 | 38508.9508 | 150 | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | 0.00007 | 12SAN/NAV |
| 2596.04210 | 38508.6633 | 110 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | - | $3d^4(^3F2)4p$ | t ⁴ D° | 7/2 | 0.00007 | 12SAN/NAV |
| 2596.0867 | 38508.002 | 12 | 3d ⁴ (³ G)4p 3d ⁴ (³ F)4s | y ⁴ H ^o b ² F | 9/2 | - | $3d^4(^5D)5d$ | ^{4}G x $^{2}F^{o}$ | 7/2 | 0.0004 | 12SAN/NAV |
| 2596.16843 | 38506.790 38506.790 | 52 * 52 * | $3d^{4}(^{5}D)4p$ | в F z ⁶ D° | 7/2 5/2 | - | 3d ⁴ (¹ G1)4p 3d ⁴ (⁵ D)4d | e ⁶ F | 7/2 7/2 | 0.00015 0.00015 | 12SAN/NAV |
| 2596.16843 2596.7237 | 38498.556 | 9 | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | _ | $3a^{4}4d$ | f ⁴ I | 9/2 | 0.00013 | 12SAN/NAV 12SAN/NAV |
| 2596.7237 | 38496.507 | 6 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^3G)4p$ | y^2F^0 | 7/2 | 0.0009 | 12SAN/NAV |
| 2597.4000 | 38488.533 | 15 | $3d^4(^3H)4p$ | z ⁴ I ^o | 13/2 | _ | $3d^44d$ | f ⁴ H | 11/2 | 0.0004 | 12SAN/NAV |
| 2597.9050 | 38481.051 | 5 * | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | _ | $3d^44d$ | f ⁴ H | 9/2 | 0.0008 | 12SAN/NAV |
| 2597.9050 | 38481.051 | 5 * | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | _ | $3d^44d$ | f ⁴ H | 13/2 | 0.0008 | 12SAN/NAV |
| 2598.06 | 38478.76 | 3 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3D)4p$ | w^2F^o | 5/2 | 0.01 | 51KIE |
| 2598.48 | 38472.5 | 3 w | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | x ⁶ D ^o | 3/2 | 0.02 | 51KIE |
| 2598.73 | 38468.8 | 2 w | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^3(^2H)4s4p(^3P^0)$ | w ⁴ H ^o | 7/2 | 0.02 | 51KIE |
| 2599.0099 | 38464.693 | 22 | $3d^4(^5D)4p$ | z^4P^o | 3/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | 0.0003 | 12SAN/NAV |
| 2599.2008 | 38461.868 | 14 | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 9/2 | 0.0004 | 12SAN/NAV |
| 2599.494 | 38457.53 | 3 | $3d^34s^2$ | d ⁴ P | 3/2 | _ | $3d^3(^2D)4s4p(^3P^0)$ | o ⁴ D ^o | 5/2 | 0.003 | 12SAN/NAV |
| 2599.869 | 38451.98 | 4 | $3d^4(^3H)4p$ | z ⁴ I ^o | 13/2 | - | $3d^44d$ | f ⁴ I | 15/2 | 0.003 | 12SAN/NAV |
| 2600.01783 | 38449.7827 | 82 | $3d^4(^3G)4p$ | ⁴ F ^o | 9/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 9/2 | 0.00008 | 12SAN/NAV |
| 2600.1623 | 38447.647 | 13 | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 1/2 | 0.0004 | 12SAN/NAV |
| 2600.547 | 38441.96 | 2 * | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | - | $3d^4(^5D)6s$ | ⁶ D ⁴F | 3/2 | 0.002 | 12SAN/NAV |
| 2600.547 | 38441.96 | 2 * | $3d^4(^3G)4p$ | ⁴ F ^o a ⁴ H | 7/2 | - | $3d^4(^5D)5d$ | z ² H° | 9/2 | 0.002 | 12SAN/NAV |
| 2600.73 | 38439.3 | 5 wl 8 | 3d ⁴ (³ H)4s 3d ⁵ | а Н a ² G | 11/2 9/2 | - | $3d^4(^3\text{H})4p$ $3d^4(^1\text{G1})4p$ | z ² H° | 11/2 11/2 | 0.02 0.01 | 51KIE |
| 2601.04 2601.30 | 38434.67 38430.8 | o 3 w | $3d^4(^3D)4p$ | w ² F° | 5/2 | _ | $3d^4(^5D)7s$ | х п ⁶ D | 5/2 | 0.01 | 51KIE 51KIE |
| 2601.5885 | 38426.571 | 7 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.0008 | 12SAN/NAV |
| 2601.77638 | 38423.7960 | 58 | $3d^4(^3H)4p$ | z ⁴ I ^o | 11/2 | _ | $3d^44d$ | f ⁴ I | 11/2 | 0.00010 | 12SAN/NAV |
| 2601.8386 | 38422.877 | 8 | $3d^5$ | a ² D | 3/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.0007 | 12SAN/NAV |
| 2602.04 | 38419.9 | 3 w | $3d^4(^3D)4p$ | x^2D^o | 5/2 | _ | $3d^4(^5D)6d$ | ⁴ S | 3/2 | 0.02 | 51KIE |
| 2602.2788 | 38416.378 | 4 | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 7/2 | _ | $3d^44d$ | ${ m h}^4{ m H}$ | 9/2 | 0.0012 | 12SAN/NAV |
| 2602.7755 | 38409.047 | 11 | $3d^5$ | $d^{2}G$ | 7/2 | _ | $3d^4(^3F2)4p$ | t ² F ^o | 5/2 | 0.0005 | 12SAN/NAV |
| 2602.89192 | 38407.3294 | 130 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | 0.00007 | 12SAN/NAV |
| 2602.9858 | 38405.944 | 19 | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 11/2 | 0.0003 | 12SAN/NAV |
| 2603.2662 | 38401.808 | 4 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | - | $3d^4(^3F2)4p$ | t ⁴ D° | 1/2 | 0.0009 | 12SAN/NAV |
| 2603.40188 | 38399.807 | 27 | $3d^4(^3F1)4p$ | $x {}^{4}D^{o}$ | 7/2 | - | $3d^4(^5D)6s$ | ⁴ D | 7/2 | 0.00018 | 12SAN/NAV |
| 2603.7264 | 38395.021 | 15 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2604.1526 | 38388.737 | 22 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 2604.8401 | 38378.61 | 3 | $3d^4(^3P1)4p$ | $^{2}D^{o}$ z $^{4}I^{o}$ | 3/2 | - | 3d ⁴ (⁵ D)5d 3d ⁴ 4d | ⁴ F f ⁴ H | 5/2 | 0.0017 | 12SAN/NAV |
| 2604.8905 2604.9186 | 38377.864 38377.450 | 23 21 | $3d^4(^3\text{H})4p$ $3d^4(^3\text{P})4s$ | c ⁴ P | 15/2 3/2 | _ | 3d ⁴ (⁵ D)5p | 1 н ⁶ D ^o | 13/2 5/2 | 0.0002 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2605.2394 | 38372.724 | 7 * | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^3(^2P)4s4p(^3P^0)$ | r ⁴ D° | 5/2 | 0.0003 | 12SAN/NAV |
| 2605.2394 | 38372.724 | 7 * | $3d^4(^3G)4p$ | ⁴ F° | 5/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 7/2 | 0.0013 | 12SAN/NAV |
| 2605.3207 | 38371.527 | 9 | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | _ | $3d^44d$ | f ⁴ I | 9/2 | 0.0008 | 12SAN/NAV |
| 2605.3347 | 38371.321 | 30 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 3/2 | 0.0002 | 12SAN/NAV |
| 2605.59918 | 38367.426 | 31 | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 3/2 | 0.00018 | 12SAN/NAV |
| 2606.0649 | 38360.570 | 20 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 5/2 | 0.0003 | 12SAN/NAV |
| 2606.4924 | 38354.28 | 3 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 9/2 | 0.0017 | 12SAN/NAV |
| 2606.5293 | 38353.736 | 29 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | - | $3d^4(^3P1)4p$ | z $^4S^o$ | 3/2 | 0.0002 | 12SAN/NAV |
| 2606.65 | 38352.0 | 4 wl | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ^{6}G | 9/2 | 0.02 | 51KIE |
| 2607.0593 | 38345.939 | 16 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 11/2 | 0.0003 | 12SAN/NAV |
| 2607.15783 | 38344.4901 | 66 | $3d^4(^3G)4p$ | ⁴ F ^o | 7/2 | - | $3d^4(^5D)5d$ | ⁴ F | 7/2 | 0.00012 | 12SAN/NAV |
| 2607.6333 | 38337.499 | 24 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 7/2 | 0.0003 | 12SAN/NAV |
| 2607.7470 | 38335.827 | 9 | $3d^4(^3H)4p$ | z ⁴ I ^o | 11/2 | - | $3d^44d$ | f ⁴ I | 9/2 | 0.0006 | 12SAN/NAV |
| 2607.8313 | 38334.588 | 19 | $3d^5$ | a ² G | 7/2 | - | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.0003 | 12SAN/NAV |
| 2607.89648 | 38333.6302 | 120 | $3d^5$ | a ² I | 11/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | 0.00007 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | |
|------------------------|----------------------------|----------------|--|---------------------------------------|------------|-------|--|---|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | SITTE | Configuration | Term | | wavelength (Å) | Source of line |
| 2608.12299 | 38330.3012 | 73 | $3d^4(^3H)4p$ | z ⁴ I ^o | 13/2 | _ | $3d^44d$ | f ⁴ I | 13/2 | 0.00010 | 12SAN/NAV |
| 2608.1679 | 38329.641 | 20 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 9/2 | 0.0003 | 12SAN/NAV |
| 2608.60 | 38323.29 | 1 | $3d^5$ | a ² F | 7/2 | - | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | 0.01 | 51KIE |
| 2608.8142 | 38320.146 | 7 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | 0.0007 | 12SAN/NAV |
| 2609.11 | 38315.80 | 1 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3D)4p$ | $w_e^2 F^o$ | 7/2 | 0.01 | 51KIE |
| 2609.20051 | 38314.4729 | 74 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 3/2 | 0.00009 | 12SAN/NAV |
| 2609.2899 | 38313.16 | 3 | $3d^4(^3G)4p$ | y ⁴ H° | 13/2 | - | $3d^4(^5D)5d$ | ⁶ F ⁴ F ^o | 11/2 | 0.0014 | 12SAN/NAV |
| 2609.5505 | 38309.33 | 3 | 3d ⁴ (³ F)4s 3d ⁴ (⁵ D)4p | a ⁴ F z ⁶ D° | 7/2 7/2 | _ | 3d ⁴ (³ G)4p 3d ⁴ (⁵ D)4d | e ⁶ F | 5/2 9/2 | 0.0015 0.02 | 12SAN/NAV |
| 2610.04 2610.46706 | 38302.2 38295.8846 | 20 wl 42 | $3a^{(1)4p}$ $3d^4(^3G)4p$ | ⁴ F° | 9/2 | _ | $3d^{4}(^{5}D)5d$ | e F | 11/2 | 0.02 | 51KIE 12SAN/NAV |
| 2610.46700 | 38292.6455 | 290 | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | 0.00013 | 12SAN/NAV |
| 2610.80070 | 38292.0433 | 320 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | 0.00008 | 12SAN/NAV |
| 2611.0238 | 38287.719 | 20 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2611.6264 | 38278.886 | 25 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2612.07475 | 38272.3155 | 61 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 5/2 | 0.00010 | 12SAN/NAV |
| 2612.31155 | 38268.8465 | 140 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | 0.00008 | 12SAN/NAV |
| 2612.5567 | 38265.256 | 18 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | _ | $3d^4(^3P1)4p$ | $^{2}\mathrm{D^{o}}$ | 3/2 | 0.0003 | 12SAN/NAV |
| 2612.738 | 38262.60 | 3 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 9/2 | _ | $3d^44d$ | g ⁴ I | 11/2 | 0.003 | 12SAN/NAV |
| 2613.10301 | 38257.2562 | 97 | $3d^4(^3H)4p$ | $z^4 I^o$ | 15/2 | _ | $3d^44d$ | f ⁴ I | 15/2 | 0.00008 | 12SAN/NAV |
| 2613.4977 | 38251.479 | 13 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3D)4p$ | x^2D^o | 5/2 | 0.0004 | 12SAN/NAV |
| 2613.67595 | 38248.8704 | 51 | $3d^4(^3G)4p$ | ⁴ F ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁴ F | 5/2 | 0.00012 | 12SAN/NAV |
| 2613.8394 | 38246.479 | 12 | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | - | $3d^4(^5D)5d$ | ⁶ G | 7/2 | 0.0006 | 12SAN/NAV |
| 2614.0675 | 38243.142 | 7 | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | - | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | 0.0007 | 12SAN/NAV |
| 2614.54675 | 38236.1321 | 340 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | 0.00007 | 12SAN/NAV |
| 2614.9093 | 38230.831 | 6 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.0010 | 12SAN/NAV |
| 2615.1152 | 38227.821 | 26 | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | - | $3d^4(^5D)6s$ | ⁴ D | 5/2 | 0.0002 | 12SAN/NAV |
| 2615.2822 | 38225.380 | 7 * | $3d^4(^3H)4p$ | z ⁴ I ^o | 13/2 | - | $3d^44d$ | f ⁴ I | 11/2 | 0.0008 | 12SAN/NAV |
| 2615.2822 | 38225.380 | 7 * | $3d^4(^3F1)4p$ $3d^4(^3G)4p$ | ${}^4P^o$ | 3/2 | - | 3d ⁴ (⁵ D)6s 3d ⁴ (⁵ D)5d | ⁴ D ⁴ F | 5/2 | 0.0008 | 12SAN/NAV |
| 2615.6010 2615.6344 | 38220.721 38220.233 | 5 7 | $3d^{4}(^{3}F1)4p$ | x ⁴ D° | 7/2 7/2 | _ | $3d^{4}(^{5}D)6s$ | F ⁴ D | 5/2 5/2 | 0.0008 0.0007 | 12SAN/NAV |
| 2615.78386 | 38218.0497 | 62 | $3a^{4}(^{3}G)4p$ | ⁴ F ^o | 9/2 | _ | $3d^4(^5D)5d$ | ⁴ D | 7/2 | 0.0007 | 12SAN/NAV 12SAN/NAV |
| 2615.85 | 38217.08 | 1 | $3d^{5}$ | a ² G | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 5/2 | 0.0010 | 51KIE |
| 2616.15270 | 38212.6619 | 360 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 7/2 | 0.00007 | 12SAN/NAV |
| 2616.8104 | 38203.058 | 4 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 9/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 11/2 | 0.0011 | 12SAN/NAV |
| 2616.9881 | 38200.464 | 13 | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | 0.0004 | 12SAN/NAV |
| 2617.3926 | 38194.561 | 19 | $3d^4(^5D)4p$ | z ⁶ D ^o | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | 0.0003 | 12SAN/NAV |
| 2617.50 | 38193.0 | 3 w | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^3D)4p$ | x^2D^o | 5/2 | 0.02 | 51KIE |
| 2617.9633 | 38186.235 | 7 | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 11/2 | _ | $3d^44d$ | i ² G | 9/2 | 0.0006 | 12SAN/NAV |
| 2618.5017 | 38178.384 | 6 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | 0.0010 | 12SAN/NAV |
| 2618.61982 | 38176.6622 | 220 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | 0.00008 | 12SAN/NAV |
| 2618.7760 | 38174.386 | 21 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | - | $3d^4(^3F2)4p$ | t ⁴ D° | 1/2 | 0.0003 | 12SAN/NAV |
| 2618.8375 | 38173.489 | 9 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 3/2 | 0.0006 | 12SAN/NAV |
| 2619.156 | 38168.85 | 3 | $3d^5$ | $d^{2}G$ | 9/2 | - | $3d^4(^3F2)4p$ | v ⁴ F ^o | 7/2 | 0.003 | 12SAN/NAV |
| 2619.1804 | 38168.492 | 17 | $3d^4(^3P1)4p$ | ² D ^o | 3/2 | - | $3d^4(^5D)5d$ | ⁴ F | 3/2 | 0.0004 | 12SAN/NAV |
| 2619.47441 | 38164.2080 | 36 | $3d^4(^3F1)4p$ | z ² F° | 7/2 | - | $3d^44d$ | i ² G | 9/2 | 0.00012 | 12SAN/NAV |
| 2619.56017 | 38162.9586 | 870 | 3d ⁴ (⁵ D)4p 3d ⁵ | z ⁶ D° a ² D | 9/2 | - | $3d^4(^5D)4d$ | e ⁶ F ⁴ F° | 11/2 | 0.00006 | 12SAN/NAV |
| 2620.10 | 38155.1 | 1 w | $3d^34s^2$ | a ⁻ D c ⁴ F | 5/2 | - | $3d^4(^3G)4p$ | t ² D° | 7/2 | 0.02 | 51KIE |
| 2620.10 2620.2982 | 38155.1 38152.210 | 1 w 31 | $3d^{4}(^{5}D)4p$ | c F z ⁴ P° | 5/2 5/2 | _ | $3d^4(^3P2)4p$ $3d^4(^5D)4d$ | e ⁶ F | 5/2 7/2 | 0.02 0.0003 | 51KIE 12SAN/NAV |
| 2620.45073 | 38132.210 | 370 | $3d^{4}(^{5}D)4p$ | z ⁶ P ^o | 7/2 | _ | $3d^4(^5D)4d$ | ег е ⁶ Р | 7/2 | 0.0003 | 12SAN/NAV |
| 2620.43073 | 38143.887 | 26 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | _ | $3d^4(^3F2)4p$ | t ⁴ D° | 3/2 | 0.00010 | 12SAN/NAV |
| 2620.9316 | 38142.991 | 20 14 | $3d^{4}(^{5}D)4p$ | z ⁴ F° | 5/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 5/2 | 0.0002 | 12SAN/NAV |
| 2621.1237 | 38140.195 | 15 | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 3/2 | 0.0006 | 12SAN/NAV |
| 2621.5449 | 38134.068 | 11 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 9/2 | _ | $3d^4(^5D)5d$ | ⁴ G | 9/2 | 0.0007 | 12SAN/NAV |
| 2622.03 | 38127.01 | 3 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 5/2 | 0.01 | 51KIE |
| 2622.08896 | 38126.156 | 39 | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ G | 9/2 | 0.00014 | 12SAN/NAV |
| 2622.5333 | 38119.696 | 8 | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 5/2 | _ | $3d^4(^5D)5d$ | ^{4}D | 5/2 | 0.0007 | 12SAN/NAV |
| 2622.59432 | 38118.810 | 34 | $3d^4(^5D)4p$ | z $^6D^o$ | 5/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | 0.00017 | 12SAN/NAV |
| 2622.9771 | 38113.247 | 120 | $3d^4(^5D)4p$ | z ⁶ D ^o | 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | 0.0002 | 12SAN/NAV |
| 2623.18994 | 38110.1548 | 470 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 9/2 | 0.00007 | 12SAN/NAV |
| 2623.3803 | 38107.390 | 35 | $3d^5$ | a ² D | 3/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 3/2 | 0.0002 | 12SAN/NAV |
| 2623.7706 | 38101.721 | 71 * | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 1/2 | 0.0004 | 12SAN/NAV |
| 2623.7706 | 38101.721 | 71 * | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 3/2 | 0.0004 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Class | cific | ation | | | Uncertainty of observed | |
|-------------------------|----------------------------|-------------|--------------------------------|---------------------------------------|------------|-------|--------------------------------|---------------------------------------|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | SIIIC | Configuration | Term | | wavelength (Å) | Source of line |
| 2624.1514 | 38096.193 | 16 | $3d^4(^5D)4p$ | z ⁴ F ^o | 7/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 7/2 | 0.0003 | 12SAN/NAV |
| 2624.47174 | 38091.5428 | 78 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ D | 5/2 | 0.00008 | 12SAN/NAV |
| 2624.7017 | 38088.206 | 4 | $3d^4(^3G)4p$ | 4 F $^{\rm o}$ | 3/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 5/2 | 0.0013 | 12SAN/NAV |
| 2625.00 | 38083.9 | 2 wl | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | 0.02 | 51KIE |
| 2625.87 | 38071.26 | 2 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^3G)4p$ | x 4G° | 7/2 | 0.01 | 51KIE |
| 2625.9520 | 38070.072 | 12 | $3d^4(^3H)4p$ | y ⁴ G ^o | 9/2 | _ | $3d^44d$ | g ⁴ G | 11/2 | 0.0005 | 12SAN/NAV |
| 2626.1273 | 38067.531 | 8 | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 1/2 | 0.0005 | 12SAN/NAV |
| 2626.28225 | 38065.2848 | 44 | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | _ | $3d^44d$ | g ⁴ H | 13/2 | 0.00013 | 12SAN/NAV |
| 2626.68432 | 38059.4585 | 230 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | - | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | 0.00008 | 12SAN/NAV |
| 2626.7732 | 38058.171 | 23 | $3d^5$ | c ² F | 7/2 | - | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 5/2 | 0.0002 | 12SAN/NAV |
| 2627.0080 | 38054.769 | 7 | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | - | $3d^4(^5D)4d$ | f ⁴ D | 3/2 | 0.0008 | 12SAN/NAV |
| 2627.0425 | 38054.270 | 12 | $3d^4(^3H)4p$ | y ⁴ G ^o | 11/2 | - | $3d^44d$ | g ⁴ G | 11/2 | 0.0004 | 12SAN/NAV |
| 2627.1138 | 38053.237 | 15 | $3d^4(^3F1)4p$ | x ⁴ D° | 3/2 | - | $3d^4(^5D)6s$ | ⁴ D | 1/2 | 0.0003 | 12SAN/NAV |
| 2627.14450 | 38052.7922 | 89 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | 0.00008 | 12SAN/NAV |
| 2627.1582 | 38052.594 | 12 | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | - | $3d^4(^5D)5d$ | ⁴ G | 5/2 | 0.0006 | 12SAN/NAV |
| 2627.91030 | 38041.7039 | 530 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 9/2 | 0.00007 | 12SAN/NAV |
| 2628.11038 | 38038.8079 | 48 | $3d^4(^3G)4p$ | ⁴ F ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁴ F | 3/2 | 0.00012 | 12SAN/NAV |
| 2628.1291 | 38038.537 | 10 | $3d^{5}$ | a ² F | 7/2 | - | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0009 | 12SAN/NAV |
| 2628.6000 | 38031.723 | 14 | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | - | $3d^44d$ | g ⁴ G | 9/2 | 0.0004 | 12SAN/NAV |
| 2628.71480 | 38030.0622 | 47 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 1/2 | 0.00012 | 12SAN/NAV |
| 2628.8885 | 38027.550 | 14 | $3d^4(^3F1)4p$ | z ⁴ G ^o | 11/2 | - | $3d^4(^3G)5s$ | f ⁴ G | 11/2 | 0.0005 | 12SAN/NAV |
| 2629.0318 | 38025.477 | 6 | 3d ⁵ | b ⁴ F | 9/2 | - | $3d^4(^3G)4p$ | x^4G^o | 11/2 | 0.0007 | 12SAN/NAV |
| 2629.1624 | 38023.588 | 7 | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | - | $3d^4(^5D)4d$ | f ⁴ D | 5/2 | 0.0008 | 12SAN/NAV |
| 2629.24154 | 38022.444 | 29 | $3d^4(^3G)4p$ | ⁴ F° | 5/2 | - | $3d^4(^5D)5d$ | ⁴ G | 7/2 | 0.00019 | 12SAN/NAV |
| 2629.40454 | 38020.0868 | 90 | $3d^4(^5D)4p$ | $z^{6}D^{o}$ | 9/2 | - | $3d^4(^5D)4d$ | e ⁶ F | 7/2 | 0.00008 | 12SAN/NAV |
| 2629.4816 | 38018.973 | 5 | $3d^4(^3F1)4p$ | y ² G° a ² H | 7/2 | - | $3d^44d$ | h ⁴ H x ² G° | 9/2 | 0.0012 | 12SAN/NAV |
| 2629.57601 | 38017.608 | 37 | $3d^4(^3H)4s$ | a ⁻H ⁴F° | 9/2 | - | $3d^4(^3G)4p$ $3d^4(^5D)5d$ | x -G" ⁶ D | 7/2 | 0.00014 | 12SAN/NAV |
| 2629.8700 | 38013.358 | 21 | $3d^4(^3G)4p$ $3d^4(^3H)4p$ | y ⁴ G° | 7/2 9/2 | _ | $3d^44d$ | g ⁴ G | 5/2 | 0.0003 0.0006 | 12SAN/NAV |
| 2629.9480 2630.92027 | 38012.231 37998.1840 | 9 78 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^4(^3P1)4p$ | z ⁴ S° | 9/2 3/2 | 0.0008 | 12SAN/NAV 12SAN/NAV |
| 2630.92027 | 37998.1840 | 16 | $3d^{5}$ | a ² D | 5/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.0003 | 12SAN/NAV |
| 2631.0423 | 37997.273 | 9 | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | _ | $3d^44d$ | g ⁴ G | 9/2 | 0.0003 | 12SAN/NAV |
| 2631.1907 | 37994.279 | 7 | $3d^4(^3G)4p$ | у С ⁴ F° | 7/2 | _ | $3d^4(^5D)5d$ | g G ⁴G | 7/2 | 0.0007 | 12SAN/NAV |
| 2631.8582 | 37984.643 | 19 | $3d^4(^3H)4p$ | y ⁴ G ^o | 9/2 | _ | $3d^44d$ | g ⁴ H | 11/2 | 0.0003 | 12SAN/NAV |
| 2632.109 | 37984.043 | 3 | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^3G)4p$ | y ² F ^o | 5/2 | 0.005 | 12SAN/NAV |
| 2632.33030 | 37977.8311 | 110 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | 0.0008 | 12SAN/NAV |
| 2632.54044 | 37974.7998 | 59 | $3d^4(^3F1)4p$ | y ⁴ F° | 9/2 | _ | $3d^{4}4d$ | g ⁴ G | 11/2 | 0.00010 | 12SAN/NAV |
| 2632.73076 | 37972.055 | 37 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | _ | $3d^44d$ | g ⁴ G | 9/2 | 0.00015 | 12SAN/NAV |
| 2633.51346 | 37960.7698 | 50 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 1/2 | 0.00013 | 12SAN/NAV |
| 2633.57066 | 37959.9454 | 48 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 3/2 | 0.00012 | 12SAN/NAV |
| 2634.24043 | 37950.2944 | 190 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | 0.00008 | 12SAN/NAV |
| 2634.4658 | 37947.048 | 4 * | $3d^4(^3H)4p$ | z ² G° | 9/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | 0.0012 | 12SAN/NAV |
| 2634.4658 | 37947.048 | 4 * | $3d^4(^3F1)4p$ | y ² G° | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 7/2 | 0.0012 | 12SAN/NAV |
| 2634.7928 | 37942.339 | 19 | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | _ | $3d^4(^5D)4d$ | f ⁴ D | 7/2 | 0.0003 | 12SAN/NAV |
| 2634.8127 | 37942.052 | 9 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | 0.0011 | 12SAN/NAV |
| 2635.1780 | 37936.793 | 27 | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 5/2 | _ | $3d^4(^5D)5d$ | $^{6}\mathrm{D}$ | 3/2 | 0.0003 | 12SAN/NAV |
| 2635.7701 | 37928.271 | 20 | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 11/2 | _ | $3d^44d$ | g ⁴ H | 13/2 | 0.0003 | 12SAN/NAV |
| 2635.928 | 37926.00 | 3 | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | _ | $3d^{4}4d$ | h ⁴ H | 7/2 | 0.003 | 12SAN/NAV |
| 2636.1446 | 37922.88 | 5 | $3d^4(^3G)4p$ | ⁴ F ^o | 5/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 5/2 | 0.0014 | 12SAN/NAV |
| 2636.2389 | 37921.527 | 9 | $3d^4(^3H)4p$ | y ⁴ G ^o | 7/2 | _ | $3d^44d$ | g ⁴ H | 9/2 | 0.0006 | 12SAN/NAV |
| 2636.4561 | 37918.403 | 26 * | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 3/2 | 0.0002 | 12SAN/NAV |
| 2636.4561 | 37918.403 | 26 * | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 1/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | 0.0002 | 12SAN/NAV |
| 2636.512 | 37917.60 | 2 | $3d^4(^3F1)4p$ | z ⁴ G ^o | 11/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | 0.005 | 12SAN/NAV |
| 2636.5562 | 37916.963 | 5 | $3d^4(^3F1)4p$ | y 4F° | 9/2 | _ | $3d^44d$ | g ⁴ G | 9/2 | 0.0011 | 12SAN/NAV |
| 2637.0153 | 37910.363 | 7 | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | _ | $3d^44d$ | h ⁴ H | 11/2 | 0.0008 | 12SAN/NAV |
| 2637.1978 | 37907.739 | 19 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 1/2 | 0.0003 | 12SAN/NAV |
| 2637.3160 | 37906.040 | 18 | $3d^4(^5D)4p$ | z ⁶ D ^o | 3/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | 0.0003 | 12SAN/NAV |
| 2637.47252 | 37903.7910 | 63 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | 0.00010 | 12SAN/NAV |
| 2637.91853 | 37897.3827 | 44 | $3d^5$ | $d^{2}G$ | 9/2 | _ | $3d^4(^3P2)4p$ | ${ m v}^4{ m D}^{ m o}$ | 7/2 | 0.00013 | 12SAN/NAV |
| 2638.058 | 37895.38 | 2 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.008 | 12SAN/NAV |
| 2638.0983 | 37894.800 | 20 | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 5/2 | 0.0003 | 12SAN/NAV |
| 2638.30042 | 37891.897 | 38 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | _ | $3d^4(^5D)6s$ | ^{6}D | 5/2 | 0.00017 | 12SAN/NAV |
| | 37889.36 | 6 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | _ | $3d^{4}4d$ | g ⁴ H | 11/2 | 0.002 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | ssific | ation | | | Uncertainty of observed | |
|-----------------------|----------------------------|-------------|---|---|------------|--------|---|--|------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2638.50325 | 37888.985 | 39 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | 3d ⁴ (⁵ D)4d | f ⁶ D | 1/2 | 0.00015 | 12SAN/NAV |
| 2639.01733 | 37881.6045 | 150 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | 0.00008 | 12SAN/NAV |
| 2639.45 | 37875.40 | 13 R | $3d^5$ | b ² H | 9/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | 0.01 | 00WAG |
| 2639.89621 | 37868.9936 | 79 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | 0.00008 | 12SAN/NAV |
| 2640.00 | 37867.50 | 7 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3D)4p$ | w ⁴ D ^o | 5/2 | 0.01 | 51KIE |
| 2640.3946 | 37861.85 | 6 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | - | $3d^44d$ | g ⁴ H | 9/2 | 0.0019 | 12SAN/NAV |
| 2640.8734 | 37854.982 | 12 | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | - | $3d^44d$ | g ⁴ H | 7/2 | 0.0004 | 12SAN/NAV |
| 2641.09 | 37851.88 | 3 | $3d^34s^2$ | c ⁴ F | 5/2 | - | $3d^4(^3F2)4p$ | w ⁴ G ^o | 7/2 | 0.01 | 51KIE |
| 2641.28178 | 37849.1293 | 190 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 9/2 | 0.00007 | 12SAN/NAV |
| 2641.7488 | 37842.439 | 7 | 3d ⁵ 3d ⁵ | b ⁴ F a ² G | 7/2 | - | $3d^4(^3G)4p$ | $x {}^{4}G^{o}$ $x {}^{2}F^{o}$ | 9/2 | 0.0008 | 12SAN/NAV |
| 2641.79063 | 37841.839 | 28 | $3d^4(^3F1)4p$ | • | 9/2 9/2 | _ | 3d ⁴ (¹ G1)4p 3d ⁴ (⁵ D)5d | x F ⁴ F | 7/2 | 0.00019 | 12SAN/NAV |
| 2641.8929 | 37840.375 37824.840 | 8 5 | $3a^{(11)4p}$ $3d^5$ | y ² G° b ⁴ F | 9/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 9/2 | 0.0006 0.0012 | 12SAN/NAV |
| 2642.9780 2643.051 | 37824.840 | 3 | $3d^4(^3F)4s$ | в F a ⁴ F | 9/2 7/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 9/2 9/2 | 0.0012 | 12SAN/NAV 12SAN/NAV |
| 2643.5285 | 37823.80 | 21 | $3d^{5}$ | a ² D | 3/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.003 | 12SAN/NAV |
| 2643.6766 | 37810.903 | 4 | $3d^4(^3F1)4p$ | y ² G° | 9/2 | _ | $3d^44d$ | h ⁴ H | 9/2 | 0.0003 | 12SAN/NAV |
| 2643.884 | 37811.88 | 3 | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | _ | $3d^44d$ | g ⁴ H | 7/2 | 0.004 | 12SAN/NAV |
| 2644.19 | 37807.5 | 3 w | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^3F2)4p$ | w ⁴ G° | 5/2 | 0.02 | 51KIE |
| 2644.4870 | 37803.26 | 3 * | $3d^4(^3G)4p$ | ⁴ F ^o | 7/2 | _ | $3d^4(^5D)5d$ | ⁶ F | 5/2 | 0.0017 | 12SAN/NAV |
| 2644.4870 | 37803.26 | 3 * | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | _ | $3d^44d$ | g ⁴ I | 9/2 | 0.0017 | 12SAN/NAV |
| 2644.80 | 37798.8 | 2 w | $3d^4(^3H)4p$ | z ² H° | 9/2 | _ | $3d^4(^5D)6s$ | ^{4}D | 7/2 | 0.02 | 51KIE |
| 2645.74 | 37785.4 | 2 w | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | _ | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ P ^o | 7/2 | 0.02 | 51KIE |
| 2646.60 | 37773.08 | 2 | $3d^{4}(^{3}F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 9/2 | 0.01 | 51KIE |
| 2647.0681 | 37766.398 | 18 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)4d$ | e ⁴ S | 3/2 | 0.0003 | 12SAN/NAV |
| 2647.2166 | 37764.280 | 29 | $3d^4(^5D)4p$ | z^4P^o | 5/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | 0.0002 | 12SAN/NAV |
| 2647.3621 | 37762.205 | 25 * | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 3/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 5/2 | 0.0005 | 12SAN/NAV |
| 2647.3621 | 37762.205 | 25 * | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | _ | $3d^4(^5D)5d$ | ^{4}D | 7/2 | 0.0005 | 12SAN/NAV |
| 2647.8131 | 37755.773 | 5 | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | _ | $3d^44d$ | a ² K | 13/2 | 0.0011 | 12SAN/NAV |
| 2647.9642 | 37753.619 | 6 | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | - | $3d^44d$ | i ² G | 9/2 | 0.0011 | 12SAN/NAV |
| 2648.0805 | 37751.961 | 15 | $3d^5$ | a ² F | 7/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2648.25412 | 37749.4858 | 82 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | 0.00008 | 12SAN/NAV |
| 2648.95 | 37739.57 | 2 | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | 0.01 | 51KIE |
| 2649.6591 | 37729.470 | 4 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^3G)4p$ | y ² F ^o | 5/2 | 0.0014 | 12SAN/NAV |
| 2649.89 | 37726.18 | 1 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^3G)4p$ | y ⁴ H ^o | 7/2 | 0.01 | 51KIE |
| 2650.38 | 37719.21 | 2 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^3F1)4p$ | z ² F ^o w ⁴ P ^o | 5/2 | 0.01 | 51KIE |
| 2650.57 | 37716.5 | 1 w | $3d^4(^3F)4s$ | e ² F a ² F | 5/2 | - | $3d^3(^4P)4s4p(^3P^0)$ | w P x 4G° | 3/2 | 0.02 | 51KIE |
| 2650.7839 | 37713.462 | 7 | 3d ⁵ 3d ⁴ (³ P1)4p | a F ² D° | 5/2 3/2 | - | $3d^4(^3G)4p$ $3d^4(^5D)5d$ | х 'G" ⁶ Р | 5/2 3/2 | 0.0008 | 12SAN/NAV |
| 2651.15 2651.36769 | 37708.3 37705.1582 | 1 w 56 | $3d^{4}(^{3}G)4p$ | у ² H° | 11/2 | _ | 3 <i>d</i> 4 <i>d</i> 3 <i>d</i> 4 <i>d</i> | h ⁴ H | 13/2 | 0.02 0.00011 | 51KIE 12SAN/NAV |
| 2651.97352 | 37696.5451 | 190 | $3d^4(^3H)4p$ | z ² I ^o | 13/2 | | $3d^44d$ | a ² K | 15/2 | 0.00011 | 12SAN/NAV |
| 2652.144 | 37694.12 | 5 | $3d^4(^3F1)4p$ | y ² G° | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ D | 5/2 | 0.0007 | 12SAN/NAV |
| 2652.29 | 37692.0 | 4 w | $3d^4(^3F1)4p$ | $z^{2}F^{0}$ | 5/2 | _ | $3d^4(^5D)6s$ | ⁴ D | 7/2 | 0.002 | 51KIE |
| 2652.6818 | 37686.481 | 5 | $3d^4(^3F1)4p$ | y ² G° | 9/2 | _ | $3d^4(^5D)5d$ | ⁴G | 11/2 | 0.0011 | 12SAN/NAV |
| 2652.73887 | 37685.6698 | 49 | $3d^4(^5D)4p$ | z ⁴ P° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | 0.00013 | 12SAN/NAV |
| 2653.58060 | 37673.7164 | 840 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | 0.00006 | 12SAN/NAV |
| 2653.95824 | 37668.3560 | 76 | $3d^4(^3H)4p$ | z ² H° | 9/2 | _ | $3d^44d$ | f ² I | 11/2 | 0.00009 | 12SAN/NAV |
| 2654.02 | 37667.5 | 4 wl | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | 0.02 | 51KIE |
| 2654.422 | 37661.78 | 3 | $3d^4(^5D)4p$ | z^4P^o | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | 0.002 | 12SAN/NAV |
| 2654.84 | 37655.85 | 1 | $3d^34s^2$ | c ⁴ F | 3/2 | _ | $3d^4(^3F2)4p$ | t ² F ^o | 5/2 | 0.01 | 51KIE |
| 2655.7822 | 37642.487 | 8 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.0007 | 12SAN/NAV |
| 2657.09863 | 37623.839 | 38 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | _ | $3d^44d$ | h ⁴ H | 11/2 | 0.00016 | 12SAN/NAV |
| 2657.1427 | 37623.215 | 13 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^3F2)4p$ | w^4G^o | 9/2 | 0.0004 | 12SAN/NAV |
| 2657.45832 | 37618.7467 | 160 | $3d^4(^3H)4p$ | $z^2 I^o$ | 11/2 | - | $3d^44d$ | a ² K | 13/2 | 0.00008 | 12SAN/NAV |
| 2658.1725 | 37608.640 | 24 | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | - | $3d^4(^5D)5d$ | ⁴ D | 7/2 | 0.0002 | 12SAN/NAV |
| 2658.42098 | 37605.1251 | 74 | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 11/2 | - | $3d^44d$ | f ² I | 13/2 | 0.00009 | 12SAN/NAV |
| 2658.58839 | 37602.7573 | 950 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | 0.00006 | 12SAN/NAV |
| 2658.89660 | 37598.3988 | 78 | $3d^5$ | a ² F | 7/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.00009 | 12SAN/NAV |
| 2659.4669 | 37590.337 | 16 | $3d^{5}$ | b ⁴ F | 7/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 7/2 | 0.0003 | 12SAN/NAV |
| 2659.54919 | 37589.174 | 32 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | - | $3d^4(^3P2)4p$ | y ⁴ S ^o | 3/2 | 0.00018 | 12SAN/NAV |
| 2659.7383 | 37586.501 | 8 | $3d_{5}^{4}(^{1}G1)4s$ | c ² G | 7/2 | - | $3d^4(^1I)4p$ | w ² H ^o | 9/2 | 0.0005 | 12SAN/NAV |
| 2660.7611 | 37572.054 | 14 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^3G)4p$ | x^4G^o | 7/2 | 0.0004 | 12SAN/NAV |
| 2661.20156 | 37565.8354 | 710 | $3d^4(^5D)4p$ | z ⁴ F ^o b ⁴ P | 9/2 | - | $3d^4(^5D)4d$ | e ⁴ G x ⁴ D° | 11/2 | 0.00006 | 12SAN/NAV |
| 2661.4138 | 37562.840 | 27 | $3d^4(^3P)4s$ | 1 4D | 3/2 | _ | $3d^4(^3F1)4p$ | 4100 | 3/2 | 0.0002 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clea | cific | ation | | | Uncertainty of observed | |
|-------------------------|----------------------------|-------------|--|--|------------|-------|--|---------------------------------------|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 5111C | Configuration | Term | | wavelength (Å) | Source of line |
| 2661.58555 | 37560.4160 | 52 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.00012 | 12SAN/NAV |
