THE SOLAR SPECTRUM 2935Å to 8770Å

Second Revision of Rowland's Preliminary Table of Solar Spectrum Wavelengths

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UNITED STATES DEPARTMENT OF COMMERCE • John T. Connor, *Secretary*
NATIONAL BUREAU OF STANDARDS • A. V. Astin, *Director*

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Foreword

The present Monograph has been prepared in response to a request by the International Astronomical Union. At the Seventh General Assembly of this Union, held in 1948 in Zürich, Switzerland, the following proposal from the Commission on Solar Radiation and Spectroscopy was adopted: "La Commission considère que la publication d'une table révisée du spectre solaire dans le plus court délai possible est de la plus haute importance pour les astronomes qui s'occupent de recherches sur le soleil et sur les spectres stellaires . . . .".

It was further stipulated that such a revision should "contain wavelengths on the scale of 1928, measured intensities or equivalent widths from Utrecht, and definitive identifications from Moore-Sitterly".

The authors have made every effort to carry out the above recommendations. Throughout the span of years since this solar program was started the data collected for the *Atomic Energy Levels* project, which has been carried out simultaneously, have aided greatly in the identification work.

The generous support of the International Astronomical Union is warmly acknowledged. This compendium could not have been completed without the equally cordial cooperation of the Utrecht Observatory and the Spectroscopy Section at the National Bureau of Standards.

A. V. Astin, *Director*

Washington, D.C., January 6, 1966.

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The present compendium of solar spectrum wavelengths and intensities is essentially a second revision of Rowland's Table, corrected and supplemented by material from the Utrecht Photometric Atlas [1].[1] Approximately 24,000 lines are listed. In a number of cases new wavelengths were determined. Measured equivalent widths from the Atlas records replace the Rowland estimated line intensities recorded in the 1928 revision. From these directly measured equivalent widths have been derived reduced widths, which, if necessary, were corrected for disturbing influences. The intensity behavior of atomic lines in the spot spectrum as compared with the spectrum of the solar disk is indicated by letters denoting strengthening, weakening, and the like. Atomic lines present only in the spot spectrum are, also, included, 223 in all.

Revised identifications of the lines, as to chemical origin, are given for both atomic and molecular lines. For classified atomic lines the lower excitation potential and multiplet number are listed. For molecular lines the rotation branch and quantum number, and the vibration band are indicated. Note numbers refer to notes in which the complete designation of the band is given.

An introductory text gives a detailed description of each column of the solar ledger. Figures are included to illustrate the procedure used to derive the observed equivalent widths $\Delta\lambda$ (mÅ) and the reduced widths $\Delta\lambda/\lambda(F)$.

Tables include counts of lines of each spectrum recorded in the identification column, leading lines in the first and second spectra, and summaries of molecules and elements present in the sun. About 73 percent of the lines are wholly or partially identified. Sixty-three elements are recorded as present. A number need further study. The number of molecules identified in the sun totals 11.

Key Words: Elements in sun, equivalent widths of solar lines, identification of solar lines, molecules in sun, solar spectrum, wavelengths of solar lines.

1. Introduction

In 1895–1897 Rowland published a Preliminary Table of Solar Spectum Wavelengths that is still a challenge to spectroscopists [2].[1] The span of observations was from 2975 Å to 7330 Å. Many features of this rich spectrum still defy interpretation. Throughout the years this classical work has provided a threefold incentive: (1) to extend laboratory observations and interpretations of atomic and molecular spectra of various chemical elements, for the purpose of identifying more of the observed solar lines as to chemical origin; (2) to extend Rowland's observations in both directions, to shorter and to longer wavelength-regions by means of modern observing techniques, photographic developments, and the like; (3) finally, to reobserve the solar spectrum in the "accessible" range. All of these incentives are still being carried out.

The first revision of the Rowland Table was made at the Mount Wilson Observatory in 1928 by C. E. St. John, and others [3]. At this time the Rowland wavelength-scale was converted to the international scale. The correction curve used for this conversion is described in detail in the text to the 1928 publication. Further minor corrections to the international scale are discussed in § 2.1.

By comparing the observed solar lines with laboratory spectra, Rowland reported the presence of 39 chemical elements in the sun, all but 2 of which have since been confirmed. In 1928, 57 elements were reported as present and 57% of the lines in the solar spectrum were identified. The number of known chemical elements in the sun is now 63, with 2 others dubiously identified. To date some 73% of the lines are wholly or partially identified as to chemical origin. This is described more fully in §§ 3.2, 3.3.

In the 1928 revision no attempt was made to replace the estimated line intensities from Rowland's Table by measured equivalent widths. Provisional graphs for the approximate conversion of the Rowland scale into equivalent widths were published by Mulders [4]. In 1943, however, the staff at the Utrecht Observatory started to prepare a catalogue of measured equivalent widths, based primarily on the Utrecht Photometric Atlas of the Solar Spectrum [5], in which the profiles of all Fraunhofer lines between 3612 Å and 8771 Å are recorded. The spectrograms were obtained by Mulders at the Mount Wilson Observatory, and the photometric data were elaborated under the direction of Minnaert and Houtgast. This Utrecht program became part of the cooperative project suggested by the International Astronomical Union in 1948. The catalogue, just as the Atlas on which it is based, refers to the spectrum of the center of the solar disk, little different from the spectrum of integrated sunlight. The Utrecht contribution, consisting of a list of photometric data has already, to a large extent, been published separately [6]

[1] Figures in brackets indicate the literature references in § 4.

because the data are so urgently needed for abundance determinations and for comparisons with other stellar spectra.

The range of the present table has been limited to that long span of the solar spectrum that overlaps the more recent and current observations from rocket and orbiting-solar-observatory spectra in the ultraviolet (short of 3000 Å), and from the Jungfraujoch spectra in the infrared (long of 7500 Å). It is essentially a second revision of Rowland's Table corrected and supplemented by the Utrecht Atlas material. Even in this range the work is far from completed. Many more solar lines will doubtless be added when the spectrum has been completely reobserved under the best observing conditions and with the best available modern instruments. The task of remeasuring the complex spectrum and of extending identifications and intensity measurements is a heavy one in itself, and one that requires, also, much additional work on the analysis of individual laboratory spectra. The present contribution is intended as a convenient handbook for the astrophysicist until the ideal self-contained compendium of the solar spectrum from the x-ray to the microwave region becomes a reality.

2. Description of the Solar Spectrum Compendium

The successive columns of the solar ledger are described. The general procedure by which the data on measured intensities have been obtained is fully explained. The many users require, also, more detailed information on the analyses of individual spectra than can be recorded here, for the many lines classified from laboratory investigations. Sufficient information is given in the ledger to provide convenient cross reference to the separate papers on spectrum analysis. For special details concerning individual lines the column headed "Notes" should be consulted.

2.1 The Wavelengths: Column One

A comprehensive revision of Rowland's *Preliminary Table of Solar Spectrum Wavelengths* entails a thorough study of the wavelengths of the lines reported by Rowland. These remarkably accurate measurements by Jewell, that date back to 1895–97 [2], were reduced to the International Scale of Wavelengths in the first revision of Rowland's Table in 1928 [3].

The tremendous amount of work that has gone into interferometric observations for precise wavelength standards need not be discussed here. Details may be found in the early Transactions of the International Astronomical Union [7], in the Allegheny Publications by Burns, Meggers, and Kiess [8], and in the Mount Wilson Contributions by St. John, H. D. Babcock and others. St. John discussed the method used for the reduction to the international system, and has published the correction curve based on the International Standard Wavelength Scale of 1922 [3]. The wavelengths listed in the 1928 edition are based on this curve. They are in three categories: (1) Lines marked "m". These lines were observed by Rowland, but remeasured for use in correcting Rowland's wavelength scale. (2) Lines marked "w", denoting weighted means of remeasured lines and Rowland's corrected values. (3) Undesignated wavelengths; these formed the great majority. They were lines listed by Rowland but corrected to the international scale of 1922 by means of the correction curve adopted in 1928.

Throughout the years in which the 1928 edition has been actively used, several problems regarding wavelengths have arisen. Further work on the International Standards has indicated that a small running correction is required to reduce the wavelengths based on the 1922 scale to the scale adopted in 1928 by the International Astronomical Union. These corrections, reported by H. D. Babcock [9] are as follows:

Table 1. Wavelength Corrections for Reduction to the 1928 Scale of Standards

Region (Å)	Correction to 1922 Scale (Å)	Region (Å)	Correction to 1922 Scale (Å)
2995–3133	−0.0012	6125–6290	−0.006
3133–3370	*(−0.0010)	6290–6455	−0.007
3370–3705	−0.0006	6455–6630	−0.008
3719–3849	−0.0015	6630	−0.009
3850–3969	−0.0015	6800	−0.010
4000–5600	−0.002	6900	−0.012
5600–5780	*(−0.003)	7000	−0.014
5780–5960	*(−0.004)	7100	−0.016
5960–6125	−0.005		

* Values in parentheses are interpolated.

They must be applied to all wavelengths published in the 1928 edition, in order to comply with the standards recommended by Commission 14 of the Union.

Although Rowland's observations extend from 2975 Å to 7330 Å, his spectrograms did not record the solar spectrum completely in the ranges short of 3060 Å and long of 6600 Å. With the development of new photographic emulsions, Rowland's work has been superseded in the short- and long-wave regions. Meggers made a thorough study of the spectrum from 6500 Å to 9000 Å in 1919 [10] and by means of Doppler displacements, carefully separated the solar lines from the telluric lines. This work was subsequently extended at Mount Wilson by H. D. Babcock and others, by comparing line intensities at high and low sun. In the present table the

Table 2. Spectrograms from the Utrecht-Mount Wilson Collection used for Wavelength Measurement

Plate No.	Wavelength Range (Å)	Plate No.	Wavelength Range (Å)	Plate No.	Wavelength Range (Å)
82	3949 to 4035	54	5205 to 5290	60	4690 to 4775
206	3994 to 4081	52	5260 to 5345	56	4875 to 4960
83	4071 to 4158	55	5320 to 5406	66	4933 to 5018
79	4144 to 4228	93	5367 to 5450	89	5018 to 5045
196	4190 to 4275	241	5740 to 5820	90	5070 to 5155
75	4262 to 4347	36	5885 to 5970	46	5395 to 5480
197	4315 to 4400	98	5953 to 6037	49	5462 to 5547
190	4375 to 4460	37	6004 to 6088	A	5520 to 5595
210	4430 to 4516	40	6055 to 6140	B	5580 to 5650
191	4495 to 4580	250	6195 to 6275	C	5635 to 5715
195	4560 to 4640	248	6250 to 6330	41	5663 to 5749
70	4592 to 4678	251	6305 to 6385	42	5800 to 5885
73	4655 to 4738	249	6370 to 6450	18	6125 to 6210
67	4753 to 4840	252	6420 to 6500	120	6582 to 6664
65	4820 to 4907	119	6497 to 6578		
59	5044 to 5130	102	6575 to 6655		
51	5145 to 5230				

wavelengths from 6600 Å to 8770 Å are mostly taken from the 1947 Monograph by H. D. Babcock and C. E. Moore [11]. Details regarding the wavelength scale in this region are given in the Introduction to this Monograph.

In the interval 2935 Å to 3060 Å, H. D. Babcock has reobserved the solar spectrum. New measurements for some 665 lines have been reported [12] and used for the present work. The reference standards for this region require a correction of −0.002 Å according to Babcock [9]. In this interval Babcock's measurements thus corrected have been adopted with Standards indicated by "S". See Table 3.

In the course of the work on intensities by Minnaert and his staff, many questions have arisen regarding new lines not listed by Rowland, the reality of faint Rowland lines, the resolution of close pairs, and the like. A set of spectrograms taken from the collection made for the preparation of the Atlas has been measured by C. E. Moore in an effort to settle some questions about apparent inconsistencies between the Atlas and the Rowland lines, and also because it seems desirable to examine further the lines recorded heretofore only by Rowland. These measurements extend from 3949 Å to 6600 Å.

The spectrograms from the Utrecht-Mount Wilson collection that have been measured, are listed in Table 2. In the last column a list of auxiliary spectrograms of poorer quality than the others is given. These were used only to supplement the good ones.

Finally, two Mount Wilson sun-spot spectrograms T′ 1969 and T′ 1971 were used to cover the respective intervals 4732 Å to 4755 Å and 4900 Å to 4933 Å. The reciprocal dispersion of the Atlas plates is 0.35 Å/mm; that of the T′ plates is 0.22 Å/mm. The measurements have been made on comparators at the National Bureau of Standards, partly by visual and partly by oscilloscope settings. An attempt has been made to obtain at least two measurements for every line.

Table 3. References to Standard Wavelengths in the Solar Spectrum

Wavelength Range (Å)	Reference: Trans. Intern. Astron. Union	Comments
2995 to 3133	**7**, 150, 1950	Reference Standards to be corrected by −0.002 Å.
3592 to 7122	**3**, 93, 1928	Recommended λ.
7568 to 9889	**6**, 90, 1938	Recommended λ.

The standards have been taken from the second reference of Table 3. This table contains a complete list of references to solar standards given by Commission 14 in the Transactions of the International Astronomical Union.

A supplementary list of "temporary" standards in the interval 7333 Å to 11204 Å is given in these Transactions **4**, 83, 1932, but these are not designated by "S" in column one, as are those from Table 3.

In drawing the correction curves for the measurements described above, the lines marked "m" in the 1928 solar table as corrected from Table 1, have also been utilized in addition to the "Standards" mentioned above. These lines were all measured at Mount Wilson prior to 1928.

It is evident that many of the fainter lines that can be detected on the spectrograms under low-power magnification and in the Atlas, are too faint to measure on the comparators. Some of these faint lines can, however, be measured to 0.01 Å on high-dispersion spectrograms, with the aid of handscales.

For one region, 5000 Å to 6000 Å, Zalubas [13] has made spectrograms at the Georgetown University Observatory, especially for the purpose of observing faint lines. He used a 21-foot concave Rowland grating having 20,000 lines to the inch, in a Wadsworth mounting; the reciprocal dispersion (first order) was about 3 Å/mm. The spectrograms were made in the second order and have a reciprocal dispersion of 1.4 Å/mm. He has remeasured some 4,072 previously known lines, and added 234 new faint lines, many of which may be of atmospheric origin. All of his wavelengths represent means of measurements made on three spectrograms. Of these new lines, 55 that were clear and also measurable in the Atlas records have been included here.

For the remeasured lines, a weighting system was devised to combine the various kinds of measurements available. The weighting factors are described in Table 4.

The authors have had, also, the benefit of unpublished notes from H. D. Babcock regarding close pairs, new lines, improved wavelengths of atmospheric and other molecular lines, identifications, reality of faint lines, and other details. The wavelengths published by him and L. Herzberg [14] in their analysis of the Atm O_2 bands have been adopted with the label "m" (see Table 5).

In examining the Atlas, Minnaert and Houtgast have measured a number of lines to ±0.01 Å. Some of these indicate further corrections to Rowland's list; many others are new lines (see § 3.1 and Table 8). Long of 6600 Å it seemed inefficient to include all of the faintest lines in the catalogue, which are mostly of atmospheric origin. Many of them have been dropped, especially if they were not included in the 1928 edition or in the 1947 catalogue of H. D. Babcock and C. E. Moore. All identified solar lines have been kept. The wavelengths determined from the Atlas cannot be compared in precision with those measured by means of a modern comparator. If precise wavelengths are needed, the positions of several neighboring lines should be checked, and the scale, if necessary, slightly adjusted by fractions of a millimeter. The Atlas is superior, however, when faint lines appear on the slopes of strong lines, when lines are broad and assymetric, or when they are revealed only by a tracing, which, being flat, nevertheless fails to reach the continuum line.

Table 4. Weighting Factors for Measurements

Weight	Description of Source Material
10	Wavelengths marked "w" in the 1928 edition as corrected from Table 1.
5	Rowland wavelength from the 1928 edition as corrected from Table 1.
5	Measurement by Zalubas [13].
5	Three or more measurements by C. E. Moore.
3	Two measurements by C. E. Moore.
1	One measurement by C. E. Moore.
½	One dubious measurement by C. E. Moore.

The behavior of atomic lines in the spot spectrum is discussed in § 2.4. A study of such lines was made by C. E. Moore in 1932 [15], and a list was published by her in 1933 [16]. Atomic lines appearing only in the spot spectrum are entered to two decimals only. They are taken from the 1933 paper. Her measurements of spot lines have been supplemented by those included in the 1928 revision, and also by unpublished measurements by R. S. Richardson in the interval from 4900 Å to 5403 Å [17]. The rounded-off wavelengths of spot lines quoted from Richardson are indicated by a dagger in note 13. His wavelengths have also been utilized for a number of lines formerly listed as spot lines and later seen on the Atlas spectrograms.

Table 5 contains the letters used in column one to indicate wavelengths in the different categories discussed above.

In two special cases, laboratory wavelengths are quoted with special notes:

Note 10. The Balmer series of H, $n=8$ through 17.

Note 31. The Paschen series of H, $n=12$ through 18.

All other wavelengths not designated by the letters in Table 5, are weighted means. All wavelengths are in air.

More remains to be done, especially on improving wavelengths of faint solar lines, and, above all, on extending the list to include many more faint solar lines that appear on spectrograms and photometric records made with the finest solar instruments available today. The demand for the present compendium is so great that the further delay that would be necessary to make a more detailed study of new faint solar lines, does not appear justifiable. This is one of the most challenging problems of the near future.

Table 5. Letters in Column One: Wavelengths

S	Standard Wavelength, see Table 3.
m	This letter is used: (1) To denote lines measured at Mount Wilson, recorded as "m" in the 1928 revision, in the interval 3062 Å to 6600 Å. The 1928 entries corrected from Table 1 are recorded here. For lines longer than 6600 Å, many have been remeasured, but the letter "m" has been retained only for those solar lines thus noted in the 1928 edition. (2) For wavelengths of lines in the Atm O_2 bands as reported by H. D. Babcock and L. Herzberg [14]. (3) For a few unpublished measurements by H. D. Babcock. (4) For measurements of sun-spot lines [16], and for other measurements taken from Richardson. (5) For selected lines having special notes.
r	Lines whose wavelengths are from Rowland's Table. Short of 6600 Å the listed wavelengths are from the 1928 edition corrected as described in Table 1. To longer waves, the lines in this category are quoted from the 1947 Solar Table [11], where the correction factors occasionally deviate slightly from those listed in Table 1.
a	Two-place measurements furnished by Minnaert and Houtgast, from their study of the photometric tracings. All of these lines have been seen as traces on the solar spectrograms as well as in the Atlas recordings.

2.2 The Measured Equivalent Widths, $\Delta\lambda$(mÅ): Column Two

According to the general use in astrophysics, the *equivalent width* of a Fraunhofer line is the width of a hypothetical absorption line, which, being perfectly black and having sharp edges, would absorb from the neighbouring continuum the same amount of energy as the real line (Fig. 1). Another measure for the line strength called the *reduced width*, which will be defined in § 2.3, is listed in column three [18].

The present table has the short-wave limit 2935 Å, in order to provide an overlap with subsequent solar tables that extend to shorter wavelengths. From 2935 Å to 3061 Å no calibrated plates were available for intensity measurements. In this range, eye-estimates of the line intensities are entered in brackets between the two columns containing measured intensities. The quoted estimated intensities are from H. D. Babcock [12]. They are not to be confused with the measured equivalent widths.

In the present volume, several errors in the provisional publication [6] have been corrected. The ultraviolet data have been modified, taking into account the more recently published Göttingen Atlas [19]. In the red part of the spectrum a number of dubious faint lines have been rejected, others have been added, and wavelengths have been adjusted, so that the catalogue is now a better description of the Atlas.

The intensity measurements were based on the Utrecht Photometric Atlas of the Solar Spectrum [5], in which the profiles of all Fraunhofer Lines between 3612 Å and 8771 Å are recorded, from spectrograms made by G. F. W. Mulders at the Mount Wilson Observatory, Pasadena. In the introduction of this Atlas, full details about the microphotometric work are found. The region from 3612 Å to 6977 Å was photographed in the 2nd order; the one from 6923 Å to 8771 Å in the 1st order. For the atmospheric lines it may be useful to remember that sec ζ varied between 1.26 and 4.92, as listed in the introduction of the Atlas. Longer than 5560 Å it did not exceed 2.22. In the small stretches where two spectrograms overlap, that with the greatest value of ζ was selected.

The spectral region short of 3612 Å was included in the Atlas only as an Appendix based on Utrecht spectra with much less resolution. It proved surprisingly difficult to find an observatory provided with adequate instruments for an improved study of this part of the solar spectrum. Fortunately the Dunsink Observatory was so kind as to obtain a complete set of the ultraviolet region between 3100 Å and 3650 Å and to record these spectra with a direct intensity microphotometer, similar to that originally used for the Utrecht Atlas. It is clearly an advantage that the same institute that made the spectrograms also recorded them, making all necessary photometric checks. For some sections, plates kindly taken by H. D. Babcock at the Mount Wilson Observatory were also used. On the Dublin records the lines have a total half-width only slightly (5%) greater than that of the Mount Wilson-Utrecht records; 10 lines in the region of overlap yielded h=27.8 (Mount Wilson) and 29.1 (Dublin), expressed in micro-wavelengths ($\mu\lambda$). An analysis of the apparatus curve in this

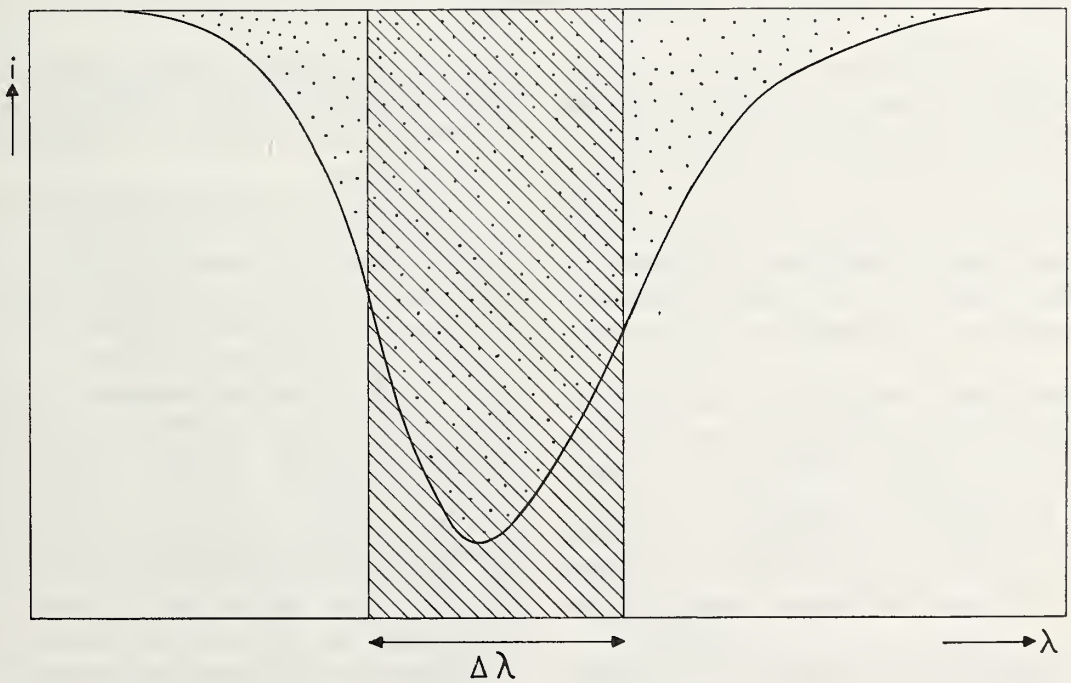

FIGURE 1. *Definition of equivalent width.*

761-925—66——2

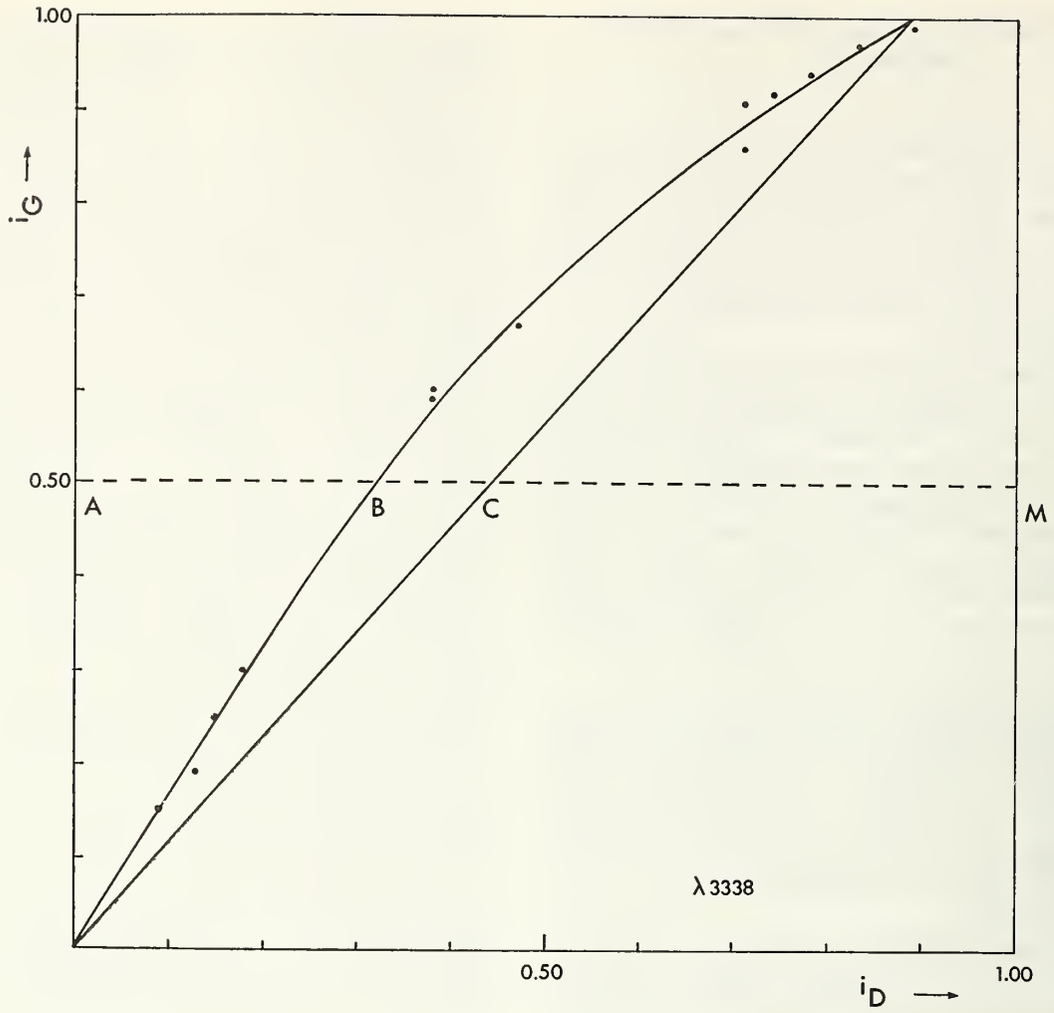

FIGURE 2. *Comparison of UV monochromatic intensity measurements at Göttingen and at Dunsink.*
Coordinates i_G and i_D in arbitrary units.

region, approximated by a Voigt profile, showed that the Dublin damping coefficient (β_1) was much smaller, practically absent, while the Doppler coefficient (β_2) was considerably greater. (Mount Wilson: $\beta_1=2.19$; $\beta_2=3.48$. Dublin: $\beta_1=0.01$; $\beta_2=11.0$). The curve relating the half-width to the central intensity, was practically the same for both series. This was a fortunate circumstance, owing to which we felt justified at first in applying to the whole of the material the same tables and graphs.

After the Preliminary Photometric Catalogue was published by the Utrecht Observatory, an Atlas was published at Göttingen that provided new photometric tracings for the ultraviolet region [19]. It seemed important to check against these new records the results which had been obtained on the basis of the Dublin registrations. Both series of tracings were direct intensity records.

On first inspection it became clear that the resolving power of the Dublin records is slightly better than that obtained at Göttingen. More important, however, was the photometric comparison, the more so, since we had been warned by the Dublin observers that there might be some deviations.

A plot of *E.W.* (Dublin) against *E.W.* (Göttingen), for 210 lines near 3330 Å, showed a systematic difference, the ratio D/G varying between 1.2 and 1.4. By plotting for individual, well selected points the intensities in arbitrary units i_D against i_G, it was also shown that this difference was due to fundamental deviations in the photometric scale. This method of comparison worked quickly and efficiently and was independent of the assumed background intensity, the deviations appearing as a curvature of the plot (Fig. 2). In order to decide which of the two scales was correct, use was made of ultraviolet spectral records obtained by J. Houtgast [23] at the Mount Wilson Observatory in 1960, with the Snow Telescope and the apparatus of W. E. Mitchell for direct photometric recording of the spectrum. Cross-comparisons showed unambiguously that the Göttingen photometry is the correct one.

The effect of a curvature in the photometric scale might be expected to be different according to the *E.W.* of the spectral lines and the intensity of the background on which they are superposed. This was actually found. However in practice these differences in the correction for the individual spectral lines were not important. Considering the necessity of a simple and practical procedure, in view of the great number of lines involved, it seemed sufficient to divide all values of $E.W._D$ by a mean factor of $(1+\Delta)$,

where $$\Delta=\frac{EW_D-EW_G}{EW_G}$$

measures the relative deviation in the *E.W.* Near 3330 Å the factor $(1+\Delta)$ amounted to 1.35.

It was then necessary to ascertain how the factor $(1+\Delta)$ varied with the spectral region. We assumed that the photometric scale would be homogeneous within each Dublin microphotometer record, corresponding to about 10 Å. For each of the 52 records, a graph was made of i_D against i_G (Fig. 2); the curvature, thus the deviation from the right scale, was characterised by the ratio $r=\frac{AB-AC}{AM}$, measured at the height $i_G=0.50\,i_{G(\max)}$. The ratio r was 0.130 near 3330 Å and varied between 0 and 0.15 in the wavelength region 3075 Å to 3550 Å, the difference between both scales disappearing at longer wavelengths.

We assumed that Δ is approximately proportional to r, so that, in general,

$$1+\Delta=1+0.35\,\frac{r}{0.13}.$$

The difficult and lengthy determination of Δ was thus replaced by a very quick measurement of r, easily applied at a great number of wavelengths.

The correction, finally applied, amounted to dividing all equivalent widths and reduced widths of the Preliminary Catalogue (1960) by the factor $(1+\Delta_\lambda)$, which is a function of wavelength; this factor varied in general between 1 and 1.30 and reached higher values, up to 1.43 at only two places.

The equivalent widths, $\Delta\lambda$, in milli-Ångströms, as determined by direct measurement from the records, are tabulated in column two. In the first place the *continuous background* was located, which sometimes deviates a little from the Atlas continuum. This was relatively easy in the infrared and visual regions, but it became increasingly difficult towards the shorter wavelengths. Special difficulties were encountered short of 4000 Å, where the determination of the continuous background has been a matter of serious concern. In general we first traced the profiles of the strongest lines, then the profiles of fainter lines superposed on the first ones, etc. So for each line we obtained a *local continuum*. The local continuum for the strongest lines is determined by the highest points of the stretch of spectrum considered. Of course some indeterminacy resulted from the extent of the interval inside of which these highest points were selected. It is with respect to this local continuum that equivalent widths of column two have been computed.

In view of further reductions, to be explained in § 2.3, we had, also, to locate the true or *maximum continuum*, this being defined as the continuum which would be found theoretically from the tables of κ_c in general use, e.g. from those of Vitense [26]. These tables yield in the UV a continuum which at the Balmer limit jumps discontinuously to a lower value. In the region short of 4000 Å, we have adopted the mean of the continuum as found by Michard [20], and by Rauer [21], later confirmed by Mrs. Pecker [22]. This locates the maximum continuum at an Atlas ordinate, gradually increasing from 100 at 4000 Å to 140 at 3647 Å. There it is considered to jump discontinuously to a lower value, the place of the jump being indicated by parallel horizontal bars in our catalogue. There is no doubt that actually the background is depressed gradually and smoothly, because of the accumulating Balmer lines and (nearer to the limit) by the pre-ionization of the hydrogen atoms. However, these effects are not included in the ordinary tables of the continuous absorption coefficient. In computing a line profile, the theorist will, therefore, refer the spectral line to this high continuum, and consider the profile as formed by the blend between the line proper and the higher Balmer lines. The location of our maximum continuum, as described, conforms to the continuum of the theorists. Short of 3647 Å, we have conservatively assumed that the Atlas ordinate 100 corresponds more or less to the true continuum, as was assumed by Michard. An investigation by Minnaert concerning the profiles of strong lines in the region 3500 Å to 3600 Å suggests that there the real continuum should also be higher. Before accepting the consequences of such a conclusion, more discussion seems to be necessary.

Recent photoelectric measurements of Houtgast on high-dispersion spectra give the detailed absolute intensities of 200 selected points over the range 3000 Å to 4000 Å, which should be used in the future as the basis for the location of the maximum continuum [23].

For each individual line, where necessary, smoothed individual profiles of the wings were traced with a sharp pencil on the Atlas records. In blends, the separation of a line from the neighbouring ones was made there where it could be done without complications by simple application of the "product rule," meaning that an ordinate with relative intensity $\frac{i_2}{i_0}$, superposed on a background $\frac{i_1}{i_0}$, becomes $\frac{i_{12}}{i_0}=\frac{i_1}{i_0}\times\frac{i_2}{i_0}$ (Fig. 3). This applies to the following cases:

1. two telluric lines, or a telluric line combined with a solar line;
2. two solar lines, the overlapping parts of which do not descend below 80% of the continuum.

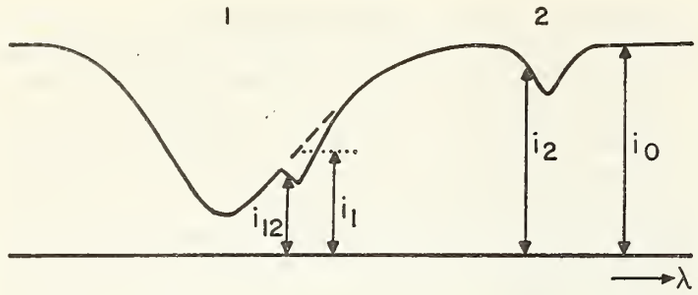

FIGURE 3. *Disturbed and undisturbed Fraunhofer line.*

In all other cases the separation of the blend components was made only in column three (see § 2.3).

The areas of profiles whose dip exceeded 20%, were determined by a Coradi polar planimeter, of which the precision had been tested before. Each profile was measured clockwise and counterclockwise and the mean was taken. For lines with a maximum dip less than 30%, the planimeter measurments were not considered to be sufficiently precise, and the areas were found by counting square millimeters. For a group of medium strong lines there is an overlap, and the mean was taken of the planimeter result and of the counts. The same was done for overlapping parts of the successive Atlas strips; their differences were treated as accidental, though in many cases it was obvious that the deviations were systematic. The *areas* were reduced to *equivalent widths* in mÅ, taking into account the dispersion and the height of the (local) continuum. All single lines and all of the lines which had been directly separated by applying the product rule were treated in this way. For blends not satisfying the conditions mentioned, the equivalent width of the entire blend as a whole is mentioned in the second column.

The Balmer lines of the hydrogen spectrum presented special difficulties near the series limit at 3647 Å. Very striking is the great depth of H_{10}, which we considered as a real anomaly. The lines H_{12}, H_{13}, H_{14} are masked by strong superposed lines; H_{15}, H_{16} and H_{17} are measurable. The line H_{18} is certainly not seen; we assumed, therefore, that H_{19} and H_{20} are also invisible, and that slight depressions there are due to the combination of neighboring lines. The profiles for H_{12}, H_{13} and H_{14} were found by interpolation. For the further reduction in column three, where results of other observers are combined with ours, the results of de Jager (Table 6) have been taken into account up to H_{11}.

2.3 The Reduced Widths, $\Delta\lambda/\lambda\times10^6$ (F): Column Three

Next to the equivalent width, another measure for line-strength has proved useful for many theoretical investigations: it is the *reduced width*, defined as 10^6 times $\Delta\lambda/\lambda$, and expressed in a unit called the *fraunhofer* (F) [18]. This is a dimensionless number, having a convenient order of magnitude and independent of the unit in which both $\Delta\lambda$ and λ are measured. The reduced width is equal to the equivalent width, expressed in *microwavelengths* ($\mu\lambda=10^{-6}\lambda$). The reduced widths are found in column three, improved, however, because the directly measured equivalent widths of column two had to be revised, before reduction, taking into account several considerations, now to be explained.

For a number of Fraunhofer lines, equivalent widths have already been determined earlier by other workers. A list of references is found in Table 6, at the end of § 2.3. We assumed, that these measurements are direct determinations of the equivalent width, without the correction for the blend factor to be discussed later. For this reason all comparisons were made with the numbers of our second column, where the blend correction has not yet been applied. We have listed for each line all available measurements, and have taken mean values, assuming double weight for the Atlas determinations, in order to obtain greater homogeneity in the catalogue between lines measured at Utrecht only, and lines also measured elsewhere. For all lines where other measurements have been taken into account, the reduced width in the third column is in italics.

The following remarks should be made: (*a*) The measurements of Phillips (Table 6) in the ultraviolet have not been used, because his numbers are so much smaller than our results, from both Mount Wilson and Dublin plates, that the homogeneity of the catalogue would have been lost. The same applies to Woolley's measurements (Table 6). Short of 3813 Å, except for the Balmer lines, no measurements other than the Utrecht values were used. (*b*) Of the equivalent widths measured by Allen (Table 6), these have been used which were derived by photometry of the profiles, but not those obtained from depth and halfwidth only. (*c*) No use has been made of profiles determined by some authors, but not converted by them into *E.W.;* in most of these cases the shape of the outer wings had not been ascertained.

The next task was to disentangle those *blends,* which could not be analyzed by the simple product rule. Practically all blends, even in complicated cases, could be reduced: (*a*) to combinations of two lines, or (*b*) to the case of a line, formed on a background lower than the normal continuum. When three lines A, B, C were found combined, it was in general sufficient to consider the interaction of A and B and the interaction of B and C, the mutual influence of A and C being mostly negligible.

It is well known that two Fraunhofer lines combine according to rules more complicated than those of terrestrial absorption lines, as has been shown by Thackeray, Houtgast and Minnaert [24] and later by Unsöld [25] and by Rauer [21].[2] When these last investigations were published, our work, started in 1943, had already progressed so far that it would not have been possible to change the

[2] In the mean the effects of blending, calculated by Rauer, are less pronounced than those taken into account by us. This is due mainly to our assumption, that both lines originate in the same layers of the solar atmosphere.

method of reduction. Nor would it have been possible, in a treatment of many blends, to consider the individual details of each combination. The explanation and graphs published in paper [24] give more ample information about the methods applied. For the reduction it was assumed that the lines behaved as scattering lines, because some of the strongest ones were resonance lines and because we wished, also, to reduce in the simplest way the very low central intensities. For moderately deep profiles, the choice between absorption and scattering is practically unimportant. Two-dimensional *combination tables* were calculated, giving the resultant intensity i_{12} at a wavelength where the individual intensities i_1 and i_2 are superposed; a first table referred to atoms distributed according to Schwarzschild-Schuster, another to atoms distributed according to Milne-Eddington. Finally, the geometric mean of both combination tables was taken, square by square. Fig. 4 gives $V=\frac{i_1-i_{12}}{i_0-i_2}$ for a hypothetical monochromatic line, indicating in what proportion it is reduced when superposed on a background i_1. If we compare lines superposed on a more or less

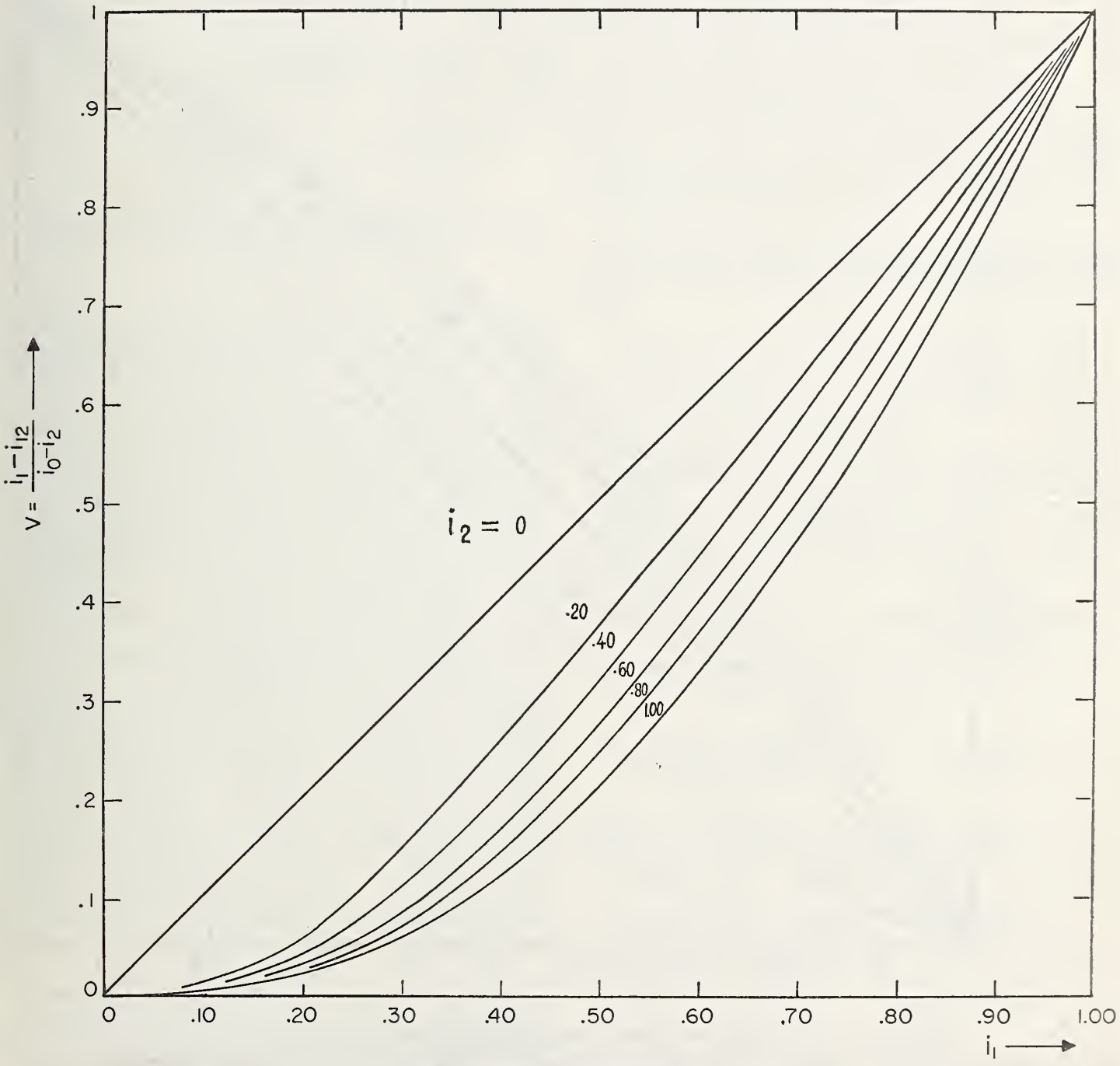

FIGURE 4. *Monochromatic blend factor.*

homogeneous background i_1, with the lines which would have been formed by the same atoms on the background of the true continuum i_0, we would expect by the product rule that the blend factor would be simply equal to $\frac{i_1}{i_0}$, the area having decreased in this proportion but the equivalent width remaining the same. According to the combination table, however, a further reduction of the area is observed, which affects the equivalent width and which can be computed easily for normal profiles derived from the Atlas for lines of different equivalent widths (Fig. 5). Conversely, the observed equivalent widths $\int \frac{(i_1 - i_2)d\lambda}{i_1}$ have to be divided by a factor smaller than unity, and found in the figure quoted.

Lines forming a close doublet were analysed by means of *model doublets*. Two normal profiles, freed from the apparatus function, were drawn at a chosen distance from each other, then combined, ordinate by ordinate, according to the combination table. The resulting doublets, slightly smoothed by combining them with the apparatus

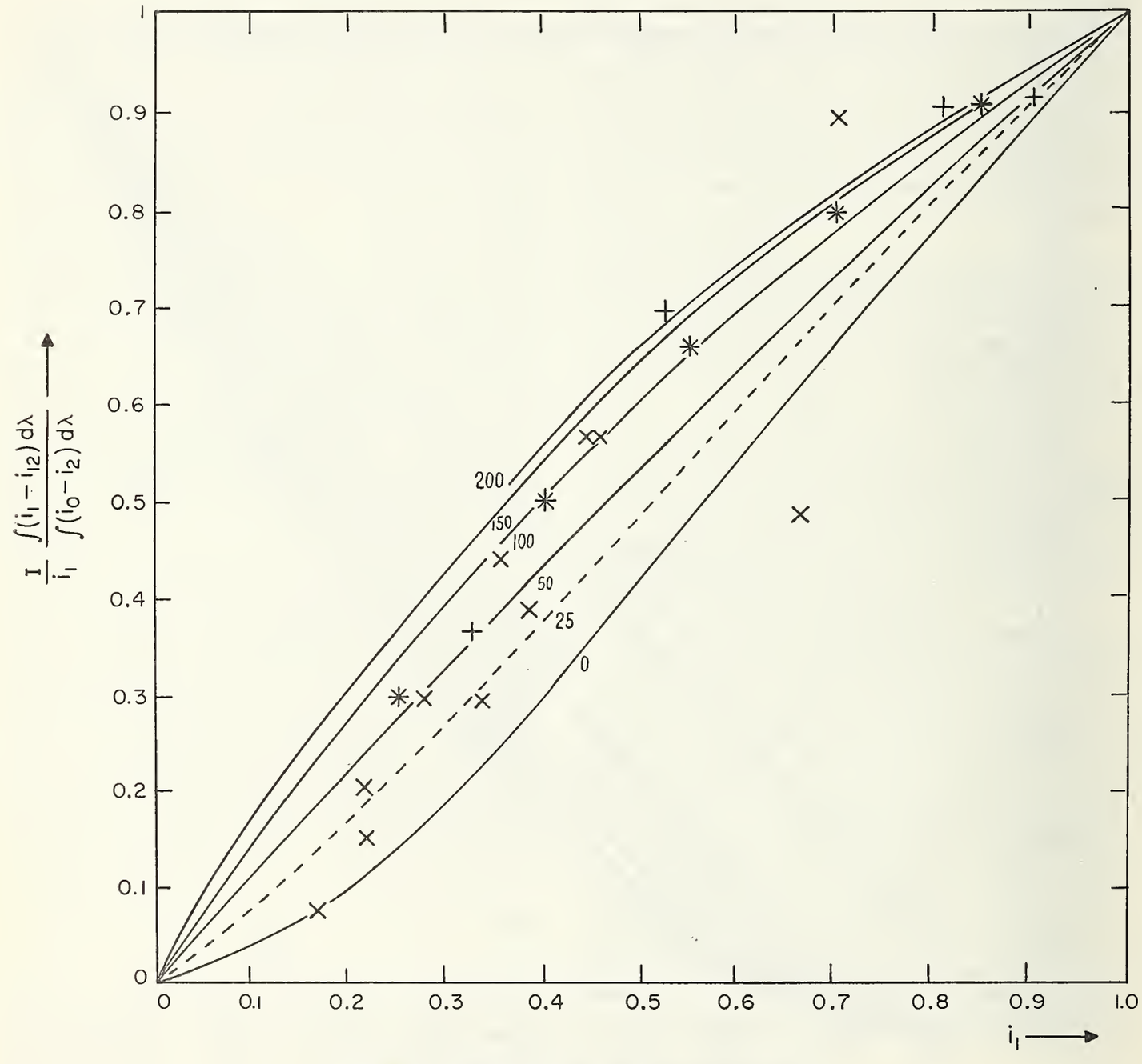

FIGURE 5. *Influence of background on equivalent width.*

Ratio between the equivalent widths of a Fraunhofer line on a background i_1 and the same line undisturbed. Parameter: equivalent width of the disturbed line in mA. Asterisks represent calculated values for the strong D_2 line. The crosses correspond to Thackeray's observations; upright crosses for lines stronger than 100 mÅ

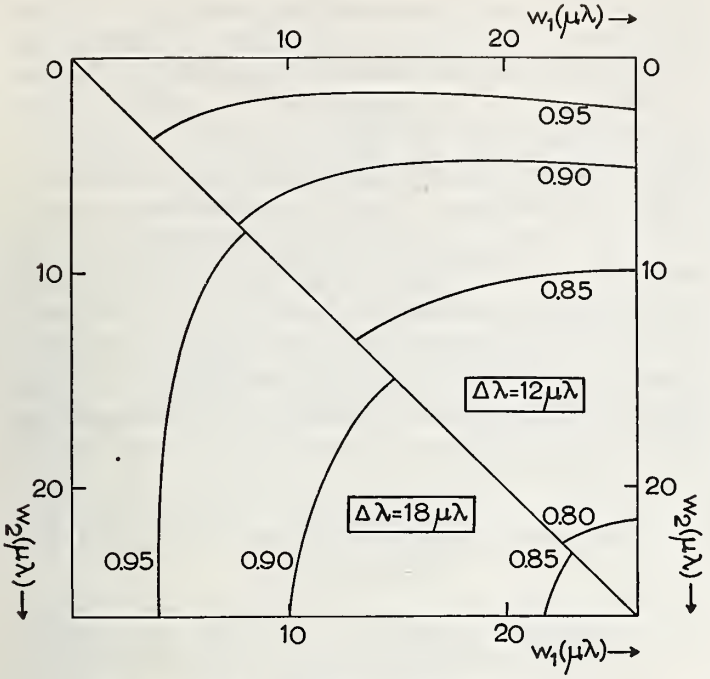

FIGURE 6. *Complementing correction.*
Ratio $\frac{w_{12}}{w_1+w_2}$ of the equivalent width of a blend w_{12} to the sum of the equivalent widths of the undisturbed components w_1 and w_2 (in $\mu\lambda$)

function, were considered to apply to the whole spectrum indiscriminately, provided their abscissae were taken proportional to the wavelength.[3] This was obtained by assuming as a unit the microwavelength $\mu\lambda = 10^{-6}\lambda$.

Lines of very different equivalent widths were combined two by two, the profile of each pair being computed for distances of 0, 6, 12, 18, 24 $\mu\lambda$. Atlas doublets could then be compared with the model doublets. This process of comparison was made easier by computing once for all from the model doublets the ratio: equivalent width of fainter line/sum of the two equivalent widths

as a function of: { minimum intensity in fainter line; / minimum intensity in stronger line;

or as a function of: { width of blend at height 60% of i_0; / minimum intensity in stronger line.

The first graph was used for the faint lines, the second graph for the strong lines. In many cases both graphs could be used, and the results were, in general, found to agree remarkably well; the mean of the two was taken. The model doublets give only the *ratio* between the two components. When the measured equivalent width of the blend is divided in that ratio, a correction must still be applied because the equivalent width of the blend is less than the sum of the equivalent widths of the components. The amount of this *complementing correction* was also obtained as a byproduct of the construction of the model doublets. As an example we reproduce the graph for two lines at distances of $\Delta\lambda = 12\mu\lambda$ or $\Delta\lambda = 18\mu\lambda$ (Fig. 6).

For the closest doublets, the methods thus far described would not suffice. Often the record and the plate showed only slight indications of asymmetry, which it would have been very difficult to translate into quantitative ratios. In these cases we have relied on Rowland's original visual estimates; we transformed them into equivalent widths according to Mulders [4], divided the measured equivalent width in that ratio, and applied the complementing correction. A special investigation showed that for lines of a given Rowland number the equivalent width does not systematically change when they are found superposed on the wings of other lines. This means that Rowland automatically corrected for the influence of the background on the equivalent width.

In all cases, where there is a difference between the local and the maximum background, a reduction was applied, in the same way as explained for "lines, superposed on a more or less homogeneous background" (Fig. 3). This applies especially to the whole stretch between 3647 Å and 4000 Å.

Finally all equivalent widths, already corrected for the effects thus far mentioned, had to be converted to *reduced widths:*

$$\text{reduced width (F)} = \text{equivalent width (mÅ)} \times \frac{1000}{\lambda(\text{Å})}$$

We shall give a few examples of the procedure followed.

3991.121 Å Area = 136 mm² (planimeter)

Local background = 93 mm. Dispersion = 19.8 mm/Å

Equivalent width $= \frac{136}{93 \times 19.8} = 0.0739$ Å $= \boxed{73.9}$ mÅ

Measurements by other authors: Thackeray 71, Rauer 80.

Weighted mean = 74.5

Max. background = 102 mm. Thus $\frac{\text{local background}}{\text{max. background}} = 0.91$

Reduction to max. background (by Fig. 5)

$$\frac{74.5}{0.93} = 80.2$$

Reduced width $= \frac{80.2}{3.991} = \boxed{20.1}$ F

4476.021 Å
4476.089 Å } Area = 297 mm² (planimeter)

Background = 100. Dispersion = 19.6 mm/A

Equivalent width $= \frac{297}{100 \times 19.6} = 0.152$ Å $= \boxed{152}$ mÅ

Separation not detectable.

Rowland estimates: 4 115, 3 87 } 202 (Mulders)

Proportional equivalent width of components: 86.5, 65.5 } 152

[3] The apparatus function of a grating appears to have its abscissae proportional to λ. A special test, made later on near 3800 Å, seems to show that the line widths there, measured in $\mu\lambda$, are somewhat narrower than near 6000 Å, by a factor varying between 1.00 and 1.30; this means that we might have overestimated somewhat the blending effects in the UV

Complementing correction for mutual influence (by Fig. 6):

$$\frac{86.5}{0.86}=101;\quad \frac{65.5}{0.86}=76$$

Reduced width $=\frac{101}{4.476}=\boxed{22.6}$ F; $\frac{76}{4.476}=\boxed{17.0}$ F

4238.760 Å
4238.816 Å } Area = 297.5 mm² (planimeter)

Local background = 99. Dispersion = 19.4 mm/Å

Equivalent width = $\boxed{155}$ mÅ

Ratio of components from model doublets: 0.15

Equivalent width of components: $\frac{155}{1.15}=135$; $\frac{155\times 0.15}{1.15}=20.$

Increase for mutual influence ($\Delta\lambda=0.056$ Å):

$$\frac{135}{0.91}=148;\quad \frac{20}{0.91}=22$$

Reduced width $=\frac{148}{4.238}=\boxed{34.9}$ F; $\frac{22}{4.238}=\boxed{5.2}$ F.

The computation of the equivalent width and of the reduced width may in some cases increase the importance of a line in a most surprising way; this occurs especially for lines superposed on the deepest parts of a spectral profile. Take e.g. the line 3967.431 Å with an area of only 5 sq. mm in the Atlas, superposed on a local background of 15%. The equivalent width becomes $\frac{5.0}{15\times 17.3}=0.0192$ Å = 19.2 mÅ. Now consider, that this local background is only 11% of the maximum background, and since we consider a faint line, the reduction factor is very important. We have to divide by 0.08. Eventually the reduced width becomes 240 mÅ or 60.4 F. Even more striking examples could be given.

The reduced widths ($10^6\Delta\lambda/\lambda$), in fraunhofers, obtained by taking into account measurements of other authors and eliminating, as well as possible, perturbing influences of neighboring lines, are directly adapted to the theoretical work, but much more uncertain than the entries in column two. We are well aware of the uncertainties in this process of reduction. Our calculations give at least an idea of the order of the blending effect, and a warning that it may become very important, especially in the ultraviolet spectrum.

In such cases where measurements of different authors are available, great divergencies are sometimes found. While the data in italics may be expected to be, in general, more reliable than the others, they may be worse in individual cases, and they are inevitably less homogeneous.

We have refrained from using question marks for those many cases in which there were doubts concerning the reality of a line, the exact profile, the separation of blends, the correction for the background, etc. Even in the most dubious cases, we have compelled ourselves to make a decision, considering that others would have to struggle with the same difficulties, without having more solid ground than we did. It must be clear that our catalogue is full of weak points in all these respects, and that anyone interested in special lines should study them in detail himself, on several spectrograms and repeated records, by using his own critical sense. Nevertheless we hope that the intensity data of the catalogue will be useful in the present period of solar research.

Symbols and Special Signs Used in Columns Two and Three

—— / - - - — Horizontal separation, indicating the overlap between successive plates in the spectral region where telluric lines occur. Equivalent widths of telluric lines may be compared only on one and the same plate.

$\widehat{5}$ — The line is so closely blended with adjacent faint lines, not mentioned in the RRT or in the BM catalogue, that a separation seems impossible. The equivalent width given refers to the total blend.

$|5|$ — The line is partly blended with adjacent faint lines, not mentioned in the RRT or in the BM catalogue, which have been separated by us. The equivalent width refers to the line alone.

} — The lines have not been analyzed in the second column, either because an analysis of the profile was practically impossible, or because such an analysis required too uncertain theoretical assumptions. The equivalent width relates to the blend as a whole.

5 — The reduced width, when entered in italics, is the weighted mean of the Utrecht measurement and of measurements by other observers.

( ) — The equivalent width could not be directly measured, but it was derived by interpolation, or from multiplets, or from Rowland's estimates.

Table 6. References to Papers Where Equivalent Widths of Fraunhofer Lines Are Found

Adam, M. G.: Mon. Not. Roy. Astron. Soc. **98**, 112 and 544, 1938; **100**, 595, 1940.
Allen, C. W.: Mem. Commonwealth Solar Obs., Canberra **1**, No. 5, 1934; **2**, No. 6, 1938. Astroph. J. **85**, 165, 1937; **88**, 125, 1938. Mon. Not. Roy. Astron. Soc. **96**, 508 and 843, 1936; **100**, 10, 1939.
Barocas, V. and Righini, G.: Astroph. J. **114**, 443, 1951.
Bretz, M.: Zeit. Astroph. **38**, 259, 1956.
Cherrington, E.: Bull. Lick Obs. **17**, 161, 1935.
Dahme, A.: Zeit. Astroph. **11**, 93, 1935.
Hindmarsh, W. R.: Mon. Not. Roy. Astron. Soc. **115**, 270, 1955.
Houtgast, J.: Dissertation, Utrecht, 1942.
De Jager, C.: Recherch. Astron. Obs. Utrecht, **13** (1), 1952.
Korff, S. A.: Astroph. J. **76**, 294, 1932.
Minnaert, M. and Mulders, G. F. W.: Zeit. Astroph. **1**, 192, 1930.
Mulders, G. F. W.: Dissertation, Utrecht, 1934.
Pecker, J. Cl. and Peytureaux, R.: Ann. d'Astroph. **11**, 90, 1948.
Pecker, J. Cl.: Ann. d'Astroph. **12**, 197, 1949.
Phillips, J. G.: Astroph. J. **96**, 61, 1942.
Plaskett, H. H.: Mon. Not. Roy. Astron. Soc. **91**, 870, 1931.
Rauer, W.: Zeit. Astroph. **37**, 1, 1955.
Righini, G.: Mem. Oss. Astrof. Arcetri **48**, 29, 1931. Zeit. Astroph. **10**, 349, 1935.
Roach, F. E. and Phillips, J. G.: Astroph. J. **96**, 71, 1942.
Shane, C. D.: Bull. Lick Obs. **16**, No. 449, 1932; **19**, No. 507, 1941.
Thackeray, A. D.: Mon. Not. Roy. Astron. Soc. **94**, 99, 1934; **95**, 293, 1935. Astroph. J. **84**, 433, 1936.
Ten Bruggencate, P. and von Klüber, H.: Veröff. Göttingen No. 78; Nach. Akad. Wiss. Göttingen, Math.-Phys. Kl., pp. 165 to 183, 1944.
Ten Bruggencate, P. and Houtgast, J.: Zeit. Astroph. **20**, 149, 1940.
Ten Bruggencate, P.; Golnow, H.; Günther, S.; Strohmeier, W.: Zeit. Astroph. **26**, 51, 1949.
Unsöld, A.: Zeit. Phys. **46**, 765, 1928.
Weidemann, V.: Zeit. Astroph. **36**, 101, 1955.
Woolley, R.v.d.R.: Ann. Solar Phys. Obs. Cambridge **3**, 88, 1933. Mon. Not. Roy. Astron. Soc. **93**, 706, 1933.

2.4 Behavior of Atomic Lines in the Sun-Spot Spectrum: Column Four

The physical conditions prevailing in sun-spots have long attracted the attention of the astrophysicist. The great importance of spot behavior in assigning identifications to the solar lines has been recognized throughout the present work. The most extensive spot data available are those based on the Mount Wilson observations of spot spectra. One of the authors (C.E.M.) used this material for a detailed study of *Atomic Lines in the Sun-Spot Spectrum*, in 1932 [15]. At this time an attempt was made to estimate spot intensities on approximately the same scale as Rowland used for estimating the disk intensities. Although estimated intensities are far from ideal for work on determining abundances of chemical elements in the stars, yet they provide reliable general information as to whether the line is strengthened, unchanged, weakened, or obliterated in the spot spectrum as compared with the disk spectrum.

The spectrograms were made with the 150-foot tower telescope at Mount Wilson with the use of a Nicol prism and quarter-wave plate to reveal the Zeeman effect in the spot spectra. The zigzag effect thus produced enables one to select atomic from molecular lines in the spot spectrum.

For the present it is impossible to include measured equivalent widths for lines in the spot spectrum, such as are contained in columns two and three for the disk lines. The great amount of stray light in most sun-spot spectra vitiates the photometric measurements by an amount often unknown. In place of the equivalent widths the following letters are introduced in column four to indicate the spot behavior as compared with the disk intensity, and thus add weight to the assigned identifications in column five.

S The line is greatly strengthened in the spot spectrum as compared with the disk spectrum. For atomic lines appearing only in the spot spectrum, the estimated spot spectrum is 0 or greater, on the Rowland scale of intensities. For disk lines, the strengthening is estimated to be 3 or more units on that scale. This letter is used, also, for selected unweakened winged lines, which were labeled "W" in the 1933 publication [16].

s The line is strengthened in the spot spectrum, probably less than 3 units on the Rowland scale. For atomic lines present only in the spot spectrum the intensity is estimated as "—1" or less, i.e. 00 or less, on Rowland's scale.

u The line is unchanged in intensity in the spot spectrum.

W The line is greatly decreased in intensity in the spot spectrum, 3 or more units on the Rowland scale.

w The line is weakened in the spot spectrum, but the weakening is estimated to be less than 3 units.

o The line is obliterated in the spot spectrum.

N The line is diffuse.

NN The line is very diffuse.

d The line is double.

The spot spectrum data are taken mostly from the publication entitled *Atomic Lines in the Sun-Spot Spectrum* for the region 3894 Å to 6635 Å [16]. In general, for wavelengths longer than 6635 Å the estimated spot intensities from the 1947 publication [11] have been used. In addition, for a limited number of lines, miscellaneous unpublished notes furnished by H. D. Babcock and some unpublished estimates by C. E. Moore have been used.

It is hoped that the next revision of the solar spectrum will include homogeneous measured equivalent widths for atomic lines in the spot spectrum, derived from high-dispersion spot spectrograms covering the whole range with the *same* spot. This is one of the crying needs in solar spectroscopy today. Difficult as such an observing program is, it would well repay the effort. The spot spectrum contains thousands of lines that have not yet been measured. Many are of molecular origin, but the atomic lines interspersed with these have not yet been fully studied.

2.5 The Identifications: Column Five

The entries in this column consist of both atomic and molecular lines, each of which can be recognized easily from their chemical symbols. The wealth of material collected at The National Bureau of Standards for the program on *Atomic Energy Levels* has been used to revise and extend the identifications of atomic lines. Data were collected for as many atomic spectra as possible, from laboratories engaged in spectroscopy throughout the world. The collaboration of many spectroscopists has made possible the revisions included in this column. For each atomic spectrum, the individual lines arranged by multiplets in order of increasing excitation potential have been examined in making the final identification assignments. The intensity behavior in the spot spectrum as compared with the disk has also been a valuable guide throughout.

For molecular spectra the services of various specialists in molecular spectroscopy have been solicited. These identifications have been made not by coincidence of wavelength alone, but rather by a study of the behavior of the various rotation branches of a given molecular spectrum. The procedure has been similar to that of studying multiplet structure for atomic lines. If the intensities of the solar lines vary consistently with the observed laboratory intensities along the lines of the branch, and the wavelengths are in reasonable agreement, the identifications are considered to be plausible. Further details are discussed in the descriptions of the last three columns of the table. §§ 2.6, 2.7, 2.8.

Several symbols have been used in column five to explain the identifications in some detail. These symbols have the following meanings:

|| Parallel lines preceding the chemical symbol indicate the predominant contributor in the case of a blend.

Example: 4844.022 Å ||Fe I
Ti I

Fe I is the predominant contributor, but Ti I is not completely masked.

| A single vertical line preceding the chemical symbol denotes one of the principal contributors to a blend.

Example: 5247.923 Å |Co I
Cr I

Here Co I is a stronger contributor than Cr I.

In cases where more than one identification is given and no such symbols are used, no choice has been possible as to the leading or predominant contributor.

— A dash is used for blends of three types:

Example: 5041.450 Å —C I

Here it is felt that C I does not account fully for the solar intensity. The dash indicates that the line is probably a blend. It precedes the "C I" because the laboratory wavelength is longer than the solar wavelength. The other unknown contributor(s) may well be a line (or lines) having shorter wavelengths.

Example: 5092.309 Å C_2—

This blend is similar to the one described above, except that the C_2 laboratory wavelength is shorter than the solar wavelength. Other contributors may be on the long-wave side or to the red of the solar line.

Example: 4466.165 Å Cr I—
Fe I

In the case of this blend, the Cr I is on the short-wave side of the solar line and Fe I is to longer waves.

( ) Parentheses indicate masked lines. Only more important masked lines are entered throughout the solar table. Usually the multiplet evidence indicates that the masked line should be present. The most conspicuous examples occur in the wings of very strong solar lines.

Example: 3933.682 Å Ca II (*K*)
(Sc I) (V I) (Co I)

? A question mark denotes that the identification is somewhat dubious.

p Chemical symbols followed by "p" indicate identifications based on wavelengths "predicted" from known atomic energy levels. Such lines have mostly not yet been observed in the laboratory, but the multiplet behavior confirms the suggested solar identification.

Example: 4481.031 Å Fe I p

The method of identifying solar lines by prediction is particularly fruitful for a spectrum like Fe I. The solar spectrum still provides more Fe I lines than have as yet been observed in the laboratory. This situation indicates the need for reobserving this complex spectrum with a modern laboratory source, such as an electrodeless discharge. Still more solar identifications of Fe I could be made if the analysis were extended by means of a new homogeneous line list.

2.6 The Low Excitation Potential or Rotation Line: Column Six

This column contains two types of data. For atomic lines, the lower excitation potential of the individual line is tabulated. This excitation potential is that of the lower level involved in the transition giving rise to the laboratory line, expressed in eV. The multiplication factor used to convert cm^{-1} to eV is 0.00012395. This conversion factor has been used throughout to obtain all the ionization potentials listed in the volumes on *Atomic Energy Levels* [27]. The excitation energies listed in this solar table appear slightly larger than those in the 1928 edition, because of the revision in the conversion factor.

For molecular lines, this column has been used to enter the rotation branch and quantum number. For example, the solar line at 4084.327 Å is identified as CH. This line in the laboratory spectrum of CH occurs in the "P" branch and has the quantum number 7, denoted as "P 7" in column six.

2.7 The Multiplet Number or Vibration Band: Column Seven

This is arranged similarly to column six. It contains the multiplet numbers taken from the published Multiplet Tables. These are old multiplet numbers, but since they are well established in the literature, every effort has been made to retain them. In cases where lines have been added to the multiplet, if the multiplet has been assigned a number, that same number is now used for the additional lines. For lines longer than 3000 Å the Multiplet Numbers are from the Princeton University Observatory Contribution No. 20, 1945 [28]. For lines short of 3000 Å, the *Ultraviolet Multiplet Table* has been used, as indicated by "UV" preceding the listed multiplet number [29].

For molecular spectra the vibration bands are indicated in this column. For example, the solar line at 4096.941 Å is identified as CN. This line of CN belongs to the vibration band (1, 2); which is entered in column seven.

2.8 Notes to the Solar-Spectrum Ledger: Column Eight

The numbers in the last column refer to notes that follow the solar ledger (pp. 344 to 349). Most of these are self-explanatory.

Molecular Spectra—Solar Lines

A large number of the notes contain information regarding the molecular lines present in the solar spectrum. Each classified molecular line has a note number. For each molecule all lines having the same electronic transition have the same note number. The note gives the transition, the vibration bands, the spectral range of the individual bands from laboratory spectra, and references used for the material on analysis. Only the bands represented in the present solar ledger are included in the notes.

Molecular Spectra—Atmospheric Lines

For Atm O_2 the limiting range of wavelength is quoted from the paper on analysis by H. D. Babcock and L. Herzberg [14]. A different note number is used for each isotope of O, the electronic transition being the same.

For the classified lines of atmospheric water vapor, Atm H_2O, the limiting spectral range quoted in the notes is taken from the solar table itself. No attempt has been made to include a detailed picture of this complex molecule. In general, the identifications of atmospheric lines have been taken from the 1928 [3] and 1947 [11] tables. This has been supplemented by unpublished data from W. S. Benedict, who has made a most exhaustive study of the bands and has kindly furnished his analysis for use here.

Unclassified atmospheric lines are entered as "Atm", although they are probably due to the water vapor molecule.

A summary of the notes referring to molecular lines is given in Table 7:

Table 7. Notes on Molecular Lines in the Solar-Spectrum Ledger

Note Number	Molecule	Note Number	Molecule	Note Number	Molecule
1	OH	11	CN (blue)	22	Atm O_2 $O^{16}O^{16}$
2	CH	12	CN (red)	23	Atm O_2 $O^{16}O^{17}$
3	CH	19	C_2	24	Atm O_2 $O^{16}O^{18}$
4	CH	20	MgH	26	Atm H_2O
6	NH				

Selected Lists of Solar Lines

Six notes give solar wavelengths of lines that are in special categories (notes 5, 7, 8, 15, 18, 27). Three refer to pairs of lines: (1) formerly listed as double, but recorded here as single (note 7); (2) lines that may be double but are still unresolved (notes 15 and 18).

There are 223 atomic lines appearing only in the sun-spot spectrum. These are included in the main ledger and listed separately in note 13. They can be detected readily by the absence of equivalent width data in columns two and three. Numerous spot lines recorded in the 1932 survey [15, 16] have since been detected on the Atlas spectrograms as present, also, in the disk spectrum, which explains their absence from the listing in note 13 as compared with the 1932 listing [16].

In selecting the atomic lines in the sun-spot spectrum from the appearance of the Zeeman effect, many cases were noted in which it was difficult to separate atomic from molecular lines with certainty. In cases where the spot line is possibly a molecular line, note 16 is entered. Definite blends of atomic and molecular lines in the spot spectrum are indicated by note 17.

Laboratory Wavelengths in the Table

Laboratory wavelengths have been used for higher members of the Balmer and Paschen series of hydrogen, because of the diffuseness of these lines in the solar spectrum. The Balmer lines from H_8 through H_{17} are listed in note 10; and the Paschen lines from n equals 12 through 18, in note 31.

Seven notes contain special comments concerning the data on widths of lines: (notes 9, 14, 21, 28, 29, 30, 32).

The only "forbidden" lines entered in the table are those of [O I] reported by Bowen in 1948 (note 25).

3. General Results

In August 1963 an International Symposium on the Solar Spectrum was held in Utrecht. One paper on this program dealt with the present revision of the solar spectrum, and gave a general account of this solar program [30]. Since that date a new summary of the data included in the table, has been prepared.

3.1 Number of Lines

It is interesting to compare the approximate counts of lines in the present revision with similar counts from the 1928 edition. The 1963 summary [30] has been revised and extended in Table 8. Short of 3061 Å and long of 6600 Å, new observations replace those of Rowland. The counts have been made by regions in order to emphasize the comparison over the long interval from 3061 Å to 6600 Å, where the Rowland Table has not yet been superseded.

Separate counts have not been made for the 223 atomic spot lines in the various categories: unblended, blended, and unidentified. They are included in the overall counts of lines recorded in Table 8. With the aid of note 13 the spot lines can be easily segregated and counted.

The last three columns of Table 8 answer a question that has been persistent over the years, namely, the reality of the faintest Rowland lines. Rowland's Table started at 2975 Å; consequently the counts of new lines short of this wavelength are handled separately. A glance at the last column of this Table indicates an important trend. It seems extremely evident that many more faint solar lines remain to be found and that the rejections of those now recorded will be on the decrease.

Table 8. Counts of Lines in the Solar Ledger

Range (Å)	Unblended	Blended	Unidentified	Total	Percentage Identified	Range (Å)	New Lines Added	Rowland Lines Rejected	Difference
1966 Edition									
2935 to 3061	389	114	153	656	77	2935 to 2975 2975 to 3061	142 80	37	+43
3061 to 4000	4509	1138	1786	7433	76		165	50	+115
4000 to 5000	3327	697	2143	6157	65		430	76	+354
5000 to 6600	3372	380	1830	5582	67		604	346	+258
6600 to 7330	1306	163	356	1825	80				
7330 to 8770	1699	303	312	2314	87				
2935 to 8770	14602	2795	6580	23977	73				
3061 to 6600	11208	2215	5759	19182	70		1199	472	+727
1928 Edition									
2975 to 3061	186	49	236	471	50				
3061 to 4000	3527	933	2868	7328	61				
4000 to 5000	2440	533	2764	5737	52				
5000 to 6600	2725	235	2280	5240	56				
6600 to 7330	695	48	504	1247	60				
2975 to 7330	9573	1798	8652	20023	57				
3061 to 6600	8692	1701	7912	18305	57				

The strongest unidentified lines are listed in Table 9. The limiting intensities are 2 on the scale of eye estimates (<3061 Å). To longer waves the selection is quite arbitrary, since both the measured equivalent width in column two and the reduced width in column three have been used as guides. The total number listed is 241.

3.2 Atoms and Ions in the Sun

In 1941, W. F. Meggers published tables of leading lines in first and second spectra [31]. These tables have been invaluable for astrophysicists. They have been quoted for the *Ultimate Lines* of individual spectra in both the Princeton and the Ultraviolet Multiplet Tables [28], [29]. Since 1941 our knowledge of atomic spectra has increased steadily, and some of the material in these tables has been superseded. Pending the publication of a complete revision containing the designations and a current bibliography for the "Raies Ultimes", the leading lines from his tables, with some revisions and extensions, are given in Table 10 with the low excitation potential of the transition giving rise to the line. Wavelengths in vacuo are denoted by "v" in columns three and nine. All other wavelengths are in air. Laboratory data are in columns three and four for first spectra, and nine and ten for second spectra. The laboratory lines are observed in emission. These are followed by solar data. Some *raies ultimes* short of 3000 Å are strong solar lines, as, for example, Lyman α of H I at 1215 Å. In Table 10, however, the solar material is limited to the range of the present volume, 2935 Å to 8770 Å, all of which is an absorption spectrum. Special notes refer to spectra whose lines are known in solar, spot, or chromospheric spectra, particularly in cases where the lines occur beyond the above ranges.

Many absences can be explained from a glance at Table 10. For the less abundant elements having their ultimate lines in the far ultraviolet, the search for the element should be made in the ultraviolet solar spectrum. The accessible lines have high excitation potentials, which is unfavorable for their appearance. This was pointed out by H. N. Russell in 1929 [32], as was, also, the greater abundance of elements having even atomic numbers.

3.3 Molecules in the Sun

A general survey of this subject was presented by H. P. Broida and C. E. Moore at a symposium in Liège in 1957 [33]. They prepared tables giving counts of the lines of the various bands of CH, OH, and CN present in the sun [34]. Two subsequent papers give the detailed identifications of CH [34] and OH [35] in the solar ledger. A later summary of the solar lines of molecular origin, in the range of the present ledger, was given in Utrecht in 1963 [30]. In 1964 the general question of *Molecules in the Sun*, including spot spectra and the infrared solar spectrum was discussed at the Florence symposium honoring Galileo [36]. To this should be added the recent identification by L. Goldberg and his associates [37] of CO in the solar spectrum near 1600 Å. The molecules identified to date from a detailed study of the laboratory observations and analysis are listed briefly in Table 11 [36].

The present identifications of C_2 can be extended when the Berkeley Monograph on this molecule has been completed. Further study is also needed on SiH; this molecule may be present in the disk spectrum.

3.4 Summary of Identifications

It is well known that some spectra, like Fe I, are well represented in the sun. This laboratory spectrum can be matched line for line in both position and relative intensity with a solar line. Other less abundant elements have only their leading lines present in the sun, as, for example Ag I. In order to summarize the present identifications, counts have been made of the number of lines of each spectrum contained in this compendium. These are recorded in Table 12. The spectra are in order of increasing atomic number. The counts are by regions, and the blended and unblended lines in the solar spectrum have been counted separately. Blended lines are solar lines having more than one contributor to the identification, as, for example:

4046.341Å Ce II
V II

4043.768Å —Ti I

Masked lines, entered in parentheses in the ledger, are not included in the counts. Lines whose identifications are subject to question are counted in with the others. Counts for spot lines are included.

Finally, a condensed summary of all elements present in the sun is contained in Table 13. The results given here are based on material over the entire spectral range, i.e. from the far ultraviolet solar spectrum to the infrared. In preparing Table 13 one of the authors (C.E.M.) has had the benefit of communication with R. Tousey regarding identifications in the short-wave region. The notes to Tables 10 and 13 indicate cases where the evidence rests upon observations beyond the range of the present work.

There are 63 elements proven as present without doubt in the sun. Of these, the spectroscopic evidence is least certain for Os and Ir, but the data from the accessible region are more favorable for these elements than for the two elements (Tb and Er) listed as dubiously present. Both Au and Cd were formerly identified from one line each, in the accessible region. R. Tousey [38] reports additional confirmation for these elements from the presence of the *raies ultimes* in the short-wave region. The *raie ultime* of Pt I is also present [38]. One element, Ne, was first detected from the ultraviolet rocket solar spectrum, where the resonance lines of Ne VIII near 780 Å, were identified [38]. The element Ar was first found

Table 9. The Strongest Unidentified Solar Lines

Wavelength	Estimated Intensity	Wavelength	Equivalent Width	Reduced Width	Wavelength	Equivalent Width	Reduced Width	Wavelength	Equivalent Width	Reduced Width
2942. 85	[5*d*?]	3088. 188	64	34. 0	3618. 523	12	20. 2	3935. 216	6	22. 4
2975. 038	[2]	3088. 355	101	32. 7	3618. 999	31	43. 2	3937. 974	28	28. 8
2984. 574	[2]	3088. 752	105	54. 2	3619. 114	12	21. 8	3947. 693	45	21. 6
2987. 052	[2]	3089. 505	66	21. 5	3621. 105	84	25. 3	3965. 930	25	30. 2
2990. 876	[2]	3091. 693	45	32. 0	3631. 265	35	45. 4	3967. 636	7	26. 4
2991. 774	[4]	3091. 876	96	31. 2	3631. 586	10	31. 2	3967. 859	7. 5	29. 5
2993. 798	[4]	3092. 473	63	29. 2	3634. 412	36	22. 8	3968. 715	3	20. 6
2995. 494	[2]	3097. 785	66	23. 5	3638. 104	78**	21. 1	3968. 936	6	37. 2
2996. 849	[2]	3099. 790	44	47. 2	3648. 082	24	34. 5	4001. 163	127**	27. 2
2997. 222	[2*N*]	3101. 417	88	47. 4	3649. 837	75	26. 7	4004. 915	72. 5	24. 1
2998. 152	[2]	3101. 694	97	77. 4	3688. 804	72	24. 6	4005. 072	52	26. 5
2998. 966	[2]	3101. 974	45	26. 2	3730. 308	38	21. 7	4007. 926	68	17. 0
3000. 339	[2]	3113. 838	66	21. 1	3735. 118	6. 5	42. 8	4009. 146	53	13. 2
3001. 791	[3]	3119. 198	77	24. 8	3735. 244	14	56. 0	4015. 611	88	21. 9
3006. 573	[4*d*]	3130. 631	63	32. 7	3736. 712	12	29. 2	4017. 573	74	18. 4
3007. 96	[3*NN*]	3148. 900	67	21. 4	3737. 032	10	67. 0	4020. 272	107**	18. 2
3008. 470	[3]	3152. 000	75	23. 8	3737. 299	4. 5	31. 6	4025. 823	64	15. 2
3016. 872	[3]	3179. 166	73	45. 4	3743. 218	25	22. 2	4033. 588	46	11. 4
3017. 418	[3]	3183. 05	47	22. 6	3745. 349	(68)#	(72. 5)#	4045. 715	7. 5	13. 3
3017. 854	[2]	3186. 86	98	43. 0	3749. 244	46	103	4045. 968	14	23. 0
3023. 068	[3]	3186. 964	64	28. 7	3749. 365	4	31. 2	4063. 789	19	18. 7
3024. 242	[2]	3196. 195	33	21. 3	3749. 740	15	33. 4	4066. 120	48	10. 8
3024. 802	[3]	3196. 835	48	30. 4	3749. 850	7. 5	22. 7	4132. 711	40	10. 2
3027. 016	[2]	3199. 662	55	21. 4	3757. 959	29	37. 2	4146. 990	45	10. 8
3027. 699	[2]	3205. 223	66	25. 2	3758. 437	15	38. 6	4167. 722	44	10. 6
3028. 869	[2]	3211. 634	73	40. 6	3763. 008	53	21. 2	4181. 974	93	22. 2
3029. 000	[2*N*]	3215. 844	69	21. 5	3763. 979	16	33. 8	4219. 199	42	10. 0
3029. 990	[3]	3222. 944	24	25. 3	3766. 968	24	27. 5	4226. 970	45	55. 8
3034. 60	[3]	3225. 712	33	57. 7	3767. 081	7	23. 9	4227. 321	44	28. 9
3037. 23	[3]	3227. 631	46	38. 3	3767. 356	18	34. 5	4231. 954	45	10. 6
3040. 761	[2]	3281. 716	70	21. 5	3780. 706	110	36. 2	4299. 831	93	21. 6
3041. 038	[2]	3286. 628	41	31. 0	3792. 686	121**	36. 0	4300. 744	33	11. 8
3044. 228	[2*N*]	3289. 027	48	33. 8	3794. 887	14	24. 0	4302. 65	43	19. 5
3051. 04	[3]	3305. 864	44	24. 5	3795. 155	547**	20. 6	4308. 289	31	12. 8
3053. 744	[2]	3306. 093	65	27. 3	3796. 803	33	26. 0	4337. 252	46	12. 2
3057. 963	[3]	3315. 420	74	34. 3	3815. 328	27	21. 7	4393. 284	46	10. 5
3058. 706	[3]	3335. 923	50	21. 6	3815. 617	38	58. 7	4401. 022	58	13. 2
3060. 773	[2]	3336. 831	32	41. 3	3820. 056	27	41. 6	4403. 187	62	14. 5
Wavelength	Equivalent Width / Reduced Width	3344. 936	70	21. 1	3820. 196	13	43. 7	4518. 342	40	*10. 0*
		3349. 266	19	27. 7	3824. 573	84	97. 5	4599. 843	56	12. 2
3062. 83	55 / 21. 5	3360. 351	36	22. 9	3826. 026	7	26. 9	4672. 334	56	12. 0
3064. 015	147 / 48. 0	3369. 665	33	77. 1	3827. 692	6. 5	21. 9	4678. 172	62	13. 2
3064. 515	65 / 21. 2	3380. 313	76	43. 4	3828. 019	24	33. 9	4699. 340	64	13. 6
3064. 829	80 / 26. 2	3391. 107	36	31. 9	3829. 250	10	32. 4	4748. 141	78	16. 4
3068. 476	75 / 24. 6	3392. 894	17	26. 2	3832. 510	9. 5	27. 6	4771. 472	70	14. 7
3069. 334	57 / 20. 4	3414. 511	53	34. 2	3834. 10	20	43. 1	4971. 351	55	11. 1
3074. 07	82 / 30. 3	3414. 918	49	157	3836. 920	34	20. 8	5053. 577	50	9. 9
3075. 035	50 / 24. 7	3415. 098	15	24. 9	3838. 208	3	23. 5	5271. 054	31	5. 9
3075. 455	39 / 22. 6	3440. 099	25	22. 1	3840. 303	12	25. 0	5298. 497	65**	11. 9
3075. 595	78 / 49. 0	3440. 192	26	31. 0	3840. 583	26	40. 4	5341. 151	180**	10. 2
3078. 915	52 / 21. 4	3442. 148	34	20. 5	3841. 190	14	25. 5	5390. 527	30	5. 6
3079. 105	78 / 25. 5	3458. 594	32	37. 6	3859. 400	39	32. 6	5418. 775	49	*8. 7*
3080. 877	65 / 27. 8	3461. 796	32	30. 9	3859. 741	20	45. 8	5421. 178	44	8. 1
3081. 725	120 / 39. 0	3466. 002	24	22. 5	3881. 980	56	31. 2	5654. 501	75	13. 3
3082. 38	64 / 24. 5	3475. 519	22	74. 0	3884. 292	66**	23. 4	6020. 016	49	8. 1
3083. 850	40 / 24. 0	3492. 369	60	21. 5	3903. 854	224**	25. 0	6299. 588	36	5. 7
3085. 043	64 / 20. 7	3492. 815	23	20. 2	3911. 989	76	25. 6	6449. 127	34	5. 3
3085. 395	58 / 23. 5	3504. 684	70	20. 0	3921. 187	59	24. 0	7032. 319	33	*4. 1*
3085. 720	79 / 25. 6	3505. 294	92	26. 2	3927. 797	42	41. 7	7375. 251	45	6. 1
3086. 988	161 / 52. 2	3524. 358	16	24. 6	3929. 357	24	27. 7	7435. 584	32	4. 3
3087. 693	58 / 25. 3	3610. 508	250**	42. 6	3930. 150	26	40. 8			

**Blend.
#Parentheses indicate that the equivalent width could not be measured directly. See p. XVI.

as [Ar x] in the coronal spectrum. The only radioactive element known to be present is Th; here the *raie ultime* of Th II provides the only evidence.

Two elements, Tb and Er, are listed as questionably present. For both Tb II and Er II, the behavior of the lines in the flash spectrum as having the rare-earth characteristic described by Menzel [40], has been a guiding factor in assigning identifications.

No positive statement can be made about the four elements in the category "Further study needed". The presence of BH has been reported, but further data are needed [33]. The strongest lines of B I lie near 2500 Å. Because of blending they can neither be clearly identified nor ruled out as definitely absent [38].

Sixteen elements are listed as absent on the basis of spectroscopic study. Two, Tc and Ta, have been added to this group as a result of additional solar observations. R. Tousey finds no evidence of the presence of the leading Tc II multiplet near 2600 Å. The strong Ta I line at 2714 Å is masked and other strong lines are absent [38].

Further laboratory work on the lanthanon group of rare earths may add to line identifications in spectra of elements known to be present, and may increase the number of rare-earth elements present. The third spectra of these elements extend into the infrared and may well be of astrophysical importance. Only one third spectrum is mentioned in the present table, namely Ce III. In this spectrum the strongest accessible line is at 3055.589 Å, and it may explain the chemical origin of the faint solar line observed at 3055.594 Å.

Table 10. Leading Lines in First and Second Spectra

Z	Laboratory			Sun-Present Volume			Laboratory			Sun-Present Volume		
	Sp	λ (Å)	Low E P	λ (Å)	Reduced Width	Low E P	Sp	λ (Å)	Low E P	λ (Å)	Reduced Width	Low E P
1	^{1}H I	1215.668v$^\Delta$	0.00	6562.808	649	10.20						
2	He I	584.334v$^\Delta$	0.00				^{4}He II	303.780v$^\Delta$	0.00			
3	Li I	6707.761	0.00	6707.76▲	0.2	0.00	Li II	199.282v	0.00			
4	Be I	2348.610	0.00	3321.352	2.7	2.72	Be II	3130.420	0.00	3130.414	27.3	0.00
5	B I	2497.725	0.00				B II	1362.460v	0.00			
6	C I	1657.008v	0.01	8335.150	13.7	7.68	C II	1335.708v	0.01			
7	N I	1134.979v	0.00	8683.384	0.9	10.33	N II	1085.701v	0.02			
8	O I	1302.169v	0.00	7771.954	*9.4*	9.14	O II	834.467v	0.00			
9	F I	924.825v	0.00				F II	606.81 v	0.00			
10	Ne I	735.892v	0.00				Ne II	460.725v	0.00			
11	Na I	5889.953	0.00	5889.973	120	0.00	Na II	372.069v	0.00			
12	Mg I	2852.127	0.00	3838.302	641	{2.72 2.72	Mg II	2795.528	0.00	4481.140	*14.3*	8.86
13	Al I	3961.520	0.01	3961.535	220	0.01	Al II	1670.786v	0.00	3900.660?	7.1	7.42
14	Si I	2516.112	0.03	3905.532	*219*	1.91	Si II	1533.445v	0.04	3856.026	26.0	6.86
15	P I	1774.942v □	0.00				P II	1542.321v	0.06			
16	S I	1807.341v	0.00	8694.641	3.9	7.87	S II	1259.53 v	0.00			
17	Cl I	1347.238v	0.00				Cl II	1071.036v	0.00			
18	Ar I	1048.219v	0.00				Ar II	919.782v	0.00			
19	K I	7664.899	0.00	7698.977	*19.4*	0.00	K II	600.765v	0.00			
20	Ca I	4226.728	0.00	4226.740	*342*	0.00	Ca II	3933.663	0.00	3933.682	(4874)	0.00
21	Sc I	3911.810	0.02	3911.825	18.2	0.02	Sc II	3613.836	0.02	3613.809 3613.881	29.6 29.6	0.02
22	Ti I	3653.497	0.05	3729.813	39.4	0.00	Ti II	3349.399	0.05	3349.447	163	0.05
23	V I	3185.396	0.07	3185.388	38.8	0.07	V II	3093.108	0.39	3556.803	55.7	1.13
24	Cr I	3578.682	0.00	3578.693	142	0.00	Cr II	2055.59	0.00	3368.058	56.3	2.48
25	Mn I	4030.755	0.00	4030.763	75.2	0.00	Mn II	2576.106	0.00	3441.982	107	1.78

Table 10. Leading Lines in First and Second Spectra—Continued

Z	Laboratory			Sun-Present Volume			Laboratory			Sun-Present Volume		
	Sp	λ (Å)	Low E P	λ (Å)	Reduced Width	Low E P	Sp	λ (Å)	Low E P	λ (Å)	Reduced Width	Low E P
26	Fe I	3719. 934	0. 00	3734. 874	945	0. 86	Fe II	2382. 034	0. 00	3196. 106	76. 7	1. 67
27	Co I	3453. 516	0. 43	3453. 512	87. 9	0. 43	Co II	2286. 165	0. 42	3387. 718	15. 2	2. 27
28	Ni I	3414. 764	0. 03	3524. 536	363	0. 03	Ni II	1751. 914v	0. 00	3407. 314	26. 0	3. 08
29	Cu I	3247. 538	0. 00	3247. 569	76. 0	0. 00	Cu II	1358. 764v	0. 00			
30	Zn I	2138. 56	0. 00	3345. 024	21. 4	4. 08	Zn II	2025. 512	0. 00			
31	Ga I	4172. 056	0. 10	4172. 053	13. 9	0. 10	Ga II	1414. 44 v	0. 00			
32	Ge I	2094. 258	0. 17	4226. 568	53. 2	2. 03	Ge II	1649. 192v	0. 22			
33	As I	1890. 42v	0. 00				As II	1266. 36 v	0. 31			
34	Se I	1960. 901v	0. 00				Se II	1192. 29 v	0. 00			
35	Br I	1488. 452v	0. 00				Br II	1036. 983v	0. 00			
36	Kr I	1164. 868v	0. 00				Kr II	917. 434v	0. 00			
37	Rb I	7800. 227	0. 00	7800. 29▲	0. 6	0. 00	Rb II	697. 04 v	0. 00			
38	Sr I	4607. 331	0. 00	4607. 338	7. 8	0. 00	Sr II	4077. 714	0. 00	4077. 724	100	0. 00
39	Y I	4102. 38	0. 07	3620. 971	8. 2	0. 07	Y II	3710. 30	0. 18	3664. 623	31. 4	0. 18
40	Zr I	3601. 18	0. 15	3575. 765	9. 5	0. 07	Zr II	3391. 96	0. 16	3165. 958	26. 7	0. 16
41	Nb I	4058. 933	0. 13	3802. 959	7. 1?	0. 09	Nb II	3094. 172	0. 51	3619. 536	17. 0	0. 98
42	Mo I	3798. 249	0. 00	5533. 039	1. 3	1. 33	Mo II	2020. 32	0. 00	3320. 915	2. 6	3. 11
43	Tc I	3636. 070	0. 32				Tc II	2543. 227	0. 00			
44	Ru I	3498. 944	0. 00	3728. 042	20. 0	0. 00	Ru II	1574. 337v	0. 00	3177. 080	4. 6	2. 40
45	Rh I	3434. 893	0. 00	3434. 896	3. 6	0. 00	Rh II	1607. 86 v	0. 00	3187. 899	4. 2	3. 45
46	Pd I	3404. 580	0. 81	3404. 584	10. 6	0. 81	Pd II	1363. 76 v	0. 00			
47	Ag I	3280. 682	0. 00	3280. 681	15. 3	0. 00	Ag II	1112. 46 v	0. 00			
48	Cd I	2288. 018	0. 00	3261. 065	7. 0	0. 00	Cd II	2144. 408	0. 00			
49	In I	4511. 323	0. 27	4511. 31▲	0. 4	0. 27	In II	1586. 37 v	0. 00			
50	Sn I	2839. 99	0. 42	3801. 025	2. 5	1. 07	Sn II	1899. 890v	0. 53			
51	Sb I	2068. 33	0. 00	3267. 539	3. 5	2. 03	Sb II	1438. 11 v	0. 00			
52	Te I	2142. 75	0. 00				Te II	1404. 65 v	0. 00			
53	I I	1782. 758v	0. 00				I II	1220. 887v	0. 00			
54	Xe I	1295. 587v	0. 00				Xe II	1100. 432v	0. 00			
55	Cs I	8521. 133	0. 00				Cs II	813. 85 v	0. 00			
56	Ba I	5535. 484	0. 00	5535. 51 ⊠		0. 00	Ba II	4554. 033	0. 00	4554. 036	*86. 7*	0. 00
57	La I	6249. 929	0. 51	6249. 91	0. 1	0. 51	La II	3949. 10	0. 40	3794. 773	34. 3	0. 24
58	Ce I	5699. 226					Ce II	4186. 599	0. 86	3560. 802	13. 7	0. 68
59	Pr I	4951. 355	0. 00				Pr II	4100. 746	0. 55	3994. 810	3. 9	0. 05
60	Nd I	4924. 516	0. 00				Nd II	4303. 573	0. 00	4303. 595	15. 1	0. 00
61	Pm I	4781. 291	0. 00				Pm II	3998. 961				
62	Sm I	4296. 743	0. 50				Sm II	3568. 271	0. 48	3735. 964	18. 0	0. 28

Table 10. Leading Lines in First and Second Spectra—Continued

Z	Laboratory			Sun-Present Volume			Laboratory			Sun-Present Volume		
	Sp	λ (Å)	Low E P	λ (Å)	Reduced Width	Low E P	Sp	λ (Å)	Low E P	λ (Å)	Reduced Width	Low E P
63	Eu I	4594. 03	0. 00	4627. 221▲	0. 9	0. 00	Eu II	3819. 67	0. 00	3819. 688	28. 2	0. 00
64	Gd I	4225. 850	0. 21				Gd II	3422. 466	0. 24	3100. 524	69. 6 ?	0. 24
65	Tb I						Tb II			3568. 55 ? ∧	1. 8	
66	Dy I						Dy II			3407. 805	18. 8	0. 00
67	Ho I						Ho II					
68	Er I	4007. 97	0. 00				Er II			3896. 248 ?	8. 7	0. 05
69	Tm I	4094. 188	0. 00	4094. 20 ?	0. 9	0. 00	Tm II	3848. 02	0. 00	3462. 213	4. 0	0. 00
70	Yb I	3987. 98	0. 00	3987. 966▲	5. 0	0. 00	Yb II	3694. 19	0. 00	3694. 199	25. 6	0. 00
71	Lu I	3359. 56	0. 25				Lu II	2615. 42	0. 00	3397. 062	12. 1	1. 46
72	Hf I	2916. 48	0. 57	3616. 878	0. 1	0. 29	Hf II	3399. 793	0. 00	3505. 232	8. 3	1. 04
73	Ta I	2714. 66	0. 00				Ta II	2400. 62	0. 77			
74	W I	4008. 753	0. 37	3207. 248	4. 0	0. 37	W II	2204. 482	0. 76			
75	Re I	3460. 465	0. 00				Re II	1973. 13 v	0. 00			
76	Os I	2909. 061	0. 00	3232. 076	5. 8	0. 52	Os II					
77	Ir I	2543. 971	0. 35	3220. 775	10. 5	0. 35	Ir II					
78	Pt I	2659. 454	0. 00	3064. 713	53. 6 ?	0. 00	Pt II	1777. 086v	0. 59			
79	Au I	2427. 95	0. 00	3122. 784 ?	1. 6	1. 14	Au II	1224. 57 v	0. 00			
80	Hg I	1849. 499v	0. 00				Hg II	1649. 939v	0. 00			
81	Tl I	3519. 24	0. 97				Tl II	1321. 71 v	0. 00			
82	Pb I	2833. 067	0. 00	3683. 480	3. 9	0. 97	Pb II	1682. 15 v	0. 00			
83	Bi I	3067. 732	0. 00				Bi II	1436. 83 v	0. 00			
84	Po I	2450. 11	0. 00				Po II					
85	At I	2244. 01	0. 00				At II					
86	Rn I	1786. 07 v	0. 00				Rn II					
87	Fr I						Fr II					
88	Ra I	4825. 91	0. 00				Ra II	3814. 42	0. 00			
89	Ac I	4179. 98	0. 00				Ac II	4507. 20	0. 00			
90	Th I	3719. 435	0. 00				Th II	4019. 129	0. 00	4019. 136	2. 1	0. 00
91	Pa I						Pa II					
92	U I	3584. 88	0. 00				U II	3859. 580	0. 04			

△Prominent in the ultraviolet region of the solar spectrum. Lines of He I and He II conspicuous in the spectrum of the chromosphere.

▲Prominent in the sun-spot spectrum.

□First identified in the sun from strong lines near λ10500.

⊠Present only in the spot spectrum.

∧Identification doubtful; Tb II lines may account for some lines observed in the spectrum of the chromosphere.

Table 11. Molecules in the Sun—Summary

Spectrum	Molecule											Number
Disk	OH	CH	NH	C_2	CN	CO	MgH					7
Spot		CH		C_2	CN		MgH	CaH	SiH	TiO	ZrO	8
Disk and Spot		CH		C_2	CN		MgH					4
Total No.	represented from detailed study of lines											11
Total No.	reported prior to 1964											28

Table 12. Counts of Lines of Individual Spectra in the Solar Ledger

Range (Å) →	2935 to 3061		3061 to 4000		4000 to 5000		5000 to 6600		6600 to 7330		7330 to 8770		2935 to 8770	
Sp. ↓	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended
H			11		3		1				4		19	
Li I									2				2	
Be I			1	2									1	2
Be II			2										2	
C I	1	1	1		9	2	16	3	15	5	10	5	52	16
N I											9	4	9	4
O I			2				5	1	1	1	4	2	12	4
Na I			2		12	3	8				2		24	3
Mg I		2	17	2	12		9	1	5	1	24	4	67	10
Mg II	1		2		2						2	1	7	1
Al I	2	1	5	3			1	1	4	1	5	2	17	8
Al II			1										1	
Si I	4		1		24	4	50	13	33	6	64	25	176	48
Si II			2	1		1	3						5	2
P I									1	1		1	1	2
S I					4		5	4	5	2	13	5	27	11
K I				1	2		6	1	1		1	1	10	3
Ca I	4	1	39	17	34	5	47	3	6	1	6	5	136	32
Ca II			7		2	1	5	1			5	1	19	3
Sc I	1	3	4	2	13	6	33	7					51	18
Sc II	2	1	18	12	14	5	19	2	1				54	20
Ti I	6	9	141	84	275	98	231	31	23	10	61	27	737	259
Ti II	9	10	140	72	70	24	16	4	2			1	237	111
V I	18	7	71	65	128	57	99	14	9	1	7	5	332	149
V II	30	21	110	78	29	21	14	7					183	127
Cr I	32	8	211	115	346	126	180	39	25	5	15	9	809	302
Cr II	37	11	125	83	38	16	27	5					227	115
Mn I	16	7	94	42	79	20	31	11	3	1	8		231	81
Mn II	10	7	18	2	3	2							31	11
Fe I	114	50	1517	394	1075	241	869	135	237	54	214	63	4026	937
Fe II	33	25	150	79	76	16	73	23	5	3	7	5	344	151
Co I	14	7	277	127	91	32	95	23	12	3	19	10	508	202
Co II			15	7	2								17	7
Ni I	19	3	220	72	167	60	172	25	40	9	42	6	660	175
Ni II	1	1	10	6	3								14	7

Table 12. Counts of Lines of Individual Spectra in the Solar Ledger—Continued

Range (Å) →	2935 to 3061		3061 to 4000		4000 to 5000		5000 to 6600		6600 to 7330		7330 to 8770		2935 to 8770	
Sp. ↓	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended
Cu I	2	2	4	1	5		6				2		19	3
Zn I			4	2	5		1						10	2
Ga I					1	1							1	1
Ge I	1		1	1	1	1							3	2
Rb I											2		2	
Sr I			2	2	9		6		2				19	2
Sr II			1	2	3	1							4	3
Y I			1	1	19	3	7	6	1	2			28	12
Y II	2		25	15	12	4	11	6	4	1	1		55	26
Zr I	1	3	16	20	35	14	27	4	6	1	7	5	92	47
Zr II	12	9	109	54	30	24	5	3	1	1		1	157	92
Nb I			4	1	6	2	1					1	11	4
Nb II	3		13	8		1							16	9
Mo I			2	4	8	2	5	1					15	7
Mo II	1		7	2	1	1							9	3
Ru I			12	5	10	3	1	1					23	9
Ru II			2	8	1	1							3	9
Rh I	1		13	2		3	1						15	5
Rh II	1		2	2									3	2
Pd I		1	7	6	1								8	7
Ag I			2										2	
Cd I			1										1	
In I					1								1	
Sn I	1		1	1									2	1
Sb I			2										2	
Ba I							2						2	
Ba II			1		4		2	1					7	1
La I							1						1	
La II			12	6	16	15	10	3	1				39	24
Ce II	2		36	32	49	32	13	2					100	66
Ce III	1												1	
Pr II			3	3	4	3	6						13	6
Nd II			18	14	26	14	24	6					68	34
Sm II			39	31	44	16	1		1			1	85	48
Eu I					2								2	
Eu II		1	6	4	3		1	1	1				11	6
Gd II	4	1	25	11	9	8	1					1	39	21
Tb II			3	1	1								4	1
Dy II			31	13	4	3	3			1	1		39	17
Er II			1										1	
Tm I					2								2	
Tm II			6	3		1	1						7	4
Yb I			1					1					1	1
Yb II			1	1									1	1

Table 12. Counts of Lines of Individual Spectra in the Solar Ledger—Continued

Range (Å) →	2935 to 3061		3061 to 4000		4000 to 5000		5000 to 6600		6600 to 7330		7330 to 8770		2935 to 8770	
Sp. ↓	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended	Unblended	Blended
Lu II			1	2									1	2
Hf I			2							2			2	2
Hf II			11	4	2		1						14	4
W I		2	4	3	2	2	2						8	7
Os I		1	3	1	1	1							4	3
Ir I			4	2	3	1							7	3
Pt I	1		1	3							1		3	3
Au I			1										1	
Pb I			1			1							1	1
Th II					1								1	
CH			100	102	304	214							404	316
CN			428	207	88	62	18	12	105	35	396	221	1035	537
C_2					99	18	348	90					447	108
NH			159	106									159	106
MgH					2		81	31					83	31
OH	4		164	127									168	127
Atm							283	53	186	45	106	46	575	144
Atm H_2O							407	44	410	84	439	93	1256	221
Atm O_2							81	8	158	11	222	3	461	22
Total	391	195	4507	2079	3327	1192	3372	627	1306	287	1699	554	14602	4934
Total	586		6586		4519		3999		1593		2253		19536	

Table 13. Chemical Elements in the Sun

Classification	Element	No.
Present	H He Li Be C N O Ne[1] Na Mg Al Si P S Ar[2] K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge Rb Sr Y Zr Nb Mo Ru Rh Pd Ag Cd In Sn Sb Ba La Ce Pr Nd Sm Eu Gd Dy Tm Yb Lu Hf W Os Ir Pt Au Pb Th	63
Present ?	Tb Er	2
Further study needed	B[3] As Ho Hg	4
Absent	F[4] Cl Se Br Kr Tc Te I Xe Cs Ta Re Tl Bi Ra U	16
Not to be expected	Remaining radioactive elements	

[1] Evidence based on discovery of Ne VIII and Ne VII in the UV spectrum [38].
[2] Evidence based on discovery of [Ar X] in the coronal spectrum [39].
[3] BH has been reported as present, but further evidence is needed [33].
[4] No atomic lines present. MgF has been reported as present but further evidence is needed [33].

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5. The Solar Spectrum Ledger

5.1 Letters, Symbols, and Special Signs

For ready reference the letters and symbols used in this ledger are listed below with brief descriptions. They are explained fully in the text.

Wavelengths: Column one (see Table 5, p. VIII)

S Standard Wavelength

m Measured lines; not taken from Rowland's Table.

r Wavelength from Rowland's Table (corrected to 1928 scale).

a Wavelengths from Atlas Recordings and Atlas Spectrograms.

Equivalent and Reduced Widths: Columns two and three (see p. XVI)

——— Horizontal separation indicating overlap between successive
------ plates in region where telluric lines occur.

$\widehat{5}$ Unresolved blend; equivalent width refers to the total blend.

|5| Partial blend with adjacent faint lines; equivalent width refers to the line alone.

⌊ ⌋ Lines not analyzed in column two. Equivalent width relates to the blend as a whole.

5 The reduced width, when entered in italics, is the weighted mean of Utrecht measurements and of those by other observers.

( ) Equivalent width not directly measured; derived by interpolation, from multiplets, or from Rowland's estimated intensities.

═══ On page 78 the discontinuity in the Balmer continuum near 3646 Å is thus indicated.

Behavior in Sunspots: Column four (see p. XVII)

S The line is greatly strengthened.

s The line is strengthened.

u The line is unchanged in intensity.

W The line is greatly weakened.

w The line is weakened.

o The line is obliterated.

N The line is diffuse.

NN The line is very diffuse.

d The line is double.

The Identifications: Column five (see p. XVIII)

‖ Predominant contributor to a blend.

| Principal contributor to a blend.

— In case of blends the dash indicates whether the contributor is on the short- or the long-wave side of the solar line; or whether the solar line has been completely identified.

( ) Masked lines.

p Identification based on predicted laboratory wavelength.

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It is a privilege and a pleasure to record our thanks to all who have participated.

National Bureau of Standards
Utrecht Observatory
January 6, 1966.

Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
2935.9	[5?]		V I— Fe II	0.04 4.15	UV3 UV323	
2936.20	[5?]		Ti II— Fe I?	3.82 1.61	UV26 UV89	
2936.5	[5?]		Mg II	4.43	UV2	
2936.8	[5?]		Fe I	0.00	10	
2937.2	[5?]		Ti I	0.02	UV1	
2937.65	[5]		V I Fe I	{0.00 {0.02 2.20	UV3 UV3 UV122	
2938.41	[5]		|Mg I- Ti II	2.70 3.84	UV3 UV26	
2939.23	[20?		Fe I— ‖Mn II	2.22 1.17	104 UV5	
2939.6	[2?]		Fe II	1.04	2	
2940.13	[2]		Mn I	3.13	UV17	
2940.50	[3]		Mn I— Mn I Fe I	2.32 2.32 2.83	UV10 UV10 UV173	
2941.29	[10*d*?]		Fe I (V II) (V II)	0.09 0.33 0.39	10 UV10 UV10	
2942.31	[5*d*?]		Ti I |Mg I |V I	0.00 2.72 {0.00 {0.07	UV1 UV3 UV1 UV3	
2942.85	[5*d*?					
2943.10	[3		V I	0.00	UV1	
2943.59	[3]		Fe I (Ga I)	0.10	UV1	
2943.87	[5]		Ni I	0.03	26	
2944.09	[0]					
2944.54	[0]		Fe II— ‖V II	1.69 0.37	8 UV10	
2944.98	[0]		—Fe I	2.45		
2945.37	[—1]		Fe II	1.04	2	
2945.42	[—1]		Ti II	3.88	UV26	
2945.65	[—1]		Fe I			
2945.79	[—1]		Fe II			
2946.08	[—1]		Fe I	1.61		
2946.80	[—1]		Cr II	4.32	66	
2947.04	[—1		W I— Fe I?	0.37 3.30	UV5 UV182	
2947.70	[30]		Fe II— ‖Fe I (V II)	1.67 0.05 3.76	8 10 UV196	
2948.22	[—1		Ti I	0.02	UV1	
2948.44	[—1]		Fe I	2.73	UV166	
2948.66	[—1]		—Fe I	2.20	104	
2948.95	[3]		Fe I Zr II	0.97	77	
2949.18	[5]		Fe II (Mn II)	3.77 1.17	UV277 UV5	
2949.62	[3]		V I	0.02	UV3	
2950.22	[5]		Fe I (V II)	2.18 0.32	UV120 UV10	
2950.62	[—1]					
2950.77	[—1]					
2950.87	[—1]		Nb II	0.51	UV14	
2951.09	[0]		Fe II	3.20	UV214	
2951.37	[0]		Cr II	4.15	59	
2951.53	[0]		Fe I			
2952.03	[2]		|V II Ti II (Cr II)	0.35 3.86 4.15	2 UV26 59	
2952.24	[0]		Zr II	0.16	UV1	
2952.86	[—1]		Mn I?	2.16	UV4	
2953.36	[—1]		Cr II	3.71	27	
2953.48	[—1]		Fe I	2.76	UV166	
2953.84	[25]		Fe II— ‖Fe I	1.04 0.09	2 10	
2954.31	[—3]		V I	0.02	18	
2954.58	[2*N*]		—Fe I	2.28	UV132	
2954.89	[0]		Ti II	4.31	UV34	
2955.11	[0]		Cr II	4.17	59	
2955.33	[—3]		Co I?			
2955.61	[—2]		V II	3.76	UV196	
2955.79	[—2]		Zr II |V I	1.74 0.07	UV61 UV3	
2955.92	[—3]					
2956.08	[2]		Ti I	0.05	30	
2956.34	[—1]		Cr I	0.94	UV5	
2956.64	[8*N*]		Cr II Fe I	4.15 2.18	58 104	
2956.82	[2]		|Ti I Fe I	0.02 2.69	30 UV165	
2956.95	[—3]		Mn I?	2.19	UV4	
2957.17	[—1]		V I?	1.19	UV76	
2957.24	[—1]					

Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
2957.38	[10]		Fe I	0.11	10	
2957.52	[−1]		V II	0.33	2	
2957.64	[−1]		Co I	2.08	UV134	
2958.07	[−3]		Fe I?			
2958.26	[−1]		Ni I	1.93	UV74	
			Ti II	3.88	UV26	
2958.45	[0*N*]		Fe I	2.73	317	
2958.73	[0*N*]		V II	3.75	UV196	
2958.98	[0*N*]		Ti II	4.28	UV34	
2959.32	[1*N*]		Fe I			
2959.62	[3*N*]		|Fe II—	3.39	62	
			Fe I	2.81	334	
2959.95	[2*Nl*]		Fe II—	5.57	180	
			Cr II	4.17	59	
			‖Fe I	2.69	316	
2960.28	[1]		Fe I	2.48	148	
2960.52	[0]		Fe I			
2960.65	[1*NN*]		—Fe I	2.95	UV178	
2961.09	[1*N*]		V I	1.22	UV76	
			|Cu I	1.39	UV15	
2961.27	[3]		Fe II	1.08	2	
2961.40	[−1*N*]		—Ti I?	1.05		
2961.56	[−1*N*]					
2961.71	[3]		Cr II	{3.76	27	
				{4.18	59	
			(Fe I)	2.18	105	
2961.91	[−3]					
2962.12	[3]		Fe I	1.48	57	
2962.38	[0]					
2962.59	[−1]		Fe I			
2962.67	[−2]		Zr II	0.36	UV9	
2962.77	[−2]		V I	0.04	18	
2962.93	[−3]		Fe II	5.55	160	
2963.05	[−1]					
2963.27	[−2]		V II	2.60	154	
2963.52	[3*N*]		Fe I?			
			|Cr II	4.17	58	
2963.68	[3]		Fe I	2.86	UV173	
2963.80	[−2]		V I	1.22	UV75	
2964.13	[6*N*]		Fe II	3.39	60	
2964.52	[0]		W I—	0.37	UV5	
			Zr II	0.09	UV1	
2964.604	[6*N*]		—|Fe II	1.72	8	
2964.84	[1*N*]		C I	0.00	UV1	
2965.02	[4]		Fe II	1.69	8	
2965.26	[10]		Fe I	0.12	10	
			(Ti I)	1.05	94	
2965.41	[−1]		Fe II	3.42	59	
2965.81	[4*ns*]		|Fe I	2.43	UV147	
			Ti I	{1.05	94	
				{1.07	94	
2966.08	[2]		Cr II	3.87	33	
2966.26	[2]		Fe I	2.22	104	
2966.93	[30]		Fe I	0.00	10	
2967.23	[0*N*]		|C I	0.01	UV1	
			Ti I	0.05	30	
2967.662	[3]		Cr I	1.00	28	
2968.090	[1]		—Fe II	5.58	160	
2968.20	[−3]		Ti I	0.00	29	
2968.389	[3]		V II	1.70	28	
2968.516	[2*N*]		Fe I—	2.42	UV135	
2968.740	[1]		Fe II	3.39	61	
			Cr II	4.18	58	
2968.97	[−1]		Zr II	0.47	14	
2969.04	[−3]					
2969.19	[1]		Ni I	1.95	UV74	
2969.35	[1]		Fe I	0.11	11	
2969.46	[8]		Fe I	0.86	30	
2969.67	[−1*N*]		Cr II	4.32	66	
2969.96	[3]		Fe II	3.81	70	
2970.12	[8]		Fe I	{0.09	11	
				{0.11	10	
2970.36	[3]		Si I	0.78	1	
2970.519	[5]		Fe II	1.08	2	
2970.68	[1*N*]		Fe II	3.77	69	
2970.92	[1*N*]					
2971.118	[2]		Cr I	0.98	28	
2971.24	[0]					
2971.622	[0]		Fe II	3.39	60	
2971.77	[1]		Fe I			
2971.936	[3]		Cr II	3.77	28	
2972.03	[−1]		Fe I			
			Fe II	5.60	160	

Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes	Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
2972.274	[4]		|V II— Fe I	2.37 2.20	87 104		2979.120	[6]		Fe II (V II) (Zr II)	{3.97 {5.57 2.03 0.36	100 180 44 14	
2972.415	[−1]												
2972.65	[−2]		Cr II	3.75	28		2979.370	[8]		Fe II	1.10	2	
2973.201	[40]		Fe I— Fe I	0.05 0.09	10 10		2979.59	[−3]					
							2979.742	[2]		Cr II	3.76	28	
2973.745	[2]		Ni I?	1.68	UV66		2979.88	[1]		Fe I			
2973.93	[−1*N*]		V II	3.79	218		2980.02	[1]					
2974.223	[1]		Mn I?	4.23	UV41		2980.219	[1]					
2974.43	[−1*N*]						2980.396	[0]					
2974.640	[0]						2980.558	[5]		Fe I	2.76	317	
2974.791	[3]		Fe I	2.83	335		2980.795	[4]		Cr I	0.96	28	
2974.92	[−2]		Ti I	1.07	94		2980.979	[4]		|Fe II Zr II	3.42 0.56	61 24	
2975.038	[2]												
2975.278	[3]		—Fe I				2981.20	[0]		V II	2.38	87	
2975.480	[4]		Cr I	0.97	28		2981.458	[6*N*]		Fe I	0.05	11	
2975.665	[3]		V II	1.67	28		2981.658	[3]		Ni I	0.11	26	
2975.823	[0]		Fe I?				2981.866	[3]		Fe I	2.18	104	
2975.924	[5]		Fe II	1.10	2		2982.067	[3]		Fe II	4.48	139	
2976.156	[7]		Fe I— V II	2.28 1.67	146 28		2982.243	[3]		Fe I |Fe II	2.99 3.81	460 70	
2976.37	[−2]		Mn II?	4.93			2982.393	[1]					
2976.540	[7]		V II (Fe I)	1.69	28		2982.488	[1]					
							2982.768	[2]		V II	1.67	28	
2976.724	[3]		Cr II	3.83	27		2982.98	[−2]		V II	{1.68 {1.69	22 28	
2976.913	[5]		—Fe I	2.83	334								
2977.236	[−3]						2983.20	[−1]		—Ti I	0.02	29	
2977.533	[2]		V I	0.07	18		2983.576	[40]		Fe I (V II)	0.00 1.69	9 28	
2977.685	[−1]		Rh I?	0.70									
2977.84	[−3]		Mn II? Fe I?	4.93			2983.84	[1]					
							2984.144	[4]		Ni I	0.00	12	
2978.055	[3]		Fe I Zr II	2.45 0.41	14		2984.35	[−2]					
							2984.574	[2]					
2978.204	[0]		V II	2.37	87		2984.71	[1]		Cr II—	3.76	27	
2978.294	[0]						2984.840	[7*N*]		|Fe II Fe I	1.67 0.86	8 29	
2978.456	[1]												
2978.557	[1]		—Mn I?	2.16	UV3		2985.19	[−3]		V II	3.80	218	
2978.692	[1]						2985.324	[0]		Cr II (Zr I)	3.75 0.00	28 22	
2978.848	[1]		Fe II	3.77	69		2985.49	[1]		Ti I—	0.02	29	

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Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes	Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
2985.56	[5*Nd*]		|Fe II—	1.72	8		2992.098	[1]		Ni I?			
2985.73	[1]		Fe I				2992.407	[5]		—Cr II	3.76	28	
2985.872	[4]		Cr I	0.98	28		2992.600	[7]		Ni I	0.03	25	
2986.004	[4]		Cr I	1.00	28		2992.958	[—1]					
2986.145	[2]		Cr I	0.97	28		2993.046	[0]					
2986.298	[2]		Fe I				2993.25	[1*d*?]					
2986.478	[6]		‖Cr I Fe I	1.03 0.11	28 11		2993.398	[2]		Fe II	4.49	139	
							2993.798	[4]					
2986.641	[6]		|Fe II— Fe I	3.42 2.43	62 200		2994.074	[4]		Cr I	0.94	14	
2986.873	[0*N*]						2994.436	[40]		‖Fe I—	{0.05 0.12	9 11	
2987.052	[2]									Ni I	0.03	27	
2987.20	[2]		Co I	0.00	11		2994.758	[3]		Cr II	3.75	28	
2987.291	[10]		Fe I	0.91	30		2994.951	[4]		Ca I	1.88	17	
2987.662	[10*N*]		Si I	0.78	1		2995.113	[3]		Cr I (Co I)	0.94 2.14	15 UV129	
2988.033	[6]		|V II Cr II Ni II	1.69 3.77 3.10	27 28 6		2995.260	[3]		Fe I			
							2995.373	[—1]					
2988.195	[0]						2995.494	[2]					
2988.31	[—3]						2995.588	[—2*n*]					
2988.481	[1]		Fe I	1.48	56		2995.839S	[2]		Fe I	3.02	460	
2988.644	[2]		Cr I	0.94	14		2996.008	[4*nl*]		V II	1.67	27	
2988.774	[0]		Zr II?	4.14	148		2996.396S	[5]		Fe I	2.42	148	
2988.926	[1*d*?]		Fe I |Sc I |Sc II	2.73 0.02 3.23	316 11 34		2996.588S	[5]		Cr I	0.98	28	
							2996.73	[—2*N*]		V II	1.70	28	
2989.14	[3]		Cr II	3.74	28		2996.849	[2]					
2989.32	[—1*N*]		V II—	2.38	87		2997.00	[—3*N*]		V I	2.03	116	
2989.630	[4]		|V II Co I	1.70 0.00	28 13		2997.222S	[2*N*]					
2989.78	[0*N*]		V II—	2.38	87		2997.32	[3]		|Ca I |Fe II— Cu I	1.89 4.49 1.64	17 139 5	
2990.035	[0]		Ti I?—	1.43									
2990.390	[6]		Fe I	2.73	316		2997.54	[—3]					
2990.618	[—2*N*]						2997.72	[—3]		Fe II	3.90	85	
2990.876	[2]						2997.862	[—2]		V I	2.04	116	
2991.096	[5]		Ni I	{0.27 1.93	14 80		2997.978S	[2]		Pt I	0.10	3	
							2998.152	[2]					
2991.242	[1]		Fe II	3.42	60		2998.336	[1]					
2991.411	[1]		Zr II	0.00	6		2998.497S	[1]					
2991.635	[5]		Fe I				2998.795	[4]		Cr I (Fe II)	0.94 3.42	14 60	
2991.774	[4]												
2991.882	[4]		Cr I	0.97	28		2998.966	[2]					

Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
2999.04	[−3]		Gd II	0.03	12	
2999.205	[3]		Fe I			
2999.366	[4]		Cr II—	3.86	33	
2999.521	[10]		Fe I	0.86	30	
2999.67	[2]		Ca I	1.89	17	
2999.943	[2]		Cr II	4.01	42	
3000.065	[2]		Fe II	3.81	69	
3000.21	[−3]					
3000.339	[2]					
3000.462	[3]		Fe I	1.48	56	
3000.576	[2]		Co I	0.10	13	
3000.75	[0]		Fe II— Ti I	 0.05	 29	
3000.946	[25]		Fe I (Ca I) (Cr I)	0.09 1.89 1.00	9 17 28	
3001.230	[5*N*]		V II	1.70	27	
3001.432	[1*N*]		—Fe II			
3001.658	[2]		Fe I	3.02	506	
3001.791	[3]					
3001.932	[−2]		V I	2.05	116	
3002.041	[−2]					
3002.193	[−2]					
3002.341	[−3]		Fe II	3.94	98	
3002.486	[25]		Ni I	0.03	26	
3002.660	[10]		Fe II	1.69	8	
3003.045	[8]		Fe I	0.96	30	
3003.463	[3*N*]		V II	1.69	27	
3003.649	[8]		Ni I	0.11	26	
3003.895	[5]		Cr II	3.86	33	
3004.120S	[3]		Fe I	2.43	199	
3004.271	[2]		Fe II	3.81	69	
3004.362	[0]					
3004.480	[−2]		Fe Ip	2.22	105	
3004.630S	[3]		Fe I	1.56	57	
3005.052S	[4]		Cr I	1.03	28	
3005.308S	[3]		Fe I	2.40	199	
3005.494	[−1*N*]		Zr I	1.00	60	
3005.755	[4*d*?]		Co I—	1.88	77	
3005.968S	[2]		Fe I?			
3006.179	[0]		—V I	2.07	116	
3006.318	[0*N*]		—Fe I			
3006.434	[0*N*]					
3006.573	[4*d*]					
3006.740S	[3]		Si I	0.01		
3006.868S	[3]		Ca I (V I)	1.90 2.10	17 116	
3007.152	[5]		Fe I	1.48	55	
3007.291	[6]		]Fe I— V II	0.09 1.67	11 27	
3007.497	[1		Ti I?			
3007.65	[0		Mn I	3.13	35	
3007.77	[−1]		Fe Ip	2.59	262	
3007.96	[3*NN*]					
3008.152	[15]		Fe I	0.11	9	
3008.293	[2]		]Mn I Ti II	3.13 1.57	35 85	
3008.470	[3]					
3008.648	[4*d*]		V II—	1.67	26	
3008.801S	[−2]		Ce II	0.32	122	
3008.922	[−3]					
3009.102	[3]		Fe I (Sn I)	2.40 0.21	198 1	
3009.214	[2		Ca I	1.90	17	
3009.36	[1*N*]					
3009.582	[12]		Fe I	0.91	30	
3009.921	[−3]					
3010.029	[−3]		Fe I			
3010.180S	[2]		Fe II Fe I	5.82	181	
3010.421	[0]					
3010.628S	[1]		Fe I			
3010.847	[0]		Cu I	1.39	3	
3011.167S	[0]		Mn I	3.13	35	
3011.277S	[1]					
3011.369	0*N*]		Mn I (Cr II)	3.13 3.83	35 27	
3011.478	[4]		Fe I	2.76	316	
3011.632	[−2]					
3011.736	[0]		Zr I—	0.07	2	

Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3011.88	[0*N*]		Fe I	2.48	UV135	
3012.012	[12]		‖Ni I—	0.42	41	
			V II	2.05	43	
3012.346	[−3]		Cr II?	4.01	42	
3012.450S	[3]		Fe I			
3012.60	[−3]		Fe IIp	3.81	69	
3012.736	[−2]					
3012.937	[3]		Fe I			
3013.048	[3]		Cr I	0.96	26	
3013.101	[3]		V II	1.67	26	
3013.331	[1*N*]		Zr II—	0.56	27	
3013.497S	[1]					
3013 595S	[2]		Co I	0.00	10	
3013.730	[6]		Cr I	0.97	26	
3013.831	[0]		Fe II	4.15	124	
3013.970S	[−1]		Fe I			
3014.105	[2]		Fe I	2.95	458	
3014.164	[3]		Fe I	0.96	31	
3014.320S	[1]		V I	2.12	116	
3014.457	[0*N*]		Zr I?—	0.00	21	
3014.648	[0]		Mn I	3.13	35	
3014.781	[9]		|Cr I	0.97	27	
			V II	1.69	27	
3014.919	[8]		Cr I	0.98	27	
3015.202S	[6]		Cr I	0.96	27	
3015.366	[−2]		Sc I	0.00	10	
3015.508	[4]		Cr II	4.41	87	
3015.688	[−1]		Co I	1.88	76	
3015.818	[−1]					
3015.929	[5]		Fe I	2.43	198	
3015.989	[0*N*]		V II	2.04	42	
3016.196	[10]		Fe I	0.99	30	
			(V II)	1.69	26	
3016.449	[2]		Mn I	3.13	35	
3016.522	[0]					
3016.784	[5]		V II	1.70	27	
3016.872	[3]					
3017.08	[−2]					
3017.187	[4]		Ti II	1.58	85	
3017.255	[4]		Co I	1.88	78	
3017.418	[3]					
3017.631	[12]		|Fe I	0.11	9	
			Cr I	1.00	27	
			Co I	0.10	11	
3017.854	[2]					
3017.953	[0]		Ni I	1.93	UV74	
3018.031	[0]		—Os I	0.00		
3018.141S	[3]		Fe I	2.40	199	
3018.254	[1]		Fe Ip	2.56	263	
3018.496	[4]		Cr I	0.97	26	
3018.599	[−2]		Ca I?	1.90		
3018.701	[−2]					
3018.821	[4]		Cr I	0.98	26	
3018.992	[7]		Fe I	0.96	30	
3019.154	[7]		Ni I	0.00	11	
3019.313	[4]		‖Fe I—	2.45	199	
			Sc I	0.02	10	
3019.56	[−2]					
3019.911	[0*d*]		Zr II?—	0.04	6	
			Mn II	4.31		
3020.015	[5]		Si I	0.03		
3020.27	[−1]					
3020.490	[20]		Fe I	0.09	9	
3020.656	[40]		Fe I	0.00	9	
			(Cr I)	0.97	27	
3021.077	[30]		Fe I	0.05	9	
3021.22	[−1]					
3021.572	[5]		Cr I	1.03	27	
3021.719	[0]		—Mn II	4.31		
3021.883	[1]					
3022.12	[−3]		V II?	2.38	86	
3022.266	[1]					
3022.359	[2]		Co I	1.71		
3022.472	[−1]					
3022.602	[3*N*]		V II	1.67	26	
3022.747S	[3]		Mn I	3.13	35	
3022.91	[−3]					
3023.068	[3]					
3023.30	[−3]		Mo II?	4.39		

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3023.438	[0]					
3023.695	[1*N*]					
3023.851	[4*N*]		—Fe II	3.89	84	
			|V II	2.05	41	
3024.060	[12]		Fe I	0.11	11	
3024.242	[2]					
3024.353	[6]		Cr I	0.98	26	
3024.577	[—2]					
3024.677	[1]		Cr I	2.97	117	
3024.802S	[3]					
3024.981	[2*N*]		V II	2.37	85	
3025.286	[6]		Fe I	0.91	29	
3025.644	[8]		Fe I	2.40	198	
3025.866	[18]		Fe I	0.12	9	
3026.221	[—1*N*]					
3026.377	[3]		Co I	1.88	77	
3026.495	[8]		Fe I	0.99	30	
3026.645	[6]		Cr II	4.43	95	
3026.836	[2]		Cr II	4.01	41	
3026.942	[2]		Fe I?			
3027.016	[2]					
3027.213	[—2*N*]					
3027.35	[—2]		Fe II p	3.94	99	
3027.607	[1]		‖V II	2.38	85	
			Gd II	0.14	12	
3027.699	[2]					
3027.890	[—1*N*]		—Pd I	0.96	5	
3028.020	[4]		|V II	2.38	85	
			Zr II	0.97	76	
3028.127	[4]		Cr II	4.41	87	
3028.287	[0]					
3028.445	[—2*N*]		Nb II	0.44	2	
3028.604	[1]		Rh II?	3.40	1	
3028.686	[1]					
3028.869	[2]					
3029.000	[2*N*]					
3029.069	[2*N*]		Mn II	5.38	10	
3029.155	[4]		Cr I	0.98	26	
3029.227	[3]		Fe I	1.56	56	
3029.288	[2]		Ni I	{1.68	56	
				{1.95	UV74	
3029.345	[—2]					
3029.430	[—3]		Mn II?	4.33		
3029.548	[—2*N*]		Zr I—	0.15	22	
			V II	1.70	26	
3029.734	[5*nl*]		Ti II	1.57	85	
3029.990S	[3]					
3030.147	[5]		Fe I	2.43	198	
3030.254	[5]		Cr I	1.00	27	
3030.484	[—3]		OH?	S 9	0,0	1
3030.607S	[2]		Fe I	2.28	1.45	
3030.760	[—2]		Fe I	2.99	459	
			Sc I	0.02	10	
3030.85	[—3]					
3030.941	[2*d*?]		Zr II	0.00	6	
3031.052	[2]		Mn II	4.31		
3031.211	[6]		Fe I	2.45	198	
3031.346	[6]		Cr I—	0.98	27	
3031.474	[1]		Cr I	2.98	117	
3031.668	[10]		Fe I	1.01	30	
3031.867	[5]		Ni I	0.00	11	
3032.036	[—2]		Zr II?	2.43	144	
3032.228	[—2*N*]					
3032.469	[1]		Ni II	2.86	3	
3032.645	[—3*N*]					
3032.855	[—2]		Gd II	0.08	12	
3032.929	[3]		Cr II	2.70	15	
3033.105S	[2]		Fe I	2.42	146	
3033.434	[4*d*?]		V II	2.52	123	
			(Fe II)	5.87	181	
3033.607	[1*N*]					
3033.817S	[3]		V II	1.82	34	
3033.949	[—2*N*]					
3034.061	[—1]		Gd II	0.03	12	
3034.12	[—3]		Sn I	0.21	1	
3034.196	[3]		Cr I	1.00	26	
3034.45	[3]		Co I	0.17	12	
3034.50	[3]		Fe I	1.61	57	
3034.55	[3]		Cr II	3.86	33	

Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3034.60	[3]					
3034.812	[0]		Mn II	4.50	21	
3034.988	[1]		Cr II	4.04	42	
3035.118	[−3]		Fe I?			
3035.232	[1]		Fe I p	3.07	506	
3035.360	[2]		Mn II	4.33		
3035.456	[−2]					
3035.747	[4]		Fe I—			
3035.886	[0]					
3035.999	[−3]					
3036.108	[1*N*]		Cu I	1.64	5	
3036.252	[0]					
3036.397	[2]		Zr II	0.56	25	
3036.509	[0]		Zr II	0.53	24	
3036.62	[−2*N*]		Y II	3.56	68	
3036.754	[2*N*]		—Ti II	1.57	78	
3036.94	[−2]		Fe II	5.82	181	
3037.044	[8]		Cr I	1.03	27	
3037.23	[3]					
3037.396	[30]		Fe I	0.11	9	
3037.64	[0]					
3037.788	[3]		Fe I	0.99	31	
3037.946	[15]		Ni I	0.03	25	
3038.091	[1]		Mn II	4.34		
3038.312	[3]		Fe I			
3038.513	[2]		‖V II Cr II	2.47 4.01	96 41	
3038.747	[3*d*]		Ti II— |Fe II	1.58 3.89	85 84	
3038.978	[1]					
3039.066	[3]		Ge I	0.88	2	
3039.202	[−3]		Mn II?	4.69		
3039.325	[3*nl*]		Fe I	2.43	199	
3039.38	[−3]					
3039.597	[4*ns*]		Co I Mn II—	1.71 5.39	52 10	
3039.761	[3]		Cr I— Cr I	3.00 1.00	117 26	
3040.020	[−2*N*]					
3040.218	[−3]		Cr II?			
3040.35	[−3]		OH	S 6	0,0	1
3040.43	[10]		Fe I	0.91	30	
3040.606	[2]		Mn I	3.13	34	
3040.761	[2]					
3040.843	[4]		Cr I	1.00	27	
3040.938	[4]		Cr II	4.29	65	
3041.038	[2]					
3041.136	[−3]					
3041.220	[0]		Mn I	3.13	34	
3041.412	[2*nl*]		V II	2.03	40	
3041.625	[5]		Fe I	1.56	56	
3041.754	[5]		Fe I Cr II	0.96 4.41	30 95	
3041.901	[1]					
3042.026	[7]		Fe I	1.01	30	
3042.263S	[3]		V II	2.03	40	
3042.486S	[3]		Co I	0.10	10	
3042.664	[10]		Fe I (Mn I)	0.99 3.13	30 34	
3042.854	[3]		Cr II	4.07	47	
3043.017	[−3]					
3043.129S	[1]		V I (Mn I) (Mn II)	0.02 3.13 4.51	17 34 21	
3043.263	[−2]					
3043.355S	[2]		Mn I	3.13	34	
3043.543	[3]		V I |V II	0.00 2.04	17 40	
3043.759	[−2*n*]		Mn I	3.13	34	
3043.853	[2]		Ti II— Cr II	1.57 4.07	78 48	
3044.009	[5]		Co I	0.00	11	
3044.124	[2]		Zr II—	0.56	26	
3044.228	[2*N*]					
3044.333	[−2]		OH	S 5	0,0	1
3044.44	[−3]					
3044.568	[3]		Mn I	2.11	15	
3044.720	[−3]		Nb II?	1.69		
3044.837	[2]		Fe II	3.97	98	
3044.94	[−2]		V I	0.04	17	
3045.01	[4]		Ni I	0.17	12	

Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3045.07	[4]		Fe I	0.91	29	
3045.340	[−3]		Fe II	5.57	179	
3045.48	[−2*N*]		Cr II?	4.07	48	
3045.582	[2]		Mn I Fe I	3.13 2.45	34 198	
3045.723	[1]		Sc II	3.40	37	
3045.778	[1]		Mn I	3.13	34	
3045.96	[−3]					
3046.046S	[1]		Fe I			
3046.17	[−3]					
3046.266	[0*N*]		Mn II	5.40	10	
3046.503S	[0]					
3046.672	[3]		Ti II	1.16	47	
3046.805S	[0]		Fe I	2.73	315	
3046.935	[2]		Fe I	2.43	198	
3047.048	[2]		Fe I |Mn I	2.95 3.13	457 34	
3047.200	[0]		Fe I	2.84	382a	
3047.43	[1]		—Cr I	3.09	164	
3047.614	[35]		Fe I	0.09	9	
3047.79	[3?]		Cr II	2.71	15	
3048.003	[0]					
3048.094	[0]		Co I	1.96	77	
3048.219S	[3]		V II	2.51	123	
3048.352	[−1*N*]					
3048.454	[5]		Fe I—			
3048.569	[−3]		OH	S 4	0,0	1
3048.651	[−3]		V II?	2.27	67	
3048.762	[2]		Ti II	1.58	78	
3048.887	[4]		Co I V II (Mn I)	0.17 2.04 3.13	11 40 34	
3049.015	[2]		Fe II— Mn II	5.87 4.52	181 21	
3049.156	[−2]		Fe II p	4.08	109	
3049.349	[3]		Fe I			
3049.546	[2]		Fe I			
3049.754	[−3*N*]					
3049.900	[−3*N*]		Cr I	1.03	27	
3050.074	[2]		Al I	3.60	7	
3050.132	[3]		Cr II	4.32	65	
3050.273	[−2]					
3050.396	[−2]		V I	1.38	74	
3050.504	[0]		Co I	1.96	77	
3050.67	[1*N*]		Mn II	4.50	21	
3050.815	[10]		Ni I	0.03	25	
3051.04	[3]					
3051.24	[−3]					
3051.416	[2]		—Mn II	4.34		
3051.61	[−3*N*]		Cr II?			
3051.794	[−1*N*]		Fe I?			
3051.987	[−3*d*?]		Ce II?	0.54	180	
3052.148	[−1]					
3052.213	[0]		V I— Cr I	0.02 3.08	15 164	
3052.268	[0*d*?]					
3052.491S	[1]					
3052.580	[−1]					
3052.67	[−3]					
3052.788	[0]		Fe I p	2.56	262	
3052.926	[−1]		Sc II	3.42	37	
3053.068	[3]		Fe I	2.42	146	
3053.246	[−3]		Y II	3.54	68	
3053.420	[7*d*]		|V II— Fe I	1.80 {1.01 {2.94	34 31 398	
3053.55	[−2		Gd II?	0.49	25	
3053.669	[1]		V I (Cr II)	0.00 4.29	17 64	
3053.744	[2]					
3053.880	[4]		Cr I V II	1.03 2.05	26 40	
3054.315	[12]		‖Ni I Mn I	0.11 2.14	25 15	
3054.698	[2*Ns*]		|Al I Co I	3.60 0.17	7 13	
3054.830	[1]		Zr II	1.01	76	
3054.940	[1]		Fe I Eu II	2.61 0.21	263 7	
3055.116	[1]					
3055.296	[6*d*]		|Fe I— Fe II	1.56 5.90	55 181	

Wavelength (Å)	Estimated Intensity	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes	Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3055.457	[1]		Cr II	3.85	33		3060.989	[2]			Fe I	1.56	55	
3055.594	[−3]		Ce III?	2.25	1		3061.12	[−1]						
3055.720	[4*d*]		Fe I—				3061.28	[−3]						
3055.934	[−3*N*]		V II	2.52	123		3061.35	[−1]			Zr II	0.09	6	
3056.110S	[1]						3061.40	[−1]						
3056.233	[2]		Fe I	2.61			3061.57	[1]			Cr II	4.04	41	
3056.340S	[2]		V I	0.02	17		3061.66	38	12. 4		Cr I	2.54	55	
3056.461	[−3]						3061.825	91	29. 7		Co I	0.10	11	
3056.581	[1*N*]						3061.972	67	22. 0		—Co I?	1.74	52	
3056.768	[5*d*]		Ti II—	1.16	47		3062.12	61	23. 8		Mn I	2.16	15	
3057.004	[0*N*]		Fe II	4.07	109		3062.18	127	41. 5		Co I	0.10	12	
3057.134	[2]		Al I	3.61	7		3062.29	59	22. 0		Fe II	4.08	108	
3057.436	[25]		Ti II—	0.00	5		3062.52	39	12. 7		OH?	S 1	0,0	1
			‖Fe I	0.86	28									
3057.643	[10]		Ni I	0.21	26		3062.70	27	8. 3		V II	1.82	34	
3057.788	[2]		Fe Ip	0.96	29		3062.83	55	21. 5					
3057.873	[−3]		Cr II	4.32	65		3062.873	72	23. 7		Fe I	2.95	456	
3057.963	[3]						3063.045r	23	7. 7		Ce II	0.90	185	
3058.075	[7]		Ti II	1.18	47		3063.175r	44	25. 6		Fe I	2.18	102	
3058.240	[−2*N*]						3063.241r	106	34. 6		V II	2.51	123	
3058.356	[3]		Cr II	4.07	48		3063.405r	43	14. 2		Cu I	1.64	4	
3058.488	[4]		Fe I				3063.505r	60	27. 3		Ti II	1.16	47	
3058.706S	[3]						3063.555r	119	38. 9		OH	R 9	0,0	1
			(Os I)	0.00	1		3063.729r	101	33. 0		OH	R 8,10	0,0	1
3059.094	[25]		Fe I	0.05	9		3063.805r	78	37. 9		Cr II	3.87	32	
			(Al I)	3.60	7									
3059.383	[0]		Cr II	2.70	15		3063.936r	86	35. 6		Ni II—	2.95	3	
											‖Fe I	2.42	147	
3059.516	[2*d*?]		Cr II	2.71	15		3064.015r	147	48. 0					
				2.71	15									
							3064.12 a	23	11. 0					
3059.738	[3]		Ti II	0.01	5									
				1.16	47		3064.216r	135	44. 1		OH—	R 7	0,0	1
											OH	R 11	0,0	1
3060.039	[0*d*]		Fe II—	4.08	109									
			‖Co I	1.96	77		3064.377S	132	50. 0		Co I	0.10	13	
3060.12	[−1]		Zr II	0.04	6		3064.515r	65	21. 2					
3060.24	[−1]						3064.622r	149	48. 7		Ni I	0.11	26	
3060.345S	[−1]						3064.713S	83	53. 6		Pt I	0.00	2	
3060.455S	[0]		V I	0.04	17		3064.829r	80	26. 2					
3060.548	[0]		Fe I	2.99	457		3064.955r	83	27. 3		OH	R 6	0,0	1
3060.633	[0]						3065.094r	133	43. 5		⌋OH	R 12	0,0	1
												R′ 6	0,0	
3060.773	[2]										Cr I	3.09	184	
											(Sc II)	3.45	37	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3065.316r	103	33. 6		Fe II	3.94	97	
3065.495r	34	11. 2					
3065.615r	42	13. 8		V II	2.49	112	
3065.775r	22	7. 2					
3065.994r	95	40. 4		OH— Mn I	R 5 2.14	0,0 15	1
3066.144r	565	18. 9		OH— Al I	R′ 5 3.61	0,0 7	1
3066.227r		86. 5		Ti II	0.01	5	
3066.364r		39. 1		Ti II V I	0.00 0.07	5 17	
3066.501r		86. 5		Fe I— Ti II	2.73 1.16	313 47	
3066.694S	33	16. 0		Fe I? p	2.95	456	
3066.816r	31	15. 0		V II	2.51	123	
3066.994r	663	42. 4		Fe I			
3067.123r		93. 3		Fe I V II (Cr II)	1.61 1.79 2.71 2.71	56 34 15 15	
3067.262r		93. 3		Fe I	0.91	28	
3067.386r		42. 4		OH—	R′ 4	0,0	1
3067.657r	121	46. 6		OH	R 10	0,0	1
3067.781S	110	35. 8		OH	R 9	0,0	1
3067.939r	128	41. 8		OH— Fe I	R 11 R 14 2.69	0,0 0,0 315a	1
3068.176r	130	42. 3		Fe I	1.61	55	
3068.281r	103	33. 7		OH	R 8 R′14	0,0 0,0	1
3068.476r	75	24. 6					
3068.598r	63	23. 4		OH	R 12	0,0	1
3068.725r	148	48. 3		OH— Fe II	R 3 4.15	0,0 122	1
3068.796r	102	46. 1		OH	R′ 3	0,0	1
3068.944S	52	18. 7		Fe I	1.48	53	
3069.181r	69	22. 5		OH	R 7	0,0	1
3069.334r	57	20. 4					
3069.455r	141	46. 3		Fe I			
3069.681r	80	26. 4		OH V I	R 13 0.04	0,0 15	1
3069.915r	66	21. 5		OH	R 15	0,0	1
3070.038r	55	17. 9					
3070.265r	129	42. 0		Mn I	2.16	15	
3070.380r	58	25. 4		OH	R′ 2	0,0	1
3070.492r	86	28. 0		OH	R 6	0,0	1
3070.695r	68	22. 2		Fe II	3.77	68	
3070.795r	49	18. 2					
3071.005r	38	12. 5		Cr II	4.04	41	
3071.145r	59	22. 0		OH Fe II	R 14 5.90	0,0 181	1
3071.253r	132	43. 1		Ti II	1.18	47	
3071.429S	41	13. 5					
3071.555r	27	8. 8		Cr II	4.07	47	
3071.677r	53	17. 4		Fe II	4.15	123	
3071.798r	37	12. 8					
3071.965r	69	29. 4		Co I	0.22	12	
3072.115r	202	65. 6		Ti II	0.03	5	
3072.182r	155	79. 5		OH	R 5	0,0	1
3072.328r	109	35. 6		OH— Co I	R 16 0.17	0,0 11	1
3072.495r	78	25. 5		Cr II?—	3.86	32	
3072.670r	31	10. 2		Co I? OH?	2.28 R′16	125 0,0	1
3072.984r	243	79. 1		Ti II	0.00	5	
3073.125r	86	39. 0		Mn I	2.18	15	
3073.235r	62	28. 8		Fe I Cr II	3.05 4.07	549 47	
3073.370r	15	4. 9					
3073.525r	22	7. 3		Co I	1.74	51	
3073.677r	40	13. 2		Cr I	3.12	184	
3073.832r	50	16. 4		V I	0.02 0.04	15 17	
3073.997r	52	29. 0		Fe I	2.69	313	
3074.07 a	82	30. 3					
3074.155r	143	46. 5		Fe I	3.02	457	
3074.385r	39	18. 4		OH	R 4	0,0	1
3074.435r	105	34. 2		Fe I			
3074.696r	49	15. 9		V II?—	2.49	112	
3074.905r	29	9. 4		Cr II?	4.38	73	
3075.035r	50	24. 7					
3075.135r	108	47. 5		OH	R 17	0,0	1
3075.239r	222	72. 2		Fe II Ti II	3.81 0.01	68 5	
3075.355r	103	102. 1		OH	R 16	0,0	1

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3075.455r	39	22. 6					
3075.595r	78	49. 0					
3075.733r	436	141. 7		Fe I	0.96	28	
3075.895r	51	33. 6		Zn I	0.00	1	
				(V I)	1.19	57	
3075.998r	57	35. 4		V II	1.80	34	
3076.265r	40	13. 2					
3076.435r	51	16. 6		Fe II	5.87	181	
3076.585r	16	5. 2		Cr I?	2.54	55	
3076.750r	24	8. 5					
3076.831r	24	8. 0					
3076.91 a	10	3. 7		Gd II	0.00	10	
3077.027r	44	15. 3		OH	R 3	0,0	1
3077.188r	57	33. 1		Fe II	4.07	108	
3077.225r	92	29. 9		—Cr II	4.50	103	
3077.395r	12	4. 1					
3077.558r	30	12. 3		Lu II?	1.54	4	
				Cr II?	3.86	32	
3077.640r	91	29. 7		Mo II	4.39		
3077.735r	57	19. 8					
3077.835r	46	15. 1		Cr I	3.11	184	
				Cr II	4.47	103	
3078.044r	141	45. 8		|Fe I—	0.96	29	
				OH	R 17	0,0	1
3078.252r	29	13. 0					
3078.387r	88	47. 2		OH	R 18	0,0	1
3078.445r	173	68. 2		OH	Q 1	0,0	1
				‖Fe I	2.48	146	
3078.662r	321	104		‖Ti II—	0.03	5	
				Fe II	5.82	181	
3078.825r	18	11. 8					
3078.915r	52	21. 4					
3079.105r	78	25. 5					
3079.308r	35	13. 3		Cr II	4.50	102	
3079.375r	94	30. 7		Fe II—	4.15	122	
				|Co I	{0.00	10	
					{1.71	49	
3079.50 a	6	2. 7					
3079.617r	79	25. 8		Mn I	2.19	15	
3079.755r	22	7. 3					
3079.825r	20	6. 7		Fe I p	2.20	102	
3079.979r	111	36. 2		|OH—	Q 2	0,0	1
				Fe I			
3080.116r	73	23. 9		Fe I			
3080.245r	37	12. 2		OH	R 2	0,0	1
3080.368r	31	12. 3		V I—	1.18	57	
3080.422r	46	14. 9		Fe II	4.08	108	
3080.595r	45	14. 6					
3080.757r	130	33. 4		Ni I	0.21	26	
3080.877r	65	27. 8					
3081.005r	56	18. 2		—V II	2.50	112	
3081.12 a	19	7. 5					
3081.247r	58	27. 3		OH	R 18	0,0	1
				Fe I	3.02	457	
3081.312r	100	32. 5		Mn I	2.18	15	
3081.460r	37	14. 0					
3081.550r	82	26. 6		OH	Q 3	0,0	1
3081.680r	91	43. 0		OH	P 1	0,0	1
3081.725r	120	39. 0					
3081.840r	61	33. 9		Fe I	1.48	53	
3082.035r	82	40. 4		Mn I	2.16	15	
				OH	R 19	0,0	1
3082.168r	257	83. 6		‖Al I	0.00	3	
				V I	0.07	17	
3082.28 a	56	38. 8					
3082.38 a	64	24. 5					
3082.525r	40	13. 0		V II	2.04	39	
3082.626S	107	34. 9		Co I	0.00	10	
3082.75 a	34	13. 6		Mn I?	4.23		
3082.850r	53	17. 2		Co I—	1.88	73	
3083.042r	85	27. 7		Fe II—	3.97	97	
3083.168r	61	19. 8		|Fe I	2.45	197	
				V II	2.52	112	
3083.282r	110	35. 6		OH	Q 4	0,0	1
3083.382r	58	28. 4		OH	Q′ 4	0,0	1
3083.503r	117	52. 9		—V I	1.22	57	
3083.620r	22	25. 2		Cr II	4.07	47	
3083.749S	295	95. 7		Fe I	0.99	28	
3083.850r	40	24. 0					
3084.055r	67	24. 8		OH	R 1	0,0	1
3084.165r	46	15. 0					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3084.290r	44	14. 4					
3084.455r	67	21. 7		Cr II—	4.30	71	
3084.575r	28	9. 2		Cr I	3.12	184	
3084.685r	3. 5	1. 0					
3084.795r	4	1. 3		Ti I?	1.05	93	
3084.897r	69	22. 6		OH	R 19	0,0	1
3085.043r	64	20. 7					
3085.206r	98	31. 7		OH	Q 5	0,0	1
3085.331r	98	31. 9		Cr II	4.07	47	
3085.395r	58	23. 5					
3085.545r	12	4. 0					
3085.673r	37	16. 7					
3085.720r	79	25. 6					
3085.885r	38	12. 3					
3085.995r	31	10. 0					
3086.111r	41	13. 4					
3086.229r	75	24. 3		OH	R 20	0,0	1
3086.400S	64	20. 7		Co I OH	1.71 P 2	50 0,0	 1
3086.530r	122	39. 5		V II—	2.03	39	
3086.636r	40	15. 9					
3086.787r	177	57. 3		Co I	0.22	11	
3086.988r	161	52. 2					
3087.076r	54	22. 4		Ni II	3.10	7	
3087.345r	107	40. 5		OH	Q 6	0,0	1
3087.453r	71	25. 3		Fe I— OH	3.24 Q′ 6	 0,0	 1
3087.533r	62	20. 7		Cr I?	3.09		
3087.693r	58	25. 3					
3087.843r	38	28. 8		Co I— Cr II?	2.01 4.47	77 102	
3088.039r	370	119		Ti II	0.05	5	
3088.188r	64	34. 0					
3088.355r	101	32. 7					
3088.610r	41	13. 3					
3088.752r	105	34. 2					
3088.823r	36	11. 7					
3089.000r	60	19. 4		OH	R 20	0,0	1
3089.096r	39	12. 6		V I	1.19	57	
3089.22 a	24	7. 9					
3089.403r	70	22. 7		‖Ti II Fe II	1.89 4.73	90 158	
3089.505S	66	21. 5					
3089.613r	94	30. 4		Co I	0.10	10	
3089.745r	134	58. 5		OH	Q 7	0,0	1
3089.868r	162	52. 6		OH	{Q 2,3 {Q′2,3,7	0,0 0,0	} 1
3090.222r	129	41. 7		Fe I— Co I	2.76 2.01	313 77	
3090.374r	98	32. 0		OH	Q 4	0,0	1
3090.486r	112	40. 7		OH OH	Q 1 Q′ 1	0,0 0,0	1 1
3090.733r	50	19. 7					
3090.868r	65	32. 4		OH	R 21	0,0	1
3091.071r	356	115		Mg I	2.71	5	
3091.213r	77	46. 4		CH ‖OH	R 21 {P 3 {Q′ 5	0,0 0,0 0,0	2 } 1
3091.371r	58	34. 8		OH	Q 5	0,0	1
3091.583r	301	97. 4		Fe I	1.01	28	
3091.693r	45	32. 0					
3091.876S	96	31. 2					
3092.093r	102	36. 4		Mo II—	1.94		
3092.233r	13	5. 7					
3092.403r	48	34. 6		OH	Q 8	0,0	1
3092.473r	63	29. 2					
3092.598r	41	44. 9		CH OH	R 20 Q′ 8	0,0 0,0	2 1
3092.712r		{183		Al I (Fe I) (OH)	0.01 0.96 Q 6	3 29 0,0	 1
3092.851r	927	46. 2		Al I	0.01	3	
3092.983r		45. 9		Mg I	2.71	5	
3093.123r		97. 5		V II (V II p)	0.39 2.05	1 39	
3093.346r	56	34. 1		Fe I			
3093.498r	94	39. 0		Cr II (Rh II)	4.78 3.49	125 4	
3093.608r	46	19. 2		OH	R 21	0,0	1
3093.723r	35	12. 3		OH	P′ 1	0,0	1
3093.823r	106	57. 0		Fe I	1.61	55	
3093.883r	109	35. 4		Fe I	2.56	261	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3093.943r	70	35. 7		Cr II	4.07	47	
3094.068r	24	7. 9		Fe I p	2.45	165	
3094.205r	88	45. 6		V II Nb II	2.04 0.51	39 1	
3094.295r	111	35. 9		CH—	R 19	0,0	2
3094.364r	58	24. 9		CH	R 19	0,0	2
3094.469r	28	9. 0		OH	Q′ 7	0,0	1
3094.626r	67	22. 2		OH	Q 7	0,0	1
3094.724r	9	2. 9		V I	1.18	56	
3094.897r	75	24. 2		Fe I— Cr II	2.73 4.07	315a 47	
3095.078S	27	8. 9		Zr II	0.04	5	
3095.254r	60	21. 2		Fe I	2.69	314	
3095.347r	103	33. 4		OH	Q 9	0,0	1
3095.554r	14	4. 5		OH	Q′ 9	0,0	1
3095.724r	29	9. 5		Co I	1.74	49	
3095.884r	32	10. 6		‖Cr I Y II	2.71 0.13	11	
3096.039r	82	30. 3		Fe I	2.73		
3096.138r	86	31. 2		OH Cr II	P 4 4.78	0,0 126	1
3096.324r	43	18. 3		Fe II— OH	3.97 P 2 P′ 2	97 0,0 0,0	} 1
3096.404r	99	40. 9		Co I— Ti II	1.78 1.57	52 77	
3096.549r	41	23. 2		Cr I	2.71		
3096.624r	55	36. 6		—OH	Q′ 8	0,0	1
3096.764r	45	47. 9		Rh II—	3.60	4	
3096.902r	647	209		Mg I	2.72	5	
3097.130r 3097.177r	148	33. 3 29. 6		Ni I Ti II	0.17 1.23	11 67	
3097.355r	21	10. 9					
3097.433r	26	12. 1		Fe II	3.94	96	
3097.490r	45	18. 6		Fe I	2.42	165	
3097.618r	38	14. 6		Ti II	1.57	77	
3097.785r	66	23. 5					
3097.830r	54	19. 0					
3097.965r	28	8. 8					
3098.072r	68	21. 9		CH	R 17	0,0	2
3098.193r	98	31. 9		Fe I Co I	2.69 0.17	313 10	
3098.325r	14	4. 4					
3098.453S	26	8. 6		Mo II?	2.15		
3098.588r	87	28. 2		OH	Q 10	0,0	1
3098.720r	31	10. 1		OH	R 22	0,0	1
3098.825r	53	17. 2		OH	Q′ 10	0,0	1
3098.968r	57	18. 4		Fe I	2.22	102	
3099.115r	105	34		Ni I	0.17	13	
3099.235r	68	23. 2		Zr II OH	0.00 Q′ 9	5 0,0	1
3099.418r	77	29. 3		OH	Q 9	0,0	1
3099.575r	65	30. 5		OH— OH	P′ 3 O 2 P 3	0,0 0,0 0,0	1 } 1
3099.675r	24	16. 6		Co I	1.96	75	
3099.790r	44	47. 2					
3099.896r 3099.987r	465	115 115		Fe I Fe I	1.01 0.91	28 28	
3100.150r	61	64. 5		CH CH	R 16 R 16	0,0 0,0	2 2
3100.325r	263	85. 0		Fe I	0.99	28	
3100.524r	98	69. 6		Gd II	0.24	12	
3100.682r	216	69. 6		‖Fe I Ti I	0.96 1.07 1.07	28 92 93	
3100.839r	100	38. 5		Fe I	2.40	196a	
3100.942r	61	38. 2		V II	2.03	39	
3101.012r	102	32. 9		Fe I	2.73	313	
3101.242r	123	44. 3		OH	P 5	0,0	1
3101.417r	88	47. 4					
3101.574r	284	91. 6		Ni I	0.11	25	
3101.694r	97	77. 4					
3101.895r	201	64. 6		Ni I	0.42	40	
3101.974r	45	26. 2					
3102.148r	94	30. 4		OH	Q 11 Q′ 10	0,0 0,0	} 1
3102.299r	53	29. 2		CH— V II	R 15 0.37	0,0 1	2
3102.369r	192	61. 9		OH	Q 10 Q′ 11	0,0 0,0	} 1
3102.519r	29	9. 4		Ti I	2.00	181	
3102.643r	68	22. 4		Fe I	0.99	29	
3102.764r	48	15. 4					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3102.882r	69	22. 4		Fe I			
3102.979r	24	7. 8		Ti II	1.22	58	
3103.109r	23	7. 5					
3103.284r	28	12. 5		OH	P′ 4	0,0	1
3103.349r	80	25. 9		OH	P 4	0,0	1
3103.494r	44	14. 3		Cr II	4.30	71	
3103.614r	16	5. 3					
3103.781r	129	8. 8		Co I	1.88	73	
3103.819r		40. 3		Ti II	1.89	90	
3103.982r	58	18. 7		Co I	1.71	48	
3104.167S	48	15. 6					
3104.274r	18	6. 0		Cr II?	4.50	102	
3104.349r	39	13. 2		OH	R 23	0,0	1
3104.571r	106	34. 1		CH—	R 14	0,0	2
				Ti II?	1.89	90	
3104.71 a to 3104.79 a	44	14. 3		Mg II	8.86	6	
				Mg II	8.86	6	
3104.914r	42	13. 7		V II	2.05	39	
3105.094r	131	22. 2		Ti II	1.22	67	
3105.174r		24. 9		Fe II	3.89	82	
					4.15	122	
3105.324r	20	6. 4					
3105.464r	66	21. 3		Ni I	0.27	12	
3105.563r	26	11. 5		Fe II	3.89	82	
3105.677r	99	31. 9		OH	Q 11	0,0	1
3105.894r	21	7. 0		Co I	0.51	26	
3106.032r	89	28. 7		OH	Q 12	0,0	1
					O 3	0,0	
3106.241r	117	37. 7		Ti II	1.24	67	
3106.559r	96	31. 2		Fe II	3.81	68	
				OH—	P 6	0,0	1
				Zr II	1.00	63	
3106.809r	26	10. 0		Ti I	1.05	92	
3106.907r	76	24. 5		CH	R 13	0,0	2
3107.092r	48	15. 7		Co I?—	1.71	49	
3107.322r	53	17. 1		Fe I			
3107.40 a	7	3. 0		Ca I	1.89	16	
3107.459r	36	12. 6		OH—	P 5	0,0	1
				Ti I	1.97	181	
3107.565r	82	26. 5		OH	P 5	0,0	1
				Cr II	4.77	125	
3107.725r	54	17. 4		Ni I	0.17	12	
3107.854r	29	9. 4					
3107.983r	58	18. 8		Fe I	2.69		
3108.133r	11	3. 4					
3108.263r	20	6. 4					
3108.363r	6. 5	2. 1					
3108.555r	30	9. 6		Ca I	1.90		
3108.681r	63	21. 2		Cr II—	4.15	55	
				V II	2.04	39	
3108.885r	26	8. 9					
3108.951r	52	16. 8		Ti II	1.58	77	
3109.073r	45	14. 6		Fe I	2.47	165	
3109.333r	77	24. 8		OH	Q 12	0,0	1
				CH	R 12	0,0	2
3109.503r	25	8. 0		Co I	1.74	50	
3109.622S	47	15. 1		Fe I			
3109.803r	8. 5	2. 8		OH?	S 3	1,1	1
3109.928r	43	14. 0		Ti IIp	1.22	58	
3110.084r	83	26. 7		Ti II	1.58	77	
3110.245r	140	45. 2		OH—	Q 13	0,0	1
				Fe I			
3110.529r	39	12. 5		OH	R 24	0,0	1
					Q′ 13	0,0	
3110.704r	148	47. 5		Ti II—	1.23	67	
				V II	0.35	1	
3110.849r	108	34. 7		Fe I			
				Co I	0.22	11	
3110.894r	97	63. 6		Zr II—	0.09	5	
3111.074r	12	4. 0					
3111.179r	38	12. 2		Zr II?	0.56	24	
3111.304r	34	11. 1		Ti I	1.98	181	
3111.424r	9. 5	3. 1					
3111.534r	7. 5	2. 4					
3111.685r	57	18. 4		Fe I	2.56	260	
3111.814r	87	28. 0		Fe I			
				CH	R 11	0,0	2
3111.944r	59	18. 9		Cr II	4.14	55	
3112.077r	119	38. 4		Ti II—	1.22	67	
				Fe I	2.95	455	
				OH	P 7	0,0	1
					P′ 6	0,0	
3112.214r	96	30. 8		OH	P 6	0,0	1

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3112.469r	50	16. 2		Ti I	1.05	92	
3112.609r	15	4. 7					
3112.684r	28	9. 2					
3112.804r	13	4. 2					
3112.954r	39	12. 6		V I— Cr I?	1.19 3.11	56	
3113.097r	39	12. 5		OH	Q′ 13 O 4	0,0 0,0	1
3113.214r	17	5. 5					
3113.384r	112	36. 1		OH	Q 13	0,0	1
3113.454r	44	20. 8		Co I	1.71	48	
3113.591r	89	28. 2		V II	2.90	174	
3113.666r	50	21. 1		Fe Ip	2.47	165	
3113.838r	66	21. 1					
3114.078r	74	33. 5		Ti I	2.00	181	
3114.125r	125	40. 5		Ni I	0.11	24	
3114.316r	125	40. 1		Fe II CH	3.89 R 10	82 0,0	2
3114.353r	94	53. 0		CH	R 10	0,0	2
3114.483r	13	5. 5		Y II? Cr I?	3.41 3.12	58	
3114.628r	39	15. 9					
3114.673r	47	16. 5		Fe II	3.89	82	
3114.778r	101	32. 4		OH	Q 14	0,0	1
3115.043r	84	26. 8		Fe I			
3115.283r	43	14. 0		Cr II	4.17	54	
3115.353r	27	8. 6		Fe II			
3115.468r	30	9. 8		Mn I Fe II	3.37 3.97	38 96	
3115.563r	35	11. 3					
3115.668r	57	18. 2		Fe I Cr II	3.07 4.07 5.32	46	
3115.883r	31	10. 1		Fe I	3.02	456	
3116.053r	28	9. 1					
3116.263r	82	26. 3		Fe I	2.45	165	
3116.393r	46	14. 8		Fe I	2.59	261	
3116.503r	140	57. 3		Fe I	2.20?		
3116.633r	149	47. 9		Fe I Fe II	1.01 3.89	28 82	
3116.727r	69	28. 2		Ni I— Cr II	3.19 4.77	95 126	
3116.917r	63	25. 1		CH	R 9	0,0	2
3116.982r	100	32. 2		CH	R 9	0,0	2
3117.037r	34	20. 7		OH	P′ 7	0,0	1
3117.201r	72	23. 1		OH	P 7	0,0	1
3117.249r	59	35. 4		Cr II	4.07	46	
3117.432r	52	16. 7		—Ti I	1.07	92	
3117.662r	101	32. 6		Fe I— Ti II	0.99 1.23	29 67	
3117.768S	63	20. 4		OH	Q 14	0,0	1
3117.890r	74	23. 9		OH— Ti I	P 8 1.05	0,0 92	1
3118.141S	66	21. 2		Ti I Cr II	2.02 4.17	181 55	
3118.253S	53	17. 0		Co I	0.17	11	
3118.390r	118	38. 0		V II	0.33	1	
3118.557r	42	20. 7		Ni I	3.19	94	
3118.656r	122	39. 2		Cr II	2.42	5	
3118.827S	59	19. 1		Ti II?	1.08	27	
3119.035r	23	7. 4		Fe I	2.76	315a	
3119.198r	77	24. 8					
3119.351r	88	28. 2		V II?	2.52	110	
3119.504r	128	41. 0		Fe I	2.43	194	
3119.678r	120	38. 6		OH CH— Cr I (Ti I)	Q 15 R 8 3.09 1.50	0,0 0,0 183 137	1 2
3119.802r	97	31. 2		Ti II	1.24	67	
3120.012r	27	8. 7		OH— Fe II	Q′ 15 3.97	0,0 96	1
3120.092r	8	2. 6		Co I?	1.88	74	
3120.237r	68	29. 2		Fe I	2.76		
3120.372r	151	48. 4		Cr II	2.43	5	
3120.430r	100	56. 3		Fe I	2.45	194	
3120.602r	41	13. 1		OH	O 5	0,0	1
3120.732r	60	19. 2		V II Zr I	2.56 0.52	138 37	
3120.877r	78	24. 9		Fe I			
3121.081r	35	16. 7		Cr II?	4.38	72	
3121.160r	140	44. 8		V II	0.39	1	
3121.419r	54	17. 3		Co I	0.00	9	
3121.604r	119	38. 3		Ti II Co I	0.00 0.10	4 11	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3121.783r	84	27. 1		OH |Fe I	R 7 2.22	1,1 102	1
3121.859r	50	19. 3		Cr II— OH	4.38 R 9	72 1,1	1
3121.969r	37	11. 8		Cr II	4.15	55	
3122.079S	57	18. 3		Ti II	1.24	58	
3122.219r	56	24. 4		OH CH	R 6 R 7	1,1 0,0	1 2
3122.317r	145	46. 5		Fe I CH	 R 7	 0,0	 2
3122.570r	144	46. 2		OH OH— Cr II	P 8 Q 15 4.18	0,0 0,0 54	1 1
3122.664r	41	18. 7		Fe I	2.73	314	
3122.784r	5	1. 6		Au I	1.14	1	
3122.909r	62	17. 7		V II	2.90	173	
3122.949r		4. 6		OH	R 5	1,1	1
3123.092r	38	12. 2		Ti I	0.90	67	
3123.260r	35	11. 3					
3123.349r	53	17. 0		Fe I	2.42	164	
3123.443r	28	9. 1		OH	R 11	1,1	1
3123.561r	60	19. 4		Fe I	2.73		
3123.698r	11	3. 8		Rh I?	0.00		
3123.778r	42	13. 6		Ti I	2.04	181	
3123.959r	27	8. 6		OH	P 9	0,0	1
3124.097r	33	10. 5		Fe I	2.48	165	
3124.283r	10	3. 3					
3124.488r	11	3. 8					
3124.638r	18	5. 9		OH?	R 26	0,0	1
3124.688r	11	3. 4					
3124.803r	30	10. 5		OH— Ge I	R 12 0.88	1,1 1	1
3124.918r	124	70. 9		CH OH	R 6 Q 16	0,0 0,0	2 1
3124.998r	149	47. 8		Cr II	2.45	5	
3125.053r	111	57. 0		Cr II CH	4.30 R 6	70 0,0	 2
3125.288r	156	49. 8		V II	0.32	1	
3125.467r	47	14. 9		Cr II	4.18	55	
3125.667r	152	48. 6		|Fe I— Fe I p	0.99 2.40 2.40	28 160 194	
3125.920S	48	15. 4		Zr II	0.00	5	
3126.207r	150	48. 0		Fe I— V II	 0.37	 1	
3126.332r	33	12. 0		OH	R 9	1,1	1
3126.472r	37	11. 8		OH	R 8	1,1	1
3126.617r	75	24. 0		CH OH OH	R 12 R 10 R 13	1,1 1,1 1,1	2 1 1
3126.767r	80	25. 8		Fe I			
3126.847r	44	17. 7		Fe I	2.56	260	
3127.047r	24	7. 7		OH	R 7	1,1	1
3127.117r	13	4. 1					
3127.247r	29	9. 2		Co I	0.43	26	
3127.362r	33	10. 6		OH	R 11	1,1	1
3127.491r	29	9. 4		—Nb II	2.16		
3127.671r	86	27. 7		|OH CH Ti I?	Q 16 R 5 1.97	0,0 0,0 180	1 2
3127.846r	51	16. 4		CH	R 5	0,0	2
3128.086r	36	11. 7		OH— OH	R 6 P 9	1,1 0,0	1 1
3128.289r	73	23. 2		Sc II |OH	3.46 P 9	39 0,0	 1
3128.386r	47	15. 3					
3128.521r	60	19. 4		OH	O 6 R 12	0,0 1,1	1
3128.706r	98	31. 3		Cr II	2.43	5	
3128.776r	32	15. 1		OH Y II?	R 14 3.37	1,1 51	1
3128.897r	47	15. 1		Fe I	1.56	54	
3129.007r	25	8. 1		Co I— Fe II	0.51 3.97	 96	
3129.107r	60	19. 4		Fe I			
3129.177r	32	12. 2		Zr II Fe I	0.53 2.45	23 161	
3129.320r	85	27. 2		Ni I— |Fe I	0.27 1.48	12 52	
3129.532r	34	10. 9		OH	R 5	1,1	1
3129.767r	50	16. 0		Zr II	0.04	5	
3129.947r	23	7. 3		Y II?	3.41	51	
3130.137r	48	15. 4		|OH— Ti I	R 13 1.98	1,1 180	1
3130.267r	104	33. 2		|V II— OH	0.35 P 10	1 0,0	 1
3130.414m	85	27. 3		Be II	0.00	1	5

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3130.567r	77	24. 7		|OH Fe II	Q 17 3.77	0,0 66	1
3130.631r	63	32. 7					
3130.795r	106	33. 9		‖Ti II Ti I (Nb II)	0.01 0.44	4 1	
3131.058m	80	25. 6		Be II	0.00	1	5
3131.236r	38	12. 2		|Cr I— Tm II	3.11 0.00	183	
3131.361r	29	9. 3					
3131.446r	44	14. 1		OH	R 15	1,1	1
3131.526r	42	13. 5		OH— Cr II	R 4 {4.17 {4.18	1,1 55 53	1
3131.708r	51	16. 5		Fe II Ni I	4.08 3.31	107 94	
3131.806r	18	6. 8		Co I	1.74	48	
3131.951r	37	13. 9					
3132.055r	137	44. 0		Cr II	2.48	5	
3132.189r	89	36. 2		OH	R 14	1,1	1
3132.288r	73	30. 4		Mn I?—	4.33		
3132.521r	96	30. 8		Fe I	3.21	578	
3132.635r	84	34. 5		—Fe I			
3132.821r	49	15. 7		Cr I	3.12	183	
3133.066r	69	22. 1		‖Fe II— Sc II	3.89 3.47	82 39	
3133.216r	87	28. 0		OH	Q 17	0,0	1
3133.335r	95	30. 4		V II	0.33	1	
3133.491S	62	19. 9		Zr II	0.96	63	
3133.59 a	7	2. 7		Nd II			
3133.676r	7. 5	2. 8					
3133.966r	108	62. 7		Fe I p— OH	2.42 R 3	161 1,1	1
3134.116r	414	132		Fe I |Ni I	0.96 0.21	28 25	
3134.337r	106	55. 9		|OH Cr II	P 10 4.41	0,0 94	1
3134.396r	63	41. 2		Fe I?	2.69		
3134.541r	28	11. 9		OH— OH	R 16 Q 1	1,1 1,1	1 1
3134.626r	60	22. 3		OH	Q′ 1	1,1	1
3134.716r	48	24. 4		OH— Hf II	R 15 0.38	1,1 5	1
3134.937r	87	27. 8		V II	2.52	122	
3135.046r	24	8. 3		Ti I	2.00	180	
3135.181r	24	7. 8		Y II	0.18	11	
3135.356r	92	29. 4		Fe II Cr II	3.89 4.77	82 124	
3135.453r	62	19. 7		Fe I			
3135.589r	53	17. 1		Fe I	2.73		
3135.706r	87	28. 0		Cr II	4.43	94	
3135.870r	69	22. 1		Fe I	2.45	194	
3136.015r	43	13. 9		Ca I	1.88	15	
3136.085r	28	8. 8		Fe I p	2.40	160	
3136.195r	53	17. 1		OH |Fe I	Q 2	1,1	1
3136.345r	46	14. 8		CH	R 2	0,0	2
3136.506r	82	26. 4		V II	2.51	122	
3136.590r	145	46. 2		OH	Q 18	0,0	1
3136.707r	141	45. 1		‖Cr II— Co I	2.45 0.00	5 8	
3136.890r	84	26. 7		OH	P 11	0,0	1
3137.025r	47	15. 0		Co I?— OH	1.74 R 2	48 1,1	1
3137.100r	29	9. 3		Cr II?	5.33		
3137.330r	88	28. 2		Co I	0.22	10	
3137.445r	32	12. 3		Co I	2.04	108	
3137.560r	31	9. 8		Cr II	4.15	54	
3137.710r	26	10. 2		OH	R 16	1,1	1
3137.765r	66	21. 0		Co I OH	1.78 P 1	49 1,1	1
3137.896r	53	17. 1		OH	Q 3	1,1	1
3138.014r	34	10. 9					
3138.076r	19	6. 5		V II— OH	3.76 R 17	205 1,1	1
3138.206r	8	2. 6		Cr I	3.12	183	
3138.306r	6	1. 9		Cr I?	3.85		
3138.406r	25	8. 1		Fe I	1.56	53	
3138.518r	78	24. 8		Fe I			
3138.674r	57	18. 3		Zr II	0.09	5	
3138.786r	37	11. 9					
3138.916r	27	8. 8					
3139.106r	11	3. 6		Fe I p	2.45	161	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3139.164r	57	18. 3		OH	Q 18	0,0	1
3139.306r	23	7. 3		CH	R 1	0,0	2
3139.486r	13	4. 3		Fe I			
3139.666r	61	19. 6		Fe I	2.40	155	
3139.761r	107	34. 2		‖V II Sc II— OH	2.51 3.49 Q 4	122 39 1,1	 1
3139.937r	106	25. 1		|Fe I Co I (Cr II)	 0.10 4.14	 9 54	
3140.016r	36	16. 6					
3140.209r	50	16. 1		Cr II	4.78	124	
3140.388r	81	25. 9		Fe I	3.24	578	
3140.511r	62	19. 8		OH	P′ 11	0,0	1
3140.757r	101	32. 1		|OH— Ca I	P 11 1.89	0,0 15	1
3140.938r	13	4. 1					
3141.106r	39	15. 8		CH?— Dy II	R 5	1,1	2
3141.181r	54	17. 2		Ca I	1.89	15	
3141.296r	29	9. 5					
3141.513r	56	18. 1		Ti I (V II)	0.90 2.60	66 152	
3141.666r	23	7. 3		Ti I	2.13	192	
3141.801r	5. 5	1. 7		Cr II?	5.32	175	
3141.908r	68	21. 8		—OH	Q 5	1,1	1
3142.021r	20	6. 5		OH	Q′ 5	1,1	1
3142.156r	21	8. 1		OH— V II?	R 18 2.90	1,1 172	1
3142.224r	58	18. 4		Fe II	1.67	7	
3142.470r	123	38. 7		|Fe I— V II	2.45 2.22	164 52	
3142.511r		0. 5		OH	P 2	1,1	1
3142.676r	13	4. 7		Mn I	2.89		
3142.731r	32	10. 1		Cr II	4.41	85	
3142.897r	88	28. 1		Fe I	2.28	144	
3143.016r	75	23. 7		OH	Q 19	0,0	1
3143.156r	27	9. 3		Ti I? p	0.00	28	
3143.242r	76	25. 6		Fe I	0.00	7	
3143.336r	23	7. 8		Ti I	2.04	180	
3143.486r		73. 1		V II	2.51	122	
				CH	Q 14 to Q 17	0,0 0,0	2
3143.575r		33. 4		CH	Q 13 Q 18	0,0 0,0	2
3143.764r		133. 3		‖Ti II CH— OH	0.03 Q 11 P 12	4 0,0 0,0	 2 1
3143.896r		15. 9		CH Cr II	Q 9, 10 4.43	0,0 94	2
3143.996r		73. 1		CH Fe I	Q 8, 9 3.21	0,0 578	2
3144.116r	1237	15. 9		CH	Q 6, 8	0,0	2
3144.236r		15. 9		CH	Q 3 to Q 5 Q 7 Q 21	0,0 0,0 0,0 0,0	2
3144.326r		15. 9		CH |OH	Q 6 Q 6	0,0 1,1	2 1
3144.453r		33. 4		CH—	Q 5	0,0	2
3144.501r		33. 4		Fe I CH	2.47 Q 4	161 0,0	 2
3144.629r		15. 9		CH	Q 3 Q 22	0,0 0,0	2
3144.737r		33. 4		V II— |Fe II	2.52 3.90	122 82	
3144.816r	37	17, 7					
3144.925r	67	21. 3		CH Fe I	Q 1 2.43	0,0 195	2
3145.091r	123	39. 3		|Fe I Cr II (CH)	2.99 2.45 Q 23	455 5 0,0	 2
3145.136r	80	40. 4		Ni I—	0.00	7	
3145.369r	128	40. 8		V II	0.35 0.39	1 1	
3145.526r	71	22. 6		OH	Q 19	0,0	1
3145.725r	115	36. 6		Ni I	0.17	11	
3145.791r	80	34. 5		Cr II CH— CH	4.41 Q 24 Q 24	85 0,0 0,0	 2 2
3145.976r	74	23. 7		V II	0.37	1	
3146.106r	18	5. 9					
3146.256r	69	21. 9		V II	2.56	138	
3146.301r	18	7. 8		Fe I			
3146.466r	47	14. 9		Fe I	2.42	160	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3146.598r	106	33. 9		CH— CH OH	Q 25 Q 25 Q 3	0,0 0,0 1,1	2 2 1
3146.756r	48	15. 3		Fe II	3.77	67	
3146.934r	73	23. 2		OH	Q 7	1,1	1
3147.068r	89	28. 2		Co I	0.17	10	
3147.235r	152	34. 3		Cr II	2.48 4.17	5 54	
3147.267r		25. 1		Fe I— OH	Q 4	1,1	1
3147.447r	96	30. 4		OH— OH	P 3 P 12	1,1 0,0	1 1
3147.599r	102	32. 4		Fe I— CH	Q 26	0,0	2
3147.784r	100	31. 9		Fe I	3.02	455	
3148.042r	114	36. 2		Ti II	0.00	4	
3148.168r	65	20. 6		Mn I	2.28	19	
3148.307r	43	13. 8		—OH?	Q′ 5	1,1	1
3148.440r	103	32. 8		OH Fe I Cr I	Q 5 2.43 2.97	1,1 194 115	1
3148.642r	14	4. 4		Fe I?	2.20		
3148.797r	61	19. 4					
3148.900r	67	21. 4					
3149.122r	8	2. 5		Cr II?	4.41	84	
3149.317r	63	20. 0		Co I	0.17	9	
3149.397r	20	7. 6					
3149.497r	27	8. 7		Fe I	2.95	453	
3149.642r	11	3. 6					
3149.724r	55	17. 4					
3149.852r	133	31. 2		OH (Cr II)	Q 20 4.14	0,0 54	1
3149.898r		20. 6		OH	Q 8	1,1	1
3150.077r	93	29. 5		OH— Cr II	Q 6 4.15	1,1 54	1
3150.229r	49	17. 2		Fe I? p	2.48	161	
3150.307r	94	29. 8		Fe I— OH	3.28 P′ 1	578a 1,1	1
3150.417r	39	12. 7		CH	P 2	0,0	2
3150.512r	20	6. 5					
3150.652r	18	5. 7		Co I?			
3150.747r	73	23. 3		Ca I	1.90	15	
3150.832r	16	5. 5		Co I?			
3151.005r	66	20. 9		OH	P 13	0,0	1
3151.097r	20	6. 5		Ti I?	0.00	28	
3151.237r	69	21. 9		Ni I Ca I	1.90	15	
3151.352r	114	36. 2		Fe I (V II)	2.73 2.54	311 138	
3151.517r	11	3. 5					
3151.642r	14	4. 4		Ca I	1.90	15	
3151.863r	82	26. 5		Fe I	0.05	7	
3152.000r	75	23. 8					
3152.117r	66	21. 1		OH	Q 7	1,1	1
3152.262r	142	45. 1		Ti II— OH	0.12 Q 20	10 0,0	1
3152.457r	38	12. 2		OH	P 4	1,1	1
3152.597r	10	3. 3					
3152.737r	65	20. 8		Co I— CH	2.01 P 3	73 0,0	2
3152.857r	14	4. 4		Cr I?	3.00	116	
3152.957r	58	18. 4		OH— OH	P′ 2 P 2	1,1 1,1	1 1
3153.058r	50	16. 0		Fe I	2.20 2.95	99 452	
3153.191r	118	37. 4		Fe I OH	2.45 Q 9	161 1,1	1
3153.319r	95	30		Fe I	2.45	160	
3153.568r	27	8. 6		Cr I— Ti I?	3.37	200	
3153.751r	70	22. 3		Fe I			
3153.870r	10	3. 2					
3154.005r	31	10. 0					
3154.120r	57	21. 4		Fe I	1.61	53	
3154.200r	144	45. 7		Fe II Ti II	3.77 0.11	66 10	
3154.420r	137	43. 6		Fe I	2.18	100	
3154.493r	93	29. 5		OH Fe I	P 13 2.47	0,0 161	1
3154.595r	82	26. 0		Ni I— OH	1.95 Q 8	78 1,1	1
3154.643r	75	45. 3		OH	O 9	0,0	1
3154.788r	76	24. 1		Co I	1.88	73	
3154.940r	18	5. 7					
3155.130r	101	32. 0		Cr I Fe I	2.98 2.48	115 161	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3155.290r	85	27. 1		Fe I	2.43	193	
3155.405r	35	11. 2		V II	2.22	51	
3155.622r	160	36. 2		CH	P 4	0,0	2
3155.658r		36. 2		|Ti II	0.13	10	
				Zr II	0.93	63	
3155.795r	66	20. 9		Fe I p	2.40	192a	
3155.905r	84	23. 8		CH	P 4	0,0	2
3155.940r		6. 4		Fe II	3.77	67	
3156.090r	6	1. 9					
3156.190r	18	7. 0		OH	P′ 3	1,1	1
3156.272r	137	43. 6		Fe I	3.24	578	
3156.450r	65	20. 7		Fe I	2.99	454	
3156.565r	48	15. 4		CH	Q 2	1,1	2
				Pt I	1.26	2	
3156.727r	38	12. 2		CH	Q 4	1,1	2
3156.845r	69	33. 9		OH	Q 10	1,1	1
3156.916r	89	40. 9		—CH	Q 5	1,1	2
3157.031r	234	74. 1		Fe I	2.42	160	
				(Zr II)	0.53	23	
3157.143r	148	88. 6		|OH—	Q 21	0,0	1
				Fe I p	2.28	144	
3157.294r	49	24. 6		Fe I			
3157.411r	189	59. 9		Ti II	0.01	4	
3157.501r	123	64. 0		—OH	Q 9	1,1	1
3157.634r	46	18. 2		CH	Q 8	1,1	2
3157.751r	95	30. 1		CH	Q 9	1,1	2
				OH?	P 5	1,1	1
3157.882r	153	48. 6		‖Fe I—	2.47	164	
				V II	2.22	50	
3157.996r	95	30. 1		Fe I	2.42	159	
3158.049r	90	63. 0		Cr II—	4.38	70	
3158.191r	46	14. 7		Mo I	0.00	2	
3158.351r	48	26. 9		Fe II p—	3.94	95	
3158.403r	137	43. 5		CH	P 5	0,0	2
3158.521r	96	30. 4		OH	P 14	0,0	1
3158.633r	80	32. 3		CH	P 5	0,0	2
3158.783r	78	60. 2		Co I	0.10	10	
				CH	Q 11	1,1	2
3158.886r	288	91. 2		Ca II	3.12	4	
3159.011r	70	43. 4		Fe I	2.95	452	
3159.111r	83	33. 3		Cr II	2.48	5	
3159.261r	94	39. 0		Rh II	3.15	2	
				|Fe I	2.61	259	
3159.349r	95	30. 2		Fe II?—	4.15	120	
				V II?	2.37	83	
3159.436r	39	15. 4		Fe I	2.76		
3159.531r	122	38. 7		|Ni I	0.17	11	
				OH	Q 21	0,0	1
3159.671r	85	38. 6		Co I	0.22	9	
					0.58	26	
3159.831r	38	14. 4		—Cr II	4.17	54	
3159.935r	127	40. 4		‖CH—	Q 13	1,1	2
				Mn I	2.92		
3160.082r	46	16. 0		OH—	P 4	1,1	1
				Cr II	4.15	54	
3160.213r	121	38. 5		Fe I	3.26	578	
3160.347r	72	22. 8		Fe I	2.40	192a	
160.472r	35	12. 3					
3160.612r	188	27. 2		Cr I	2.98	115	
				CH	Q 14	1,1	2
3160.647r		48. 1		Fe I	2.42	155	
3160.801r	109	34. 7		V II—	2.26	65	
					2.56	138	
				|OH	Q 10	1,1	1
					Q 11	1,1	
3160.923r	84	37. 0		Fe I p	2.47	160	
3161.033r	68	21. 7		Mn I	2.30	19	
3161.204r	147	46. 6		Ti II	0.11	10	
3161.382r	145	39. 8		Fe I	1.56	52	
				CH	P 6	0,0	2
3161.423r		14. 8					
3161.553r	46	14. 6		Fe I	2.45	195	
3161.653r	44	14. 2		Co I	1.96	73	
3161.774r	147	46. 6		Ti II	0.12	10	
3161.901r	44	21. 1		OH	P 14	0,0	1
3161.952r	123	39. 1		|Fe I	2.40	160	
				Fe II	1.69	7	
3162.123r	10	3. 3					
3162.178r	13	4. 2					
3162.353r	107	33. 8		Fe I	2.45	159	
					2.69	310	
				CH	Q 16	1,1	2
3162.433r	33	15. 3		Cr II	4.07	46	
3162.570r	172	54. 4		Ti II	0.13	10	
3162.703r	26	11. 2		V II	2.38	83	
3162.803r	68	21. 6		Fe II	4.15	120	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3162.923r	8	2. 5					
3163.028r	101	4. 7		V II	2.37	84	
3163.095r		27. 4		Fe II	1.67	7	
3163.223r	45	14. 3		OH	P 6	1,1	1
3163.423r	89	28. 2		Nb II— CH	0.38 Q 17	1 1,1	 2
3163.558r	4	1. 2					
3163.683r	13	4. 2					
3163.768r	51	16. 2		Cr I	3.00	115	
3163.888r	96	30. 8		Fe I			
3163.930r	78	50. 7		Cr II— CH	4.30 P 7	69 0,0	 2
3164.068r	63	20. 0		CH	P 7	0,0	2
3164.173r	36	11. 5		Ni I	1.95	79	
3164.295r	84	26. 5		Fe I Zr II	2.45 0.71	163 50	
3164.418r	61	19. 1		OH	P 5	1,1	1
3164.548r	72	22. 9		OH	Q 11	1,1	1
3164.685r	70	22. 3		CH	Q 18	1,1	2
3164.833r	80	25. 5		V II OH	1.10 Q 22	8 0,0	 1
3164.898r	32	17. 0		Ti II			
3165.005r	90	28. 6		Fe I	2.42	155	
3165.084r	18	5. 7		Fe I p	2.45	194	
3165.157r	72	22. 8		OH Fe I p	Q 12 2.18	1,1 100	1
3165.266r	62	20. 7		Fe I			
3165.35 a	7. 5	2. 8					
3165.420r	23	7. 7		Zr II	1.00	63	
3165.512r	64	20. 4		Ni I	0.03	21	
3165.675r	16	5. 1					
3165.875r	95	29. 9		Fe I	2.45	160	
3165.958r	84	26. 7		Zr II	0.16	5	
3166.130r	71	22. 6		CH	Q 19	1,1	2
3166.255r	83	26. 4		Fe I— Zr II	2.45 0.80	155 48	
3166.335r	46	14. 7		OH	P 15	0,0	1
3166.438r	108	33. 2		Fe I	2.56	259	
3166.595r	46	18. 2		Fe I p	2.20	100	
3166.674r	120	37. 9		CH Fe II	P 8 1.67	0,0 6	2
3166.767r	69	35. 7		CH	P 8	0,0	2
3166.865r	16	6. 2					
3166.985r	50	15. 7		Fe I	3.02	455	
3167.177r	53	16. 7		OH	Q 22	0,0	1
3167.295r	3. 5	1. 0					
3167.415r	19	5. 9		V II	3.79	217	
3167.595r	38	12. 2					
3167.790r	199	14. 3		Fe I CH	2.18 Q 20	99 1,1	 2
3167.859r		37. 0		Fe II	3.81	66	
3167.910r		17. 5		Fe I Fe II p	3.24 3.89	578 82	
3168.045r	20	8. 5		Co I	2.08	108	
3168.151r	1077	340		V II	1.07	8	
3168.280r	24	8. 2					
3168.435r	217	10. 1					
3168.528r		61. 9		Ti II	0.15	10	
3168.672r	100	58. 0		OH	Q 12	1,1	1
3168.856r	89	28. 1		Fe I	2.47	160	
3168.955r	79	25. 0		—OH	P 7	1,1	1
3169.075r	24	7. 9		OH— Fe I p	P′ 6 3.57	1,1 813	1
3169.192r	48	15. 2		OH— Cr II	P 6 4.78	1,1 123	1
3169.366r	87	27. 4		CH	P 9	0,0	2
3169.427r	71	28. 6		CH	P 9	0,0	2
3169.616r	74	23. 5		OH	P 15	0,0	1
3169.753r	81	25. 7		Co I	2.08	109	
3169.861r	56	18. 5		OH	Q 13	1,1	1
3170.006r	18	5. 7		Dy II			
3170.128r	39	12. 5					
3170.256r	19	7. 7					
3170.344r	107	33. 9		Fe II	1.69	6	
3170.481r	47	15. 8					
3170.54 a	9	3. 1					
3170.711r	65	20. 7		Ni I	1.93	78	
3170.806r	13	4. 2					
3170.985r	43	13. 9		Fe I?			
3171.141r	22	7. 0					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3171.216r	13	4. 3					
3171.355r	73	23. 1		Fe I	1.48 3.05	52 548	
3171.466r	12	3. 7					
3171.665r	75	23. 8		Fe I	2.48	160	
3171.771r	33	11. 1					
3171.936r	19	7. 2					
3172.051r	144	26. 2		‖Fe I Cr II	2.20 2.45 4.38	99 193 71	
3172.087r		31. 5		Fe I p (CH)	2.20 P 10	100 0,0	2
3172.297r	46	14. 9		Fe I	2.76	312	
3172.377r	7	2. 4					
3172.507r	43	13. 3					
3172.647r	19	6. 2		—Ru II?	4.18		
3172.722r	12	4. 0		Ti I	0.90	65	
3172.852r	16	5. 1		Tm II?	0.03	8	
3172.997r	58	18. 3		OH	Q 23	0,0	1
3173.210r	67	21. 2		OH	Q 13	1,1	1
3173.408r	87	27. 4		Fe I	2.88	333	
3173.550r	121	15. 4		Co I Cr II?	1.88 4.41	72 83	
3173.605r		28. 1		Fe I	2.86	333	
3173.683r	82	25. 9		Fe I	2.20	101	
3173.840r	12	4. 0		OH	O 11	0,0	1
3173.950r	5	1. 5					
3174.055r	26	8. 2		V II	2.38	84	
3174.155r	23	7. 5		Co I	2.70	138	
3174.221r	39	12. 3		Fe I p	3.28	578	
3174.380r	35	11. 0		OH	P 7	1,1	1
3174.490r	69	21. 7		OH (V II)	P 16 3.80	0,0 217	1
3174.697r	98	31. 0		CH	P 11	0,0	2
3174.785r	31	10. 2		Ti II			
3174.953r	94	29. 8		OH	Q 14	1,1	1
3175.045r	69	25. 8		|Sn I OH (Fe II)	0.42 P 8 4.73	1 1,1 157	1
3175.165r	26	8. 2					
3175.314r	83	26. 4		OH Fe I	Q 23 2.76	0,0	1
3175.39 a	16	9. 1					
3175.451r	119	37. 5		Fe I	2.40	155	
3175.555r	29	11. 5		Mn I	4.34		
3175.710r	12	3. 8		Mn I?	4.33		
3175.820r	12	3. 9					
3175.988r	57	18. 0		Fe I	2.88	333	
3176.100r	7. 5	2. 4					
3176.299r	83	41. 6		Ni I	1.95	77	
3176.351r	94	29. 8		Fe I	2.61	258	
3176.445r	37	14. 5					
3176.600r	5	1. 5		W I?	0.21	5	
3176.675r	6	2. 1					
3176.835r	7	2. 4		Hf II?	0.61	8	
3176.930r	3	1. 1					
3177.080r	14	4. 6		Ru II	2.40	2	
3177.302r	91	28. 8		Co I— CH	P 12	0,0	2
3177.542r	74	23. 3		Fe II	3.90	82	
3177.680r	61	19. 3		OH	P 16	0,0	1
3177.822r	56	17. 7					
3178.021r	129	40. 6		Fe I	2.40	156	
3178.161r	58	18. 3		OH	Q 14	1,1	1
3178.326r	5	1. 9					
3178.431r	26	8. 5					
3178.509r	68	22. 4		Mn I— Fe I	2.32 3.02	19 454	
3178.641r	18	6. 1		Ti II Fe I	3.84	120	
3178.786r	16	5. 8		Cr II?	5.33	173	
3178.966r	46	17. 4		Fe I	2.43	192a	
3179.061r	21	11. 3					
3179.166r	73	45. 4					
3179.342r	580	182		Ca II	3.15	4	
3179.513r	92	63. 5		Fe II Fe I— Fe I	4.73 1.61	157 52	
3179.671r	17	9. 2					
3179.901r	71	26. 3		CH	P 13	0,0	2
3179.966r	34	17. 4		OH	P 8	1,1	1
3180.121r	59	22. 3		—Fe II	4.74	157	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3180.236r	53	17. 8		Fe I	2.45	155	
3180.491r	82	26. 2		OH—	Q 15	1,1	1
3180.710r	476	110		Cr II	2.54	9	
3180.746r		110		Fe I	0.09	7	
3180.881r	27	8. 7					
3180.991r	16	5. 0					
3181.131r	9. 5	3. 6		Fe I			
3181.201r	21	12. 8					
3181.276r	182	57. 4		Ca II	3.15	4	
3181.420r	76	30. 6		OH Cr II	P 9 2.54	1,1 9	1
3181.531r	91	35. 4		Fe I	2.59	258	
3181.641r	50	15. 7		OH	Q 24	0,0	1
3181.745r	27	8. 5		Ni I	1.93	78	
3181.864r	71	22. 4		Fe I	2.87	333	
3181.911r	49	15. 4		Fe I Zr II	2.47 3.02 0.71	155 505 48	
3182.061r	78	24. 5		Fe I— CH	2.42 2.85 P 9	159 333 1,1	2
3182.121r	44	17. 1		Co I	2.01	73	
3182.246r	43	13. 5					
3182.316r	37	11. 6					
3182.471r	81	25. 6		CH	P 14	0,0	2
3182.651r	35	11. 0		—V II	2.60	150	
3182.807r	34	14. 2					
3182.850r	41	12. 9		Zr II	0.56	23	
3182.990r	85	26. 7		Fe I Ni I	2.20 1.99	100 78	
3183.05 a	47	22. 6					
3183.124r	87	27. 4		Fe II	1.69	7	
3183.261r	62	19. 4		Ni I	1.95	78	
3183.317r	36	11. 8		Cr II	4.41	82	
3183.422r	73	23. 0		V I	0.02	14	
3183.520r	36	11. 3		OH (Ce II)	Q 15 0.56	1,1 216	1
3183.581r	66	20. 8		Fe I p	2.43	192a	
3183.762r	2	0. 8					
3183.964r	119	24. 7		V I	0.04	14	
3183.998r		22. 5		V I	0.00	14	
3184.114r	67	21. 1		Ti II	0.01	3	
3184.210r	49	15. 4		Fe I			
3184.379r	93	29. 1		Ni I	0.27	11	
3184.442r	32	17. 4		Fe II p	3.81	67	
3184.547r	20	6. 8					
3184.615r	49	15. 4		Fe I	2.45 2.45	155 162	
3184.762r	19	5. 9					
3184.895r	130	41. 0		Fe I	0.05	7	
3185.022r	96	34. 1		CH	P 15	0,0	2
3185.092r	25	13. 3		Fe II	3.81	67	
3185.222r	17	6. 3					
3185.327r	114	35. 8		Fe II	1.72	7	
3185.388r	82	38. 8		V I	0.07	14	
3185.564r	39	12. 3					
3185.674r	55	17. 4					
3185.804r	12	4. 0		OH	P′ 9	1,1	1
3185.979r	46	14. 6		OH	P 9	1,1	1
3186.104r	86	27. 5		OH	P 17	0,0	1
3186.272r	25	9. 1		Fe I			
3186.383r	63	26. 2		Co I OH	0.17 Q 16	8 1,1	1
3186.453r	124	39. 0		Ti I	0.00	27	
3186.634r	18	6. 8					
3186.752r	163	43. 9		Fe II	1.69	6	
3186.794r		19. 2		—Fe I	2.22	100	
3186.86 a	98	43. 0					
3186.964r	64	28. 7					
3187.064r	15	6. 3		Mn II	4.69		
3187.168r	63	20. 1		Fe I	2.88	333	
3187.308r	69	21. 8		Fe II	4.15	120	
3187.556r	87	27. 3		CH— CH	P 16 P 16	0,0 0,0	2 2
3187.713r	111	34. 9		V II	1.07	8	
3187.899r	13	4. 2		Rh II	3.45	4	
3188.034r	119	29. 8		OH Cr I	P 10 2.99	1,1 92	1
3188.059r		19. 8		V II	2.22	49	
3188.199r	9	2. 8					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3188.335r	111	21.3		CH	P 11	1,1	2
3188.376r		21.3		Co I	1.96	74	
3188.544r	168	55.5		V II— Fe I	1.10 2.40	8 159	
3188.822r	111	34.7		Fe I	2.48	159	
3188.934r	24	9.3					
3189.084r	2.5	0.8					
3189.169r	0.5	0.6					
3189.317r	35	10.9		OH	Q 16	1,1	1
3189.494r	18	5.7		Ti II	3.82	120	
3189.634r	1.5	0.5		Fe I			
3189.764r	29	9.1		Co I	0.22	9	
3189.824r	10	3.7		Cr II?	4.78	123	
3189.964r	15	5.0		Mn I	4.35 4.36		
3190.042r	95	29.8		Fe I— CH	2.59 P 17	259 0,0	2
3190.104r	105	52.2		CH	P 17	0,0	2
3190.164r	33	11.5					
3190.294r	23	7.4		OH	R 7, 12	2,2	1
3190.404r	11	3.4		OH?	R 9	2,2	1
3190.539r	24	7.7					
3190.683r	97	30.6		V II Fe I	1.13 3.05	8 548	
3190.849r	202	44.5		Fe I	3.05	548	
3190.899r		34.7		Ti II	1.08	26	
3191.124r	62	19.6		Fe I	2.56	258	
3191.194r	23	9.3		Fe I	2.99	452	
3191.314r	20	6.2		Co I	0.17	7	
3191.414r	81	25.4		Fe I p CH	3.25 P 12	682 1,1	2
3191.564r	11	3.9		W I?	0.00	5	
3191.664r	89	28.1		Fe I	0.00	8	
3191.799r	57	17.9		OH	P 18	0,0	1
3191.889r	46	14.5		Ni I— Zr II	3.54 0.80	125 50	
3192.008r	145	37.3		Ti I	0.02	27	
3192.039r		17.8		Fe II	3.81	66	
3192.194r	65	20.6		Co I	1.96	72	
3192.274r	71	22.3		Ti II	1.08	25	
3192.396r	115	36.3		Fe I	2.22 3.40	100 711	
3192.534r	89	30.1		‖Fe I— CH?	P 18	0,0	2
3192.617r	39	20.1		CH	P 18	0,0	2
3192.724r	71	35.7		OH	Q 17	1,1	1
3192.824r	172	54.0		Fe I	2.48	155	
3192.917r	152	67.0		Fe II	1.67	6	
3193.054r	38	18.3		OH	Q 25	0,0	1
3193.234r	264	64.4		Fe I	0.00	7	
3193.301r		55.2		Fe I	2.47	159	
3193.549r	24	8.1		Hf II—	0.38	2	
3193.734r	217	25.5		Fe I Fe II p	3.27 3.89	682 79	
3193.816r		51.1		Fe II	1.72	6	
3193.979r	32	11.3		Mo I V II	0.00 2.22	3 49	
3194.094r	67	20.9		—Cu I	1.64	3	
3194.234r	55	17.4		Hf II— |Ti II	0.45 3.86	10 120	
3194.339r	26	9.4					
3194.431r	98	30.7		Fe I	2.47	155	
3194.524r	74	23.1		CH	P 13	1,1	2
3194.586r	94	29.5		Ti II	3.88	120	
3194.764r	20	6.4		Ti II? Ni I p	3.42	108	
3194.849r	68	21.3		OH Ce II	P 18 0.61	0,0 217	1
3194.973r	41	12.9		Nb II	0.33	1	
3195.085r	76	23.7		CH OH	P 19 P 11	0,0 1,1	2 1
3195.140r	45	18.5		Ru II CH	4.22 P 19	0,0	2
3195.230r	80	25.3		Fe I			
3195.37 a	19	7.2					
3195.405r	24	7.5					
3195.593r	126	39.4		Ni I— Y II	0.27 0.10	12 10	
3195.725r	70	22.7		Ti II	1.08	25	
3195.875r	20	7.2					
3195.990r	51	32.2		Fe I	2.45	192a	
3196.106r	245	76.7		Fe II	1.67	7	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3196.195r	33	21. 3					
3196.340r	39	13. 6		Cr II?	2.54	9	
3196.465r	30	9. 4					
3196.570r	49	15. 5		V II	2.27	62	
3196.625r	47	14. 9		Fe II p	3.97	95	
3196.75 a	31	11. 6					
3196.835r	48	30. 4					
3196.925r	218	43. 9		Fe I	2.42	155	
3196.973r		43. 9		Cr II—	2.54	9	
				|Fe I	0.05	8	
3197.110r	274	96. 3		Cr II—	2.54	9	
				Ni I	0.21	24	
3197.206r	25	13. 0					
3197.361r	8. 5	2. 7					
3197.541r	105	32. 8		Ti II	0.03	3	
				Fe I	3.42	711	
3197.596r	64	25. 8		V II?—	2.60	150	
				CH	P 20	0,0	2
3197.710r	75	23. 6		CH	P 20	0,0	2
3197.871r	1	0. 3					
3198.021r	57	17. 8		V I	0.02	14	
3198.101r	25	8. 8		Cr I	2.99	91	
3198.20 a	17	5. 5					
3198.276r	48	15. 0		Fe I	2.61	258	
3198.487r	58	18. 2		Fe I			
3198.687r	23	7. 2		Co I	0.63	26	
3198.902r	10	3. 3		Fe I?—			
3199.137r	52	16. 2		OH—	P 11	1,1	1
3199.237r	11	3. 6					
3199.342r	60	19. 7		Co I—	0.17	9	
3199.527r	196	61. 2		Fe I	2.42	156	
				(Fe I p)	0.11	7	
3199.662r	55	21. 4					
3199.822r	23	9. 4		V I?	1.86		
3199.922r	114	35. 8		Ti I	0.05	27	
3200.137r	59	20. 6		CH	P 21	0,0	2
3200.295r	147	46. 2		Y II—	0.13	10	
3200.469r	207	64. 8		Ni I—	0.03	23	
				‖Fe I	2.47	155	
					2.47	162	
3200.622r	13	5. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3200.791r	81	25. 5		Fe I	0.09	8	
3200.962r	71	22. 2		OH	P 19	0,0	1
3201.014r	50	16. 5					
3201.127r	12	3. 8		Fe I			
3201.262r	40	12. 5		Cr II	4.74	114	
3201.382r	26	8. 3					
3201.512r	42	13. 3		OH	Q 4	2,2	1
3201.612r	34	10. 8		Ti I	1.05	90	
3201.722r	10	3. 1		Ce II	0.86	76	
3201.892r	14	4. 5		Fe I	2.45	159	
3201.957r	17	5. 3					
3202.141r	68	21. 4		Ni I	3.19	94	
3202.257r	40	13. 4		OH	Q 18	1,1	1
3202.382r	76	26. 7		|V I	0.04	14	
				OH	P 12	1,1	1
3202.539r	156	48. 9		Ti II—	1.08	26	
				Fe I	3.05	547	
3202.667r	86	26. 9		Fe I p	1.61	52	
3202.695r	29	9. 1		CH	P 22	0,0	2
				OH	Q 26	0,0	1
3202.822r	50	15. 6		CH	P 22	0,0	2
3202.942r	15	4. 7		Fe I			
3203.032r	16	5. 2		Co I	0.10	9	
3203.162r	4	1. 3					
3203.323r	71	22. 4		Y II	0.10	10	
3203.440r	78	24. 4		Ti II	0.00	3	
3203.512r	24	7. 5		Fe II—	3.90	79	
				‖Cr II	4.07	46	
3203.612r	3	1. 3		Ti I?	0.02	26	
3203.712r	3	1. 1		Fe II	5.95	196	
3203.832r	57	17. 9		Ti I	0.02	27	
3203.980r	37	11. 5		OH	P 19	0,0	1
3204.113r	2	0. 6					
3204.284r	52	16. 2		—Fe I	3.27		
3204.453r	14	4. 5		Fe I			
3204.573r	2	0. 6					
3204.693r	2. 5	0. 8					
3204.863r	28	8. 7		Ti I	1.05	90	
3204.953r	20	6. 3		Nb II	2.16		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3205.113r	41	12. 9		Cr II	4.75	114	
3205.223r	66	25. 2					
3205.333r	18	17. 7		CH	P 23	0,0	2
3205.408r	168	52. 5		Fe I CH	2.48 P 23	155 0,0	2
3205.573r	36	11. 3		V I	1.35	73	
3205.653r	28	8. 7		Ti II p	1.16	46	
3205.783r	35	11. 0		Fe I	2.56?	252	
3205.838r	20	6. 2		Ti I	0.00	26	
3206.007r	45	14. 0		Ti II	1.08	26	
3206.113r	12	4. 0					
3206.238r	30	9. 5		OH	P 12	1,1	1
3206.348r	19	5. 9		Ti I	2.02	179	
3206.493r	9	3. 6		Fe I?			
3206.533r	16	5. 0		OH	Q 6	2,2	1
3206.763r	45	14. 1		—OH	Q 19	1,1	1
3206.943r	65	20. 2		Mn I— Ni I	2.11 3.40	14 94	
3207.081r	59	18. 5		Fe I	2.40	159	
3207.178r	203	63. 3		Sm II	0.00	2	
3207.248r	12	4. 0		W I	0.37	9	
3207.34 a	5. 5	1. 7		Ti I	1.05	90	
3207.413r	30	9. 6		V I	0.07	14	
3207.563r	15	4. 8					
3207.676r	58	13. 3		Fe I—	2.83	382	
3207.711r		7. 5		Fe I			
3207.893r	10	3. 2		Ti I	1.98	179	
3207.989r	36	11. 3		CH—	P 24	0,0	2
3208.094r	45	14. 0		CH	P 24	0,0	2
3208.214r	10	3. 1		Cu I	1.64	3	
3208.352r	66	20. 5		V II	1.10	8	
3208.474r	90	28. 0		Fe I	3.43	711	
3208.595r	88	27. 8		Cr II	2.54	9	
3208.689r	45	17. 5					
3208.794r	21	8. 4		OH	P 3	2,2	1
3208.894r	27	8. 8		Ni II	2.86	2	
3209.004r	22	8. 8		Ti I	1.97	179	
3209.117r	51	30. 3		Fe I	2.18	97	
3209.185r	117	36. 5		Cr II	2.54	9	
3209.299r	130	40. 5		Fe I	2.81 3.42	333 711	
3209.434r	35	10. 9		OH	Q 19	1,1	1
3209.489r	16	5. 2		OH	Q 7	2,2	1
3209.624r	12	3. 8		Fe II	4.48	137	
3209.674r	5. 5	1. 7					
3209.764r	10	3. 1					
3209.934r	72	22. 6		Ca I Ni I	1.88 3.31	13 94	
3210.046r	35	11. 1		OH	P 13	1,1	1
3210.225r	158	49. 5		Fe I	2.42	159	
3210.452r	164	39. 3		Fe II	1.72	6	
3210.480r		28. 2		OH	P 20	0,0	1
3210.639r	52	16. 5		Fe I?			
3210.724r	42	20. 5		CH OH	P 25 Q 27	0,0 0,0	2 1
3210.836r	113	35. 3		Fe I	2.47	156	
3210.944r	26	8. 3		Zr II	1.00	63	
3211.064r	25	7. 9		Fe II	3.94	95	
3211.169r	32	10. 1					
3211.209r	28	8. 8		CH?	P 18	1,1	2
3211.309r	18	5. 7		Cr I	3.42	220	
3211.490r	91	28. 4		Fe I	2.48	162	
3211.634r	73	40. 6					
3211.684r	121	37. 7		Fe I	3.33	711	
3211.884r	88	46. 0		Fe I	2.22 3.40	98 711	
3212.005r	200	62. 4		Fe I	2.40	158	
3212.165r	76	29. 1		Fe I			
3212.323r	59	18. 4					
3212.440r	24	8. 5		Fe I? V I	1.38	73	
3212.545r	57	17. 9		Cr II	4.41	81	
3212.690r	33	10. 2		Ti II p	0.11	9	
3212.892r	94	29. 2		Mn I (Cr II)	2.11 4.76	14 114	
3213.135r	91	31. 8		Ti I Ti II	1.07 0.01	90 3	
3213.311r	185	57. 5		Fe II	1.69	6	
3213.404r	28	18. 4		Ni I	3.40	91	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3213.474r	57	22. 8		OH	P 20	0,0	1
3213.564r	32	10. 6		Ti II Fe I	3.88	120	
3213.694r	44	13. 9					
3213.744r	55	17. 4		OH— Fe I	P 13 3.02	1,1 452	1
3213.929r	26	15. 4					
3214.030r	229	46. 0		Fe I	2.45 3.37	156 711	
3214.072r		56. 1		Ni I Fe I	3.19 2.45	93 158	
3214.222r	68	27. 7		Zr II— Ti I	0.09 0.05	3 27	
3214.402r	105	32. 7		Fe I	0.09	7	
3214.494r	44	18. 4		OH	Q 20	1,1	1
3214.614r	38	12. 0		Fe I	2.28	143	
3214.776r	106	33. 2		Ti II V II	0.05 1.13	3 8	
3214.864r	30	11. 3		CH?	P 19	1,1	2
3215.029r	29	9. 0		OH	Q 7	2,2	1
3215.179r	105	20. 4		Ca I	1.89	13	
3215.204r		20. 4		Fe I			
3215.354r	28	10. 8		Ca I	1.89	13	
3215.404r	71	22. 2		Fe I			
3215.594r	8. 5	2. 7		Nb II	0.44	1	
3215.644r	19	6. 1		Fe I	2.81	332	
3215.714r	14	4. 3					
3215.844r	69	21. 5					
3215.948r	123	38. 6		Fe I	2.47	156	
3216.049r	23	9. 3		Fe I p	3.30	682	
3216.214r	50	15. 7		Ti I	1.07	90	
3216.359r	4. 5	1. 4		Fe I?			
3216.546r	62	19. 5		Cr II	4.41	82	
3216.694r	69	21. 6		Y II	0.13	10	
3216.815r	49	15. 3		Ni I	3.31	93	
3216.927r	119	37. 0		Mn I Fe I	0.00	3	
3217.070r	168	39. 6		Ti II	0.03	2	
3217.097r		27. 6		V I V II	0.04 2.05	14 38	
3217.300r	10	4. 8					
3217.392r	133	41. 6		Fe I Cr II	2.40 2.54	157 9	
3217.545r	65	32. 3		Fe I p	2.59	254	
3217.725r	11	3. 6					
3217.841r	72	22. 3		Ni I	3.19	91	
3217.935r	35	11. 1		Ti I	1.97	179	
3218.075r	37	11. 6		OH	P 14	1,1	1
3218.205r	12	3. 7					
3218.276r	84	26. 1		Ti II	1.57	84	
3218.450r	13	4. 2		Ti II p	1.16	46	
3218.614r	28	8. 8		Sm II			
3218.684r	33	10. 2		Cr I	2.99	92	
3218.864r	16	5. 8		V I	1.35	72	
3218.984r	29	9. 0		Ce II?	0.86	75	
3219.146r	76	23. 6		Co I	0.10	8	
3219.199r	34	12. 0		Ti I	1.98	179	
3219.369r	35	14. 7		Fe I p	2.69	308	
3219.429r	8. 5	4. 6		OH?	P 5	2,2	1
3219.597r	192	59. 6		Fe I	2.45	156	
3219.805r	167	52. 0		Fe I	2.42	158	
3219.965r	43	15. 2					
3220.145r	31	9. 5					
3220.312r	51	16. 1					
3220.433r	60	18. 7		OH	P 21	0,0	1
3220.550r	39	12. 2		Ti II	0.12	9	
3220.607r	30	10. 1		Co I	2.96	152	
3220.775r	32	10. 5		Ir I	0.35	5	
3220.835r	30	9. 2		Fe II	4.08	106	
3220.970r	22	7. 1					
3221.135r	46	14. 3		OH— Ti I	Q 9 0.02	2,2 26	1
3221.274r	80	24. 8		Ni I	3.83	185	
3221.385r	39	13. 1		Ti I	2.00	179	
3221.545r	38	12. 1		OH	Q 28	0,0	1
3221.659r	104	32. 4		Ni I	0.00	8	
3221.760r	29	12. 2		Ti II p	1.16	46	
3221.888r	98	18. 8					
3221.920r		34. 2		Fe I	2.48	156	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3222.087r	258	80. 0		Fe I	2.40	156	
3222.260r	33	18. 2					
3222.444r	36	12. 2		Zr II	1.76	104	
3222.584r	44	13. 7					
3222.729r	51	28. 7		Ti I	0.02	26	
3222.855r	205	63. 6		Ti II	0.01	2	
3222.944r	24	25. 3					
3223.099r	44	13. 8		Fe I	3.30	682	
3223.263r	85	26. 5		Fe I	1.48	51	
3223.364r	44	13. 7		OH	P 21	0,0	1
3223.449r	32	13. 8		Fe I	3.30		
3223.516r	66	20. 5		|Ti I	2.02	179	
				Ni I	3.19	92	
					3.50	94	
3223.639r	34	10. 5					
3223.744r	25	7. 4		Gd II?	0.24	10	
				OH?	Q 28	0.0	1
3223.847r	51	15. 8		Fe I	0.99	27	
3224.039r	9. 5	3. 0		Fe I p	3.64	920	
3224.253r	104	32. 5		Ti II	1.58	84	
3224.425r	9. 5	3. 0					
3224.485r	11	3. 3					
3224.635r	45	14. 1		Co I	1.88	71	
3224.767r	31	9. 5		Mn I	0.00	3	
3224.925r	76	23. 5		Fe I			
3225.031r	125	41. 4		Ni I	0.42	39	
3225.122r	22	14. 7		OH	Q 11	2,2	1
3225.267r	23	8. 7		OH	Q 21	1,1	1
3225.372r	18	7. 8		Cr II	4.92	140	
3225.462r	27	13. 5		Cr II—	4.07	45	
				‖Nb II	0.29	1	
3225.617r	36	29. 5		Fe I	2.43	192	
					3.64	920	
3225.712r	33	57. 7					
3225.804r	506	157. 1		Fe I	2.40	155	
3225.909r	26	27. 6		Ca I	1.90	13	
3226.028r	40	26. 4		Mn I	2.14	14	
3226.151r	59	29. 4		Ca I	1.90	13	
				Ti I	2.04	179	
3226.227r	14	6. 5		Ti I	0.05	27	
3226.347r	18	7. 0		Ca I	1.90	13	
3226.446r	48	16. 9		OH	P 15	1,1	1
3226.541r	42	14. 1		Cr I	0.98	25	
3226.738r	130	24. 8		Fe I	0.09	8	
3226.764r		27. 0		Ti II	0.03	3	
3226.891r	40	14. 4		V II	3.12	185	
3227.007r	92	28. 5		Co I	2.33	124	
				|Ni I	0.00	7	
3227.059r	61	19. 1		Fe I	2.48	156	
3227.176r	70	27. 0		Fe I p	2.56	247	
3227.276r	19	7. 0					
3227.426r	24	10. 5		V I?	2.37	134	
3227.496r	19	10. 2					
3227.631r	46	38. 3					
3227.761r	424	99. 6		Fe II	1.67	6	
3227.809r		99. 6		Fe I	2.42	157	
3227.996r	57	45. 9		Fe I	2.83	379	
3228.103r	75	33. 9		Mn I	2.11	14	
3228.254r	107	38. 2		Fe I	2.47	157	
3228.387r	31	15. 2		Ti II p	1.16	46	
3228.502r	52	16. 9		Ru II—	4.04		
3228.619r	106	33. 1		|Ti II	1.08	24	
				Fe I			
				Fe II			
3228.837r	54	21. 6		Zr II	0.80	49	
3228.900r	95	29. 6		|Fe I	2.48	157	
				OH	P 15	1,1	1
3229.147r	191	37. 2		Fe I	0.12	8	
3229.208r		49. 6		Ti II	0.00	2	
3229.352r	26	10. 9		Co I	3.02	152	
				Cr II	4.07	46	
3229.426r	104	32. 3		Ti II	1.13	36	
3229.588r	99	30. 9		Fe I	2.83	333	
3229.795r	66	25. 8		Fe I	2.59	247	
3229.883r	104	32. 3		—Cr II	4.76	114	
3229.990r	104	34. 6		Fe I	3.05	546	
3230.097r	45	18. 8		Fe I	0.96	27	
3230.207r	131	40. 6		Fe I	2.47	158	
3230.472r	56	17. 4		—Fe II	3.97	95	
3230.592r	34	10. 5		Sm II	0.18	21	
3230.727r	70	22. 5		OH	P 22	0,0	1
				|Mn I	2.14	14	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib Band	Notes
3230.846r	44	13. 5					
3231.007r	97	32		Fe I	2.45	157	
3231.077r	24	9. 0		Ni I p	3.42	106	
3231.11 a	10	3. 7					
3231.222r	42	13. 1		OH?— Ce II	P 7 0.50	2,2 149	1
3231.326r	106	36. 5		Ti II	0.13	9	
3231.472r	36	11. 3		OH	Q 22 P 6	1,1 2,2	1
3231.587r	49	16. 4		Fe I	1.48	50	
3231.707r	27	8. 4		Fe II Zr II	3.89 0.04	80 3	
3231.842r	6. 5	2. 0					
3231.947r	39	12. 2		V II	2.26	61	
3232.076r	18	5. 8		Os I	0.52	3	
3232.156r	30	9. 5		Fe I	2.61	258	
3232.290r	87	27. 1		Ti II	1.12	36	
3232.392r	13	4. 2					
3232.547r	3	0. 9		Sb I	2.29	2	
3232.687r	36	12. 9		Fe I—			
3232.797r	45	20. 4		Fe II	4.15	119	
3232.938r	214	66. 1		Ni I	0.00	7	
3233.054r	93	46. 6		Fe I	3.24	620	
3233.167r	52	23. 6		Ni I	3.31 3.83	91 184	
3233.277r	45	14. 8		Cr I— |Fe I	0.97 2.28	25 142	
3233.437r	4. 5	1. 5					
3233.537r	33	10. 9		V II	2.27	61	
3233.669r	51	16. 8		OH	P 22	0,0	1
3233.762r	65	25. 6		V II	2.27	61	
3233.976r	127	45. 0		‖Fe I Mn I	2.42 3.07	158	
3234.072r	88	53. 0		|Cr II— Mn I	4.29 3.07	63	
3234.277r	11	6. 2		Ce II	0.27	80	
3234.352r	32	22. 3		Ru II?—	4.08		
3234.518r	49	15. 2		Ti II	0.05	2	
3234.647r	109	69. 0		Ni I Fe I	0.11 0.05	21 8	
3234.777r	13	9. 6		Fe I?			
3234.932r	50	21. 2		Fe II	0.99	1	
3235.027r	30	11. 7		Mn I	3.07		
3235.187r	35	12. 4		Fe I— OH	P 16	1,1	1
3235.327r	58	19. 1		Fe I Mn I	2.73 3.07	309	
3235.557r	71	10. 2		Co I	1.96 2.79	71 138	
3235.584r		15. 7		Fe I	2.69	308	
3235.771r	84	19. 5		Ni I	0.27	11	
3235.796r		11. 6		Co I	2.01	72	
3235.933r	10	3. 0		Ti I? p	0.83	47	
3236.134r	96	31. 6		Ti II	1.08	24	
3236.232r	47	18. 8		Fe I	0.05	7	
3236.423r	41	23. 7		Nb II—	0.38	1	
3236.586r	385	118		Ti II	0.03	2	
3236.788r	89	49. 4		Mn I	2.14 3.07	14	
3236.923r	10	4. 0		OH	P 7	2,2	1
3237.037r	49	16. 6		Co I	0.10	7	
3237.143r	13	4. 5					
3237.233r	52	16. 7		Fe I	2.59	256	
3237.431r	83	25. 7		Mn I Fe II	3.07 3.89	81	
3237.583r	21	6. 5		OH	P 8	2,2	1
3237.723r	23	7. 1		Cr I	2.97	114	
3237.850r	87	26. 3		|Fe II— V II	3.89 2.04	81 38	
3238.038r	22	9. 8					
3238.088r	71	22. 0		Cr I	2.98	114	
3238.213r	12	3. 9		Ti I	2.02	179	
3238.318r	14	4. 5		Fe I	3.05	545	
3238.518r	47	5. 5		Cr II— Fe I	4.07 3.04	45 397	
3238.553r		8. 8		OH	P 16	1,1	1
3238.767r	52	18. 8		Cr II	4.32	63	
3238.897r	73	37. 2		OH— Co I	Q 13 3.07	2,2	1
3239.052r	267	82. 5		Ti II	0.01	2	
3239.317r	94	41. 0		—Fe I p	2.84	379	
3239.456r	161	49. 7		Fe I	2.42	157	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3239.668r	102	31. 6		Ti II	1.08	24	
3239.848r	16	4. 9		V II	2.27	61	
3240.019r	35	10. 9		Fe I	3.05	545	
3240.121r	25	7. 9		Fe I	2.45	158	
3240.263r	9	2. 8					
3240.404r	53	16. 6		Mn I	2.11	13	
3240.498r	7	2. 1					
3240.608r	49	15. 1		Mn I	2.16	14	
3240.708r	62	19. 2		Ti II	0.11	9	
3240.873r	8	2. 5		Ti I? p	0.85	47	
3240.963r	20	6. 4		Cr I	0.96	25	
3241.050r	49	15. 1		Zr II	0.04	4	
3241.138r	9. 5	2. 8		OH?— Sm II	Q 14 0.04	2,2 6	1
3241.248r	5. 5	1. 6					
3241.391r	47	14. 5		Fe I			
3241.489r	63	19. 5		Fe I	1.01	27	
3241.603r	20	6. 3		Sm II?	0.19	22	
3241.688r	42	13. 2		Fe II	3.90	80	
3241.818r	27	11. 8					
3242.007r	270	83. 0		Ti II	0.00	2	
3242.108r	14	8. 8					
3242.277r	66	23. 6		Fe I— |Y II	2.59 0.18	255 10	
3242.413r	5. 5	1. 8					
3242.489r	4	1. 3					
3242.629r	27	8. 5					
3242.709r	26	8. 0		Pd I	0.81	3	
3242.834r	20	6. 2		OH	P 8	2,2	1
3243.014r	157	16. 7					
3243.071r		39. 2		Ni I	0.03	22	
3243.214r	40	14. 8		OH	Q 23	1,1	1
3243.414r	83	25. 6		Fe I	2.83 3.33	381 710	
3243.564r	20	6. 4		Co I	1.74	47	
3243.765r	98	30. 5		Fe II— Mn I	4.15 2.16	119 14	
3243.860r	67	32. 0		Co I	1.88	69	
3244.029r	6. 5	2. 0					
3244.139r	177	9. 3		Cr I	1.00	25	
3244.199r		58. 9		Fe I	2.42	156	
3244.354r	53	21. 6		OH	P 23 P 17	0,0 1,1	1
3244.498r	24	7. 4		OH—	Q 14	2,2	1
3244.548r	18	5. 5		Ti I? p	0.84	47	
3244.703r	24	7. 4		—Cr I?	2.98	114	
3244.868r	30	9. 4					
3245.018r	39	12. 1					
3245.138r	34	10. 5		La II	0.17	32	
3245.278r	35	10. 9		Cr II?	4.32	62	
3245.398r	76	23. 6		Ni I	3.48	108	
3245.49 a	25	10. 6		Cr I	0.98	25	
3245.543r	48	14. 8		Cr I	2.97	113	
3245.728r	9. 5	2. 9		Co I	2.79	138	
3245.788r	18	5. 5		Fe I p	3.64	920	
3245.985r	111	23. 3		Fe I	0.91	27	
3246.031r		18. 5		Fe I	0.11	8	
3246.171r	6. 5	2. 0					
3246.310r	8. 5	2. 6					
3246.494r	68	21. 0		Fe I	2.59	252	
3246.684r	12	3. 7		Ce II?	0.42	130	
3246.770r	16	5. 1					
3246.977r	108	33. 4		Fe I	2.20	95	
3247.192r	110	34. 0		|Fe II Co I	3.89 1.88	81 70	
3247.301r	76	23. 6		‖Fe I Cr I	2.47 0.97	157 25	
3247.406r	46	29. 7		Fe II	4.15	119	
3247.569r	246	76. 0		Cu I	0.00	1	
3247.789r	40	14. 4					
3247.976r	21	6. 5					
3248.129r	80	38. 0		Fe I—			
3248.220r	117	36. 1		Fe I	2.45	157	
3248.323r	20	7. 6					
3248.470r	43	14. 0		Ni I	0.03	21	
3248.518r	62	22. 6		Mn I	2.16	14	
3248.612r	148	46. 0		|Ti II Ti I	1.24 1.05	66 89	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3248.722r	54	16. 7		Ti II p	0.12	9	
3248.868r	21	6. 7					
3249.028r	56	17. 4		Fe I	2.73	308	
3249.194r	95	29. 6		Fe I	2.56	253	
3249.378r	55	20. 4		Ti II	1.08	23	
3249.458r	81	25. 1		Ni I	0.27	10	
3249.535r	42	19. 7		Fe I— V I	1.56 0.07	51 13	
3249.635r	18	7. 9		V II	2.05	38	
3249.684r	59	18. 4		Fe II	3.89	81	
3249.861r	34	10. 5		Fe I			
3249.927r	26	8. 2		Fe II	3.89	78	
3250.017r	53	16. 5		Co I	0.58	26	
3250.151r	31	9. 6					
3250.395r	130	40. 2		Fe I (Zr II)	2.28 2.86 1.77	142 379 125	
3250.637r	116	35. 8		Fe I	2.18	95	
3250.767r	114	40. 5		Ni I— V II	0.42 2.90	39 171	
3250.941r	25	7. 8					
3251.154r	76	29. 1		Mn I	2.18	14	
3251.256r	109	33. 5		Fe I	2.20	93	
3251.353r	58	25. 1		Fe II p Sc II?	4.49 0.01	137 5	
3251.539r	18	5. 6					
3251.612r	22	6. 7		Cr I?			
3251.685r	25	7. 7		Pd I? Co I	1.25 2.93	6 152	
3251.857r 3251.937r	162	16. 7 38. 4		Cr I— V II Ti II	2.98 2.52 0.01	113 108 2	
3252.125r	24	7. 3		Fe I p	2.56	247	
3252.239r	17	5. 2		—Fe I			
3252.440r	88	27. 2		Fe I			
3252.609r	39	12. 0		OH	P 24	0,0	1
3252.745r	40	12. 5		—Fe I			
3252.892r 3252.970r	175	44. 4 33. 9		Ti II Fe I Mn I (Ti II p)	0.03 2.56 2.18 1.08	2 252 14 23	
3253.038r		0. 7		OH	Q 24	1 1	1
3253.154r	25	9. 0					
3253.271r	23	7. 1		Cr I—	3.00	114	
3253.411r	15	4. 8		Sm II			
3253.564r 3253.611r	73	4. 5 20. 8		Fe I	3.25	681	
3253.721r	11	3. 5		Hf II	0.38	1	
3253.844r	61	19. 0		Fe I	2.56	250	
3253.958r	58	19. 4		Fe I	2.61	257	
3254.060r	37	13. 1		Mn I	2.11	12	
3254.194r	48	47. 7		Co I	1.88	69	
3254.261r	161	49. 5		Ti II (Fe I)	0.05 2.56	2 249	
3254.377r	80	33. 0		Fe I	3.27	620	
3254.470r	53	16. 4		Fe I p	2.45	158	
3254.761r	93	28. 6		Fe I— V I V II	2.69 0.07 2.03	308 13 38	
3255.030r	17	5. 2					
3255.163r	10	3. 0					
3255.293r	18	5. 4		Cr II?	4.92	138	
3255.497r	31	9. 7		OH—	P 24	0,0	1
3255.680r	23	7. 2		Sc I V I?	0.00 1.08	9	
3255.817r 3255.901r 3255.982r	124	0. 1 37. 9 0. 1		Fe II	0.99	1	
3256.144r	56	17. 4		Mn I	2.18	14	
3256.262r	10	3. 1					
3256.496r	45	13. 9		Fe I p	2.47 3.00	158 397	
3256.710r	52	16. 2		Fe I			
3256.961r	12	3. 9					
3257.103r	47	14. 5		OH— Fe I	P 18	1,1	1
3257.235r	69	21. 4		Fe I	0.99 2.99	27 451	
3257.360r	26	8. 3		Fe II	3.97	94	
3257.428r	56	17. 4					
3257.600r	77	24. 7		Fe I	2.18	90	
3257.823r	42	12. 9		Cr I	3.00	113	
3257.907r	30	9. 2		V II (Fe II)	2.49 5.57	108 178	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3258.020r	26	8. 0		Co I	1.71	47	
3258.100r	27	8. 3		Fe I			
3258.287r	6. 5	2. 0					
3258.421r	50	15. 4		Mn I	2.19	14	
3258.631r	33	10. 2		Fe I	2.48	157	
3258.783r	62	19. 3		Fe II	3.89	81	
3258.913r	7	2. 2					
3259.062r	58	18. 0		Fe II	3.90	81	
3259.236r	5	1. 5		Co I?	3.07	153	
3259.373r	2	0. 6					
3259.446r	5. 5	1. 7		Fe II? p	5.57	178	
3259.599r	25	7. 9		—Cr I?	0.98	25	
3259.713r	20	6. 1		Fe I			
3259.856r	13	3. 9		Co I?			
3259.989r	70	21. 7		‖Fe I	2.45	157	
				Cr I	3.00	114	
3260.145r	17	5. 3		Zr I	0.52	35	
3260.265r	96	31. 6		Ti I	1.07	89	
				|Ti II	1.16	45	
				|Mn I—	2.19	14	
				‖Fe I	2.56	250	
3260.472r	10	3. 3		Fe I?			
3260.552r	20	6. 1		Nb II	2.17		
3260.692r	10	3. 2		Fe I?			
3260.829r	38	11. 9		Co I	2.04	107	
3260.958r	7	2. 3		Ce II?	1.01	258	
3261.065r	23	7. 0		Cd I	0.00	1	
3261.198r	9. 5	2. 9					
3261.339r	59	18. 1		Fe I	3.42	712	
3261.584r	142	26. 6		Ti II	1.23	66	
					1.89	89	
3261.639r		26. 6		Fe I?—			
3261.817r	39	12. 1		Fe I	1.56	50	
3262.021r	62	19. 0		Fe I	3.37	710	
3262.288r	69	21. 3		Fe I			
				(Sn I)	1.07	3	
				(Os I)	0.52	3	
3262.437r	5	1. 6					
3262.717r	10	3. 3					
3262.902r	50	15. 5		Fe I			
3263.073r	30	9. 2		Fe I			
3263.133r	30	9. 4		OH	P 11	2,2	1
3263.234r	19	5. 9		Co I—	2.28	124	
				|V I	0.00	12	
3263.370r	62	19. 2		—Fe I	2.42	144	
				(V II)	2.04	38	
3263.466r	19	6. 0		Fe I	3.25	680	
3263.691r	64	19. 7		Ti II	1.16	45	
3263.838r	25	7. 8		OH—	P 19	1,1	1
3263.975r	24	8. 9		Fe I?			
3264.065r	34	10. 4					
3264.185r	29	10. 4		OH	P 25	0,0	1
3264.283r	50	15. 5		Cr II	4.29	61	
3264.406r	38	11. 6		Ni I			
3264.524r	73	22. 4		Fe I	2.20	90	
3264.711r	100	16. 6		Mn I—	2.14	13	
				Fe I	2.47	157	
				(Co I)	1.74	47	
3264.784r		16. 6		Fe II p	1.04	1	
3264.861r	29	8. 9		Co I	2.04	105	
3265.054r	87	26. 8		Fe I	0.09	8	
3265.188r	11	3. 5					
3265.332r	54	16. 7		—Co I	2.08	106	
3265.556r	59	27. 3		Fe I p	2.73	308	
3265.640r	102	24. 2		Fe I	2.18	91	
3265.700r	18	8. 1		La II	0.32	45	
3265.894r	37	11. 3		V II	2.37	74	
3265.980r	10	3. 1					
3266.153r	9. 5	2. 9					
3266.240r	12	3. 9		Cr II	4.32	62	
					4.78	121	
3266.439r	35	10. 9		Ti II—	1.24	57	
3266.676r	5. 5	1. 6		Cr I—	1.03	25	
3266.950r	49	15. 0		Fe II	3.77	65	
3267.062r	56	17. 3		Fe II—	3.90	80	
				OH	P 25	0,0	1
3267.206r	26	8. 1					
3267.269r	16	4. 9		Fe I			
3267.439r	23	7. 2					
3267.539r	11	3. 5		Sb I	2.03	2	
3267.712r	82	25. 2		V II	1.07	7	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3267.788r	24	7. 8		Fe I— Mn I	4.23		
3268.063r	52	15. 9		Ni I			
3268.243r	67	20. 6		Fe I	2.22	95	
3268.345r	8	2. 4					
3268.435r	16	5. 0		Cr II?	4.29	62	
3268.521r	39	12. 0		Fe II	4.15	118	
3268.724r	17	5. 2		Mn I	4.19		
3268.860r	14	4. 3		Fe I?			
3268.975r	29	9. 7		Ni I—	3.46	91	
3269.084r	34	10. 5		Ca I	1.88	12	
3269.232r	61	18. 8		Fe I	3.40	710	
3269.339r	28	8. 5		Fe I			
3269.432r	28	8. 7		Fe I	2.20	95	
3269.504r	44	13. 5		Ge I	0.88	1	
3269.624r	12	3. 9		—Zr I	0.52	34	
3269.767r	51	15. 6		|Fe II Ti II	4.15 1.22	118 57	
3269.910r	80	6. 3		Sc I	0.00	9	
3269.966r		19. 8		Fe I	2.18	90	
3270.142r	68	20. 8		‖Cr II V II	4.32 2.47	61 94	
3270.350r	30	9. 2		Mn I	4.25		
3270.533r	29	9. 0		Ti I?	1.44	123	
3270.671r	55	17. 0		Fe Ip	3.69	954	
3270.749r	14	5. 0		OH	P 12	2,2	1
3271.006r	172	52. 7		Fe I	2.20	91	
3271.143r	107	40. 4		|V II Ni I (Zr II)	1.10 0.11 0.53	7 23 22	
3271.313r	24	8. 3					
3271.413r	24	8. 5					
3271.498r	62	19. 2		Fe I	3.25	680	
3271.668r	130	39. 9		|Ti II— Fe I (V I)	1.24 1.48 0.02	66 49 12	
3271.795r	35	14. 4		Co I	1.96	70	
3271.962r	23	7. 1					
3272.094r	104	31. 9		Ti II	1.22	66	
3272.244r	78	23. 8		|Zr II— Ce II	0.00 0.70	3 73	
3272.435r	26	8. 1		Co I	3.07	152	
3272.606r	51	15. 8		Fe I	1.56	51	
3272.732r	42	12. 9		Fe I	3.43	712	
3272.848r	19	5. 7					
3273.052r	78	23. 9		Zr II	0.16	3	
3273.188r	7	2. 1					
3273.354r	8	2. 4					
3273.482r	60	18. 5		Sm II |Fe II	 4.15	 118	
3273.634r	37	11. 4		Sc I	0.02	9	
3273.720r	6	2. 1					
3273.846r	221	0. 2					
3273.972r		67. 4		Cu I	0.00	1	
3274.226r	39	13. 3		OH— ‖Fe Ip	P 20 2.22	1,1 95	1
3274.451r	28	8. 7		Fe I	3.37	710	
3274.553r	5	1. 5					
3274.676r	34	10. 3		Ca I	1.89	12	
3274.783r	3. 5	1. 0					
3274.909r	39	12. 0		Ni II	2.86	1	
3275.025r	4	1. 4					
3275.152r	6	2. 0		Zr II	0.36	12	
3275.229r	66	3. 4		Nd II— Fe I p	 1.01	 27	
3275.299r		17. 7		Ti II	1.08	23	
3275.405r	4	1. 2					
3275.479r	5	1. 5					
3275.592r	16	5. 0		Ni I	3.48	107	
3275.685r	54	16. 5		Fe I	2.76	308	
3275.845r	39	11. 9		Fe I	2.95	450a	
3275.979r	20	6. 2					
3276.135r	104	31. 9		V II	1.13	7	
3276.262r	31	9. 5		OH	P 26	0,0	1
3276.470r	94	26. 1		Fe I	2.20	90	
3276.617r	49	15. 0		Fe II	3.94	92	
3276.781r	84	25. 8		Ti II	1.18	45	
3277.000r	63	19. 2		—Ti II	0.12	8	
3277.101r	19	5. 9		V II	2.56	137	
3277.191r	47	14. 5		Ni I	3.46	90	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3277.358r	155	47. 5		Fe II	0.99	1	
3277.671r	41	13. 5		Co I	2.96	152	
3277.724r	46	14. 7		V II—	2.56	137	
3277.873r	34	10. 5		Fe II—	3.77	65	
3278.096r	27	8. 4		Co I	2.96	153	
3278.295r	98	30. 0		Ti II	1.23	66	
3278.449r	16	5. 0					
3278.562r	45	13. 8		Mn I	2.14	12	
3278.742r	91	27. 9		Fe I	2.42 2.59	144 250	
3278.849r	24	10. 0		Co I	2.01	72	
3278.935r	110	33. 7		Ti II Ti I	1.08 0.90	23 63	
3279.154r	54	16. 5		OH	P 26	0,0	1
3279.275r	76	23. 2		‖Zr II Co I	0.09 1.96	3 70	
3279.449r	28	8. 8					
3279.519r	15	4. 8		Cr II	4.77	121	
3279.659r	44	13. 3		Fe II	4.15	118	
3279.747r	61	18. 8		Fe I	2.99	449	
3279.848r	73	22. 5		V II	2.37	73	
3279.995r	76	23. 1		Ti II	1.12	35	
3280.131r	29	8. 8					
3280.267r	90	27. 3		Fe I	3.30	620	
3280.368r	23	7. 2		—Ti I?	1.07	88	
3280.498r	16	5. 0					
3280.681r	44	15. 3		Ag I	0.00	1	
3280.775r	64	19. 7		Fe I Mn I	3.02 2.14	451 10	
3280.975r	23	7. 1		NH?	R 29 R 30 R 31	0,0 0,0 0,0	6
3281.125r	44	13. 4		V II	2.56	136	
3281.304r	117	36. 0		Fe II	1.04	1	
3281.527r	18	5. 5					
3281.600r	19	5. 9		Co I	0.17	8	
3281.716r	70	21. 5					
3281.868r	66	20. 2		Ni I	3.54	106	
3281.997r	19	5. 7		NH?	R 27	0,0	6
3282.247r	27	9. 3		Co I	1.78	47	
3282.334r	94	28. 9		Zn I ‖Ti II	4.00 1.22	4 66	
3282.447r	29	9. 0		Fe I			
3282.540r	51	15. 6		V II	2.37	72	
3282.705r	82	25. 0		Ni I— Fe I	0.17 2.95	7 449	
3282.837r	109	18. 8		‖Ni I Zr II	3.48 1.83	106 125	
3282.904r		18. 8		Fe I	3.27	680	
3283.054r	21	6. 4		Cr II	4.99	159	
3283.161r	36	6. 0		Ti II p	1.24	57	
3283.207r		6. 0					
3283.333r	26	8. 2		Co I V I	2.28 0.04	12	
3283.450r	100	30. 6		Fe I— Co I	0.96 2.08	27 107	
3283.554r	33	13. 4		Fe I			
3283.686r	5. 5	1. 7					
3283.803r	13	4. 1		Co I	1.74	47	
3283.933r	11	3. 8		NH?	R 25	0,0	6
3283.990r	28	8. 5		NH?	R 25	0,0	6
3284.130r	5. 5	1. 6					
3284.240r	4. 5	1. 4					
3284.363r	8. 5	2. 9		V I Ni I	1.38	71	
3284.433r	47	14. 3		Ni I	3.31	96	
3284.522r	28	11. 5					
3284.597r	75	22. 8		Fe I	2.20	91	
3284.721r	43	13. 1		Zr II	0.00	4	
3284.842r	5	1. 5					
3285.022r	28	8. 8		|V II— OH	2.52 P 21	108 1,1	1
3285.198r	43	13. 2		Fe I (Ce II)	3.00 0.50	396 148	
3285.295r	33	10. 3		NH	R 24	0,0	6
3285.421r	72	23. 1		Fe II	1.08	1	
3285.552r	34	11. 2		Fe I p	2.56	248	
3285.702r	16	5. 7					
3285.782r	23	8. 1		Zr II	1.49	91	
3285.908r	45	16. 0		Zr II	1.00	62	
3286.038r	71	25. 6		Fe I	2.22	90	

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3286.071r	28	19. 8		Ca I	1.90	12	
3286.184r	8	3. 3					
3286.258r	21	8. 7		Sm II	0.48	48	
3286.368r	4. 5	2. 2		Cr I?			
3286.454r	46	21. 5		Fe I	3.40	710	
3286.541r	25	14. 9		Co I?	1.74	46	
3286.628r	41	31. 0					
3286.772r	660	201		Fe I	2.18	91	
3286.854r	20	43. 5		NH	R 23	0,0	6
3286.960r	58	44. 3		Ni I	0.03	19	
3287.098r	44	26. 4		Fe I	2.94	396	
3287.221r	65	32. 8		Ni I Co I	1.68 1.96	55 71	
3287.334r	21	10. 3		Zr II	0.32	12	
3287.434r	11	5. 1					
3287.471r	32	13. 3		Fe II	4.15	118	
3287.583r	9	4. 1		Co I	3.10	154	
3287.667r	97	33. 2		Ti II	1.89	89	
3287.737r	24	16. 5					
3287.860r	8. 5	2. 9		Co I?	1.71	43	
3288.049r	31	10. 2		Cr II?—	4.32	62	
3288.155r	89	28. 7		Ti II—	0.13	8	
3288.327r	36	11. 5		V II Fe I	2.38	89	
3288.435r	74	23. 2		Ti II	1.24	66	
3288.579r	79	24. 2		Ti II	1.23	66	
3288.675r	81	37. 7		Fe I	2.42	144	
3288.813r	45	13. 8		Zr II	0.09 0.96	4 62	
3288.977r	72	22. 8		Fe I— V II	2.20 2.52	90 109	
3289.027r	48	33. 8					
3289.146r	11	3. 5		Rh I?	0.43		
3289.246r	12	3. 6					
3289.372r	111	21. 1		Fe II Yb II— V II	3.81 0.00 1.10	65 1 7	
3289.442r		17. 3		Fe I	2.83	380	
3289.579r	25	7. 6					
3289.749r	10	3. 2					
3289.862r	16	4. 9					
3289.909r	13	4. 5					
3290.112r	9. 5	2. 9		Mg I?p	6.59		
3290.249r	22	6. 8		V II	2.49	108	
3290.349r	7. 5	2. 2					
3290.476r	22	7. 7		NH	R 21	0,0	6
3290.516r	44	13. 4		NH— Ni II?	R 21 3.10	0,0 5	6
3290.639r	15	4. 7					
3290.716r	70	21. 2		Fe I (Ni II)	2.18 2.95	90 1	
3290.993r	92	28. 1		Fe I	2.22	95	
3291.134r	43	14. 9		Mg I?p	6.59		
3291.284r	14	4. 2					
3291.430r	26	8. 1		Fe I	3.69	954	
3291.544r	8. 5	2. 8					
3291.697r	26	7. 9		Fe I			
3291.770r	49	15. 1		Cr II	4.30	68	
3292.024r	111	23. 6		Fe I	3.25	680	
3292.079r		15. 6		Ti I	0.90	62	
3292.210r	11	3. 3		Gd II?— Co I?	1.10 3.10	74 153	
3292.324r	39	11. 9		Mo II—	3.14	6	
3292.509r	31	10. 2		NH	R 20	0,0	6
3292.601r	95	28. 8		Fe I	2.22	91	
3292.743r	13	4. 1					
3292.869r	10	3. 2		Fe II? p	4.49	136	
3292.926r	6. 5	2. 0					
3293.149r	54	16. 5		Fe I (V II)	1.61 4.24	51 235	
3293.223r	16	5. 8		Co I	3.02	154	
3293.478r	23	7. 0		Ti II p	1.24	57	
3293.673r	42	12. 7		Fe I			
3293.773r	24	7. 5					
3293.862r	11	3. 5		Co I Cr I	2.08 3.45	107 219	
3293.998r	5	1. 5					
3294.108r	8	2. 5		Co I	3.10	154	
3294.198r	7. 5	2. 2		—Ru II	2.54	2	
3294.335r	4. 5	1. 4		Nb II?	1.98		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3294.442r	6. 5	2. 0					
3294.555r	7. 5	2. 5		Co I	3.13	152	
3294.622r	29	8. 8		Fe I			
3294.722r	23	7. 2		NH	R 19	0,0	6
3294.822r	37	11. 5		NH— NH	R 19 R 19	0,0 0,0	6 6
3294.942r	44	13. 5		Fe I?			
3295.022r	20	6. 1		Zr II?	0.76	36	
3295.116r	39	11. 8					
3295.248r	47	14. 5		Fe II	3.89	79	
3295.435r	53	16. 1		Cr II	4.18	51	
3295.605r	16	5. 0					
3295.635r	9	3. 3					
3295.824r	76	23. 1		Fe II	1.08	1	
3296.041r	16	4. 8		Mn I	2.16	11	
3296.261r	40	12. 4		Ni I—	3.40	93	
3296.377r	14	4. 9		Zr II	0.96	62	
3296.475r	47	14. 2		Fe I	2.59	250	
3296.594r	8	2. 5					
3296.821r	47	14. 2		Fe I— Fe II	3.30 3.97	619 92	
3296.887r	30	11. 1		Mn I	2.16	12	
3297.067r	22	6. 6		NH	R 18	0,0	6
3297.174r	22	6. 6		NH	R 18	0,0	6
3297.254r	22	6. 6		NH	R 18	0,0	6
3297.384r	2	0. 6		Fe I?			
3297.517r	2. 5	0. 8		V II	2.50	108	
3297.593r	3. 5	1. 1					
3297.666r	9	2. 8					
3297.836r	57	3. 8					
3297.882r		15. 1		Fe II	3.94	91	
3298.013r	8	2. 5		Ni I p	3.50	91	
3298.141r	77	23. 5		Fe I (V I)	2.22 0.07	90 12	
3298.234r	39	14. 7		Mn I	3.37		
3298.324r	25	8. 8		Cr I	3.09	161	
3298.418r	17	5. 4					
3298.558r	37	11. 4		Fe I	3.43	710	
3298.691r	16	6. 5		Co I	2.01	70	
3298.742r	66	20. 1		V II	1.13	7	
3298.868r	8	2. 3					
3299.084r	32	9. 9		Fe I	3.40	710	
3299.178r	12	3. 6					
3299.350r	8. 5	2. 8					
3299.437r	67	20. 5		Ti I	0.90	61	
3299.525r	52	21. 0		Fe I— NH	1.56 R 17	49 0,0	6
3299.677r	24	7. 2		NH	R 17	0,0	6
3299.778r	22	6. 6		NH Fe II?	R 17 6.70	0,0	6
3299.890r	6	1. 8					
3300.077r	1	0. 4					
3300.170r	47	14. 3		Ce II?— Nd II?	0.72	166	
3300.317r	0. 5	0. 2					
3300.490r	3. 5	1. 1		Rh I?	1.28		
3300.675r	6	1. 8					
3300.817r	3. 5	1. 1					
3300.912r	6	1. 8		V II	2.27	60	
3301.016r	6	1. 8					
3301.136r	4	1. 3					
3301.225r	43	13. 0		Fe I	2.84	380	
3301.425r	25	7. 7		Fe I			
3301.579r	6	1. 8		Os I	0.00	1	
3301.681r	41	12. 4		—Ti II	1.16	44	
3301.782r	16	5. 0		Sr I?	1.77	7	
3301.869r	11	3. 8		OH? Pt I	P 28 0.81	0,0 7	1
3301.928r	37	11. 3		Fe I	3.24	617	
3302.105r	86	26. 1		Ti II—	0.15	8	
3302.162r		0. 1		NH Pd I	R 16 1.25	0,0 3	6
3302.316r	18	7. 3		NH	R 16	0,0	6
3302.383r	112	34		Na I	0.00	2	
3302.593r	55	16. 8		Zn I	4.03	4	
3302.768r	15	4. 8					
3302.863r	72	21. 9		Fe II	1.04	1	
3302.982r	83	25. 1		Na I (Zn I)	0.00 4.03	2 4	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3303.121r	21	6. 5		La II	0.23	45	
3303.271r	30	9. 3		Mn I	3.38		
3303.474r	69	20. 9		Fe II	1.10	1	
3303.571r	76	23. 0		Fe I	3.02	449	
3303.781r	16	4. 9					
3303.895r	14	4. 3		Co I	1.78	47	
3304.136r	18	5. 4		Co I	3.07	154	
3304.248r	20	6. 1					
3304.365r	52	15. 7		Fe I	3.42	710	
3304.450r	37	11. 3		Fe II	3.94	93	
3304.484r	13	6. 0		V II	2.54	136	
3304.592r	25	7. 5					
3304.754r	34	10. 3		OH?—	P 28	0,0	1
3304.874r	22	6. 7		NH	R 15	0,0	6
3304.962r	55	16. 6		Ni I	3.42	108	
3305.067r	26	8. 1		NH	R 15	0,0	6
3305.156r	72	21. 8		Fe I Zr II	0.04	2	
3305.227r	20	7. 4		NH	R 15	0,0	6
3305.307r	9	2. 9					
3305.414r	7	2. 2					
3305.477r	8	2. 4					
3305.627r	57	17. 4		Fe II	3.90	79	
3305.750r	46	16. 0		Co I Fe I p	3.10 3.27	152 618	
3305.864r	44	24. 5					
3305.977r	153	47. 1		Fe I	2.20	91	
3306.093r	65	27. 3					
3306.168r	23	11. 6					
3306.284r	49	15. 0		Zr II	0.04	3	
3306.378r	145	43. 9		Fe I	2.22	91	
3306.495r	61	25. 5		Fe I	3.30	680	
3306.598r	60	18. 5		Fe I			
3306.702r	17	5. 2		Fe I	3.00	396	
3306.775r	14	4. 3					
3306.882r	28	8. 6		Ti I	2.13	190	
3306.986r	16	8. 1		Cr II— Mn I	4.94 3.38	150	
3307.037r	99	30. 2		Fe I Ni I Cr II	2.95 3.42 4.17	450 107 51	
3307.152r	50	15. 1		Co I	1.96	69	
3307.246r	65	19. 8		Fe I	3.24	617	
3307.345r	10	3. 0		Rh II?	3.49	5	
3307.508r	20	6. 1		NH? Sr I	R 25 1.80	1,1 7	6
3307.717r	97	29. 3		Fe I? Ti II?— Cr I	0.12 2.71	8 78	
3307.907r	48	14. 6		NH	R 14	0,0	6
3308.111r	59	17. 9		NH	R 14	0,0	6
3308.277r	14	4. 4		NH?	R 23	1,1	6
3308.399r	32	9. 7		Ti I	1.05	87	
3308.491r	17	5. 3		Co I V II	3.07 2.54	155 137	
3308.621r	14	4. 4					
3308.760r	29	10. 6		Fe I p— Mn I	2.40 2.18	190 11	
3308.819r	84	25. 6		Co I Ti II	3.07 0.13	153 7	
3308.937r	24	14. 5		Ni I p	3.60	107	
3309.031r	6	1. 8		Co I?	2.54		
3309.084r	15	4. 7		NH	R 22	1,1	6
3309.197r	7. 5	2. 3		V I	1.19	55	
3309.324r	13	3. 9		Ni I p	3.42	105	
3309.430r	37	11. 3		Ni I			
3309.530r	73	22. 1		Ti I	1.05	87	
3309.723r	30	9. 1		Ti I	2.12	190	
3309.846r	12	3. 6		Cr I	3.00 3.09	161	
3309.903r	7	2. 5		Zr II	0.97	72	
3310.030r	28	8. 5		NH	R 21 R 28	1,1 1,1	6
3310.120r	20	6. 5		NH	R 21	1,1	6
3310.210r	56	16. 9		Ni I	0.42	38	
3310.344r	76	23. 0		Fe I	2.95	449	
3310.498r	59	17. 2		Fe I	3.25	679	
3310.649r	67	20. 1		Cr II NH	4.78 4.98 R 13	120 158 0,0	6
3310.868r	46	13. 8		NH	R 13	0,0	6