| 2661.72208 | 37558.4895 | 250 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^4(^5D)4p$ | z^4P^o | 5/2 | 0.00007 | 12SAN/NAV |
| 2661.7947 | 37557.465 | 5 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0013 | 12SAN/NAV |
| 2662.0519 | 37553.836 | 6 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 9/2 | 0.0008 | 12SAN/NAV |
| 2662.1685 | 37552.192 | 6 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | - | $3d^4(^3F1)4p$ | x ⁴ D ^o | 1/2 | 0.0008 | 12SAN/NAV |
| 2662.38062 | 37549.200 | 31 | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | - | $3d^4(^5D)5d$ | ⁴ F | 9/2 | 0.00018 | 12SAN/NAV |
| 2662.467 | 37547.98 | 3 | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | - | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | 0.005 | 12SAN/NAV |
| 2662.5878 | 37546.278 | 7 | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | - | $3d^4(^5D)5d$ | ⁴ G | 7/2 | 0.0008 | 12SAN/NAV |
| 2662.7105 | 37544.548 | 15 | $3d^5$ | b ⁴ F | 9/2 | - | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.0004 | 12SAN/NAV |
| 2663.0001 | 37540.466 | 27 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.0002 | 12SAN/NAV |
| 2663.0407 | 37539.893 | 7 | 3d ⁵ 3d ⁴ (⁵ D)4p | b ⁴ F z ⁴ F° | 9/2 | - | $3d^4(^3G)4p$ | y ² H° e ⁴ G | 9/2 | 0.0009 | 12SAN/NAV |
| 2663.28405 | 37536.4634 | 590 | $3d^{4}(^{5}D)4p$ $3d^{4}(^{5}D)4s$ | a ⁶ D | 7/2 7/2 | _ | $3d^4(^5D)4d$ $3d^4(^5D)4p$ | e G z ⁶ D° | 9/2 9/2 | 0.00006 | 12SAN/NAV |
| 2663.41915 2663.6040 | 37534.5595 37531.955 | 1600 10 | $3d^{4}(^{5}D)4s$ | а D a ⁶ D | 3/2 | _ | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 3/2 | 0.00006 0.0006 | 12SAN/NAV 12SAN/NAV |
| 2663.67433 | 37530.9639 | 330 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | 0.00007 | 12SAN/NAV |
| 2664.28 | 37530.9039 | 2 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^1D1)4p$ | w ² D ^o | 5/2 | 0.0007 | 51KIE |
| 2664.381 | 37521.01 | 4 | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 9/2 | 0.004 | 12SAN/NAV |
| 2664.97241 | 37512.6840 | 57 | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | _ | $3d^44d$ | h ⁴ H | 7/2 | 0.00011 | 12SAN/NAV |
| 2665.54792 | 37504.5852 | 470 | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ G | 7/2 | 0.00006 | 12SAN/NAV |
| 2666.01367 | 37498.0336 | 2500 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | 0.00006 | 12SAN/NAV |
| 2666.19650 | 37495.4623 | 51 | $3d^4(^3G)4p$ | x 4G° | 7/2 | _ | $3d^44d$ | ${ m h}$ ${}^4{ m H}$ | 9/2 | 0.00014 | 12SAN/NAV |
| 2666.5730 | 37490.17 | 5 | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | _ | $3d^{4}4d$ | $g^{4}G$ | 9/2 | 0.0017 | 12SAN/NAV |
| 2667.87716 | 37471.8430 | 370 | $3d^4(^5D)4p$ | z^4F^o | 3/2 | _ | $3d^4(^5D)4d$ | e ⁴ G | 5/2 | 0.00008 | 12SAN/NAV |
| 2668.70881 | 37460.1663 | 1100 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | 0.00006 | 12SAN/NAV |
| 2668.9770 | 37456.402 | 17 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | _ | $3d^4(^5D)5d$ | ^{4}F | 7/2 | 0.0004 | 12SAN/NAV |
| 2669.07 | 37455.1 | 3 w | $3d^4(^5D)4p$ | z ⁶ F ^o | 5/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.02 | 51KIE |
| 2669.5850 | 37447.872 | 12 | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | - | $3d^44d$ | g ⁴ I | 13/2 | 0.0005 | 12SAN/NAV |
| 2670.06654 | 37441.1189 | 150 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^3P1)4p$ | z ⁴ S° | 3/2 | 0.00008 | 12SAN/NAV |
| 2670.21772 | 37438.9992 | 100 | $3d^5$ | a ² I | 13/2 | - | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 13/2 | 0.00008 | 12SAN/NAV |
| 2670.56 | 37434.20 | 7 R | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^4(^3G)4p$ | y ² F ^o | 7/2 | 0.01 | 00WAG |
| 2670.83723 | 37430.316 | 41 | $3d^4(^5D)4p$ | z ⁶ D° b ⁴ P | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ P z ² D° | 7/2 | 0.00015 | 12SAN/NAV |
| 2671.02 | 37427.75 | 2 | $3d^4(^3P)4s$ $3d^4(^3G)4p$ | в Р ⁴ F° | 1/2 9/2 | - | 3d ⁴ (³ F1)4p 3d ⁴ 4d | z ⁻ D" i ² G | 3/2 | 0.01 | 51KIE |
| 2671.1603 2671.3193 | 37425.79 37423.561 | 5 10 | $3a^{(1)}G^{(2)}4p$ $3d^{(3)}G^{(3)}4p$ | x ⁴ G° | 9/2 7/2 | _ | $3d^4(^5D)5d$ | 1 G ⁴ F | 9/2 7/2 | 0.0018 0.0010 | 12SAN/NAV 12SAN/NAV |
| 2671.80684 | 37423.361 | 1700 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | 0.0010 | 12SAN/NAV |
| 2671.8593 | 37415.7328 | 79 | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | _ | $3d^4(^5D)4d$ | e ⁴ S | 3/2 | 0.0000 | 12SAN/NAV |
| 2672.36457 | 37408.9242 | 60 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3F1)4p$ | z ² F° | 7/2 | 0.0010 | 12SAN/NAV |
| 2672.82781 | 37402.4411 | 1200 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | _ | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 5/2 | 0.00006 | 12SAN/NAV |
| 2673.0046 | 37399.967 | 20 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | _ | $3d^4(^5D)5d$ | ⁴ G | 11/2 | 0.0005 | 12SAN/NAV |
| 2673.33837 | 37395.2983 | 67 | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 11/2 | 0.00010 | 12SAN/NAV |
| 2673.49 | 37393.18 | 3 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^1I)4p$ | w^2H^o | 9/2 | 0.01 | 51KIE |
| 2673.96487 | 37386.5372 | 52 * | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | 0.00013 | 12SAN/NAV |
| 2673.96487 | 37386.5372 | 52 * | $3d^4(^5D)4p$ | z^4F^o | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ G | 5/2 | 0.00013 | 12SAN/NAV |
| 2674.06216 | 37385.1771 | 58 | $3d^4(^5D)4p$ | z ⁴ F ^o | 7/2 | - | $3d^4(^5D)4d$ | e ⁴ G | 7/2 | 0.00011 | 12SAN/NAV |
| 2674.24536 | 37382.6161 | 43 | $3d^4(^5D)4p$ | z^4F^o | 9/2 | - | $3d^4(^5D)4d$ | e ⁴ G | 9/2 | 0.00014 | 12SAN/NAV |
| 2675.2593 | 37368.449 | 28 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^3F2)4p$ | w ⁴ G ^o | 11/2 | 0.0002 | 12SAN/NAV |
| 2675.3941 | 37366.566 | 11 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | - | $3d^44d$ | g ⁴ I | 11/2 | 0.0005 | 12SAN/NAV |
| 2675.66086 | 37362.8408 | 98 | $3d^5$ | a ² I | 11/2 | - | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 11/2 | 0.00008 | 12SAN/NAV |
| 2675.7059 | 37362.212 | 18 | $3d^4(^1S)4s$ | a ² S | 1/2 | - | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 1/2 | 0.0002 | 12SAN/NAV |
| 2676.5306 | 37350.700 | 13 | $3d^5$ | a ² F | 5/2 | - | $3d^4(^3P1)4p$ | ² D ^o | 5/2 | 0.0010 | 12SAN/NAV |
| 2677.15829 | 37341.9436 | 8200 * | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | 0.00007 | 12SAN/NAV |
| 2677.15829 | 37341.9436 | 8200 * | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | 0.00007 | 12SAN/NAV |
| 2677.3133 2677.37739 | 37339.782 37338.8880 | 45 47 | 3d ⁴ (⁵ D)4p 3d ⁴ (³ G)4p | z ⁶ D° x ⁴ G° | 5/2 9/2 | _ | 3d ⁴ (⁵ D)4d 3d ⁴ 4d | e ⁶ P h ⁴ H | 5/2 11/2 | 0.0003 0.00009 | 12SAN/NAV |
| 2677.37739 2678.79072 | 37338.8880 | | $3d^{4}(^{5}D)4s$ | a ⁶ D | 3/2 | _ | $3d^{4}d^{4}$ $3d^{4}(^{5}D)4p$ | n H z ⁶ D° | 5/2 | 0.00009 | 12SAN/NAV |
| 2679.8868 | 37319.1891 | 1700 30 | $3d^{4}(^{1}G1)4s$ | a D c ² G | 3/2 7/2 | _ | $3d^4(^3D)4p$ | w ² F° | 5/2 | 0.0006 | 12SAN/NAV 12SAN/NAV |
| 2679.9898 | 37303.920 | 10 | $3d^4(^3G)4p$ | y ² H° | 11/2 | _ | $3d^4(^5D)5d$ | w г ⁶ F | 11/2 | 0.0007 | 12SAN/NAV |
| 2680.1607 | 37302.493 | 12 | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | 0.0008 | 12SAN/NAV |
| 2680.1845 | 37299.783 | 18 | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | _ | $3d^4(^5D)5d$ | ⁴ F | 5/2 | 0.0004 | 12SAN/NAV |
| 2680.2985 | 37298.197 | 21 | $3d^4(^1S)4s$ | a ² S | 1/2 | _ | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | 0.0013 | 12SAN/NAV |
| 2680.8582 | 37290.410 | 6 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 13/2 | 0.0009 | 12SAN/NAV |
| 2681.083 | 37287.28 | 3 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 11/2 | 0.004 | 12SAN/NAV |
| | 37279.760 | 13 | $3d^4(^3G)4p$ | x 4G° | 7/2 | _ | $3d^44d$ | g ⁴ I | 9/2 | 0.0005 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Class | cific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|-------------|---|---|-------------|-------|---|--|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 5111C | Configuration | Term | | wavelength (Å) | Source of line |
| 2682.1073 | 37273.044 | 5 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | _ | $3d^45s$ | g ² G | 9/2 | 0.0012 | 12SAN/NAV |
| 2682.257 | 37270.96 | 2 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.006 | 12SAN/NAV |
| 2682.406 | 37268.89 | 3 | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | - | $3d^4(^5D)5d$ | ^{4}F | 9/2 | 0.003 | 12SAN/NAV |
| 2682.4422 | 37268.39 | 4 | $3d^4(^5D)4p$ | z ⁶ F ^o | 7/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.0018 | 12SAN/NAV |
| 2682.620 | 37265.92 | 2 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^3F2)4p$ | w 4G° | 9/2 | 0.003 | 12SAN/NAV |
| 2682.8909 | 37262.16 | 5 | $3d^4(^5D)4p$ | z ⁶ F ^o | 9/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 7/2 | 0.0017 | 12SAN/NAV |
| 2682.95 | 37261.34 | 1 | $3d^4(^3G)4s$ | b ⁴ G c ² G | 9/2 | - | $3d^4(^3G)4p$ | x ⁴ G° w ² H° | 11/2 | 0.01 | 51KIE |
| 2683.4428 2683.7303 | 37254.495 37250.505 | 22 8 | 3d ⁴ (¹ G1)4s 3d ⁴ (¹ D)4s | c G c ² D | 9/2 3/2 | _ | 3d ⁴ (¹ I)4p 3d ⁴ (¹ D1)4p | w H w ² P ^o | 11/2 3/2 | 0.0003 0.0007 | 12SAN/NAV 12SAN/NAV |
| 2684.0835 | 37230.303 | 12 | $3d^{5}$ | c ² F | 5/2 | _ | $3d^4(^3D)4p$ | w r w ² F ^o | 5/2 | 0.0007 | 12SAN/NAV |
| 2684.1164 | 37245.147 | 15 | $3d^4(^3G)4p$ | y ² F° | 5/2 | _ | $3d^44d$ | h ⁴ H | 7/2 | 0.0007 | 12SAN/NAV |
| 2684.2445 | 37243.369 | 5 | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | _ | $3d^44d$ | h ⁴ H | 9/2 | 0.0012 | 12SAN/NAV |
| 2684.62592 | 37238.0781 | 42 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | _ | $3d^4(^5D)5d$ | ⁴ G | 9/2 | 0.00014 | 12SAN/NAV |
| 2684.7240 | 37236.718 | 11 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | 0.0006 | 12SAN/NAV |
| 2685.0322 | 37232.444 | 26 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.0002 | 12SAN/NAV |
| 2685.1825 | 37230.360 | 21 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.0004 | 12SAN/NAV |
| 2685.62445 | 37224.234 | 38 | $3d^4(^3G)4p$ | $x ^4G^{\rm o}$ | 11/2 | _ | $3d^44d$ | h ⁴ H | 13/2 | 0.00016 | 12SAN/NAV |
| 2685.9874 | 37219.204 | 9 | $3d^5$ | $a^{2}I$ | 13/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | 0.0006 | 12SAN/NAV |
| 2686.3968 | 37213.532 | 31 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | - | $3d^4(^3P2)4p$ | y ⁴ S ^o | 3/2 | 0.0002 | 12SAN/NAV |
| 2686.6497 | 37210.029 | 7 | $3d^5$ | a ² I | 11/2 | - | $3d^4(^3H)4p$ | y ⁴ G ^o | 9/2 | 0.0005 | 12SAN/NAV |
| 2686.99640 | 37205.2284 | 34 | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | - | $3d^4(^5D)5d$ | ⁴ G | 9/2 | 0.00013 | 12SAN/NAV |
| 2687.08786 | 37203.9621 | 890 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | - | $3d^4(^5D)4p$ | z ⁶ D ^o | 5/2 | 0.00007 | 12SAN/NAV |
| 2687.2864 | 37201.214 | 9 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)4d$ | e ⁶ G | 9/2 | 0.0008 | 12SAN/NAV |
| 2687.3825 | 37199.883 | 10 | $3d^4(^3G)4p$ | x ⁴ G ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁴ F | 3/2 | 0.0004 | 12SAN/NAV |
| 2687.60 | 37196.87 | 3 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | - | $3d^4(^3H)4p$ | y^4G^o w^2P^o | 9/2 | 0.01 | 51KIE |
| 2688.14590 | 37189.3196 | 64 | $3d^4(^1D)4s$ | c ² D a ⁴ H | 5/2 | - | $3d^4(^1D1)4p$ | w ² P ^o y ⁴ G ^o | 3/2 | 0.00009 | 12SAN/NAV |
| 2688.29383 2688.41514 | 37187.2733 37185.5954 | 360 220 | 3d ⁴ (³ H)4s 3d ⁴ (³ G)4s | ан b ⁴ G | 7/2 11/2 | _ | $3d^4(^3H)4p$ $3d^4(^3G)4p$ | y G° x ⁴ G° | 5/2 11/2 | 0.00007 0.00009 | 12SAN/NAV 12SAN/NAV |
| 2688.49441 | 37183.3934 | 32 | $3d^{4}(^{1}D)4s$ | c ² D | 3/2 | _ | $3d^4(^1D1)4p$ | w ² P ^o | 1/2 | 0.00009 | 12SAN/NAV |
| 2688.5647 | 37184.499 | 14 | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | _ | $3d^4(^5D)5d$ | ⁴ G | 7/2 | 0.00018 | 12SAN/NAV |
| 2689.0336 | 37177.043 | 32 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | 0.0002 | 12SAN/NAV |
| 2689.18119 | 37175.0032 | 47 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | 0.00014 | 12SAN/NAV |
| 2689.20524 | 37174.6707 | 140 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.00009 | 12SAN/NAV |
| 2689.4378 | 37171.456 | 15 | $3d^4(^3G)4p$ | x 4G° | 9/2 | _ | $3d^4(^5D)5d$ | 4 F | 7/2 | 0.0004 | 12SAN/NAV |
| 2689.500 | 37170.60 | 4 | $3d^4(^3G)4p$ | $x ^4G^{\rm o}$ | 7/2 | _ | $3d^4(^5D)5d$ | ^{4}D | 5/2 | 0.003 | 12SAN/NAV |
| 2689.8022 | 37166.421 | 8 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | 0.0006 | 12SAN/NAV |
| 2690.30891 | 37159.4211 | 120 | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | $3d^4(^5D)4d$ | e ⁴ S | 3/2 | 0.00008 | 12SAN/NAV |
| 2690.41 | 37158.0 | 2 w | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | 0.02 | 51KIE |
| 2690.988 | 37150.04 | 46 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 9/2 | 0.003 | 12SAN/NAV |
| 2691.03838 | 37149.3487 | 1300 | $3d^4(^5D)4s$ | a ⁰D | 9/2 | - | $3d^4(^{5}D)4p$ | z ^o D ^o | 7/2 | 0.00007 | 12SAN/NAV |
| 2691.5927 | 37141.698 | 13 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | - | $3d^4(^5D)4d$ | e ⁶ G | 11/2 | 0.0003 | 12SAN/NAV |
| 2691.8406 | 37138.278 | 8 | $3d^4(^3G)4p$ | x ⁴ G° z ⁶ D° | 11/2 | - | $3d^44d$ | h ⁴ H e ⁶ P | 11/2 | 0.0005 | 12SAN/NAV |
| 2691.98806 | 37136.2439 37134.4899 | 100 53 | 3d ⁴ (⁵ D)4p 3d ⁴ (³ H)4s | z ^a D ^a a ⁴ H | 7/2 9/2 | _ | 3d ⁴ (⁵ D)4d 3d ⁴ (³ H)4p | e ^a P y ⁴ G ^o | 7/2 9/2 | 0.00008 0.00014 | 12SAN/NAV 12SAN/NAV |
| 2692.11522 2692.6572 | 37134.4899 | 24 | $3d^4(^5D)4p$ | ап z ⁶ D° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | 0.00014 | 12SAN/NAV |
| 2693.0033 | 37127.010 | 7 | $3d^{5}$ | a ² F | 7/2 | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2693.52909 | 371122.243 | 290 * | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 7/2 | 0.0008 | 12SAN/NAV |
| 2693.52909 | 37114.9986 | 290 * | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | _ | $3d^4(^5D)5d$ | ⁴G | 11/2 | 0.00007 | 12SAN/NAV |
| 2693.5830 | 37114.26 | 8 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | _ | $3d^4(^3H)4p$ | z ² I ^o | 11/2 | 0.0018 | 12SAN/NAV |
| 2693.8472 | 37110.616 | 11 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3D)4p$ | w^2F^o | 5/2 | 0.0005 | 12SAN/NAV |
| 2693.95 | 37109.20 | 10 R | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | 0.01 | 00WAG |
| 2694.167 | 37106.21 | 3 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 7/2 | 0.005 | 12SAN/NAV |
| 2694.38459 | 37103.2148 | 53 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | 0.00013 | 12SAN/NAV |
| 2694.6835 | 37099.099 | 9 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.0007 | 12SAN/NAV |
| 2694.7746 | 37097.845 | 3 | $3d^4(^3G)4p$ | x ⁴ G ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁶ D | 3/2 | 0.0013 | 12SAN/NAV |
| 2695.78368 | 37083.960 | 39 | $3d^4(^3G)4p$ | x ⁴ G ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁴ G | 5/2 | 0.00016 | 12SAN/NAV |
| 2695.9539 | 37081.618 | 3 | $3d^4(^3G)4p$ | $x^{4}G^{o}$ | 9/2 | - | $3d^44d$ | g ⁴ I | 11/2 | 0.0013 | 12SAN/NAV |
| 2696.1181 | 37079.360 | 4 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3G)4p$ | x ² G° | 7/2 | 0.0012 | 12SAN/NAV |
| 2696.3769 | 37075.801 | 7 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | 0.0006 | 12SAN/NAV |
| 2696.5571 | 37073.324 | 45 | $3d^4(^3G)4p$ | x ⁴ G ^o | 7/2 | - | $3d^4(^5D)5d$ | ⁴ G | 7/2 | 0.0002 | 12SAN/NAV |
| 2696.75509 | 37070.602 | 42 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | - | $3d^4(^3\text{H})4p$ | y ⁴ G ^o | 11/2 | 0.00015 | 12SAN/NAV |
| 2696.9248 | 37068.270 | 20 6 D | $3d^4(^3G)4p$ | x ⁴ G ^o | 11/2 | - | $3d^4(^5D)5d$ | ⁴ F | 9/2 | 0.0003 | 12SAN/NAV |
| 2697.03 | 37066.82 | 6 R | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | y ² G° | 7/2 | 0.01 | 00WAG |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Class | sific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|----------------|--|---------------------------------------|------------|-------|--------------------------------|---|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 31110 | Configuration | Term | | wavelength (Å) | Source of line |
| 2697.51539 | 37060.1543 | 170 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | 0.00007 | 12SAN/NAV |
| 2697.90542 | 37054.7969 | 420 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 9/2 | 0.00007 | 12SAN/NAV |
| 2697.9223 | 37054.565 | 41 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3D)4p$ | w ² F ^o | 7/2 | 0.0002 | 12SAN/NAV |
| 2698.09889 | 37052.1400 | 57 | $3d^5$ | a ² D | 3/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.00011 | 12SAN/NAV |
| 2698.40671 | 37047.9135 | 910 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 0.00007 | 12SAN/NAV |
| 2698.56701 | 37045.713 | 45 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | - | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | 0.00015 | 12SAN/NAV |
| 2698.68447 | 37044.1006 | 980 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | - | $3d^4(^5D)4p$ | z ⁴ P° | 3/2 | 0.00007 | 12SAN/NAV |
| 2698.84303 | 37041.9244 | 150 | $3d^4(^1I)4s$ | b ² I | 11/2 | - | $3d^4(^1I)4p$ | w^2H^o | 9/2 | 0.00007 | 12SAN/NAV |
| 2699.11313 | 37038.2178 | 44 | 3d ⁵ 3d ⁴ (³ P)4s | b ² H b ⁴ P | 9/2 | - | $3d^4(^3G)4p$ | x ² G° y ⁴ G° | 7/2 | 0.00014 | 12SAN/NAV |
| 2699.2282 | 37036.639 | 12 | $3d^{5}$ | a ² F | 3/2 5/2 | _ | $3d^4(^3H)4p$ $3d^4(^3G)4p$ | y 'G' ⁴ F° | 5/2 | 0.0004 | 12SAN/NAV |
| 2699.3300 2699.4319 | 37035.242 37033.84 | 24 4 | 3a $3d^4(^3H)4p$ | a F z ² I ^o | 11/2 | _ | $3d^44d$ | г a ⁴ K | 3/2 13/2 | 0.0002 0.0016 | 12SAN/NAV 12SAN/NAV |
| 2699.4319 | 37033.84 | 5 | $3d^{4}(^{5}D)4p$ | $z^{4}P^{0}$ | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | 0.0017 | 12SAN/NAV |
| 2700.4034 | 37032.03 | 9 | $3d^4(^3F1)4p$ | y ² G° | 7/2 | _ | $3d^44d$ | i ² G | 9/2 | 0.0017 | 12SAN/NAV |
| 2701.10278 | 37010.9367 | 160 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 7/2 | 0.00007 | 12SAN/NAV |
| 2701.22624 | 37009.2452 | 44 | $3d^5$ | b ² H | 11/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | 0.00014 | 12SAN/NAV |
| 2701.2425 | 37009.022 | 23 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | 0.0005 | 12SAN/NAV |
| 2701.65584 | 37003.361 | 39 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | 0.00019 | 12SAN/NAV |
| 2701.75 | 37002.07 | 12 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3D)4p$ | w ² F ^o | 7/2 | 0.01 | 51KIE |
| 2702.9030 | 36986.288 | 12 | $3d^4(^3F1)4p$ | z ⁴ G ^o | 7/2 | _ | $3d^4(^3F1)5s$ | f ² F | 7/2 | 0.0009 | 12SAN/NAV |
| 2702.9164 | 36986.104 | 19 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | _ | $3d^4(^3P2)4p$ | y ⁴ S ^o | 3/2 | 0.0005 | 12SAN/NAV |
| 2702.9780 | 36985.261 | 28 | $3d^4(^5D)4p$ | z^4P^o | 5/2 | _ | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | 0.0002 | 12SAN/NAV |
| 2703.56452 | 36977.2381 | 510 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 11/2 | 0.00007 | 12SAN/NAV |
| 2703.85223 | 36973.3037 | 140 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | 0.00007 | 12SAN/NAV |
| 2704.7197 | 36961.446 | 29 | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | - | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | 0.0003 | 12SAN/NAV |
| 2705.3280 | 36953.136 | 24 | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | - | $3d^4(^5D)5d$ | ⁴G | 9/2 | 0.0004 | 12SAN/NAV |
| 2706.02125 | 36943.6693 | 120 | $3d^4(^5D)4p$ | z ⁶ D ^o | 9/2 | - | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | 0.00007 | 12SAN/NAV |
| 2708.0532 | 36915.95 | 4 | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | - | $3d^4(^5D)5d$ | ${}^{4}G$ | 7/2 | 0.0015 | 12SAN/NAV |
| 2708.1686 | 36914.378 | 24 | $3d^4(^3G)4p$ | x ⁴ G° | 11/2 | - | $3d^4(^5D)5d$ | ⁴ G | 11/2 | 0.0003 | 12SAN/NAV |
| 2708.6853 | 36907.336 | 6 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^3F2)4p$ | $t^{2}F^{o}$ | 7/2 | 0.0006 | 12SAN/NAV |
| 2708.79073 | 36905.9000 | 350 | $3d^4(^3G)4s$ $3d^4(^3G)4s$ | b ⁴ G b ⁴ G | 7/2 5/2 | - | $3d^4(^3G)4p$ | x ⁴ G° x ⁴ G° | 7/2 | 0.00007 | 12SAN/NAV |
| 2709.30907 2710.93195 | 36898.8396 36876.7516 | 270 190 | $3d^{4}(^{1}I)4s$ | b ² I | 13/2 | _ | $3d^4(^3G)4p$ $3d^4(^1I)4p$ | w ² H° | 5/2 11/2 | 0.00007 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2710.93193 | 36874.538 | 6 | $3d^{5}$ | a ² F | 5/2 | _ | $3d^4(^3G)4p$ | w п ⁴ F ^o | 5/2 | 0.00007 | 12SAN/NAV |
| 2711.0947 | 36873.058 | 26 * | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0001 | 12SAN/NAV |
| 2711.2035 | 36873.058 | 26 * | $3d^4(^3P1)4p$ | y ⁴ D° | 5/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 7/2 | 0.0002 | 12SAN/NAV |
| 2712.215 | 36859.31 | 9 | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | _ | $3d^4(^3F1)5s$ | f ² F | 7/2 | 0.002 | 12SAN/NAV |
| 2712.30562 | 36858.0761 | 560 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ P° | 3/2 | 0.00007 | 12SAN/NAV |
| 2712.8575 | 36850.578 | 10 | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^4(^1I)4p$ | w ² H ^o | 11/2 | 0.0013 | 12SAN/NAV |
| 2715.00437 | 36821.441 | 36 | $3d^4(^3H)4p$ | y ⁴ G ^o | 11/2 | _ | $3d^44d$ | f ⁴ H | 13/2 | 0.00019 | 12SAN/NAV |
| 2715.3772 | 36816.385 | 33 * | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | _ | $3d^44d$ | i ² G | 9/2 | 0.0002 | 12SAN/NAV |
| 2715.3772 | 36816.385 | 33 * | $3d^4(^3G)4p$ | y ² F ^o | 5/2 | _ | $3d^4(^5D)5d$ | ^{4}G | 5/2 | 0.0002 | 12SAN/NAV |
| 2715.58730 | 36813.5370 | 85 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ S | 3/2 | 0.00009 | 12SAN/NAV |
| 2715.97 | 36808.35 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 7/2 | 0.01 | 51KIE |
| 2716.9027 | 36795.715 | 8 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 5/2 | 0.0009 | 12SAN/NAV |
| 2717.0380 | 36793.882 | 10 | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 3/2 | 0.0008 | 12SAN/NAV |
| 2717.2524 | 36790.979 | 4 | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | - | $3d^45s$ | g ² G | 9/2 | 0.0011 | 12SAN/NAV |
| 2717.5077 | 36787.523 | 160 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | - | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | 0.0004 | 12SAN/NAV |
| 2717.5232 | 36787.313 | 67 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^3F1)4p$ | x ⁴ D ^o | 3/2 | 0.0005 | 12SAN/NAV |
| 2717.7015 | 36784.900 | 5 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | 0.0009 | 12SAN/NAV |
| 2718.08 | 36779.78 | 12 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.01 | 51KIE |
| 2718.1784 | 36778.446 | 7 | $3d^4(^3H)4p$ | z ² H° a ⁴ F | 9/2 | - | $3d^44d$ | g ⁴ H x ⁴ D ^o | 9/2 | 0.0008 | 12SAN/NAV |
| 2718.30926 | 36776.6760 | 170 | 3d ⁴ (³ F)4s 3d ⁴ (³ G)4s | a F b ⁴ G | 3/2 | - | $3d^4(^3F1)4p$ | y ² H ^o | 1/2 | 0.00007 | 12SAN/NAV |
| 2718.41770 2718.41770 | 36775.2091 36775.2091 | 210 * 210 * | $3d^{4}(^{3}G)4p$ | y ² F° | 9/2 7/2 | _ | $3d^4(^3G)4p$ $3d^4(^5D)5d$ | у -н ⁶ D | 9/2 7/2 | 0.00007 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2718.41770 2719.312 | 367/3.2091 36763.12 | 210 * 4 | $3d^{4}(^{3}P)4s$ | y F b ⁴ P | 3/2 | _ | $3d^{4}(^{3}F1)4p$ | y ⁴ F° | 3/2 | 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2719.312 2719.688 | 36758.03 | 4 | $3d^{4}(^{3}F)4s$ | вР a ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | y F x ⁴ D° | 3/2 7/2 | 0.003 | 12SAN/NAV |
| 2719.088 | 36753.166 | 27 | $3d^4(^3H)4p$ | аг у ⁴ G° | 9/2 | _ | $3d^44d$ | f ⁴ H | 11/2 | 0.004 | 12SAN/NAV |
| 2720.0482 | 36752.8851 | 250 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 3/2 | 0.0007 | 12SAN/NAV |
| 2720.24842 | 36750.4608 | 100 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | 0.00007 | 12SAN/NAV |
| 2720.6676 | 36744.799 | 22 | $3d^{5}$ | a ² F | 5/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.0003 | 12SAN/NAV |
| 2722.74737 | 36716.7329 | 540 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | 0.00007 | 12SAN/NAV |
| | | | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | ${\rm x}^{\rm 4}{\rm D}^{\rm o}$ | 7/2 | 0.00009 | |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|----------------|--|--|-------------|-------|---|---|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | - | Configuration | Term | | wavelength (Å) | Source of line |
| 2723.64304 | 36704.6593 | 290 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.00007 | 12SAN/NAV |
| 2724.04739 | 36699.2112 | 350 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.00007 | 12SAN/NAV |
| 2724.5868 | 36691.946 | 7 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^4(^3P2)4p$ | v ⁴ D ^o | 5/2 | 0.0008 | 12SAN/NAV |
| 2724.7184 | 36690.174 | 14 | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | - | $3d^44d$ | f ⁴ H | 9/2 | 0.0008 | 12SAN/NAV |
| 2726.0287 | 36672.539 | 15 | $3d^4(^5D)4p$ | z ⁶ D° c ⁴ D | 1/2 | - | $3d^4(^5D)4d$ | e ⁴ S y ² P ^o | 3/2 | 0.0007 | 12SAN/NAV |
| 2726.2258 | 36669.89 | 17 19 | 3d ⁴ (³ D)4s 3d ⁵ | b ⁴ F | 5/2 7/2 | _ | $3d^4(^3D)4p$ $3d^4(^3G)4p$ | y -P* ⁴ F° | 3/2 7/2 | 0.0015 0.0018 | 12SAN/NAV |
| 2726.2602 2727.1147 | 36669.43 36657.936 | 4 | $3d^4(^3F1)4p$ | у ⁴ F° | 9/2 | _ | $3d^44d$ | г f ⁴ H | 11/2 | 0.0018 | 12SAN/NAV 12SAN/NAV |
| 2727.1147 | 36656.0362 | 440 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | 0.00011 | 12SAN/NAV |
| 2727.6189 | 36651.160 | 6 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3G)4p$ | ⁴ F° | 7/2 | 0.0006 | 12SAN/NAV |
| 2728.1545 | 36643.965 | 26 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 9/2 | 0.0003 | 12SAN/NAV |
| 2728.93 | 36633.55 | 2 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 5/2 | 0.01 | 51KIE |
| 2729.1558 | 36630.522 | 9 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | _ | $3d^44d$ | f ⁴ H | 9/2 | 0.0007 | 12SAN/NAV |
| 2729.7199 | 36622.952 | 7 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 5/2 | 0.0008 | 12SAN/NAV |
| 2730.25 | 36615.8 | 2 wl | $3d^4(^3H)4p$ | y ⁴ G ^o | 7/2 | _ | $3d^44d$ | f ⁴ H | 7/2 | 0.02 | 51KIE |
| 2730.9974 | 36605.82 | 8 | $3d^4(^3H)4p$ | z ² G ^o | 7/2 | _ | $3d^4(^3F1)5s$ | f ² F | 5/2 | 0.0015 | 12SAN/NAV |
| 2731.0387 | 36605.268 | 18 | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | - | $3d^44d$ | f ⁴ H | 7/2 | 0.0003 | 12SAN/NAV |
| 2731.37469 | 36600.766 | 42 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)4d$ | e ⁴ S | 3/2 | 0.00017 | 12SAN/NAV |
| 2732.41 | 36586.90 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.01 | 51KIE |
| 2733.2762 | 36575.30 | 6 | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | - | $3d^4(^5D)6s$ | ⁴ D | 1/2 | 0.0015 | 12SAN/NAV |
| 2733.9473 | 36566.33 | 3 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^3F2)4p$ | v ⁴ F° | 7/2 | 0.0016 | 12SAN/NAV |
| 2734.0876 | 36564.45 | 3 | $3d^4(^3P)4s$ | b ⁴ P z ² G° | 3/2 9/2 | - | $3d^4(^3\text{P1})4p$ | z ² P ^o f ² F | 1/2 | 0.0020 | 12SAN/NAV |
| 2734.1851 2734.5694 | 36563.147 36558.009 | 8 25 | $3d^4(^3\text{H})4p$ $3d^4(^3\text{D})4s$ | c ⁴ D | 3/2 | _ | $3d^4(^3F1)5s$ $3d^4(^3D)4p$ | x ⁴ P ^o | 7/2 1/2 | 0.0007 0.0003 | 12SAN/NAV |
| 2734.3694 | 36553.007 | 12 | $3d^4(^3G)4p$ | ⁴ F ^ο | 5/2 | _ | $3d^4(^5D)6s$ | х Р ⁴ D | 3/2 | 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2734.9430 | 36542.206 | 19 | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^4(^{1}G2)4p$ | r ² F° | 5/2 | 0.0007 | 12SAN/NAV |
| 2736.20 | 36536.22 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.0007 | 51KIE |
| 2736.73 | 36529.15 | 5 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | 0.01 | 51KIE |
| 2737.0779 | 36524.51 | 6 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3F1)4p$ | x^4D^0 | 7/2 | 0.0016 | 12SAN/NAV |
| 2737.1010 | 36524.197 | 17 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^3D)4p$ | x^4P^o | 1/2 | 0.0004 | 12SAN/NAV |
| 2737.19 | 36523.01 | 3 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.01 | 51KIE |
| 2737.4660 | 36519.327 | 10 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 3/2 | 0.0006 | 12SAN/NAV |
| 2737.6477 | 36516.904 | 6 | $3d^5$ | a ² D | 5/2 | - | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.0007 | 12SAN/NAV |
| 2737.7656 | 36515.331 | 5 | $3d^4(^3H)4p$ | z ⁴ H ^o | 9/2 | - | $3d^4(^3H)5s$ | e ⁴ H | 11/2 | 0.0012 | 12SAN/NAV |
| 2738.67 | 36503.27 | 2 | $3d^{5}$ | b ⁴ F | 3/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.01 | 51KIE |
| 2739.5553 | 36491.478 | 22 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^4(^3D)4p$ | y ² P ^o | 1/2 | 0.0003 | 12SAN/NAV |
| 2739.7649 | 36488.686 | 17 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2740.09564 | 36484.2821 | 170 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | - | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | 0.00008 | 12SAN/NAV |
| 2741.31938 | 36467.996 36463.480 | 40 | $3d^4(^3\text{H})4p$ $3d^4(^3\text{P1})4p$ | z ⁴ H° z ² S° | 7/2 1/2 | - | $3d^4(^3\text{H})5s$ $3d^4(^3\text{P1})5s$ | e ⁴ H e ² P | 7/2 3/2 | 0.00019 0.0013 | 12SAN/NAV |
| 2741.6589 2741.99532 | 36459.0068 | 5 120 | $3a^{(P1)4p}$ $3d^{4}(^{5}D)4p$ | z S z ⁴ P° | 5/2 | _ | $3d^4(^5D)4d$ | e P e ⁴ S | 3/2 | 0.0013 | 12SAN/NAV 12SAN/NAV |
| 2742.03255 | 36458.5118 | 420 * | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | 0.00008 | 12SAN/NAV |
| 2742.03255 | 36458.5118 | 420 * | $3d^4(^3P1)4p$ | y ⁴ D° | 7/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 9/2 | 0.00007 | 12SAN/NAV |
| 2742.09635 | 36457.6635 | 43 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^3D)4p$ | y^2P^0 | 1/2 | 0.00013 | 12SAN/NAV |
| 2743.64205 | 36437.1253 | 730 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | _ | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | 0.00007 | 12SAN/NAV |
| 2743.954 | 36432.98 | 5 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3P1)4p$ | $^{2}\mathrm{D^{o}}$ | 5/2 | 0.004 | 12SAN/NAV |
| 2744.21449 | 36429.525 | 49 | $3d^4(^3H)4p$ | $z^{4}H^{o}$ | 9/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 9/2 | 0.00016 | 12SAN/NAV |
| 2744.59633 | 36424.4570 | 220 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | _ | $3d^4(^3F2)4p$ | w^4G^o | 11/2 | 0.00008 | 12SAN/NAV |
| 2744.97628 | 36419.4155 | 190 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.00008 | 12SAN/NAV |
| 2745.4239 | 36413.478 | 15 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.0005 | 12SAN/NAV |
| 2746.1271 | 36404.154 | 36 | $3d^5$ | a ² F | 7/2 | - | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.0002 | 12SAN/NAV |
| 2746.21863 | 36402.9408 | 200 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.00012 | 12SAN/NAV |
| 2746.23522 | 36402.7209 | 100 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^4(^3D)4p$ | x ⁴ P° | 3/2 | 0.00014 | 12SAN/NAV |
| 2747.7690 | 36382.402 | 9 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3F1)4p$ | $y^{2}G^{o}$ | 7/2 | 0.0006 | 12SAN/NAV |
| 2747.9272 | 36380.308 | 22 | $3d^4(^3G)4s$ | e ² G | 9/2 | - | $3d^4(^1G2)4p$ | r ² F° | 7/2 | 0.0004 | 12SAN/NAV |
| 2748.25344 | 36375.9894 | 330 | $3d^5$ | a ² G z ⁴ H° | 9/2 | - | $3d^4(^3G)4p$ | x ² G° e ⁴ H | 7/2 | 0.00007 | 12SAN/NAV |
| 2748.4870 | 36372.898 36366 3275 | 65 1200 | $3d^4(^3\text{H})4p$ $3d^4(^5\text{D})4s$ | z 'H' a ⁶ D | 11/2 3/2 | _ | $3d^4(^3H)5s$ $3d^4(^5D)4p$ | e 'H z ⁶ P° | 11/2 3/2 | 0.0002 0.00007 | 12SAN/NAV |
| 2748.98364 2749.82715 | 36366.3275 36355.1728 | 1200 76 | $3d^{4}(^{3}D)4s$ | c ⁴ D | 3/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2750.72661 | 36343.2856 | 1400 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | 0.00011 | 12SAN/NAV |
| 2751.0483 | 36339.036 | 10 | $3d^{5}$ | a ² D | 3/2 | _ | $3d^4(^3F1)4p$ | $x^{4}D^{o}$ | 3/2 | 0.0004 | 12SAN/NAV |
| | 36336.624 | 10 | $3d^5$ | a ² D | 3/2 | _ | $3d^4(^3F1)4p$ | x^4D^o | 5/2 | 0.0005 | 12SAN/NAV |
| 2751.2309 | JUJJU.U2T | | | | | | | | | | |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Classi | ific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|-------------|---|---|--------|------|--|--|--------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 1110 | Configuration | Term | | wavelength (Å) | Source of line |
| 2752.3858 | 36321.378 | 22 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2753.6559 | 36304.626 | 29 | $3d^4(^3P)4s$ | b ⁴ P | | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.0003 | 12SAN/NAV |
| 2753.68795 | 36304.204 | 42 | $3d^4(^3F)4s$ | a ⁴ F | | - | $3d^4(^3F1)4p$ | z ² D ^o | 5/2 | 0.00019 | 12SAN/NAV |
| 2753.89456 | 36301.4802 | 160 | $3d^4(^3F)4s$ | d ⁴ F | | - | $3d^4(^3F2)4p$ | w ⁴ G° | 9/2 | 0.00008 | 12SAN/NAV |
| 2754.27928 | 36296.4099 | 170 | $3d^4(^3F)4s$ | a ⁴ F | | - | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.00008 | 12SAN/NAV |
| 2754.3944 | 36294.893 | 9 | $3d^34s^2$ $3d^4(^3H)4p$ | c ⁴ F z ⁴ H ^o | | _ | $3d^4(^3P2)4p$ | v ⁴ D° e ⁴ H | 7/2 | 0.0011 | 12SAN/NAV |
| 2754.64672 | 36291.5686 36288.430 | 80 6 | $3d^{4}(^{3}\text{H})4p$ $3d^{4}(^{3}\text{F1})4p$ | y ⁴ F° | | _ | $3d^4(^3\text{H})5s$ $3d^4(^3\text{G})5s$ | f ⁴ G | 13/2 11/2 | 0.00011 0.0011 | 12SAN/NAV 12SAN/NAV |
| 2754.8850 2755.18 | 36284.54 | 2 | $3d^4(^3G)4s$ | уг b ⁴ G | | _ | $3d^4(^3F1)4p$ | y ² G° | 7/2 | 0.0011 | 51KIE |
| 2755.52769 | 36279.966 | 43 | $3d^4(^3F)4s$ | a ⁴ F | | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 9/2 | 0.00017 | 12SAN/NAV |
| 2755.8187 | 36276.136 | 22 | $3d^4(^3F)4s$ | a ⁴ F | | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | 0.0006 | 12SAN/NAV |
| 2755.9974 | 36273.78 | 6 | $3d^4(^3H)4p$ | y ⁴ G° | | _ | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | 0.0017 | 12SAN/NAV |
| 2756.30274 | 36269.7653 | 210 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.00007 | 12SAN/NAV |
| 2756.89538 | 36261.9689 | 49 | $3d^4(^3F)4s$ | a ⁴ F | | - | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.00013 | 12SAN/NAV |
| 2756.9584 | 36261.140 | 52 | $3d^4(^3F)4s$ | a ⁴ F | | - | $3d^4(^3H)4p$ | y ⁴ G ^o | 5/2 | 0.0005 | 12SAN/NAV |
| 2757.72192 | 36251.1011 | 970 | $3d^4(^5D)4s$ | a ⁶ D | | - | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | 0.00007 | 12SAN/NAV |
| 2758.61525 | 36239.3625 | 110 | $3d^4(^3F)4s$ | d ⁴ F | | - | $3d^4(^3F2)4p$ | $w_4^4G^o$ | 7/2 | 0.00009 | 12SAN/NAV |
| 2758.9019 | 36235.597 | 7 | $3d^4(^5D)4p$ | z ⁶ P ^o | | - | $3d^4(^5D)5s$ | e ⁴ D | 7/2 | 0.0008 | 12SAN/NAV |
| 2758.98323 | 36234.5293 | 530 | 3d ⁴ (³ D)4s 3d ⁴ (¹ F)4s | c ⁴ D d ² F | | _ | $3d^4(^3D)4p$ $3d^4(^1F)4p$ | w^4F^o v^2D^o | 9/2 | 0.00007 | 12SAN/NAV |
| 2759.22295 2759.38850 | 36231.3814 36229.2078 | 130 440 | $3d^{4}(^{3}F)4s$ | a ⁴ F | | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 9/2 | 0.00008 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2759.38830 | 36224.8736 | 240 | $3d^4(^3F)4s$ | a ⁴ F | | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.00007 | 12SAN/NAV |
| 2759.9940 | 36221.260 | 11 | $3d^4(^3H)4s$ | a ² H | | _ | $3d^4(^3G)4p$ | $y^{2}F^{0}$ | 7/2 | 0.0006 | 12SAN/NAV |
| 2760.04351 | 36220.6104 | 100 | $3d^4(^3G)4s$ | b ⁴ G | | _ | $3d^4(^3G)4p$ | $^{4}F^{0}$ | 3/2 | 0.00010 | 12SAN/NAV |
| 2760.20317 | 36218.5154 | 70 | $3d^4(^3F)4s$ | a ⁴ F | | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.00011 | 12SAN/NAV |
| 2760.36049 | 36216.4513 | 110 | $3d^4(^3F)4s$ | a ⁴ F | | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 7/2 | 0.00008 | 12SAN/NAV |
| 2760.52162 | 36214.3375 | 220 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | 0.00008 | 12SAN/NAV |
| 2760.83690 | 36210.2021 | 67 | $3d^4(^3F)4s$ | d ⁴ F | | - | $3d^4(^3F2)4p$ | w ⁴ G ^o | 5/2 | 0.00013 | 12SAN/NAV |
| 2761.16 | 36205.97 | 5 | $3d^4(^3P)4s$ | b ⁴ P | | - | $3d^4(^3F1)4p$ | y^4F^0 | 3/2 | 0.01 | 51KIE |
| 2761.4846 | 36201.710 | 12 | $3d^4(^3P1)4p$ | y ⁴ D ^o | | - | $3d^4(^3P1)5s$ | f ⁴ P | 5/2 | 0.0003 | 12SAN/NAV |
| 2761.9784 | 36195.238 | 12 | $3d^4(^3F)4s$ | d ⁴ F a ⁶ D | | - | $3d^4(^3F2)4p$ | w ⁴ G° z ⁶ P° | 5/2 | 0.0005 | 12SAN/NAV |
| 2762.58907 | 36187.2370 | 2400 | 3d ⁴ (⁵ D)4s 3d ⁴ (³ F)4s | a ⁴ F | | - | $3d^4(^5D)4p$ $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | 0.00007 | 12SAN/NAV |
| 2762.78331 2763.59109 | 36184.6930 36174.1170 | 100 61 | $3d^{4}(^{3}F)4s$ | а F a ⁴ F | | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 7/2 | 0.00009 0.00014 | 12SAN/NAV 12SAN/NAV |
| 2763.97653 | 36169.0727 | 61 | $3d^4(^3D)4s$ | c ⁴ D | | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | 0.00014 | 12SAN/NAV |
| 2764.27217 | 36165.205 | 53 | $3d^4(^3F)4s$ | a ⁴ F | | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 7/2 | 0.00014 | 12SAN/NAV |
| 2764.9412 | 36156.454 | 16 | $3d^5$ | a ² F | | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.0005 | 12SAN/NAV |
| 2765.1213 | 36154.099 | 16 * | $3d^4(^3D)4s$ | c ⁴ D | | _ | $3d^4(^3D)4p$ | w^4F^o | 7/2 | 0.0005 | 12SAN/NAV |
| 2765.1213 | 36154.099 | 16 * | $3d^4(^3G)4p$ | y ² F ^o | 7/2 | _ | $3d^4(^5D)5d$ | ^{6}G | 7/2 | 0.0005 | 12SAN/NAV |
| 2765.45514 | 36149.7352 | 120 | $3d^4(^3F)4s$ | a ⁴ F | | - | $3d^4(^3H)4p$ | y ⁴ G ^o | 11/2 | 0.00008 | 12SAN/NAV |
| 2765.61519 | 36147.6432 | 130 | $3d^4(^3P)4s$ | b ⁴ P | | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.00008 | 12SAN/NAV |
| 2765.86484 | 36144.381 | 53 | $3d^4(^3G)4s$ | b ² G | | - | $3d^4(^1G1)4p$ | x ² H ^o | 11/2 | 0.00016 | 12SAN/NAV |
| 2766.53675 | 36135.6027 | 4400 | $3d^4(^5D)4s$ | a ⁶ D | | - | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | 0.00007 | 12SAN/NAV |
| 2767.2530 | 36126.250 | 9 | 3d ⁴ (¹ G1)4s 3d ⁴ (³ D)4s | c ² G c ⁴ D | | - | $3d^4(^{1}G1)4p$ $3d^4(^{3}D)4p$ | $w^{2}G^{o}$ $x^{4}P^{o}$ | 9/2 | 0.0015 0.00017 | 12SAN/NAV |
| 2767.61510 2767.6321 | 36121.524 36121.30 | 43 9 | $3d^{4}(^{3}D)4s$ | c D c ⁴ D | | _ | $3d^4(^{1}G1)4p$ | x P x ² F ^o | 5/2 5/2 | 0.00017 | 12SAN/NAV 12SAN/NAV |
| 2768.1572 | 36114.450 | 16 | $3d^4(^3F)4s$ | a ⁴ F | | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 7/2 | 0.0019 | 12SAN/NAV |
| 2768.53914 | 36109.4684 | 130 | $3d^4(^5D)4p$ | z ⁴ D° | | _ | $3d^4(^5D)4d$ | e ⁴ F | 5/2 | 0.0008 | 12SAN/NAV |
| 2768.58739 | 36108.8392 | 390 | $3d^4(^3D)4s$ | c ⁴ D | | _ | $3d^4(^3D)4p$ | w ⁴ F° | 7/2 | 0.00007 | 12SAN/NAV |
| 2769.24866 | 36100.2172 | 200 | $3d^{4}(^{5}D)4p$ | $z^{4}D^{o}$ | | _ | $3d^4(^5D)4d$ | e ⁴ F | 7/2 | 0.00008 | 12SAN/NAV |
| 2769.68299 | 36094.5564 | 80 | $3d^4(^5D)4p$ | z $^4D^o$ | 1/2 | _ | $3d^4(^5D)4d$ | e ⁴ F | 3/2 | 0.00012 | 12SAN/NAV |
| 2770.14658 | 36088.516 | 33 | $3d^4(^3F1)4p$ | z ⁴ G° | | - | $3d^4(^3F1)5s$ | f ⁴ F | 3/2 | 0.00018 | 12SAN/NAV |
| 2771.2824 | 36073.726 | 17 | $3d^4(^3D)4s$ | c ⁴ D | | - | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.0003 | 12SAN/NAV |
| 2771.8368 | 36066.511 | 280 | $3d^4(^5D)4p$ | z ⁴ D° | | - | $3d^4(^5D)4d$ | e ⁴ F | 9/2 | 0.0004 | 12SAN/NAV |
| 2771.8572 | 36066.246 | 24 | $3d^4(^3H)4p$ | z ² H° | | - | $3d^45s$ | g ² G | 7/2 | 0.0004 | 12SAN/NAV |
| 2771.9586 | 36064.926 | 8 | $3d^4(^3F1)4p$ | z ⁴ G° | | - | $3d^4(^3F1)5s$ | f ⁴ F | 7/2 | 0.0011 | 12SAN/NAV |
| 2772.3434 | 36059.921 | 14 | $3d^4(^3G)4s$ | b ⁴ G c ⁴ D | | - | $3d^4(^3G)4p$ | ⁴ F ^o w ⁴ F ^o | 5/2 | 0.0004 | 12SAN/NAV |
| 2773.1608 2773.30727 | 36049.293 36047.3889 | 8 | 3d ⁴ (³ D)4s 3d ⁴ (³ P)4s | c D b ⁴ P | | - | $3d^4(^3D)4p$ $3d^4(^3P1)4p$ | w F ^o y ⁴ P ^o | 5/2 3/2 | 0.0007 0.00012 | 12SAN/NAV 12SAN/NAV |
| 2774.43189 | 36047.3889 | 80 75 | $3d^{4}(^{1}G1)4s$ | вР c ² G | | _ | $3d^{4}(^{1}G1)4p$ | y P w ² G ^o | 3/2 7/2 | 0.00012 | 12SAN/NAV |
| 2774.43169 | 36019.698 | 22 | $3d^4(^3F1)4p$ | z ⁴ G° | | _ | $3d^4(^3F1)5s$ | f ⁴ F | 5/2 | 0.00012 | 12SAN/NAV |
| 2775.95354 | 36013.027 | 48 | $3d^4(^5D)4p$ | z ⁴ D° | | _ | $3d^4(^5D)4d$ | e ⁴ F | 3/2 | 0.0003 | 12SAN/NAV |
| | | | \ - / P | | | | | | | | |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Classi | fic | ation | | | Uncertainty of observed | |
|-------------------------|----------------------------|----------------|---|--|-------------|-----|---|--|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 110 | Configuration | Term | | wavelength (Å) | Source of line |
| 2776.6490 | 36004.008 | 37 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2776.8775 | 36001.045 | 23 | $3d^4(^5D)4p$ | z ⁶ F° | | _ | $3d^4(^5D)5s$ | e ⁶ D | 7/2 | 0.0004 | 12SAN/NAV |
| 2777.032 | 35999.04 | 6 | $3d^4(^3F1)4p$ | z ⁴ G ^o | 9/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 9/2 | 0.003 | 12SAN/NAV |
| 2777.9193 | 35987.544 | 17 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 3/2 | 0.0005 | 12SAN/NAV |
| 2778.06821 | 35985.6155 | 190 | $3d^4(^1G1)4s$ | c ² G | | _ | $3d^4(^1G1)4p$ | w ² G ^o | 9/2 | 0.00007 | 12SAN/NAV |
| 2778.1184 | 35984.965 | 11 | $3d^4(^3G)4s$ | b ⁴ G | | - | $3d^4(^3G)4p$ | ⁴ F ^o | 7/2 | 0.0015 | 12SAN/NAV |
| 2778.24218 | 35983.3623 | 78 | $3d^4(^5D)4p$ | $z_{2}^{4}D^{o}$ | | - | $3d^4(^5D)4d$ | e ⁴ F | 5/2 | 0.00012 | 12SAN/NAV |
| 2778.2775 | 35982.90 | 8 | $3d^{5}$ | a ² D | | - | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | 0.0017 | 12SAN/NAV |
| 2778.5035 | 35979.978 | 8 | $3d^5$ | a ² F y ⁴ D° | | - | $3d^4(^3\text{F1})4p$ | z ² F ^o f ⁴ P | 5/2 | 0.0013 | 12SAN/NAV |
| 2778.6197 2778.8139 | 35978.474 35975.959 | 16 34 | 3d ⁴ (³ P1)4p 3d ⁴ (⁵ D)4p | z ⁶ F° | | _ | 3d ⁴ (³ P1)5s 3d ⁴ (⁵ D)5s | e ⁶ D | 3/2 5/2 | 0.0006 0.0003 | 12SAN/NAV 12SAN/NAV |
| 2778.9295 | 35973.939 | 34 15 | 3 <i>a</i> (D)4 <i>p</i> 3 <i>d</i> ⁵ | c ² F | | _ | $3d^4(^{1}G1)4p$ | w ² G° | 7/2 | 0.0003 | 12SAN/NAV |
| 2780.0617 | 35959.813 | 19 | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | | _ | $3d^45s$ | g ² G | 7/2 | 0.0012 | 12SAN/NAV |
| 2780.29392 | 35956.8094 | 340 | $3d^4(^3G)4s$ | b ⁴ G | | _ | $3d^4(^3G)4p$ | ${}^{4}F^{0}$ | 5/2 | 0.00007 | 12SAN/NAV |
| 2780.32101 | 35956.4591 | 210 | $3d^4(^3D)4s$ | c ⁴ D | | _ | $3d^4(^3D)4p$ | w ⁴ F° | 5/2 | 0.00008 | 12SAN/NAV |
| 2780.89207 | 35949.0758 | 130 | $3d^4(^3P)4s$ | b ⁴ P | | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.00009 | 12SAN/NAV |
| 2781.0617 | 35946.883 | 47 | $3d^4(^3G)4s$ | b ² G | | _ | $3d^4(^1G1)4p$ | x ² H ^o | 9/2 | 0.0002 | 12SAN/NAV |
| 2781.48881 | 35941.3637 | 79 | $3d^4(^5D)4p$ | z ⁴ D ^o | | _ | $3d^4(^5D)4d$ | e ⁴ F | 7/2 | 0.00011 | 12SAN/NAV |
| 2781.5666 | 35940.359 | 38 | $3d^4(^5D)4p$ | z ⁶ F° | 1/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 3/2 | 0.0002 | 12SAN/NAV |
| 2781.7552 | 35937.922 | 20 | $3d^4(^3F1)4p$ | z ⁴ G ^o | | _ | $3d^4(^3F1)5s$ | f ⁴ F | 7/2 | 0.0006 | 12SAN/NAV |
| 2782.1390 | 35932.96 | 6 | $3d^5$ | c ² F | | _ | $3d^4(^1G1)4p$ | w ² G ^o | 9/2 | 0.0020 | 12SAN/NAV |
| 2782.35599 | 35930.1624 | 110 | $3d^4(^3G)4s$ | b ⁴ G | | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.00009 | 12SAN/NAV |
| 2782.4310 | 35929.194 | 17 | $3d^4(^3F)4s$ | a ⁴ F | | - | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | 0.0005 | 12SAN/NAV |
| 2782.4790 | 35928.574 | 10 | $3d^4(^3H)4p$ | z ² H ^o | | - | $3d^45s$ | g ² G | 9/2 | 0.0007 | 12SAN/NAV |
| 2782.58637 | 35927.188 | 44 | $3d^4(^3G)4s$ | b ² G z ⁶ P° | | - | $3d^4(^1G1)4p$ | x ² F ^o e ⁴ D | 5/2 | 0.00019 | 12SAN/NAV |
| 2783.048 2783.84400 | 35921.23 35910.958 | 4 42 | $3d^4(^5D)4p$ $3d^4(^3D)4s$ | c ⁴ D | | _ | $3d^4(^5D)5s$ $3d^4(^3D)4p$ | w ⁴ F° | 3/2 3/2 | 0.004 0.00019 | 12SAN/NAV |
| 2784.011 | 35910.938 | 5 | $3d^4(^3D)4p$ | w ⁴ D° | | _ | $3d^4(^5D)5d$ | ⁶ S | 5/2 | 0.00019 | 12SAN/NAV 12SAN/NAV |
| 2784.1857 | 35906.551 | 20 | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | | _ | $3d^45s$ | g ² G | 9/2 | 0.0004 | 12SAN/NAV |
| 2784.30 | 35905.331 | 4 w | $3d^5$ | b ⁴ F | | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 2785.1049 | 35894.701 | 25 | $3d^4(^3F)4s$ | a ⁴ F | | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.0004 | 12SAN/NAV |
| 2785.32 | 35891.93 | 2 | $3d^4(^1G1)4s$ | c ² G | | _ | $3d^4(^1G1)4p$ | w ² G ^o | 7/2 | 0.01 | 51KIE |
| 2785.69263 | 35887.1282 | 480 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 7/2 | 0.00007 | 12SAN/NAV |
| 2786.30 | 35879.31 | 2 | $3d^4(^3G)4s$ | b ⁴ G | | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 9/2 | 0.01 | 51KIE |
| 2786.46757 | 35877.1482 | 160 | $3d^4(^3D)4s$ | c ⁴ D | | _ | $3d^4(^3D)4p$ | $w_{4}^{4}F^{o}$ | 3/2 | 0.00008 | 12SAN/NAV |
| 2786.5492 | 35876.097 | 12 | $3d^4(^3P1)4p$ | y ⁴ D ^o | | - | $3d^4(^3P1)5s$ | f ⁴ P | 1/2 | 0.0006 | 12SAN/NAV |
| 2787.12347 | 35868.7056 | 120 | $3d^4(^5D)4p$ | z ⁶ F° | | _ | $3d^4(^5D)5s$ | e ⁶ D | 1/2 | 0.00009 | 12SAN/NAV |
| 2787.3212 | 35866.161 | 9 | $3d^4(^3H)4s$ | a ² H b ⁴ P | | _ | $3d^4(^3G)4p$ | x ⁴ G ^o y ⁴ P ^o | 9/2 | 0.0009 | 12SAN/NAV |
| 2787.61739 | 35862.3506 35858.744 | 370 | 3d ⁴ (³ P)4s 3d ⁴ (³ G)4s | b ² G | 5/2 · 9/2 · | - | $3d^4(^3P1)4p$ $3d^4(^1I)4p$ | ² I ^o | 5/2 11/2 | 0.00007 0.0004 | 12SAN/NAV |
| 2787.8978 2787.91434 | 35858.744 | 31 170 | $3d^{4}(^{5}D)4p$ | z ⁶ F° | | _ | $3d^4(^5D)5s$ | e ⁶ D | 3/2 | 0.0004 | 12SAN/NAV 12SAN/NAV |
| 2788.7257 | 35848.099 | 6 | $3d^5$ | a ² D | | _ | $3d^4(^3F1)4p$ | z ² D° | 3/2 | 0.0008 | 12SAN/NAV |
| 2789.0836 | 35843.499 | 20 | $3d^4(^3F)4s$ | a ⁴ F | | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | 0.0004 | 12SAN/NAV |
| 2789.29198 | 35840.8212 | 200 | $3d^4(^5D)4p$ | z ⁶ F° | | _ | $3d^4(^5D)5s$ | e ⁶ D | 5/2 | 0.00008 | 12SAN/NAV |
| 2789.34849 | 35840.0952 | 180 | $3d^{4}(^{1}F)4s$ | $d^{2}F$ | | _ | $3d^4(^1F)4p$ | v^2D^o | 5/2 | 0.00007 | 12SAN/NAV |
| 2789.39789 | 35839.4605 | 65 | $3d^5$ | c ² F | | _ | $3d^4(^1G1)4p$ | w^2G^o | 7/2 | 0.00014 | 12SAN/NAV |
| 2790.5622 | 35824.508 | 9 | $3d^4(^5D)4p$ | z ⁴ D ^o | 7/2 | _ | $3d^4(^5D)4d$ | e ⁴ F | 5/2 | 0.0007 | 12SAN/NAV |
| 2790.64 | 35823.51 | 1 | $3d^4(^3F)4s$ | d ⁴ F | | _ | $3d^4(^3F2)4p$ | t ² F ^o | 5/2 | 0.01 | 51KIE |
| 2790.9370 | 35819.697 | 19 | $3d^4(^1F)4s$ | d ² F | | _ | $3d^4(^1F)4p$ | v ² D° | 5/2 | 0.0004 | 12SAN/NAV |
| 2791.37318 | 35814.1003 | 190 | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | | - | $3d^4(^5D)5s$ | e ⁶ D | 7/2 | 0.00008 | 12SAN/NAV |
| 2791.470 | 35812.86 | 5 | $3d^5$ | a ² D | | - | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | 0.003 | 12SAN/NAV |
| 2791.6234 | 35810.890 | 13 * | $3d^4(^5D)4p$ | z ⁶ P° z ⁴ G° | | - | $3d^4(^5D)5s$ | e ⁴ D | 1/2 | 0.0006 | 12SAN/NAV |
| 2791.6234 2791.6995 | 35810.890 35809.914 | 13 * | 3d ⁴ (³ F1)4p 3d ⁴ (³ G)4s | z 'G' b ² G | | _ | $3d^4(^3H)5s$ $3d^4(^3D)4p$ | e ² H w ⁴ F ^o | 11/2 5/2 | 0.0006 0.0004 | 12SAN/NAV 12SAN/NAV |
| 2791.6995 2792.15502 | 35809.914 | 17 540 | $3d^{4}(^{3}G)4s$ | b ⁴ G | | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 5/2 9/2 | 0.0004 | 12SAN/NAV |
| 2792.13302 | 35799.52 | 5 | $3d^4(^3D)4s$ | c ⁴ D | | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.0007 | 12SAN/NAV |
| 2792.7800 | 35796.06 | 5 | $3d^4(^3H)4s$ | a ² H | | _ | $3d^4(^3G)4p$ | x ⁴ G ^o | 7/2 | 0.002 | 12SAN/NAV |
| 2793.49677 | 35786.8761 | 90 | $3d^4(^5D)4p$ | z ⁶ F° | | _ | $3d^4(^5D)5s$ | e ⁶ D | 1/2 | 0.0010 | 12SAN/NAV |
| 2793.6464 | 35784.959 | 16 | $3d^4(^3P)4s$ | b ⁴ P | | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.0005 | 12SAN/NAV |
| 2794.35678 | 35775.8627 | 120 | $3d^4(^5D)4p$ | z ⁶ F ^o | | _ | $3d^4(^5D)5s$ | e ⁶ D | 9/2 | 0.00009 | 12SAN/NAV |
| 2795.2112 | 35764.928 | 6 | $3d^4(^3F1)4p$ | z ⁴ G ^o | | _ | $3d^4(^3H)5s$ | e ² H | 9/2 | 0.0014 | 12SAN/NAV |
| 2795.32 | 35763.54 | 2 | $3d^4(^3H)4s$ | a ² H | | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.01 | 51KIE |
| 2796.1053 | 35753.492 | 8 | $3d^4(^3P1)4p$ | z^2S^o | 1/2 | _ | $3d^4(^3P1)5s$ | e ² P | 1/2 | 0.0012 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Class | ific | ation | | | Uncertainty of observed | |
|-------------------------|----------------------------|-------------|---|---------------------------------------|--------------|-------|----------------------------------|---|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | illic | Configuration | Term | | wavelength (Å) | Source of line |
| 2796.2929 | 35751.09 | 5 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | _ | $3d^44d$ | f ² I | 11/2 | 0.0016 | 12SAN/NAV |
| 2797.6581 | 35733.648 | 8 | $3d^4(^3H)4p$ | z ² G° | 7/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 5/2 | 0.0012 | 12SAN/NAV |
| 2798.2575 | 35725.994 | 47 * | $3d^4(^5D)4p$ | z^4F^o | 7/2 | _ | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | 0.0002 | 12SAN/NAV |
| 2798.2575 | 35725.994 | 47 * | $3d^4(^3P1)4p$ | y ⁴ D ^o | 7/2 | _ | $3d^4(^3P1)5s$ | f ⁴ P | 5/2 | 0.0002 | 12SAN/NAV |
| 2798.46148 | 35723.3904 | 210 | $3d^4(^5D)4p$ | z ⁶ F ^o | 5/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 3/2 | 0.00008 | 12SAN/NAV |
| 2798.64522 | 35721.0451 | 92 * | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | - | $3d^4(^3F2)4p$ | v ⁴ F ^o | 9/2 | 0.00011 | 12SAN/NAV |
| 2798.64522 | 35721.0451 | 92 * | $3d^4(^3G)4p$ | ⁴ F ^o | 5/2 | _ | $3d^44d$ | g ⁴ H | 7/2 | 0.00011 | 12SAN/NAV |
| 2798.76147 | 35719.5615 | 60 | $3d^5$ | a ² D | 5/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | 0.00015 | 12SAN/NAV |
| 2800.16765 | 35701.6249 | 110 | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^1D1)4p$ | v ² F ^o | 7/2 | 0.00009 | 12SAN/NAV |
| 2800.76516 | 35694.0087 | 650 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | 0.00007 | 12SAN/NAV |
| 2801.86 | 35680.06 | 3 R | $3d^4(^3P)4s$ | c ⁴ P z ⁴ G° | 3/2 | - | $3d^4(^3F2)4p$ | w ⁴ G ^o f ⁴ F | 5/2 | 0.01 | 00WAG |
| 2802.3753 | 35673.501 | 45 | 3d ⁴ (³ F1)4p 3d ⁵ | a ² I | 11/2 13/2 | _ | $3d^4(^3F1)5s$ $3d^4(^3H)4p$ | z ⁴ I° | 9/2 | 0.0002 0.0007 | 12SAN/NAV |
| 2803.2171 2803.34194 | 35662.789 35661.2011 | 13 61 | $3a$ $3d^5$ | a 1 a ² D | 5/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 15/2 5/2 | 0.0007 | 12SAN/NAV 12SAN/NAV |
| 2803.91770 | 35653.8788 | 360 | $3d^4(^5D)4p$ | z ⁶ F° | 7/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 5/2 | 0.00013 | 12SAN/NAV |
| 2804.8679 | 35641.801 | 15 | $3d^4(^3H)4p$ | z ² G° | 9/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 7/2 | 0.0006 | 12SAN/NAV |
| 2806.34 | 35623.1 | 3 w | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3H)4p$ | z ² H° | 9/2 | 0.02 | 51KIE |
| 2806.8866 | 35616.169 | 12 | $3d^4(^3P1)4p$ | y ⁴ D° | 3/2 | _ | $3d^4(^3P1)5s$ | f ⁴ P | 1/2 | 0.0006 | 12SAN/NAV |
| 2807.620 | 35606.87 | 8 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 1/2 | 0.002 | 12SAN/NAV |
| 2807.661 | 35606.35 | 4 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F ^o | 7/2 | 0.006 | 12SAN/NAV |
| 2808.01594 | 35601.845 | 67 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F ^o | 7/2 | 0.00016 | 12SAN/NAV |
| 2808.8384 | 35591.421 | 29 | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | _ | $3d^4(^3P1)5s$ | f ⁴ P | 3/2 | 0.0003 | 12SAN/NAV |
| 2809.276 | 35585.88 | 7 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.004 | 12SAN/NAV |
| 2809.5731 | 35582.115 | 13 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 3/2 | 0.0007 | 12SAN/NAV |
| 2809.62 | 35581.52 | 2 * | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^4(^1G1)4p$ | w^2G^o | 9/2 | 0.01 | 51KIE |
| 2809.62 | 35581.52 | 2 * | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.01 | 51KIE |
| 2809.99583 | 35576.7619 | 530 | $3d^4(^5D)4p$ | z ⁶ F ^o | 9/2 | - | $3d^4(^5D)5s$ | e ⁶ D | 7/2 | 0.00007 | 12SAN/NAV |
| 2810.2713 | 35573.275 | 6 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | - | $3d^4(^3F2)4p$ | v ⁴ F ^o | 5/2 | 0.0015 | 12SAN/NAV |
| 2810.46191 | 35570.862 | 75 | $3d^4(^5D)4p$ | z ⁴ P ^o | 1/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 3/2 | 0.00017 | 12SAN/NAV |
| 2810.7559 | 35567.142 | 22 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | - | $3d^4(^3P2)4p$ | v ⁴ D° | 3/2 | 0.0004 | 12SAN/NAV |
| 2810.8058 | 35566.511 | 12 | $3d^4(^3F)4s$ | a ⁴ F d ² D | 3/2 | - | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ $w^{2}P^{o}$ | 3/2 | 0.0006 | 12SAN/NAV |
| 2810.8827 | 35565.538 | 31 | 3d ⁵ 3d ⁴ (¹ D)4s | а ⁻ D c ² D | 5/2 3/2 | - | $3d^4(^1D1)4p$ | w P v ² F ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2811.04527 2811.3586 | 35563.4808 35559.52 | 89 6 | $3d^{5}$ | a ² I | 13/2 | _ | $3d^4(^1D1)4p$ $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 11/2 | 0.00011 0.0019 | 12SAN/NAV 12SAN/NAV |
| 2811.4574 | 35558.268 | 46 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F° | 5/2 | 0.0019 | 12SAN/NAV |
| 2811.4374 | 35551.4138 | 620 * | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | 0.0002 | 12SAN/NAV |
| 2811.99945 | 35551.4138 | 620 * | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{0}$ | 7/2 | 0.00007 | 12SAN/NAV |
| 2812.309 | 35547.50 | 6 | $3d^5$ | d ² D | 3/2 | _ | $3d^4(^1D1)4p$ | $w^{2}P^{o}$ | 3/2 | 0.004 | 12SAN/NAV |
| 2813.5284 | 35532.095 | 9 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.0015 | 12SAN/NAV |
| 2814.2262 | 35523.285 | 7 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | _ | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | 0.0012 | 12SAN/NAV |
| 2814.508 | 35519.73 | 8 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | 0.004 | 12SAN/NAV |
| 2814.9010 | 35514.770 | 21 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | _ | $3d^4(^3H)5s$ | e ² H | 11/2 | 0.0006 | 12SAN/NAV |
| 2816.1254 | 35499.329 | 8 | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | _ | $3d^4(^3F1)5s$ | f ² F | 5/2 | 0.0010 | 12SAN/NAV |
| 2816.5181 | 35494.38 | 6 | $3d^4(^3P)4s$ | b ² P | 3/2 | _ | $3d^4(^3P2)4p$ | v ² P ^o | 1/2 | 0.0017 | 12SAN/NAV |
| 2816.84013 | 35490.3225 | 150 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.00009 | 12SAN/NAV |
| 2816.88431 | 35489.7659 | 130 | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.00011 | 12SAN/NAV |
| 2816.95939 | 35488.8201 | 760 | $3d^4(^5D)4p$ | z ⁶ F ^o | 11/2 | - | $3d^4(^5D)5s$ | e ⁶ D | 9/2 | 0.00007 | 12SAN/NAV |
| 2817.5441 | 35481.456 | 19 | $3d^5$ | d ² D | 3/2 | - | $3d^4(^1D1)4p$ | $w^2 P^o$ | 1/2 | 0.0005 | 12SAN/NAV |
| 2817.5885 | 35480.897 | 11 | $3d^5$ | a ² D | 3/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.0009 | 12SAN/NAV |
| 2817.7467 | 35478.905 | 23 | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | - | $3d^4(^3\text{H})5s$ | e ² H | 9/2 | 0.0005 | 12SAN/NAV |
| 2817.9213 | 35476.706 | 10 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.0007 | 12SAN/NAV |
| 2817.9600 | 35476.219 | 25 | 3d ⁴ (³ G)4s 3d ⁵ | b ⁴ G a ² I | 11/2 | - | $3d^4(^3G)4p$ | y ⁴ H° z ⁴ I° | 11/2 | 0.0004 | 12SAN/NAV |
| 2818.0798 2818.35429 | 35474.711 35471.2563 | 9 500 | $3d^4(^3G)4s$ | a 1 b ⁴ G | 11/2 7/2 | _ | $3d^4(^3H)4p$ $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 9/2 | 0.0009 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2818.7089 | 35466.794 | 10 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^4(^3F2)4p$ | y H v ⁴ F ^o | 7/2 | 0.00007 | 12SAN/NAV |
| 2819.16 | 35461.12 | 2 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3H)4p$ | z ² G° | 9/2 | 0.009 | 51KIE |
| 2819.10 | 35460.5052 | 84 | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 1/2 | 0.00015 | 12SAN/NAV |
| 2822.01125 | 35425.2925 | 410 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 7/2 | 0.00013 | 12SAN/NAV |
| 2822.36777 | 35420.8178 | 1600 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | _ | $3d^4(^3H)4p$ | z ⁴ I° | 15/2 | 0.00007 | 12SAN/NAV |
| 2824.5361 | 35393.627 | 22 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^4(^3F2)4p$ | v ⁴ F ^o | 3/2 | 0.0005 | 12SAN/NAV |
| 2825.5011 | 35381.540 | 38 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | 0.0003 | 12SAN/NAV |
| 2825.7338 | 35378.626 | 14 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^4(^3F2)4p$ | v^4F^o | 3/2 | 0.0008 | 12SAN/NAV |
| | 35375.901 | 18 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.0006 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Name | Observed air | Observed wave | Intensity | | | Classi | fic | ation | | | Uncertainty of observed | _ |
|--|-------------------|----------------------------|-------------|---------------|------------------|--------|------|-------------------|-------------------------------|------|-------------------------|------------------------|
| 2826.1505 38374.01 11 3876°P348 d FF 5/2 386°P349 v PP 5/2 0.0003 12826.45071 38371.199 30 36°P3484 d FF 7/2 384°P349 v PP 5/2 0.0006 12826.74487 38376.199 30 36°P3484 d FF 7/2 384°P349 v PP 5/2 0.0006 12827.5907 38350.894 d 11 386°P349 a PP 5/2 384°44 d FF 7/2 386°P349 v PP 7/2 0.0001 9 12827.5907 38350.894 d 12 386°P349 a PP 3/2 384°P349 v PP 7/2 0.0003 12827.5907 38350.894 d 12 386°P349 a PP 3/2 384°P349 v PP 7/2 0.0003 12830.0942 38324.100 12 386°P349 a PP 3/2 386°P349 v PP 7/2 0.0003 12830.0942 38324.100 12 386°P349 a PP 3/2 386°P349 v PP 7/2 0.0006 12830.0591 38322.175 31 386°P349 a PP 3/2 386°P349 v PP 7/2 0.0006 12830.0591 38319.4718 100 386°P349 a PP 3/2 386°P349 v PP 7/2 0.0006 12830.0591 38319.6110 180 386°P349 a PP 3/2 386°P349 v PP 7/2 0.0006 12830.0592 38314.0610 180 386°P349 a PP 1/2 386°P349 v PP 7/2 0.0007 12830.0592 3831.0591 38319.0594 386°P349 v PP 1/2 386°P349 | wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | | iiic | | Term | | wavelength (Å) | Source of line |
| 2826.4071 3371.40 37 346°C94s b 6'G 9/2 - 346°C94p y 11" 9/2 0.0003 1 2326.4071 33370.199 30 346°C94s b 17.2 346°C24p y 10" 5/2 0.0004 1 2326.74487 3536.5973 48 346°C914p z 2 5" 5/2 - 34844 f 1 11 7.2 0.0003 1 2326.7505 35340.649 28 346°C94s a 10 3/2 - 346°C94p y 10" 7/2 0.0003 2 2328.7705 35340.649 28 346°C94s a 10 3/2 - 346°C94p y 11" 7/2 0.0003 2 2330.0201 35321.75 31 30 346°C94s a 10 3/2 - 346°C94p y 11" 7/2 0.0003 2 2330.04617 35321.75 31 30 346°C94s a 11 1/2 - 346°C94p y 11" 7/2 0.0003 2 2330.66183 35316.781 10 180 346°C94s a 11 1/2 - 346°C94p y 11" 7/2 0.0003 2 2330.65183 35316.10 180 346°C94s a 11 1/2 - 346°C94p y 11" 7/2 0.0003 2 2330.929 35312.907 54 8 R 346°C94p a 11 1/2 - 346°C94s a 11 1/2 - 346°C94s a 11 1/2 0.0007 2 2330.5234 2 330.0000 2 2 33312.24 8 3828.24 2 340 346°C94p a 11 1/2 - 346°C94s a 11 1/2 - 346°C94p a 11 1/ | 2826.02808 | 35374.9425 | 130 | $3d^4(^5D)4p$ | | 5/2 | _ | | | 7/2 | 0.00011 | 12SAN/NAV |
| 2826.7487 | 2826.047 | | | | | | | | | | | 12SAN/NAV |
| 22627.9507 3536.8794 48 34°CP1948 d F 92 34°CP2949 V 95° 7/2 0.00003 1 2283.7705 35340.649 28 34° a 2D 3/2 34°CP3149 z 2°P° 1/2 0.0003 1 2283.7705 35340.649 28 34° a 2D 3/2 34°CP3149 z 2°P° 1/2 0.0003 1 2283.7705 35340.649 28 34° a 2D 3/2 34°CP3149 z 2°P° 1/2 0.0003 1 2283.7705 35340.649 28 34° a 2D 3/2 34°CP3149 z 2°P° 1/2 0.0003 1 2283.0251 35324.720 12 34°CP3144 a 4°H 9/2 34°CP3149 z 2°P° 1/2 0.0003 1 2283.0251 35324.720 12 34°CP3144 a 4°H 11/2 34°CP3149 z 2°P° 1/2 0.0003 1 2283.03623 35314.2871 10 80 34°CP3149 a 4°H 13/2 34°CP3149 z 2°P° 1/2 0.00007 1 2283.03623 35314.2874 10 34°CP3149 z 2°P° 3/2 34°CP3149 z 2°P° 1/2 0.00007 1 2283.03623 35312.44 83 R 34°CP3149 z 2°P° 1/2 34°CP3149 z 2°P° 1/2 0.00007 1 2283.1529 35312.647 83 R 34°CP3149 z 2°P° 1/2 34°CP3149 z 2°P° 1/2 0.00007 1 2283.2453 35318 35312.44 83 R 34°CP3149 z 2°P° 1/2 34°CP3149 z 2°P° 1/2 0.00002 1 2283.24507 35294.6663 240 34°CP3149 z 2°P° 1/2 34°CP3149 y 2°P° 1/2 0.00002 1 2283.24518 35325.8481 11 34°CP3144 a 3°H 11/2 34°CP3149 y 2°P° 1/2 0.00002 1 2283.243230 35325.8588 3 R 34°CP3149 z 2°P° 1/2 34°CP3149 y 2°P° 1/2 0.00008 1 2283.243240 35277.5891 19 34°CP3148 a 3°H 9/2 34°CP3149 y 2°P° 1/2 0.00008 1 2283.243240 35277.5897 260 34°CP3148 a 3°H 9/2 34°CP3149 y 2°P° 1/2 0.00008 1 2283.25248 35254.350 1000 34°CP3148 a 3°H 9/2 34°CP3149 y 2°P° 1/2 0.00008 1 2283.75601 35224.650 360 380 34°CP3149 a 3°P° 1/2 34°CP3149 y 2°P° 1/2 0.00008 1 2283.75602 3523.1401 16 34°CP3148 a 3°H 172 34°CP3149 y 2°P° 1/2 0.00008 1 2283.75602 3523.1401 16 34°CP3148 a 3°H 172 34°CP3149 y 3°P° 1/2 0.00008 1 2283.75603 35224.687 30 34°CP3149 a 3°P° 3/2 34°CP3149 y 3°P° 1/2 0.00008 1 2283.75602 3523.1401 16 34°CP3148 a 3°H 172 34°CP3149 y 3°P° 1/2 0.00008 1 2283.75603 35224.687 30 34°CP3148 a 3°H 172 34°CP3149 y 3°P° 1/2 0.00008 1 2283.75603 35224.687 30 34°CP3148 a 3°H 172 34°CP3149 y 3°P° 1/2 0.00008 1 2283.75603 35224.687 30 34°CP3148 a 3°H 172 34°CP3149 y 3°P° 1/2 0.00008 1 2283.75601 3524.687 30 34°CP3148 a 3°H 172 34°CP3149 y 3°P° 1/2 0.00008 1 2283.75601 3524.687 30 3 | | | | | | | | | | | | 12SAN/NAV |
| 2827.9707 \$5550.894 41 \$\frac{3}{4}\chicket^2 \text{Pisk} \text{ a}^2 \text{ b}^2 \text{ 92} = \frac{3}{4}\chicket^2 \text{Pisk} \text{ v}^2 \text{ p}^2 \text{ 77} \text{ 0.0003} \text{ 2283.0701} \text{ 25534.100} \text{ 12} \text{ 23} \text{ 34}\chicket^2 \text{ 148} \text{ a}^2 \text{ 148} \text{ 92} = \frac{3}{4}\chicket^2 \text{ 148} \text{ v}^2 \text{ 17} \text{ 0.0003} \text{ 230.0501} \text{ 35324.170} \text{ 12} \text{ 23} \text{ 34}\chicket^2 \text{ 148} \text{ a}^2 \text{ 141} \text{ 122} \text{ 34}\chicket^2 \text{ 148} \text{ 0.00007} \text{ 15331.04183} \text{ 100} \text{ 34}\chicket^2 \text{ 148} \text{ a}^2 \text{ 141} \text{ 122} \text{ 34}\chicket^2 \text{ 148} \text{ 0.00007} \text{ 122} \text{ 0.00007} \text{ 0.000007} \text{ 2330.0523} \text{ 35312.0471} \text{ 100} \text{ 34}\chicket^2 \text{ 0.00007} \text{ 2}^2 \text{ 14} \text{ 100} \text{ 34}\chicket^2 \text{ 0.00007} \text{ 2} \text{ 2833.0522} \text{ 0.00007} \text{ 35312.0707} \text{ 34} \text{ 36}\chicket^2 \text{ 0.00007} \text{ 2233.0523} \text{ 0.00007} \text{ 35312.0707} \text{ 34} \text{ 36}\chicket^2 \text{ 0.00007} \text{ 2233.0523} \text{ 0.00006} \text{ 35312.0707} \text{ 34} \text{ 36}\chicket^2 \text{ 0.00007} \text{ 2233.0523} \text{ 0.00007} \text{ 2333.05220} \text{ 0.00007} \text{ 2334.0523} \text{ 0.00007} \text{ 0.00007} \text{ 0.00007} \text{ 2334.0500} \text{ 0.00007} \text{ 0.000007} \text{ 0.000007} \text{ 0.00007} \text{ 0.000007} \text{ 0.000007} \text{ 0.000007} \t | | | | | | | | | | | | 12SAN/NAV |
| 283.0942 3534.049 28 36° 12 34° 149.8 19 2 - 34° 149.4 2° 17 172 0.0003 12830.0942 3532.195 31 34° 149.8 19 2 - 34° 149.8 19 2 - 26° 772 0.0006 12830.201 3532.175 31 34° 149.8 19 2 - 34° 149.8 19 2 - 26° 772 0.0003 12830.66183 3531.4781 100 34° 149.8 1112 - 34° 149.8 112 - 26° 149.8 112 0.0007 12830.6823 3531.4781 100 34° 149.8 112 - 34° 149.8 112 - 26° 149.8 112 0.0007 12830.98225 3531.2007 54 34° 149.8 112 - 34° 149.8 112 - 34° 149.8 112 0.0007 12830.9929 3531.2007 54 34° 149.8 112 - 34° 149.8 112 - 34° 149.8 112 0.0007 12830.9929 3531.2007 54 34° 149.8 112 - 34° 149.8 112 - 34° 149.8 112 0.0007 12830.1521 35306.220 39 34° 149.8 112 - 34° 149.8 112 - 34° 149.8 112 0.0007 12831.391 35306.220 39 34° 149.8 112 - 34° 149.8 112 - 34° 149.8 112 0.0007 12831.391 35306.220 39 34° 149.8 112 - 34° 149.8 112 - 34° 149.8 112 0.0007 12831.391 35382.341 35283.391 35283.391 35283.391 35283.391 35283.391 11 34° 149.8 112 - 34° 149.8 112 - 34° 149.8 112 0.0000 12833.2934 35771.7897 260 34° 149.8 112 - 34° | | | | | | | | | | | | 12SAN/NAV |