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3310.918	14	6. 3		Fe I			7
3311.110r	45	13. 6		NH	R 13	0,0	6
3311.215r	39	11. 8		Fe I			
3311.349r	20	6. 0		Zr II	0.71	34	
3311.459r	32	9. 8		Fe I	0.99	27	
3311.599r	9	2. 7		NH	R 29	1,1	6
3311.715r	19	5. 9		Sc II— NH	3.69 R 29	41 1,1	6
3311.895r	23	11. 8		Mn I	2.18	10	
3311.935r	68	20. 6		Cr II	4.15	51	
3312.059r	19	5. 3		Cr I	2.71	78	
3312.197r	63	19. 2		‖Cr II Co I— |Fe I	4.14 1.96 2.99	51 69 450a	
3312.325r	54	16. 5		Ni I	3.42	106	
3312.435r	35	10. 7		Sm II	0.18	21	
3312.601r	53	15. 9					
3312.699r	76	23. 0		Ti I— ‖Fe II (Sc II)	2.10 1.08 3.70	190 1 41	
3312.842r	25	7. 6		NH	R 19	1,1	6
3312.925r	23	7. 5		NH	R 19	1,1	6
3313.009r	66	19. 9		Ni I	3.60	106	
3313.078r	36	12. 1		Cr II	4.78	119	
3313.173r	33	12. 4		—Mn I	3.07	30	
3313.304r	9	2. 6		Eu II	3.00	24	
3313.434r	28	8. 7		Mn I	3.07	30	
3313.548r	30	9. 2		Mn I	3.07	30	
3313.646r	59	17. 8		NH	R 12	0,0	6
3313.725r	35	12. 5		Fe I	1.61	50	
3313.801r	12	4. 1					
3313.914r	30	9. 1		NH	R 12	0,0	6
3313.996r	59	17. 8		Fe II	1.10	1	
3314.086r	44	17. 6		Co I Fe I	{1.74 {2.88 3.41	43 149 736	
3314.206r	14	4. 4		NH	R 12	0,0	6
3314.348r	34	11. 3		Co I— NH	3.07 R 18	152 1,1	6
3314.446r	72	21. 7		Ti I— |Fe I (Zr II)	1.07 2.61 0.71	87 250 47	
3314.535r	58	17. 6		Ti I— Cr II	1.05 4.93	87 150	
3314.614r	55	20. 5		NH	R 18	1,1	6
3314.748r	90	27. 2		Fe I	3.30	680	
3314.867r	52	15. 8		|V II Mn I	2.56 3.07	136 30	
3315.050r	26	8. 0		Co I Pt I?	{2.28 {3.13 0.00	154 1	
3315.175r	32	9. 8		Fe I V II	3.30 2.37	618 71	
3315.257r	11	4. 8		Ti I— |Cr II	2.09 4.18	190 51	
3315.329r	96	29		Ti II	1.22	65	
3315.420r	74	34. 3					
3315.557r	25	9. 9		V II	2.56	136	
3315.679r	153	46. 2		Ni I	0.11	22	
3315.953r	17	5. 1					
3316.000r	10	3. 7					
3316.197r	24	7. 2		Fe II p— NH	1.67 R 17	5 1,1	6
3316.339r	23	7. 0		|Mn I Dy II?	2.19	11	
3316.432r	43	13. 1		Mn I	3.07	30	
3316.486r	14	4. 4		NH— Cr I	R 17 3.85	1,1 255	6
3316.569r	31	8. 5		Fe I— Sm II	2.18?	86	
3316.649r	33	10. 2					
3316.742r	35	10. 7		NH	R 11	0,0	6
3316.851r	34	10. 2		Fe I— V II	2.54	137	
3316.905r	16	6. 0		NH	R′ 11	0,0	6
3317.045r	20	6. 0		NH	R 11	0,0	6
3317.133r	74	22. 4		Fe I	2.28	139	
3317.264r	53	16. 0		Mn I	3.07	30	
3317.385r	44	13. 2		NH	R 11	0,0	6
3317.591r	36	11. 0		Ni I	1.68		
3317.701r	6	1. 9					
3317.831r	14	4. 4					
3318.031r	103	31. 0		Ti II	0.12	7	
3318.210r	29	8. 7		NH	R 16	1,1	6
3318.367r	60	18. 1		Ti I— Co I	2.08 1.71	190 45	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3318.516r	24	7. 3		NH	R 16	1,1	6
				Zr II	0.76	35	
3318.612r	19	5. 8		Fe II? p	4.49	136	
3318.766r	27	8. 0					
3318.906r	18	5. 6		V II	2.56	137	
3319.043r	23	7. 3		Zr II	0.04	4	
3319.078r	59	18. 0		Ti II	0.13	8	
3319.169r	18	5. 5		Co I	3.02	155	
3319.258r	54	16. 3		Fe I	2.99	449	
3319.362r	30	9. 0					
3319.490r	48	14. 5		Co I	2.93	154	
3319.544r	34	13. 1		Co I	1.71	45	
3319.686r	5. 5	1. 6					
3319.824r	32	9. 8		Co I	2.93	153	
3319.903r	41	12. 4		NH	R 10	0,0	6
				Dy II	0.00		
3320.032r	12	3. 7					
3320.129r	15	5. 0		Sm II	0.18	20	
3320.262r	122	36. 8		Ni I	0.17	9	
3320.379r	19	7. 7		NH	R 15	1,1	6
3320.492r	39	11. 9					
3320.654r	77	23. 2		Fe I	2.43	190	
				NH	R 10	0,0	6
3320.778r	79	23. 8		Ni I—	3.60	108	
				Fe I	3.04	396	
3320.915r	8. 5	2. 6		Mo II	3.11	6	
3321.043m	7. 5	2. 2		Be I	2.72	1	5
				Be I	2.72	1	
3321.195r	11	3. 4		Cr I?	3.11	182	
				Sm II	0.38	40	
3321.237r	31	9. 5		Ni I	3.31	92	
3321.352m	9	2. 7		Be I	2.72	1	5
3321.430m	16	5. 1					5
3321.538r	33	12. 8		V II	2.37	71	
3321.586r	40	12. 6		Ti I	1.07	87	
3321.707r	92	28. 7		Ti II	1.23	65	
3321.918r	23	7. 5		Co I	2.08	106	
3322.061r	12	4. 1					
3322.202r	43	14. 5		Co I	2.04	104	
					2.87	149	
3322.325r	108	35. 8		Ni I	0.42	39	
3322.481r	68	23. 4		Fe I	2.94	396	
3322.655r	40	17. 5		NH	R 14	1,1	6
3322.704r	15	11. 2		Cr II	4.17	51	
3322.874r }	495	23. 1		NH—	R 14	1,1	6
3322.949 }		157. 3		Ti II	0.15	7	7
				(Zr II)	0.76	34	
3323.084r	41	39. 4		Fe II	3.97	92	
3323.127r	19	18. 2		NH	R 9	0,0	6
3323.297r	5. 5	2. 3		Cr I?	3.10		
3323.395r	47	17. 8					
3323.540r	42	14. 5		NH	R 9	0,0	6
				Cr II	4.15	51	
3323.752r	84	28. 5		Fe I	2.83	379	
3323.919r	18	6. 3		Ti I?	2.32	255	
3323.999r	11	5. 9		NH	R 9	0,0	6
3324.071r	87	27. 8		Cr II—	2.43	4	
				Cr II	4.77	120	
3324.150r	31	13. 6		Fe I?			
3324.364r	64	19. 7		Cr II—	4.41	80	
				Fe I	3.27	617	
3324.544r	60	18. 0		Fe I	2.40	191	
3324.678r	40	12. 1					
3324.791r	42	12. 6		Fe I			
3325.012r	33	10. 0		Fe II	3.97	93	
3325.038r	10	4. 0		NH	R 13	1,1	6
3325.158r	6. 5	2. 0		Ti I	2.13	190	
3325.251r	46	14. 0		Co I	2.01	70	
3325.332r	15	6. 3		NH	R 13	1,1	6
3325.479r	61	18. 4		Fe I	2.45	191	
3325.582r	15	4. 6		NH	R 13	1,1	6
3325.690r	3	1. 0					
3325.756r	4	1. 2					
3325.898r	4. 5	1. 3					
3325.975r	3. 5	1. 0					
3326.082r	3	0. 8					
3326.205r	11	3. 6					
3326.302r	10	3. 3		Co I?	1.78	46	
					3.05	157	
3326.423r	24	8. 1		NH	R 8	0,0	6
3326.597r	31	14. 8		Cr I	3.09	182	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3326.695r	25	29. 9		Ni I	3.54	108	
3326.777r	214	64. 0		‖Ti II—	0.11	7	
				Zr II	1.53	91	
3326.868r	42	22. 8		—NH	R 8	0,0	6
3326.997r	38	14. 9		Co I	2.93	152	
3327.167r	14	4. 5					
3327.294r	7. 5	2. 3					
3327.403r	53	16. 1		|Ni I—	3.31	90	
				NH	R 8	0,0	6
3327.503r	59	20. 1		Fe I	2.40	190	
3327.627r	20	6. 1		NH—	R 12	1,1	6
				Zr II	0.32	11	
3327.731r	7. 0	2. 1					
3327.886r	64	19. 4		Y II	0.41	18	
3327.971r	37	16. 8		Fe I	2.18	86	
3328.211r	34	10. 4		NH	R 12	1,1	6
				Co I	3.10		
3328.357r	66	19. 9		Cr II	2.42	4	
3328.475r	28	8. 5		Fe I			
3328.583r	6. 5	2. 0		Fe I?			
3328.719r	42	12. 6		Ni I	0.11	20	
3328.803r	7	3. 4		Cr I	3.09	160	
3328.870r	67	20. 3		Fe I	3.27	617	
3328.96 a	5. 5	2. 1					
3329.056r	55	16. 7		Cr I	3.12	182	
				|Fe I–			
				Fe II			
3329.103r	33	16. 5					
3329.208r	6. 5	2. 1		Mo II	3.06	6	
3329.305r	12	5. 8					
3329.438r	183	54. 9		‖Ti II	0.13	7	
				Co I	3.02	153	
3329.518r	42	26. 1		Fe I	3.05	542a	
3329.632r	9	4. 6		Fe I			
3329.772r	33	11. 0		NH	R 7	0,0	6
3329.852r	15	7. 4		V I	1.22	55	
3329.914r	118	24. 0		Mg I	2.71	4	
3329.972r		17. 8		Fe I	3.02		
3330.082r	23	8. 7					
3330.234r	30	9. 2		Fe I—	2.83	378	
				|NH	R 7	0,0	6
3330.308r	49	14. 7		Fe I	3.02		
3330.435r	8. 5	2. 7					
3330.515r	17	5. 2					
3330.615r	20	7. 8		NH	R 11	1,1	6
3330.672r	47	14. 1		Mn I	2.16	9	
3330.784r	24	7. 2		Mn II	4.69		
3330.926r	38	11. 3		NH—	R 7	0,0	6
3331.064r	8. 5	2. 5					
3331.254r	19	5. 7		Ni I p—	3.54	107	
3331.397r	10	3. 1		Gd II	0.00	8	
3331.617r	43	12. 9		Fe I	2.43	191	
3331.785r	48	14. 5		Fe I	2.48	144	
3331.930r	31	11. 2		Zr II—	0.36	11	
3332.053r	22	12. 2					
3332.109r	194	35. 7		Ti II	1.24	65	
3332.195r		35. 7		Mg I	2.71	4	
3332.290r	15	9. 8					
3332.350r	24	10. 9					
3332.41 a	11	4. 0					
3332.576r	11	3. 5					
3332.719r	8. 5	2. 6					
3332.834r	33	10. 1		Fe I?			
3332.895r	12	4. 9		Cr I	3.11	182	
3333.029r	10	3. 0		NH	R 10	1,1	6
3333.119r	29	8. 9		NH	R 6	0,0	6
3333.222r	10	3. 0					
3333.395r	49	14. 7		Co I	0.51	25	
3333.597r	42	12. 5		Cr I	2.90		
3333.723r	32	9. 6		NH	R 6	0,0	6
3333.822r	21	6. 4		NH	R 10	1,1	6
3333.915r	9. 5	2. 8		Ti I	0.00	25	
3333.985r	21	6. 4					
3334.135r	51	32. 2		Co I	0.43	23	
3334.225r	92	27. 7		Fe I	2.43	190	
3334.275r	44	13. 2		|Fe I	3.27	617	
				Zr II	1.00	58	
3334.482r	33	10. 1		‖NH	R 6	0,0	6
				Nd II	0.18	42	
3334.622r	27	8. 2		Zr II	0.56	21	
3334.715r	30	9. 1		Cr I	2.89		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3334.802r	10	3. 3		Cr I?	3.37		
3334.934r	21	6. 4		Cr I	3.08	160	
3335.061r	15	6. 7					
3335.185	144	43. 0		Ti II	0.12	7	7
3335.308r	69	21. 7		Cr II	4.41	80	
3335.422r	40	12. 1		Fe I Cr II	2.56 4.43	246 92	
3335.535r	121	53. 6		Fe I—	1.56	49	
3335.728r	25	7. 6		Fe I p	2.73	307	
3335.784r	89	27. 1		Fe I	2.84	379	
3335.848r	33	18. 0		NH	R 9	1,1	6
3335.923r	50	21. 6					
3336.128r	34	12. 1					
3336.260r	58	30. 5		Fe I	3.30	618	
3336.346r	84	32. 5		Cr II	2.42	4	
3336.504r	25	16. 3		NH	R 5	0,0	6
3336.548r	12	16. 2		Fe I p	3.02	450a	
3336.689r	416	124. 8		Mg I	2.72	4	
3336.831r	32	41. 3					
3336.967r	11	5. 9		Ti II	1.18	43	
3337.007r	54	23. 3		Ni I	0.03	17	
3337.188r	55	19. 6		Co I— NH	0.43 R 5	25 0,0	6
3337.340r	11	3. 8		Ni I p	3.61	122	
3337.393r	18	5. 8		Mn II	4.69		
3337.499r	49	15. 2		La II	0.40	45	
3337.672r	65	19. 4		Fe I	2.69	304	
3337.853r	81	24. 5		V II Ti II	3.12 1.24	184 55	
3337.923r	51	31. 3		Fe I	3.02		
3338.010r	5	1. 4					
3338.116r	31	9. 4		NH	R 5	0,0	6
3338.237r	26	8. 0					
3338.347r	18	5. 6					
3338.430r	24	7. 2		Zr II	0.96	61	
3338.520r	37	11. 1		Fe II	3.89	76	
3338.628r	93	28. 0		Fe I	3.00	396	
3338.774r	41	12. 3		Ni I	1.68	54	
3338.813r	22	11. 3		NH	R 8	1,1	6
3338.920r	12	3. 8		Cr II?	6.79		
3339.049r	41	12. 3		Ni I	3.54	104	
3339.202r	62	18. 8		Fe I	2.45 2.95	190 446	
3339.307r	16	5. 0		NH	R 8	1,1	6
3339.446r	11	3. 4					
3339.582r	52	15. 6		Fe I	3.02	502	
3339.687r	39	11. 6		Fe I			
3339.801r	97	29. 2		Co I— Cr II	2.96 2.43	155 4	
3339.879r	45	21. 1		NH— Cr II	R 4 4.41	0,0 92	6
3340.041r	19	5. 6					
3340.178r	9. 5	2. 7		Fe I			
3340.356	157	47. 2		Ti II	0.11	7	7
3340.570r	79	26. 0		Fe I Zr II	2.28 0.16	139 3	
3340.691r	29	9. 6		NH	R 4	0,0	6
3340.825r	6	1. 8					
3340.895r	43	12. 8		Fe I			
3341.005r	11	3. 3		Dy II			
3341.168r	14	4. 2					
3341.285r	5. 5	1. 9					
3341.348r	33	10. 1		Co I	2.87	148	
3341.451r	9. 5	2. 9		Mn II?	4.69		
3341.558r	13	6. 0		Ti I?	0.90 1.98	60 178	
3341.688r	25	14. 0					
3341.835r	152	126		Ti I Ti II	0.00 0.57	24 16	
3341.930r	194	58. 1		Fe I	2.69	303	
3342.148r	27	10. 7		Ti I	0.00	23	
3342.226r	110	33. 0		Fe I	2.28	137	
3342.310r	58	27. 6		Fe I	2.84	378	
3342.374r	5	2. 0		NH	R 7	1,1	6
3342.474r	8. 5	2. 9		Cr I?	3.37		
3342.585r	89	26. 8		Cr II	2.45	4	
3342.697r	45	14. 6		Ti I Co I	0.00 2.08	25 105	
3342.760r	30	17. 0		Fe I p	3.04	396	
3342.900r	16	5. 0					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3343.024r	18	5. 5		NH	R 7	1,1	6
3343.234r	57	17. 2		NH— Fe I	R 3 2.18	0,0 88	6
3343.347r	21	6. 3		Cr I	3.09	159	
3343.524r	23	7. 0		Sm II—			
3343.672r	42	12. 6		Fe I	3.02	449	
3343.776r	90	27. 0		Ti II	0.15	7	
3343.904r	8. 5	2. 5					
3344.083r	17	5. 2		Fe I	2.99	450	
3344.183r	29	8. 6		NH	R 3	0,0	6
3344.389r	13	4. 0					
3344.523r	59	17. 7		Ca I	1.88	11	
3344.589r	19	6. 7		La II	0.23	45	
3344.699r	10	3. 1					
3344.792r	38	11. 5		Zr II (Ce II)	1.01 0.53	72 165	
3344.883r	21	9. 6		NH	R 6	1,1	6
3344.936r	70	21. 1					
3345.024r	62	21. 4		Zn I	4.08	4	
3345.166r	17	5. 1		Co I? Cr I?	1.74 3.45	45 218	
3345.363r	28	8. 4		Mn I Cr I?	2.18 3.43	 218	
3345.486r	13	4. 2		NH	R 6	1,1	6
3345.583r	50	14. 9		Zn I	4.08	4	
3345.629r	27	10. 1		NH	R 3	0,0	6
3345.703r	16	5. 2		Fe I	2.42	141	
3345.823r	12	3. 7					
3345.915r	20	6. 0		V II— Zn I	4.51 4.08	244 4	
3346.022r	34	10. 3		Cr I	3.00	112	
3346.152r	19	5. 8					
3346.282r	28	8. 5		NH— Co I	R 6 1.74	1,1 45	6
3346.425r	39	11. 7		NH	R 2	0,0	6
3346.602r	22	7. 0					
3346.746r	119	35. 6		Ti II (Cr I) (Cr I)	0.13 2.98 2.97	7 112 112	7
3346.934r	65	19. 6		Co I— Fe I	2.96 2.18	153 87	
3347.025r	22	7. 8					
3347.135r	7. 5	2. 3		Cr II?	6.77		
3347.318r	4	1. 2		Sm II	0.48	48	
3347.375r	30	9. 1					
3347.506r	30	8. 9		Fe I	2.99	449	
3347.628r	14	4. 2		NH	R 2	0,0	6
3347.838r	68	20. 5		Cr II	2.43	4	
3347.939r	64	19. 2		Fe I	2.28	138	
3348.121r	42	12. 5		Co I	2.04	103	
3348.237r	11	4. 0					
3348.387r	10	3. 2		V II—	2.56	136	
3348.540r	29	9. 5		Ti I	0.00	25	
3348.687r	32	11. 0		Sm II— NH	 R 5	 1,1	 6
3348.910r	122	43. 9		Ti II—	0.12	7	
3349.002r	135	29. 6		Ti II	0.61	16	
3349.079r		23. 3		Cr I	3.01		
3349.266r	19	27. 7					
3349.447	546	163		Ti II	0.05	1	7
3349.562r	39	58. 1		NH	R 2	0,0	6
3349.652r	4	4. 2		NH Cr II?	R 5 2.71	1,1 14	6
3349.741r	14	8. 2		Fe I	2.83	377	
3349.832r	1. 5	6. 9					
3349.947r	11	4. 2					
3350.081r	16	5. 5					
3350.214r	69	22. 1		Ca I	1.89	11	
3350.296r	29	9. 6		Fe I	2.43 2.45	191 191	
3350.379r	55	17. 2		Ca I	1.89	11	
3350.412r	12	4. 0		Ni II	2.95	1	
3350.515r	58	17. 3		Ti I Ti II (Gd II)	1.98 1.16 0.14	178 43 7	
3350.64 a	4. 5	1. 4					
3350.75 a	5	1. 5					
3350.852r	11	3. 5		NH— Sm II?	R′ 1	0,0	6
3350.956r	16	4. 6		NH	R 1	0,0	6
3351.068r	18	5. 5		Ni I p— NH	0.00 R 4	3 1,1	6
3351.156r	9. 5	2. 8					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3351.246r	7. 5	2. 3		Sr I	1.85	7	
3351.339r	7. 5	2. 3					
3351.418r	11	3. 3		Mn I	2.19	9	
3351.525r	59	17. 5		Fe I	2.20	89	
3351.612r	24	9. 4		Cr I	3.10	160	
3351.751r	58	17. 5		Fe I	2.73	304	
3351.968r	45	14. 5		Cr I	0.00	5	
3352.065r	71	21. 4		‖Ti II Sc II	1.22 0.00	54 4	
3352.185r	12	4. 2					
3352.445r	17	5. 3					
3352.638r	14	4. 2					
3352.775r	6	1. 8					
3352.825r	18	5. 5		Co II	2.24	2	
3352.932r	47	14. 1		‖Fe I Ti I	2.45 0.02	190 25	
3353.129r	67	20. 0		Cr II	2.48	4	
3353.269r	43	12. 8		Fe I	2.43	190	
3353.405r	14	4. 2					
3353.528r	8	2. 4					
3353.635r	24	7. 8		|NH— Zr I?	R 1 0.15	0,0 18	6
3353.742r	80	23. 8		Sc II	0.31	12	
3353.924r	18	5. 5		NH	R′ 0	0,0	6
3354.066r	51	15. 4		Fe I	2.86	378	
3354.217r	32	9. 6		Co I	2.96	152	
3354.390r	68	19. 6		‖Co I Zr II	0.51 0.76	23 34	
3354.537r	19	5. 6		Fe I? Ti II? p	1.22	64	
3354.645r	65	19. 5		Ti I	0.02	24	
3354.890r	18	5. 5					
3355.064r	17	5. 2					
3355.230r	71	21. 2		Fe I	3.30	617	
3355.364r	8	2. 4		V II	2.60	149	
3355.528r	21	6. 4		Fe I	0.96	25	
3355.664r	6	1. 7					
3355.824r	12	3. 7					
3355.947r	11	3. 2		Co I	2.04	103	
3356.098r	34	10. 3		Zr II	0.09	3	
3356.237r	21	6. 4		Fe II	4.07	105	
3356.328r	37	14. 8		Fe I	0.91	25	
3356.414r	73	21. 9		Fe I	2.28	137	
3356.542r	26	7. 9		NH	Q 2	0,0	6
3356.687r	50	14. 9		Fe I	3.05		
3356.842r	14	4. 2		Co I?	3.07	151	
3356.958r	7. 5	2. 3					
3357.122r	12	3. 8					
3357.278r	50	15. 1		‖Zr II— NH	0.00 Q 3	3 0,0	6
3357.403r	36	10. 5		Cr II	4.41	79	
3357.569r	30	8. 9		Fe I			
3357.682r	4	1. 2					
3357.740r	33	9. 6		NH	Q 1,4	0,0	6
3357.825r	35	10. 6		Fe I	2.99	448	
3357.942r	8	2. 4		Fe II	4.15	117	
3358.048r	44	13. 5		|NH Fe I?	{Q 5 {R 0	{0,0 {0,0	6
3358.142r	13	4. 1					
3358.282r	75	23. 6		|Ti I Fe II— NH	0.00 3.89 Q 6	23 77 0,0	6
3358.408r	35	10. 3		NH	Q 2	0,0	6
3358.515r	100	30. 0		Cr II	2.45	4	
3358.637r	23	9. 0		Gd II	0.03	8	
3358.698r	59	17. 7		NH	Q 8	0,0	6
3358.795r	32	9. 5		NH Fe II p	Q 3 1.67	0,0 5	6
3358.901r	70	20. 9		NH— |Fe I	Q 9 2.99	0,0	6
3359.010r	21	6. 9		NH	Q 4	0,0	6
3359.114r	106	32. 1		Ni I	3.48	108	
3359.286r	89	27. 5		Co I NH	1.71 {Q 6 {Q 11	44 {0,0 {0,0	6
3359.408r	38	12. 1		NH	Q 7	0,0	6
3359.502r	90	28. 3		|Fe I— NH	0.86 {Q 8 {Q 12	25 {0,0 {0,0	6
3359.635r	27	9. 1		NH	Q 9	0,0	6
3359.689r	102	32. 2		Sc II	0 01	4	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3359.802r	69	28. 4		NH— Fe I	{Q 10 {Q 13 3.30	0,0} 0,0} 617	6
3359.932r	39	18. 1		NH Zr II	Q 11 1.49	0,0 91	6
3360.047r	89	29. 7		NH— NH	{Q 7,8 {Q 14 Q 6, 9	0,0} 0,0} 0,0	6 6
3360.124r	79	28. 0		NH Fe II— NH	{Q 10 {Q 12 4.08 Q 5	0,0} 0,0} 105 0,0	6 6
3360.211r	40	19. 9		NH	Q 11	0,0	6
3360.310r	89	31. 9		Cr II NH— NH—	3.10 Q 15 {Q 4,12 {Q 13	21 0,0 0,0} 0,0}	 6 6
3360.351r	36	22. 9					
3360.497r	51	21. 7		NH	Q 13	0,0	6
3360.607r	32	15. 1		NH— NH	Q3,14 Q 16	0,0 0,0	6 6
3360.694r	23	12. 9		NH	Q 14	0,0	6
3360.808m	14	8. 1		NH	Q 15	0,0	6, 8
3360.921r	22	16. 1		NH— Fe I	Q 15 2.42	0,0 142	6
3361.007r	26	22. 1		NH Ti I	{Q 2 {Q 17 0.02	0,0} 0,0} 24	6
3361.107r	8	19. 7		NH	Q 16	0,0	6
3361.193r 3361.287r	939	{265 {69. 3		Ti II |Ti I Sc II	0.03 0.02 0.00	1 23 4	
3361.434r	20	25. 7		NH	{Q 17 {Q 18	0,0} 0,0}	6
3361.570r	90	46. 4		Ni I (V II)	0.11 2.37	19 70	
3361.772r	47	22. 3		Cr II	3.10	21	
3361.854r	60	27. 5		NH— Ti I	{Q 18 {Q 19 0.02	0,0} 0,0} 25	6
3361.953r	81	30. 9		|Ca I |Sc II— Fe I	1.90 0.00 2.84	11 4 377	
3362.141r	61	22. 1		Ca I	1.90	11	
3362.268r	76	26. 6		Cr I— Fe I NH (Gd II)	2.54 Q 19 0.08	54 0,0 8	 6
3362.394r	26	9. 0		NH	Q 20	0,0	6
3362.593r	8	2. 7		Tm II	0.03		
3362.648r	49	15. 5		Ti II	1.22	64	
3362.802r	89	27. 9		Ni I	0.21	23	
3362.973r	30	8. 8		NH	Q 21	0,0	6
3363.164r	15	4. 7					
3363.308r	33	10. 0		Co I— NH	3.05 Q 21	 0,0	 6
3363.408r	50	14. 8		Fe I			
3363.616r	50	15. 0		|Ni I NH	3.48 Q 22	105 0,0	 6
3363.720r	55	16. 4		Cr II	2.43	3	
3363.821r	31	9. 2		Fe I (Zr II)	2.76 0.36	307 11	
3363.921r	33	9. 7		NH	Q 22	0,0	6
3364.014r	25	8. 3		NH	Q 22	0,0	6
3364.098r	5. 5	1. 6					
3364.228r	14	6. 1		Fe II p	1.72	5	
3364.274r	47	14. 1		Fe I			
3364.400r	29	8. 7		Fe I NH	3.05 Q 23	 0,0	 6
3364.614r	55	16. 4		Ni I— Fe I	3.38 2.59	107 245	
3364.651m	23	10. 3		NH	Q 23	0,0	6,8
3364.735m	20	6. 4		NH	Q 23	0,0	6,8
3364.946r	5	1. 6		NH Nd II?	P′ 2	0,0	6
3365.032r	8	2. 3		Co I	2.01	69	
3365.112r	3. 5	1. 0					
3365.206r	16	4. 9		NH	Q 24	0,0	6
3365.316r	7	2. 1					
3365.446r	31	9. 2		Fe II— NH	3.89 Q 24	78 0,0	 6
3365.549r	27	8. 2		V I	1.18	54	
3365.773r	107	31. 9		Ni I	0.42	38	
3365.992r	24	7. 3					
3366.176r	116	34. 6		Ti I |Ti II ||Ni I	2.04 1.24 0.17	178 54 8	
3366.359r	19	5. 7		NH Sr I	Q 25 1.85	0,0 7	6
3366.459r	14	4. 4		NH	Q 25	0,0	6
3366.552r	8	2. 4		Ce II	0.55	99	
3366.656r	5	1. 5					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3366.796r	180	31. 5		Fe I—	2.69	302	
				Ni I	3.38	108	
3366.874r		31. 5		Fe I	2.20	87	
3366.982r	23	7. 1		Fe II	5.57	177	
3367.098r	146	22. 1		Co I	0.43	22	
3367.162r		29. 2		Fe I	2.42	142	
3367.299r	30	9. 0		Fe I			
3367.392r	12	3. 9		NH	Q 26	0,0	6
3367.440r	45	13. 2		Cr II	4.41	79	
3367.552r	80	23. 9		Cr I	2.54	54	
					2.54	54	
3367.677r	48	14. 5		NH	Q 3	1,1	6
				Fe I			
3367.818r	29	11. 6		Zr II	0.32	11	
3367.894r	29	11. 6		Ni I	0.03	20	
3368.058r	189	56. 3		Cr II	2.48	4	
3368.184r	26	12. 9		Fe I			
3368.247r	8. 5	3. 4		Fe I p	3.25	678	
3368.361r	5. 5	1. 8		NH	Q 27	0,0	6
3368.445r	6. 5	2. 0		Fe II?	4.49	134	
3368.545r	19	5. 7		NH	Q 27	0,0	6
3368.658r	22	6. 6		NH	Q 5	1,1	6
					Q 27	0,0	
3368.725r	36	10. 9		Cr II	4.43	91	
3368.821r	45	13. 9		Fe I			
3368.948r	101	32. 4		Sc II—	0.01	4	
				Fe I	2.83	376	
3369.055r	18	9. 1		NH	Q 6	1,1	6
				Cr II	4.38	68	
3369.151r	39	30. 6		Fe I	2.45	191	
				NH	P 2	0,0	6
3369.217r	75	28. 2		Ti II	1.23	64	
				NH	Q 3	1,1	6
3369.371r	27	15. 0		Fe II—	3.89	76	
				NH	Q 7	1,1	6
3369.498r	13	17. 5		NH	Q 4	1,1	6
3369.578r	407	120. 5		Ni I	0.00	6	
				Fe I	2.73	304	
3369.665r	33	77. 1					
3369.797r	30	15. 2		NH	Q 5,8	1,1	6
				Fe II p	3.89	76	
3369.917r	26	10. 9					
3370.038r	20	6. 9		NH	Q 6	1,1	6
3370.195r	30	9. 6		NH—	Q 9	1,1	6
3370.333r	54	16. 6		Co I	0.58	24	
3370.449r	69	20. 7		Ti I	0.00	23	
3370.635r	61	18. 6		NH—	Q 8,10	1,1	6
3370.798r	118	35. 2		Fe I	2.69	304	
3370.884r	18	9. 2					
3370.974r	83	24. 9		NH	Q 7,9	1,1	6
				Co II	2.27	2	
3371.110r	39	13. 9		NH	Q 3	1,1	6
3371.160r	28	11. 2		NH	Q 8,11	1,1	6
3371.295r	51	15. 2		Fe I			
3371.399r	17	11. 7		NH	Q 9,10	1,1	6
3371.457r	107	31. 5		Ti I	0.05	24	
3371.609r	24	7. 2		NH	Q 12	1,1	6
3371.716r	65	10. 9		NH	Q 10	1,1	6
3371.763r		10. 9		NH	Q 11	1,1	6
3371.988r	104	47. 7		Ni I	0.17	7	
3372.089r	118	59. 9		Fe I	2.18	83	
				NH	P 3	0,0	6
3372.178r	216	16. 3		Sc II	0.02	4	
3372.226r		73. 1		Ti II	0.61	16	
				NH	P 4	0,0	6
3372.352r	24	11. 9		Fe I	2.99	447	
3372.473r	29	14. 0		NH	Q 12	1,1	6
				Fe I			
3372.623r	9	8. 8					
3372.812	459	135. 9		Ti II	0.01	1	7
3372.969r	22	20. 3		NH—	Q 13	1,1	6
3373.093r	6	3. 1					
3373.233r	34	12. 4		Co I	2.28	122	
3373.316r	44	14. 4		Fe I			
3373.419r	39	12. 5		NH	P 4	0,0	6
				Zr II	1.01	74	
3373.506r	36	11. 4		NH—	Q 14	1,1	6
					Q 15	1,1	
3373.606r	9	2. 8					
3373.736r	11	3. 5		Ce II	0.56	212	
				W I	0.41		
3373.880r	35	10. 7		Fe I	2.73	303	
3373.983r	72	21. 4		Co I	1.71	44	
				Ni II	2.86	1	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3374.135r	7. 5	3. 6		NH	Q 15	1,1	6
3374.222r	150	44. 8		‖Ni I Fe I	0.03 2.22	17 89	
3374.351r	32	9. 5		Ti II	1.24	54	
3374.452r	53	16. 6		Fe I			
3374.642r	98	28. 9		Ni I	3.38	106	
3374.736r	58	24. 5		Zr II— NH	1.00 Q 16	61 1,1	 6
3374.845r	12	4. 0		NH	Q 16	1,1	6
3374.932r	35	10. 7		Cr I? Cr II	3.12 2.48	181 4	
3375.095r	24	7. 2		NH	Q 17	1,1	6
3375.215r	9	2. 8		Co I?	3.07	153	
3375.342r	19	5. 7		NH |Fe I	P 4	0,0	6
3375.465r	8. 5	2. 5					
3375.562r	43	12. 8		Ni I— NH	3.60 Q 17	108 1,1	 6
3375.632r	15	5. 3		NH	Q 17	1,1	6
3375.730r	20	5. 9		Fe I	2.99		
3375.855r	8	2. 3					
3375.945r	7	2. 1					
3376.028r	20	5. 9		NH— V I	Q 18 1.19	1,1 54	6
3376.102r	11	3. 4					
3376.205r	8	2. 3		Co I?	3.02		
3376.278r	24	7. 2		Cr II? Zr II— NH	4.41 0.96 P 5	78 60 0,0	 6
3376.335r	56	16. 7		Ni I	3.48	104	
3376.494r	54	15. 9		NH— ‖Fe I	Q 18	1,1	6
3376.595r	8	2. 4		Cr II?	4.41	90	
3376.678r	7	2. 1		Cr II?	4.74	112	
3376.758r	12	3. 8		Fe I			
3376.842r	7	2. 1					
3376.948r	5. 5	1. 6		Co I?	2.54		
3377.066r	35	10. 5		Co I NH	1.71 Q 19	42 1,1	 6
3377.272r	17	4. 9		NH	P 5	0,0	6
3377.361r	5. 5	1. 6		Fe I— V I	 1.19	 54	
3377.486r	54	16. 1		‖Ti I Zr II	0.05 0.41	25 11	
3377.587r	68	20. 3		Ti I	0.02	23	
3377.701r	5. 5	1. 7					
3377.807r	5. 5	1. 6		—Fe I?			
3377.977r	68	20. 3		Fe I			
3378.066r	7	2. 1					
3378.183r	19	5. 7		NH	Q 20	1,1	6
3378.339r	39	11. 6		Cr II	3.10	21	
3378.586r	19	6. 5		NH	Q 20	1,1	6
3378.687r 3378.744r	143	30. 7 17. 9		Fe I Co I	2.69 2.28	301 121	
				NH Fe I p	P 5 2.28	0,0 137	6
3378.868r	50	18. 1					
3379.024r	92	27. 6		Fe I	2.18	85	
3379.200r	71	21. 9		Cr I |Ti I	0.00 0.05	5 24	
3379.377r 3379.440r	75	23. 2 0. 9		Cr II NH	3.10 Q 21	21 1,1	 6
3379.550r	7. 5	2. 5		Cr I?	2.54	54	
3379.646r	1. 5	0. 4					
3379.706r	2	0. 8		Fe I			
3379.824r	71	25. 3		|Cr II Cr I	3.10 2.54	21 54	
3379.923r	44	21. 1		Ti II	1.24	64	
3380.020r	2. 5	1. 3		Fe I	3.33	709	
3380.118r	62	27. 5		Fe I	2.76	304	
3380.260r	30	31. 2		Ti II	0.05	1	
3380.313r	76	43. 4					
3380.468r	6	9. 7					
3380.585r	809	239		Ni I	0.42	37	
3380.752r	17	27. 1		|Sr II— Fe I	2.94	4	
3380.889r	87	51. 0		Ni I	0.27	7	
3381.033m	3	1. 9		Fe II— NH	5.57 P 6	177 0,0	8 6
3381.132r	30	14. 1		Fe I—			
3381.353r	58	21. 6		Fe I	{2.84 {3.25	376 677	
3381.495r	2	0. 8		Co I Fe I	2.04 1.61	88 49	
3381.532r	4. 5	1. 4					
3381.649r	2. 5	0. 9					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3381.759r	6	1. 8					
3381.866r	11	3. 5		NH?	P 3	1,1	6
3381.993r	33	9. 8		Fe I	3.04		
3382.088r	16	4. 9		Co I? Cr I?	2.33 3.12	123 181	
3382.204r	21	6. 3		NH	P 6	0,0	6
3382.314r	30	11. 9		Ti I	1.07	86	
3382.413r	123	36. 5		Fe I	2.18	84	
3382.468r	35	19. 2					
3382.588r	9	3. 4					
3382.689r	85	25. 2		Cr II	2.45	3	
3382.790r	14	5. 4					
3382.900r	22	6. 6		Ag I	0.00	1	
3382.993r	35	10. 6		Fe I			
3383.096r	9. 5	2. 9					
3383.206r	7. 5	2. 4		Co I?	3.07		
3383.313r	5	1. 6		NH	P 4	1,1	6
3383.376r	28	10. 1		Fe I	2.61	245	
3383.493r	7	3. 0					
3383.573r	13	7. 9					
3383.697r	430	56. 2		Fe I	2.20 2.95	85 444	
3383.765r		127		Ti II	0.00	1	
3383.997r	64	32. 2		Fe I	2.18	83	
3384.089r	19	8. 7		NH	P 7	0,0	6
3384.239r	6	1. 8		Cr I	2.54	54	
3384.325r	11	3. 6		NH	Q 24	1,1	6
3384.425r	14	4. 4		Fe I?			
3384.592r	8. 5	2. 8		V I? Mo I?	1.06 1.47	46 9	
3384.646r	32	9. 4		Cr I	2.54	54	
3384.772r	56	16. 7		Fe I— NH	0.99 P 7	25 0,0	6
3384.925r	11	3. 2		Fe I			
3385.031r	29	8. 7		Dy II			
3385.079r	13	4. 9					
3385.225r	77	22. 7		Co I	0.51	22	
3385.332r	13	4. 1		Cr I	3.55	236	
3385.441r	47	14. 2		Fe I			
3385.552r	57	16. 8		Fe I			
3385.673r	70	17. 8		Ti I	0.05	24	
3385.725r		4. 2		NH Fe I?	P 7	0,0	6
3385.869r	7. 5	2. 5		NH	Q 25	1,1	6
3385.949r	70	20. 7		Ti I	0.05	23	
3386.174r	30	9. 0		NH	P 5 Q 25	1,1 1,1	6
3386.272r	16	5. 7		NH Nb II?	Q 25 1.22	1,1	6
3386.352r	10	3. 1					
3386.452r	17	5. 0		Fe II	3.94	88	
3386.555r	24	7. 1					
3386.739r	8. 5	2. 4		Fe II			
3386.785r	25	7. 4					
3386.878r	18	5. 3					
3387.058r	15	4. 4					
3387.171r	16	5. 0		NH	P 5	1,1	6
3387.308r	33	9. 7		—Fe II	3.97		
3387.418r	87	25. 8		Fe I	2.76	306	
3387.464r	38	20. 0		Ni I	0.11	17	
3387.626r	86	25. 5		Fe I			
3387.718r	31	15. 2		Co II	2.27	2	
3387.852r	187	55. 2		Ti II— Zr II	0.03 0.97	1 74	
3388.054r	22	6. 8		NH	Q 26	1,1	6
3388.175r	103	30. 4		Co I Co II	0.58 2.24	23 2	
3388.312a	52	15. 5		Zr II	0.00	2	
3388.468r	44	13. 1		NH	P 8	0,0	6
3388.625r	52	15. 5		Fe I			
3388.760r	89	26. 6		Ti II	1.24	53	
3388.858r	13	4. 3		Dy II	0.59		
3388.971r	42	12. 4		Fe I	3.07	502	
3389.121r	19	5. 8					
3389.251r	37	11. 2		NH— Fe I	P 8	0,0	6
3389.324r	16	5. 0		Sm II	0.54	52	
3389.404r	38	11. 4					
3389.611r	6	1. 8					
3389.748r	48	14. 1		Fe I	2.22	87	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3389.824r	8	3. 0		Hf II	0.45	8	
3389.924r	4	1. 2					
3390.018r	17	5. 2		NH	Q 27 P 6	1,1 1,1	6
3390.108r	17	5. 2		Fe II?	6.80	207	
3390.264r	21	6. 3		Fe I p	2.43	188	
3390.408r	24	7. 4		Co I	2.04	102	
3390.518r	12	3. 8					
3390.600r	21	6. 9					
3390.683r	40	11. 9		Ti I	1.05	86	
3390.783r	20	6. 5		Cr I?— Co I?	3.55 3.19	236	
3390.897r	14	6. 2					
3391.039r	238	70. 2		Ni I	0.00	5	
3391.107r	36	31. 9					
3391.273r	21	7. 5		Fe II	4.15	117	
3391.373r	15	5. 8		Cr I	3.85	254	
3391.442r	99	29. 2		Cr II	2.42	3	
3391.590r	40	11. 8		NH	P 9	0,0	6
3391.670r	11	3. 8					
3391.841r	30	9. 0		Fe I p	3.30	678	
3391.973r	113	20. 0		Zr II	0.16	1	
3392.017r		20. 0		Fe I	3.02	499	
3392.123r	48	19. 2		NH	P 9	0,0	6
3392.305r	102	32. 9		Fe I	2.20	83	
3392.498r	31	11. 5		—Gd II	0.08	7	
3392.624r	144	41. 0		Fe I	2.18	85	
3392.678r		25. 4		V II— Ti I	2.37 1.50	70 136	
3392.791r	18	17. 1		NH	P 9	0,0	6
3392.894r	17	26. 2					
3392.978r	570	160		Ni I	0.03	20	
3393.025r		70. 7		Cr II	3.10	21	
3393.150r	54	41. 3		Zr II	0.04	3	
3393.292r	31	14. 1					
3393.391r	47	18. 5		Fe I	2.86	376	
3393.61 a	56	18. 7		Fe I Dy II	2.76 2.83	305 376	
3393.710r	7	2. 0					
3393.845r	90	27. 9		Cr II	3.10	21	
3393.927r	43	16. 5		Fe I	2.28	136	
3394.085r	63	18. 5		Fe I	2.45	188	
3394.17 a	10	3. 0					
3394.297r	93	27. 6		Cr II	3.10	21	
3394.383r	41	20. 3		Fe I			
3394.550r	204	36. 8		Ti II	0.01	1	
3394.611r		36. 8		Fe I	2.20	81	
3394.740r	24	9. 3					
3394.823r	13	4. 4					
3394.950r	12	3. 5		Co I	1.71	42	
3395.077r	29	8. 7		Fe I	3.02		
3395.16 a	7	2. 2					
3395.273r	19	6. 5		NH	P 10	0,0	6
3395.386	111	32. 8		Co I (Fe II)	0.58 4.15	25 117	7
3395.615r	44	12. 9		Cr II	4.47	100	
3395.747r	40	11. 8		NH	P 10	0,0	6
3395.877r	16	5. 2		Fe I? p	2.45 3.05	189 543	
3395.990r	35	15. 1		Fe I			
3396.043r	79	23. 6		Fe I			
3396.185r	63	18. 5		Ni I	3.61	122	
3396.302r	31	9. 3		NH— Zr II	P 10 0.96	0,0 58	6
3396.388r	47	14. 0		Fe I	0.96	25	
3396.507r	15	4. 4		Ni I p	3.61	118	
3396.607r	6. 5	2. 2		Eu II?	3.33	30	
3396.657r	25	7. 4		Zr II	1.66	103	
3396.830r	8. 5	2. 6		Rh I	0.00	3	
3396.927r	19	7. 7					
3396.981r	79	23. 3		Fe I	0.96	26	
3397.062r	28	12. 1		Lu II	1.46	4	
3397.221r	40	12. 1		Fe I	3.02	503	
3397.316r	8. 5	2. 7					
3397.436r	29	8. 8					
3397.556r	43	13. 8		Fe I	3.02	447	
3397.644r	68	20. 3		Fe I	0.99	26	
3397.796r	13	4. 6					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3397.839r	37	10. 9		Ni II	3.60	8	
3398.017r	5. 5	1. 5					
3398.110r	6	1. 8		Fe I p	3.24	615	
3398.223r	45	13. 2		Fe I	2.76	304	
3398.307r	58	8. 8					
3398.377r		9. 2		Fe II	4.07	105	
3398.417r	10	2. 9					
3398.612r	41	11. 8		Fe I |Ti I	1.05	86	
3398.705r	15	4. 9					
3398.815r	14	4. 1		Co I	3.13	157	
3398.925r	48	13. 5		NH	P 11	0,0	6
3398.992r		0. 6					
3399.05 a	4	1. 2		Fe I			
3399.160r	28	13. 1		—NH	P 8	1,1	6
3399.242r	83	31. 0		Fe I	2.73	302	
3399.355r	159	46. 6		‖Fe I Zr II	2.20 0.32	85 11	
3399.520r	26	8. 2		Cr II	4.50	100	
3399.612r	12	3. 7		Fe I			
3399.808r	38	11. 3		NH	P 11	0,0	6
3400.019r	8. 5	2. 5		Gd II	0.35	22	
3400.145r	16	4. 7		Ti I Mn II	2.40 4.93		
3400.232r	8	2. 3					
3400.395r	8. 5	2. 5		V I	1.08	46	
3400.495r	9	2. 6		Co I	1.74	42	
3400.645r	35	10. 3		Fe I	3.02		
3400.845r	19	5. 6					
3400.987r	42	12. 2		Fe I	3.02		
3401.173r	25	7. 4		Ni I	3.42	107	
3401.344r	28	8. 2					
3401.530r	104	30. 6		Fe I	0.91	26	
3401.644r	17	5. 1		Co I?	1.74	44	
3401.766r	37	10. 9		Ni II	3. 07	4	
3401.858r	10	3. 1					
3401.924r	20	6. 0		Co I	3. 23	157	
3402.074r	20	5. 9		Co I	2.33	123	
3402.128r	13	4. 1		NH	P 9	1,1	6
3402.218r	114	0. 6					
3402.266r		33. 5		Fe I	3.24	614	
3402.420r	95	27. 9		|Ti II Cr II	1.22 3.10	53 21	
3402.552r	28	8. 4		NH—	P 12	0,0	6
3402.709r	9. 5	2. 6					
3402.792r	14	4. 1		Mo II?	4.16		
3402.900r	35	10. 3		|NH Zr II	P 12 1.53	0,0 91	6
3403.012r	12	3. 7					
3403.155r	21	6. 2					
3403.271r	155	23. 8		Fe I	2.73 2.83	304 377	
3403.345r		28. 8		Cr II	2.43 3.10	3 21	
3403.439r	59	18. 5		Ni I	3.42	108	
3403.592r	27	7. 9		Cr I	3.85	254	
3403.693r	22	6. 6		Zr II	1.00	59	
3403.792r	7	1. 9					
3403.872r	6. 5	1. 9					
3403.995r	8. 5	2. 6		Cr I?	3.37		
3404.069r	13	3. 8					
3404.159r	17	5. 3					
3404.280r	176	26. 2		Fe I	1.01 2.73	25 301	
3404.31 a		51. 3		Mo I?	1.47	9	
3404.378r		35. 3		Fe I	2.20	83	
3404.448r	10	3. 4		V II?	4.51	243	
3404.584r	36	10. 6		Pd I	0.81	2	
3404.764r	70	21. 2		Fe I	2.73	300	
3404.839r	43	15. 8		Zr II	0.36	11	
3404.911r	30	11. 6		Fe I	2.69	300	
3404.964r	10	4. 8		Ti II?	1.22	63	
3405.126	206	60. 5		Co I	0.43	23	7
3405.26 a	7	2. 5					
3405.371r	10	3. 2		NH?	P 10	1,1	6
3405.504r	10	3. 2		Ni I p	3.70	122	
3405.583r	35	10. 4		Fe I			
3405.704r	10	3. 1					
3405.838r	56	16. 6		Fe I	2.69	299	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3405.978r	17	5. 1		Ce II—	0.55	96	
3406.121r	35	10. 3		NH	P 13	0,0	6
3406.171r	14	4. 0		Fe I p	2.84	376	
3406.258r	6	1. 8					
3406.358r	9. 5	3. 1					
3406.439r	76	22. 2		Fe I	3.27	676	
3406.564r	34	9. 8					
3406.810r	136	39. 9		Fe I	2.22	85	
3407.054r	28	8. 2		Fe I? p	2.83	377	
3407.205r	101	30. 5		Ti II	0.05	1	
3407.314r	56	26. 0		Ni II	3.08	4	
3407.404r	16	12. 5					
3407.464r	248	50. 9		Fe I	2.18	83	
3407.561r		28. 4		Fe I p	2.18	81	
3407.712r	10	3. 7					
3407.805r	60	18. 8		Dy II	0.00		
3407.959r	37	10. 8		Mn I	2.92	26	
3408.085r	58	17. 0		Zr II	0.97	72	
3408.185r	20	6. 9					
3408.352r	13	3. 8					
3408.505r	22	6. 5		Fe I			
3408.679r	8. 5	2. 9		Sm II			
3408.779r	131	38. 4		Cr II	2.48	3	
3408.938r	56	17. 9		—V II	2.51	120	
3409.078r	9	2. 9					
3409.170r	134	23. 5		Co I	0.51	23	
3409.214r		23. 5		Fe I	3.24	614	
3409.398r	40	11. 7		Fe I p	3.02	445	
3409.579r	100	29. 2		Ni I	0.00	5	
3409.671r	25	9. 1		NH Co I	P 14 0.51	0,0 24	6
3409.818r	80	23. 6		Ti II	0.03	1	
3409.948r	21	6. 3		NH	P 14	0,0	6
3410.038r	60	17. 6		Fe I	3.05	542	
3410.181r	80	23. 5		Fe I	3.41	735	
3410.254r	48	21. 1		Zr II	0.41	11	
3410.394r	5. 5	1. 6					
3410.564r	23	6. 7		Fe I	2.59	244	
3410.651r	7	2. 2					
3410.791r	20	5. 9					
3410.903r	84	24. 8		Fe I	0.91	25	
3411.028r	26	7. 6		Cr I?—			
3411.142r	54	16. 0		Fe I	2.69	299	
3411.234r	9. 5	2. 8					
3411.366r	70	20. 5		Fe I	2.73	301	
3411.568r	6	1. 8					
3411.67 a	17	5. 0		Ti I	2.41		
3411.751r	6	1. 8					
3411.877r	14	4. 1		Fe I p	2.69	298	
3411.977r	20	5. 9					
3412.030r	4	1. 2					
3412.170r	23	6. 6					
3412.349r	123	36. 0		Co I	0.51	25	
3412.463r	9. 5	3. 2		Ni I p	3.40	90	
3412.643r	108	32. 0		Co I	0.00	6	
3412.777r	8. 5	2. 6					
3412.887r	30	9. 1		NH	P 12	1,1	6
3413.00 a	11	3. 7					
3413.143r	156	48. 4		Fe I	2.20	85	
3413.270r	29	10. 7		NH	P 12	1,1	6
3413.410r	160	1. 8		Zr II— NH	1.00 P 15	60 0,0	6
3413.492		54. 4		Ni I	0.17	5	7
3413.650r	53	17. 5		NH	P 15	0,0	6
3413.723r	19	8. 6					
3413.803r	8	2. 9		Dy II	0.10		
3413.947r	112	36. 1		Ni I	0.11	17	
3414.137r	28	10. 0		Fe II	3.94	91	
3414.267r	6. 5	2. 6					
3414.403r	9	4. 7		Fe I?			
3414.511r	53	34. 2					
3414.637r	54	156		Zr II Zr I	1.01 0.07	73 17	
3414.779r	816	237		Ni I	0.03	19	
3414.918r	49	157					
3415.098r	15	24. 9					
3415.147r	8	4. 4					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3415.330r	3. 5	1. 3		Cr I?	3.45		
3415.443r	6	2. 2		Cr II?	4.50	100	
3415.540r	82	28. 1		Fe I (Co I)	2.22 0.00	83 5	
3415.683r	44	14. 4		Ni I p	3.54	123	
3415.790r	28	9. 4		Co II	2.20	2	
3415.897r	4	1. 3					
3416.032r	63	19. 6		Fe II	2.28	16	
3416.142r	6. 5	2. 1					
3416.289r	42	12. 9		Fe I			
3416.409r	6	1. 9					
3416.512r	10	2. 9		Fe I p	3.37	708	
3416.639r	5. 5	1. 9		NH	P 16	0,0	6
3416.676r	44	13. 2		Fe I	2.48	142	
3416.782r	16	4. 7					
3416.869r	21	6. 1		NH Fe I	P 16	0,0	6
3416.963r	68	19. 9		Ti II	1.24	53	
3417.066r	12	4. 4		NH	P 16	0,0	6
3417.169r	121	35. 3		Co I	0.58	23	
3417.269r	51	20. 3		Fe I	1.01	26	
3417.359r	25	9. 4		NH Ru I	P 13 0.26	1,1 4	6
3417.486r	6	1. 8		Ce II?	0.70	100	
3417.549r	5	1. 5					
3417.687r	28	8. 0		Co I	2.33	122	
3417.816r	139	22. 5		Co I	0.43	19	
3417.870r		22. 5		Fe I	2.22	81	
3418.029r	26	7. 6		Fe II p	4.08	104	
3418.171r	70	20. 5		Fe I	3.28	577	
3418.316r	13	3. 9					
3418.39 a	8. 5	2. 7					
3418.522r	111	32. 4		Fe I	2.22	81	
3418.732r	29	8. 5		Gd II	0.00	7	
3418.881r	55	16. 1		Fe I	3.04		
3418.976r	4	1. 2					
3419.150r	48	14. 0		Fe I	3.24	576	
3419.292r	3. 5	1. 0		Fe I?			
3419.422r	6	1. 8		Mn II	4.93		
3419.704r	60	17. 7		Fe I	2.84	377	
3419.80 a	4. 5	1. 5					
3419.881r	4	1. 2					
3420.001r	3. 5	1. 0		Mn II?	4.93		
3420.108r	18	5. 3		NH	P 17	0,0	6
3420.228r	9	2. 9		Fe I?			
3420.285r	23	6. 9		NH	P 17	0,0	6
3420.443r	30	8. 8		NH	P 17	0,0	6
3420.488r	23	6. 7		Co I	1.74	42	
3420.598r	6. 5	1. 9					
3420.748r	84	22. 8		Ni I	0.27	9	
3420.808r		2. 6		Mn I Co I	4.23 2.08	102	
3421.015r	14	4. 1		NH	P 14	1,1	6
3421.121r	9	3. 1		Ni I? p	3.42	105	
3421.221r	103	30. 2		Cr II	2.42	3	
3421.350r	50	16. 7		Ni I	3.54	122	
3421.487r	10	2. 8					
3421.625r	23	6. 7		Cr II? Co I?	4.29 4.32 2.04	60 60 101	
3421.727r	20	6. 0					
3421.900r	2	0. 6		Fe I			
3421.954r	4	1. 0					
3422.127r	45	13. 1		Fe I			
3422.214r	8. 5	2. 5					
3422.335r	48	14. 0		Ni I	3.54	105	
3422.496r	113	33. 5		Fe I (Gd II)	2.99 0.24	444 2	
3422.661r	65	33. 0		Fe I	2.22	85	
3422.759r	165	48. 1		Cr II (Ce II)	2.45 0.45	3 144	
3422.883r	43	14. 9		Ni I Co I	3.70 1.74	122 42	
3423.020r	12	3. 6		Cr I?			
3423.08 a	7. 5	2. 3					
3423.174r	14	4. 5		Cr I?	3.85		
3423.247r	19	6. 0					
3423.320r	9	3. 1					
3423.534r	6. 5	3. 2		NH— Fe I?	P 18	0,0	6

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3423.627r	17	16. 9					
3423.715r	366	104		Ni I	0.21	20	
3423.839r	18	16. 2		NH— Co II	P 18 2.27	0,0 2	6
3423.994r	22	8. 9		Fe I			
3424.13 a	12	3. 9					
3424.178r	6	2. 6		NH Fe II? p	P 15 4.15	1,1 116	6
3424.299r	128	38. 8		Fe I	2.18	81	
3424.446r	17	5. 8		NH	P 15	1,1	6
3424.513r	51	14. 9		Co I	2.08	103	
3424.599r	21	7. 0		Gd II	0.35	22	
3424.713r	20	6. 0		NH	P 15	1,1	6
3424.833r	30	9. 0		Zr II	0.04	2	
3425.019r	96	27. 7		Fe I	3.05	541	
3425.063r		0. 6		Tm II	0.03	7	
3425.299r	7	2. 0					
3425.37 a	8	2. 3					
3425.446r	16	4. 7		Fe I Nb II	1.35	7	
3425.583r	52	15. 2		Fe II	1.67	5	
3425.746r	6. 5	1. 9					
3425.843r	19	5. 5					
3425.968r	11	3. 2		Cr I	3.09	158	
3426.092r	22	6. 6		Fe I p	3.11	502	
3426.215r	15	6. 5		Ce II	0.12	44	
3426.332r	143	21. 3		Fe I	2.28	135	
3426.401r		26. 0		Fe I	0.99 2.18	25 82	
3426.635r	121	23. 6		Fe I	2.20	82	
3426.673r		17. 8		Fe I p	3.27	615	
3426.795r	10	3. 2		Fe II p	4.08	103	
3426.912r	5	1. 9		NH	P 19	0,0	6
3426.992r	101	48. 4		Fe I	0.99	26	
3427.086m	9	14. 0		NH—	P 19	0,0	6,8
3427.129r	218	63. 8		Fe I	2.18	81	
3427.206r	18	15. 2					
3427.358r	5	1. 6					
3427.462r	3. 5	1. 2					
3427.522r	19	5. 7					
3427.612r	11	3. 1		Cr I?			
3427.765r	14	4. 5		Co I?	3.19		
3427.838r	24	7. 1					
3427.948r	11	3. 5		NH	P 16	1,1	6
3428.020r	41	11. 9		Fe I p	3.30	616	
3428.207r	117	34. 1		Fe I	2.20	81	
3428.325r	11	3. 5		Ru I	0.00		
3428.427r	110	17. 8		Ni I p Fe I p	3.70 2.76	123 302	
3428.492r		17. 8					
3428.642r	24	6. 8		Fe II p	3.97	90	
3428.758r	69	20. 1		Fe I	3.60	836	
3428.932r	19	5. 5		Ti I	1.89	168	
3429.038r	6. 5	1. 9					
3429.148r	4. 5	1. 3		Fe I?			
3429.334r	10	2. 9					
3429.471r	8	2. 3					
3429.584r	5	1. 5					
3429.717r	18	5. 4					
3429.817r	22	6. 4		Fe I	2.61 3.05	244 540	
3429.937r	5	1. 5					
3430.083r	2	0. 6		Fe I?			
3430.160r	6. 5	1. 9		Fe II p	3.94	89	
3430.293r	19	5. 4		NH	P 20	0,0	6
3430.410r	22	6. 4		NH	P 20	0,0	6
3430.536r	49	14. 3		Zr II	0.47	11	
3430.642r	5. 5	1. 6					
3430.735r	5	1. 5		Ru I	0.34	3	
3430.885r	1. 5	0. 4		Fe I p	3.27	614	
3430.955r	8	2. 3					
3431.072r	3	0. 9					
3431.185r	8	2. 3					
3431.288r	20	5. 8		Cr I	2.54	53	
3431.455r	21	6. 3					
3431.586r	106	30. 9		Co I	0.10	6	
3431.695r	13	3. 9		Cr I	2.54	53	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3431.830r	90	26. 2		Fe I	2.83 3.30	376 676	
3431.942r	8	2. 5		NH	P 17	1,1	6
3432.022r	47	13. 7		Fe I	2.86	377	
3432.135r	18	5. 1		NH	P 17	1,1	6
3432.215r	7. 5	2. 2					
3432.312r	38	11. 1		Cr I Co I	2.54 2.08	53 102	
3432.415r	19	5. 5		Zr II	0.93	58	
3432.572r	13	3. 8					
3432.728r	42	12. 5		Nb II	2.01		
3432.888r	15	4. 7					
3433.048	111	40. 9		Co I	0.63	23	7
3433.155r	4	1. 6					
3433.318r	80	33. 8		Cr II	2.43	3	
3433.455r	12	12. 2		Pd I—	1.45	11	
3433.579r	492	143		Ni I— Cr I	0.03 2.54	19 52	
3433.769r	26	15. 1		NH NH	P 21 P 21	0,0 0,0	6 6
3433.917r	6. 5	2. 6		Zr II	1.00	58	
3433.981r	4. 5	1. 7					
3434.047r	64	21. 4		Fe I	2.76	300	
3434.123r	25	10. 5		Cr I	2.54	52	
3434.247r	13	4. 1					
3434.376r	11	3. 3		Dy II	0.00		
3434.490r	3. 5	1. 0					
3434.610r	2. 5	0. 7					
3434.693r	1. 5	0. 6					
3434.826r	8. 5	2. 5					
3434.896r	13	3. 6		Rh I	0.00	2	
3434.966r	14	4. 1		Fe I	3.55	776	
3435.043r	2	0. 6					
3435.160r	3	0. 9					
3435.246r	3. 5	1. 0		Fe I?			
3435.373r	4. 5	1. 3		V II	2.56	133	
3435.492r	29	8. 4		Ni I	1.68	53	
3435.593r	14	4. 4					
3435.683r	29	8. 4		Cr I	2.54	52	
3435.826r	39	11. 3		Cr I	2.54 2.54	53 53	
3436.038r	40	11. 8		Fe I	3.27	614	
3436.114r	15	5. 9		Fe II	3.97	91	
3436.196r	80	23. 3		Cr I	2.54 2.54	52 52	
3436.336r	9	2. 6					
3436.416r	16	4. 6					
3436.530r	7. 5	2. 3					
3436.650r	6	1. 7					
3436.746r	13	3. 8		Ru I	0.15	4	
3436.840r	15	4. 4					
3436.980r	6. 5	2. 3		Co I?— NH	3.13 P 22	0,0	6
3437.054r	126	36. 4		Fe I	3.05	539	
3437.146r	22	12. 8		Zr II	0.71	33	
3437.291r	184	53. 6		Ni I	0.00	3	
3437.480r	34	10. 5					
3437.636r	49	14. 2		Fe I	2.43	187	
3437.693r	20	7. 8		Co I	3.25	162	
3437.790r	7. 5	2. 2					
3437.876r	9	2. 6					
3437.958r	61	17. 9		Fe I	3.27	614	
3438.100r	22	6. 4		Fe I p	2.73	300	
3438.240r 3438.319r	132	23. 0 22. 7		Zr II Fe I	0.09	1	
3438.420r	13	4. 2					
3438.503r	23	6. 7					
3438.715r	27	8. 1		Co I	2.04	87	
3438.956r 3439.035r	140	27. 0 18. 9		Mn II Fe I	1.17 2.73	1 299	
3439.132r	7. 5	2. 3					
3439.229r	10	3. 5		Gd II	0.38	23	
3439.342r	12	3. 8		Ti I— Al I	1.46 0.00	120 2	
3439.499r	5	1. 7		NH	P 19	1,1	6
3439.599r	8	2. 9		NH	P 19	1,1	6
3439.705r	9	3. 6					
3439.805r	66	26. 4		Gd II	0.42	22	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3439.872r	13	6. 7		Fe I			
3440.002r	7. 5	5. 4		Gd II	0.24	7	
3440.099r	25	22. 1					
3440.192r	26	31. 0					
3440.369r	10	32. 2		NH	P 23	0,0	6
3440.499r	8	33. 2		—Sm II?	0.66	54	
3440.626r	1243	361		Fe I	0.00	6	
3440.739r	11	40. 1		Fe I p	2.76	301	
3441.019r	634	322		Fe I	0.05	6	
3441.112r	16	53. 5		Cr I	2.54	52	
3441.255r	14	15. 1					
3441.452r	40	20. 6		Cr I	2.54 2.54	52 52	
3441.552r	6. 5	3. 5					
3441.672r	4	2. 0					
3441.739r	9	4. 8					
3441.899r	14	11. 9					
3441.982r	329	107		Mn II	1.78	3	
3442.052r	9	10. 8		Ni I	3.42	104	
3442.148r	34	20. 5					
3442.232r	13	6. 2		Fe II	3.97	89	
3442.367r	70	27. 0		Fe I	2.28	134	
3442.560r	36	12. 9		Ni I	3.70	124	
3442.677r	85	27. 8		Fe I	0.96	26	
3442.785r	5. 5	1. 9		Fe II p	3.89	76	
3442.923r	131	35. 4		Co I	0.17	6	
3442.965r		19. 5		Fe I	3.07 3.55	499 776	
3443.045r	20	8. 4					
3443.194r	42	14. 4		Co I			
3443.299r	8. 5	3. 8		—NH	P 20	1,1	6
3443.381r	60	21. 2		Ti II	2.05	99	
3443.439r	9	4. 6		Co I?	3.05		
3443.555r	15	11. 4		Zr II	0.97	73	
3443.655r	141	59. 0		Co I (Al I)	0.51 0.01	22 2	
3443.772r	28	31. 1		Cr I	2.97	110	
3443.884r	655	190		Fe I	0.09	6	
3443.991r	8. 5	13. 1					
3444.081r	5. 5	3. 2					
3444.266r	148	22. 9		Ni I	3.74	122	
3444.331r		37. 2		Ti II	0.15	6	
3444.454r	5. 5	3. 0					
3444.518r	38	13. 2		Fe I			
3444.638r	4. 5	1. 5					
3444.711r	16	5. 4					
3444.894r	11	3. 5		Al I?	0.00	2	
3445.125r	137	41. 9		—Fe I	2.20	81	
3445.342r	11	3. 5		Fe I			
3445.462r	17	5. 4					
3445.606r	66	20. 2		Cr I (Dy II)	2.54 2.54 0.00	51 51	
3445.770r	66	21. 0		Fe I			
3445.812r	8	2. 9					
3445.992r	2. 5	1. 2					
3446.105r	29	15. 8		Co I	3.21	162	
3446.179r	6. 5	4. 9					
3446.271r	470	136		Ni I	0.11	20	
3446.401r	19	13. 3		Co II K I	2.24 0.00	2 4	
3446.485r	6	2. 9					
3446.612r	3	1. 0		Ti I	1.88	168	
3446.722r	12	4. 9					
3446.796r	65	20. 8		Fe I	2.61	244	
3446.954r	77	23. 8		Fe I	1.01	26	
3447.019r	34	24. 3		Cr I	2.54	52	
3447.155r	9. 5	2. 9		NH	P 21	1,1	6
3447.285r	100	29. 8		Fe I	2.20	82	
3447.434r	48	14. 0		Cr I (K I)	2.54 0.00	52 4	
3447.539r	8. 5	2. 5					
3447.639r	16	4. 6					
3447.766r	45	13. 0		Cr I	2.54	52	
3447.905r	11	3. 2					
3448.009r	66	19. 1		Fe I			
3448.092r	9. 5	5. 8					
3448.205r	44	12. 8		Fe I	2.40	186	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3448.359r	29	8. 4		Co I	3.25	163	
3448.462r	27	7. 8		Fe II— Fe I	3.97 3.02	90 444	
3448.592r	23	6. 7		Fe I			
3448.692r	14	4. 1					
3448.791r	88	13. 6		‖Fe I— Y II	2.83 0.41	372 17	
3448.868r		13. 6		Fe I	2.56	242	
3448.964r	20	6. 6		Ir I	0.50	1	
3449.051r	21	6. 8		Fe I p	2.95	442	
3449.175r	115	33. 3		Co I	0.58	22	
3449.311r	12	3. 9					
3449.448r	138	40. 0		Co I	0.43	22	
3449.631r	11	3. 3		Gd II?	0.03	7	
3449.698r	14	4. 2		Co I?	3.30	160	
3449.861r	23	6. 7		Ti I	0.82	46	
3449.988r	26	7. 4					
3450.140r	25	7. 3		Fe I p	2.59	242	
3450.238r	5	1. 7					
3450.334r	97	28. 4		Fe I	2.22	82	
3450.454r	12	3. 8					
3450.607r	5	1. 4		Mn I	4.27		
3450.747r	7	2. 0		Fe I Ti I	0.81	46	
3450.860r	9. 5	2. 8		Cr II?	4.29	60	
3450.994r	8. 5	2. 5		NH	P 22	1,1	6
3451.120r	18	5. 2		NH—	P 22	1,1	6
3451.234r	13	3. 8		Gd II Fe II?	0.38 6.81	22 208	
3451.342r	37	10. 7		Fe II?	6.81		
3451.474r	38	10. 9					
3451.626r	72	20. 7		‖Fe I Fe I p	2.42 2.56	139 241	
3451.780r	8	2. 6		Fe I			
3451.922r	110	31. 8		Fe I	2.22	81	
3452.284r	151	43. 7		Fe I	0.96	25	
3452.475r	68	20. 5		Ti II	2.05	99	
3452.628r	19	6. 2					
3452.785r	15	6. 5					
3452.905r	247	73. 1		Ni I	0.11	17	
3453.035r	50	26. 8		Fe I	2.76	301	
3453.121r	17	6. 7		V II	2.56	132	
3453.221r	3. 5	1. 3		Cr I	3.85		
3453.335r	24	10. 3		Cr I	2.54	52	
3453.512a	310	87. 9		Co I	0.43	22	
3453.751r	20	7. 5		Cr I	2.54	52	
3453.848r	9	2. 9					
3454.169r	59	17. 5		Ni II	2.95	1	
3454.321r	24	7. 0		Dy II			
3454.468r	5	1. 4					
3454.591r	9. 5	2. 9		Zr II	0.93	59	
3454.695r	6	1. 7					
3454.800r	3	0. 9					
3454.924r	8. 5	2. 6		Gd II	0.03	7	
3454.987r	39	11. 3		Cr II	4.94	136	
3455.070r	14	4. 3		NH	P 23	1,1	6
3455.245r	114	33. 0		‖Co I Cr I	0.22 2.54	6 51	
3455.360r	30	9. 3		Fe I?			
3455.467r	16	4. 6					
3455.602r	44	12. 9		Cr I	2.54 2.54	51 51	
3455.694r	11	3. 5		Fe I?			
3455.794r	12	3. 4		Ti I—	0.82	46	
3455.947r	14	4. 3					
3456.014r	40	11. 7		Fe II p	1.67	4	
3456.094r	20	6. 1					
3456.249r	62	18. 7		Fe I			
3456.394r	115	33. 3		Ti II	2.06	99	
3456.500r	15	5. 6					
3456.580r	13	3. 9		Dy II			
3456.667r	44	12. 7		Ti I	1.50	134	
3456.810r	19	5. 5					
3456.934r	64	18. 5		Fe II Co I	3.90 0.10	76 5	
3457.096r	92	25. 5		Fe I	2.83 3.60	374 835	
3457.147r		2. 0		V II	2.60	147	
3457.280r	9	2. 9		Ti I	0.83	46	
3457.404r	10	3. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3457.514r	15	2. 0		Fe I	2.45	187	
3457.574r	56	17. 5		Zr II	0.56	20	
3457.624r	12	4. 6		Cr II	4.94	135	
3457.774r	3	0. 9					
3457.894r	22	7. 5		Fe I—			
3458.010r	8. 5	4. 0		Ti I	0.84	46	
3458.120r	30	13. 0		Cr I Fe II? p	3.85 1.96	253 10	
3458.308r	52	37. 0		Fe I	2.42	139	
3458.467r	656	189		Ni I	0.21	19	
3458.594r	32	37. 6					
3458.700r	18	9. 8					
3458.940r	14	5. 1		Zr II	0.96	58	
3459.060r	5. 5	2. 0		NH	P 24	1,1	6
3459.154r	12	4. 0					
3459.280r	35	11. 3		Cr II Fe I p	4.92 3.28	136 576	
3459.434r	81	24. 2		Fe I	2.69	297	
3459.580r	11	3. 3					
3459.627r	13	3. 8		Fe I p	3.28	577	
3459.747r	70	21. 2		Fe I			
3459.918r	159	53. 8		Fe I— Fe I p	3.02 2.28	501 133	
3460.040r	100	36. 7		Mn II—	1.17	1	
3460.160r	24	9. 0					
3460.326r	181	53. 3		Mn II	1.81	3	
3460.434r	44	18. 3		Cr I—	3.01	141	
3460.557r	32	5. 5					
3460.607r		5. 5		NH?	P 29	0,0	6
3460.740r	34	10. 8		Co I— Pd I	0.92 0.81	35 2	
3460.887r	20	7. 1					
3460.977r	35	12. 4		Dy II	0.00		
3461.187r	91	32. 9		Co I	3.17	162	
3461.279r	12	7. 1		Cr II?	4.94	148	
3461.499r	120	74. 8		Ti II	0.13	6	
3461.667r	758	219		Ni I	0.03	17	
3461.796r	32	30. 9					
3461.939r	22	12. 4					
3462.083r	4	1. 6		Rh I?—	0.32	3	
3462.213r	11	4. 0		Tm II	0.00		
3462.358r	66	21. 8		Fe I	2.20	79	
3462.533r	6. 5	2. 2					
3462.733r	32	17. 5		Cr II	2.42	2	
3462.816r	126	38. 4		Fe I Co I	2.83 0.63	373 23	
3463.019r	33	10. 1		Zr II	1.49	90	
3463.189r	23	7. 1		NH— Ti I	P 25 1.05	1,1 85	6
3463.310r	70	20. 8		Fe I	1.48	48	
3463.386r	14	4. 9					
3463.526r	13	3. 9		Co I	1.78	42	
3463.643r	16	4. 8		Mn I	4.68		
3463.803r	25	7. 2					
3463.979r	59	17. 3		Fe II	1.67	4	
3464.033r	19	7. 4		Cr II	2.43	2	
3464.141r	65	18. 8		Fe I			
3464.31 a	$\widehat{10}$	2. 9					
3464.474r	63	18. 2		Sr II (Fe II)	3.04 4.15	4 114	
3464.709r	10	3. 0					
3464.836r	6. 5	2. 0		Cr I	2.54	51	
3464.918r	44	13. 0		Fe I	2.59	241	
3465.033r	7. 5	2. 3					
3465.166r	5	1. 4		Mn I?			
3465.256r	21	6. 9		Cr I	2.54	51	
3465.333r	2	0. 9					
3465.439r	3. 5	1. 2					
3465.553r	56	22. 2		Ti II Cr I	2.06 2.54	99 51	
3465.645r	. 23	16. 9		Ni II	3.07	4	
3465.766r	69	84. 2		Co I	0.00	5	
3465.880r	544	158		Fe I	0.11	6	
3466.002r	24	22. 5					
3466.052r	7	4. 9					
3466.185r	18	8. 2					
3466.285r	36	13. 7		Fe I	2.40	185	
3466.372r	5. 5	2. 0					
3466.504r	74	23. 4		Fe I	0.86	24	
3466.638r	52	15. 9					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3466.718r	15	4. 6					
3466.898r	70	20. 3		Fe I			
3467.018r	21	6. 0		Cr I	3.01 3.85	141 253	
3467.135r	22	6. 3		Ni I	3.77	123	
3467.272r	29	8. 4		Ti I	1.05	84	
3467.382r	10	2. 9		—NH	P 26	1,1	6
3467.509r	96	27. 7		Ni I	0.17	3	
3467.710r	70	20. 2		Cr I Ni I	2.98 3.74	110 123	
3467.872r	18	5. 2		Y II	0.41	17	
3468.02 a	5	1. 4					
3468.075r	22	6. 3					
3468.212r	13	3. 7					
3468.351r	7. 5	2. 3					
3468.477r	40	11. 5		Ca I	1.88	10	
3468.686r	66	19. 0		Fe II	4.15	114	
3468.851r	75	21. 8		Fe I	2.56	242	
3468.979r 3469.020r	81	4. 9 20. 6		Co I Fe I	3.28 3.30	159 614	
3469.16 a	11	3. 2					
3469.26 a	18	5. 6		Fe I	2.56		
3469.397r	19	8. 8		Fe I	2.84	375	
3469.493r	180	52. 2		Ni I (V II)	0.27 2.27	8 58	
3469.601r	26	9. 9		Cr I— Fe I	2.71 3.01	77 141	
3469.691r	10	3. 0		Co I?	2.70	137	
3469.837r	59	17. 9		Fe I	2.61	242	
3469.941r	7. 5	2. 1		Zr II	1.00	59	
3470.021r	3	0. 8		Mn I	4.68		
3470.141r	1. 5	0. 5					
3470.244r	5. 5	1. 5		Fe II— V II	3.97 2.27	89 58	
3470.400r	17	5. 0		Cr I	2.71	77	
3470.542r	25	7. 2		Cr I	2.71	77	
3470.640r	11	3. 0		Rh I?	0.43	3	
3470.740r	15	4. 3		Cr I	2.71	77	
3470.864r	1	0. 3					
3471.000r	2	0. 6					
3471.120r	7. 5	2. 3		Zr II Zr I	1.74 0.00	114 15	
3471.268r 3471.363r	169	26. 8 33. 2		Fe I Fe I	2.22 2.28	82 130	
				(Co I) (Ni II)	3.17 3.08	161 4	
3471.462r	29	12. 1		Cr I	2.71	77	
3471.614r	14	4. 5		Ni I p	3.70	124	
3471.720r	7. 5	2. 3					
3471.774r	12	3. 7		NH	P 27	1,1	6
3471.899r	36	11. 4		Fe I			
3472.054r	37	11. 5		Cr II	4.92	135	
3472.180r	43	14. 8					
3472.307r	32	14. 0		—Fe I			
3472.457r	16	16. 8		—Lu II	1.54	4	
3472.558	374	136		Ni I	0.11	20	7
3472.714r	7. 5	4. 9		Co I—	3.17	160	
3472.780r	11	4. 5		Cr I	2.71	77	
3472.904r	9. 5	3. 3		Cr I Fe II?	2.97 4.74	111 156	
3473.010r	9. 5	3. 2		Fe I	3.26	576	
3473.054r	3. 5	1. 2					
3473.227r	3	1. 1		Gd II Fe I p	0.03 3.21	7 576	
3473.299r	61	18. 5		Fe I	3.05		
3473.501r	62	18. 5		Fe I	0.99	26	
3473.620r	10	3. 7		Cr I	2.71	77	
3473.686r	54	16. 1		Fe I			
3473.813r	6	2. 0					
3473.969r 3474.060r	27 203	11. 2 59. 2		Co I Mn II	0.00 0.58 1.81	4 23 3	
3474.150r	78	46. 7		Mn II	1.83	3	
3474.273r	5. 5	2. 0					
3474.386r	4. 5	2. 4		Cr I?			
3474.439r	79	23. 8		Fe I			
3474.532r	19	7. 4		Co I	0.58	24	
3474.663r	3. 5	1. 1					
3474.767r	30	10. 7		Ca I	1.89	10	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3474.886r	13	4. 8		Cr I Sr II	3.01 3.04	141 4	
3475.006r	1	0. 3					
3475.133r	49	22. 9		Cr II	2.43	2	
3475.269r	23	16. 0		Fe II p	1.69	4	
3475.319r	8. 5	13. 6					
3475.457r	622	179		Fe I	0.09	6	
3475.519r	22	74. 0					
3475.665r	112	56. 0		Fe I	2.18	78	
3475.757r	34	28. 2		Fe II p	1.67	4	
3475.873r	30	12. 3		Fe I	{2.43 {2.84	186 373	
3476.026r	6	2. 2		Co I?	1.74		
3476.193r	8. 5	3. 2		NH	P 28	1,1	6
3476.342r	59	22. 6		Fe I	{2.28 {3.60	133 835	
3476.453r	4	2. 3		Ti I	1.07	85	
3476.619r	17	17. 9		Ni I	3.70	123	
3476.712r	465	136		Fe I	0.12	6	
3476.865r	46	38. 4		Fe I (Ce II)	2.59 1.32	242 132	
3476.988r	74	35. 4		Ti II — Fe I	0.15 2.42	6 139	
3477.186r	102	26. 8		Ti II	0.12	6	
3477.363r	9. 5	3. 2					
3477.499r	16	4. 9		V II	2.27	58	
3477.633r	40	12. 1					
3477.719r	7. 5	2. 2					
3477.865r	88	26. 8		Fe I Ni I	2.22 3.61	82 124	
3477.985r	17	5. 0		Fe I p	3.65	836	
3478.118r	5	1. 5					
3478.178r	10	2. 9					
3478.300r 3478.366r	88	13. 8 15. 3		Zr II — Ni I Fe I	0.09 3.70 2.43	2 173 185	
3478.551r	45	18. 1		Co I	2.28	120	
3478.634r	80	23. 6		Fe I			
3478.738r	10	3. 6		Co I	1.88	67	
3478.785r	55	15. 7		Cr I Fe I	3.01 2.42	141 137	
3478.915r	10	3. 1		Ti I	1.05	84	
3479.025r	28	8. 2		Zr II	0.53	20	
3479.135r	7	2. 1		Cr I	3.01	141	
3479.263r	45	12. 9		Ni I	3.48	105	
3479.393r	50	14. 2		Zr II	0.71	46	
3479.565r	14	4. 0		Co I? Nb II	1.78 1.31	6	
3479.691r	48	13. 8		Fe I	{2.95 {3.57	443 812	
3479.831r	31	10. 9		V II	1.07	6	
3479.923r	78	22. 3		Fe II	1.69	4	
3480.033r	25	7. 2		Co I	1.88	67	
3480.177r	62	17. 8		Ni I	{3.61 {3.77	123 124	
3480.304r 3480.338r	82	0. 2 23. 6		Cr I Fe I	3.01	141	
3480.411r	12	4. 0		Zr II	0.93	58	
3480.531r	58	16. 7		Ti I	1.07	84	
3480.647r	19	5. 2					
3480.737r	9	2. 9					
3480.886r	75	21. 5		Ti II	1.08	22	
3481.057r	25	7. 8					
3481.164r	74	21. 5		Zr II	0.80	46	
3481.301r	53	15. 2		Cr I	2.71	77	
3481.451r	15	4. 3		Zr II?	0.96	59	
3481.557r	70	20. 2		Fe I Cr I	2.28 3.00	132 110	
3481.664r	13	4. 6		Ti I?	2.49	271	
3481.751r 3481.814r	78	7. 2 17. 8		Gd II	0.49	22	
3481.937r	31	8. 9		Fe II p	4.07	102	
3482.057r	23	6. 6		Fe II? p	2.03	10	
3482.187r	63	18. 1		Fe I			
3482.22 a 3482.30 a	12	2. 0 1. 7					
3482.451r	37	10. 6		Fe I Fe II			
3482.574r	50	14. 7		Cr II	5.67	184	
3482.717r	52	14. 9		Ni I	3.61	120	
3482.909r	153	43. 9		Mn II	1.83	3	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3483.017r	109	44. 4		Fe I	0.91	24	
3483.157r	26	7. 5		Co I?	2.28		
3483.414r	114	35. 1		Co I	0.51	23	
3483.528r	43	13. 2		Fe I?— ‖Zr II	0.76	33	
3483.630r	14	5. 3		Ni I p	3.70	120	
3483.784r	198	56. 8		Ni I	0.27	6	
3483.884r	35	13. 4		Fe I			
3484.033r	13	4. 0					
3484.156r	87	25. 0		Cr II	2.45	2	
3484.213r	22	6. 3					
3484.343r	32	9. 5		Fe II	4.15	115	
3484.553r	27	7. 8		Fe I?			
3484.670r	27	8. 9		V II?	1.10	6	
3484.783r	35	10. 0					
3484.856r	63	18. 1		Fe I	2.45	185	
3484.982r	110	31. 5		Fe I— (Ce II)	2.42 0.00	138 44	
3485.110r	100	29. 2		Ni I	3.70	118	
3485.230r	21	6. 0					
3485.354r	150	45. 8		|Fe I— Co I	2.20 3.12	78 162	
3485.506r	22	6. 3					
3485.580r	22	6. 3					
3485.706r	60	17. 2		Co I Ti I	1.96 1.05	68 84	
3485.902r	122	35. 8		‖Ni I V II	0.21 1.10	17 6	
3486.040r	18	5. 2					
3486.143r	35	10. 3		Fe I			
3486.223r	16	4. 9					
3486.336r	66	4. 0					
3486.383r		16. 1					
3486.552r	64	18. 3		Fe I	2.22	79	
3486.643r	13	4. 0					
3486.750r	11	3. 2					
3486.823r	8	2. 3					
3486.956r	42	7. 2					
3487.006r		5. 4					
3487.150r	13	3. 7		Fe I?	4.14		
3487.276r	8. 5	2. 4					
3487.403r	13	3. 7					
3487.604r	64	18. 2		Ca I	1.90	10	
3487.718r	31	9. 0		Co I	1.88	65	
3487.820r	20	5. 7					
3487.992r	65	18. 6		Fe II	1.69	4	
3488.150r	19	5. 6					
3488.298r	46	13. 2		Ni I	3.61	121	
3488.450r	36	10. 5		Cr I	2.97	109	
3488.563r	17	5. 2		Ce II?	0.87	187	
3488.678r	126	36. 0		Mn II	1.85	3	
3488.826r	66	19. 5		Fe I			
3489.003r	52	16. 5					
3489.163r	98	28. 9		Fe II p	4.07	102	
3489.253r	43	14. 3					
3489.407r	135	40. 2		Co I	0.92	36	
3489.674r	130	24. 6		Fe I	2.95	442	
3489.750r		18. 3		Ti II	0.13	6	
3489.909r	8	2. 9					
3489.965r	3. 5	1. 3		V II	2.56	131	
3490.052r	4	1. 6		Fe I? p	2.87	331	
3490.162r	20	9. 2					
3490.202r	5. 5	3. 2					
3490.302r	5	3. 6					
3490.395r	11	10. 8					
3490.489r	10	17. 3		Fe I p	3.60	835	
3490.594r	830	238		Fe I	0.05	6	
3490.757r	34	26. 4		Co I (Fe I p)	0.51 2.28	20 133	
3490.869r	12	7. 2					
3491.056r	104	39. 5		Ti II	0.11	6	
3491.215r	22	8. 4					
3491.323r	76	26. 6		Co I—	0.22	6	
3491.522r	9	3. 0					
3491.755r	20	6. 6		Fe I?			
3491.882r	10	3. 3					
3491.973r	34	11. 5		Co I	3.25	159	
3492.035r	8. 5	3. 0					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3492.145r	11	3. 9					
3492.229r	35	12. 5					
3492.369r	60	21. 5					
3492.539r	28	12. 9					
3492.719r	10	7. 0					
3492.815r	23	20. 2					
3492.975r	826	239		Ni I	0.11	18	
3493.089r	11	15. 6					
3493.174r	21	14. 9		V II	1.07	6	
3493.291r	47	23. 8		Fe I	1.48	48	
3493.479r	38	15. 2		Fe II	4.15	114	
3493.582r	28	10. 6		Fe I p	2.83	327	
3493.695r	53	18. 6		Fe I	2.73	297	
3493.865r	21	7. 2		Fe I?			
3494.015r	8. 5	2. 7					
3494.169r	53	16. 3		Fe I	2.42	137	
3494.262r	7	2. 1		Fe I p	2.43	185	
3494.359r	10	3. 0					
3494.412r	13	3. 7		Gd II	0.08	7	
3494.515r	46	13. 2		Cr II Dy II	2.48 0.10	2	
3494.676r	94	26. 6		Fe II	2.28	16	
3494.732r		0. 9		Ni I	3.80	154	
3494.855r	14	4. 0					
3494.969r	33	9. 5		Cr I	2.98	109	
3495.039r	6. 5	2. 0					
3495.12 a	11	3. 0					
3495.245r	116	5. 7					
3495.284r		30. 8		Fe I	2.56	238	
3495.383r	61	20. 0		Cr II	2.45	2	
3495.519r	30	8. 6		Cr II	4.94		
3495.663r	138	26. 9		Co I (Fe II)	0.63 4.15	22 115	
3495.714r		20. 0		—Ti I	1.05	84	
3495.835r	141	24. 3		Mn II	1.85	3	
3495.885r		24. 3		Fe I			
3495.962r	10	3. 7					
3496.085r	48	13. 7		Y II	0.00	3	
3496.209r	96	28. 0		Fe I Zr II	2.45 0.04	186 1	
3496.352r	64	19. 0		Ni I	3.61	118	
3496.475r	14	4. 1					
3496.582r	49	17. 1		Fe I p	3.21	572	
3496.681r	101	30. 3		Co I	0.51	19	
3496.813r	77	24. 1		Mn II (Co I)	1.83 3.12	3 161	
3497.009r	62	32. 3		—V II	2.60	146	
3497.102r	166	34. 0		Fe I	2.18	78	
3497.162r		30. 6		Fe I	2.20	78	
3497.282r	8. 5	3. 3		Co II			
3497.395r	31	12. 4					
3497.529r	59	25. 9		Mn II	1.85	3	
3497.735r	12	12. 3		Fe II p—	4.15	114	
3497.843r	726	205		Fe I (Fe I p)	0.11 3.02	6 499	
3497.977r	12	9. 4					
3498.183r	49	22. 3		Fe I p— Ni I p	2.81 0.00	326 2	
3498.312r	15	6. 1					
3498.395r	11	4. 1					
3498.529r	20	7. 0					
3498.749r	42	13. 4		Fe I	2.85	330	
3498.945r	31	9. 7		Ru I	0.00	4	
3499.109r	31	9. 4		Ti I	1.07	84	
3499.269r	21	6. 6		Fe I			
3499.353r	23	6. 7					
3499.469r	2	0. 6					
3499.572r	26	7. 3		Zr II	0.41	9	
3499.709r	5	1. 4					
3499.835r	44	0. 3		V II	1.07	5	
3499.874r		12. 5		Fe II	4.15	115	
3499.992r	21	6. 0					
3500.157r	39	11. 1		Fe I	2.87	327	
3500.335r	90	25. 6		Ti II	0.12	6	
3500.438r	7	2. 1					
3500.567r	86	24. 6		Fe I	2.59	238	
3500.691r	16	5. 1					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3500.857r	163	46. 6		Ni I	0.17	6	
3500.955r	4	1. 3					
3501.071r	21	2. 9					
3501.157r		2. 9					
3501.255r	7	2. 0					
3501.333r	10	2. 9		Zr I?	0.07	14	
3501.466r	12	3. 4		Ce II	0.23	67	
3501.571r	13	3. 7					
3501.702r	84	15. 1					
3501.729r		15. 1		Co II	2.20	2	
3501.831r	15	4. 3					
3501.965r	18	5. 1		Mo II	3.74		
3502.026r	8	2. 4					
3502.10 a	16	4. 6					
3502.291	111	31. 6		Co I	0.43	21	7
3502.469r	37	10. 7		Fe I p	3.24	576	
3502.598r	111	17. 1		Ni I	0.00	3	
3502.636r		21. 2		Co I	0.17	6	
3502.760r	12	3. 6					
3502.862r	28	8. 0		Fe I	3.26	577	
3502.973r	9	2. 5		Co I?	2.63	135	
3503.117r	16	4. 6					
3503.303r	7. 5	2. 1					
3503.473r	50	14. 3		Fe II	1.72	4	
3503.560r	6	1. 7					
3503.727r	22	6. 3		Co I	2.14	88	
3503.909r	13	3. 7					
3504.053r	3	0. 9					
3504.193r	3. 5	1. 0					
3504.260r	6	1. 7					
3504.442r	65	18. 5		V II	1.10	6	
				Fe I	2.83	371	
3504.594r	15	4. 3					
3504.684r	70	20. 0					
3504.892	132	37. 6		Fe I	2.28	131	7
				Ti II	1.89	88	
3505.063r	94	26. 8		Fe I	3.02	498	
3505.149r	7	2. 4		Co I	3.12	160	
3505.232r	24	8. 3		Hf II	1.04	7	
3505.294r	92	26. 2					
3505.386r	9. 5	3. 0					
3505.489r	51	14. 5		Zr II	1.53	90	
				(Gd II)	0.49	22	
3505.671r	53	15. 1		Zr II	0.16	1	
3505.789r	9. 5	2. 7					
3505.899r	38	11. 0		Ti II	1.89	88	
3506.050r	28	8. 0		Zr II	1.24	84	
3506.241r	45	24. 0		Fe I	2.87	327	
3506.328r	140	40. 0		Co I	0.51	21	
3506.506r	132	37. 6		Fe I	2.28	130	
3506.594r	71	31. 4		Fe I p	2.88	327	
3506.654r		1. 0		Ti I	0.05	22	
3506.752r	14	4. 4					
3506.841r	46	13. 8		Dy II—	0.10		
3506.938r	15	4. 4		Fe I			
3507.145r	94	18. 8		Fe I	3.65	835	
3507.211r		11. 1					
3507.308r	10	3. 0		Rh I	0.32	2	
3507.404r	50	14. 3		Fe II	2.34	16	
				Fe I	3.07	500	
3507.548r	13	3. 7		V II	2.76	159	
3507.698r	80	23. 1		Ni I	0.17	3	
3507.818r	17	4. 8		Co II			
3507.951r	19	5. 6		Ce II—	0.17	51	
3508.095r	11	3. 2		Cr I?			
3508.211r	48	13. 4		Fe II	1.72	4	
3508.348r	11	3. 3					
3508.487r	105	22. 0		Fe I	2.99	442	
3508.531r		13. 4		Fe I	2.56	239	
3508.708r	23	6. 7					
3508.898r	21	6. 0					
3509.018r	14	4. 2		V II	2.52	117	
3509.125r	69	19. 8		Fe I	2.83	326	
3509.331r	18	5. 4		Zr I	0.07	15	
3509.431r	14	3. 9					
3509.551r	16	4. 9					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3509.731r	41	13. 4		Fe I	2.88	327	
3509.853r	105	33. 9		||Co I— Fe I (Ti II)	0.58 2.22 1.89	22 78 88	
3510.070r	7. 5	3. 2					
3510.192r	22	13. 1		Fe I p	3.69	836	
3510.327r	489	140		Ni I	0.21	18	
3510.457r	25	22. 5		Fe I Co I (Zr II)	2.48 0.10 0.56	139 6 20	
3510.554r	10	5. 7		Cr I	3.00	109	
3510.685r	33	13. 5		Fe I			
3510.846r	87	29. 1		Ti II	1.89	88	
3511.070r	10	3. 1					
3511.217r	11	3. 2		Sm II	0.10	12	
3511.314r	9	2. 6					
3511.444r	13	3. 6					
3511.537r	16	4. 6		Zr II?	1.83	124	
3511.624r	31	8. 7		Ni I	3.63	152	
3511.744r	41	13. 6		Fe I	2.56	238	
3511.839r	90	26. 1		Cr II	2.48	2	
3511.927r	27	9. 4		Ni I	3.74	124	
3512.089r	71	20. 0		Fe I	2.85	327	
3512.230r	70	19. 8		Fe I	2.85	326	
3512.381r	42	12. 1					
3512.500r	9	2. 8		Gd II?	1.25	89	
3512.646r	132	37. 2		Co I	0.58	21	
3512.730r	27	12. 7		Fe I p	3.27	613	
3512.811r	24	8. 2		Fe I p	2.86	330	
3512.960r	50	17. 7		Fe I	3.07	501	
3513.060r	97	27. 7		|Cr II— Fe I	4.74 1.56	107 48	
3513.282r	24	7. 2					
3513.483r	98	31. 8		Co I	0.10	5	
3513.604r	20	9. 7		Fe I p	2.81	327	
3513.728r	2. 5	1. 8					
3513.825r	307	87. 5		Fe I	0.86	24	
3513.942r 3513.998r	43	7. 7 5. 9		|Ni I Ni II	0.21 2.86	17 1	
3514.242r	10	3. 3		Co II	2.27	1	
3514.33 a	12	4. 1					
3514.468r	47	15. 9		Fe I p	1.48	47	
3514.635r	56	21. 9		Fe I	2.40	183	
3515.066r	718	202		Ni I	0.11	19	
3515.409r	18	8. 3		Fe I	2.61	243	
3515.535r	17	6. 8		Fe I			
3515.647r	4. 5	1. 5					
3515.807r	3	1. 1		Fe II?	6.80	208	
3515.881r	2	0. 6					
3516.016r	7	2. 3		V II	1.13	6	
3516.121r	4. 5	1. 3					
3516.219r	55	16. 8		Ni I	3.54	123	
3516.301r	6. 5	2. 3					
3516.414r	60	18. 2		Fe I	3.02	442	
3516.561r	67	19. 9		Fe I	2.86	326	
3516.714r	9. 5	2. 9					
3516.819r	35	10. 5					
3516.953r	22	6. 6		Pd I	0.96	1	
3517.033r	16	4. 5		Ni I p	3.74	123	
3517.170r	15	4. 2					
3517.306r	79	22. 9		V II	1.13	6	
3517.383r	10	3. 5		Ce II	0.90	230	
3517.513r	16	4. 5		Co II—	2.24	1	
3517.720r	3	0. 9					
3517.820r	5. 5	1. 4					
3517.963r	8	2. 3					
3518.060r	7	2. 0					
3518.220r	15	4. 2		Fe I p	3.24	575	
3518.348r	93	26. 3		Co I	1.05	36	
3518.496r	12	3. 5					
3518.650r 3518.685r	96	18. 6 14. 2		Ni I Fe I	3.54 2.87	124 327	
3518.793r	6	2. 1					
3518.874r	67	19. 1		Fe I	2.20	78	
3519.099r	18	5. 2		Ce II?	0.33	92	
3519.270a	3. 5	1. 0					
3519.505r	3. 5	1. 0		Fe I			
3519.618r	7. 5	2. 6		Zr I	0.00	13	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3519.764r	171	49. 4		Ni I	0.27	5	
3519.881r	9. 5	5. 3					
3520.028r	114	16. 9		V II	1.07	5	
3520.088r		19. 2		Co I	0.10	4	
3520.257r	75	22. 3		Ti II	2.05	98	
3520.391r	5. 5	1. 7					
3520.535r	13	4. 1		Ce II— V II	0.17 2.27	55 57	
3520.611r	4	1. 2					
3520.731r	4. 5	1. 4					
3520.851r	47	16. 2		Fe I Zr II	2.61 0.56	238 19	
3520.978r	3	1. 2					
3521.065r	25	10. 2					
3521.178r	12	9. 3					
3521.270r	381	110		Fe I	0.91	24	
3521.546r	109	17. 6		Co I	0.43	20	
3521.608r		27. 1					
3521.748r	18	6. 9		Co I	0.63 2.04	24 100	
3521.844r	72	23. 4		V II Fe I	2.27 2.22	57 78	
3522.044r	6. 5	2. 0		Fe II? p	2.03	10	
3522.144r	7	2. 2		Cr II?	5.67	184	
3522.272r	61	19. 0		Fe I	2.83	326	
3522.449r	21	6. 4					
3522.537r	5. 5	2. 0					
3522.617r	16	5. 2					
3522.737r	12	3. 9		Fe I p	3.05	538	
3522.834r	20	7. 3		Co I	3.21	159	
3522.908r	58	18. 3		Fe I	2.87	330	
3523.072r	43	14. 2		Ni I	0.42	34	
3523.184r	35	11. 5		Fe I p	3.25	673	
3523.312r	55	18. 4		Fe I	2.87	326	
3523.444r	96	30. 9		Ni I Co I	0.03 0.63	16 21	
3523.560r	21	8. 2					
3523.710r	21	7. 5		Co I	1.88	66	
3523.784r	4	1. 5					
3523.990r	4	6. 5		Dy II	0.54		
3524.081r	63	27. 2		Fe I	2.59	239	
3524.244r	100	54. 6		Fe I	2.28	130	
3524.358r	15	24. 6					
3524.536r	1271	363		Ni I	0.03	18	
3524.742r	39	33. 3		V II	1.10	5	
3524.922r	12	7. 6					
3525.130r	14	6. 1					
3525.275r	4	1. 5					
3525.388r	2. 5	1. 0					
3525.515r	3. 5	1. 3					
3525.618r	30	11. 3		—Fe I			
3525.845r	75	32. 3		Zr II— Fe I	0.36 2.85	9 329	
3525.962r	13	11. 6					
3526.042r	84	62. 5		Fe I	0.09	6	
3526.170r	422	132		Fe I	0.96	24	
3526.257r	23	29. 2		Fe I	2.86	327	
3526.385r	108	49. 2		Fe I	2.86	326	
3526.484r	67	38. 2		Fe I	2.28	131	
3526.545r	23	18. 9		Ni I	3.65	155	
3526.680r	82	35. 8		Fe I	2.87	326	
3526.847r	209	63. 0		Co I	0.00	4	
3526.974r	24	12. 6		Fe I p	3.65	835	
3527.111r	18	5. 6		Cr I	3.98	274	
3527.227r	2. 5	0. 6					
3527.317r	17	5. 1					
3527.447r	8. 5	2. 5		Zr II	1.76	103	
3527.531r	18	6. 1		Nd II?			
3527.609r	48	14. 1					
3527.795r	107	31. 4		Fe I	2.85	326	
3527.900r	47	17. 1		Fe I p	2.76	296	
3527.992r	87	25. 1		Ni I	0.17	6	
3528.241r	49	14. 1		Fe I	2.45	182	
3528.324r	12	3. 4		Fe I?	1.56		
3528.411r	11	3. 1					
3528.574r	7	1. 9		Os I	0.00	1	
3528.787r	3. 5	1. 0					
3528.894r	49	13. 5		Ni I	3.65	154	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3529.040r	76	21. 7		Co I	0.17	5	
3529.187r	8. 5	2. 3					
3529.354r	12	3. 3					
3529.521r	68	19. 2		Fe I	3.05	537	
3529.627r	25	8. 8		Ni I	1.93	76	
3529.731r	46	17. 8		V I	1.19	53	
3529.823r	148	42. 0		Fe I Co I	2.88 0.51	326 22	
3529.994r	20	5. 9		Zr II	1.21	84	
3530.122r	9	2. 5					
3530.232r	14	3. 9		Zr I	0.63	52	
3530.391r	92	25. 9		Fe I	2.81	326	
3530.592r	34	9. 7		Ni I	3.54	121	
3530.777r	75	21. 3		V II	1.07	5	
3530.965r	23	6. 4		Fe I	2.48	138	
3531.105r	4. 5	1. 3		Cr I?			
3531.282r	7	1. 9					
3531.440r	60	17. 1		Fe I (V II)	2.43 1.10	182 4	
3531.619r	20	5. 6					
3531.709r	45	12. 5		Dy II			
3531.840r	68	19. 2		Mn I	2.28	18	
3532.001r	81	24. 5		Mn I	2.28	18	
3532.120r	101	28. 7		Mn I	2.28	18	
3532.327r	45	12. 8					
3532.459r	31	8. 7					
3532.579r	76	21. 6		Fe I—			
3532.635r	50	16. 8		Fe II	4.48	132	
3532.82 a	7	2. 9					
3532.899r	12	4. 5		Cr I?	3.37		
3533.014r	97	31. 4		Fe I	2.88	326	
3533.203r	223	63. 2		Fe I	2.88	326	
3533.364r	72	26. 1		Co I	0.22	5	
3533.538r	6	2. 1					
3533.694r	21	6. 0		V I— V I	1.22 1.18	53 53	
3533.858r	43	12. 3		Ti II	2.06	98	
3534.064r	14	4. 1		Ce II	0.52	44	
3534.258r	20	5. 6					
3534.530r	44	12. 5		Fe I	3.57	811	
3534.591r	8. 5	2. 8					
3534.688r	6. 5	1. 8					
3534.778r	21	5. 9		Co I	2.28	118	
3534.918r 3534.948r	66	18. 0 1. 2		Fe I Dy II	1.48 1.56 0.10	48 48	
3535.038r	3. 5	1. 0					
3535.158r	3	1. 0		Zr I V II? p	1.00 1.07	59 4	
3535.304r	25	7. 7		Nb I?	0.09	4	
3535.412r	79	22. 5		Ti II	2.06	98	
3535.518r	14	4. 2		Hf II	0.61	9	
3535.624r	25	8. 2		Fe II	3.89	75	
3535.726r	73	20. 7		Sc II	0.31	11	
3535.847r	1. 5	0. 4					
3535.92 a	4. 5	1. 3		Co II			
3536.023r	23	6. 7		Dy II			
3536.117r	7. 5	2. 2					
3536.263r	4	1. 3					
3536.567r	189	53. 6		Fe I	2.87	326	
3536.690r	11	4. 3					
3536.792r	39	11. 6					
3536.963r	36	10. 2		Zr II	0.36	10	
3537.123r	2. 5	0. 7					
3537.243r	40	11. 2		Cr I	2.54 2.54	50 50	
3537.297r	10	3. 1					
3537.496r	70	19. 7		Fe I	2.59	239	
3537.630r	31	12. 3		Ni I	3.54	120	
3537.737r	83	23. 8		Fe I	2.61	239	
3537.903r	107	31. 3		Fe I	2.83	327	
3538.077r	16	4. 6					
3538.257r	40	16. 5		V II	1.13	4	
3538.310r	60	16. 9		Fe I	3.55	775	
3538.413r	8. 5	2. 5					
3538.501r	20	5. 6		Dy II	0.00		
3538.559r	63	17. 8		Fe I	2.48	137	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3538.690r	7. 5	2. 1		Fe I			
3538.795r	29	8. 1		Fe I	3.57	811	
3538.939r	13	3. 6					
3539.076r	12	3. 4		Ce II	0.32	118	
3539.249r	2	0. 5					
3539.371r	3	1. 0		Fe I			
3539.446r	5. 5	1. 5					
3539.542r	2. 5	0. 5		Fe II?			
3539.629r	6	1. 8					
3539.750r	7. 5	2. 3					
3539.896r	23	6. 5					
3539.956r	5	1. 5					
3540.126r	93	26. 4		Fe I	2.86	329	
3540.322r	10	2. 8					
3540.396r	9	2. 7					
3540.502r	8	2. 3		— V I?	1.06	45	
3540.715r	95	26. 6		Fe I	0.91	23	
3540.808r	43	15. 4		Fe I			
3540.966r	21	9. 1		Nb II	1.03	4	
3541.095r	214	60. 9		Fe I	2.85	326	
3541.242r	14	5. 8		Fe I p	1.48	47	
3541.332r	16	5. 4		V II	2.60	145	
3541.545r	16	4. 6					
3541.648r	14	4. 0					
3541.875r	39	13. 2					
3541.987r	21	13. 4					
3542.090r	224	63. 7		Fe I	2.86	326	
3542.255r	47	17. 1		Fe I	2.28	128	
3542.331r	10	3. 6		Dy II			
3542.441r	4	1. 5					
3542.491r	6. 5	2. 0					
3542.571r	60	17. 2		Fe I p	2.86	321	
3542.633r	18	7. 2		Zr II	1.76	113	
3542.768r	7. 5	2. 2					
3542.948r	3	2. 3					
3543.001r	16	4. 5		Co I	0.43	19	
3543.101r	11	3. 4		Fe I p	2.40	182	
3543.168r	12	3. 3					
3543.265r	44	12. 6		Co I	1.88	64	
3543.389r	59	16. 5		Fe I	2.43	183	
3543.495r	13	3. 6		V I	1.18	53	
3543.682r	61	17. 3		Fe I	3.41	734	
3543.795r	6. 5	1. 8					
3543.933r	5	1. 3		Rh I?	0.70		
3544.013r	13	3. 8					
3544.087r	15	4. 1					
3544.229r	38	10. 6					
3544.347r	2	0. 5					
3544.520r	11	3. 1					
3544.634r	57	16. 1		Fe I	2.61	239	
3544.746r	3	0. 7					
3544.859r	4. 5	1. 3		Fe I p	2.48	154	
3544.912r	13	3. 6					
3544.986r	20	5. 6					
3545.052r	4	1. 0		Co II	2.20	1	
3545.194r	73	20. 5		V II	1.10	5	
3545.339r	3	1. 0		V I	1.19	53	
3545.512r	43	13. 3		Ni I	3.65		
3545.644r	108	30. 5		Fe I	2.85	321	
3545.829r	72	20. 3		Fe I (Gd II)	3.05 0.14	536 2	
3545.906r	16	6. 6					
3546.019r	2. 5	0. 7					
3546.206r	42	12. 0		Fe I	2.43	183	
3546.346r	6. 5	1. 8					
3546.426r	3. 5	1. 0					
3546.542r	9. 5	2. 7					
3546.64 a	4	1. 0					
3546.709r	13	3. 8		Co I	1.71	41	
3546.779r	7	2. 0					
3546.832r	6. 5	1. 7		Dy II	0.10		
3546.979r 3547.026r	30	0. 1 8. 5		Ti I	1.50	133	
3547.199	100	28. 2		Fe I	2.81 3.30	321 613	7
3547.369r	18	5. 1		Ca I	2.52		
3547.498r	6	1. 7					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3547.638r	28	4.2					
3547.67 a		4.2		Zr I	0.07	13	
3547.799r	124	34.3		Mn I	2.30	18	
3547.945r	35	12.7					
3548.033r	107	34.0		Mn I— Fe I	2.30 3.02	18 496	
3548.190r	139	38.4		Ni I— Mn I	0.27 0.21 2.30	3 20 18	
3548.305r	3.5	1.0					
3548.38 a	2.5	0.8					
3548.451r	38	10.5		Co I	1.71	41	
3548.545r	28	7.6		Fe II p	4.49	132	
3548.651r	9	2.5					
3548.738r	6	1.7		Cr I?	3.43		
3548.84 a	7	1.9					
3548.905r	10	3.1					
3549.009r	54	15.1		Y II	0.13	9	
3549.118r	4	1.1					
3549.242r	38	10.4					
3549.371r	26	7.0		Gd II	0.24	7	
3549.525r	12	3.4		Zr II	1.24	84	
3549.631r	1	0.2					
3549.72 a	5	1.4		Zr I	1.00		
3549.765r	7.5	2.3					
3549.872r	84	23.1		Fe I	1.61	48	
3550.106r	9.5	2.7		Ca I	2.52		
3550.222r	43	12.0		—Dy II			
3550.369r	22	6.1					
3550.486r	19	5.6		Zr I?	0.00	12	
3550.599r	87	24.0		Co I	0.17	4	
3550.798r	24	6.3					
3550.951r	13	3.5					
3551.112r	53	14.5		Fe I	2.85	321	
3551.235r	14	3.8					
3551.401r	26	7.3					
3551.533r	94	26.1		Ni I	0.17	5	
3551.659r	44	12.4		Co I	1.96	67	
3551.771r	10	3.0					
3551.871r	6	1.7					
3551.957r	56	15.4		Zr II	0.09	1	
3552.112r	70	19.5		Fe I	3.07	499	
3552.308r	2.5	0.7					
3552.433r	32	9.0		Fe I	2.45	182	
3552.558r	4.5	1.3					
3552.62 a	7.5	2.1					
3552.725r	55	16.6		Co I (Y I)	0.22 0.00	6 8	
3552.845r	120	33.1		Fe I	2.87	321	
3552.945r	14	5.1					
3552.991r	37	10.4		Co I	1.96	67	
3553.095r	48	3.4		Pd I	1.45	9	
3553.163r		10.1		Co I	2.79	137	
3553.275r	12	3.4		V I	1.22	53	
3553.350r	8.5	2.5					
3553.483r	96	26.6		Ni I	0.11	16	
3553.594r	27	8.5					
3553.746r	116	32.3		Fe I	3.57	810	
3553.870r	17	5.4					
3553.974r	3	0.8		Cr I?	3.08	157	
3554.122r	127	35.3		Fe I (Zr II)	0.96 1.18	23 83	
3554.277r	16	3.8					
3554.297r		1.0					
3554.36 a	18	6.2					
3554.452r	46	18.1		Fe I p	2.94	395	
3554.510r	86	27.2		Fe I	2.88	325	
3554.648r	41	17.7		Fe I p	2.47	154	
3554.797r	16	9.0					
3554.937	404	111		Fe I	2.83	326	
3555.044r	15	13.5					
3555.177r	6	3.1		V I?	1.19	53	
3555.284r	2	0.7					
3555.357r	5.5	1.8					
3555.455	49	14.6					
3555.617r	4	1.1		Cr I?	1.00		
3555.724r	12	3.2		Fe I			
3555.804r	4.5	1.3		Cr I?	2.54		

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3555.947r	16	4. 5		Co II	2.27	1	
3556.150r	8. 5	2. 2		Ti I			
3556.264r	8. 5	2. 5					
3556.374r	4	1. 3					
3556.490r	13	3. 9					
3556.597r	23	7. 0		Zr II	0.47	9	
3556.689r	95	34. 3		Fe I	2.86	325	
3556.803r	143	55. 7		V II	1.13	5	
3556.896r	243	67. 2		Fe I	2.85	327	
3557.064r	5	1. 7		Gd II	0.60	22	
3557.164r	9. 5	3. 1					
3557.230r	11	3. 4					
3557.355r	15	4. 4					
3557.464r	4	1. 1					
3557.677r	5. 5	1. 5					
3557.767r	8	2. 4					
3557.880r	4	1. 3					
3558.000r	3. 5	1. 1					
3558.072	30	10. 7		Fe I p	3.24	572	
3558.210r	6	2. 4		Fe I p	2.61	239	
3558.337r	7. 5	4. 6					
3558.430r	13	15. 9					
3558.532r	485	137		Fe I— Sc II	0.99 0.01	24 3	
3558.634r	10	10. 5					
3558.783r	38	16. 4		Co I	0.58	20	
3558.877r	5	1. 8					
3558.984r	2. 5	1. 0					
3559.079r	41	12. 8		Fe I			
3559.207r	25	7. 2		Fe I?			
3559.274r	9. 5	2. 8					
3559.464r	94	7. 9		Fe I p	2.88	321	
3559.516r		22. 2		Fe I	3.07	498	
3559.610r	6. 5	2. 0					
3559.700r	8	2. 2					
3559.814r	24	6. 7		Cr I?	2.87	89	
3559.923r	48	13. 5		Ni I	3.54	118	
3560.076r	42	11. 6		Fe I	2.86	321	
3560.163r	26	7. 3					
3560.296r	23	6. 5		Co I	1.88	64	
3560.416r	22	6. 2					
3560.509r	10	3. 9					
3560.589r	62	18. 8		V II	1.10	4	
3560.704	75	21. 0		Fe I	3.25	675	
3560.802r	32	13. 7		Ce II	0.68	51	
3560.897r	82	22. 4		Co I	0.63	21	
3561.063r	17	4. 8					
3561.136r	16	4. 5		Co II			
3561.279r	12	3. 5					
3561.376r	14	3. 9					
3561.469r	6	1. 7					
3561.582	58	16. 3		Ti II	0.57	15	
3561.656r	8. 5	2. 7		Hf II	0.00	1	
3561.757	77	21. 6		Ni I	0.00	2	
3561.903r	57	15. 6		Fe I— Ti II	1.16	42	
3562.021r	11	3. 4					
3562.096r	32	8. 8		Co I	2.28	115	
3562.191r	7	2. 1					
3562.270r	40	10. 9		Fe I?— Cr I?	3.25 4.45	308	
3562.410r	7. 5	1. 9					
3562.550r	6. 5	1. 9					
3562.607r	11	2. 9		Fe I p	2.56	237	
3562.709r	7. 5	1. 9					
3562.926r	37	10. 1		Co I	1.88	64	
3563.013r	6	1. 6					
3563.159r	20	5. 6		Dy II	0.10		
3563.403r	8. 5	2. 3					
3563.611r	23	6. 3		Fe I	2.81	325	
3563.716r	4	1. 1		V II	1.13	4	
3563.789r	18	5. 2					
3563.926r	4	1. 2		Cr II?	4.94	134	
3564.126	71	21. 0		Fe I (Co I)	1.61 3.17	48 159	
3564.279r	2. 5	0. 8		Cr I?	4.10	281	
3564.398r	12	3. 9		Ca I	2.52		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3564.524r	71	16. 0		Fe I	2.45	183	
3564.565r		11. 5		Fe I p	2.45	183	
3564.683r	11	4. 3		Fe I			
3564.796r	15	6. 4					
3564.959	70	32. 7		Co I	0.58	19	7
3565.129r	7. 5	7. 2		— Cr I	2.54	50	
3565.306r	13	26. 6		— Ti II	1.58	76	
				Cr II	4.75	107	
3565.396r	990	274		Fe I	0.96	24	
3565.596r	49	42. 8		Fe I	2.86	321	
					2.86	328	
3565.716r	4	3. 1					
3565.838r	16	7. 8		Fe I p	3.26	571	
3565.972r	41	20. 6		Ti II	1.16	42	
3566.088r	13	7. 6		Zr I	0.15	15	
				Cr I	3.14		
					4.19	284	
3566.175r	53	30. 2		V II	1.07	4	
				Fe II	4.49	132	
3566.315r	9. 5	16. 0		Fe I p	2.28	127	
3566.383r	458	141		Ni I	0.42	36	
3566.485r	10	18. 2					
3566.589r	28	17. 2		Fe I	2.40	181	
3566.668r	4	2. 1					
3566.758r	3	1. 3					
3566.845r	5. 5	2. 4		Sm II			
3566.922r	38	14. 0					
3567.042r	82	25. 9		Fe I	2.87	325	
3567.195r	11	3. 4					
3567.377	58	16. 5		Fe I	2.45	183	
3567.455r	11	3. 1					
3567.572r	22	6. 2					
3567.696r	110	25. 8		Sc II	0.00	3	
3567.742r		9. 5		Fe I	3.24	571	
3567.944r	22	6. 4		Ni I	3.61		
3568.008r	3. 5	1. 1					
3568.142r	6. 5	2. 1		Zr II	0.80	46	
3568.248r	28	8. 5		Sm II	0.48	47	
3568.312r	12	3. 6					
3568.448	70	21. 4		Fe I	2.87	321	
3568.55 a	5	1. 8		Tb II?			
3568.628r	16	5. 2					
3568.829r	72	23. 4		Fe I	3.25	673	
3568.983r	82	27. 2		Fe I	2.69	294	
3569.142r	6. 5	2. 5		Cr I?	4.10	281	
3569.232r	9. 5	3. 8					
3569.384r	116	44. 0		Co I	0.92	35	
3569.510r	86	41. 7		Mn I	2.32	18	
3569.622r	8	4. 1					
3569.734r	12	13. 6					
3569.819r	37	33. 4		Mn I	2.32	18	
3569.921r	5	6. 2					
3570.044r	10	30. 5		Mn I	2.32	18	
				Fe I	2.42	135	
3570.134r	1380	387		Fe I	0.91	24	
3570.276r	42	61. 3		Fe I	2.81	326	
3570.427r	7. 5	9. 9					
3570.521r	10	8. 8					
3570.597r	6	4. 2		Fe I p —	2.45	154	
				Ru I	1.93		
3570.687r	7	3. 9					
3570.861r	4	1. 7					
3570.987r	16	6. 3					
3571.111r	9. 5	3. 5					
3571.233m	60	20. 7		Fe I	1.48	46	
3571.30 a	5	1. 8					
3571.407r	11	3. 6					
3571.551r	5. 5	1. 8					
3571.689r	49	19. 7					
3571.774r	9. 5	6. 0					
3571.875r	237	69. 8		Ni I	0.17	5	
3572.016r	64	29. 7		Fe I	2.83	321	
3572.141r	52	17. 2					
3572.321r	39	11. 6		Fe I p	2.43	182	
3572.478r	106	30. 6		Zr II	0.00	1	
3572.573r	112	32. 0		Sc II	0.02	3	
				(Fe I)	2.85	325	
3572.751r	30	8. 6		Cr I	2.71	75	
3572.878r	1	0. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3572.948r	7. 5	2. 1					
3573.067	40	11. 5		|Fe I Zr II	0.32	9	
3573.181r	4	1. 1					
3573.278r	6	1. 7		Ni I p	3.70	123	
3573.402	66	18. 5		Fe I	3.30	673	
3573.511r	21	5. 9		V I— V II?	2.13 2.37	122 78	
3373.653r	39	13. 5		Cr I	2.71	75	
3573.735r	84	25. 5		Ti II	0.57	15	
3573.836r	156	27. 5		Fe I	2.40	181	
3573.911r		22. 4		Fe I	3.30	611	
3573.996r	69	11. 9					
3574.035r		11. 9		Cr I	2.71 4.45	74 308	
3574.158r	7. 5	2. 0		Dy II			
3574.253	45	12. 6		Ti I— Fe I	2.27 3.28	247 574	
3574.360r	24	7. 3		V II Fe I	2.37 2.43	78 181	
3574.416	60	16. 8					
3574.584r	5. 5	1. 5		Fe I			
3574.805	50	14. 3		Cr I	2.71	75	
3574.967	90	25. 1		Co I	0.58	21	
3575.121	75	22. 5		Fe I	2.88	321	
3575.252r	83	26. 5		Fe I	2.83	322	
3575.374	115	32. 2		|Co I Fe I	0.10 3.02	4 496	7
3575.560r	15	4. 2					
3575.765r	34	9. 5		Zr I	0.07	12	
3575.94 a	90	8. 9		Ni I	3.70	120	
3575.994a		21. 3		Fe I	2.87 2.87	321 328	
3576.156r	9. 5	2. 8					
3576.253r	12	3. 8		Dy II	0.59		
3576.329r	116	30. 8		Sc II	0.01	3	
3576.387r		2. 8					
3576.599r	3	0. 8					
3576.766r	87	24. 3		Fe I Ni II	3.27 3.07	613a 4	
3576.863r	44	13. 5		Zr II	0.41	9	
3576.959r	1. 5	0. 4					
3577.063r	10	3. 1					
3577.159r	4. 5	1. 1					
3577.245	39	10. 9		Ni I— Co I	0.27 1.74	3 41	
3577.392r	11	3. 4					
3577.465r	47	13. 1		Ce II Fe I	0.47	51	
3577.565r	4	1. 1					
3577.745r	22	6. 8					
3577.875	105	30. 6		Mn I	2.11	8	
3577.998r	12	4. 5		Co II	2.24	1	
3578.100r	48	15. 2		Co I	2.28	117	
3578.218r	14	4. 8		Zr II	1.21	83	
3578.392	52	21. 9		Fe I—	2.88	321	
3578.562r	4. 5	3. 1					
3578.693	488	142		Cr I	0.00	4	
3578.838r	8. 5	8. 1					
3578.907r	13	8. 9		Co I	1.74	41	
3578.982r	11	6. 4					
3579.045r	14	6. 3		Co I	1.74	41	
3579.128r	4	1. 5					
3579.368r	7. 5	2. 7					
3579.508r	5	1. 8					
3579.562r	27	9. 9		Fe I			
3579.672r	6. 5	2. 5					
3579.835	34	13. 4		Fe I	3.24	573	
3579.90 a	9	5. 0					
3579.958r	6	2. 8					
3580.087r	9	4. 6		Mn I	3.07		
3580.216r	24	12. 1					
3580.412r	20	12. 5		Fe I			
3580.542r	14	12. 0					
3580.758r	13	15. 8					
3580.927r	54	53. 5		Sc II	0.00	3	
3581.044r	6. 5	19. 7					
3581.209r	2144	599		Fe I	0.86	23	
3581.391r	7	15. 6					
3581.477r	8. 5	16. 0					
3581.665r	36	34. 2		Fe I	2.69	295	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3581.817r	29	22. 7		Fe I	3.07	497	
3581.941r	24	16. 4		Fe I			
3582.091r	12	8. 6		Zr II	1.66	101	
3582.205	64	30. 2		Fe I	3.24	612	
3582.331r	33	15. 2		Fe I	3.28	568	
3582.437r	17	7. 8		Fe I			
3582.571r	40	17. 7		Fe I	2.45	181	
3582.698r	72	26. 5		Fe I	2.88	328	
3582.744r	19	7. 7					
3582.877r	18	6. 6		Fe I?			
3582.964r	16	5. 9		Fe I			
3583.104r	16	5. 4					
3583.217r	18	6. 8					
3583.339	122	38. 6		Fe I—	3.29	574	
3583.441r	9. 5	3. 6					
3583.497r	17	5. 7					
3583.597r	11	3. 9		Fe I			
3583.697r	112	33. 2		Fe I— V I	1.08	45	
3583.911r	96	27. 9		Fe I			
3584.007r	8	3. 1					
3584.097r	34	10. 3		Fe I			
3584.257r	5	1. 5		Fe I			
3584.317r	10	3. 2		Cr I	3.19		
3584.383r	25	7. 9		Fe I			
3584.476r	4	1. 4		Fe I?			
3584.520r	44	20. 0		Y II	0.10	9	
3584.661	182	59. 7		Fe I	2.69	294	
3584.800r	72	39. 3		Co I Fe I	0.17 2.86	6 322	
3584.965	78	33. 8		Fe I	3.00 3.27	395 611	
3585.074r	8. 5	7. 5		Dy II	0.00		
3585.170r	45	37. 0		Co I— Fe I	0.51 2.95	21 438	
3585.339r	839	231		Fe I Cr II	0.96 2.70	23 13	
3585.518r	35	28. 8		Cr II	2.71	13	
3585.637r	7	9. 2					
3585.714m	168	63. 0		Fe I	0.91	23	
3585.844r	25	22. 6		Co I?— Ti I	2.08	100	
3585.907r	50	26. 6		Ni I p	3.70	172	
3586.017r	24	12. 7					
3586.118m	122	38. 4		Fe I (Fe I p)	3.24 3.02	611 497	
3586.250r	16	6. 0		Cr I?— Zr I	3.10 0.00	157 12	
3586.354r	21	7. 2		Fe I?			
3586.484r	10	4. 5					
3586.544r	74	27. 3		Mn I	2.14	8	
3586.750r	42	22. 2		Fe I	2.81	325	
3586.884r	12	15. 3					
3586.990m	532	147		Fe I	0.99	23	
3587.146r	3. 5	11. 4		Ti II	0.61	15	
3587.230r	250	145		Co I— Fe I	1.05 2.86	35 325	
3587.357r	7	4. 6		Fe I?			
3587.429m	54	23. 4		Fe I	2.42	134	
3587.617r	110	34. 9		Fe I?			
3587.760m	112	32. 3		Fe I	3.27		
3587.943r	129	35. 6		Ni I (Zr II)	0.03 0.32	16 10	
3588.122r	35	9. 8		—V II	2.38	78	
3588.246r	80	22. 3		Fe I p	1.56	47	
3588.325r	36	11. 0		Zr II	0.41	10	
3588.422r	9. 5	2. 8					
3588.534r	161	22. 6		Fe I	2.94	394	
3588.622r		27. 3		Fe I	2.83	325	
3588.775r	33	8. 9		Zr II	1.00	57	
3588.925	94	25. 6		Fe I	2.87	322	
3589.112m	104	28. 4		Fe I	0.86	23	
3589.222r	18	5. 7		Ru I	0.38	4	
3589.305r	24	6. 7					
3589.461m	97	26. 5		Fe I	2.73	295	
3589.632r	108	29. 6		Sc II	0.01	3	
3589.767r	102	28. 0		V II	1.07	4	
3589.882r	16	4. 7		Fe I?			
3589.968r	45	12. 8		Mn I	2.93	25	
3590.094r	76	20. 9		Fe I	2.95	440	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3590.242r	16	5. 0					
3590.302r	33	11. 9		Fe I p	3.02?	497	
3590.368r	44	16. 2					
3590.489	136	37. 9		Sc II	0.02	3	7
3590.662r	20	5. 6		Fe I	3.69	953	
3590.835r	2	0. 6					
3591.008r	44	12. 3		Fe I	3.21	573	
3591.142r	4	1. 1		Fe I?			
3591.225r	13	3. 6		Ca I	2.52		
3591.355r	59	16. 5		Fe I	2.85	321	
3591.488r	60	16. 8		Fe I	3.29	568	
3591.591r	11	3. 1					
3591.744r	10	2. 8		Co I	2.54	134	
3591.904r	10	2. 9					
3592.027S	75	21. 0		V II	1.10	4	
3592.207r	4	1. 1					
3592.271r	15	4. 2					
3592.367r	3. 5	1. 1		Fe I			
3592.477	42	12. 3		Fe I	2.59	237	
3592.604r	15	6. 0		Sm II	0.38	39	
3592.678r	79	23. 0		Fe I	3.24	569	
3592.899r	48	14. 5		|Fe I Y I	2.20 0.00	77 8	
3593.017r	3	1. 1		Ru I	0.34	4	
3593.082r	32	10. 3		Ti II	1.58	76	
3593.261r	2. 5	1. 0					
3593.340r	88	39. 6		||V II Fe I	1.13 3.26	4 571	
3593.495r	436	127		Cr I	0.00	4	
3593.694r	5	2. 1					
3593.794r	10	3. 8		Fe I	2.45	182	
3593.997r	40	14. 0		Ca I	2.52		
3594.104r	11	3. 9		Fe I p	2.42	154	
3594.317r	7	2. 1		Fe I?			
3594.387r	6	1. 8					
3594.638m	146	40. 8		Fe I	2.85	322	
3594.876r	92	25. 7		Co I	0.17	4	
3595.115r	74	20. 6		Mn I	2.16	8	
3595.308r	74	20. 6		Fe I	2.87	322	
3595.413r	5.5	1. 5		Fe I?			
3595.540r	1	0. 3		Fe I			
3595.683r	14	4. 0		Fe I	2.88	322	
3595.879m	50	13. 9		Fe I	2.45	181	
3596.054r	95	26. 7		Ti II	0.61	15	
3596.205r	57	15. 9		Fe I (Ru I)	2.43 0.26	181 3	
3596.313r	2. 5	0. 7		Fe I?			
3596.392r	0. 5	0. 2					
3596.509r	22	6. 4		Co I	2.28	118	
3596.645r	3. 5	1. 1		Fe I?			
3596.752r	1. 5	0. 4		Fe I?			
3596.859r	3	0. 8		Fe I			
3597.047m	86	23. 9		Fe I	3.26	569	
3597.152r	11	3. 3		Rh I	0.41	5	
3597.252r	6	1. 7		Fe I p	3.63	856	
3597.399r	6	1. 7					
3597.512r	13	3. 6		Fe I?			
3597.712r	181	50. 2		Ni I	0.21	18	
3597.852r	26	8. 3					
3597.979r	3	0. 9					
3598.025r	15	4. 3					
3598.182r	8	2. 2		Ce II?	0.33	116	
3598.271	67	18. 6					
3598.469r	4	1. 1					
3598.612r	11	3. 0					
3598.720r	60	16. 7		||Ti I Fe I	0.90 3.25	59 674	
3598.811r	6	1. 7					
3598.939r	87	13. 9		Fe I	3.28	568	
3598.986r		13. 9		Fe I	2.88	322	
3599.145r	87	24. 2		Fe I			
3599.381r	28	7. 8		Cr I?	2.91	89	
3599.544r	18	5. 0		Ni I	3.61	121	
3599.631m	78	22. 0		Fe I	3.57	809	
3599.764r	6. 5	1. 9		Ru I	1.09		
3599.831r	6. 5	1. 8		Fe I			
3599.970r	58	16. 2		Fe I			
3600.171r	12	3. 6					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3600.371r	2. 5	0. 7					
3600.454r	3. 5	1. 1		Tb II?			
3600.591r	2. 5	0. 8		Ce II	0.79	236	
3600.739m	69	19. 2		Y II	0.18	9	
3600.824r	6. 5	1. 7		Co I	1.96	63	
3600.918r	3. 5	1. 0					
3601.078r	2. 5	0. 7					
3601.198r	13	3. 6		Zr I	0.15	13	
3601.284r	6	1. 7		Fe I			
3601.358r	8	2. 2					
3601.428r	16	4. 4		Fe I	2.28	127	
3601.544r	5	1. 4					
3601.664	51	14. 2		Cr I	2.71	74	
3601.788r	8	2. 2		Mn I	2.92	25	
3601.922m	57	15. 8		Y II	0.10	9	
3602.085	103	28. 5		Co I— Fe I	0.22 2.88	4 322	7
3602.287m	94	26. 2		Ni I	0.17	3	
3602.469r	172	25. 3		Fe I	2.86	322	
3602.544r		29. 2		Fe I	2.86 2.94	324 391	
3602.598r		0. 1		Cr I	2.71	74	
3602.708r	13	4. 7		Fe I p	2.94	390	
3602.771r	47	13. 2		Fe I	2.83	370	
3602.878r	1. 5	0. 5		Fe I			
3602.971r	3	0. 9					
3603.097r	45	14. 8					
3603.210m	119	33. 6		Fe I	2.69	295	
3603.438r	3. 5	0. 9		Fe I			
3603.578r	106	11. 8		Fe I	2.43	181	
3603.621r		23. 9		Cr II	2.70	13	
3603.691r	18	9. 0		Fe I	2.56 2.69		
3603.781r	155	28. 6		Cr II	2.71	13	
3603.831r		23. 6		Fe I— Cr II	3.07 2.71	496 13	
3603.950r	43	12. 6		Fe I			
3604.07 a	2	0. 5		Fe I?			
3604.118r	2	0. 5					
3604.277	42	12. 8		Ti I (Sm II)	0.02 0.48	21 47	
3604.378	75	20. 8		Fe I	2.88	323	
3604.464r	9. 5	2. 8		Co I	2.79	136	
3604.558r	5	1. 4					
3604.702m	60	17. 3		Fe I	3.30		
3604.805r	2. 5	0. 8					
3604.933r	17	5. 5		Cr I	2.71	74	
3605.019r	18	6. 9		Co I	2.04	97	
3605.082r	16	7. 8					
3605.201r	26	24. 1		—Fe I	3.30		
3605.339r	495	136		‖Cr I Co I	0.00 0.51	4 20	
3605.475r	83	43. 8		Fe I	2.73	294	
3605.529r		43. 8		Fe I p	2.81	322	
3605.692r	4. 5	1. 7		Mn I	2.94	25	
3605.916m	75	21. 8		Fe I			
3606.039r	26	7. 5		Fe I? Co II?			
3606.132r	9	2. 8		Dy II			
3606.251r	4. 5	1. 4		Fe I			
3606.378r	31	9. 6		Fe I	2.56	233	
3606.538r	44	21. 4		Fe I	2.42	133	
3606.611r	9	10. 5					
3606.694	271	75. 1		Fe I	2.69	294	
3606.854r	18	6. 9		Ni I	3.61 3.83	120 173	
3607.004r	1. 5	0. 4					
3607.124r	6	1. 7		Fe I			
3607.251r	3	0. 8		Fe I			
3607.379r	13	3. 9		Zr II	1.24	83	
3607.533m	66	19. 0		Mn I	2.14	8	
3607.625r	2	0. 7		Ce II	0.67	178	
3607.772r	6	1. 8		Fe I			
3607.865r	12	3. 7		—Ca I?	1.89		
3607.972r	55	0. 2					
3608.010r		18. 6					
3608.07 a	1. 5	1. 0					
3608.155m	82	32. 8		Fe I	2.85 2.99	325 438	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3608.319r	11	5. 7		Co I	0.63	20	
3608.412r	15	8. 6		Cr I	3.85	252	
3608.491r	38	22. 4		Mn I	2.16	8	
3608.589r	2	2. 5					
3608.639r	5. 5	7. 2					
3608.732r	6	13. 3		Ni II p—	3.09	4	
3608.869	1046	287		Fe I	1.01	23	
3608.995r	3	8. 2					
3609.105r	6	7. 3					
3609.328r	69	32. 0		Ni I	0.11	16	
3609.472r	42	17. 2		Fe I Cr I Sm II	2.86 2.54 0.28	322 49 30	
3609.558r	13	5. 0		Pd I	0.96	2	
3609.714r	1	0. 4		Ce II	0.90	179	
3609.768r	9	3. 0		Co I	2.88	147	
3609.978r	3	1. 2		Fe I?			
3610.056r	10	5. 4		Cr I	2.54	49	
3610.166r	231	65. 4		‖Fe I Ti I	2.81 0.90	321 58	
3610.296r	35	25. 5		Mn I	2.18	8	
3610.460r	250	52. 0		Ni I	0.11	18	
3610.508r		42. 6					
3610.702m	76	24. 8		Fe I	2.87	323	
3610.831r	17	5. 1					
3610.944r	4. 5	1. 4		Fe I?			
3611.050r	80	22. 2		Y II	0.13	9	
3611.184r	54	15. 0		Fe I			
3611.304r	18	5. 3					
3611.459r	34	9. 3					
3611.558r	23	6. 4		Ni I p	0.17	2	
3611.723r	61	16. 9		Co I	2.33	115	
3611.894m	25	7. 3		Zr II	1.74	113	
3612.075m	118	31. 6		Fe I	2.83	325	
3612.245r	9	2. 6		Ti I			
3612.382r	5	1. 5					
3612.519r	20	5. 8		Fe I	3.30	613a	
3612.605r	13	3. 9		Cr I	3.85	252	
3612.744m	160	45. 2		Ni I	0.27	6	
3612.941	90	25. 2		Fe I	1.56 2.18	46 77	
3613.109r	139	25. 7		‖Zr II Fe I p	0.04 2.87	1 322	
3613.176r		18. 5		Fe I— Cr II	2.87 2.71	324 13	
3613.332r	14	3. 9		Cr II	2.71	13	
3613.449m	86	23. 8		Fe I	3.25	672	
3613.605m	86	24. 4		Fe I	3.30		
3613.719r	21	9. 7		Fe I Ce II	2.45 0.32	110	
3613.809r	194	29. 6		Sc II	0.02	2	
3613.881r		29. 6					
3613.952r	9	3. 6		Fe I	3.27	612	
3614.021r	19	5. 3					
3614.118m	80	22. 5		Fe I	3.30		
3614.23 a	4. 5	1. 4		Ti I?			
3614.308r	10	2. 9					
3614.411r	7. 5	2. 0		Fe I?			
3614.561m	98	27. 0		Fe I			
3614.651r	3	1. 1					
3614.718r	141	25. 1		Fe I	3.25		
3614.784r		18. 0		Zr II	0.36	9	
3614.891r	28	8. 0		Fe II	4.15	112	
3615.004r	7. 5	2. 0		Fe I	2.40	154	
3615.084r	3. 5	0. 9					
3615.197m	62	17. 1		Fe I	3.28	569	
3615.324r	3	0. 8		Fe I			
3615.393r	26	7. 0		Co I	1.96	66	
3615.531r	2	0. 5		Fe I?			
3615.665m	71	19. 6		Cr I ‖Fe I	0.00 1.48	3 46	
3615.811r	9	2. 5		Fe I			
3615.962r	37	10. 2		Fe I	3.30		
3616.07 a	3	0. 8		Fe I?			
3616.156r	116	21. 0		Fe I	3.21	569	
3616.219r		14. 5					
3616.327r	56	16. 6		Fe I	2.42	132	
3616.431r	2. 5	0. 8					
3616.570m	92	25. 9		Fe I			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3616.728r	3. 5	1. 0		Fe I			
3616.878r	0. 5	0. 1		Hf I	0.29		
3617.011r	36	10. 6		Fe I			
3617.105r	35	11. 2		Fe I	3.05	535	
3617.321	82	25. 4		Fe I			
3617.437r	42	16. 0					
3617.539r	8. 5	2. 9		W I	0.37	8	
3617.717r	29	10. 8					
3617.796r	124	41. 4		Fe I	3.02	496	
3617.960r	46	18. 5		Fe I	2.45	181	
3618.090r	1	0. 4					
3618.187r	11	5. 3		Fe I	3.02		
3618.304	110	48. 9		Fe I	2.83	324	
3618.394	74	89. 0		Fe I	2.73 3.24	295 571	
3618.523r	12	20. 2					
3618.615r	44	63. 8		Fe I p	3.26	569	
3618.777m	1410	385		Fe I	0.99	23	
3618.923r	2	7. 5		V II Fe I p	2.76 2.42	158 130	
3618.999r	31	43. 2					
3619.114r	12	21. 8					
3619.273r	17	34. 2		Mn I	2.19	8	
3619.400r	568	204		Ni I	0.42	35	
3619.536r	15	17. 0		Nb II	0.98	4	
3619.670r	19	11. 5		Fe I	2.42	130	
3619.776r	48	23. 2		Fe I	2.40	180	
3619.937r	34	13. 8		Fe I			
3620.032r	28	10. 6		Ni I Fe I p	0.27 2.88	3 324	
3620.156r	6. 5	2. 5					
3620.247	51	17. 4		Fe I	2.85	324	
3620.36 a	3. 5	1. 1					
3620.439r 3620.468m	76	0. 1 24. 4		Co I Fe I—	2.28	116	
3620.619r	2. 5	0. 8					
3620.772r	7	2. 2					
3620.879r	51	16. 0		Fe I	2.88 3.30	323 611	
3620.971r	24	8. 2		Y I	0.07	8	
3621.105r	84	25. 3					
3621.201r	72	21. 8		V II Co II	2.37 2.20	76 1	
3621.261r	36	19. 7		Sm II— Fe II	0.10 4.61	12 144	
3621.381r	10	4. 1					
3621.467m	140	40. 6		Fe I	2.73	294	
3621.601r	29	9. 1					
3621.725m	76	22. 4		Fe I	3.57	808	
3621.868r	14	4. 1					
3622.009m	127	36. 5		Fe I	2.76	295	
3622.158r	31	9. 1		Ce II—	0.86	71	
3622.268r	17	5. 2		V II?	2.60	144	
3622.438r	3	0. 8		Fe I			
3622.555r	3. 5	1. 0		Eu II?—	1.38	18	
3622.655r	0. 5	0. 1					
3622.795r	14	4. 1					
3622.901r	0. 5	0. 1					
3623.041r	2. 5	0. 8					
3623.095r	15	4. 4		Ti I?			
3623.192m	105	29. 9		Fe I	2.40	180	
3623.321r	12	4. 0		Sm II	0.10	12	
3623.450 3623.510r	97	24. 2 5. 2		Fe I Fe I p	2.56 2.95 3.00	233 438 393	
3623.610r	14	4. 1					
3623.67 a	1. 5	0. 5					
3623.785r	118	33. 8		Fe I— Mn I	2.86 2.18	323 8	
3623.917r	46	14. 2		Zr I—	0.07	12	
3624.064r 3624.118r	139	18. 5 24. 6		Fe I Ca I	3.26 1.88	570 9	
3624.304m	95	27. 0		Fe I— Co I	2.42 1.78	133 41	
3624.460r	2. 5	0. 7					
3624.567r	4	1. 1					
3624.733r	132	37. 1		Ni I	0.00	2	
3624.839r	122	34. 4		Ti II (Fe II)	1.22 4.61	52 144	
3624.963r	39	11. 0		Co I	0.63	21	
3625.147m	106	29. 8		Fe I	2.83	323	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3625.249r	7. 5	2. 4					
3625.366r	1. 5	0. 4					
3625.501r	49	13. 5		Fe I			
3625.626r	10	2. 8		V II	2.38	76	
3625.753r	23	6. 5		Ca I	2.52		
3625.853r	2	0. 6					
3625.933r	0. 5	0. 1		Ni I?	3.31		
3626.016r	2	0. 6		Co I	1.78	41	
3626.109r	39	11. 8		Ti I	0.02	20	
3626.187r	50	13. 9		Fe I			
3626.386r	6	1. 6					
3626.493r	1	0. 2					
3626.606r	4	1. 1		Rh I	1.14		
3626.739m	59	16. 3					
3626.906r	6. 5	1. 8					
3627.061r	56	15. 5		Fe I	3.57	808	
3627.169r	18	5. 0		Fe II?— CH	5.95 R 3	193 1,0	3
3627.359r	14	4. 0		Fe I p	3.04	395	
3627.456r	12	3. 2		CH	R 1,2	1,0	3
3627.623r	40	11. 3		Mg I CH	6.59 R 4	45 1,0	3
3627.715r	19	7. 2		V II Ti II	2.37 1.22	76 62	
3627.813m	98	27. 4		Co I	0.51	19	
3627.959r	9	2. 5		Sm II?	0.10	12	
3628.098r	78	21. 8		Fe I	2.20	77	
3628.279r	24	6. 8		CH	R 2	1,0	3
3628.439r	8	2. 2		Fe I			
3628.599r	45	12. 7		Ca I— Fe I	2.52		
3628.707r	57	16. 4		Y II	0.13	9	
3628.828m	64	18. 3		Fe I	2.99	438	
3628.879r	11	3. 4		Fe I			
3629.006r	15	4. 4		CH	R 5	1,0	3
3629.146r	2	0. 6					
3629.25 a	1	0. 3					
3629.352r	16	4. 4		CH	R 5	1,0	3
3629.512r	0. 5	0. 1					
3629.737m	48	14. 0		Mn I	2.16	8	
3629.905m	47	13. 9		Ni I	3.84	182	
3630.027m	31	9. 4		Zr II	0.36	10	
3630.112r	8	2. 5					
3630.234r	26	8. 3		Dy II Ni I p	3.84	180	
3630.355m	84	27. 2		Fe I	2.85	323	
3630.478r	1. 5	0. 6					
3630.578r	41	14. 5		Ni I	3.83	172	
3630.658r	9. 5	6. 6					
3630.754	133	50. 1		Ca I Sc II	1.89 0.01	9 2	7
3630.985r	56	36. 6		Ca I	1.89	9	
3631.105r	98	54. 5		Fe I	2.83	322	
3631.265r	35	45. 4					
3631.356r	4. 5	17. 4		Co I	0.10	4	
3631.475m	1364	369		‖Fe I Cr II	0.96 2.70	23 12	
3631.586r	10	31. 2					
3631.711r	35	38. 6		Cr II	2.71	12	
3631.789r	5	5. 2					
3631.959r	27	18. 1		Co I—	2.54	133	
3632.049m	117	55. 6		Fe I	3.07	496	
3632.173r	24	10. 6					
3632.299r	16	6. 1		Fe II	4.15	112	
3632.446r	5	1. 7					
3632.560m	72	22. 6		Fe I	2.95	437	
3632.693r	0. 5	0. 2					
3632.840r	64	19. 1		Co I Cr I	2.87 {2.54 {2.54	147 49 49	
3632.984r	60	17. 9		Fe I	2.48	135	
3633.076r 3633.138r	134	28. 2 19. 0		Fe I Y II	2.94 0.00	390 2	
3633.308r	23	6. 6		CH	Q 1	1,0	3
3633.512r	47	13. 8		Zr II	1.76	102	
3633.652r	23	6. 3		Fe I p	3.04	395	
3633.835r	92	25. 4		Fe I	2.99	440	
3633.892r	9	3. 7					
3634.005r	9	2. 8		Ti II? p— Cr II	3.09 4.94	116 147	
3634.08 a	3. 5	0. 9					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3634.198r	58	15. 7					
3634.278r	7. 5	4. 5		Sm II	0.18	19	
3634.332r	136	36. 9		Fe I	2.94	389	
3634.412r	36	22. 8					
3634.472r	38	14. 9					
3634.535r	60	16. 2		Fe I p	2.87	323	
3634.618r	13	5. 0		CH	R 7	1,0	3
3634.710r	134	36. 0		Co I Fe I Pd I	2.88 0.81	146 1	
3634.865r	14	5. 1		CH	R 7	1,0	3
3634.952r	129	34. 7		Ni I	0.42	33	
3635.025r	34	9. 1		Cr I?—	4.10		
3635.085r	9. 5	2. 6		Fe I? p	3.64	919	
3635.197r	115	31. 7		Fe I— Ti I (Mo II)	3.02 0.05 3.14	490 20 5	
3635.280r	12	3. 9		Cr I	0.00	3	
3635.352r	28	7. 7		Y II— Ti II p	3.41 1.23	46 62	
3635.469S	97	26. 1		Ti I	0.00	19	
3635.652r	17	4. 7		Ti II? p CH	3.09 Q 1	116 1,0	3
3635.828r	16	4. 4		Fe I p	2.83	321	
3635.895r	1	0. 3					
3636.045r	2	0. 6					
3636.166r	132	22. 7		Fe I	2.20 3.21	77 568	
3636.238r		16. 5		Fe I	3.55	774	
3636.485r	92	24. 9		Zr II— Fe I	0.47 1.56 3.26	9 47 568	
3636.589r	36	10. 3		Cr I	2.54 2.54	47 47	
3636.663r	66	23. 1		Fe I	3.02	493	
3636.751r	92	25. 1		Co I	1.96	64	
3636.865r	4	1. 4		Fe II p	4.15	112	
3637.000r	112	21. 5		Fe I	2.59	233	
3637.058r		10. 7		Fe I	3.02	438	
3637.255m	68	18. 5		Fe I	2.43	180	
3637.317r	10	3. 4		Co I	2.33	117	
3637.444r	1	0. 2					
3637.554r	24	6. 6					
3637.737r	48	12. 9		Fe I	2.56	229	
3637.873m	93	25. 2		Fe I	2.94	385	
3637.975r	23	6. 9		Ti I	0.00	18	
3638.058r	78	0. 3					
3638.104r		21. 1					
3638.168r	28	10. 2		Fe I p	2.85	324	
3638.245r	153	19. 0					
3638.304r		28. 3		Fe I	2.76	294	
3638.472r	5. 5	1. 5					
3638.605r	7. 5	2. 0		CH	P 1	1,0	3
3638.772r	1	0. 3		Sm II			
3638.905r	16	4. 4		CH	Q 3	1,0	3
3639.030r	34	9. 1		V I—	1.80	83	
3639.132r	3	0. 8					
3639.285r	52	14. 3					
3639.332r	11	3. 3		Fe I			
3639.450r	69	18. 7		Co I	1.96	64	
3639.525r	36	12. 3		Fe I—			
3639.695r	3. 5	1. 0					
3639.804	76	20. 6		Cr I	2.54	47	
3639.985r	10	2. 6		Fe I			
3640.118r	8. 5	2. 3		Fe I			
3640.265r	12	3. 4		Dy II	0.59		
3640.394m	132	35. 8		Fe I (Cr I)	2.73 2.54 2.54	295 47 47	
3640.645r	18	4. 9					
3640.765r	1. 5	0. 5					
3640.905r	3	0. 8					
3641.032r	48	13. 2					
3641.228r	11	3. 0		Fe II? p	4.15	111	
3641.335m	109	29. 6		Ti II	1.24	52	
3641.459r	52	14. 0		Fe I Cr I	2.88 2.54	323 47	
3641.646r	51	14. 0		Ni I	0.27	6	
3641.792r	72	6. 3		Co I	2.04	99	
3641.832r		15. 5		Cr I	2.54	47	
3641.964r	32	8. 8		Fe I			
3642.147r	8. 5	2. 3		—CH	P 2	1,0	3