| 2830.9291 35324.120 12 3d/chi4s a sh 9 2 - 3d/chi4p 2 2 c 7 72 0.0006 1 2830.3291 35322.17S 31 3d/chi4s a sh 112 - 3d/chi4p 2 c 7 12 132 0.0007 1 2830.8215 3531.2417 180 3d/chi4s a sh 112 - 3d/chi4p 2 c 1 132 0.0007 1 2830.82225 3531.2874 100 3d/chi4s a sh 112 - 3d/chi4p 2 c 1 132 0.0007 1 2830.82225 3531.2874 100 3d/chi4s a sh 132 - 3d/chi4s c 1 1 1 2 0.0007 1 2830.82225 3531.2874 100 3d/chi4s a sh 132 - 3d/chi4s c 1 1 1 2 0.0007 1 2831.8211 3330.220 39 3d/chi4s a sh 112 - 3d/chi4d sh 1 1 1 2 0.0002 1 2831.5211 3330.220 39 3d/chi4s a sh 112 - 3d/chi4d sh 1 1 1 2 0.01 (2 2 2 2 3 3 2 2 3 2 2 3 2 2 3 2 2 3 2 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 3 2 3 2 3 3 2 3 2 3 3 2 3 3 2 3 3 2 3 3 3 2 3 3 3 3 3 2 3 | | | | | | | | | | | | 12SAN/NAV 12SAN/NAV |
| 2830.46617 35319.4783 1200 3d*(*Pilbak a *H 1102 - 3d*(*Pilbak) 2 *T* 1372 0.00003 1 2830.66183 35319.4781 1200 3d*(*Pilbak) a *H 1102 - 3d*(*Pilbak) 2 *T* 1372 0.00007 1 2830.68225 35314.2874 100 3d*(*Pilbak) a *H 1102 - 3d*(*Pilbak) 2 *G* 1112 0.00007 1 2830.68225 35314.2874 100 3d*(*Pilbak) 2 *T* 1372 0.0002 1 2831.030 33314.284 83 R 3d*(*Pilbak) a *H 1102 - 3d*(*Pilbak) 1 *T* 1572 0.0002 1 2831.5291 33306.220 3 3d*(*Pilbak) a *H 1102 - 3d*(*Pilbak) 1 *T* 1572 0.0002 1 2832.45307 35294.6903 240 3d*(*Pilbak) a *H 1102 - 3d*(*Pilbak) a *K | | | | | | | | | | | | 12SAN/NAV |
| 2830.61583 35319.6170 180 3d*(*P1)48 a *H 11/2 - 3d*(*P1)4\(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}\) \(\frac{1}\) \(\fr | | | | | | | | | | | | 12SAN/NAV |
| 2830.8825 3 35314.2874 100 3d*c*Ph4s | | | | | | | | · / 1 | | | | 12SAN/NAV |
| 2831.9029 35312.907 54 34"cPb4s b 2"p" 32 - 34"cPb4d | | | 180 | | | 13/2 | _ | | | 11/2 | | 12SAN/NAV |
| 2831.030 | 2830.88225 | 35314.2874 | 100 | | | | _ | $3d^4(^5D)5s$ | | 3/2 | 0.00014 | 12SAN/NAV |
| 2831.5291 | | | | | | | - | | | | | 12SAN/NAV |
| 2832.84367 35294.6963 240 3df^cPj4s a 2+11/2 - 3df^cPj4p y 3-0° 9/2 0.00007 1 | | | | | | | | | | | | 00WAG |
| 2832.284 | | | | | | | | | | | | 12SAN/NAV |
| 2833.42909 | | | | | | | | | | | | 12SAN/NAV |
| 2834.29324 35271.7897 260 3d*(°P14s d²F 7/2 - 3d*(°P14p v²G° 9/2 0.00008 1 2834.899 35264.37 10 R 3d*(°D14p z °D° 5/2 - 3d*(°D14p v²G° 9/2 0.00007 1 2834.89 35264.37 10 R 3d*(°D14p z °D° 5/2 - 3d*(°D14p v²G° 9/2 0.0001 1 2835.8388 35259.405 88 3d*(°D14p z °D° 5/2 - 3d*(°D14p z °D° 5/2 0.001 1 2835.831 1 10000 3d*(°D14s b²F 7/2 - 3d*(°D14p y ²F° 1/2 0.00008 1 2836.831 1 3000 3d*(°D14s b²F 7/2 - 3d*(°D14p y ²F° 1/2 0.00008 1 2836.831 1 10000 3d*(°D14s b²F 7/2 - 3d*(°D14p y ²F° 1/2 0.00008 1 2836.831 1 10000 3d*(°D14s b²F 7/2 - 3d*(°D14p y ²F° 1/2 0.00008 1 2837.8692 35231.071 16 3d*(°P14s b²F 7/2 - 3d*(°P14s b²F 7/2 - 3d*(°P14b y y²F° 1/2 0.0005 1 2837.8693 35224.682 30 3d*(°P14s a a²H 13/2 - 3d*(°P14b y z °P° 1/2 0.0005 1 2838.8039 35224.682 30 3d*(°P14s a a²H 13/2 - 3d*(°P14b y z °P° 1/2 0.0003 1 2838.8325 35216.376 560 3d*(°D14s e °P) 3/2 - 3d*(°P14b y z °P° 1/2 0.0003 1 2839.2550 35210.01 33 3d*(°D14s e °P) 3/2 - 3d*(°P14b y z °P° 1/2 0.0003 1 2839.2550 35210.01 33 3d*(°D14s e °P) 3/2 - 3d*(°D14 | | | | | | | | | a 'K ² ⊏° | | | 00WAG |
| 2834.89 | | | | | | | | | y F | | | 12SAN/NAV 12SAN/NAV |
| 2834.89 35264.37 10 R 3d ⁶ | | | | | | | | | y ² G ^o | | | 12SAN/NAV |
| 2835.2888 3529.405 88 34c ¹ cD)4s a fD 9/2 - 3dc ¹ cD)4d | | | | | | | | | | | | 00WAG |
| 2836.47522 3524.6580 150 3d*c*ph4s a *p 9/2 - 3d*c*ph4p z *p*c* 11/2 0.00007 12836.47522 3524.6580 150 3d*c*ph4s b *p*F 7/2 - 3d*c*ph4p z *p*c* 7/2 0.00008 1 2837.5602 35231.071 16 3d*c*ph4p z *p*c* 12/2 - 3d*c*ph4p z *p*c* 14/2 0.0002 1 2837.5602 35231.071 16 3d*c*ph4p z *p*c* 14/2 - 3d*c*ph4p z *p*c* 14/2 0.0003 1 2837.5602 35231.071 14 3d*c*ph4s a *p*d*ph4p z *p*c* 2 *g*c* 9/2 0.0003 1 2837.96 3522.622 4 3d*c*ph4s a *p*d*ph4p z *p*c* 2 *g*c* 9/2 0.0003 1 2837.96 3522.622 4 3d*c*ph4s a *p*d*ph4p z *p*c* 2 *g*c* 9/2 0.0003 1 2838.8303 35224.682 30 3d*c*ph4p z *p*o* 3/2 - 3d*c*ph4p z *p*o* 7/2 - 3d*c*ph4p z *p*o* 7/2 0.00007 1 2838.83039 35224.682 30 3d*c*ph4p z *p*o* 3/2 - 3d*c*ph4p z *p*o* 7/2 - 3d*c*ph4p z *p*o* 7/2 0.00007 1 2838.8325 35216.376 560 3d*c*ph4p z *p*o* 3/2 - 3d*c*ph4p z *p*o* 7/2 - 3d*c*ph4p z *p*o* 7/2 0.00007 1 2839.8533 35210.401 33 3d*c*ph4p z *p*o* 3/2 - 3d*c*ph4p z *p*o* 7/2 0.00007 1 2839.9563 35210.401 33 3d*c*ph4p z *p*o* 3/2 - 3d*c*ph4p z *p*o* 7/2 0.0001 1 2839.8631 35202.614 24 3d*c*ph4p z *p*o* 3/2 - 3d*c*ph4p z *p*o* 9/2 0.0001 1 2839.8631 35202.614 24 3d*c*ph4p z *p*o* 7/2 - 3d*c*ph4p z *p*o* 9/2 0.0001 1 2839.8631 35202.614 24 3d*c*ph4p z *p*o* 7/2 - 3d*c*ph4p z *p*o* 7/2 0.0001 2840.4452 35200.7373 1000 3d*c*ph4p z *p*o* 7/2 0.0003 1 2841.13882 35186.8083 58 3d*c*ph4p z *p*o* 7/2 0.0003 1 2841.13882 35186.8083 58 3d*c*ph4p z *p*o* 7/2 0.0003 1 2841.13882 35186.8083 58 3d*c*ph4p z *p*o* 7/2 0.0003 1 2842.317 35172.22 15 3d*c*ph4p z *p*o* 7/2 0.0003 1 2842.317 35172.22 15 3d*c*ph4p z *p*o* 7/2 0.0002 1 2842.332 3510.7361 37 3d*c*ph4p z *p*o* 7/2 0.0003 1 2842.332 3510.7361 37 3d*c*ph4p z *p*o* 7/2 0.0003 1 2842.332 3510.7361 37 3d*c*ph4p z *p*o* 7/2 0.0002 1 2842.3332 3510.136 1 3d*c*ph4p z *p*o* 7/2 0.0002 1 3d*c*ph4p z *p*o* 7/2 0.0002 1 3d*c*ph4p z *p*o* 7/2 0.0000 1 3d*c*ph4p z *p*o* 7/2 0.00 | | | | | | | | | | | | 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| 2837.5692 35231.071 16 3df^{2}Fl)Ap y \(^{4}F^{\circ}\) 5/2 - 3df^{2}Fl)JSS \(^{7}F^{\circ}\) 7/2 0.0005 12837.8833 35227.171 44 3df^{2}HJA\$ a \(^{4}H\) 44 3df^{2}HJA\$ a \(^{4}H\) 7/2 - 3df^{2}Fl)JP\$ z \(^{4}G^{\circ}\) 9/2 0.0003 12838.8333 35227.171 44 3df^{2}HJA\$ a \(^{4}H\) 44 13/2 - 3df^{2}HJA\$ z \(^{4}I^{\circ}\) 13/2 0.01 52838.8333 35224.682 30 3df^{2}DJA\$ z \(^{4}D^{\circ}\) 3/2 - 3df^{2}DJA\$ \(^{4}D^{\circ}\) 4 \(^{4}I^{\circ}\) 3/2 0.0003 12838.78056 35216.0376 560 3df^{2}DJA\$ c \(^{4}D^{\circ}\) 4 \(^{4}G^{\circ}\) 9/2 - 3df^{2}DJA\$ \(^{4}D^{\circ}\) 4 \(^{4}G^{\circ}\) 4 \(^{4}G^{\circ}\) 3/2 0.0003 12838.78056 35216.0376 560 3df^{2}DJA\$ c \(^{4}D^{\circ}\) 4 \(^{4}G^{\circ}\) 4 \(^{4}G^{\circ}\) 4 \(^{4}G^{\circ}\) 3/2 2 \(^{4}G^{\circ}\) 3/2 \(^{4}G^{\circ}\) 4/3 \(^{4}G^{\circ} | 2836.47522 | 35244.6580 | 150 | | | 7/2 | _ | | y ² F ^o | | 0.00008 | 12SAN/NAV |
| 2837.96 | 2837.3600 | 35233.668 | 40 | | | 1/2 | _ | | | 1/2 | 0.0002 | 12SAN/NAV |
| 2837.96 | 2837.5692 | 35231.071 | 16 | | | | - | | | | 0.0005 | 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 51KIE |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | z ⁴ I ^o | | | 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 2840.4469 | 35195.379 | 41 | | | 5/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.0003 | 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 2841.13882 | 35186.8083 | 58 | | | | - | | | 5/2 | 0.00016 | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | 2842.317 | | | | | | _ | | | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | - | | w ⁴ D ^o | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | $3d^{4}(^{3}D)4p$ | | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | и ⁴ G | | | | | | | 51KIE |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | _ | | | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | 2847.6781 | 35106.011 | 14 | $3d^4(^3G)4p$ | | | _ | | | 7/2 | 0.0010 | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | 2848.12040 | 35100.5593 | 190 | $3d^4(^5D)4p$ | | 7/2 | _ | | | 7/2 | 0.00008 | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | 79 | | | | - | | | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | z ⁴ G° | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | х G , 4то | | | 12SAN/NAV 12SAN/NAV |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | | | | | | | | | 12SAN/NAV 12SAN/NAV |
| 2852.67611 35044.5065 93 $3d^4(^3D)4s$ c 4D $3/2$ – $3d^4(^3D)4p$ w $^4D^o$ $1/2$ 0.00015 12852.7907 35043.099 19 $3d^4(^3P)4s$ c 4P $3/2$ – $3d^4(^3P)4p$ v $^4F^o$ 5/2 0.0007 13 | | | | | | | | | | | | 12SAN/NAV |
| 2852.7907 35043.099 19 $3d^4(^3P)4s$ c^4P $3/2 - 3d^4(^3P)4p$ v^4F^0 5/2 0.0007 | | | | | | | | | | | | 12SAN/NAV |
| | | | | | | | | | | | | 12SAN/NAV |
| | 2853.1468 | 35038.725 | 22 | | b ⁴ F | | | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | 0.0004 | 12SAN/NAV |
| 2853.19990 35038.073 81 $3d^4(^3H)4s$ a 4H 9/2 $ 3d^4(^3F1)4p$ z $^4G^\circ$ 7/2 0.00019 1 | | | | $3d^4(^3H)4s$ | a ⁴ H | | _ | | z $^4G^{\rm o}$ | | | 12SAN/NAV |
| 2853.2677 35037.241 93 $3d^4(^3D)4s$ b 2D 5/2 $ 3d^4(^3D)4p$ x $^2D^o$ 5/2 0.0003 1 | 2853.2677 | 35037.241 | 93 | $3d^4(^3D)4s$ | b ² D | 5/2 | - | $3d^4(^3D)4p$ | x^2D^o | 5/2 | 0.0003 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Class | sific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|----------------|---|---|-------------|--------|--|--|-------------|-------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | ,,,,,, | Configuration | Term | | wavelength (Å) | Source of line |
| 2853.4046 | 35035.560 | 12 | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | _ | $3d^44d$ | g ⁴ H | 13/2 | 0.0008 | 12SAN/NAV |
| 2853.7271 | 35031.601 | 16 | $3d^4(^3G)4p$ | y ⁴ H ^o | 9/2 | _ | $3d^44d$ | f ⁴ H | 9/2 | 0.0006 | 12SAN/NAV |
| 2853.7644 | 35031.143 | 18 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^3F1)4p$ | x ⁴ D° | 5/2 | 0.0006 | 12SAN/NAV |
| 2854.02455 | 35027.9499 | 79 | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 7/2 | - | $3d^4(^5D)4d$ | f ⁴ D | 5/2 | 0.00015 | 12SAN/NAV |
| 2854.1428 | 35026.499 | 17 | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^4(^1G2)4p$ | s ² G° | 7/2 | 0.0009 | 12SAN/NAV |
| 2854.23 | 35025.43 | 3 | $3d^5$ $3d^4(^3G)4p$ | b ⁴ F y ² H ^o | 3/2 | - | 3d ⁴ (³ F1)4p 3d ⁴ 4d | x ⁴ D° g ⁴ G | 3/2 | 0.01 | 51KIE |
| 2854.3012 2854.5805 | 35024.555 35021.128 | 17 23 | $3a^{6} (G)4p$ | уп b ⁴ F | 11/2 9/2 | _ | $3d^4(^3F1)4p$ | g G x ⁴ D° | 11/2 7/2 | 0.0005 0.0005 | 12SAN/NAV 12SAN/NAV |
| 2854.63851 | 35020.4166 | 270 * | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | x D x ⁴ D ^o | 7/2 | 0.0003 | 12SAN/NAV |
| 2854.63851 | 35020.4166 | 270 * | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 7/2 | 0.00008 | 12SAN/NAV |
| 2855.0240 | 35015.688 | 47 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^3D)4p$ | w ⁴ D° | 3/2 | 0.0004 | 12SAN/NAV |
| 2855.06290 | 35015.2113 | 170 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^3G)4p$ | y^2F^o | 5/2 | 0.00009 | 12SAN/NAV |
| 2855.25 | 35012.92 | 120 R | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.01 | 00WAG |
| 2855.4307 | 35010.701 | 71 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^3D)4p$ | w ⁴ D ^o | 1/2 | 0.0002 | 12SAN/NAV |
| 2855.67299 | 35007.7309 | 3500 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | - | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | 0.00007 | 12SAN/NAV |
| 2856.3244 | 34999.747 | 53 | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.0003 | 12SAN/NAV |
| 2856.3443 | 34999.504 | 19 | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | - | $3d^4(^5D)5d$ | ⁴ D | 7/2 | 0.0009 | 12SAN/NAV |
| 2856.4097 | 34998.702 | 19 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | - | $3d^4(^3H)4p$ | z ⁴ I ^o | 9/2 | 0.0004 | 12SAN/NAV |
| 2856.76181 | 34994.3888 | 860 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.00007 | 12SAN/NAV |
| 2857.39862 | 34986.5902 | 490 | 3d ⁴ (⁵ D)4s 3d ⁴ (³ P)4s | a ⁴ D a ² P | 5/2 | - | $3d^4(^5D)4p$ | $z^{4}D^{o}$ $^{4}F^{o}$ | 7/2 3/2 | 0.00007 | 12SAN/NAV |
| 2857.99032 2858.1903 | 34979.3472 34976.900 | 78 17 | $3d^{4}(^{3}F)4s$ $3d^{4}(^{3}F)4s$ | a ⁻ P b ² F | 1/2 7/2 | _ | $3d^4(^3G)4p$ $3d^4(^3G)4p$ | y ² F° | 5/2 | 0.00016 0.0006 | 12SAN/NAV |
| 2858.1905 | 34976.900 | 680 | $3d^{4}(^{5}D)4s$ | в F a ⁴ D | 1/2 | _ | $3d^{4}(^{5}D)4p$ | y F z ⁴ D° | 3/2 | 0.0006 | 12SAN/NAV 12SAN/NAV |
| 2858.90953 | 34968.1010 | 2100 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | _ | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | 0.00007 | 12SAN/NAV |
| 2860.5004 | 34948.654 | 15 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 5/2 | 0.0004 | 12SAN/NAV |
| 2860.93129 | 34943.3909 | 1500 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | _ | $3d^4(^5D)4p$ | z ⁶ F° | 3/2 | 0.00007 | 12SAN/NAV |
| 2861.5277 | 34936.108 | 14 | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | _ | $3d^44d$ | f ⁴ H | 11/2 | 0.0007 | 12SAN/NAV |
| 2861.93749 | 34931.1061 | 110 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.00015 | 12SAN/NAV |
| 2862.56913 | 34923.3988 | 3200 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | _ | $3d^4(^5D)4p$ | z ⁶ F ^o | 7/2 | 0.00007 | 12SAN/NAV |
| 2863.6206 | 34910.576 | 9 * | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | - | $3d^4(^5D)5d$ | ⁶ D | 7/2 | 0.0011 | 12SAN/NAV |
| 2863.6206 | 34910.576 | 9 * | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | - | $3d^4(^5D)5d$ | ⁶ S | 5/2 | 0.0011 | 12SAN/NAV |
| 2865.10383 | 34892.5042 | 3500 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | - | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | 0.00007 | 12SAN/NAV |
| 2865.33205 | 34889.7252 | 790 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | - | $3d^4(^5D)4p$ | z ⁴ D° v ² G° | 1/2 | 0.00007 | 12SAN/NAV |
| 2865.67896 | 34885.5018 | 270 91 | 3d ⁴ (¹ F)4s 3d ⁴ (¹ G1)4s | d ² F c ² G | 5/2 9/2 | - | $3d^4(^1F)4p$ | v ² H ^o | 7/2 | 0.00007 | 12SAN/NAV |
| 2865.88225 2866.73980 | 34883.0273 34872.5930 | 2900 | $3d^4(^5D)4s$ | a ⁶ D | 3/2 | _ | $3d^4(^{1}G1)4p$ $3d^4(^{5}D)4p$ | х п z ⁶ F° | 11/2 3/2 | 0.00012 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2867.09398 | 34868.2853 | 1200 | $3d^4(^5D)4s$ | a D a ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.00007 | 12SAN/NAV |
| 2867.64706 | 34861.5606 | 2000 | $3d^4(^5D)4s$ | a ⁶ D | 1/2 | _ | $3d^4(^5D)4p$ | z ⁶ F° | 1/2 | 0.00007 | 12SAN/NAV |
| 2867.8159 | 34859.508 | 30 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D° | 5/2 | 0.0010 | 12SAN/NAV |
| 2867.957 | 34857.79 | 6 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | 0.007 | 12SAN/NAV |
| 2868.48716 | 34851.351 | 75 | $3d^4(^3H)4p$ | $z^{4}I^{o}$ | 9/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 7/2 | 0.00017 | 12SAN/NAV |
| 2868.6587 | 34849.267 | 13 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 1/2 | 0.0010 | 12SAN/NAV |
| 2869.6415 | 34837.332 | 13 | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | - | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | 0.0010 | 12SAN/NAV |
| 2869.7084 | 34836.520 | 23 | $3d^4(^5D)4p$ | z ⁴ D° | 1/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 1/2 | 0.0006 | 12SAN/NAV |
| 2870.43233 | 34827.7349 | 2400 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 5/2 | 0.00007 | 12SAN/NAV |
| 2870.6997 | 34824.491 | 19 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | - | $3d^4(^3P2)4p$ | v ⁴ D° | 3/2 | 0.0011 | 12SAN/NAV |
| 2871.4563 | 34815.316 | 49 | $3d^4(^3D)4s$ | b ² D | 5/2 | - | $3d^4(^1S1)4p$ | x ² P ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2872.5255 | 34802.358 | 22 | $3d^4(^3G)4p$ | y ⁴ H° a ⁶ D | 13/2 | - | 3d ⁴ 4d 3d ⁴ (⁵ D)4p | f ⁴ H z ⁶ F° | 13/2 | 0.0005 | 12SAN/NAV |
| 2873.48310 2873.48310 | 34790.7601 34790.7601 | 610 * 610 * | 3d ⁴ (⁵ D)4s 3d ⁴ (³ D)4s | b ² D | 3/2 3/2 | _ | $3d^{4}(^{1}S1)4p$ | $x^{2}P^{o}$ | 1/2 1/2 | 0.00007 0.00007 | 12SAN/NAV 12SAN/NAV |
| 2873.5991 | 34789.356 | 70 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.00007 | 12SAN/NAV |
| 2873.81446 | 34786.7488 | 850 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 1/2 | 0.0002 | 12SAN/NAV |
| 2874.0581 | 34783.800 | 14 * | $3d^5$ | a ² F | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.0015 | 12SAN/NAV |
| 2874.0581 | 34783.800 | 14 * | $3d^5$ | b ² H | 9/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0015 | 12SAN/NAV |
| 2874.0581 | 34783.800 | 14 * | $3d^4(^3G)4p$ | y ⁴ H ^o | 7/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | 0.0015 | 12SAN/NAV |
| 2874.5034 | 34778.412 | 47 | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^4(^1G2)4p$ | v^2H^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2875.02637 | 34772.086 | 71 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 9/2 | 0.00017 | 12SAN/NAV |
| 2875.98981 | 34760.4380 | 3400 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 7/2 | 0.00007 | 12SAN/NAV |
| 2876.24392 | 34757.3671 | 640 | $3d^4(^5D)4s$ | a ⁶ D | 5/2 | - | $3d^4(^5D)4p$ | $z^{6}F^{o}$ | 3/2 | 0.00007 | 12SAN/NAV |
| 2876.29540 | 34756.7450 | 340 | $3d^4(^1I)4s$ | b ² I | 13/2 | - | $3d^4(^1I)4p$ | ² K ^o | 15/2 | 0.00007 | 12SAN/NAV |
| 2876.3870 | 34755.638 | 58 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 3/2 | 0.0003 | 12SAN/NAV |
| 2876.6559 | 34752.390 | 53 | $3d^4(^{1}G1)4s$ | c ² G | 7/2 | - | $3d^4(^1G1)4p$ | x ² F ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2876.798 | 34750.67 | 8 * | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^3G)4p$ | y ² F ^o | 7/2 | 0.005 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | |
|-------------------|----------------------------|----------------|------------------------|-------------------------------|------|-------|------------------------|-------------------------------|------|-------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | | wavelength (Å) | Source of line |
| 2876.798 | 34750.67 | 8 * | $3d^4(^1D)4s$ | c ² D | 3/2 | _ | $3d^4(^1D1)4p$ | w ² D ^o | 5/2 | 0.005 | 12SAN/NAV |
| 2877.97550 | 34736.4558 | 450 | $3d^4(^5D)4s$ | a ⁶ D | 7/2 | _ | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | 0.00007 | 12SAN/NAV |
| 2878.44733 | 34730.7621 | 190 | $3d^4(^5D)4s$ | a ⁶ D | 9/2 | _ | $3d^4(^5D)4p$ | z ⁶ F ^o | 7/2 | 0.00008 | 12SAN/NAV |
| 2879.17 | 34722.05 | 10 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^4(^3P1)4p$ | z^2S^o | 1/2 | 0.01 | 51KIE |
| 2879.5824 | 34717.073 | 35 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 1/2 | 0.0006 | 12SAN/NAV |
| 2879.64956 | 34716.263 | 87 | $3d^4(^3H)4p$ | $z^{4}I^{o}$ | 11/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 9/2 | 0.00017 | 12SAN/NAV |
| 2879.7258 | 34715.344 | 19 | $3d^34s^2$ | c ⁴ F | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.0004 | 12SAN/NAV |
| 2880.0684 | 34711.215 | 49 | $3d^4(^5D)4p$ | z^4D^o | 5/2 | - | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | 0.0003 | 12SAN/NAV |
| 2880.86379 | 34701.6314 | 1100 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.00007 | 12SAN/NAV |
| 2881.86557 | 34689.5692 | 140 | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^1D1)4p$ | w^2D^o | 5/2 | 0.00010 | 12SAN/NAV |
| 2881.92087 | 34688.9035 | 90 | $3d^4(^3P)4s$ | a ² P | 1/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.00014 | 12SAN/NAV |
| 2882.919 | 34676.89 | 8 | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | _ | $3d^4(^5D)5d$ | ⁶ S | 5/2 | 0.003 | 12SAN/NAV |
| 2884.61 | 34656.57 | 1 | $3d^5$ | a ² F | 7/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | 0.01 | 51KIE |
| 2884.9638 | 34652.317 | 16 | $3d^4(^5D)4p$ | z ⁴ D ^o | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ P | 3/2 | 0.0007 | 12SAN/NAV |
| 2885.2838 | 34648.474 | 27 | $3d^4(^3F)4s$ | e ² F | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | $s^{2}F^{o}$ | 7/2 | 0.0004 | 12SAN/NAV |
| 2885.5505 | 34645.272 | 16 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 1/2 | 0.0006 | 12SAN/NAV |
| 2886.38 | 34635.32 | 7 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3D)4p$ | w 4F° | 5/2 | 0.01 | 51KIE |
| 2887.77179 | 34618.6236 | 88 | $3d^4(^1D)4s$ | c ² D | 3/2 | _ | $3d^4(^1D1)4p$ | w^2D^o | 3/2 | 0.00015 | 12SAN/NAV |
| 2888.1692 | 34613.860 | 27 | $3d^4(^5D)4p$ | z^4P^o | 5/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 3/2 | 0.0003 | 12SAN/NAV |
| 2888.2702 | 34612.650 | 21 | $3d^4(^3F1)4p$ | z ⁴ G ^o | 11/2 | - | $3d^4(^3H)5s$ | e ⁴ H | 13/2 | 0.0008 | 12SAN/NAV |
| 2888.62821 | 34608.3603 | 460 | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | - | $3d^4(^5D)5s$ | e ⁶ D | 9/2 | 0.00008 | 12SAN/NAV |
| 2888.72426 | 34607.2097 | 180 | $3d^5$ | a ² G | 9/2 | _ | $3d^4(^3G)4p$ | x ⁴ G ^o | 11/2 | 0.00010 | 12SAN/NAV |
| 2889.02171 | 34603.6467 | 160 | $3d^4(^3H)4p$ | $z^{4}I^{o}$ | 13/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 11/2 | 0.00008 | 12SAN/NAV |
| 2889.1934 | 34601.590 | 850 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.0004 | 12SAN/NAV |
| 2889.48040 | 34598.1538 | 280 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.00007 | 12SAN/NAV |
| 2889.54776 | 34597.3473 | 84 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^1I)4p$ | $^{2}I^{o}$ | 11/2 | 0.00010 | 12SAN/NAV |
| 2889.80265 | 34594.2959 | 190 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | 0.00009 | 12SAN/NAV |
| 2891.02825 | 34579.6309 | 150 | $3d^5$ | a ² G | 9/2 | _ | $3d^4(^3G)4p$ | y^2F^o | 7/2 | 0.00012 | 12SAN/NAV |
| 2891.10056 | 34578.766 | 67 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 9/2 | 0.00018 | 12SAN/NAV |
| 2891.20106 | 34577.5641 | 140 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^3G)4p$ | x 4G° | 9/2 | 0.00010 | 12SAN/NAV |
| 2891.3909 | 34575.294 | 42 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | 0.0006 | 12SAN/NAV |
| 2891.86564 | 34569.618 | 80 | $3d^4(^1S)4s$ | a ² S | 1/2 | _ | $3d^4(^3D)4p$ | y ² P ^o | 3/2 | 0.00018 | 12SAN/NAV |
| 2892.7455 | 34559.10 | 48 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.0018 | 12SAN/NAV |
| 2892.93953 | 34556.7862 | 100 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.00014 | 12SAN/NAV |
| 2893.48608 | 34550.2591 | 280 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 7/2 | 0.00008 | 12SAN/NAV |
| 2894.25629 | 34541.0651 | 79 | $3d^4(^1I)4s$ | b ² I | 13/2 | _ | $3d^4(^1I)4p$ | $^{2}I^{o}$ | 13/2 | 0.00015 | 12SAN/NAV |
| 2894.3930 | 34539.434 | 18 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | 0.0013 | 12SAN/NAV |
| 2894.4105 | 34539.225 | 23 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | 0.0008 | 12SAN/NAV |
| 2894.79858 | 34534.595 | 62 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^3F1)4p$ | z^2D^o | 3/2 | 0.00019 | 12SAN/NAV |
| 2895.00346 | 34532.151 | 75 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | z^2D^o | 5/2 | 0.00019 | 12SAN/NAV |
| 2895.6553 | 34524.378 | 16 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | z^2D^o | 3/2 | 0.0006 | 12SAN/NAV |
| 2896.30680 | 34516.6121 | 120 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^3H)4p$ | y ⁴ G° | 9/2 | 0.00012 | 12SAN/NAV |
| 2896.4528 | 34514.872 | 290 * | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | 0.0003 | 12SAN/NAV |
| 2896.4528 | 34514.872 | 290 * | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^4(^1I)4p$ | $^{2}I^{o}$ | 13/2 | 0.0003 | 12SAN/NAV |
| 2896.74 | 34511.45 | 35 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | 0.01 | 51KIE |
| 2896.90962 | 34509.4298 | 140 | $3d^4(^3H)4p$ | $z^{4}I^{o}$ | 15/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 13/2 | 0.00010 | 12SAN/NAV |
| 2897.2557 | 34505.308 | 33 * | $3d^4(^1I)4s$ | b ² I | 13/2 | - | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 11/2 | 0.0005 | 12SAN/NAV |
| 2897.2557 | 34505.308 | 33 * | $3d^4(^1S)4s$ | a ² S | 1/2 | _ | $3d^4(^3D)4p$ | x^4P^o | 1/2 | 0.0005 | 12SAN/NAV |
| 2897.69182 | 34500.1148 | 210 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.00008 | 12SAN/NAV |
| 2897.7608 | 34499.294 | 68 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | 0.0002 | 12SAN/NAV |
| 2897.941 | 34497.15 | 10 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | 0.002 | 12SAN/NAV |
| 2898.53227 | 34490.1117 | 670 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | 0.00008 | 12SAN/NAV |
| 2898.62 | 34489.07 | 60 R | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 5/2 | 0.01 | 00WAG |
| 2899.14089 | 34482.8715 | 110 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^3G)4p$ | y^2F^o | 5/2 | 0.00014 | 12SAN/NAV |
| 2899.1907 | 34482.279 | 120 | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 5/2 | 0.0005 | 12SAN/NAV |
| 2899.4590 | 34479.088 | 58 * | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 11/2 | 0.0002 | 12SAN/NAV |
| 2899.4590 | 34479.088 | 58 * | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D ^o | 5/2 | _ | $3d^4(^5D)6d$ | ⁶ P | 5/2 | 0.0002 | 12SAN/NAV |
| 2899.48013 | 34478.8372 | 92 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 7/2 | 0.00015 | 12SAN/NAV |
| 2900.25751 | 34469.5960 | 87 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o | 9/2 | _ | $3d^4(^5D)6d$ | ^{6}D | 9/2 | 0.00014 | 12SAN/NAV |

| TABLE 6. Spects | ral lines of Cr | II | | | | | | | | | |
|--------------------------|--------------------------|------------|--------------------------------|---------------------------------------|-------------|-------|--|---|-------------|--------------------|------------------------|
| Observed | Observed | | | | | | | | | Uncertainty | |
| air | wave | Intensity | | | Clas | sific | ation | | | of observed | |
| wavelength | number | and | | | | SITIC | | | | wavelength | Source |
| (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 2900.468 | 34467.09 | 7 | $3d^5$ | a ² F | 5/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | 0.002 | 12SAN/NAV |
| 2901.0079 | 34460.680 | 26 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^4(^3H)4p$ | z ² G ^o | 9/2 | 0.0005 | 12SAN/NAV |
| 2901.3445 | 34456.683 | 70 | $3d^4(^3G)4p$ $3d^4(^3G)4s$ | y ⁴ H° b ⁴ G | 11/2 | _ | $3d^4(^3G)5s$ | f ⁴ G x ⁴ D ^o | 9/2 | 0.0002 | 12SAN/NAV |
| 2901.72 2901.92 | 34452.22 | 4 R 3 R | $3d^4(^3G)4s$ $3d^4(^3G)4s$ | b ⁴ G | 5/2 5/2 | _ | 3d ⁴ (³ F1)4p 3d ⁴ (³ F1)4p | $x^{4}D^{o}$ | 3/2 | 0.01 | 00WAG |
| 2901.92 | 34449.85 34441.797 | 3 K 14 | $3d^{5}$ | c ² F | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 5/2 5/2 | 0.01 0.0007 | 00WAG 12SAN/NAV |
| 2902.8540 | 34438.766 | 26 | $3d^4(^1S)4s$ | a ² S | 1/2 | _ | $3d^4(^3D)4p$ | y ² P ^o | 1/2 | 0.0007 | 12SAN/NAV |
| 2903.59293 | 34430.002 | 81 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^4(^3P2)4p$ | y ⁴ P ^o | 5/2 | 0.00017 | 12SAN/NAV |
| 2903.619 | 34429.69 | 8 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o | 7/2 | _ | $3d^4(^5D)6d$ | ⁶ F | 7/2 | 0.003 | 12SAN/NAV |
| 2903.9665 | 34425.573 | 69 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | 0.0002 | 12SAN/NAV |
| 2904.2363 | 34422.375 | 17 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 3/2 | _ | $3d^4(^3P1)5s$ | e ² P | 3/2 | 0.0008 | 12SAN/NAV |
| 2905.34374 | 34409.2547 | 130 | $3d^4(^5D)4p$ | z ⁶ P° | 7/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 7/2 | 0.00013 | 12SAN/NAV |
| 2905.48800 | 34407.5463 | 1800 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D ^o | 7/2 | - | $3d^4(^5D)6d$ | ⁶ P | 7/2 | 0.00007 | 12SAN/NAV |
| 2905.57 | 34406.58 | 3 | $3d^5$ | a ² G | 9/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 9/2 | 0.01 | 51KIE |
| 2906.1848 | 34399.297 | 46 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | - | $3d^4(^3P2)4p$ | y ⁴ P ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 2906.76 | 34392.49 | 2 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | 0.01 | 51KIE |
| 2906.96698 | 34390.0416 | 170 | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | - | $3d^4(^5D)5s$ | e ⁶ D | 5/2 | 0.00010 | 12SAN/NAV |
| 2908.2979 | 34374.304 | 20 | $3d^4(^3F)4s$ | a ⁴ F z ⁶ P° | 7/2 | - | $3d^4(^3H)4p$ $3d^4(^5D)5s$ | z ² G° e ⁶ D | 7/2 | 0.0006 | 12SAN/NAV |
| 2909.10501 2910.45332 | 34364.7679 34348.8487 | 210 86 | $3d^4(^5D)4p$ $3d^4(^3G)4p$ | y ⁴ H ^o | 3/2 13/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 3/2 11/2 | 0.00008 0.00015 | 12SAN/NAV |
| 2910.43332 | 34346.554 | 84 | $3d^4(^3F)4s$ | уп b ² F | 7/2 | _ | $3d^4(^3P1)4p$ | 1 0 2 D^{o} | 5/2 | 0.00013 | 12SAN/NAV 12SAN/NAV |
| 2911.68670 | 34334.2993 | 200 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^3F1)4p$ | y ² G° | 7/2 | 0.00018 | 12SAN/NAV |
| 2913.4941 | 34313.001 | 19 | $3d^4(^3F)4s$ | e ² F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s^2F^0 | 5/2 | 0.0008 | 12SAN/NAV |
| 2914.3890 | 34302.465 | 9 | $3d^4(^1S)4s$ | a ² S | 1/2 | _ | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | 0.0010 | 12SAN/NAV |
| 2914.9659 | 34295.677 | 12 | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | _ | $3d^4(^3P1)5s$ | f ⁴ P | 5/2 | 0.0009 | 12SAN/NAV |
| 2915.18232 | 34293.131 | 90 | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 1/2 | 0.00019 | 12SAN/NAV |
| 2915.22532 | 34292.6248 | 110 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.00013 | 12SAN/NAV |
| 2915.28 | 34291.98 | 15 * | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.01 | 51KIE |
| 2915.28 | 34291.98 | 15 * | $3d^4(^3H)4s$ | a ⁴ H | 7/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | 0.01 | 51KIE |
| 2915.44857 | 34289.9990 | 120 | $3d^4(^1G1)4s$ | c ² G | 9/2 | - | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.00012 | 12SAN/NAV |
| 2916.0702 | 34282.690 | 19 | $3d^4(^3P)4s$ | a ² P | 3/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 3/2 | 0.0008 | 12SAN/NAV |
| 2916.9279 | 34272.610 | 54 | $3d^4(^5D)4p$ | $z^{6}P^{o}$ | 5/2 | - | $3d^4(^5D)5s$ | e ⁶ D | 3/2 | 0.0003 | 12SAN/NAV |
| 2917.3579 | 34267.558 | 18 | $3d^4(^3G)4p$ | y ² H° b ⁴ G | 11/2 | _ | $3d^45s$ | $g^{2}G$ $x^{4}D^{o}$ | 9/2 | 0.0008 | 12SAN/NAV |
| 2918.306 2918.9361 | 34256.43 | 6 23 | $3d^4(^3G)4s$ $3d^4(^5D)4p$ | z ⁶ P° | 9/2 7/2 | _ | 3d ⁴ (³ F1)4p 3d ⁴ (⁵ D)5s | e ⁶ D | 7/2 5/2 | 0.004 | 12SAN/NAV |
| 2918.9361 2919.8092 | 34249.031 34238.790 | 63 | $3d^4(^3G)4p$ | Z P ⁴ F ^o | 9/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 11/2 | 0.0006 0.0002 | 12SAN/NAV 12SAN/NAV |
| 2919.8092 | 34237.4 | 2 w | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.002 | 51KIE |
| 2920.9224 | 34225.742 | 10 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | 0.0013 | 12SAN/NAV |
| 2921.0842 | 34223.847 | 71 | $3d^4(^3F)4s$ | e ² F | 5/2 | _ | $3d^4(^3F2)4p$ | u ² G° | 7/2 | 0.0003 | 12SAN/NAV |
| 2921.23814 | 34222.0431 | 230 | $3d^4(^1I)4s$ | b ² I | 13/2 | _ | $3d^4(^1I)4p$ | ² K ^o | 13/2 | 0.00008 | 12SAN/NAV |
| 2921.81164 | 34215.3262 | 320 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | 0.00008 | 12SAN/NAV |
| 2922.4546 | 34207.799 | 17 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | 0.0007 | 12SAN/NAV |
| 2923.47515 | 34195.8580 | 85 | $3d^4(^1I)4s$ | b ² I | 11/2 | - | $3d^4(^1I)4p$ | 2 K o | 13/2 | 0.00016 | 12SAN/NAV |
| 2923.68198 | 34193.4390 | 170 | $3d^4(^1I)4s$ | b ² I | 11/2 | - | $3d^4(^1I)4p$ | $^{2}I^{o}$ | 11/2 | 0.00009 | 12SAN/NAV |
| 2923.8030 | 34192.024 | 36 | $3d^5$ | a ² D | 5/2 | - | $3d^4(^3H)4p$ | z ² G° | 7/2 | 0.0004 | 12SAN/NAV |
| 2924.8854 | 34179.371 | 6 | $3d^4(^3H)4s$ | a ² H | 11/2 | - | $3d^4(^3G)4p$ | y ⁴ H ^o | 9/2 | 0.0016 | 12SAN/NAV |