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3642.281r	22	5. 9		CH	Q 4	1,0	3
3642.398r	19	5. 2		Ni I	1.99	75	
3642.537r	12	3. 3		Fe II?			
3642.682r	93	31. 8		Ti I	0.02	19	
3642.806	150	40. 9		Sc II	0.00	2	7
3642.971r	20	5. 4		CH	P 2	1,0	3
3643.124r	94	25. 8		Fe I			
3643.204r	66	30. 2		Co I— Cr II	2.04 2.48	99 1	
3643.354r	2. 5	0. 7					
3643.477r	5	1. 3					
3643.627m	113	30. 8		Fe I	2.94	385	
3643.729r	112	41. 2		Fe I	2.61	233	
3643.811r	81	43. 4		Fe I	1.61 3.25	46 670	
3643.951r	27	7. 4		Ni I	3.68	174	
3644.074r	3. 5	1. 0					
3644.151r	1	0. 3					
3644.21 a	3	0. 8		Fe II p	4.48	131	
3644.317r	141	0. 1		Hf II	0.79	6	
3644.417		38. 0		Ca I	1.90	9	
3644.591r	46	12. 4		Fe I p	2.59	235	
3644.695r	58	15. 8		Cr II	2.45	1	
3644.794r	119	32. 4		Ca I— Fe I	1.90 3.24	9 570	
3644.978r	38	12. 0		Ca I	1.90	9	
3645.082r	97	26. 4		Fe I	2.85 3.02	323 495	
3645.186r	7	2. 1		Co I	1.96	61	
3645.313	132	35. 8		Sc II	0.02	2	7
3645.413r	32	11. 7		Dy II La II	0.10 0.00	14	
3645.497r	90	24. 4		Fe I	2.86 3.00 3.02	323 391 441	
3645.626r	8	2. 2					
3645.827m	103	28. 0		Fe I	3.11	496	
3645.935r	20	6. 6		V II	2.38	76	
3645.989r	2. 5	0. 7					
3646.097r	23	6. 4		Fe I p	2.87	324	
3646.196r	52	14. 0		Ti I (Gd II)	0.00 0.24	18 2	
3646.352r	1. 5	0. 4					
3646.40 a	1	0. 2					
3646.504r	23	6. 6		CH	Q 5	1,0	3
3646.618r	54	15. 9					
3646.809r	40	3. 3					
3646.837r		9. 9		—CH	Q 5	1,0	3
							See §2.2
3646.988	58	24. 6		(Ce II)	0.30	66	
3647.095r	14	7. 5		Co I	2.33	118	
3647.255r	4	2. 1					
3647.428m	94	50. 7		Fe I Cr II	1.56 2.43	46 1	
3647.562r	24	25. 6		Fe I p	3.26	574	
3647.669r	39	59. 6		Co I	0.22	4	
3647.851m	970	313		Fe I (Fe I)	0.91 3.24	23 569	
3648.082r	24	34. 5					
3648.228r	18	14. 0		Fe I p— CH	3.88 P 3	978 1,0	3
3648.322r	5. 5	3. 8					
3648.530r	23	11. 2		Cr I	2.54	47	
3648.639r	0. 5	0. 3					
3648.759r	5	2. 3					
3648.815r	36	15. 3					
3648.998	52	21. 4		Cr I	2.54	47	
3649.094r	4	1. 5					
3649.184r	13	5. 2					
3649.298r	124	29. 9		Fe I	0.00	5	
3649.336r		24. 4		Co I	2.87	146	
3649.511m	134	45. 7		Fe I	2.69	291	
3649.698r	44	16. 2		Fe I p	2.94	391	
3649.837r	75	26. 7					
3650.037	115	39. 2		Fe I	3.00	394	
3650.17 a	13	5. 5		La II Sm II	0.00 0.25	12 25	
3650.285m	115	39. 3		Fe I	2.43	180	
3650.367r	16	5. 9		Cr II	4.98	156	
3650.538S	72	25. 5		—Fe I	3.25		
3650.720r	9	3. 3		Zr II	3.12	146	
3650.887r	10	3. 7					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3651.039r	20	11. 0		Fe I	3.21	571	
3651.107r	98	33. 8		Fe I— 2.85 3.30	322 674		
3651.197r	31	15. 3		Nb II	0.93	4	
3651.260r	16	8. 0		Co I	2.04	85	
3651.353r	6. 5	2. 7					
3651.474m	136	46. 6		Fe I	2.76	295	
3651.654r	80	28. 0		Ni I Cr II	3.65 2.42	153 1	
3651.800r	114	39. 1		Sc II	0.01	2	
3651.921r	64	25. 6		Fe I— CH	Q 6	1,0	3
3652.107r	10	3. 8		Fe II?			
3652.260r	27	10. 4		Fe I	3.02	494	
3652.397r	7	2. 7					
3652.551m	70	25. 6		Co I	0.17	4	
3652.680r	2. 5	1. 0					
3652.883r	1	0. 4					
3653.020r	9. 5	3. 7					
3653.120r	7. 5	3. 0		Ce II	0.36	38	
3653.200r	3. 5	1. 4					
3653.352r	44	16. 6		Fe I	2.59 2.86	229 324	
3653.501m	98	33. 6		Ti I	0.05	19	
3653.659r	8	3. 0		Ce II	0.47	50	
3653.761	66	23. 6		Fe I	2.43	180	
3653.912r	102	20. 2		Cr I	2.54	47	
3653.979r		20. 2		Fe I			
3654.126r	5	1. 9					
3654.252r	3. 5	1. 4					
3654.386r	13	5. 7		CH	P 4	1,0	3
3654.446r	25	9. 6		Co I	1.96	63	
3654.598r	64	23. 5		Ti I (Gd II)	0.00 0.08	18 4	
3654.673r	35	17. 8		Fe I	2.22	77	
3654.859r	4	1. 5					
3655.003r	50	18. 6		Fe I			
3655.059r	12	4. 6					
3655.219r	33	12. 3					
3655.355r	40	14. 9		Fe I	2.42	131	
3655.472m	88	31. 2		Fe I	2.83	369	
3655.580r	12	6. 6		Zr II	0.97	71	
3655.661	100	36. 4		(Fe I)			
3655.851r	15	5. 9		Ce II— Cr I	0.32 2.54	51 46	
3655.941r	3. 5	1. 4					
3656.078r	3	1. 2					
3656.219r	116	31. 2		Fe I	3.27		
3656.265r		17. 8		Cr I	2.54 2.54	46 46	
3656.357r	36	13. 7		Fe I p	2.87	323	
3656.548r	13	4. 9		Ni I?	3.65		
3656.705r	2. 5	1. 0		V I	2.05	115	
3656.858r	1	0. 3					
3656.965r	33	12. 6		Co I	0.58	21	
3657.137	72	26. 0		Fe I	2.42	130	
3657.298r	4. 5	1. 6		Mn II?			
3657.423r	48	17. 9		Fe I			
3657.571r	5. 5	2. 2		Ru II	2.40	1	
3657.711r	57	21. 2		Ni I Fe I	3.94	183	
3657.818r	5	2. 2					
3657.905r	102	35. 4		Fe I	3.04	395	
3658.024r	40	21. 0		Fe I	3.02	438	
3658.099r	71	25. 8		Ti I	0.02	19	
3658.167r	8	3. 6		Cr II	4.92 4.93	146	
3658.274r	4. 5	1. 8		V II	2.51	116	
3658.390r	3	1. 1					
3658.550r	50	18. 3		Fe I	2.56	231	
3658.644r	1. 5	0. 7					
3658.864r	3	1. 2		Tb II?			
3658.970r	0. 5	0. 3		Fe II?			
3659.124r	1. 5	0. 7		Fe I			
3659.234r	10	3. 8		Ce II Fe I	0.17	54	
3659.310r	7	2. 7					
3659.524m	98	34. 2		Fe I	2.45	180	
3659.762	103	35. 8		Ti II	1.58	75	
3659.877r	5	2. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3659.971r	9. 5	3. 7					
3660.08 a	5	1. 8					
3660.211r	40	15. 2					
3660.329r	60	22. 0		Fe I	2.86	323	
3660.411r	32	13. 1		Fe I	2.61	229	
3660.525r	9. 5	3. 6					
3660.636r	51	18. 9		Ti I	0.02	18	
3660.778r	50	18. 4					
3660.921r	9	3. 3		Zr II	0.76	32	
3661.038r	28	10. 4		CH	P 5	1,0	3
3661.151r	5. 5	2. 0		Fe II p	4.15	111	
3661.258r	14	5. 3		Fe I p	3.69	952	
3661.372m	64	22. 6		Sm II Fe I— V II	0.04 2.45 3.33	6 179 191	
3661.537r	5. 5	2. 0					
3661.637r	6	2. 3					
3661.737r	11	4. 4					
3661.837r	5	1. 9					
3661.957	70	25. 4		Ni I	0.21	16	
3662.10 a	5. 5	2. 2		La II	0.13	12	
3662.170r	59	28. 2		Co I (Zr II)	2.28 1.66	115 101	
3662.240r	94	32. 8		Ti II	1.57	75	
3662.364r	17	6. 8		Cr I	2.54	46	
3662.470r	8	3. 2					
3662.624r	17	6. 6					
3662.737r	30	11. 8		Fe I p	3.02	490	
3662.841	96	33. 2		Cr I Fe I	2.54	46	
3662.897r		0. 3		Fe I p— Sm II	2.95 0.38	436 39	
3663.017r	9. 5	3. 6					
3663.070r	4. 5	1. 9					
3663.208r	100	18. 6		Cr I	2.54	46	
3663.264r		22. 9		Fe I	2.99	439	
3663.404r	116	16. 1					
3663.459r		21. 3		Fe I	2.56 2.59	229 231	
3663.598r	10	4. 4		V I	2.03	114	
3663.698r	40	15. 4		Zr I—	0.15	12	
3663.831r	16	5. 9					
3663.967r	65	25. 6		Fe I	2.95	435	
3664.097	130	43. 8		Ni I	0.27	4	
3664.211r	48	20. 7		Sc II?	0.31	10	
3664.238r		4. 9					
3664.411r	16	5. 9					
3664.540r	103	35. 0		Fe I	3.00	391	
3664.623r	68	31. 4		Y II	0.18	9	
3664.701r	63	33. 8		Fe I	3.00	390	
3664.828r	35	13. 0		CH	Q 8	1,0	3
3664.945r	29	11. 3		Cr II	4.99	156	
3665.028r	37	13. 9		—CH	Q 8	1,0	3
3665.188r	12	4. 6		Nd II			
3665.304r	7. 5	2. 9					
3665.437r	9. 5	3. 5		Cr I	2.54	48	
3665.594r	4	1. 5					
3665.724r	29	10. 4					
3665.850r	17	6. 3		Fe I			
3665.997r	34	6. 9		Cr I	2.54 2.54	48 48	
3666.064r	105	35. 8		Fe I			
3666.164r	11	5. 2		Cr I	2.54	46	
3666.250r	105	24. 8		Fe I	2.43 2.94	179 389	
3666.284r		19. 4		Fe I p	3.30	672	
3666.367r	14	5. 8					
3666.539r	83	29. 3		Sc II	0.02	2	
3666.644r	26	11. 3		Cr I	2.54	46	
3666.770r	75	26. 4		Fe I			
3666.849r	16	8. 0		Fe I	3.04	393	
3666.931r	92	31. 6		—Fe I	1.61	46	
3667.097r	8. 5	3. 2		Zr II—	0.41	8	
3667.14 a	4	1. 9					
3667.261m	103	35. 2		Fe I	3.21	570	
3667.424r	8. 5	3. 3		Zr II	0.71	32	
3667.604r	7. 5	2. 9					
3667.750r	15	5. 5		V I	2.04	114	
3667.877r	5. 5	2. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3667.996	89	31. 0		Fe I	2.99	438	
					3.21	569	
				(Ce II)	0.36	40	
3668.217r	82	29. 4		Fe I	3.24	568	
				Ni I	3.94	182	
3668.354r	5	1. 9					
3668.460r	53	11. 2		Zr II	0.41	9	
3668.497r		11. 2		Y II	3.52	46	
3668.659r	35	13. 2					
3668.770r	6	2. 2					
3668.891r	47	20. 6		Fe I	2.59	229	
3668.969r	65	23. 0		Ti I	0.02	18	
3669.155r	78	35. 7		Fe I	2.99	437	
3669.244r	103	35. 0		Ni I	0.17	2	
3669.406r	40	18. 0		V II	2.52	116	
3669.526m	120	40. 5		Fe I	2.73	291	
3669.686r	52	18. 7		Fe I p	2.99	436	
3669.839r	24	9. 1		Mn I	2.14	7	
3670.032r	143	29. 4		Fe I	2.84	369	
				(Co I)	2.01	64	
3670.104r		24. 5		Fe I	2.95	435	
3670.220r	4. 5	1. 6		Fe I p	1.61	47	
3670.310r	18	7. 2					
3670.431	120	40. 6		Ni I	0.17	4	
3670.542r	37	17. 0		Mn I	2.11	7	
3670.650r	52	1. 1		Sm II?			
3670.724r		17. 7					
3670.817r	86	30. 0		Fe I—	2.48	133	
				Sm II	0.10	11	
3670.910r	13	4. 9					
3671.090r	4. 5	1. 6					
3671.222r	8	3. 1		V I	1.35	70	
				Gd II	0.08	2	
3671.276r	37	13. 9		Zr II	0.71	45	
3671.370r	3	1. 1					
3671.524r	43	15. 8		Fe I	3.26	570	
3671.682m	67	23. 8		Ti I	0.05	19	
3671.857r	2	0. 8					
3671.947r	10	3. 8					
3672.124r	16	6. 0		Fe I			
3672.316r	10	3. 8		Dy II	0.59		
3672.465r	22	8. 3					
3672.606r	6	2. 2		Zr II?	0.09	1	
3672.712S	68	24. 0		Fe I	2.45	180	
3672.803r	5	1. 9		Ce II	0.90	233	
3672.913r	1. 5	0. 5					
3673.046r	97	0. 3					
3673.087		32. 7		Fe I—			
3673.226r	44	17. 2		—CH	Q 9	1,0	3
3673.426r	40	14. 9		V I—	2.05	114	
				Ca I	2.52	28	
3673.543r	9	3. 4		Nd II			
3673.683r	31	10. 4		Fe I	3.88	978	
3673.773r	53	19. 8		Fe II?p	4.49	131	
3673.888	63	22. 4		Fe I			
3674.062	178	33. 0		Fe I			
				Ni I	0.03	15	
3674.150		33. 0		Ni I	0.42	32	
3674.316r	8	3. 0					
3674.413	58	20. 6		Fe I			
3674.563r	8. 5	3. 1					
3674.729r	106	16. 6		Zr II	0.32	9	
3674.773r		26. 8		Fe I	2.83	369	
3674.923r	2. 5	1. 1		Cr II	2.48	1	
3674.999r	11	4. 1		Ir I?	1.62		
3675.119r	2	0. 8		Mg I?p	6.98		
3675.18 a	3	1. 1					
3675.294r	42	15. 6		Ca I	2.52	28	
3675.449r	25	9. 5		Fe I	2.61	229	
3675.556r	2. 5	0. 9					
3675.689r	38	14. 0		V I	0.28	29	
3675.766r	24	9. 0		Fe I	3.88	996	
3675.882r	1. 5	0. 7					
3675.976r	18	6. 8		Fe I?			
3676.155r	6. 5	2. 4					
3676.322m	102	34. 7		Fe I	2.56	228	
3676.562r	66	23. 2		Co I	2.87	145	
3676.700r	6	2. 2		V I	2.12	115	
3676.814r	16	8. 2					
3676.878	73	25. 6		Fe I	3.00	389	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3676.962r	13	4. 8		Mn I	4.66		
3677.095r	4. 5	1. 6					
3677.172r	2	0. 7					
3677.318m	93	29. 2		Fe I	3.55	773	
3677.462r	85	29. 4		Fe I	2.28	125	
3677.514r	32	26. 4		Fe I	3.30	666	
3677.628r	147	48. 9		Fe I	2.76	291	
3677.695r	48	34. 4		Cr II	2.70	12	
3677.855r	98	38. 5		Cr II	2.71	12	
3677.909r	88	51. 8		Fe I |Cr II	2.71	12	
3678.100r	35	12. 9		CH	P 7	1,0	3
3678.234r	67	23. 6		Ca I	2.52	28	
3678.355r	7. 5	2. 8					
3678.455r	3. 5	1. 2					
3678.582r	0. 5	0. 1					
3678.728r	3	1. 1		Mn II			
3678.869m	89	30. 7		Fe I (Zr II)	2.42 1.76	131 101	
3679.002	64	22. 6		Fe I	2.28	124	
3679.112r	26	11. 0					
3679.351	35	13. 9		Fe I	2.56	228	
3679.539	29	13. 2		Fe I	3.00 3.07	393 490	
3679.685r	43	24. 7		Ti II	1.58	75	
3679.811r	22	21. 2		Cr I	2.54	48	
3679.923m 3680.001r	448	140 8. 8		Fe I	0.00	5	
3680.125r	4. 5	3. 9		V I	2.07	114	
3680.211r	6. 5	3. 8		Cr I	2.54 2.54	48 48	
3680.389r	52	21. 2		Fe I			
3680.505r	4	1. 8					
3680.665r	70	30. 3		Fe I	3.21	568	
3680.802m	128	44. 6		Fe I			
3680.944r	66	23. 8		Fe I			
3681.117r	7	2. 7		Ni I	1.93		
3681.230m	59	21. 3		Fe I	3.30		
3681.364r	4. 5	1. 9		Co II			
3681.467r	3. 5	1. 3					
3681.653m	72	25. 6		Fe I	3.00	390	
3681.884r	30	11. 1		Fe I	3.69	951	
3682.024r	15	6. 8		Mn I?	4.68		
3682.173r 3682.245r	202	31. 2 45. 6		Fe I p Fe I	2.94 3.00 3.55	386 385 772	
3682.524r	47	16. 8					
3682.670r	44	15. 8		Fe II?p—	4.48	131	
3682.884r	5	1. 8					
3683.045r 3683.092	166	29. 2 37. 0		Co I ‖Fe I— V I	2.08 0.05 0.27	99 5 29	
3683.377r	4. 5	1. 9					
3683.480r	10	3. 9		Pb I	0.97	1	
3683.623	52	18. 5		Fe I	2.48 3.30	130 671	
3683.756r	2	0. 8		Fe I p	3.93	996	
3683.882r	6. 5	2. 7					
3683.968r	6. 5	2. 4					
3684.123m	129	43. 2		Fe I	2.73	292	
3684.222r	8. 5	4. 1		Cr II	4.94	145	
3684.322r	10	3. 8		V I?	2.05	114	
3684.462r	11	4. 9		Co I	2.08	99	
3684.542r	38	14. 1		Fe I	3.25		
3684.720r	8. 5	3. 0					
3684.862r	25	9. 5					
3685.002r	30	15. 0					
3685.196m	275	84. 7		Ti II	0.57 0.61	14 14	
3685.527r	56	20. 4		Cr I	2.54	44	
3685.662r	11	4. 1		Fe I p	2.61	231	
3685.775r	15	5. 7		—Nd II			
3685.888r	7. 5	3. 7					
3686.004	151	50. 0		Fe I	2.94	385	
3686.108r	18	9. 2					
3686.188r	7	3. 7		Cr I	2.54 2.54	44 44	
3686.263m	85	32. 0		Fe I (V I)	2.42 1.38	131 70	
3686.381r	7	2. 8					
3686.472r	7. 5	2. 8		Co I	2.63	134	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3686.674r	22	8. 7		Cr II	4.78	118	
3686.787r	44	18. 2		Cr I	2.54 2.54	44 44	
3686.871r	13	6. 6					
3686.944r	0. 5	0. 3					
3687.102m	73	33. 0		Fe I	2.18	75	
3687.241r	14	14. 0		Cr I	2.54	44	
3687.334r	13	33. 1		Cr I— Ti I	2.54 0.05	44 19	
3687.466m	564	182		Fe I (V I)	0.86 2.10	21 114	
3687.551r	3. 5	9. 8		Cr I	2.54	44	
3687.660m	59	41. 7		Fe I	2.73	291	
3687.760r	2. 5	1. 6		Gd II	0.35	20	
3687.866r	16	7. 6		CH	P 8	1,0	3
3687.986r	1. 5	0. 7		Nb II?	2.16		
3688.071r	32	13. 3		V I	0.29	29	
3688.173r	47	19. 0		Fe I	3.30		
3688.286r	2	0. 9		Mo II	3.11	5	
3688.419r	134	29. 5		Ni I Eu II	0.27 0.00	5 2	
3688.478r		23. 8		Fe I	3.25	669	
3688.63 a	2. 5	0. 8					
3688.680r	3. 5	1. 4					
3688.804r	72	24. 6					
3688.874r	27	14. 9		Fe I	2.45	179	
3689.002r	52	18. 2		Fe I	2.43	178	
3689.080r	40	19. 5		Fe I			
3689.206r	1	0. 4					
3689.320r	68	3. 1		Ni I? Cr I	3.68 2.54	173 48	
3689.374r		26. 6		Fe I p	3.04	391	
3689.469m	158	51. 0		Fe I	2.84 2.94	369 386	
3689.630r	9. 5	4. 1		Cr I?	3.43	216	
3689.700r	7. 5	2. 8					
3689.880r	79	10. 0		Fe I	3.05	533	
3689.914r		21. 6		Ti I	0.05	18	
3690.066r	15	5. 6		Ru II— Fe I	2.40 2.59	1 231	
3690.281r	39	14. 3		V I	0.26	29	
3690.459	63	21. 8		Fe I	3.11 3.28	497 570	
3690.593r	3. 5	1. 2					
3690.731m	86	29. 5		Fe I (Co I)	3.57 2.04	807 86	
3690.860r	2. 5	0. 8					
3690.973r	10	3. 8					
3691.176r	8. 5	3. 0		Fe I	2.61	229	
3691.314	50	18. 4		Fe I			
3691.395r	4	1. 6					
3691.535r	4. 5	1. 8		Fe I p	3.43	707	
3691.686r	2	0. 8					
3691.816r	0. 5	0. 3					
3691.963r	3	1. 1		Fe II?			
3692.113r	4. 5	1. 6					
3692.226r	40	14. 9		V I	0.28	29	
3692.360r	6	2. 2		Rh I	0.00	1	
3692.440r	2	0. 8		O I?	9.52	6	
3692.570r	4. 5	2. 1		Zr II?	0.96	56	
3692.650m	47	16. 8		Fe I (Mo II)	3.06	5	
3692.816r	11	4. 1		Mn I	2.16	7	
3692.886r	0. 5	0. 3					
3693.032r	86	29. 2		Fe I	3.02	439	
3693.120r	35	17. 9		Co I	2.08	97	
3693.246r	8. 5	3. 1					
3693.366r	26	9. 7		Co I	2.01	64	
3693.478r	61	21. 9		Co I	2.04	95	
3693.666r	36	15. 0		Mn I	4.23		
3693.783r	24	11. 0		Fe I p	1.56 3.07	46 490	
3693.940r	24	21. 4		Ni I (Sm II)	0.11 0.00	15 2	
3694.027r	272	90. 0		Fe I	3.04	394	
3694.199m	67	25. 6		Yb II	0.00	1	
3694.436m	38	14. 9		—Ti I	1.44	117	
3694.654r	1	0. 5					
3694.817r	24	9. 2		Dy II	0.10		
3694.904r	2	0. 8		Ce II	0.30	63	
3695.056S	98	33. 5		Fe I	3.05	534a	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3695.207r	2. 5	1. 1					
3695.342r	27	10. 1		V I	2.12	114	
3695.521r	41	15. 5		Fe I	2.56 3.42	225 707	
3695.652r	55	19. 8		Fe I			
3695.869r	42	16. 2		V I	0.27	29	
3696.038r	37	14. 0		Fe I	2.42	128	
3696.153r	9. 5	3. 8					
3696.296r	24	9. 3		Ni I	1.93	74	
3696.383r	46	18. 7		Ti II	1.57	73	
3696.523r	53	17. 6		Fe I	3.05	530	
3696.570r		15. 4		Mn I	2.89	24	
3696.663r	12	6. 1		Ni I	1.93	74	
3696.753r	6. 5	4. 6					
3696.812r	18	7. 0		Fe I p Cr II?	3.02	434	
3696.911r	34	13. 9		Ni I	3.68	172	
3697.07 a	3. 5	1. 6					
3697.15	217	69. 0		H_{17}	10.20	3	10
3697.16 a	2	0. 9					
3697.261r	5	2. 3					
3697.433	101	40. 0		Fe I (Zr II)	3.00 0.47	389 7	
3697.537	82	30. 8		Fe I	3.30	670	
3697.747r	8. 5	3. 5		Gd II	0.03	4	
3697.871r	1	0. 4		Nb I?	0.05	3	
3698.017r	37	14. 4		Cr II— Fe I	4.77 2.20	118 75	
3698.167r	52	20. 3		Zr II (Ti I)	1.01 2.25	71 222	
3698.327r	1	0. 4		CN?	R 113	0,0	11
3698.477r	19	7. 3		—CH	P 9	1,0	3
3698.609m	75	26. 7		Fe I	3.02	491	
3698.694r	13	6. 8		CH	P 9	1,0	3
3698.804r	1. 5	0. 6					
3699.017r	26	9. 7		Co I	2.87	145	
3699.144	69	24. 8		Fe I	3.02	490	
3699.277r	1. 5	0. 7					
3699.396r	5. 5	2. 2		Fe I p	3.93	996	
3699.573r	2	0. 7		Fe I p	3.02	436	
3699.740r	3	1. 1		Gd II Hf II	0.35 1.67	20 18	
3699.825r	32	12. 0		Fe I			
3699.925r	1. 5	0. 5		Fe II p	4.49	131	
3700.045r	7. 5	3. 0		Ti I			
3700.132r	8	3. 0		V II	2.49	102	
3700.269r	34	2. 3		Tm II	0.03	6	
3700.342r		10. 5		V II	2.51	116	
3700.459r	4	1. 5					
3700.600r	28	10. 5		Fe I	3.24	569	
3700.739r	5	1. 9					
3700.805r	4. 5	1. 6		Fe I?			
3700.915r	186	0. 8		CN? Rh I?	R 111 0.19	1,1 2	11
3700.995r		0. 8		V II	2.49	102	
3701.095m		59. 8		Fe I	3.00	385	
3701.272r	11	4. 9					
3701.375r	9	3. 5		Tm II	0.00	2	
3701.535r	5. 5	2. 2					
3701.612r	3	1. 1		Ni I?	3.54	138	
3701.729r	20	7. 8		Mn I	2.14	7	
3701.869r	1	0. 4		Cr II?	5.32	168	
3702.037m	68	26. 2		Fe I	2.84	369	
3702.245r	69	16. 0		Co I	2.88	145	
3702.272r		16. 0		—Ti I	1.05	83	
3702.493	77	27. 6		Fe I	1.61 2.18	46 75	
3702.645r	1. 5	0. 5					
3702.825r	3. 5	1. 5		CN— Tb II?	R 111	0,0	11
3702.961r	10	4. 3		CN?	R 110	1,1	11
3703.00 a	1. 5	0. 7					
3703.104r	1	0. 5					
3703.231r	5	2. 0					
3703.448r	14	5. 9		Fe I p	3.37	704	
3703.545r	114	28. 6		Fe I	2.76 2.76	291 292	
3703.591r		22. 7		V I	0.30	29	
3703.696r	62	28. 1		Fe I	2.94	389	
3703.829m	78	30. 2		Fe I (V II)	2.86 1.56	369 15	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3703.86	235	76. 5		H_{16}	10.20	3	10
3703.94 a	1. 5	0. 7					
3704.038r	103	20. 5		Fe I	3.07	495	
3704.083r		26. 8		Co I	1.05	35	
3704.203r	4	1. 6		Fe I			
3704.297r	50	5. 9		Ti I	1.46	117	
3704.347r		15. 7		Fe I	3.24	609	
3704.469m	98	35. 4		Fe I	2.69	290	
3704.58 a	8	3. 5					
3704.704	46	18. 0		V I	0.29	29	
3704.797r	5. 5	2. 4		Fe I p	3.69	950	
3704.913r	3	1. 4		CN?	R 109 R 109	1,1 2,2	11
3705.033r	33	15. 3		V I	0.28	29	
3705.113r	7	3. 6		Ni I	0.42	30	
3705.263r	9	5. 8		Fe I p	3.40	704	
3705.423r	6	10. 5					
3705.577m	562	180		Fe I	0.05	5	
3705.709	44	48. 3		Fe I p	2.76 3.27	293 610	
3705.830r	14	13. 6					
3705.937r	6. 5	10. 5					
3706.037r	290	105		Ca II (Mn I)	3.12 4.25	3	
3706.220m	70	37. 2		Ti II	1.57	73	
3706.337r	9. 5	4. 9					
3706.483r	1. 5	0. 7					
3706.563r	1. 5	0. 7					
3706.697r	10	4. 2					
3706.77 a	1. 5	0. 5		Sm II	0.48	47	
3706.882r	12	5. 1		CN?	R 108	1,1	11
3707.052m	121	41. 5		Fe I	3.00 3.00	385 392	
3707.176r	10	4. 7		Sm II?— CN	0.33 R 109	35 0,0	11
3707.329r	78	27. 6		—Fe I	3.02	437	
3707.465	66	25. 4		Co I Fe I	2.04 2.56	96 229	
3707.562	83	29. 2		Ti I— Fe I	2.02 3.88	177 978	
3707.676r	12	5. 5					
3707.826m	88	30. 2		Fe I	0.09	5	
3707.929m	114	50. 5		Fe I	2.18	76	
3708.085r	40	16. 5					
3708.188r	16	6. 3		Fe I p	2.59	228	
3708.315r	3	1. 1					
3708.435r	3	1. 1		Sm II Fe I p	0.04 2.99	5 436	
3708.611m	53	21. 8		Fe I	2.45 2.59	178 225	
3708.695r	3	1. 4		—V I?	1.89	104	
3708.825r	45	21. 8		Co I	2.04	98	
3709.031r	60	40. 0		Fe I p	3.04	390	
3709.151r	7. 5	15. 4					
3709.256m	573	186		Fe I (Zr II) (Ce II)	0.91 0.80 0.52	21 45 40	
3709.401r	8	13. 0		—CN	R 108	0,0	11
3709.537m	55	33. 2		Fe I	2.99	435	
3709.670m	56	26. 0		Fe I	2.56	225	
3709.828r	3. 5	1. 6					
3709.953m	39	16. 1		Ce II— Ti I	0.12 1.05	40 83	
3710.075r	7. 5	3. 2		Cr I?	4.45		
3710.165r	6	2. 7					
3710.292S	74	27. 2		Y II	0.18	7	
3710.448r	23	9. 3					
3710.638r	27	10. 8					
3710.741r	1. 5	0. 7					
3710.881r	6	2. 6		Sm II? CN?	0.18 R 106	19 1,1	11
3711.115r	7. 5	3. 2		V II	2.49	102	
3711.229m	83	32. 0		Fe I	2.59	228	
3711.301r	12	7. 0		Fe I p	2.20	75	
3711.412m	66	29. 6		Fe I	3.07	494	
3711.535r	6. 5	3. 0		Sm II	0.25	25	
3711.665r	10	4. 3		Co I— CN	2.01 R 107 R 106	63 0,0 2,2	11
3711.784r	3. 5	1. 6		CN V II	R 106 2.52	2,2 116	11
3711.940r	24	10. 6		Fe I p — Fe II?	2.45 5.91	178 192	
3711.97	333	108		H_{15}	10.20	3	10

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3712.090r	19	8. 5					
3712.180r	11	4. 9		Co I	2.04	84	
3712.304r	1. 5	0. 8					
3712.400r	8. 5	3. 8		Fe II p	2.28	15	
3712.527r	2	0. 9		V II?	2.76	157	
3712.717r	9	4. 2		Gd II	0.38	20	
3712.767r	6	2. 6		Sm II	0.25	25	
3712.898	111	20. 8		Cr II	2.71	12	
3712.943		30. 2		Cr II	2.71	12	
3713.100r	4	1. 6					
3713.207r	0. 5	0. 1					
3713.340r	14	5. 7		Ni I	1.95	74	
3713.554r	7. 5	3. 0		La II	0.17	26	
3713.714r	22	8. 8		Ni I— Ti I	1.95 1.43	74 116	
3713.834r	2. 5	1. 0		CN	R 106	0,0	11
3713.970r	2	0. 8		V I	0.07	11	
3714.157r	0. 5	0. 3		Zr I	0.15	12	
3714.220r	1. 5	0. 5					
3714.30 a	2	0. 8		Y II	3.62	61	
3714.407r	3	1. 2		Cr I?	3.89	269	
3714.567r	2. 5	1. 1					
3714.674r	6	2. 4					
3714.787r	28	11. 0		Zr II	0.53	18	
3714.930r	1	0. 5					
3715.040r	3	1. 2					
3715.180r	58	22. 2		Cr II	3.10	20	
3715.397r	105	5. 4		Ti I?			
3715.476r		34. 0		V II	1.57	15	
3715.714r	7. 5	3. 2					
3715.799r	3. 5	1. 5		Ti I	1.44	116	
3715.916m	80	29. 4		Fe I	2.28	124	
3716.05 a	6. 5	2. 8		CN CN	R 105 R 105	0,0 0,0	11 11
3716.154r	28	11. 5					
3716.378r	166	2. 2		Ce II (Gd II)	0.00 0.03	40 2	
3716.451m		56. 0		Fe I	2.94 3.37	388 705	
3716.538r		1. 6		Cr I	3.89	269	
3716.699r	3. 5	1. 6		Fe I p	2.99	434	
3716.84 a	1. 5	0. 7		CN	R 103	1,1	11
				CN	R 103 R 103	1,1 2,2	11
3716.945r	2	0. 8		CN?	R 103	2,2	11
3717.072r	3	1. 2		Nb II	1.69		
3717.187r	9. 5	4. 3		Fe I p	3.33	704	
3717.271r	2. 5	1. 1		Ti I	1.46	116	
3717.397m	48	19. 9		Ti I	0.00	17	
3717.557r	0. 5	0. 3					
3717.673r	1	0. 4					
3717.733r	7	3. 2		Fe I p	3.88	997	
3717.836r	28	11. 6		Fe I p	3.42	706	
3717.954r	8	3. 4					
3718.152r	38	16. 5		V II	1.68	21	
3718.228r	12	6. 5		CN	R 104	0,0	
3718.321r	15	7. 0					11
3718.412m	77	32. 0		Fe I	2.76	292	
3718.526r	4	2. 3					
3718.615r	10	5. 4		CN	R 102	2,2	11
3718.706r	1	0. 5		CN	R 102	2,2	11
3718.839r	7	4. 0		Zr II	0.36	9	
3718.931r	32	17. 4		Mn I Pd I	4.26 1.25	3	
3719.028r	8. 5	5. 6					
3719.192r	8	6. 7					
3719.265r	3. 5	3. 9		Hf II	0.61	7	
3719.458r	7	15. 3		Ni I	3.70		
3719.543r	6. 5	2. 3					
3719.656r	11	3. 6					
3719.765r	1	0. 8					
3719.947m	1664	538		Fe I	0.00	5	
3720.165r	1. 5	1. 1		Fe II p	2.54	23	
3720.260r	11	3. 6		Zr II? p	0.76	32	
3720.404r	10	21. 2		CN Ti I	R 103 R 101 2.04	0,0 2,2 177	11
3720.48 a	10	10. 5		CN	R 103 R 101	0,0 2,2	11
3720.564r	11	12. 5					
3720.692r	4	4. 2					
3720.790r	1. 5	1. 3		CN	R 101	1,1	11

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3720.907r	3	2. 4					
3721.030r	0. 3	0. 1		Ni I p	3.83	181	
3721.071r		0. 1					
3721.185r	58	40. 0		Fe I	3.02	491	
3721.277r	45	27. 6		Fe I	2.18 3.33	75 705	
3721.399r	41	25. 1		Fe I	2.48	131	
3721.506r	53	32. 5		Fe I	3.04	389	
3721.635m	110	55. 8		|Ti II Fe I	0.57 3.02	13 437	
3721.930r	66	39. 2		Fe I			
3721.94	(536)	(176)		H_{14}	10.20	3	10
3722.028m	42	28. 8		Fe I	2.76	291	
3722.139r	4	4. 2		V II	1.55	15	
3722.236r	36	28. 1		Fe I p	2.42 3.07	127 490	
3722.377r	4	6. 4					
3722.498r	22	54. 8		Ni I	0.21	18	
3722.588r	694	249		Ti I ‖Fe I	0.02 0.09	17 5	
3722.758r	8	14. 8		Fe I p (Sb I)	3.42 2.03	707 1	
3723.284r	7	3. 9					
3723.392r	9. 5	5. 0		Cr II	4.94	144	
3723.510r	10	5. 4		Nd II			
3723.609r	47	20. 8		Ti II?	1.57	72	
3723.686r	5	2. 7					
3723.844r	41	17. 6					
3723.912r	16	8. 1		Fe II p	2.28	14	
3724.092r	43	17. 6		—Ti II	1.58	73	
3724.258r	6	3. 0		Ni I p	3.94	183	
3724.385m	124	44. 6		Fe I	2.28	124	
3724.574m	60	23. 1		Ti I	1.50	131	
3724.743r	8	3. 5		CN	R 101 R 99	0,0 1,1	11
3724.829r	52	20. 2		Ni I	3.83	182	
3724.949r	19	7. 7		Eu II	0.00	2	
3725.158m	42	16. 5		Ti I	1.07	83	
3725.306r	12	4. 6		Fe II	4.48	130	
3725.496S	67	24. 6		Fe I	3.05	534	
3725.665r	7	2. 7		Fe I p	2.22	75	
3725.837r	6	2. 4					
3725.95 a	5	2. 0		Cr I?			
3726.023r	14	5. 4		Ni I	3.84		
3726.065r	3. 5	1. 3		Fe I p	2.95	433	
3726.23 a	0. 5	0. 2		Nb I?	0.02	3	
3726.36 a	2	0. 7					
3726.48 a	2	0. 8		CN?			
3726.665r	37	14. 5		Co I —CN	1.71 R 98	40 1,1	11
3726.842r	9. 5	5. 6					
3726.920r	202	70. 3		‖Fe I Ru I	3.04 0.15	385 2	
3727.026r	36	30. 8		Fe I p	3.27	668	
3727.098m	118	55. 1		Fe I	2.94	387	
3727.347r	59	37. 0		V II (Cr II)	1.69 4.78	21 117	
3727.449r	1	1. 9					
3727.531r	8. 5	26. 8		Fe I p	3.42	705	
3727.634m	632	205		Fe I	0.96	21	
3727.685r	14	112		|Fe I p— Zr II	2.59 1.74	225 112	
3727.818m	85	73. 8		Fe I	3.00	386	
3728.042r	40	20. 0		Ru I	0.00	2	
3728.137r	12	5. 9		Nd II			
3728.332r	30	12. 6		V II	2.51	116	
3728.402r	5. 5	2. 4		—Ce II	0.68	47	
3728.48 a	5	2. 3		Sm II	0.66	54	
3728.671r	73	26. 0		Fe I	2.56	227	
3728.862r	5. 5	2. 6		|Co I— Mn I	2.63 2.92	133 24	
3728.954r	80	28. 1		Ni I— Fe I	3.84	181	
3729.072r	7. 5	2. 7		CN	R 99 R 96	0,0 2,2	11
3729.18 a	3	2. 4		CN?	R 99	0,0	11
3729.339r	10	4. 0		Fe I p	3.05	530	
3729.524r	6	2. 4					
3729.723r	7	2. 7		Zr II	0.47	8	
3729.813m	83	39. 4		Ti I	0.00	17	
3730.012r	22	8. 4		CN?			
3730.141r	1. 5	0. 7					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3730.308r	38	21. 7					
3730.392r	118	41. 8		Fe I	3.05	533	
3730.483r	102	37. 0		Co I (Fe I p)	1.88 3.00	62 389	
3730.590r	15	7. 0		CN	R 96	1,1	11
3730.756r	106	23. 6		Ni I	0.27	2	
3730.808r		22. 6		Cr I	0.00	2	
3730.950m	87	33. 2		Fe I	2.61	228	
3731.159r	14	6. 4		Fe I p	3.69	950	
3731.261r	31	13. 7		Sm II Zr II (Co I)	0.10 1.74 2.04	11 112 96	
3731.381m	80	32. 0		Fe I	2.61	225	
3731.621r	12	5. 8					
3731.727r	8	4. 0		CN?			
3731.814r	1. 5	0. 8		CN?			
3731.930r	22	10. 2		Mn I	4.27		
3732.035r	54	24. 0		Cr I	0.00	2	
3732.142r	3	1. 7					
3732.214r	7	3. 7					
3732.406m	142	58. 9		Fe I Co I	2.20 1.88	76 62	
3732.634r	11	6. 4		CN—	R 95 R 94	1,1 2,2	11
3732.752r	64	32. 4		V II	1.56	15	
3732.885r	3. 5	2. 4		CN?			
3732.985r	4	3. 2		CN?			
3733.079r	23	14. 9					
3733.195r	75	56. 2		Fe I p	2.56	225	
3733.330m	228	107		Fe I	0.11	5	
3733.492r	77	62. 7		Co I	2.08	98	
3733.655r	10	11. 0					
3733.767r	5. 5	6. 2					
3733.841r	2	2. 3		Cr I?	3.89		
3734.017r	1. 5	2. 5					
3734.135r	17	18. 8		Co I	2.04	96	
3734.285r	9	21. 7		CN	R 93	2,2	11
3734.37	(1014)	(323)		H_{13}	10.20	3	10
3734.465r	13	15. 3		Ru II— CN	2.54 R 94	1 1,1	11
3734.536r		36. 2		—CN	R 94	1,1	11
3734.664r	1	8. 8					
3734.874m	3027	945		Fe I	0.86	21	
3735.118r	6. 5	42. 8					
3735.244r	14	56. 0					
3735.334m	69	81. 3		Fe I	2.94	388	
3735.444r	8	11. 4		CN	R 96	0,0	11
3735.551r	5	6. 0		Nd II?			
3735.700r	15	10. 6		Ti I?— Fe I p	2.42	127	
3735.898r	27	21. 4		Co I	2.08	95	
3735.964r	22	18. 0		Sm II	0.28	29	
3736.044r	3. 5	3. 9		CN V II	R 92 2.52	2,2 102	11
3736.291r	1	1. 2					
3736.476r	6. 5	7. 6		CN	R 93	1,1	11
3736.592r	11	17. 7					
3736.712r	12	29. 2					
3736.816r	39	95. 9		Ni I	0.42	30	
3736.917r	290	261		Ca II	3.15	3	
3737.032r	10	67. 0					
3737.141m	1071	428		Fe I	0.05	5	
3737.299r	4. 5	31. 6					
3737.576r	78	87. 0		Cr II?— CN	4.77 R 95	117 0,0	11
3737.758r	6	6. 1		CN?	R 91	2,2	11
3737.884r	0. 5	0. 5					
3737.986r	1	1. 1		V I?	1.85	91	
3738.069r	5. 5	3. 9		Nd II			
3738.139r	5	3. 3		Zr II	0.56	17	
3738.312r	136	41. 4		Fe I	3.27	609	
3738.363r		27. 8		Cr II	3.10	20	
3738.510r	47	22. 4		Fe I p?	3.64	918	
3738.631r	4	2. 0					
3738.758r	6	2. 8		V I	1.89	97	
3738.998r	14	6. 4					
3739.118r	53	20. 8		Fe I	2.22	75	
3739.228r	104	40. 1		Ni I	0.17	2	
3739.325r	50	20. 6		Fe I	2.18	74	
3739.529m	112	39. 4		Fe I	3.30		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3739.783	55	20. 8		Ni I	3.94	180	
3739.944r	3	1. 3					
3740.064	65	24. 1		Fe I	3.05 3.40	532a 707	
3740.245r	142	31. 8		Fe I	3.25	667	
3740.336r		12. 3		—CN	R 91	1,1	11
3740.464r	4	1. 6		CN?— CN?			
3740.531r	1. 5	0. 7					
3740.72 a	2	0. 8		Nb II?	1.62		
3740.811r	0. 1	0.03					
3740.884r	0. 5	0. 1					
3741.065S	93	32. 0		Ti I	0.02	17	
3741.198r	3. 5	1. 5		—CN	R 89	2,2	11
3741.312r	13	5. 0		Sm II— Eu II	1.38	11	
3741.479r	56	20. 7		Fe I	3.43	701	
3741.561	15	8. 8		Fe II p	2.28	15	
3741.645m	133	44. 6		Ti II	1.58	72	
3741.833r	5	2. 1		CN	R 93	0,0	11
3741.903r	8. 5	3. 2		CN	R 93	0,0	11
3742.079r	20	10. 2		Fe I	2.59	225	
3742.146r	66	24. 6		Fe I	3.94	978	
3742.278r	6	2. 4		Ru I	0.34	2	
3742.567r	137	25. 9		Fe I p	3.04	389	
3742.623r		36. 1		Fe I	2.94	387	
3742.80 a	0. 5	0. 3					
3742.950	75	36. 4		|Fe I— Cr I	3.43 2.54	704 43	
3743.129r	20	13. 6					
3743.218r	25	22. 2					
3743.368m	592	193		Fe I	0.99	21	
3743.485r	92	101		Fe I (Gd II)	3.57 0.14	806 2	
3743.585r	70	43. 6		||Cr I— V II	2.54 2.54 1.67	43 43 21	
3743.779	47	24. 0		Fe I	2.73	290	
3743.888	74	32. 4		Cr I (Sm II)	2.54 0.18 0.33	43 18 34	
3743.997r	3. 5	1. 9		CN	R 92	0,0	11
3744.110m	176	67. 0		Fe I	3.04	385	
3744.162r		1. 7					
3744.372r	1	0. 5					
3744.493r	84	13. 9		Cr I	2.54	43	
3744.556r		26. 2		Ni I	3.84	180	
3744.756r	3. 5	1. 9		CN?			
3744.817r	2. 5	1. 3					
3745.048r	(2. 5)	(1. 3)		CN?			
3745.137r	(2. 5)	(1. 6)					
3745.229r	(8)	(8. 6)					
3745.349r	(68)	(72. 5)					
3745.475r	9. 3	49. 6		Co I	0.92	34	
3745.574m	1202	459		Fe I	0.09	5	
3745.609r		66. 6		Sm II?—	0.00	2	
3745.83 a	12	64. 0		V II	1.55	15	
3745.910m	540	301		Fe I (Zr II)	0.12 1.76	5 112	
3746.048r	14	26. 7		—CN	R 91 R 88	0,0 1,1	11
3746.144r	4	7. 2					
3746.244r	20	14. 4					
3746.368r	0. 5	0. 5					
3746.475r	72	36. 8		Fe I	2.20	73	
3746.574r	46	32. 5		Fe II p	2.28	14	
3746.721r	2. 5	1. 6		Ca I	2.71		
3746.922r	141	40. 3		Fe I	3.00	386	
3747.004r		29. 5		Fe I p	3.00	388	
3747.225	26	13. 9		—Cr I	4.18	289	
3747.348r	6	3. 5					
3747.552	44	22. 2		Y II	0.10	8	
3747.720r	2	1. 5					
3747.821r	4. 5	3. 5		Dy II			
3748.000r	50	44. 3		V I— ||Ti II	1.87 1.93 2.60	97 98 107	
3748.088r	10	29. 0		CN— Ti I?	R 90 R 85 1.87	0,0 2,2 166	11
3748.271m	497	228		Fe I	0.11	5	
3748.405r	2. 5	12. 8		Ca I	2.52	27	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3748.506r	19	29. 8		Fe I Fe II	3.57 4.73	805 154	
3748.605r	8	14. 5		Cr I	2.54	43	
3748.677r	17	19. 2		Cr II	2.70	11	
3748.799r	0. 5	1. 2					
3748.905r	15	24. 0		Fe I p	2.69	289	
3748.966r	103	82. 9		|Fe I Cr I	2.94 2.54 2.54	386 43 43	
3749.051r	48	99. 1		Ni I	0.00	1	
3749.244r	46	103					
3749.365r	4	31. 2					
3749.495m	1907	578		Fe I	0.91	21	
3749.620r	1. 5	18. 1					
3749.740r	15	33. 4					
3749.850r	7. 5	22. 7					
3749.938r	13	26. 9		Co I	2.04	95	
3750.139r	1. 5	3. 2		CN	R 89	0,0	11
3750.15	(1388)	(430)		H_{12}	10.20	2	10
3750.205r	3. 5	5. 3		CN	R 89	0,0	11
3750.304r	25	22. 4		Ca I	2.52	27	
3750.505r	1. 5	1. 6					
3750.678m	27	18. 7		Fe I	2.61	225	
3750.773r	8. 5	6. 4		Mn I	2.94	24	
3750.872	26	15. 7		V II	1.68	21	
3750.993r	1	0. 7		CN?			
3751.090m	32	17. 9		Fe I Fe I	2.20 3.30	74 667	
3751.224r	15	8. 0		V II	2.49	100	
3751.449r	2. 5	1. 3					
3751.592	42	20. 0		Zr II	0.97	71	
3751.659r	10	5. 3		Co I— CN	2.08 R 85	98 1,1	11
3751.824	50	22. 7		Fe I	2.69	287	
3751.912r	4. 5	2. 3					
3752.191r	6	2. 7		CN	R 88	0,0	11
3752.265r	5. 5	2. 7		CN	R 88	0,0	11
3752.418S	78	30. 6		Fe I	3.04 3.04	385 392	
3752.506r	12	6. 0		Nd II— Os I	0.34	2	
3752.688r	5	2. 1		Nd II?	0.00	33	
3752.860m	95	34. 6		Ti I	0.05	17	
3752.992r	40	17. 0					
3753.142m	60	23. 2		Fe I	2.40	177	
3753.340r	56	20. 8		Ca I	2.52	27	
3753.525r	8. 5	3. 6		Dy II— CN	0.00 R 84	1,1	11
3753.620m	132	45. 0		|Fe I— Ti I	2.18 0.02	73 17	
3753.751r	12	5. 2		Dy II			
3753.867r	4	1. 6					
3754.04 a	1. 5	0. 5		Fe I?			
3754.123r	0. 5	0. 3					
3754.225r	6. 5	2. 4		CN	R 87	0,0	11
3754.339r	18	6. 9		Co I	2.54	132	
3754.505r 3754.578r	120	26. 6 16. 5		Fe I Cr II	3.00 3.10	386 20	
3754.725r	22	7. 7		Co II			
3754.874r	5	1. 9		Fe I p	3.69	949	
3755.006r	3	1. 1		Fe II?			
3755.134r	13	4. 8		—CN	R 81	2,2	11
3755.280r	3. 5	1. 3		Sm II— CN	0.33 R 81	34 2,2	11
3755.452r	44	16. 1		Co I	2.08	96	
3755.573r	15	5. 3		Fe II	4.74	154	
3755.722r	1. 5	0. 5		V I?	2.27 2.29	124 124	
3755.823r	2. 5	0. 7		Cr I	2.71	72	
3755.939r	0. 2	0. 1					
3756.072m	65	24. 8		Fe I	2.18	74	
3756.264r	6. 5	2. 4		CN	R 86	0,0	11
3756.339r	6	2. 1		CN	R 86	0,0	11
3756.45 a	1	0. 4		Sm II?	0.43	44	
3756.564r	4. 5	1. 6		CN	R 80	2,2	11
3756.650r	7. 5	2. 7		CN	R 80	2,2	11
3756.941m	96	34. 8		Fe I	3.57	805	
3757.072r	2	0. 9		CN			
3757.165	32	13. 5		Cr I	2.54	43	
3757.304r	14	8. 8					
3757.368r	16	8. 2		Dy II	0.10		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3757.458m	68	30. 6		Fe I	3.30	668	
3757.684r	92	46. 8		Ti II Cr I	1.57 2.54	72 43	
3757.810r	14	17. 3		Zr II	1.83	120	
3757.959r	29	37. 2					
3758.033r	13	34. 8		Cr I	2.54	43	
3758.129r	2	9. 6		Fe I p	3.42	704	
3758.245m	1647	497		Fe I	0.96	21	
3758.316r	3	24. 5		CN	R 85 R 79	0,0 2,2	11
3758.437r	15	38. 6					
3758.596r	10	14. 9					
3758.723r	8. 5	3. 5		Cr I	0.94	12	
3758.827r	1	0. 7					
3758.956r	4. 5	3. 1		Nd II?— Sm II			
3759.075r	29	19. 9		La II	0.24	13	
3759.157r	22	21. 0		Fe I	3.63	855	
3759.299m	334	115		Ti II	0.61	13	
3759.473r	19	12. 8		Fe II	4.74	154	
3759.585r	29	13. 8		Fe I	3.43	701	
3759.689r	4. 5	2. 1		Co I	2.54	131	
3759.800r	3. 5	1. 5					
3759.892r	8. 5	3. 2		CN	R 78	2,2	11
3760.055m	105	35. 0		Fe I	2.40	177	
3760.224r	24	8. 6		V II	1.69	21	
3760.32 a	3	1. 3		CN	R 84	0,0	11
3760.392r	23	8. 2		CN— Co I	R 84 1.74	0,0 40	11
3760.537S	100	32. 8		Fe I	2.22	76	
3760.705r	12	4. 4		Sm II	0.18 0.54	18 51	
3760.80 a	3	1. 1		CN?			
3760.931r	14	5. 0		CN	R 80	1,1	11
3761.067r	46	18. 5		Fe I	3.37	706	
3761.320m 3761.429r	277	61. 0 37. 2		Ti II Fe I	0.57 2.59	13 227	
3761.556r	12	5. 2		CN	R 77	2,2	11
3761.690	60	20. 2		Cr II	2.70	11	
3761.874m	78	26. 2		Ti II	2.59	107	
3762.210r	58	19. 8		Fe I	3.37	705	
3762.309r 3762.356r	75	15. 2 10. 4		CN CN	R 83 R 83	0,0 0,0	11 11
3762.477r	4	1. 5					
3762.618	34	12. 5		Ni I	2.74		
3762.757r	8	3. 2		CN	R 79	1,1	11
3762.870r	16	6. 4		CN— Fe II	R 79 5.95	1,1 192	11
3763.008m	53	21. 2					
3763.175r	9	4. 8		CN	R 76	2,2	11
3763.288r	4. 5	2. 9		CN	R 76	2,2	11
3763.376r	6. 5	4. 9		Mn I	2.95	24	
3763.476r	14	14. 9		Nd II			
3763.571r	24	33. 1		Fe I p	2.48	128	
3763.803m	829	255		Fe I	0.99	21	
3763.979r	16	33. 8					
3764.113r	27	30. 2		—Ce II	0.36	41	
3764.221r	39	24. 2		Fe I	2.20	74	
3764.284r	7. 5	5. 4		CN	R 82	0,0	11
3764.384r	28	14. 4		Sm II Zr I CN	0.33 0.00 R 82	34 10 0,0	11
3764.590r	10	4. 7		CN	R 78	1,1	11
3764.650r	5	2. 1		CN	R 78	1,1	11
3764.849r	5	1. 9		CN	R 75	2,2	11
3764.922r	3	1. 1		CN	R 75	2,2	11
3765.057r	4	1. 6		Rh I?	0.71		
3765.16 a	0. 5	0. 1					
3765.304r	32	12. 0					
3765.551m	174	56. 2		Fe I	3.24	608	
3765.710r	68	27. 6		Fe I	3.27	608	
3765.88 a	1. 5	0. 6					
3766.094m	56	21. 5		Fe I	2.59	226	
3766.240r	25	10. 6		CN	R 81	0,0	11
3766.323r	16	6. 9		CN	R 81	0,0	11
3766.457r	9. 5	4. 6		CN	R 77 R 74	1,1 2,2	11
3766.666m	78	36. 1		Fe I	3.04	386	
3766.820m	39	25. 8		Fe I— Zr II	0.41	7	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3766.968r	24	27. 5					
3767.081r	7	23. 9					
3767.204m	820	262		Fe I	1.01	21	
3767.356r	18	34. 5					
3767.437r	20	19. 7		Cr I	2.54	42	
3767.545r	11	10. 1		CN			
3767.650r	15	9. 3		Ca I—	2.71		
3767.705r	13	7. 7		V II	2.50	100	
3767.897r	3	1. 6		Zr II	0.71	31	
3768.034m	78	32. 4		Fe I	2.22	73	
3768.095r	12	6. 6		Cr I CN	2.54 2.54 R 73	42 42 2,2	11
3768.16 a	4. 5	2. 5		CN	R 76 R 73	1,1 2,2	11
3768.248	60	24. 3		Cr I Fe I	2.54 2.84	43 368	
3768.406r	22	9. 4		Gd II	0.08	2	
3768.50 a	1	0. 5					
3768.661r	32	14. 1		—Ir I?	1.47		
3768.733r	44	18. 3		Cr I	2.54	43	
3768.89 a	6. 5	3. 1		CN— CN	R 72 R 72	3,3 3,3	11 11
3769.019r	21	9. 2		Cr I	2.54	42	
3769.22 a	0. 5	0. 4					
3769.316r	5. 5	2. 8		Fe I—			
3769.463	58	26. 4		Ni II	3.10	4	
3769.653r	4	2. 3		Nd II	0.20	67	
3769.722r	5	3. 1		CN	R 72	2,2	11
3769.813r	7. 5	3. 4		CN	R 72	2,2	11
3769.994S	77	39. 8		Fe I	3.00	387	
3770.169r	25	15. 3		CN	R 79 R 71	0,0 3,3	11
3770.307r	65	37. 7		Fe I	2.69	287	
3770.413r	49	34. 2		‖Fe I Ti II	2.43 2.60	177 107	
3770.531r	4	3. 7		Fe I?			
3770.599r	23	18. 6					
3770.63	1860	*621*		H_{11}	10.20	2	10
3770.719r	3	3. 3					
3770.972m	44	29. 2		V II	1.67	21	
3771.113	4	3. 2		CN—			
3771.18 a	1. 5	1. 1		CN?			
3771.278r 3771.331r	2	0. 4 1. 1		Fe I? CN	R 71	2,2	11
3771.38 a	3. 5	2. 1		CN	R 71	2,2	11
3771.497	44	23. 2		Fe I	3.24	607	
3771.658r	62	29. 8		Ti I	0.05	17	
3771.75 a	7	4. 8		CN	R74 R70	1,1 3,3	11
3771.814	14	7. 7		CN	R 74 R 70	1,1 3,3	11
3771.971r	1	0. 6		Zr II?	0.71	44	
3772.104	19	8. 8		CN	R 78	0,0	11
3772.188m	13	6. 4		CN	R 78	0,0	11
3772.384r	3. 5	1. 6		CN?			
3772.533r 3772.591r	86	27. 6 8. 1		Ni I	0.21	15	
3772.779r	2. 5	1. 2					
3772.931r	24	10. 0		—V II	2.49	100	
3773.206r	30	12. 0					
3773.364m	43	17. 0		Fe I	3.05	531	
3773.472m	11	4. 2		CN	R 73	1,1	11
3773.561m	10	4. 4		CN	R 73	1,1	11
3773.699m	88	31. 7		Fe I	3.04	386	
3773.890r	12	5. 0					
3774.033m	13	5. 3		CN	R 77	0,0	11
3774.111m	11	4. 2		CN	R 77	0,0	11
3774.218r	0. 2	0. 1					
3774.336m	74	26. 0		Y II	0.13	7	
3774.515m	8. 5	3. 2		CN	R 69	2,2	11
3774.652r	74	26. 2		Ti II Co I?	0.57 2.08	12 96	
3774.832m	100	34. 0		Fe I	2.22	73	
3774.998r	6	2. 4		CN			
3775.204m	10	3. 7		CN	R 72	1,1	11
3775.290m	14	5. 4		CN	R 72	1,1	11
3775.423r	6. 5	2. 4		CN?			
3775.578r	144	47. 2		Ni I	0.42	33	
3775.710r	9	3. 2					
3775.860	48	17. 5		Fe I	2.73	287	
3775.949m	12	4. 6		CN	R 76	0,0	11

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3776.059m	84	28. 8		Ti II	1.58	72	
3776.198m	21	7. 7		CN—	R 68	2,2	11
3776.334r	7. 5	2. 6		CN			
3776.461r	90	30. 0		Fe I	2.18	74	
3776.559r	46	18. 0		Y II (Mn I)	0.13 2.11	8 6	
3776.692r	1. 5	0. 5					
3776.839r	1. 5	0. 5		Fe I?			
3777.074r	68	23. 0		Fe I	2.99	432	
3777.232r	4. 5	1. 6					
3777.332r	50	17. 5		Cr I	2.54	41	
3777.456m	94	31. 0		Fe I	2.56	223	
3777.569m	8. 5	3. 2		Co I	2.08	96	
3777.664m	8	2. 9		CN	R 67	2,2	11
3777.752m	6	2. 1		CN	R 67	2,2	11
3777.846m	14	5. 0		CN	R 75	0,0	11
3777.928m	23	7. 9		CN	R 75	0,0	11
3778.066	66	22. 0		Ni I	0.03	15	
3778.163r	20	7. 1		Sm II			
3778.327m	82	27. 8		Fe I— V II	2.83 1.68	367 21	
3778.515m	88	29. 4		Fe I	3.25	664	
3778.703r	88	29. 1		Fe I V I	2.20 0.29	73 28	
3778.798m	58	23. 9		CN Fe I?	R 70 R 65	1,1 3,3	11
3778.911r	7	2. 6		CN	R 65	3,3	11
3779.027r	13	4. 6					
3779.098r	1. 5	0. 5		CN			
3779.207m	48	16. 3		Fe I	2.76	290	
3779.316m	8. 5	3. 1		CN	R 66	2,2	11
3779.431r	178	35. 7		Fe I Fe I	2.56 3.27	222 665	
3779.519r		23. 8		Fe I	2.22	74	
3779.575r		6. 1		Fe II p	2.54	23	
3779.731m	24	8. 7		CN	R 74	0,0	11
3779.808m	16	6. 1		CN	R 74	0,0	11
3780.00 a	1	0. 4		Cr I? Fe I?	2.71		
3780.087	3. 5	1. 2					
3780.228	10	3. 7		CN	R 64	3,3	11
3780.32 a	9	3. 2		CN	R 64	3,3	11
3780.420m	24	8. 6		CN	R 69	1,1	11
3780.516m	26	9. 5		CN— Zr I	R 69 0.00	1,1 8	11
3780.706	110	36. 2					
3780.856m	15	5. 7		CN	R 65	2,2	11
3780.989r	7. 5	2. 6		Fe I?— CN?			
3781.190S	76	25. 6		Fe I	2.20	74	
3781.321r	3. 5	1. 3		Fe I?			
3781.41 a	4	1. 3		V I?	0.00 1.93	10 97	
3781.516r	18	6. 3		Fe II	4.49	130	
3781.615m	85	25. 1		CN Fe I	R 73 R 63	0,0 3,3	11
3781.687m		5. 8		CN	R 73 R 63	0,0 3,3	11
3781.796r	2. 5	0. 9					
3781.938m	70	24. 6		Fe I	3.64	917	
3782.119r	70	24. 6		Fe I CN	R 68	1,1	11
3782.218m	19	7. 4		CN (Os I) (Zr II)	R 68 0.52 0.80	1,1 3 44	11
3782.318m	18	6. 3		CN Y II	R 64 3.62	2,2 61	11
3782.453m	74	24. 9		Fe I	3.00	388	
3782.613m	64	21. 2		Fe I	3.07	491	
3782.729r	4	1. 6		Zr II	1.77	120	
3782.848r	3. 5	1. 2		Fe I			
3782.995r	4	1. 6		CN	R 62	3,3	11
3783.085r	11	4. 0		CN	R 62	3,3	11
3783.189r	19	6. 9					
3783.349m	68	23. 5		Fe II	2.28	14	
3783.462r	164	2. 1		CN	R 72	0,0	11
3783.535r		52. 7		Ni I	0.42	30	
3783.73 a	4. 5	1. 9		Co I Fe I	2.08		
3783.818m	29	10. 4		CN	R 67 R 63	1,1 2,2	11
3783.900m	24	8. 7		CN	R 67 R 63	1,1 2,2	11
3784.02 a	8. 5	3. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3784.252r	16	5. 8		Nd II— Fe I p	3.27	607	
3784.365m	6	2. 1		CN	R 61	3,3	11
3784.504m	30	10. 8					
3784.675r	6	2. 1		CN Fe I?			
3784.826r	4. 5	2. 3		Fe I CN			
3785.013r	6	2. 1		CN			
3785.084r	6	2. 1		CN			
3785.234r	20	6. 9					
3785.317m	31	11. 1		CN	R 71 R 62	0,0 2,2	11
3785.397m	28	10. 0		CN	R 71 R 62	0,0 2,2	11
3785.496m	20	6. 9		CN	R 66	1,1	11
3785.578m	16	5. 8		CN	R 66	1,1	11
3785.707m	96	31. 4		Fe I	3.24	608	
3785.790r	46	22. 2		Fe I p	3.33	704	
3785.952m	122	39. 0		Fe I	2.43	177	
3786.042r	42	20. 8		Ti I	0.90	57	
3786.175m	144	45. 4		Fe I (Dy II)	2.83	367	
3786.329r	80	26. 4		Ti II p	0.61	12	
3786.448r	80	26. 6		Fe I?			
3786.522r	26	15. 8					
3786.682m	132	42. 0		Fe I	1.01	22	
3786.842	22	7. 9		Fe I?			
3786.965r	6	2. 3					
3787.101r	139	2. 6					
3787.166m		33. 4		Fe I CN	3.64 R 70 R 65	916 0,0 1,1	11
3787.236m		17. 2		V II CN	2.52 R 70 R 65	100 0,0 1,1	11
3787.420r	6. 5	2. 6					
3787.482r	6. 5	3. 2		CN— Fe I			
3787.575r	5	2. 9					
3787.714r	0. 5	0. 8					
3787.891m	512	157		Fe I	1.01	21	
3788.051r	2. 5	4. 2					
3788.145r	0. 5	0. 4		Sm II	0.25	25	
3788.215r	2	1. 2					
3788.439m	38	14. 8		Dy II CN	0.10 R 60	2,2	11
3788.528	18	6. 9		CN	R 60	2,2	11
3788.701m	84	28. 2		Y II	0.10	7	
3788.815r	69	8. 3		CN	R 64	1,1	11
3788.861r		17. 4		Cr I— CN	3.01 R 64	139 1,1	11
3788.970	30	12. 4		CN	R 69	0,0	11
3789.046	25	8. 4		CN	R 69	0,0	11
3789.184m	110	35. 4		Fe I	2.73	289	
3789.300	22	9. 2		Ti I	1.46	115	
3789.419	146	45. 3		—Fe I			
3789.499	24	18. 2		Cr I?—	2.54	41	
3789.577m	56	19. 8		Fe I	2.61	226	
3789.728	22	7. 9		Cr I	0.97	24	
3789.822m	98	33. 8		Fe I	3.37	702	
3789.921r	25	10. 5		CN	R 59	2,2	11
3790.098m	179	54. 9		Fe I	0.99	22	
3790.223m	138	61. 8		Cr I Mn I	3.01 2.11	139 6	
3790.332	32	13. 4		V I	0.28	28	
3790.447r	96	12. 6		Cr I CN	3.01 R 63	139 1,1	11
3790.491r		25. 3		V I— Ru I	1.38 0.26	69	
3790.657m	157	59. 4		Fe I	3.04	387	
3790.759m	119	38. 6		Fe I— CN	2.18 2.48 R 68	73 127 0,0	11
3790.833	38	21. 6		La II CN	0.13 R 68	12 0,0	11
3790.994r	6	2. 2		CN			
3791.110m	45	16. 3		CN—			
3791.194r	8. 5	3. 2		CN Nb I	0.13	2	
3791.26 a	4	1. 6		Sm II?			
3791.380m	43	15. 5		Cr I	3.01	139	
3791.509m	75	25. 8		Fe I	2.56	223	
3791.749m	69	24. 0		Fe I	3.42	703	
3791.904r	12	4. 5		CN			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3792.079r	110	2. 8		CN	R 62	1,1	11
3792.158m		35. 6		Fe I Cr I	2.73 3.01	287 139	
3792.347m	86	29. 8		Ni I	0.27	2	
3792.565	33	15. 0		CN Y II	R 67 3.54	0,0 61	11
3792.651r	121	11. 6		CN	R 67	0,0	11
3792.686		36. 0					
3792.832m	72	26. 0		Fe I	2.22	74	
3792.932r	18	7. 4		CN	R 57	2,2	11
3792.991r	7	3. 0					
3793.125r	29	11. 3		Fe I? CN?			
3793.291	27	17. 6		Cr I	3.01	139	
3793.358	66	24. 8		Fe I	3.04	388	
3793.485m	64	25. 0		Fe I	3.00	387	
3793.605m	123	43. 2		Ni I	0.27	4	
3793.707	10	5. 7		CN	R 61	1,1	11
3793.782	9	3. 4		CN	R 61	1,1	11
3793.876S	80	30. 8		Cr I Fe I	3.01 2.84	139 367	
3793.970r	7. 5	3. 0		Sm II	0.10	11	
3794.088r	2	1. 1					
3794.176r	3	1. 6		Fe I?			
3794.347m	122	44. 0		Fe I (CN) (V II)	2.45 R 66 R 56 2.52	177 0,0 2,2 100	11
3794.418r		10. 0		CN	R 66 R 56	0,0 2,2	11
3794.541	10	6. 6					
3794.615	22	12. 7		Cr I	3.01	139	
3794.773m	48	34. 3		La II	0.24	12	
3794.887	14	24. 0					
3795.012m	547	174		Fe I (V I)	0.99 0.02 0.30	21 9 28	
3795.155r		20. 6					
3795.302	25	14. 8		CN	R 60	1,1	11
3795.375	10	6. 6		CN	R 60	1,1	11
3795.444m	30	18. 5					
3795.538m	65	31. 9		Fe I			
3795.743r	10	5. 4		Tm II CN	0.03 R 55	6 2,2	11
3795.815r	21	11. 1		CN	R 55	2,2	11
3795.900	16	8. 4		Ti I	1.44	115	
3796.015m	25	14. 0		Fe I	2.40	176	
3796.107m	16	8. 7		CN	R 65	0,0	11
3796.186m	31	17. 7		CN	R 65	0,0	11
3796.308	3. 5	2. 4		CN			
3796.391m	14	8. 7		Gd II	0.03	2	
3796.496	15	9. 2		Zr II	1.01	71	
3796.66 a	3	2. 6		CN?			
3796.803m	33	26. 0					
3796.887m	76	44. 6		Ti II Fe I	0.57 3.30	12 667	
3796.974	20	16. 1		CN Cr I	R 59 2.54	1,1 41	11
3797.065	9. 5	12. 2		CN			
3797.139m	37	28. 7		Cr I	3.01	139	
3797.245m	20	16. 6		CN	R 54	2,2	11
3797.459r	103	6. 3					
3797.522m		67. 4		Fe I	3.24	607	
3797.720m	34	37. 4		Cr I (Sm II)	3.01	139	
3797.851m	17	21. 6		CN	R 64	0,0	11
3797.90	3463	*1085*		H_{10}	10.20	2	10
3797.954m	54	54. 6		Fe I CN	2.59 R 64	222 0,0	11
3798.086r	11	15. 0		CN			
3798.168r		6. 6		CN			
3798.257m	12	20. 6		Mo I Ti I	0.00 1.43	1 115	
3798.348r	5	11. 9		Fe II p	2.34	14	
3798.521m	304	159		Fe I	0.91	21	
3798.648	18	35. 6		CN	R 53	2,2	11
3798.774r	9	11. 6		CN			
3798.903m	20	14. 0		Ru I	0.15	1	
3799.021r	1	1. 1		Fe I?			
3799.135	7	7. 4		CN			
3799.251m	30	25. 3		Mn I	2.14	6	
3799.348	16	17. 1		Ru I	0.00	1	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3799.448r	5	14. 4					
3799.558m	622	309		Fe I	0.96	21	
3799.677	16	25. 8		CN	R 63	0,0	11
3799.792m	41	37. 4		Ti II	0.61	13	
3799.908	44	26. 3		V I	0.27	28	
3800.034	58	29. 2		CN	R 57 R 52	1,1 2,2	11
3800.113	18	13. 7		CN	R 57	1,1	11
3800.19 a	3	1. 8		Fe I? CN?			
3800.319	38	18. 4					
3800.546	34	15. 8		Mn I	3.84	45	
3800.627	16	8. 2					
3800.739r	9	4. 4		Zr II	0.53	17	
3800.850m	28	13. 2		—Y II (Sm II)	3.56 0.28	61 29	
3801.025r	5. 5	2. 5		Sn I	1.07	2	
3801.113	33	15. 0		Ti I?	1.88	165	
3801.192	18	8. 5					
3801.303	17	10. 8		CN	R 62	0,0	11
3801.371m	75	30. 2		Fe I— CN	3.69 R 62	948 0,0	11
3801.47 a	6. 5	3. 4		Fe I?			
3801.542	50	21. 0		Ce II CN	0.90 R 56 R 46	172 1,1 3,3	11
3801.683m	108	40. 0		Fe I	2.83	367	
3801.815m	112	40. 5		Fe I	2.84	367	
3801.909	2. 5	2. 4		Mn I CN	3.13		
3801.990m	105	38. 9		Fe I	3.33	704	
3802.132	30	12. 9					
3802.285m	80	30. 5		Fe I	3.30	666	
3802.482	19	7. 9		CN			
3802.587r	9	3. 8		CN			
3802.731	28	11. 1		CN	R 50 R 45	2,2 3,3	11
3802.813	23	9. 3		CN	R 50 R 45	2,2 3,3	11
3802.959r	50	7. 1		Nb I?	0.09	3	
3803.009m		18. 7		CN	R 61	0,0	11
3803.090m	61	22. 9		CN	R 61 R 55	0,0 1,1	11
3803.177	16	6. 7		CN	R 55	1,1	11
3803.258m	56	20. 8		Fe I—	2.28	122	
3803.482m	42	16. 0		V I	0.29	28	
3803.576m	14	5. 8		CN			
3803.678m	11	4. 2		CN			
3803.772r	6. 5	2. 5		V I?	1.35	68	
3803.906r	11	4. 6		V I— CN	0.04 R 44	10 3,3	11
3804.015S	100	36. 6		Fe I	3.33	702	
3804.099	8	5. 0		CN	R 49	2,2	11
3804.178	31	11. 6		CN	R 49	2,2	11
3804.286	25	9. 5					
3804.346r	7	2. 9		CN			
3804.486	19	7. 1		CN— Fe I			
3804.612m	68	23. 9		CN	R 54	1,1	11
3804.696m	29	14. 1		CN	R 60 R 54	0,0 1,1	11
3804.793m	95	31. 8		CN Cr I	R 60 3.01	0,0 139	11
3804.931r	19	6. 7		CN			
3805.00 a	5	1. 8		Fe I?			
3805.117r	30	11. 1		CN	R 43	3,3	11
3805.198r	13	5. 8		CN	R 43	3,3	11
3805.349m	171	55. 0		Fe I	3.30	608	
3805.450	12	9. 2		CN	R 48	2,2	11
3805.530	60	23. 2		CN	R 48	2,2	11
3805.745r	32	11. 3		CN— Fe I			
3805.850r	10	4. 2		CN			
3805.964r	7	2. 6		CN			
3806.119m	27	11. 2		CN	R 53	1,1	11
3806.219m	105	34. 9		Fe I CN	3.41 R 53	731 1,1	11
3806.375m	67	22. 0		CN Fe I	R 59 R 42	0,0 3,3	11
3806.445	48	23. 4		CN	R 59 R 42	0,0 3,3	11
3806.572r	20	8. 1		Cr I	0.98	24	
3806.718m	209	64. 6		Mn I Fe I	2.11 3.27	6 607	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3806.860m	54	28. 4		Cr I— CN	3.45 R 47	214 2,2	11
3807.009r	7. 5	3. 1					
3807.151m	193	59. 8		Ni I	0.42	33	
3807.285	43	18. 6		CN			
3807.397	27	11. 6		CN— Zr II	 0.71	 31	
3807.544m	178	55. 1		Fe I (V I)	2.22 0.26	73 28	
3807.689	32	13. 4		CN	R 52	1,1	11
3807.775r	14	5. 5		CN			
3807.937m	111	35. 2		Cr I— CN	3.01 R 58	139 0,0	11
3808.083r	110	14. 4		Co I	0.43	17	
3808.134r		28. 4		Ce II— CN	0.30 R 58 R 46	59 0,0 2,2	11
3808.286m	90	29. 2		Fe I	3.02	489	
3808.522m	37	12. 7		V I	0.00	9	
3808.630r	4. 5	1. 8		CN			
3808.734m	114	36. 5		Fe I	2.56	222	
3809.049m	85	28. 1		Fe I	2.86	367	
3809.162	24	9. 5		Fe I			
3809.25 a	5	1. 8					
3809.31 a	4	1. 4		Fe I?			
3809.412r	20	8. 3		CN	R 45	2,2	11
3809.490	26	11. 0		CN	R 45	2,2	11
3809.586m	132	41. 8		V I Mn I	0.28 2.14	28 6	
3809.692	75	21. 0		CN	R 57	0,0	11
3809.755m		16. 3		CN	R 57	0,0	11
3809.85 a	6	2. 2		CN?	R 39	3,3	11
3809.921r	20	7. 0		CN	R 39	3,3	11
3810.034r	15	5. 5					
3810.22 a	1. 5	0. 4		CN?			
3810.294r	21	7. 3					
3810.540	41	13. 8		CN	R 50	1,1	11
3810.618	23	9. 7		CN	R 50	1,1	11
3810.713r	120	1. 0		CN	R 44	2,2	11
3810.760m		37. 8		Fe I	3.30	665	
3810.900m	28	10. 0		Fe I p	2.61	224	
3811.041m	72	23. 9		Co I Fe I	0.92 2.59 2.73	31 223 287	
3811.176r	2. 5	0. 9		CN			
3811.298m	67	22. 0		Ni I— CN	0.21 R 56	15 0,0	11
3811.380m	35	16. 0		CN Ti I?	R 56 1.87	0,0 165	11
3811.526r	0. 5	0. 3					
3811.646r	3. 5	1. 1		CN			
3811.807m	147	21. 0		Fe I—	3.37	701	
3811.894m		31. 2		Fe I	2.76	287	
3811.982m	48	19. 9		CN	R 49 R 43	1,1 2,2	11
3812.062m	37	16. 5		CN	R 49 R 43	1,1 2,2	11
3812.199r	44	4. 5		CN Y II	R 37 3.55	3,3 61	11
3812.248r		10. 7		Cr I	3.43	214	
3812.448r	18	6. 3		Co I	1.78	40	
3812.592r	3. 5	1. 3		CN			
3812.672r	17	6. 7		CN			
3812.859r	322	13. 4					
3812.962		95. 7		Fe I	0.96	22	
3813.075	104	97. 6		Fe I	2.59	222	
3813.262	40	19. 1		CN	R 42 R 36	2,2 3,3	11
3813.394m	138	38. 0		Ti II	0.61	12	
3813.491m	54	28. 4		V I	0.02	9	
3813.640m	86	27. 8		Fe I	2.69	283	
3813.892r	182	36. 2		Fe I	3.63	854	
3813.928r		25. 6		Co I— Fe I p	3.57 2.43	 176	
3814.012r		12. 9		Gd II— CN	0.00	2	
3814.122m	38	16. 0		Fe II	4.74	153	
3814.244r	8. 5	3. 1		CN			
3814.358r	22	8. 1		CN	R 35	3,3	11
3814.521m	170	34. 9		Fe I	1.01	22	
3814.596m		33. 6		Ti II (Cr I)	0.57 3.42	12 214	
3814.784m	47	18. 9		Fe I	3.41		
3814.892m	26	15. 7		CN Ti I	R 47 2.09	1,1 189	11

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3815.080r	4	1. 8		CN			
3815.210r	13	8. 9		Fe I— CN			
3815.328m	27	21. 7		(V II)	2.90	166	
3815.437m	51	40. 9		Cr I	2.71	71	
3815.617r	38	58. 7					
3815.851m	1272	*330*		Fe I	1.48	45	
3816.110r	27	48. 8		CN			
3816.191	39	50. 9		Cr I Cr I CN— CN	2.54 2.54 R 53 R 53 R 46	40 40 0,0 0,0 1,1	 11 11
3816.345m	100	53. 3		Fe I Co I	2.20 1.96	73 62	
3816.468m	68	31. 8		Co I	1.96	62	
3816.636	17	8. 7		CN	R 33	3,3	11
3816.745m	47	19. 6		Mn I	2.16	6	
3816.856r	80	0. 5		Co I	2.14	86	
3816.922m		28. 8		Fe I	3.04	387	
3816.972r		3. 1		CN	R 39	2,2	11
3817.056r	17	7. 3		CN	R 39	2,2	11
3817.148r	9. 5	3. 7		CN			
3817.25 a	1	0. 4		Fe I?			
3817.382m	34	12. 8		—CN			
3817.459	18	8. 0		—W I	0.37		
3817.583r	165	12. 0		Zr II	0.53	18	
3817.647m		29. 3		Ti I Fe I— CN	2.10 3.33 R 52 R 32	189 701 0,0 3,3	 }11
3817.734		19. 6		CN	R 52 R 32	0,0 3,3	}11
3817.843m	40	16. 0		V I CN Cr I	0.07 R 45 2.54	10 1,1 40	 11
3817.947r	13	4. 7		Co I	2.54	131	
3818.083r	12	4. 4		CN			
3818.195r	75	5. 2		CN	R 38	2,2	11
3818.243m		23. 3		V I	0.00	9	
3818.345m	55	22. 3		Y II	0.13	7	
3818.475m	38	13. 9		Cr I	2.54 2.54	40 40	
3818.620m	60	21. 7		Fe I			
3818.749r	16	6. 3		CN	R 31	3,3	11
3818.890r	3. 5	1. 5		Nb II?	1.59		
3819.063m	49	19. 6		CN	R 44	1,1	11
3819.208	68	15. 4		CN	R 51	0,0	11
3819.273		17. 5		CN	R 51	0,0	11
3819.381	14	8. 4		CN	R 37	2,2	11
3819.494m	83	38. 2		Fe I	3.40	703	
3819.573	53	44. 7		Cr I	2.71	70	
3819.688	43	28. 2		Eu II	0.00	1	
3819.797r	9	9. 4		CN	R 30	3,3	11
3819.901r	7. 5	11. 2		Co I	2.54	130	
3819.961r	21	27. 8		V I Cr I	0.30 2.54	28 40	
3820.056r	27	41. 6					
3820.196r	13	43. 7					
3820.303r	2. 5	19. 6		V I—	1.06	44	
3820.436m	1712	*512*		Fe I	0.86	20	
3820.561r	5. 5	41. 1		—CN	R 36	2,2	11
3820.656r	23	60. 7		CN—	R 36	2,2	11
3820.748r	13	34. 6		CN	R 50 R 29	0,0 3,3	}11
3820.809r	41	32. 4		CN	R 50 R 29	0,0 3,3	}11
3820.877r		32. 4		Cr I	2.54	40	
3820.990r	7	9. 2		CN			
3821.187S	93	49. 1		Fe I	3.27	608	
3821.494	14	7. 3		V I	0.27	28	
3821.586	11	5. 1		Cr I	2.54	40	
3821.728m	52	32. 9		CN—	R 42 R 35 R 28	1,1 2,2 3,3	}11
3821.840m	130	45. 2		Fe I	2.61	222	
3821.937r	64	28. 2		Fe II p	2.34	14	
3822.017r	69	36. 6		V I	0.04	9	
3822.110r	15	6. 3		Cr I	2.54	40	
3822.264	86	17. 8		CN	R 49	0,0	11
3822.328		17. 0		CN	R 49	0,0	11
3822.418r	17	6. 8		Zr I	0.00	10	
3822.52 a	4	1. 4					
3822.648	18	6. 5		CN			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3822.785r	4. 5	1. 7					
3822.856	75	25. 6		CN— CN V I	R 27 R 34 R 27 0.29	3,3 2,2 3,3 28	11 11
3822.954	14	7. 3		CN	R 34	2,2	11
3823.023	46	16. 0		CN	R 41	1,1	11
3823.088	29	13. 5		CN	R 41	1,1	11
3823.216m	25	8. 6		V I	0.28	28	
3823.356	18	6. 3		CN			
3823.514m	116	37. 4		Mn I (Cr I)	2.14 0.96	6 24	
3823.757	51	25. 0		CN	R 48 R 26	0,0 3,3	11
3823.818	23	15. 4		CN	R 48 R 26	0,0 3,3	11
3823.895m	93	34. 2		Mn I	2.16	6	
3824.001r 3824.082m	106	9. 9 40. 7		V I— CN Fe I	1.05 R 33 2.59	44 2,2 224	11
3824.235r	10	9. 9					
3824.312m	85	79. 5		Fe I	3.30	607	
3824.452m	519	*225*		Fe I	0.00	4	
3824.573	84	97. 5					
3824.643r	6	7. 8					
3824.750r	11	10. 5		CN Fe I p	R 25 2.61	3,3 221	11
3824.799r	3. 5	3. 1		CN	R 25	3,3	11
3824.926m	52	27. 7		Fe II	2.58	29	
3825.046r	8	5. 2		CN			
3825.126m	11	7. 1		CN	R 32	2,2	11
3825.236r	34	22. 5		CN— CN	R 47 R 32 R 47	0,0 2,2 0,0	11 11
3825.311r	25	21. 7		CN	R 47	0.0	11
3825.408m	40	32. 4		Fe I Cr I	2.28 2.71	123 70	
3825.599r	28	41. 8		—CN	R 39	1,1	11
3825.683r	11	35. 3		CN—	R 39 R 24	1,1 3,3	11
3825.891m	1519	*421*		Fe I	0.91	20	
3826.026r	7	26. 9					
3826.093r	5	16. 7		CN—			
3826.207r	18	37. 9		Sm II CN	0.54 R 31	51 2,2	11
3826.313r	12	16. 2		CN	R 31	2,2	11
3826.418m	25	16. 2		Cr I	2.71	70	
3826.500r	1	0. 8		CN			
3826.625	44	23. 8		Fe I—	2.45	176	
3826.709	58	39. 2		CN	R 46 R 23	0,0 3,3	11
3826.770	15	11. 2		CN— V I Ni I	R 46 R 23 1.04 3.84	0,0 3,3 44	11
3826.852m	88	39. 5		Fe I	2.73	283	
3826.957	32	21. 7		CN— V II	R 38 2.56	1,1 128	11
3827.084	7. 5	4. 7		Fe II	4.73	153	
3827.213	8	5. 2		CN?			
3827.301m	34	19. 3					
3827.383	17	13. 3		CN	R 30	2,2	11
3827.486r	8	7. 8		Zr II?	1.83	121	
3827.580m	73	58. 6		Fe I	2.69	284	
3827.692r	6. 5	21. 9					
3827.832m	897	276		Fe I	1.56	45	
3828.019r	24	33. 9					
3828.160r	60	39. 2		CN	R 45 R 37	0,0 1,1	11
3828.224r	34	33. 0		CN	R 45 R 37	0,0 1,1	11
3828.404	15	10. 0		CN	R 21	3,3	11
3828.510r 3828.566r	94	36. 4 18. 5		Fe I CN V I	2.76 R 29 0.02	287 2,2 9	11
3828.659r	10	4. 8		CN			
3828.835r	26	13. 6		V I? CN	1.38	67	
3828.972r	13	9. 4		CN			
3829.059r	9	9. 7					
3829.154m	77	61. 4		Fe I	3.69	948	
3829.250r	10	32. 4					
3829.365m	874	*308*		Mg I	2.71	3	
3829.480	23	54. 9		Fe I— CN	2.84 3.27 R 28	366 663 2,2	11

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3829.592	22	29. 0		CN	R 44	0,0	11
3829.685	69	54. 4		Mn I	2.18	6	
3829.769m	40	38. 7		Fe I	2.56	221	
3829.901r	12	5. 5		CN			
3830.00 a	4. 5	2. 1		Cr I	3.45		
3830.076m	50	23. 5		CN			
3830.311r	7. 5	3. 8		CN? Sm II	 0.10	 10	
3830.375	25	12. 0		CN	R 19	3,3	11
3830.490	24	11. 8					
3830.609r	43	19. 0		CN	R 35	1,1	11
3830.665r	10	7. 8		CN	R 35	1,1	11
3830.764m	75	31. 0		Fe I	2.61	224	
3830.867m	65	28. 4		Fe I	2.69	284	
3831.037m	77	34. 2		Cr I CN— CN	1.00 R 43 R 43	24 0,0 0,0	 11 11
3831.198r	17	9. 4		CN	R 18	3,3	11
3831.380r	8. 5	5. 5		CN—			
3831.520r	7	5. 7		Sm II	0.43	43	
3831.700m	129	70. 4		Ni I	0.42	31	
3831.888r	26	32. 4		CN	R 34	1,1	11
3832.034r	14	24. 8		CN	R 17	3,3	11
3832.166r	12	33. 2		CN?			
3832.310m	1685	*600*		Mg I	2.71 2.71	3 3	
3832.510r	9. 5	27. 6					
3832.649	16	36. 5		CN	R 25	2,2	11
3832.753r	5	8. 9					
3832.888m	51	42. 7		Ni I Y II	0.17 0.18	1 7	
3833.019r	12	15. 9		CN Fe II p	R 33 2.64	1,1 23	11
3833.084r	33	26. 4		CN Sc II	R 33 0.00	1,1 1	11
3833.208m	25	18. 2		Ti I?—			
3833.317m	53	34. 7		Fe I	2.56	221	
3833.491r	2. 5	2. 1		Cr I	0.94	11	
3833.608m	23	17. 2		CN	R 24	2,2	11
3833.702m	25	19. 8		Ti I— Cr I	 2.71	 70	
3833.783m	34	38. 4		CN	R 41 R 15	0,0 3,3	11
3833.866m	63	46. 7		Mn I CN	2.18 R 41	6 0,0	 11
3833.959r	6	12. 2		Ca I CN	2.71		
3834.02 a	9. 5	18. 0		CN			
3834.10 a	20	43. 1					
3834.233m	624	*497*		Fe I	0.96	20	
3834.371m	21	53. 7		Mn I	2.16	6	
3834.474	12	23. 2		Fe I p	3.25	663	
3834.55 a	17	23. 5		CN	R 23	2,2	11
3834.629	3	4. 7		CN			
3834.729m	9. 5	8. 3		Cr I	2.71	70	
3834.841r		3. 9		CN?—			
3834.885r	4. 5	5. 2		CN			
3835.037	4	5. 2		—W I?	0.41	2	
3835.161r	68	33. 4		CN	R 40	0,0	11
3835.205r		33. 4		CN	R 40	0,0	11
3835.370	13	30. 4		CN CN	R 31 R 31	1,1 1,1	11 11
3835.39	2362	*719*		H_9	10.20	2	10
3835.552m	33	33. 1		CN— V I	R 22 1.04	2,2 44	11
3835.725r	12	12. 0		Sm II?	0.18	18	
3835.978r	4	3. 7		Zr I	0.00	8	
3836.090S	58	35. 4		Ti II Cr I V I?	0.61 2.71 1.05	12 70 44	
3836.199r	2. 5	2. 2					
3836.337m	72	38. 0		Fe I	3 30	664	
3836.501r	80	27. 1		CN	R 39 R 30 R 21	0,0 1,1 2,2	11
3836.551r		27. 1		CN	R 39 R 30 R 21	0,0 1,1 2,2	11
3836.670r	3	2. 1					
3836.769m	39	23. 2		Zr II	0.56	16	
3836.920m	34	20. 8					
3837.141m	54	31. 8		Fe I	2.61	222	
3837.266r	5. 5	5. 0					
3837.423m	24	19. 5		CN	R 20	2,2	11

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3837.635m	46	38. 6		CN— CN	R 29 R 29	1,1 1,1	11 11
3837.823r	55	37. 8		CN	R 38	0,0	11
3837.898r		37. 8		CN	R 38	0,0	11
3838.051r	15	44. 3		Fe I?			
3838.208r	3	23. 5					
3838.302m	1920	*641*		Mg I	2.72 2.72	3 3	
3838.538r	24	50. 5		—Ce II	0.33	114	
3838.751	63	30. 8		CN— CN	R 28 R 28	1,1 1,1	11 11
3838.996m	17	15. 9		Nd II— V I	0.00 1.06	28 44	
3839.139	36	32. 3		CN CN?	R 37 R 18	0,0 2,2	11 11
3839.263m	104	52. 6		Fe I	3.05	529	
3839.439m	44	26. 1		CN			
3839.625m	68	36. 2		Fe I	3.96	995	
3839.785m	82	43. 0		Mn I	2.19	6	
3839.850r	8	10. 4		CN	R 27	1,1	11
3839.929	11	8. 1					
3840.105m	20	18. 2		CN	R 17	3,3	11
3840.201	13	18. 7		Fe I p	2.28	120	
3840.303r	12	25. 0					
3840.447m	567	*257*		Fe I	0.99	20	
3840.583r	26	40. 4					
3840.756m	38	39. 4		V I—	0.04	9	
3840.897r	20	33. 3		CN	R 26	1,1	11
3841.058m	517	165		Fe I Mn I	1.61 2.18	45 6	
3841.190r	14	25. 5					
3841.280m	44	38. 0		Cr I	2.71	69	
3841.349r	9	10. 2		Fe II?	4.48	128	
3841.460m	22	13. 3		Co I	0.92	32	
3841.583r	8. 5	4. 0					
3841.730	124	42. 4		CN— CN	R 35 R 35	0,0 0,0	11 11
3841.822r	11	7. 9					
3841.950m	43	23. 6		CN	R 25	1,1	11
3842.054m	126	39. 5		Co I	0.92	33	
3842.217r	49	16. 1		CN— CN			
3842.363r	14	5. 3					
3842.450r	36	12. 3		CN			
3842.644m	46	15. 0		CN	R 14	2,2	11
3842.767r	12	3. 9		Fe I?			
3842.903m	26	8. 7		Fe I	2.59	222	
3842.990r	141	28. 4		CN Fe I— CN	R 34 R 24 2.59 R 34	0,0 1,1 221 0,0	11 11
3843.058r		22. 8		Zr II	0.36	7	
3843.264S	138	42. 1		Fe I	3.05	528	
3843.463	73	23. 3		CN	R 13	2,2	11
3843.626r	5	2. 3		Cr I?	3.09		
3843.715m	145	44. 2		Fe I Co I	3.42 2.14	703 84	
3843.826r	15	6. 5		CN			
3843.998m	109	30. 9		Mn I	2.19	6	
3844.031r		0. 4		CN	R 23	1,1	11
3844.131r	126	1. 0					
3844.237m		39. 0		CN— CN Ni I	R 33 P 6 R 33 3.54	0,0 4,4 0,0 137	11 11
3844.448m	53	17. 4		V I	0.00	7	
3844.574m	38	12. 8		CN Ni I	3.94	181	
3844.725r	23	7. 9		CN	P 7	4,4	11
3844.892m	46	15. 3		V I	1.05	44	
3845.020m	72	23. 2		CN	R 22	1,1	11
3845.174r	140	33. 8		Fe I	2.42	124	
3845.222r		19. 2		Fe I p	3.40	701	
3845.325r	16	7. 4		CN			
3845.470m	135	41. 6		Co I CN	0.92 R 32	34 0,0	 11
3845.593r	13	5. 7					
3845.700m	85	30. 3		Fe I	3.55	771	
3845.813r	32	12. 4		CN— CN	P 2	3,3	11
3845.993m	104	32. 5		Fe I CN	3.37 R 21	703 1,1	 11
3846.15 a	18	6. 5					
3846.288m	55	20. 8		Fe I p CN	3.69	947	
3846.417m	105	33. 3		Fe I	3.57	804	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3846.531r	30	12. 9		CN			
3846.642r	104	26. 0		CN	R 31 R 9	0,0 2,2	11
3846.679r		26. 0		CN	R 31	0,0	11
3846.809m	160	49. 4		Fe I	3.25	664	
3846.950m	110	39. 5		Fe I	2.43	176	
3846.986r		9. 6		CN— Zr I	R 20 0.07	1,1 10	11
3847.126r	16	7. 0					
3847.259r	52	19. 4		CN			
3847.339	53	17. 6		V I V II	0.02 2.76	7 156	
3847.432	32	11. 9					
3847.519r	13	4. 7		Sm II?	0.33	34	
3847.63 a	4	1. 3					
3847.692r	7	2. 6					
3847.848	146	47. 0		CN—	R 30	0,0	7, 11
3847.965r	18	12. 2		CN	R 30 R 19	0,0 1,1	11
3848.051r	18	7. 9		CN Tm II	P 16 0.00	4,4 2	11
3848.114r	16	6. 2		CN	R 7	2,2	11
3848.194r	19	8. 0		CN			
3848.297m	92	29. 4		Fe I	2.61	224	
3848.446r	12	4. 4					
3848.533r	25	10. 9		Nd II— CN			
3848.611r	41	13. 5		CN Ce II	P 18 0.52	4,4 36	11
3848.706r	17	6. 5		CN	P 8 P 18	3,3 4,4	11
3848.847m	70	24. 6		CN	R 18	1,1	11
3849.006m	121	37. 7		Cr I CN (La II)	2.71 R 29 0.00	69 0,0 12	11
3849.114r	12	4. 7					
3849.266r	14	5. 6		CN Zr I	0.00	6	
3849.367m	88	31. 7		Cr I	3.01	138	
3849.543m	53	23. 6		Cr I	0.98	24	
3849.69 a	3. 5	3. 7		Fe I			
3849.757m	36	25. 1		CN	R 17	1,1	11
3849.879r	13	24. 1		CN	P 11 P 23	3,3 4,4	11
3849.977m	608	*181*		Fe I	1.01	20	
3850.165m	59	27. 3		CN	R 28	0,0	11
3850.303m	10	6. 5		CN	P 12	3,3	11
3850.402	20	9. 9		CN V II	P 26 P 48 1.40	4,4 4,4 11	11
3850.492r	65	26. 0		Fe I			
3850.566r	15	11. 2					
3850.653m	54	28. 1		CN	P 13 P 27 P 46 R 16	3,3 4,4 4,4 1,1	11
3850.826m	222	67. 7		Fe I	0.99	22	
3850.960m	42	23. 9		Co I— Fe I? Gd II	0.51 0.00	17 2	
3851.086r	11	4. 0		CN	P 32	4,4	11
3851.172r	24	9. 6		V I CN	1.06 P 32	44 4,4	11
3851.291m	102	31. 7		CN	R 27	0,0	11
3851.446r	6. 5	2. 3					
3851.536m	68	24. 9		CN	R 15	1,1	11
3851.599r	13	6. 1		CN Fe I			
3851.679	33	11. 3		CN			
3851.756	14	5. 4		Nd II	0.18	35	
3851.858m	24	8. 0		CN Co I	2.54	128	
3851.998r	1. 5	0. 5					
3852.111r	15	5. 4		CN			
3852.217m	63	20. 5		Cr I	0.97	24	
3852.407m	52	19. 5		CN	R 26 R 14 P Head	0,0 1,1 4,4	11
3852.579m	148	45. 2		Fe I	2.18	73	
3852.709	44	14. 3		CN	P 52	3,3	11
3852.765r		5. 7		CN	P 20 P 52	3,3 3,3	11
3852.912	25	8. 3		CN	P 51?	3,3	11
3853.047m	46	15. 0		Ti I	1.97	176	
3853.203m	82	26. 2		Cr I— CN	2.71 R 13 P 22 P 50	69 1,1 3,3 3,3	11
3853.341m	54	24. 6		CN?	P 23 P 49	3,3 3,3	11

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3853.483m	148	44. 6		Fe I— CN	2.95 R 25 P 49	429 0,0 3,3	11
3853.670r	23	12. 2		Si II— CN	6.86 P 48? P 24	1 3,3 3,3	11
3853.732m	58	18. 7		Ti I	1.98	176	
3853.832r	31	12. 2		CN	P 47 P 25	3,3 3,3	11
3853.905r	38	13. 0		CN	P 46	3,3	11
3854.059m	67	21. 8		CN	R 12 P 45	1,1 3,3	11
3854.211	81	29. 3		CN— Cr I	P 44 2.71	3,3 69	11
3854.266r	7. 5	7. 8		CN	P 28 P 44	3,3 3,3	11
3854.370m	130	40. 2		Fe I	3.21	567	
3854.571m	189	57. 1		CN	P Head R 24	3,3 0,0	11
3854.673r	64	17. 6		CN	P Head	3,3	11
3854.734r		17. 6		CN	P Head	3,3	11
3854.854m	84	27. 0		CN	R 11	1,1	11
3854.953r		15. 0		CN			
3855.124r	20	6. 7		CN			
3855.316	151	29. 4		Fe I	2.73	283	
3855.412r		22. 8		V I Zr II	0.00 0.56	7 18	
3855.586r	122	14. 3		Cr I	2.71	69	
3855.631r		33. 7		CN	R 23 R 10	0,0 1,1	11
3855.851m	96	37. 1		Fe I V I	3.24 0.07	567 9	
3855.972r	56	6. 2		CN	P 53?	2,2	11
3856.026m		26. 0		Si II	6.86	1	
3856.147r	13	12. 4					
3856.232r	19	26. 8		CN Cr I?	P 69 P 6 2.71	1,1 2,2 69	11
3856.381m	648	*197*		Fe I	0.05	4	
3856.539r	18	26. 0		Mn I CN	3.37		
3856.664m	66	39. 1		CN	P 7 R 22	2,2 0,0	11
3856.820r	7	3. 6		Co I	1.88	60	
3856.923m	27	11. 9		CN	P 52?	2,2	11
3857.000r	8	3. 5		CN	P 68 P 52?	1,1 2,2	11
3857.080r	10	4. 6		CN	P 68 P 8	1,1 2,2	11
3857.154m	54	18. 9		CN	R 8	1,1	11
3857.336	28	9. 6		CN			
3857.445r	23	8. 0		CN	P 51?	2,2	11
3857.667m	149	46. 4		Cr I— CN	2.71 R 21	69 0,0	11
3857.819	73	10. 9		CN	P 67	1,1	11
3857.892m		16. 6		CN	R 7	1,1	11
3858.011r	18	10. 0		CN?			
3858.132m	71	33. 2		Ti I	2.00	176	
3858.303m	202	66. 1		Ni I	0.42	32	
3858.472	55	24. 8		CN— Fe I p	P 66 3.24	1,1 565	11
3858.507r		4. 1		CN	P 66	1,1	11
3858.589m	38	21. 5		CN	P 49 R 6	2,2 1,1	11
3858.689m	95	36. 8		CN	P 49 R 20	2,2 0,0	11
3858.865r	131	50. 0		Mg I	4.34	21	
3858.917r		25. 0		CN Cr I	3.01	138	
3858.993r		6. 0		CN	P 13 P 48	2,2 2,2	11
3859.111r	17	13. 7		CN	P 65 P 48	1,1 2,2	11
3859.223m	108	53. 4		Fe I	2.40	175	
3859.280r		3. 1		CN	P 14 P 47 R 5	2,2 2,2 1,1	11
3859.400r	39	32. 6					
3859.435	13	16. 4		CN			
3859.668	51	62. 5		CN	P 46 R 19	2,2 0,0	11
3859.741r	20	45. 8					
3859.922m	1554	*400*		Fe I	0.00	4	
3860.092r	17	39. 5		—Cr I?	2.54 2.54	39 39	
3860.219r	32	41. 6		CN	P 44?	2,2	11
3860.292r	18	28. 4		CN			
3860.431r	21	18. 5		CN	P 63 P 43	1,1 2,2	11

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3860.495r	20	17. 9		CN	P 63	1,1	11
3860.626m	61	34. 4		CN	P 19 P 42 R 18	2,2 2,2 0,0	11
3860.728r	5. 5	3. 8		Fe I p	3.37	701	
3860.828m	35	18. 3		CN	P 20? P 41	2,2 2,2	11
3860.930m	34	21. 8		CN Fe II			
3861.023m	51	23. 0		CN— CN	P 21 P 40 P 40	2,2 2,2 2,2	11 11
3861.167m	104	39. 4		Co I	1.05	33	
				CN—	P 62 P 22 P 39	1,1 2,2 2,2	11
				CN	P 62 P 22 P 39	1,1 2,2 2,2	11
3861.344m	103	42. 2		Fe I	2.69 3.27	283 663	
3861.458r	12	10. 4		CN	P 24 P 37	2,2 2,2	11
3861.547r	250	40. 3		CN	P 25 P 36	2,2 2,2	11
3861.600r		65. 6		CN	R 17 P 36	0,0 2,2	11
3861.712m	35	25. 8		CN	P Head	2,2	11
3861.837m	51	22. 4		CN	P Head	2,2	11
3861.980m	32	10. 4		CN—			
3862.114r	1	0. 4		CN			
3862.227r	6. 5	2. 2		V I	0.02	8	
3862.324r	20	7. 0		CN	P 60	1,1	11
3862.407r	18	8. 3		CN	P 60	1,1	11
3862.494m	84	27. 4		CN	R 16 R 0	0,0 1,1	11
3862.593m	38	14. 8		Si II	6.86	1	
3862.693r	22	9. 6		CN	P 73	0,0	11
3862.763r	12	4. 4		CN	P 73	0,0	11
3862.829	31	10. 9		Ti I	1.97	175	
3862.907r	13	5. 2		CN	P 59	1,1	11
3862.979r	14	4. 7		CN	P 59	1,1	11
3863.068m	41	13. 7		Ni I	3.83	181	
3863.207r	2. 5	0. 9					
3863.401m	89	29. 2		CN	R 15 P 58	0,0 1,1	11
3863.521r	26	9. 6		CN	P 58	1,1	11
3863.600r	16	7. 9		CN Co I	P 72 P 1	0,0 1,1 2.63	11 131
3863.701r	157	18. 9		Fe I p		3.26	565
3863.754r		40. 6		Fe I (V II)		2.69 1.80	280 33
3863.868m	23	9. 1		V I Zr I		1.35 0.07	66 8
3863.976m	50	17. 1		Fe II— CN		4.49 4.74 P 57	127 152 1,1 11
3864.111m	46	15. 5		Mo I CN		0.00 P 2	1 1,1 11
3864.305m	61	20. 2		CN Fe I p		R 14 2.59 3.21	0,0 11 221 565
3864.492r	68	13. 2		CN—		P 71	0,0 11
3864.586r		10. 4		CN		P 71	0,0 11
3864.668r	16	5. 6		CN		P 3	1,1 11
3864.874	78	25. 6		V I		0.02	7
3865.003m	28	9. 8		—CN		P 55	1,1 11
3865.079r	76	1. 0		CN		P 55	1,1 11
3865.151m		26. 9		CN		R 13 P 4	0,0 11 1,1
3865.320r	40	9. 0		CN		P 70	0,0 11
3865.420r		22. 0		CN		P 70	0,0 11
3865.533m	377	*138*		Fe I		1.01	20
3865.659r		10. 9		CN		P 5	1,1 11
3865.913r	112	9. 1					
3865.990m		31. 0		CN		R 12 P 53	0,0 11 1,1
3866.104	39	16. 6		CN		P 6	1,1 11
3866.173r	17	7. 1		CN		P 69	0,0 11
3866.247r	21	7. 2		CN		P 69	0,0 11
3866.393r	67	5. 7		CN		P 52	1,1 11
3866.445m		18. 1		Ti I— CN		2.02 P 52	176 1,1 11
3866.553m	28	9. 8		CN		P 7	1,1 11
3866.722m	31	10. 6		V II		1.43	11
3866.826m	80	24. 7		CN		R 11 P 51	0,0 11 1,1
3866.981m	61	19. 9		CN		P 68 P 8	0,0 11 1,1
3867.064m	26	11. 1		CN		P 68	0,0 11
3867.224m	110	*45. 0*		Fe I		3.02	488

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3867.316r	24	11. 9		CN	P 50	1,1	11
3867.387r	45	15. 0		CN	P 9	1,1	11
3867.440r	9	4. 0		Fe I p	2.61	221	
3867.627	87	22. 8		CN	R 10	0,0	11
					P 49	1,1	
				V I	0.04	7	
3867.658r		11. 6		—CN	P 49	1,1	11
3867.774m	54	20. 1		Ti I—	1.98	176	
				|CN	P 67	0,0	11
					P 10	1,1	
3867.863r	100	1. 6		CN	P 67	0,0	11
				Ru I	0.81	9	
3867.929m		31. 3		Fe I	2.59	221	
3868.040	35	15. 0		CN	P 48	1,1	11
3868.130m	50	16. 8		CN	P 11	1,1	11
3868.239m	58	19. 1		Fe I	2.95	430	
3868.318r	7	3. 0		Ni I	3.83		
3868.409m	78	25. 3		CN	R 9	0,0	11
				Ti I	1.98	175	
3868.492	23	10. 1		CN	P 47	1,1	11
3868.569m	45	15. 2		CN	P 66	0,0	11
					P 12	1,1	
3868.651	22	8. 8		CN	P 66	0,0	11
3868.741	80	15. 5		CN—	P 46	1,1	11
3868.808r		13. 4		CN	P 13	1,1	11
3869.047	46	20. 1		CN—	P 45	1,1	11
				CN	P 45	1,1	11
3869.173m	88	29. 2		CN	R 8	0,0	11
3869.313	120	22. 5		Ti I—	1.97	175	
				CN	P 65	0,0	11
					P 44	1,1	
3869.403m		22. 2		CN	P 65	0,0	11
					P 15	1,1	
3869.559r	154	31. 0		Fe I	2.73	284	
3869.612r		18. 0		Fe I	2.73	284	
3869.672r		15. 0		CN	P 16	1,1	11
3869.829	94	12. 1		CN	P 42	1,1	11
3869.922m		25. 0		CN	R 7	0,0	11
					P 17	1,1	
3870.072m	95	15. 8		CN	P 64	0,0	11
					P 41	1,1	
3870.159m		23. 8		CN	P 64	0,0	11
					P 18	1,1	
3870.276	50	10. 1		|Cr I—	0.94	11	
				CN	P 40	1,1	11
3870.365m		14. 2		CN	P 19	1,1	11
3870.483	74	20. 2		CN	P 39	1,1	11
				Ca I	2.52	26	
3870.552		19. 4		CN	P 20	1,1	11
				Co I	2.54	129	
3870.664	53	23. 0		CN	R 6	0,0	11
					P 38	1,1	
3870.714r		10. 6		CN	P 21	1,1	11
3870.800m	85	27. 9		CN	P 63	0,0	11
3870.887m		28. 4		CN	P 63	0,0	11
					P 22	1,1	
3871.016m	19	17. 0		CN	P 23	1,1	11
3871.136m	13	18. 8		CN	P 24	1,1	11
				V I?	1.38	66	
3871.234m	12	22. 7		CN	P 25	1,1	11
3871.392	764	226		CN	P Head	1,1	11
					R 5	0,0	
				(CH)	R 7	0,0	3
3871.563m	77	24. 5		CH—	R 6	0,0	3
				CN	P 62	0,0	11
				Ni I	3.84	181	
3871.651r	25	15. 7		La II	0.13	13	
				CH	R 7	0,0	3
3871.758m	132	41. 8		Fe I	2.95	429	
				(CH)	R 8	0,0	3
3871.903m	37	14. 4		CH	R 6	0,0	3
3872.062	59	25. 8		CN	R 4	0,0	11
				CH	R 8	0,0	3
				(Dy II)	0.00		
3872.179m	19	12. 4		CN	P 61	0,0	11
				Fe I?			
3872.273m	28	20. 9		|CN—	P 61	0,0	11
				CH	R 5	0,0	3
3872.510m	612	181		Fe I	0.99	20	
				(Ca I)	2.52	26	
3872.732m	44	31. 8		|CN	R 3	0,0	11
				V I?	1.08	43	
				CH?	R 5	0,0	3
3872.834	30	21. 9		CH	R 9	0,0	3
3872. 932m	70	31. 0		|Fe I	2.73	284	
				CN	P 60	0,0	11
3873.090r	135	30. 0		CH—	R 9	0,0	3
3873.133r		*52. 1*		Co I	0.43	18	
3873.199r	15	7. 5		Ti I	2.00	176	
3873.294	39	15. 5					
3873.371	26	10. 6		CN	R 2	0,0	11
3873.502r	97	13. 7		CN	P 59	0,0	11
3873.575		20. 9		CN	P 59	0,0	11
				CH?	R 4	0,0	3

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3873.767m	105	33. 4		Fe I	2.43	175	
3873.959	106	*39. 6*		Co I	0.51	18	
3874.060m	116	47. 6		Fe I	2.28	120	
				(CH)	R 4	0,0	3
3874.123r	12	9. 5		CN	P 58	0,0	11
3874.193	35	16. 0		CN	P 58	0,0	11
3874.356r	2	0. 8		Zr II?	1.49	89	
3874.524m	85	23. 4		—CH	R 10	0,0	3
3874.573r		8. 0		Cr I—	3.01	138	
				CN	R 0	0,0	11
3874.726r	87	10. 1		CN	P 57	0,0	11
3874.776		22. 4		CH—	R 10	0,0	3
				CN	P 57	0,0	11
3875.085m	74	25. 3		V I	0.04	7	
3875.290	109	24. 5		Ti I	0.00	15	
					2.00	175	
				CN	P 56	0,0	11
3875.378r		14. 7		CN	P 56	0,0	11
3875.546r	45	15. 0		Sm II—	0.18	17	
3875.658r	50	16. 5					
3875.780m	72	23. 7		CN	P 1	0,0	11
				|Ca I	2.52	26	
3875.884r	74	16. 5		CN—	P 55	0,0	11
				V I	0.02	7	
3875.948r		19. 3		CN—	P 55	0,0	11
				CH	R 3	0,0	3
3876.051m	141	43. 3		Fe I	1.01	22	
				(V I)	0.07	8	
3876.310	30	10. 2		CN	P 2	0,0	11
3876.420r	64	12. 1		CN	P 54	0,0	11
3876.486r		10. 8		CN	P 54	0,0	11
3876.566r	7	2. 4					
3876.678m	40	13. 3		Fe I	2.28	121	
3876.845	91	29. 2		CN	P 3	0,0	11
				||Co I	0.43	17	
					2.01	62	
3876.978m	84	26. 9		CN—	P 53	0,0	11
				CN	P 53	0,0	11
				(CH)	R 11	0,0	3
3877.096r	6. 5	2. 6					
3877.198m	58	19. 1		CH	R 11	0,0	3
3877.344m	54	20. 6		CN	P 4	0,0	11
3877.451r	76	19. 1		CN—	P 52	0,0	11
				CH	R 2	0,0	3
3877.510r		16. 0		CN	P 52	0,0	11
3877.609r	12	5. 4		Ti I	1.98	175	
				Zr I	1.00	58	
3877.709r	8. 5	4. 0					
3877.835	37	29. 6		CN	P 5	0,0	11
3877.935r	12	28. 3		CN	P 51	0,0	11
3878.027m	555	*202*		Fe I	0.96	20	
3878.194	30	35. 6		Fe I p	3.28	565	
3878.302	78	63. 4		Mg I	4.34	20	
				CN	P 6	0,0	11
				Y II	0.18	7	
3878.412r	13	33. 2		CH	R 2	0,0	3
				CN—	P 50	0,0	11
				CN	P 50	0,0	11
3878.580m	724	248		Fe I	0.09	4	
3878.679r	50	61. 9		Fe I	2.45	175	
3878.747r		61. 9		Fe I	3.27	664	
				|V II—	1.82	33	
				CN	P 7	0,0	11
3878.838r	26	14. 4		CN	P 49	0,0	11
3878.900r		14. 4		CN	P 49	0,0	11
3879.041r	6	3. 0		Ru II?	3.41		
				Zr I?	0.07	6	
3879.194r	122	28. 0		CN	P 8	0,0	11
3879.257r		14. 0		CN	P 48	0,0	11
				Cr I	3.01	138	
3879.321r		12. 0		CN	P 48	0,0	11
3879.576m	49	21. 1		CN	P 9	0,0	11
3879.659r	84	19. 6		CN	P 47	0,0	11
3879.714r		13. 2		CN	P 47	0,0	11
3879.849	21	7. 6					
3879.964m	45	22. 4		CN	P 10	0,0	11
3880.038r	100	21. 4		CN	P 46	0,0	11
3880.098r		16. 2		CN	P 46	0,0	11
3880.190	63	25. 7		CH	R 12	0,0	3
3880.255r		1. 0					
3880.327r	139	17. 0		CN	P 11	0,0	11
3880.394r		22. 0		CN	P 45	0,0	11
				(CH)	R 12	0,0	3
3880.458r		14. 0		CN	P 45	0,0	11
3880.546r	2	0. 6					
3880.677r	130	16. 7		CN	P 12	0,0	11
3880.74 a		17. 8		CN	P 44	0,0	11
3880.793r		14. 7		CN	P 44	0,0	11

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3880.900r	3	1. 0					
3881.002r	121	24. 0		CN	P 13	0,0	11
3881.04 a		16. 0		CN	P 43	0,0	11
3881.116r		12. 0		CN	P 43	0,0	11
3881.206	21	7. 5		—Cr I	3.01	138	
3881.307r	147	30. 6		CN	P 14	0,0	11
3881.405r		24. 2		CN	P 42	0,0	11
				Ti I	0.02	15	
3881.490r	7. 5	3. 2		CH	R 1	0,0	3
3881.591r	127	27. 6		CN—	P 15	0,0	11
				CN	P 41	0,0	11
3881.687r		19. 8		CN	P 41	0,0	11
3881.875	117	37. 4		CN	P 16–P 40	0,0	11
				Co I	0.58	18	
				(Ni I)	0.00	1	
3881.980r	56	31. 2					
3882.085r	136	24. 5		CN	P 17–P 39	0,0	11
3882.170r		24. 5		CN	P 39	0,0	11
				Ti I	2.02	175	
3882.300r	141	30. 9		Ti I	2.02	176	
				CN	P 18–P 38	0,0	11
3882.391r		19. 1		CN	P 38	0,0	11
3882.511r	127	28. 3		CN	P 19–P 37	0,0	11
3882.594r		17. 8		CN	P 37	0,0	11
3882.689r	112	27. 8		CN	P 20–P 36	0,0	11
3882.754r		13. 9		CN	P 36	0,0	11
3882.847r	140	28. 3		CN	P 21–P 35	0,0	11
3882.894r		28. 3		Ti I	2.04	176	
3882.996	118	38. 9		CN	P 35	0,0	11
3883.114r	91	30. 4		CN	P 22–P 34	0,0	11
3883.200r	228	27. 0		CN	P 23–P 34	0,0	11
				(V II)	1.43	11	
3883.287r		27. 0		Cr I	0.98	23	
				Fe I	3.25	663	
3883.394r		?		CN Head	P 24 to	0,0	11
3883.429r	band	edge		CN	P 33	0,0	11
3883.551r	3	1. 0					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3883.639m	26	9. 3		Cr I	3.01	138	
3883.76 a	2. 5	0. 9		Hf II?	1.67	18	
3884.097r	5. 5	1. 9		Ti I	1.98	175	
3884.222r	66	10. 8		CH	R 13	0,0	3
3884.292r		23. 4					
3884.369m	136	39. 6		Fe I	2.69	282	
3884.440r		9. 5		CH	R 13	0,0	3
3884.609r	69	16. 2		Co I	1.05	32	
3884.673r		11. 3		Fe I	3.28	565	
3884.844m	22	8. 7		V II	1.79	33	
3884.962r	4. 5	1. 8					
3885.066	15	7. 2		Cr I	3.01	138	
3885.151	28	22. 9		Fe I	2.99	430	
3885.225	115	38. 1		Cr I—			
				Cr I	0.97	23	
3885.286r		7. 5		Sm II	0.48	46	
				Co I	0.92	31	
3885.519m	87	*33. 7*		Fe I	2.42	124	
3885.657r	6. 5	3. 9					
3885.756m	35	19. 0		Fe I p	3.26	567	
3885.865r	6. 5	6. 4		Ni I	0.27	1	
3885.933r	30	20. 6		Fe I p	3.69	946	
3886.065r	10	15. 9					
3886.155r	6. 5	16. 7					
3886.294m	920	*306*		Fe I	0.05	4	
3886.428r	11	31. 6		CH—	Q 1	0,0	3
3886.564r	8. 5	11. 8		V I?	1.38	64	
3886.804m	50	*26. 2*		Cr I	1.00	23	
3886.940r	4. 5	5. 4					
3887.059m	219	*96. 9*		Fe I	0.91	20	
3887.372r	8	4. 9		Ti I?	2.00	176	
3887.526r	1	0. 5					
3887.730r	3	1. 7					
3887.890r	10	5. 4					
3888.041	9	15. 5		Ti I	2.00	175	
3888.21 a	3. 5	2. 6					
3888.29 a	4. 5	4. 6					
3888.422	23	35. 2		Fe I	3.26	565	

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3888.524m	265	116		Fe I	1.61	45	
3888.723r	10	12. 1					
3888.829m	49	38. 6		Fe I	3.02	488	
3888.938r	6	8. 2		CH	Q 2	0,0	3
3889.05	2346	*722*		H_8	10.20	2	10
3889.105	12. 5	23. 9		CH	Q 1	0,0	3
3889.231	25	22. 5		CH— Fe I?	R 14 2.69	0,0 280	3
3889.358	40. 5	28. 9		CH Fe I	R 14 3.21 3.27	0,0 562 660	3
3889.676m	42	22. 6		Ni I	0.21	15	
3889.848m	28	22. 1		CH	Q 2	0,0	3
3889.929m	55	26. 7		Fe I— |Ti I	3.26 0.00	564 15	
3890.083r	2. 5	1. 4		Sm II	0.18	17	
3890.196	35	16. 4		V I—	0.04	8	
3890.311r	6. 5	3. 1		Zr I	0.15	8	
3890.399m	44	19. 5		Fe I	3.24	567	
3890.568	38	16. 7		||CH— Nd II	Q 3	0,0	3
3890.722r	3	1. 4		Ni I	3.54		
3890.849m	64	*27. 0*		Fe I	2.73	280	
3890.945r	20	8. 3		Nd II			
3891.198	49	*20. 4*		CH	Q 3	0,0	3
3891.383	16	6. 4		Zr I	0.15	11	
3891.511	35	*14. 6*					
3891.682r	3	1. 2					
3891.781	30	11. 6		Ba II	2.51	4	
3891.934m	88	*32. 4*		Fe I (Mg I)	3.41 7.17	733 47	
3892.015r	9	3. 9					
3892.11 a	11	4. 1		Co I	2.54	130	
3892.314	28	10. 3		Fe I	3.55		
3892.452r	3	1. 2		Fe I?			
3892.591m	49	*16. 4*		CH	Q 4	0,0	3
3892.898	78	26. 2		|Fe I V I (CH)	2.76 0.04 P 1	283 7 0,0	3
3892.988	72	29. 8		Fe I	3.26	567	
3893.074	63	30. 3		CH	Q 4	0,0	3
3893.214r	6. 5	2. 2					
3893.317		26. 0		Fe I	2.83	364	
3893.402m	182	32. 5		Fe I	2.95	430	
3893.463r		4. 8					
3893.606r	5. 5	1. 8					
3893.795r	1	0. 4					
3893.920m	70	26. 2		Fe I	2.43	175	
3894.029	154	26. 1		Fe I— |Cr I	3.30 0.96	663 23	
3894.102		28. 0		Co I	1.05	34	
3894.218r	9	3. 1		Pd I	1.45	8	
3894.493	33	*11. 3*	*u*	Fe I	3.21	566	
3894.631r	9	5. 4	*u*	Nd II	0.06	29	
3894.713r	11	6. 6	*u*	Gd II	0.00	1	
3894.85 a	1. 5	0. 9					
3894.986m	78	*25. 6*	*s?*	Co I	0.63	18	
3895.088m	58	21. 2	*u*	CH— Ce II	Q 5 0.61	0,0 210	3
3895.167r	21	12. 6		CH	R 15	0,0	3
3895.242m	58	19. 8	*s*	Ti I	2.04	176	
3895.334	46	19. 3	*u*	CH—	R 15	0,0	3
3895.448m	87	42. 3	*u*	Fe I— |CH	3.29 Q 5	565 0,0	3
3895.582r	10	15. 7		Mg I	7.17		
3895.667m	361	*115*	*S*	Fe I (Mg I)	0.11 7.17	4 47	
3895.794r		10. 0					
3896.139	58	19. 9	*u*	V I ||V II	1.08 1.40	43 10	
3896.248r	24	8. 7	*u*	Er II?	0.05		
3896.363r	20	6. 5	*u*				
3896.472	62	19. 2	*s*				
3896.534r	14	5. 9		Zr I? CH?	0.07 P 2	9 0,0	3
3896.622r	27	8. 7	*u*	Fe I p	3.65	834	
3896.781m	21	*5. 9*	*u*	Ni I (Ce II)	3.80 0.56	188	
3896.982r	2. 5	0. 8	*u*	Sm II	0.04	5	
3897.073r	2	0. 6	*u*	V I?	2.26	126	
3897.199r	6	1. 9	*u*				
3897.345r	10	3. 1	*u*	Ti I—	2.00	175	
3897.458S	83	*28. 4*	*u*	Fe I (CH)	2.95 P 2	429 0,0	3