| 2925.2226 | 34175.431 | 7 | $3d^{5}$ | b ⁴ F | 7/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | 0.0013 | 12SAN/NAV |
| 2925.90 | 34167.52 | 3 | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.01 | 51KIE |
| 2926.15267 | 34164.5691 | 89 | $3d^4(^3F)4s$ | a ⁴ F b ² G | 9/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | 0.00015 | 12SAN/NAV |
| 2927.08263 | 34153.7152 | 960 | $3d^4(^3G)4s$ $3d^4(^3G)4p$ | y ² H ^o | 9/2 | - | $3d^4(^3G)4p$ $3d^45s$ | $x {}^{2}G^{o}$ $g {}^{2}G$ | 9/2 | 0.00007 | 12SAN/NAV |
| 2927.4899 2928.13999 | 34148.964 34141.3828 | 13 370 | $3d^4(^3P)4s$ | ун b ⁴ P | 9/2 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 7/2 5/2 | 0.0013 0.00008 | 12SAN/NAV 12SAN/NAV |
| 2928.13999 | 34139.5818 | 980 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 7/2 | 0.00008 | 12SAN/NAV |
| 2928.822 | 34133.43 | 980 | $3d^4(^3P1)4p$ | z ² P° | 3/2 | _ | $3d^4(^3P1)5s$ | e ² P | 1/2 | 0.0008 | 12SAN/NAV |
| 2929.2115 | 34128.894 | 9 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.0011 | 12SAN/NAV |
| 2929.43575 | 34126.2819 | 110 | $3d^{5}$ | a ² G | 9/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.00011 | 12SAN/NAV |
| 2929.8030 | 34122.004 | 19 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{\circ}$ | 5/2 | 0.0007 | 12SAN/NAV |
| 2929.8914 | 34120.975 | 53 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 7/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | 0.0003 | 12SAN/NAV |
| 2930.84568 | 34109.8656 | 170 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 3/2 | 0.00009 | 12SAN/NAV |
| 2930.8953 | 34109.288 | 29 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | _ | $3d^4(^3P2)4p$ | y ⁴ P ^o | 1/2 | 0.0005 | 12SAN/NAV |
| 2931.10427 | 34106.8565 | 98 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 11/2 | 0.00014 | 12SAN/NAV |
| 2932.0299 | 34096.090 | 6 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o | 11/2 | - | $3d^4(^5D)6d$ | ⁶ G | 13/2 | 0.0016 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed air wavelength (Å) | Observed wave number (cm ⁻¹) | Intensity and comment | Classification | | | | | | | Uncertainty of observed | - |
|--------------------------------------|---|-----------------------------|--|---|-------------|---|--|---|------------|----------------------------|------------------------|
| | | | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 2932.5802 | 34089.692 | 14 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3D)4p$ | w ² F ^o | 5/2 | 0.0008 | 12SAN/NAV |
| 2932.70225 | 34088.2731 | 120 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | z $^4G^{\rm o}$ | 7/2 | 0.00012 | 12SAN/NAV |
| 2933.5991 | 34077.852 | 53 | $3d^5$ | d ² D | 5/2 | _ | $3d^4(^1D1)4p$ | v^2F^o | 7/2 | 0.0002 | 12SAN/NAV |
| 2933.96468 | 34073.6062 | 340 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^3F1)4p$ | z ⁴ G ^o | 5/2 | 0.00008 | 12SAN/NAV |
| 2934.16090 | 34071.3277 | 84 | $3d^4(^3F)4s$ | e ² F | 7/2 | - | $3d^4(^3F2)4p$ | u ² G° | 9/2 | 0.00017 | 12SAN/NAV |
| 2934.3262 | 34069.408 | 51 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 3/2 | 0.0003 | 12SAN/NAV |
| 2935.13440 | 34060.0277 | 610 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 7/2 | 0.00007 | 12SAN/NAV |
| 2935.6229 | 34054.360 | 16 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | - | $3d^4(^3P2)4p$ | y ⁴ P ^o | 5/2 | 0.0008 | 12SAN/NAV |
| 2936.05 | 34049.41 | 3 | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | - | $3d^4(^3F1)5s$ | f ⁴ F | 9/2 | 0.01 | 51KIE |
| 2936.93348 | 34039.1644 | 85 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.00016 | 12SAN/NAV |
| 2937.075 | 34037.52 | 7 | $3d^4(^3F)4s$ | a ⁴ F c ⁴ P | 9/2 | - | $3d^4(^3F1)4p$ | z ⁴ G ^o | 7/2 | 0.004 | 12SAN/NAV |
| 2938.2724 | 34023.654 | 10 | $3d^4(^3P)4s$ | z ⁴ P° | 3/2 | - | $3d^4(^3P2)4p$ | y ⁴ P ^o e ⁶ D | 3/2 | 0.0013 | 12SAN/NAV |
| 2939.0733 | 34014.383 | 32 | $3d^4(^5D)4p$ | y ⁴ G° | 1/2 | - | $3d^4(^5D)5s$ | f ⁴ F | 3/2 | 0.0004 | 12SAN/NAV |
| 2939.1180 2939.46233 | 34013.866 34009.8815 | 23 180 | 3d ⁴ (³ H)4p 3d ⁴ (¹ F)4s | d ² F | 11/2 7/2 | _ | 3d ⁴ (³ F1)5s 3d ⁴ (¹ F)4p | u ² F° | 9/2 7/2 | 0.0006 0.00009 | 12SAN/NAV |
| 2939.46233 | 34009.8813 | 3 | $3d^{5}$ | a ² G | 7/2 | _ | $3d^{4}(^{3}F1)4p$ | u F y ² G° | 9/2 | 0.00009 | 12SAN/NAV 51KIE |
| 2940.22593 | 34000.21 | 190 * | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3D)4p$ | y G w ² F° | 5/2 | 0.00009 | 12SAN/NAV |
| 2940.22593 | 34001.0493 | 190 * | $3d^4(^3P1)4p$ | z ² P° | 3/2 | _ | $3d^4(^3P1)5s$ | f ⁴ P | 5/2 | 0.00009 | 12SAN/NAV |
| 2940.42 | 33998.81 | 2 | $3d^4(^3F1)4p$ | y ² G° | 9/2 | _ | $3d^{4}4d$ | f ⁴ H | 11/2 | 0.000 | 51KIE |
| 2940.9884 | 33992.235 | 24 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.0006 | 12SAN/NAV |
| 2941.22951 | 33989.4482 | 130 * | $3d^4(^1F)4s$ | d ² F | 5/2 | _ | $3d^4(^1F)4p$ | u ² F° | 7/2 | 0.00011 | 12SAN/NAV |
| 2941.22951 | 33989.4482 | 130 * | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 9/2 | 0.00011 | 12SAN/NAV |
| 2941.357 | 33987.98 | 10 * | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.003 | 12SAN/NAV |
| 2941.357 | 33987.98 | 10 * | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 7/2 | 0.003 | 12SAN/NAV |
| 2941.95979 | 33981.0114 | 240 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3D)4p$ | w^2F^o | 7/2 | 0.00008 | 12SAN/NAV |
| 2942.99 | 33969.12 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.01 | 51KIE |
| 2943.0383 | 33968.559 | 21 | $3d^4(^3H)4p$ | y ⁴ G ^o | 9/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 7/2 | 0.0005 | 12SAN/NAV |
| 2943.6637 | 33961.343 | 10 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.0010 | 12SAN/NAV |
| 2945.2753 | 33942.761 | 29 | $3d^4(^3H)4p$ | y ⁴ G ^o | 7/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 5/2 | 0.0004 | 12SAN/NAV |
| 2945.7387 | 33937.421 | 12 | $3d^4(^1F)4s$ | d ² F | 7/2 | _ | $3d^4(^1F)4p$ | u ² F° | 5/2 | 0.0012 | 12SAN/NAV |
| 2945.782 | 33936.92 | 7 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 7/2 | 0.003 | 12SAN/NAV |
| 2946.0015 | 33934.394 | 56 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | - | $3d^4(^3F1)5s$ | f ⁴ F | 9/2 | 0.0002 | 12SAN/NAV |
| 2946.5258 | 33928.356 | 28 | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | - | $3d^4(^3F1)5s$ | f ⁴ F | 7/2 | 0.0004 | 12SAN/NAV |
| 2946.7286 | 33926.021 | 33 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^4(^3H)4p$ | y ⁴ G ^o | 5/2 | 0.0004 | 12SAN/NAV |
| 2946.83074 | 33924.8452 | 220 | $3d^4(^3H)4s$ | a ² H | 11/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 11/2 | 0.00010 | 12SAN/NAV |
| 2946.9322 | 33923.677 | 25 | $3d^4(^3P1)4p$ | y ⁴ P° | 5/2 | - | $3d^4(^3P1)5s$ | f ⁴ P | 5/2 | 0.0006 | 12SAN/NAV |
| 2947.51042 | 33917.0226 | 130 | $3d^4(^1F)4s$ | d ² F | 5/2 | - | $3d^4(^1F)4p$ | u ² F° | 5/2 | 0.00012 | 12SAN/NAV |
| 2948.0361 | 33910.975 | 8 | $3d^4(^3P1)4p$ | z ² P ^o b ² F | 1/2 | - | $3d^4(^3P1)5s$ | e ² P ⁴ F° | 1/2 | 0.0017 | 12SAN/NAV |
| 2948.2325 | 33908.716 | 8 4 | $3d^4(^3F)4s$ $3d^5$ | a ² D | 5/2 | - | $3d^4(^3G)4p$ | z ⁴ G° | 5/2 | 0.0011 | 12SAN/NAV |
| 2948.472 | 33905.96 33900.96 | | $3a^4(^3H)4p$ | а D y ⁴ G° | 5/2 | | 3d ⁴ (³ F1)4p 3d ⁴ (³ F1)5s | f ⁴ F | 7/2 | 0.004 | 12SAN/NAV |
| 2948.9071 2949.1166 | 33898.55 | 8 6 | $3d^4(^3F)4s$ | b ² F | 5/2 7/2 | _ | $3d^4(^3G)4p$ | 1 г ⁴ F ⁰ | 3/2 7/2 | 0.0020 0.0018 | 12SAN/NAV 12SAN/NAV |
| 2949.1100 | 33894.731 | 72 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^3H)4p$ | z ² I ^o | 13/2 | 0.0018 | 12SAN/NAV |
| 2949.7993 | 33890.706 | 27 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 9/2 | 0.00018 | 12SAN/NAV |
| 2949.9073 | 33889.465 | 18 | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 5/2 | 0.0008 | 12SAN/NAV |
| 2950.1095 | 33887.143 | 19 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 11/2 | 0.0007 | 12SAN/NAV |
| 2950.6763 | 33880.63 | 9 | $3d^5$ | a ² I | 13/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 13/2 | 0.0018 | 12SAN/NAV |
| 2951.1448 | 33875.255 | 39 | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 3/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 5/2 | 0.0004 | 12SAN/NAV |
| 2951.3973 | 33872.357 | 20 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | 0.0006 | 12SAN/NAV |
| 2951.9517 | 33865.996 | 16 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.0010 | 12SAN/NAV |
| 2951.9783 | 33865.691 | 19 | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | - | $3d^4(^3F1)5s$ | f ⁴ F | 3/2 | 0.0006 | 12SAN/NAV |
| 2952.1234 | 33864.026 | 16 | $3d^4(^3G)4p$ | $x^{4}G^{o}$ | 9/2 | _ | $3d^45s$ | $g^{2}G$ | 7/2 | 0.0009 | 12SAN/NAV |
| 2952.4356 | 33860.446 | 42 | $3d^5$ | d^2D | 3/2 | - | $3d^4(^1D1)4p$ | v ² F ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 2952.626 | 33858.26 | 6 | $3d^4(^1S)4s$ | a ² S | 1/2 | - | $3d^4(^3D)4p$ | w ⁴ F ^o | 3/2 | 0.004 | 12SAN/NAV |
| 2953.35261 | 33849.9325 | 170 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 1/2 | 0.00010 | 12SAN/NAV |
| 2953.69925 | 33845.9601 | 240 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | 0.00008 | 12SAN/NAV |
| 2954.6481 | 33835.091 | 14 | $3d^{5}$ | a ² G | 9/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.0006 | 12SAN/NAV |
| 2955.1266 | 33829.613 | 13 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 9/2 | 0.0009 | 12SAN/NAV |
| 2955.68 | 33823.28 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | 0.01 | 51KIE |
| 2956.4737 | 33814.199 | 14 | $3d^4(^3G)4p$ | y ² F ^o | 7/2 | - | $3d^45s$ | g ² G | 9/2 | 0.0009 | 12SAN/NAV |
| 2956.6065 | 33812.681 | 21 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | 0.0005 | 12SAN/NAV |
| 2957.5441 | 33801.962 | 10 | $3d^5$ | a ² G | 7/2 | - | $3d^4(^3F1)4p$ | y ² G° | 7/2 | 0.0014 | 12SAN/NAV |
| 2958.0458 | 33796.229 | 17 | $3d^4(^3P)4s$ | c ⁴ P | 1/2 | - | $3d^4(^3P2)4p$ | y ⁴ P ^o | 3/2 | 0.0006 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | S |
|--------------------------|----------------------------|----------------|-------------------------|--------------------------------------|--------------|-------|----------------------------------|--|-------------|----------------------------|------------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 2958.17 | 33794.81 | 1 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^3P1)4p$ | z ² P ^o | 3/2 | 0.01 | 51KIE |
| 2958.51 | 33790.93 | 2 | $3d^5$ | b ² H | 11/2 | - | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 9/2 | 0.01 | 51KIE |
| 2958.8862 | 33786.630 | 34 | $3d^4(^3G)4p$ | x ⁴ G ^o | 11/2 | - | $3d^45s$ | $g^{2}G$ | 9/2 | 0.0003 | 12SAN/NAV |
| 2959.1402 | 33783.731 | 9 | $3d^4(^3P1)4p$ | y ⁴ P° | 1/2 | - | $3d^4(^3P1)5s$ | f ⁴ P | 3/2 | 0.0017 | 12SAN/NAV |
| 2959.38 | 33780.99 | 4 R | $3d^5$ | d ² G | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 7/2 | 0.01 | 00WAG |
| 2959.5584 2959.9480 | 33778.957 | 23 | $3d^4(^3F)4s$ | b ² F b ⁴ G | 5/2 | - | $3d^4(^3P1)4p$ $3d^4(^3F1)4p$ | ² D ^o y ⁴ F ^o | 3/2 | 0.0006 | 12SAN/NAV |
| | 33774.511 33757.826 | 28 12 * | $3d^4(^3G)4s$ $3d^5$ | d ² G | 9/2 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | y F u ⁴ D° | 7/2 7/2 | 0.0006 0.0008 | 12SAN/NAV 12SAN/NAV |
| 2961.4110 2961.4110 | 33757.826 | 12 * | $3d^4(^5D)4p$ | a G z ⁴ P° | 3/2 | _ | $3d^4(^5D)5s$ | и D e ⁶ D | 3/2 | 0.0008 | 12SAN/NAV |
| 2961.4110 | 33755.845 | 12 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 7/2 | 0.0008 | 12SAN/NAV |
| 2961.71815 | 33754.3256 | 200 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^4(^3\text{P1})4p$ | y ⁴ D° | 3/2 | 0.00011 | 12SAN/NAV |
| 2963.4733 | 33734.335 | 22 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 9/2 | 0.00010 | 12SAN/NAV |
| 2964.66 | 33720.83 | 2 R | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ² D° | 3/2 | 0.000 | 00WAG |
| 2965.18 | 33714.92 | 2 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | 0.01 | 51KIE |
| 2966.04126 | 33705.1297 | 150 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 7/2 | 0.00011 | 12SAN/NAV |
| 2967.40937 | 33689.5907 | 93 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 7/2 | 0.00011 | 12SAN/NAV |
| 2968.20 | 33680.62 | 3 | $3d^5$ | b ² H | 11/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | 0.01 | 51KIE |
| 2968.7017 | 33674.926 | 33 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | 0.0003 | 12SAN/NAV |
| 2969.6710 | 33663.935 | 33 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 2970.65 | 33652.84 | 2 | $3d^4(^3H)4p$ | y ⁴ G ^o | 11/2 | _ | $3d^4(^3H)5s$ | e ² H | 9/2 | 0.01 | 51KIE |
| 2971.90113 | 33638.6742 | 1100 | $3d^4(^3H)4s$ | a ⁴ H | 13/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 13/2 | 0.00007 | 12SAN/NAV |
| 2972.5808 | 33630.983 | 8 | $3d^5$ | a ² G | 9/2 | _ | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | 0.0014 | 12SAN/NAV |
| 2972.674 | 33629.93 | 5 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | 0.003 | 12SAN/NAV |
| 2972.722 | 33629.39 | 5 | $3d^4(^3F1)4p$ | y ² G° | 9/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 11/2 | 0.005 | 12SAN/NAV |
| 2973.0831 | 33625.301 | 20 | $3d^5$ | a ² D | 3/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.0008 | 12SAN/NAV |
| 2974.79878 | 33605.9093 | 100 | $3d^4(^3H)4p$ | $z^2 I^o$ | 13/2 | _ | $3d^4(^3H)5s$ | e ² H | 11/2 | 0.00016 | 12SAN/NAV |
| 2975.8007 | 33594.595 | 80 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 9/2 | 0.0006 | 12SAN/NAV |
| 2976.71147 | 33584.3167 | 120 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | 0.00012 | 12SAN/NAV |
| 2977.65 | 33573.73 | 2 | $3d^5$ | a ² D | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 7/2 | 0.01 | 51KIE |
| 2978.388 | 33565.41 | 15 | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | - | $3d^4(^3F1)5s$ | f ² F | 5/2 | 0.002 | 12SAN/NAV |
| 2979.73597 | 33550.2293 | 930 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | 0.00007 | 12SAN/NAV |
| 2981.5903 | 33529.364 | 65 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | - | $3d^4(^5D)5s$ | e ⁶ D | 5/2 | 0.0002 | 12SAN/NAV |
| 2982.8054 | 33515.706 | 81 | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 11/2 | - | $3d^4(^3H)5s$ | e ² H | 9/2 | 0.0002 | 12SAN/NAV |
| 2983.5277 | 33507.59 | 39 | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | - | $3d^4(^3F1)5s$ | f ⁴ F | 9/2 | 0.0018 | 12SAN/NAV |
| 2984.70264 | 33494.4028 | 49 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 1/2 | 0.00016 | 12SAN/NAV |
| 2985.01 | 33490.95 | 7 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o z ⁴ H ^o | 5/2 | 0.01 | 51KIE |
| 2985.32051 | 33487.4707 | 780 | $3d^4(^3H)4s$ | a ⁴ H b ² S | 9/2 | - | $3d^4(^3H)4p$ | $z^{-1}H^{\circ}$ $x^{-2}P^{\circ}$ | 9/2 | 0.00008 | 12SAN/NAV |
| 2986.87 | 33470.10 | 8 | $3d^5$ $3d^5$ | b ² H | 1/2 | - | $3d^4(^1S1)4p$ | х ⁻ Р° у ⁴ Н° | 1/2 | 0.01 | 51KIE |
| 2987.52 | 33462.82 | 3 | $3d^4(^3H)4s$ | в н а ⁴ Н | 11/2 13/2 | - | $3d^4(^3G)4p$ $3d^4(^3H)4p$ | y H z ⁴ H ^o | 11/2 | 0.01 | 51KIE |
| 2988.0523 | 33456.857 33444.1260 | 61 710 | $3d^4(^3H)4s$ | ан а ⁴ Н | 7/2 | _ | $3d^4(^3H)4p$ | z п z ⁴ H° | 11/2 7/2 | 0.0003 0.00008 | 12SAN/NAV |
| 2989.18975 2992.07043 | 33411.9284 | 160 | $3d^4(^5D)4p$ | ап z ⁶ D° | 5/2 | _ | $3d^4(^5D)5s$ | и е ⁶ D | 3/2 | 0.00010 | 12SAN/NAV 12SAN/NAV |
| 2992.07043 | 33408.03 | 100 | $3d^4(^3H)4s$ | a ⁴ H | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ H° | 9/2 | 0.0010 | 51KIE |
| 2992.42 | 33406.265 | 27 * | $3d^5$ | b ² S | 1/2 | _ | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | 0.0008 | 12SAN/NAV |
| 2992.5777 | 33406.265 | 27 * | $3d^4(^3F1)4p$ | x ⁴ D° | 3/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 5/2 | 0.0008 | 12SAN/NAV |
| 2992.95629 | 33402.0395 | 480 | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 9/2 | 0.00009 | 12SAN/NAV |
| 2993.54120 | 33395.5133 | 240 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 7/2 | 0.00009 | 12SAN/NAV |
| 2994.4486 | 33385.394 | 14 | $3d^4(^3F1)4p$ | $x^{4}D^{o}$ | 1/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 3/2 | 0.0009 | 12SAN/NAV |
| 2994.7457 | 33382.082 | 46 | $3d^4(^3H)4s$ | a ⁴ H | 9/2 | _ | $3d^4(^3H)4p$ | z ⁴ H° | 7/2 | 0.0004 | 12SAN/NAV |
| 2998.68834 | 33338.1936 | 80 | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 11/2 | 0.00012 | 12SAN/NAV |
| 2998.97015 | 33335.0609 | 96 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 7/2 | 0.00013 | 12SAN/NAV |
| 2999.295 | 33331.45 | 24 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | 0.003 | 12SAN/NAV |
| 2999.9335 | 33324.357 | 33 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^3H)4p$ | z ² G° | 9/2 | 0.0005 | 12SAN/NAV |
| 3000.0500 | 33323.063 | 28 | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | _ | $3d^4(^3P1)5s$ | f ⁴ P | 1/2 | 0.0003 | 12SAN/NAV |
| 3000.63027 | 33316.6189 | 120 | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 5/2 | 0.00012 | 12SAN/NAV |
| 3003.91645 | 33280.1732 | 89 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | 0.00014 | 12SAN/NAV |
| 3004.47 | 33274.04 | 3 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^3G)4p$ | y ⁴ H ^o | 7/2 | 0.01 | 51KIE |
| 3004.7478 | 33270.966 | 110 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 3/2 | 0.0015 | 12SAN/NAV |
| 3007.97320 | 33235.2912 | 210 | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 5/2 | 0.00009 | 12SAN/NAV |
| 3008.1908 | 33232.887 | 36 | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 9/2 | 0.0003 | 12SAN/NAV |
| 3008.30 | 33231.68 | 6 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.01 | 51KIE |
| 3008.67 | 33227.59 | 4 | $3d^4(^3P)4s$ | a ² P | 3/2 | - | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.01 | 51KIE |
| | 33205.922 | 61 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 9/2 | 0.0003 | 12SAN/NAV |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave number | Intensity and | | | Clas | sific | ation | | | Uncertainty of observed wavelength | Cannas |
|------------------------|----------------------------|------------------|---|--------------------------------------|------------|-------|--|--|------------|--|----------------------|
| wavelength (Å) | number (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 3010.90430 | 33202.9382 | 130 | 3d ⁴ (⁵ D)4p | z ⁶ D° | 9/2 | _ | $3d^4(^5D)5s$ | e ⁶ D | 7/2 | 0.00014 | 12SAN/NA |
| 3011.2368 | 33199.27 | 25 | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | - | $3d^4(^5D)5s$ | e ⁶ D | 1/2 | 0.0019 | 12SAN/NAV |
| 3011.4208 | 33197.244 | 21 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 3/2 | 0.0004 | 12SAN/NAV |
| 3012.01 | 33190.75 | 2 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.01 | 51KIE |
| 3012.33 | 33187.22 | 3 | $3d^{5}$ | a ² F | 7/2 | - | $3d^4(^3H)4p$ | z ² G ^o | 7/2 | 0.01 | 51KIE |
| 3012.47 | 33185.68 | 5 | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 9/2 | 0.01 | 51KIE |
| 3015.50454 | 33152.2883 | 280 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.00009 | 12SAN/NA |
| 3017.78 | 33127.3 | 10 w* | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | - | $3d^4(^5D)5s$ | e ⁶ D | 1/2 | 0.02 | 51KIE |
| 3017.78 | 33127.3 | 10 w* | $3d^5$ | b ² H | 9/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 11/2 | 0.02 | 51KIE |
| 3024.1603 | 33057.404 | 110 | $3d^4(^5D)4p$ | z ⁴ P° | 5/2 | - | $3d^4(^5D)5s$ | e ⁶ D | 3/2 | 0.0002 | 12SAN/NA |
| 3024.90 | 33049.32 | 3 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 7/2 | 0.01 | 51KIE |
| 3026.3999 | 33032.942 | 10 | $3d^4(^1G1)4s$ | c ² G | 7/2 | - | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | 0.0015 | 12SAN/NA |
| 3026.64155 | 33030.3042 | 440 | $3d^5$ | b ² H | 11/2 | - | $3d^4(^3H)4p$ | z ² H ^o u ⁴ F ^o | 11/2 | 0.00008 | 12SAN/NA |
| 3026.7906 | 33028.678 | 42 | $3d^4(^3F)4s$ $3d^5$ | d ⁴ F a ² F | 7/2 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ $3d^4(^3F1)4p$ | u Fo | 7/2 | 0.0003 | 12SAN/NA |
| 3026.8296 | 33028.252 | 35 | $3d^4(^3F)4s$ | a ⁻ F b ² F | 5/2 | _ | | $z^{-1}G^{\circ}$ $z^{-2}F^{\circ}$ | 9/2 | 0.0004 | 12SAN/NA |
| 3028.12436 | 33014.1306 | 190 | | | | | $3d^4(^3F1)4p$ | | 5/2 | 0.00009 | 12SAN/NA |
| 3031.63 | 32975.96 | 3 | $3d^4(^3F)4s$ | b ² F c ² G | 7/2 | - | $3d^4(^3F1)4p$ $3d^4(^3G)4p$ | $z^{2}F^{o}$ $x^{2}G^{o}$ | 5/2 | 0.01 | 51KIE |
| 3032.65 3032.91855 | 32964.87 32961.9468 | 4 180 | 3d ⁴ (¹ G1)4s 3d ⁵ | c ² G a ⁴ P | 7/2 5/2 | _ | $3d^{4}(^{5}G)4p$ $3d^{4}(^{5}D)4p$ | x ² G° z ⁴ D° | 7/2 7/2 | 0.01 0.00010 | 51KIE 12SAN/NA |
| | | 73 | $3d^4(^3H)4p$ | a P y ⁴ G° | 11/2 | | $3d^4(^3H)5s$ | e ⁴ H | | 0.00010 | |
| 3033.74162 3034.06 | 32953.0044 | | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^3P1)4p$ | e H z ⁴ S° | 13/2 | | 12SAN/NA 51KIE |
| | 32949.55 | 5 | $3d^4(^3F)4s$ | a P a ⁴ F | 5/2 | _ | $3a^{4}(^{3}P1)4p$ $3d^{4}(^{3}P1)4p$ | y ⁴ D° | 3/2 | 0.01 0.0004 | |
| 3034.5385 3034.9819 | 32944.351 32939.538 | 50 28 | $3d^{5}$ | a F a ² F | 5/2 5/2 | _ | $3d^{4}(^{3}H)4p$ | y D z ² G° | 3/2 7/2 | 0.0004 | 12SAN/NA |
| | | | $3d^4(^5D)4p$ | a F z ⁴ F° | 3/2 7/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | | | 12SAN/NA |
| 3035.1359 3038.0296 | 32937.867 | 87 | $3d^{5}$ | c ² F | 5/2 | _ | $3d^4(^3G)4p$ | x ² G° | 7/2 | 0.0002 | 12SAN/NA 12SAN/NA |
| 3038.51 | 32906.495 32901.29 | 26 4 | $3d^5$ | a ² F | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 7/2 | 0.0006 0.01 | 51KIE |
| 3038.80 | 32898.15 | 4 | $3d^4(^3F)4s$ | аг d ⁴ F | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.01 | 51KIE 51KIE |
| 3039.32 | 32892.52 | 4 | $3d^4(^1G1)4s$ | иг c ² G | 9/2 | _ | $3d^4(^3G)4p$ | u r x ² G° | 9/2 | 0.01 | 51KIE 51KIE |
| 3040.1908 | 32883.104 | 31 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.0003 | 12SAN/NA |
| 3040.1908 | 32875.1774 | 860 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^3H)4p$ | z ² I ^o | 11/2 | 0.0003 | 12SAN/NA |
| 3041.5582 | 32868.321 | 49 | $3d^4(^3H)4p$ | y ⁴ G° | 9/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 11/2 | 0.0003 | 12SAN/NA |
| 3041.72050 | 32866.5673 | 360 | $3d^{5}$ | b ² H | 9/2 | _ | $3d^4(^3H)4p$ | z ² H° | 9/2 | 0.0003 | 12SAN/NA |
| 3042.5809 | 32857.274 | 33 | $3d^4(^3G)4p$ | x ⁴ G° | 11/2 | _ | $3d^4(^3G)5s$ | f ⁴ G | 11/2 | 0.0004 | 12SAN/NA |
| 3042.7733 | 32855.196 | 47 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | 0.0003 | 12SAN/NA |
| 3043.8696 | 32843.363 | 27 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3H)4p$ | z ² G° | 9/2 | 0.0006 | 12SAN/NA |
| 3044.2118 | 32839.671 | 26 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | 0.0009 | 12SAN/NA |
| 3045.46031 | 32826.2090 | 160 | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.0003 | 12SAN/NA |
| 3045.62 | 32824.49 | 3 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 7/2 | 0.01 | 51KIE |
| 3046.27 | 32817.48 | 1 | $3d^4(^3H)4s$ | a ² H | 9/2 | | $3d^4(^3F1)4p$ | y ⁴ F° | 9/2 | 0.01 | 51KIE |
| 3047.60693 | 32803.0884 | 160 | $3d^{5}$ | a ⁴ P | | | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.00010 | 12SAN/NA |
| 3047.7082 | 32801.998 | 33 | $3d^4(^3H)4p$ | y ⁴ G° | 7/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 9/2 | 0.0004 | 12SAN/NA |
| 3047.75902 | 32801.4515 | 130 | $3d^{5}$ | a ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.0004 | 12SAN/NA |
| 3047.838 | 32800.60 | 13 | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | _ | $3d^4(^3F1)5s$ | f ² F | 5/2 | 0.003 | 12SAN/NA |
| 3049.38023 | 32784.0133 | 940 | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 7/2 | 0.00009 | 12SAN/NA |
| 3049.49 | 32782.8 | 10 wl | $3d^4(^3H)4p$ | y ⁴ G° | 9/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 9/2 | 0.02 | 51KIE |
| 3050.13080 | 32775.9462 | 850 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3H)4p$ | z ² I ^o | 13/2 | 0.00008 | 12SAN/NA |
| 3050.2101 | 32775.094 | 25 | $3d^4(^3F1)4p$ | x ⁴ D° | 7/2 | _ | $3d^4(^3P1)5s$ | f ⁴ P | 5/2 | 0.0007 | 12SAN/NA |
| 3050.548 | 32771.46 | 9 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 7/2 | 0.003 | 12SAN/NA |
| 3050.7377 | 32769.43 | 11 | $3d^5$ | b ² H | 11/2 | _ | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | 0.0019 | 12SAN/NA |
| 3051.37 | 32762.64 | 2 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.01 | 51KIE |
| 3051.5943 | 32760.228 | 19 | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 3/2 | 0.0006 | 12SAN/NA |
| 3052.97 | 32745.47 | 3 | $3d^4(^3F)4s$ | d ⁴ F | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 3/2 | 0.01 | 51KIE |
| 3053.15 | 32743.54 | 19 R | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F° | 5/2 | 0.01 | 00WAG |
| 3053.65 | 32738.17 | 10 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 11/2 | 0.01 | 51KIE |
| 3054.8902 | 32724.885 | 40 | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 7/2 | 0.0008 | 12SAN/NA |
| 3055.32 | 32720.28 | 5 | $3d^4(^3P)4s$ | a ² P | 1/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.01 | 51KIE |
| 3055.4483 | 32718.907 | 30 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 1/2 | 0.0014 | 12SAN/NA |
| 3056.20 | 32710.86 | 3 | $3d^5$ | a ² D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 3/2 | 0.01 | 51KIE |
| 3056.57955 | 32706.7985 | 830 | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.00010 | 12SAN/NA |
| 3057.86 | 32693.10 | 12 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3H)4p$ | z ² I° | 11/2 | 0.01 | 51KIE |
| 3058.3421 | 32687.950 | 25 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | 0.0005 | 12SAN/NA |
| 3059.3686 | 32676.983 | 37 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.0004 | 12SAN/NA |
| 3059.4822 | 32675.770 | 64 | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.0002 | 12SAN/NA |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clac | sific | ation | | | Uncertainty of observed | |
|----------------------|----------------------------|-------------|--|---|------------|-------|--|---|------------|-------------------------|--------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | SIIIC | Configuration | Term | | wavelength (Å) | Source of line |
| 3059.52163 | 32675.3485 | 160 | $3d^5$ | a ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.00010 | 12SAN/NAV |
| 3061.5688 | 32653.500 | 26 | $3d^{5}$ | a ² F | 5/2 | _ | $3d^4(^3F1)4p$ | z $^4G^{\rm o}$ | 7/2 | 0.0005 | 12SAN/NAV |
| 3061.82841 | 32650.7319 | 650 | $3d^4(^5D)4p$ | z^4F^o | 5/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 3/2 | 0.00010 | 12SAN/NAV |
| 3062.02 | 32648.7 | 5 wl | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | _ | $3d^44d$ | g^4G | 9/2 | 0.02 | 51KIE |
| 3063.25 | 32635.58 | 6 | $3d^4(^3H)4s$ | a ² H | 11/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 9/2 | 0.01 | 51KIE |
| 3063.8334 | 32629.366 | 12 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | 0.0015 | 12SAN/NAV |
| 3064.17926 | 32625.6831 | 430 | $3d^4(^5D)4p$ | z ⁴ F ^o | 3/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 1/2 | 0.00010 | 12SAN/NAV |
| 3067.13567 | 32594.2365 | 120 | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 1/2 | 0.00013 | 12SAN/NAV |
| 3067.1748 | 32593.821 | 40 | $3d^{5}$ | a ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 1/2 | 0.0007 | 12SAN/NAV |
| 3069.02 | 32574.22 | 1 | $3d^4(^3F)4s$ | e ² F | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | t ² G ^o | 9/2 | 0.01 | 51KIE |
| 3071.02 | 32553.01 | 2 | $3d^5$ | a ² F | 5/2 | - | $3d^4(^3F1)4p$ | $z^{4}G^{o}$ | 5/2 | 0.01 | 51KIE |
| 3071.563 | 32547.26 | 11 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^3F1)4p$ | z ⁴ G ^o | 9/2 | 0.003 | 12SAN/NAV |
| 3071.7835 | 32544.921 | 80 | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | - | $3d^4(^3H)5s$ | e ² H | 9/2 | 0.0002 | 12SAN/NAV |
| 3072.19 | 32540.61 | 2 | $3d^4(^3H)4s$ | a ² H | 11/2 | - | $3d^4(^3H)4p$ | y ⁴ G ^o | 9/2 | 0.01 | 51KIE |
| 3072.4671 | 32537.680 | 12 | $3d^4(^3F)4s$ $3d^5$ | a ⁴ F b ⁴ F | 7/2 | - | $3d^4(^3H)4p$ | z ⁴ H° z ⁴ G° | 9/2 | 0.0011 | 12SAN/NAV |
| 3073.2258 | 32529.648 | 19 | | w ⁴ D° | 9/2 | - | $3d^4(^3F1)4p$ | | 9/2 | 0.0007 | 12SAN/NAV |
| 3074.4635 | 32516.553 | 19 | $3d^4(^3D)4p$ | a ² P | 1/2 | - | 3d ⁴ (⁵ D)6s 3d ⁴ (³ F1)4p | ⁴ D x ⁴ D ^o | 1/2 | 0.0007 | 12SAN/NAV |
| 3074.67 3074.90 | 32514.37 32511.94 | 3 | $3d^4(^3P)4s$ $3d^4(^3P)4s$ | a P a ² P | 3/2 3/2 | _ | $3d^{4}(^{3}F1)4p$ $3d^{4}(^{3}F1)4p$ | x D x ⁴ D° | 3/2 5/2 | 0.01 0.01 | 51KIE 51KIE |
| 3074.90 | 32487.284 | 37 | $3d^{5}$ | a ^P | 9/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.004 | 12SAN/NAV |
| 3077.5877 | 32483.545 | 33 | $3d^4(^3F)4s$ | a G a ⁴ F | 5/2 | _ | $3d^4(^3H)4p$ | z r z ⁴ H° | 7/2 | 0.0004 | 12SAN/NAV |
| 3077.7539 | 32481.791 | 52 | $3d^{5}$ | a ² G | 7/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.0004 | 12SAN/NAV |
| 3079.3219 | 32465.252 | 21 | $3d^5$ | a ² G | 9/2 | _ | $3d^4(^3H)4p$ | z ² H ^o | 11/2 | 0.0003 | 12SAN/NAV |
| 3080.10352 | 32457.0137 | 98 | $3d^4(^3H)4p$ | z ² H° | 11/2 | _ | $3d^4(^3H)5s$ | e ² H | 11/2 | 0.0008 | 12SAN/NAV |
| 3083.048 | 32426.02 | 7 | $3d^4(^3P)4s$ | b ² P | 3/2 | _ | $3d^4(^3P2)4p$ | t ² D° | 3/2 | 0.003 | 12SAN/NAV |
| 3083.6015 | 32420.02 | 20 | $3d^{5}$ | b ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | 0.0008 | 12SAN/NAV |
| 3084.4578 | 32411.196 | 39 | $3d^4(^3P)4s$ | a ² P | 1/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | 0.0004 | 12SAN/NAV |
| 3085.3411 | 32401.918 | 16 | $3d^{5}$ | b ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | 0.0004 | 12SAN/NAV |
| 3087.8728 | 32375.353 | 41 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^3H)4p$ | z ² H° | 9/2 | 0.0004 | 12SAN/NAV |
| 3089.72 | 32356.00 | 1 | $3d^5$ | d ² G | 9/2 | _ | $3d^4(^1F)4p$ | u ² F° | 7/2 | 0.01 | 51KIE |
| 3090.7805 | 32344.897 | 24 | $3d^4(^3P1)4p$ | z ⁴ S ^o | 3/2 | _ | $3d^4(^3P1)5s$ | f ⁴ P | 5/2 | 0.0006 | 12SAN/NAV |
| 3090.91 | 32343.5 | 2 w | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3G)4p$ | y^2F^o | 7/2 | 0.02 | 51KIE |
| 3093.17 | 32319.91 | 3 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.01 | 51KIE |
| 3093.47547 | 32316.7196 | 190 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^4(^3G)4p$ | x 4G° | 11/2 | 0.00010 | 12SAN/NAV |
| 3093.9460 | 32311.805 | 36 | $3d^{5}$ | b ⁴ F | 3/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.0003 | 12SAN/NAV |
| 3094.9285 | 32301.548 | 14 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.0013 | 12SAN/NAV |
| 3095.2128 | 32298.581 | 14 * | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.0012 | 12SAN/NAV |
| 3095.2128 | 32298.581 | 14 * | $3d^4(^3F1)4p$ | z^2D^o | 3/2 | - | $3d^4(^3P1)5s$ | f ⁴ P | 1/2 | 0.0012 | 12SAN/NAV |
| 3095.4879 | 32295.711 | 53 | $3d^4(^3P)4s$ | b ² P | 3/2 | - | $3d^4(^3P2)4p$ | t ² D° | 5/2 | 0.0003 | 12SAN/NAV |
| 3096.11639 | 32289.1552 | 130 * | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 7/2 | 0.00013 | 12SAN/NAV |
| 3096.11639 | 32289.1552 | 130 * | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | - | $3d^4(^3F1)5s$ | f ² F | 7/2 | 0.00013 | 12SAN/NAV |
| 3098.1600 | 32267.857 | 30 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | 0.0005 | 12SAN/NAV |
| 3098.88 | 32260.36 | 4 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.01 | 51KIE |
| 3099.88 | 32249.95 | 2 | $3d^{5}$ | a ² D | 5/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | 0.01 | 51KIE |
| 3100.3350 | 32245.221 | 31 | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | - | $3d^4(^3F1)5s$ | f ² F | 5/2 | 0.0005 | 12SAN/NAV |
| 3102.55 | 32222.20 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | 0.01 | 51KIE |
| 3103.4762 | 32212.585 | 82 * | $3d^4(^3P)4s$ | a ² P | 1/2 | - | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 1/2 | 0.0002 | 12SAN/NAV |
| 3103.4762 | 32212.585 | 82 * | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | - | $3d^4(^3F1)5s$ | f ⁴ F | 9/2 | 0.0002 | 12SAN/NAV |
| 3103.4993 | 32212.346 | 10 | $3d^34s^2$ | c ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° | 5/2 | 0.0017 | 12SAN/NAV |
| 3104.29 | 32204.14 | 3 | $3d^5$ | a ² G | 9/2 | - | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 9/2 | 0.01 | 51KIE |
| 3107.56837 | 32170.1682 | 160 | $3d^4(^3G)4s$ | b ² G | 7/2 | - | $3d^4(^3G)4p$ | $x {}^{4}G^{o}$ | 9/2 | 0.00012 | 12SAN/NAV |
| 3108.6555 | 32158.918 | 40 | $3d^4(^3G)4s$ | b ⁴ G c ⁴ F | 7/2 | - | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | 0.0004 | 12SAN/NAV |
| 3108.98 | 32155.56 | 3 | $3d^34s^2$ | c F y ² G° | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° f ² F | 7/2 | 0.01 | 51KIE |
| 3110.9180 | 32135.531 32124.914 | 35 32 | $3d^4(^3F1)4p$ $3d^4(^3G)4s$ | y ² G ³ b ⁴ G | 9/2 5/2 | _ | $3d^4(^3F1)5s$ $3d^4(^3H)4p$ | z ² G° | 7/2 7/2 | 0.0004 0.0004 | 12SAN/NAV |
| 3111.9462 3113.17 | 32124.914 32112.29 | 32 | $3d^4(^3D)4s$ | в G с ⁴ D | 5/2 | _ | $3d^{4}(^{3}G)4p$ | z G° x ⁴ G° | 7/2 | 0.0004 | 12SAN/NAV 51KIE |
| 3113.17 | 32112.29 32107.892 | 10 | $3d^{4}(^{1}D)4s$ $3d^{4}(^{1}D)4s$ | c D c ² D | 3/2 | _ | $3d^{4}(^{1}S1)4p$ | $x^{-1}G^{\circ}$ $x^{-2}P^{\circ}$ | 1/2 | 0.01 | 12SAN/NAV |
| 3113.5960 | 32107.892 32094.76 | 10 5 R | $3d^{4}(^{5}D)4p$ | с D z ⁴ D° | 3/2 | _ | 3d (S1)4p 3d ⁴ (⁵ D)4d | e ⁶ G | 3/2 | 0.0012 | 00WAG |
| 3115.2833 | 32094.76 | 37 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | 0.0004 | 12SAN/NAV |
| 3115.2833 | 32090.303 | 37 89 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3D)4p$ | y ² P ^o | 3/2 | 0.0004 | 12SAN/NAV |
| 3115.04801 | 32086.7401 | 66 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | 0.00019 | 12SAN/NAV |
| 3117.2546 | 32073.404 | 31 | $3d^{5}$ | b ⁴ F | 9/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 7/2 | 0.0005 | 12SAN/NAV |
| | | J1 | Ju | U 1 | 114 | - | $\omega u \setminus \mathbf{I} \mathbf{I} \mathbf{J} \mathbf{T} \mathcal{V}$ | , D | 114 | 0.0005 | 170111111111 V |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | Saumas |
|-------------------|----------------------------|-------------|-------------------------------------|-------------------|------|-------|-------------------------------------|-------------------------------|------|----------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 3118.64904 | 32055.8708 | 2300 | 3d ⁴ (⁵ D)4s | a ⁴ D | 1/2 | _ | 3d ⁴ (⁵ D)4p | z ⁴ F° | 3/2 | 0.00009 | 12SAN/NAV |
| 3119.19 | 32050.31 | 53 R | $3d^4(^3F)4s$ | d ⁴ F | 3/2 | _ | $3d^4(^1F)4p$ | v^2D^o | 3/2 | 0.01 | 00WAG |
| 3120.36919 | 32038.2002 | 3400 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z^4F^o | 5/2 | 0.00009 | 12SAN/NAV |
| 3121.0525 | 32031.186 | 24 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.0006 | 12SAN/NAV |
| 3121.2013 | 32029.659 | 30 | $3d^4(^3P)4s$ | b ² P | 1/2 | - | $3d^4(^3P2)4p$ | t ² D ^o | 3/2 | 0.0006 | 12SAN/NAV |
| 3121.8115 | 32023.399 | 37 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.0004 | 12SAN/NAV |
| 3121.9670 | 32021.804 | 15 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | 0.0016 | 12SAN/NAV |
| 3122.60143 | 32015.2981 | 220 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^4(^3F1)4p$ | z^4G^o | 11/2 | 0.00010 | 12SAN/NAV |
| 3124.97758 | 31990.9555 | 4700 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | 0.00009 | 12SAN/NAV |
| 3125.061 | 31990.10 | 170 | $3d^4(^3P)4s$ | a ² P | 1/2 | - | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.003 | 12SAN/NAV |
| 3125.4720 | 31985.895 | 43 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | 0.0006 | 12SAN/NAV |
| 3125.784 | 31982.70 | 13 | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | 0.002 | 12SAN/NAV |
| 3128.70010 | 31952.8942 | 850 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 3/2 | 0.00009 | 12SAN/NAV |
| 3129.0191 | 31949.637 | 30 | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 9/2 | - | $3d^45s$ | g ² G | 9/2 | 0.0005 | 12SAN/NAV |
| 3130.5722 | 31933.787 | 25 | $3d^4(^3D)4s$ | b ² D | 3/2 | - | $3d^4(^3D)4p$ | x^4P^o | 1/2 | 0.0008 | 12SAN/NAV |
| 3131.53 | 31924.02 | 5 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | 0.01 | 51KIE |
| 3132.05662 | 31918.6526 | 6600 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | 0.00008 | 12SAN/NAV |
| 3134.30293 | 31895.7778 | 130 | $3d^5$ | b ² H | 9/2 | - | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 11/2 | 0.00014 | 12SAN/NAV |
| 3134.4215 | 31894.571 | 9 | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 7/2 | - | $3d^45s$ | g ² G | 7/2 | 0.0010 | 12SAN/NAV |
| 3135.34050 | 31885.2231 | 140 | $3d^4(^3G)4s$ | b ² G | 7/2 | - | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.00013 | 12SAN/NAV |
| 3135.71600 | 31881.4050 | 170 | $3d^5$ | b ² H | 11/2 | - | $3d^4(^3H)4p$ | z ² I ^o | 13/2 | 0.00011 | 12SAN/NAV |
| 3136.68596 | 31871.5466 | 1000 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^5D)4p$ | z^4F^o | 5/2 | 0.00009 | 12SAN/NAV |
| 3137.1082 | 31867.257 | 23 | $3d^4(^3D)4s$ | b ² D | 3/2 | - | $3d^4(^3D)4p$ | y^2P^o | 1/2 | 0.0008 | 12SAN/NAV |
| 3137.44 | 31863.89 | 2 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | 0.01 | 51KIE |
| 3137.546 | 31862.81 | 9 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3F1)4p$ | z ⁴ G ^o | 9/2 | 0.002 | 12SAN/NAV |
| 3138.2287 | 31855.879 | 15 | $3d^4(^3F)4s$ | e ² F | 7/2 | - | $3d^4(^3P2)4p$ | t ² D° | 5/2 | 0.0010 | 12SAN/NAV |
| 3139.9048 | 31838.875 | 13 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | 0.0010 | 12SAN/NAV |
| 3140.20853 | 31835.7957 | 130 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.00014 | 12SAN/NAV |
| 3140.66 | 31831.22 | 1 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.01 | 51KIE |
| 3141.806 | 31819.61 | 8 | $3d^4(^3D)4s$ | b ² D | 5/2 | - | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | 0.002 | 12SAN/NAV |
| 3142.7441 | 31810.111 | 34 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.0004 | 12SAN/NAV |
| 3142.9627 | 31807.899 | 16 | $3d^4(^3G)4s$ | b ² G | 7/2 | - | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | 0.0008 | 12SAN/NAV |
| 3143.67 | 31800.74 | 7 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^3H)4p$ | z ⁴ I ^o | 11/2 | 0.01 | 51KIE |
| 3143.8804 | 31798.615 | 13 | $3d^5$ | b ² H | 11/2 | - | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 11/2 | 0.0011 | 12SAN/NAV |
| 3145.1041 | 31786.243 | 55 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | 0.0003 | 12SAN/NAV |
| 3145.7635 | 31779.580 | 39 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.0004 | 12SAN/NAV |
| 3147.2051 | 31765.024 | 93 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^3F1)4p$ | z ⁴ G ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 3147.22665 | 31764.8065 | 680 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | 0.00013 | 12SAN/NAV |
| 3147.84 | 31758.62 | 1 | $3d^5$ | b ² H | 9/2 | | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | 0.01 | 51KIE |
| 3149.11 | 31745.81 | 4 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 9/2 | 0.01 | 51KIE |
| 3149.83449 | 31738.5085 | 92 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.00019 | 12SAN/NAV |
| 3150.034 | 31736.50 | 8 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3H)4p$ | y ⁴ G ^o | 5/2 | 0.005 | 12SAN/NAV |
| 3150.1072 | 31735.761 | 85 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G ^o | 7/2 | 0.0002 | 12SAN/NAV |
| 3150.2203 | 31734.622 | 14 | $3d^4(^3P1)4p$ | z ⁴ S° | 3/2 | _ | $3d^4(^3P1)5s$ | f ⁴ P | 3/2 | 0.0012 | 12SAN/NAV |
| 3152.21468 | 31714.5441 | 300 | $3d^4(^3P)4s$ | a ² P | 3/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 3/2 | 0.00009 | 12SAN/NAV |
| 3154.04 | 31696.19 | 3 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3H)4p$ | z ⁴ I ^o | 9/2 | 0.01 | 51KIE |
| 3154.1074 | 31695.514 | 12 | $3d^4(^3P)4s$ | a ² P | 1/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.0011 | 12SAN/NAV |
| 3154.68 | 31689.76 | 2 R | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^4(^3F1)4p$ | z ⁴ G ^o | 9/2 | 0.01 | 00WAG |
| 3157.52 | 31661.26 | 2 | $3d^5$ | b ² H | 11/2 | - | $3d^4(^3H)4p$ | y ⁴ G° | 11/2 | 0.01 | 51KIE |
| 3158.0266 | 31656.180 | 65 | $3d^4(^3P)4s$ | a ² P | 3/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 3159.1038 | 31645.386 | 30 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | 0.0006 | 12SAN/NAV |
| 3159.851 | 31637.90 | 7 | $3d^4(^3G)4s$ | b ⁴G | 9/2 | - | $3d^4(^3F1)4p$ | z ⁴ G ^o | 7/2 | 0.005 | 12SAN/NAV |
| 3160.1024 | 31635.387 | 13 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 5/2 | 0.0013 | 12SAN/NAV |
| 3162.4305 | 31612.098 | 20 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 5/2 | 0.0007 | 12SAN/NAV |
| 3163.37 | 31602.71 | 3 | $3d^5$ | a ² G | 9/2 | - | $3d^4(^3F1)4p$ | x ⁴ D° | 7/2 | 0.01 | 51KIE |
| 3163.76 | 31598.81 | 14 R | $3d^4(^3G)4s$ | b ² G | 7/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.01 | 00WAG |
| 3163.9233 | 31597.184 | 27 | $3d^4(^3P)4s$ | a ² P | 1/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.0004 | 12SAN/NAV |
| 3164.28 | 31593.62 | 4 | $3d^5$ | b ⁴ F | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 5/2 | 0.01 | 51KIE |
| 3164.48 | 31591.63 | 1 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.01 | 51KIE |
| 3167.2187 | 31564.309 | 20 | $3d^4(^3G)4p$ | y^2F^o | 5/2 | - | $3d^4(^3F1)5s$ | f ² F | 5/2 | 0.0008 | 12SAN/NAV |
| 3168.3842 | 31552.698 | 14 | $3d^4(^3F)4s$ | e ² F | 7/2 | _ | $3d^4(^3F2)4p$ | w^4G^o | 7/2 | 0.0010 | 12SAN/NAV |
| 3169.1956 | 31544.620 | 55 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.0003 | 12SAN/NAV |
| 3169.7836 | 31538.769 | 42 | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | _ | $3d^4(^3P1)5s$ | e ² P | 3/2 | 0.0004 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | ~ |
|-----------------------|----------------------------|-------------|-------------------------|--------------------------------------|------------|-------|--------------------------------|--|------------|----------------------------|----------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 51110 | Configuration | Term | J | wavelength (Å) | Source of line |
| 3170.71 | 31529.55 | 2 | $3d^4(^3G)4s$ | e ² G | 9/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 7/2 | 0.01 | 51KIE |
| 3172.08033 | 31515.9342 | 160 | $3d^4(^3P)4s$ | a ² P | 3/2 | - | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 1/2 | 0.00012 | 12SAN/NA |
| 3173.58 | 31501.04 | 15 * | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 3/2 | 0.01 | 51KIE |
| 3173.58 | 31501.04 | 15 * | $3d^4(^3F)4s$ | e ² F | 5/2 | _ | $3d^4(^3F2)4p$ | w ⁴ G° | 5/2 | 0.01 | 51KIE |
| 3173.93 | 31497.57 | 2 w | $3d^4(^3D)4s$ | b ² D | 3/2 | - | $3d^4(^3D)4p$ | x ⁴ P ^o | 5/2 | 0.02 | 51KIE |
| 3176.60 | 31471.09 | 4 | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | - | $3d^3(^4P)4s4p(^1P^0)$ | ⁴ P ^o | 3/2 | 0.01 | 51KIE |
| 3177.90 | 31458.22 | 1 | $3d^5$ | a ² F | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 3/2 | 0.01 | 51KIE |
| 3178.778 | 31449.533 | 8 | $3d^4(^3D)4s$ | b ² D | 3/2 | - | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 5/2 | 0.002 | 12SAN/NA |
| 3179.2136 | 31445.224 | 7 | $3d^4(^3G)4s$ | b ² G | 7/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.0016 | 12SAN/NA |
| 3179.4504 | 31442.882 | 19 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3F1)4p$ | $y_{2}^{4}F^{o}$ | 5/2 | 0.0009 | 12SAN/NA |
| 3180.281 | 31434.670 | 18 | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | - | $3d^4(^3P1)5s$ | e ² P | 1/2 | 0.002 | 12SAN/NA |
| 3180.69618 | 31430.5671 | 1600 | $3d^{5}$ | a ⁴ G | 11/2 | - | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 9/2 | 0.00009 | 12SAN/NA |
| 3181.42225 | 31423.3943 | 100 | $3d^{5}$ | a ⁴ G | 9/2 | - | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 9/2 | 0.00019 | 12SAN/NA |
| 3183.32967 | 31404.5664 | 260 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3F1)4p$ | y^4F^0 | 5/2 | 0.00009 | 12SAN/NA |
| 3184.3445 | 31394.558 | 29 | $3d^4(^3G)4s$ | b ² G | 7/2 | - | $3d^4(^3F1)4p$ | y^2G^o | 7/2 | 0.0006 | 12SAN/NA |
| 3184.7063 | 31390.992 | 19 | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 7/2 | - | $3d^4(^3F1)5s$ | f ² F | 7/2 | 0.0010 | 12SAN/NA |
| 3186.7472 | 31370.889 | 40 | $3d^4(^3P)4s$ | a ² P | 3/2 | - | $3d^4(^3\text{P1})4p$ | y ⁴ P ^o | 5/2 | 0.0004 | 12SAN/NA |
| 3189.8383 | 31340.490 | 10 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | 0.0019 | 12SAN/NA |
| 3190.6770 | 31332.252 | 7 2 D | $3d^4(^3D)4s$ | b ² D | 3/2 | - | $3d^4(^3D)4p$ | w ⁴ F ^o v ⁴ F ^o | 5/2 | 0.0016 | 12SAN/NA |
| 3192.80 | 31311.42 | 2 R | $3d^4(^3P)4s$ | b ² P b ⁴ G | 3/2 | - | $3d^4(^3F2)4p$ | y ⁴ D ^o | 5/2 | 0.01 | 00WAG |
| 3193.41 | 31305.44 | 2 | $3d^4(^3G)4s$ | b G z ⁴ F° | 9/2 | - | $3d^4(^3P1)4p$ | | 7/2 | 0.01 | 51KIE |
| 3194.194 | 31297.755 | 9 | $3d^4(^5D)4p$ | z F a ² P | 9/2 | - | $3d^4(^5D)5s$ | e ⁶ D z ² P ^o | 9/2 | 0.002 | 12SAN/NA |
| 3194.628 | 31293.503 | 18 | $3d^4(^3P)4s$ $3d^5$ | a ⁻ P a ⁴ G | 3/2 | - | $3d^4(^3P1)4p$ | z ⁴ F° | 3/2 | 0.002 | 12SAN/NA |
| 3196.35 | 31276.64 | 3 5 | $3d^{4}(^{3}D)4s$ | a G c ⁴ D | 5/2 3/2 | - | $3d^4(^5D)4p$ $3d^4(^3G)4p$ | Z F 4F° | 7/2 | 0.01 | 51KIE 51KIE |
| 3196.39 3196.92485 | 31276.25 31271.0208 | 150 | $3d^{5}$ | a ⁴ G | 3/2 7/2 | _ | $3d^{4}(^{5}D)4p$ | z ⁴ F° | 3/2 7/2 | 0.01 0.00012 | |
| 3190.92483 | 31269.5446 | 1300 | $3d^5$ | a G a ⁴ G | 9/2 | _ | $3d^4(^5D)4p$ | z ⁴ F ^o | 7/2 | 0.00012 | 12SAN/NA 12SAN/NA |
| 3197.07378 | 31269.5446 | 60 | $3d^4(^3F)4s$ | e ² F | 912 7/2 | _ | $3d^4(^3F2)4p$ | t ² F° | 7/2 | 0.00009 | 12SAN/NA |
| 3198.74 | 31253.28 | 2 | $3d^4(^3F)4s$ | e ² F | 5/2 | _ | $3d^4(^3F2)4p$ | t ² F ^o | 7/2 | 0.0003 | 51KIE |
| 3199.8526 | 31242.410 | 12 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 3/2 | 0.0016 | 12SAN/NA |
| 3200.4583 | 31236.497 | 11 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{0}$ | 7/2 | 0.0014 | 12SAN/NA |
| 3201.2646 | 31228.630 | 52 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 9/2 | 0.0006 | 12SAN/NA |
| 3201.5774 | 31225.579 | 12 | $3d^4(^3G)4p$ | y ⁴ H° | 7/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 7/2 | 0.0013 | 12SAN/NA |
| 3202.47 | 31216.88 | 7 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 3/2 | 0.013 | 51KIE |
| 3202.5171 | 31216.417 | 14 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{0}$ | 7/2 | 0.0013 | 12SAN/NA |
| 3203.5095 | 31206.747 | 12 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 3/2 | 0.0014 | 12SAN/NA |
| 3205.1027 | 31191.235 | 54 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{0}$ | 7/2 | 0.0003 | 12SAN/NA |
| 3205.35 | 31188.83 | 2 | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^3(^4F)4s4p(^3P^0)$ | s ² F ^o | 5/2 | 0.01 | 51KIE |
| 3207.9997 | 31163.069 | 15 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 5/2 | 0.0010 | 12SAN/NA |
| 3208.58935 | 31157.3422 | 120 | $3d^5$ | a ⁴ G | 5/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | 0.00016 | 12SAN/NA |
| 3209.17937 | 31151.6141 | 1000 | $3d^5$ | a ⁴ G | 7/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | 0.00009 | 12SAN/NA |
| 3209.9400 | 31144.233 | 15 | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 3/2 | _ | $3d^4(^3P1)5s$ | e ² P | 1/2 | 0.0016 | 12SAN/NA |
| 3210.0234 | 31143.423 | 14 | $3d^4(^3G)4p$ | y ⁴ H ^o | 9/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 9/2 | 0.0016 | 12SAN/NA |
| 3211.4962 | 31129.142 | 41 | $3d^4(^3F)4s$ | e ² F | 5/2 | _ | $3d^4(^3F2)4p$ | t ² F ^o | 5/2 | 0.0004 | 12SAN/NA |
| 3212.5145 | 31119.275 | 60 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.0003 | 12SAN/NA |
| 3212.6134 | 31118.317 | 26 | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | _ | $3d^4(^3H)5s$ | e ² H | 9/2 | 0.0008 | 12SAN/NA |
| 3212.9028 | 31115.514 | 37 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 5/2 | 0.0005 | 12SAN/NA |
| 3213.46 | 31110.12 | 3 | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 7/2 | 0.01 | 51KIE |
| 3215.8336 | 31087.157 | 29 | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | _ | $3d^4(^3H)5s$ | e ² H | 11/2 | 0.0008 | 12SAN/NA |
| 3216.5527 | 31080.2075 | 170 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.0002 | 12SAN/NA |
| 3217.39855 | 31072.0369 | 820 | $3d^5$ | a ⁴ G | 5/2 | - | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 3/2 | 0.00009 | 12SAN/NA |
| 3219.1265 | 31055.359 | 59 | $3d^4(^1G1)4s$ | c ² G | 9/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 11/2 | 0.0003 | 12SAN/NA |
| 3219.5532 | 31051.243 | 14 | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | - | $3d^4(^3H)5s$ | e ⁴ H | 11/2 | 0.0012 | 12SAN/NA |
| 3219.7767 | 31049.088 | 19 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^3H)4p$ | z ² G ^o | 9/2 | 0.0009 | 12SAN/NA |
| 3221.39 | 31033.54 | 1 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.01 | 51KIE |
| 3225.3567 | 30995.373 | 33 | $3d^4(^1G1)4s$ | c ² G | 7/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 9/2 | 0.0006 | 12SAN/NA |
| 3225.44 | 30994.57 | 8 | $3d^5$ | b ⁴ F | 9/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | 0.01 | 51KIE |
| 3226.35 | 30985.83 | 4 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.01 | 51KIE |
| 3227.48 | 30974.98 | 3 | $3d^5$ | c ² F | 7/2 | - | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 7/2 | 0.01 | 51KIE |
| 3229.38 | 30956.76 | 8 | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ D ^o | 1/2 | 0.01 | 51KIE |
| 3229.88 | 30951.97 | 10 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | - | $3d^4(^3P1)4p$ | ² D ^o | 3/2 | 0.01 | 51KIE |
| 3230.83 | 30942.87 | 2 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3G)4p$ | 4 F $^{\rm o}$ | 7/2 | 0.01 | 51KIE |
| 3231.63 | 30935.21 | 8 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^4(^3G)4p$ | $^{4}F^{o}$ | 9/2 | 0.01 | 51KIE |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | C |
|-----------------------|----------------------------|-------------|--|--------------------------------------|-------------|-------|--|--|-------------|----------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 3231.7643 | 30933.921 | 24 | $3d^4(^3G)4p$ | y ⁴ H ^o | 13/2 | _ | $3d^4(^3H)5s$ | e ⁴ H | 13/2 | 0.0005 | 12SAN/NAV |
| 3232.38 | 30928.03 | 2 * | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | - | $3d^4(^3F1)5s$ | f ⁴ F | 3/2 | 0.01 | 51KIE |
| 3232.38 | 30928.03 | 2 * | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 5/2 | 0.01 | 51KIE |
| 3234.05796 | 30911.9830 | 330 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | 0.00009 | 12SAN/NAV |
| 3235.24 | 30900.69 | 4 | $3d^4(^3P)4s$ | a ² P | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.01 | 51KIE |
| 3236.29 | 30890.66 | 2 R | 3d ⁴ (³ F)4s 3d ⁵ | d ⁴ F | 7/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ D° z ⁴ H° | 5/2 | 0.01 | 00WAG |
| 3238.51 3238.76248 | 30869.49 | 10 | $3d^{4}$ $(^{3}\text{H})4s$ | b ⁴ F a ² H | 7/2 11/2 | _ | $3d^4(^3\text{H})4p$ $3d^4(^3\text{H})4p$ | $z^{-1}H^{\circ}$ $z^{-2}G^{\circ}$ | 9/2 9/2 | 0.01 0.00009 | 51KIE |
| 3238.76248 | 30867.0828 30861.28 | 250 9 | $3d^{4}(^{1}I)4p$ | ан ² К° | 13/2 | _ | 3 <i>d</i> ⁴ 4 <i>d</i> | a ² K | 15/2 | 0.00009 | 12SAN/NAV |
| 3240.058 | 30854.74 | 6 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3G)4p$ | x ⁴ G° | 9/2 | 0.003 | 12SAN/NAV |
| 3240.6033 | 30849.549 | 8 | $3d^4(^3G)4p$ | x ⁴ G° | 7/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 5/2 | 0.0020 | 12SAN/NA |
| 3240.0033 | 30842.25 | 4 | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^3G)4p$ | y^2F^0 | 5/2 | 0.0020 | 51KIE |
| 3245.29 | 30805.00 | 5 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ I° | 13/2 | 0.01 | 51KIE |
| 3247.00 | 30788.78 | 4 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^3H)4p$ | z ⁴ I° | 11/2 | 0.01 | 51KIE |
| 3247.33 | 30785.65 | 8 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.01 | 51KIE |
| 3249.5117 | 30764.980 | 15 | $3d^4(^1F)4s$ | d ² F | 7/2 | _ | $3d^4(^1D1)4p$ | v ² F° | 7/2 | 0.0011 | 12SAN/NA |
| 3250.59 | 30754.77 | 1 | $3d^5$ | d ² D | 5/2 | _ | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 3/2 | 0.01 | 51KIE |
| 3250.774 | 30753.03 | 8 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | 0.004 | 12SAN/NA |
| 3251.52 | 30745.98 | 6 R | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | 0.01 | 00WAG |
| 3252.4662 | 30737.034 | 33 | $3d^5$ | d^2D | 3/2 | _ | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 3/2 | 0.0006 | 12SAN/NA |
| 3255.2843 | 30710.426 | 11 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0013 | 12SAN/NA |
| 3255.60 | 30707.45 | 3 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3G)4p$ | y^2F^o | 5/2 | 0.01 | 51KIE |
| 3256.062 | 30703.09 | 8 | $3d^4(^1I)4p$ | $^{2}I^{o}$ | 11/2 | _ | $3d^44d$ | a ² K | 13/2 | 0.004 | 12SAN/NA |
| 3258.00 | 30684.83 | 3 | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^3G)4p$ | x ⁴ G ^o | 7/2 | 0.01 | 51KIE |
| 3258.7658 | 30677.618 | 51 * | $3d^4(^1I)4s$ | b ² I | 13/2 | _ | $3d^4(^3G)4p$ | $x^{4}G^{o}$ | 11/2 | 0.0004 | 12SAN/NA |
| 3258.7658 | 30677.618 | 51 * | $3d^5$ | b ² S | 1/2 | - | $3d^4(^3D)4p$ | y^2P^o | 3/2 | 0.0004 | 12SAN/NA |
| 3261.54 | 30651.52 | 4 | $3d^4(^1I)4s$ | b ² I | 11/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 11/2 | 0.01 | 51KIE |
| 3261.88 | 30648.33 | 4 | $3d^4(^3F)4s$ | e ² F | 7/2 | _ | $3d^4(^3P2)4p$ | v ⁴ D ^o | 7/2 | 0.01 | 51KIE |
| 3264.2653 | 30625.9350 | 82 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^3F1)4p$ | z ⁴ G ^o | 7/2 | 0.0002 | 12SAN/NA |
| 3266.244 | 30607.38 | 8 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3G)4p$ | y ⁴ H ^o | 11/2 | 0.004 | 12SAN/NA |
| 3268.466 | 30586.575 | 9 | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^3H)4p$ | z ⁴ I ^o | 9/2 | 0.002 | 12SAN/NA |
| 3269.0795 | 30580.835 | 58 | $3d^5$ | d ² D | 5/2 | - | $3d^4(^3D)4p$ | x ² D ^o | 5/2 | 0.0003 | 12SAN/NA |
| 3269.7633 | 30574.440 | 46 | $3d^4(^1G1)4s$ | c ² G | 9/2 | - | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.0004 | 12SAN/NA |
| 3270.13375 | 30570.9769 | 160 | $3d^4(^3H)4s$ | a ² H | 11/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | 0.00013 | 12SAN/NA |
| 3271.03 | 30562.60 | 1 | $3d^5$ | d ² D | 3/2 | - | $3d^4(^3D)4p$ | $x^{2}D^{o}$ | 5/2 | 0.01 | 51KIE |
| 3272.167 | 30551.98 | 6 | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ $b^{2}S$ | 7/2 | - | $3d^45s$ | $g^{2}G$ $y^{2}P^{o}$ | 9/2 | 0.003 | 12SAN/NAV |
| 3272.73 | 30546.73 | 1 | 3d ⁵ 3d ⁴ (¹ F)4s | d ² F | 1/2 | - | $3d^4(^3D)4p$ $3d^4(^1D1)4p$ | y P v ² F° | 1/2 | 0.01 | 51KIE |
| 3272.883 | 30545.30 | 6 | | a F | 5/2 | _ | $3d^{4}4d$ | v F a ² K | 5/2 | 0.003 | 12SAN/NAV |
| 3273.19 | 30542.43 | 3 w | $3d^4(^1I)4p$ $3d^5$ | c ² F | 13/2 7/2 | | $3a^{4}a^{3}$ $3d^{4}(^{3}G)4p$ | a K y ² H ^o | 15/2 9/2 | 0.02 | 51KIE |
| 3275.9061 | 30517.111 | 10 | $3d^4(^3D)4s$ | b ² D | | - | $3d^4(^3D)4p$ | ун w ⁴ D° | | 0.0017 | 12SAN/NAV |
| 3276.24 3278.78 | 30514.00 | 1 | $3d^4(^3D)4s$ | в D c ⁴ D | 5/2 7/2 | _ | $3d^4(^3F1)4p$ | z ² F° | 3/2 7/2 | 0.01 0.01 | 51KIE 51KIE |
| 3279.54 | 30490.36 30483.30 | 2 5 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3G)4p$ | z г y ⁴ H° | 9/2 | 0.01 | 51KIE 51KIE |
| 3283.0400 | 30465.30 | 31 | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^4(^3G)4p$ | у п х ⁴ G° | 9/2 | 0.0006 | 12SAN/NA |
| 3285.9427 | 30423.902 | 31 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3F1)4p$ | y ² G° | 9/2 | 0.0006 | 12SAN/NA |
| 3286.34 | 30420.22 | 1 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3D)4p$ | w ⁴ D° | 1/2 | 0.000 | 51KIE |
| 3288.0298 | 30404.591 | 13 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ I° | 9/2 | 0.0015 | 12SAN/NA |
| 3291.76482 | 30370.0936 | 200 | $3d^4(^3P)4s$ | a ² P | 1/2 | _ | $3d^4(^3P1)4p$ | $z^{2}S^{o}$ | 1/2 | 0.00012 | 12SAN/NA |
| 3294.310 | 30346.63 | 8 | $3d^4(^5D)5p$ | $^{6}D^{o}$ | 9/2 | _ | $3d^4(^5D)9s$ | ⁶ D | 9/2 | 0.003 | 12SAN/NA |
| 3294.939 | 30340.838 | 6 | $3d^5$ | d ² D | 3/2 | _ | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | 0.002 | 12SAN/NA |
| 3295.42508 | 30336.3624 | 200 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ H° | 13/2 | 0.00012 | 12SAN/NA |
| 3301.2034 | 30283.264 | 20 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3F1)4p$ | y ² G° | 9/2 | 0.0011 | 12SAN/NA |
| 3302.82 | 30268.44 | 8 R | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.01 | 00WAG |
| 3304.73 | 30250.95 | 5 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.01 | 51KIE |
| 3306.9556 | 30230.5907 | 90 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3F1)4p$ | y ² G ^o | 9/2 | 0.0002 | 12SAN/NA |
| 3307.04652 | 30229.7596 | 170 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | 0.00013 | 12SAN/NA |
| 3308.1402 | 30219.766 | 21 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3F1)4p$ | y ² G ^o | 7/2 | 0.0010 | 12SAN/NA |
| 3310.6592 | 30196.773 | 92 * | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.0003 | 12SAN/NA |
| 3310.6592 | 30196.773 | 92 * | $3d^4(^1I)4s$ | b ² I | 13/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.0003 | 12SAN/NA |
| 3311.93300 | 30185.1596 | 150 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 9/2 | 0.00014 | 12SAN/NA |
| 3312.18325 | 30182.8790 | 140 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | 0.00015 | 12SAN/NA |
| 3313.0741 | 30174.763 | 30 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 11/2 | 0.0007 | 12SAN/NA |
| 3313.53 | 30170.61 | 2 | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.01 | 51KIE |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | |
|--------------------------|----------------------------|----------------|-------------------------|--------------------------------------|------------|-------|--------------------------------|--|------------|----------------------------|----------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | SITIC | Configuration | Term | J | wavelength (Å) | Source of line |
| 3314.0529 | 30165.852 | 33 | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^4(^3G)4p$ | y ² H ^o | 9/2 | 0.0006 | 12SAN/NA |
| 3314.5376 | 30161.4405 | 89 | $3d^5$ | c ² F | 5/2 | - | $3d^4(^3F1)4p$ | y ² G° | 7/2 | 0.0002 | 12SAN/NAV |
| 3315.293 | 30154.568 | 9 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | 0.002 | 12SAN/NAV |
| 3321.18446 | 30101.0789 | 180 | $3d^4(^5D)4p$ | z ⁴ D ^o | 5/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 7/2 | 0.00014 | 12SAN/NAV |
| 3322.69 | 30087.44 | 12 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o | 9/2 | 0.01 | 51KIE |
| 3323.52 | 30079.93 | 8 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | 0.01 | 51KIE |
| 3324.053 | 30075.10 | 160 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | 0.005 | 12SAN/NAV |
| 3324.136 | 30074.35 | 130 | $3d^4(^3G)4s$ | b ² G | 7/2 | - | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.003 | 12SAN/NAV |
| 3324.34006 | 30072.5066 | 290 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3H)4p$ | z ² G° | 9/2 | 0.00009 | 12SAN/NAV |
| 3328.34993 | 30036.2776 | 120 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | 0.00018 | 12SAN/NA |
| 3329.45 | 30026.35 | 4 | $3d^{5}$ | c ² F | 7/2 | - | $3d^4(^3F1)4p$ | $y^{2}G^{o}$ | 7/2 | 0.01 | 51KIE |
| 3332.13 | 30002.20 | 2 | $3d^5$ | b ² H | 11/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 11/2 | 0.01 | 51KIE |
| 3332.80572 | 29996.1220 | 250 | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 3/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.00011 | 12SAN/NAV |
| 3333.12 | 29993.29 | 2 w | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G ^o | 7/2 | - | $3d^4(^5D)6d$ | ⁶ D w ² G° | 7/2 | 0.02 | 51KIE |
| 3333.9429 | 29985.891 | 17 | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^1G1)4p$ | | 7/2 | 0.0007 | 12SAN/NAV |
| 3335.29692 | 29973.7180 | 250 | $3d^4(^3F)4s$ | b ² F b ² H | 5/2 | - | $3d^4(^3H)4p$ | z ² G° z ² G° | 7/2 | 0.00011 | 12SAN/NAV |
| 3335.4275 | 29972.5446 | 91 | $3d^5$ | | 11/2 | _ | $3d^4(^3H)4p$ | | 9/2 | 0.0002 | 12SAN/NA |
| 3335.934 3336.16 | 29967.99 29965.96 | 14 2 | $3d^4(^3G)4s$ $3d^5$ | b ² G a ⁴ P | 7/2 5/2 | _ | $3d^4(^3H)4p$ $3d^4(^5D)4p$ | $z^{2}H^{o}$ $z^{4}F^{o}$ | 9/2 7/2 | 0.003 0.01 | 12SAN/NA' 51KIE |
| | | | $3d^4(^5D)4s$ | a P a ⁴ D | 1/2 | _ | $3d^{4}(^{5}D)4p$ | z F z ⁶ D° | | | |
| 3336.32510 3338.80473 | 29964.4811 29942.2281 | 370 940 | $3d^4(^5D)4p$ | a D z ⁴ D° | 7/2 | _ | $3d^{4}(^{5}D)5s$ | e ⁴ D | 1/2 7/2 | 0.00010 0.00011 | 12SAN/NA |
| 3339.80080 | 29942.2281 | 590 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | 0.00011 | 12SAN/NA 12SAN/NA |
| 3339.8792 | 29933.2983 | 100 | $3d^{5}$ | а D b ² H | 9/2 | _ | $3d^4(^3H)4p$ | z ² G ^o | 3/2 7/2 | 0.00010 | 12SAN/NA 12SAN/NA |
| 3341.97 | 29932.3937 | 5 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^4(^3H)4p$ | z ² H° | 9/2 | 0.0002 | 51KIE |
| 3342.58107 | 29908.4014 | 840 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | 0.00010 | 12SAN/NA |
| 3343.27622 | 29902.1829 | 200 | $3d^4(^5D)4p$ | z ⁴ D° | 1/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 3/2 | 0.00010 | 12SAN/NA |
| 3346.87627 | 29870.0198 | 580 | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.00013 | 12SAN/NA |
| 3347.14 | 29867.67 | 5 w | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D° | 9/2 | _ | $3d^4(^5D)9s$ | 6D | 9/2 | 0.02 | 51KIE |
| 3347.83068 | 29861.5047 | 370 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | 0.00010 | 12SAN/NA |
| 3349.34 | 29848.05 | 6 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | 0.01 | 51KIE |
| 3349.65 | 29845.29 | 3 | $3d^5$ | a ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | 0.01 | 51KIE |
| 3352.41783 | 29820.6462 | 310 | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 3/2 | 0.00011 | 12SAN/NA |
| 3352.56 | 29819.38 | 3 w | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 5/2 | _ | $3d^4(^5D)6d$ | ⁶ Р | 7/2 | 0.02 | 51KIE |
| 3353.1234 | 29814.3715 | 100 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | 0.0002 | 12SAN/NA |
| 3353.67 | 29809.51 | 4 R | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | _ | $3d^4(^1F)4p$ | u^2F^o | 7/2 | 0.01 | 00WAG |
| 3355.66069 | 29791.8289 | 200 | $3d^4(^5D)4p$ | z ⁴ D ^o | 1/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 1/2 | 0.00014 | 12SAN/NA |
| 3357.40017 | 29776.3941 | 180 | $3d^4(^3F)4s$ | b ² F | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G ^o | 9/2 | 0.00012 | 12SAN/NA |