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3897.648r	27	8. 5	*u*	—Cr I			
3897.778r	26	8. 8	*u*				
3897.900m	98	28. 7	*s*	Fe I	2.69	280	
3898.014	158	*55. 1*	*s*	Fe I	1.01	20	
3898.094r		18. 7		CH	Q 6	0,0	3
3898.277r	22	7. 2	*u*	V I? Ce II	0.47	52	
3898.394m	74	22. 4	*u*	CH	Q 6	0,0	3
3898.512m	42	14. 9	*s*	‖Ti I Co I— Dy II	0.00 1.88 0.59	13 58	
3898.65 a	2. 5	0. 8		Fe I?			
3898.774r	1	0. 3					
3898.878r	4	1. 3					
3899.036m	85	25. 4	*s?*	Fe I	2.45	175	
3899.142m	62	22. 6	*u*	V II	1.80	33	
3899.326r	8	3. 1		Mn I?			
3899.393m	22	9. 0	*u*				
3899.719m	436	*132*	*S*	Fe I	0.09	4	
3900.224	16	5. 6	*u*	Nd II			
3900.333r	4. 5	1. 5					
3900.412r	157	5. 6					
3900.44 m		—	*S*				13
3900.541m		*41*	*u*	Fe I— ‖Ti II	3.24 1.13	565 34	
3900.660r	20	7. 1		Al II?	7.42	1	
3900.770r	12	4. 6					
3900.836	52	15. 9	*u*				
3900.963m	37	11. 3	*s*	Ti I	0.02	15	
3901.060r	7	2. 2		Fe I? p	3.60	834	
3901.160r	4	1. 3	*u*	V I?	2.29	126	
3901.337r	0. 5	0. 1					
3901.484r	4. 5	1. 4	*u*				
3901.598	62	*20. 0*	*u*	CH	Q 7	0,0	3
3901.741r	3	1. 0					
3901.866	71	21. 4	*u*	CH	Q 7	0,0	3
3901.977	36	13. 3	*u*	CH— Cr I	P 3	0,0	3
3902.104r	17	5. 2	*u*				
3902.262	61	*21. 5*	*s*	V I (CH)	0.07 R 16	7 0,0	3
3902.430	44	14. 9	*u*	Gd II— CH	0.42 R 16	19 0,0	3
3902.632	35	15. 9		CH	P 3	0,0	3
3902.779r		6. 1					
3902.956m	530	*142*	*u*	‖Fe I Cr I (Mo I)	1.56 0.98 0.00	45 23 1	
3903.079r		6. 0					
3903.161m	18	15. 4	*s*	Cr I	0.97	23	
3903.257m	40	19. 5	*u*	V II	1.48	11	
3903.416r	4	1. 5		Sm II			
3903.546r	11	3. 8					
3903.731r	8. 5	3. 4					
3903.854m	224	25. 0	*u,n*	Mg I	4.34	19	
3903.915m		52. 2		Fe I	2.99	429	
3904.076	28	10. 2	*u*				
3904.173r	1. 5	0. 6					
3904.330r	4	1. 3		Mn I?	4.68		
3904.476r	1	0. 3					
3904.630	20	7. 3	*u*	Ni I p	0.42	29	
3904.790m	60	21. 3	*s*	Ti I	0.90	56	
3904.879	28	13. 1	*u*				
3905.009	29	12. 7	*u*	Fe I p	3.42	703	
3905.189	28	14. 9	*u*	Fe I p	3.24	564	
3905.360r	8	15. 1					
3905.532m	816	*219*	*S*	Si I	1.91	3	
3905.679	48	46. 1		‖CH Fe I p	Q 8 2.47	0,0 153	3
3905.769r	24	14. 9					
3905.905m	61	25. 9	*u*	CH	Q 8	0,0	3
3906.032r	19	7. 9	*u,N*	—Fe II	5.57	173	
3906.181r.	1. 5	0. 5					
3906.300	52	19. 1	*s*	Co I (Er II)	0.51 0.00	17	
3906.402r	7. 5	4. 3					
3906.490m	164	*66. 9*	*s*	Fe I	0.11	4	
3906.626r	8	3. 1					
3906.752S	77	24. 3	*s*	Fe I	3.30	664	
3906.963m	34	10. 7	*u*	Fe I p	3.28	567	
3907.114	28	8. 7	*u*	Eu II	0.21	5	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3907.231r	17	5. 4	*u,N*				
3907.296r	6. 5	2. 0		Ce II	1.11	253	
3907.478	73	*22. 5*	*s*	‖Sc I Fe I	0.00 2.76	8 284	
3907.672m	36	11. 0	*u*	Fe I			
3907.774m	41	12. 8	*u*	Cr I CH	3.84 P 4	262 0,0	3
3907.940m	82	24. 8	*u*	Fe I	2.76	280	
3908.067r	6	1. 9		Pr II?	0.55	11	
3908.174r	5. 5	1. 8					
3908.274	45	13. 8		CH	P 4	0,0	3
3908.411	26	7. 9	*u*	Ce II— Pr II	0.86 0.00	65 11	
3908.548	36	11. 1	*u*	Ce II Fe II p	0.46 2.70	127 29	
3908.685r	98	4. 1	*s*	Fe I	2.45	153	
3908.762m		*28. 6*	*s*	Cr I	1.00	23	
3908.928	63	19. 3	*u*	Ni I	3.61	117	
3909.075r	5	1. 3					
3909.285	25	*7. 8*	*s,N*				
3909.402r	1. 5	0. 5					
3909.502r	18	5. 8	*u*				
3909.668m	89	39. 2	*u*	Fe I	3.28	565	
3909.727r		0. 8					
3909.837m	115	34. 0	*u*	Fe I	2.84	364	
3909.941m	97	41. 7	*s*	‖Co I V I	0.00 0.07 1.35	3 7 63	
3910.075r	9	2. 8					
3910.212r	6	2. 0					
3910.334	79	24. 3		CH	Q 9	0,0	3
3910.479r	114	7. 8	*u*				
3910.534		30. 4		CH	Q 9	0,0	3
3910.667	45	16. 0	*u*				
3910.849m	86	26. 1	*u*	Fe I	2.76	284	
3911.003m	74	22. 5	*u*	Fe I	3.21	562	
3911.094r	8. 5	3. 1					
3911.180	40	12. 3	*s*	Ti I	2.04	175	
3911.308r	8	2. 6					
3911.417r	11	3. 6	*u,N*	—Mn I?	4.19		
3911.571r	0. 5	0. 3					
3911.701	34	10. 5	*u*	Fe I	3.30	664	
3911.825m	60	18. 2	*s*	Sc I	0.02	8	
3911.989	76	25. 6	*u*				
3912.087r	17	6. 3	*u,N*				
3912.203r	15	5. 1	*s*	V I	1.04 1.05	42 43	
3912.294m	63	*20. 0*	*u*	Ni I	3.80	151	
3912.422	14	4. 6	*u*	Ce II	0.30	60	
3912.594r	3. 5	1. 0	*s*	Ti I	2.02	175	
3912.797r	11	3. 3	*u*	Fe I			
3912.892r	6	2. 0		V I— Pr II?	1.06 0.20	42 17	
3912.981m	51	*16. 3*	*s*	Ni I	0.03	15	
3913.144r	8	2. 6					
3913.255	49	14. 8	*u*				
3913.470	138	39. 4	*u*	Ti II	1.12	34	
3913.637m	101	29. 2	*s*	Fe I	2.28	120	
3913.82 a	5. 5	1. 6					
3913.89 a	2. 5	0. 9					
3914.013m	53	*16. 6*		CH	P 5	0,0	3
3914.181r	35	15. 8	*u*				
3914 287r	133	25. 0	*s*	Fe I	3.28	567	
3914.338r		22. 2		Ti I (V II)	0.05 1.79	15 33	
3914.426	70	26. 1	*u*	CH	P 5	0,0	3
3914.512r	64	14. 3	*u*	Fe II Fe I p	1.67 3.27	3 660	
3914.740r	7	2. 3	*s*	Fe I— Ti I	3.25 0.00	662 14	
3914.90 a	1	0. 3					
3914.98 m	7	*2. 4*		Cr I	3.01	137	
3915.05 m	5. 5	1. 7					
3915.218m	46	*14. 0*	*u*	Fe I			
3915.34 a	4. 5	1. 4		Ir I?	1.22	6	
3915.473	49	14. 8	*u*	‖Fe I— Co I	2.28	113	
3915.612	78	23. 0		CH	Q 10	0,0	3
3915.811	110	32. 0	*s?*	CH— Cr I	Q 10 3.01	0,0 136	3
3915.939	47	14. 4	*u*	Zr II	0.53	17	
3916.067r	22	6. 5	*u*	La II	0.23	42	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3916.244	67	*19. 1*	*s*	Cr I	0.97	23	
3916.405	85	25. 8	*u*	—V II	1.43	10	
3916.521r	11	3. 8		Gd II	0.60	20	
3916.605r	8	2. 6		Zr I?	0.15	6	
3916.737S	90	*30. 2*	*u*	Fe I	3.24	606	
3916.852r	8	2. 7					
3916.985r	17	6. 1	*u*	Cr I—	3.01	137	
3917.124r	151	16. 6	*s*	Co I	2.28	113	
3917.184r		*42. 0*		Fe I	0.99	20	
3917.36 m	29	9. 5	*u*				
3917.591r	23	*6. 6*	*s*	Cr I	3.01	137	
3917.653r		1. 0					
3917.867r	11	3. 7	*u*				
3918.017m	1	0. 3					
3918.113m	4. 5	1. 5	*u*	Hf II?	0.45	7	
3918.256r		6. 6		Ce II	0.70	12	
3918.324m	190	33. 4	*u*	Fe I	2.48	124	
3918.424m		28. 8	*u*	Fe I	2.84	364	
3918.573r	121	6. 1	*u*	Fe I p	2.83	362	
3918.651m		34. 4	*u*	Fe I	3.02	430	
3918.789r	11	3. 6					
3918.895r	19	6. 5	*u*				
3919.069	156	26. 5	*u*	Fe I	2.99	430	
3919.168		30. 1	*s*	Cr I	1.03	23	
3919.359r	2. 5	0. 9					
3919.568r	9	3. 3	*u*				
3919.730r	5. 5	2. 0	*u*				
3919.817r	8	3. 1	*s*	Ce II—	0.70	60	
				|Ti I	1.50	130	
3919.975r	4	1. 8					
3920.125r	7. 5	9. 7					
3920.269m	341	*101*	*S*	Fe I	0.12	4	
3920.452r	28	16. 1					
3920.629	76	31. 6	*u*	Fe I	2.42	153	
3920.729	69	27. 8	*u*	CH—	P 6	0,0	3
					R 18	0,0	
3920.844m	77	27. 6	*u*	Fe I	3.26	567	
3921.049r	125	42. 1	*s*	Cr I	0.98	23	
				(CH)	P 6	0,0	3
3921.187	59	24. 0	*u*				
3921.276	40	18. 6	*u*	Fe I	2.56	220	
3921.428m	50	19. 3	*s*	Ti I	0.00	14	
3921.556	79	27. 8	*w*	CH	Q 11	0,0	3
3921.716	75	26. 8	*u*	CH	Q 11	0,0	3
3921.904r	3. 5	1. 3	*s*	V I	1.05	42	
3922.020r	4. 5	1. 8					
3922.084	24	9. 5	*u,d*	Fe I	2.48	153	
					3.29	564	
3922.421r	34	14. 3	*s*	Sm II—	0.38	38	
				‖V I	1.06	42	
3922.674	42	28. 3	*u*	Fe I p	2.99	429	
				(Mn I)	3.85	44	
3922.768r	18	24. 5	*u,N*	Co I	1.05	32	
3922.923m	414	*124*	*S*	Fe I	0.05	4	
3923.041r	23	35. 0	*u*	Fe I p	3.25	661	
3923.107r	5. 5	5. 9		Ce II	0.56	191	
3923.236r	1. 5	1. 0					
3923.333r	7	3. 6	*w*	Mn I?	4.25		
3923.502r	11	4. 8	*u*	Sc II	0.31	9	
3923.692r	2	0. 8					
3923.926r	1	0. 4		Hf II?	1.60	18	
3924.067r	20	8. 5	*u*	Mn I	3.86	44	
3924.174r	19	8. 5	*u*	Ni I	4.10	240	
3924.353r	2. 5	1. 0					
3924.533m	68	*29. 4*	*s*	Ti I	0.02	13	
3924.652r	13	5. 6	*u*	Ce II—	0.56	190	
				|V I	1.87	90	
3924.790r	1	*1. 0*					
3925.014r	7. 5	*3. 1*					
3925.209m	70	*32. 0*	*s*	Fe I	3.29	567	
				(V I)	0.07	8	
3925.352r	8. 5	4. 0					
3925.45 a	5. 5	2. 6		Pr II	0.00	11	
3925.538	33	16. 6	*u*	Fe I p	3.25	660	
3925.651m	74	32. 8	*u*	Fe I	2.83	364	
3925.800r	9. 5	4. 8					
3925.949	86	38. 9	*u*	Fe I	2.86	364	
3926.027	76	51. 2	*u*	Fe I	3.24	562	
3926.181r	8. 5	5. 1					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3926.326	13	7. 9	*s*	Ti I	2.58	292	
3926.458	34	19. 0	*u*	Mn I	3.84	44	
3926.639	6. 5	4. 2	*u*	Cr I	4.53		
3926.777r	0. 5	0. 5					
3926.939r	2	1. 4	*u*				
3927.129r	4	3. 1	*u*	Nd II? —			
3927.252r	1	0. 6					
3927.344r	4	3. 1					
3927.443	25	16. 3	*u*				
3927.608r	28	18. 6		Fe I p	2.73	282	
3927.72 m	13	13. 8					
3927.797 r	42	41. 7					
3927 933m	187	*144*	*S*	Fe I (CH)	0.11 P 7	4 0,0	3
3928.091	63	50. 6	*u*	Fe I	3.21	565	
3928.217	68	49. 4	*u*	CH	P 7 Q 12	0,0 0,0	3
3928.345	46	32. 8		CH	Q 12	0,0	3
3928.496 r	6	6. 6					
3928.644m	45	*32. 8*	*s*	Cr I	1.00	23	
3928.764r	1	1. 3					
3928.93 a	2. 5	3. 7		Ti I p	2.04	175	
3929.122	37	33. 8	*u*	Fe I	2.76	280	
3929.223	37	33. 8	*u*	Fe I La II	3.25 0.17	659 27	
3929.357	24	27. 7	*u*				
3929.523 r	2	3. 6	*s*	||Zr I Zr II	0.07 2.43	7 142	
3929.724 r	20	25. 6	*u, N*	V II	1.43	10	
3929.885m	37	*39. 1*	*s*	Ti I	0.00	13	
3930.040 r	20	32. 5	*u*	V I—	1.38	63	
3930.150 r	26	40. 8					
3930.308m	108	*181*	*u*	Fe I	0.09	4	
3930.513r	32	49. 0	*u*	Eu II—	0.21	5	
3930.663 r	7. 5	20. 6	*u*	Y II	0.41	16	
3930.889 r	3. 5	10. 4	*u*	Fe I—	2.45		
3931.129m	22	50. 3	*u*	Fe I	3.26	565	
3931.342 r	3	11. 7		V I? Ce II	1.85 0.30	90 61	
3931.898 r	1. 5	6. 1		Fe I			
3932.018m	10	34. 7	*u*	Ti II	1.13	34	
3932 254	1. 5	5. 6	*u*	Fe I			
3932.484r	1	6. 9	*u*				
3932.637m	10	52. 9	*u*	Fe I	2. 73 3. 27	280 652	
3932.915r	1. 5	11. 9		Fe I			
3933.682m	20253	(*4874*)		Ca II(*K*) (Sc I) (V I) (Co I)	0. 00 0. 02 1. 08 0. 58	1 8 42 17	
3934.366r	6	35. 3		Fe I			
3935.216r	6	22. 4	*u*?				
3935.319	7. 5	25. 2	*u*	Fe I	2. 84	362	
3935.446r	2	8. 4					
3935.645r	11	31. 0	*u,N*	CH	P 8 Q 13	0,0 0,0	3
3935.73 a	5. 5	18. 0		CH	Q 13	0,0	3
3935.826m	35	66. 4	*u*	Fe I	2. 83	362	
3935.979	30	59. 4	*s*	Co I (CH) (Fe II)	0. 92 P 8 5. 57	32 0,0 173	3
3936.557r	7	16. 2	*u*	Fe I			
3936.770r	8	16. 8	*u*	Fe I p	3. 21	564	
3936.963r	2	4. 1					
3937.06 a	2	3. 8					
3937.141r	2	4. 3					
3937.336S	38	*41. 6*	*s*	Fe I	2. 69	278	
3937.438r	4	7. 1					
3937.553r	3. 5	6. 6					
3937.830r	2	2. 8					
3937.974r	28	28. 8					
3938.018r	3. 5	5. 2	*u*	|Fe I Ti I	2. 27	246	
3938.184r	7	8. 8					
3938.298	31	37. 4	*w*	Fe II	1. 67	3	
3938.409	71	47. 7	*u*	Mg I	4. 34	18	
3938.630r	11	11. 4	*u*	Fe I			
3938.734r	2. 5	2. 4		Ni I	4. 17	240	
3938.865r	6. 5	6. 0	*u*	Co I	3. 57	171	
3938.970r	4	3. 5		Fe II	5. 91	190	
3939.146r	8. 5	7. 4	*u*				
3939.391r	2. 5	2. 3	*u,N*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3939.518r	3. 5	2. 8	*u*	Sc II? p	0.31	9	
3939.66 a	1	0. 9					
3939.885r	1	0. 9					
3940.041m	28	*16. 2*	*u*	Fe I	3.41	731	
3940.183r	1. 5	0. 9					
3940.358r	9. 5	6. 3	*u*	Ce II—	0.32	50	
3940.671r	13	7. 6	*u*				
3940.890m	84	*38. 6*	*s*	Co I |Fe I	0.63 0.96	18 20	
3941.049r	7	4. 1					
3941.182	30	15. 0	*u*				
3941.284r	60	37. 6	*u*	Fe I	3.26	562	
3941.369r	5. 5	2. 6					
3941.496m	52	*26. 8*	*s*	Cr I	1.03	23	
3941.612r	3. 5	1. 6					
3941.737	47	20. 8	*s?*	Co I	0.43	17	
3941.856	25	11. 9	*u*	|Ni I— Sm II	3.83 0.00	171 1	
3942.016r	5. 5	2. 5	*s*	V I	1.38	63	
3942.155	10	4. 7	*u*	Ce II	0.00	37	
3942.239r	1. 5	0. 8		C I?	7.68		
3942.370	41	21. 6	*u*	Fe I			
3942.448	72	29. 4	*u*	Fe I	2.84	364	
3942.607r	7	3. 2					
3942.746r	15	6. 6	*u*	Ce II	0.86	57	
3942.844r	15	6. 6	*u*	—Mn I?	3.84		
3943.098r	33	15. 3	*u*				
3943.182r	22	11. 5	*u*	Fe I			
3943.348m	52	23. 9	*u*	Fe I	2.20	72	
3943.482r	20	11. 1	*u*				
3943.581r	33	18. 8	*u*				
3943.679r	5. 5	4. 6	*s?*	V I	1.08	42	
3943.820r	36	39. 6	*u,N*	CH	Q 14	0,0	3
3943.918r	3	8. 9		Ce II— |CH	0.79 {P 9 {Q 14	234 {0,0 {0,0	}3
3944.016m	488	*138*	*S*	Al I	0.00	1	
3944.11 a 3944.179r	37	29. 4 33. 1	*u,N*	Ni I CH	3.63 P 9	151 0,0	3
3944.352r	16	7. 8	*u*				
3944.541r	2	1. 0					
3944.684r 3944.744r	73	11. 4 22. 6	*u*	Fe I? Dy II Fe I	 0.00 2.84	 361	
3944.898m	72	37. 4	*u*	Fe I	2.99	430	
3944.988	32	15. 6	*u*				
3945.127m	79	38. 1	*s*	Fe I	2.76	280	
3945.218	28	13. 8	*w*	Fe II p	1.69	3	
3945.332m	68	24. 8	*u*	Co I	0.92	29	
3945.493r	10	3. 8	*u*	Cr I	3.01	135	
3945.687r	0. 5	0. 3					
3945.854	36	13. 7	*u*				
3945.961r	10	3. 8	*u*	Cr I	3.01	134	
3946.048r	7. 5	3. 0	*u*	Ca I Fe I	2.71		
3946.200r	2. 5	1. 0	*u*	Ni I	0.17	1	
3946.38 a	1	0. 5					
3946.459r	2. 5	*1. 1*					
3946.553r	9. 5	*3. 3*	*u*				
3946.660r	22	*6. 6*	*u*				
3946.813r	5. 5	2. 0					
3947.002m	83	*38. 8*	*u*	Fe I	3.21	561	
3947.133r 3947.161r	24	6. 6 2. 8	*u*	Co I	1.96	58	
3947.27 a	3	1. 0		O I	9.14	3	
3947.385	49	17. 0	*u*	Fe I	2.40	153	
3947.538m	86	38. 1	*u*	Fe I	{2.83 {2.95	361 426	
3947.693	45	21. 6	*u*				
3947.778	74	24. 3	*s*	Ti I	0.02	14	
3947.978r	9. 5	3. 5		Fe I p	3.30	652	
3948.109m	99	*31. 1*	*u*	Fe I	3.24	562	
3948.281	35	*12. 7*	*u*	Fe I p	3.24	561	
3948.476	4. 5	*1. 8*		Fe I	3.21	560	
3948.680	94	*32. 7*	*s*	Ti I	0.00	13	
3948.785m	80	25. 6	*u*	Fe I	3.27	604	
3948.900	50	16. 7	*s*	Ca I	1.88	6	
3949.061 3949.141	89	11. 1 19. 7	*u,N* *u*	La II Fe I	0.40 3.41	41 730	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3949.230	21	6. 8	*u*	Fe I p	2. 48	153	
3949.402	3	1. 0	*u*	—Pr II?	0. 20	16	
3949.605	6. 5	2. 3	*u*	Cr I	3. 01	136	
3949.70 a	2	0. 8		Cr I?	3. 01	136	
3949.814	9. 5	3. 0	*u*				
3949.959S	103	*33. 4*	*u*	Fe I	2. 18	72	
3950.139	14	4. 6	*u*				
3950.253	4	1. 3		V I?			
3950.358	55	17. 7	*u*	Y II	0. 10	6	
3950.469	15	5. 1	*u*				
3950.58 a	1. 5	0. 5					
3950.795	3. 5	1. 1		Fe I p	2. 45	153	
3951.081	126	9. 8	*u*	Cr I	3. 01	136	
3951.171		30. 6	*u*	Fe I	3. 27	661	
3951.310r	9	2. 8					
3951.435	10	3. 2					
3951.626	22	7. 1	*u*	Fe I	2. 86	362	
3951.776	20	6. 6	*u*	Cr I—	3. 01	136	
3951.839r	1	0. 4		Hf I?	0. 29		
3951.964	63	*19. 2*	*u*	V II	1. 48	10	
3952.096	5. 5	1. 8					
3952.201	14	4. 6	*u*	Nd II	0. 00	23	
3952.338	46	7. 1	*s*	Co I	0. 43	16	
3952.408		7. 1	*s*?	Cr I	3. 01	136	
3952.468r		0. 9					
3952.545r	133	0. 9		Ce II	0. 33 0. 82	113 177	
3952.616		37. 9	*u*	Fe I	2. 69	278	
3952.704	100	27. 6	*u*	Fe I	2. 84	362	
3952.756r		6. 3		CH	P 10	0,0	3
3952.905r	159	28. 0	*s*	Co I	0. 92	28	
3952.982		28. 0		CH	P 10 Q 15	0,0 0,0	3
3953.082	27	12. 5	*o*?	CH	Q 15	0,0	3
3953.158m	97	38. 8	*u*	Fe I Cr I	3. 02 3. 01	430 136	
3953.256	37	14. 0	*u*	Fe I			
3953.408	7	2. 3					
3953.502	40	*12. 7*	*u*	Fe I	3. 55	770	
3953.661	7	2. 1					
3953.706r	3	1. 0					
3953.861S	51	*16. 2*	*u*	Fe I	2. 83	362	
3953.966r	2. 5	0. 9					
3954.046	9. 5	3. 0	*u*				
3954.276r	0. 5	0. 3					
3954.396	4	1. 3					
3954.540	37	12. 1	*u*	Ni I	3. 65		
3954.718	29	9. 6	*u*	Fe I	3. 27	606	
3954.95 a	4	1. 3					
3955.09 a	5	1. 6					
3955.219	38	15. 4	*u*	Fe I	3. 05	527	
3955.343	107	*33. 8*	*u*	Fe I	3. 28	562	
3955.484	16	5. 4					
3955.606	11	4. 0	*u*				
3955.762	13	*3. 8*	*u*	Fe I p	2. 56	219	
3955.831r	1	0. 3		Zr II? p	0. 56	17	
3955.963m	64	*20. 7*	*u*	Fe I	3. 07	488	
3956.059	9	3. 2					
3956.179r	5	1. 6					
3956.339	110	*35. 0*	*s*	Ti I	0. 02	13	
3956.463m	94	29. 3	*u*	Fe I	3. 24	604	
3956.686m	133	*41. 8*	*u*	Fe I	2. 69	278	
3956.891	11	3. 9					
3957.041m	123	*40. 3*	*u*	Fe I— Ca I	3. 26 1. 89	562 6	
3957.287r	2	0. 8					
3957.485r	1. 5	0. 5					
3957.629	35	12. 1	*u*	Fe I	3. 28	564	
3957.797	4. 5	1. 6					
3957.936	54	*17. 7*	*s*	Co I	0. 58	18	
3958.093	9. 5	3. 4		Cr I?	4. 45	307	
3958.216	86	*27. 0*	*s*	‖Ti I— Zr II	0. 05 0. 53	13 16	
3958.338r	2. 5	0. 9					
3958.416	27	9. 6	*u*	Fe I			
3958.508	3. 5	1. 3					
3958.636	3	1. 1		Pd I	1. 45	8	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3958.740	31	10. 8	*u*	Fe I			
3958.870r	3. 5	1. 3		Rh I?	0. 97	7	
3959.03 a	1. 5	0. 5					
3959.195	8	2. 9	*u*				
3959.293	5	1. 8	*u*				
3959.453	4. 5	1. 7	*s*	Fe I p	3. 21	556	
3959.542r	2. 5	1. 0		Gd II?—	0. 73	44	
3959.726r	1	0. 4					
3959.833	15	5. 9	*u*				
3960.153	2	0. 8					
3960.284S	50	18. 7	*u*	Fe I	3. 64	913	
3960.410	2	0. 8					
3960.647	3. 5	1. 4	*u*	Fe I			
3960.765	6. 5	3. 6	*u*	Cr I	2. 71	68	
3960.916	7. 5	4. 2	*u*	Ce II	0. 32	84	
3961.010	11	6. 3	*u*	Co I	2. 63	128	
3961.149m	44	28. 0	*u*	Fe I	2. 86	361	
3961.286r	2	3. 0					
3961.535m	621	220	*S*	Al I	0. 01	1	
3961.916	14	11. 9	*u*				
3962.090	33	20. 8	*u*	—Ni I	3. 85	199	
3962.179	41	21. 4	*u*	CH—	P 11	0,0	3
3962.360	60	24. 2	*u*	Fe I	3. 26	566	
3962.398r		8. 8		CH	P 11	0,0	3
3962.649	10	6. 3	*u*	Fe I	3. 64	913	
3962.722	22	12. 0	*u*	Fe I			
3962.861m	46	*24. 0*	*s*	Ti I	0. 00	12	
3962.972r	5. 5	3. 3		Sm II			
3963.115m	81	*38. 6*	*u*	Fe I (CH)	3. 28 Q 16	562 0,0	3
3963.222	47	28. 5	*u*	CH	Q 16	0,0	3
3963.347	4	2. 5		Ti I?	1. 05	81	
3963.437	20	12. 1	*u*	Fe I	3. 27	654	
3963.564r	2	1. 5					
3963.691S	56	*30. 4*	*s*	Cr I	2. 54	38	
3963.806	3	2. 3					
3963.919	1. 5	1. 0					
3964.030	3. 5	2. 5	*u*				
3964.190	15	13. 2	*o*?	Ni I	3. 65		
3964.280	48	*30. 5*	*s*	Ti I	0. 02	12	
3964.406	1	0. 9					
3964.526m	53	32. 8	*u*	Fe I	2. 84	361	
3964.759r	6. 5	6. 0					
3965.016	1	0. 9		Co I	1. 05	31	
3965.230	3. 5	4. 3	*u*	Co I	0. 92	30	
3965.349r	2. 5	3. 0					
3965.470	39	2. 8		Fe I	3. 25	658	
3965.516		33. 2	*u*	Fe I	3. 24	565	
3965.618	2	3. 5					
3965.726	12	15. 9	*u*				
3965.845	9	12. 8	*u*	Fe I p	2. 42	122	
3965.930	25	30. 2	*u*				
3966.073m	66	60. 0	*s*	Fe I	1. 61	45	
3966.356r	4	9. 1					
3966.511	35	46. 1	*u*	Fe I	3. 29 3. 30 3. 55	562 652 766	
3966.639	44	*70. 3*	*u*	Fe I	2. 76 3. 21	282 562	
3966.824	11	28. 2	*u*	Fe I	3. 30	659	
3967.055r	5	15. 1		Ce II—	0. 33	84	
3967.431m	19	54. 0	*u*	Fe I	3. 30	604	
3967.636	7	26. 4					
3967.859	7. 5	29. 5					
3967.975r	7	34. 8	*u*?	Fe I	3. 24	561	
3968.492m	15467	(3435)		Ca II(*H*) (V II) (Dy II)	0. 00 1. 40 0. 00	1 9	14
3968.715r	3	20. 6					
3968.936	6	37. 2					
3969.06 a	5	18		Cr I	2. 54	38	
3969.148r	5	18		Co I	2. 54	128	
3969.268m	52	*103*	*u*	Fe I	1. 48	43	
3969.407	10	35. 8		Fe II p	1. 67 1. 69	3 3	
3969.507	2	8. 1					
3969.641m	7. 5	25. 2	*u*	Fe I	3. 25	657	
3969.758	14	*30. 7*	*s*?	Cr I	2. 54	38	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
3969. 927	3	11. 3		Fe I?			
3970.076m	76	(776)	*w*	Hε	10. 20	1	14
3970.166r	3. 5	8. 8					
3970.272m	18	32. 2	*u*	Fe I			
3970.399m	29	42. 9	*u*	Fe I	3. 07	488	
3970.495	10	19. 7	*u*	Ni I	3. 65	151	
3970.569	3	6. 6					
3970.660	6. 5	12. 4	*w*				
3970.843	2	3. 3		—Fe I?			
3971.007	16	21. 6	*u,N*	Fe I—	4. 10	1074	
3971.126r	4. 5	7. 8					
3971.261	9	16. 7		Cr I	2. 71	67	
3971.332m	56	*45. 0*	*u*	Fe I	2. 69	277	
3971.468	6. 5	10. 4					
3971.720	5. 5	7. 8	*u*				
3971.826	15	16. 2	*u*	Fe I	2. 76	281	
3971.994	17	16. 7	*u,N*	Eu II	0. 21	5	
3972.173	51	37. 0	*u*	Ni I	0. 42	29	
3972.263	21	15. 8	*w*?	CH	P 12	0,0	3
3972.440	44	31. 2	*u,N*	CH (Co I)	P 12 3. 51	0,0 171	3,18
3972.575	27	19. 0	*s*	Ca I	2. 71	41	
3972.687	6	5. 0		Cr I	2. 71	67	
3972.916	17	12. 1	*u*	Fe I	3. 57	803	
3973.012r	0. 5	0. 4					
3973.126	19	14. 2	*u*	Co I	1. 88	58	
3973.168	9	8. 3					
3973.276	11	8. 0	*u*	Nd II	0. 63	19	
3973.418r	1. 5	1. 3					
3973.564	74	43. 1	*u*	Ni I	0. 42	31	
3973.657	101	29. 2	*s*	Fe I V II	3. 55 1. 43	769 9	
3973.715		29. 2		Ca I	1. 90	6	
3973.871	17	10. 9	*u*				
3973.916	30	16. 2	*u*	Fe I			
3974.023	2. 5	1. 6					
3974.170	28	14. 0	*w*?	Fe II	2. 70	29	
3974.274	2. 5	1. 4					
3974.398	61	27. 3	*u*	Fe I (CH)	3. 24 Q 17	564 0,0	3
3974.486	50	25. 9	*u*	CH—	Q 17	0,0	3
3974.634	48	23. 6	*u*	Ni I	3. 85	198	
3974.763	89	33. 9	*u*	Fe I Co I	2. 22 0. 51	72 18	
3975.051	4. 5	2. 0		Fe II?—	5. 95	191	15
3975.210m	36	15. 6	*u*	Fe I	2. 47	153	
3975.362	20	8. 6	*w*?				
3975.519	2. 5	1. 0					
3975.691r	1. 5	0. 5		Ti I?	2. 10	186	
3975.845	43	17. 1	*u*	Fe I	3. 88	977	
3975.960	2	0. 9					
3976.089	44	17. 1	*u*				
3976.185r	6. 5	2. 5					
3976.276r	5. 5	2. 1		Sm II	0. 10	9	
3976.390	44	16. 7	*u*	Fe I	3. 02	487	
3976.553	162	16. 3	*s*?	Fe I	3. 25	655	
3976.632		23. 9		Fe I	3. 41	729	
3976.694		16. 7		Cr I	2. 54 2. 54	38 38	
3976.868m	64	22. 6	*u*	Fe I—	3. 02 3. 30	431 662	
3976.986	21	7. 8	*u*				
3977.081	7. 5	2. 7		Mn I	4. 27		
3977.191	12	4. 3	*u*	Co I	2. 33	113	
3977.336r	1. 5	0. 5					
3977.45 a	4	1. 5		Fe I?			
3977.575r	8. 5	3. 2		Fe I			
3977.747S	104	33. 2	*u*	Fe I (V II)	2. 20 1. 48	72 10	
3977.895r	7	2. 6					
3978.014	1	0. 5					
3978.164	19	6. 4	*u*				
3978.346	32	11. 0	*u*				
3978.462m	50	16. 8	*u*	Fe I	2. 83	361	
3978.572	8. 5	3. 2		Dy II			
3978.667m	68	22. 8	*u*	Co I— Cr I (Ce II)	0. 51 2. 71 0. 54	17 67 175	
3978.775r	3. 5	1. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3978.855	10	3. 5	*u*	Co I	3. 69	173	
3979.011r	1	0. 3					
3979.115r	4	1. 4		Fe I p	2. 99	426	
3979.196	7	2. 3		Sm II Cr I?	0. 54 4. 45	51 307	
3979.323	5. 5	1. 8		Cr I?	4. 10	280	
3979.522	67	23. 4	*u*	Co I	0. 10	3	
3979.642	42	13. 6	*u*	Fe I	3. 26	561	
3979.791	19	6. 2	*s*	Cr I Fe I?	2. 71	67	
3979.902r	1. 5	0. 5					
3980.012	21	6. 8	*u*	Fe I	3. 02		
3980.147r	3	1. 0					
3980.292	4	1. 2					
3980.522	3. 5	1. 1		V I?			
3980.634	25	8. 2	*u*	Fe I	2. 42	153	
3980.821r	3. 5	1. 1	*s*	Ti I	2. 09	186	
3980.883	6	1. 9		Ce II	0. 71	194	
3980.982	23	7. 2	*u*				
3981.105m	32	10. 0	*u*	Fe I	2. 42	122	
3981.233	25	7. 5	*u*	Cr I	2. 71	67	
3981.325r	1. 5	0. 5					
3981.448	3	0. 9	*u,N*	Ti I	2. 12	188	
3981.516	16	5. 2					
3981.616	21	6. 5	*u*	Fe II p Fe I? p	1. 72 2. 99	3 428	
3981.775m	101	*31. 0*	*s*	Fe I Ti I	2. 73 0. 00	278 12	
3981.997	71	20. 7	*u*	Ti II— Zr II?	0. 57 2. 49	11 142	
3982.166	12	3. 6		Mn I?	4. 27		
3982.332	4	1. 1					
3982.486	60	17. 3	*s*	Ti I	0. 00	11	
3982.598	62	18. 3	*u*	Mn I Y II	3. 13 0. 13	33 6	
3982.757	3	0. 9					
3982.911	12	3. 8	*u*	Ce II—	0. 82	172	
3983.004	52	15. 3		CH—	P 13	0,0	3
3983.198	57	16. 5	*u*	CH— Ca I	P 13 2. 93	0,0	3
3983.360	24	7. 0	*s*	Fe I	3. 02	485	
3983.540	35	10. 3	*u*	Fe I			
3983.666	10	3. 2	*u*	Dy II	0. 54		
3983.813	155	3. 4	*u,N*	Fe I p	3. 02	426	
3983.921		*24. 0*	*u*	Cr I	2. 54	38	
3983.970		27. 0		Fe I	2. 73	277	
3984.150	70	19. 7	*u*	Ni I	3. 68	171	
3984.336	54	*15. 7*	*s*	Cr I	2. 54 2. 54	38 38	
3984.451	9	2. 6		Fe I	2. 59	219	
3984.564r	3. 5	1. 0		V I?	1. 85	89	
3984.665	55	15. 7	*u*	(Ce II)	0. 96	252	
3984.839r	2. 5	0. 7		Ru I	1. 00	9	
3984.941	37	10. 7	*u*	Fe I	3. 28	561	
3985.070	5. 5	1. 7					
3985.16 a	4	1. 1					
3985.242	35	11. 8	*u*	Mn I	3. 13	33	
3985.321	27	15. 8	*u*	Fe I p	2. 56	219	
3985.392	99	27. 3	*u*	Fe I	3. 30	661	
3985.600	11	3. 2	*s*	Ti I	2. 09	188	
3985.628	5. 5	1. 8					
3985.789	5. 5	1. 5	*u*	V II	3. 75	202	15
3985.999	5	1. 5					
3986.180m	82	23. 2	*u*	Fe I	3. 25	655	
3986.295	25	8. 2	*u*	Fe I p	3. 24	560	
3986.370r	9	3. 0		Ni I?	3. 19		
3986.574r	4. 5	1. 5					
3986.760	267	70. 0	*u,N*	Mg I	4. 34	17	
3986.837		15. 8	*u?*	Mn I	3. 13	33	
3987.000	163	13. 7	*u,N*	CH—	Q 18	0,0	3
3987.096		34. 3	*u,N*	Mn I Ni I— Co I	3. 13 3. 66 0. 51	33 137 16	
3987.183		12. 3	*u,N*				
3987.374	20	5. 8	*u*				
3987.473	12	3. 3	*u*	Mn I	3. 13	33	
3987.612m	52	14. 8	*u*	—Ti II p	0. 61	11	
3987.80 a	4	1. 0					
3987.966	18	5. 0	*s*	Yb I	0. 00	2	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
3988.115r	0. 5	0. 1					
3988.332	7	2. 0	*u*				15
3988.473r	44	4. 2	*u*				
3988.516		6. 2		La II	0. 40	40	
3988.562		2. 8	*u*				
3988.668r	5. 5	1. 5		—Zr I	0. 62	46	
3988.834	7. 5	2. 1		V I	1. 86	89	
3988.992	69	18. 8	*u*	—Fe I	3. 57		
3989.084	56	19. 5	*u*				
3989.251	13	3. 6	*u*	Fe I p	3. 28	561	
3989.452	5	1. 5		Ce II?	0. 90	240	
3989.607	17	4. 8	*s*	Fe I p Ti I?	3. 27 1. 07	605 81	
3989.768	105	*30. 0*	*s*	Ti I	0. 02	12	
3989.864	69	23. 8	*u*	Fe I	3. 55	768	
3989.983	44	13. 1	*u*	Cr I (Mn I)	3. 89 3. 13	268 33	
3990.104	27	7. 5	*u*	Nd II	0. 47	19	
3990.188r	5	1. 5		Ti I?	2. 08	188	
3990.301	21	7. 0	*u*	Co I	1. 96	58	
3990.379m	74	20. 0	*u*	Fe I	3. 05	527	
3990.565	28	7. 8	*s*	|V I Fe I p	1. 85 1. 85 3. 24	89 89 556	
3990.760r	3. 5	0. 9					
3990.949	4	1. 0					
3991.121S	74	*20. 1*	*u*	|Cr I— Zr II	2. 54 0. 76	38 30	
3991.314r	9	2. 3					
3991.434	40	11. 0	*u*				
3991.544	20	5. 6	*u*	Co I	3. 63	173	
3991.685	72	14. 2	*s,n*	Co I Cr I	0. 58 2. 54	17 38	
3991.745		5. 8		Nd II Fe I	0. 00	19	
3991.834	8	2. 0		Co I?	2. 63	129	
3991.898	6. 5	1. 9	*u*				
3992.019r	3. 5	0. 9		Co I	0. 17	3	
3992.115	8	2. 0		Ir I? Cr I	1. 22 2. 54	5 38	
3992.250	56	15. 0	*u*				
3992.392	30	8. 0	*u*	Fe I	3. 30	604	
3992.486	10	2. 8	*u*				
3992.643	13	3. 6	*u*	Fe I	2. 59	219	
3992.828	65	17. 2	*s*	V I— ‖Cr I	1. 86 2. 71	89 67	
3992.975r	4. 5	1. 1					
3993.101m	43	11. 5	*u*	Fe I			
3993.304	6. 5	1. 6	*u,N*	—Sm II	0. 04	4	
3993.470r	2	0. 5					
3993.612	19	5. 0	*u*	—Fe I			
3993.733	16	4. 3	*u*				
3993.827	11	2. 9	*u*	Ce II	0. 91	12	
3993.950	62	16. 5	*u*	Ni I— Cr I	3. 68 2. 71	170 67	
3994.012	15	5. 8		Fe I p	3. 26	560	
3994.119m	80	20. 8	*u*	Fe I	3. 05	526	
3994.270r	4. 5	0. 6		Fe I p	2. 87	320	
3994.328r		0. 6					
3994.469	72	2. 3	*s?*				
3994.512		17. 6	*u*	CH— |Co I	P 14 0. 63	0,0 17	3
3994.684	62	16. 5	*u*	Ti I Nd II CH	2. 09 P 14	188 0,0	3
3994.810	15	3. 9		Pr II	0. 05	11	
3994.950r	5	1. 3					
3995.071r	2. 5	0. 6					
3995.208	146	11. 7	*u*	Fe I	3. 27	604	
3995.315		28. 4	*u*	Co I	0. 92	31	
3995.439r	12	3. 3		Fe I?			
3995.622r	3	0. 8					
3995.751m	38	10. 0	*u,N*	La II—	0. 17	27	
3995.862r	3. 5	0. 9		Ni I p	4. 17	238	
3995.990m	82	21. 4	*s?*	Fe I	2. 73	279	
3996.117	15	4. 0	*u*	Fe I?			
3996.264	47	12. 4	*u*	Fe I	2. 99 3. 29	427 561	
3996.342	13	4. 0	*u*	Gd II			
3996.546	10	2. 6		Fe I			
3996.600	18	4. 6	*s,N*	Sc I	0. 00	7	
3996.697	7	1. 8		Dy II	0. 59		
3996.788	32	8. 5	*u*	Fe I	4. 15	1074	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
3996.857r	3	0. 8					
3996.971m	70	18. 2	*u*	Fe I	3. 69	945	
3997.112	50	12. 9	*u*	V II	1. 48	9	
3997.215	9	2. 4		Mn I?			
3997.401	170	*32. 6*	*u*	Fe I	2. 73	278	
3997.482		18. 0	*u*	Fe I p	3. 24 3. 24	556 563	
3997.610r	8	2. 1					
3997.748r	6. 5	1. 6					
3997.908	114	29. 8	*u*	Co I	1. 05	32	
3998.058m	115	30. 5	*u*	Fe I	2. 69	276	
3998.270r	9	2. 2					
3998.475	30	7. 7	*u*	Fe I p	3. 30	606	
3998.643m	110	*30. 6*	*s*	Ti I	0. 05	12	
3998.746r	14	4. 5		V I	1. 87	89	
3998.852r	6	1. 5		Cr I?	4. 45	307	
3998.971	62	11. 6	*u*	Zr II	0. 56	16	
3999.038		4. 8	*u*				
3999.18 a	6	1. 5		V II	3. 76	202	
3999.243	16	4. 1	*u*	Ce II	0. 30	57	
3999.344	12	3. 0	*s*	Ti I	2. 10	188	
3999.500r	5	1. 2					
3999.670	7	1. 6	*s,N*	Cr I?			
3999.797r	1. 5	0. 4					
4000.023	8	2. 0	*u*	Fe I	2. 83	360	
4000.150r	2. 5	0. 6					
4000.257	66	16. 5	*u*	Fe I	3. 26	556	
4000.371	14	4. 2	*u*				
4000.465	78	19. 5	*u*	Fe I Dy II	2. 99 0. 10	426	
4000.588	8	2. 0					
4000.73 a	4. 5	1. 1					
4000.812	16	4. 0	*u*				
4000.973r	5. 5	1. 4	*s*	Cr I?	4. 45	307	
4001.111	127	6. 0					
4001.163		27. 2	*u,N*				
4001.241		1. 0		Fe I	3. 64		
4001.343r		1. 0					
4001.449m	68	17. 0	*u*	Cr I	3. 89	268	
4001.558r	3	0. 9					
4001.670m	103	24. 2	*u*	Fe I	2. 18	72	
4001.753		2. 2					
4001.940	16	4. 0	*u*	Mn I?			15
4002.077	38	9. 5	*u*	Fe II	2. 78	29	
4002.162r	4	1. 0		Mn I?	3. 77		
4002.26 a	2	0. 5					
4002.395	15	3. 7	*o*				
4002.503	34	8. 5	*s*	Ti I Ni I	2. 12 4. 17	188	
4002.665m	32	8. 0	*s*	Fe	2. 88 3. 25	320 655	
4002.803r	3. 5	0. 9					
4002.929	61	15. 2	*u*	V II	1. 43	9	
4003.085r	1. 5	0. 4					
4003.17 a	2	0. 5					
4003.275	10	2. 5	*u*	Mn I— Fe I	4. 64		
4003.512	7	1. 7					
4003.620	6	1. 5		Co I—	2. 63	130	
4003.769S	70	17. 5	*u*	Fe I Ti I (Ce II)	3. 41 2. 13 0. 93	728 188 188	
4003.915	9. 5	2. 4	*u*	Cr I	3. 89	268	16
4004.016	9. 5	2. 4	*u*	Nd II			16
4004.164	9	2. 2	*u*	Fe II p	4. 48	127	16
4004.267r	2. 5	0. 6					
4004.386	6. 5	1. 6	*u*				16
4004.601	14	3. 7	*u*				16
4004.710r	7. 5	2. 0		Cr I?	4. 20	295	
4004.838	83	40. 2	*u*	Fe I	3. 24	601	
4004.915	72	24. 1	*u*				
4004.983	82	36. 8	*u?*	Fe I	3. 02 3. 21	486 557	
4005.072m	52	26. 5	*u*				
4005.254m	416	*110*	*s?*	Fe I	1. 56	43	
4005.388m	42	21. 5	*u*	Fe I p	2. 42	123	
4005.482m	42	15. 2	*u*	Fe I p	2. 59	219	
4005.657r	85	0. 9					
4005.708		23. 0	*u*	V II	1. 82	32	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4005.849r	2. 5	0. 6					
4005.965	18	4. 7	*s*	Ti I	2. 10	187	
4006.023r	2. 5	0. 6					
4006.156	54	13. 5	*u*	Ni I Fe I p	 3. 26	 564	
4006.317m	89	22. 2	*u*	Fe I	3. 27	603	
4006.473	13	3. 2					
4006.633m	93	*23. 6*	*u*	Fe I	3. 11	488	
4006.758	102	17. 0	*u*	Fe I	2. 88	320	
4006.825		10. 5	*u,N*	—CH	P 15	0,0	3
4006.997	65	14. 5	*u*	CH	P 15	0,0	3
4007.039r		3. 0					
4007.164r	3. 5	0. 9					
4007.20 a	4	1. 0	*s*	Ti I	2. 09	187	
4007.279m	86	*23. 0*	*u*	Fe I	2. 76	277	
4007.443	14	3. 5	*u*	Nd II			
4007.596	11	2. 7	*u*	Fe I			
4007.72 a	5	1. 2					
4007.802r	11	2. 7					
4007.926	68	17. 0	*u,N*				
4008.060	28	7. 7	*s*	Ti I	2. 12	187	
4008.172	24	6. 0	*u*	V II	1. 79	32	
4008.361r	3. 5	0. 9	*u*				
4008.418	5. 5	1. 4		Sc II p	0. 61	16	
4008.602	14	3. 5	*u*	Sc II p—	0. 60	16	
4008.736r	13	3. 2	*u*	W I	0. 37	6	
4008.878	106	13. 2	*u*	Fe I			
4008.930		17. 2		Ti I	0. 02	12	
4009.055r	7	1. 7					
4009.146	53	13. 2	*u*				
4009.255r	4. 5	1. 1		Fe I			
4009.420r	3. 5	0. 9		Fe I			
4009.547	43	10. 7	*u*	Fe I p	3. 21	556	
4009.660r	122	11. 0	*s*	Ti I	0. 02	11	
4009.714		24. 4		Fe I	2. 22	72	
4009.910r	9. 5	2. 4		Ru II C I?	3. 75 7. 68		
4009.984	18	4. 5	*u*	Ni I	3. 63	150	
4010.054r	3	0. 7					
4010.179	36	9. 0	*u*	Fe I	3. 64	915	
4010.287r	5. 5	1. 4					
4010.374	12	3. 0	*u*				
4010.492	11	2. 7		Fe I?			
4010.588	68	16. 7	*u*	—Fe I			
4010.650r		0. 6					
4010.780m	56	14. 0	*u*	Fe I	2. 61 2. 86	219 320	
4010.933m	51	12. 2	*u*	Fe I			
4011.080	7. 5	1. 9	*s*	Co I	0. 10	2	
4011.20 a	3. 5	0. 9					
4011.304r	4. 5	1. 1		V I?	1. 22		
4011.414m	55	13. 7	*u*	Fe I	2. 56	218	
4011.546	16	4. 0	*s*	Ti I	0. 00	10	
4011.718m	50	12. 5	*u*	Fe I	2. 45	153	
4011.893	10	2. 5	*u*	Fe I p	2. 95	424	
4012.016	10	2. 5	*u*				
4012.158	33	8. 2	*u*	Fe I	3. 24	601	
4012.253	39	9. 7	*u*	Nd II	0. 63	10	
4012.390	93	23. 2	*u*	Ce II ‖Ti II	0. 56 0. 57	206 11	
4012.478	31	10. 5	*u*	Cr I Cr II	3. 89 5. 66	268 183	
4012.602	25	6. 2	*u*	Ni I— Fe I	4. 17		
4012.705	14	3. 5	*u*	Nd II			
4012.796	5	1. 2	*u*	Ti I	2. 12	186	
4012.959r	1	0. 2					
4013.075	3. 5	0. 9	*u,N*				
4013.232	7	1. 7	*s*	Ti I p	2. 10	186	
4013.466r	2	0. 5					
4013.582	83	4. 2	*s*	Ti I	2. 13	187	
4013.639m		18. 2		Fe I	3. 21	557	
4013.816m	102	25. 4	*u*	Fe I Fe I	3. 02 3. 02	485 486	
4013.960	34	8. 5	*u,N*	Co I	2. 01	58	
4014.126r	3	0. 7					
4014.272m	50	12. 0	*s*	Fe I	3. 02 3. 02	426 427	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4014.389r	4. 5	1. 1					
4014.530m	117	29. 1	*u*	Sc II— ‖Fe I	0. 31 3. 57	8 802	
4014.674	18	4. 5	*u*	Cr I	3. 89	268	
4014.793r	7	1. 7					
4014.934	34	8. 5	*u,N*	Ce II—	0. 53	157	
4015.150	14	3. 5	*u,N*				
4015.268r	3	0. 7					
4015.380	23	5. 7	*s*	Ti I	2. 08	185	
4015.480	20	5. 2	*w*	Ni II	4. 03	12	
4015.611	88	21. 9	*u*				
4015.732r	14	3. 5					
4015.879r	4. 5	1. 1					
4016.001	8. 5	2. 1	*u,N*				
4016.092r	5	1. 2		Ca I	2. 93		
4016.283	13	3. 2	*s*	Ti I	2. 13	186	
4016.423S	68	16. 9	*u*	Fe I	3. 28	560	
4016.546	12	3. 0	*u*	Fe I	2. 73	277	
4016.686r	12	3. 0					
4016.804	30	7. 5	*u*	Cr I V II	3. 43 3. 76	202	
4016.962	24	6. 0	*s*	Ti I	2. 16	208	
4017.100	149	19. 7	*u*	Fe I	2. 76	279	
4017.154		23. 9	*u*	Fe I	3. 05	527	
4017.309r	24	6. 2		V II	3. 79	216	
4017.471	86	21. 4	*u*	Ni I	3. 70	171	
4017.573	74	18. 4	*u*				
4017.774	34	8. 5	*s*	Ti I	2. 09	185	
4017.931r	2	0. 5		Cr II?	5. 33	166	
4018.104	139	34. 6	*s*	Mn I	2. 11	5	7
4018.271m	92	22. 9	*u*	Fe I	3. 26	560	
4018.385	16	4. 2		Zr II	0. 96	54	
4018.497	7	1. 7		Fe II p	2. 28	13	
4018.62 a	1. 5	0. 4					
4018.691r	1	0. 2	*s*				
4018.836	9	2. 2	*u*	Nd II	0. 06	19	
4018.938	7	1. 7					
4019.053	49	12. 2	*s?*	Ni I Fe I	1. 93 2. 61	72 219	
4019.136	8. 5	2. 1		Th II	0. 00	3	
4019.297	18	*4. 4*	*s*	Co I	0. 58	16	
4019.431r	1	0. 2					
4019.598	2	0. 5					
4019.838r	4. 5	1. 1					
4019.885r	2	0. 5		Fe I			
4020.029	93	8. 5	*u?*	—CH	P 16	0,0	3
4020.074		17. 4	*u*	Fe I p	3. 26	556	
4020.193	107	10. 7	*u*	—CH	P 16	0,0	3
4020.272		18. 2	*u,N*				
4020.397	56	13. 9	*s*	Sc I	0. 00	7	
4020.488	44	10. 9	*u*	Fe I	3. 64	913	
4020.650r	3	0. 7					
4020.778r	5. 5	1. 4					
4020.905m	80	19. 9	*s*	Co I	0. 43	16	
4021.089r	3	0. 7					
4021.197r	5. 5	1. 4	*u*				
4021.338	16	4. 0	*u*	Nd II	0. 32	36	
4021.496r	2. 5	0. 6					
4021.623m	68	16. 9	*u*	Fe I	2. 42 3. 24	120 557	
4021.740	10	3. 0	*u*				
4021.870m	121	*30. 1*	*u*	Fe I (Ti I)	2. 76 2. 10	278 185	
4022.049	23	5. 7	*u*	Ni I	4. 09 4. 10	241 238	
4022.226	55	10. 4	*s*	Fe I	2. 83	360	
4022.252r		5. 5		Cr I	3. 89	268	
4022.446	25	6. 2	*u*	Fe I	2. 40	173	
4022.536r	4. 5	1. 1		Fe I?			
4022.625	10	2. 5	*u*	Cu I	3. 78		
4022.745m	52	12. 9	*u*	Fe I	3. 25 3. 28	654 556	
4022.86 a	5	1. 2		C I?	7. 48		
4023.011	18	4. 6	*u*	Nd II			
4023.14 a	5. 5	1. 4		V I?	1. 89 2. 36		
4023.230r	3	0. 7	*s*	Sm II	0. 04	4	
4023.384	67	16. 6	*u*	V II (Co I)	1. 80 1. 96	32 59	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4023.556r	1	0. 2					
4023.687	57	14. 2	*s*	Sc I	0. 02	7	
4023.831	3. 5	0. 9		Fe I			
4024.003	33	9. 2	*u*	‖Ni I Zr I	3. 70 0. 69	170 46	
4024.100	66	*16. 4*	*u*	Fe I	2. 76	277	
4024.224r	3	0. 7		Fe II			
4024.330r	3	0. 7					
4024.441	18	4. 7	*u*	Zr II	1. 00	54	
4024.576	80	*19. 9*	*s*	Ti I (Fe II)	0. 05 4. 49	12 127	
4024.732m	104	25. 8	*u*	Fe I	3. 24	560	
4024.894r	8. 5	2. 1	*s*	Zr I	0. 65	46	
4025.009	29	7. 0	*u*	Cr I	2. 54	37	
4025.134m	84	20. 9	*u*	|Ti II Ni I	0. 61 4. 09	11 240	
4025.308	14	3. 5		CH	R 4	1,1	3
4025.429	48	11. 9	*u*	|Ni I Cr I	3. 70 2. 54 2. 54	117 37 37	
4025.584r	7	1. 7					
4025.823	64	15. 2	*u*				
4025.930r	6	1. 5					
4026.071r	8. 5	2. 2					
4026.168	43	10. 7	*s,d*	Cr I	2. 54 2. 54	37 37	
4026.310	7. 5	1. 9		CH	R 2	1,1	3
4026.436	53	13. 2	*u*	Mn I	3. 13		
4026.542	42	10. 4	*s*	Ti I	2. 12	185	
4026.771	9	2. 4	*s*	Fe I			
4026.918r	4	1. 0					
4027.043	67	11. 7	*s*	Co I	0. 17	3	
4027.104		6. 0	*s*?	Cr I	2. 54	37	
4027.251	9. 5	2. 4	*s*	Zr I— CH	0. 62 R 2	46 1,1	3
4027.388	25	6. 2	*u*				
4027.474	12	3. 0	*s*				
4027.672	49	12. 2	*u*	Ni I	3. 90		
4027.790r	2	0. 5					
4027.943	28	7. 0	*u*	CH	R 6	1,1	3
4028.123r	3	0. 7		Cr I?	4. 20		
4028.346m	90	22. 3	*u*	Ti II	1. 89	87	
4028.492	9. 5	2. 4					
4028.605	6. 5	1. 6					
4028.763	43	10. 7	*u*	Fe I			
4028.93 a	0. 5	0. 1	*s*	Zr I	0. 52		
4029.09 a	2. 5	0. 6					
4029.296r	3. 5	0. 9		Ni I p	3. 70	170	
4029.443	10	2. 5	*u*	CH	R 1	1,1	3
4029.642S	108	26. 8	*u*	‖Fe I Zr II	3. 26 3. 26 0. 71	556 563 41	
4029.869	12	*2. 7*	*s*				
4030.049r	3	0. 7	*s*	Zr I—	0. 60	46	
4030.190S	64	16. 1	*u*	|Fe I	2. 20	72	
4030.348	36	9. 7	*u*				
4030.497	92	27. 3	*u*	|Fe I Ti I	3. 21 2. 13	560 185	
4030.643	326	17. 1					
4030.763		75. 2	*S*	Mn I	0. 00	2	7
4030.892	48	17. 6	*u*	Fe I p—	3. 69	943	
4031.116	15	4. 2	*u*	Cr I	3. 89	268	
4031.245	42	10. 9	*u*	Fe I	3. 02	486	
4031.340	12	3. 0	*u*	Ce II	0. 32	108	
4031.447r	5	1. 2		Fe II	4. 73	151	
4031.563r	1. 5	0. 4					
4031.716r	94	12. 6	*u*?	Fe I p (La II)	3. 02 0. 32	427 40	7
4031.793r		12. 6	*u*?	Mn I (Nd II)	3. 13		
4031.969m	69	17. 1	*u*	Fe I	3. 27	655	
4032.116r	3. 5	0. 9					
4032.268	7	1. 7					
4032.463m	75	18. 6	*u*	Fe I	2. 88	320	
4032.641m	106	26. 3	*u*	Fe I	1. 48	44	
4032.837r	12	3. 1					
4032.964r	229	1. 9		Fe II— Ga I	4. 49 0. 00	126 1	
4033.072		54. 8	*S*	Mn I	0. 00	2	
4033.186	60	28. 5	*u*?	Fe I	2. 56	218	
4033.277r	21	6. 2		Cr I	2. 54	36	
4033.430r	8	2, 0					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4033.588	46	11. 4	*u*				
4033.660	24	7. 7	*u*	Fe I			
4033.790	9. 5	2. 4	*u*	CH	Q 1	1,1	3
4033.904	14	3. 5	*s*	Ti I	2. 16	208	
4033.972r	4. 5	1. 1		Cr I	2. 54	36	
				Cr I	2. 54	36	
4034.091	16	4. 0	*u*	Zr II	0. 80	42	
4034.232	50	12. 9	*u*	—CH	P 17	0,0	3
4034.386	213	9. 9		CH	P 17	0,0	3
4034.492m		46. 1	*s*	Mn I	0. 00	2	
4034.733	16	4. 2	*u*				
4034.870	28	6. 9	*s*	Ti I	2. 15	208	
4035.118	24	5. 9	*u*	Sm II	0. 33	33	
4035.250	23	5. 7	*u*	Fe I p	3. 60	831	
4035.427r	9	2. 2					
4035.547r	216	5. 7		Co I	3. 58	173	
4035.606		18. 8	*u,N*	V II	1. 79	32	
4035.732		31. 2	*s*	Mn I	2. 14	5	
4035.833		2. 0		Ti I	2. 17	208	
4035.984	16	4. 0	*u*	Fe I p	3. 02	426	
				Ni I p	3. 65	150	
4036.12 a	4. 5	1. 1					
4036.244a	6. 5	1. 6	*u*				
4036.377	24	5. 9	*u*	Fe I	2. 76	279	
4036.567	8. 5	2. 1	*u*	Fe I			
4036.670	6	1. 5		CH	Q 1	1,1	3
4036.773	31	7. 7	*u*	V II	1. 48	9	
4036.929r	1. 5	0. 4					
4037.121S	44	10. 9	*u*	Fe I			
4037.301	18	4. 5	*s*	Cr I	2. 54	36	
				Cr I	2. 54	36	
				(Gd II)	0. 66	49	
4037.438r	5	1. 2		CH	P 1	1,1	3
4037.548	4. 5	1. 0					
4037.688	22	5. 1	*u*	Fe I	2. 28	118	
4037.913a	4. 5	1. 1		Gd II	0. 56	49	
4037.976	4. 5	1. 1					
4038.124	13	3. 2	*s*				
4038.276	3	0. 7	*u,N*	Ni I	3. 65	150	
4038.479r	3. 5	0. 9					
4038.627	26	6. 4	*u*	Fe I	3. 30	600	
					3. 41	728	
4038.795	64	15. 8	*u*	Fe I			
4038.946r	2. 5	0. 6					
4039.096	42	10. 4	*s*	Cr I	3. 85	251	
4039.296	7	1. 7	*u*	Cr I—	3. 85	251	
4039.432r	0. 5	0. 1					
4039.574	9	2. 2	*u*	V II	1. 82	32	
4039.743	8	2. 0					
4039.864	44	2. 2	*s*	Y I	0. 00	5	
4039.946		8. 9	*u*	Fe I	2. 73	276	
4040.097m	61	15. 1	*u*	Fe I			
4040.270	31	4. 0		Zr II—	0. 93	54	
4040.310		4. 0	*s*	Ti I	2. 12	185	
				CH	P 1	1,1	3
4040.514	27	6. 9	*u*	—CH	Q 3	1,1	3
4040.647m	78	19. 9	*u*	Fe I	3. 30	655	
4040.790	39	9. 6	*s*	Ce II—	0. 45	138	
				Nd II	0. 18	30	
4040.951r	4	1. 0					
4041.066	8	2. 0	*u*				
4041.283r	168	16. 3	*u?*	Fe I	3. 30	603	
					3. 30	654	
4041.374		28. 4	*s*	Mn I	2. 11	5	
4041.656m	58	14. 3	*u*	Fe I			
4041.809r	3	0. 7	*u?*	Cr I	2. 54	36	
4041.914	13	3. 2	*u*	Fe I	3. 30	602	
4042.05 a	3. 5	0. 9					
4042.149r	3. 5	0. 9					
4042.245	10	2. 5	*s*	Cr I	2. 54	36	
4042.363	6	1. 5	*u?*				
4042.443r	3. 5	0. 9					
4042.592	13	3. 2	*u*	Ce II	0. 50	140	
4042.758	10	2. 5	*u*	Fe I p	3. 28	556	
4042.907	18	4. 4	*u*	Sm II	0. 10	9	
				La II	0. 93	66	
4042.997r	1. 5	0. 4					
4043.346	24	5. 9	*u,N*	CH	Q 4	1,1	3
4043.47 a	2. 5	0. 6					
4043.608	6. 5	1. 6	*s*	Zr I	0. 52	32	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
4043.695	17	4. 7	*u*	Cr I Fe I p	4. 45 2. 48	306 122	
4043.768	27	7. 4	*u*	—Ti I	2. 16	208	
4043.906	146	22. 0	*u*	Fe I	2. 73 3. 24	276 557	
4043.988		14. 1	*u*	Fe I p	3. 24	559	
4044.145	16	4. 2	*s*	K I	0. 00	3	
4044.274r	0. 5	0. 1					
4044.380	6. 5	1. 7		CH	P 2	1,1	3
4044.497	40	14. 3	*u*	Fe I p	4. 10	1073	
4044.615	105	28. 0	*u*	Fe I	2. 83	359	
4044.843r	2. 5	0. 7					
4044.959r	1	0. 4					
4045.115	50	17. 3	*u*	‖Fe I Mn I	3. 02 4. 33	425 48	
4045.217	19	17. 4	*u,N*?	Mn I	4. 23		
4045.390	48	25. 0	*u*	Co I	1. 05	31	
4045.508	9	8. 2					
4045.600	29	26. 4	*u*	Fe I p— |Zr II	3. 21 0. 71	559 30	
4045.715r	7. 5	13. 3					
4045.825m	1174	*316*	*S*	Fe I	1. 48	43	
4045.968	14	23. 0					
4046.074	44	36. 1	*u*	Fe I p—	3. 26	557	
4046.341	9	4. 4		Ce II V II	0. 55 3. 12	81 177	
4046.459	19	7. 1	*u*	Fe I p	4. 15	1075	
4046.615r	1	0. 4		Fe I	3. 07	487	
4046.760	7. 5	2. 3	*u*	|Cr I Ni I	2. 54 4. 09	36	
4047.016	10	2. 7	*u*				
4047.189r	5	1. 4					
4047.23 a	5	1. 4	*S*	K I	0. 00	3	
4047.310	41	10. 9	*u*	Fe I	2. 28 3. 63	117 853	
4047.407r	3. 5	1. 0					
4047.673	21	5. 4	*s*	Y I— CH	0. 00 Q 5	6 1,1	3
4047.802	11	2. 7	*s*	Sc I	0. 02	7	
4047.91 a	2	0. 5					
4048.072	24	5. 9	*u*	—CH	Q 5	1,1	3
4048.235r	1	0. 2					
4048.400r	7	1. 7					
4048.555r	4	1. 0		Fe I			
4048.671	138	8. 6	*u*?	Zr II	0. 80	43	
4048.753		28. 2	*s*	‖Mn I Cr I	2. 16 3. 85	5 251	
4048.996	29	7. 2	*u*	Mn I	4. 34	48	
4049.152	23	5. 7	*u*	Cr II?	6. 48	193	
4049.336m	62	15. 3	*u*	Fe I	2. 59	218	
4049.438	9	2. 5		Gd II Ti I?	0. 66 2. 13	50 185	
4049.565	41	10. 1	*u*	CH	P 18	0,0	3
4049.731	47	11. 6	*u*	CH (Cr I)	P 18 3. 85	0,0 251	3, 18
4049.862	11	2. 7		Gd II |Fe I			
4050.029	4	1. 0	*s*	Cr I	2. 54	36	
4050.104r	1	0. 2		La II	1. 96	85	
4050.329	20	4. 9	*u*	Zr II	0. 71	43	
4050.492	13	3. 2	*s*				
4050.566r	3. 5	0. 9		Dy II	0. 59		
4050.680m	57	14. 1	*u*	Fe I			
4050.813r	3	0. 7					
4050.948	6	1. 5	*s*	V I	2. 13	121	
4051.052	10	2. 5	*o*?	V II	1. 80	32	
4051.187	21	5. 0	*u*	Ni I	4. 10	239	
4051.337	33	8. 1	*s*	|V I V II	2. 14 3. 80	121 215	
4051.49 a	1. 5	0. 4		Ru I	1. 09		
4051.734	12	3. 0	*u*	Mn I			
4051.918	79	19. 5	*u*	Fe I |Cr II	3. 40 3. 10	700 19	
4052.020	16	4. 7	*u*				
4052.166r	4. 5	1. 1					
4052.303m	60	14. 8	*u*	Fe I	3. 37 3. 63	700 852	
4052.456	96	11. 6	*u*?	Fe I	3. 28	563	7
4052.499		15. 5	*u*?	Mn I	4. 35	48	
4052.660	88	12. 1	*s*	Fe I	3. 05	524	
4052.720		12. 1	*u*	Fe I	3. 24	557	
4052.842r	1	0. 2					
4052.940	32	7. 9	*u*	Ti I— CH	2. 17 Q 6	208 1,1	3

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
4053.113r	0. 5	0. 1					
4053.271m	61	15. 0	*u*	Fe I			
4053.430	22	5. 4	*w,N*				
4053.491	7	1. 9	*u*?	Ce II	0. 00	36	
4053.59 a	2	0. 5		V II	3. 80	215	
4053.824S	65	16. 0	*u*	Ti II Fe I	1. 89 3. 07	87 485	
4053.936r	5. 5	1. 4					
4054.077	28	6. 9	*w,N*	Cr II	3. 10	19	
4054.185	50	12. 3	*s*	Fe I	3. 26	557	
4054.308r	0. 5	0. 1					
4054.442	28	6. 9	*u*	Fe I			
4054.560	14	3. 4	*s*	Sc I	0. 00 0. 00	6 6	
4054.711	22	6. 4	*u*	Mg I	4. 34		
4054.815	135	24. 7	*u*	Fe I	3. 40	698	
4054.873		18. 5	*u*	Fe I	3. 42	698	
4055.039	80	19. 7	*u*	Ti I— Fe I	1. 05 2. 56	80 218	
4055.215	22	5. 4	*u*	Mn I	4. 36	48	
4055.384r	9	2. 2					
4055.551m	114	28. 1	*u*	Mn I	2. 14	5	
4055.706r	8. 5	2. 1	*u*				
4055.858r	2. 5	0. 6					
4055.990	20	4. 4	*u*	Fe I	3. 64	914	
4056.070	18	4. 4	*u*	Cr I	4. 45		
4056.195	30	7. 4	*u*	Ti II	0. 61	11	
4056.347	38	9. 4	*u*	Fe I			
4056.452	29	7. 1	*u*				
4056.559r	7	1. 7		Fe I	2. 86	320	
4056.65 a	2	0. 5					
4056.806r	6. 5	1. 6	*s*	Cr I	4. 45	306	
4056.907r	12	3. 0					
4057.075	13	3. 2	*s*	V I	2. 12	121	
4057.218	57	14. 3	*s*	Co I— Ni I?	0. 22 3. 31	3	
4057.355m	46	14. 8	*u*	Fe I	2. 76	277	
4057.515	197	48. 5	*u*	Mg I	4. 34	16	
4057.670	38	13. 0	*s,N*	Fe I Ti I	3. 41 2. 30	729 254	
4057.733r	11	3. 2		CH	P 4	1,1	3
4057.813r	16	4. 7	*s,N*	Pb I Cr I	1. 32 3. 85	1 251	
4057.893r	72	9. 4					
4057.957		9. 4	*u,N*	Mn I	3. 07	29	15
4058.221	101	24. 9	*s*	Co I Fe I (Ti I)	0. 51 3. 21 2. 32	16 558 254	
4058.391r	4	1. 0					
4058.467r	15	3. 7		Fe I p	3. 64	914	
4058.598	29	7. 1	*u*	Co I	2. 01	58	
4058.765	74	18. 2	*u*	Fe I Cr I	2. 42 3. 85	120 251	
4058.931	89	21. 9	*s*	Mn I (Nb I)	2. 18 0. 13	5 1	
4059.091r	6	1. 5					
4059.222	23	5. 7	*u*	CH	Q 7	1,1	3
4059.386	58	14. 3	*u,N*	Mn I	3. 07	29	
4059.502	20	5. 7	*u*	CH	Q 7	1,1	3
4059.722m	70	17. 2	*u*	Fe I	3. 55	767	
4059.966	6	1. 5	*u*	Nd II	0. 20	63	
4060.094	4	1. 0	*s*	Ti I p	2. 30	254	
4060.269m	34	8. 4	*s*	Ti I	1. 05	80	
4060.491	17	4. 2	*u*				
4060.634	6	1. 5		Cr I	4. 45		
4060.768	25	6. 2	*u*	Fe I			
4060.936	1	0. 2					
4061.097	57	14. 0	*u*	Nd II— Fe I	0. 47	10	
4061.443	19	4. 7	*u,N*				
4061.733	64	15. 8	*u,N*	Mn I	3. 07	29	15
4061.956	54	13. 3	*u*	Fe I			
4062.045	14	3. 4					
4062.232	6	1. 5		Ce II	1. 37	34	
4062.321	2	0. 5					
4062.447S	98	25. 2	*u*	Fe I	2. 84	359	
4062.642	22	5. 9	*w*?	Cu I	3. 82		
4062.746	12	3. 4	*u*				
4062.952	4	1. 4					
4063.288m	68	32. 2	*u*	Fe I	3. 37	698	
4063.424r	12	8. 9		Gd II			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4063.605m	787	*219*	*S*	Fe I	1. 56	43	
				(Mn I)	2. 16	5	
4063.789r	19	18. 7					
4063.926r	5. 5	3. 4		V I	2. 11	121	
4064.050	28	11. 6	*w?*	Fe I p	2. 95	423	
4064.214	28	8. 6	*s*	Ti I	1. 05	80	
4064.371	15	5. 2	*u*	Ti II—	2. 60	106	
				‖Ni I	3. 84	179	
4064.456	64	17. 2	*s*	Fe I	1. 56	44	
4064.577	9. 5	2. 5		Sm II	{0. 25	24	
					{0. 33	33	
4064.70 a	2. 5	0. 6					
4064.761	2	0. 5		Fe II p	2. 85	39	
4065.087	52	*12. 5*	*s*	V II—	3. 79	215	
				‖Ti I	1. 05	80	
4065.236	5. 5	1. 4		C I?	7. 49		
4065.388m	64	15. 7	*u*	Fe I	3. 43	698	
4065.587	15	3. 7	*u*	Ti I	2. 15	207	
				CH	P 5	1,1	3
4065.708	14	3. 4	*u*	Cr I	4. 10	279	
4065.810r	0. 5	0. 1					
4066.004	12	3. 0	*u*	Fe I p—	3. 33	695	
				CH	P 5	1,1	3
4066.120	48	10. 8	*u*				
4066.220	25	6. 8	*u*	—CH	P 19	0,0	3
4066.373	76	18. 7	*s*	Co I	0. 92	30	
4066.590m	80	19. 7	*u*	Fe I	2. 99	424	
4066.721	20	4. 9	*u*	Sm II	0. 28	28	
4066.820	30	7. 6	*u*	CH	Q 8	1,1	3
4066.984m	130	32. 0	*s*	Fe I	2. 83	358	
				(Cr I)	2. 71	66	
4067.280m	96	23. 6	*u*	Fe I	2. 56	217	
4067.407r	5. 5	1. 5		La II	0. 17	26	
4067.492	18	4. 4	*u*	Fe I p	2. 95	422	
4067.600	23	5. 6	*u*	Fe I p	3. 30	655	
4067.766	21	5. 6	*u*				
4067.856	27	7. 9	*u*	Fe I p	4. 18	1103	
4067.988m	133	32. 7	*u*	Fe I	3. 21	559	
4068.117r	10	2. 7	*s*	Ti I	2. 15	207	
4068.20 a	5	1. 2					
4068.337r	4. 5	1. 1		Sm II?	0. 43	42	
4068.404r	0. 5	0. 1	*s*	Cr I?			
4068.544	27	6. 8	*u*	Co I	1. 96	58	
4068.650r	5	1. 2	*s*	Ti I	2. 29	254	
4068.843	3. 5	0. 9	*u*	Ce II	0. 70	82	
4068.90 a	1	0. 2		Fe I			
4068.968	5	1. 2	*s*	Ti I	2. 74	299	
4069.070	48	11. 8	*u*	Fe I	3. 28	557	
4069.155	5	1. 2					
4069.272	8. 5	2. 1	*s,d?*	Nd II	0. 06	20	
4069.437r	1. 5	0. 4					
4069.610	34	8. 4	*u*	Fe I			
4069.84 m			*s*				13
4070.036	11	2. 7	*u*	Fe I	2. 87	320	
4070.281	66	16. 0	*u*	Mn I	2. 19	5	
4070.443	5	1. 2	*u*	Fe I	3. 05	525	
4070.626r	3	0. 7					
4070.777m	94	23. 6	*u*	Fe I	3. 24	558	
4070.985	3	0. 9		Cr I	4. 45	306	
4071.093	17	5. 2	*u*	Zr II—	1. 00	54	
4071.21 a	2. 5	0. 9	*s*	Ti I	2. 30	254	
4071.350r	8. 5	3. 2					
4071.536m	50	22. 9	*u*	‖Fe I—	2. 59	218	
				V I	1. 93	96	
4071.638r	7. 5	12. 3					
4071.749m	723	*191*	*S*	Fe I	1. 61	43	
4071.901	19	17. 9	*u,N*				
4071.970r	3	2. 5					
4072.144r	8	2. 9					
4072.351	12	3. 7	*u*	Fe I			
4072.512m	63	17. 4	*u*	Fe I	3. 43	698	
4072.696	7	2. 0	*s*	Zr I	0. 69	46	
4072.888	6	1. 5	*u*	Ni I	3. 85	197	15
4073.125	5	1. 2	*u*	Dy II	0. 54		
4073.342r	0. 5	0. 1					
4073.486	18	4. 4	*u*	Ce II	0. 48	4	
4073.629r	4. 5	1. 1	*s*				
4073.767S	90	22. 1	*u*	Fe I	3. 26	558	
4073.95 a	4	1. 0					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4074.048	12	2. 9					
4074.17 a	6	1. 5					
4074.332	18	4. 4	*s,N*	Ti I W I	2. 32 0. 37	254 6	
4074.530r	1	0. 2					
4074.684	42	14. 0	*u*	Fe I p	3. 64	912	
4074.794	110	27. 0	*u*	Fe I	3. 05	524	
4074.900	30	8. 1	*u*	Ni I	0. 42	28	
4075.103	62	15. 2	*u*	(Nd II)	0. 20	62	
4075.316	31	7. 6	*u,N*	Nd II?— CH	0. 06 Q 9	19 1,1	3
4075.510r	0. 5	0. 1					
4075.65 a	2. 5	0. 6		Cr II? p	3. 10	19	
4075.706	12	2. 9	*u*	Ce II	0. 70	57	
4075.851	14	3. 9	*u*	Sm II— Ce II	0. 54 0. 61	51 206	
4075.949	83	20. 4	*u*	Fe I			
4076.051	16	4. 4		Cr I	4. 10	279	
4076.132	10	2. 5	*s*	Co I	0. 58	16	
4076.226	58	14. 2	*u*	Fe I	3. 07	486	
4076.364	8. 5	2. 1	*s*	Ti I	0. 02	9	
4076.495	62	16. 2	*u*	Fe I	2. 61	218	
4076.637m	127	31. 4	*u*	Fe I	3. 21	558	
4076.808	94	23. 8	*u*	Fe I	3. 26	557	
4076.877	35	12. 7	*u,N*	Cr II Fe I	3. 10 3. 26	19 559	
4077.072	20	5. 2	*u*	Zr II— |Cr I	0. 96 2. 71	54 66	
4077.16 m			*S*	Ti I	2. 16	207	13
4077.198	7. 5	2. 1					
4077.347	41	11. 8	*s*	La II |Y I	0. 23 0. 00	41 7	
4077.486	11	4. 4		Ce II— Cr II	0. 30 3. 10	60 19	
4077.580r		2. 9					
4077.724m	428	100	*S*	Sr II	0. 00	1	
4077.834r		2. 9					
4077.969	26	8. 8	*u*	Dy II	0. 10		
4078.164	3. 5	1. 0					
4078.365	124	31. 9	*u*	Fe I	2. 61	217	
4078.475	56	21. 6	*s*	Ti I	1. 07	80	
4078.650r	2. 5	0. 6					
4078.823	19	4. 6	*u*	Fe I	3. 64		
4078.89 m			*s*				13
4079.012	8	2. 0	*u*				
4079.184	144	18. 1	*u*	Fe I p ||Mn I	3. 42 2. 14	700 5	
4079.237		24. 0					
4079.357r	104	1. 0					
4079.416		25. 0	*s*	Mn I	2. 19	5	
4079.556r	4. 5	1. 1					
4079.711	12	2. 9	*s*	Ti I (Nb I)	2. 16 0. 09	207 1	
4079.843S	94	23. 0	*u*	Fe I	2. 86	359	
4080.062	8. 5	2. 1	*u*	Fe I p	3. 69	944	
4080.216	89	21. 8	*u*	Fe I	3. 28	558	
4080.36 a	2	0. 5					
4080.437	5	1. 2		Hf II?	0. 61	6	
4080.600r	5	1. 2	*s*	Ru I	0. 81	9	
4080.69 a	1. 5	0. 4	*s*				
4080.770r	1	0. 2					
4080.880	61	14. 9	*u*	Fe I	3. 29	557	
4081.039r	6. 5	1. 6					
4081.234r	63	6. 4	*s*	Ce II |Zr I Fe I	0. 48 0. 73	4 46	
4081.262		12. 2					
4081.429r	5	1. 2	*s*				16
4081.585r	0. 5	0. 1					
4081.736r	6. 5	1. 6	*u*	Cr I	2. 71	66	
4081.909r	7. 5	1. 8		Cr I?			
4082.115m	76	18. 6	*u*	Fe I	3. 42	698	
4082.278	8	2. 0		Cr II?	5. 32	165	
4082.439	82	20. 1	*s*	|Fe I Sc I— |Ti I	3. 63 0. 02 1. 07	906 6 80	
4082.596	14	3. 4	*s*	Co I	0. 63	16	
4082.778r	2	0. 5					
4082.943S	94	23. 0	*s*	Mn I	2. 18	5	
4083.093r	3	0. 7		CN?	R 67	1,2	11
4083.226	26	6. 4	*u*	Ce II	0. 70	60	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4083.365r	3. 5	0. 9					
4083.565	181	17. 9	*s*	Fe I	2. 28	117	
4083.630		32. 4		Mn I	2. 16	5	
4083.763m	71	21. 1	*u*	Fe I	3. 42	697	
4083.999	20	4. 9	*u*	CH?	P 7	1,1	3
4084.150r	5. 5	1. 3		Fe I p	3. 21	557	
4084.327	23	6. 4	*u*	CH	P 7	1,1	3
4084.501m	156	38. 2	*u*	Fe I	3. 33	698	
4084.611r	2	0. 7		Fe II p	4. 74	151	
4084.71 a	4. 5	1. 2					
4084.794r	12	2. 9					
4085.013m	107	26. 2	*u*	Fe I	2. 84	358	
4085.153r	5. 5	1. 4					
4085.258	152	10. 5	*u,d*	Ce II	0. 67	172	
				Fe I p	2. 76	276	
4085.309		31. 3		Fe I	3. 24	559	
4085.445r	7	1. 8		CN?	R 66	1,2	11
4085.574	10	2. 4		Gd II	0. 73	50	
4085.731r	7	1. 7		Zr II	0. 93	54	
4085.858r	7. 5	1. 8					
4085.984	55	13. 5	*u*	Fe I	4. 15	1073	
4086.134	32	7. 8	*u*	Cr II	3. 71	26	
4086.316	104	25. 4	*u,d?*	Co I	1. 88	58	
4086.713m	42	10. 3	*u*	La II	0. 00	10	
4086.838r	5	1. 2					
4086.965r	6	1. 5	*s*	Cr I?	3. 85		
4087.101m	81	19. 8	*u*	Fe I	3. 33	694	
4087.277	15	3. 7	*u*	Fe II p	2. 58	28	
4087.37 a	3. 5	0. 9					
4087.491r	2	0. 5					
4087.601	8	2. 0	*u,N*	Cr II	3. 10	19	
4087.705r	6. 5	1. 6		CN?	R 65	1,2	11
4087.798	19	4. 6	*u,N*	Fe I p—	3. 65	832	
				CN?	R 65	1,2	11
4087.94 a	6. 5	1. 6					
4088.050r	5. 5	1. 3					
4088.183r	5	1. 2					
4088.298r	3. 5	0. 9	*s,N*	Co I	0. 10	2	
4088.446r	0. 5	0. 1					
4088.564m	56	13. 7	*u*	Fe I	3. 64	906	
4088.727r	13	3. 2		Fe II p	2. 84	39	
4088.850r	8	2. 0		Cr II?	3. 10	19	
4089.049r	16	3. 9	*u,N*				
4089.224m	62	15. 2	*u*	Fe I	2. 95	422	
4089.418r	4	1. 0					
4089.598r	3	0. 7		Cr I	3. 85	260	
4089.785r	6	1. 5					
4089.961	21	5. 4	*u*	Mn I	4. 27		
4090.081	70	17. 1	*u*	Fe I	3. 40	700	
4090.188r	1. 5	0. 4					
4090.324	24	5. 9	*s,d?*	Cr I	2. 71	66	
				Fe I	1. 61	44	
4090.521	56	5. 1	*s*	Zr II	0. 76	29	
4090.573		9. 8		V I	1. 08	41	
4090.772	10	2. 4	*u*	Fe I p	3. 69	943	
4090.959	57	13. 9	*u*	Fe I	3. 37	695	
4091.085r	4	1. 0					
4091.22 a	3. 5	0. 9					
4091.438r	1	0. 2					
4091.557S	60	*15. 0*	*u*	Fe I	2. 83	357	
4091.678r	2. 5	0. 6					
4091.85 a	1. 5	0. 4					
4091.999r	8. 5	2. 1	*s,N*	Ca I	2. 93		
4092.098r	9	2. 2	*u?*				
4092.281	57	16. 9	*u*	Fe I	3. 63		
4092.396	108	26. 9	*s*	Co I	0. 92	29	
				(V I)	1. 19	52	
4092.516m	36	9. 3	*u*	Fe I	0. 91	18	
4092.669	115	28. 6	*s,d?*	Ca I—	2. 52	25	
				V I	0. 29	27	
4092.825r	12	3. 2	*u*	Co I	2. 01	59	
4092.892	6. 5	1. 7					
4093.034	12	2. 9	*u*	Ni I—	4. 23		
				Cr I	3. 85	260	
4093.15 a	4	1. 0		Hf II	0. 45	6	
4093.284r	6	1. 5	*u*				
4093.48 a	4	*1. 3*	*S*	V I	1. 18	52	
4093.650r	2	0. 5		Ni I	0. 17	1	
4093.990r	3	0. 7					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
4094.069r	3	0. 7					
4094.20 a	3. 5	0. 9		Tm I?	0. 00		
4094.304r	3	0. 7		Fe I			
4094.422	47	12. 0	*u*	Fe I			
4094.610r	7. 5	2. 1		CN	R 62	1,2	11
4094.698	23	5. 9	*u*	CH	P 8	1,1	3
4094.938S	100	25. 4	*s*	Ca I	2. 52	25	
4095.100r	11	2. 9					
4095.268	40	10. 2	*u*	Mn I Fe I	4. 19	1075	
4095.356	18	4. 9	*u*	Fe I			
4095.481	29	7. 6	*s*	V I	1. 06	41	
4095.644r	4. 5	1. 2		Fe I	3. 63	851	
4095.749r	8. 5	2. 2					
4095.816r	5. 5	1. 5					
4095.981m	99	25. 6	*s*?	Fe I	2. 59	217	
4096.108	67	17. 6	*u*	Fe I	3. 64	911	
4096.213	39	10. 7	*s*	Fe I p	0. 96	18	
4096.329r	11	2. 9					
4096.523r	15	4. 2					
4096.643r	45	3. 7		Zr II	0. 56	15	
4096.696r		9. 0	*s*	Fe I			16
4096.824r	5. 5	1. 5		CN	R 61	1,2	11
4096.941	39	13. 2		Fe I p CN	2. 43 R 61	173 1,2	11
4097.016r	95	2. 4		Fe I p	3. 43	700	
4097.086		23. 7	*u*	Fe I	3.28	558	
4097.237r	15	4. 2					
4097.32 a	2. 5	0. 7					
4097.460r	3. 5	1. 0					
4097.581r	7. 5	2. 1					
4097.650	19	5. 1	*s*	Cr I	2. 89	97	
4097.796r	5	1. 3		Ru I	1. 14	9	
4097.962	30	8. 3	*s*	Cr I Cr I	2. 89 2. 89	97 97	
4098.183m	113	30. 8	*u*	Fe I	3. 24	558	
4098.435r	6	1. 8	*s*				
4098.539	111	23. 0	*s,n*	Ca I	2. 52	25	
4098.594r		13. 4		Ca I (Gd II)	2. 52 0. 82	25 49	
4098.795r	3. 5	1. 1					
4098.901r	4. 5	1. 3		Gd II?	0. 60	49	
4099.048	19	5. 6	*s,d*	Fe I	3. 30 3. 25	600 651	17
4099.175	11	3. 4	*s,d*	Ti I CN	2. 17 R 60	207 1,2	17 11
4099.401r	4	1. 2					
4099.574r	4. 5	1. 5	*s*				
4099.788	57	*17. 8*	*S*	V I	0. 28	27	
4099.989	13	4. 6	*u*	Fe I p	3. 43	698	
4100.165m	58	19. 0	*w*	Fe I			
4100.345	26	9. 3	*s*	Fe I p	2. 85 4. 26	320 1103	
4100.508r	4	1. 6					
4100.578r	2	0. 9					
4100.747m	82	29. 8	*u*	Fe I (Pr II)	0. 86 0. 55	18 4	
4100.914	9. 5	4. 6	*u,N*	Fe I p— Nb I	2. 45 0. 05	173 1	
4101.096	13	7. 1	*u*?				17
4101.272m	47	25. 6	*u*	Fe I	3. 40	698	
4101.378r	1. 5	1. 1		CN	R 59	1,2	11
4101.484r	14	14. 9					
4101.682	18	43. 9	*u*	Fe I	2. 48	120	
4101.748m	3133	*746*	*S*	Hδ (In I)	10. 20 0. 00	1 1	
4102.167	15	10. 5	*S*	V I	1. 05	41	
4102.380	5	2. 7	*s*	Y I	0. 07	7	
4102.621r	3	1. 5					
4102.761r	2. 5	1. 1	*u*	Ni I p	4. 23	255	
4102.943m	106	35. 3	*u,N*	Si I	1. 91	2	
4103.19 a	1. 5	0. 6					
4103.315	12	4. 1	*u*	Dy II	0. 10		17
4103.463	8. 5	2. 9	*s*	CN	R 58	1,2	11,16
4103.611	28	9. 3	*s*	Fe I	3. 25 3. 65	650 831	17
4103.814r	3. 5	1. 1	*s*	Cr I	3. 12	180	
4103.988r	2	0. 6					
4104.133m	100	28. 3	*u*	Fe I	2. 83 3. 26	356 558	
4104.306r	13	3. 9					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4104.465	29	8. 5	*s,d*	Fe I V I?	2. 99 2. 14	422	
4104.54 a	5	1. 5					
4104.654r	9. 5	2. 9					
4104.748	24	6. 8	*s*	V I	1. 95	112	
4104.862	11	3. 4	*s*	Cr I	2. 97	108	
4104.944	54	14. 9	*u*	Fe I	3. 33	694	
4105.063r	8	2. 4		Fe I p	3. 43	700	
4105.164	61	*16. 3*	*s*	V I	0. 27	27	
4105.356	15	4. 1	*u*	Mn I	4. 33	47	
4105.654r	2. 5	0. 7		CN	R 57	1,2	11
4105.726r	3. 5	1. 0		CN	R 57	1,2	11
4105.828r	2	0. 6	*S*	Tm I?	0. 00		16
4106.05 a	1. 5	0. 4		Cr I	3. 11	180	
4106.141r	0. 5	0. 1					
4106.266m	64	17. 0	*s,n*	Fe I	2. 59	217	16
4106.432m	74	19. 5	*u*	Fe I	3. 40	697	
4106.585	14	3. 7					
4106.730	15	3. 8	*u*	CH	P 9	1,1	3
4106.944	12	3. 2	*u?,N*				17
4107.10 a	1. 5	0. 4					
4107.297	8. 5	2. 2	*s*				17
4107.492S	125	31. 9	*u*	Fe I (V I)	2. 83 1. 19	354 52	
4107.662r	1. 5	0. 4					
4107.781r	4	1. 1		CN Fe I p	R 56 3. 60	1,2 831	11
4107.886	6	1. 6		CN	R 56	1,2	11
4108.027	14	3. 6	*u*				
4108.134	39	10. 0	*s*	Fe I	3. 24	559	
4108.301r	6	1. 6		Fe I p	3. 69	833	
4108.394r	9	2. 3	*s*	Cr I Zr I	2. 71 0. 54	65 32	
4108.532	80	20. 2	*s*	Ca I	2. 71	39	
4108.75 a	2. 5	0. 6					
4108.907	25	6. 6	*w*				
4109.062m	75	19. 0	*u*	Fe I	3. 29	558	
4109.220r	2	0. 5					
4109.450	39	*9. 5*	*s*	Nd II	0. 32	10	
4109.582	18	4. 6	*s*	Cr I	2. 71	65	
4109.751r	134	17. 8	*s*	V I	0. 26	27	
4109.800		23. 2		Fe I	2. 84	357	
4109.960r	7	2. 0		CN	R 55	1,2	11
4110.042	11	2. 9		Zr II	0. 76	30	
4110.299	8. 5	2. 2	*s*	Ca II— Fe I	7. 51	17	17
4110.393r	3. 5	0. 9		Ce II	1. 09	29	
4110.537m	97	24. 4	*s*	Co I	1. 05	29	
4110.700r	4. 5	1. 1	*s,N*				
4110.867	65	16. 3	*s*	Mn I Cr I?	4. 33 2. 90	47 97	
4111.000	44	10. 9	*o*	Cr II	3. 10 3. 76	18 26	
4111.202r	1	0. 2					
4111.358m	42	*10. 2*	*s*	Cr I	2. 90	97	
4111.47 a	4. 5	1. 1		Gd II?			
4111.589r	6	1. 5					
4111.680	14	3. 6	*s?*	Cr I	2. 90	97	17
4111.787	106	26. 3	*s*	V I	0. 30	27	
4111.986r	11	2. 7	*s,N*				
4112.081r	14	3. 4		Fe I	3. 55	766	
4112.174r	6. 5	1. 6		Fe I p	2. 69	275	
4112.323m	69	17. 0	*u*	Fe I	3. 40	695	
4112.450r	7	1. 7		Ni I	4. 15		
4112.569	9. 5	2. 3		Cr II	3. 10	18	
4112.716	43	*9. 7*	*s*	Ti I	0. 05	9	
4112.914r	114	10. 0	*u*				
4112.958		22. 2		Fe I	4. 18	1103	
4113.094r	8. 5	2. 1					
4113.221	29	7. 3	*u,N*	Cr II	3. 10	18	17
4113.528	8	*2. 1*	*S*	V I	1. 22	52	17
4113.681	12	2. 9	*s*				
4113.866	11	2. 7	*u*	Mn I	4. 35	47	
4113.98 a	5	1. 2	*u*				
4114.118r	16	3. 9		CN CN	R 53 R 53	1,2 1,2	11 11
4114.308r	2. 5	0. 6					
4114.451m	100	*25. 5*	*u*	Fe I	2. 83	357	
4114.618r	9	2. 2					
4114.780	9	2. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4114.942	65	15. 8	*u*	Fe I	3. 37	695	
4115.177m	98	23. 8	*s*	V I	0. 29	27	
4115.376	11	2. 7	*s*	Ce II	0. 92	22	16
4115.562r	2	0. 5					
4115.681r	1	0. 2					
4115.808r	5	1. 2	*s*	Ir I?	1. 73		
4115.890	15	3. 9	*s*	Fe I p	3. 64	910	
4115.980	35	*8. 0*	*u*	Ni I	4. 15	255	
4116.123r	4. 5	1. 1	*u*				
4116.208r	6. 5	1. 6		CN	R 52	1,2	11
4116.321r	5	1. 2					
4116.481	58	14. 1	*s*	V I	0. 28	27	
4116.553	14	4. 0					
4116.60 m			*S*	V I p	0. 26	27	13
4116.704	35	*7. 3*	*u*	V I—	0. 27	27	
4116.821r	8	2. 1					
4116.957	34	8. 2	*u*	Fe I	3. 24	558	
4117.164r	0. 5	0. 1					
4117.261r	2	0. 5					
4117.434r	2. 5	0. 6					
4117.56m			*S*				13
4117.588r	9	2. 2					
4117.741r	8	1. 9		Fe I	3. 65	833	
4117.856	76	18. 4	*u*	Fe I	3. 42 4. 28	700 1103	17
4117.995r	7	1. 7					
4118.153	27	6. 6	*s,N*	Ce II—	0. 70	11	
4118.194r	13	3. 4	*s?*	V I	1. 95	112	
4118.428r	8	2. 1	*s*				
4118.555m	154	37. 4	*u*	Fe I (Sm II)	3. 57 0. 66	801 54	
4118.782	148	35. 9	*u*	Co I	1. 05	28	
4118.895	75	26. 0	*u*	Fe I	3. 26	559	
4119.054r	16	3. 9	*s,d?*				
4119.259	12	2. 9	*u*				
4119.400m	72	17. 5	*u*	Fe I			
4119.526	26	7. 1	*s*	Fe II p	2. 54	21	16
4119.671	23	5. 6	*s,d?*	Fe I p— CH	2. 86 P 10	320 1,1	17 3
4119.797	24	5. 8	*u*	Ce II?	1. 09	22	
4119.918	30	7. 3	*u*				
4120.048	8. 5	2. 1	*s*	Ti I	2. 30	253	
4120.212S	97	23. 5	*u*	Fe I	2. 99	423	
4120.472r	10	2. 4	*S*				
4120.622	21	*4. 9*	*s*	Cr I	2. 71	65	
4120.773r	4. 5	1. 1	*s?*				
4120.838	13	*2. 9*	*u*	Ce II	0. 32	112	
4121.06 a	7. 5	1. 8	*u*				
4121.155r	4. 5	1. 1					
4121.325m	125	30. 3	*u*	Co I	0. 92	28	
4121.495	8	1. 9	*s*	Zr I—	0. 54	32	
4121.650	8. 5	2. 1	*s*	Ti I— Rh I?	0. 97	9	
4121.810m	94	22. 8	*u*	Fe I— Cr I	2. 83 2. 98	356 108	
4121.990	16	3. 9	*s*	Ni I— Fe I p	3. 66 3. 55	765	
4122.150	30	7. 3	*s*	Ti I— Cr I	2. 66 2. 71	296 65	
4122.243r	7	1. 8		CN	R 49	1,2	11
4122.358	10	2. 4		Mn I	4. 36	47	
4122.523m	86	20. 8	*u*	Fe I	2. 84	356	
4122.665	63	*14. 8*	*w,n*	Fe II	2. 58	28	
4122.783r	10	2. 4		Mn I	4. 34	47	
4122.874r	4	1. 0					
4123.031r	7. 5	1. 8	*s,N*				16
4123.234m 4123.277r	54	11. 2 2. 4	*s*	La II Ti I	0. 32 2. 78	41 302	
4123.388	24	5. 8	*u*	Cr I	3. 00	108	
4123.514 4123.561r	73	17. 2 1. 2	*s,d*	V I Ti I	0. 27 2. 68	27 296	
4123.753m	109	26. 4	*u*	Fe I	2. 61 2. 99	217 422	
4123.878r	23	5. 8	*u?*	Ce II	0. 86	60	
4123.939	16	4. 9	*u*	—Sm II?	0. 48	46	
4124.108r	9	2. 2	*s*	V I	1. 22	52	
4124.207r	6. 5	1. 6	*u*				
4124.358r	2	0. 5		Fe I?			
4124.489	31	7. 5	*s*	Fe I	3. 64		

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
4124.630r	5. 5	1. 3					
4124.786	33	*7. 3*	*u*	Fe II	2. 54	22	
4124.915	18	*4. 1*	*u*	Y II	0. 41	14	
4125.133r	1. 5	0. 4					
4125.228	6. 5	1. 6		Fe I p	2. 45	173	
4125.377r	4	1. 0					
4125.460	10	2. 4		Cr I?	4. 21		
4125.626	100	19. 9	*u*	Fe I	4. 22	1103	
4125.694		6. 3	*u*				
4125.886m	75	18. 2	*s*?	Fe I	2. 84	354	
4126.048r	5. 5	1. 5	*s*	—Cr I	2. 71	65	
4126.191m	113	27. 4	*u*	Fe I	3. 33	695	
4126.380	6	1. 5					
4126.519	47	*10. 9*	*s*	Cr I	2. 54	35	
4126.646r	7	1. 7					
4126.857	36	*7. 3*	*s*	Fe I	2. 84	354	
4126.918	7	1. 7	*s*	Cr I	2. 71	66	
4127.073r	6. 5	1. 6	*s*	Ti I? p	1. 46	114	
4127.275	32	7. 8	*u*?	Cr I	2. 54 4. 10	35	17
4127.376	16	4. 1	*u*?	Ce II	0. 68	4	17
4127.537r	121	2. 7	*s*	Ti I	2. 69	296	
4127.613m		27. 6	*u*	Fe I (Cr I)	2. 86 2. 71	357 65	
4127.803m	97	23. 5	*u*	Fe I	3. 28 3. 41	558 727	
4127.941r	9	2. 3		Fe I			
4128.098	107	25. 9	*s*	V I (Si II)	0. 28 9. 83	27 3	
4128.309	12	2. 9	*S*	Y I	0. 07	5	
4128.391r	8	1. 9	*w*?	Cr I	4. 10		
4128.506r	3. 5	0. 8					
4128.595r	2. 5	0. 6					
4128.742	50	12. 1	*w*	Fe II	2. 58	27	
4128.88 a	10	2. 4		Rh I V I	0. 97 1. 94	8 112	
4128.975r	9	2. 2					
4129.184	84	20. 3	*s*	||Cr I Fe I	2. 91 3. 42	97 698	
4129.324r	13	3. 1					
4129.463	57	13. 8	*u*	Fe I	3. 40	695	
4129.505r	3. 5	1. 0					
4129.608r	9. 5	2. 4					
4129.724	54	*12. 1*	*s,d, NN*	Eu II	0. 00	1	
4129.958	18	4. 8	*u*				
4130.038	64	15. 5	*s*	Fe I	1. 56 3. 11	44 486	
4130.139r	4	1. 0		CN	R 45	1,2	11
4130.249r	3	0. 7					
4130.368r	11	2. 7		Gd II	0. 60 0. 73	19 49	
4130.455	19	4. 6	*s*?	Cr I	2. 91	97	
4130.657m	45	10. 9	*u,d*	Ba II	2. 72	4	
4130.695r	5	1. 3		Ce II	0. 56	209	
4130.856	26	6. 3	*u,N*	—Si II	9. 84	3	
4130.999r	7	1. 7					
4131.117	49	11. 9	*s*	Mn I (Ce II)	4. 23 0. 33	112	
4131.267r	6. 5	1. 6	*s*	Ti I	2. 30	253	
4131.348	21	5. 1	*s*	Cr I	3. 84	261	
4131.454r	5	1. 2		Mn I	3. 38	37	
4131.596r	1. 5	0. 4		Fe I			
4131.760	23	7. 0	*u*	Fe I p	4. 22	1075	
4131.798	4	1. 7		CN	R 44	1,2	11
4131.957m	60	44. 0	*s*	Fe I p Fe I p	3. 26 3. 42	558 695	
4132.067m	404	*104*	*S*	Fe I (V I)	1. 61 0. 29	43 27	
4132.283r	5	1. 8		Gd II	0. 60	49	
4132.409	19	5. 6	*u*	Cr II	3. 76	26	
4132.538	77	20. 1	*u*	Fe I	4. 26	1103	
4132.711	40	10. 2	*s*				
4132.908m	123	29. 8	*u*	Fe I (Sc I)	2. 84 1. 94	357 20	
4133.133r	3	0. 7					
4133.290r	2	0. 5					
4133.357	11	2. 7	*u*	Nd II	0. 32	19	
4133.474r	7	1. 7					
4133.610m	48	11. 6	*w*	Fe I			
4133.722r	6	1. 7		CN?— CH?	R 43 R 35	1,2 0,0	11 4

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4133.815	108	5. 6		Ce II	0. 52 0. 86	4 4	
4133.858		24. 0	*u,n*	Fe I	3. 37	698	
4134.009	30	7. 5	*u*				
4134.196	22	5. 3		Fe I	2. 61	217	
4134.347	186	20. 3	*s*	Fe I	0. 00	3	
4134.438		28. 0	*s*	Fe I	3. 02 3. 42	482 697	15
4134.524r		6. 5	*s*	V I	0. 30	27	
4134.685m	129	31. 2	*u*	Fe I	2. 83	357	
4134.897	26	6. 3	*s*				17
4135.037	38	9. 2	*u*	Mn I	4. 25		
4135.173r	6	1. 5		CH?	R 33	0,0	4
4135.297	26	6. 3	*s,N*	Rh I?— Nd II	0. 71		
4135.458	19	4. 6	*u,N*	CN? CH? (Ce II)	R 42 R 33 0. 56	1,2 0,0 188	11 4
4135.686r	7	1. 8	*s*	Zr I—	0. 63	50	17
4135.760	22	5. 3	*s*	Fe I Os I	4. 19 0. 52	1073 3	
4135.938r	9	2. 2					
4136.093r	1	0. 2	*S*	V I?	1. 87		
4136.293r	2. 5	0. 6					
4136.375r	4. 5	1. 1	*s*	V I?	0. 29	26	
4136.527S	73	17. 6	*s*	Fe I	3. 37	694	
4136.738r	6	1. 5					
4136.881r	4. 5	1. 1	*s*	Ti I?	2. 25	221	
4137.005m	104	25. 1	*u*	Fe I	3. 41	726	
4137.120r	7. 5	1. 9		Nb I?	0. 00	1	
4137.274	48	11. 6	*s*	Ti I (Mn I)	2. 32 3. 38	253 37	
4137.415	59	14. 3	*u*	Fe I	4. 28	1103	
4137.655	33	*8. 0*	*s*	Ce II Fe I	0. 52	2	
4137.773r	11	2. 8					
4137.886r	12	2. 9	*s*				
4137.979	26	6. 3	*u*	Fe I	2. 83	320	
4138.136	18	4. 3	*w*				
4138.20 a	6	1. 4					
4138.360	34	8. 2					
4138.494	13	3. 1		Ni I	4. 17	237	
4138.618r	4	1. 0					
4138.756r	8. 5	2. 1		CN	R 31	2,3	11
4138.853	17	4. 1	*u*	Fe I	2. 28	117	
4138.987r	10	2. 4		—CN	R 40	1,2	11
4139.089	27	6. 5	*u*	CN—	R 40	1,2	11
4139.225r	14	3. 4	*u*				
4139.371r	14	3. 4		CH	R 31	0,0	4
4139.458r	8	1. 9		Co I	2. 04	94	
4139.610	14	3. 4		CH	R 31	0,0	4
4139.732r	3. 5	0. 8		Fe I Nb I	0. 13	1	
4139.936S	86	20. 8	*u*	Fe I	0. 99	18	
4140.062r	1	0. 2					
4140.162r	4	1. 0	*u*	CN?	R 30	2,3	11
4140.247	18	4. 3	*u*	Fe I— Sc I	2. 95 1. 95	418 20	
4140.407	68	16. 4	*u*	Fe I p	3. 42	695	
4140.457r	10	2. 9		Fe I	3. 40	694	
4140.54 a	5. 5	1. 3					
4140.755	18	4. 3		CN	R 39	1,2	11
4140.831r	6. 5	1. 6	*u*	CN	R 39	1,2	11
4141.056	18	4. 3	*u*	Mn I	4. 26		
4141.311r	5	1. 2		Fe I?	3. 02	480	
4141.529	18	4. 3					
4141.652	19	4. 6		CN?—	R 29	2,3	11
4141.755r	3	0. 7		La II	0. 40	40	
4141.871m	68	16. 4	*u*	Fe I	3. 02	422	
4142.026	6. 5	1. 6	*s*				
4142.177	51	12. 3	*w*	Ni I Cr I	3. 90 4. 45	212	
4142.308	43	10. 4	*u*	Ni I			
4142.407r	10	2. 9	*s*	Ce II	0. 70	10	16
4142.474	45	11. 6	*u*	Cr I	3. 12	179	
4142. 588	70	16. 9	*u*	Fe I	4. 30	1103	
4142.768r	8	1. 9					
4142.842	22	5. 3	*s*	Y I	0. 00	5	
4142.944	28	6. 8	*s*	V II— Ni I	3. 97 4. 09	226	
4143.041	23	6. 0	*s*	Ti I	2. 30	253	
4143.160r	12	3. 1		Pr II	0. 37	4	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4143.274r	5. 5	1. 6		Ti I	2. 29	253	
4143.416r	134	36. 2	*u*	Fe I	3. 05	523	
4143.508r	35	16. 9	*w*?	Fe I p	3. 37	697	
4143.626r	6. 5	2. 7					
4143.747r	12	8. 0					
4143.878m	466	*121*	*S*	Fe I (Fe I)p	1. 56 2. 86	43 354	
4143.974r	41	1. 7					
4144.075		8. 2	*u,N*				
4144.197r	15	5. 1		|Ru I— CN	1. 00 R 37	9 1,2	11
4144.242	6	1. 8		CN	R 37	1,2	11
4144.33 a	1	0. 2	*S*				
4144.387	6. 5	1. 8					
4144.519	13	3. 4	*s,d*				17
4144.668r	6. 5	1. 6					
4144.768	14	3. 4		CN?	R 27	2,3	11
4144.855	11	2. 7					
4145.005m	19	*3. 6*	*s,d*	Ce II—	0. 70	9	17
4145.086r	2. 5	0. 6					
4145.201	38	*8. 2*	*u*	Fe I	2. 69	274	
4145.308r	6	1. 4					
4145.442	14	3. 6	*w*				
4145.559	32	7. 7	*w*	—CH	R 29	0,0	4
4145.760	57	*13. 0*	*w*	—Cr II	5. 32	162	
4145.863r	6	1. 7		CN?	R 36 R 26	1,2 2,3	11
4145.975	23	5. 5	*u*				
4146.068	72	17. 4	*u*	Fe I	2. 99	422	
4146.234a	18	4. 3	*s,d*	Cr I	3. 84	260	17
4146.384	5	1. 2					
4146.500	10	2. 4	*w*				
4146.689	19	4. 6		—Cr I	2. 97	107	
4146.835	6	1. 4					
4146.990	45	10. 8	*w*				
4147.213	15	3. 6		CN?	R 25	2,3	11
4147.347	52	12. 5	*w*	Fe I	3. 33	693	
4147.492	38	8. 2	*w*	Fe I p	3. 60	832	
4147.520r		1. 7		Mn I	3. 37	37	
4147.675m	110	26. 5	*s*	Fe I	1. 48	42	
4147.863r	4. 5	1. 1					
4147.975r	2. 5	0. 6					
4148.169	2. 5	0. 6					
4148.252	6	1. 4		Fe I p	3. 65	832	
4148.395	8. 5	2. 0		CN?	R 24	2,3	11
4148.493	13	3. 1	*u*				
4148.618r	3. 5	0. 8					
4148.720r	6. 5	1. 7	*u*?	Ni I	3. 46	89	
4148.783	20	4. 8	*u,N*	Mn I	4. 27		
4148.917	5	1. 2		Ce II?	1. 09	28	
4149.128	21	6. 0	*w,N*?				
4149.202	62	14. 9	*u*	Zr II	0. 80	41	
4149.370m	111	26. 8	*u*	Fe I	3. 33	694	
4149.495	38	7. 0	*u,N*	Fe I p	3. 69	942	
4149.538		2. 9		CH	R 28	0,0	4
4149.699r	3. 5	1. 0		CH	R 27	0,0	4
4149.765	67	16. 1	*s*	Fe I	0. 05	3	
4149.897	14	3. 6					
4149.979	7. 5	1. 9					
4150.06 a	4. 5	1. 1		—V II p	2. 03	37	
4150.254	75	18. 1	*s*	Fe I	3. 43	695	
4150.375	10	3. 1	*o*?	Ni I	3. 94	178	
4150.445	43	10. 4	*w*	Co I—	0. 58	16	
4150.548r	9. 5	2. 3	*s*	Ti I	2. 30	253	
4150.706r	9	2. 2		—CN?	R 33	1,2	11
4150.801	11	2. 7	*u*	—Ti I?	2. 24	221	
4150.970	43	10. 4	*s*	||Ti I Zr II	2. 17 0. 80	206 42	
4151.066r	5	1. 2	*s*				
4151.201r	2	0. 5					
4151.270r	2	0. 5					
4151.30 a to 4151.50 a	5	1. 2		Fe I—			
4151.567r	4	1. 0		Cr I?	2. 97		
4151.666	6. 5	1. 6					
4151.768	36	8. 7	*w*	Fe II p	2. 28	12	
4151.950	62	14. 9	*u,d*	|Fe I La II	3. 55 0. 23	764 40	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4152.092	68	27. 2	*u*	Fe I p	4. 07	1049	
4152.176	107	25. 8	*s*	Fe I	0. 96	18	
4152.317	16	3. 8		CN?	R 32	1,2	11
4152.36 m			*S*	Sc I	1. 97	20	13
4152.388r	8. 5	2. 0		CN	R 32	1,2	11
4152.527	8	1. 9					
4152.601	8	1. 9		Nb I	0. 09	1	
4152.766	22	5. 3	*u*	Cr I	3. 85	261	
4152.913	7. 5	1. 8					
4152.97 a	2. 5	0. 6		Fe II p	2. 89	45	
4153.066	9	2. 2	*s,N*	Cr I	2. 54	35	
4153.124r	1. 5	0. 4					
4153.242	1	0. 2					
4153.389m	36	8. 7	*u,d*?	CH Fe I	R 27	0,0	4
4153.494	3	0. 7					
4153.620	24	5. 8	*s*	CH—	R 27	0,0	4
4153.820	21	8. 7	*u*	Cr I	2. 54 2. 54	35 35	
4153.906	138	33. 2	*u*	Fe I	3. 40	695	
4154.105	69	16. 6	*u*	Fe I	3. 40	694	
4154.204r	6. 5	1. 7					
4154.287	18	4. 8	*u*	CH	R 26	0,0	4
4154.379	23	7. 0		CH	R 26	0,0	4
4154.505m	126	30. 3	*u*	Fe I	2. 83	355	
4154.665	17	4. 6	*w*				
4154.814S	120	28. 9	*u*	Fe I	3. 37	694	
4154.966r	8	1. 9					
4155.052	4. 5	1. 1					
4155.199r	3. 5	0. 8		Sm II?	0. 54	50	
4155.316r	2. 5	0. 6					
4155.428r	6. 5	1. 6		—CN?	R 30	1,2	11
4155.523r	6	1. 4		Mn I	3. 38	37	
4155.641	7	1. 7					
4155.715r	2. 5	0. 6					
4155.915	35	8. 4	*w*	Fe I			
4156.083	30	7. 2	*s*	Nd II	0. 18	10	
4156.235	103	7. 7	*u*	Zr II	0. 71	29	
4156.307		20. 4	*u*	Fe I			
4156.455	51	12. 3	*u*	Fe I	3. 37	693	
4156.604	80	3. 1					
4156.672		17. 3	*u*	Fe I	2. 95	419	
4156.806m	126	30. 3	*u*	Fe I	2. 83	354	
4157.004	26	6. 5		Mn I	4. 64		
4157.195	26	5. 3	*s,N*				
4157.234		1. 1					
4157.427	6	1. 4					
4157.577r	8	1. 9					
4157.788m	127	30. 5	*u*	Fe I	3. 42	695	
4158.007	56	7. 0		CH	R 26	0,0	4
4158.081r		7. 0		CN—	R 16	2,3	11
4158.267r	3. 5	0. 8	*s*	Ti I?			
4158.376	34	6. 0	*s,d*	Fe I			17
4158.425		2. 4		Co I— Fe II p	2. 87 2. 28	144 12	
4158.539r	6	1. 4		Ni I	4. 26		
4158.798m	103	24. 8	*u*	Fe I	3. 43	695	
4159.044	12	3. 1		Ce II?	1. 03	246	
4159.186m	114	26. 7	*w*	(CH)	R 25	0,0	4
4159.240r		0. 6		CH	R 25	0,0	4
4159.401r	5. 5	1. 3					
4159.479r	1. 5	0. 4	*s*				
4159.645	13	3. 1	*s*	Ti I— V I	2. 16 0. 29	206 25	
4159.865	18	4. 3	*u,N*	CN—	R 27	1,2	11, 17
4160.092	24	5. 8	*w*				
4160.246	19	4. 8		CN— Fe II? p	R 14 4. 74	2,3 149	11
4160.368	64	15. 4	*w*	Fe I—			
4160.559	30	7. 2	*s*	Fe I	2. 95	419	
4160.778	20	4. 8	*u*	Fe I p	4. 21	1116	
4160.928r	2	0. 5					
4161.085m	52	12. 5	*u*	Fe I	3. 37	689	
4161.208	58	13. 9	*w*	Zr II	0. 71	42	
4161.310r	7	1. 9		Ni I	3. 19	86	
4161.408	26	6. 7	*u*	Cr I	4. 45	305	
4161.517m	96	23. 1	*u*	Fe I Ti II	3. 02 1. 08	422 21	
4161.670	7. 5	1. 8					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4161.799m	30	7. 2	*w*	Sr II	2. 94	3	
4161.949r	4. 5	1. 1					
4162.120r	4	1. 0					
4162.292	6	1. 4		CN	R 12	2,3	11
4162.460	29	7. 0	*o?*	|CH—	R 25	0,0	4, 17
				CN?	P 5	3,4	11
4162.660	34	8. 2	*u*	CH	R 25	0,0	4
				CN?	R 25	1,2	11
4162.908r	4. 5	1. 1	*u,N*	Fe I p	3. 02	476a	
4162.984r	3	0. 7		CN	P 6	3,4	11
4163.121r	1	0. 2		—Cr I	2. 54	35	
4163.289r	3. 5	0. 8		CN	R 11	2,3	11
4163.356r	7	1. 7		Fe I p	4. 19	1073	
4163.480	42	10. 1	*u,d*	CN—	P 7	3,4	11, 15 17
4163.654S	107	25. 7	*u*	||Ti II	2. 59	105	
				|Cr I	2. 54	35	
					2. 54	35	
				Fe I	2. 69	274	
					3. 42	699	
4163.799r	6	1. 4					
4163.909r	5. 5	1. 3		CN?			
4164.020r	15	3. 6	*w?*	V II	2. 04	37	
4164.153r	5	1. 2	*s*	Ti I	1. 87	163	
4164.263	66	8. 9	*u*	Fe I p—	3. 42	694	16
				CH	R 24	0,0	4
4164.330		7. 9	*u*	CH	R 24	0,0	4,16
4164.513r	3	0. 7					
4164.642	19	4. 6	*s*	Ni I	0. 42	28	
				(Nb I)	0. 05	1	
4164.781	24	5. 8	*s*	Fe I	2. 99	418	
4164.961r	9. 5	2. 3					
4165.119	41	7. 4	*s,NN*	Mg I	4. 34		17
4165.168r		3. 1		CN—	R 9	2,3	11
				Sc I	1. 99	20	
4165.391m	84	20. 2	*u,d?*	—Fe I	3. 64		
4165.516	5. 5	1. 8		Cr I	4. 45	305	
4165.595	48	11. 5	*u*	Ce II—	0. 91	10	
4165.791r	5. 5	1. 3					
4165.999	9	2. 2	*s*	|Ba II	2. 72	4	17
				CN—	P 38	3,4	11
4166.100	8	1. 9		CN	R 8	2,3	11
4166.193	2. 5	0. 6		CN	P 37	3,4	11
4166.298	20	4. 1	*s*	—|Ti I	1. 88	163	
4166.352r		0. 7		Zr I	0. 69	45	
4166.532r	4	1. 0		CN?	P 36	3,4	11
4166.664r	21	5. 0	*s,d*				
4166.854	26	6. 5					
4166.965	37	8. 9	*u?*	Ni I	4. 10		17
4167.038r	8	2. 4		CN	P 34	3,4	11
4167.173	24	8. 2		CN	P 33	3,4	11
4167.277m	200	48. 0	*w*	Mg I	4. 34	15	
4167.400	14	5. 8		CH	R 24	0,0	4
4167.52 m	11	3. 4	*S*	Y I	0. 07	7	
4167.571	54	13. 2	*u*	CH	R 24	0,0	4
4167.722	44	10. 6	*u*				
4167.864	50	12. 7	*u*	Fe I	3. 30	599	
4167.968	67	16. 1	*u*	Fe I	3. 64		
4168.120r	5. 5	1. 3		Nb I	0. 00	1	
4168.177r	3. 5	0. 8					
4168.287r	1	0. 2		Cr I?	3. 84	261	
4168.475r	13	3. 1					
4168.620S	51	12. 2	*w*	Fe I	3. 37	689	
4168.794	5. 5	1. 3	*s*				16
4168.950	55	13. 2	*s?*	Fe I	3. 42	694	
4169.093	8	1. 9	*s*	Fe I p	1. 01	18	
4169.252	7. 5	1. 8	*w?*	CN?	R 20	1,2	11
4169.336	10	2. 4	*s*	Ti I	1. 89	163	
4169.469	9	2. 2	*s*	CN?—	R 4	2,3	11, 17
				Sm II	0. 25	24	
4169.615	54	12. 9	*u,d?*	CH—	R 23	0,0	4
				CH	R 23	0,0	4
4169.765	52	12. 5	*u*	Fe I	3. 40	693	
4169.853	17	4. 3		Cr I	4. 10	278	
4169.986	4. 5	1. 1		Fe II p	2. 28	12	
4170.142	16	3. 8	*u*				
4170.210	15	3. 8		Cr I	4. 10	278	
4170.347r	1. 5	0. 4					
4170.485	7. 5	1. 8		CN	R 19	1,2	11
4170.635	8	1. 9	*s,d*	Cr II	3. 10	18	
4170.740r	4. 5	1. 1					
4170.912m	97	23. 2	*u*	Fe I	3. 02	482	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4171.050	92	22. 0	*u*	Ti I—	2. 15	206	
4171.273r	12	2. 9					
4171.432	11	2. 6					
4171.558	8	1. 9	*u,N*				
4171.695	73	17. 5	*u*	‖Fe I Cr I	3. 69 3. 85	941 261	
4171.908	90	21. 6	*u*	Fe I Ti II	3. 30 2. 60	650 105	
4172.053	42	13. 9	*s*	Ga I	0. 10	1	
4172.131	99	23. 7	*u*	Fe I	3. 25	649	
4172.287r	4	1. 0					
4172.349r	6	1. 4					
4172.482	48	12. 0	*u*	CH	R 23	0,0	4
4172.588r	108	5. 8	*w*	|Ti I Cr II?	1. 88 3. 10	163 18	
4172.644		25. 4		Fe I	3. 33	689	
4172.759	110	26. 4	*s*	Fe I	0. 96	19	
4172.885r	4. 5	1. 2		CN	R 17	1,2	11
4172.975	49	11. 7	*w*	Fe I p	3. 64 4. 22	909 1073	
4173.149r	11	2. 6		Fe I p	3. 40	698	
4173.323m	76	18. 2	*s*	Fe I	2. 84	355	
4173.470	90	21. 6	*w*	Fe II	2. 58	27	
4173.542	59	21. 8		Ti II	1. 08	21	
4173.681r	7	1. 7					
4173.790r	2	0. 5					
4173.933m	85	20. 4	*s*	Fe I	0. 99	19	
4174.077	40	9. 8	*u*	|Ti II Ti I	2. 60 0. 90	105 55	
4174.15 m	3	0. 7	*S*	Y I	0. 07	6	
4174.183r	2	0. 5		Fe I			
4174.317	17	4. 3	*u,N*	Mn II—	1. 81	2	
4174.405	33	7. 9	*w*	Fe I	3. 57	799	
4174.486r	6. 5	1. 6		Ti I	2. 23	220	
4174.646r	2. 5	0. 6					
4174.812	33	9. 8	*s*	Cr I			
4174.917m	103	24. 7	*s*	Fe I	0. 91	19	
4175.130	66	15. 8	*w,N*	CH— CN	R 22 R 15	0,0 1,2	4 11
4175.222r	11	2. 9		Cr I	3. 85	261	
4175.332	16	3. 8					
4175.464r	7. 5	1. 8					
4175.643m	110	26. 3	*u*	Fe I	2. 84	354	
4175.780r	5	1. 2					
4175.910	45	*9. 4*	*u*	‖Fe I p Cr I	3. 40 3. 00	694 106	
4176.061r	6	1. 4					
4176.267	8. 5	2. 0		CN— CN	R 14 R 14	1,2 1,2	11 11
4176.411	19	4. 8		Fe II? p	4. 74	149	
4176.577	124	29. 7	*u*	Fe I	3. 37	689	
4176.872	25	6. 0	*w*?				
4176.990	10	2. 4		CN	P 7	2,3	11
4177.080	27	6. 5	*s*	Fe I	3. 33	690	
4177.195r	2	0. 5		Cr I?	3. 01	133	
4177.332	29	6. 9	*s*	Nd II— Ti I	0. 06 1. 89	10 163	
4177.421r	3	0. 8		CN	P 8	2,3	11
4177.537r	151	20. 8	*s*	Y II	0. 41	14	
4177.611r		20. 8		Fe I	0. 91	18	
4177.698	41	13. 6	*o*	Fe II p	2. 54	21	
4177.849	48	11. 5	*w,N*	|CH— CN	R 22 P 9	0,0 2,3	4 11
4177.999r	83	2. 4		CH	R 22	0,0	4
4178.059		18. 2	*w*	Fe I			
4178.235	15	3. 6		CN	P 10	2,3	11
4178.382	25	6. 0	*s*	CN— V II	R 12 1. 69	1,2 25	11, 17
4178.479	16	4. 1					
4178.625	16	3. 8	*u*	CN	P 11	2,3	11
4178.859S	79	18. 9	*w*	Fe II	2. 58	28	
4178.944	7. 5	1. 9		CN	P 12	2,3	11
4179.057	6. 5	1. 6		Cr I	3. 85	250	
4179.198r	49	3. 8		—Co I?	2. 88	144	
4179.249		8. 8	*u,N*	|Cr I	3. 11 3. 85	179 250	
				CN?	P 13	2,3	11
4179.383	126	30. 2	*s*	–‖V I Cr II	0. 30 3. 83	25 26	
4179.578	15	3. 6	*u*	CN	P 34	2,3	11, 16
4179.674	2. 5	0. 6		Fe I			
4179.811	14	3. 3	*u*	Zr II CN	1. 66 P 33	99 2,3	16 11

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4179.86 m			*S*	Ti I	2. 17	206	13
4179.998r	10	0. 7		CN Cr I?	P 32 4. 62	2,3	11
4180.045		1. 7		CN	P 16 P 32	2,3 2,3	11
4180.154	3	0. 7		CN	P 31	2,3	11
4180.242	6	1. 4		CN	P 31	2,3	11
4180.403	46	11. 0	*u*	Fe I	2. 73	274	
4180.571r	6. 5	1. 6		CN	P 19 P 29	2,3 2,3	11
4180.678r	6. 5	1. 6		CN	P 28	2,3	11
4180.811	80	19. 1		CH	R 21	0,0	4
4180.904r	12	3. 3		CN— CN	P 22 P 26 P 23 P 25	2,3 2,3 2,3 2,3	11 11
4180.99 a	4	1. 0		CN	P 24	2,3	11
4181.083	5	1. 2					
4181.189	13	3. 1		Fe I	3. 63	908	
4181.353	10	2. 4		CN	R 9	1,2	11
4181.551	62	14. 8	*u*	Fe I	3. 55	763	
4181.764m	148	35. 4	*u*	Fe I	2. 83	354	
4181.974	93	22. 2	*u*				
4182.216r	26	6. 2		—CN	R 24	0,1	11
4182.387m	88	21. 0	*u*	Fe I	3. 02	476a	
4182.589	7	1. 7	*s*	V I	0. 28	24	
4182.763	63	15. 1	*u*	Fe I	3. 42	694	
4182.851	12	3. 1					
4183.008	36	8. 6	*u*	Fe I	3. 40	697	
4183.186	9. 5	2. 3		Fe II? p	2. 64	21	
4183.326	32	8. 6	*u*	Ti I— CH	2. 24 R 21	220 0,0	4
4183.457	78	18. 6	*u*	V II— CH	2. 05 R 21	37 0,0	17 4
4183.628	17	4. 1		Fe I			
4183.805	28	6. 7	*u,N*				
4183.998m	131	31. 3	*w*	—Fe I			
4184.312	76	18. 2	*s*?	Ti II	1. 08	21	
4184.478	21	5. 0	*w*?	Ni I— Fe I	3. 40	89	
4184.635r	4	1. 0		Cr I?	4. 53		
4184.900S	97	23. 2	*u*	Fe I (Cr I)	2. 83 3. 09	355 155	
4184.996r	14	3. 6	*s,N*	CN—	R 22	0,1	11, 16
4185.151r	2. 5	0. 6					
4185.364	14	3. 3	*s,d*	Cr I	2. 98	106	17
4185.546	14	3. 3	*u,N*				
4185.651	12	2. 9		Fe I p	4. 26	1104	
4185.779	19	4. 5		Fe I			
4185.971r	1	0. 2	*s*	Ti I p	2. 24	220	
4186.126m	42	10. 0	*s*	Ti I	1. 50	129	
4186.336	39	9. 3	*u,N*	CN— Cr I	R 21 3. 85 3. 86	0,1 249	11
4186.464r	12	3. 1					
4186.622	95	22. 7	*u,N*	Ce II— CH	0. 86 R 20	1 0,0	4
4186.797r	12	2 9					
4186.84m			*s*				13
4187.047m	204	48. 7	*u*	Fe I	2. 45	152	
4187.255	31	7. 9	*u,N*	Co I CN	2. 04 P 49	93 1,2	11
4187.335	22	5. 5		Ce II?—	0. 55	86	
4187.457r	15	3. 6	*s*				
4187.594	76	18. 6	*u*	Fe I	3. 43	694	
4187.720r 4187.812	224	7. 2 53. 5	*u*	Fe I	2. 42	152	7
4188.097	39	9. 3					
4188.315	16	3. 8		Fe I CN	P 48	1,2	15 11
4188.450r	8. 5	2. 0		CN?	R 0?	1,2	11
4188.583r	10	2. 4					
4188.737	120	28. 6	*u,d*?	Fe I— (Ti I)	4. 21 2. 24	1116 220	
4188.978	72	17. 2		Ni I CH	3. 70 R 20	0,0	4
4189.102	44	11. 0		CH	R 20	0,0	4
4189.332r	2. 5	0. 6					
4189.565	70	16. 7	*u*	Fe I	3. 69	940	
4189.816	16	*3. 4*	*s*	V I	0. 29	24	
4189.989	21	5. 0	*u*	Mn I Cr I	4 25 2. 97	106	
4190.130	25	6. 0	*u*	Cr I	2. 87	84	
4190.239	20	4. 8	*s*				
4190.396	10	2. 4		V II	1. 67	25	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Pow E P or Rot. Line	RMT No. or Vib. Band	Notes
4190.530r	7. 5	1. 8					
4190.717	58	13. 8	*s*	Co I	0. 00	1	
4190.893	11	2. 6	*u,N*	V II	2. 03	37	
4191.079	9. 5	2. 3		Gd II—	0. 43	34	
4191.164r	9	2. 1					
4191.277	47	14. 1	*s*	Cr I	2. 54	35	
4191.437m	181	43. 2	*s*	Fe I (V I)	2. 47 0. 27	152 24	
4191.683S	98	23. 4	*u*	Fe I (Cr I)	2. 86 2. 54	355 35	
4191.863	14	3. 3		CN	P 4	1,2	11
4192.016	52	12. 4	*u*	CN?— CH	P 62 R 23 R 24	0,1 1,1 1,1	11, 17 4
4192.101r	22	6. 9	*s,N*	Cr I	3. 98	273	
4192.204	14	3. 6		CH	R 24	1,1	4
4192.400	10	2. 4		CN Fe I	P 5 P 41	1,2 1,2	11
4192.572	66	15. 7	*u*	CH	R 19	0,0	4
4192.752	2	0. 5					
4192.908	9	2. 1		CN	P 6 P 40	1,2 1,2	11
4193.107	7. 5	1. 8		Ce II—	0. 74	79	
4193.278	5. 5	1. 3		CN	P 61	0,1	11
4193.383	5. 5	1. 3		CN	P 7 P 39	1,2 1,2	11
4193.447	7. 5	1. 8		CN	P 39	1,2	11
4193.621r 4193.679r	46	3. 3 8. 3	*s,d*	Fe I Cr I (Ni I)	3. 85 3. 83	248	
4193.811	23	5. 5	*w,N*	CN	P 8 P 38	1,2 1,2	11
4193.874	8. 5	2. 1		Ce II?— CN Cr I	0. 55 P 38 3. 85	85 1,2 248	11
4194.089r	2	0. 5		Fe I			
4194.241	10	2. 4		CN	P 9 P 37	1,2 1,2	11
4194.316	6	1. 4		CN	P 60 P 37	0,1 1,2	11
4194.488	17	4. 0	*u*	Fe I	2. 73	274	
4194.627r	6. 5	1. 7		CN	P 10 P 36	1,2 1,2	11
4194.736	42	10. 5	*u,N*	CN?— CH	P 36 R 19	1,2 0,0	11, 16 4