| 3357.72 | 29773.56 | 1 | $3d^5$ | b ² H | 9/2 | _ | $3d^4(^3F1)4p$ | z^4G^o | 9/2 | 0.01 | 51KIE |
| 3358.49985 | 29766.6447 | 1200 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D ^o | 3/2 | 0.00010 | 12SAN/NA |
| 3360.29061 | 29750.7820 | 1800 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 7/2 | 0.00010 | 12SAN/NA |
| 3361.76488 | 29737.7355 | 330 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 7/2 | 0.00010 | 12SAN/NA |
| 3363.7111 | 29720.530 | 32 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 0.0007 | 12SAN/NA |
| 3364.67 | 29712.06 | 7 | $3d^5$ | b ² H | 11/2 | _ | $3d^4(^3H)4p$ | $z^{4}I^{o}$ | 11/2 | 0.01 | 51KIE |
| 3364.77171 | 29711.1621 | 160 | $3d^4(^5D)4p$ | z ⁴ D ^o | 7/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 5/2 | 0.00017 | 12SAN/NA |
| 3364.87016 | 29710.2929 | 190 | $3d^4(^5D)4p$ | z ⁴ D ^o | 3/2 | _ | $3d^4(^5D)5s$ | e ⁴ D | 1/2 | 0.00015 | 12SAN/NA |
| 3365.041 | 29708.78 | 8 | $3d^4(^3G)4p$ | x ⁴ G ^o | 7/2 | - | $3d^4(^3H)5s$ | e ⁴ H | 9/2 | 0.004 | 12SAN/NA |
| 3366.65490 | 29694.5433 | 240 | $3d^4(^5D)4p$ | z^4D^o | 5/2 | - | $3d^4(^5D)5s$ | e ⁴ D | 3/2 | 0.00012 | 12SAN/NA |
| 3367.4331 | 29687.6812 | 83 | $3d^4(^3F)4s$ | b ² F | 5/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | 0.0002 | 12SAN/NA |
| 3368.04942 | 29682.2488 | 3900 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | 0.00010 | 12SAN/NA |
| 3368.7102 | 29676.427 | 57 | $3d^5$ | b ² H | 11/2 | - | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | 0.0003 | 12SAN/NA |
| 3369.04975 | 29673.4359 | 140 | $3d^4(^3P)4s$ | a ² P | 3/2 | - | $3d^4(^3P1)4p$ | z^2S^o | 1/2 | 0.00016 | 12SAN/NA |
| 3372.1045 | 29646.556 | 25 | $3d^5$ | b ² H | 9/2 | - | $3d^4(^3F1)4p$ | z ⁴ G ^o | 7/2 | 0.0007 | 12SAN/NA |
| 3374.95 | 29621.56 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 7/2 | 0.02 | 51KIE |
| 3374.99 | 29621.21 | 3 | $3d^{5}$ | c ² F | 7/2 | - | $3d^4(^3G)4p$ | ⁴ F ^o | 9/2 | 0.02 | 51KIE |
| 3376.2705 | 29609.976 | 26 | $3d^4(^3F)4s$ | b ² F | 7/2 | - | $3d^4(^3H)4p$ | z ⁴ I ^o | 9/2 | 0.0005 | 12SAN/NA |
| 3376.62 | 29606.91 | 4 | $3d^{5}$ | b ² H | 9/2 | - | $3d^4(^3H)4p$ | $z^{4}I^{o}$ | 9/2 | 0.02 | 51KIE |
| 3376.71 | 29606.12 | 5 | $3d^5$ | c ² F | 5/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.02 | 51KIE |
| 3377.36 | 29600.42 | 5 | $3d^4(^1F)4s$ | d ² F | 5/2 | - | $3d^4(^1D1)4p$ | w^2D^o | 3/2 | 0.02 | 51KIE |
| 3377.60 | 29598.32 | 1 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | - | $3d^4(^3F1)4p$ | $x^{4}D^{o}$ | 5/2 | 0.02 | 51KIE |
| 3378.3293 | 29591.9319 | 440 | $3d^{5}$ | b ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.0002 | 12SAN/NA |
| 3379.36812 | 29582.8356 | 540 | $3d^5$ | b ⁴ D | 3/2 | - | $3d^4(^5D)4p$ | z^4D^0 | 5/2 | 0.00010 | 12SAN/NA |
| 3379.82014 | 29578.8793 | 1200 | $3d^{5}$ | b ⁴ D | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.00010 | 12SAN/NA |
| 3382.67992 | 29553.8736 | 550 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 0.00010 | 12SAN/NA |

Table 6. Spectral lines of Cr II—Continued

| Observed air wavelength | Observed wave number | Intensity and | | | Clas | sific | ation | | | Uncertainty of observed wavelength | Source |
|-------------------------------|----------------------------|------------------|--|--------------------------------------|------------|-------|--|--------------------------------------|------------|--|--------------------|
| wavelength (Å) | (cm ⁻¹) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 3387.72 | 29509.91 | 5 | $3d^5$ | b ² H | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ I ^o | 9/2 | 0.02 | 51KIE |
| 3387.95 | 29507.90 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^4(^3F1)4p$ | ${\rm x}^{\rm 4}{\rm D}^{\rm o}$ | 3/2 | 0.02 | 51KIE |
| 3389.17 | 29497.28 | 2 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 1/2 | 0.02 | 51KIE |
| 3391.43126 | 29477.6144 | 180 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | _ | $3d^4(^5D)4p$ | z^4P^o | 3/2 | 0.00013 | 12SAN/NAV |
| 3392.98164 | 29464.1454 | 360 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^5D)4p$ | z ⁴ D ^o | 3/2 | 0.00012 | 12SAN/NAV |
| 3393.83572 | 29456.7308 | 560 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 3/2 | 0.00010 | 12SAN/NAV |
| 3394.29141 | 29452.7763 | 580 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z^4D^o | 3/2 | 0.00010 | 12SAN/NAV |
| 3395.6051 | 29441.382 | 38 | $3d^5$ | a ² G | 7/2 | _ | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | 0.0005 | 12SAN/NAV |
| 3399.5187 | 29407.489 | 30 | $3d^5$ | a ² G | 9/2 | _ | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | 0.0006 | 12SAN/NAV |
| 3400.08 | 29402.63 | 2 | $3d^4(^3P)4s$ | a ² P | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 3/2 | 0.02 | 51KIE |
| 3402.39698 | 29382.6128 | 400 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 1/2 | 0.00010 | 12SAN/NAV |
| 3403.25621 | 29375.1947 | 400 | $3d^5$ | b ⁴ D | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ D ^o | 1/2 | 0.00010 | 12SAN/NAV |
| 3403.32026 | 29374.6419 | 1200 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | 0.00010 | 12SAN/NAV |
| 3405.13 | 29359.03 | 2 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.02 | 51KIE |
| 3408.07 | 29333.70 | 10 R | $3d^4(^1I)4p$ | $^{2}I^{o}$ | 11/2 | _ | $3d^44d$ | f ⁴ I | 9/2 | 0.01 | 00WAG |
| 3408.76527 | 29327.7216 | 2100 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁶ D ^o | 5/2 | 0.00010 | 12SAN/NAV |
| 3410.551 | 29312.37 | 8 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | 0.004 | 12SAN/NAV |
| 3415.44 | 29270.41 | 2 | $3d^5$ | a ² G | 9/2 | - | $3d^4(^3H)4p$ | z ² G ^o | 7/2 | 0.02 | 51KIE |
| 3419.824 | 29232.89 | 7 | $3d^4(^3D)4p$ | w ⁴ F ^o | 9/2 | - | $3d^4(^3G)5s$ | f ⁴ G | 11/2 | 0.005 | 12SAN/NAV |
| 3421.20953 | 29221.0486 | 1300 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | - | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 1/2 | 0.00011 | 12SAN/NAV |
| 3421.62 | 29217.54 | 5 * | $3d^4(^3H)4s$ | a ² H | 9/2 | - | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | 0.02 | 51KIE |
| 3421.62 | 29217.54 | 5 * | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 13/2 | 0.02 | 51KIE |
| 3422.73940 | 29207.9880 | 2300 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | 0.00011 | 12SAN/NAV |
| 3426.1443 | 29178.962 | 12 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 9/2 | 0.0012 | 12SAN/NAV |
| 3428.94 | 29155.17 | 7 | $3d^{5}$ | a ² G | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | 0.02 | 51KIE |
| 3429.90 | 29147.01 | 1 | $3d^{5}$ | a ² G | 9/2 | - | $3d^4(^3H)4p$ | z ⁴ I ^o | 11/2 | 0.02 | 51KIE |
| 3430.42 | 29142.59 | 3 * | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | _ | $3d^4(^5D)5f$ | ⁴ D ^o | 5/2 | 0.02 | 51KIE |
| 3430.42 | 29142.59 | 3 * | $3d^4(^3P)4s$ | a ² P | 1/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 1/2 | 0.02 | 51KIE |
| 3433.30894 | 29118.0731 | 1300 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | 0.00011 | 12SAN/NAV |
| 3437.93 | 29078.94 | 2 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 7/2 | 0.02 | 51KIE |
| 3438.3302 | 29075.551 | 28 | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | - | $3d^4(^5D)5f$ | ⁶ P° | 5/2 | 0.0006 | 12SAN/NAV |
| 3440.6424 | 29056.012 | 34 | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | - | $3d^4(^5D)5f$ | ⁶ P° | 3/2 | 0.0006 | 12SAN/NAV |
| 3442.2577 | 29042.378 | 13 | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | - | $3d^4(^5D)5f$ | ${}^{6}F^{o}$ z ${}^{2}D^{o}$ | 9/2 | 0.0017 | 12SAN/NAV |
| 3444.34 | 29024.82 | 4 | $3d^4(^3D)4s$ | c ⁴ D c ⁴ D | 3/2 | - | $3d^4(^3F1)4p$ $3d^4(^3H)4p$ | | 5/2 | 0.02 | 51KIE |
| 3445.04 | 29018.92 | 5 | 3d ⁴ (³ D)4s 3d ⁴ (⁵ D)4d | e ⁶ P | 5/2 | _ | $3d^{4}(^{5}\text{H})4p$ $3d^{4}(^{5}\text{D})5f$ | y ⁴ G° ⁶ P° | 7/2 | 0.02 | 51KIE |
| 3449.069 3449.28 | 28985.026 28983.25 | 17 | $3d^4(^3D)4s$ | e P c ⁴ D | 7/2 1/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 3/2 | 0.002 0.02 | 12SAN/NAV 51KIE |
| 3449.28 3449.9728 | 28977.433 | 1 13 | $3d^4(^5D)4d$ | е ⁶ G | 9/2 | _ | $3d^4(^5D)5f$ | ⁶ F° | 9/2 | 0.02 | 12SAN/NAV |
| 3449.9728 | 28977.455 | 3 | $3d^4(^3H)4s$ | a ² H | 9/2 | _ | $3d^4(^3H)4p$ | z ⁴ H° | 912 7/2 | 0.0009 | 51KIE |
| | | 77 | $3d^{4}(^{1}G1)4s$ | c ² G | 9/2 | | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.0003 | 12SAN/NAV |
| 3454.9801 3457.6131 | 28935.437 28913.403 | 74 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 11/2 | 0.0003 | 12SAN/NAV |
| 3459.2659 | 28899.589 | 53 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3F1)4p$ | z ² F ^o | 5/2 | 0.0003 | 12SAN/NAV |
| 3460.03 | 28893.21 | 1 | $3d^4(^3H)4s$ | a ² H | 11/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 9/2 | 0.003 | 51KIE |
| 3461.28 | 28882.77 | 3 | $3d^{5}$ | c ² F | 7/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{0}$ | 7/2 | 0.02 | 51KIE |
| 3462.71 | 28870.85 | 6 | $3d^4(^5D)4s$ | a ⁴ D | 1/2 | _ | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | 0.02 | 51KIE |
| 3463.9748 | 28860.305 | 28 | $3d^4(^5D)4d$ | e ⁶ G | 11/2 | _ | $3d^4(^5D)5f$ | ⁶ F ^o | 11/2 | 0.0011 | 12SAN/NAV |
| 3464.01 | 28860.01 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ P° | 5/2 | 0.02 | 51KIE |
| 3464.728 | 28854.03 | 21 | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | _ | $3d^4(^5D)5f$ | ⁶ G° | 9/2 | 0.004 | 12SAN/NAV |
| 3466.25 | 28841.36 | 2 | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 3467.01 | 28835.04 | 21 R | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | 0.01 | 00WAG |
| 3469.9864 | 28810.307 | 45 | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | _ | $3d^4(^5D)5f$ | ⁶ G° | 9/2 | 0.0005 | 12SAN/NAV |
| 3470.1342 | 28809.080 | 25 | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | _ | $3d^4(^5D)5f$ | $^6\mathrm{D^o}$ | 7/2 | 0.0009 | 12SAN/NAV |
| 3470.8998 | 28802.725 | 30 | $3d^4(^5D)4d$ | e ⁶ G | 11/2 | _ | $3d^4(^5D)5f$ | ⁴ H° | 13/2 | 0.0005 | 12SAN/NAV |
| 3472.056 | 28793.134 | 77 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3H)4p$ | z ² H° | 9/2 | 0.002 | 12SAN/NAV |
| 3475.1318 | 28767.651 | 34 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | 0.0006 | 12SAN/NAV |
| 3475.6744 | 28763.160 | 24 | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | _ | $3d^4(^5D)5f$ | $^{6}D^{o}$ | 3/2 | 0.0008 | 12SAN/NAV |
| 3477.8283 | 28745.347 | 27 | $3d^4(^5D)4d$ | e ⁶ G | 9/2 | _ | $3d^4(^5D)5f$ | ⁶ G° | 9/2 | 0.0008 | 12SAN/NAV |
| 3477.9697 | 28744.178 | 16 | $3d^4(^5D)4d$ | e ⁶ G | 9/2 | _ | $3d^4(^5D)5f$ | $^6\mathrm{D^o}$ | 7/2 | 0.0011 | 12SAN/NAV |
| 3478.15 | 28742.69 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | 0.02 | 51KIE |
| 3478.7041 | 28738.110 | 50 | $3d^4(^5D)4d$ | e ⁶ G | 9/2 | _ | $3d^4(^5D)5f$ | $^{6}G^{\circ}$ | 11/2 | 0.0005 | 12SAN/NAV |
| 3482.58 | 28706.13 | 12 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 3482.913 | 28703.382 | 13 | $3d^4(^5D)4d$ | e ⁶ G | 13/2 | _ | $3d^4(^5D)5f$ | $^{6}F^{\circ}$ | 11/2 | 0.002 | 12SAN/NAV |
| 3404.91.3 | | | | | | | | | | | |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | ~ |
|--------------------|----------------------------|----------------|---|--------------------------------------|------------|-------|--|--|------------|----------------------------|-------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 3484.1500 | 28693.192 | 29 | 3d ⁴ (⁵ D)4s | a ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | 0.0006 | 12SAN/NAV |
| 3484.2785 | 28692.134 | 31 | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | - | $3d^4(^5D)5f$ | ⁴ H ^o | 9/2 | 0.0008 | 12SAN/NAV |
| 3486.45 | 28674.26 | 4 R | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 3/2 | 0.01 | 00WAG |
| 3487.510 | 28665.55 | 8 | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | - | $3d^4(^5D)5f$ | ⁶ G ^o | 7/2 | 0.004 | 12SAN/NAV |
| 3488.171 | 28660.117 | 15 | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | - | $3d^4(^5D)5f$ | ⁴ H ^o | 7/2 | 0.002 | 12SAN/NAV |
| 3488.7768 | 28655.140 | 21 | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | - | $3d^4(^5D)5f$ | ⁶ D° | 9/2 | 0.0016 | 12SAN/NAV |
| 3488.8032 | 28654.924 | 29 | 3d ⁴ (⁵ D)4d 3d ⁴ (¹ G1)4s | e ⁶ G c ² G | 5/2 9/2 | _ | $3d^4(^5D)5f$ $3d^4(^3H)4p$ | z ² H° | 7/2 | 0.0015 | 12SAN/NAV |
| 3489.07 3489.44 | 28652.73 28649.69 | 2 2 | $3d^4(^3D)4s$ | c G c ⁴ D | 3/2 | _ | $3d^4(^3F1)4p$ | z н у ⁴ F° | 9/2 5/2 | 0.02 0.02 | 51KIE 51KIE |
| 3490.3962 | 28641.846 | 36 | $3d^4(^5D)4d$ | e ⁶ P | 3/2 | _ | $3d^4(^5D)5f$ | $^{6}D^{o}$ | 5/2 | 0.0006 | 12SAN/NAV |
| 3493.2056 | 28618.812 | 16 | $3d^4(^5D)4d$ | e ⁶ G | 11/2 | _ | $3d^4(^5D)5f$ | ⁴ H ^o | 11/2 | 0.0015 | 12SAN/NA |
| 3493.298 | 28618.055 | 12 | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | _ | $3d^4(^5D)5f$ | ⁶ D° | 5/2 | 0.002 | 12SAN/NA |
| 3493.5089 | 28616.327 | 19 | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | _ | $3d^4(^5D)5f$ | ⁴ H ^o | 7/2 | 0.0010 | 12SAN/NA |
| 3493.80036 | 28613.9398 | 130 | $3d^4(^5D)4d$ | e ⁶ G | 3/2 | _ | $3d^4(^5D)5f$ | ⁶ H ^o | 5/2 | 0.00018 | 12SAN/NAV |
| 3494.1171 | 28611.346 | 87 | $3d^4(^5D)4d$ | e ⁶ P | 7/2 | _ | $3d^4(^5D)5f$ | ⁶ D° | 9/2 | 0.0003 | 12SAN/NA |
| 3494.50 | 28608.21 | 4 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^5D)4p$ | z ⁶ P ^o | 7/2 | 0.02 | 51KIE |
| 3495.3802 | 28601.007 | 63 | $3d^4(^5D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | 0.0003 | 12SAN/NA |
| 3495.5229 | 28599.840 | 28 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 9/2 | 0.0008 | 12SAN/NA |
| 3495.77895 | 28597.7449 | 380 | $3d^4(^5D)4d$ | e ⁶ G | 13/2 | _ | $3d^4(^5D)5f$ | 6 H $^{ m o}$ | 15/2 | 0.00011 | 12SAN/NAV |
| 3496.1053 | 28595.076 | 51 | $3d^4(^5D)4d$ | e ⁶ G | 5/2 | _ | $3d^4(^5D)5f$ | ⁶ P ^o | 7/2 | 0.0004 | 12SAN/NA |
| 3496.94 | 28588.25 | 4 R | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^3D)4p$ | w^4F^o | 5/2 | 0.01 | 00WAG |
| 3499.60935 | 28566.4450 | 280 | $3d^4(^5D)4d$ | e ⁶ G | 11/2 | - | $3d^4(^5D)5f$ | ⁶ H ^o | 13/2 | 0.00011 | 12SAN/NAV |
| 3500.6771 | 28557.732 | 56 | $3d^4(^5D)4d$ | e ⁶ P | 5/2 | - | $3d^4(^5D)5f$ | ⁶ P ^o | 7/2 | 0.0004 | 12SAN/NA |
| 3501.56713 | 28550.4735 | 160 | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | - | $3d^4(^5D)5f$ | ⁶ H ^o | 9/2 | 0.00015 | 12SAN/NA |
| 3501.65471 | 28549.7595 | 200 | $3d^4(^5D)4d$ | e ⁶ G | 9/2 | - | $3d^4(^5D)5f$ | ⁶ H ^o | 11/2 | 0.00013 | 12SAN/NA |
| 3502.068 | 28546.39 | 15 | $3d^4(^5D)4d$ | e ⁶ G | 9/2 | - | $3d^4(^5D)5f$ | ⁶ D° | 9/2 | 0.005 | 12SAN/NA |
| 3503.383 | 28535.68 | 13 | $3d^4(^1I)4s$ | b ² I | 13/2 | - | $3d^4(^3H)4p$ | z ² H ^o | 11/2 | 0.003 | 12SAN/NA |
| 3506.423 | 28510.94 | 9 | $3d^4(^5D)4d$ | e ⁶ G | 7/2 | - | $3d^4(^5D)5f$ | ⁶ P ^o | 7/2 | 0.003 | 12SAN/NA |
| 3506.61 | 28509.42 | 1 * | $3d^4(^1I)4s$ | b ² I | 11/2 | - | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 11/2 | 0.02 | 51KIE |
| 3506.61 | 28509.42 | 1 * | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 1/2 | 0.02 | 51KIE |
| 3507.97 | 28498.36 | 3 R | $3d^4(^3P)4s$ | b ² P | 3/2 | - | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ F ^o z ⁶ P ^o | 3/2 | 0.01 | 00WAG |
| 3511.8292 | 28467.047 | 73 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | 0.0003 | 12SAN/NA |
| 3513.0412 | 28457.226 | 22 | $3d^4(^3D)4s$ | c ⁴ D c ⁴ D | 7/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.0009 | 12SAN/NA |
| 3518.62 3522.13 | 28412.11 28383.80 | 3 7 | $3d^4(^3D)4s$ $3d^4(^1D)4s$ | c D c ² D | 5/2 5/2 | _ | 3d ⁴ (³ P1)4p 3d ⁴ (¹ G1)4p | y P $x {}^{2}F^{o}$ | 5/2 7/2 | 0.02 0.02 | 51KIE 51KIE |
| 3524.54 | 28364.39 | 5 R | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.02 | 00WAG |
| 3524.34 | 28334.72 | 3 K | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.01 | 51KIE |
| 3534.756 | 28282.41 | 10 | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | _ | $3d^4(^5D)5f$ | ⁶ F ^o | 7/2 | 0.003 | 12SAN/NAV |
| 3538.5299 | 28252.250 | 15 | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | _ | $3d^4(^5D)5f$ | 6 P o | 5/2 | 0.003 | 12SAN/NAV |
| 3538.98 | 28248.66 | 4 | $3d^4(^1I)4s$ | b ² I | 11/2 | _ | $3d^4(^3H)4p$ | z ² H ^o | 9/2 | 0.02 | 51KIE |
| 3539.355 | 28245.664 | 11 | $3d^34s^2$ | d ⁴ P | 3/2 | _ | $3d^4(^5D)5p$ | ⁴ F ^o | 3/2 | 0.002 | 12SAN/NAV |
| 3540.4988 | 28236.539 | 15 | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | _ | $3d^4(^5D)5f$ | ⁶ F ^o | 9/2 | 0.0019 | 12SAN/NA |
| 3540.9710 | 28232.773 | 12 * | $3d^4(^5D)4d$ | f ⁶ D | 5/2 | _ | $3d^4(^5D)5f$ | ⁶ P ^o | 3/2 | 0.0019 | 12SAN/NAV |
| 3540.9710 | 28232.773 | 12 * | $3d^4(^1G1)4p$ | w ² G° | 7/2 | _ | $3d^44d$ | f ⁴ H | 7/2 | 0.0018 | 12SAN/NA |
| 3543.9131 | 28209.336 | 14 | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | _ | $3d^4(^5D)5f$ | ⁶ F ^o | 7/2 | 0.0015 | 12SAN/NA |
| 3547.10 | 28183.99 | 3 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3F1)4p$ | x^4D^o | 5/2 | 0.02 | 51KIE |
| 3547.7068 | 28179.171 | 18 | $3d^{4}(^{5}D)4d$ | f ⁶ D | 7/2 | _ | $3d^4(^5D)5f$ | $^{6}P^{o}$ | 5/2 | 0.0009 | 12SAN/NA |
| 3552.42 | 28141.79 | 2 | $3d^{4}(^{3}G)4s$ | e ² G | 9/2 | _ | $3d^4(^3F2)4p$ | $t^{2}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 3563.889 | 28051.22 | 13 | $3d^{4}(^{5}D)4d$ | e ⁶ F | 5/2 | _ | $3d^4(^5D)5f$ | $^{4}D^{o}$ | 5/2 | 0.003 | 12SAN/NA |
| 3563.913 | 28051.04 | 13 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 7/2 | 0.003 | 12SAN/NA |
| 3565.32 | 28039.97 | 5 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.02 | 51KIE |
| 3566.37 | 28031.71 | 1 | $3d^4(^3F)4s$ | b ² F | 5/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 7/2 | 0.02 | 51KIE |
| 3569.75 | 28005.17 | 10 R | $3d^4(^3G)4s$ | e ² G | 7/2 | _ | $3d^4(^3F2)4p$ | t ² F ^o | 5/2 | 0.01 | 00WAG |
| 3569.8366 | 28004.490 | 54 | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | - | $3d^4(^5D)5f$ | ⁶ G ^o | 9/2 | 0.0004 | 12SAN/NA |
| 3569.9913 | 28003.277 | 34 | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | - | $3d^4(^5D)5f$ | ⁶ D ^o | 7/2 | 0.0005 | 12SAN/NA |
| 3571.37 | 27992.47 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.02 | 51KIE |
| 3571.8779 | 27988.486 | 23 | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | - | $3d^4(^5D)5f$ | ⁶ P ^o | 3/2 | 0.0009 | 12SAN/NA |
| 3581.74672 | 27911.3717 | 150 | $3d^4(^5D)4d$ | f ⁶ D | 9/2 | - | $3d^4(^5D)5f$ | ⁴ H ^o | 11/2 | 0.00015 | 12SAN/NA |
| 3582.1056 | 27908.575 | 58 | $3d^4(^5D)4d$ | e ⁶ F | 7/2 | - | $3d^4(^5D)5f$ | ⁶ P ^o | 5/2 | 0.0003 | 12SAN/NA |
| 3583.5160 | 27897.591 | 48 | $3d^4(^5D)4d$ | f ⁶ D | 9/2 | - | $3d^4(^5D)5f$ | ⁶ G ^o | 11/2 | 0.0011 | 12SAN/NA |
| 3583.96 | 27894.14 | 3 | $3d^4(^3D)4s$ | c ⁴ D | 3/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.02 | 51KIE |
| 3584.2547 | 27891.8420 | 130 | $3d^4(^5D)4d$ | e ⁶ F | 9/2 | - | $3d^4(^5D)5f$ | ⁶ F ^o | 11/2 | 0.0002 | 12SAN/NA |
| 3585.29465 | 27883.7519 | 540 | $3d^{5}$ | a ⁴ P | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ P ^o | 5/2 | 0.00012 | 12SAN/NA |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Class | sific | ation | | | Uncertainty of observed | |
|---------------------|----------------------------|-------------|---------------------------------|--------------------------------------|------------|-------|---|--|------------|----------------------------|--------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 3585.50449 | 27882.1201 | 250 | $3d^5$ | a ⁴ P | 3/2 | _ | 3d ⁴ (⁵ D)4p | z ⁴ P ^o | 5/2 | 0.00012 | 12SAN/NAV |
| 3586.30494 | 27875.8971 | 130 | $3d^4(^5D)4d$ | e ⁶ F | 9/2 | - | $3d^4(^5D)5f$ | ⁶ F° | 9/2 | 0.00018 | 12SAN/NAV |
| 3588.30 | 27860.40 | 2 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 1/2 | 0.02 | 51KIE |
| 3591.05119 | 27839.0549 | 210 * | $3d^4(^5D)4d$ | f ⁶ D | 3/2 | - | $3d^4(^5D)5f$ | ⁶ D° | 5/2 | 0.00010 | 12SAN/NAV |
| 3591.05119 | 27839.0549 | 210 * | $3d^4(^5D)4d$ | e ⁶ F | 11/2 | - | $3d^4(^5D)5f$ | ⁶ F° | 11/2 | 0.00010 | 12SAN/NAV |
| 3591.544 | 27835.24 | 250 | $3d^4(^5D)4d$ | e ⁶ F | 11/2 | - | $3d^4(^5D)5f$ | ⁶ G° | 13/2 | 0.005 | 12SAN/NAV |
| 3603.62 | 27741.96 | 20 | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | 0.02 | 51KIE |
| 3603.78 | 27740.73 | 40 | $3d^5$ $3d^5$ | a ⁴ P a ⁴ P | 1/2 3/2 | _ | $3d^4(^5D)4p$ $3d^4(^5D)4p$ | z ⁶ D° z ⁶ D° | 3/2 | 0.02 | 51KIE |
| 3603.86 | 27740.11 | 20 3 | $3d^4(^1G1)4s$ | a P c ² G | 312 7/2 | _ | $3d^4(^3F1)4p$ | $z^{-2}D^{o}$ | 3/2 | 0.02 | 51KIE |
| 3608.66 3613.183 | 27703.22 27668.54 | 100 | $3d^{5}$ | a ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 1/2 | 0.02 0.004 | 51KIE 12SAN/NAV |
| 3614.25 | 27660.37 | 2 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3H)4p$ | y ⁴ G° | 5/2 | 0.004 | 51KIE |
| 3618.99 | 27624.14 | 1 R | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 9/2 | 0.02 | 00WAG |
| 3622.44 | 27597.83 | 1 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3G)4p$ | y ² F ^o | 5/2 | 0.02 | 51KIE |
| 3626.22 | 27569.07 | 4 R* | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.02 | 00WAG |
| 3626.88 | 27564.05 | 3 R | $3d^34s^2$ | d ⁴ P | 3/2 | _ | $3d^4(^5D)5p$ | $^{6}D^{\circ}$ | 3/2 | 0.01 | 00WAG |
| 3629.3608 | 27545.208 | 41 | $3d^4(^5D)4d$ | e ⁶ F | 11/2 | _ | $3d^4(^5D)5f$ | ⁶ H ^o | 13/2 | 0.0009 | 12SAN/NAV |
| 3629.3943 | 27544.954 | 64 | $3d^34s^2$ | d ⁴ P | 5/2 | _ | $3d^4(^3F2)4p$ | u ² G° | 7/2 | 0.0009 | 12SAN/NAV |
| 3631.46745 | 27529.2297 | 330 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 0.00012 | 12SAN/NAV |
| 3631.6834 | 27527.5927 | 130 | $3d^5$ | a ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 0.0002 | 12SAN/NAV |
| 3643.2037 | 27440.549 | 23 | $3d^4(^5D)4s$ | a ⁴ D | 7/2 | _ | $3d^4(^5D)4p$ | z ⁶ F° | 9/2 | 0.0008 | 12SAN/NAV |
| 3644.6912 | 27429.350 | 26 | $3d^{4}(^{5}D)4s$ | a ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ F ^o | 7/2 | 0.0007 | 12SAN/NAV |
| 3647.40 | 27408.98 | 8 | $3d^4(^5D)4s$ | a ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ F° | 5/2 | 0.02 | 51KIE |
| 3649.6167 | 27392.333 | 25 | $3d^4(^3P)4s$ | b ² P | 1/2 | _ | $3d^4(^1F)4p$ | v^2D^o | 3/2 | 0.0008 | 12SAN/NAV |
| 3650.3593 | 27386.760 | 66 | $3d^4(^1I)4s$ | b ² I | 13/2 | _ | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 13/2 | 0.0004 | 12SAN/NAV |
| 3651.6615 | 27376.994 | 47 | $3d^4(^3P)4s$ | b ² P | 3/2 | _ | $3d^4(^1F)4p$ | v^2D^o | 5/2 | 0.0007 | 12SAN/NAV |
| 3657.93 | 27330.08 | 1 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3G)4p$ | x^4G^o | 5/2 | 0.02 | 51KIE |
| 3658.1626 | 27328.343 | 33 | $3d^4(^1G1)4s$ | c ² G | 7/2 | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.0010 | 12SAN/NAV |
| 3661.44 | 27303.88 | 3 | $3d^4(^1I)4s$ | b ² I | 13/2 | - | $3d^4(^3H)4p$ | $z^{2}I^{o}$ | 11/2 | 0.02 | 51KIE |
| 3662.4706 | 27296.198 | 23 | $3d^4(^5D)5p$ | ⁶ D ^o | 3/2 | - | $3d^4(^5D)8s$ | ⁶ D | 5/2 | 0.0015 | 12SAN/NAV |
| 3664.9411 | 27277.799 | 63 | $3d^4(^1I)4s$ | b ² I | 11/2 | - | $3d^4(^3H)4p$ | z ² I ^o | 11/2 | 0.0004 | 12SAN/NAV |
| 3677.67615 | 27183.3437 | 210 | $3d^5$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | 0.00016 | 12SAN/NAV |
| 3677.84070 | 27182.1275 | 250 | $3d^{5}$ | a ⁴ P | 1/2 | - | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 3/2 | 0.00015 | 12SAN/NAV |
| 3677.8981 | 27181.703 | 100 | $3d^{5}$ | a ⁴ P | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | 0.0003 | 12SAN/NAV |
| 3680.1779 | 27164.865 | 92 | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | - | $3d^4(^3P1)5s$ | f ⁴ P | 5/2 | 0.0003 | 12SAN/NAV |
| 3684.2229 | 27135.041 | 54 | $3d^5$ | c ² F | 7/2 | - | $3d^4(^3F1)4p$ | y^4F^0 | 5/2 | 0.0006 | 12SAN/NAV |
| 3686.6716 | 27117.018 | 43 | $3d^4(^3G)4s$ | b ² G | 9/2 | - | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 9/2 | 0.0006 | 12SAN/NAV |
| 3694.98 | 27056.05 | 4 | $3d^4(^3D)4s$ | b ² D c ² G | 5/2 | - | $3d^4(^3\text{P1})4p$ | ² D ^o y ⁴ P ^o | 5/2 | 0.02 | 51KIE |
| 3696.755 | 27043.05 | 10 | $3d^4(^1G1)4s$ | c ⁻ G b ² G | 7/2 | - | $3d^4(^3\text{P1})4p$ | $z^{2}G^{o}$ | 5/2 | 0.004 | 12SAN/NAV |
| 3697.9968 | 27033.974 | 45 | $3d^4(^3G)4s$ | b G b ² D | 7/2 | - | $3d^4(^3H)4p$ | y ² G° | 7/2 | 0.0008 | 12SAN/NAV |
| 3701.89 3702.846 | 27005.54 26998.57 | 4 | $3d^4(^3D)4s$ $3d^4(^3F2)4p$ | в Б v ⁴ F° | 5/2 7/2 | _ | 3d ⁴ (³ F1)4p 3d ⁴ (⁵ D)6d | y G ⁴ F | 7/2 9/2 | 0.02 | 51KIE 12SAN/NAV |
| 3704.89 | 26983.68 | 12 5 | $3d^4(^5D)5s$ | v г e ⁶ D | 5/2 | _ | $3d^4(^5D)6p$ | ⁶ P ^o | 5/2 | 0.003 0.02 | 51KIE |
| 3704.89 | 26967.37 | 3 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.02 | 51KIE 51KIE |
| 3707.57 | 26964.17 | 1 | $3d^4(^1S)4s$ | a ² S | 1/2 | _ | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 3/2 | 0.02 | 51KIE |
| 3711.285 | 26937.18 | 43 | $3d^4(^3F)4s$ | e ² F | 7/2 | _ | $3d^4(^1F)4p$ | v ² D° | 5/2 | 0.003 | 12SAN/NAV |
| 3712.89 | 26925.54 | 10 | $3d^5$ | a ⁴ P | 1/2 | _ | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | 0.02 | 51KIE |
| 3712.941 | 26925.17 | 340 | $3d^5$ | a ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ P° | 1/2 | 0.005 | 12SAN/NAV |
| 3715.1724 | 26908.996 | 86 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | 0.0005 | 12SAN/NAV |
| 3715.4005 | 26907.344 | 71 | $3d^5$ | c ² F | 5/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.0006 | 12SAN/NAV |
| 3722.93 | 26852.93 | 2 R | $3d^4(^3D)4p$ | w ⁴ F° | 7/2 | _ | $3d^4(^3F1)5s$ | f ⁴ F | 5/2 | 0.01 | 00WAG |
| 3723.3740 | 26849.725 | 22 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.0019 | 12SAN/NAV |
| 3727.36 | 26821.01 | 25 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | 0.02 | 51KIE |
| 3735.89 | 26759.77 | 4 | $3d^5$ | d^2D | 5/2 | _ | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 3736.56 | 26754.98 | 1 | $3d^5$ | b ⁴ D | 7/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 3737.55 | 26747.89 | 10 | $3d^4(^3G)4s$ | b ² G | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G ^o | 7/2 | 0.02 | 51KIE |
| 3738.3574 | 26742.113 | 73 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ F ^o | 7/2 | 0.0006 | 12SAN/NAV |
| 3745.5622 | 26690.674 | 61 | $3d^4(^3D)4p$ | w^4F^o | 9/2 | _ | $3d^4(^3H)5s$ | e ² H | 11/2 | 0.0009 | 12SAN/NAV |
| 3748.68 | 26668.48 | 7 | $3d^5$ | a ⁴ P | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ P ^o | 5/2 | 0.02 | 51KIE |
| 3750.61 | 26654.75 | 5 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 7/2 | 0.02 | 51KIE |
| 3750.99 | 26652.05 | 1 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 3/2 | 0.02 | 51KIE |
| | | | | | | | | 4 - | | | |
| 3754.5686 | 26626.651 | 46 | $3d^5$ $3d^5$ | b ⁴ D b ⁴ D | 3/2 | - | $3d^4(^5D)4p$ $3d^4(^5D)4p$ | z ⁴ F ^o z ⁴ F ^o | 5/2 | 0.0012 | 12SAN/NAV |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | C |
|-------------------------|----------------------------|-------------|--|---------------------------------------|-------------|-------|--------------------------------|---------------------------------|--------------|----------------------------|----------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | | Configuration | Term | J | wavelength (Å) | Source of line |
| 3756.55 | 26612.61 | 3 | $3d^5$ | c ² F | 5/2 | - | $3d^4(^3P1)4p$ | y ⁴ P ^o | 3/2 | 0.02 | 51KIE |
| 3761.68 | 26576.31 | 7 | $3d^{5}$ | a ⁴ P | 5/2 | - | $3d^4(^5D)4p$ | z ⁶ P° | 3/2 | 0.02 | 51KIE |
| 3761.90 | 26574.76 | 8 | $3d^5$ | a ⁴ P | 3/2 | - | $3d^4(^5D)4p$ | z ⁶ P ^o | 3/2 | 0.02 | 51KIE |
| 3763.141 | 26566.00 | 23 | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 9/2 | - | $3d^4(^3H)5s$ | e ² H | 9/2 | 0.003 | 12SAN/NAV |
| 3765.584 | 26548.762 | 25 | $3d^5$ | b ⁴ D | 1/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | 0.002 | 12SAN/NA |
| 3766.65 | 26541.25 | 2 | $3d^{5}$ | b ⁴ D | 3/2 | - | $3d^4(^5D)4p$ | z^4F^0 | 3/2 | 0.02 | 51KIE |
| 3769.32 | 26522.45 | 1 | $3d^{5}$ | a ⁴ G | 7/2 | - | $3d^4(^5D)4p$ | $z_{2}^{6}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 3774.3066 | 26487.408 | 29 | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 11/2 | - | $3d^4(^3\text{H})5s$ | e ² H | 11/2 | 0.0016 | 12SAN/NA |
| 3778.70 | 26456.61 | 6 | $3d^4(^1S)4s$ | a^2S | 1/2 | - | $3d^4(^3\text{P1})4p$ | z ² P° | 1/2 | 0.02 | 51KIE |
| 3782.051 | 26433.17 | 19 | $3d^4(^1G1)4p$ | w ² G° e ⁴ G | 9/2 | - | $3d^4(^3F1)5s$ | $f^{2}F$ $^{4}G^{o}$ | 7/2 | 0.004 | 12SAN/NA |
| 3785.7070 | 26407.645 | 36 | 3d ⁴ (⁵ D)4d 3d ⁴ (⁵ D)4d | e G e ⁴ G | 11/2 9/2 | _ | $3d^4(^5D)5f$ $3d^4(^5D)5f$ | ⁴ F° | 11/2 | 0.0015 | 12SAN/NA |
| 3794.343 | 26347.54 | 23 10 | $3d^{4}(^{1}F)4s$ | d ² F | 5/2 | | $3d^4(^3D)4p$ | w^2F^0 | 9/2 | 0.004 | 12SAN/NA |
| 3801.21 | 26299.95 | | 3d (F)4s 3d ⁴ (⁵ D)4d | a F e ⁴ G | | _ | | W F ⁴ H ^o | 5/2 | 0.02 | 51KIE |
| 3804.92147 3805.0129 | 26274.2926 26273.661 | 270 96 | $3d^{4}(^{5}D)4d$ | e G e ⁴ G | 11/2 9/2 | _ | $3d^4(^5D)5f$ $3d^4(^5D)5f$ | ⁴ H ^o | 13/2 11/2 | 0.00014 0.0007 | 12SAN/NA 12SAN/NA |
| | 26273.516 | 96 70 | 3 <i>d</i> ⁴ (⁵ D)4 <i>d</i> | e G e ⁴ G | 9/2 7/2 | _ | $3d^4(^5D)5f$ | ⁶ G° | 7/2 | | |
| 3805.0340 3807.0140 | 26259.851 | 82 | $3d^4(^5D)4d$ | e ⁴ G | 9/2 | _ | $3d^4(^5D)5f$ | ⁶ G⁰ | 11/2 | 0.0011 0.0006 | 12SAN/NA 12SAN/NA |
| 3807.5124 | 26256.414 | 82 97 | $3d^4(^5D)4d$ | e ⁴ G | 9/2 7/2 | _ | $3d^4(^5D)5f$ | ⁴ H ^o | 9/2 | 0.0006 | 12SAN/NA |
| 3807.3124 | 26253.148 | 91 | $3d^4(^5D)4d$ | e ⁴ G | 5/2 | _ | $3d^4(^5D)5f$ | п ⁶ Н° | 912 7/2 | 0.0005 | 12SAN/NA 12SAN/NA |
| 3810.74 | 26233.148 | 3 | $3d^4(^1S)4s$ | a ² S | 1/2 | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.0003 | 51KIE |
| 3813.99 | 26211.82 | 12 | $3d^4(^1F)4s$ | a S d ² F | 7/2 | _ | $3d^4(^3D)4p$ | v^2F^0 | 3/2 7/2 | 0.02 | 51KIE 51KIE |
| 3828.1653 | 26114.764 | 25 | $3d^4(^5D)4d$ | e ⁴ G | 7/2 | _ | $3d^4(^5D)5f$ | ⁶ H ^o | 9/2 | 0.0017 | 12SAN/NA |
| 3828.754 | 26110.749 | 31 | $3d^4(^5D)4d$ | e ⁴ P | 5/2 | _ | $3d^4(^5D)5f$ | ⁶ G⁰ | 7/2 | 0.0017 | 12SAN/NA |
| 3834.5140 | 26071.528 | 31 | $3d^4(^5D)4d$ | e ⁴ G | 9/2 | _ | $3d^4(^5D)5f$ | ⁶ H° | 11/2 | 0.002 | 12SAN/NA |
| 3838.8162 | 26042.310 | 38 | $3d^4(^5D)4d$ | f ⁴ D | 7/2 | _ | $3d^4(^5D)5f$ | ⁴ G ^o | 9/2 | 0.0013 | 12SAN/NA |
| 3865.6006 | 25861.8693 | 280 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.0001 | 12SAN/NA |
| 3866.01 | 25859.13 | 5 | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | 0.002 | 51KIE |
| 3866.54 | 25855.59 | 7 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3H)4p$ | z ² G° | 9/2 | 0.02 | 51KIE 51KIE |
| 3876.708 | 25787.773 | 38 | $3d^4(^5D)4d$ | f ⁴ D | 7/2 | _ | $3d^4(^5D)5f$ | ⁴ F° | 9/2 | 0.002 | 12SAN/NA |
| 3892.15 | 25685.46 | 4 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 3895.14 | 25665.75 | 2 * | $3d^5$ | $c^{2}F$ | 7/2 | _ | $3d^4(^3H)4p$ | $z^{2}G^{o}$ | 7/2 | 0.02 | 51KIE |
| 3895.14 | 25665.75 | 2 * | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D° | 3/2 | 0.02 | 51KIE |
| 3905.64 | 25596.75 | 25 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 3909.25 | 25573.11 | 1 * | $3d^4(^1G1)4s$ | c ² G | 7/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 7/2 | 0.02 | 51KIE |
| 3909.25 | 25573.11 | 1 * | $3d^4(^3H)4p$ | z ⁴ H° | 7/2 | _ | $3d^4(^5D)4d$ | e ⁴ G | 7/2 | 0.02 | 51KIE |