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4194.848	65	15. 5	*u*	CH	R 19	0,0	4
4194.996	47	11. 2	*s,d?*	CH Cr I CN	R 23 3. 85 P 35	1,1 248 1,2	4 11
4195.161r	9. 5	2. 4					
4195.340m	127	30. 3	*u*	Fe I	3. 33	693	
4195.415r	11	3. 6		Cr II— CH	4. 98 R 22	155 1,1	4
4195.528	38	10. 7	*w*	Ni I	4. 09	239	
4195.627	86	20. 5	*s*	Fe I	3. 02	478	
4195.830r	3	0. 7					
4195.945	20	4. 8		CN	P 14 P 32	1,2 1,2	11
4196.214m	98	23. 4	*u*	Fe I	3. 40	693	
4196.359r 4196.419r	25	3. 1 3. 1	*u*	Ce II— CN	0. 42 P 16 P 30	123 1,2 1,2	11
4196.542	67	16. 0	*u*	Fe I (La II)	2. 95 0. 32	418 41	
4196.675	42	10. 0	*u,N*	Fe I			
4196.767	11	2. 6		CN	P 18 P 28	1,2 1,2	11
4196.878	15	3. 6		CN— CN	P 27 P 19 P 27	1,2 1,2 1,2	11 11
4196.996r	9. 5	2. 4		CN	P 20 P 26	1,2 1,2	11
4197.100m	66	15. 7	*s*	Fe I CN— CN	0. 99 P 25 P 22 P 24	18 1,2 1,2 1,2	11 11
4197.234	21	5. 0	*s*	Cr I	3. 85	249	
4197.360	16	3. 8	*w*	Fe I p	3. 88	976	
4197.508r	2. 5	0. 6		Fe I			
4197.648r 4197.741	23	2. 9 2. 9	*s,N* *s,N*	CN?— Gd II?	P 57	0,1	11
4197.895r	12	2. 9					
4198.068	93	23. 1	*u,N*	Fe I—			
4198.138	11	5. 7					
4198.242 4198.330	234	27. 5 36. 3	*u*	Fe I ‖Fe I	3. 37 2. 40	693 152	
4198.426r	12	4. 5		Co I	0. 10	2	
4198.522	24	8. 1	*u*	Cr I	3. 85 3. 98	249 272	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4198.638S	128	30. 5	*u*	CH— Fe I	R 18 3. 42	0,0 693	4
4198.732r	11	2. 9		Ce II?— CN	0. 52 P 56	3 0,1	11
4198.861r	15	3. 6					
4199.105m	183	43. 6	*u*	Fe I	3. 05	522	
4199.278	12	3. 3		Y II	0. 10	5	
4199.372	22	5. 2		Fe I p	2. 95	416	
4199.524r	3. 5	0. 8		Fe I			
4199.673r	5	1. 2		CN	P 55	0,1	11
4199.743r	4. 5	1. 1		CN	P 55	0,1	11
4199.888	45	11. 7	*u*	—Ru I	0. 81	8	
4199.990	79	18. 8	*s,N*	Fe I	0. 09	3	
4200.101	17	4. 0	*w*	Fe I p	3. 88	993	
4200.292r	0. 5	0. 1					
4200.454	38	9. 0	*w*	Ni I	3. 31	89	
4200.601	56	13. 3		CH	R 18	0,0	4
4200.700	23	7. 1	*u?*	CH	R 18	0,0	4
4200.780	51	12. 1	*u*	Ti I Fe I p	2. 25 1. 61	220 44	
4200.932m	96	22. 8	*u*	Fe I	3. 40	689	
4201.068	16	3. 8	*u*	Ca I	2. 93		
4201.240	9. 5	2. 3					
4201.327r	6	1. 4					
4201.426r	5. 5	1. 3		Zr I?	0. 62	45	
4201.577	30	7. 4	*w*	—CH	R 21	1,1	4
4201.715	65	17. 1	*w*	Ni I Fe I	4. 09 3. 57	238 799	
4202.040m	326	77. 6	*S*	Fe I	1. 48	42	
4202.348	63	16. 4	*u*	V II	1. 70	25	
4202.502	20	5. 0		CN	P 52	0,1	11
4202.591	11	2. 9		CN	P 52	0,1	11
4202.759	58	13. 8	*u*	Fe I	3. 02 3. 05	476a 521	
4202.940	17	4. 0	*u,N*	CN? Ce II	R 6 0. 56	0,1 186	11
4203.129	40	9. 5	*s,d*	Ca I— CH	2. 93 R 20	1,1	4,17
4203.305r	0. 5	0. 1		Fe I	3. 02	418	
4203.461	13	3. 1	*s*	Ti I	2. 25	220	
4203.574	53	12. 6	*s*	Fe I— Cr I	1. 01 2. 54	19 35	
4203.692r	1	0. 2		Fe I p	4. 58	1245	
4203.773	2. 5	0. 6	*u*	CN—	R 5	0,1	11
4203.942r 4204.004r	123	14. 7 19. 5	*u*	Fe I Fe I	3. 27 3. 63 2. 84	649 850 355	
4204.200	26	6. 2	*u*	V II Cr I	1. 70 2. 54	25 35	
4204.344	5	1. 2		CN	P 50	0,1	11
4204.461	13	3. 1	*u*	Cr I	3. 98	272	
4204.602r	1	0. 2		CN	R 4	0,1	11
4204.725r 4204.753	82	10. 5 16. 4	*u?*	Y II CH	0. 00 R 17	1 0,0	4
4204.895r	4	1. 0					
4205.027r 4205.072	81	9. 5 12. 8	*u,N* *u,N*	Eu II (V II p) V II	0. 00 1. 69 2. 04	1 25 37	
4205.262r	2. 5	0. 6					
4205.390m	41	9. 8	*w,N*	Mn II CH	1. 81 R 20	2 1,1	4
4205.544m	89	21. 2	*s*	Fe I (CH)	3. 42 R 20	689 1,1	4
4205.735r	4	1. 0					
4205.886	5	1. 2		CN	P 48	0,1	11
4205.963	3. 5	0. 8		CN	P 48	0,1	11
4206.130r	4. 5	1. 1		Sm II?	0. 38	38	
4206.297	18	4. 3	*s*				
4206.423	6. 5	1. 5					
4206.578	44	10. 5	*u*	CH	R 17	0,0	4,16
4206.702m	122	30. 0	*s*	Fe I CH	0. 05 R 17	3 0,0	4
4206.897	13	3. 1	*u*	Cr I	4. 62		
4206.950r	2. 5	0. 6					
4207.133m	84	20. 0	*u*	Fe I	2. 83	352	
4207.251	2. 5	0. 6		Mn II	1. 83	2	
4207.408	59	14. 0	*w,N*	CH	R 19	1,1	4
4207.628	2. 5	0. 6		Co I?	2. 70		
4207.820	21	5. 0	*w*				
4207.951r	1. 5	0. 4					
4208.104	4. 5	1. 1		CN	P 45	0,1	11
4208.174r	4	1. 0		CN	P 45	0,1	11
4208.256r	6. 5	1. 5					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4208.351	16	3. 8	*u*	Cr I	3. 85	249	
4208.452	8. 5	2. 0					
4208.608S	98	23. 3	*s*	Fe I	3. 40 3. 40	689 696	
4208.784	9. 5	2. 3		CN	P 44	0,1	11
4208.856r	4	1. 0		CN	P 44	0,1	11
4208.985	46	10. 9	*u*	Zr II	0. 71	41	
4209.184	4. 5	1. 1	*u,N*				
4209.363	29	6. 9	*s*	Cr I	3. 85	248	
4209.500	27	6. 4	*u*	CH	R 19	1,1	4
4209.602	30	7. 1	*u*	CH	R 19	1,1	4
4209.754	15	4. 3	*u*	Cr I V II	3. 10 1. 67	155 25	
4209.826	64	15. 2	*s*	V I	0. 30	24	
4210.065r	23	5. 5		CN— CN?	P 42 P 42	0,1 0,1	11 11
4210.335r	183	28. 7	*w*	Fe I	2. 48	152	
4210.402r		21. 8	*s*	Fe I p	3. 07	482	
4210.503r	8	2. 0					
4210.618	13	3. 1		CN	P 41	0,1	11
4210.701r	5. 5	1. 3		CN	P 41	0,1	11
4210.967	100	23. 7		CH	R 16	0,0	4
4211.191r	7	1. 7		CN—	P 40	0,1	11
4211.349	20	*4. 1*	*s,d*	Cr I	3. 01 3. 09	133	
4211.512	3. 5	0. 8		Cr I	2. 98	106	
4211.634	3	0. 7					
4211.740	19	4. 5	*s*	Ti I	2. 49	279	
4211.895	65	15. 4	*u*	Zr II— CH	0. 53 R 18	15 1,1	4
4212.044	8. 5	2. 0	*u*	Ru I Fe I p	0. 81 3. 42	6 697	
4212.13 a	2. 5	0. 6					
4212.225	10	2. 4		CN— CN	P 38 P 38	0,1 0,1	11 11
4212.398	5. 5	1. 3		CN	P 7	0,1	11
4212.642	93	22. 1	*u,N*	CH— CH (Cr I)	R 16 R 16 3. 01	0,0 0,0 132	4, 16 4
4212.850	7	1. 7		Ni I— CN	3. 85 P 8	0,1	11
4212.971	4	0. 9		Pd I	1. 45	7	
4213.160	15	3. 6	*s,d?*	CN— Cr I	P 36 3. 08	0,1 155	11, 17
4213.272	4. 5	1. 1		CN	P 9	0,1	11
4213.422	6. 5	1. 5		Fe I p	2. 73	274	
4213.518	10	2. 4		CN	P 35	0,1	11
4213.653m	90	21. 4	*u*	Fe I	2. 84	355	
4213.839	17	4. 7	*u*	CH	R 18	1,1	4
4213.909	45	10. 7		CH	R 18	1,1	4
4214.039	7	1. 7	*o*	Ce II?	0. 61	203	
4214.136r	1. 5	0. 4		Cr I?	2. 54		
4214.246	6. 5	1. 5		CN CN	P 33 P 33	0,1 0,1	11 11
4214.363	11	2. 6		CN	P 12	0,1	11
4214.475	9	2. 1	*u*	Fe I p	2.47	152	
4214.628r	17	4. 0		—CN	P 13	0,1	11
4214.834	21	5. 0		CN	P 31	0,1	11
4214.915r	8. 5	2. 1		CN	P 14	0,1	11
4215.057	27	6. 4	*u*				
4215.170	18	4. 3		CN	P 15 P 30	0,1 0,1	11
4215.297	16	4. 0		CN	P 29	0,1	11
4215.423	91	45. 1	*u*	Fe I	2. 76 2. 99	274 419	
4215.539	233	55. 3	*s*	Sr II	0. 00	1	
4215.764r	56	11. 4		Cr II— CN	3. 10 P 26	18 0,1	11
4215.811r		2. 8		CN	P 26	0,1	11
4215.976m	91	21. 6	*u*	Fe I	2. 69	273	
4216.191m	130	30. 8	*s*	Fe I	0. 00	3	
4216.354	27	7. 4	*s?*	Cr I	3. 01	132	
4216.599	49	11. 6	*u,N*	CH	R 17	1,1	4, 16
4216.806r	0. 5	0. 1					
4216.901r	0. 5	0. 1					
4217.061	10	2. 4	*u*	Cr II	3. 10	18	
4217.214	102	14. 0		CH	R 15	0,0	4
4217.268		14. 0		CH	R 15	0,0	4
4217.559m	128	30. 3	*s?*	Fe I (Cr I)	3. 43 3. 01	693 132	
4217.757r	4. 5	1. 1		Ni	3. 54	136	
4217.878r	2. 5	0. 6					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
4218.047	8. 5	2. 0	*u*				
4218.224	44	10. 4	*u*	Fe I p	2. 43	172	
4218.392	53	12. 6	*u,N*	CH— CH	R 17 R 17	1,1 1,1	4 4
4218.565r	1	0. 2					
4218.725	78	18. 5		CH	R 15	0,0	4
4218.920r	3	0. 7					
4219.016r	1. 5	0. 4		Fe I			
4219.199	42	10. 0	*u*				
4219.355r	146	23. 5	*u*	Fe I	3. 57	800	
4219.419r		17. 3		Fe I p	2. 99	419	
4219.595r	10	2. 4		Fe I p	3. 55	763	
4219.727	7	1. 7		Fe I p	3. 65	832	
4219.903r	5. 5	1. 3					
4220.051	48	11. 4	*u*	V II Fe I	1. 67 3. 93	25 994	
4220.169r	4. 5	1. 1					
4220.347S	87	20. 6	*s*	Fe I	3. 07	482	
4220.482r	2	0. 5		Cr I?	2. 97	106	
4220.576	5. 5	1. 3	*w,d*	Mn I	4. 19		
4220.644	11	2. 6		Sm II	0. 18 0. 54	15 50	
4220.806r	4	0. 9					
4221.019r	0. 5	0. 1					
4221.170	4. 5	1. 1					
4221.304	9	2. 1	*u*				16
4221.469	54	12. 8		CH	R 16	1,1	4
4221.572	14	3. 6	*u*	Cr I	3. 08 3. 85	155 248	
4221.692	9. 5	2. 3	*u*	Ni I	3. 31	86	
4221.815r	3	0. 7					
4221.95 a	7. 5	1. 8					
4222.221m	180	42. 6	*s*	Fe I	2. 45	152	
4222.451r	10	2. 4					
4222.52 a	4	0. 9					
4222.602	22	5. 2	*u*	Ce II	0. 12	36	
4222.728	21	5. 0	*u*	Cr I	3. 01	132	
4222.898	12	2. 8	*u*				
4223.091	66	15. 6		CH	R 16	1,1	4
4223.236	22	5. 2	*s*	Fe I			
4223.345	15	3. 6	*u*				
4223.486	57	13. 5		CH	R 14	0,0	4
4223.574	67	15. 9		CH	R 14	0,0	4
4223.731	34	8. 3	*s*	Fe I	2. 95	417	
4223.900r	11	2. 6					
4223.978r	7. 5	1. 8					
4224.178m	135	32. 9	*u*	Fe I	3. 37	689	
4224.300	32	9. 5	*u*	Zr II Fe I p	0. 76 4. 28	29 1104	
4224.459r	114	5. 7					
4224.513		23. 9	*s*	Fe I Cr I	3. 43 3. 09	689 155	
4224.632r	11	2. 8		Fe I p	2. 76	274	
4224.860	91	22. 7		CH Cr II	R 19 5. 33	0,0 162	4
4225.046r	3	0. 8		Ni I p	3. 83	169	
4225.215	32	8. 8	*u*	V II	2. 03	37	
4225.330r	8	2. 4		Sm II Pr II	0. 19 0. 00	22 8	
4225.461m	120	32. 9	*s*	Fe I	3. 42	693	
4225.716	52	15. 8	*s*	Fe I p—	4. 22	1102	
4225.811r	0. 5	0. 1		Fe I p	2. 42	118	
4225.962m	74	25. 1	*s*	Fe I	3. 05	521	
4226.090	3	1. 4					
4226.222r	2	1. 2					
4226.349	6. 5	7. 1					
4226.431m	71	52. 5	*u*	Fe I	2. 84	352	
4226.568	18	53. 2		Ge I	2. 03	4	
4226.740m	1476	*342*	*S*	Ca I	0. 00	2	
4226.970r	45	55. 8					
4227.157r	9	9. 2		Fe II p	2. 89	45	
4227.321	44	28. 9	*u,N*				
4227.440m	185	60. 8	*u*	Fe I	3. 33	693	
4227.660	12	4. 5		Ti I	2. 49	278	
4227.756	35	11. 1	*u*	Ce II Zr I	0. 70 0. 73	8 45	
4227.944m	54	15. 6	*s*	CH	R 15	1,1	4, 16
4228.106r	3. 5	1. 1					
4228.19 a	2	0. 6					
4228.312	11	2. 8		C I	7. 68	17	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
4228.557r	1. 5	0. 4					
4228.720	24	6. 1	*u*	Fe I	3. 37	690	
4228.874r	1. 5	0. 4					
4229.048r	5. 5	1. 3					
4229.261r	5	1. 2					
4229.408m	28	7. 1	*s*	Fe I			
4229.520m	81	19. 4	*s*	Fe I Ni I	2. 95 3. 27 3. 85	416 649	
4229.774m	115	27. 2	*s*	Fe I (CH)	1. 48 R 13	41 0,0	4
4229.914	67	16. 3		CH	R 13	0,0	4
4230.109r	7	1. 7					
4230.254	19	4. 5	*u*	—Cr I?	2. 98	106	16
4230.402r	2. 5	0. 6	*u*	Ni I p	3. 80	150	
4230.481	16	4. 0	*u*	Cr I	3. 01	132	
4230.575	29	6. 8	*u*	Fe I	3. 02	478	
4230.703r	1	0. 2					
4230.827r	0. 5	0. 1					
4231.026m	95	22. 4	*u*	Ni I (CH)	3. 54 R 13	136 0,0	4
4231.202r	3	0. 7		V II	1. 70	25	
4231.415r	1	0. 2					
4231.609r	76	9. 7	*u,N*	CH— Zr II	R 14 1. 76	1,1 99	4, 16
4231.688r		9. 7	*u,N*	CH— Fe I	R 14	1,1	4, 16
4231.839r	2	0. 5					
4231.954m	45	10. 6	*u*				
4232.043r	6	1. 4		V II	3. 97	225	
4232.204	12	2. 8	*u*	—Cr I	4. 21	294	
4232.384	16	3. 8	*s*	Nd II—	0. 06	8	
4232.462	8. 5	2. 1	*s*	V I	1. 95	111	
4232.602	3. 5	0. 8					
4232.734m	58	13. 9	*s*	Fe I	0. 11	3	
4232.855r	5. 5	1. 4		Cr I	3. 01 3. 09	132 155	
4232.927	62	15. 1	*u*	CH— V I	R 14 1. 95	1,1 111	4
4233.169m	139	31. 4	*w*?	Fe II	2. 58	27	
4233.250		2. 1		Cr II	3. 86	31	
4233.406r	3. 5	1. 1					
4233.612S	298	70. 4	*s*	Fe I	2. 48	152	
4234.010	13	3. 3	*s*	‖V I Co I	0. 04 1. 94 0. 00	6 111 1	
4234.224	7	1. 8	*u*	V II	1. 69	24	
4234.407	2. 5	0. 6	*u*				
4234.547	18	4. 2	*s*	|V I V II (Cr I)	0. 00 3. 76 3. 12	6 200 178	
4234.737r	1. 5	0. 4					
4234.896r	1	0. 2					
4234.997r	1	0. 2					
4235.144m	64	15. 3	*s*	Mn I	2. 92	23	
4235.291m	91	23. 4	*s*	Mn I	2. 89	23	
4235.521r	3	0. 7		Ni I?	4. 15	256	
4235.641	9. 5	2. 6	*u*	Fe I p	2. 56	215	
4235.736	20	7. 6	*w*?	Y II (V I)	0. 13 1. 94	5 111	
4235.836r	16	15. 1		Fe I p	2. 40	172	
4235.949m	385	90. 9	*S*	Fe I (Cr I) (Y I)	2. 42 3. 01 0. 07	152 132 5	
4236.122m	37	12. 0		CH	R 12	0,0	4
4236.263m	86	23. 8		CH	R 12	0,0	4
4236.380	24	6. 4	*u*	Ni I	4. 10	237	
4236.556r	5	1. 2	*u,N*	Zr II—	1. 76	110	
4236.643r	1	0. 2		Fe I p	3. 64	907	
4236.78 m	68	7. 6	*u,N*	‖Fe I Sm II	3. 63 0. 66	906 53	
4236.806		12. 0	*u*	CH V II	R 13 1. 69	1,1 18	4, 16
4236.958	32	7. 8	*u*	CH	R 13	1,1	4, 16
4237.083	40	17. 9	*u*	Fe I	0. 96	19	
4237.182	161	28. 8	*u*	Fe I CH	R 12	0,0	4
4237.254r		14. 2	*s*?	CH	R 12	0,0	4
4237.55 a	3. 5	0. 8	*s*				16
4237.677	25	5. 9	*w,N*	Fe I (Cr I)	3. 02 3. 01	418 132	
4237.790	4	0. 9	*s*	Ti I	2. 30	252	
4237.891	16	4. 0	*s*	Ti I	2. 50	284	
4238.029m	111	26. 2	*s*	Fe I	3. 42 3. 42	689 696	
4238.240	17	4. 0	*u*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4238.395m	41	9. 7	*u,d*?	CH La II	R 20 0. 40	2,2 41	4
4238.621	18	4. 2	*s*	Fe I p—	3. 63	849	
4238.757 4238.816m	155	5. 2 34. 9	 *u*	 Fe I	 3. 40	 693	
4238.944	29	9. 7	*s,N*	Cr I	3. 01	131	
4239.044r	14	3. 8		Fe I p CH	2. 76 R 22	274 2,2	4
4239.145r	10	2. 4					
4239.23 a	1. 5	0. 4					
4239.367	66	15. 6	*u*	Fe I	3. 64	907	
4239.485	8. 5	2. 1	*u*	CH	R 21	2,2	4, 16
4239.599	11	2. 6	*u*	CH	R 21	2,2	4, 16
4239.733	78	19. 8	*u*	Mn I— Fe I	2. 94 2. 95	23 416	
4239.848m	132	31. 1	*s*	Fe I	0. 96 2. 69	18 273	
4239.953	39	16. 5	*u*	Fe I	3. 07	476a	
4240.087r	1. 5	0. 4		V I?	1. 94	111	
4240.199	20	4. 7	*w*?	CH	R 19	2,2	4
4240.380	101	23. 8	*u*	Fe I	3. 55	764	
4240.455	58	23. 1	*s*	Ca I	2. 71	38	
4240.610	9	2. 2		CH	R 20	2,2	4
4240.702m	60	14. 1	*u*	Cr I	2. 98 3. 09	105 178	
4240.800r	8. 5	2. 1					
4240.92 a	2	0. 5					
4241.123S	50	11. 8	*w*?	Fe I	2. 83	351	17
4241.328	5	1. 2	*u*	CH V I?	R 25 1. 95	2,2 111	4
4241.521	12	2. 8	*s,d*	CH—	R 25	2,2	4, 16
4241.706	3	0. 7	*s,d*	Zr I—	0. 65	45	17
4241.843r	2. 5	0. 6					
4242.008r	2	0. 5					
4242.162	45	10. 6		Tm II— CH	0. 03 R 12	5 1,1	4
4242.283r 4242.379 4242.455r	160	5. 2 21. 2 20. 0	*w,N*	—CH Cr II CH	R 12 3. 87 R 11	1,1 31 0,0	4 4
4242.604m	87	20. 5	*u*	Fe I— CH	2. 73 R 11	273 0,0	4
4242.734m	61	15. 1	*u*	Fe I	3. 30	649	
4242.900r	5	1. 2		V II	3. 76	200	
4243.021r	1	0. 2					
4243.203	55	14. 8		CH—	R 12	1,1	4
4243.365	151	35. 6	*u*	CH— Fe I	R 11 3. 64	0,0 906	4
4243.454	39	16. 3	*u*?	CH	R 11	0,0	4
4243.547m	56	13. 7	*w*?	Fe I	3. 69		
4243.819m	63	14. 8	*w*	Fe I	3. 88	994	
4243.993r	9. 5	2. 2					
4244.085r	6. 5	1. 5					
4244.244	9	2. 1	*w*?				
4244.340	13	3. 1	*u*	CH	R 18	2,2	4, 16
4244.403	14	3. 3	*u*	CH— Fe I	R 18	2,2	4, 16
4244.558r	1	0. 2		Fe II p	2. 34	12	
4244.741	3	0. 7		Sm II	0. 28	27	
4244.812r	8. 5	2. 0	*u,N*?	Ni II	4. 03	9	
4244.945r	1	0. 2					
4245.082	28	6. 6	*w,N*	CH—	R 17	2,2	4
4245.264m	118	28. 5	*u*	Fe I	2. 86	352	
4245.359	77	18. 1	*u*	Fe I	3. 33	691	
4245.512r 4245.613r	9. 5	1. 8 0. 5	*s*	Ti I			
4245.810r	3. 5	0. 8					
4245.912r	10	2. 4					
4246.021	23	8. 9	*u*	Fe I p	3. 27	649	
4246.089	95	22. 4	*u*	Fe I	3. 64	906	
4246.256r	3. 5	0. 8					
4246.418r	3. 5	0. 8		Cr II—	3. 85	31	
4246.570r	3. 5	0. 8		Fe I	3. 43	689	
4246.837S	171	40. 3	*w*?	Sc II	0. 31	7	
4247.114	15	3. 5	*u,N*				
4247.315m	65	24. 2	*u*	Fe I p Fe I p	2. 45 3. 63	172 905	
4247.432m	162	38. 1	*u*	Fe I	3. 37	693	
4247.560	61	18. 1	*w,N*	CH—	R 11	1,1	4
4247.726	49	11. 5		CH	R 11	1,1	4
4247.899r	2. 5	0. 6					
4248.055	31	7. 3	*w*?,*N*	CH	R 16	2,2	4, 17

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4248.231m	97	22. 8	*u*	Fe I	3. 07	482	
4248.320	22	7. 3	*o*	(Cr I)	3. 01	131	
4248.414m	65	15. 3	*s*	Fe I p CH	1. 01 R 11	19 1,1	4
4248.534	38	9. 4	*w*	CH	R 11	1,1	4
4248.726m	81	19. 1		CH (Cr I)	R 10 2. 98	0,0 105	4
4248.944m	70	16. 5		CH	R 10	0,0	4
4249.114	10	2. 4	*s*	Ti I	2. 30	252	
4249.258r	2. 5	0. 6					
4249.347	7	1. 6		Fe I p	2. 42	117	
4249.494m	60	14. 6		CH	R 10	0,0	4
4249.637m	91	23. 0	*u,d*	—CH	R 10	0,0	4, 17
4249.802r	4	1. 2					
4250.048r	342	4. 9					
4250.130m		79. 5	*u*	Fe I	2. 47	152	
4250.466	15	4. 9	*u*				
4250.706r	400	14. 1	*u,N*?	Mo II	3. 14	3	
4250.797m		90. 6	*s*	Fe I	1. 56	42	
4250.913	63	46. 1	*u*	Fe I p	3. 07	478	
4251.331	32	8. 2	*s*	—CH	R 15	2,2	4
4251.506	1. 5	0. 4		Fe II p	2. 34	12	
4251.628	7. 5	1. 9	*s*	Ti I	1. 88	162	
4251.748	11	2. 8	*u*	Gd I— Ti I	0. 38 2. 30	15 251	
4251.887	0. 5	0. 1	*s*	Fe I p	2. 61	216	
4252.055	18	4. 5	*u,d*?	Ni I—	3. 74	136	
4252.232	6. 5	1. 5	*w*?	Cr I	3. 01	131	
4252.306	32	7. 5	*s*	Co I	0. 10	1	
4252.461	8. 5	2. 0	*u*	Nd II			
4252.630	30	7. 3	*u*	Cr II	3. 86	31	
4252.756m	50	11. 8	*u*	CH	R 15	2,2	4
4253.004m	38	8. 9		CH	R 10	1,1	4
4253.210m	40	9. 4	*s*	CH	R 10	1,1	4, 17
4253.366	6. 5	1. 6	*u*	Gd II Ce II	0. 56 0. 46	46 77	
4253.532	9. 5	2. 4	*u,d*?	Fe I p Fe I p	3. 33 4. 59	690 1245	
4253.735	36	9. 2		CH	R 10	1,1	4
4253.912m	63	16. 4	*s,d*	CH— Fe I	R 10 3. 64	1,1 905	4, 17
4254.081r	2. 5	0. 7					
4254.346m	393	92. 4	*S*	Cr I (V II)	0. 00 1. 68	1 18	
4254.666r	5. 5	1. 5					
4254.846	12	3. 3	*u*	CH	R 14	2,2	4
4254.979	108	27. 0	*u,d*	Fe I— CH	3. 02 3. 02 R 9	419 477 0,0	17 4
4255.251m	69	16. 9		CH	R 9	0,0	4
4255.507m	51	12. 0	*s*	Cr I Fe I	3. 00 3. 02	105 416	
4255.637m	68	16. 0		CH	R 9	0,0	4
4255.839m	83	19. 5	*s*	CH— Fe I	R 9	0,0	4
4256.026	20	4. 7	*s*	Ti I	2. 32	252	
4256.136	19	5. 2	*o*	CH—	R 14	2,2	4
4256.208	54	12. 7	*u*	Fe I	3. 42	690	
4256.316	23	5. 4	*u*	Fe I	2. 43	172	
4256.420	9. 5	2. 3	*u*	Sm II	0. 38	37	
4256.605	16	3. 8	*u*	—Cr I	3. 01 3. 01	131 131	
4256.812	33	7. 8	*u*	Fe I	4. 26	1102	
4257.140r	4. 5	1. 1					
4257.360	7	1. 6	*u*	Cr I	3. 01	131	
4257.507r	0. 5	0. 1					
4257.661S	56	13. 2	*s*	Mn I	2. 95	23	
4257.823r	3	0. 7					
4257.925r	1. 5	0. 4					
4258.049	22	5. 2	*u*	Zr II	0. 56	15	
4258.166m	61	14. 3	*w,N*	Fe II	2. 70	28	
4258.324m	82	19. 2	*s*	Fe I	0. 09	3	
4258.488	37	9. 4	*u*	CH— Ti I	R 9 2. 29	1,1 252	4
4258 619m	82	19. 2	*u*	Fe I	2. 83	351	
4258.731m	50	12. 9	*w*	CH—	R 9	1,1	4
4258.959m	50	11. 7	*u*	Fe I	3. 02	419	
4259.098	40	9. 4	*u,N*	CH	R 9	1,1	4
4259.152r	23	6. 3	*u,N*	Cr I—	3. 01	131	
4259.305	59	14. 3	*s,d*?	V I Fe I (CH)	0. 02 2. 99 R 9	6 416 1,1	4

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4259.511r	1. 5	0. 4	*s*				16
4259.57 a	1	0. 2					
4259.764	32	8. 2	*w*?	CH—	R 13	2,2	4, 17
4260.004m	86	24. 4	*s*	Fe I	3. 33	689	
4260.128	84	26. 3	*u*	Fe I	3. 07	476a	
4260.341r	12	8. 2					
4260.486m	595	139	*S*	Fe I	2. 40	152	
4260.622	14	13. 6					
4260.733m	50	20. 6	*s,N*	Fe I p Ti I V II	2. 84 2. 30 1. 67 1. 70	351 251 18 24	
4260.828	19	6. 6	*w*?				
4261.010	7. 5	2. 1					
4261.223m	64	16. 0		CH	R 8	0,0	4
4261.343	28	7. 0	*s*	Cr I	2. 91	96	
4261.531	68	16. 4	*w*	CH	R 8	0,0	4, 16
4261.595r	12	3. 3	*s*?	Ti I	2. 30	252	
4261.738m	66	15. 7	*w,d*?	CH	R 8	0,0	4
4261.935	107	14. 5	*w*	Cr II	3. 86	31	
4261.978		14. 5		CH	R 8	0,0	4
4262.128	23	5. 4	*s,d*	Cr I (Gd II)	2. 91 3. 11 0. 73	84 178 44	
4262.346	27	6. 3	*w*?	—Cr I	3. 08	154	
4262.585	20	4. 7	*w*	CH	R 12	2,2	4
4262.710	31	7. 3		CH	R 12	2,2	4
4262.87 a	1	0. 2					
4263.142m	47	11. 0	*s*	Ti I Cr I	1. 89 3. 85	162 247	
4263.264	18	4. 2	*u*				
4263.429	6. 5	1. 5					
4263.608	37	8. 7	*u,d*?	CH— CH	R 12 R 12	2,2 2,2	4 4
4263.843r	9	2. 1		V II	1. 69	24	
4263.980m	41	9. 6	*w*	CH	R 8	1,1	4
4264.217m	102	22. 3	*u*	Fe I	3. 37	692	
4264.281		2. 3	*u*	CH	R 8	1,1	4
4264.468m	57	13. 4	*s*	CH	R 8	1,1	4, 16
4264.580	25	6. 1	*u*				
4264.741m	86	20. 2	*u*	Fe I (CH)	3. 96 R 8	993 1,1	4
4264.925	24	5. 6	*w*	Zr II	1. 66	98	
4265.084r	11	2. 6		Sm II?	0. 18	15	
4265.266m	76	17. 8	*s*	‖Fe I Ti I	3. 93 3. 96 2. 29	993 994 252	
4265.431	16	3. 8	*w*				
4265.542	20	4. 7	*w*	CH—	Q 31	0,0	4
4265.679	25	5. 9	*s*	Ti I	1. 87	162	
4265.925m	61	14. 3	*s*	Mn I	2. 94	23	
4266.078r	4	0. 9	*s,N*				
4266.216	10	2. 3	*s*	Ti I	2. 30	252	
4266.431r	2	0. 5	*u,N*				
4266.623	18	4. 7	*w*?	CH	Q 30	0,0	4
4266.742	44	10. 3		CH	Q 30	0,0	4
4266.968S	81	19. 0	*u*	Fe I	2. 73	273	
4267.135r	2	0. 5					
4267.283r	5	1. 2					
4267.389	60	14. 1		CH	R 7	0,0	4
4267.588	20	4. 9	*s*	CH	R 11	2,2	4, 16
4267.749	156	13. 1	*u,N*	CH	R 7	0,0	4
4267.827		26. 7	*u*	‖Fe I CH	3. 11 R 7	482 0,0	4
4267.984	25	6. 1	*u*				
4268.112m	76	17. 8		CH	R 7 Q 29	0,0 0,0	4
4268.294	8. 5	2. 0	*u*				
4268.448	5	1. 2	*s*	Co I	2. 54	127	16
4268.628	23	5. 6	*s*	V I	1. 87	88	
4268.756m	69	16. 2	*s*	Fe I (Cr I)	3. 30 3. 98	649 271	
4268.921	15	3. 5	*u*	—Ti I	2. 29	252	
4269.034	15	3. 5	*u*	C I	7. 68	16	16
4269.185	4. 5	1. 1					
4269.290	38	8. 9	*w*	Cr II	3. 85	31	
4269.478m	39	9. 1	*w*	CH— La II	R 7 1. 78	1,1 76	4
4269.585	30	7. 2	*u*	CH	Q 28	0,0	4
4269.740	76	17. 8	*u*	Fe I			
4269.849	76	17. 8	*u*	CH— Fe I p	R 7 3. 40	1,1 690	4
4269.966	16	3. 7	*s*	Cr I	3. 09	154	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4270.170m	63	15. 0	*s,d*	|Ti I CH	2. 32 R 7	251 1,1	4
4270.332	13	3. 3	*u*	Fe I p	2. 59	215	
4270.489	19	4. 7	*o?*				17
4270.724r	22	5. 6		Ce II—	0. 96	21	
4270.957r		0. 4					
4271.057r	240	6. 1		CH— Cr I	R 10 3. 10	2,2 154	4
4271.164m		52. 2	*u*	Fe I	2. 45	152	
4271.374	42	16. 2	*u*	CH	Q 27	0,0	4
4271.460	21	10. 3		CH	Q 27	0,0	4
4271.560r	20	1. 4	*s*	V I	1. 86	88	
4271.638		3. 3		Fe I p	2. 20	70	
4271.774m	756	177	*S*	Fe I	1. 49	42	
4271.949	28	18. 2	*u,N*	Fe I p CH	2. 43 R 10	171 2,2	4
4272.144r	5	2. 1					
4272.301	17	5. 4	*w*				
4272.436	10	2. 8	*s*	Ti I	0. 83	44	
4272.544m	39	10. 5	*s,d*	Fe I—			
4272.714r	1	0. 2					
4272.888	32	8. 0	*u,d?*	—Cr I	2. 90	96	
4273.118	2. 5	0. 6					
4273.332m	90	21. 5	*u*	|Fe II Ti I (CH)	2. 70 2. 30 Q 26	27 251 0,0	4
4273.485m	58	14. 3		CH	R 6 Q 26	0,0 0,0	4
4273.682	32	7. 7	*w*				
4273.797	43	14. 0		CH	R 6	0,0	4
4273.891r	114	17. 3	*u,d*	Fe I	3. 07	478	
4273.942r		14. 0		CH	R 6	0,0	4
4274.193m	65	15. 2		CH	R 6	0,0	4
4274.391	19	4. 4	*u*	—Ti I	2. 29	252	
4274.596m	69	16. 4	*s*	Ti I	0. 82 1. 88	44 162	
4274.806m	196	45. 8	*S*	Cr I	0. 00	1	
4274.959	63	20. 1	*u,N*	CH	R 6	1,1	4, 16
4275.108r	14	3. 5		Cu I?	4. 84		
4275.258	49	15. 0		CH	R 6	1,1	4
4275.386	104	24. 3		CH	R 6	1,1	4
4275.513r	10	2. 6		CH	R 9	2,2	4
4275.557	63	14. 7	*u?*	Cr II	3. 86	31	17
4275.661	79	10. 5	*u,d*	CH La II	R 6 0. 32	1,1 40	4
4275.713r		10. 5		Fe I	2. 56	215	
4275.897r	2	0. 5					
4275.997	11	2. 6	*u*	Cr I	3. 88	240	
4276.103	20	4. 7		CH Fe I	R 9	2,2	4
4276.274	19	4. 4		—CH	R 9	2,2	4
4276.434	19	*4. 4*	*s*	Ti I	1. 73	148	
4276.532r	0. 5	0. 1					
4276.680S	57	13. 3	*u*	||Fe I Ti I	3. 27 3. 88 2. 30	597 976 252	
4276.826	7	1. 6		Na I?	2. 10		
4276.995m	42	*9. 3*	*s,d*	V I— CH	1. 85 Q 26	88 0,0	4
4277.233m	37	8. 6		CH—	Q 26	0,0	4
4277.391	24	5. 6	*u*	|Fe I Zr II?	2. 61 0. 80	214 40	
4277.535m	72	16. 8	*u,d*	CH— CH	Q 24 Q 24	0,0 0,0	4, 16 4
4277.680	14	3. 3	*s*	Fe I	2. 43	172	
4277.815r	2	0. 5					
4277.907r	1	0. 2					
4278.000r	2	0. 5		Fe I p	4. 26	1102	
4278.155	14	4. 9	*u*	Fe II	2. 69	32	
4278.235	73	17. 1	*s*	Fe I Ti I	3. 37 2. 58	691 291	
4278.442r	8. 5	2. 0	*u,N*				
4278.551r	1. 5	0. 4		Tb II?			
4278.689	11	2. 6	*u*	Mn I	4. 72		
4278.79 m			*S*	Ti I	2. 30	252	13
4278.853m	46	10. 8	*u*	CH (V II)	Q 25 4. 00	0,0 225	4, 16
4279.067m	39	9. 1	*u,d*	CH Mo II	Q 25 3. 06	0,0 3	4, 17
4279.227r	1. 5	0. 4					
4279.490m	63	14. 7	*u*	Fe I CH	3. 88 R 5	993 0,0	17 4
4279.720	93	21. 7		CH	R 5 Q 23	0,0 0,0	4
4279.874m	60	14. 7	*w*	Fe I	2. 86	351	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4280.037m	64	15. 0	*w,d?*	CH (Ti I)	R 5 2. 32	0,0 252	4
4280.220m	70	16. 4	*w*	CH Fe I	R 5	0,0	4, 16
4280.341r	7. 5	2. 6					
4280.403	61	14. 2	*w*	Cr I CH	3. 85 R 5	247 1,1	4
4280.494r	7. 5	2. 8	*s*	Gd II	0. 35	15	
4280.542	57	13. 8	*s*	Fe I	3. 24	598	
4280.632	24	7. 2		Fe I p CH	3. 02 R 5	416 1,1	4
4280.788m	59	13. 7		Sm II CH	0. 48 Q 24	46 0,0	4
4280.964m	49	11. 4		CH	Q 24 R 5	0,0 1,1	4
4281.100m	77	18. 0	*s*	|Mn I— CH	2. 92 R 5	23 1,1	4
4281.257r	1. 5	0. 4					
4281.376	20	*4. 9*	*S,N*	Ti I	0. 81	44	
4281.598	4	0. 9	*s*	Fe I p	2. 45	171	
4281.71 m			*s*				13
4281.750r	2. 5	0. 6					
4281.972m	76	17. 7		CH	Q 22	0,0	4
4282.217r	12	2. 8	*s*	|Zr I Zr II	0. 65 2. 42	45 132	
4282.412S	146	34. 1	*s*	Fe I	2. 18	71	
4282.579r	14	3. 7					
4282.708	32	8. 4	*s*	Ti I	1. 87	162	
4282.796	56	13. 1	*w*	CH	Q 23	0,0	4
4283.014m	133	31. 0	*s*	Ca I	1. 89	5	
4283.258	6. 5	1. 5					
4283.411	7	1. 6	*u*	Fe I	2. 61	215	
4283.752r	1	0. 2		Fe I?			
4283.904r	8. 5	2. 0	*s*	Fe I p	0. 99	19	
4284.071	32	7. 5	*s*	V I— Mn I	1. 85 2. 95	88 23	
4284.228	86	20. 1	*w*	|CH Cr II	Q 21 3. 85	0,0 31	4
4284.411	27	6. 3	*u*	Fe I	2. 99	417	
4284.533	8. 5	2. 0	*u*	Nd II	0. 63	10	
4284.686m	50	11. 7	*u*	Ni I (Cr I)	3. 19 2. 89	86 96	
4284.837m	48	11. 2		CH	Q 22	0,0	4
4285.008m	75	17. 5	*s*	CH Ti I	Q 22 1. 74	0,0 148	4
4285.201	8. 5	2. 0	*u,N*	Ni I p	3. 40	86	
4285.371r	20	7. 9		CH	R 4	0,0	4
4285.450	120	28. 0	*u*	Fe I	3. 24	597	
4285.538r	40	15. 4		CH	R 4	0,0	4
4285.680r	2	0. 5					
4285.815m	59	13. 8	*s*	Co I— Fe I (CH)	0. 17 3. 64 R 4	1 904 1,1	4
4285.938r	5. 5	1. 8		CH	R 4	1,1	4
4286.015	119	27. 8	*s*	Ti I	0. 83	44	
4286.090r	16	6. 8		CH	R 4	0,0	4
4286.196m	57	14. 5		CH	R 4	0,0	4
4286.324r	2. 5	0. 6					
4286.477m	114	26. 6	*u,d*	Fe I CH	2. 95 Q 20	414 0,0	4
4286.587r	31	11. 2	*u,N*	CH	R 4	1,1	4, 16
4286.733	2. 5	0. 6					
4286.884m	54	13. 8	*u*	Fe I (CH)	2. 45 3. 42 Q 21	172 691 0,0	4
4287.004	101	19. 8	*u*	Fe I (La II)	3. 94 1. 95	976 75	
4287.051r		6. 5	*u?*	CH	Q 21	0,0	4, 17
4287.240r	1. 5	0. 3					
4287.412m	57	*13. 5*	*S*	Ti I	0. 84	44	
4287.582r	15	3. 5	*s*	Fe I			17
4287.718	4	0. 9	*s*	Ti I p	0. 82	45	
4287.884	90	21. 0	*w*	Ti II	1. 08	20	
4287.992	76	19. 4	*u*	Ni I	3. 83	178	
4288.155m	64	14. 9	*s*	Fe I— Ti I	2. 76 0. 82 1. 05	273 43 79	
4288.268r	5	1. 2		Fe I?			
4288.406	12	2. 8	*u,N*				
4288.566r	3. 5	0. 8					
4288.736m	75	17. 5		CH	Q 19	0,0	4
4288.962m	74	17. 2	*u*	|Fe I CH	2. 59 Q 20	214 0,0	4
4289.080m	73	17. 0	*s*	Ti I (CH)	0. 82 Q 20	44 0,0	4
4289.210r	6	1. 5		Zr II?	1. 83	117	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4289.372m	131	30. 5	*s*	Ca I	1. 88	5	
4289.540r	5	1. 5					
4289.729m	230	53. 6	*S*	Cr I	0. 00	1	
4289.922m	65	19. 1	*u*	Fe I (Ce II)	3. 40 0. 33	691 111	
4290.057	20	4. 9	*u*	CH	R 6	2,2	4
4290.226m	117	27. 3	*u*	Ti II	1. 16	41	
4290.384m	62	14. 4	*s*	Fe I	2. 99	416	
4290.573r	6	1. 4					
4290.709r	2. 5	0. 6					
4290.880r	35	18. 2	*u*	Fe I	2. 83	351	
4290.956	137	31. 9	*s*	Ti I (CH)	0. 81 Q 18	44 0,0	4
4291.019r	19	10. 2		CH	Q 19	0,0	4
4291.121	110	26. 1	*u*	CH	R 3 Q 19	0,0 0,0	4
4291.220r	32	14. 2	*u*	CH Ti I	R 3 0. 84 1. 74	0,0 45 147	4
4291.472S	84	19. 6	*S*	Fe I (Fe I p)	0. 05 1. 56 2. 73	3 41 273	
4291.621r	5. 5	1. 3					
4291.735	8. 5	2. 0					
4291.839	11	2. 6	*s,d*	V I—	2. 14	120	
4291.979r	77	6. 5	*w*	Cr I— CH	3. 42 R 3	 1,1	 4
4292.055		12. 3		CH	R 3	0,0	4
4292.129	95	22. 1	*u*?	CH— Fe I	R 3 2. 18 2. 59	0,0 70 215	4
4292.294m	50	11. 6	*u*	Fe I	2. 20	70	
4292.460r	4. 5	1. 0					
4292.583r	1. 5	0. 3					
4292.671r	3. 5	0. 8	*s*	Ti I	1. 05	79	
4292.784r	1	0. 2					
4292.879r	1	0. 2		Zn I	4. 03	3	
4293.036r	136	15. 1		CH	Q 18	0,0	4
4293.114		20. 5		CH	Q 17 Q 18	0,0 0,0	4
4293.330r	8	1. 9	*s*				16
4293.556	14	*3. 0*	*s,d*?	Cr I	2. 91	96	
4293.661r	4. 5	1. 0					
4293.802	37	8. 6	*u*				
4293.921r	3	0. 8					
4294.048r	36	24. 7	*u*?	Fe I p—	2. 56	214	
4294.142	217	50. 5	*s*	Fe I Ti II	1. 48 1. 08	41 20	
4294.370	25	6. 3	*u*	CH	R 5	2,2	4, 16
4294.48 m	6. 5	1. 5	*s*				16
4294.623	31	7. 2	*u,d*	W I CH	0. 37 R 5	6 2,2	 4
4294.781m	62	14. 4	*u*	Sc II	0. 61	15	
4294.859r	6. 5	1. 6		CH	R 5	2,2	4
4295.040	99	23. 0		CH— CH	Q 17 Q 17	0,0 0,0	4 4
4295.226	107	24. 9		CH— CH	Q 16 Q 16	0,0 0,0	4 4
4295.422r	5	1. 2					
4295.591r	0. 5	0. 1					
4295.757m	55	12. 8	*s*	Ti I— Cr I	0. 81 2. 71	44 64	
4295.887m	42	9. 8	*u*	Ni I	3. 84	178	
4296.075	17	4. 0	*s*	V I (La II)	2. 13 0. 77	120 53	
4296.217	35	8. 1		CH	R 2	1,1	4
4296.392	3. 5	0. 8					
4296.584	105	24. 4	*w*	Fe II (CH)	2. 70 R 2	28 0,0	 4
4296.683r	84	13. 3	*s,N*	CH— (Ce II)	R 2 0. 52	0,0 2	4 17
4296.776r		7. 0		Zr II	1. 76	98	
4296.956	110	25. 6		CH	Q 16	0,0	4
4297.045r	41	18. 6	*u*	Cr I	2. 71	64	
4297.219	62	22. 3		CH	Q 15	0,0	4
4297.291r	90	20. 9		CH	Q 15	0,0	4
4297.530m	75	17. 4	*w,d*?	CH—	R 2	1,1	4
4297.751	55	12. 8	*s,N*	Cr I V I?	3. 85 2. 12	247 120	
4297.979r	15	7. 4	*s*	CH	R 2	0,0	4
4298.036	111	25. 8	*u*	Fe I	3. 05	520	
4298.197m	52	12. 1	*u*	Fe I p	3. 11	476a	16
4298.374r	4	0. 9					
4298.516	15	3. 5	*u*	Ni I	3. 84	178	
4298.676m	76	17. 7	*s*	Ti I	0. 82	44	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4298.813m	96	22. 3	*u*	CH	Q 15	0,0	4
4298.994m	112	27. 2	*s*	Ca I	1. 89	5	
4299.138	48	24. 2	*u*?	CH	Q 14	0,0	4
4299.249	212	49. 3	*s,N*	|Fe I Ti I (CH)	2. 42 1. 75 Q 14	152 148 0,0	 4
4299.367r	37	19. 1	*u*	(Ce II)	0. 17	47	
4299.483	71	18. 1	*u*	CH Fe I p	R 1 3. 25	1,1 648	4
4299.645m	82	19. 1	*s*	‖Ti I Fe I	0. 83 3. 02	43 416	
4299.689r	22	7. 4		Cr I	2. 90	96	
4299.831m	93	21. 6					
4299.977r	9	3. 7					
4300.053	166	38. 6	*w*	Ti II	1. 18	41	
4300.219	37	11. 9	*u*	Fe I	3. 88	975	
4300.318	87	20. 2	*w*	CH (Ce II)	R 1 0. 45	0,0 134	4, 16
4300.573m	126	29. 3	*S*	‖Ti I— CH	0. 83 Q 14	44 0,0	 4
4300.744	33	11. 8	*u,N*				
4300.827	99	23. 0	*u*	Fe I	3. 98	976	
4301.000r	48	23. 7	*u,N*	CH	Q 13	0,0	4
4301.103	179	41. 6	*s*	Ti I (V II)	0. 84 4. 02	44 225	
4301.174r	25	18. 1	*u,N*?	CH— |Cr I	Q 13 3. 45	0,0	4
4301.280	28	8. 6					
4301.501	9	2. 1	*w*				
4301.749	59	15. 1		CH— CH	Q 16 Q 16	1,1 1,1	4 4
4301.927m	128	29. 8	*u*	Ti II	1. 16	41	
4302.080r	12	3. 0	*u*	Ni I	3. 48	102	
4302.199	48	21. 8	*u*	Fe I	3. 05	520	
4302.297	135	31. 4		CH— CH	Q 13 Q 13	0,0 0,0	4 4
4302.539m	165	38. 4	*S*	Ca I	1. 90	5	
4302.65 a	43	19. 5					
4302.754	101	24. 2		CH	Q 12	0,0	4
4302.913m	79	19. 0		CH	Q 12	0,0	4
4303.089r	32	9. 3	*w*?,*N*	CH	R 1	1,1	4
4303.177	103	23. 9	*w*	Fe II	2. 70	27	
4303.426m	72	16. 7		CH	Q 16	1,1	4
4303.595m	65	15. 1	*s*	Nd II	0. 00	10	
4303.723	41	13. 2	*w*	CH—	Q 14	1,1	4
4303.835	81	28. 6	*u*	CH	Q 12	0,0	4, 16
4303.937	119	27. 6	*w,N*	—CH	{Q 12 {R 1	0,0 0,0	} 4
4304.141r	7. 5	1. 7		Fe I	3. 30	647	
4304.256m	63	14. 6	*w*	CH	Q 15	1,1	4, 17
4304.395m	68	16. 0		CH	Q 11	0,0	4
4304.571m	108	25. 1	*w*	Fe I— CH	2. 95 Q 11	414 0,0	 4
4304.721	35	9. 0		CH	Q 13	1.1	4
4304.852	56	13. 0	*u,N*	CH— Fe I	Q 13 {3. 30 {3. 55	1,1 598 756	4
4305.110m	82	19. 0		CH Fe I	Q 14 2. 73	1,1 272	4
4305.217	34	9. 3	*u*	Fe I	3. 55	760	
4305.322m	52	13. 5		CH	Q 11	0,0	4
4305.456m	124	28. 8	*u*	|Fe I Sr II (Cr I) (CH)	3. 02 3. 04 2. 89 Q 11	476 3 96 0,0	 4
4305.613r	20	5. 6					
4305.713m	67	15. 6	*u*	Sc II	0. 60	15	
4305.847r	15	5. 8		CH	Q 12	1,1	4
4305.918	156	36. 2	*S*	Ti I (CH)	0. 85 Q 10	44 0,0	 4
4306.145	90	21. 1		CH	Q 10	0,0	4
4306.18 m			*S*	V I	0. 02	5	13
4306.360	12	2. 8	*w*				
4306.599	33	12. 5	*u,N*	Fe I	3. 43	691	
4306.701	95	25. 1		CH	Q 10	0,0	4
4306.855	120	29. 2		CH	Q 10	0,0	4
4306.91 m			*s*	Ti I	0. 81	43	13
4307.058	3	0. 8		Fe I p	3. 37	690	
4307.181	4. 5	1. 2	*s*	V I	0. 00	5	
4307.311m	64	17. 2		CH	Q 9	0,0	4
4307.564	82	28. 8		CH?— CH	Q 10 Q 9	1,1 0,0	4 4
4307.748	59	40. 2	*s*	Ca I	1. 89	5	
4307.912m	723	*165*	*S*	|Fe I Ti II (CH)	1. 56 1. 16 Q 9	42 41 0,0	 4
4308.046r	6	7. 7					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4308.176m	29	16. 7		CH	Q 9	0,0	4
4308.289r	31	12. 8					
4308.381r	46	14. 2		CH	Q 9	1,1	4
4308.441r	35	11. 1		CH	Q 10	1,1	4
4308.54 m	7. 5	3. 7	*S*	Ti I	1. 07	79	
4308.595	98	25. 1		CH— CH	Q 8 Q 9	0,0 1,1	4 4
4308.777r	3. 5	0. 9		Cr II?			
4308.905m	71	20. 4		CH	Q 8	0,0	4
4309.040	131	31. 6	*u*	Fe I	3. 63	849	
4309.131	79	13. 2		CH	Q 8	0,0	4
4309.205r		13. 2		CH	Q 9	1,1	4
4309.383	126	29. 9	*u*	Fe I CH	2. 95 Q 8	4. 14 0,0	4
4309.458	40	21. 6	*w*	CH Fe I p	Q 8 3. 11	1,1 478	4
4309.634	93	21. 8	*u*	Y II CH	0. 18 Q 8	5 1,1	4
4309.711	45	17. 2	*w*?	CH	Q 7	0,0	4
4309.834	29	9. 5	*s,N*	CH V I	Q 7 0. 04	1,1 5	4
4309.900	71	16. 5	*u,N*	CH	Q 8	1,1	4
4310.106m	108	25. 0		CH	Q 7	0,0	4
4310.225	53	18. 3		CH	Q 7	1,1	4
4310.379r	15	5. 8	*u*	Fe I	3. 93	994	
4310.467	126	29. 2		CH	Q 7	0,0	4
4310.559	24	9. 3		CH	Q 7	1,1	4
4310.704m	98	22. 7	*s*	CH—	Q 6	0,0	4, 17
4310.897	28	10. 0		CH	Q 6 Q 5	1,1 1,1	4
4310.984	104	24. 1		CH	Q 6	0,0	4
4311.167m	77	17. 9		CH	Q 6	0,0	4
4311.322	17	5. 6		CH	Q 4	1,1	4
4311.446	14	8. 8		CH	Q 6	0,0	4
4311.509	171	39. 6		CH	Q 5	0,0	4
4311.63 m	18	6. 5	*S*	Ti I	2. 15	205	
4311.718	82	19. 0		CH	Q 5	0,0	4
4311.888	18	4. 4	*u*				
4312.086r	141	23. 0		CH	Q 5	0,0	4
4312.150r		14. 8		CH	Q 4	0,0	4
4312.302m	70	18. 6	*w*?,*d*	CH— Ca I	Q 5 Q 4 2. 93	0,0 0,0	4, 17
4312.504r	99	4. 6	*u*	CH	Q 3	1,1	4
4312.564		20. 9		Mn I— CH	2. 94 Q 3	23 0,0	4
4312.709	34	8. 8		CH	Q 3 Q 2	0,0 0,0	4
4312.875m	153	35. 5	*w*?	Ti II— CH	1. 18 Q 4	41 0,0	4
4313.035m	72	19. 5	*w,N*	CH Fe I p	Q 4 2. 76	0,0 273	4
4313.237	6. 5	1. 5					
4313.418	8. 5	2. 0					
4313.631m	81	18. 8		CH— CH	Q 3 Q 3	0,0 0,0	4 4
4313.890	11	2. 6	*s*	—V I?	1. 85		
4314.091m	108	25. 0	*u*	Sc II	0. 62	15	
4314.221	24	7. 9	*w*	CH	Q 2	0,0	4
4314.314	66	15. 3	*u*	Fe II Fe I?	2. 68	32	
4314.36 m			S,*N*	Ti I	0. 84	45	13
4314.512	19	4. 4	*w*	Nd II—	0. 00	9	
4314.733r	82	3. 7					
4314.77 m			*S*	Ti I p	0. 82	43	13
4314.807		16. 2	*s*	Ti I	0. 84	43	
4314.981	82	28. 0	*u*	Ti II	1. 16	41	
4315.098m	153	35. 4	*u*	Fe I	2. 20	71	
4315.285r	5. 5	1. 3					
4315.458	10	2. 3					15
4315.602	6. 5	1. 5	*u*				
4315.740r	3	0. 7					
4315.877	4. 5	1. 0		La II?	0. 40	41	
4315.951·	8	1. 9	*u,N*	Fe I p	2. 43	171	
4316.083	11	2. 5	*u,N*	Gd II?—	0. 66	43	
4316.559r	1. 5	0. 3		Fe I?			
4316.671r	3. 5	0. 8					
4316.802m	38	*10. 2*	*u*	Ti II	2. 05	94	
4316.962	16	3. 7	*w*				
4317.055	11	2. 5	*w*	Fe I	3. 55	762	
4317.15 a	2	0. 5					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4317.321	13	*2. 8*	*w,N*	Zr II—	0. 71	40	
4317.457r	3	0. 7					
4317.719	8. 5	2. 0	*u*				
4317.903r	1. 5	0. 3		Cr I	4. 21		
4318.070	13	3. 0	*w*				
4318.207	8. 5	2. 0	*u*				
4318.362	13	3. 0	*u,d*?				
4318.470r	4	0. 9					
4318.659S	116	26. 8	*s*	|Ca I Ti I	1. 90 2. 25	5 235	
4318.796	18	4. 9	*u*	Fe I p	2. 59	215	
4318.936	10	2. 3	*u*	Sm II	0. 28	27	
4319.091r	2. 5	0. 6					
4319.294r	2. 5	0. 6					
4319.452	13	*3. 0*	*s*?	Fe I	2. 61	214	
4319.636	15	*3. 5*	*s*?	Cr I	2. 89	96	
4319.808r	2. 5	0. 6					
4319.986	6	1. 4	*u*				
4320.143	6	1. 4	*w*	Fe I p	4. 39	1170	
4320.373	17	3. 9	*w*	Fe I	3. 40	691	
4320.500	24	5. 6	*s,d*	Fe I	3. 42	691	17
4320.593	7. 5	1. 7	*u*	Cr I	{2. 90 {2. 91	96 96	
4320.749m	94	21. 8	*u*	Sc II	0. 61	15	
4320.958m	63	*16. 4*	*w*	Ti II	1. 16	41	
4321.133r	5	1. 2	*u*				
4321.232	8	1. 9	*s*	Cr I	2. 87	83	
4321.412	9. 5	2. 2	*s*	Na I—	2. 10		
4321.517r	1. 5	0. 3					
4321.658m	26	6. 0	*s*	Ti I	2. 24	235	
4321.798m	50	*12. 0*	*u*	Fe I			
4322.043	9. 5	2. 2	*u,N*	V II—	1. 68	17	
4322.212r	2. 5	0. 6					
4322.358	4. 5	1. 0	*u*				
4322.505	12	2. 8	*u*	La II	0. 17	25	
4322.701r	3	0. 7		Fe I p	2. 61	215	
4322.828	6	1. 4	*s*				16
4323.013	66	15. 5		CH	{Q 8 to Q 11	2,2 2,2	4
4323.063	21	6. 5		CH	{Q 2, 7 {Q 12	2,2 2,2	4
4323.226m	101	23. 6		CH— CH	{Q 5, 6 {Q10 to Q 13 {Q 4, 9 {Q 13	2,2 2,2 2,2 2,2	4 4
4323.367	43	11. 1	*u*	|CH Fe I p	{Q 3, 8 {Q 14 2. 45	2,2 2,2 171	4
4323.512	105	24. 7	*u*	CH—	{Q 3 to Q 9 {Q 14	2,2 2,2 2,2	4
4323.611r	56	18. 7	*u,N*	CH	{Q 6 {Q 10	2,2 2,2	4
4323.711r	12	3. 7		Ni I	3. 40		
4323.851	113	26. 6		CH	{Q 5 to Q 9 {Q 11 {Q 15	2,2 2,2 2,2 2,2	4
4323.973	42	13. 2		CH	{Q 4, 5 {Q 10 {Q 15	2,2 2,2 2,2	4
4324.087	41	9. 9		CH	{Q 4 {Q 11 {Q 12	2,2 2,2 2,2	4
4324.176	38	9. 2		CH	{Q 3 {Q 12	2,2 2,2	4
4324.412m	73	17. 8		CH CH	Q 2 {Q 13 {Q 16	2,2 2,2 2,2	4 4
4324.616	6	1. 5	*s*	Na I	2. 10		
4324.725r	7	2. 0	*u*				
4324.819	39	9. 9	*w*	—CH	Q 14	2,2	4
4324.998m	117	29. 4	*u*	Fe I— ‖Sc II (Cr I)	2. 20 0. 60 2. 97	70 15 104	
4325.141	55	16. 6	*s*	Ti I	2. 25	235	
4325.356m	49	15. 5	*u*	CH	Q 15	2,2	4
4325.487r	20	8. 6	*u*				
4325.618	26	16. 2	*u*	Ni I	3. 31	86	
4325.775m	793	*174*	*S*	Fe I (Fe I p)	1. 61 0. 00	42 2	
4325.953	56	32. 4	*u*	Fe I p	3. 27	598	
4326.052r	23	13. 2	*u,N*	CH	{Q 16 {Q 18	2,2 2,2	4
4326.222r	6. 5	2. 1					
4326.357m	22	6. 2	*s*	Ti I	0. 83	43	
4326.479r	0. 5	0. 1					
4326.616	4	1. 0		Mn II?	5. 40	6	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4326.762m	56	14. 1	*u*	Fe I	2. 95	413	
4326.917	34	8. 6	*w*	CH— CH	Q 17 Q 17	2,2 2,2	4 4
4326.97 m	7	2. 0	*s*	Ti I	0. 81	43	
4327.110m	83	18. 2	*w*	Fe I	3. 55	761	
4327.157r		2. 0	*u*?	CH	P 3 Q 19	1,1 2,2	4
4327.317r	5. 5	1. 4					
4327.453	9	2. 2	*u,N*				
4327.61 a	5. 5	1. 3					
4327.791	18	4. 2	*u*				
4327.917m	69	16. 2	*u*	Fe I	3. 30	597	
4328.035	23	6. 2		CH	Q 18	2,2	4
4328.203r	8	2. 0		CH?	P 3	1,1	4
4328.284r	7. 5	1. 7					
4328.439	5	1. 2					
4328.610	34	8. 1	*u*	CH	Q 20	2,2	4, 16
4328.845r	9	2. 1	*u*	CH	P 3	0,0	4
4328.927r	5. 5	1. 3		CH	P 3	0,0	4
4329.038	12	2. 8	*u*	Sm II	0. 18	15	
4329.144	5	1. 2		CH	P 3	0,0	4
4329.289	30	6. 9	*u*	CH	Q 19	2,2	4, 16
4329.391	26	6. 0	*u*	CH	Q 19	2,2	4, 16
4329.537	7. 5	1. 7	*u*	Fe I p	2. 22	70	16
4329.691r	3	0. 7					
4329.902	9	2. 1	*u*				
4330.024	35	*8. 1*	*s*	V I	0. 00	5	
4330.245m	38	*9. 7*	*w*	Ti II	2. 05	94	
4330.408	43	5. 3	*u,N*	CH	Q 21	2,2	4
4330.451		5. 3					
4330.581r	2	0. 5		Gd II?	0. 52	46	
4330.708m	64	14. 8	*w*	Ti II Ni I	1. 18 3. 80	41 149	
4330.820	10	2. 5	*u*	Fe I	3. 02	475	
4330.956m	42	9. 7	*u*	Fe I	3. 27	597	
4331.053	14	3. 5	*w*	CH—	Q 20	2,2	4
4331.243	7	1. 6		Co I	3. 41	168	
4331.442	19	4. 4	*w,N*	Fe I—			
4331.651S	56	*13. 6*	*u*	Ni I	1. 68	52	
4331.782r	4. 5	1. 0					
4332.006	5	1. 2	*o*	CH—	P 4	1,1	4
4332.169	4. 5	1. 0		CH	P 4	1,1	4
4332.453	8	1. 8	*u*	Fe I			16
4332.583	29	6. 7	*u,N*	Cr I— CH	3. 12 Q 22	176 2,2	4
4332.831	20	4. 8	*s*	V I	0. 02	5	
4332.918	36	8. 3	*u*	CH—	P 4	1,1	4
4333.051	12	2. 8	*u*	CH Fe I p	Q 21 4. 29	2,2 1135	4
4333.206	14	3. 2	*u*	Ni I? CH? (Zr II)	Q 21 2. 41	2,2 132	4
4333.365	6. 5	1. 5	*u,N*				
4333.421	3	0. 7	*u,N*				
4333.763m	35	8. 3	*u*	La II	0. 17	24	
4333.898	19	4. 4	*s*				
4334.018	20	2. 3		CH	P 4	0,0	4
4334.067r		2. 3	*s,N*				
4334.166	19	2. 3		Sm II	0. 28	27	15
4334.246r		2. 3					
4334.672	16	3. 9		CH	P 4	0,0	4
4334.800	16	3. 9	*s*	CH— Ti I	P 4 0. 82	0,0 43	4
4334.938	13	3. 2		Fe I?			
4335.087r	1. 5	0. 3					
4335.274	31	7. 6	*u*	CH	Q 23	2,2	4, 17
4335.452	13	3. 2		Fe I p	3. 07	477	
4335.602r	5	1. 3					
4335.783	5	1. 3	*u*	Fe I?—			16
4335.913	6. 5	1. 6	*u,N*	Fe I	3. 88	991	
4335.987r	2	0. 5					
4336.135r	0. 5	0. 1		Fe I			
4336.273r	2. 5	0. 6		Ce II	0. 70	89	
4336.442r	0. 5	0. 1					
4336.614r	2. 5	0. 7		Fe I p	3. 88	990	
4336.791	8. 5	2. 3	*u*	CH	P 5	1,1	4, 16
4336.873	18	4. 8		Fe I p	3. 42	692	
4337.055m	120	30. 4	*u*	Fe I	1. 56	41	
4337.252	46	12. 2	*u*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4337.411	18	4. 8	*u*	CH	P 5	1,1	4
4337.566m	88	23. 3	*s*	Cr I	0. 97	22	
4337.792	14	3. 9	*u*	Ce II	0. 33	82	
4337.925S	89	24. 0	*w*	Ti II	1. 08	20	
4338.085r	4	1. 3					
4338.132r	10	3. 0					
4338.271m	54	15. 4	*u*	Fe I	2. 18	70	
4338.445	26	7. 8	*u,d*	—Ti I	2. 16	204	
4338.627	10	3. 2		CH	P 5 Q 24	0,0 2,2	4
4338.694	30	9. 2	*u*	Nd II Fe II p	0. 74 2. 69	68 32	
4338.829	20	6. 4	*u,d*	Cr I Fe I p	3. 37 2. 48	198 117	
4339.010r	7	2. 3	*u*	CH	P 3	2,2	4
4339.129	19	6. 4	*w*				
4339.259	23	8. 1	*u*	Fe I (CH)	P 5	0,0	4
4339.456m	82	*25. 0*	*s*	Cr I	0. 98	22	
4339.722m	69	*23. 8*	*s*	Cr I	0. 96	22	
4339.910r	3	1. 5					
4340.032r	1. 5	0. 9	*s*	Ti I?	2. 02	174	
4340.142	14	10. 8	*s*	Cr I	2. 71	64	
4340.475m	2855	*659*	*W,N*	Hγ	10. 20	1	
4340.848	2. 5	1. 8					15
4341.003	16	7. 6	*S*	V I	0. 04	5	
4341.126r	1. 5	0. 7	*s*	Zr I	1. 40	61	
4341.250	6. 5	3. 0	*w*	Fe I	3. 40	691	
4341.371m	53	19. 6	*w?*	Ti II	1. 12	32	
4341.551	12	4. 8	*u,N*	Fe I p	3. 27	644	
4341.710	16	5. 8	*w*	CH	P 6	1,1	4, 16
4341.826	7. 5	2. 8	*u*	Fe I	3. 55		
4341.924	14	4. 8	*u?*	CH	P 6	1,1	4
4342.059r	3. 5	1. 2	*u*	Ru I?	1. 14	9	
4342.180	20	6. 4	*u*	Gd II CH	0. 60 P 6	15 1,1	4
4342.305	14	4. 8	*u,N*				
4342.47 a	1. 5	0. 5					
4342.590r	1. 5	0. 5					
4342.840	1. 5	0. 5	*s*	V I	1. 87	103	
4342.990r	6	1. 7	*u?*	CH?	P 4	2,2	4
4343.216	112	15. 0	*u,d*	|Cr I— Fe I p	2. 71 3. 25	64 644	
4343.268		15. 0		Fe I	3. 25	645	
4343.416r	9. 5	3. 0	*u*				
4343.494	38	10. 4		CH	P 6	0,0	4
4343.705m	71	18. 6	*u*	Fe I (CH)	3. 05 P 6	517 0,0	4
4343.854r	3	0. 8		CH— Fe I p	P 4 3. 55	2,2 7. 56	4
4343.968m	44	11. 5	*u*	CH	P 6	0,0	4
4344.145r	3. 5	0. 9					
4344.290m	75	*18. 2*	*u*	Ti II	1. 08	20	
4344.511m	98	*24. 3*	*s*	Cr I	1. 00	22	
4344.669r	8	2. 1					
4344.746	3. 5	0. 9	*u*	Na I	2. 10		
4344.891	32	8. 0	*u*	—Fe I?			
4345.084	10	2. 5	*u*	Cr I	3. 37	198	
4345.21?m	1	0. 2	*s,N*				
4345.238r	1. 5	0. 3					
4345.345r	1. 5	0. 3					
4345.432r	1	0. 2					
4345.594	9. 5	2. 3	*u*				
4345.772	8	2. 1	*u*				
4345.895	23	5. 8	*u*	CH	P 7	1,1	4
4346.116	10	2. 5	*s*	Ti I	2. 24	234	
4346.295m	49	12. 0	*u*	CH	P 7	1,1	4
4346.418r	3. 5	0. 8					
4346.561m	68	16. 6	*u*	Fe I	3. 30	598	
4346.673	14	3. 7	*u*	CH	P 7	1,1	4
4346.831m	39	9. 4	*u*	Cr I	2. 98	104	
4346.904r	7	1. 8		V II	1. 67	17	
4347.037r	2. 5	0. 6					
4347.104r	1. 5	0. 3					
4347.242m	41	*9. 6*	*s*	Fe I	0. 00	2	
4347.370r	3. 5	0. 8		—CH	Q 26	2,2	4
4347.545m	37	9. 0		CH	P 7	0,0	4
4347.683r	3	0. 7					
4347.841m	65	15. 4	*w?*	Fe I (Sm II)	3. 60 0. 38	828 37	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4347.973m	55	13. 1		CH	P 7	0,0	4
4348.104r	11	2. 5		CH	P 5	2,2	4
4348.187r	2. 5	0. 6					
4348.338m	50	12. 0		CH	P 7	0,0	4
4348.492	9. 5	2. 3	*u*	CH	P 5	2,2	4
4348.636	7. 5	1. 7	*u*	CH	P 5	2,2	4
4348.771r	1. 5	0. 3		Y I?	2. 01	16	
4348.947S	58	*13. 3*	*u*	Fe I	2. 99	414	
4349.168r	3. 5	0. 8					
4349.376r	3	0. 7					
4349.799	7. 5	*1. 4*	*u*	Ce II	0. 70	59	
4349.958	4. 5	1. 0	*s,d?*				
4350.156	14	3. 4	*u*				
4350.249	28	6. 4	*u*	CH	P 8	1,1	4
4350.388	12	2. 8	*w?*				
4350.585	36	8. 3	*u*	Fe I—CH	P 8	1,1	4
4350.760r	15	3. 9		CH	P 8	1,1	4
4350.840m	61	14. 0	*u,d*	Ti II	2. 06	94	
4351.056m	90	*20. 0*	*s*	Cr I	0. 97	22	
4351.177r	6	1. 4					
4351.303	14	3. 4		Nd II	0. 18	10	
4351.392	16	3. 7		Fe I p	3. 42	691	
4351.554m	72	18. 6	*u*	Fe I	2. 99	413	
4351.710r	133	0. 5		CH	P 8	0,0	4
4351.767m		43. 2	*s*	Cr I Fe II	1. 03 2. 70	22 27	
4351.921m	283	65. 0	*w*	Mg I	4. 34	14	
4352.072	38	16. 8		CH	P 8	0,0	4
4352.261	49	12. 2		CH	P 8	0,0	4
4352.391	26	6. 2					
4352 557	52	12. 2		CH	P 8	0,0	4
4352.743m	142	32. 6	*s*	Fe I	2. 22	71	
4352.880	67	21. 1	*S*	V I	0. 07	5	
4353.053r	11	2. 5		CH	P 6	2,2	4
4353.172	30	6. 9	*o?*	—CH	P 6	2,2	4
4353.435	9. 5	2. 3	*u,N*	CH	P 6	2,2	4, 16
4353.517r	27	6. 2					
4353.644	16	3. 7					
4353.843	10	2. 3		Co I?	3. 97		
4353.948	24	5. 5	*u*	Cr I	3. 37	198	
4354.067r	8	1. 8	*s*	Ti I	2. 16	204	
4354.266	32	7. 3	*u,N*	Fe I p	3. 88	975	
4354.436r	13	3. 4	*u,NN*	La II	0. 92	58	
4354.514	34	8. 3		Mg I	4. 34	13	
4354.615m	70	16. 1	*u*	Se II	0. 61	14	
4354.762	25	5. 7		CH Fe I?	P 9	1,1	4
4354.951r	21	5. 3	*s,d?*	—V I	1. 89	103	16
4355.093m	104	*23. 0*	*s*	Ca I (CH)	2. 71 P 9	37 1,1	4
4355.351	48	8. 0	*u*	CH	P 9	1,1	4
4355.417r		3. 2	*u,N*				
4355.589	10	2. 3	*u*				16
4355.704	48	11. 0		CH	P 9	0,0	4
4355.902	37	11. 5	*s*	Ni I V I	3. 63 0. 02	149 5	
4356.000	73	16. 8		CH	P 9	0,0	4
4356.136	14	3. 4	*u*				
4356.253r	8	2. 0					
4356.367	55	12. 6		CH	P 9	0,0	4
4356.604	54	12. 4		CH	P 9	0,0	4
4356.743	20	4. 6	*s*	Cr I	3. 01	130	
4356.910	19	4. 4	*u*				16
4357.063r	2. 5	0. 6					
4357.152r	4	0. 9		Co I?	4. 05		
4357.297	16	3. 7	*u*				16
4357.514	38	8. 7	*u,d*	Cr I Fe I p	3. 37 3. 96 4. 43	198 994 1170	
4357.705r	4	0. 9					
4357.869	24	5. 5	*u*	CH	P 7	2,2	4, 16
4358.014	18	4. 4	*u*				16
4358.170	38	8. 7	*s*	Nd II	0. 32	10	
4358.361r	4	0. 9					
4358.512m	95	21. 8	*u*	Fe I	2. 95	412	
4358.718	75	17. 2	*u,d?*	Y II	0. 10	5	
4358.820	53	15. 6	*u,N*	—CH	P 10	1,1	4
4358.916	25	8. 0	*u,N*	Fe I p	3. 88	987	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4359.076r	5	1. 1					
4359.194	15	3. 4	*w*?				
4359.341	29	6. 6		CH	P 10	1,1	4
4359.493	49	13. 8		CH	P 10 P 10	0,0 1,1	4
4359.623m	139	31. 9	*s*	Ni I ‖Cr I	3. 40 0. 98	86 22	
4359.744	53	15. 6	*w*	Zr II CH	1. 24 P 10	79 0,0	17 4
4359.907r	5	1. 1					
4359.983	9. 5	2. 2	*s,d*	Cr I	2. 98 3. 37	103 198	
4360.120r	4	0. 9					
4360.289m	58	13. 3		CH	P 10	0,0	4
4360.480m	59	13. 5	*s*	Ti I CH	2. 17 P 10	204 0,0	 4
4360.636r	3	0. 7					
4360.797m	51	11. 7	*u*	Fe I	3. 64	903	
4360.931r	5	1. 1					
4361.059?r	3. 5	0. 8		Co I?	0. 22	1	
4361.252 4361.314r	29	3. 4 3. 4	*w,N*	Fe II—			
4361.668r	2	0. 5		Ce II	0. 53	157	
4361.795r	4	0. 9					
4361.861r	1. 5	0. 3					
4362.038r	5	1. 1	*u*?	Sm II	0. 48	45	
4362.099	29	6. 6	*o*?	Ni II	4. 03	9	17
4362.216	24	5. 5	*u*	CH	P 8	2,2	4
4362.382r	4	0. 9	*s*				16
4362.533m	53	12. 1	*w*?	—CH	P 11	1,1	4
4362.746	45	10. 3	*u*	CH	P 11	1,1	4, 16
4362.953	16	3. 9	*u*	|Cr I Cr II	2. 87 5. 66	82 179	
4363.108m	72	16. 5	*u,d*	CH— Cr I	P 11 2. 97	0,0 103	4, 17
4363.293	60	13. 8	*w,d*	CH	P 11	0,0	4, 17
4363.467	24	5. 5	*u*	CH	P 11	1,1	4
4363.54?m	3	0. 8	*S*	V I	0. 28	23	
4363.602	27	6. 2	*w*	—CH	P 11	1,1	4
4363.819r	2. 5	0. 6					
4363.976r	3	0. 7	*u,N*?				
4364.041m	48	11. 0		CH	P 11	0,0	4
4364.189m	53	12. 1		CH	P 11	0,0	4
4364.322	14	3. 2	*w*				
4364.502r	3	0. 7					
4364.663	12	2. 7	*u*	Ce II	0. 50	135	
4364.871r	1	0. 2		Cr I	3. 10	153	
4365.008r	1. 5	0. 3					
4365.286	3	0. 7					
4365.532	28	6. 4					
4365.725r	1	0. 2	*s*	V I	1. 71	79	
4365.904S	48	*10. 8*	*u*	Fe I	2. 99	415	
4366.086r	2. 5	0. 6					
4366.202r	4	0. 9					
4366.413	20	5. 5	*u,N*	—CH	P 12	1,1	4
4366.500	63	14. 4		CH	P 12	0,0	4
4366.675m	72	16. 5		CH	P 12	0,0	4
4366.908	14	3. 2	*u*				
4367.060	4. 5	1. 0		Fe I p	4. 39	1170	
4367.195	11	2. 5		Ni I CH	4. 09 P 9	 2,2	 4
4367.333	12	2. 7		Ni I	3. 46	88	
4367.475	21	5. 7	*u*	CH	P 12 P 9	1,1 2,2	4, 16
4367.594	143	32. 7	*u*	|Fe I CH	2. 99 P 12	414 0,0	 4
4367.679 4367.723r	59	22. 4 3. 2	*w,*N	Ti II CH	2. 59 P 12	104 0,0	 4
4367.912m	90	20. 6	*s*	Fe I	1. 61	41	
4368.065r	6	1. 6	*s,N*	V I	0. 04	5	
4368.131	38	8. 7	*w*?				
4368.303	26	6. 0	*u*	|Cr I Ni I	3. 01 3. 42	130 102	
4368.470r	1	0. 2	*u*				
4368.639	21	4. 8	*u*	Nd II— Fe I p	0. 06 3. 25	11 644	
4368.897m	9. 5	2. 2	*u*?	Mn I— Cr I	4. 71 3. 37	 198	
4368.92 m			*S*	Ti I	2. 27	245	13
4369.095r	1. 5	0. 3					
4369.269r	6. 5	1. 5		Fe I? p	4. 59	1244	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4369.406m	42	9. 6	*w*	Fe II	2. 78	28	
4369.546	29	6. 6					
4369.714r	162	6. 2	*u*	Ti I— Fe I p (CH)	2. 58 3. 94 P 13	290 976 0,0	4
4369.779m		30. 9	*u,N*	Fe I	3. 05	518	
4369.866r		2. 3		CH	P 13	0,0	4
4370.034	16	3. 7	*u*	Ni I	3. 63	149	
4370.154	27	6. 2		CH	P 13	1,1	4
4370.292	26	5. 9		CH	P 13	1,1	4
4370.413	7	1. 6					
4370.584r	1. 5	0. 3					
4370.656r	5. 5	1. 3					
4370.857r	11	2. 5		Mn I	2. 30	17	
4370.985r	20	5. 7	*w,d*	Fe I |Zr II	2. 18 1. 21	69 79	17
4371.062r	78	17. 8		CH— CH	P 13 P 13	0,0 0,0	4 4
4371.161r	30	9. 2	*u,N*	Co I	2. 08	93	
4371.286m	110	25. 2	*s*	Cr I	1. 00	22	
4371.426	46	11. 9	*w,d?*	CH— CH	P 13 P 13	1,1 1,1	4 4
4371.582	12	2. 7		CH	P 10	2,2	4
4371.794	18	4. 1	*u*				16
4371.956r	4. 5	1. 0					
4372.025r	5. 5	1. 3					
4372.201r	6	1. 4	*u?*	Ru I	0. 93	13	
4372.335	27	6. 2	*s,d*	CH—	P 10	2,2	4
4372.41 m	9. 5	2. 3		Ti I	2. 49	277	
4372.493	13	3. 0		CH	P 10	2,2	4
4372.588r	6	1. 4		Fe I			
4372.743	32	9. 1		CH	P 14	0,0	4
4372.844	69	15. 8		CH	P 14	0,0	4
4372.991m	34	7. 8	*u*	Fe I	3. 02	473	
4373.119r	5	1. 1					
4373.264m	45	10. 3	*s*	Cr I	0. 98	22	
4373.396	7. 5	1. 7					
4373.568m	65	*14. 4*	*u*	Fe I	2. 56 3. 02	214 413	
4373.655r	8	1. 9		Cr I Co I?	4. 45 3. 51	304	
4373.791	64	7. 8	*u*	CH	P 14	1,1	4, 16
4373.888		7. 8		CH Fe I p	P 14 3. 64	1,1 904	4
4374.048r	7. 5	1. 7					
4374.182	108	14. 4	*u*	Cr I	3. 00	104	
4374.226r		14. 4		CH	P 14	0,0	4
4374.472m	110	25. 1	*u*	|Sc II— Fe I	0. 62 3. 30	14 648	
4374.617r	19	4. 6	*u*				
4374.825	41	9. 6	*w?*	Ti II	2. 06	93	
4374.944m	88	20. 1	*u*	Y II	0. 41	13	
4375.058r	10	2. 3		Nd II?	0. 00	8	
4375.202	55	12. 6		CH	P 14	1,1	4
4375.335	30	7. 3	*s*	Cr I	2. 98	103	
4375.485r	9. 5	2. 3	*u*	Fe I p	3. 57	797	
4375.578	49	15. 3		CH	P 15	0,0	4
4375.658	69	15. 8		CH	P 15	0,0	4
4375.944m	152	34. 7	*s*	Fe I	0. 00	2	
4376.216	23	5. 2		CH	P 11	2,2	4
4376.405	25	5. 7		CH	P 11	2,2	4
4376.563	21	4. 8					
4376.782m	52	11. 9	*s*	|Fe I Cr I	3. 02 3. 64 4. 45	471 904 304	
4376.955r	7	1. 6					
4377.087	12	2. 7		CH	P 11	2,2	4
4377.234m	87	19. 9		CH	P 15	0,0	4
4377.374	32	8. 4	*u*	Fe I CH	3. 88 P 15	990 1,1	16 4
4377.543	14	3. 2	*s*	Cr I	2. 91	83	
4377.793m	39	8. 9	*u*	Fe I (Mo II)	3. 27 3. 02	645 3	
4377.991r	0. 5	0. 1					
4378.255m	83	19. 0		CH— CH?	P 16 P 16	0,0 0,0	4 4
4378.512	25	5. 7		Fe I			
4378.744r	0. 5	0. 1		Fe I p	3. 55	759	
4378.913m	44	10. 0		CH	P 15	1,1	4
4378.97 m	1	0. 3	*S,N*				
4379.074r	7	1. 6					
4379.238m	110	*25. 6*	*S*	V I	0. 30	22	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4379.407r	2. 5	0. 6					
4379.531	6	1. 4					
4379.640r	2. 5	0. 6					
4379.771	25	5. 7	*s*	‖Cr I Zr II	3. 01 1. 53	130 88	
4379.908r	2	0. 5					
4380.067	68	15. 5	*u,N*	Ce II? Co I?—	0. 62 3. 51	155	
4380.237r	4	0. 9					
4380.367	15	3. 4	*u*	Mg I (CH)	4. 34 P 16	12 0,0	4
4380.496	38	8. 7	*u*				16
4380.724	92	21. 0		CH—	P 17	0,0	4
4380.852	36	9. 6	*w,N*	CH—	P 16	1,1	4
4380.990	12	2. 7	*u?*	CH	P 12	2,2	4
4381.112	27	6. 2	*s*	Cr I	2. 71	64	
4381.297	4. 5	1. 0	*u*				
4381.709	7. 5	1. 7	*u,N*	Mn I	4. 79		
4381.885	13	3. 0	*u*	CH	P 12	2,2	4
4381.989	11	2. 5	*u*	CH— Fe I p	P 12 3. 69	2,2 938	4
4382.167	8	1. 9	*u*	Ce II	0. 68	2	
4382.317r	1	0. 2	*u,N*				
4382.521	32	8. 2		CH	P 16	1,1	4
4382.689r	13	5. 7		CH	P 17	0,0	4
4382.764	79	22. 4	*u*	CH— |Fe I	P 17 3. 57	0,0 799a	4
4382.998	47	16. 4		—CH	P 18	0,0	4
4383.174r	12	6. 8					
4383.310r	16	13. 0					
4383.377r	10	11. 4					
4383.557m	1008	*235*	*S*	Fe I	1. 48	41	
4383.721r	9. 5	12. 1					
4383.832r	18	13. 7					
4383.964r	6. 5	3. 4					
4384.120	22	8. 4		CH— CH	P 17 P 17	1,1 1,1	4 4
4384.317m	31	9. 4	*w*	Fe II p	2. 66	32	
4384.540	28	7. 3	*u*	Ni I	3. 46	86	
4384.712m	110	26. 7	*S*	V I	{0. 07 {0. 29	5 22	
4384.819	30	10. 9	*u?*	Sc II	0. 60	14	
4384.983m	80	18. 9	*s*	Cr I	1. 03	22	
4385.124m	59	14. 1		CH	P 19	0,0	4
4385.254m	52	12. 1	*u*	|Fe I — CH	3. 02 P 18	415 0,0	4
4385.387m	81	18. 7	*w*	Fe II	2. 78	27	
4385.611	10	2. 5		CH	P 13	2,2	4
4385.670	15	3. 4	*s*	Nd II	0. 20	50	
4385.857	16	3. 6					
4386.063m	43	9. 8		—CH	P 17	1,1	4
4386.275r	2. 5	0. 6					
4386.460	14	3. 2	*u*	Ni I	3. 83	168	
4386.592r	8. 5	1. 9		Fe I Fe II p	3. 63 2. 58	899 26	
4386.694	23	5. 2	*u,N*	CH	P 13	2,2	4, 16
4386.853m	59	13. 4	*u*	Ti II	2. 60	104	
4387.063m	59	13. 4		CH	P 20	0,0	4
4387.20 m			*s*	V I	1. 04	40	13
4387.262r	7. 5	1. 7					
4387.398	38	10. 5	*u*	—CH	P 18	1,1	4
4387.497	61	13. 9	*s*	Cr I (CH)	{2. 99 {3. 00 P 19	84 103 0,0	4
4387.595	38	9. 6		CH	P 19	0,0	4
4387.748r	2. 5	0. 6					
4387.899m	73	16. 6	*s*	Fe I	3. 07	476	
4388.101r	26	5. 9	*s,d*	Ti I—	2. 24	219	
4388.252r	19	4. 3					
4388.414m	103	23. 5	*u*	Fe I	3. 60	830	
4388.586	22	5. 0	*u,N*				
4388.729	35	8. 0	*u*				
4388.870	47	10. 7		CH	P 21	0,0	4
4389.031r	3	0. 7					
4389.088r	3. 5	0. 8					
4389.253S	67	*15. 5*	*s*	Fe I	0. 05	2	
4389.396r	7	1. 6		Fe I?			
4389.504	19	4. 6		CH	P 18	1,1	4
4389.638	45	10. 2		CH	P 20	0,0	4
4389.776	30	6. 8		CH	P 20	0,0	4
4389.877	25	5. 7	*w?*	Ni I	3. 46	87	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4389.988m	84	19. 1	*S*	V I	0. 28	22	
4390.114r	11	2. 7		CH	P 14	2,2	4
4390.222	16	3. 6	*w*	CH	P 14	2,2	4
4390.328	18	4. 1	*u*	Ni I	3. 66	136	
4390.461	53	12. 1	*u*	Fe I	2. 99	413	
4390.545	33	8. 9		CH	P 22	0,0	4
4390.630	30	7. 5	*u*	CH	P 19	1,1	4, 16
4390.773r	7	1. 6					
4390.843r	6	1. 4		Sm II	0. 18	15	
4390.966	92	21. 0	*u*	Fe I	3. 02	414	
4391.033	34	13. 0	*w*	Ti II	1. 23	61	
4391.147r	10	2. 3					
4391.299	7. 5	1. 7	*u*				
4391.488	38	8. 6		CH	P 14	2,2	4
4391.668	44	11. 8	*u*?	Ce II— CH	0. 32 P 21	81 0,0	4
4391.768m	67	15. 2	*s*	Cr I (CH)	1. 00 P 21	22 0,0	4
4391.863	36	9. 1	*w,N*	Fe I	3. 93	992	
4392.071m	54	*10. 9*	*s*	V I CH	0. 27 P 23	23 0,0	4
4392.300	12	2. 7	*u,N*	Fe I p	3. 55	757	
4392.432r	3. 5	0. 8	*u*				
4392.587m	37	8. 4	*u*	Fe I	3. 88	973	
4392.788r	6. 5	1. 5					
4392.924	21	4. 8	*u*	CH	P 19	1,1	4, 16
4393.025	27	6. 1	*s*?	CH Fe I	P 19 3. 02 3. 55	1,1 473	4, 16
4393.284	46	10. 5	*s*?				
4393.33 m			*S*	Na I	2. 10	17	13
4393.524	71	16. 2	*u,d*?	—CH (Cr I)	P 22 P 24 2. 97	0,0 0,0 102	4, 17
4393.700	28	6. 4	*w*	Fe I p CH	3. 64 P 22	899 0,0	4
4393.808	28	6. 4	*u*	CH V I	P 20 1. 05	1,1 40	4
4393.931m	22	5. 0	*s*	Ti I	2. 27	244	
4394.068m	72	*18. 0*	*w*	Ti II	1. 22	51	
4394.183r	11	2. 5	*u*				
4394.304r	2	0. 5		Fe I p	3. 94	975	
4394.51 m			*s,N*				13
4394.623r	7	1. 6					
4394.791	8. 5	2. 5		V I?	1. 35		
4394.852	51	11. 6	*s*	Ti I	1. 05	78	
4395.040m	135	30. 7	*w*	Ti II	1. 08	19	
4395.251m 4395.289r	100	21. 6 3. 4	*s*	V I Fe I— CH	0. 27 3. 65 P 23	22 828 0,0	4
4395.504	66	15. 0	*u,d*	CH— Fe I	P 23 3. 88 3. 88	0,0 991 992	4
4395.684r	5. 5	1. 3					
4395.848m	61	*15. 0*	*w*?	Ti II	1. 24	61	
4396.079	22	5. 0		CH	P 26	0,0	4
4396.153r	18	4. 1		—CH	P 26	0,0	4
4396.309	36	8. 2		CH	P 20	1,1	4
4396.430	17	4. 1	*u*	CH	P 20	1,1	4, 16
4396.631r	3. 5	0. 8		Mo I?	2. 08		
4396.772r	1. 5	0. 3					
4396.961m	45	10. 2		CH	P 24	0,0	4
4397.143	22	5. 0	*u*	CH	P 24	0,0	4
4397.22 m			*S*	Cr I	3. 01	129	13
4397.264	25	5. 7	*u*				
4397.381	14	3. 4	*u*				
4397.583r	1	0. 2					
4397.778	9. 5	2. 2					
4398.020S	46	*10. 7*	*u*	Y II	0. 13	5	
4398.174	11	2. 5	*u*				
4398.299	28	6. 4	*w*	Ti II	1. 22	61	
4398.491	34	7. 7		CH V II	P 25 P 28 3. 33	0,0 0,0 187	4
4398.621	24	5. 4	*w*	Ni I CH	3. 54 P 28	102 0,0	16 4
4398.712	17	4. 3	*w*	CH	P 25	0,0	4, 16
4398.844	18	4. 1	*w*				
4399.067	6. 5	1. 5	*s,N*				17
4399.224	5. 5	1. 3	*u*	Ce II	0. 33	81	
4399.290	7. 5	1. 7	*u*	Fe I?			
4399.482	15	3. 6	*s*	CH? Ir I?	P 16 2. 05	2,2	4

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4399.602m	32	7. 3	*w*	Ni I	3. 85	196	
4399.778m	115	*26. 4*	*w*?	Ti II	1. 24	51	
				(Cr I)	3. 01	129	
4399.989	21	4. 8		CH	P 26	0,0	4
4400.185	41	9. 3		Ni I	3. 63	146	
				CH?	P 26	0,0	4
4400.398	85	*19. 5*	*u*	Sc II	0. 61	14	
4400.580	51	11. 6	*s*	V I	0. 26	22	
4400.688	8	1. 8					
4400.858m	42	9. 5	*u*	Nd II—	0. 06	10	
				Ni I	3. 65	149	
4401.022	58	13. 2	*u*				
4401.16 a	15	3. 6					
4401.298m	101	22. 9	*u*	Fe I	3. 60	828	
4401.451m	48	15. 0	*u*	Fe I	2. 83	350	
4401.552m	115	26. 1	*u*	Ni I	3. 19	86	
4401.668	10	2. 5		CH?	P 27	0,0	4
4401.80 a	5. 5	1. 2					
4401.87 a	2	0. 5					
4402.343	6	1. 4					
4402.475	7	1. 6	*u*				
4402.685r	4	0. 9		Co I?	3. 51		
4402.841a	18	4. 1	*u*	CH	P 28	0,0	4, 16
4403.077	18	4. 5	*u,N*	CH	P 28	0,0	4, 16
4403.187m	62	14. 5	*u*				
4403.374	46	10. 7	*s*	‖Cr I	3. 01	128	
				Zr II	1. 18	79	
4403.496	21	5. 4	*u*	Cr I	3. 98		
4403.649	10	2. 3		—V I?	1. 87		
4403.829	3	0. 8					
4403.972	16	4. 3	*w*?				
4404.101	12	3. 4	*u*	Fe I p	3. 93	987	
4404.277m	35	12. 0	*u*	|Ti I—	2. 25	218	
					2. 25	219	
				CH	P 29	0,0	4
4404.400	9	4. 3	*s*	Ti I	1. 05	78	
4404.548r	8	5. 2		CH?	P 29	0,0	4
4404.599r	8	7. 0					
4404.761m	898	*181*	*S*	Fe I	1. 56	41	
4404.924r	6	7. 3	*u*	Ti I—	1. 88	161	
				Co I	2. 63	127	
4405.033m	28	15. 9	*s*	V I	0. 28	23	
				Fe I p	0. 05	2	
4405.314r	0. 5	0. 1					
4405.411	4. 5	1. 4	*u*	Fe I p	3. 93	991	
4405.569	2	0. 6					
4405.732	25	6. 4	*s,d*	Ti I—	1. 05	78	17
				CH?	P 30	0,0	4
4406.036	12	3. 0	*u*	CH?	P 30	0,0	4
4406.157	23	5. 7	*u*	CH	P 17	2,2	4, 16
				V I	1. 06	40	
4406.298r	3	0. 7		Cr I	3. 09	152	
4406.504	19	4. 5	*u*	CH	P 23	1,1	4
4406.652	78	*18. 2*	*S*	V I	0. 30	22	
4406.836	10	2. 3					
4406.994	6. 5	1. 5					
4407.139r	7. 5	1. 7					
4407.272	25	5. 7	*u,N*	—Ce II?	0. 70	64	
4407.375r	12	2. 7					
4407.522r	5	1. 1					
4407.652r	146	14. 1	*s,d*	V I	0. 29	22	
4407.706		24. 5		Fe I	2. 18	68	
				(Cr I)	3. 01	129	
4407.864r	2. 5	0. 6					
4407.934	16	3. 6	*u*				
4408.078r	7	1. 6					
4408.208m	74	*17. 2*	*S*	V I	0. 28	22	
4408.425m	130	29. 5	*s*?	Fe I	2. 20	68	
4408.523	65	24. 5	*s*?	V I	0. 26	22	
					0. 27	22	
4408.660	18	4. 1					
4408.798r	10	2. 3		—Pr II?	0. 00	4	
4408.941	19	4. 3		V II	3. 97	224	
4409.128m	51	11. 6	*u*	Fe I	3. 30	645	
4409.248m	28	6. 8	*w*	Ti II	1. 24	61	
4409.359	12	2. 9	*u,N*	—Dy II			
4409.526m	33	*7. 9*	*w*	Ti II	1. 23	61	
4409.695r	1. 5	0. 3					
4409.857r	2	0. 5		Mg I?	7. 19	48	
4410.014	25	5. 7		—CH?	P 24	1,1	4
					P 25	1,1	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4410.167	25	5. 7		—CH?	P 24	1,1	4
4410.306	14	3. 2	*s*	Cr I	3. 01	129	
4410.525	51	11. 6	*u*	Ni I	3. 31	88	
4410.659r	3	0. 7		Ce II?	1. 35	33	
4410.765r	2	0. 5					
4410.861r	4. 5	1. 0					
4410.953r	9. 5	2. 2	*s*	Cr I	2. 98	102	
4411.082m	56	12. 7	*u*	Ti II— Cr I	3. 09 3. 01	115 129	
4411.227	24	5. 4	*u,N*	CH— CH?	P 18 P 18	2,2 2,2	4 4
4411.35 a	6	1. 4					
4411.590r	4. 5	1. 0		Mo I?	2. 08		
4411.724r	2. 5	0. 6		Mo I	2. 08		
4411.884r	55	1. 0	*w,d*?	Mn I	4. 71		
4411.935m		12. 0		Ti II Fe I?	1. 22	61	
4412.138r	8	1. 8	*s*	V I Fe I	0. 26	23	
4412.257	29	*6. 2*	*s,d*	Cr I—	1. 03	22	
4412.424	7	1. 6	*s*	Ti I Fe I p	0. 90 2. 18	54 69	
4412.698	8. 5	1. 9					
4412.877	6	1. 4	*u*				
4413.121	11	2. 5					
4413.399	7. 5	1. 7	*u*	Fe I p	4. 07	1046	16
4413.599m	39	8. 8	*w*	Fe II CH?	2. 68 P 25	32 1,1	16 4
4413.785r	3. 5	0. 8					
4413.853	29	6. 6	*u*	Cr I	3. 55	234	
4414.048r	26	1. 6		Fe I p	3. 60	825	
4414.124		4. 3	*u*	—CH?	P 19	2,2	4
4414.234	17	3. 8	*u*	Fe I p	3. 07	475	
4414.458	9	2. 3	*u*	Fe I	3. 27	643	
4414.554	23	5. 4	*u*	Zr II	1. 24	79	
4414.737r	3. 5	0. 9		Fe I			
4414.890	59	20. 2	*s*?	Mn I	2. 89	22	
4415.040r	417	4. 5					
4415.135m		*92. 9*	*S*	Fe I	1. 61	41	
4415.255r		3. 4					
4415.427r	3. 5	1. 1					
4415.563m	86	21. 7	*u*	Sc II	0. 60	14	
4415.785	11	2. 5					
4415.915r	6	1. 4					
4416.065r	12	2. 7					
4416.160r	6. 5	1. 5		Fe I?			
4416.360	13	2. 9		—CH?	P 19	2,2	4
4416.475m	36	*8. 1*	*S,d*?	V I— Ti I?	0. 27 1. 87	22 161	
4416.651r	10	2. 3	*s*				
4416.828S	77	*17. 4*	*w*	Fe II	2. 78	27	
4417.003r	7	1. 6					
4417.115r	2	0. 5					
4417.287m	45	10. 2	*s*	Ti I	1. 89	161	
4417.412	15	3. 4	*s*	Co I	3. 07	150	
4417.574	11	2. 5	*u*	CH	P 26	1,1	4
4417.723m	96	*22. 4*	*w*?	Ti II	1. 16	40	
4417.884r	4	0. 9					
4418.035	8	1. 8	*w*				16
4418.206r	6. 5	1. 5					
4418.342m	70	15. 8	*u*	Ti II	1. 24	51	
4418.430	21	5. 4	*s*	Fe I	2. 99	412	
4418.574r	7	1. 6		—Fe I p	3. 63	899	
4418.63 a	4	0. 9	*s*				
4418.785	17	3. 8	*u*	Ce II	0. 86	2	
4418.940	22	5. 0	*u*				
4419.104	12	2. 7	*u*	Cr I Fe I	3. 01 4. 39	128 1170	
4419.273	16	3. 6		Fe I p	3. 63	893	
4419.513	3	0. 7		Fe I			
4419.607r	2	0. 5					
4419.778	18	4. 1	*u*	Fe I	3. 30	644	
4419.942m	6. 5	1. 5	*s*	V I	0. 28	21	
4420.105r	3. 5	0. 8					
4420.287	34	7. 7	*u*	Fe I			
4420.46 m			*s*	Os I	0. 00	1	13
4420.526	14	3. 2	*u*	Sm II	0. 33	32	
4420.671	15	3. 4	*w*	Sc II	0. 62	14	
4420.929r	2	0. 5					
4421.125	10	2. 3	*u,N*	—Sm II	0. 38	37	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4421.334	21	4. 8	*u*	Co I— CH	2. 93 P 27	150 1,1	4
4421.455r	13	2. 9	*u*				
4421.573m	35	7. 9	*S*	V I	0. 28	22	
4421.763m	34	7. 7	*s*	Ti I	2. 24	218	
4421.944m	51	11. 5	*w*	Ti II	2. 06	93	
4422.065	29	7. 2	*u*				
4422.304	23	5. 2	*u,N*				
4422.40 a	15	3. 8					
4422.505r	117	2. 7	*u*	V I	1. 71 1. 86	79	
4422.576m		24. 6	*s*	Fe I Y II	2. 84 0. 10	350 5	
4422.711r	6	1. 5		Cr I	3. 56	234	
4422.829m	29	6. 6	*s*	Ti I	1. 07	78	
4422.973	34	7. 7	*u*	Ni I	3. 68	168	
4423.140m	59	13. 3	*s*	Fe I	2. 99	412	
4423.265	37	9. 0	*s,d*?	Na I— Cr I	2. 10 3. 01	16 128	
4423.468r	2	0. 5					
4423.585r	1	0. 2					
4423.681r	3	0. 7		Ce II	1. 06	21	
4423.847m	53	*11. 8*	*w*?	Fe I	3. 65	830	
4424.072	24	5. 4	*u*	Fe I— Cr I	2. 91	82	
4424.204	14	3. 4	*u*	Fe I	3. 55	757	
4424.294	41	9. 3	*u*	Cr I	3. 01	129	
4424.369	7. 5	1. 9	*s,N*	Sm II— Ti I	0. 48 2. 27	45 243	
4424.586	26	5. 9	*u,d*	V I?— Fe I	1. 38		
4424.811	9. 5	2. 1	*u*	Ni I?	4. 16	262	
4425.148	8. 5	1. 9	*s*	Cr I	3. 10	152	
4425.444S	145	*31. 6*	*s*	Ca I	1. 88	4	
4425.664	40	9. 0	*u*	Fe I	3. 57	798	
4425.769	20	5. 0	*u,N*	Fe I p Fe I p	3. 26 3. 64	555 899	
4425.85 m	6. 5	1. 6	*s*	Ti I	1. 07	78	
4425.959r	9. 5	2. 3	*S*				
4426.040m	38	8. 6	*s*	V I— Ti I	0. 29 1. 88	22 161	
4426.377	5	1. 2					
4426.458	14	3. 2					
4426.677r	9	2. 0		Cr I?—	5. 24		
4426.892r	6	1. 4					
4427.105m	64	14. 4	*s*	Ti I	1. 50	128	
4427.317m	147	*34. 6*	*S*	Fe I (Fe I p)	0. 05 3. 65	2 828	
4427.461r	12	2. 9					
4427.598r	9. 5	2. 1					
4427.713r	2. 5	0. 6	*u*	Cr I	3. 01	129	
4427.75 a	2. 5	0. 6					
4427.80 a	4	0. 9					
4427.916	12	2. 7	*u*	Ti II p	1. 24	61	
4428.094	6	1. 4					
4428.276	6. 5	1. 5					
4428.52 m	13	3. 4	*s*	V I Cr I	0. 27 3. 01	21 129	
4428.549m	35	7. 9	*u*?	Fe I	3. 94	973	
4428.707	10	2. 3	*u*	—Fe I p	3. 64	899	
4428.916r	2	0. 5					
4429.203	15	3. 4	*u*	Fe I p— Pr II?	3. 93 0. 00 0. 37	987 2 4	
4429.288	11	2. 7	*u*	Ce II— Fe I	1. 09 3. 94	19 972	
4429.503r	2. 5	0. 6					
4429.643r	1. 5	0. 3					
4429.794	7. 5	1. 8	*s,N*	V I	0. 30	22	
4429.906	30	7. 2		La II Cr I	0. 23 3. 55	38 234	
4430.057m	52	11. 7	*u*	Ti I—	2. 41	267	
4430.197m	68	15. 3	*u*	Fe I	3. 02	472	
4430.368	27	6. 1	*s*	Ti I	1. 44	113	
4430.483	20	5. 0	*u*	Cr I	3. 56	234	
4430.622S	115	26. 0	*s*	Fe I	2. 22	68	
4430.765	40	9. 7	*w,N*				
4431.036	24	5. 4	*u*	Ni I	4. 17		
4431.292r	$\widehat{5}$	1. 1	*s*	Ti I	2. 23	218	
4431.360	30	6. 8	*u*	Sc II	0. 61	14	
4431.499r	7. 5	1. 7					
4431.621	6. 5	1. 5		Co I?	2. 88	1. 43	
4431.846	41	9. 2	*u*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4432.089	15	3. 6	*w*	Ti II	1. 24	51	
4432.169	37	8. 3	*u*	Cr I	2. 87	81	
4432.316r	2. 5	0. 6					
4432.426r	1. 5	0. 3					
4432.575m	47	10. 6	*u*	Fe I	3. 57	797	
4432.743r	5. 5	1. 2		—Cr I?	5. 25		
4432.927r	2. 5	0. 6		Fe I? p	2. 73	271	
4433.046r	11	2. 5	*u*				
4433.230m	97	*22. 3*	*u*	Fe I	3. 65	830	
4433.396	19	4. 3	*u*	Fe I p	3. 02	412	
4433.588	11	2. 5	*s*	Ti I	2. 40	267	
4433.788m	73	16. 5	*s*	Fe I	3. 60	825	
4433.896	6. 5	1. 7		Sm II	0. 43	41	
4433.97 m			*S*	Cr I	3. 01	128	13
4434.000	42	9. 5	*s*	Ti I	1. 43 1. 87	113 161	
4434.196	5	1. 1					
4434.344	15	3. 4	*s*	Sm II— Ti I?	0. 38	36	
4434.439	33	7. 4	*u*				
4434.655	19	4. 3	*u*	Si I	4. 92		
4434.756r	9. 5	2. 3		Cr I	3. 01	128	
4434.967m	171	*40. 6*	*s*	Ca I	1. 89	4	
4435.156m	83	20. 3	*s*	Fe I	0. 09	2	
4435.328	26	5. 9	*u*	Ni I?	3. 66		
4435.441	11	2. 7					
4435.688m	127	*28. 8*	*S*	Ca I (Eu II)	1. 89 0. 21	4 4	
4435.838r	12	2. 7					
4436.000r	8. 5	1. 9		Mn I?	3. 77	40	
4436.145	34	*8. 0*	*s*	V I	0. 26	21	
4436.356m	70	*15. 1*	*s*	Mn I	2. 92	22	
4436.589	8. 5	1. 9	*s*	Ti I	1. 88	160	
4436.687	6	1. 4	*s*	Ti I	2. 43	267	
4436.787r	4. 5	1. 0					
4436.951m	75	16. 9	*u,d*	Fe I Ni I	3. 05 3. 50	516 86	
4437.135r	2	0. 5					
4437.267r	0. 5	0. 1					
4437.427r	1	0. 2					
4437.567	22	5. 0	*w*?	Ni I	3. 68	168	
4437.699	12	2. 7	*u*	Fe I	2. 69		
4437.842	27	*6. 4*	*S*	V I	0. 29	21	
4438.030r	6	1. 4	*s*	Sr I	1. 85	6	
4438.197r	6	1. 4					
4438.25 m	6. 5	1. 5	*s*	Ti I	2. 25	218	
4438.349m	45	*10. 4*	*w*	Fe I	3. 69	828	
4438.520	8. 5	1. 9		Fe I p	3. 88	969	
4438.627	12	2. 7	*u*				
4438.790r	3. 5	0. 8					
4438.964r	4	0. 9					
4439.01 m	5. 5	1. 2	*s*				
4439.163	20	4. 5	*u,N*	Fe II? p—	2. 69	32	
4439.358r	19	4. 3					
4439.486r	6. 5	1. 5					
4439.642	22	5. 0	*u*	Fe I	3. 05	515	
4439.748r	3. 5	0. 8					
4439.888S	47	10. 6	*s*	Fe I	2. 28	116	
4440.068r	9. 5	2. 1					
4440.179r	10	2. 3		Fe I			
4440.348m	25	5. 6	*s*	Ti I	1. 87	159	
4440.482m	46	10. 4	*w*	Fe I Zr II	3. 60 1. 21	829 79	
4440.630	19	4. 3					
4440.827m	47	*10. 4*	*u*	Fe I	3. 96	992	
4440.993	22	5. 2	*u*	Fe I	3. 30	645	
4441.092	36	8. 1	*u*				
4441.273m	15	*2. 9*	*s*	Ti I	1. 87	160	
4441.436	13	3. 1	*u*	Ni I?	3. 31		
4441.555	20	4. 5	*u*	Fe I p	3. 88	987	
4441.719m	79	*16. 7*	*s,N*	V I— Ti II p	0. 28 1. 18	21 40	
4441.964r	$\widehat{13}$	2. 9	*u*	Fe I			
4442.078r	9	2. 0					
4442.15 a	5	1. 2		Mo I?	2. 08		
4442.258r	7. 5	2. 1		Cr I	3. 00	102	
4442.349m 4442.416r	171	*39. 2* 0. 9	*s*	Fe I Ni I	2. 20 3. 50	68 87	
4442.588r	5. 5	1. 2					

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4442.679r	4. 5	1. 0					
4442.838m	57	12. 8	*s*	Fe I	2. 18	69	
4443.001	26	5. 8	*u*	Zr II	1. 49	88	
4443.201m	95	*22. 5*	*u*	Fe I	2. 86	350	
4443.296r	9	2. 0					
4443.560r	5	1. 1					
4443.812m	124	*30. 8*	*w*	Ti II	1. 08	19	
4443.970r	7. 5	1. 7					
4444.080r	6. 5	1. 5					
4444.218m	31	*7. 4*	*S*	V I	0. 27	21	
4444.401	5. 5	1. 2		Ce II	0. 92	19	
4444.562m	50	*12. 4*	*w*	Ti II	1. 12	31	
4444.697	6	1. 3		Ce II	1. 06	19	
4444.80 a	1. 5	0. 3					
4445.065r	2	0. 4	*u*	Fe I?			
4445.319	2. 5	0. 6	*u*				
4445.479m	30	*7. 2*	*s*	Fe I	0. 09	2	
4445.683	7. 5	1. 7	*u*	—Co I	3. 10	150	16
4445.849	5	1. 1	*u*	Zr II?	1. 66	96	16
4446.075r	0. 5	0. 1					
4446.242	4. 5	1. 0	*u*	Fe II?	5. 95	187	
4446.399	8. 5	*1. 9*	*s*	Nd II	0. 20	49	
4446.541r	1. 5	0. 3					
4446.630	3	0. 7					
4446.843m	71	15. 7	*u,d*	Fe I	3. 69	828	
4446.896		0. 2		Fe I p	3. 30	596	
4447.027r	2	0. 4					
4447.137m	60	13. 5	*s*	Fe I	2. 20	69	
4447.359	11	2. 5	*u,d*?				
4447.555r	2	0. 4					
4447.728m	177	*37. 8*	*s,d*	Fe I	2. 22	68	
4447.789r		2. 0					
4448.021r	1. 5	0. 3					
4448.279	4. 5	1. 0					
4448.444r	1. 5	0. 3					
4448.945	12	2. 7	*s*?	Fe I p	3. 64	891	16
4449.150m	53	*13. 0*	*s*	Ti I	1. 89	160	
4449.341	15	3. 4	*u*	Ce II	0. 61	202	
4449.466	8	1. 8					
4449.60 m	6	1. 3	*s*	V I	1. 35	62	
4449.719	4	0. 9	*s*	Dy II—	0. 00		
4449.930r	3. 5	0. 8		Si I	4. 95		
4449.97m	2. 5	0. 6	*s*	Ti I	1. 88	159	
4450.101	5	1. 1	*u*	Ni I	3. 94	178	
4450.235r	5. 5	1. 2		Ni I	4. 10	236	
4450.323m	53	11. 9	*u*	Fe I	3. 11	476	
4450.491m	79	17. 8	*w*?	Ti II	1. 08	19	
4450.631r	5	1. 1					
4450.764	25	5. 6	*u*	Fe I	3. 88	972	
4450.901m	45	*10. 6*	*s*	Ti I	1. 88	160	
4451.116r	3. 5	0. 8					
4451.357r	2	0. 4					
4451.588S	90	20. 2	*s*	Mn I	2. 89	22	
				(Nd II)	0. 38	50	
4451.833r	1. 5	0. 3					
4452.007m	22	*4. 9*	*s*	V I	1. 87	87	
4452.147r	2. 5	0. 6					
4452.323	0. 5	0. 1		Fe I p	3. 64	898	
4452.617	26	5. 8	*u*	Fe I	3. 94	969	
4452.741	6. 5	1. 5		Sm II	0. 28	26	
4452.809	13	2. 9	*u,N*				
4453.006m	46	*11. 0*	*s*	Mn I	2. 94	22	
4453.163r	1. 5	0. 3					
4453.321m	59	*13. 7*	*s*	Ti I	1. 43	113	
4453.524	7. 5	1. 7	*u*				
4453.710m	36	*9. 0*	*s*	Ti I	1. 87	160	
4453.841	7	1. 6	*u*				
4454.005	2	0. 4					
4454.109r	2	0. 4					
4454.222r	4	0. 9					
4454.388S	84	18. 8	*s*	Fe I	2. 83	350	
4454.535r	14	3. 4					
4454.671r	44	11. 4	*u*?	Fe I	3. 63	902	
4454.793m	176	*46. 2*	*s*	Ca I	1. 90	4	
				(Zr II)	0. 80	40	
4455.030m	90	20. 2	*s,N*	Mn I—	3. 07	28	
				|Fe I	3. 88	974	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4455.177r	11	2. 5					
4455.320m	79	17. 7	*s*	Mn I— |Ti I	3. 07 1. 44	28 113	
4455.452	6. 5	1. 5		Cr I	3. 01	127	
4455.545r	3. 5	0. 8					
4455.650r	7	1. 6					
4455.819	48	14. 8	*s*	Mn I	3. 07	28	
4455.893	106	23. 8		Ca I	1. 90	4	
4456.060r	15	3. 4					
4456.176	6. 5	1. 5					
4456.333m	48	*11. 4*	*u*	Fe I	3. 05	516	
4456.460r	12	2. 7					
4456.627m	66	*15. 5*	*s*	Ca I	1. 90	4	
4456.780r	5. 3	1. 2					
4456.875r	3	0. 7		Fe I			
4457.043	38	*8. 5*	*u*	Mn I	3. 07	28	
4457.165r	4. 5	1. 0					
4457.270r	3	0. 7					
4457.437m	81	18. 2	*s*	‖Ti I Zr II |V I	1. 46 1. 18 0. 28	113 79 21	
4457.547m	56	13. 9	*s*	Mn I	3. 07	28	
4457.671r	2. 5	0. 6					
4457.773	13	*2. 9*	*s*	V I	1. 87	101	
4457.946r	6	1. 3					
4458.088m	61	13. 7	*u*	Fe I	3. 88	992	
4458.255m	66	14. 8	*s*	Mn I	3. 07	28	
4458.386r	7	1. 6					
4458.529	43	9. 6	*s*	Cr I (Sm II)	3. 01 3. 55 0. 10	127 7	
4458.686r	10	2. 2					
4458.839r	8	1. 8					
4459.042	190	19. 7	*u*	Ni I	3. 31	86	
4459.138m		26. 5	*u*	Fe I	2. 18	68	
4459.361m	70	15. 7	*s*	Cr I	2. 71	63	
4459.506r	9. 5	2. 1					
4459.616	7	1. 6					
4459.755S	48	*10. 8*	*S*	Cr I— |V I	3. 01 0. 29	127 21	
4459.896	4	0. 9					
4460.000r	2. 5	0. 6		Ru I?	1. 09		
4460.112r	5. 5	1. 2		Fe I p	2. 76	271	
4460.225r	100	6. 0	*S,N*	Ce II	0. 48	2	
4460.301		11. 9		V I	0. 30	21	
4460.361r		6. 3		Mn I	3. 07	28	
4460.536r	5. 5	1. 2	*u*	Fe I p	4. 22	1100	
4460.778	13	*2. 9*	*s*	Cr I	2. 71	63	
4460.930r	6	1. 3					
4461.084m	63	14. 1	*u*	Mn I	3. 07	28	
4461.205m	48	11. 0	*u*	|Fe I Zr II	3. 02 1. 01	471 67	
4461.386	55	9. 4	*u*	Fe I	3. 41	725	
4461.429r		3. 8		Fe II p	2. 58	26	
4461.660m	116	*28. 0*	*s*	Fe I	0. 09	2	
4461.820r	11	2. 5		Fe I p	3. 02	412	
4462.005m	118	26. 4	*s*	Fe I Mn I	3. 07 3. 60 3. 64 3. 07	471 825 902 28	
4462.204	31	6. 9	*w*	Fe I p	3. 60	824	
4462.362	17	3. 8	*s*	V I	1. 86	87	
4462.461m	62	13. 9	*w?*	Ni I	3. 46	86	
4462.587r	4	0. 9					
4462.700	14	3. 1	*w*				
4462.769	8. 5	1. 9	*s*	Cr I	3. 01	127	16
4462.897r	6	1. 3	*u*				
4462.993	13	2. 9	*u*	Nd II	0. 56	50	
4463.137	19	4. 2	*s*	Fe I	3. 07 3. 64	471 901	
4463.261	9	2. 0	*u*				
4463.407	41	9. 2	*s*	‖Ti I— Ni I	1. 88 3. 48	160 102	
4463.539	12	2. 7	*s*	Ti I	1. 89	160	
4463.680r	1	0. 2					
4463.834r	0. 5	0. 1					
4463.975r	1	0. 2					
4464.226r	1. 5	0. 3					
4464.340r	5	1. 1		V II	3. 76	199	
4464.457m	68	15. 2	*u*	Ti II—	1. 16	40	
4464.685	94	21. 0	*s*	Mn I (Cr I)	2. 92 3. 01	22 127	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4464.774	41	13. 7	*u*	Fe I	3. 02	472	
4464.911	14	3. 1	*s*	Cr I	3. 01	127	
4464.980r	6. 5	1. 5		Eu II?	3. 38	27	
4465.132	19	4. 2	*u,d*	—Cr I	3. 89	267	
4465.222r	7. 5	1. 7					
4465.358	20	4. 5	*s*	Cr I	3. 01	127	
4465.504r	2	0. 4					
4465.611	2. 5	0. 6	*u*				
4465.73 a	2. 5	0. 6					
4465.814m	30	*7. 5*	*s*	Ti I	1. 74	146	
4465.984r	0. 5	0. 1					
4466.165	7	1. 6	*s*	Cr I— Fe I	3. 01 3. 64	127 901	
4466.252r	2. 5	0. 6					
4466.387	24	5. 4	*u*	Ni I	3. 70	168	
4466.562m	125	28. 0	*s*	Fe I (Fe I p)	2. 83 0. 11	350 2	
4466.723r	8	1. 8					
4466.854r	11	2. 5	*w?,n*	Co I	3. 02	150	
4466.940m	48	*11. 6*		Fe I	3. 93	992	
4467.085r	3	0. 7					
4467.210r	3	0. 7					
4467.339	8	1. 8	*u*	Sm II	0. 66	53	
4467.440r	1. 5	0. 3		Fe I	4. 14	1048	
4467.555	11	2. 5	*s*	Cr I	3. 01	127	
4467.830	10	2. 2	*u*				
4467.999	8	*1. 6*	*s*	V I	1. 85	87	
4468.154r	5	1. 1					
4468.300r	6. 5	1. 5	*u*	Mo I—	2. 08		
4468.500m	120	*29. 3*	*w*	Ti II	1. 13	31	
4468.637r	7. 5	1. 8					
4468.751r	9. 5	2. 1	*s*	V I	1. 87	102	
4468.987r	6. 5	1. 5	*s*				
4469.154m	49	11. 0	*w?*	Ti II	1. 08	18	
4469.278r	110	0. 2					
4469.383m		24. 6	*u*	Fe I	3. 65	830	
4469.564	38	8. 5	*u,N*	Co I	2. 96	150	
4469.711m	18	4. 0	*s*	V I	1. 85	87	
4469.808r	6	1. 3					
4469.937r	5. 5	1. 2					
4470.138m	49	*11. 6*	*u*	Mn I	2. 94	22	
4470.314r	7. 5	1. 7					
4470.485S	69	*16. 6*	*u*	Ni I	3. 40	86	
4470.636r	6	1. 3					
4470.712r	2. 5	0. 6					
4470.858m	54	*12. 5*	*u*	—Ti II	1. 16	40	
4471.003r	3. 5	0. 8					
4471.087r	2. 5	0. 6					
4471.244m	35	*8. 5*	*s*	Ti I (Ce II)	1. 73 0. 70	146 8	
4471.408r	6	1. 3					
4471.560	12	2. 7	*u*	Co I	3. 07	150	
4471.682	19	4. 2	*s*	Fe I	0. 11	2	
4471.810	6. 5	1. 5	*u,N*	Fe I	3. 94	972	
4471.913r	3. 5	0. 8					
4472.078r	2. 5	0. 6		Ca II	6. 47	6	
4472.208r	4. 5	1. 0					
4472.415r	3. 5	0. 8					
4472.541	4	0. 9	*s*	Fe I p— Fe I p	1. 48 2. 95	39 411	
4472.723	63	14. 1	*u*	Fe I	3. 27 3. 64	595 900	
4472.802	33	9. 8	*s*	Mn I	2. 95	22	
4472.930	39	8. 7	*w*	Fe II	2. 84	37	
4473.137r	4. 5	1. 0					
4473.222r	3	0. 7		Mo I?	2. 29		
4473.470r	0. 5	0. 1					
4473.635r	2	0. 4					
4473.764r	5. 5	1. 2	*u?*	Cr I	2. 71	63	
4473.834	4	0. 9	*s*				
4474.049	4. 5	1. 0	*s*	V I	1. 95	110	
4474.169r	5	1. 1		Fe II?	5. 57	171	
4474.402r	7. 5	1. 7	*w?*				
4474.569	12	2. 7	*u*	Mo I	2. 06		
4474.755	15	3. 4	*s*	V I	1. 89	101	
4474.859m	18	4. 0	*s*	Ti I	1. 44 2. 10	113 184	
4475.011r	4	0. 9					
4475.096r	2. 5	0. 6					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4475.171r	1. 5	0. 3	*s*	Ti I p Cr I p	2. 09 2. 71	184 63	
4475.306	14	*3. 3*	*s*	Cr I	2. 89	95	
4475.469r	2	0. 4					
4475.50 m	1. 5	0. 3	*s*	Ti I	2. 12	184	
4475.722r	9	2. 0		Y I V II	1. 40 3. 75	14 199	
4476.033	152	22. 6	*u*	Fe I	2. 84	350	
4476.089r		17. 0		Fe I	3. 69	830	
4476.235r	11	2. 5					
4476.432r	6	1. 3					
4476.62 m			*s*	Ti I p	2. 08	184	13
4476.640r	3	0. 7					
4476.864r	2. 5	0. 6	*u*				
4477.058	7	*1. 7*	*s*	Cr I	2. 71	63	
4477.236	5	1. 1	*u*				
4477.469	8	1. 8	*u*	Y I	1. 36	14	
4477.646r	2. 5	0. 6	*s*				
4477.851r	0. 5	0. 1					
4478.024	15	*3. 6*	*s*	Fe I	2. 20	69	
4478.142r	1. 5	0. 3					
4478.323	10	2. 2	*u*	Co I	3. 10	150	
4478.44 a	4	0. 9		Ir I?	1. 62		
4478.626	12	2. 7	*u*	—Fe I			
4478.818r	4	0. 9	*u*				
4478.998	4	0. 9		Fe I p Fe I p	3. 64 3. 96	899 987	
4479.240r	0. 5	0. 1		Ca II	6. 47	6	
4479.386	18	4. 0	*u*	Ce II—	0. 56	203	
4479.611m	61	13. 6	*s*	Fe I	3. 69 3. 63	828 848	
4479.713m	16	4. 2	*s*	Ti I	1. 73	146	
4479.851r	2. 5	0. 6					
4479.968	42	9. 4	*u*	Fe I p	3. 98	974	
4480.145m	54	12. 0	*s*	Fe I	3. 05	515	
4480.273	24	5. 4	*u,N*	Cr I Fe I? p	3. 37 3. 60	197 823	
4480.384r	6	1. 3		Cu I	3. 78	8	
4480.469r	2. 5	0. 6					
4480.588	33	*7. 4*	*s*	Ni I Ti I	3. 90 1. 74	211 146	
4480.704r	4. 5	1. 0					
4480.825	30	*6. 9*	*u*				
4481.031r	10	2. 5		Fe I p	3. 63	893	
4481.140m	63	*14. 3*	*w*	Mg II	8. 86	4	
4481.273m	97	16. 3	*s*	Ti I	1. 75	146	
4481.338m		8. 5	*o*	Mg II	8. 86	4	
4481.483r	5. 5	1. 2	*s*	Cr I	3. 98 4. 59	270	
4481.616S	46	10. 3	*u*	Fe I	3. 69	827	
4481.776r	6	1. 3					
4481.914r	7. 5	1. 7					
4482.006r	2	0. 4		Zr II?	2. 41	131	
4482.174	165	25. 0	*s?*	Fe I	0. 11	2	
4482.268		14. 7	*u*	Fe I	2. 22	68	
4482.439r	12	2. 7		Ti II p	1. 12	30	
4482.540r	6. 5	1. 5					
4482.740m	67	14. 9	*s,d*	Ti I— Fe I	1. 46 3. 65	113 828	
4482.873	16	3. 6	*s*	Cr I	3. 37	197	
4483.029r	2. 5	0. 6					
4483.182r	1	0. 2					
4483.351	1. 5	0. 3					
4483.538	2	0. 4					
4483.661r	1	0. 2					
4483.782	11	2. 5	*u*	Fe I	3. 64	898	
4483.911	15	3. 3	*u*	Co I	3. 13	150	
4484.086r	5	1. 1					
4484.227m	77	*19. 2*	*u*	Fe I	3. 60	828	
4484.391r	5. 3	1. 2					
4484.503r	6	1. 3	*s*	Ni I— Co I	3. 60 0. 92	102 27	
4484.695r	1. 5	0. 3		Cr I	3. 08	151	
4484.829r	1	0. 2					
4485.080r	2	0. 4		Ti I?	2. 08	184	
4485.209r	1	0. 2					
4485.422r	5	1. 1		Zr II	1. 24	79	
4485.537r	6. 5	1. 4					
4485.683m	65	*15. 4*	*u*	Fe I	3. 69	830	
4485.839r	3	0. 7					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4485.976	18	4. 0	*w*	Fe I p	3. 65	825	
4486.122r	0. 5	0. 1					
4486.223r	1	0. 2					
4486.324r	2. 5	0. 6					
4486.598r	3	0. 7	*u*				16
4486.750r	1	0. 2	*u*				
4486.914	11	2. 5	*u*	Ce II	0. 30	57	
4487.004r	5. 5	1. 2	*u*	Fe I p	3. 93	988	
4487.12 a	1. 5	0. 3					
4487.258	10	2. 2	*u*	Y I	1. 37	14	
4487.370	6	1. 3	*u*	Fe I p	3. 60	824	
4487.513	5. 5	1. 2	*s*	Y I	1. 36	14	
4487.747	15	3. 3	*u*	Fe I	3. 24	594	
4487.870r	4. 5	1. 0	*u*				
4487.944r	3	0. 7					
4488.061	11	2. 9	*u*	Cr I	2. 99	283	
4488.138m	46	10. 2	*w*	Fe I	3. 60	819	
4488.329m	45	*10. 7*	*w*	Ti II	3. 12	115	
4488.523r	2. 5	0. 6					
4488.59 a	1	0. 2					
4488.688r	0. 5	0. 1					
4488.764r	1	0. 2					
4488.912m	45	10. 0	*s*	V I	1. 85 1. 94	86 110	
				Fe I	2. 56 3. 65	213 827	
4489.101	25	6. 9	*s*	Ti I	1. 74	146	
4489.184	61	13. 6	*w,N*	Fe II	2. 83	37	
4489.341r	6	1. 3					
4489.467	17	3. 8	*u*	Cr I	2. 71 3. 56	63	
4489.602r	3. 5	0. 8					
4489.748m	81	*18. 9*	*s*	Fe I	0. 12	2	
4489.928	3. 5	0. 8					
4490.089m	67	*15. 4*	*s*	Fe I	3. 02	469	
				Mn I	2. 95	22	
4490.234r	7	1. 6		Fe I p	2. 88	319	
4490.397r	1. 5	0. 3					
4490.543	20	4. 4	*w?*	|Ni I—	3. 54	134	
					4. 17	235	
				Cr I	3. 89	267	
4490.614r	6	1. 3	*u*	Fe I p	3. 64	891	
4490.781	76	14. 2	*w?*	Fe I	3. 94	973	
					3. 94	974	
4490.811r		4. 0		V I	1. 85	86	
4490.949r	3. 5	0. 8					
4491.108r	2. 5	0. 6					
4491.18 m			*s*	V I	1. 38	62	13
4491.213r	1. 5	0. 3					
4491.408m	66	*16. 0*	*w*	Fe II	2. 85	37	
4491.660	20	4. 4	*s*	Cr I	2. 90	95	
4491.852	10	2. 2	*s*	Cr I	2. 99	83	
4491.975r	1. 5	0. 3					
4492.114r	1. 5	0. 3					
4492.312	21	*5. 0*	*s*	Cr I	3. 37	197	
4492.541	8	1. 8	*s*	Ti I	2. 10	184	
4492.688m	29	*6. 2*	*u*	Fe I	3. 98	969	
4492.852r	1. 5	0. 3					
4492.968r	0. 5	0. 1		Nb II?	2. 61		
				Fe I p	3. 25	639	
4493.227r	0. 5	0. 1					
4493.380	5	1. 1	*s*	Fe I	3. 57	796	
4493.530m	26	*6. 4*	*w*	Ti II	1. 08	18	
4493.753r	9	2. 0					
4493.952	19	4. 2	*w*				
4494.062m	32	7. 1	*u*	Fe I p	3. 98	973	
4494.196	18	*3. 3*	*s*	Na I	2. 10	15	
4494.384r	16	3. 6		Zr II	2. 41	130	
4494.492r	16	5. 1		Fe I p	2. 95	411	
4494.573m	139	*37. 2*	*u,N*	Fe I	2. 20	68	
4494.739r	10	2. 4		Co I	3. 53	168	
4494.867r	10	2. 2					
4495.008m	12	2. 7	*s*	Ti I			
4495.15 a	4	0. 9					
4495.267	8	1. 8	*u*	Cr I	4. 10	275	
4495.423	23	5. 1	*u*	‖Fe I	2. 88	319	
					3. 88	970	
				Zr II	1. 21	79	
4495.575	24	5. 3	*u*	Fe I	3. 60	827	
4495.757r	5. 5	1. 2					
4495.961	41	9. 1	*u*	Fe I	3. 65	825	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4496.157m	39	*10. 2*	*s*	Ti I	1. 75	146	
4496.245r	9. 5	2. 2	*s*	Ti I	0. 02	8	
4496.377r	2. 5	0. 6					
4496.515	7. 5	1. 7					
4496.661r	7	1. 6					
4496.860m	79	*21. 1*	*s*	Cr I	0. 94	10	
4496.974	24	5. 8	*u*	Zr II	0. 71	40	
4497.103r	2. 5	0. 6					
4497.264r	1. 5	0. 3					
4497.406r	4	0. 9					
4497.680m	27	*5. 2*	*s,N*	Na I	2. 10	15	
4497.73 m			*s*	Ti I	2. 12	184	13
4497.865r	6. 5	1. 4		Ce II?	0. 96	19	
4498.000a	2. 5	0. 6					
4498.13 a	2. 5	0. 6					
4498.296	7	1. 6	*u*				
4498.560r	8	1. 8		Fe I p	3. 88	988	
4498.732	21	4. 7	*s*	Cr I	2. 91	81	
4498.900m	48	10. 7	*s*	Mn I	2. 94	22	
4499.036r	4	0. 8					
4499.143m	43	9. 6	*u*				
4499.360r	3	0. 7					
4499.501r	2	0. 4		Sm II?	0. 25	23	
4499.68 a	1. 5	0. 3					
4499.957r	2. 5	0. 6					
4500.288	39	6. 2	*s*	Cr I	3. 08	150	
4500.369		2. 4	*w*				
4500.504r	1. 5	0. 3					
4500.639	14	*2. 9*	*u*	Fe I			
4500.767r	2	0. 4					
4500.949r	3	0. 7					
4501.102	27	6. 0	*s*	Cr I	2. 91 3. 55	81	
4501.278m	111	*29. 1*	*w*	Ti II	1. 12	31	
4501.457	10	2. 2	*u,N*				
4501.651	8. 5	1. 9	*u*	Cr I?—Ni I	3. 56 3. 70	115	
4501.780	22	4. 9	*s*	Cr I	2. 91	81	
4501.990	5. 5	1. 2	*s*	V I	1. 38	62	
4502.052r	3. 5	0. 8					
4502.221S	49	*11. 8*	*s*	Mn I	2. 92	22	
4502.441	7. 5	1. 7	*u*				
4502.600m	21	*4. 9*	*u*	Fe I	3. 57	796	
4502.760	1	0. 2					
4503.063r	2	0. 4		Cr I?	4. 70	310	
4503.320a	2. 5	0. 6					
4503.354r	2	0. 4					
4503.489r	0. 5	0. 1					
4503.761r	8	1. 8	*s*	Ti I	2. 13	184	
4503.874	7	1. 6	*u*				
4504.059r	0. 5	0. 1					
4504.206r	1	0. 2		Fe I p	3. 96	988	
4504.542r	2	0. 4					
4504.737	46	1. 8	*u*				
4504.838m		*8. 4*	*u*	Fe I	3. 26	555	
4505.031r	4. 5	1. 0		Ca I	2. 52	24	
4505.239r	4	0. 9					
4505.482r	|1|	0. 2					
4505.73 m	1	0. 2	*s*	Ti I	2. 10	184	
4505.791	4. 5	1. 0	*u*				
4505.926r	2	0. 4	*s*	Y I	1. 37	14	
4506.093r	|4|	0. 9	*u,N*				
4506.326	9	2. 0	*s*	Ni I |Ti I	3. 54	133	
4506.452r	1. 5	0. 3					
4506.608	7	1. 6	*s*	Ca I	2. 52	24	
4506.747	7. 5	1. 7	*o*	Ti II p	1. 13	30	
4506.842	9. 5	2. 1	*s*	Cr I	4. 18	288	
4506.973r	1	0. 2					
4507.100r	3	0. 7	*S*	Zr I	0. 54	31	
4507.227	6. 5	1. 4	*w?*	Fe I	3. 11	474	
4507.395	7. 5	1. 7	*s*	Ca I	2. 52	24	
4507.754	3. 5	0. 8	*s*				
4507.858	3. 5	0. 8	*s*	Ca I	2. 52	24	
4508.011r	6	1. 3	*s*	Ti I	2. 78		
4508.084r	3. 5	0. 8					
4508.289S	74	*17. 5*	*w*	Fe II	2. 85	38	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4508.472r	3	0. 3					
4508.550r		0. 3					
4508.689	13	*3. 1*	*w*				
4508.97 a	1	0. 2					
4509.128r	2	0. 4		Fe I p	2. 61	213	
4509.290	14	3. 1	*u*	Fe I	3. 05 3. 69	514 937	
4509.449	14	3. 1	*s*	Ca I	2. 52	24	
4509.742m	34	*8. 0*	*u*				
4509.995r	3. 5	0. 8	*u*	Cr I	4. 53		
4510.178r	1. 5	0. 3		Pr II	0. 42	20	
4510.830	8	1. 8	*w?,N*	Fe I p	3. 60	823	
4510.96 m	0. 5	0. 1					
4511.072	5	1. 1	*w*	Fe I p	3. 94	970	
4511.171	8	1. 8	*s*	Ti I			
4511.31 m	2	0. 4	*s*	In I	0. 27	1	
4511.350r	0. 5	0. 1					
4511.567	8	1. 8	*w,N*				
4511.82 m			*s*				13
4511.900m	31	*8. 4*	*s*	Cr I	3. 09	150	
4512.062	4. 5	1. 0	*u*				
4512.273	18	*4. 0*	*s*	Ca I	2. 52	24	
4512.436r	0. 5	0. 1					
4512.497r	1	0. 2					
4512.566r	1	0. 2					
4512.741S	55	*13. 5*	*s*	Ti I	0. 84	42	
4512.997	16	3. 5	*w*	Ni I	3. 70	163	
4513.219r	2. 5	0. 6		Cr I?	3. 09	150	
4513.325r	3. 5	0. 8					
4513.437	13	2. 9	*w*				
4513.582	5	1. 1	*s*	Y I	1. 90	15	
4513.720	9	2. 0	*s*	Ti I Fe I	1. 43 2. 59	112 213	
4513.872r	3	0. 7		Ni I p Cr I?	3. 54 3. 09	131 175	
4513.912r	3	0. 7					
4514.193m	48	10. 6	*s*	V I Fe I	1. 94 3. 05	110 514	
4514.320r	1	0. 2	*s*	Cr I?	4. 18	287	
4514.432	68	9. 3	*u?*				
4514.496		6. 9	*s?*	Cr I	2. 91	95	
4514.651r	2	0. 4					
4514.791r	3. 5	0. 8	*u*				16
4514.968r	2. 5	0. 6					
4515.107r	4	0. 9		Sm II			
4515.178	14	3. 1	*u*	Fe I	2. 87	319	
4515.343m	75	*17. 9*	*w*	Fe II	2. 84	37	
4515.440r		1. 8	*s*	Cr I	3. 01	126	
4515.597r	6. 5	1. 4	*s,N*	V I— Ti I	1. 89 2. 12	100 184	
4515.863	3. 5	0. 8	*u,N*				
4516.089r	1	0. 2		Fe I p	3. 25	639	
4516.272	9. 5	*2. 6*	*u*	Fe I	3. 60	819	
4516.461	3. 5	0. 8	*s*	Fe I p	3. 65	825	
4516.661	12	*3. 5*	*u,N*				
4516.928r	2	0. 4	*u*				
4517.089r	28	0. 7	*u?*	Co I	3. 13	150	
4517.154		*6. 6*	*u*	Fe I?			
4517.305r	2. 5	0. 6					
4517.373r	1	0. 2					
4517.534S	61	*12. 4*	*u*	Fe I	3. 07	472	
4517.598r		1. 1	*u?*	Fe I p	3. 96	992	
4517.757r	2	0. 4					
4517.838r	3. 5	0. 8		Ni I?	3. 54	103	
4518.032m	62	*14. 8*	*S*	Ti I	0. 83	42	
4518.183r	2	0. 4					
4518.342m	40	*10. 0*	*u*				
4518.447	6	1. 3	*u*	Fe I	3. 24	593	
4518.587	14	3. 1	*u,d*	Fe I Cr I	2. 22 2. 54 2. 97	69 34 100	
4518.700m	12	2. 6	*s*	Ti I	1. 43	112	
4518.861r	1. 5	0. 3					
4518.982r	1	0. 2		Mn II?			
4519.08 a	1	0. 2					
4519.299r	1	0. 2		Co I?	3. 71		
4519.458r	0. 5	0. 1					
4519.637	5	1. 1	*s*	Sm II—	0. 54	49	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4519.843r	3. 5	0. 8	*u*	Cr I	3. 01	126	
4519.992	30	6. 6	*s*	Ni I	1. 68	51	
4520.116r	1	0. 2					
4520.229m	69	*16. 2*	*w*	Fe II Fe I	2. 81 3. 07	37 471	
4520.399r	3	0. 7		Ti II p	1. 12	30	
4520.536	6. 5	1. 4	*u,N*				17
4520.62 a	1. 5	0. 3					
4520.804r	5	0. 7					
4520.966r		0. 4					
4521.136	11	2. 4	*s*	Cr I	4. 10 4. 18	277 287	
4521.33 a	3	0. 7					
4521.432r	0. 5	0. 1					
4521.668r	0. 5	0. 1		Fe I p	3. 27	641	
4521.78 a	1. 5	0. 3					
4521.887r	2	0. 4		Ni I—	3. 74	116	
4522.029r	1. 5	0. 3	*s*	Cr I	3. 09	173	
4522.120r	2	0. 4					
4522.252r	0. 5	0. 1					
4522.372	8. 5	1. 9	*u*	La II	0. 00 1. 25	8 74	
4522.528	101	4. 6	*u*	Fe I			
4522.638m		18. 8	*w*	Fe II (Eu II)	2. 84 0. 21	38 4	
4522.807m	65	*15. 5*	*S*	Ti I	0. 82	42	
4522.950r	1	0. 2					
4523.080	12	2. 6	*u*	Ce II	0. 52	2	
4523.246r	1. 5	0. 3					
4523.407m	36	*8. 2*	*s*	Fe I	3. 65	829	
4523.585r	3. 5	0. 8	*s,N*				
4523.744r	6	1. 3		Ni I?	3. 54 4. 23	99	
4523.924	11	2. 4	*u*	Sm II	0. 43	41	
4524.096r	5. 5	1. 2	*u*	Fe I			16
4524.223	8	*1. 5*	*s*	V I	1. 89	99	
4524.418r	2	0. 4					
4524.519r	1. 5	0. 3					
4524.691	18	4. 0	*u*	Ti II	1. 23	60	
4524.843r	8	1. 5	*u*	Cr I	4. 10	276	
4524.944	32	7. 1	*w*	Ba II	2. 51	3	
4525.146S	120	25. 6	*s*	Fe I	3. 60	826	
4525.245r		0. 9					
4525.616r	2	0. 4					
4525.72 a	1. 5	0. 3					
4525.866	17	*3. 8*	*u,d*	Fe I	2. 88	319	
4526.103	16	3. 5	*s*	Cr I (La II)	3. 37 0. 77	196 50	
4526.264r	2	0. 4	*s*				
4526.442	107	23. 6	*s*	Fe I p— Cr I	3. 88 2. 54	969 33	7
4526.568m	38	8. 4	*u*	Fe I	3. 11	471	
4526.720r	3. 5	0. 8					
4526.788r	3. 5	0. 8		Co I	3. 71	177	
4526.933m	75	*17. 4*	*s*	Ca I	2. 71	36	
4527.165r	4	0. 9					
4527.325m	67	14. 8	*S*	Ti I Cr I (Ce II)	0. 81 2. 54 0. 32	42 33 108	
4527.468m	25	5. 5	*s*	Ti I Cr I	0. 00 2. 99	7 82	
4527.640r	1. 5	0. 3					
4527.788	21	*4. 6*	*u*	Fe I	3. 25	641	
4527.930r	4. 5	1. 0		Co I Fe I	3. 05 3. 64	156 897	
4527.98 m	1	0. 2	*s*	V I			
4528.05 a	2	0. 4		Si I			
4528.143r	4. 5	1. 0					
4528.306r	4. 5	1. 0					
4528.484		7. 3	*w?,N*	Ce II— V II	0. 86 2. 27	1 56	
4528.627m	275	*43. 0*	*S*	Fe I	2. 18	68	
4528.768		8. 4	*u*	Fe I p	3. 30	595	
4528.824		8. 4	*u*	Fe I p	3. 02	468	
4529.018r	3	0. 7					
4529.227r	2. 5	0. 6					
4529.315r	2. 5	0. 6	*s*	V I	1. 89	95	
4529.492	99	13. 0	*u*	Ti II	1. 57	82	
4529.560		11. 0	*u*	Fe I (V I)	3. 88 1. 87	987 99	
4529.686m	55	8. 8	*u*	Fe I			
4529.852	15	3. 3	*s*	Cr I	2. 54	33	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4530.005r	0. 5	0. 1					
4530.16 a	1	0. 2					
4530.338r	1	0. 2					
4530.500r	3	0. 7	*s*				
4530.698r	76	7. 1	*s?*	Cr I	2. 54	33	
4530.738		12. 8	*s*	Cr I	2. 54	33	
4530.955m	69	15. 2	*u,N*	Co I	2. 93	150	
4531.158m	106	23. 4	*s*	Fe I	1. 48	39	
4531.350r	2	0. 4					
4531.457r	2	0. 4		Fe I			
4531.631S	55	*13. 2*		Fe I	3. 21 3. 63 3. 93	555 847 992	
4531.806r	1. 5	0. 3					
4531.907r	2	0. 4	*u*				
4532.138r	2	0. 4	*s*	(V II)	3. 80	212	
4523.317r	2	0. 4					
4532.50 a	1	0. 2					
4532.776r	4	0. 9	*u*	Cr I	3. 42	212	
4532.968	72	8. 8	*u*				
4533.046		7. 5	*u*	Fe I?			
4533.249m	90	*20. 9*	*S*	Ti I	0. 85	42	
4533.542r	2	0. 4					
4533.719r	9	2. 0					
4533.970	109	24. 0	*w*	Ti II	1. 24	50	
4534.171m	53	11. 7	*w*	Fe II	2. 85	37	
4534.37 a	1	0. 2					
4534.478r	3	0. 7					
4534.620r	5. 5	1. 2		Fe I p	4. 43	1169	
4534.785S	81	*20. 5*	*s*	Ti I	0. 84	42	
4534.984r	4	0. 9					
4535.143	26	*6. 0*	*s*	Cr I	2. 54	33	
4535.322	12	2. 6	*w*				
4535.447r	1	0. 2					
4535.576m	79	*19. 8*	*s*	Ti I	0. 83	42	
4535.712	84	18. 5	*u*	|Cr I— Zr I	2. 54 2. 54 4. 10 0. 52	33 33 276 30	7
4535.86 m			*s*	Ti I p	1. 44	112	13
4535.925m	147	16. 3	*s*	Ti I	0. 82	42	
4536.054m		16. 3	*s*	Ti I	0. 81	42	
4536.209r	1. 5	0. 3					
4536.364r	4	0. 9	*s?*				
4536.504	10	2. 2	*u*	Fe I (Cr I)	3. 64 3. 32	896 190	
4536.75 a	1	0. 2					
4536.907r	1	0. 2					
4537.05 m	2	0. 4	*s*				
4537.221r	5	1. 1	*s*	Ti I			
4537.424r	3	0. 7	*u*				
4537.676	13	2. 9	*s*	Fe I	3. 27	594	
4537.818r	1. 5	0. 3	*s,N*	Ti I?			
4537.970r	4. 5	1. 0	*u*	Sm II	0. 48	45	
4538.12 a	0. 5	0. 1					
4538.371r	1. 5	0. 3					
4538.466r	2	0. 4					
4538.597	9. 5	2. 1	*u,d?*	Fe I p	3. 98	972	
4538.758	51	5. 3	*u*	Fe I	2. 28	115	
4538.843		6. 4	*u*	Fe I	3. 94	969	
4538.956r	2. 5	0. 6	*u*	Fe I p	4. 19	1048	
4539.094	4	0. 9	*s*	Ti I			
4539.250	5. 5	1. 2	*u*				
4539.397r	2. 5	0. 6					
4539.593	12	2. 6	*w,N*				
4539.777	37	8. 1	*s*	Ce II— ‖Cr I	0. 33 2. 54	108 33	
4539.999r	2	*0. 6*	*s*	V I	1. 89	100	
4540.217r	2	0. 4	*s*				
4540.278r	1	0. 2					
4540.406	57	2. 4	*s*				17
4540.506m		10. 1	*s*	Cr I	2. 54	33	
4540.710m	52	*12. 3*	*s*	Cr I	3. 10	150	
4540.873	9. 5	2. 1	*s,N*	Ti I	1. 44	112	
				Cr I	2. 99 3. 10	82 150	
4541.068	22	*5. 3*	*s*	Cr I	2. 54	33	
4541.185r	2. 5	0. 6	*s*				16
4541.318	17	3. 7	*w*	Fe I	3. 25	640	
4541.35 m			*s*				13