| 3911.32 | 25559.58 | 3 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3F1)4p$ | z ⁴ G° | 9/2 | 0.02 | 51KIE |
| 3915.51 | 25532.23 | 4 R | $3d^4(^3F)4s$ | d ⁴ F | 7/2 | _ | $3d^4(^1D1)4p$ | w^2D^o | 5/2 | 0.01 | 00WAG |
| 3935.04 | 25405.51 | 1 | $3d^4(^3D)4s$ | c ⁴ D | 1/2 | _ | $3d^4(^3P1)4p$ | y ⁴ D ^o | 1/2 | 0.02 | 51KIE |
| 3936.95 | 25393.18 | 1 | $3d^4(^1G1)4s$ | c ² G | 9/2 | _ | $3d^4(^3H)4p$ | z ⁴ I° | 9/2 | 0.02 | 51KIE |
| 3952.37 | 25294.12 | 35 R | $3d^5$ | d^2D | 5/2 | _ | $3d^4(^3G)4p$ | $x^{2}G^{o}$ | 7/2 | 0.01 | 00WAG |
| 3953.688 | 25285.68 | 8 | $3d^4(^3G)4s$ | b ² G | 9/2 | _ | $3d^4(^3H)4p$ | z ⁴ H ^o | 11/2 | 0.004 | 12SAN/NA |
| 3979.52 | 25121.55 | 20 | $3d^{4}(^{1}D)4s$ | $c^{2}D$ | 5/2 | _ | $3d^4(^3G)4p$ | y^2F^o | 7/2 | 0.02 | 51KIE |
| 4002.48 | 24977.45 | 5 | $3d^4(^3D)4s$ | b^2D | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D° | 7/2 | 0.02 | 51KIE |
| 4003.32 | 24972.21 | 25 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 3/2 | 0.02 | 51KIE |
| 4007.55 | 24945.85 | 2 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ D ^o | 7/2 | _ | $3d^44d$ | i ² G | 9/2 | 0.02 | 51KIE |
| 4012.50 | 24915.08 | 30 | $3d^4(^1D)4s$ | c ² D | 3/2 | _ | $3d^4(^3G)4p$ | y ² F ^o | 5/2 | 0.02 | 51KIE |
| 4017.96 | 24881.22 | 3 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3F1)4p$ | x ⁴ D ^o | 5/2 | 0.02 | 51KIE |
| 4022.37 | 24853.94 | 3 | $3d^4(^1D)4s$ | c ² D | 5/2 | _ | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 4038.02 | 24757.62 | 25 | $3d^5$ | $d^{2}G$ | 9/2 | _ | $3d^4(^1I)4p$ | w ² H ^o | 11/2 | 0.02 | 51KIE |
| 4049.1435 | 24689.61 | 18 | $3d^4(^5D)4d$ | e ⁴ F | 5/2 | _ | $3d^4(^5D)5f$ | $^{4}P^{o}$ | 3/2 | 0.0040 | 98ALL/GA |
| 4053.43 | 24663.50 | 1 | $3d^{5}$ | b ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z^4P^o | 5/2 | 0.02 | 51KIE |
| 4054.0757 | 24659.57 | 8 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z^4P^o | 5/2 | 0.0040 | 98ALL/GA |
| 4056.07 | 24647.45 | 4 | $3d^4(^1D)4s$ | c ² D | 3/2 | - | $3d^4(^3G)4p$ | x $^4G^{\rm o}$ | 5/2 | 0.02 | 51KIE |
| 4070.88 | 24557.78 | 10 | $3d^5$ | $d^{2}G$ | 9/2 | _ | $3d^4(^3D)4p$ | w^2F^o | 7/2 | 0.02 | 51KIE |
| 4072.56 | 24547.65 | 4 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.02 | 51KIE |
| 4076.87 | 24521.70 | 3 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D ^o | 3/2 | 0.02 | 51KIE |
| 4077.50 | 24517.91 | 4 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^5D)4p$ | z ⁶ D ^o | 3/2 | 0.02 | 51KIE |
| 4081.21 | 24495.62 | 1 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F ^o | 7/2 | 0.02 | 51KIE |
| 4082.30 | 24489.08 | 10 | $3d^4(^3D)4s$ | b ² D | 5/2 | - | $3d^4(^3F1)4p$ | $z^{2}D^{o}$ | 5/2 | 0.02 | 51KIE |
| 4086.1290 | 24466.13 | 8 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | _ | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 1/2 | 0.0040 | 98ALL/GA |
| 4087.5928 | 24457.37 | 2 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | 0.0040 | 98ALL/GA |
| 4088.8401 | 24449.91 | 1 | $3d^{5}$ | b ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | 0.0040 | 98ALL/GA |
| 4089.48 | 24446.09 | 2 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3H)4p$ | y ⁴ G ^o | 5/2 | 0.02 | 51KIE |

Table 6. Spectral lines of Cr II—Continued

| air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | ~ |
|----------------------|----------------------------|-------------|--|---------------------------------------|-------------|--------|--|--|-------------|----------------------------|--------------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | .51110 | Configuration | Term | J | wavelength (Å) | Source of line |
| 4098.44 | 24392.64 | 8 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3F1)4p$ | z ² D ^o | 3/2 | 0.02 | 51KIE |
| 4110.9980 | 24318.13 | 18 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.0040 | 98ALL/GAR |
| 4112.5481 | 24308.97 | 1 | $3d^{5}$ | b ⁴ D | 3/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 0.0040 | 98ALL/GAR |
| 4113.2202 | 24304.99 | 5 | $3d^5$ | b ⁴ D | 5/2 | - | $3d^4(^5D)4p$ | $z^{6}D^{o}$ | 5/2 | 0.0040 | 98ALL/GAR |
| 4116.65 | 24284.74 | 2 | $3d^4(^1D)4s$ | $c^{2}D$ | 3/2 | - | $3d^4(^3P1)4p$ | ${}^{2}D^{o}$ | 5/2 | 0.02 | 51KIE |
| 4127.08 | 24223.37 | 4 | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 5/2 | 0.02 | 51KIE |
| 4132.4047 | 24192.16 | 7 | $3d^4(^3P)4s$ $3d^4(^3H)4p$ | b ⁴ P z ⁴ H° | 3/2 11/2 | _ | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4d | z ⁴ D° e ⁶ F | 3/2 | 0.0040 | 98ALL/GAR 00WAG |
| 4139.17 4151.00 | 24152.62 24083.79 | 12 R 5 | $3d^{4}(^{3}D)4s$ | z н b ² D | 3/2 | _ | $3d^{4}(^{3}F1)4p$ | е F y ⁴ F° | 11/2 3/2 | 0.01 0.02 | 51KIE |
| 4161.07 | 24085.79 | 2 | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3F1)4p$ | y ⁴ F° | 5/2 | 0.02 | 51KIE 51KIE |
| 4170.6203 | 23970.49 | 1 | $3d^5$ | b ⁴ D | 1/2 | _ | $3d^4(^5D)4p$ | z ⁴ P° | 3/2 | 0.0040 | 98ALL/GAR |
| 4170.86 | 23969.11 | 1 | $3d^4(^1D)4s$ | $c^{-2}D$ | 3/2 | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 3/2 | 0.02 | 51KIE |
| 4171.92 | 23963.02 | 3 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | 0.02 | 51KIE |
| 4172.60 | 23959.12 | 2 | $3d^5$ | b ⁴ D | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | 0.02 | 51KIE |
| 4195.33 | 23829.31 | 6 | $3d^5$ | c ² F | 7/2 | _ | $3d^4(^3H)4p$ | $z^{4}H^{o}$ | 9/2 | 0.02 | 51KIE |
| 4195.41 | 23828.86 | 4 | $3d^4(^3D)4s$ | b ² D | 5/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P ^o | 5/2 | 0.02 | 51KIE |
| 4207.36 | 23761.18 | 4 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ D ^o | 5/2 | 0.02 | 51KIE |
| 4209.05 | 23751.64 | 3 | $3d^4(^1I)4p$ | $w^{2}H^{o}$ | 9/2 | _ | $3d^4(^3H)5s$ | e ² H | 9/2 | 0.02 | 51KIE |
| 4215.76 | 23713.84 | 2 | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | _ | $3d^4(^5D)4d$ | e ⁴ F | 7/2 | 0.02 | 51KIE |
| 4217.07 | 23706.47 | 2 | $3d^5$ | b ⁴ D | 3/2 | _ | $3d^4(^5D)4p$ | z^4P^o | 1/2 | 0.02 | 51KIE |
| 4222.00 | 23678.79 | 3 | $3d^4(^1D)4s$ | c ² D | 3/2 | - | $3d^4(^3P1)4p$ | $^{2}D^{o}$ | 3/2 | 0.02 | 51KIE |
| 4224.8579 | 23662.77 | 25 | $3d^4(^3D)4s$ | b ² D | 3/2 | - | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.0040 | 98ALL/GAR |
| 4227.73 | 23646.70 | 1 | $3d^4(^1S)4s$ | a ² S | 1/2 | - | $3d^4(^3P1)4p$ | y ⁴ D° | 3/2 | 0.02 | 51KIE |
| 4229.81 | 23635.07 | 1 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ D ^o | 3/2 | 0.02 | 51KIE |
| 4233.26 | 23615.81 | 18 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ D ^o | 7/2 | 0.02 | 51KIE |
| 4233.26 | 23615.81 | 18 | $3d^4(^3F1)4p$ | z ⁴ G ^o | 11/2 | - | $3d^4(^5D)4d$ | e ⁴ G | 9/2 | 0.02 | 51KIE |
| 4242.3723 | 23565.08 | 50 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 7/2 | 0.0040 | 98ALL/GAR |
| 4246.3968 | 23542.75 | 2 | $3d^4(^3F)4s$ | a ⁴ F a ⁴ F | 3/2 | _ | 3d ⁴ (⁵ D)4p 3d ⁴ (⁵ D)4p | $z^{4}D^{o}$ $z^{4}D^{o}$ | 5/2 | 0.0040 | 98ALL/GAR |
| 4252.6285 4261.92 | 23508.25 23457.00 | 10 30 | 3d ⁴ (³ F)4s 3d ⁴ (³ F)4s | a F a ⁴ F | 5/2 7/2 | _ | $3d^{4}(^{5}D)4p$ $3d^{4}(^{5}D)4p$ | z D z ⁴ D° | 5/2 5/2 | 0.0040 0.02 | 98ALL/GAR 51KIE |
| 4261.92 | 23437.00 | 10 | $3d^4(^5D)5p$ | аг ⁴ F° | 3/2 | _ | $3d^4(^5D)6d$ | ⁶ S | 5/2 | 0.0040 | 98ALL/GAR |
| 4209.2893 | 23382.19 | 30 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.0040 | 98ALL/GAR |
| 4278.11 | 23368.2 | 3 s | $3d^4(^3D)4s$ | b ² D | 3/2 | _ | $3d^4(^3P1)4p$ | y ⁴ P° | 3/2 | 0.04 | 51KIE |
| 4341.09 | 23029.21 | 10 | $3d^4(^1D)4s$ | $c^{2}D$ | 5/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 4362.93 | 22913.94 | 3 | $3d^4(^1D)4s$ | $c^{-2}D$ | 3/2 | _ | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 4465.77 | 22386.27 | 5 | $3d^5$ | $d^{2}G$ | 9/2 | _ | $3d^4(^1G1)4p$ | $x^{2}H^{o}$ | 11/2 | 0.02 | 51KIE |
| 4539.61 | 22022.15 | 3 | $3d^{5}$ | a ² F | 5/2 | _ | $3d^{4}(^{5}D)4p$ | z ⁴ D ^o | 5/2 | 0.02 | 51KIE |
| 4546.63 | 21988.15 | 2 | $3d^4(^3G)4s$ | e ² G | 9/2 | _ | $3d^4(^1F)4p$ | u^2F^o | 7/2 | 0.02 | 51KIE |
| 4554.9906 | 21947.790 | 30 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 7/2 | 0.0040 | 98ALL/GAR |
| 4558.6498 | 21930.173 | 100 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^5D)4p$ | z ⁴ D ^o | 7/2 | 0.0040 | 98ALL/GAR |
| 4572.84 | 21862.12 | 2 | $3d^4(^3F)4s$ | e ² F | 7/2 | - | $3d^4(^1D1)4p$ | v^2F^o | 7/2 | 0.02 | 51KIE |
| 4587.30 | 21793.21 | 2 | $3d^5$ | d ² G | 9/2 | - | $3d^4(^1G1)4p$ | $x^{2}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 4588.2033 | 21788.919 | 75 | $3d^5$ | b ⁴ F | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.0040 | 98ALL/GAR |
| 4589.89 | 21780.91 | 4 | $3d^{5}$ | b ⁴ F | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.02 | 51KIE |
| 4592.0538 | 21770.649 | 25 | $3d^{5}$ | b ⁴ F | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.0040 | 98ALL/GAR |
| 4616.6245 | 21654.782 | 25 | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.0040 | 98ALL/GAR |
| 4634.0765 | 21573.231 | 40 | $3d^5$ | b ⁴ F | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ D ^o | 1/2 | 0.0040 | 98ALL/GAR |
| 4684.78 | 21339.75 | 2 | $3d^4(^1D)4s$ | c ² D | 5/2 | - | $3d^4(^3F1)4p$ | y ⁴ F° | 3/2 | 0.02 | 51KIE |
| 4697.61 | 21281.47 | 3 | $3d^4(^1D)4s$ $3d^34s^2$ | c ² D c ⁴ F | 5/2 3/2 | - | $3d^4(^3F1)4p$ $3d^4(^3D)4p$ | y ⁴ F ^o w ⁴ F ^o | 5/2 | 0.02 | 51KIE |
| 4710.78 4713.27 | 21221.97 21210.76 | 1 | $3d^{5}$ | d ² D | 3/2 | - | $3d^{4}(^{3}F1)4p$ | z ² F° | 3/2 5/2 | 0.02 | 51KIE 51KIE |
| 4715.12 | 21210.76 | 1 3 | $3d^4(^1D)4s$ | а D c ² D | 3/2 | _ | $3a^{(1}F1)4p$ $3d^{4}(^{3}P1)4p$ | z P ^o | 1/2 | 0.02 0.02 | 51KIE 51KIE |
| 4713.12 | 21202.44 | 1 | $3d^34s^2$ | c ⁴ F | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ F° | 5/2 | 0.02 | 51KIE 51KIE |
| 4793.09 | 20857.54 | 2 | $3d^34s^2$ | c ⁴ F | 7/2 | _ | $3d^4(^3D)4p$ | w ⁴ F ^o | 7/2 | 0.02 | 51KIE 51KIE |
| 4794.79 | 20850.14 | 1 | $3d^4(^5D)5p$ | ⁴ D ^o | 5/2 | _ | $3d^4(^5D_4)5g$ | ² [2] | 5/2 | 0.02 | 51KIE 51KIE |
| 4812.3459 | 20774.080 | 25 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{0}$ | 9/2 | 0.0040 | 98ALL/GAR |
| 4815.29 | 20761.38 | 1 | $3d^4(^3P)4s$ | b ² P | 1/2 | _ | $3d^4(^1D1)4p$ | w^2D^o | 3/2 | 0.02 | 51KIE |
| 4824.1417 | 20723.285 | 100 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 9/2 | 0.0040 | 98ALL/GAR |
| 4836.2316 | 20671.480 | 25 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 7/2 | 0.0040 | 98ALL/GAR |
| 4848.2541 | 20620.221 | 75 | $3d^4(^3F)4s$ | a ⁴ F | 7/2 | _ | $3d^4(^5D)4p$ | z ⁴ F ^o | 7/2 | 0.0040 | 98ALL/GAR |
| 4856.1927 | 20586.513 | 20 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | 0.0040 | 98ALL/GAR |
| 4857.60 | 20580.55 | 2 | $3d^34s^2$ | c ⁴ F | 9/2 | _ | $3d^4(^3D)4p$ | w^4F^o | 9/2 | 0.02 | 51KIE |
| 4860.2186 | 20569.460 | 20 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | 0.0040 | 98ALL/GAR |

TABLE 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave | Intensity | | | Clas | sific | ation | | | Uncertainty of observed | _ |
|--------------------|----------------------------|-------------|--|--------------------------------------|------------|-------|--|--|------------|----------------------------|----------------|
| wavelength (Å) | number (cm ⁻¹) | and comment | Configuration | Term | J | 31110 | Configuration | Term | J | wavelength (Å) | Source of line |
| 4864.3303 | 20552.074 | 60 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | 0.0040 | 98ALL/GAI |
| 4876.4015 | 20501.199 | 20 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | 0.0040 | 98ALL/GAI |
| 4884.6025 | 20466.779 | 12 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 3/2 | 0.0040 | 98ALL/GAI |
| 4952.79 | 20185.01 | 12 | $3d^4(^1F)4s$ | d ² F | 7/2 | - | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 5024.52 | 19896.85 | 10 | $3d^4(^1F)4s$ | d ² F | 5/2 | - | $3d^4(^3G)4p$ | $y^{2}F^{o}$ | 5/2 | 0.02 | 51KIE |
| 5076.16 | 19694.44 | 4 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | - | $3d^4(^3D)4p$ | x ⁴ P ^o | 3/2 | 0.02 | 51KIE |
| 5091.14 | 19636.49 | 2 | $3d^4(^3F)4s$ | d ⁴ F | 9/2 | - | $3d^4(^3D)4p$ | w ⁴ F° | 9/2 | 0.02 | 51KIE |
| 5097.3181 | 19612.693 | 7 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | 0.0040 | 98ALL/GA |
| 5116.07 | 19540.81 | 2 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | - | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | 0.02 | 51KIE |
| 5121.10 | 19521.62 | 2 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | - | $3d^4(^3D)4p$ | x ⁴ P ^o x ⁴ P ^o | 1/2 | 0.02 | 51KIE |
| 5137.09 | 19460.85 | 7 | $3d^4(^3P)4s$ | c ⁴ P d ² F | 5/2 | - | $3d^4(^3D)4p$ | y ² G° | 5/2 | 0.02 | 51KIE |
| 5142.52 | 19440.30 | 2 | $3d^4(^1F)4s$ | a ⁻ F b ⁴ P | 7/2 | _ | $3d^4(^3F1)4p$ | y G° z ⁴ P° | 9/2 | 0.02 | 51KIE |
| 5153.50 | 19398.88 | 20 | 3d ⁴ (³ P)4s 3d ⁵ | в Р d ² D | 3/2 3/2 | _ | $3d^4(^5D)4p$ | z^{P} $z^{2}P^{o}$ | 5/2 | 0.02 | 51KIE |
| 5186.12 | 19276.87 | 2 1 | $3d^4(^1F)4s$ | d D d ² F | 5/2 | - | 3d ⁴ (³ P1)4p 3d ⁴ (³ P1)4p | $^{2}D^{o}$ | 3/2 | 0.02 | 51KIE |
| 5188.91 5191.44 | 19266.50 19257.12 | 2 | $3d^4(^3P)4s$ | a r b ⁴ P | 3/2 | _ | $3d^{4}(^{5}D)4p$ | z ⁶ D° | 5/2 3/2 | 0.02 0.02 | 51KIE 51KIE |
| 5202.60 | 19257.12 | 3 | $3d^4(^1F)4s$ | d ² F | 5/2 | _ | $3d^{4}(^{3}F1)4p$ | y ² G° | 3/2 7/2 | 0.02 | 51KIE 51KIE |
| 5210.8524 | 19213.81 | 10 | $3d^4(^3P)4s$ | ur b ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 1/2 | 0.0040 | 98ALL/GA |
| 5232.4978 | 19105.570 | 20 | $3d^{5}$ | b ⁴ F | 7/2 | _ | $3d^{4}(^{5}D)4p$ | z ⁴ F° | 9/2 | 0.0040 | 98ALL/GA |
| 5237.3260 | 19100.013 | 100 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 9/2 | 0.0040 | 98ALL/GA |
| 5246.7718 | 19054.035 | 30 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | _ | $3d^{4}(^{5}D)4p$ | z ⁴ P ^o | 3/2 | 0.0040 | 98ALL/GA |
| 5249.4337 | 19034.033 | 20 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 0.0040 | 98ALL/GA |
| 5274.9803 | 18952.143 | 75 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^{4}(^{5}D)4p$ | $z^{4}F^{0}$ | 7/2 | 0.0040 | 98ALL/GA |
| 5279.8763 | 18934.569 | 50 | $3d^5$ | b ⁴ F | 9/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{0}$ | 7/2 | 0.0040 | 98ALL/GA |
| 5280.0673 | 18933.884 | 30 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^5D)4p$ | z ⁴ F° | 7/2 | 0.0040 | 98ALL/GA |
| 5305.8645 | 18841.828 | 40 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 5/2 | 0.0040 | 98ALL/GA |
| 5308.4258 | 18832.737 | 35 | $3d^5$ | b ⁴ F | 7/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | 0.0040 | 98ALL/GA |
| 5310.6898 | 18824.708 | 30 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | 0.0040 | 98ALL/GA |
| 5313.5820 | 18814.462 | 40 | $3d^5$ | b ⁴ F | 5/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | 0.0040 | 98ALL/GA |
| 5316.28 | 18804.91 | 7 | $3d^4(^3P)4s$ | b ² P | 3/2 | _ | $3d^4(^3D)4p$ | x ² D ^o | 5/2 | 0.02 | 51KIE |
| 5318.38 | 18797.49 | 15 | $3d^4(^3P)4s$ | b ⁴ P | 1/2 | _ | $3d^{4}(^{5}D)4p$ | $z^{4}P^{o}$ | 1/2 | 0.02 | 51KIE |
| 5334.8674 | 18739.396 | 50 | $3d^5$ | b ⁴ F | 3/2 | _ | $3d^{4}(^{5}D)4p$ | z ⁴ F ^o | 3/2 | 0.0040 | 98ALL/GA |
| 5346.0801 | 18700.093 | | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | 0.0040 | 98ALL/GA |
| 5346.5402 | 18698.484 | 5 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | _ | $3d^4(^5D)4p$ | z^4P^o | 3/2 | 0.0040 | 98ALL/GA |
| 5368.09 | 18623.42 | 7 | $3d^4(^3F)4s$ | a ⁴ F | 3/2 | _ | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 5/2 | 0.02 | 51KIE |
| 5369.3496 | 18619.052 | 15 | $3d^4(^3F)4s$ | a ⁴ F | 9/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 9/2 | 0.0040 | 98ALL/GA |
| 5379.80 | 18582.88 | 6 | $3d^4(^3P)4s$ | b ² P | 3/2 | _ | $3d^4(^1S1)4p$ | $x^{2}P^{o}$ | 3/2 | 0.02 | 51KIE |
| 5407.6127 | 18487.309 | 25 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | 0.0040 | 98ALL/GA |
| 5414.86 | 18462.57 | 7 | $3d^4(^3P)4s$ | c ⁴ P | 5/2 | _ | $3d^4(^3D)4p$ | w ⁴ D ^o | 7/2 | 0.02 | 51KIE |
| 5419.38 | 18447.17 | 2 | $3d^4(^3F)4s$ | a ⁴ F | 5/2 | _ | $3d^4(^5D)4p$ | z ⁶ D° | 3/2 | 0.02 | 51KIE |
| 5420.9253 | 18441.909 | 25 | $3d^4(^3P)4s$ | b ⁴ P | 3/2 | - | $3d^4(^5D)4p$ | $z^{4}P^{o}$ | 1/2 | 0.0040 | 98ALL/GA |
| 5446.77 | 18354.40 | 10 | $3d^3(^4F)4s4p(^3P^0)$ | u ⁴ G° | 9/2 | _ | $3d^4(^5D)6s$ | ⁶ D | 7/2 | 0.02 | 51KIE |
| 5472.60 | 18267.77 | 12 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | _ | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 5477.49 | 18251.47 | 10 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 5/2 | 0.02 | 51KIE |
| 5478.37 | 18248.53 | 50 | $3d^4(^3G)4s$ | b ⁴ G | 11/2 | - | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | 0.02 | 51KIE |
| 5497.80 | 18184.04 | 3 | $3d^3(^2G)4s4p(^3P^0)$ | t ⁴ G° | 7/2 | - | $3d^4(^5D_0)5g$ | ² [4] | 9/2 | 0.02 | 51KIE |
| 5502.0841 | 18169.883 | 40 | $3d^4(^3G)4s$ | b ⁴ G | 9/2 | - | $3d^4(^5D)4p$ | z^4F^0 | 7/2 | 0.0040 | 98ALL/GA |
| 5503.2197 | 18166.134 | 25 | $3d^4(^3G)4s$ | b ⁴ G | 5/2 | - | $3d^4(^5D)4p$ | z^4F^0 | 3/2 | 0.0040 | 98ALL/GA |
| 5508.6207 | 18148.323 | 30 | $3d^4(^3G)4s$ | b ⁴ G | 7/2 | - | $3d^4(^5D)4p$ | $z^{4}F^{o}$ | 5/2 | 0.0040 | 98ALL/GA |
| 5510.7114 | 18141.438 | 20 | $3d^4(^3P)4s$ | b ⁴ P | 5/2 | - | $3d^4(^5D)4p$ | z ⁴ P ^o | 3/2 | 0.0040 | 98ALL/GA |
| 5542.48 | 18037.46 | 3 | $3d^4(^3P)4s$ | c ⁴ P | 3/2 | - | $3d^4(^3D)4p$ | w ⁴ D° | 5/2 | 0.02 | 51KIE |
| 5613.18 | 17810.27 | 10 | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | - | $3d^4(^5D)4f$ | ⁶ D° | 9/2 | 0.02 | 51KIE |
| 5685.90 | 17582.49 | 7 | $3d^5$ | $d^{2}G$ | 9/2 | - | $3d^4(^3F1)4p$ | y ² G° | 7/2 | 0.02 | 51KIE |
| 5775.81 | 17308.79 | 4 | $3d^4(^3F)4s$ | e ² F | 7/2 | - | $3d^4(^3D)4p$ | $w^2 F^o$ | 7/2 | 0.02 | 51KIE |
| 5790.29 | 17265.50 | 20 | $3d^34s^2$ | c ⁴ F | 3/2 | - | $3d^4(^3G)4p$ | x ⁴ G° | 5/2 | 0.02 | 51KIE |
| 5827.24 | 17156.03 | 12 | $3d^34s^2$ | c ⁴ F | 5/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 7/2 | 0.02 | 51KIE |
| 5895.89 | 16956.27 | 15 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^3G)4p$ | x ⁴ G ^o | 11/2 | 0.02 | 51KIE |
| 5913.86 | 16904.75 | 12 | $3d^4(^5D)4p$ | z ⁶ D° | 5/2 | _ | $3d^34s^2$ | d ⁴ P | 5/2 | 0.02 | 51KIE |
| 6053.4645 | 16514.893 | 75 | $3d^4(^3D)4s$ | c ⁴ D | 7/2 | - | $3d^4(^5D)4p$ | z ⁴ D° | 7/2 | 0.0040 | 98ALL/GA |
| 6067.99 | 16475.36 | 7 | $3d^34s^2$ | c ⁴ F | 9/2 | - | $3d^4(^3G)4p$ | y ² H ^o | 11/2 | 0.02 | 51KIE |
| 6070.10 | 16469.63 | 2 | $3d^4(^3D)4s$ | c ⁴ D | 5/2 | - | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 7/2 | 0.02 | 51KIE |
| 6081.52 | 16438.71 | 3 | $3d^5$ | d^2G | 9/2 | - | $3d^4(^3F1)4p$ | $z^{2}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 6089.69 | 16416.65 | 15 | $3d^{5}$ | $d^{2}G$ | 9/2 | _ | $3d^4(^3H)4p$ | $z^{2}H^{o}$ | 11/2 | 0.02 | 51KIE |

Table 6. Spectral lines of Cr II—Continued

| Observed air | Observed wave number (cm ⁻¹) | Intensity and comment | | Uncertainty of observed | - | | | | | | |
|------------------------|---|-----------------------------|--|---|--------|---|--|--|-------------|-------------------|------------------------|
| wavelength (Å) | | | Configuration | Term | Classi | | Configuration | Term | J | wavelength (Å) | Source of line |
| 6112.27 | 16356.01 | 3 | $3d^4(^3D)4s$ | c ⁴ D | | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.02 | 51KIE |
| 6116.42 | 16344.91 | 2 | $3d^4(^1F)4s$ | d ² F | | - | $3d^4(^3F1)4p$ | y ⁴ F ^o | 5/2 | 0.02 | 51KIE |
| 6129.2192 | 16310.777 | 18 | $3d^4(^3D)4s$ | c ⁴ D | | - | $3d^4(^5D)4p$ | z ⁴ D° | 5/2 | 0.0040 | 98ALL/GAR |
| 6147.17 | 16263.15 | 20 | $3d^4(^3D)4s$ | c ⁴ D | | - | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 5/2 | 0.02 | 51KIE |
| 6157.80 | 16235.07 | 7 | $3d^34s^2$ | c ⁴ F | | - | $3d^4(^3G)4p$ | ⁴ F ^o | 7/2 | 0.02 | 51KIE |
| 6176.95 | 16184.74 | 15 | $3d^4(^3D)4s$ | c ⁴ D | | - | $3d^4(^5D)4p$ | $z^{4}D^{o}$ | 3/2 | 0.02 | 51KIE |
| 6181.38 | 16173.14 | 5 | $3d^4(^5D)4d$ | f ⁴ D | | - | $3d^4(^5D)4f$ | ⁴ F ^o z ⁴ D ^o | 7/2 | 0.02 | 51KIE |
| 6195.1747 | 16137.130 | 15 | $3d^4(^3D)4s$ $3d^4(^3D)4s$ | c ⁴ D c ⁴ D | | _ | $3d^4(^5D)4p$ $3d^4(^5D)4p$ | z ⁴ D° | 3/2 | 0.0040 | 98ALL/GAR |
| 6208.20 6226.67 | 16103.27 16055.51 | 2 8 | $3d^4(^3D)4s$ | c D c ⁴ D | | _ | $3d^{4}(^{5}D)4p$ $3d^{4}(^{5}D)4p$ | z D° z ⁴ D° | 3/2 1/2 | 0.02 0.02 | 51KIE 51KIE |
| 6239.78 | 16033.31 | 10 | $3d^4(^3D)4s$ | c ⁴ D | | _ | $3d^4(^5D)4p$ | z ⁴ D° | 1/2 | 0.02 | 51KIE 51KIE |
| 6263.22 | 15961.81 | 6 | $3d^4(^1F)4s$ | d ² F | | _ | $3d^4(^3P1)4p$ | $z^{2}P^{o}$ | 3/2 | 0.02 | 51KIE |
| 6271.84 | 15939.88 | 15 | $3d^34s^2$ | c ⁴ F | | _ | $3d^4(^3G)4p$ | ${}^{4}F^{o}$ | 7/2 | 0.02 | 51KIE |
| 6274.93 | 15932.03 | 2 | $3d^34s^2$ | c ⁴ F | | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 9/2 | 0.02 | 51KIE |
| 6418.87 | 15574.76 | 20 | $3d^34s^2$ | c ⁴ F | | _ | $3d^4(^3G)4p$ | ⁴ F ^o | 9/2 | 0.02 | 51KIE |
| 7311.60 | 13673.13 | 2 | $3d^4(^3D)4s$ | c ⁴ D | | _ | $3d^4(^5D)4p$ | z ⁴ F° | 9/2 | 0.02 | 51KIE 51KIE |
| 11562.824 | 8646.0394 | 2 | $3d^4(^5D)5d$ | ⁴ S | | _ | $3d^4(^5D)5f$ | ⁶ F ^o | 5/2 | 0.001 | 85BIE/BRA |
| 11633.409 | 8593.5802 | 6 | $3d^4(^5D)5d$ | ⁶ G | | _ | $3d^4(^5D)5f$ | ⁶ F ^o | 11/2 | 0.001 | 85BIE/BRA |
| 11693.524 | 8549.4017 | 2 | $3d^4(^5D)5d$ | ⁶ P | | _ | $3d^4(^5D)5f$ | ⁶ F ^o | 3/2 | 0.001 | 85BIE/BRA |
| 11784.689 | 8483.2647 | 8 | $3d^4(^5D)5d$ | ⁴ S | | _ | $3d^4(^5D)5f$ | ⁴ G ^o | 5/2 | 0.001 | 85BIE/BRA |
| 11867.389 | 8424.1477 | 20 * | $3d^4(^5D)5d$ | ⁶ G | | _ | $3d^4(^5D)5f$ | ⁴ H ^o | 9/2 | 0.001 | 85BIE/BRA |
| 11867.389 | 8424.1477 | 20 * | $3d^4(^5D)5d$ | ⁶ F | | _ | $3d^4(^5D)5f$ | $^{4}D^{o}$ | 5/2 | 0.001 | 85BIE/BRA |
| 11894.076 | 8405.2463 | 6 | $3d^4(^5D)5d$ | ⁶ P | | _ | $3d^4(^5D)5f$ | ⁶ G ^o | 5/2 | 0.001 | 85BIE/BRA |
| 11989.530 | 8338.3285 | 15 | $3d^4(^5D)5d$ | ⁶ G | | _ | $3d^4(^5D)5f$ | ⁶ G ^o | 11/2 | 0.001 | 85BIE/BRA |
| 12182.587 | 8206.1916 | 60 | $3d^4(^5D)5d$ | ⁶ F | | _ | $3d^4(^5D)5f$ | 6 G $^{\rm o}$ | 9/2 | 0.001 | 85BIE/BRA |
| 12377.799 | 8076.7709 | 40 | $3d^4(^5D)5d$ | ⁴ F | | _ | $3d^4(^5D)5f$ | 4 G $^{\rm o}$ | 9/2 | 0.001 | 85BIE/BRA |
| 12412.599 | 8054.1268 | 2 | $3d^4(^5D)5d$ | ⁴ F | | _ | $3d^4(^5D)5f$ | ⁶ F ^o | 5/2 | 0.001 | 85BIE/BRA |
| 12430.639 | 8042.4383 | 30 | $3d^4(^5D)5d$ | ^{4}G | | _ | $3d^4(^5D)5f$ | 6 G $^{\rm o}$ | 13/2 | 0.001 | 85BIE/BRA |
| 12447.432 | 8031.5882 | 30 | $3d^4(^5D)5d$ | ⁴ F | | _ | $3d^4(^5D)5f$ | ${}^{4}F^{o}$ | 7/2 | 0.001 | 85BIE/BRA |
| 12483.683 | 8008.2655 | 10 | $3d^3(^2H)4s4p(^3P^0)$ | q^2G^o | 7/2 | _ | $3d^4(^5D_4)5g$ | ² [2] | 5/2 | 0.001 | 85BIE/BRA |
| 12553.416 | 7963.7805 | 3 | $3d^4(^5D)5d$ | ⁶ D | | _ | $3d^4(^5D)5f$ | $^{6}D^{o}$ | 7/2 | 0.001 | 85BIE/BRA |
| 12737.868 | 7848.4603 | 8 | $3d^4(^5D)5d$ | ^{4}G | | _ | $3d^4(^5D)5f$ | ⁶ P ^o | 7/2 | 0.001 | 85BIE/BRA |
| 12828.752 | 7792.8588 | 2 | $3d^4(^5D)5d$ | ⁴ F | | _ | $3d^4(^5D)5f$ | $^6D^{o}$ | 5/2 | 0.001 | 85BIE/BRA |
| 12930.903 | 7731.2972 | 3 | $3d^4(^5D)5d$ | ^{4}D | | _ | $3d^4(^5D)5f$ | ⁶ G° | 7/2 | 0.001 | 85BIE/BRA |
| 13176.005 | 7587.4788 | 3 | $3d^4(^5D)5d$ | ⁶ F | | - | $3d^4(^5D)5f$ | ⁶ H ^o | 9/2 | 0.001 | 85BIE/BRA |
| 13792.104 | 7248.5435 | 3 | $3d^4(^5D)6p$ | ⁶ D° | | - | $3d^4(^5D)6d$ | ⁴ F | 7/2 | 0.001 | 85BIE/BRA |
| 14326.371 | 6978.2272 | 1 | $3d^4(^5D)6p$ | ⁶ F° | | - | $3d^4(^5D)6d$ | ⁶ D | 7/2 | 0.001 | 85BIE/BRA |
| 14435.768 | 6925.3449 | 2 | $3d^4(^5D)6p$ | ⁶ P ^o | | - | $3d^4(^5D)6d$ | ⁶ D | 7/2 | 0.001 | 85BIE/BRA |
| 14474.745 | 6906.6967 | 1 | $3d^4(^5D)4d$ | e ⁶ P | | - | $3d^4(^5D)5p$ | ⁶ D ^o | 3/2 | 0.001 | 85BIE/BRA |
| 14652.426 | 6822.9435 | 40 | $3d^4(^5D)6p$ | ⁴ F ^o | 9/2 | - | $3d^4(^5D)6d$ | ⁴ F | 9/2 | 0.001 | 85BIE/BRA |
| 14738.471 | 6783.1104 | 15 | $3d^4(^5D)6p$ | ⁶ F° | | - | $3d^4(^5D)6d$ | ⁶ F | 5/2 | 0.001 | 85BIE/BRA |
| 14788.113 | 6760.3403 | 20 | $3d^4(^5D)6p$ | ⁶ F ^o | | - | $3d^4(^5D)6d$ | ⁶ F | 7/2 | 0.001 | 85BIE/BRA |
| 14904.204 | 6707.6831 | 2 | $3d^4(^5D)4d$ | e ⁶ F | | - | $3d^3(^4P)4s4p(^3P^0)$ | x ⁶ D ^o | 9/2 | 0.001 | 85BIE/BRA |
| 14936.513 | 6693.1738 | 4 | $3d^4(^5D)6p$ | ⁶ P ^o | | - | $3d^4(^5D)6d$ | ⁶ D | 7/2 | 0.001 | 85BIE/BRA |
| 14940.753 | 6691.2744 | 3 | $3d^4(^5D)6p$ | ⁶ F ^o | | - | $3d^4(^5D)6d$ | ⁶ P | 7/2 | 0.001 | 85BIE/BRA |
| 15002.253 | 6663.8443 | 2 | $3d^4(^5D)4d$ | e ⁶ F | | - | $3d^4(^5D)5p$ | ⁴ F° | 7/2 | 0.001 | 85BIE/BRA |
| 15003.476 | 6663.3011 | 10 | $3d^4(^5D)4d$ | e ⁶ G | | - | $3d^4(^5D)5p$ | ⁶ F ^o | 11/2 | 0.001 | 85BIE/BRA |
| 15019.518 | 6656.1842 | 2 | $3d^4(^3H)5s$ | e ⁴ H ⁶ P ^o | | - | $3d^3(^2\text{H})4s4p(^3\text{P}^{\circ})$ | r ⁴ G ^o | 9/2 | 0.001 | 85BIE/BRA |
| 15118.648 | 6612.5410 | 15 | $3d^4(^5D)6p$ | ⁶ F ^o | | - | $3d^4(^5D)6d$ | ⁶ F | 5/2 | 0.001 | 85BIE/BRA |
| 15145.853 | 6600.6635 | 20 | $3d^4(^5D)6p$ | e ⁶ G | | - | $3d^4(^5D)6d$ | ⁶ P ⁶ F⁰ | 5/2 | 0.001 | 85BIE/BRA |
| 5153.965 | 6597.1302 | 15 | $3d^4(^5D)4d$ $3d^4(^5D)6p$ | ⁶ P ^o | | - | $3d^4(^5D)5p$ | ⁴ S | 9/2 | 0.001 | 85BIE/BRA |
| 5186.086 | 6583.1762 | 20 | | e ⁶ G | | - | $3d^4(^5D)6d$ $3d^4(^5D)5p$ | 5 ⁶ F ^o | 3/2 | 0.001 | 85BIE/BRA |
| 15264.216 15305.177 | 6549.4802 6531.9520 | 1 | 3d ⁴ (⁵ D)4d 3d ⁴ (⁵ D)4d | e G f ⁶ D | | _ | $3d^{4}(^{5}D)5p$ $3d^{4}(^{5}D)5p$ | ⁶ P ^o | 5/2 3/2 | 0.001 0.001 | 85BIE/BRA 85BIE/BRA |
| | | 2 | 3d ⁴ (⁵ D)4d | e ⁶ G | | _ | $3d^{4}(^{5}D)5p$ $3d^{4}(^{5}D)5p$ | ⁶ F ^o | | | |
| 15365.387 | 6506.3562 6476.0186 | 120 | $3d^{4}(^{5}D)4d$ $3d^{4}(^{5}D)6p$ | e G ⁴ F° | | _ | $3d^{4}(^{5}D)5p$ $3d^{4}(^{5}D)6d$ | ⁴ G | 11/2 9/2 | 0.001 0.001 | 85BIE/BRA |
| 15437.368 | | 20 | | e ⁶ G | | | | ⁶ F ^o | | | 85BIE/BRA |
| 15634.317 15637.557 | 6394.4388 | 20 30 | 3d ⁴ (⁵ D)4d 3d ⁴ (⁵ D)4d | e ⁶ G | | _ | $3d^4(^5D)5p$ $3d^4(^5D)5p$ | ⁶ F ^o | 1/2 3/2 | 0.001 | 85BIE/BRA |
| 15654.597 | 6393.1140 | | 3 <i>d</i> ⁴ (⁵ D)4 <i>d</i> | e G f ⁶ D | | _ | $3d^{4}(^{5}D)5p$ $3d^{4}(^{5}D)5p$ | ⁴ P ^o | 5/2 | 0.001 0.001 | 85BIE/BRA |
| 15654.597 15684.174 | 6386.1551 6374.1122 | 1 2 | 3d ⁴ (⁵ D)4d | e ⁶ F | | _ | $3d^{3}(^{4}P)4s4p(^{3}P^{o})$ | x ⁶ D° | 5/2 1/2 | 0.001 | 85BIE/BRA |
| | | | $3a^{4}(^{5}D)4a$ $3d^{4}(^{5}D)6p$ | e F 4Do | | _ | $3d^{4}(^{5}D)6d$ | x ^a D ^a | | | 85BIE/BRA |
| 15870.594 15876.815 | 6299.2403 6296.7721 | 15 10 | $3d^{4}(^{5}D)6p$ $3d^{4}(^{5}D)6p$ | ⁴ D° | | _ | $3d^{4}(^{5}D)6d$ $3d^{4}(^{5}D)6d$ | ⁴ F | 3/2 5/2 | 0.001 0.001 | 85BIE/BRA 85BIE/BRA |
| 12010.013 | 0290.//21 | 10 | $a \in D \cap p$ | υ | 312 | _ | эи (D)0a | I, | 312 | 0.001 | OJDIE/BKA |

TABLE 6. Spectral lines of Cr II-Continued

| Observed air wavelength | Observed wave number | Intensity and | | | | Uncertainty of observed wavelength | Source | | | | |
|-------------------------------|----------------------------|------------------|-------------------------------------|-------------------------------|------|--|-------------------------------------|-----------------------------|------|-------------|-----------|
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 16109.586 | 6205.7887 | 3 | $3d^4(^5D)6p$ | ⁶ D° | 3/2 | _ | 3d ⁴ (⁵ D)6d | ⁶ G | 5/2 | 0.001 | 85BIE/BRA |
| 16133.225 | 6196.6958 | 8 | $3d^4(^5D)5d$ | ⁶ S | 5/2 | _ | $3d^4(^5D)5f$ | $^6\mathrm{D^o}$ | 7/2 | 0.001 | 85BIE/BRA |
| 16155.221 | 6188.2588 | 10 | $3d^4(^5D)4d$ | f ⁶ D | 7/2 | _ | $3d^4(^5D)5p$ | $^6\mathrm{D^o}$ | 5/2 | 0.001 | 85BIE/BRA |
| 16169.139 | 6182.9321 | 3 | $3d^4(^5D)6p$ | ⁶ P ^o | 5/2 | _ | $3d^4(^5D)7s$ | ^{4}D | 7/2 | 0.001 | 85BIE/BRA |
| 16279.278 | 6141.1009 | 12 | $3d^4(^5D)6p$ | $^{4}D^{o}$ | 3/2 | _ | $3d^4(^5D)6d$ | ^{4}D | 5/2 | 0.001 | 85BIE/BRA |
| 16459.566 | 6073.8351 | 8 | $3d^4(^5D)6p$ | $^{4}P^{o}$ | 5/2 | _ | $3d^4(^5D)7s$ | ^{4}D | 7/2 | 0.001 | 85BIE/BRA |
| 16535.046 | 6046.1090 | 2 | $3d^4(^5D)6p$ | $^{6}P^{o}$ | 3/2 | _ | $3d^4(^5D)7s$ | ^{4}D | 5/2 | 0.001 | 85BIE/BRA |
| 16614.866 | 6017.0627 | 5 | $3d^4(^5D)4d$ | e ⁶ F | 5/2 | _ | $3d^4(^5D)5p$ | 6 D $^{\rm o}$ | 5/2 | 0.001 | 85BIE/BRA |
| 16688.717 | 5990.4360 | 2 | $3d^4(^5D)6p$ | $^{4}D^{o}$ | 5/2 | _ | $3d^4(^5D)6d$ | ^{4}D | 5/2 | 0.001 | 85BIE/BRA |
| 16893.963 | 5917.6579 | 2 | $3d^4(^5D)4d$ | e ⁶ F | 7/2 | _ | $3d^4(^5D)5p$ | $^6\mathrm{D^o}$ | 5/2 | 0.001 | 85BIE/BRA |
| 16901.151 | 5915.1411 | 3 | $3d^4(^5D)5d$ | ⁶ S | 5/2 | _ | $3d^4(^5D)5f$ | 6 D $^{\rm o}$ | 5/2 | 0.001 | 85BIE/BRA |
| 17006.920 | 5878.3538 | 1 | $3d^4(^5D)6p$ | $^{6}P^{o}$ | 7/2 | _ | $3d^4(^5D_4)5g$ | ² [5] | 9/2 | 0.001 | 85BIE/BRA |
| 17075.287 | 5854.8178 | 10 | $3d^4(^5D)5d$ | ⁶ S | 5/2 | _ | $3d^4(^5D)5f$ | ⁶ P ^o | 7/2 | 0.001 | 85BIE/BRA |
| 17204.379 | 5810.8866 | 8 | $3d^4(^5D)6p$ | $^6\mathrm{D^o}$ | 3/2 | _ | $3d^4(^5D)7s$ | ^{4}D | 5/2 | 0.001 | 85BIE/BRA |
| 17219.468 | 5805.7946 | 3 | $3d^3(^4F)4s4p(^3P^0)$ | y ⁶ F ^o | 7/2 | _ | $3d^4(^5D)4d$ | e ⁶ F | 9/2 | 0.001 | 85BIE/BRA |
| 17367.033 | 5756.4637 | 5 | $3d^4(^5D)6p$ | ⁴ P ^o | 3/2 | _ | $3d^4(^5D)7s$ | ^{6}D | 5/2 | 0.001 | 85BIE/BRA |
| 17378.647 | 5752.6168 | 2 | $3d^4(^5D)5f$ | 6 G $^{\rm o}$ | 9/2 | _ | $3d^4(^5D_4)6g$ | ² [6] | 11/2 | 0.001 | 85BIE/BRA |
| 17398.410 | 5746.0823 | 6 | $3d^4(^5D)5f$ | $^{4}\text{H}^{\text{o}}$ | 11/2 | _ | $3d^4(^5D_4)6g$ | ² [6] | 11/2 | 0.001 | 85BIE/BRA |
| 17403.544 | 5744.3872 | 3 | $3d^4(^5D)6p$ | $^{6}F^{o}$ | 7/2 | _ | $3d^4(^5D_2)5g$ | ² [4] | 7/2 | 0.002 | 85BIE/BRA |
| 17467.097 | 5723.4866 | 12 | $3d^4(^5D)6p$ | $^{6}F^{o}$ | 5/2 | _ | $3d^4(^5D)7s$ | $^{6}\mathrm{D}^{-}$ | 5/2 | 0.002 | 85BIE/BRA |
| 17719.245 | 5642.0405 | 15 | $3d^4(^5D)4d$ | e ⁶ F | 11/2 | _ | $3d^4(^5D)5p$ | $^{6}F^{o}$ | 11/2 | 0.002 | 85BIE/BRA |
| 17938.388 | 5573.1150 | 3 | $3d^4(^5D)6p$ | $^{4}P^{o}$ | 3/2 | _ | $3d^4(^5D)7s$ | ^{6}D | 1/2 | 0.002 | 85BIE/BRA |
| 19258.104 | 5191.2019 | 10 | $3d^4(^5D)4d$ | e ⁴ G | 7/2 | - | $3d^4(^5D)5p$ | ⁴ F ^o | 5/2 | 0.002 | 85BIE/BRA |
| Observed | Observed | , | | | | | | | | Uncertainty | |
| vacuum | wave | Intensity | | | Clas | sific | ation | | | of observed | |
| wavelength | number | and | G 6 4 | | | 31110 | | | | wavelength | Source |
| (Å) | (cm^{-1}) | comment | Configuration | Term | J | | Configuration | Term | J | (Å) | of line |
| 20802.456 | 4807.1248 | 2 | 3d ⁴ (⁵ D)6s | ⁴ D | 7/2 | _ | $3d^4(^5D)6p$ | ⁴ D ^o | 5/2 | 0.002 | 85BIE/BRA |
| 20926.370 | 4778.6595 | 8 | $3d^4(^5D)6p$ | $^{4}D^{o}$ | 7/2 | _ | $3d^4(^5D)7s$ | ^{4}D | 7/2 | 0.002 | 85BIE/BRA |
| 21176.601 | 4722.1932 | 8 | $3d^4(^5D)6s$ | ^{6}D | 5/2 | _ | $3d^4(^5D)6p$ | $^6\mathrm{D^o}$ | 3/2 | 0.002 | 85BIE/BRA |
| 22983.814 | 4350.888 | 30 | $3d^4(^5D)4d$ | f ⁴ D | 1/2 | - | $3d^4(^5D)5p$ | ⁶ P ^o | 3/2 | 0.020 | 85BIE/BRA |

Since almost all of the energy levels are from Sansonetti et al. [12SAN/NAV] who used a least squares fit, a separate fit was not used here to generate the energy level table.

The values of g_J and the leading percentages included in the level table were compiled by Sugar and Corliss [85SUG/COR].

The ionization energy quoted here is from Sugar and Corliss [85SUG/COR]. It was based on privately communicated results of S. Johansson of the 6-member Cr II $3d^4(^5D)ns$ ⁶D_{9/2} series of levels.

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