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4541.523S	58	12. 8	*w*	Fe II	2. 85	38	
				(Cr I)	3. 08	149	
4541.61 m			*s*	Na I	2. 10	14	13
4541.656r	3. 5	0. 8					
4541.809r	3	0. 7					
4541.943	8	1. 8	*w*	Fe I	3. 27	593	
4542.067r	2	0. 4	*s*				
4542.234	4. 5	1. 0	*s*	Zr I	0. 63	49	
4542.433m	40	8. 8	*u,N*	Fe I	3. 64	894	
4542.617	31	3. 1	*s*	Cr I	3. 09	149	
					4. 10	275	
4542.704		3. 7	*u*	Fe I	3. 69	827	
4542.845r	1. 5	0. 3					
4542.90 m	0. 5	0. 1	*s*				
4543.035r	1	0. 2					
4543.13 m	1. 5	0. 3	*s*				
4543.229	3	0. 7	*u,N*	Fe I p	3. 64	893	
4543.740	3. 5	0. 8	*s*	Cr I	2. 98	100	
4543.818	14	3. 1	*u,d*	Co I	2. 72	142	17
4544.022m	35	*7. 7*	*w*	Ti II—	1. 24	60	
4544.198r	0. 5	0. 1					
4544.281	1	0. 2					
4544.488r	8	1. 8	*u*	Fe I p	3. 98	970	
4544.621	97	11. 0	*u*	Cr I	2. 54	33	
4544.694		13. 9	*s*	Ti I	0. 82	42	
4544.841r	3	0. 7					
4544.971	9	2. 0	*u*				
4545.143m	42	*10. 6*	*u*	Ti II	1. 13	30	
4545.338	30	4. 6	*s,d*	Cr I	2. 54	33	
4545.397		2. 0		V I	1. 95	109	
4545.545r	2	0. 4		Fe I p	3. 64	894	
4545.602r	1. 5	0. 3					
4545.693r	2. 5	0. 6		Ir I?	1. 62		
4545.815r	3	0. 7					
4545.962m	73	*17. 4*	*S*	Cr I	0. 94	10	
4546.108r	2. 5	0. 6					
4546.260r	1. 5	0. 3					
4546.476	5. 5	1. 2	*u*	Fe I	4. 19	1047	
4546.679	7. 5	1. 6	*u*	Fe I p	3. 96	989	
4546.807r	1	0. 2	*s*	Nb I?	0. 20		
4546.934	92	8. 8	*w*	Ni I	4. 16	261	
4547.022		13. 0	*s*	Fe I	1. 56	39	
4547.232	34	7. 0	*u*	Ni I	3. 63	146	
4547.30 m		0. 4	*s*	Ti I?			
4547.418r	1	0. 2					
4547.646r	1	0. 2					
4547.853S	73	*17. 6*	*s*	Fe I	3. 55	755	
				(Ti I)	2. 48	270	
4547.996r	3	0. 7					
4548.132r	3	0. 7	*s*	Ti I	2. 49	270	
4548.20 a	0. 5	0. 1					
4548.445r	2	0. 4					
4548.583	6	1. 3	*w,N*				
4548.770S	63	*14. 5*	*S*	Ti I	0. 83	42	
4548.900r	2	0. 4					
4549.018r	1. 5	0. 3					
4549.104r	2. 5	0. 6					
4549.189	33	2. 4	*o*	Fe II	5. 91	186	
4549.283		5. 0	*u*				
4549.474m	231	18. 2	*w*	Fe II	2. 83	38	
4549.638m		32. 5	*w*	Ti II	1. 58	82	
				(Co I)	3. 07	150	
4549.820	53	11. 6	*u*	Ti II p	1. 18	39	
4549.992r	2	0. 4					
4550.121	15	3. 3	*u*				
4550.274	6	1. 3					
4550.431r	1. 5	0. 3					
4550.573r	1. 5	0. 3					
4550.773S	72	*16. 0*	*w*	Fe I			
4550.969r	3. 5	0. 8					
4551.091r	1. 5	0. 3					
4551.228	23	*4. 9*	*u,d*	Ni I	4. 17	236	
4551.521r	0. 5	0. 1					
4551.654	23	*5. 3*	*u*	Fe I	3. 94	972	
4551.848r	1	0. 2	*s*	V I?	1. 80	82	
4552.144	20	4. 4	*w?,N*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4552.293	27	5. 9	*u*	Ti II? p	1. 12	30	
4552.463	109	15. 4	*s*	Ti I	0. 84	42	
4552.549		10. 3	*u*	Fe I			
4552.653r	3	0. 7		Sm II	0. 25	23	
4552.894r	1	0. 2					
4553.048r	2	0. 4	*s*	Zr I— V I	0. 52 2. 36	31 133	
4553.174	12	*2. 6*	*w*	Ni I	3. 66	135	
4553.375r	3. 5	0. 8					
4553.625r	3	0. 7					
4553.838r	1. 5	0. 3					
4554.036m	159	*36. 7*	*s*	Ba II	0. 00	1	
4554.252r	1. 5	0. 3					
4554.313r	1. 5	0. 3					
4554.460m	26	5. 7	*s*	Fe I	2. 86	319	
4554.536r	4	0. 9	*S*	Ru I	0. 81	5	
4554.698r	1. 5	0. 3					
4554.834	7. 5	1. 6	*s*	Cr I	3. 11	173	
4554.992m	39	8. 6	*w*	Cr II	4. 07	44	
4555.092	8	1. 8	*s*	Ti I Cr I	2. 41 3. 10	266 149	
4555.295	3. 5	0. 8	*s*	Cr I	3. 43	212	
4555.492m	54	*13. 2*	*s*	Ti I	0. 85	42	
4555.658r	2. 5	0. 5					
4555.738r	3	0. 7	*s*	Fe I p	3. 27	640	
4555.892m	77	16. 9	*w*	Fe II	2. 83	37	
4556.137m	100	21. 9	*u*	Fe I (Cr I)	2. 95 3. 60 3. 94 3. 11	410 820 974 173	
4556.377r	2	0. 4					
4556.547r	2	0. 4					
4556.760	1	0. 2					
4556.932m	21	4. 6	*s*	Fe I	3. 25	638	
4557.088	1. 5	0. 3					
4557.284	26	5. 7	*w,N*	Fe I			
4557.520	1. 5	0. 3					
4557.62 a	1	0. 2					
4557.754	3. 5	0. 8					
4557.867m	5. 5	1. 2	*s*	Ti I	2. 47	270	
4558.113m	19	4. 2	*s*	Fe I Ti I	3. 64 3. 98 2. 34 2. 34	894 974 262 263	
4558.226	7	1. 5	*w*				
4558.470	5	1. 1	*u*	V II La II	3. 80 0. 32	212 39	
4558.650m	66	*15. 4*	*w*	Cr II	4. 07	44	
4558.774	8	1. 8					
4558.930	1	0. 2					
4559.353	1. 5	0. 3					
4559.556r	0. 5	0. 1					
4559.72 a	2	0. 4					
4559.808r	1	0. 2					
4559.930	18	3. 9	*s*	Ti I (Ni I)	1. 46 3. 54	112 115	
4560.097m	42	9. 2	*u*	Fe I	3. 60	823	
4560.278	13	2. 8	*u*	Ce II	0. 91	8	
4560.417r	1. 5	0. 3	*s*				
4560.568r	2	0. 4					
4560.720	7. 5	*1. 7*	*s*	V I	1. 95	109	
4560.869	14	3. 1	*w*	Fe I?			
4560.966	4. 5	1. 0	*u*	Ce II	0. 68	2	
4561.192	6	*1. 7*	*u,N*				
4561.417m	28	6. 1	*u*	Fe I	2. 76		
4561.731	4	0. 9	*s*				
4561.985	1	0. 2					
4562.234r	0. 5	0. 1					
4562.367	17	3. 7	*u*	Ce II	0. 48	1	
4562.477r	1. 5	0. 3	*s*				
4562.637m	8	*2. 4*	*S*	Ti I	0. 02	7	
4562.885	1. 5	0. 3					
4563.08 a	1. 5	0. 3					
4563.237	6	1. 3	*s*	Cr I	3. 85	246	
4563.427m	11	*2. 4*	*s*	Ti I	2. 43	266	
4563.66 m			*S*	Cr I	3. 09	172	13
4563.766S	120	*28. 0*	*w*	Ti II	1. 22	50	
4563.886	6	1. 3	*u,N*				
4564.031r	2. 5	0. 5					
4564.173	13	2. 8	*u*	Cr I	4. 78	312	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4564.23 m			*s*	Ti I	1. 46	112	13
4564.329	5. 5	1. 2	*w*				
4564.457r	4. 5	1. 0					
4564.578	14	3. 1	*w*	V II	2. 27	56	
4564.702	30	6. 6	*w,N*	Fe I	3. 65	823	
4564.828	24	5. 2	*u*	Fe I	3. 07	472	
4565.043r	3	0. 7		C I? p	7. 48		
4565.15 a	2. 5	0. 5		Ni I p	3. 40	88	
4565.316	26	5. 7	*u*	Fe I	3. 27	641	
4565.418	26	5. 7	*u*	Zr II? Ni I? p	1. 77 3. 38	116 99	
4565.518m	67	14. 7	*s*	Cr I (Co I)	0. 98 3. 02	21 150	
4565.668	76	14. 9	*u*	Fe I	3. 24	554	
4565.729		3. 1	*u?*	Cr II?	4. 04	39	
4565.856	5	1. 1		Ce II	1. 09	21	
4566.026r	1. 5	0. 3		Fe I p	4. 47	1169	
4566.233	7. 5	1. 6	*u,N*	Sm II—	0. 33	32	
4566.383r	0. 5	0. 1					
4566.524m	36	7. 9	*u*	Fe I	3. 30	641	
4566.662r	5	1. 1		Fe I p	2. 56	212	
4566.873m	40	8. 8	*w*	Fe I			
4566.993	17	3. 7	*s*	Fe I	3. 41	723	
4567.173r	0. 5	0. 1					
4567.28 a	1. 5	0. 3					
4567.409	2	0. 4	*u*	Ni I	3. 54	102	
4567.583r	2	0. 4					
4567.745r	0. 5	0. 1					
4567.89 a	1	0. 2					
4568.043	1. 5	0. 3					
4568.20 a	3	0. 7					
4568.328m	25	*6. 1*	*w*	Ti II	1. 22	60	
4568.50 a	3	0. 7					
4568.608	14	3. 1	*u*	Fe I p	3. 93	989	
4568.771	60	9. 6	*w?*	Fe I	3. 26	554	
4568.855		5. 0	*u*	Fe I	3. 63	894	
4569.071r	3	0. 7	*u*	Fe I p	3. 27	593	
4569.253r	2	0. 4		Co II			
4569.360	5. 5	1. 2	*u*				
4569.525	10	2. 2	*s*	Cr I	3. 12	173	
4569.618	24	5. 2	*s*	Cr I	3. 12	173	
4569.820r	1	0. 2					
4570.025	5	1. 1	*u,N*	Co I—	3. 63	178	
4570.29 a	0. 5	0. 1					
4570.387r	|2|	0. 4	*s,N*	—V I	1. 95	109	
4570.609r	2	0. 4					
4570.918	6. 5	1. 4	*s*	Ti I	2. 40	266	
4571.102S	92	*20. 8*	*s*	Mg I	0. 00	1	
4571.298r	4	0. 9					
4571.444	18	3. 9	*u*	Fe I	2. 87	319	
4571.548r	0. 5	0. 1					
4571.675m	39	8. 5	*s*	Cr I	2. 54	32	
4571.803	14	3. 1	*s*	|V I Cr I	1. 94 3. 10 3. 85	109 149 246	
4571.982S	126	*29. 7*	*w*	Ti II	1. 57	82	
4572.194r	5	1. 1	*s*	Cr I	3. 32 3. 85	190 246	
4572.284	15	3. 3	*u*	Ce II	0. 68	1	
4572.428r	2. 5	0. 5					
4572.593	4. 5	1. 0	*s,d?*				17
4572.70 a	3	0. 7					
4572.864	11	2. 4	*w?*	Fe I—	3. 65	819	17
4572.94 m	1. 5	0. 3	*S*				
4573.059r	0. 5	0. 1					
4573.09 m			*s,N*	Nb I?	0. 27		13
4573.656r	0. 5	0. 1		Si I			
4573.790	2	0. 4					
4573.996r	3	0. 7	*s*	Sc I? Si I?			
4574.225m	33	7. 2	*u*	Fe I	3. 21	554	
4574.365r	1. 5	0. 3					
4574.483	5	1. 1	*u,N*	Zr II Cr I	2. 43 3. 08	139 148	
4574.567r	0. 5	0. 1					
4574.728m	52	11. 4	*s*	Fe I	2. 28	115	
4574.902	9. 5	2. 1	*u,N*	La II—	0. 17	23	
4575.113	9	2. 0	*s*	Cr I	3. 37	196	
4575.230r	1. 5	0. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4575.428r	5	1. 1					
4575.48 m			*S*	Zr I	0. 00	5	13
4575.546	10	2. 2	*s*				
4575.790	15	3. 3	*u*	Fe I	3. 30 3. 88	593 970	
4575.924r	2	0. 4					
4576.096r	0. 5	0. 1					
4576.339S	56	*12. 4*	*w*	Fe II	2. 84	38	
4576.517	6. 5	1. 4	*s*	Ti I	2. 33	262	
4576.597r	2. 5	0. 5					
4576.785r	1	0. 2	*s*	Cr I	3. 08	148	
4577.009r	2	0. 4					
4577.184	25	*5. 9*	*S*	V I	0. 00	4	
4577.331	3	0. 7					
4577.484r	1. 5	0. 3	*u*				
4577.694	4	0. 9	*u*	Sm II	0. 25	23	
4577.816	1. 5	0. 3					
4578.047	3	0. 7	*u,N*				
4578.326	4. 5	1. 0	*s*	Cr I	3. 85	246	
4578.47m			*S*				13
4578.559S	73	15. 9	*s*	Ca I	2. 52	23	
4578.732	11	2. 4	*s*	V I	1. 94	109	
4578.890	3	0. 7	*u*				
4579.054	12	2. 6	*u,d*	Fe I p Fe I p	3. 27 3. 88	640 988	
4579.187r	1. 5	0. 3	*s*	V I	1. 95	109	
4579.338m	22	4. 8	*u*	Fe I	2. 83 3. 69	319 936	
4579.514	3. 5	0. 8	*s*				16
4579.687	7. 5	1. 6	*w*	Fe I p	3. 64	894	
4579.820	20	4. 4	*w,N*	Fe I	3. 07	469	
4579.908r	3. 5	0. 8					
4580.062m	80	*17. 6*	*S*	Cr I	0. 94	10	
4580.154r	7	1. 5	*s*	Co I	0. 92	27	
4580.291r	1. 5	0. 3					
4580.414m	42	*9. 8*	*S*	V I	0. 02	4	
4580.589m	40	8. 7	*u*	Fe I Ni I	3. 65 3. 65	827 146	
4580.739r	4	0. 9					
4580.881	3	0. 7					
4581.046	3. 5	0. 8	*s*	Cr I	3. 01 3. 09	125 148	
4581.196	22	4. 8	*w*	Fe I			
4581.30 m			*s*	Y I	1. 90	15	13
4581.406	201	21. 8	*s*	Ca I	2. 52	23	
4581.519		21. 8	*u*	Fe I	3. 24	555	
4581.630		4. 4	*u,N*	Co I	2. 96	150	
4581.835r	5	1. 1					
4582.075	5	1. 1					
4582.309	16	3. 5	*w*	Fe I			
4582.43?m	3	0. 7	*s*				16
4582.510	4	0. 9					
4582.679r	1. 5	0. 3					
4582.833m	49	*10. 7*	*w*	Fe II	2. 84	37	
4582.952	6	1. 3	*u*	Fe I	2. 84	348	
4583.123	10	2. 2	*u*				
4583.251r	0. 5	0. 1					
4583.415	25	*5. 4*	*u*	Ti II	1. 16	39	
4583.576r	2	0. 4					
4583.724	124	2. 8	*s*	Fe I	3. 11	472	
4583.839m		24. 2	*w*	Fe II	2. 81	38	
4583.90 m			*s*	Cr I	3. 01	125	13
4583.992	16	3. 5	*o?*	Fe II p	2. 70	26	
4584.090	11	2. 4	*s,d?*	Cr I	3. 12	172	
4584.274	2. 5	0. 5					
4584.443	1. 5	0. 3	*s*	Ru I	1. 00	5	
4584.726	32	7. 0	*u*	Fe I Cr I	3. 60 3. 01	820 125	
4584.824m	49	10. 7	*u*	Fe I	3. 60	822	
4584.945r	5. 5	1. 2	*s*	Cr I	3. 37	196	
4585.079	5. 5	1. 2	*u*	Cr I	3. 45	212	
4585.195r	1. 5	0. 3					
4585.343	14	3. 0	*w,N*	Fe I			
4585.597	2	0. 4		Fe I p	3. 02	468	
4585.698	3. 5	0. 8		Si I			
4585.874	134	23. 5	*s*	Ca I	2. 52	23	
4585.973		6. 8	*s*	V I Ca I?	1. 35 2. 52	61 23	
4586.144	15	3. 3	*s*	Cr I	3. 11	172	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4586.234	38	8. 3	*w*				
4586.378m	38	*8. 7*	*S*	V I	0. 04	4	
4586.543r	0. 5	0. 1					
4586.721	0. 5	0. 1					
4586.93 m			*s*	Ti I p	2. 43	266	13
4586.994	9. 5	2. 1	*u*	Cr I?	3. 01	126	
4587.134S	46	10. 0	*u*	Fe I	3. 57	795	
4587.396	3. 5	0. 8					
4587.602	7	1. 5					
4587.723	14	3. 0	*u*	Fe I p	3. 98	971	
4587.878r	2. 5	0. 5		Cr I	3. 01	125	
4588.006r	3	0. 7					
4588.204m	66	*14. 4*	*w*	Cr II	4. 07	44	
4588.400	2	0. 4					
4588.523r	1. 5	0. 3					
4588.682	12	2. 6	*u*				
4588.76 m	1. 5	0. 3	*s*	Co I	0. 43	15	
4589.017	2	0. 4	*u,N*				
4589.294	3. 5	0. 8	*u*			16	
4589.36 m	0. 5	0. 1	*s*				
4589.512r	0. 5	0. 1					
4589.738r	2	0. 4					
4589.953S	70	*15. 9*	*w*	—Ti II	1. 24	50	
4590.072r	5. 5	1. 2					
4590.216	2	0. 4					
4590.340	1	0. 2		Mo I?			
4590.494	1	0. 2		V II?	3. 79	210	
4590.55 m			*s*	Zr I	0. 54	31	13
4590.677r	2	0. 4	*s*	Cr I	3. 01	125	
4590.793	25	5. 4	*w*	Fe I			
4590.945	3. 5	0. 8					
4591.113	4. 5	1. 0	*u*				
4591.247r	2. 5	0. 5	*s*	V I	2. 37	133	
4591.400m	59	12. 8	*s*	Cr I	0. 97	21	
4591.520m	34	7. 4	*u*	Fe I	2. 76		
4591.737r	1. 5	0. 3					
4591.850	1. 5	0. 3		Sm II?—	0. 18	14	
4592.057m	44	*9. 8*	*w*	Cr II	4. 07	44	
4592.219r	3. 5	0. 8					
4592.355	12	2. 6	*w,N*				
4592.531m	67	14. 6	*u*	Ni I	3. 54	98	
4592.659m	95	20. 7	*s*	Fe I	1. 56	39	
4592.816r	3	0. 7					
4592.928r	2	0. 4					
4593.170	6. 5	1. 4	*u*				
4593.533m	22	4. 8	*u*	Fe I	3. 94	971	
4593.709r	1	0. 2					
4593.832	10	2. 2	*u*	Cr I	3. 32	190	
4593.935	12	2. 6	*u*	Ce II	0. 70	6	
4594.126m	46	*10. 0*	*S*	V I (Eu I)	0. 07 0. 00	4 1	
4594.285r	1. 5	0. 3					
4594.416r	1. 5	0. 3		Cr I?			
4594.50?m			*s*	Ti I p	2. 34	262	13
4594.639	10	2. 2	*o?* *u*	Co I—	3. 63	176	
4594.790r	1	0. 2					
4594.894	26	5. 6	*u*	Ni I			
4595.052r	4. 5	1. 0	*s*	Cr I	3. 32	190	
4595.216	10	2. 2	*u*	Fe I p	3. 63	846	
4595.365m	61	13. 3	*s*	Fe I	3. 30	594	
4595.476	8. 5	1. 8	*u*				
4595.593	21	4. 6	*s*	Cr I	4. 18	286	
4595.690r	8. 5	1. 8		Fe II p	2. 85	38	
4595.88 m	3. 5	0. 8	*s*				
4595.956	34	7. 4	*u*	Ni I	3. 42	101	
4596.069m	61	13. 3	*u*	Fe I	3. 60	820	
4596.242	3	0. 7					
4596.416m	29	6. 3	*u*	Fe I	3. 65	823	
4596.578	6	1. 3	*u*				
4596.682r	2. 5	0. 5					
4596.905	14	3. 0	*u*	Co I Cr I?	3. 63 3. 09	177 171	
4597.036r	5. 5	1. 2	*s*	Fe I p	0. 99	17	
4597.255	18	3. 9	*u*				
4597.383	23	5. 0	*u*	Fe I			
4597.601	6	1. 3	*s,N*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4597.754	36	7. 8	*w*				
4597.876m	44	9. 6	*u*				
4598.125S	76	16. 5	*s*	Fe I	3. 28	554	
4598.364	16	3. 5	*s*	Fe I p Fe I p	0. 96 3. 94	17 970	
4598.437r	6	1. 3	*s*	Cr I	3. 11	172	
4598.617r	2	0. 4					
4598.745	12	2. 6	*u,d*	Fe I	3. 69	819	
4599.008r	2	0. 4	*u*	Cr I Ti I p	3. 09 2. 33	171 262	
4599.227	6	1. 3	*s*	Ti I			
4599.577	1	0. 2					
4599.74 a	3	0. 7					
4599.79 m			*s*				13
4599.843m	56	12. 2	*u*				
4599.970	1. 5	0. 3					
4600.107m	28	6. 1	*s*	Cr I	2. 54	32	
4600.204	12	2. 6	*u*	V II	2. 26	56	
4600.364m	53	11. 5	*w*	Ni I	3. 60	98	
4600.562r	4. 5	1. 0					
4600.757m	80	*18. 2*	*S*	Cr I	1. 00	21	
4600.938	26	5. 6	*u*	Fe I	3. 24	591	
4601.025	27	5. 9	*s*	Cr I	2. 54	32	
4601.144	7	1. 5	*s*	Cr I	3. 12	172	
4601.270	7. 5	1. 6		Si I	5. 08		
4601.376	7. 5	1. 6	*o*	Fe II p	2. 89	43	
4601.556	1	0. 2					
4601.742r	0. 5	0. 1					
4601.838r	0. 5	0. 1					
4602.008S	60	13. 0	*s*	Fe I	1. 61	39	
4602.181r	2	0. 4					
4602.389	1	0. 2					
4602.542r	3	0. 7	*s*	Cr I?— Zr I?	3. 45 1. 87	210	
4602.756	5. 5	1. 2		Fe II? p	2. 54	19	
4602.949S	97	*22. 2*	*s*	Fe I	1. 48	39	
4603.107r	10	2. 2					
4603.20 a	3	0. 7					
4603.348	14	3. 0	*s,d*	Si I Fe I p	2. 84	348	
4603.490r	1	0. 2					
4603.620	1. 5	0. 3					
4603.729	2. 5	0. 5					
4603.852	10	2. 2	*u*				
4603.953	15	3. 2	*u*	Fe I	2. 99	410	
4604.13 a	1. 5	0. 3					
4604.239	5	1. 1	*s*	Fe I p	2. 83	348	
4604.405r	1	0. 2	*S*	Zr I	0. 52	29	
4604.560m	37	8. 0	*w*	—Fe I (Cr I)	3. 32	190	
4604.688r	6	1. 3					
4604.852	10	2. 2	*s?*	Fe I	3. 63	846	
4604.996m	62	13. 5	*u*	Ni I	3. 48	98	
4605.104	8	1. 7	*s*	Fe I	2. 86	348	
4605.255r	3. 5	0. 7		Fe I?			
4605.357	19	4. 1	*u*	—Mn I	4. 72		
4605.466	15	3. 2	*u*				
4605.594m	40	8. 6	*w*	Fe I			
4605.75 a	2	0. 4		La II	0. 71	52	
4605.844	10	2. 3	*s,d?*				
4606.014	2. 5	0. 5		Fe I p	3. 64	893	
4606.12 m	3	0. 7	*S*	V I	0. 02	4	
4606.226m	39	8. 5	*u*	Ni I	3. 60	100	
4606.396	9. 5	2. 1	*u*	Cr I— Ce II	4. 45 0. 91	303 6	
4606.511r	3	0. 7		Sm II	0. 00	1	
4606.797	5. 5	1. 2	*s,d?*	Nb I	0. 35		
4607.087	3. 5	0. 8	*w*	Fe I p	3. 41	724	
4607.217	1	0. 2					
4607.338m	36	7. 8	*s*	Sr I	0. 00	2	
4607.511	4. 5	1. 0					
4607.654S	75	16. 3	*u*	Fe I	{3. 26 {3. 98	554 969	
4607.856	8. 5	1. 8					
4608.126	3	0. 7					
4608.230r	1. 5	0. 3					
4608.709	4	0. 9	*o*				
4608.842	4. 5	1. 0					
4608.98 a	2	0. 4					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4609.266	11	2. 4	*o*	Ti II p	1. 18	39	
4609.362	5	1. 1	*s*	Ti I			
4609.576r	2	0. 4					
4609.657r	2. 5	0. 5	*s*	V I	1. 38	61	
4609.912	22	4. 8	*w*	Ni I?	4. 09		
4609.97 m			*s*				13
4610.091r	3	0. 7					
4610.186	11	2. 4	*w*?				17
4610.31 a	3	0. 7					
4610.595r	2. 5	0. 5					
4610.941	3	0. 7	*s*	V I	1. 04	39	
4611.070	131	3. 2	*u*	Fe I p	3. 30	641	
4611.194		4. 3	*u*	Fe I p	2. 85	319	
4611.290		22. 8	*s*	Fe I	3. 65	826	
				(Fe I p)	3. 65	819	
4611.488r	12	2. 6					
4611.640r	8. 5	1. 8					
4611.824	6. 5	1. 4					
4611.956	6. 5	1. 4	*s*	Cr I	3. 37	196	
4612.075r	3. 5	0. 8		Pr II?	0. 00		
4612.270r	4	0. 9	*s,d*				17
4612.470r	2. 5	0. 5	*s,d*?				17
4612.611	8	1. 7	*u*	Fe I p	2. 83	349	
4612.749r	3. 5	0. 8					
4612.952	12	2. 6	*u,N*				
4613.213m	66	14. 3	*u*	Fe I	3. 29	554	
4613.367m	62	13. 4	*s*	Cr I	0. 96	21	
4613.562r	7	1. 5	*u*				
4613.713	11	2. 4	*s*				
4613.921m	29	6. 3	*u*	Zr II	0. 97	67	
4614.208m	27	5. 8	*s,d*	Cr I—	3. 10	148	
				Fe I	3. 30	638	
4614.353r	1. 5	0. 3					
4614.534	5	1. 1	*s*	Cr I	3. 85	245	
4614.585r	5	1. 1	*u*	Ni I	3. 60	99	
4614.726	5	1. 1	*s*	Cr I	3. 37	196	
4614.938r	1. 5	0. 3					
4615.20 a	1	0. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4615.456r	2. 5	0. 5		Sm II	0. 54	49	
4615.569m	24	5. 2	*u*	Fe I			
4615.720r	8. 5	1. 8	*s*	Sm II	0. 19	22	16
4615.938r	4	0. 9					
4616.132m	71	*17. 1*	*S*	Cr I	0. 98	21	
4616.296r	5	1. 1					
4616.466	4	0. 9					
4616.628m	37	8. 0	*w*	Cr II	4. 07	44	
4616.747r	3. 5	0. 8					
4617.068r	1. 5	0. 3					
4617.276S	49	*12. 1*	*s*	Ti I	1. 75	145	
4617.460r	4	0. 9					
4617.870	6	1. 3	*u*				
4617.967	7. 5	1. 6	*u*	Ni I	3. 77	115	
4618.127r	2	0. 4					
4618.360r	3	0. 7					
4618.512r	4	0. 9					
4618.60 a	1. 5	0. 3		Fe I p	4. 31	1151	
4618.792m	78	16. 9	*w,d*	Fe I—	2. 95	409	
				Cr II	4. 07	44	
4618.958r	7	1. 5					
4619.110r	3	0. 7					
4619.297m	70	15. 2	*s*	Fe I	3. 60	821	
4619.432	3	0. 7					
4619.539m	33	7. 1	*s*	Ti I	2. 33	261	
				Cr I	2. 99	81	
4619.677r	3. 5	0. 8	*s*	V I			
4619.780	6. 5	*1. 5*	*S*	V I	0. 04	4	
4619.897r	2. 5	0. 5		La II	1. 75	76	
4620.132	5	1. 1	*u*	Fe I p	3. 07	468	
4620.347	5	1. 1	*u*	—Ni I	3. 68	163	16
4620.520m	47	*10. 4*	*w*	Fe II	2. 83	38	
4620.811r	1. 5	0. 3		Co I	2. 72		
4621.033	2	0. 4	*s*?	Cr I	2. 54	32	
4621.124	3	0. 6					
4621.35 a	1. 5	0. 3		Mg I?	2. 71		
4621.479r	2. 5	0. 5		Si I			
4621.618	2. 5	0. 5		Fe I p	3. 96	98	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4621.770	0. 5	0. 1					
4621.888	45	3. 2	*s*	Cr I	2. 54	32	
4621.942		7. 4	*s*	Cr I	2. 54 3. 85	32 244	
4622.132r	3. 5	0. 8					
4622.258r	2. 5	0. 5					
4622.453m	33	7. 1	*s*	Cr I	3. 55	233	
4622.558r	8. 5	1. 8					
4622.751	20	*4. 5*	*s*	Cr I	2. 99	81	
4622.896r	4. 5	1. 0					
4623.02 a	3	0. 6		Co I	3. 19	156	
4623.101m	46	*11. 0*	*S*	Ti I	1. 74	145	
4623.303	4	0. 9					
4623.578	17	3. 7	*u*				
4623.878r	0. 5	0. 1					
4624.083	8	1. 7	*w*				
4624.269	1. 5	0. 3					
4624.419r	6	1. 3	*s*	V I	1. 05	39	
4624.558	6. 5	1. 4	*u*	Co I— Cr I?	2. 72	141	
4624.748r	4	0. 9					
4624.901	6	1. 3		Ce II—	1. 12	27	
4625.052S	76	*17. 3*	*s*?	Fe I	3. 24	554	
4625.203r	3. 5	0. 8					
4625.314r	5	1. 1		Cr I?—	3. 11	171	
4625.441	4	0. 9		Fe I p	3. 98	974	
4625.771	7	1. 5	*u,N*	Co I—	3. 71	176	
4625.920	12	2. 6	*s*	Cr I	3. 85	244	
4626.023r	1	0. 2					
4626.182m	67	*15. 6*	*S,d*	Cr I	0. 97	21	
4626.357r	5	1. 1		Fe I p	3. 25	636	
4626.49?m			*s*	V I	1. 04	39	13
4626.538	21	4. 5	*s*	Mn I—	4. 71		
4626.650r	2	0. 4					
4626.792	6. 5	1. 4	*u*	Fe I	2. 99	410	
4627.015r	1	0. 2		Fe I p	3. 25	637	
4627.221	4	0. 9	*s*	Eu I	0. 00	1	
4627.368	14	3. 0	*o*	Si I	5. 08		
4627.49 a	5	1. 1		Mo I?	2. 28		
4627.549	12	2. 6	*N,s*?	Fe I	3. 30	593	
4627.654r	2. 5	0. 5					
4628.160	14	3. 0	*u*	Ce II	0. 52	1	
4628.276	2	0. 4					
4628.457	6	1. 3	*s*	Cr I	3. 14	186	
4628.685r	3. 5	0. 8		Fe I	3. 69	819	
4628.917r	7	1. 5	*s,N*	Co I	0. 51	15	
4629.064	5	1. 1		Zr II	2. 49	139	
4629.342m	80	*18. 1*	*s*	Ti I Fe II— Co I	1. 73 2. 81 3. 05	145 37 156	
4629.533	11	2. 4	*s,d*				17
4629.669r	2. 5	0. 5					
4629.804r	4	0. 9		Zn I	5. 79	8	
4629.950r	5. 5	1. 2		Ni I p	4. 09	223	
4630.128S	61	*13. 6*	*u*	Fe I	2. 28	115	
4630.407r	4	0. 9					
4630.563	14	3. 0	*w*				
4630.783	3. 5	0. 8	*o*	Fe I	3. 94	969	
4631.036	7	1. 5	*o*	Fe I p	4. 10	1071	
4631.212	2. 5	0. 5					
4631.337r	0. 5	0. 1					
4631.484	10	*2. 2*	*w*	Fe I	4. 37 4. 55	1152	
4631.725r	1	0. 2					
4631.954r	3	0. 6					
4632.139	12	*2. 7*	*s*	Fe I p— Cr I	3. 55 3. 56	754 233	
4632.331	2	0. 4					
4632.479r	1. 5	0. 3					
4632.650r	4	0. 9					
4632.819	97	6. 9	*u*	Fe I p	3. 65	820	
4632.918		14. 0	*s*	Fe I	1. 61	39	
4633.097r	5. 5	1. 2		Fe I? p—	1. 01	17	
4633.256	10	*2. 2*	*s*	Cr I	3. 12	186	
4633.380r	0. 5	0. 1					
4633.547r	1. 5	0. 3					
4633.767	21	4. 5	*u*	Fe I	3. 02	410	
4634.012r	53	0. 2	*S*	Zr I	0. 07	5	
4634.079		11. 2	*w*	Cr II	4. 07	44	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4634.266r	4. 5	1. 0					
4634.372r	1. 5	0. 3					
4634.605r	1	0. 2		Cr I Fe II p	3. 11 2. 58	171 25	
4634.719m	28	6. 0	*u*	Fe I?			
4634.871	4	0. 9	*s*	Ti I?			
4635.035r	0. 5	0. 1					
4635.177	2. 5	0. 5	*S*	V I	0. 07	4	
4635.311	14	3. 0	*o*	Fe II	5. 95	186	
4635.423r	2	0. 4					
4635.561r	4	0. 9	*s*	Ti I	2. 33	261	
4635.620	10	2. 2	*u*	Fe I p	2. 86	319	
4635.709r	2	0. 4					
4635.853S	44	*10. 1*	*u*	Fe I	2. 84	349	
4636.017r	2	0. 4					
4636.164r	2	0. 4					
4636.324	14	*3. 2*	*w*	Ti II	1. 16	38	
4636.565r	1	0. 2					
4636.675	4. 5	1. 0	*u*	Fe I	3. 05	513	
4636.934r	2. 5	0. 5					
4637.044	3. 5	0. 8					
4637.178	18	3. 9	*s*	‖Cr I Ti I	2. 54 2. 33	32 261	
4637.300r	6. 5	1. 4					
4637.510S	77	*17. 2*	*u*	Fe I	3. 28	554	
4637.671r	4. 5	1. 0					
4637.764	20	4. 3	*s*	Cr I	{2. 54 {2. 54	32 32	
4637.875	10	2. 2	*s*	Ti I	2. 34	261	
4638.017S	82	*18. 3*	*u*	Fe I	3. 60	822	
4638.531	8	1. 7	*u*?				17
4638.705r	2	0. 4					
4638.956	13	2. 8	*u*				
4639.176	3. 5	0. 8					
4639.368m	36	*8. 4*	*s*	Ti I	1. 74	145	
4639.506	15	3. 2	*u*	Cr I	3. 11	186	
4639.671m	37	*8. 8*	*s*	Ti I	1. 75	145	
4639.946m	31	*7. 3*	*S*	Ti I	1. 73	145	
4640.106r	4. 5	1. 0	*s*	V I—	1. 05	39	
4640.292m	33	7. 1	*w*				
4640.44 m	3	0. 6	*s*	Ti I	2. 33	261	
4640.504	8. 5	1. 8	*o*				
4640.709r	1	0. 2	*S,N*	V I	1. 06	39	
4640.83 a	1. 5	0. 3		Co I	0. 58		
4640.973r	15	3. 2		Fe I?			
4641.216	24	5. 2	*w*	Fe I p	2. 83	347	17
4641.37 a	7	1. 5					
4641.519r	4. 5	1. 0					
4641.677r	1. 5	0. 3					
4641.89 a	0. 5	0. 1					
4642.000	3	0. 6	*s*	Cr I	3. 85	244	
4642.132r	2. 5	0. 5	*o*				
4642.245	7. 5	1. 6	*u*	Sm II	0. 38	36	
4642.40 a	1. 5	0. 3					
4642.584	7. 5	1. 6	*u*?	—Fe I	3. 40	688	17
4642.831r	4	0. 9	*w,N*?				17
4643.061r	0. 5	0. 1					
4643.202	6. 5	1. 4	*s*	Fe I p	1. 48	38	
4643.301r	2	0. 4					
4643.470S	63	13. 6	*u*	Fe I	3. 65	820	
4643.72 m			*S*	Y I	0. 00	4	13
4643.738r	15	3. 2					
4643.892r	8	1. 7					
4643.94 m			*s*				13
4644.05 a	5	1. 1					
4644.19 a	3. 5	0. 8					
4644.398r	8. 5	1. 8					
4644.526	8. 5	1. 8	*o*?				17
4644.80 a	2. 5	0. 5					
4644.86 m			*s*	Zr I	{1. 44 {1. 82	64	13
4645.04 a	2	0. 4					
4645.193	16	3. 4	*s,d*	Ti I	1. 73	145	21
4645.308r	2	0. 4		La II	0. 13	8	
4645.492	9	1. 9	*o*?				17
4645.644r	1. 5	0. 3					
4645.790r	2	0. 4					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4645.883r	1	0. 2					
4645.94 a	1	0. 2					
4645.993r	1. 5	0. 3		V I?	0. 04	4	
4646.169m	77	*20. 0*	*S*	Cr I	1. 03	21	
4646.376	14	3. 0	*s*	V I	1. 06	39	
4646.498	9. 5	2. 0	*s*	Cr I	3. 08	147	
4646.640m	27	5. 8	*s*				
4646.780	16	3. 4	*s*	Cr I	3. 10	186	
4646.970r	3. 5	0. 8		Ni I? p	3. 63	145	
4647.185	5. 5	1. 2	*s*				
4647.283	19	4. 1	*u*				
4647.442S	78	16. 8	*u*	Fe I	2. 95	409	
4647.701r	9. 5	2. 0		Fe I p	3. 41	722	
4647.958m	42	9. 0	*u*				
4648.120	19	4. 1	*s*	Cr I	2. 54	32	
4648.322r	5. 5	1. 2	*s*				
4648.416r	1. 5	0. 3					
4648.657m	67	*15. 7*	*u*	Ni I	3. 42	98	
4648.852	16	3. 4	*S,N*	Cr I	2. 54 3. 55	32 233	
4648.948	18	3. 9	*o*	Fe II	2. 58	25	
4649.163r	3. 5	0. 8					
4649.302r	0. 5	0. 1					
4649.438	20	4. 3	*s*	Cr I	2. 54 3. 56	32 233	
4649.643	20	4. 3	*u,N*				
4649.817	16	3. 4	*s*	Fe I	3. 24	592	
4650.019	14	3. 0	*s*	Ti I	1. 74	145	
4650.122r	3. 5	0. 8					
4650.308	10	2. 1	*u*				
4650.550	5	1. 1	*u*				17
4650.815	3. 5	0. 8	*u*				17
4650.947r	2	0. 4					
4651.119	6	1. 3		Cu I?	5. 07		
4651.290m	66	*15. 6*	*S*	Cr I	0. 98	21	
4651.511r	5	1. 1		Pr II	0. 20	6	
4651.871r	1	0. 2					
4652.024r	2	0. 4		C_2			
4652.167m	82	*19. 5*	*S*	Cr I	1. 00	21	
4652.31 a	3	0. 6					
4652.55 a	5	1. 1					
4652.78 a	1. 5	0. 3					
4652.895r	1	0. 2					
4653.042r	1	0. 2					
4653.149r	0. 5	0. 1					
4653.314	3. 5	0. 8					
4653.370	9	1. 9					
4653.490	8	1. 7	*s*	Fe I p	0. 99	17	
4653.645r	1. 5	0. 3					
4653.786r	1	0. 2					
4653.903r	0. 5	0. 1					
4654.044r	1	0. 2		C_2			
4654.153	14	3. 0	*s*				
4654.303	4	0. 9					
4654.504m	171	16. 8	*s*	Fe I	1. 56	38	
4654.629m		21. 0	*u*	Fe I	3. 21 3. 60	554 821	
4654.730		2. 6	*s*	Cr I	3. 10	186	
4654.93 a	3	0. 6					
4655.10 a	1	0. 2					
4655.245r	5	1. 1	*u*				16
4655.460r	1	0. 2		La II	1. 95	75	
4655.656	16	3. 4	*s*	Ni I Ti I	3. 70 2. 34	115 261	21
4655.787	12	2. 6	*u*				
4655.953r	3	0. 6					
4656.051	9	1. 9	*s,d*	Ti I	1. 75	145	
4656.188	18	3. 9	*s*	Cr I	3. 09	147	
4656.307r	1. 5	0. 3					
4656.474S	55	*13. 8*	*s*	Ti I	0. 00	6	
4656.641r	4	0. 9					
4656.818r	1. 5	0. 3		Cr I	4. 78	311	
4656.981m	27	*6. 6*	*w*	Fe II	2. 89	43	
4657.204m	38	*9. 2*	*w*	Ti II	1. 24	59	
4657.380r	3. 5	0. 8		Co I Ni I	3. 23 4. 26	156 254	
4657.451r	1	0. 2					
4657.590m	24	*5. 6*	*u*	Fe I	2. 84	346	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4657.861r	1. 5	0. 3					
4658.044r	2. 5	0. 5		Fe II?p—C_2?	5. 57	170	
4658.11 a	1	0. 2					
4658.170r	0. 5	0. 1					
4658.300	14	3. 0	*u,d*	Fe I	3. 27	591	
4658.502r	4. 5	1. 0					
4658.654r	5. 5	1. 2					
4658.881r	11	2. 4					
4659.165r	4	0. 9					
4659.374r	3	0. 6					
4659.534r	2. 5	0. 5					
4659.767r	0. 5	0. 1					
4659.971	3	0. 6					
4660.071	4	0. 9					
4660.241	2. 5	0. 5		C_2			
4660.426	17	3. 6	*w*				
4660.628r	1	0. 2		Co II			
4660.729r	1. 5	0. 3					
4660.907	19	4. 1	*u*	Fe I?			
4661.151	3	0. 6	*o*	Fe II? p	5. 57	170	
4661.328	3	0. 6	*u*	Fe I p	2. 83	347	
4661.539m	28	*6. 9*	*w?,d?*	Fe I	4. 56	1207	
4661.788	2	0. 4	*o?*	Zr II	2. 41	129	
4661.92?m			*s*	Eu I	0. 00	1	13
4661.979m	35	*8. 6*	*s*	Fe I	2. 99	409	
4662.105r	4. 5	1. 0					
4662.217r	2. 5	0. 5					
4662.323r	1	0. 2					
4662.512	4. 5	1. 0	*s*	La II—	0. 00	8	
4662.755	11	2. 4	*u,N*	Ti II p— Mo I?	1. 18 1. 47	38 6	
4662.98 a	2. 5	0. 5					21
4663.182	18	3. 9	*u*	Fe I	3. 55	754	
4663.28?m			*S*				13
4663.317	27	5. 8	*s*	Cr I	3. 10	186	
4663.406	25	5. 4	*s,N?*	Co I	3. 13	156	
4663.561r	4	0. 9					
4663.709	21	4. 5	*o*	Fe II	2. 89	44	
4663.822m	28	6. 0	*s*	Cr I	3. 11	186	
4663.954	12	2. 6	*s,N*				
4664.185r	3. 5	0. 8					
4664.324r	4	0. 9		Ni I p C_2?	3. 63 R 30	147 2,1	19
4664.547r	1. 5	0. 3					
4664.794S	52	*11. 4*	*s,N*	Cr I Na I	3. 12 2. 10	186 12	
4665.172	5. 5	1. 2	*s*				
4665.257r	3	0. 6		Fe I p	4. 21	1115	
4665.42 a	1	0. 2					
4665.547	5	1. 1	*u,N*	Fe I	4. 07	1044	
4665.679r	3. 5	0. 8		C_2			
4665.76 m	4. 5	1. 0	*s*				
4665.825r	6. 5	1. 4		Fe II p	2. 70	26	
4665.906	28	6. 0	*s*	Cr I	3. 55	233	
4666.111	23	4. 9	*u*	—V I	1. 89	94	
4666.203	18	3. 8	*s*	Cr I	2. 97	99	
4666.353r	0. 5	0. 1					
4666.484m	34	7. 3	*s*	Cr I	3. 14	186	
4666.615	16	3. 4	*u*				
4666.754m	45	9. 6	*w*	Fe II	2. 83	37	
4666.893r	3. 5	0. 8					
4666.986	35	7. 5	*w?,d*	Ni I	3. 80	146	
4667.162	16	3. 4	*s*	Cr I	2. 97	99	
4667.255	34	7. 3	*w?,N*				
4667.460m	75	16. 1	*u*	Fe I	3. 60	822	
4667.594m	60	12. 8	*s*	Ti I	0. 02	6	
4667.770m	36	7. 7	*w,N*	Ni I	3. 70	163	
4667.924	4	0. 9		C_2?	P 64	2,1	19
4668.073	112	8. 6	*u*	Fe I p	3. 69	826	
4668.149		17. 6	*u*	Fe I	3. 26	554	
4668.375	11	2. 4	*s*	Ti I	1. 05	77	
4668.572m	39	*10. 0*	*S*	Na I	2. 10	12	
4668.78 a	5	1. 1		C_2?			
4668.844r	1. 5	0. 3					
4668.991r	2	0. 4					
4669.176m	60	12. 8	*w?*	Fe I	3. 65	821	
4669.323	31	*7. 3*	*s*	Cr I	3. 17	186	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4669.395r	6. 5	1. 4		Sm II	0. 10	7	
4669.527r	2. 5	0. 5					
4669.651	6. 5	1. 4	*s*	Sm II Cr I	0. 28 3. 09	26 170	
4669.828r	0. 5	0. 1		Si I			
4669.982r	2	0. 4					
4670.173m	27	5. 8	*w*	Fe II	2. 58	25	
4670.413m	55	*12. 2*	*u*	Sc II	1. 36	24	
4670.559r	6. 5	1. 4	*s,N*				
4670.742r	0. 5	0. 1					
4670.905	2. 5	0. 5					
4671.049r	2. 5	0. 5					
4671.215r	1	0. 2		Si I?			
4671.422m	27	5. 8	*w*				
4671.569r	3. 5	0. 7		C_2	{P 63 {P 64	2,1} 2,1}	19
4671.687	11	2. 4	*s,N*	Mn I	2. 89	21	
4671.914r	2	0. 4		C_2			
4672.036r	4. 5	1. 0		Fe I p	4. 14	1045	
4672.197r	5	1. 1					
4672.334m	56	12. 0	*w*				
4672.46 a	2	0. 4					
4672 537r	4. 5	1. 0					
4672.632r	1	0. 2					
4672.837m	31	6. 6	*s*	Fe I p	1. 61	40	
4672.971r	3	0. 6	*u*				
4673.169m	72	15. 4	*w?*	Fe I	3. 65	820	
4673.278m	39	8. 3	*u*	Fe I p	3. 65	822	
4673.444r	2	0. 4		C_2			
4673.645r	2	0. 4					
4673.790	7. 5	1. 6					
4673.958r	2	0. 4					
4674.099m	34	7. 3	*u*				
4674.303	13	2. 8	*u,N*	Fe I			
4674.475r	1. 5	0. 3		C_2			
4674.656	18	3. 8	*s*	Fe I (Sm II)	1. 56 0. 18	40 14	
4674.762	14	3. 0	*w*	Ni I	3. 63		
4674.880r	1	0. 2	*S*	Y I	0. 07	4	
4675.112m	30	*6. 4*	*S*	Ti I	1. 07	77	
4675.280r	2. 5	0. 5					
4675.392	4	0. 9	*w?*				
4675.604	14	3. 0	*w*	Ni I	3. 61	115	
4675.846r	1	0. 2					
4676.015r	2	0. 4					
4676.165r	2. 5	0. 5					
4676.234	3	0. 6					
4676.358	5. 5	1. 2	*s*				
4676.540r	1. 5	0. 3	*s,N*				
4676.656r	2	0. 4					
4676.926	3. 5	0. 7	*s,N*	Sm II Ti I?	0. 04 2. 50	3	17
4677.086r	1. 5	0. 3					
4677.30 a	1	0. 2		C_2	R 25	2,1	19
4677.431r	3. 5	0. 7		C_2	R 24	2,1	19
4677.53?m	1	0. 2	*s*	Co I	0. 58	15	
4677.596	12	2. 6	*w*	Fe I	4. 15	1072	17
4677.724r	4	0. 9	*o?*				
4677.873r	3	0. 6					
4677.997r	5. 5	1. 2					
4678.172S	62	13. 2	*w*				
4678.420r	9	1. 9	*u*	Fe I p	3. 42	688	
4678.521	10	2. 1	*u*				
4678.625r	6	1. 3					
4678.854S	97	*21. 2*	*u*	Fe I	3. 60	821	
4679.076r	7	1. 5					
4679.230m	47	10. 0	*w*	Fe I—	3. 37	688	
4679.421r	4	0. 9					
4679.578r	1	0. 2		C_2			
4679.73 m			*S*	Ti I p	1. 05	77	13
4679.822r	1	0. 2		C_2			
4679.983r	6. 5	1. 4		Fe I p	4. 22	1071	
4680.142m	42	9. 0	*w*	Zn I	4. 00	2	
4680.306m	43	9. 2	*S*	Fe I	1. 61	39	
4680.482	58	7. 3	*s*	Fe I— Cr I	2. 86 3. 11	346 186	
4680.560		5. 1	*u*				
4680.749	4	0. 9	*s*	Nd II?	0. 06	4	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4680.863	26	5. 6	*s*	Cr I	3. 09	170	
4681.049r	5. 5	1. 2		Ni I p	3. 63	143	
4681.208r	1. 5	0. 3					
4681.308r	0. 5	0. 1					
4681.474m	26	*5. 8*	*u,d*	Fe I			
4681.607r	2. 5	0. 5					
4681.744r	1	0. 2					
4681.919m	64	*15. 0*	*S*	Ti I	0. 05	6	
4682.121m	49	10. 5	*u*	Fe I			
4682.351m	39	8. 3	*u*	Y II— Co I	0. 41 3. 19	12 156	
4682.570	22	*4. 5*	*u*	Fe I	2. 94	384	
4682.766r	6. 5	1. 4					
4682.960r	0. 5	0. 1		C_2			
4683.15 a	1	0. 2					
4683.253r	3	0. 6		C_2	P56 P57	2,1 2,1	19
4683.401r	6	1. 3					
4683.44 m			*s*	Zr I	1. 53	63	13
4683.567S	46	*10. 0*	*u*	Fe I	2. 83	346	
4683.708r	2. 5	0. 5					
4683.827r	1. 5	0. 3					
4683.981r	6	1. 3					
4684.12 a	3. 5	0. 7					
4684.218r	7	1. 5					
4684.28 m			*s*				13
4684.351	9	1. 9		C_2	R32 R19	1,0 2,1	19
4684.50 m			*S*	Ti I	2. 16	203	13
4684.528r	4	0. 9		C_2	R 30	1,0	19
4684.601	22	4. 7	*u*	Cr I Ce II?	3. 08 0. 90	146 228	
4684.750r	6	1. 3		C_2?	P 65 P 66	1,0 1,0	19
4684.884r	5	1. 1	*s,N*	C_2	P 64	1,0	16,19
4685.034	16	3. 4	*s*	Fe I	2. 84	347	
4685.17 m	2	0. 4	*s*				
4685.275m	53	*11. 5*	*s*	Ca I	2. 93	51	
4685.499r	4. 5	1. 0		C_2			
4685.696r	1	0. 2					
4685.854r	5	1. 1		Ge I Co I	2. 03 0. 92	3	
4686.006r	3. 5	0. 7		C_2	R 18	2,1	19
4686.122r	2. 5	0. 5					
4686.222	56	*12. 4*	*u*	Ni I	3. 60	98	
4686.370r	5	1. 1		Fe I?			
4686.630r	1. 5	0. 3		Fe I?			
4686.750r	2. 5	0. 5					
4686.87 m	2	0. 4	*s*	Ti I	2. 15	203	
4686.96 m	2	0. 4	*s*	V I	1. 87	93	
4687.186	5	1. 1	*s?,N*	Sm II— C_2?	0. 04 R 19	3 2,1	19
4687.312	44	2. 3	*s*	Fe I p	0. 96	17	
4687.393		7. 0	*u*	Fe I	2. 83	347	
4687.538r	3	0. 6					
4687.676	6. 5	1. 4	*u*	Fe I p	2. 86	347	
4687.805	7. 5	1. 6	*S*	Zr I	0. 73	43	
4687.943r	1. 5	0. 3		C_2			
4688.184m	40	*9. 0*	*w*	—Fe I			
4688.372	17	3. 6	*u*	Fe I p— Ti I	4. 19 3. 09	1071 306	
4688.477r	11	2. 3	*S*	Zr I	0. 15	5	
4688.56 a	7	1. 5					
4688.688r	30	6. 4		C_2 C_2	R 28 Head	1,0 2,1	19 19,30
4689.062r	4	0. 9		C_2			
4689.214r	3	0. 6		C_2			
4689.361m	31	6. 6	*s*	Cr I	3. 12	186	
4689.499m	25	5. 3	*u*	Fe I			
4689.760r	0. 5	0. 1					
4689.974r	0. 5	0. 1					
4690.144S	51	10. 9	*w*	Fe I	3. 69	820	
4690.379	13	2. 8	*s*	Fe I	1. 01	17	
4690.559r	5	1. 1		C_2			
4690.798	3	0. 6	*S*	Ti I	1. 07	76	
4690.974r	4. 5	1. 0					
4691.197r	3. 5	0. 7					
4691.347	104	6. 0	*S*	Ti I	1. 07	75	
4691.420		18. 1	*u*	Fe I	2. 99	409	
4691.599m	37	7. 9	*w,N*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4691.779r	6	1. 3		C_2?—	R 17?	2,1	19
4691.969r	5. 5	1. 2		C_2?—	R 17?	2,1	19
4692.219r	4	0. 9					
4692.45 m	3. 5	0. 7	*S*	Ti I p	1. 07	77	
4692.524r	8. 5	1. 8		La II—	1. 75	75	
4692.653	21	4. 5	*w,N*	—C_2	R 29	1,0	17, 19
4692.847r	8. 5	1. 8					
4692.974r	5. 5	1. 2		Cr I	2. 98	99	
4693.195	17	3. 6	*u,d*?	Co I	3. 23	156	17
4693.338r	4	0. 9		C_2?—	R 16?	2,1	19
4693.674	12	*2. 7*	*S*	Ti I	0. 02	6	
4693.789r	3	0. 6					
4693.947m	22	*4. 9*	*s*	Cr I	2. 98	99	
4694.117	12	2. 6	*o*?	S I	6. 52	2	17
4694.303r	1	0. 2					
4694.457r	3. 5	0. 7		—C_2	R 28	1,0	19
4694.655r	10	2. 1					
4694.870	32	5. 5	*w,N*	Fe I			
4694.903r		1. 9					
4695.152	17	3. 6	*s*	Cr I	2. 98	99	
4695.446	8	1. 7		S I	6. 52	2	
4695.607r	1	0. 2		C_2?	R 13	2,1	19
4695.751r	1	0. 2		C_2	R 14?	2,1	19
4695.857r	1	0. 2		C_2			
4696.030	3	0. 6		C_2	R 11	2,1	19
4696.262	8	1. 7		S I	6. 52	2	
4696.38 a	4	0. 9		—C_2	R 27	1,0	19
4696.512r	1	0. 2		C_2	R 27	1,0	19
4696.622	4	0. 9		C_2	P 59 P 60	1,0 1,0	19
4696.755r	1. 5	0. 3					
4696.932	6	1. 3	*s*	Ti I	2. 15	203	
4697.058m	26	5. 5	*s*	Cr I	2. 71	62	
4697.294r	4	0. 9	*u*	C_2	R 10 P 46 P 47	2,1 2,1 2,1	19
4697.398	14	3. 0	*s*	Cr I	3. 37	195	
4697.608	4	0. 9		C_2			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4697.808r	0. 5	0. 1					
4698.081r	4. 5	1. 0		C_2?	R 12?	2,1	19
4698.280	10	2. 1		Sc II	0. 60	13	
4698.402	65	5. 5	*u*	Co I Ni I	3. 25 4. 09	156 235	
4698.462		9. 4	*s*	Cr I	3. 14	186	
4698.623m	45	9. 6	*s*	Cr I	2. 71 3. 09	62 146	
4698.771m	40	8. 5	*S*	Ti I	1. 05	75	
4698.83 m			*S*	Ti I	2. 16	203	13
4698.942	9. 5	2. 0	*s*	Cr I	3. 08	146	
4699.134r	5	1. 1					
4699.340m	64	13. 6	*w*				
4699.583	8	1. 7	*s*	Cr I	4. 21	292	
4699.724r	3	0. 6					
4699.854r	2	0. 4					
4699.990r	1. 5	0. 3					
4700.162S	52	11. 1	*u*	Fe I	3. 69	935	
4700.298r	3	0. 6		C_2			
4700.431	2	0. 4	*u*	Fe I p	2. 20	67	
4700.619	12	*2. 8*	*s*	Cr I	2. 71	62	
4700.814r	0. 5	0. 1					
4700.915r	4. 5	1. 0					
4701.054m	38	8. 1	*s*	Fe I	3. 69	820	
4701.172	10	2. 1	*s*	Mn I	2. 92	21	
4701.361m	34	7. 2	*u*	Ni I	3. 48	101	
4701.542m	46	9. 8	*u*	Ni I	4. 09	235	
4701.719r	4	0. 9		C_2?	R 24	1,0	19
4701.898	15	3. 2	*u*	Fe I p– Cr I	3. 43 3. 11	688 170	17
4702.135r	4	0. 9					
4702.295	12	2. 6	*u*				
4702.603	11	2. 3	*w*				
4703.003m	326	*71. 9*	*S*	Mg I	4. 34	11	
4703.491r	3	0. 6		C_2	R 23	1,0	19
4703.584	10	2. 1	*s*				
4703.818m	58	12. 3	*w*	Ni I	3. 66	133	
4704.021r	5	1. 1					
4704.190r	7	1. 5					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4704.412	4	0. 9	*w,d*	Sm II	0. 00	1	17
4704.482	17	3. 6					
4704.675r	2	0. 4					
4704.787r	1. 5	0. 3					
4704.954S	58	*12. 5*	*u*	Fe I	3. 69	821	
4705.150r	6	1. 3		C_2?	R 22	1,0	19
4705.246	5. 5	1. 2		C_2	R 22	1,0	19
4705.473m	36	*7. 6*	*s*	Fe I	3. 55	752	
4705.65 a	2	0. 4					
4705.79 a	2. 5	0. 5					
4705.925	9	1. 9	*u,d*?	Ni I?	3. 66	128	
4706.094	7. 5	1. 6	*s*	Cr I	3. 11	170	
4706.17 m	1	0. 2	*s*	V I	1. 93	94	
4706.302	6. 5	1. 4	*u*	Fe I p	3. 64	890	
4706.554	26	5. 5	*s*	Nd II— V I	0. 00 2. 14	3 119	
4706.72 a	4	0. 9		Si I	5. 08		
4706.83 a	5	1. 1		C_2?	R 21	1,0	19
4706.94 a	4	0. 9		C_2?	R 21	1,0	19
4707.074r	8. 5	1. 8					
4707.285m	107	22. 7	*s*	Fe I	3. 24	554	
4707.496m	65	13. 8	*s*	Fe I	2. 84	346	
4707.69?m			*s*				13, 16
4707.752	8	1. 7	*s*	Cr I	3. 37	195	
4708.019m	52	*11. 3*	*s*	Cr I	3. 17	186	
4708.288r	4	0. 9		C_2	P 35 P 36	2,1 2,1	19
4708.461r	6	1. 3					
4708.672m	46	*10. 0*	*w*	Ti II	1. 24	49	
4708.976	111	7. 8	*u*	Fe I Ti I	3. 64 2. 16	889 203	
4709.096m		15. 7	*u*	Fe I	3. 65	821	
4709.332r	4. 5	1. 0	*s*	Se I?	2. 30	22	
4709.505r	3. 5	0. 7	*s*	Ru I	1. 13	14	
4709.718m	62	*14. 0*	*s*	Mn I	2. 89	21	
4709.868r	4	0. 9					
4710.077	9. 5	2. 0	*S*	Zr I	0. 69	43	
4710.192	98	3. 0	*S*	Ti I	1. 05 2. 17	75 203	
4710.290m		17. 8	*u*	Fe I	3. 02	409	
4710.561r	4	0. 8	*s*	V I	2. 13	119	
4711.021r	2	0. 4					
4711.491m	28	5. 9	*w*?	Fe I			
4711.628	3. 5	0. 7		C_2	R 18	1,0	19
4711.68 m	1	0. 2	*s*	Ti I p	1. 44	111	
4711.81 a	2	0. 4					
4711.91 m	2. 5	0. 5	*s*	Zr I	1. 53	64	
4712.083	34	7. 2	*u,d*	Ni I— Fe I	3. 66 3. 02	131 467	
4712.257	18	3. 8	*u*				16
4712.497	13	2. 8	*u*	Fe I			16
4712.701	16	3. 4	*u,N*				17
4712.975r	18	3. 8		C_2?	R 17	1,0	19
4713.185	14	3. 0		Fe II p	2. 78	26	
4713.34 a	3. 5	0. 7		C_2	R 17	1,0	19
4713.520r	3	0. 6					
4713.65 a	2	0. 4					
4713.803	9	1. 9	*u,N*	Ni I? p	3. 54	128	
4714.071	36	7. 6	*u,N*	Fe I	4. 56	1206	
4714.12 m			*s*	V I	2. 12	119	13
4714.206	22	4. 7	*u*	Fe I	3. 30	591	
4714.371r	132	5. 7	*u*	Fe I			
4714.420		25. 0	*u*	Ni I	3. 38	98	
4714.553r	16	3. 4		C_2	R 16	1,0	19
4714.732r	17	3. 6		C_2	R 16	1,0	19
4714.911r	17	3. 6					
4715.102r	12	2. 5					
4715.299	11	*2. 8*	*S*	Ti I	0. 05	6	
4715.453r	1	0. 2	*s*				
4715.607	6. 5	1. 4	*u*	Nd II?	0. 20	49	
4715.767m	68	*15. 0*	*u*	Ni I	3. 54	98	
4715.893	14	3. 0	*s,N*	V I?	2. 36	136	
4716.141r	2. 5	0. 5		Se II p— C_2	0. 61 R 15	13 1,0	19
4716.508r	2	0. 4		Fe I?			
4716.833	5	1. 1	*s*	Fe I	3. 25	634	
4717.127r	6	1. 3					
4717.314	9	1. 9	*w*				
4717.579	28	5. 9	*u*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4717.710	9	1. 9	*s*	V I	2. 11	119	
				Cr I	3. 12	170	
4717.877	8	1. 7	*u*				
4718.05 a	2	0. 4					
4718.23 a	2. 5	0. 5					
4718.423m	60	*12. 9*	*s*	Cr I	3. 19	186	
4718.587r	6	1. 3					
4718.833r	2	0. 4		C_2	R 13	1,0	19
4719.12 m	2. 5	0. 5	*s*	Zr I	1. 86	66	
4719.225	4	0. 8		Fe I?			
4719.510	11	2. 3	*w*	Ti II	1. 24	59	
4719.686	7. 5	1. 6	*o*?				
4719.856r	5. 5	1. 2		Sm II	0. 04	3	
4720.133	3. 5	0. 7		Fe II p	3. 20	54	
4720.391r	1	0. 2					
4720.577r	4. 5	1. 0		Fe I? p	4. 21	1114	
4720.816r	1. 5	0. 3		C_2	R 11	1,0	19
4720.999S	47	*10. 0*	*s*	Fe I	2. 99	409	
					4. 15	1071	
4721.130r	5. 5	1. 2		C_2—	R 11	1,0	19
				Cr I?	3. 55	232	
4721.312	5	1. 1					
4721.525r	3	0. 6	*S*	V I	1. 95	108	
4721.975r	3	0. 6		C_2	R 10	1,0	19
4722.163m	63	*14. 2*	*w*	Zn I	4. 03	2	
4722.284r	4. 5	1. 0	*s*	Sr I	1. 80	5	
4722.466r	1	0. 2	*s*				16
4722.615	14	*3. 0*	*S*	Ti I	1. 05	75	
4722.754	3	0. 6	*s*	Cr I	3. 37	195	
4722.881r	1	0. 2	*s*	V I	1. 95	108	
4722.999r	4. 5	1. 0		Ni I	4. 15		
4723.114	31	3. 4	*S*	Cr I	3. 08	145	
4723.175		3. 4	*S*	Ti I	1. 07	75	
4723.347r	6	1. 3		Ni I p	3. 68	162	
				C_2	P 42	1,0	19
4723.448r	3. 5	0. 7		C_2	R 9	1,0	19
4723.752r	3. 5	0. 7		C_2	R 9	1,0	19
4723.898r	2. 5	0. 5		Ni I	3. 68	167	
4724.10 a	2	0. 4		C_2	R 8	1,0	19
4724.415	27	*5. 5*	*s*	Cr I	3. 09	145	
4724.538r	7. 5	1. 6	*u*				
4724.68 m	2. 5	0. 5	*s*	Ti I	2. 17	203	
4724.847	4. 5	1. 0	*u,N*	C_2—	R 8	1,0	19
4725.098r	1. 5	0. 3		C_2	R 7	1,0	19
4725.455	3	0. 6	*u*	—C_2	P 40	1,0	19
4725.584r	1. 5	0. 3		C_2	P 40	1,0	19
				C_2	R 7	1,0	19
4725.81 a	|2|	0. 4					
4725.948	7	1. 5	*s*	|Cr I	3. 00	99	
				Fe I	4. 29	1134	
4726.145	16	*3. 8*	*u*	Fe I	3. 00	384	
4726.334	4	0. 8		C_2	P 39	1,0	19
4726.80 a	2. 5	0. 5		Si I?	5. 08		
4727.003	7. 5	1. 6	*s,N*	Fe I p	3. 27	635	
4727.156	25	5. 3	*s*	Cr I	3. 00	99	
4727.272	17	3. 6	*u*				
4727.406	122	16. 5	*u*	Fe I	3. 69	821	
4727.488		11. 0	*s*	Mn I	2. 92	21	
4727.850	8. 5	1. 8	*w*?	Ni I	3. 63	146	
4727.947	8. 5	1. 8	*s*	Co I	0. 43	15	
4728.167	18	3. 8	*u*	Fe I			
4728.416r	7. 5	1. 6	*u*	Ni I	3. 74	115	
4728.552S	73	*16. 3*	*u*	Fe I	3. 65	822	
4728.787r	6	1. 3	*S*	Sc I	1. 44	14	
4729.023m	35	7. 4	*u*	Fe I	4. 07	1043a	
4729.202r	8. 5	1. 8	*S,N*	Sc I	1. 43	14	
					1. 43	14	
4729.277	16	3. 4	*u*	Ni I	4. 10	235	
4729.45 a	7	1. 5					
4729.54 m	1	0. 2	*s,N*	V I	1. 89	93	
4729.682m	45	9. 5	*u*	Fe I	3. 40	688	
4729.859	11	2. 3	*s,N*	Cr I	3. 09	169	
4730.038m	65	*13. 3*	*u*	Mg I	4. 34	10	
4730.403	11	2. 3	*s*	V I—	1. 94	108	
4730.60 m	1	0. 2	*s*				
4730.720m	43	*9. 5*	*s*	Cr I	3. 08	145	
4730.997	31	6. 6	*u*				
4731.173	11	2. 3	*S*	Ti I	2. 17	202	
4731.287r	0. 5	0. 1					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4731.473m	79	*16. 7*	*w*	|Fe II Fe I	2. 89	43	
4731.662r	0. 5	0. 1					
4731.804m	39	8. 2	*u*	Ni I	3. 83	163	
4732.049r	1. 5	0. 3	*s*	Co I	0. 51	15	
4732.174r	2	0. 4		C_2	P 32	1,0	19
4732.323r	1. 5	0. 3	*s*	Zr I	0. 63	48	
4732.466m	39	*8. 7*	*w*	Ni I	4. 10	235	
4732.817r	2	0. 4		C_2	P 31	1,0	19
4732.948r	3	0. 6		Ti II p	1. 13	29	
4733.222r	1	0. 2					
4733.426	11	2. 3	*s*	Ti I	2. 16	202	
4733.598S	76	16. 0	*S*	Fe I	1. 48	38	
4733.758r	4	0. 8					
4733.984	13	2. 7	*s*				
4734.105m	30	6. 3	*s*	|Fe I Sc I	4. 29 1. 43	1133 14	
4734.183r	3	0. 6					
4734.28 a	3	0. 6					
4734.434r	4. 5	1. 0		C_2	P 28	1,0	19
4734.577	8	1. 7		C_2	P 28	1,0	19
4734.669r	3	0. 6	*S*	Ti I	2. 24	233	
4734.832	5	1. 1		Co I	3. 25	156	
4735.003r	3	0. 6		C_2	P 27	1,0	19
4735.314r	4. 5	1. 0		C_2?	P 26	1,0	19
4735.446r	2. 5	0. 5		C_2	P 26	1,0	19
4735.664	5	1. 1		C_2?	P 25	1,0	19
4735.848S	59	12. 4	*u*	Fe I	4. 07	1042	
4736.030	13	2. 7		C_2	P 24	1,0	19
4736.232r	6	1. 3		C_2	P 23	1,0	19
4736.508	12	2. 5		Ni I	3. 48	99	
4736.783S	144	*30. 8*	*s*	Fe I	3. 21	554	
4736.965r	18	3. 8		C_2	P 19	1,0	19
4737.117r	10	2. 1		C_2	P 20	1,0	19
4737.355m	55	*11. 2*		Cr I	3. 09	145	
4737.635m	38	8. 0	*u*	Fe I	3. 27	590	
4737.66 m			*S*	Sc I	1. 43	14	13
4737.764r	6	1. 3		Co I	1. 96	57	
4738.13 a	1. 5	0. 3					
4738.30 a	4	0. 8					
4738.44 a	3	0. 6					
4738.65 a	1. 5	0. 3					
4738.83 a	1	0. 2		Si I?p	4. 93		
4738.958r	5	1. 1					
4739.113m	56	*11. 4*	*s*	Mn I	2. 94	21	
4739.290r	1. 5	0. 3					
4739.454	6	1. 3	*S*	Zr I	0. 65	43	
4739.656r	1	0. 2					
4739.81 a	0. 5	0. 1					
4739.916r	0. 5	0. 1					
4739.96 a	0. 5	0. 1					
4740.168	14	3. 0	*s,d*	Ni I	3. 48	99	
4740.344m	37	7. 8	*s*	Fe I	3. 02	409	
4740.483	31	6. 5	*s*				
4740.70 a	3	0. 6					
4740.948	32	7. 0	*w*				
4741.075	33	7. 0	*s*	Sc I— |Fe I	1. 44 3. 33	14 688	
4741.355r	3. 5	0. 7		Ni I p	3. 68	166	
4741.535S	69	14. 6	*u*	Fe I	2. 83	346	
4741.796r	3	0. 6					
4741.942r	1. 5	0. 3	*s*	Sr I	1. 77	5	
4742.124r	5	1. 1	*S*	Ti I	2. 15	202	
4742.294	11	2. 3	*s,d*	Ti I p	1. 46	111	
4742.546	8	1. 7	*w*?				
4742.64 m	1	0. 2	*s*	V I	2. 33	128	
4742.798m	27	5. 7	*s*	Ti I	2. 24	233	
4742.936	10	2. 1	*u*	Fe I	4. 19	1072	
4743.105r	8	1. 7	*u,N*	La II— Cr I	1. 78 4. 20	75 290	
4743.297r	1. 5	0. 3					
4743.490r	0. 5	0. 1					
4743.817	7. 5	1. 6	*S,N*	Sc I	1. 45	14	
4744.117r	3. 5	0. 7		Fe I? p	4. 39	1168	
4744.387m	60	12. 6	*w*	Fe I			
4744.642r	8. 5	1. 8	*s*	Fe I	0. 99	17	
4744.836r	9	1. 9					
4744.946	7. 5	1. 6	*u*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4745.138	12	*2. 3*	*s,d*	Fe I	2. 22	67	
4745.312	12	*2. 3*	*s*	Cr I	2. 71	61	
4745.48 a	1. 5	0. 3					
4745.706r	3	0. 6		Sm II	0. 10	7	
4745.807S	69	*15. 0*	*u*	Fe I	3. 65 4. 10	821 1068	
4745.960r	3. 5	0. 7					
4746.120r	3	0. 6		Co I	3. 93	182	
4746.266	6	1. 3	*u*				
4746.39 a	1. 5	0. 3					
4746.64 m	0. 5	0. 1	*s,N*	V I	2. 03	113	
4747.07 a	2	0. 4					
4747.27 m			*S*	Ti I	1. 07	75	13
4747.284r	1. 5	0. 3					
4747.683r	4. 5	0. 9	*s*	Ti I	2. 25	233	
4747.830r	3	0. 6					
4747.96 m			*S*	Na I	2. 10	11	13
4747.980	15	*2. 5*		Si I	4. 93		
4748.141m	78	16. 4	*w*				
4748.367r	8	1. 7					
4748.50 m	3	0. 6	*s*	V I	2. 04	113	
4748.549r	1	0. 2					
4748.737r	4	0. 8		La II	0. 93	65	
4749.258r	6	1. 3		Fe I p	4. 26	1098	
4749.662	35	7. 4	*u,d*	Co I	3. 05	156	
4749.952m	33	*6. 7*	*u*	Fe I	4. 56	1206	
4751.00 m	2	0. 4	*s*	V I	2. 05	113	
4751.093	26	*5. 3*	*w*	Fe I			
4751.29 m	1. 5	0. 3	*s,N*				
4751.363r	2. 5	0. 5					
4751.553r	6	1. 3					
4751.58 m			*s*	V I	1. 93	94	13
4751.825	15	*5. 7*	*S,d*	Na I	2. 10	11	
4751.940r	2	0. 4					
4752.104m	47	9. 9	*s*	Cr I (Ni I)	4. 18 3. 68	165	
4752.286r	3	0. 6					
4752.430m	60	12. 6	*w*	Ni I	3. 66	132	
4752.55 a to 4752.80 a	8	1. 7					
4752.902r	|3|	0. 6	*s*	Cr I	3. 37	194	
4753.18 m	|2.5|	0. 5	*S*	Sc I	0. 00	5	
4753.375r	|1|	0. 2					
4753.55 a to 4753.80 a	5	1. 1					
4754.039m	130	*27. 8*	*s*	Mn I (V I)	2. 28 2. 07	16 113	
4754.360	11	2. 3	*u*	Co I	3. 23	156	
4754.62 a	|2. 5|	0. 5					
4754.765m	49	10. 3	*s*	Ni I Cr I	3. 63 3. 09	141 168	
4755.149	7. 5	1. 6	*s*	Cr I	3. 01	124	
4755.264	5. 5	1. 2	*o?*	Si I	4. 92		
4755.529r	1. 5	0. 3					
4755.704	26	5. 5	*w*				
4755.837	14	2. 9	*u?*	Fe I			
4756.117m	60	12. 6	*s*	Cr I	3. 10	145	
4756.366	11	2. 3	*o*	Fe I			
4756.521m	75	15. 8	*u*	Ni I	3. 48	98	
4756 728r	7	1. 5		Co I	3. 93		
4756.98 a	1	0. 2					
4757.027r	0. 5	0. 1					
4757.313	6	1. 3	*s*	|Cr I V I	4. 24 2. 10	290 113	17
4757.48 m			*s*	V I	2. 03	113	13
4757.585m	54	*11. 1*	*s?*	Fe I (Cr I)	3. 27 4. 26 3. 55	634 1115 231	
4757.856r	3	0. 6		Ru I	0. 93	12	
4758.124m	40	*8. 2*	*s*	Ti I	2. 25	233	
4758.425	5	1. 1		Ni I	3. 85	193	
4758.726	11	2. 3	*s,N*	—V I?	1. 22	51	
4758.917	4	0. 8	*S*	Ti I	0. 84	41	
4758.99 a	2	0. 4		Si I	4. 95		
4759.276m	41	8. 6	*s*	Ti I	2. 25	233	
4759.44 a	1	0. 2					
4759.529r	1	0. 2					
4759.671r	3	0. 6		Ti I	2. 17	202	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4759.772r	2	0. 4	*s*	Cr I	3. 01	124	
4759.926r	5	1. 1	*s*	Cr I	3. 11	169	
4760.074	8	1. 7		Fe I	3. 04	384	
4760.218r	2	0. 4		Ni I p	3. 70	114	
4760.45 a	2	0. 4					
4760.80 a	1. 5	0. 3					
4760.97 m	2. 5	0. 5	*S*	Y I	0. 07	4	
4761.101	16	3. 4	*u*				
4761.246	11	2. 3	*s*	Cr I	3. 12	169	
4761.528m	74	*15. 5*	*s*	Mn I	2. 95	21	
4761.711r	3	0. 6	*s*	Cr I	3. 37	194	
4762.08 a	2. 5	0. 5					
4762.375m	105	22. 0	*s*	Mn I	2. 89	21	
				(C I)	7. 48	6	
					7. 48	6	
4762.631m	53	11. 1	*s*	Ni I	1. 93	71	
4762.782	30	6. 3	*u*	Ti II	1. 08	17	
4763.29 a	1. 5	0. 3					
4763.62 a	1. 5	0. 3					
4763.89 m	90	11. 8	*u*				
4763.93 m		11. 8	*u*	Ni I	3. 65	146	
4764.094r	3. 5	0. 7					
4764.293	26	5. 4	*s*	Cr I	3. 55	231	
4764.531	31	6. 5	*u*	Ti II?	1. 24	48	
4764.650r	5. 5	1. 2	*s*	Cr I	3. 01	124	
4764.757	11	2. 3					
4764.87 m	2	0. 4	*s,N*				
4764.994r	2. 5	0. 5					
4765.125r	2. 5	0. 5					
4765.472m	95	19. 9	*s,N*	Fe I	1. 61	40	
4765.662r	3	0. 6					
4765.864m	71	*15. 5*	*s*	Mn I	2. 94	21	
4766.08 a	4	0. 8					
4766.33 m	5	1. 0	*S*?	Ti I	2. 25	233	17
4766.423m	89	*18. 7*	*s*	Mn I	2. 92	21	
4766.636	21	4. 4	*S*	V I	2. 04	113	
				Cr I	3. 55	231	
				(C I)	7. 48	6	
4766.780	33	6. 9	*u*				
4766.869	20	4. 2	*u*	Fe I p	3. 42	688	
4767.150r	7. 5	1. 6		Co I	4. 06	182	
				Fe I			
4767.270	14	2. 9	*s,d*	Cr I	3. 56	231	17
4767.40 a to 4767.75 a	11	2. 3					
4767.857	20	4. 2	*s*	Cr I	3. 56	231	
4768.082	14	2. 9	*s,d*	Co I	3. 19	156	17
4768.326	110	14. 3	*u*	Fe I	3. 69	821	
4768.400		10. 7	*u*	Fe I	2. 94	384	
4768.700	25	5. 2	*u*	Fe I			
4768.832	6	1. 3					
4769.033r	1. 5	0. 3					
4769.50 a	2	0. 4					
4769.799	16	3. 4	*s*	Ti I	2. 25	233	
4769.997	16	3. 4	*o*?	C I	7. 48	6	
4770.39 a	3	0. 6					
4770.683	5. 5	1. 2	*s*	Cr I	3. 01	124	
4771.089	20	4. 2	*S*	Ti I	0. 83	41	
				Co I	3. 13	156	
4771.288	13	2. 7	*u*				
4771.472m	70	14. 7	*w*				
4771.712m	61	12. 8	*s*	Fe I	2. 20	67	
				(C I)	7. 49	6	
4771.897r	6. 5	1. 4					
4772.170r	2. 5	0. 5					
4772.310	7	1. 5	*S*	Zr I	0. 62	43	
4772.625r	1	0. 2					
4772.823S	88	*19. 1*	*s*	Fe I	1. 56	38	
					3. 02	467	
4773.021r	3	0. 6					
4773.143	11	2. 3	*u*				
4773.283r	1. 5	0. 3					
4773.413	17	3. 6	*u*	Ni I	3. 70	167	
4773.527r	4. 5	0. 9		Fe I	3. 02	408	
4773.704	5	1. 0					
4773.959	8. 5	1. 8	*u*?	Ce II	0. 92	17	
4774.540r	1	0. 2	*s*	Cr I	3. 01	124	
4775.127	5. 5	1. 2	*u*	Cr I	3. 55	230	
4775.502r	5. 5	1. 2		Cr I?	4. 16	283	
4775.67 a	1. 5	0. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
4775.877	20	4. 2	*o*?	C I	7. 49	6	17
4776.070	29	6. 1	*s*	Fe I	3. 30	635	
4776.32 m	52	4. 0	*s*	—Co I	3. 30	158	
4776.360		8. 2	*s*	Fe I — V I	4. 56 2. 05	1206 113	
4776.487	24	5. 0	*s*	—V I	2. 38	128	
4776.81 a	2	0. 4					
4777.183r	2	0. 4					
4777.593r	1. 5	0. 3		Cr I	3. 01	124	
4777.725	2. 5	0. 5					
4777.85 a	1. 5	0. 3		Sm II	0. 04	3	
4778.258m	16	3. 3	*s*	Ti I	2. 24	232	
4778.580r	3	0. 6					
4779.05 a	5	1. 0					
4779.34 m			*S,N*	Sc I	0. 02	5	13
4779.445m	51	*9. 8*	*u*	Fe I	3. 41	720	
4779.69 a	4	0. 8					
4779.984m	76	15. 9	*w*	Co I |Ti II	3. 28 2. 05	158 92	
4780.453r	3	0. 6					
4780.54 a	2	0. 4					
4780.810	10	2. 1	*w*	Fe I	3. 25	633	
4781.014r	1. 5	0. 3					
4781.32 a	1. 5	0. 3					
4781.452r	8	1. 7		Co I	1. 88	57	
4781.720	15	3. 1	*S*	Ti I	0. 85	41	
4782.068	10	2. 1	*w*				17
4782.280r	2	0. 4					
4782.56 a	3	0. 6					
4782.801	5. 5	1. 1		Fe I	3. 24	588	
4782.983	29	6. 1	*o*	Si I	4. 95		
4783.14 a	5	1. 0					
4783.424m	157	*31. 8*	*s*	Mn I	2. 30	16	
4783.69 a	7	1. 5					
4783.862	10	2. 1	*s*				16
4784.000	31	6. 5	*w*				
4784.10 a to 4784.55 a	6	1. 3		(Sr I)	1. 80	5	
4784.45 m			*S*	V I	0. 02	3	13
4784.711r	3. 5	0. 7					
4784.94 m	1	0. 2	*S*	Zr I	0. 69	44	
4785.057	1. 5	0. 3		Co I?	3. 95	186	
4785.19 a	2	0. 4					
4785.34 a	2	0. 4					
4785.688	16	3. 3	*s*				17
4785.960m	30	*6. 0*	*w*?	Fe I	4. 14	1044	
4786.120	3. 5	0. 7					
4786.289m	41	8. 6	*s*	Ni I	1. 68	50	
4786.542m	110	23. 0	*s*	‖Ni I V I	3. 42 2. 07	98 113	
4786.814m	95	*19. 0*	*u*	Fe I	3. 02	467	
4787.102r	4. 5	0. 9					
4787.503	|1. 5|	0. 3		Fe I p	3. 02	408	
4787.64 m			*s*	Ti I p	0. 82	40	13
4787.833m	43	*8. 8*	*u*	Fe I	3. 00	384	
4787.97 a	3	0. 6					
4788.218	2. 5	0. 5					
4788.51 a	1. 5	0. 3					
4788.765S	72	*14. 4*	*u*	Fe I	3. 24	588	
4788.935r	2	0. 4					
4789.137r	2. 5	0. 5					
4789.342m	71	*14. 7*	*s*	Cr I	2. 54	31	
4789.451r	5	1. 0	*s*				
4789.658S	96	*19. 4*	*u*	Fe I	3. 55	753	
4789.79 m	3. 5	0. 7	*S*	Ti I	0. 84	41	
4789.92 a	1. 5	0. 3					
4790.334	16	*3. 1*	*s*	Cr I	2. 54 2. 54	31 31	
4790.560	10	2. 1	*u*	Fe I	4. 15	1068	
4790.748	10	2. 1	*u*	Fe I	3. 25	632	
4790.968	14	2. 9	*s*	Ni I	1. 95	71	
4791.143	30	6. 3	*u,d*				16
4791.256m	40	8. 3	*u*	Fe I	3. 27	633	
4791.53 m	1	0. 2	*S*	Sc I	0. 02	5	
4791.597	2. 5	0. 5		Sm II	0. 10	7	
4791.83 a	1	0. 2					
4792.214	12	2. 5	*s,N*?	Si I Ti I p	4. 93 0. 81	40	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4792.315	28	5. 8	*s,d*	Si I	4. 95		17
4792.514m	77	16. 1	*s*	|Cr I Ti I	3. 11 2. 33	168 260	
4792.862m	40	*7. 5*	*u*	Co I	3. 25	158	
4793.10 a	1	0. 2					
4793.30 a	2	0. 4					
4793.433	4. 5	0. 9		Ni I	3. 70	158	
4793.741r	3. 5	0. 7					
4793.967	9	1. 9	*w*	Fe I	3. 05	512	
4794.359	13	*2. 3*	*u*	Fe I	2. 42	115	
4794.644r	|1|	0. 2					
4794.838r	2. 5	0. 5		Ti II p	1. 13	29	
4795.835	7	1. 5	*s,d*	Co I	3. 95	185	17
4796.042r	6. 5	1. 4					
4796.189	24	5. 0	*s*	Cr I— ‖Ti I	4. 19 2. 33	283 260	
4796.365r	3. 5	0. 7	*s*	Co I	0. 43	14	
4796.54 a	2	0. 4					
4796.657	6	1. 3					
4796.905	12	*2. 5*	*S*	V I	2. 10	113	
4797.046	9	1. 9					
4797.168	2. 5	0. 5	*s,d*				17
4797.358r	0. 5	0. 1					
4797.622	6	1. 3	*s,N*				
4797.722r	3	0. 6		Cr I	3. 56	230	
4797.975	7. 5	1. 6	*S*	Ti I	2. 33	260	
4798.107r	2. 5	0. 5					
4798.270m	47	*9. 2*	*u*	Fe I	4. 19	1042	
4798.537m	50	*9. 6*	*w?*	Ti II	1. 08	17	
4798.736	35	*6. 9*	*s*	Fe I	1. 61	38	
4799.070	2. 5	0. 5		Fe I p	4. 28	1098	
4799.251r	0. 5	0. 1					
4799.413m	36	7. 5	*u*	Fe I	3. 64	888	
4799.585r	3	0. 6					
4799.794m	75	10. 2	*s*	V I— ‖Ti I	0. 00 2. 27	3 242	
4799.890		6. 0	*u*	Fe I			
4800.022	1. 5	0. 5					
4800.134	19	4. 0	*s*	Fe I	3. 04	384	17
4800.319r	1	0. 2					
4800.545	8. 5	1. 8		Fe I p	3. 30	590	
4800.653m	72	15. 0	*w*	Fe I	4. 14	1042	
4800.841r	2. 5	0. 5					
4801.031m	56	11. 7	*s*	Cr I	3. 12	168	
4801.235r	4	0. 8					
4801.612	6	1. 2		Fe I p	4. 28	1115	
4801.914r	1	0. 2	*S,N*	Ti I p Ti I p	0. 83 0. 82	40 40	
4802.30 a	1. 5	0. 3					
4802.522	19	4. 0	*u*	Fe I	4. 61	1206	
4802.693r	1. 5	0. 3					
4802.887S	70	*13. 7*	*u*	Fe I	3. 64 3. 69	888 934	
4803.047r	3. 5	0. 7					
4803.31 a	|1.5|	0. 3					
4803.685r	3. 5	0. 7					
4804.047r	4	0. 8					
4804.13 a	3	0. 6					
4804.23 a	1. 5	0. 3					
4804.38 a	2	0. 4		Zr II	1. 21		
4804.521	26	5. 4	*u*	Fe I	3. 57	794	
4804.648r	8. 5	1. 8	*s*	Cr I	2. 71	61	
4804.850r	3	0. 6					
4805.007	128	6. 0	*u*				
4805.099		20. 6	*w*	Ti II	2. 06	92	
4805.292	3. 5	0. 7		Cr I?	4. 17	283	
4805.420m	37	7. 7	*s*	Ti I	2. 34	260	
4805.55 a	4	0. 8		Fe I?	4. 64	1207	
4805.89 m	2	0. 4	*S*	Zr I	0. 69	43	
4806.252	7	1. 5	*s*	Cr I	2. 71	61	
4806.333	6	1. 2	*u*	Ti II p	1. 08	17	
4806.616r	5. 5	1. 1					
4806.799r	4. 5	0. 9	*S*	Ti I p	0. 81	40	
4806.994m	70	*13. 7*	*w*	Ni I	3. 68	163	
4807.225	16	3. 3	*s,N*	Fe I	3. 30 4. 26	634 1098	
4807.40 a	4	0. 8					
4807.533	15	3. 1	*S*	V I	2. 12	113	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4807.716m	60	*11. 4*	*s*	Fe I	3. 37	688	
4807.91 a	3	0. 6					
4808.00 a	2	0. 4					
4808.158m	30	6. 2	*s*	Fe I	3. 25	633	
4808.545m	34	7. 1	*s*	Ti I	3. 06	305	
4808.685	47	9. 8	*u*	Fe I			
4808.879	28	5. 8	*u*	Ni I	3. 70	160	
4809.02 a	2. 5	0. 5		La II?	0. 23	37	
4809.145	17	3. 5	*u*	Fe I	3. 69	933	
4809.267	12	2. 5	*u?*	Fe I Cr I?	4. 07 3. 55	1039 230	
4809.477r	3	0. 6	*s*	Zr I?	1. 58		
4809.619r	2	0. 4					
4809.941	20	4. 2	*s*	Fe I	3. 57	793	
4810.26 a	3. 5	0. 7		Cr I?	4. 53		
4810.537m	84	*16. 2*	*w*	Zn I	4. 08	2	
4810.733	13	2. 7	*s*	Cr I	3. 08	144	
4811.046m	16	3. 3	*s*	Fe I Ti I	3. 07 1. 89	467 158	
4811.352	9. 5	2. 0	*s*	Nd II	0. 06	3	
4811.89 m	3. 5	0. 7	*s*	Sr I	1. 85	5	
4811.993	25	5. 2	*w*	Ni I	3. 66	130	
4812.241	6	1. 2	*S*	Ti I	2. 34	260	
4812.352	41	8. 5	*w*	Cr II	3. 86	30	
4812.894	8. 5	1. 8	*s,N*	Ti I	0. 85	41	
4813.005	7. 5	1. 6					
4813.117	24	5. 0	*s*	Fe I	3. 27	630	
4813.264r	2. 5	0. 5					
4813.479m	51	*10. 0*	*s*	Co I	3. 21	158	
4813.719	6. 5	1. 3		Fe I p	4. 58	1243	
4813.973	9. 5	2. 0	*s,d*	Co I V II	3. 30 3. 76	158 197	17
4814.268	12	2. 5	*s*	Cr I	3. 09	144	
4814.369	13	2. 7	*s,d*	Fe I			17
4814.594	20	*3. 7*	*w*	Ni I	3. 60	98	17
4814.874r	4. 5	0. 9					
4815.056r	2	0. 4	*s*	Zr I	0. 65	44	
4815.223	14	2. 9	*u*	Fe I	3. 41	720	
4815.309r	5	1. 0					
4815.491r	2	0. 4					
4815.637r	2	0. 4	*S*	Zr I	0. 60	43	
4815.816	2. 5	0. 5	*u*	Sm II	0. 18	14	
4815.932	16	3. 3	*s,d*	Ni I	3. 54	131	17
4816.129	4	0. 8	*s?,N*	Cr I	4. 53		
4816.423r	3	0. 6		Cr I?	4. 19	283	
4816.46 m	3	0. 6	*S,N*	Ti I p	0. 82	40	
4816.682r	3	0. 6		Fe I p	3. 27	588	
4816.965r	3	0. 6					
4817.20 a	1. 5	0. 3					
4817.376r	9. 5	2. 0		C I	7. 48	5	
4817.637r	2. 5	0. 4					
4817.808m	62	12. 9	*s,d*	Fe I— Ni I	2. 22 4. 15	67 254	
4818.032	19	3. 9	*u*	Fe I			
4818.245r	8. 5	0. 8		Fe II p	2. 28	11	
4818.29 m		0. 8	*s*				
4818.386r	4	0. 8					
4818.660r	2. 5	0. 5		Fe I p	3. 41	719	
4819.022r	3	0. 6	*s*	Ti I			
4819.186r	10	2. 1					
4819.342r	4	0. 8					
4819.644	3	0. 6		Y I?	1. 36	13	
4820.13 a	1	0. 2					
4820.414m	44	*8. 7*	*s*	Ti I	1. 50	126	
4820.58 a	1. 5	0. 3					
4820.78 a	1. 5	0. 3					
4821.000	6. 5	1. 3		Ti II p	1. 12	29	
4821.126	33	6. 8	*w*	Ni I	4. 15	254	
4821.29 m	3	0. 6	*s*	Ti I	2. 16	201	
4821.479	8	1. 7	*o*				
4821.601	4	0. 8		Fe I			
4821.85 a	2	0. 4					
4822.324	7	1. 4					
4822.564	11	2. 3					
4822.667	9	1. 9	*u*	Fe I	3. 27	633	
4822.820r	3	0. 6					
4822.962r	5	1. 0					

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4823.084r	9. 5	2. 0	*s,N*				
4823.309	29	6. 0	*w*	Y II	0. 99	22	
4823.514m	165	*32. 5*	*s*	Mn I	2. 32	16	
4823.896	16	3. 3		Cr I	4. 53		
4824.143S	94	19. 5	*w*	‖Cr II Fe I	3. 87 3. 63	30 888	
4824.29 m	5	1. 0	*S*	Zr I	0. 65	43	
4824.36 a	2	0. 4					
4824.430	6. 5	1. 3					
4824.54 a	2. 5	0. 5		Ni I	4. 09		
4824.592r	1. 5	0. 3					
4824.835r	2	0. 4					
4824.956	8. 5	1. 8					
4825.10 a	3	0. 6					
4825.349	30	6. 2	*w*	Fe I			
4825.484	18	3. 7	*s*	Nd II Ti I— |Cr I	0. 18 2. 32 3. 09	3 250 144	
4825.604r	6. 5	1. 3		Mn I	3. 84	43	
4825.720	7. 5	1. 6		Fe II p	2. 63	30	
4826.12 a	1. 5	0. 3					
4826.364	5	1. 0					
4826.841	19	3. 9	*s,N*	C I?— Mn I?	7. 49 3. 85	5 43	17
4827.275r	|1|	0. 2					
4827.457	13	2. 7	*S*	V I	0. 04	3	
4827.618	21	4. 3	*w?,N*	Ti I—	2. 30	250	
4828.06 m	0. 5	0. 1	*s*	Zr I	0. 62	44	21
4828.330r	2. 5	0. 5					
4828.699	9. 5	2. 0	*s*	Cr I?	2. 54	31	
4828.859r	3	0. 6					
4829.027m	91	*18. 0*	*u*	Ni I	3. 54	131	
4829.168r	3. 5	0. 7					
4829.309r	1. 5	0. 3	*S?*				
4829.369m	84	17. 4	*s*	Cr I	{2. 54 {2. 54	31 31	
4829.695r	5. 5	1. 1		Fe I? p	4. 24	1038	
4830.303r	1. 5	0. 3					
4830.519	3	0. 6					
4830.93 a	1. 5	0. 3					
4831.182m	81	*15. 9*	*w*	Ni I	3. 61	111	
4831.393	24	5. 0	*s*				
4831.651	16	*3. 5*	*S*	V I (Cr I)	0. 02 3. 42	3 208	
4831.916r	2	0. 4		C_2	{R 92 {R 93	0,0} 0,0}	19
4832.041	7	1. 4	*s*	Sr I (Ti I)	{1. 77 {1. 80 2. 30	4 5 250	
4832.277r	3	0. 6	*s*				
4832.431	12	*2. 7*	*S*	V I	0. 00	3	21
4832.553	1. 5	0. 3					
4832.719S	68	14. 1	*w*	Ni I— |Fe I	3. 80 {3. 64 {4. 30	146 888 1098	
4832.892r	2	0. 4					
4833.03 m	1. 5	0. 3	*s,N*	V I	1. 71	78	
4833.192	9	1. 9		Fe II p	2. 66	30	
4833.376r	2. 5	0. 5					
4833.578r	2. 5	0. 5					
4833.819	8	1. 7	*s*	Fe I			
4833.981r	7. 5	1. 5					
4834.173r	5	1. 0					
4834.355r	1	0. 2		Co I?	2. 01	57	
4834.517m	28	5. 8	*u*	Fe I	2. 42	115	
4834.609	8	1. 7		Sm II?	0. 48	45	
4834.815r	2. 5	0. 5		Ni I p	3. 68	158	
4835.092r	1	0. 2					
4835.272	5. 5	1. 1					
4835.545r	2. 5	0. 5					
4835.704	2	0. 4	*s*	Cr I	3. 55	229	
4835.875m	44	9. 1	*s*	Fe I	4. 10	1068	
4835.999	5	1. 0					
4836.122	5. 5	1. 1	*S*	Ti I	2. 27	241	
4836.238	33	6. 8	*w*	‖Cr II Ni I	3. 86 3. 74	30 114	
4836.35 a	2	0. 4		Cr I	3. 89		
4836.460	7	1. 4					
4836.674r	3	0. 6					
4836.857	16	3. 3	*s*	Cr I	3. 10	144	
4837.046r	2	0. 4					

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4837.198r	0. 5	0. 1					
4837.402	1. 5	0. 3	*s*	Ti I p	2. 29	250	
4837.666r	3. 5	0. 7		Fe I	4. 58	1243	
4837.825r	2. 5	0. 5		C_2	R 91 0,0 R 92 0,0	19	
4837.946r	1. 5	0. 3		Co I	0. 63	15	
4838.092	9	1. 9	*u*	Fe I	3. 25	630	17
4838.219r	4	0. 8		Mn I	3. 86	43	
4838.341r	2	0. 4					
4838.521m	51	10. 5	*s*?	Fe I	3. 42	687	
4838.650m	45	9. 3	*u*	Ni I	4. 16	260	
4838.827r	3. 5	0. 7		Fe I? p	4. 43	1167	
4839.120r	4. 5	0. 9					
4839.25 m	1. 5	0. 3	*s*	Ti I	2. 23	217	
4839.363r	2	0. 4					
4839.551S	55	*11. 8*	*s*?	Fe I	3. 27	588	
4839.782	7. 5	1. 5		Fe I p	4. 61	1206	
4839.884	12	2. 5	*s*	Y I	1. 43	13	
4840.004	9	1. 9		Fe II p	2. 68	30	
4840.263	88	8. 7	*u*	Co I	3. 17	158	
4840.316		12. 6	*u*	Fe I	4. 15	1068	
4840.66 a	3. 5	0. 7					
4840.884m	60	*12. 6*	*s*	Ti I	0. 90	53	
4841.497r	3. 5	0. 7					
4841.674	8	1. 7	*s*?	Fe I p	3. 30	633	
4841.791	24	5. 0	*w*	Fe I	4. 19	1070	
4841.969	6	1. 2	*s,N*	Ni I	4. 16	260	
4842.209r	2	0. 4		Fe I? p	3. 05	511	
4842.588r	2. 5	0. 5					
4842.727	44	1. 7		Fe I p	4. 22	1098	
4842.793		7. 8	*u*	Fe I	4. 10	1069	
4842.937r	4. 5	0. 9		C_2 ?	R 90 0,0 R 91 0,0	19	
4843.152m	67	13. 8	*u*	Fe I Ni I	3. 40 1. 68	687 50	
4843.368r	12	2. 5		Fe I p	3. 57	794	
4843.507	20	4. 1	*u*	Co I Ni I	3. 28 4. 17	158 235	
4843.694r	3	0. 6					
4843.846r	1	0. 2		W I	0. 41	1	
4844.022m	39	*8. 2*	*s*	Fe I Ti I	3. 55 2. 24	750 217	
4844.222r	4	0. 8		Sm II	0. 28	26	
4844.311	12	2. 5	*s,N*	Mn I	3. 84	43	
4844.503	12	2. 5	*s*				
4844.701r	0. 5	0. 1					
4844.875r	1	0. 2					
4845.165	3. 5	0. 7	*s*	Ni I	3. 70	115	
4845.338	3	0. 6					
4845.506r	0. 5	0. 1					
4845.656m	36	*7. 6*	*s*	Fe I (Y I)	3. 27 3. 63 1. 40	588 888 13	
4845.805r	4. 5	0. 9					
4846.001r	0. 5	0. 1					
4846.156r	2	0. 4					
4846.33 m	5	1. 0	*s,N*	Cr I	3. 45	208	
4846.385r	10	2. 1					
4846.64 a	1	0. 2					
4846.712r	3	0. 6					
4846.87 a	1	0. 2					
4847.191	3. 5	0. 7		Cr I	3. 10	144	
4847.311	20	*4. 3*	*s*	Ca I	2. 93	50	
4847.448r	6	1. 2					
4847.623r	3	0. 6		Fe II p	2. 69	30	
4847.734	4. 5	0. 9		Sm II	0. 66	53	
4847.924r	0. 5	0. 1					
4848.087r	1. 5	0. 3					
4848.252m	52	*11. 1*	*w*	Cr II	3. 86	30	
4848.418	5	1. 0	*S*	Ti I p	2. 25	217	
4848.471	11	2. 3	*S*	Ti I	2. 17	201	
4848.650r	2. 5	0. 5					
4848.887m	33	6. 8	*s*	Fe I	2. 28	114	
4849.076r	4	0. 8					
4849.172	32	6. 6	*w*	Ni I p— Ti II p	3. 54 1. 13	112 29	
4849.341r	6. 5	1. 3					
4849.42 a	4	0. 8					
4849.553r	9	1. 9					
4849.663	16	3. 3	*u*	Fe I	3. 57	793	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4849.81 a	3	0. 6					
4849.878r	3	0. 6					
4850.201r	1. 5	0. 3		Cr I?	3. 37		
4850.749r	2	0. 4					
4850.941r	1	0. 2		Cr I?	3. 37		
4851.136r	1	0. 2					
4851.323r	2. 5	0. 5					
4851.35 m			*S*	Zr I	0. 62	43	13
4851.496m	31	*6. 8*	*S*	V I (Cr I)	0. 00 3. 43	3 208	
4851.680r	5	1. 0					
4851.873	8. 5	1. 7	*w*				
4852.019	11	2. 3	*s*				
4852.562m	36	7. 4	*w*	Ni I	3. 54	130	
4852.68 m	1	0. 2	*s*	Y I	1. 37	13	
4852.743r	0. 5	0. 1					
4853.037r	3. 5	0. 7					
4853.277	7	1. 4	*w*	Ni I p	3. 90	207	
4853.543r	2	0. 4		Cr I? p	2. 71	61	
4853.777	16	3. 3	*w*	Ni I	3. 54	99	
4853.877	5	1. 0		C_2	R 88 0,0 R 89 0,0	19	
4854.161	3	0. 6	*s*	Fe I p	4. 59	1243	
4854.352r	2. 5	0. 5	*s*	Sm II	0. 38	36	17
4854.616	4	0. 8		Mn I	3. 86	43	
4854.76 m	2. 5	0. 5	*s*	Ti I	2. 24	217	
4854.873m	41	8. 8	*w*	Y II Fe I	0. 99 4. 14	22 1043	
4855.154	7. 5	1. 5	*s*	Cr I	2. 71	61	
4855.234r	3. 5	0. 7	*s*?	Co I	0. 51	14	
4855.418m	73	15. 4	*w*	Ni I	3. 54	130	
4855.556	13	2. 7	*o*	Fe II p	2. 70	25	
4855.681m	60	13. 0	*s*	Fe I	3. 37	687	
4855.905	14	2. 9	*w*				
4856.019m	39	8. 4	*s*	Ti I	2. 25	231	
4856.195	19	3. 9	*w,N*	Cr II	3. 85	30	
4856.398r	3	0. 6					
4856.62 a	1. 5	0. 3					
4856.901r	2	0. 4					
4857.099r	4	0. 8		Zr II	1. 24		
4857.395m	42	9. 5	*w*	Ni I	3. 74	111	
4857.563r	2. 5	0. 5					
4857.786r	2	0. 4					
4857.97 a	1	0. 2		Co I	0. 58	15	
4858.142	8	1. 9	*w*?				
4858.254	8. 5	2. 0		Fe I	4. 19 4. 28	1069 1098	
4858.330	5. 5	1. 2					
4858.494r	1	0. 2					
4859.039	5. 5	1. 3	*s*	Nd II—	0. 32	3	
4859.134	18	4. 7	*u*	Fe I	4. 19	1068	
4859.304r	1	0. 2	*u,N*	Fe I p	3. 30	632	
4859.486r	2. 5	0. 7					
4859.747m	108	*27. 4*	*s*	Fe I	2. 87	318	
4860.022r	2. 5	0. 7					
4860.217	9	2. 7	*o*	Cr II	3. 87	30	
4860.986	3. 5	2. 3	*s*	Fe I	3. 40	688	
4861.19 m			*S*?	Cr I	2. 54	31	13
4861.342m	3680	*750*	*w*	Hβ	10. 20	1	
4861.849	15	5. 6	*s*	Cr I	2. 54	31	
4861.952	11	4. 1	*s*	Fe I (Mn I)	3. 85	43	
4862.187r	2. 5	0. 8					
4862.26 m			*S,d*?				13,16
4862.551r	1. 5	0. 4		Fe I p	4. 15	1070	
4862.598	16	4. 5	*s*	Fe I? p—	4. 15	1069	
4862.90 m			*s*				13
4863.096r	1. 5	0. 4					
4863.250r	1. 5	0. 4					
4863.468r	0. 5	0. 1		Co I?	1. 96		
4863.650m	48	11. 7	*u*	Fe I	3. 43	687	
4863.75 m			*s*	Ti I p	2. 25	217	13
4863.784	8. 5	2. 2		Fe I p	3. 04	384	
4863.936m	22	5. 3	*u*	Ni I	3. 74	113	
4864.180	3	0. 7	*S*	Ti I	2. 16	201	
4864.323m	50	11. 7	*w,d*	Cr II	3. 86	30	
4864.738	24	*5. 8*	*S*	V I	0. 02	3	
4864.85 m	2	0. 4	*s*	V I p	1. 18	50	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4865.08 a	1	0. 2					
4865.21 a	1	0. 2					
4865.42 a	1. 5	0. 3					
4865.618m	34	7. 6	*w*	Ti II	1. 12	29	
4866.07 m	3	0. 6	*s*	Zr I	0. 73	44	17
4866.277m	66	14. 6	*u*	Ni I	3. 54	111	
4866.50 a to 4866.65 a	3	0. 6					
4866.743	2	0. 4		Fe I p	4. 18	1093	
4866.883	2	0. 4		Si I?	4. 95		
4867.26 a	1	0. 2					
4867.537	7. 5	1. 5	*s,N*	Fe I	1. 61	38	
4867.639r	2. 5	0. 5		Fe I p	3. 27	587	
4867.874m	54	11. 5	*u*	Co I	3. 12	158	
4868.122	5. 5	1. 1	*u*				
4868.263m	26	5. 5	*s*	Ti I	2. 24	231	
4868.38?m	26	2. 9	*u*?	Fe I	1. 56	38	18
4868.45?m		2. 9	*u*?				
4868.808r	2	0. 4		Fe II p	2. 68	30	
4868.931	2. 5	0. 5	*o*				
4869.147r	2. 5	0. 5		Ru I	0. 93	11	
4869.469	20	4. 1	*u*	Fe I	3. 55	751	
4869.65 a	1. 5	0. 3					
4870.043	12	2. 5	*u*	Fe I?	3. 93	985	
4870.136m	36	*8. 8*	*s*	Ti I	2. 25	231	
4870.419r	5. 5	1. 1		C_2	R 85 R 86	0, 0 0, 0	19
4870.645r	3	0. 6					
4870.816m	74	15. 2	*u*	‖Cr I Ni I	3. 08 3. 74	143 131	
4870.94 a	4	0. 8					
4871.049	9	1. 8					
4871.325m	228	*46. 6*	*u*	Fe I	2. 86	318	
4871.680	15	3. 1					
4871.935m	45	9. 2	*u*	Fe I p	3. 25	630	
4872.144m	195	*39. 2*	*s*	Fe I	2. 88	318	
4872.508r	7	1. 4	*s*	Sr I	1. 80	4	
4872.688	9	1. 8		Fe I p	4. 26	1115	
4872.908	10	2. 1	*u*	Fe I p	4. 22	1097	
4873.092r	2	0. 4					
4873.255	24	4. 9	*w*	Ni I p	3. 74	112	
4873.446m	58	11. 9	*w*	Ni I	3. 70	111	
4873.608r	2. 5	0. 5					
4873.750	12	2. 5	*s*	Fe I	3. 30	633	
4873.872r	1	0. 2					
4874.014	34	*7. 0*	*w*	—Ti II	3. 09?	114	
4874.196r	3	0. 6					
4874.360	18	3. 7	*s*	Fe I	3. 07	467	
4874.510r	2	0. 4					
4874.651r	2. 5	0. 5	*s*	Cr I	3. 11	167	
4874.793	21	4. 3	*w*?	Ni I	3. 54	98	
4874.85 m	3. 5	0. 7	*s,N*				
4874.994r	27	0. 3					
4875.033		5. 2	*u*				
4875.198r	3	0. 6		CH?	Q 8	0,1	4
4875.26 m	2	0. 4	*s,N*				
4875.339r	2. 5	0. 5		Fe I? p	4. 19	1038	
4875.492m	41	*8. 4*	*S*	V I	0. 04	3	
4875.739r	3. 5	0. 7		Fe I p	4. 59	1243	
4875.881m	55	11. 3	*s*	Fe I	3. 33	687	
4876.093r	3. 5	0. 7		Sr I?	1. 80	4	
4876.195	8	1. 6		Fe I	3. 25	631	
4876.401	41	8. 4	*w*	Cr II	3. 85	30	
4876.485	25	5. 1	*o*	Cr II	3. 86	30	
4876.673r	4. 5	0. 9					
4876.80 a	2	0. 4					
4877.08 a to 4877.33 a	2	0. 4					
4877.596	21	4. 3	*u*	Fe I	3. 00	384	
4877.851r	13	2. 7					
4878.128	187	*19. 5*	*s*	Ca I	2. 71	35	
4878.220		*24. 2*	*w*	Fe I	2. 88	318	
4878.509r	5	1. 0					
4878.721r	3	0. 6		CH	Q 7	0,1	4
4879.150r	2	0. 4		CH?	Q 7	0,1	4
4879.520r	1	0. 2					
4879.702r	0. 5	0. 1					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4880.045	5	1. 0	*s*	Cr I	3. 12	167	
4880.27 m	1. 5	0. 1	*S*	Co I	0. 51	15	
4880.320r		0. 2					
4880.527	8	*1. 8*	*s,N*	V I	1. 19	50	
4880.59 m	1	0. 2	*S*				
4880.935	9	1. 8	*S*	Ti I	2. 15	201	
4881.08 a	3	0. 6					
4881.24 m			*s*	Zr I	0. 65	44	13
4881.267r	2	0. 4		CH?	Q 6	0,1	4
4881.31 a	2	0. 4					
4881.561m	49	10. 0	*S*	V I	0. 07	3	
4881.724m	61	12. 5	*u*	Fe I	3. 30 4. 14	588 1041	
4881.948r	5	1. 0					
4882.148m	70	*13. 9*	*u*	Fe I	3. 42	687	
4882.337r	9	1. 8	*s*	Ti I	2. 25	231	
4882.489r	4	0. 8		Ce II	1. 35		
4882.60 a	1. 5	0. 3					
4882.705	6	1. 2	*s*	Co I	3. 25	158	
4882.910r	3	0. 6					
4883.132r	2. 5	0. 5					
4883.35 a	2	0. 4					
4883.44 a	6. 5	1. 3	*u*	V II—	3. 79	209	
4883.690m	51	*10. 6*	*w*	Y II	1. 08	22	
4883.900	6. 5	1. 3	*o*				
4884.051	7. 5	1. 5		V II	3. 76	197	
4884.598	21	4. 3	*o*	Cr II	3. 86	30	
4884.803r	7. 5	1. 5		CH?—	Q 5	0,1	4
4884.941	11	2. 2	*S,N*	Cr I	2. 54	30	17
4885.088m	53	*12. 5*	*s*	Ti I	1. 89	157	
4885.236r	3	0. 6					
4885.434m	60	12. 7	*u*	Fe I	3. 88	966	
4885.620r	1	0. 2	*s?*				
4885.774	22	*5. 1*	*s*	Cr I	2. 54	30	
4885.949	12	2. 4	*s*	Cr I	3. 09	143	
4886.086r	1	0. 2		CH?	Q 4	0,1	4
4886.177r	0. 5	0. 1	*s*	Fe I p	3. 11	467	
4886.337m	68	13. 9	*s*	Fe I—	4. 15	1066	
4886.709	8	1. 6		Ni I	3. 70	158	
4886.846	3	0. 6	*s*	V I— CH?	1. 19 Q 4	50 0,1	16 4
4887.009m	63	12. 9	*s*	‖Cr I Ni I	3. 09 3. 63	143 141	
4887.195m	62	12. 7	*w,N*	Fe I—	4. 19	1065	
4887.363	18	3. 7	*u*	Fe I p	4. 07	1037	
4887.533r	5	1. 0					
4887.690	7	1. 4	*s*	Zr I? Cr I	0. 73 2. 54	43 31	16
4888.158	3. 5	0. 7					
4888.525	91	3. 7	*s*	Cr I	2. 54	31	
4888.639m		15. 7	*u*	Fe I	4. 10	1066	
4888.829r	7. 5	1. 5		—CH?	Q 3	0,1	4
4889.004	121	14. 3	*s*	Fe I	2. 20 3. 55	67 749	
4889.111		12. 7	*u*	Fe I	3. 88	985	
4889.648r	1	0. 2		C_2			
4890.215r	5	1. 0	*s*	Cr I	5. 49 5. 50		
4890.438r	9	1. 8	*s*	Ni I	3. 77	114	
4890.763m	220	*47. 6*	*u*	Fe I	2. 87	318	
4891.041	12	2. 4	*s*				
4891.150	15	3. 1	*o?*				
4891.502m	312	*64. 8*	*u*	Fe I	2. 85	318	
4891.866r	2. 5	0. 5	*s?*	Ti I	2. 17	201	
4891.957r	2	0. 4		Cr I?	2. 71	61	
4892.865m	44	*9. 0*	*w*	Fe I	4. 22	1070	
4893.047r	3	0. 6	*s*	Ti I	2. 25	231	
4893.13 m	0. 5	0. 1	*s*	Zr I	0. 69 1. 58	43	
4893.253r	0. 5	0. 1					
4893.425r	2	0. 4	*s*	Ti I			
4893.570r	1	0. 2		Fe I p	4. 18	1096	
4893.704	4	0. 8	*u*	Fe I	4. 21	1113	
4893.817	11	2. 2	*o*	Fe II	2. 83	36	
4893.92 m			*s*	Ti I	2. 16	201	13
4893.960r	1. 5	0. 3		Ce II?	1. 33	31	
4894.370r	3	0. 6		Cr I	5. 52		
4894.562	8. 5	1. 7	*w*				
4894.797r	1	0. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4894.85 a	1. 5	0. 3					
4895.034r	0. 5	0. 1					
4895.661r	2	0. 4		Fe I?			
4895.85 a	1	0. 2					
4895.99 m			*s*				13
4896.05 a	1	0. 2					
4896.442m	26	5. 3	*u*	Fe I	3. 88	984	
4896.580	8	1. 6					
4896.94 m	0. 5	0. 1	*s*				
4897.200r	4	0. 8		Co I	3. 93		
4897.36 a	1. 5	0. 3					
4897.473r	6. 5	1. 3	*o*?				17
4897.65 m	1. 5	0. 3	*s*				
4897.85 a	3	0. 6					
4898.27 m	1	0. 2	*s*				17
4898 473r	2	0. 4		Cr I	5. 50		
4898 619r	2. 5	0. 5					
4898 81 a	1. 5	0. 3					
4898.94 a	3. 5	0. 7		Fe I?			
4899.513	5	1. 0	*u,N*	Co I	2. 04	92	
4899.56 a	2. 5	0. 5					
4899.738r	0. 5	0. 1					
4899.917m	57	*12. 2*	*s*	‖Ti I La II (Ba II)	1. 88 0. 00 2. 72	157 7 3	
4900.02?m			*s*?	Ti I p	2. 66	295	13
4900.124m	54	*10. 8*	*u*	Y II	1. 03	22	
4900.276r	3	0. 6					
4900.469r	2	0. 4					
4900.629r	3	0. 6	*s,d*	Ti I V I	2. 68 2. 12	295 118	
4900.821	12	2. 4	*s*	Fe I			
4900.970	17	3. 5	*u,d*	Ni I Ti I	3. 48	98	
4901.319r	1	0. 2					
4901.614r	2	0. 4					
4901.75 a	1	0. 2					
4901.91 a	3	0. 6					
4902.078r	3. 5	0. 7		Cr I?	4. 21 4. 21		
4902.236	11	2. 2	*w*				
4902.384	8. 5	1. 7	*u*	Fe I			
4902.62 a	3	0. 6					
4902.75 a	2	0. 4					
4902.97 a	2	0. 4					
4903.099r	4. 5	0. 9		Fe I? p	3. 30	589	
4903.259	157	*9. 0*	*s*	Cr I	2. 54	31	
4903.316		*27. 5*	*u*?	Fe I	2. 88	318	
4903.61 a	3	0. 6					
4903.717r	1. 5	0. 3	*s*	Ti I?			
4904.171r	4	0. 8		Co I	2. 87	141	
4904.30 m			*s*	V I	1. 19	50	13
4904.418m	91	18. 6	*u*	Ni I	3. 54	129	
4904.830r	2	0. 4					
4905.138m	30	6. 1	*u*	Fe I	3. 93	986	
4905.22 a	2. 5	0. 5					
4905.32 a	2. 5	0. 5					
4905.802r	1	0. 2					
4905.90 a	2. 5	0. 5					
4906.133	5	1. 0		Fe I?			
4906.44 a	1. 5	0. 3	*S,N*				17
4906.706r	3	0. 6					
4906.775	7	1. 4	*o*	Fe I p	4. 22	1096	
4907.053r	5	0. 4					
4907.12 a		0. 6		Co I	0. 43	14	
4907.315r	1	0. 2					
4907.43 a	1. 5	0. 3					
4907.502r	1	0. 2					
4907.735m	61	*12. 0*	*s*	Fe I	3. 43	687	
4908.032	37	7. 5	*s*	—Fe I	4. 22	1065	
4908.272r	1. 5	0. 3					
4908.45 m			*s*	Ti I	2. 69	295	13
4908.495r	1. 5	0. 3		Co I	3. 53		
4908.611	4. 5	0. 9	*u*	Fe I	2. 48	115	
4908.834r	0. 5	0. 1					
4908.95 a	1	0. 2					
4909.105r	5. 5	1. 1	*S*	Ti I	0. 83	39	
4909.199r	3	0. 6					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4909.387m	66	*13. 6*	*u*	Fe I	3. 93	985	
4909.51 a	3	0. 6					
4909.710r	5	1. 0		Ni I	3. 77		
4909.87 a	2	0. 4					
4910.020m	91	*18. 1*	*s*	Fe I	3. 40	687	
4910.330m	79	16. 1	*u*	Fe I	4. 19	1068	
4910.44 m	2. 5	0. 5	*s*				16
4910.570m	80	16. 3	*u*	Fe I	4. 22	1068	
4910.774r	4	0. 8					
4911.027r	1. 5	0. 3					
4911.199m	50	*10. 6*	*u*	—Ti II	3. 12	114	
4911.390r	6. 5	1. 3					
4911.536	24	4. 9	*u*	Fe I p	4. 26	1098	
4911.782m	44	*8. 8*	*u*	Fe I	3. 93	984	
4912.025m	47	9. 6	*u*	Ni I	3. 77	111	
4912.185r	4. 5	0. 9					
4912.39?m	1	0. 2	*s?*	Co I	0. 58	14	
4912.491	9. 5	1. 9	*u*	Fe I	4. 14	1040	
4912.62 a	1. 5	0. 3					
4912.787r	0. 5	0. 1					
4912.980r	1	0. 2					
4913.135	12	2. 4	*w*				
4913.273r	2	0. 4		Sm II	0. 66	53	
4913.622m	49	*10. 0*	*s*	Ti I	1. 87	157	
4913.803r	3	0. 6					
4913.978m	57	*11. 4*	*w*	Ni I	3. 74	132	
4914.13 a	4	0. 8					
4914.224r	3. 5	0. 7					
4914.406r	6. 5	1. 3	*s*				
4914.522	5. 5	1. 1	*u?*				
4914.68 a	2. 5	0. 5					
4914.92 a	|2. 5|	0. 5					
4915.234	6	1. 2	*S*	Ti I	1. 89	157	
4915.775r	2	0. 4	*S*	Ti I? Fe I?			
4915.849r	3. 5	0. 7					
4916.238	6. 5	1. 3	*w*				
4916.487	14	2. 8	*u*				
4916.674	4. 5	0. 9	*o*	Fe I p	3. 93	986	
4916.852r	3. 5	0. 7		C_2	R 76 / R 77	0,0 / 0,0	19
4916.958r	2. 5	0. 5					
4917.235m	60	12. 2	*u*	Fe I	4. 19	1066	
4917.353r	5. 5	1. 1					
4917.828r	2	0. 4					
4918.015m	53	10. 8	*u*	Fe I	4. 23	1070	
4918.173r	4. 5	0. 9					
4918.371m	75	15. 2	*u*	Ni I	3. 84	177	
4918.50 m	3	0. 6	*S*				16
4918.709m	39	7. 9	*u*	Ni I	3. 77	113	
4918.998m	278	*53. 7*	*s*	Fe I	2. 86	318	
4919.306r	3	0. 6		C_2	R 69	1, 1	19
4919.448r	9	1. 8		Cr I	5. 52		
4919.749	11	2. 2	*s*	Fe I p	3. 27	631	
4919.872	24	4. 9	*s*	Ti I	2. 16	200	
4920.065r	4	0. 8					
4920.298r	471	*1. 1*		Co I	1. 96	57	
4920.514m		*85. 6*	*S*	Fe I	2. 83	318	
4920.686r		*6. 9*	*s,N?*	—Nd II	0. 06	2	
4920.963m	29	5. 9	*u*	|Cr I— La II	3. 10 / 0. 13	143 / 7	
4921.168r	2. 5	0. 5		Ni I? p	3. 60	100	
4921.30 a	1	0. 2					
4921.42 a	1	0. 2					
4921.50 a	0. 5	0. 1					
4921.598r	0. 5	0. 1					
4921.785m	40	8. 1	*s*	|Ti I— La II	2. 17 / 0. 24	200 / 7	
4921.988r	1. 5	0. 3					
4922.162	97	4. 1	*u*	Fe I p	4. 21	1110	
4922.267m		15. 8	*s*	Cr I	3. 10	143	
4922.489r	2. 5	0. 5					
4922.62 a	0. 5	0. 1					
4922.821	6. 5	1. 3	*s?*				
4922.979r	1	0. 2					
4923.154	16	3. 2	*u?*	Fe I			17
4923.28 a	4	0. 8		Cr I?			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4923.40 a	3. 5	0. 7					
4923.57 a	4. 5	0. 9					
4923.68 a	5. 5	1. 1					
4923.930m	167	*33. 3*	*w*	Fe II	2. 89	42	
4924.123r	4. 5	0. 9		C_2	R 69 R 70	1,1 1,1	19
4924.302	18	3. 6	*s*				
4924.56 m			*S,N*				13
4924.588r	5	1. 0					
4924.777m	101	*20. 3*	*s*	Fe I	2. 28	114	
4924.964r	5. 5	1. 1					
4925.085r	2	0. 4					
4925.279	20	4. 1	*s*	Fe I	4. 10	1065	
4925.418	7. 5	1. 5	*S*	Ti I	1. 88	157	
4925.574m	58	11. 8	*u*	Ni I	3. 65	141	
4925.70 a	3	0. 6	*S,N*	V I—	1. 22	50	16
4925.89 a	1. 5	0. 3					
4926.154	5. 5	1. 1	*S*	Ti I	0. 82	39	
4926.401r	1. 5	0. 3					
4926.694	4. 5	0. 9	*u*				16
4926.845	6. 5	1. 3	*s*	Fe I p	3. 63	844	
4926.947r	3	0. 6	*s*				
4927.271r	5. 5	1. 1					
4927.428m 4927.474r	55	10. 4 1. 0	*s*	Fe I	3. 57	792	
4927.59 m	3	0. 6	*s*				13
4927.666r	2	0. 4					
4927.872m	68	*14. 0*	*u*	Fe I			
4928.03 a	4. 5	0. 9					
4928.124	3. 5	0. 7					
4928.341m	30	6. 1	*s*	Ti I	2. 15	200	
4928.47 a	2	0. 4					
4928.89 m	1	0. 2	*s*	Ti I	0. 84	39	
4929.44 a	|1.5|	0. 3					
4929.80 a	|2.5|	0. 5					
4930.065r	5. 5	1. 0		Fe I p	3. 30	631	
4930.21 m			*s*	Cr I	3. 84	259	13
4930.310m	82	16. 6	*u*	Fe I	3. 96	985	
4930.479r	3. 5	0. 7					
4930.66 m	2. 5	0. 5	*s*				
4930.800	19	3. 8	*s*	Ni I?	3. 85	193	
4930.94 a	2	0. 4					
4931.120r	5	1. 0	*u*	Cr I	5. 54		
4931.50 m	1	0. 2	*s*				
4931.735r	4. 5	0. 9					
4932.016 4932.068	45	1. 8 7. 5	*s*	V I C I	1. 22 7. 68	50 13	
4932.29 m	1. 5	0. 3	*s*				
4932.98 a	4. 5	0. 9					
4933.190	39	7. 9	*w*	Fe I p	4. 19	1070	
4933.338m	97	19. 7	*u*	Fe I	4. 23	1065	
4933.671r	5. 5	1. 1					
4933.873m	41	8. 3	*s?*	Fe I	3. 94	968	
4934.030 4934.095	207	*21. 5* *27. 8*	*s?* *u?*	Fe I Ba II	4. 15 0. 00	1068 1	
4934.41 a	1. 5	0. 3					
4934.66 a	2	0. 4					
4934.872r	4	0. 8		Cr I	3. 85	259	
4935.00 a	2. 5	0. 5					
4935.16 a	1. 5	0. 3					
4935 419r	2. 5	0. 5		Fe I p	3. 64	886	
4935.651r	3	0. 6					
4935.834m	65	13. 2	*u*	Ni I	3. 94	177	
4936.15 a	1. 5	0. 3					
4936.341m	43	*8. 9*	*s*	Cr I	3. 11	166	
4936.699	3	0. 6		C_2	R 72 R 73	0,0 0,0	19
4937.061	18	3. 6	*o*				
4937.16 m			*s*				13
4937.348m	86	17. 4	*w*	Ni I	3. 61	114	
4937.530r	2	0. 4					
4937.60 m	2. 5	0. 5	*s*				
4937.733m	10	2. 0	*S*	Ti I	0. 81	39	
4937.88 m	4	0. 8	*s*				
4937.973	3. 5	0. 7					
4937.99 m			*s*	Ti I	2. 00	173	13

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4938.177m	92	16. 0	*u*	Fe I	3. 94	966	
4938.293		2. 6	*S*	Ti I	2. 58	289	
4938.46 a	2	0. 4					
4938.62 a	1	0. 2		Si I?			
4938.820m	119	*23. 5*	*s*	Fe I	2. 87	318	
4939.05 a	4	0. 8					
4939.242m	88	17. 8	*u*	Fe I	4. 22 4. 15	1065 1070	
4939.479r	2	0. 4		Fe I p	4. 19	1043	
4939.694S	96	*19. 6*	*s*	Fe I	0. 86	16	
4939.823r	3	0. 6					
4939.972	8. 5	1. 7	*u*?				
4940.069	14	2. 8	*u*?				
4940.30 m			*s*				13
4940.492	6	1. 2					
4940.710r	3. 5	0. 7					
4940.958r	0. 5	0. 1					
4941.02 m			*s*	Ti I	1. 98	173	13
4941.219	3. 5	0. 7					
4941.322r	2	0. 4	*S*	Ti I	0. 83	39	
4941.38 m			*s*				13
4941.569	3	0. 6	*S*	Ti I	2. 16	200	
4941.833	3. 5	0. 7		C_2?	R 73	0,0	19
4941.907	5	1. 0		Ni I	3. 61	114	
4942.25 a	4	0. 8					
4942.484m	100	17. 2	*s*	Cr I	0. 94	9	
4942.598		3. 0	*u*?	Fe I p	4. 26	1097	
4942.78 a	2	0. 4					
4942.94 a	2	0. 4					
4943.06 m	1	0. 2	*s*	Ti I	0. 90	52	
4943 305r	1. 5	0. 3					
4943.448r	1. 5	0. 3		Ce II?	1. 21		
4943.82 a	1. 5	0. 3					
4943.912r	2	0. 4					
4944.10 a	1	0. 2					
4944.287	10	2. 0	*s,d*	Fe I			17
4944 564	5	1. 0	*s*	Cr I	3. 85	259	
4944.82 m			*s*				13
4945.289	3	0. 6		Fe I p	3. 02	466	
4945.447m	44	8. 9	*w*	Ni I	3. 80	145	
4945.642m	42	8. 5	*u*	Fe I	4. 21	1113	
4945.82 a	2. 5	0. 5					
4946.034	24	4. 8	*u*	Ni I	3. 80	148	
4946.168r	3	0. 6					
4946.395m	113	*22. 4*	*u*	Fe I	3. 37	687	
4947.04 a	1	0. 2					
4947.19 a	1. 5	0. 3					
4947.33 m			*s*?				13
4947.40 a	2	0. 4		Fe I?			
4947.600	17	3. 4	*u*	V II— Si I	3. 75 5. 08	197	
4947.944r	2	0. 4					
4947.98 m			*S*	Ti I	0. 82	39	13
4948.191	7. 5	1. 5	*S*	Ti I	2. 17	200	
4948.345	7. 5	1. 5	*w*?				
4948.597r	3	0. 6		Sm II	0. 54	49	
4948.78 m	1	0. 2	*s*	Zr I	0. 52	28	
4948.87 m	1	0. 2	*s*				
4949.10 a	5	1. 0					
4949.34 a	2	0. 4					
4949.576r	3	0. 6		Cr I	3. 85	259	
4949.78 a	2	0. 4					
4950.111m	76	*16. 0*	*u*	Fe I	3. 42	687	
4950.378r	8	1. 6					
4950.624r	6	1. 2		C_2	R 63 R 64	1,1 1,1	19
4951.411	4. 5	0. 9		C_2	R 69 R 70	0,0 0,0	19
4951.52 a	2. 5	0. 5					
4951.75 a	1	0. 2					
4952.284m	28	5. 6	*u*	Ni I— Fe I	3. 61	113	
4952.458r	5	1. 0	*s*				
4952.647m	54	*10. 5*	*w*	Fe I	4. 10 4. 21	1068 1111	
4952.839r	3	0. 6		Cr II	6. 28		
4953.021r	2	0. 4					
4953.212m	53	*10. 7*	*u*	Ni I	3. 74	111	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4953.36 m	3	0. 5	*s*	Ti I p	0. 85	39	
4953.436r		0. 2					
4953.49 m	2. 5	0. 2	*s*				
4953.57 m		0. 3	*s*				
4953.728	5	1. 0	*s*	Cr I	3. 12	166	
4954.016	4	0. 8		Fe II?	5. 57	168	
4954.296r	4	0. 8		Fe I p	4. 18	1093	
4954.605m	37	7. 5	*u*	Fe I			
4954.809m	54	*10. 3*	*s*	Cr I	3. 12	166	
4955.974	6	1. 2		C_2?	R 70	0,0	19
4956.09 a	2	0. 4					
4956.746r	2. 5	0. 5		MgH	R 38	0,0	20
4957.307m	696	*56. 7*	*s*	Fe I (Dy II)	2. 85	318	
4957.475r		*5. 6*					
4957.613m		*128*	*S*	Fe I	2. 81	318	
4957.697		*8. 7*		Fe I p	4. 19	1066	
4958.032r	5	1. 0					
4958.257	14	2. 8	*s*	Ti I	0. 90	52	
4959.12 m			*s*				13
4959.145r	7	1. 4		Nd II	0. 06	1	
4959.202	14	2. 8	*o*?				17
4959.36 a	1. 5	0. 3					
4959.70 a	1	0. 2		Co I	0. 63	14	
4960.351r	4	0. 8					
4960.856	7	1. 4		C_2	R 67 R 68	0,0 0,0	19
4961.054	17	3. 4	*w*?	Fe I			17
4961.389r	5	1. 0					
4961.48 a	1. 5	0. 3					
4961.70 a	2. 5	0. 5					
4961.920	26	5. 2	*u*	Fe I	3. 63	845	
4962.123r	1	0. 2					
4962.267	2	0. 4	*s*	Sr I	1. 85	4	
4962.292r	5. 5	1. 1		Zr II	0. 97	66	
4962.576m	52	*10. 5*	*s*?	Fe I	4. 18	1097	
4962.730r	2. 5	0. 5					
4962.912r	2. 5	0. 5		C_2			
4963.070r	3	0. 6		C_2			
4963.550r	2	0. 4		C_2			
4963.75 a	1. 5	0. 3					
4964.131	14	2. 8	*w*				
4964.726m	7	1. 4	*S*	Ti I	1. 97	173	
4964.933m	35	*7. 3*	*s*	Cr I	0. 94	9	
4965.173	27	5. 4	*w*	Ni I	3. 80	147	
4965.30 a	2	0. 4					
4965.405r	5. 5	1. 1		V II	3. 80	209	
4965.58 a	2	0. 4					
4965.811r	31	1. 8					
4965.857		4. 6	*s,N*	Mn I	2. 89	20	
4966.095m	114	23. 0	*s*	Fe I	3. 33	687	
4966.281	16	3. 2		Fe I p	3. 96	986	
4966.576	3	0. 6	*s,N*	Co I	0. 43	14	
4966.803r	2. 5	0. 5		Cr I	3. 85	259	
4967.273r	2	0. 4					
4967.32 m			*s*	Ti I	0. 00	5	13
4967.395r	2	0. 4		C_2	R 59 R 60	1,1 1,1	19
4967.523	12	2. 4	*o*?	Ni I	3. 80	141	
4967.683r	1. 5	0. 3					
4967.80?m	2. 5	0. 5	*S*				
4967.903m	74	14. 9	*u*	Fe I (Sr I)	4. 19 1. 85	1067 4	
4968.391	21	4. 2	*s*				
4968.593	29	5. 8	*s*	Ti I—	1. 98	173	
4968.705	46	9. 2	*u*	Fe I	3. 64	887	
4968.852r	2	0. 4					
4968.93 a	1	0. 2					
4969.922m	69	13. 9	*u*	Fe I	4. 22	1066	
4970.115r	10	2. 0		C_2	R 65 R 66	0,0 0,0	19
4970.206r	6. 5	1. 3		C_2	R 64	0,0	19
4970.501m	51	10. 3	*s*	Fe I	3. 63	883	
4970.651m	31	6. 2	*s,d*	—Fe I p	3. 96	985	
4971.06 a	1. 5	0. 3					
4971.351m	55	11. 1	*s*				
4971.50 a	3. 5	0. 7					
4971.62 m			*s*				13,16

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4971.920r	2. 5	0. 5		Co I	3. 17	158	
4972.03 a	1	0. 2					
4972.181r	2	0. 4					
4972.396r	0. 5	0. 1		Fe I	4. 18	1096	
4972.656r	3	0. 6		C_2?	R 51 R 52	2,2 2,2	19
4972.916	4. 5	0. 9		Fe I p	3. 30	631	
4973.06 m			*S*	Ti I	2. 00	173	13
4973.104m	88	*17. 3*	*u*	Fe I	3. 96	984	
4973.352	10	2. 0					
4973.51 a	1	0. 2					
4973.652r	1	0. 2					
4974.05 a	2	0. 4					
4974.247	8	1. 6		Fe I			
4974.363	8. 5	1. 7		Ni I	3. 80	144	
4974.460	7. 5	1. 5		C_2	R 64 R 65	0,0 0,0	19
4974.552	4	0. 8		C_2?	R 66	0,0	19
4975.351	35	3. 6	*s*	Ti I	2. 50	283	
4975.412		3. 6	*w*?	Fe I	3. 30	586	
4975.554r	4. 5	0. 9		C_2	R 57 R 58	1,1 1,1	19
4975.85 a	1. 5	0. 3					
4976.00 a	2. 5	0. 5					
4976.138m	27	5. 4	*w*	Ni I	3. 61	112	
4976.333m	36	7. 2	*s*	Ni I	1. 68	49	
4976.496r	2	0. 4					
4976.693	6	1. 2		Ni I p	4. 23	254	
4976.881r	2. 5	0. 5		C_2	P 92 P 93	0,0 0,0	19
4977.24 a	1. 5	0. 3					
4977.655	34	5. 2	*w*	Fe I	3. 93	985	
4977.719		1. 8	*S*	Ti I	2. 02	173	
4977.929r	1. 5	0. 3					
4978.112	34	1. 8	*w*?	Fe I	3. 96	986	
4978.194		5. 0	*S*	Ti I	1. 97	173	
4978.369r	5	1. 0					
4978.555	118	*9. 0*	*s*	Na I	2. 10	9	
4978.606		17. 5	*u*	Fe I	3. 98	966	
4978.691		1. 2		Fe I p	4. 07	1035	
4978.937r	4. 5	0. 9					
4979.057r	3. 5	0. 7					
4979.206	7	1. 4		MgH?	R 35	0,0	20
4979.310r	5	1. 0					
4979.40 a	2	0. 4					
4979.590	19	3. 8	*s*	Fe I	3. 64	883	
4979.705	5. 5	1. 1					
4979.835	4. 5	0. 9		Fe I p	3. 02	465	
4979.967	6	1. 2		Co I	4. 06		
4980.177m	112	20. 1	*u*	Ni I	3. 61	112	
4980.296		2. 8	*u,N*	Fe I	4. 18	1092	
4980.539	10	2. 0					
4981.10 a	1. 5	0. 3					
4981.279r	5	1. 0					
4981.358	8. 5	1. 7		Ti II p	1. 57	71	
4981.740m	112	*22. 9*	*S*	Ti I	0. 85	38	
4982.136	14	2. 8	*u*	Y II	1. 03	20	
4982.507m	138	27. 7	*u*	Fe I	4. 10	1067	
4982.825m	83	*16. 2*	*s*	Na I	2. 10	9	
4983.031r	7	1. 4					
4983.260S	114	22. 9	*u*	Fe I	4. 15	1067	
4983.470r	14	2. 8		C_2	R 64	0,0	19
4983.603r	10	2. 0					
4983.859m	123	24. 7	*u*	Fe I	4. 10	1066	
4984.122m	91	18. 2	*u*	Ni I	3. 80	143	
4984.302r	5. 5	1. 1					
4984.458r	5. 5	1. 1					
4984.625	18	3. 6	*u*				
4984.76 a	3	0. 6					
4984.83 a	2	0. 4					
4984.96 a	3	0. 6					
4985.259m	101	*20. 1*	*u*	Fe I	3. 93	984	
4985.554m	103	*21. 5*	*s*	Fe I	2. 86	318	
4985.758	11	2. 2					
4985.986	25	5. 0	*u*	Fe I p	4. 26	1094	
4986.228m	45	*9. 0*	*w*	Fe I	4. 22	1070	
4986.45 a	2. 5	0. 5		Co I?	2. 72		
4986.908	18	3. 6	*w*	Fe I	4. 26	1092	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
4987.085r	1. 5	0. 3					
4987.277r	2	0. 4		C_2	R 54 R 55	1,1 1,1	19
4987.435r	3	0. 6					
4987.652r	2. 5	0. 5		Fe I p	4. 18	1094	
4987.852	4. 5	0. 9		Co I Fe I? p	0. 58 3. 88	14 966	
4988.01 a	2. 5	0. 5		Co I	4. 06		
4988.138r	6	1. 2		C_2	R 61 R 62	0,0 0,0	19
4988.24 a	3. 5	0. 7					
4988.360r	3	0. 6					
4988.64 a	1. 5	0. 3					
4988.955m	80	16. 0	*s*	Fe I	4. 15	1066	
4989.141m	29	5. 8	*S*	Ti I	1. 98	173	
4989.41 a	2	0. 4					
4989.553	3. 5	0. 7					
4989.954	6. 5	1. 3		Nd II?			
4990.453m	26	5. 2	*u*	Fe I			
4991.072m	102	*21. 2*	*S*	Ti I	0. 84	38	
4991.275m	87	17. 4	*u*	Fe I	4. 19	1065	
4991.861	16	3. 2	*s*	—Fe I	4. 22	1094	
4992.076r	0. 5	0. 1					
4992.287	6	1. 2		C_2	R 62	0,0	19
4992.480r	4. 5	0. 9		Fe I?			
4992.778	8	1. 6	*u*	Fe I	4. 26	1110	
4992.996r	1	0. 2		Co I?	4. 07		
4993.352	34	6. 8	*w*?	Fe II	2. 81	36	17
4993.522r	1	0. 2		S I?			
4993.683	51	8. 4	*u*	Fe I	4. 21	1111	
4993.747		2. 2	*s*				16
4993.937r	2. 5	0. 5					
4994.138S	95	*19. 6*	*s*	Fe I	0. 91	16	
4994.60 a	2. 5	0. 5					
4994.99 m			*s*				13
4995.028	3. 5	0. 7					
4995.08 m	3	0. 6	*s*	Ti I	2. 25	216	
4995.267	1. 5	0. 3					
4995.409	13	2. 6	*w*	Fe I	4. 26	1113	
4995.56 m			*s*?				13
4995.659	16	3. 2	*w*	Ni I	3. 63	145	
4995.877	1. 5	0. 3		Ti II p	1. 58	71	
4996.00 a	1	0. 2					
4996.195	7	1. 4		Fe I?			
4996.378	12	2. 4	*w*?				
4996.50 a	2	0. 4					
4996.633	1	0. 2					
4996.846m	49	9. 8	*u*	Ni I	3. 63	144	
4996.979	3. 5	0. 7					
4997.100m	27	*5. 6*	*S*	Ti I	0. 00	5	
4997.353	0. 5	0. 1					
4997.56 a	1	0. 2					
4997.74 m	2. 5	0. 5	*s*				
4997.959	9. 5	1. 9	*u*				
4998.230m	56	*11. 0*	*w*	Ni I	3. 61	111	
4998.44 a	2	0. 4					
4998.567	3. 5	0. 7		Cr I?	3. 01	123	
4998.959	2. 5	0. 5		C_2	R 51 R 52	1,1 1,1	19
4999.119	29	5. 8	*w*	Fe I	4. 19	1040	
4999.264	6	1. 2					
4999.510m	104	*21. 0*	*S*	Ti I	0. 83	38	
4999.82 a	3. 5	0. 7					
4999.93 a	2. 5	0. 5					
5000.01 a	2	0. 4					
5000.208	24	4. 8	*s*				
5000.349m	70	14. 0	*w*	Ni I	3. 63	145	
5000.546	2. 5	0. 5		MgH	R 32	0,0	20
5000.735	12	2. 4		Fe II p	2. 78	25	
5000.990m	44	8. 8	*s*	Ti I	2. 00	173	
5001.210	7. 5	1. 5		MgH?	R 32	0,0	20
5001.472	20	4. 0		Ca II	7. 50	15	
5001.870m	168	*31. 4*	*u*	Fe I	3. 88	965	
5002.328	6. 5	1. 3	*s*	V I	2. 36	132	
5002.592	18	3. 6	*s*				17
5002.798S	85	*16. 4*	*s*	Fe I	3. 40	687	
5003.098	10	2. 0					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5003.25 a to 5003.60 a	8	1.6					
5003.747	34	6.8	*s*	Ni I	1.68	50	
5003.879	1	0.2		Fe I p	2.61	211	
5004.049m	50	10.0	*s*	Fe I—	4.21	1112	
5004.212	8	1.6	*s*	Co I?	2.87	141	
5004.365	17	3.4	*s,d*	Cr I	3.01	122	
5004.50 a to 5004.75 a	5	1.0					
5004.894	14	2.8	*s*	Mn I	2.92	20	
5005.171	26	5.2	*s,d?*	Ti II p	1.57	71	
5005.401	14	2.8		C_2	R 59	0,0	19
5005.509	6	1.2		C_2?	R 59	0,0	19
5005.719m	136	27.2	*s?*	Fe I	3.88	984	
5006.120m	190	38.0	*s*	Fe I	2.83	318	
5006.379	11	2.2					
5006.533	13	2.6					
5006.694	9.5	1.9		Fe I p	2.59	211	
5006.897	6	1.2					
5007.217	174	24.1	*s*	Ti I	0.82	38	
5007.280		19.2	*u*	Fe I	3.94 4.10	966 1065	
5007.734	33	6.6	*s*	Fe I?	4.29		
5007.922	2	0.4					
5008.044	4	0.8					
5008.225	3	0.6		MgH	R 31	0,0	20
5008.453	1	0.2					
5008.646	14	2.8	*w*				
5009.196	3	0.6					
5009.427	12	2.4	*w*	C_2— Fe I?	R 58	0,0	19
5009.534	1	0.2		C_2?	R 58	0,0	19
5009.655	24	*4.6*	*S*	Ti I	0.02	5	
5009.832	5	1.0	*u*				
5010.024	35	7.0	*w*	Ni I	3.77	111	
5010.218	25	5.0	*o*	Ti II	3.09	113	
5010.327	9.5	1.9		Fe I p	2.56	211	
5010.943m	46	9.2	*u*	Ni I	3.63	144	
5011.204	2	0.4		Fe I	4.22	1066	
5011.37 a to 5011.70 a	5	1.0					
5011.761	3.5	0.7		Ce II?	1.05		
5012.075	154	24.0	*s*	Fe I	0.86	16	
5012.156		11.5	*u?*	Fe I p	4.19	1070	
5012.307	8	1.6					
5012.448m	58	11.6	*u*	Ni I	3.70	111	
5012.594	4	0.8					
5012.700	40	8.0	*u*	Fe I	4.28	1093	
5012.87 a to 5013.13 a	6	1.2					
5013.305m	59	11.8	*s*	Ti I— Cr I	2.02 2.71	173 60	
5013.472	6	1.2					
5013.690	55	8.5	*w*	Ti II	1.58	71	
5013.779		3.0		C_2	R 57	0,0	19
5013.920	22	4.4	*w*	Fe I			
5014.197	148	13.5	*s*	Ti I	0.00	5	
5014.285		19.2	*s*	Ti I	0.81	38	
5014.47 a	3.5	0.7					
5014.60 a	7	1.4		V I	2.37 2.68	132	
5014.74 a	4	0.8					
5014.951S	125	24.9	*u*	Fe I	3.94	965	
5015.126	2.5	0.5					
5015.303	16	3.2		Fe I	3.98	968	
5015.41 a	4	0.8		MgH	R 30	0,0	20
5015.66 a to 5015.93 a	5	1.0					
5016.039	6	1.2		C_2—	P 83 P 84	0,0 0,0	19
5016.168m	60	*12.1*	*S*	Ti I	0.85	38	
5016.326	2.5	0.5					
5016.480	33	6.6	*u*	Fe I	4.26	1089	
5016.686	2.5	0.5					
5016.886m	45	9.0	*s*	Fe I			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5017.047	7. 5	1. 5		C_2	R 46 R 47	1,1 1,1	19
5017.193	6	1. 2		C_2	R 45	1,1	19
5017.381	5	1. 0					
5017.584m	90	17. 9	*w*	Ni I	3. 54	111	
5017.814	18	3. 6		C_2	R 56	0,0	19
5018.036	17	3. 4		Fe I p	3. 63	884	
5018.286m	58	11. 6	*u*	Ni I	3. 83	162	
5018.450m	210	41. 8	*w*	Fe II	2. 89	42	
5018.878	3	0. 6					
5019.176	10	2. 0		Fe I	4. 58	1242	
5019.22 m	4	0. 8	*s*	Cr I	0. 97	20	
5019.478	7. 5	1. 5	*u,N*	Fe II?—	5. 57	168	
5019.732	24	4. 8	*u,N*	Fe I	3. 98	966	
5020.031m	86	*16. 5*	*S*	Ti I (Ca II)	0. 84 7. 51	38 15	
5020.347	2	0. 4	*s*				16
5020.496	8. 5	1. 7					
5020.688	13	2. 6	*u*	Fe I p	3. 25	629	
5020.819	17	3. 4	*u*	Fe I	3. 55	748	
5020.997	6	1. 2					
5021.151	4	0. 8		Ca II	7. 51	15	
5021.35 a	2	0. 4					
5021.602	69	9. 5	*s*	Fe I—	4. 26	1093	
5021.686		5. 0	*u*	Fe I p	4. 22	1067	
5021.923	22	4. 4	*s,d*	Cr I Fe I C_2	0. 94 3. 27 R 55	8 629 0,0	17 19
5022.059	4. 5	0. 9	*o*?	C_2?	R 55	0,0	17,19
5022.241m	114	22. 7	*w*?	Fe I	3. 98	965	
5022.629	4	0. 8					
5022.874m	72	*14. 5*	*S*	Ti I	0. 83	38	
5023.043	3	0. 6	*s*				
5023.189	35	7. 0	*u*	Fe I	4. 28	1095	
5023.348	3. 5	0. 7	*s*	Ti I	2. 16	199	
5023.496	26	5. 2	*u*	Fe I	4. 31	1150	
5023.644	6	1. 2					
5023.832	6. 5	1. 3		C I	7. 94		
5024.010	4	0. 8		C_2	R 44 R 45	1,1 1,1	19
5024.218	15	3. 0	*w*				
5024.595	3	0. 6					
5024.850m	62	*13. 0*	*S*	Ti I	0. 82	38	
5025.082	20	4. 0	*u*	Fe I p	4. 26	1110	
5025.305	18	3. 6	*u*	Fe I	4. 28		
5025.566m	52	10. 3	*S*	Ti I (Cr I)	2. 04 0. 98	173 20	
5025.764	11	2. 2		Fe I C_2	3. 07 R 54	466 0,0	 19
5025.908	5	1. 0		C_2?	R 54	0,0	19
5026.189	1. 5	0. 3					
5026.488	3	0. 6		Ni I	3. 70	158	
5026.740	2. 5	0. 5					
5026.877	5	1. 0					
5027.130	105	20. 9	*u*	Fe I	4. 15	1065	
5027.230	46	9. 2	*u*	Fe I	3. 64	883	
5027.354	32	6. 4	*w*?	Fe I p	3. 98	968	
5027.525	12	1. 8		Fe I p	3. 88	960	
5027.617	7	1. 3					
5027.762m	61	12. 1	*w*	Fe I	4. 21	1110	
5027.924	4. 5	0. 9					
5028.133S	83	16. 5	*s*	Fe I	3. 57	791	
5028.351	13	2. 6					
5028.545	7	1. 4					
5028.78 a	5	1. 0					
5029.03 a	5	1. 0		MgH	R 28	0,0	20
5029.220	1	0. 2					
5029.484	4. 5	0. 9		MgH	R 28	0,0	20
5029.623m	41	8. 2	*u*	Fe I	3. 41	718	
5029.815	12	2. 4	*u*	Mn I	2. 94	20	
5029.917	9. 5	1. 9		C_2	R 53	0,0	19
5030.035	5	1. 0		C_2?	R 53	0,0	19
5030.633	4	0. 8	*s,N*				
5030.782	20	4. 0	*u*	Fe I	3. 24	585	
5030.880	1	0. 2		C_2	R 41	1,1	19
5031.024m	65	12. 9	*w*	‖Sc II— Fe I	1. 36 3. 55 3. 64	23 746 883	
5031.182	11	2. 2	*u*	Fe I?	3. 64	885	
5031.753	6. 5	1. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5031.916	21	4. 2	*u*	Fe I	4. 37	1150	
5032.076	5. 5	1. 1		C_2	P 79 P 80	0,0 0,0	19
5032.379	8	1. 6					
5032.733	23	4. 6	*u*	Ni I	3. 90	207	
5033.129	|3|	0. 6					
5033.538	4. 5	0. 9		C_2			
5033.61 m			*s*				13,16
5033.652	4. 5	0. 9		C_2	R 52	0,0	19
5033.777	4. 5	0. 9		C_2	R 52	0,0	19
5034.057	2	0. 4		Co I	2. 04	91	
5034.178	5	1. 0		C_2	R 41 R 42	1,1 1,1	19
5034.356	7	1. 4		C_2	R 40	1,1	19
5034.520	6	1. 2					
5034.678	4	0. 8					
5034.991	|4|	0. 8		Fe I	3. 64	885	
5035.12 a	3	0. 6					
5035.370m	109	*21. 1*	*u*	Ni I	3. 63	143	
5035.733	|13|	2. 6					
5035.910	115	16. 8	*s*	Ti I	1. 46	110	
5035.974		11. 2	*u?*	Ni I	3. 65	145	
5036.277	42	8. 3	*w*	Fe I			
5036.471m	66	*13. 1*	*s*	Ti I	1. 44	110	
5036.731	4. 5	0. 9					
5036.924	23	4. 6	*s,d*	Fe I Fe II	3. 02 2. 83	465 36	17
5037.200	3. 5	0. 7		Atm			
5037.314	13	2. 6		C_2			
5037.489	3. 5	0. 7		C_2	R 39	1,1	19
5037.709	20	4. 0		C_2	R 51	0,0	19
5037.808	7	1. 4		C_2? Ti II p	R 51 1. 58	0,0 71	19
5038.403m	60	*12. 9*	*s*	Ti I	1. 43	110	
5038.596m	50	9. 9	*w*	Ni I	3. 83	166	
5038.799	2	0. 4		Fe I? p	3. 05	510	
5038.891	8	1. 6					
5039.060	16	3. 2		C I	7. 94	4	
5039.258m	73	14. 5	*w?*	Fe I	3. 37	687	
5039.366	31	6. 2	*w*	Ni I	3. 63	142	
5039.507	7. 5	1. 5					
5039.774	7	1. 4		C_2	P 77 P 78	0,0 0,0	19
5039.964m	66	*14. 1*	*s*	Ti I	0. 02	5	
5040.122	7	1. 4		C I	7. 94		
5040.249	10	2. 0	*s*	Fe I p	4. 22	1093	16
5040.465	3	0. 6		C_2			
5040.614	16	3. 2	*S,N*	Ti I	0. 83	38	
5040.735	4. 5	0. 9					
5040.890m	116	23. 0	*w,d*	Fe I	4. 28 4. 26	1094 1092	18
5041.076m	112	22. 2	*s*	Fe I	0. 96	16	
5041.324	28	5. 6	*u,N*	C_2 Fe I p	R 50 4. 28 5. 02	0,0 1110 1328	19
5041.450	37	7. 3	*u,N*	—C I	7. 94		
5041.619m	86	17. 0	*s*	Ca I	2. 71	34	
5041.763	158	27. 7	*s*	Fe I	1. 48	36	
5041.854		5. 9		Fe I?			
5042.027	3. 5	0. 7					
5042.192m	61	12. 1	*u*	Ni I	3. 66	131	
5042.58 m	8. 5	1. 7	*s*	Mn I?	2. 95	20	
5042.921	8	1. 6		MgH	R 26	0,0	20
5043.094	8	1. 6					
5043.295	10	2. 0		C_2	P 76 P 77	0,0 0,0	19
5043.461	3. 5	0. 7					
5043.588m	14	2. 8	*S*	Ti I	0. 84	38	
5043.709	3. 5	0. 7		C_2	R 38 R 39	1,1 1,1	19
5043.833	2. 5	0. 5		C_2	R 37	1,1	19
5043.988	7	1. 4					
5044.033	1	0. 2		Ce II?	1. 21	16	
5044.218m	70	13. 9	*s*	Fe I	2. 85	318	
5044.635	1	0. 2					
5044.772	1. 5	0. 3		C_2	P 67 P 68	1,1 1,1	19
5045.082	2. 5	0. 5		Fe I?			
5045.270	12	2. 4	*o*	C_2—	R 49	0,0	19
5045.407	10	2. 0	*s*	Ti I	0. 85	38	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5045.636	5	1. 0					
5045.77 a to 5046.07 a	5	1. 0					
5046.202	4	0. 8					
5046.55 m			*s*	Zr I?	1. 53	62	13
5046.929m	4. 5	0. 9		C_2	R 37 R 38	1,1 1,1	19
5047.120	7	1. 4	*s*	Fe I p	4. 58	1242	16
5047.302	7. 5	1. 5		V I— V II	1. 93 2. 56	127	
5047.404	4	0. 8					
5047.558	2	0. 4		C_2	P 66 P 67	1,1 1,1	19
5047.719	5	1. 0		C_2	P 65	1,1	19
5047.942	22	4. 4	*w*				
5048.062	30	5. 9	*u*	Ni I	3. 83	161	
5048.225	26	5. 2	*s*	Ti I	2. 15	199	
5048.439m	70	13. 9	*u*	Fe I	3. 96	984	
5048.64 m	3	0. 6	*s*?	Ti I?			
5048.76 m	9. 5	1. 9	*S*	Cr I	0. 98	20	
5048.853m	52	10. 3	*u*	Ni I	3. 85	195	
5049.016	3. 5	0. 7					
5049.204	3	0. 6					
5049.425	5	1. 0		C_2			
5049.592	8	1. 6		MgH	R 25	0,0	20
5049.682	4	0. 8		C_2	R 26	2,2	19
5049.827m	135	*27. 3*	*u*	Fe I	2. 28	114	
5050.138	6. 5	1. 3		Fe I p MgH	3. 88 R 25	963 0,0	20
5050.291	2. 5	0. 5					
5050.443	5	1. 0					
5050.571	2	0. 4					
5050.737	6	1. 2		C_2			
5050.965	10	2. 0					
5051.305	3. 5	0. 7		Fe I p	4. 22	1089	
5051.504m	47	9. 3	*u*	Ni I	3. 65	144	
5051.642m	111	22. 0	*s*	Fe I	0. 91	16	
5051.905	20	*4. 3*	*s*	Cr I	0. 94	8	
5052.151	40	7. 9	*o*	C I	7. 68	12	
5052.388	6	1. 2					
5052.627	11	2. 2	*u*	—C_2	R 47	0,0	19
5052.738	6	1. 2	*u*	C_2?	R 47	0,0	19
5052.880m	14	2. 8	*s*	Ti I	2. 17	199	
5052.990	12	2. 4	*u*	Fe I	3. 27	585	
5053.125	5	1. 0					
5053.295	3. 5	0. 7	*s*	W I	0. 21	1	
5053.577	50	9. 9					
5053.818	2. 5	0. 5					
5054.083m	7. 5	1. 5	*s*	Ti I	2. 68	294	
5054.647m	35	6. 9	*s*	Fe I	3. 64	884	
5055.426a	1. 5	0. 3		MgH	Q 38	0,0	20
5055.583	6	1. 2	*s,d*				17
5055.794	6. 5	1. 3		MgH	Q 38	0,0	20
5055.988	24	4. 7	*s*	Fe I	4. 31	1149	17
5056.126	12	2. 4		C_2	R 46	0,0	19
5056.252	11	2. 2		C_2	R 46	0,0	19
5056.434	12	2. 4		—MgH	R 24	0,0	20
5056.846m	|24|	4. 7	*w*?	Fe I MgH	4. 26 R 24	1111 0,0	17 20
5057.487	17	3. 4	*w*	Fe I	4. 19 4. 41	1067 1150	
5057.594	10	2. 0					
5057.696	1	0. 2					
5057.839	7. 5	1. 5		Fe I p	4. 55	1185	
5057.985m	29	5. 7	*w*	Fe I	3. 94	967	17
5058.242	7	1. 4					
5058.28 m	1	0. 2		Ti I?			16
5058.495	10	2. 0	*s,d*	Fe I	3. 64	884	
5058.812	5. 5	1. 1		C_2	R 33 R 34	1,1 1,1	19
5058.930	5	1. 0		C_2	P 73	0,0	19
5059.229	3. 5	0. 7		C_2			
5059.393	1. 5	0. 3		C_2			
5059.788	12	2. 4	*o*	—C_2	R 45	0,0	19
5059.929	5. 5	1. 1		C_2	R 48	0,0	19
5060.074m	60	*11. 3*	*s*	Fe I	0. 00 4. 30	1 1095	
5060.313	3	0. 6					
5060.436	2. 5	0. 5					
5061.108	3	0. 6					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5061.396	2	0. 4		C_2			
5061.525	3. 5	0. 7		MgH	Q 37	0,0	20
5061.697	8. 5	1. 7		—C_2	P 72	0,0	19
5061.892	3	0. 6		MgH	Q 37	0,0	20
5062.104m	15	3. 0	*s*	Ti I	2. 16	199	
5062.384	4. 5	0. 9		C_2	P 61 P 62	1,1 1,1	19
5062.910	3	0. 6					
5063.07 a	3	0. 6		MgH	R 23	0,0	20
5063.174	11	2. 2		C_2—	R 44	0,0	19
5063.306	5. 5	1. 1		C_2	R 44	0,0	19
5063.522	2. 5	0. 5		MgH	R 23	0,0	20
5063.753	1	0. 2					
5063.884	1	0. 2					
5064.066m	6. 5	1. 3	*s*	Ti I	2. 69	294	
5064.336	10	0. 8	*u*	Sc I—	1. 44	13	
5064.386		1. 2					
5064.658m	79	*16. 4*	*S*	Ti I	0. 05	5	
5064.815	3	0. 6					
5064.974	118	7. 9	*u*	Fe I p (Zr I)	4. 26 1. 48	1095 62	
5065.030		19. 8	*u*	Fe I	4. 26	1094	
5065.194m	68	13. 4	*s*	Fe I	3. 64	883	
5065.375	4. 5	0. 9					
5065.714	2	0. 4					
5065.904	12	2. 4	*s*	Cr I	2. 71	60	
5065.989	19	3. 8	*S*	Ti I	1. 44	110	
5066.268	4	0. 8		Fe I p	3. 63	882	
5066.368	6	1. 2					
5066.727	10	2. 0		C_2	R 43	0,0	19
5066.859	7. 5	1. 5		C_2	R 43	0,0	19
5067.155m	73	14. 4	*w*	Fe I	4. 22	1092	
5067.504	6	1. 2		MgH C_2	Q 36	0,0	20
5067.746	24	4. 7	*s*	Cr I	2. 71	60	
5067.829	12	2. 4	*o*?	Ni I	3. 80	141	
5068.302	10	2. 0	*S,d*	Cr I Ti I	1. 00 2. 66	20 294	
5068.454	2. 5	0. 5					
5068.771m	129	*25. 4*	*s*	Fe I	2. 94	383	
5069.088	15	3. 0	*s,d*	Ti II	3. 12	113	17
5069.36 m			*s*	Ti I	2. 15	199	13
5069.415	6	1. 2					
5069.46 m	9. 5	1. 9	*s*				
5069.625	2	0. 4		MgH Fe I p	R 22 2. 59	0,0 211	20
5069.795	2	0. 4		C_2	R 31	1,1	19
5069.991	9	1. 8		C_2—	R 31	1,1	19
5070.140	9	1. 8		C_2 MgH	R 42 R 22	0,0 0,0	19 20
5070.23 m			*s*	Sc I	1. 43	13	13,16
5070.295	3	0. 6		C_2?	R 42	0,0	19
5070.438	2	0. 4					
5070.922	2. 5	0. 5					
5071.133	2	0. 4					
5071.260	1. 5	0. 3					
5071.491m	25	4. 9	*s*	Ti I	1. 46	110	
5071.774	7. 5	1. 5		C_2	P 69	0,0	19
5071.909	3	0. 6					
5072.080m	80	15. 8	*w*	Fe I	4. 28	1089	
5072.298	31	6. 1	*w*	Ti II	3. 12	113	
5072.473	5	1. 0					
5072.677m	60	11. 8	*w*?	Fe I	4. 22	1095	
5072.922m	31	*6. 5*	*s*	Cr I	0. 94	8	
5073.170	4. 5	0. 9					
5073.453	9. 5	*1. 9*	*o*?	C_2—	R 41	0,0	17,19
5073.592	4. 5	0. 9		C_2	R 41	0,0	19
5073.748	5. 5	1. 1		MgH	Q 35	0,0	20
5074.072	1. 5	0. 3					
5074.342	1. 5	0. 3					
5074.753m	115	*22. 7*	*u*	Fe I	4. 22	1094	
5074.976	10	2. 0		C_2?	R 29	1,1	19
5075.164	7	1. 4		Fe I p	4. 18	1089	
5075.300	28	5. 5	*s*	C_2—	P 68	0,0	17,19
5075.541	5	1. 0					
5075.818	4. 5	0. 9	*s*?	Sc I	1. 43	13	
5076.093	4. 5	0. 9		MgH	R 21	0,0	20
5076.275m	78	13. 4	*u*	Fe I	4. 30	1089	
5076.326		3. 6		Ni I	3. 65	143	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
5076.478	6. 5	1. 3					
5076.617	15	3. 0	*s,d*	C_2 MgH	R 40 R 21	0,0 0,0	17,19 20
5076.766	6. 5	1. 3		C_2	R 40	0,0	19
5076.879	4	0. 8					
5077.380	8. 5	*1. 7*		C_2— Co I?	R 28 3. 95	1,1 184	19
5077.55 m			*s*				13
5077.603	2	0. 4		C_2?	R 28	1,1	19
5077.834	1	0. 2					
5078.074	4	*0. 8*	*u*	C_2	P 55 P 56	1,1 1,1	16,19
5078.180	1	0. 2					
5078.28 m			*s*	Zr I	1. 44	62	13
5078.352	5. 5	1. 1		C_2	P 67	0,0	19
5078.455	3. 5	0. 7					
5078.539	7	1. 4		Fe I? p	3. 55	744	
5078.711	7. 5	1. 5		Cr I			
5078.981m	93	18. 3	*s*	—Fe I	4. 30	1092	
5079.230m	100	19. 7	*s*	Fe I	2. 20	66	
5079.544	6	1. 2		MgH	Q 34	0,0	20
5079.745S	87	*18. 7*	*S*	Fe I	0. 99	16	
5079.965m	47	9. 2	*s*	Ni I	1. 83	60	
5080.111	10	2. 0		C_2	R 39 R 27	0,0 1,1	19
5080.347	25	4. 9	*u*	Fe I			
5080.539m	93	18. 3	*w*	Ni I	3. 65	143	
5080.789	9	1. 8					
5080.938	12	2. 4	*s*	Fe I	3. 27	585	
5081.119m	91	*17. 5*	*u*	Ni I	3. 85	194	
5081.358	2	0. 4		—Ti I p	1. 43	109	
5081.581	8	1. 6	*S,N*	Sc I	1. 45	13	
5081.767	4	0. 8		C_2	P 66	0,0	19
5081.852	6	1. 2		Fe I p	3. 88	962	
5082.053	1	0. 2					
5082.190	2. 5	0. 5		C_2	R 26	1,1	19
5082.349m	58	*11. 6*	*w*	Ni I	3. 66	130	
5082.55 a	2. 5	0. 5		MgH	R 20	0,0	20
5082.654	|1|	0. 2		Fe I p	3. 11	466	
5082.895	3	0. 6		MgH	R 20	0,0	20
5083.032	14	2. 8		C_2— C_2	R 38 R 38	0,0 0,0	19 19
5083.186	7	1. 4		C_2	R 38	0,0	19
5083.345m	95	*19. 8*	*s*	Fe I	0. 96	16	
5083.535	2. 5	0. 5					
5083.703	7. 5	1. 5	*s*	Sc I	1. 44	13	
5083.858	12	2. 4					
5084.105m	93	18. 3	*w*	Ni I	3. 68	162	
5084.414	2	0. 4					
5084.552	8. 5	*1. 8*		|Fe I— C_2?	3. 69 R 25	932 1,1	19
5084.696	7	*1. 4*		C_2	P 65	0,0	19
5084.838	5	1. 0		C_2?— MgH	R 25 Q 33	1,1 0,0	19 20
5085.010	2. 5	0. 5		C_2			
5085.167	3. 5	0. 7		C_2	P 35 P 36	2,2 2,2	19
5085.340	5. 5	1. 1	*s*	Ti I	1. 43	109	
5085.489	18	3. 5	*s*	Ni I— |Sc I	3. 66 1. 43	130 13	
5085.679	6	*1. 1*	*u*	Fe I p	4. 18	1093	
5085.911	2. 5	0. 5		Fe I p	3. 94	963	
5086.248	12	*2. 6*	*w*	C_2	R 37	0,0	16,19
5086.398	6. 5	1. 3	*u*	C_2	R 37	0,0	16,19
5086.623	5	1. 0					
5086.772	7. 5	1. 5	*s*	Fe I p	4. 15	1067	
5086.931	3	0. 6	*s,N*	Sc I	1. 43	13	
5087.062m	22	4. 3	*s*	Ti I	1. 43	109	
5087.254	1. 5	0. 3		C_2			
5087.426m	40	*3. 4*	*w*	Y II	1. 08	20	
5087.847	1	0. 2		Co I?	4. 02		
5088.006	4. 5	0. 9		C_2	P 64	0,0	19
5088.158	32	6. 3	*u*	Fe I	4. 15	1066	
5088.543	26	5. 1	*s,NN*	Ni I—	3. 85	190	
5088.757	3	0. 6		MgH	R 19	0,0	20
5088.960	25	4. 9	*w,d?*	Ni I	3. 68	162	
5089.212	14	*2. 8*		C_2— C_2	R 36 R 36	0,0 0,0	15,19 19
5089.367	7	1. 4		C_2	R 36 R 23	0,0 1,1	19
5089.831	1. 5	0. 3		Nd II?	0. 20	46	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5090.068	0. 5	0. 1					
5090.221	7	*1. 5*					
5090.393	|2. 5|	0. 5		MgH	Q 32	0,0	20
5090.782S	85	16. 7	*u*	Fe I	4. 26	1090	
5090.976	6	1. 2		C_2?	P 61	0,0	19
5091.179	2	0. 4		C_2	R 22	1,1	19
5091.302	6	*1. 3*		C_2	R 22	1,1	19
5091.491	2	0. 4		C_2	R 22	1,1	19
5091.725	7. 5	*1. 6*		Fe I	3. 41 3. 55	717 745	
5091.888	9. 5	*2. 1*	*s,d*	Cr I	1. 00	20	
5092.114	2. 5	0. 5					
5092.309	14	*2. 9*		C_2—	R 35	0,0	19
5092.485	|8|	1. 6	*o*?	C_2	R 32	0,0	17,19
5092.803	6. 5	1. 3	*s*	Nd II—	0. 38	48	
5093.284	1. 5	0. 3		C_2?	R 21	1,1	19
5093.450	2. 5	0. 5	*s*	Cr I	1. 03	20	
5093.684	5. 5	*1. 2*		C_2?	P 48 P 49	1,1 1,1	19
5094.026	|8.5|	*1. 9*	*u*?	C_2—	P 62	0,0	17,19
5094.418m	25	*5. 5*	*w*	Ni I	3. 83	164	
5094.612	1	0. 2					
5094.85 a	3	0. 6		MgH	R 18	0,0	20
5094.945	10	2. 0	*s,d*	Co I	2. 04	92	17
5095.03 m	1	0. 2	*s*				
5095.176	|5.5|	1. 1		—C_2	R 34	0,0	15,19
5095.341	7. 5	*1. 7*		MgH	R 18	0,0	20
5095.503	1	0. 2		C_2	R 18	1,1	19
5095.665	2. 5	0. 5		C_2	R 17	1,1	19
5095.892	4. 5	0. 9		C_2	P 47 P 48	1,1 1,1	19
5096.046	1. 5	0. 3		C_2			
5096.183	3	0. 6		MgH	Q 31	0,0	20
5096.487	1	0. 2					
5096.586	1	0. 2	*s*?				
5096.740	5. 5	1. 1	*s*	Se I	1. 43	13	
5096.865	35	6. 9	*u*	Ni I	3. 74	111	
5097.005	90	17. 9	*u*	Fe I	4. 28	1092	
5097.321	12	2. 4	*u*	Cr II	3. 71	24	
5097.492m	38	7. 4	*u*	Fe I			
5097.711	5. 5	1. 1		C_2	P 46 P 47 R 16	1,1 1,1 1,1	19
5097.876	1	0. 2		C_2	P 45	1,1	19
5098.132	16	*2. 9*	*s*	—C_2	R 33	0,0	19
5098.318	7. 5	1. 5	*u*				
5098.578m	70	13. 7	*u*	Fe I	3. 93	984	
5098.707m	102	20. 0	*s*	Fe I	2. 18	66	
5098.930	9	1. 8					
5099.081	52	10. 2	*s,N*	Fe I	3. 98	965	
5099.329m	70	13. 7	*u,N*	Ni I (Se I)	3. 65 1. 44	141 13	
5099.575	10	2. 0		C_2	R 18	1,1	19
5099.788	7	1. 4		C_2	P 60	0,0	19
5099.936m	79	15. 5	*w*?	Ni I	3. 68	161	
5100.239	4. 5	*0. 8*					
5100.466	1. 5	0. 3					
5100.656	17	*3. 1*		Fe II	2. 81	35	
5100.854	12	*2. 4*		Fe II	5. 91	185	
5100.945	10	2. 0		C_2 Fe II	R 32	0,0	19
5101.083	9	1. 8		C_2— Se I	R 32 R 17 1. 45	0,0 1,1 13	19
5101.275	5	1. 0		C_2	R 17	1,1	19
5101.486	4. 5	0. 9		C_2	R 17	1,1	19
5101.60 a	3. 5	0. 7		C_2	P 43	1,1	19
5101.823r	3	*0. 7*					
5102.013r	0. 5	0. 1		C_2			
5102.243	3	*0. 6*		Fe I p	2. 22	65	
5102.431	12	*2. 2*		C_2?	P 59	0,0	19
5102.673	3	0. 6					
5102.973m	42	*8. 4*	*u*	Ni I	1. 68	49	
5103.125	3. 5	0. 7		Sm II?	1. 17		
5103.391	6	1. 2		C_2	P 43 P 44	1,1 1,1	19
5103.551	1. 5	0. 3		C_2	P 42	1,1	19
5103.743	11	2. 2		C_2— C_2	R 31 R 31	0,0 0,0	19 19
5103.912	4	0. 8		C_2	R 31	0,0	19

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5104.033	25	4. 9	*s*	Fe I	3. 02	465	
5104.195	25	4. 9	*w*	Fe I	4. 18	1092	
5104.440	29	*5. 7*	*w*	Fe I	4. 28	1090	
5104.645	3. 5	0. 7		C_2?	R 15	1,1	19
5104.896	2. 5	0. 5					
5105.091	2	0. 4		C_2	R 15	1,1	19
5105.182	2. 5	0. 5		C_2	P 41	1,1	19
5105.364	7. 5	1. 5		C_2	P 58	0,0	19
5105.545m	82	16. 0	*u*	Cu I	1. 39	2	
5105.752	3	0. 6					
5105.957	1	*0. 2*					
5106.009	0. 5	0. 1					
5106.238	2. 5	0. 5		V II	2. 56	127	
5106.379	4. 5	0. 8		C_2	R 30	0,0	19
5106.451	10	*2. 0*		Fe I? C_2	 R 30	 0,0	 19
5106.601	9. 5	1. 9		MgH	Q 29	0,0	20
5106.877	4. 5	0. 9		MgH	R 16	0,0	20
5107.457m	91	17. 8	*s*	Fe I	0. 99	16	
5107.651m	97	19. 0	*s*	Fe I	1. 56	36	
5107.884	11	*1. 8*		C_2— C_2	P 57 R 13	0,0 1,1	19 19
5107.977	3	0. 6		C_2	P 55	0,0	19
5108.187	4	0. 8		C_2	R 13	1,1	19
5108.394	18	3. 5	*u,N*				
5108.629	3. 5	0. 7					
5108.85 m	1. 5	0. 3	*s*				16
5108.912	4. 5	0. 9		Co I?— Cr I	3. 93 2. 71	181 60	
5109.122	10	2. 0		C_2— C_2	R 29 R 29	0,0 0,0	19 19
5109.306	4. 5	0. 9		C_2	R 29	0,0	19
5109.435m	5	1. 0	*S*	Ti I	1. 44	109	
5109.657S	69	*13. 7*	*s*	Fe I	4. 30	1089	
5110.017	4	0. 8		C_2?	R 12	1,1	19
5110.372	126	10. 9		Fe I p	3. 57	790	
5110.435		18. 7	*s*	‖Fe I	0. 00	1	
5110.763	27	*5. 3*	*s*	Cr I	2. 71	60	
5110.972	2. 5	0. 5		C_2	R 11	1,1	19
5111.253	4	0. 8		MgH C_2	Q 28 R 11	0,0 1,1	20 19
5111.367	7	*1. 3*		C_2	P 37 P 38 P 39	1,1 1,1 1,1	19
5111.634	9	*1. 8*		MgH C_2	Q 28 R 28	0,0 0,0	20 19
5111.740	6. 5	1. 3		C_2?	R 28	0,0	19
5111.871	8	*1. 6*		C_2	R 25	0,0	19
5112.279	8	1. 6	*u*	Zr II	1. 66	95	
5112.490	3. 5	*0. 8*	*s*	Cr I	1. 00	19	
5112.648	3	0. 6		MgH	R 15	0,0	20
5112.779	1	0. 2		C_2	R 10	1,1	19
5112.983	4	0. 8		C_2	P 37 P 38	1,1 1,1	19
5113.127	23	4. 5	*s,d*	|Cr I MgH	2. 71 R 15	60 0,0	17 20
5113.246	8. 5	1. 7		Co I	2. 08	91	
5113.447m	23	*4. 5*	*s*	Ti I	1. 44	109	
5113.753	1	0. 2					
5114.028	1. 5	0. 3					
5114.263	16	*3. 1*	*o*	—C_2	R 27	0,0	19
5114.505	16	3. 1		Fe I p La II	4. 59 0. 23	1242 36	
5115.001	2	*0. 5*		C_2	R 8	1,1	19
5115.199	4	0. 8					
5115.398m	72	14. 1	*w*?	Ni I	3. 83	177	
5115.672	6	1. 2					
5115.790	23	4. 5	*u*	Fe I	3. 57	789	
5115.878	5	1. 0		C_2	R 8	1,1	19
5116.049	3. 5	0. 7		Cr II	3. 71	24	
5116.188	4. 5	0. 9		MgH— C_2	Q 27 R 7	0,0 1,1	20 19
5116.473	7	1. 4		MgH	Q 27	0,0	20
5116.662	7. 5	1. 5		C_2?	R 26	0,0	19
5116.772	12	2. 3		—C_2	R 26	0,0	19
5116.902	6. 5	1. 3		C_2	R 26	0,0	19
5117.166	3	0. 6		Ce II?	1. 40	23	
5117.348	3. 5	0. 7		C_2?	R 6	1,1	19
5117.764	2	0. 4					
5117.942	21	4. 1	*s*	Mn I	3. 13	32	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5118.073	7. 5	1. 5		C_2	P 53	0,0	19
5118.184	9	1. 8		C_2?	P 51	0,0	19
5118.360	3	*0. 6*		MgH	R 14	0,0	20
5118.557	1	0. 2					
5118.822	5	*0. 9*		MgH	R 14	0,0	20
5119.120	14	2. 7	*o*	Y II	0. 99	20	
5119.212	4	0. 8	*o*	C_2?—	R 25	0,0	19
5119.25 m	2	0. 4	*s*				
5119.379	7	*1. 3*		C_2	R 25	0,0	19
5119.652	2. 5	*0. 6*					
5119.773	1. 5	0. 3		C_2			
5119.903	3. 5	*0. 8*		Fe I p	3. 88	960	
5120.111	2	0. 4					
5120.346	14	2. 7		Fe II p C_2	2. 83 R 2	35 1,1	19
5120.420	31	6. 0	*s*	Ti I	2. 58	288	
5120.633	8. 5	*1. 6*		—C_2	P 52	0,0	19
5120.729	3. 5	0. 7		C_2	P 52	0,0	19
5120.886	7. 5	1. 5		MgH Fe I p	Q 26 4. 44	0,0 1150	20
5121.030	3	0. 6					
5121.226	3. 5	0. 7		MgH	Q 26	0,0	20
5121.438	11	2. 1		C_2	R 24	0,0	19
5121.563	34	6. 6	*w*?	Ni I	3. 94	177	
5121.649	71	13. 9	*u*	Fe I	4. 28	1095	
5121.982	5	1. 0		Fe I? p	3. 55	745	
5122.121	11	*2. 1*	*s*	Cr I	1. 03	19	
5122.309	5	*1. 0*		C_2?	P 30	1,1	19
5122.447	2	0. 4		C_2?	P 30	1,1	19
5122.798	19	*3. 5*		C_2 Co I	P 51 3. 66	0,0 170	19
5123.006	11	2. 1	*u*	La II	0. 32	36	
5123.222	29	5. 7	*u*	Y II	0. 99	21	
5123.291	13	2. 5	*o*	Fe I	{3. 30 4. 41	629 1150	
5123.470	17	3. 3	*S*	Cr I	1. 03	20	
5123.730m	101	*20. 1*	*s*	Fe I	1. 01	16	
5123.901	5	1. 0		MgH	R 13	0,0	20
5124.051	19	*3. 1*		C_2	R 23	0,0	19
5124.197	2. 5	0. 5		C_2 Fe I	P 26 4. 19	1,1 1035	19
5124.389	3. 5	0. 7		MgH	R 13	0,0	20
5124.617	20	*3. 7*	*s,N*	Fe I p	3. 30	585	
5124.810 5124.92 a	10	1. 6 0. 4	 *s*	C_2? C_2?	P 27 P 27	1,1 1,1	19 16,19
5125.128	100	19. 5	*u*	Fe I	4. 22	1090	
5125.250	52	10. 1	*u*	Ni I	3. 68	160	
5125.475	11	2. 1		C_2 MgH	P 26 Q 25	1,1 0,0	19 20
5125.637	10	2. 0		Si I?	5. 08		
5125.839	11	2. 1		MgH	Q 25	0,0	20
5125.990	8	1. 6		C_2— C_2	R 22 P 25	0,0 1,1	19 19
5126.199m	75	14. 6	*u*	Fe I (Co I)	4. 26 3. 62	1089 170	
5126.513	3	0. 6		Cr I	3. 37		
5126.686	5	1. 0		C_2?	P 24	1,1	19
5126.864	6. 5	1. 3		C_2	P 22	1,1	19
5127.018	4	0. 8		C_2			
5127.189	4. 5	0. 9		C_2	P 23	1,1	19
5127.368m	85	*17. 6*	*s*	Fe I	0. 91	16	
5127.688	20	3. 9	*s*	Fe I p	0. 05	1	
5127.874	9	*1. 7*		Fe II C_2	5. 57 P 20	167 1,1	19
5128.081	18	*3. 3*		C_2?— Ni I	P 21 3. 70	1,1 113	19
5128.201	7	1. 4		C_2?	{R 21 P 21	0,0 1,1	}19
5128.316	5. 5	1. 1		C_2	R 21	0,0	19
5128.494	8. 5	*1. 7*	*s*	C_2— V I	{R 21 P 20 2. 29	0,0 1,1 123	}17,19
5128.642	3	0. 6		C_2?	P 18	1,1	19
5128.913	6. 5	1. 3		C_2	P 17	1,1	19
5129.162m	70	13. 6	*w*	Ti II	1. 89	86	
5129.377m	62	12. 1	*w*	Ni I	3. 68	159	
5129.634m	48	9. 4	*w*	Fe I	3. 94	965	
5129.823	4	0. 8		MgH	R 12	0,0	20
5129.945	2. 5	0. 5		MgH	Q 24	0,0	20
5130.135	2. 5	0. 5					
5130.260	8	1. 6		C_2	R 20	0,0	19

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5130.372	23	4. 5	*w*?	Ni I	3. 84	177	
5130.588	15	2. 9		C_2— Nd II	R 20 1. 30	0,0 75	19
5130.930	1. 5	0. 3		Fe I p	4. 31	1149	
5131.308	11	2. 1		Ti II p	1. 89	86	
5131.476m	72	*15. 3*	*s*?	Fe I	2. 22	66	
5131.602	11	2. 1		C_2	P 47	0,0	19
5131.773m	42	8. 2	*u*	Ni I	3. 70	114	
5132.165	2	0. 4					
5132.351	7. 5	1. 5	*u*	C_2	R 19	0,0	16,19
5132.501	5	1. 0	*s*	C_2—	R 19	0,0	19
5132.674	24	*4. 7*	*w*	Fe II p	2. 81	35	
5132.950	3. 5	0. 7	*s*	Ti I	2. 25	230	
5133.038	1	0. 2					
5133.198	|6|	*1. 2*		Fe I p	3. 60	818	
5133.478	18	3. 5		Co I	3. 93	180	
5133.699m 5133.820	165	30. 4 3. 5	*u*	Fe I C_2	4. 18 P 44	1092 0,0	19
5134.072	6	*1. 4*					
5134.205	4. 5	0. 9		MgH	Q 23	0,0	20
5134.333	8. 5	*1. 7*		C_2	R 18	0,0	19
5134.528	18	3. 5		MgH	Q 23 R 11	0,0 0,0	20
5134.683	17	3. 3		C_2	R 18	0,0	19
5134.855	3	0. 6					
5135.104	2	0. 4		MgH	R 11	0,0	20
5135.184	6. 5	*1. 2*		Y I?	2. 29		
5135.582	10	1. 9	*o*	C_2—	P 45	0,0	19
5135.707	6. 5	*1. 3*		C_2	P 43	0,0	19
5135.931	1. 5	0. 3		Cr I	3. 37		
5136.099	20	*3. 9*	*s*	Fe I	4. 19	1036	
5136.273	11	*2. 0*		C_2	R 17	0,0	19
5136.455	8	*1. 5*		C_2	R 17	0,0	19
5136.664	5. 5	1. 1		C_2	R 17	0,0	19
5136.800	14	*2. 7*	*o*	Fe II	2. 84	35	
5137.080m	92	17. 9	*s*	Ni I	1. 68	48	
5137.393m	102	19. 8	*u*	Fe I	4. 18	1090	
5137.579	20	3. 9		C_2	P 44	0,0	19
5137.696	8	1. 6		C_2—	P 44	0,0	19
5137.867	2	0. 4					
5137.961	3. 5	*0. 8*		Cr I	3. 42	207	
5138.110	7. 5	*1. 4*		C_2	R 16	0,0	19
5138.347	11	2. 1		MgH	Q 22	0,0	20
5138.516	11	*1. 9*		C_2	R 16	0,0	19
5138.717	13	*2. 4*	*s*	Cr I— MgH	0. 98 Q 22	19 0.0	17 20
5138.869	6. 5	1. 3		Cr I?	3. 37		
5139.021	13	2. 5					
5139.261m	137	26. 6	*s*	Fe I	3. 00	383	
5139.473m	152	29. 6	*s*	Fe I	2. 94	383	
5139.648	46	8. 9	*s*	Cr I	3. 42	207	
5139.924	13	2. 5	*o*?	C_2?	R 15	0,0	19
5140.160	9	*1. 7*	*s*?,*N*	C_2?— MgH?	R 15 R 10	0,0 0,0	19 20
5140.380	5. 5	*1. 1*		C_2	R 15	0,0	19
5140.823	17	*3. 1*	*w*?	Fe I			
5141.025	2. 5	0. 5	*s*				17
5141.211	13	*2. 4*		C_2	P 42	0,0	19
5141.323	7. 5	*1. 6*		C_2	P 42	0,0	19
5141.540	5	1. 0		Fe I p	3. 69	930	
5141.746m	90	*16. 9*	*s*	Fe I	2. 42	114	
5141.902	7. 5	1. 5		C_2	R 14	0,0	19
5142.109	7	1. 4		C_2	R 14	0,0	19
5142.276	6. 5	1. 3	*s*	Cr I	2. 71	60	
5142.32 a	7	1. 4		MgH	Q 21	0,0	20
5142.530m	117	22. 8	*s*,*d*?	Fe I	4. 26 4. 30	1092 1090	15
5142.786m	89	17. 3	*w*	Ni I	3. 70	161	
5142.936m	111	21. 6	*s*	Fe I	0. 96	16	
5143.121	14	2. 7					
5143.342	8. 5	*1. 6*		C_2	R 13	0,0	19
5143.593	8. 5	*1. 7*		C_2	R 13	0,0	19
5143.728	23	*4. 3*	*s*	Fe I	2. 20	65	16
5143.864	6	1. 2		C_2	R 13	0,0	19
5144.039	4	0. 8					
5144.374	4. 5	*0. 9*					
5144.585	12	*2. 5*	*o*?	C_2?—	P 40	0,0	19
5144.64 m			*s*,*N*	Cr I	2. 71	60	13

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5144.674	21	4. 1		MgH	R 9	0,0	20
				C_2—	P 40	0,0	19
5144.927	6. 5	1. 3		C_2	R 12	0,0	19
5145.102m	44	*9. 2*	*u*	Fe I	2. 20	66	
5145.237	7	1. 4		C_2	R 12	0,0	19
5145.468m	37	*6. 4*	*s*	Ti I	1. 46	109	
5145.740	9. 5	1. 8		Fe I p	3. 69	931	
5146.119	37	*6. 6*	*o*?	Fe II p	2. 83	35	17
				C_2	P 38	0,0	19
					P 39	0,0	
5146.314	27	5. 2	*u*?	Fe I	4. 37	1150	17
5146.491m	76	14. 8	*u*	Ni I	3. 70	162	
5146.776	28	5. 4	*o*?	Co I—	3. 57	170	15,17
				C_2	R 11	0,0	19
5147.103	24	*5. 0*	*o*	Fe I			
				Fe II			
5147.290	4	0. 8					
5147.482m	36	*6. 7*	*S*	Ti I	0. 00	4	
5147.697	18	*3. 0*		C_2	P 38	0,0	19
5147.823	10	1. 9		C_2	P 36	0,0	19
5148.051m	74	14. 4	*u*	Fe I	4. 28	1090	
5148.237m	89	17. 3	*s*	Fe I	4. 26	1095	
5148.458	3. 5	0. 7					
5148.549a	3	*0. 8*		C_2?	R 10	0,0	19
5148.676	13	2. 5	*s*	Ni I	3. 68	158	
5148.846	14	*2. 4*	*s,N*	Na I	2. 10	8	
5149.095	18	3. 5	*w*?	C_2?	P 37	0,0	19
5149.214	9	1. 7	*u*	C_2?	P 37	0,0	19
5149.343	4	0. 8		C_2	R 8	0,0	19
5149.520	6	*1. 1*		MgH	R 8	0,0	20
				Fe I—	3. 94	962	
				Fe II			
5149.796	11	2. 1		Co I	1. 74	39	
				MgH	Q 19	0,0	20
5150.042	2. 5	0. 5		MgH	R 8	0,0	20
5150.197	22	*3. 9*		MgH	Q 19	0,0	20
				Fe I p	3. 57	789	
5150.359	4	*1. 0*					
5150.563	13	*2. 4*		C_2	P 36	0,0	19
5150.674	9. 5	1. 8		C_2	P 36	0,0	19
5150.852S	114	20. 3	*S*	Fe I	0. 99	16	
5150.938		3. 7		Fe II p	2. 85	35	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5151.174	7	1. 4		C_2	R 8	0,0	19
5151.463	|6|	*1. 1*					
5151.917m	100	*19. 8*	*S*	Fe I	1. 01	16	
5152.190m	38	*6. 8*	*S*	Ti I	0. 02	4	
5152.529	|4|	0. 8		C_2	R 5	0,0	19
5152.959	4	*0. 8*		C_2?	R 7	0,0	19
5153.168	56	3. 2		C_2	P 34	0,0	19
5153.241m		8. 5	*u,N*	Cu I	3. 78	7	
5153.410	24	4. 6	*s,N*	Na I	2. 10	8	
5153.505	21	4. 1		Cr II	3. 76	24	
5153.679	7. 5	1. 5		MgH	Q 18	0,0	20
5153.756	2. 5	0. 5		C_2?	R 6	0,0	19
5153.818	3. 5	0. 7		C_2	R 4	0,0	19
5154.075m	73	*14. 2*	*u*	Ti II	1. 57	70	
5154.337	13	2. 5	*o*?	C_2	P 33	0,0	17,19
5154.412	28	5. 4		Fe II p	2. 84	35	17
5154.747	4. 5	0. 9		MgH	R 7	0,0	20
5154.881	3. 5	0. 7		Co I?	4. 15		
5155.132m	52	*9. 3*	*u*	Ni I	3. 90	206	17
5155.524	14	*2. 5*	*u*	C_2?	P 32	0,0	19
5155.771m	78	*14. 9*	*s*?	Ni I	3. 90	210	
5156.072	17	3. 3		Fe II			
5156.356	10	1. 9		Co I	4. 06	180	
5156.557	16	3. 1		C_2	P 31	0,0	19
5156.652	26	*4. 8*		MgH—	Q 17	0,0	20
5156.997	6. 5	1. 3		MgH	Q 17	0,0	20
5157.204	18	3. 5					
5157.424	2	0. 4		La II	2. 21	97	
5157.619	12	*2. 3*	*s,d*	C_2	P 30	0,0	17,19
5157.742	12	*2. 3*	*u*	C_2?	P 30	0,0	19
5157.984	19	*3. 5*	*u*	Ni I	3. 61	111	
5158.30 m			*S,N*				13
5158.37 a	1	0. 2					
5158.525	11	*2. 1*	*o*	C_2—	P 29	0,0	19
5158.664	6	*1. 3*		C_2	P 29	0,0	19
5158.860	4. 5	0. 9		Co I	4. 05	188	
5158.93 m	0. 5	0. 1	*s*				
5159.065S	65	*13. 4*	*w*	Fe I	4. 28	1091	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5159.282	4	0. 8		MgH	R 6	0,0	20
5159.464	12	2. 3	*w*?	C_2—	P 28	0,0	16,19
5159.605	6	*1. 4*	*s*				
5159.779	4	0. 8		MgH	Q 16	0,0	20
5159.966	4	0. 8		Fe I p	4. 30	1095	
5160.124	4	0. 8		Fe I?			
5160.244	16	3. 1		—C_2	P 27	0,0	19
5160.387	6	1. 2		C_2	P 27	0,0	19
5160.568	2. 5	0. 5					
5160.835	12	2. 3		Fe II	5. 57	167	
5161.028	16	3. 1		C_2	P 26	0,0	19
5161.179	16	3. 1	*w*?	Fe II p— C_2?	2. 85 P 24	35 0,0	16 19
5161.28 a	4. 5	0. 9					
5161.683	6	1. 2		C_2?	P 25	0,0	19
5161.764	14	2. 7	*u*?	C_2	P 25	0,0	15,16, 19
5161.78 m			*s*	Cr I	2. 71	60	13
5161.856	9	1. 7		C_2?	P 25	0,0	19
5161.987	12	2. 3					
5162.281m	154	*31. 4*	*w*	Fe I	4. 18	1089	
5162.525	25	4. 8		C_2	P 24	0,0	19
5162.733	16	3. 1		MgH	Q 15	0,0	20
5162.907	21	4. 1		C_2	P 23	0,0	19
5163.040	14	2. 7		C_2	P 23	0,0	19
5163.160	9	1. 7		C_2— MgH	P 7 Q 15	0,0 0,0	19 20
5163.415	14	2. 7		C_2	P 22	0,0	19
5163.591	14	2. 7		C_2	P 22	0,0	19
5163.834	13	2. 5		C_2	P 21	0,0	19
5164.001	11	2. 1		C_2	P 21	0,0	19
5164.13 a	6	1. 2					
5164.236	18	3. 5		C_2	P 20	0,0	19
5164.391	10	1. 9		C_2	P 20	0,0	19
5164.552m	48	9. 3	*u*	Fe I	4. 43	1166	
5164.680	15	2. 9	*u*	Fe I p C_2	2. 59 P 10	210 0,0	 19
5164.781	17	3. 3	*u*	C_2	P 11 P 18	0,0 0,0	19
5164.913	22	4. 2	*s*?	C_2 Fe I	P 17 P 18	0,0 0,0 4. 14 1033	17,19
5165.035	29	5. 6		C_2?	P 17	0,0	19
5165.128	15	2. 9		C_2— Co I	P 16 P 17	0,0 0,0 1. 71 39	19
5165.248	17	3. 3		C_2	P 15 P 16	0,0 0,0	19
5165.415m	87	*18. 0*	*w*	Fe I	4. 22	1089	
5165.581	9	1. 7		MgH	Q 14	0,0	20
5165.963	5	1. 1		MgH	Q 14	0,0	20
5166.284m	115	*22. 2*	*S*	Fe I (Cr I)	0. 00 3. 43	1 207	
5167.327	935	*173*	*S*	Mg I	2. 71	2	
5167.508m		76. 0	*s*	Fe I	1. 48	37	
5167.718	18	6. 4	*u*	Fe I p	3. 41	717	
5167.954	4. 5	1. 2		Cr I	3. 43	207	
5168.194	|8|	1. 8		MgH Fe I p	Q 13 3. 94 3. 94	0,0 964 960	20
5168.663m	67	13. 7	*u*	Ni I	3. 70	112	
5168.908m	114	23. 0	*s*	Fe I	0. 05	1	
5169.050m	154	31. 0	*w*	Fe II	2. 89	42	
5169.300	30	6. 0	*w*	Fe I p	4. 07	1032	
5169.43 m	10	2. 0	*s*				
5169.495	3. 5	0. 7					
5169.707	4	0. 8		Dy II			
5170.106	3	0. 6		Fe I p	4. 59	1241	
5170.46 m	2. 5	0. 5	*s*				
5170.479	3	0. 6					
5170.598	6	1. 2		MgH	Q 12	0,0	20
5170.767	32	6. 6	*w*	Fe I			
5171.028	5	1. 0		Ru I MgH	0. 93 Q 12	11 0,0	 20
5171.610m	160	*32. 9*	*s*?	Fe I	1. 48	36	
5172.221	13	5. 4		Fe I p	2. 56	210	
5172.698m	1259	*234*	*S*	Mg I	2. 71	2	
5173.326	2. 5	0. 8		MgH	Q 11	0,0	20
5173.487	3	0. 9	*s*	Fe I			
5173.749m	67	*13. 5*	*s*	Ti I	0. 00	4	
5173.911	3. 5	0. 8		Pr II	0. 97	35	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5174.035	3	0. 7					
5174.427	5. 5	1. 2					
5174.943	4	0. 8		MgH	Q 10	0,0	20
5175.252	5	1. 0					
5175.411	4. 5	0. 9		MgH	Q 10	0,0	20
5175.749	5. 5	1. 1		Fe I p— Ni I? p	0. 09 3. 85	1 188	
5176.026	6	1. 2					
5176.138	9. 5	1. 8		Co I	2. 08	92	
5176.565m	56	*10. 8*	*w*	Ni I	3. 90	209	
5176.792	10	1. 9		|V I— MgH	Q 9	0,0	20
5177.011	4	0. 8					
5177.241	24	4. 6	*u*	Fe I	3. 69	930	
5177.411	20	3. 9	*u*	Cr I	3. 43	201	
5177.610	4	0. 8		MgH	P 33	0,0	20
5177.811	2	0. 4		Cr I	3. 42	206	
5177.994	2. 5	0. 5					
5178.480	5. 5	1. 1		MgH	Q 8	0,0	20
5178.801	24	4. 6	*w*	Fe I	4. 39	1166	
5179.125	18	3. 5	*o*	Ni I	3. 90	202	
5179.530	|2. 5|	0. 5					
5179.800	7. 5	1. 5		Nd II			
5180.069m	50	*9. 4*	*u*	Fe I	4. 47	1166	
5180.405	6	1. 2					
5180.583	4. 5	0. 9		MgH	Q 7	0,0	20
5180.875	2. 5	0. 5		MgH	P 32	0,0	20
5181.165	4. 5	0. 9					
5181.330	18	3. 7	*u*	MgH Fe I?	P32 Q 6	0,0 0,0	17,20
5181.545	6	1. 3					
5181.844	8. 5	1. 8					
5181.957	3. 5	0. 8		MgH	Q 6	0,0	20
5182.241	2. 5	0. 6					
5182.740r	0. 5	0. 2		Ni I?	4. 09		
5183.619m	1584	*303*	*S*	Mg I	2. 72	2	
5184.196	9	4. 4		Fe I p	4. 31	1147	
5184.273m	42	14. 5	*w*	Fe I	4. 28	1089	
5184.562m	43	11. 6	*u*	|Ni I Cr I	3. 70 3. 41	159 201	
5184.829	1. 5	0. 4		MgH	P 31	0,0	20
5185.035	2. 5	0. 6	*S,d*	—|MgH	Q 3	0,0	17,20
5185.75 m	1. 5	0. 3	*S,d*	MgH—	Q 2	0,0	20
5185.908m	58	*12. 7*	*w*	Ti II	1. 89	86	
5186.109	3	0. 6					
5186.331	7	1. 3	*s,d*	Ti I—	2. 12	183	
5186.557	16	3. 1	*u*	Ni I	3. 90	205	
5187.11 m	2	0. 4	*s*				
5187.263	3	0. 6					
5187.457	|5. 5|	1. 1		Ce II	1. 21	15	
5187.838r	8	1. 5		Ni I	3. 70	159	
5187.917m	50	*10. 4*	*w?*	Fe I	4. 14	1032	
5188.062	7	1. 3		MgH	P 30	0,0	20
5188.238	5	1. 0		La II	2. 45	95	
5188.407	5. 5	1. 1					
5188.698m	202	20. 5	*w*	Ti II	1. 58	70	
5188.852m		21. 6	*s*	Ca I	2. 93	49	
5189.136	7. 5	1. 4					
5189.338	1. 5	0. 3					
5189.581	2	0. 4	*s*	Si I?— Ti I p	2. 24	215	
5189.785	1. 5	0. 3					
5190.19 m			*s*				13,17
5190.26 a	1. 5	0. 3					
5190.50 a to 5190.90 a	7	1. 3		MgH	P 29	0,0	20
5191.078	|9|	1. 7		MgH	P 29	0,0	20
5191.465m	160	*32. 4*	*s*	Fe I	3. 04	383	
5191.602	18	3. 5		||Zr II Fe II p	1. 76 3. 20	95 52	
5191.747	18	3. 5					
5191.868	4. 5	0. 9					
5191.998	42	8. 1	*s*	Cr I	3. 39	201	
5192.353m	176	*36. 6*	*s*	Fe I	3. 00	383	
5192.497	25	4. 8		Ni I	3. 70	111	
5192.621	14	2. 7	*s*	Nd II	1. 14	75	
5192.755	5	1. 0					
5192.978m	80	*15. 8*	*s*	Ti I	0. 02	4	
5193.177	5	1. 0					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5193.336	3	0. 6		MgH	P 28	0,0	20
5193.502	10	1. 9	*s*	Cr I	3. 42	206	
5193.863	2	0. 4		MgH	P 28	0,0	20
5194.056	10	1. 9	*s*	Ti I	2. 10	183	
5194.77 m			*s*	V I?	2. 29 2. 26	125 125	13
5194.949m	126	*25. 0*	*s*	Fe I	1. 56	36	
5195.480m	114	21. 9	*u*	Fe I	4. 22	1092	
5196.065m	78	15. 0	*w*	Fe I	4. 26	1091	
5196.268	1	0. 2		Fe I p	2. 95	406	
5196.452	34	6. 5	*s*?	Cr I	3. 45	207	
5196.578	32	6. 2	*s*	Cr I Mn I	2. 71 3. 45 3. 13	58 207 32	
5197.170	25	4. 8	*u*	Ni I	3. 90	204	
5197.376	4	0. 8	*s*				
5197.576m	80	*15. 4*	*w*	Fe II	3. 23	49	
5197.789	4. 5	0. 9					
5197.942	37	7. 1	*u*	Fe I	4. 30	1091	
5198.342	2	0. 4		MgH	P 26	0,0	20
5198.718S	87	*17. 9*	*s*	Fe I	2. 22	66	
5198.866r	5. 5	1. 1		MgH Fe I	P 26 3. 55	0,0 743	20
5199.600	3. 5	0. 7	*s,d*	—MgH	P 5	0,0	17,20
5199.718	3	0. 6		V II	2. 27	55	
5200.185	22	*4. 4*	*s,N*	Cr I	3. 38	201	
5200.415m	37	7. 1	*w*?	Y II	0. 99	20	
5200.824	3	0. 6		MgH	P 6	0,0	20
5201.095	11	2. 1	*s*	Ti I	2. 09	183	17
5201.294	3	0. 6					
5201.606	3. 5	0. 7	*S,d*	MgH	P 6	0,0	17,20
5201.82 m			*s*				13
5201.931	3. 5	0. 7					
5202.00 a	6	1. 2					
5202.082	11	2. 1					
5202.273	155	14. 9	*u*?	Fe I	4. 26	1090	
5202.348		21. 8	*u*?	Fe I	2. 18	66	
5202.781	2	0. 4	*s*	MgH	P 7	0,0	16,20
5202.990	2. 5	0. 5		MgH	P 24	0,0	20
5203.513	3. 5	0. 7	*s,d*	—MgH	P 7	0,0	17,20
5204.246	|8|	1. 5		MgH	P 23	0,0	20
5204.513r	212	28. 8	*s,d*	Cr I	0. 94	7	
5204.601r		21. 8		Fe I	0. 09	1	
5204.945	6. 5	1. 2		Fe I	2. 99	407	
5205.15 a	2	0. 4		MgH	P 8	0,0	20
5205.302	|6|	1. 2		Fe I p	4. 26	1112	
5205.730m	52	10. 0	*u*	Y II	1. 03	20	
5206.044m	216	*36. 6*	*S*	Cr I (Ti I)	0. 94 2. 49	7 276	
5206.202		*8. 4*	*u*				
5206.545	17	3. 3	*s*	Cr I p	3. 43	206	
5206.811	5. 5	1. 1	*w*?	Fe I p	4. 28	1095	
5207.097	1. 5	0. 3		MgH	P 21	0,0	20
5207.286	2	0. 4		MgH	P 10	0,0	20
5207.623	4. 5	0. 9		MgH	P 21	0,0	20
5207.864	8	1. 5	*s,N*	Ti I	2. 09	183	
5207.935m	19	3. 6	*u*	Fe I	3. 63	880	
5208.105	12	2. 5	*u*				
5208.432m	247	47. 4	*S*	Cr I	0. 94	7	
5208.601m	117	22. 5	*w*?	Fe I	3. 24	553	
5209.09 a	|4|	0. 8		MgH	P 19	0,0	20
5209.24 a	|4|	0. 8		MgH	P 12	0,0	20
5209.609	1	0. 2		MgH	P 19	0,0	20
5209.777	3	0. 6		MgH	P 12 P 13 P 18	0,0 0,0 0,0	20
5209.892	9. 5	1. 8	*u*	Fe I	3. 24	584	
5210.043	3. 5	0. 7		Co I	3. 41	167	
5210.257	4. 5	0. 9	*S,N*	MgH	P 14 P 17 P 18	0,0 0,0 0,0	16,20
5210.392m	86	*17. 3*	*S*	Ti I	0. 05	4	
5210.851	12	2. 3		Cr II	3. 76	24	
5210.939	3. 5	0. 7		MgH	P 15 P 16	0,0 0,0	20
5211.206	8	1. 5	*s*	Ti I	0. 84	37	
5211.535	29	*5. 8*	*w*	Fe I—Ti II	2. 59	103	
5211.816	3	0. 6		Co I?	3. 95	184	
5212.231	10	1. 9	*s,N*	Cr I	3. 32	189	
5212.27 m	6	1. 2	*s*	Ti I	2. 25	215	
5212.346	4. 5	0. 9		Nd II	0. 20	44	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5212.691	21	4. 0	*w,d?*	Co I	3. 51	170	
5212.996	5	1. 0	*s*	Ti I?	2. 23	215	
5213.352	9	*1. 5*	*w?*	Fe I p	4. 39	1165	
5213.57 a	2	0. 4					
5213.812	7. 5	1. 4	*u*	Fe I	3. 94	962	
5214.130	16	*3. 5*	*s*	Cr I	3. 37	193	
5214.616	17	*2. 9*	*s,N*	Cr I	3. 32	189	
5214.732	3	0. 6					
5215.188m	116	*24. 7*	*s*	Fe I	3. 26	553	
5215.571	26	5. 0	*w*				16
5215.885	1. 5	0. 3		V II?	2. 27	55	
5216.283m	108	*22. 2*	*s*	Fe I	1. 61	36	
5216.484	29	5. 6	*u*	Ni I	3. 74	113	
5216.853	1	0. 2					
5217.396m	102	*20. 7*	*s*	Fe I	3. 21	553	
5217.675	2. 5	0. 5		Fe I p	3. 98	965	
5217.870	43	2. 6					
5217.922		6. 1	*u*	Fe I	3. 64	880	
5218.09 m			*s*	Ti I			13
5218.209m	48	*9. 8*	*u*	Cu I	3. 82	7	
5218.516	3	0. 6		Fe I p	4. 58	1240	
5219.028	2. 5	0. 5		Pr II	0. 79	37	
5219.706m	25	*4. 6*	*S*	Ti I	0. 02	4	
5219.883	2. 5	0. 5					
5220.086	14	2. 7	*u*	Cu I	3. 82	7	
5220.296	26	5. 0	*u*	Ni I	3. 74	114	
5220.585	3. 5	0. 7					
5220.912	9. 5	1. 8	*s*	Cr I	3. 38	201	
5221.039	19	3. 6	*s,d?*	—Fe I	4. 29		
5221.763	27	*5. 0*	*s*	Cr I	3. 37	193	
				Fe I	3. 27	628	
5222.190	2	0. 4		Sr I?	2. 25		
5222.397	18	3. 4	*s,N*	Cr I	3. 43	206	
				Fe I p	2. 28	112	
5222.509	5	1. 0		Co I	3. 97		
5222.67 m			*s,N*	Cr I	2. 71	59	13
5222.684	23	4. 4	*s*	Ti I	2. 08	183	
5222.876	5. 5	1. 1					
5222.98 m			*s*				13,16
5223.190	26	5. 0	*s*	Fe I	3. 63	880	
5223.368	1	0. 2		Fe I?			
5223.543	4	0. 8					
5223.628	11	2. 1	*S*	Ti I	2. 09	183	
5223.896	2. 5	0. 5	*s*				
5224.074	10	1. 9	*s*	Cr I	3. 41	201	
5224.16 m	1	0. 2	*s*	Ti I	0. 83	37	
5224.310m	36	6. 9	*S*	Ti I	2. 13	183	
5224.551	26	5. 0	*S*	Cr I—	2. 71	59	
					3. 37	193	
				Ti I	2. 10	183	
5224.725	1. 5	0. 3					
5224.937	80	10. 0	*S,N*	Ti I—	2. 12	183	
				Cr I	3. 45	201	
5225.032		6. 2	*s*	Cr I	3. 43	201	
5225.348	2	0. 4					
5225.534S	68	*12. 4*	*S*	Fe I	0. 11	1	
5225.713	3. 5	0. 7					
5225.813	16	3. 1	*s*	Cr I	2. 71	58	
5226.061	17	3. 2	*u*	Fe I	3. 41	716	
5226.209	12	2. 3					
5226.384	10	1. 9		Fe I p	2. 95	406	
5226.545m	94	18. 4	*w?*	Ti II	1. 57	70	
5226.870m	160	32. 5	*s*	Fe I	3. 04	383	
				(Cr I)	3. 37	193	
5227.192m	277	53. 4	*u*	Fe I	1. 56	37	
					(2. 42)	114	
5227.473	2. 5	0. 5					
5227.737	5	1. 0	*s*	Cr I	2. 71	58	
5227.881	2. 5	0. 5		Ti II p	2. 60	103	
5228.103	22	4. 2	*s*	Cr I	3. 37	193	
5228.383m	60	11. 5	*u*	Fe I	4. 22	1091	
5228.562	7. 5	1. 4					
5228.60 m			*s*				13
5229.25 a to 5229.80 a	5. 5	1. 1					
5229.860m	124	*23. 5*	*u*	Fe I	3. 28	553	
					4. 22	1090	
5230.056	3. 5	0. 7					
5230.216	25	4. 8	*s*	Co I	1. 74	39	
				Cr I	2. 71	58	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5230.392	5	1. 0		Fe I?			
5230.696	6. 5	1. 2	*u*				
5230.984	3. 5	0. 7	*s*	Ti I	2. 24	215	
5231.25 m	3	0. 6	*s*				16
5231.396	9	1. 7	*u*	Fe I	3. 57	787	
5231.46 a	4	0. 8					
5231.52 m			*s*				13
5231.63 a	4	0. 8					
5231.83 a	3	0. 6					
5232.503	12	1. 4	*w,N*	Cr II	4. 07	43	
5232.82?m			*s,N*				13
5232.952m	346	*64. 9*	*S*	Fe I	2. 94	383	
5233.72 m	1. 5	0. 3	*s*				
5233.854	2	0. 4	*s*	Ti I	0. 82	37	
5234.090	5. 5	1. 1	*s*	V I	2. 36	131	
5234.213	8	1. 5	*u*	Nd II	0. 55	74	16
5234.436	2	0. 4					
5234.630m	81	*16. 2*	*w*	Fe II	3. 22	49	
5234.82 m			*s*				13
5234.879	3	0. 6					
5235.032	8. 5	1. 6	*s*				
5235.188	23	4. 4	*s*	Co I	2. 14	83	
5235.390m	96	14. 2	*u*	Fe I	2. 59 4. 07	210 1031	
5235.508		5. 6	*u*	Ni I	3. 90	208	
5236.207	27	5. 2	*u*	Fe I	4. 19	1034	
5236.378	9	1. 7	*u*	Fe I p	4. 31	1146	
5237.087	4	0. 8		Co I?	4. 17		
5237.325m	49	*9. 4*	*w,N*	Cr II	4. 07	43	
5237.843	3. 5	0. 7					
5238.249	3	0. 6	*u?,N*	Fe I	3. 98	962	
5238.52 m			*S*	Sr I	2. 26		13
5238.568m	15	*2. 9*	*S*	Ti I	0. 85 2. 09	37 183	
5238.969	16	*3. 0*	*s*	Cr I	2. 71	59	
5239.460	$\widehat{5}$	1. 0					
5239.823m	55	*10. 5*	*w*	Sc II	1. 45	26	
5239.95 m	3	0. 6	*s*	Ti I	0. 81	37	
5240.144	2. 5	0. 5					
5240.359	5	1. 0	*u*	Fe I p	3. 27	584	
5240.475	8. 5	1. 6	*s*	Cr I	3. 67	237	
5240.878	4. 5	*1. 1*	*s*	V I	2. 37	131	
5241.182	0. 5	0. 1		V II	4. 52	241	
5241.461	3. 5	0. 7	*s*	Cr I	2. 71	59	
5241.923	5. 5	1. 0	*u*	Fe I	4. 41	1150	
5242.070	15	2. 9	*w*				
5242.284	2	0. 4					
5242.500S	80	*16. 0*	*s*	Fe I	3. 63	843	
5243.178	14	2. 7	*w*				
5243.360	19	3. 6	*s*	Cr I	3. 39	201	
5243.471	6. 5	1. 2					
5243.783m	60	*11. 4*	*s*	Fe I	4. 26	1089	
5244.170	1. 5	0. 3					
5244.535	4	0. 8					
5244.951	1	0. 2					
5245.629	6	1. 1	*s*	Ni I? Fe I p	4. 09 4. 31	 1149	
5245.737	6	1. 1	*s*	Fe I	3. 41	715	
5246.004	3	0. 6	*s*	Fe I p	3. 25	628	
5246.147	2. 5	0. 5	*s*	Ti I	2. 50	282	
5246.556	4	*0. 9*	*S*	Ti I	0. 84	37	
5246.65 m	1. 5	0. 3	*s*	Ti I			
5246.777	17	3. 2	*w*	Cr II	3. 71	23	
5247.058m	59	*11. 4*	*S*	Fe I	0. 09	1	
5247.297m	10	1. 9	*S*	Ti I	2. 10	183	
5247.574m	76	*14. 8*	*s*	Cr I	0. 96	18	
5247.923	16	3. 0	*s,N*	Co I Cr I	1. 78 2. 71	39 58	
5248.375	5. 5	1. 0	*s*	Ti I	0. 81 1. 88	37 156	
5248.991	6. 5	1. 2	*s*				
5249.111	30	5. 7	*u*	Fe I	4. 47	1166	
5249.425	11	2. 1	*u*	Cr II	3. 76	23	
5249.579	11	2. 1	*u*	Nd II	0. 98	75	
5249.717	7	1. 3					
5249.829	3	0. 6					
5250.023	4. 5	0. 9	*u*	Co I	4. 17	190	
5250.216m	62	*11. 6*	*s*	Fe I	0. 12	1	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5250.433	3	0. 6					
5250.654m	104	*19. 6*	*s*	Fe I	2. 20	66	
5250.913	15	2. 8	*S*	Ti I	0. 83	37	
5251.487	2. 5	0. 5	*S*	Ti I	0. 82	37	
5251.607	1	0. 2					
5251.974m	40	7. 6	*u*	Fe I			
5252.106m	16	*3. 0*	*S*	Ti I	0. 05	4	
5252.36 m			*s,N*				13
5253.033	16	3. 0	*s*	Fe I p	2. 28	113	
5253.259	3. 5	0. 7		Fe I p	3. 63	875	
5253.468S	75	*14. 9*	*s*	Fe I	3. 28	553	
5253.685	4. 5	0. 9					
5253.951	8. 5	1. 6					
5254.651	7	1. 3		Co I	3. 97	187	
5254.953m	92	17. 5	*s*	Cr I— Fe I	3. 41 0. 11	201 1	
5255.123	38	7. 2	*s*	Cr I	3. 46	225	
5255.325	36	6. 8	*s,N*	Mn I	3. 13	32	
5255.517	7	1. 3	*s*	Nd II	0. 20	43	
5255.663	41	3. 2	*u*	Fe I p	4. 22	1089	
5255.743		4. 9	*u*	Fe I p	4. 28	1091	
5255.812		0. 3	*S*	Ti I	2. 12	183	
5256.933	18	3. 4	*w*	Fe II (Sr I)	2. 89 2. 27	41	
5257.080	2	0. 4		Cr I?	3. 43	205	
5257.362	3	0. 6					
5257.645	20	3. 8	*u,d*	Co I Fe I p	3. 97 3. 57	188 788	
5257.832	3. 5	0. 7					
5258.323	1. 5	0. 3	*s*	Sc I	2. 51	23	
5258.828	12	2. 3	*o*				
5259.089	4	0. 8		Fe I p	4. 37	1149	
5259.488	[7. 5]	1. 4	*u*	Ni I	3. 74		
5259.735	3	0. 6		Pr II	0. 63	35	
5259.974	6	1. 1	*s*	Ti I	2. 74	298	
5260.265	2	0. 4					
5260.390	28	5. 3	*s,N*	Ca I	2. 52	22	
5260.670	7	1. 3					
5260.778	3. 5	0. 7	*s*	Mn I	3. 13	32	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5261.35 a	2	0. 4					
5261.501	3	0. 6		Fe I p	2. 95	406	
5261.708m	99	*20. 0*	*s*	Ca I	2. 52	22	
5261.959	3. 5	0. 7					
5262.150	128	5. 7	*u*	Ti II	1. 58	70	
5262.248		20. 0	*s*	Ca I	2. 52	22	
5262.457	4. 5	0. 9		Fe II p	3. 20	52	
5262.623	12	2. 3	*u*	Fe I p	4. 32	1149	
5262.887	19	3. 6	*s*	Fe I p	3. 25	628	
5263.077	6	1. 1		Fe I?			
5263.314m	121	*24. 5*	*s*	Fe I	3. 26	553	
5263.494	13	2. 5	*s*	Ti I	2. 13	183	
5263.718	11	2. 1	*s,N*	Cr I	4. 49	309	
5263.865m	47	8. 9	*u*	Fe I	3. 57	788	
5263.992	3. 5	0. 7					
5264.160	153	19. 1	*s,d*	Cr I	0. 97	18	
5264.246		15. 5		Ca I	2. 52	22	
5264.405	9	1. 7	*u*				
5264.591	2	0. 4	*u*				16
5264.808m	45	8. 5	*w*	Fe II	3. 33	48	
5264.977	3	0. 6					
5265.153	27	5. 1	*s*	Cr I	3. 43	201	
5265.254	9	1. 7	*s*	Fe I p	3. 02	407	
5265.418	13	2. 5	*s*	Fe I p	4. 31	1145	
5265.560m	112	21. 3	*s*	Ca I	2. 52	22	
5265.723m	93	17. 7	*S*	Cr I	0. 97	18	
5265.964m	55	10. 4	*s*	Ti I	1. 89	156	
5266.078	9. 5	1. 8		Cr I?	3. 43	205	
5266.309	12	2. 3	*u*	Co I	3. 69	172	
5266.472	252	*2. 0*		Ti I? p Co I	0. 83 2. 04	36 83	
5266.563m		*46. 3*	*s*	Fe I	3. 00	383	
5267.034	5	0. 9					
5267.104	4	0. 8	*u*				
5267.275	25	4. 7	*u*	Fe I p	4. 37	1146	
5267.492	2. 5	0. 5					
5267.655	8	1. 5					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5267.80 a to 5268.10 a	6	1. 1					
5268.186r	|3. 5|	0. 7					
5268.342	37	7. 3	*u*	Ni I	4. 54	273	
5268.495	9	1. 8	*u*	Co I	3. 73	172	
5268.614	28	5. 6	*u*	Fe I Ti II	2. 60	103	
5268.803	3	0. 6					
5268.961	10	2. 1	*u*				
5269.418		*7. 4*					
5269.550m	478	*87. 0*	*S*	Fe I	0. 86	15	
5269.701		*7. 4*					
5269.905	6. 5	1. 6	*s?*	Ti I	1. 87	156	
5270.064	7. 5	1. 7	*u?*	Fe I p	3. 63	877	
5270.269	255	30. 0	*s*	Ca I	2. 52	22	
5270.383		35. 0	*u*	Fe I	1. 61	37	
5271.054	31	5. 9	*u*				
5271.291	21	4. 0	*u*				
5271.618	5. 5	1. 0	*s*	Ti I?			
5271.844	1	0. 2		Fe I			
5272.003	21	4. 0	*s*	Cr I	3. 45	225	
5272.265	14	2. 6	*u*				
5272.400	9. 5	1. 8	*o*	Fe II	5. 95	185	
5273.170m	103	19. 5	*s*	Fe I	3. 29	553	
5273.389S	104	19. 8	*u*	Fe I	2. 48	114	
5273.43 m			*s*	Cr I	3. 45	201	13
5273.602	2	0. 4		Fe I p	4. 31	1147	
5273.755	1. 5	0. 3					
5274.236	6. 5	1. 2	*w*	Ce II	1. 04	15	
5274.403	2	0. 4					
5274.534	9	1. 7	*u*				
5274.787	4. 5	0. 9	*s*				
5274.979	48	9. 1	*w,N*	|Cr II Fe I	4. 07 4. 07	43 1029	
5275.107	8	1. 5					
5275.170	39	7. 4	*s*	Cr I (Cr I)	2. 89 3. 37	94 192	
5275.284m	62	11. 8	*s*	Fe I p	3. 55	742	
5275.473	3	0. 6					
5275.594	2. 5	0. 5		V II	3. 76	195	
5275.759m	73	13. 8	*s*	Cr I	2. 89	94	
5276.002		21. 4	*w*	Fe II	3. 20	49	
5276.071	152	8. 4	*u?*	Cr I	2. 89	94	
5276.174		2. 8		Co I	4. 11	190	
5276.441	3	0. 6					
5276.878	1. 5	0. 3		Nd II	0. 86	81	
5277.308	7. 5	1. 4	*u*	Fe I p	3. 27 4. 41	584 1149	
5277.42 m	2	0. 4	*s*	Zr I	0. 54	27	
5277.572	2	0. 4		Fe I	3. 96	983	
5277.812	4	0. 8					
5278.10 a	4	0. 8					
5278.254	|8|	1. 5	*s*	Cr I	4. 47	309	
5278.577	2	0. 4					
5278.787	9	1. 7	*u*				
5278.961	6. 5	1. 2	*o*	S I	6. 86	4	
5279.179	3	0. 6					
5279.315	4	0. 8					
5279.671	5. 5	1. 0	*s*	Fe I p	3. 30	584	
5279.877	18	3. 4	*w*	Cr II	4. 07	43	
5280.072	16	3. 0	*w?*	Fe I— Cr II	4. 07	43	
5280.284	60	3. 1	*s*	Cr I	3. 37	192	
5280.369		8. 8	*u*	Fe I	3. 64	880	
5280.633	20	3. 8	*u*	Co I	3. 63	172	
5280.928	1. 5	0. 3		Fe I p	2. 61	210	
5281.163	4	0. 8	*u?*	Fe I p	4. 58	1240	17
5281.321	11	2. 1	*u*				
5281.511	3. 5	0. 7					
5281.666	164	1. 4		Ni I	4. 10	231	
5281.798m		30. 1	*s*	Fe I	3. 04	383	
5282.170	4	0. 8					
5282.402m	22	*4. 8*	*S*	Ti I	1. 05	74	
5283.163	|4. 5|	0. 9					
5283.443	212	3. 0	*S*	Ti I	1. 88	156	
5283.629m		39. 6	*s*	Fe I	3. 24	553	
5283.917	7	1. 3					
5284.112m	67	12. 7	*w*	Fe II	2. 89	41	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5284.280	3	0. 6		Fe I p	3. 63	875	
5284.428	23	4. 4	*S*	Fe I	3. 63	842	
				||Ti I	1. 05	74	
5284.615	21	4. 0	*s*	Fe I p	4. 19	1032	
5284.772	1	0. 2					
5285.130	25	4. 7	*u,d*	Fe I p	4. 43	1166	
5285.262	3	0. 6		Ca II	7. 50	14	
5285.386	2	0. 4		Cr I?	4. 18	285	
5285.649	4	0. 8	*s*	Cr I	3. 37	192	
5286.07 m	1	0. 2	*s,N*				16
5286.241	2. 5	0. 5					
5287.183	9. 5	1. 8	*s*	Cr I	3. 44	225	
5287.569	3. 5	0. 7		Co I	3. 63	175	
5287.788	6	1. 1		Co I	4. 05	187	
5288.218	2	0. 4		Fe I p	3. 60	818	
5288.375	2	0. 4		Fe I p	2. 99	406	
5288.40 m			*s*				13
5288.533S	56	10. 3	*s?*	Fe I	3. 69	929	
5288.804	3	0. 6	*s*	Ti I?			
5288.99 m	1. 5	0. 3	*s,N*				
5289.282	2	0. 4	*s*	Ti I	0. 84	36	
				Cr I	3. 37	192	
5289.510	3	0. 6					
5289.820	2. 5	0. 5		Y II	1. 03	20	
5290.817	|5|	0. 9	*u?*	Fe I p—	4. 32	1147	17
				La II?	0. 00	6	
5291.60 m			*s*				13,16
5291.650	1	0. 2					
5292.216	4	0. 8					
5292.399	2. 5	0. 5					
5292.590	36	*6. 6*	*u*	Fe I			
5292.81 m	2. 5	0. 5	*s*				
5292.873	4	0. 8	*s*	Cr I	3. 45	205	
				Mn I	3. 38	36	
5293.042	12	2. 3	*u*	Fe I p	4. 39	1165	
5293.169	10	1. 9	*u*	Nd II	0. 82	75	
5293.375	4. 5	0. 8	*s,d*	Cr I	3. 37	192	
5293.64 m	1. 5	0. 3	*s*				
5293.773	1	0. 2	*s*				
5293.963	29	5. 5	*u*	Fe I	4. 14	1031	
5294.122	5	0. 9					
5294.31 m			*s*				13,16
5294.399	1	0. 2					
5294.553	13	2. 4	*s*	Fe I	3. 64	875	
5295.070	1	0. 2					
5295.321	27	5. 1	*u*	Fe I	4. 41	1146	
5295.608	2	0. 4	*s?*				
5295.784	10	*1. 9*	*S*	Ti I	1. 07	74	
5296.075	4	0. 8					
5296.483	2. 5	0. 5					
5296.702m	95	*17. 7*	*S*	Cr I	0. 98	18	
5297.02 a	6	1. 1					
5297.233	18	3. 4	*S*	Ti I	1. 87	156	
5297.385m	87	16. 4	*s*	Cr I	2. 90	94	
5298.023m	83	15. 7	*S*	Cr I	2. 90	94	
5298.283m	110	20. 8	*S*	Cr I	0. 98	18	
5298.415	65	0. 6	*S*	|Ti I	2. 50	281	
5298.497m		11. 9	*S*	Cr Ip	2. 90		
5298.784m	46	8. 3	*s*	Fe I	3. 64	875	
5298.832r		0. 4					
5299.643	0. 5	0. 1					
5299.984	21	4. 0	*s*	Ti I	1. 05	74	
5300.408	5	0. 9		Fe I	4. 59	1240	
5300.562	2	0. 4		C I	8. 64		
5300.751S	56	*11. 3*	*S*	Cr I	0. 98	18	
5300.919	2	0. 4					
5301.047	21	4. 0	*s*	Co I	1. 71	39	
5301.312	3	0. 6	*u,N?*	Fe I p	4. 39	1162	
5301.490	2	0. 4					
5301.874	9. 5	1. 8	*s*				
5302.054	3. 5	0. 7					
5302.307m	157	*30. 0*	*s*	Fe I	3. 28	553	
5302.563	9	1. 7					
5302.657	6	1. 1					
5302.953	3	0. 6		Mn I	5. 40		
5303.223	4	0. 8		V II	2. 27	54	
5303.415	1. 5	0. 3					
5303.567	2. 5	0. 5					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib Band	Notes
5303.845	7	1. 3	*o*?	Fe I?			
5304.00?m	1. 5	0. 3	*s*				
5304.185	14	2. 6	*s*	Cr I	3. 46	225	
5304.566	2	0. 4					
5304.992	2	0. 4					
5305.430	2	0. 4		Fe I	3. 63	877	
5305.866	25	4. 7	*w*	Cr II	3. 83	24	
5306.198	2. 5	0. 5					
5306.494	1	0. 2	*s*				
5306.89 a	1	0. 2					
5306.965	0. 5	0. 1					
5307.231	7	1. 3		Ca II	7. 51	14	
5307.281a	2	0. 4		Cr I	3. 70	237	
5307.369S	86	*16. 6*	*S*	Fe I	1. 61	36	
5308.212	0. 5	0. 1		Fe I?			
5308.429	28	5. 3	*w*	Cr II	4. 07	43	
5308.691	7. 5	1. 4	*u*	Fe I	4. 26	1091	
5308.893	5. 5	1. 0					
5309.180	1	0. 2					
5309.457	1	0. 2		Cr I	4. 18	285	
5310.242	3	0. 6		Co I?	4. 21	196	
5310.481	5	0. 9					
5310.697	14	2. 6	*o*	Cr II	4. 07	43	
5311.133	0. 5	0. 1					
5311.20 m			*s*				13,16
5311.43 m			*s*	Zr I	0. 52	27	13
5311.476	2. 5	0. 5		Nd II	0. 99	80	
5311.631	3	0. 6	*u*	Hf II	1. 78	37	
5311.782	3	0. 6		Zr II?—	1. 76	95	
5312.19 a	2. 5	0. 5					
5312.494	0. 5	0. 1					
5312.656	7. 5	1. 4	*w*	Co I	4. 21	197	
5312.863	19	*3. 6*	*s*	Cr I	3. 45	225	
5313.079	4. 5	0. 8	*s*				
5313.244m	3	0. 6	*S*	Ti I	1. 07	74	
5313.411	1. 5	0. 3		Fe I p	4. 58	1239	
5313.585m	35	6. 6	*u*	Cr II—	4. 07	43	
5313.755	2	0. 4		Ti II? p	1. 57	81	
5314.272	1	0. 2					
5314.57 m	1	0. 2	*s,N*				
5314.741	2. 5	0. 5	*u*				
5314.927	8	1. 5	*u*				
5315.077m	34	6. 4	*u*	Fe I	4. 37	1147	
5315.784	|5|	0. 9	*u*	Fe I p	3. 64	877	
5316.216	|2. 5|	0. 5					
5316.397	4. 5	0. 8					
5316.620m	112	21. 1	*w*	Fe II	3. 15	49	
5316.729r	97	5. 3	*u*?				
5316.780		13. 0	*w*	Fe II	3. 22	48	
				(Co I)	4. 02	192	
5317.075	3. 5	0. 7	*s*	Mn I	3. 38	36	
5317.26 m	1. 5	0. 3	*s*				16
5317.526	6	1. 1	*u*	Fe I p	4. 14	1032	
5317.570	5	0. 9					
5317.73 m	0. 5	0. 1	*s,N*				16
5317.89 m			*s,N*				13,16
5318.040	1. 5	0. 3		Fe I	3. 02	406	
5318.361	12	2. 2	*w*	Sc II	1. 36	22	
5318.597	0. 5	0. 1	*s*	—V II?p	2. 27	53	
5318.776	14	2. 6	*s*	Cr I	3. 44	225	
5319.045	7. 5	1. 4	*u*				
5319.214	4	0. 8		Fe I p	4. 07	1029	
5319.319	5. 5	1. 0	*u,N*				
5319.73 a	2	0. 4					
5319.820	11	2. 1	*s*	Nd II	0. 55	75	
5320.040	18	3. 4	*s*	Fe I	3. 64	877	
5320.48 m	1. 5	0. 3	*s*				16
5320.831	5	0. 9		Y II—	1. 08	20	
5321.114m	43	*7. 9*	*s*	Fe I	4. 43	1165	
5321.29 m	1. 5	0. 3	*s,N*				
5321.750	3	0. 6					
5321.84 m	2. 5	0. 5	*s*				
5322.049S	60	*11. 1*	*s*	Fe I	2. 28	112	
5322.819	2	0. 4		Pr II	0. 48	35	
5323.507	1	0. 2		Fe I	2. 28	113	
5323.789	0. 5	0. 1					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5323.93 m			*S*	Ti I	0. 83	36	13
5324.097	334	*1. 0*		Cr I?	3. 37		
5324.191m		*59. 5*	*s*	Fe I	3. 21	553	
5324.705	1. 5	0. 3		Dy II?			
5325.280	8	1. 5	*w*?	Co I	4. 02	192	16
5325.388	0. 5	0. 1					
5325.560m	45	8. 4	*w*	Fe II	3. 22	49	
5325.959	3	0. 6	*u*	Co I	4. 21	194	
5326.149m	32	6. 0	*s*	Fe I	3. 02 3. 57	407 785	
5326.354	2	0. 4					
5326.41 m			*s*				13,16
5326.505	1. 5	0. 3					
5326.823	11	2. 1	*u,N*	Fe I	4. 41	1147	
5327.263	3. 5	0. 7	*u*	Fe I p	3. 64	875	
5328.051m	375	70. 4	*S*	Fe I	0. 91	15	
5328.332m	74	19. 5	*s*	Cr I	2. 91	94	
5328.542m	210	39. 4	*s*	Fe I	1. 56	37	
5328.925	2	0. 4					
5329.147m	78	*13. 4*	*s*	Cr I	2. 91	94	
5329.40 a to 5329.68 a	5	0. 9					
5329.794	31	5. 8	*s*	Cr I	2. 91	94	
5329.996 m	60	11. 2	*u*	Fe I	4. 07	1028	
5330.44 a	1	0. 2					
5330.564	3	0. 6	*s*	Ce II?	0. 87	13	17
5331.199	1	0. 2		Fe I p	3. 65	817	
5331.435	15	0. 8	*s,N*	Co I	1. 78	39	
5331.480		2. 1		Fe I p	2. 59	210	
5331.766	1	0. 2					
5331.98 m			*s*				13
5332.14 m			*s*				13
5332.363	6	1. 1					
5332.665m	45	8. 4		V II Fe I	2. 27 4. 19	54 1031	
5332.908S	96	*17. 2*	*s*	Fe I	1. 56	36	
5333.148	4. 5	0. 8		Fe I p	4. 07	1023	
5333.253	8. 5	1. 6					
5333.656	7	1. 3	*o*	Co I	4. 02	190	
5333.769	2. 5	0. 5	*s*	Fe I p—	3. 02	464	
5334.13 m	1	0. 2	*s,N*				
5334.222	3. 5	0. 7		Sc II	1. 50	30	
5334.330	2	0. 4		Fe I p	4. 10	1064	
5334.44 m	0. 5	0. 1	*s*				
5334.870m	32	6. 0	*w*	Cr II (Co I)	4. 07 4. 02	43 191	
5334.966	3. 5	0. 7					
5335.09 m	1	0. 2	*s*				
5335.24 m			*s*				13
5335.36 m			*s,N*	Ti I?			13
5335.43 m			*s,N*				13
5335.587	1. 5	0. 3					
5336.07	1	0. 2	*S*				
5336.169	4	0. 7		Co I	4. 02	191	
5336.295	2	0. 4					
5336.475	2. 5	0. 5	*s*				
5336.591	2. 5	0. 5					
5336.794m	71	*12. 9*	*w*	Ti II	1. 58	69	
5337.16 m	1	0. 2	*s*				
5337.382	2	0. 4					
5337.727r	35	5. 4	*w,d*	Fe II	3. 23	48	
5337.760		1. 8		Cr II	4. 07	43	
5337.979	1. 5	0. 3					
5338.333	13	2. 4	*s*	Ti I	0. 83	35	15
5338.544	3	0. 6	*s*				17
5338.743	3	0. 6					
5338.974	2	0. 4					
5339.217	3	0. 6		Ca II	8. 44	20	
5339.35 m	2	0. 4	*S,N*				
5339.426	9	1. 7	*o*?	Fe I p	4. 43	1162	
5339.535	3. 5	0. 7		Co I	4. 23	199	
5339.65 m	2	0. 4	*s,N*				
5339.696	1	0. 2	*s*	K I	1. 62		
5339.82?m			*s*				13
5339.937m	161	*29. 1*	*u*	Fe I	3. 26	553	
5340.193	12	2. 4	*u*				
5340.454	16	3. 0	*s*	Cr I	3. 44	225	

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Ban	Notes
5340.672	5. 5	1. 0	*s*	Ti I	0. 82	36	
5340.781	3	0. 6					
5341.033m	180	25. 5	*s*	‖Fe I Mn I (Sc I)	1. 61 2. 11 1. 94	37 4 19	
5341.151		10. 2	*s*?				
5341.328	12	2. 2	*u*	Co I	4. 14	199	
5341.483m	4	0. 7	*s*	Ti I	4. 33	316	
5342.092	1	0. 2					
5342.228	1	0. 2		Fe I?			
5342.504	0. 5	0. 1					18
5342.708m	29	5. 4	*w*?	Co I	4. 02	190	
5342.88?m	1	0. 2	*s*				
5342.962	1	0. 2	*S*	‖Sc I K I	0. 00 1. 61	4	
5343.125	1. 5	0. 3					
5343.225	1. 5	0. 3					
5343.392	65	4. 7	*w*	Co I	4. 02	190	
5343.438		8. 7		Fe I			
5343.66 m	2	0. 4	*s*,*N*				
5343.874	3	0. 6					
5344.16?m	2	0. 4	*s*,*N*	Nb I?	0. 35		
5344.25 a	0. 5	0. 1					
5344.458	11	2. 0	*w*	Mn I	5. 38		
5344.583	2. 5	0. 5		Co I	4. 02	191	
5344.763	8. 5	1. 6	*s*	Cr I	3. 45	225	
5345.037	1. 5	0. 3					
5345.543	8. 5	1. 6		Cr I p	3. 46	225	
5345.807m	107	*21. 0*	*S*	Cr I	1. 00	18	
5346.082	15	2. 8	*o*	Cr II p	3. 83	24	
5346.336	3	0. 6		Fe I p	3. 60	817	
5346.545	20	3. 7	*u*,*d*	Cr II— ‖Fe II	3. 76 3. 23	23 49	16
5346.815	6	1. 1	*s*				
5346.970	2. 5	0. 5					
5347.092	1. 5	0. 3	*s*				
5347.514	3. 5	0. 7		Co I—	4. 15	196	
5347.717	4. 5	0. 8	*w*	Ni I	3. 80	145	
5347.89 m	0. 5	0. 1	*s*				
5348.070	4. 5	0. 8	*s*	Mn I	3. 38	36	
5348.326S	92	*17. 8*	*S*	Cr I	1. 00	18	
5348.760	5. 5	1. 0	*s*				16
5349.098	5	0. 9	*u*	Co I	4. 15		
5349.292	2	0. 4	*s*	Sc I	1. 85	17	
5349.469m	91	*17. 0*	*s*	Ca I	2. 71	33	
5349.745m	49	9. 2	*s*	‖Fe I Sc I	4. 39 0. 02	1163 4	
5349.872	16	3. 0		Mn I	5. 37		
5350.093	6	1. 1	*o*	Zr II	1. 83	115	
5350.363	6	1. 1	*w*,*N*	Zr II V II	1. 77 2. 26	115 54	
5350.454	1	0. 2		Fe I?			
5350.55 a	0. 5	0. 1					
5350.789	3. 5	0. 7		Fe I			
5350.919	2	0. 4					
5351.071	9. 5	1. 8	*s*	Ti I	2. 78	300	
5351.652	1	0. 2		Cr I?			
5351.838	2	0. 4		Ni I p	3. 94	177	
5352.049m	21	3. 9	*u*	Co I	3. 58	172	
5352.232	1. 5	0. 3					
5352.405	1	0. 2		Pr II?	0. 48		
5352.800	2	0. 4					
5352.995	2	0. 4					
5353.167	2. 5	0. 5					
5353.383m	75	14. 0	*s*	‖Fe I Ni I	4. 10 1. 95	1062 70	
5353.515	30	5. 6	*u*	Co I	4. 14	198	
5353.670	2	0. 4					
5353.920	3	0. 6					
5354.68 m			*s*				13
5354.727	1	0. 2					
5354.900	0. 5	0. 1					
5355.625	1	0. 2					
5355.731	4	0. 7	*s*,*N*	Sc I	1. 95	19	
5356.084	2	0. 4	*S*	Sc I	1. 86	17	
5356.43 m			*s*				13
5356.60 m			*s*				13
5356.991	2	0. 4		Nd II?	1. 26	80	
5357.190	4	0. 7		Sc II	1. 51	30	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5358.120	8	1. 5	*s*	Fe I p	3. 30	628	
5358.287	|1|	0. 2					
5358.478	0. 5	0. 1					
5358.665	1	0. 2					
5358.940	4. 5	0. 8		Co I?	4. 14		
5359.05 m			*s*				13
5359.203	9. 5	1. 8	*w*?	Co I	4. 15	194	
5359.528	2	0. 4		K I	1. 62		
5359.718	3. 5	0. 7					
5360.144	1. 5	0. 3					
5360.467	2	0. 4		Cr I?			
5360.710	0. 5	0. 1					
5360.928	2	0. 4					
5361.372	3	0. 6					
5361.507	9	1. 7	*s,N*	Nd II—	0. 68	74	
5361.629m	36	6. 7	*u*	Fe I	4. 41	1143	
5361.71 m			*s*	Ti I	0. 84	35	13
5361.818	3	0. 6					
5362.176r	|1.5|	0. 3					
5362.57 m	|1.5|	0. 3	*s*	Zr I	0. 54	27	
5362.760	110	7. 5	*s*	|Fe I— Co I	4. 23	198	
5362.867		14. 1	*w*	Fe II	3. 20	48	
5364.166	3	0. 6					
5364.426	4. 5	0. 8					
5364.880m	133	*24. 6*	*u*	Fe I	4. 44	1146	
5365.224	8	1. 5					
5365.407S	78	*14. 7*	*u*	Fe I	3. 57	786	
5366.417	6	1. 1	*s,d*?				
5366.645	2. 5	*0. 7*	*S*	Ti I	0. 82	35	
5366.759	4. 5	0. 8					
5366.85 a to 5367.13 a	8	1. 5					
5367.476m	157	*29. 1*	*u*	Fe I	4. 41	1146	
5367.772	2	0. 4					
5367.94 a	1. 5	0. 3					
5368.296	5. 5	1. 0					
5368.438	5	0. 9					
5368.546	5	0. 9	*s*	Cr I	3. 85	258	
5368.850	1	0. 2					
5368.920	1. 5	0. 3		Co I	3. 53	167	
5369.220	1. 5	0. 3					
5369.360	6	1. 1		Cr II	3. 87	29	
5369.596m	40	7. 8	*s*	Co I	1. 74	39	
5369.974m	182	33. 9	*u*	Fe I	4. 37	1146	
5370.330	14	2. 6	*u*	—Cr I			
5371.339m	294	11. 6	*u*	Ni I	4. 42		
5371.501m		44. 1	*S*	Fe I	0. 96	15	
				(Fe I p)	4. 43	1163	
5371.927	9	1. 8		Nd II	1. 41	79	
5373.58 a	1. 5	0. 3					
5373.714m	59	10. 6	*s*	Fe I	4. 47	1166	
5373.950	3	0. 6					
5374.158	2. 5	0. 5					
5374.413	|2|	0. 4					
5374.767	1	0. 2		Fe I p	3. 57	785	
5374.887	1	0. 2					
5375.180	2	0. 4					
5375.323	2. 5	0. 5	*s*	Sc I	1. 97	19	
5375.875	2. 5	0. 5		Cr I			
5375.978	3	0. 6					
5376.132	3	0. 6		Cr I			
5376.30 a	2	0. 4					
5376.464	2. 5	0. 5					
5376.60 m	0. 5	0. 1	*s*	Ti I	0. 00	3	
5376.673	0. 5	0. 1	*s*?				16
5376.836	13	2. 4	*s*	Fe I	4. 29	1132	
5377.064	4	0. 7	*u*	La II	2. 30	95	
5377.193	2. 5	0. 5	*u*				
5377.310	1	0. 2					
5377.35 m			*s,N*				13
5377.408	0. 5	0. 1					
5377.614m	45	8. 4	*s*	Mn I	3. 84	42	
5377.793	8. 5	1. 6	*s,N*				16
5377.928	3	0. 6					
5378.223	6	1. 1	*u*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5379.144	1	0. 2					
5379.325	0. 5	0. 1					
5379.581S	56	10. 4	*s*	Fe I	3. 69	928	
5379.950	0. 5	0. 1					
5380.322	26	4. 8	?,*N*	C I	7. 68	11	
5380.737	12	2. 2					
5381.028m	56	10. 4	*u*	‖Ti II Fe I?	1. 57	69	
5381.172	3	0. 6					
5381.318	1. 5	0. 3					
5381.772	5. 5	1. 0	*s,N*	Co I—	4. 24	196	
5382.033	1. 5	0. 3					
5382.277	23	4. 3	*s*?				
5382.484	2	0. 4					
5382.649	2	0. 4					
5382.755	1	0. 2		Fe I	3. 55	741	
5382.92 m			*s*	Ti I p	1. 87	155	13
5383.015	1. 5	0. 3					
5383.07 a	1	0. 2					
5383.380m	204	*36. 0*	*s*	Fe I	4. 31	1146	
5383.766	2	0. 4					
5384.073	4	0. 7					
5384.205	1. 5	0. 3		Fe I p	3. 65	817	
5384.636	2	0. 4	*S*	Ti I	0. 83	35	
5384.873	2. 5	0. 5		V II	2. 27	53	
5385.128	1. 5	0. 3	*S*	Zr I	0. 52	26	
5385.305	1	0. 2		Cr I?	3. 84		
5385.587	5. 5	1. 0	*u*	Fe I p	3. 69	927	
5385.890	1. 5	0. 3		Nd II			
5386.102	1. 5	0. 3					
5386.340m	30	5. 6	*s*	Fe I	4. 15	1064	
5386.556	1	0. 2					
5386.797	2	0. 4					
5386.971	21	3. 9	*s*	Fe I— Cr I	3. 64 3. 37	875 191	
5387.126	2	0. 4		Fe II			
5387.283	1	0. 2					
5387.484	25	2. 9	*s*	—Fe I	4. 14	1031	
5387.565		1. 8	*s*	Cr I	3. 37	191	
5387.70 a to 5388.00 a	4	0. 7					
5388.351	12	2. 2	*s*	Ni I	1. 93	70	
5388.504	5	0. 9	*u,N*	Mn I	3. 37	36	
5388.675	1	0. 2					
5388.796	0. 5	0. 1					
5389.169	5	*1. 1*	*S*	Ti I	0. 81	35	
5389.486S	90	16. 7	*s*	Fe I	4. 41	1145	
5389.678	3	0. 6					
5389.847	12	2. 2	*w*				
5390.007m	7. 5	1. 4	*S*	Ti I	1. 87	155	
5390.377	12	2. 2	*s*	Cr I	3. 37	191	
5390.527	30	5. 6	*u*				
5390.777	5	0. 9					
5391.070	1	0. 2	*s*	Ti I p	1. 88	155	
5391.35 m	3	0. 6	*s*	Cr I	3. 37	191	
5391.465m	76	14. 1	*s*	Fe I	4. 15	1062	
5391.623	37	6. 9	*s*	Fe I			
5391.796	3	0. 6		Fe I p	2. 69	270	
5392.014	7	1. 3	*s,N*				
5392.06 m				Sc I	1. 99	19	13
5392.330	14	2. 6	*u,N*	Ni I	4. 15	250	
5392.50 a to 5392.95 a	12	2. 2					
5393.176m	153	*27. 2*	*s*	Fe I	3. 24	553	
5393.381	12	2. 2		Ce II	1. 10	24	
5393.67 m	2. 5	0. 5		Atm? ⊙			
5393.92 m	2	0. 4					
5394.200	0. 5	0. 1		Atm?			
5394.351	2	0. 4					
5394.641	74	7. 3	*S*	Mn I	0. 00	1	
5394.706		7. 3					
5395.011	1. 5	0. 3					
5395.222	20	3. 7	*s*	Fe I	4. 44	1143	
5395.470	3. 5	0. 6					
5396.001	4. 5	0. 8					
5396.247	12	2. 2	*w*?				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5396.578	7. 5	1. 4	*S,N*	Ti I	0. 00 0. 02	3 3	
5396.734	3	0. 6					
5396.904	2. 5	0. 5		Fe I p	3. 02	464	
5397.141m	239	*41. 7*	*S*	Fe I (Ti I)	0. 91 1. 88	15 155	
5397.623m	24	4. 4	*s*	Fe I	3. 63	841	
5397.930	4	0. 7					
5398.287S	76	14. 1	*s*	Fe I	4. 44	1145	
5398.519	4. 5	0. 8		Atm?			
5398.859	3. 5	0. 6	*s*				16
5399.479	39	7. 2	*s,d*?	Mn I	3. 85	42	15
5399.777	5	0. 9		Co I?	4. 21		
5400.263	2	0. 4					
5400.423r		0. 4					
5400.511m	143	21. 0	*s,d*?	Fe I	4. 37	1145	
5400.629		7. 6	*s*	Cr I	3. 37	191	
5400.855	2	0. 4					
5401.271	24	4. 4	*u*	Fe I	4. 32	1146	
5401.39 m	3. 5	0. 6	*s*	Ti I	0. 82	35	
5401.701	6. 5	1. 2	*s,N*				16
5401.92 m			*s*	V I	2. 36 2. 68	130 139	13
5401.949	4. 5	0. 8					
5402.072	16	3. 0	*u*				
5402.320	1. 5	0. 3					
5402.600	1	0. 2					
5402.783	12	2. 2	*w*	Y II	1. 84	35	
5403.07 a	1	0. 2					
5403.468	2	0. 4					
5403.829m	60	11. 8	*s*	Fe I	4. 07	1029	
5403.98 m			*s*?	Ti I	2. 33	259	13
5404.145m	239	44. 2	*s*	Fe I— Fe I	4. 31 4. 43	1145 1165	
5404.550	9	1. 7	*u*				
5404.677	12	2. 2	*u*				
5404.842	2	0. 4					
5404.993	10	1. 9	*s*	Cr I	3. 37	191	
5405.136	5	0. 9					
5405.358m	43	8. 0	*s*	Fe I p	4. 39	1162	
5405.785m	266	*46. 8*	*S*	Fe I	0. 99	15	
5406.183	1	0. 2					
5406.337	9	1. 7	*u*	Fe I p	4. 07	1026	
5406.480	2	0. 4					
5406.603	0. 5	0. 1					
5406.779m	37	6. 8	*s*	Fe I	4. 37	1148	
5406.93 a	2. 5	0. 5					
5407.112	3	0. 6					
5407.384	67	6. 3	*s,d*	Mn I	2. 14	4	
5407.482		6. 3					
5407.617	21	3. 9	*w*	Cr II	3. 83	23	
5407.825	2. 5	0. 5					
5408.088	3	0. 6		Co I?	2. 28	112	
5408.205	3. 5	0. 6					
5408.367	1	0. 2					
5408.823	5. 5	1. 0		Fe II	5. 95	184	
5408.932	3. 5	0. 6	*s*	Ti I	0. 00	3	16
5409.139m	57	10. 5	*s*	Fe I	4. 37	1147	
5409.428	3	0. 6					
5409.501	3. 5	0. 6					
5409.609m	8. 5	1. 7	*s*	Ti I	1. 89	155	
5409.799S	154	*27. 0*	*S*	Cr I	1. 03	18	
5410.054	1. 5	0. 3		Si I?	5. 61		
5410.428	8. 5	1. 6	*s*				
5410.918m	169	*29. 0*	*s*	Fe I	4. 47	1165	
5411.223m	30	5. 9	*u*	Ni I	4. 09	222	
5411.395	4	0. 7		Fe I p	3. 64	870	
5411.558	1. 5	0. 3					
5411.725	1	0. 2					
5412.007	3	0. 6					
5412.184	3. 5	0. 6					
5412.574	2	0. 4		Fe I p	4. 58	1237	
5412.791	19	3. 5	*s*	Fe I p	4. 43	1162	
5413.101	18	3. 3	*w*	⊙ Atm			
5413.17 a to 5413.50 a	5	0. 9					
5413.684	24	4. 4	*s,N*	Mn I	3. 86	42	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5413.915	2. 5	0. 5					
5414.075	31	5. 7	*w*	Fe II	3. 22	48	
5414.242	1	0. 2					
5414.367	12	2. 2	*s,N*	|Atm H_2O ⊙?	R 3	411	26
5414.881	5	0. 9		Fe I p	3. 64	874	
5415.210*S*	212	*37. 5*	*s*	Fe I	4. 39	1165	
5416.085	3	0. 6					
5416.384	1	0. 2		Nd II	0. 86	80	
5417.042	37	6. 8	*s*	Fe I	4. 41	1148	
5417.30 a	2. 5	0. 5					
5417.929	2. 5	0. 5					
5418.156	|8|	1. 5					
5418.288	3. 5	0. 6					
5418.775m	49	*8. 7*	*s*	(Ti II)	1. 58	69	
5419.109	2. 5	0. 5					
5419.217r	3. 5	0. 6	*s,NN*	Ti I?	2. 34	258	
5419.393	5	0. 9		Atm H_2O	R 2	411	26
5419.703	1. 5	0. 3					
5419.905	2	0. 4					
5420.318	78	7. 6	*S*	Mn I	2. 14	4	
5420.412		7. 6					
5420.622	7	1. 3		Atm H_2O	R 1	411	26
5420.929	20	3. 7	*s?*	Cr II	3. 76	23	17
5421.178	44	8. 1	*u,N*	Si I—	5. 62		
5421.403	7	1. 3		Fe I p	3. 64	874	
5421.577	2. 5	0. 5		Nd II? Fe I?	0. 74	79	
5421.843	14	2. 6	*s,d*	Fe I p	4. 55	1183	
5422.162	9. 5	1. 8	*u*	Fe I p	4. 32	1145	
5422.510	|2|	0. 4					
5422.661	1	0. 2					
5422.951	6. 5	1. 2		Atm H_2O	R 1	411	26
5423.327	1. 5	0. 3					
5423.483	4. 5	0. 8					
5423.598	1	0. 2					
5423.752	6. 5	1. 2	*s*	Fe I p	3. 69	927	
5423.961		1. 3	*s*				
5424.080m	239	42. 8	*s*	Fe I	4. 32	1146	
5424.204		0. 4		Fe I? p	4. 07	1026	
5424.544	10	1. 8	*u*	Ni I	4. 17	231	
5424.654m	42	7. 7	*s*	Ni I	1. 95	70	
5424.873	|4|	0. 7					
5425.259m	48	8. 8	*w,N*	Fe II	3. 20	49	
5425.627	|2|	0. 4	*s,N*	Co I	4. 07	196	
5426.258m	5. 5	*1. 1*	*S*	Ti I	0. 02	3	
5426.83 a to 5427.06 a	5	0. 9					
5427.224	1	0. 2					
5427.803	5. 5	1. 0	*o*	Fe II			
5427.997	1	0. 2		Cr I?	3. 85		
5428.327	4	0. 7					
5428.616	3	0. 6					
5428.707	6	1. 1		Fe I p	4. 19	1032	
5428.850	5. 5	1. 0		Ni I	3. 83	161	
5428.981	2	0. 4					
5429.150m	10	1. 8	*s*	Ti I	2. 34	259	
5429.432r	53	0. 8		Fe I p	4. 14	1029	
5429.511m		10. 2	*u,N*	Fe I p	4. 19	1062	
5429.706m	285	48. 0	*S*	Fe I	0. 96	15	
5429.854		4. 6	*u*	Fe I p	4. 47	1162	
5430.364	8	1. 5	*w*	Ni I	3. 83		
5431.062	1	0. 2					
5431.381	2. 5	0. 5					
5431.541r	4. 5	0. 8		Nd II	1. 12	80	
5431.80 a	1	0. 2					
5432.068	0. 5	0. 1		V II?	2. 26	53	
5432.33?m	1. 5	0. 2	*s*	Ti I	2. 41	265	
5432.354		0. 1		Cr I	3. 42	204	
5432.548m	46	8. 5	*S*	Mn I	0. 00	1	
5432.746	1. 5	0. 3	*s*				
5432.955S	72	13. 2	*s*	Fe I—	4. 44	1143	
5433.200	6	1. 1	*u*				
5433.403	6. 5	1. 2	*u*	—Mn I?	5. 37		
5433.644	6. 5	1. 2	*u*				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5433.938	1. 5	0. 3					
5434.045	1	0. 2					
5434.179	4	0. 7					
5434.534m	184	*34. 0*	*S*	Fe I	1. 01	15	
5434.861	3	0. 6					
5435.039	3. 5	0. 6	*u*				
5435.183	8. 5	1. 6	*s*	Fe I p	4. 43	1161	
5435.587	4	0. 7					
5435.704	1	0. 2					
5435.866m	46	8. 5	*s*	Ni I	1. 99	70	
5436 058	1	0. 2					
5436.161	0. 5	0. 1					
5436.302m	36	6. 6	*u*	Fe I	4. 39	1161	
5436.447	1	0. 2					
5436.596m	37	6. 8	*s*	Fe I	2. 28	113	
5436.731	3. 5	0. 6	*s*	Ti I	0. 90	51	
5436.845	1	0. 2		O I?	10. 74	11	
5436.990	1. 5	0. 3		Co I?	4. 11		
5437.091	8. 5	1. 6	*s*				
5437.203	16	2. 9	*u*	Fe I p	4. 31	1145	
5438.051	2. 5	0. 5	*u*	Fe I	4. 59	1237	
5438.307	4	0. 7	*s*	Ti I	1. 43	108	
5438.468	1	0. 2					
5438.716	0. 5	0. 1					
5438.925	1. 5	0. 3					
5439.054	2. 5	0. 5					
5439.303	2	0. 4		V II	2. 27	53	
5439.475	1	0. 2					
5439.708r	2	0. 4		Atm			
5439.920	2	0. 4		Fe I			
5440.503	2	0. 4	*s*	Ti I p	1. 43	107	16
5440.652	3. 5	0. 6	*s*				16
5440.824	1	0. 2					
5440.978	1. 5	0. 3					
5441.146	2	0. 4					
5441.347m	28	5. 1	*s*	Fe I	4. 31	1144	
5441.528	1. 5	0. 3		Fe I			
5441.678	1	0. 2					
5441.947	1. 5	0. 3					
5442.293	5	0. 9	*s,N*	Atm H_2O Nd II	P 1 0. 68	411 76	16,26
5442.420	8. 5	1. 6	*s*	Cr I	3. 42	204	
5442.768	1. 5	0. 3					
5442.977	2. 5	0. 5					
5443.426	3. 5	0. 6	*u*	Fe I p	4. 10	1059	
5443.619	4	0. 7	*u*				
5443.80 a	0. 5	0. 1					
5444.089	0. 5	0. 1					
5444.588	14	2. 6	*s*	Co I—	4. 07	196	
5444.727	3. 5	0. 6					
5444.85 m 5444.875	3. 5	0. 6	*s*				13,16
5445.053S	121	*23. 0*	*s*	Fe I	4. 39	1163	
5445.341	2	0. 4					
5445.504	2	0. 4					
5445.606	2	0. 4					
5445.776	3	0. 6		Cr I?			
5445.854	2. 5	0. 5					
5445.959	2	0. 4		Fe II p	3. 34	53	
5446.061	2	0. 4					
5446.230	3. 5	0. 6					
5446.372	2	0. 4					
5446.591m	74	14. 5	*s*	Ti I Fe I p	0. 02 2. 33 4. 41	3 259 1144	
5446.924m	238	*42. 8*	*S*	Fe I	0. 99 (1. 61)	15 37	
5447.248	3	0. 6		Ni I? p	3. 84		
5447.533	2. 5	0. 5	*u*				
5447.687.	2	0. 4					
5447.938	1. 5	0. 3	*s,N*	Ti I?			
5448.098	3	0. 6	*s*				
5448.378	16	2. 9	*s*	Fe I			
5448.674	1	0. 2					
5448.933	2	0. 4	*s*	Ti I	2. 33	259	
5449.159	2	0. 4	*s*	Ti I	1. 44	107	
5449.403	1. 5	0. 3					
5449.707	1. 5	0. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5450.798	8. 5	1. 6	*u*				
5450.924	4	0. 7					
5451.127	6	1. 1	*u,N*	Nd II			
5451.40 a	⌢4	0. 7					
5451.957	3. 5	0. 6	*s,N*	Ti I	2. 40	265	
5452.101	12	2. 2	*u*	Fe I	3. 64	870	
5452.298	3. 5	0. 6		Co I	3. 81	175	
5452.850	14	2. 6	*u*	Ni I	3. 84		
5453.085	3	0. 6					
5453.236	11	2. 0	*u*	Ni I	4. 09	231	
5453.40 m	1	0. 2	*s*				
5453.650	4	0. 7	*S*	Ti I	1. 44	108	
5453.857	2. 5	0. 5					
5453.996	6. 5	1. 2	*u*	Fe I p	4. 15	1064	
5454.128	4. 5	0. 8					
5454.364	1	0. 2	*s,N*				
5454.580	13	2. 4	*s*	Co I—	4. 07	195	
5455.095	2	0. 4		Fe I p	3. 25	627	
5455.465m	112	24. 6	*s*	Fe I	4. 32	1145	
5455.624m	219	40. 1	*S*	Fe I	1. 01	15	
5455.914	2. 5	0. 5					
5456.113	1	0. 2					
5456.366r	8. 5	1. 6		Atm H_2O	P 3	411	26
5456.528	8	1. 5	*s*	Fe I	3. 60	817	
5456.800	2	0. 4					
5456.885	1. 5	0. 3	*s,N*?				
5457.104	3	0. 5	*u*?				
5457.244	1	0. 2					
5457.474	11	2. 0	*s,N*	Mn I	2. 16	4	7
5457.832	|1|	0. 2		Cr I			
5458.58 a	⌢6	1. 1		Fe I			
5459.201r	1. 5	0. 3		Atm H_2O	P 3	411	26
5459.389	5. 5	1. 0	*s,d*?				
5459.745	1	0. 2					
5460.060	2	0. 4					
5460.190	2	0. 4					
5460.365	7. 5	1. 4	*o*				
5460.513	8. 5	*1. 6*	*S*	Ti I	0. 05	3	
5460.701	2	0. 4					
5460.888	7	1. 3	*u*	Fe I	3. 07	464	
5461.144	1	0. 2					
5461.393	1	0. 2					
5461.559	22	4. 0	*s,d*	Fe I	4. 44	1145	17
5461.823	2. 5	0. 5		Fe I p	3. 69	817	
5462.065r	1. 5	0. 3					
5462.269	1. 5	0. 3					
5462.501m	40	7. 3	*s*	Ni I	3. 85	192	
5462.662	3	0. 5					
5462.784	2. 5	0. 5					
5462.970S	93	*17. 4*	*u*	Fe I	4. 47	1163	
5463.114	1. 5	0. 3					
5463.289m	118	21. 6	*s*	Fe I	4. 43	1163	
5463.481	1. 5	0. 3					
5463.641	2	0. 4					
5463.829	2. 5	0. 5					
5463.89 m	2. 5	0. 5	*s*				
5463.972	9. 5	1. 7	*s*	Cr I	3. 43	204	
5464.116	1. 5	0. 3					
5464.288m	33	6. 0	*s*	Fe I	4. 14	1030	
5465.154	2. 5	0. 5		Atm H_2O	P 4	411	26
5465.380	1. 5	0. 3					
5465.75 m			*S*				13,17
5466.031	2. 5	0. 5		Fe II			
5466.201	1. 5	0. 3					
5466.405m	76	13. 9	*s*	Fe I (Y I)	4. 37 1. 43	1144 12	
5466.592	2	0. 4					
5466.766	2. 5	0. 5					
5466.993m	29	5. 3	*s*	Fe I	{3. 57 {3. 65	784 817	
5467.152	1	0. 2					
5467.277	1	0. 2					
5467.402	2	0. 4					
5467.571	1. 5	0. 3					
5467.785	3. 5	0. 6	*s,N*	Fe I p—	3. 55	741	
5467.862	0. 5	0. 1					
5468.114	10	1. 8	*s*	Ni I	3. 85	192	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5468.392	3. 5	0. 6	*s,d*	Ce II?	1. 40	24	17
5468.637	1. 5	0. 3	*s,N*				16
5468.846	0. 5	0. 1					
5469.068	1	0. 2		Fe I p	4. 29	1131	
5469.280	7. 5	1. 4	*s,N*	Co I |Fe I p	1. 88 4. 31	56 1143	16
5469.44 a to 5469.80 a	6	1. 0					
5470.093	22	4. 0	*s*	Fe I	4. 44	1144	
5470.228	5	0. 9		Atm H_2O	P 5	411	26
5470.446	3. 5	0. 6		Co I	3. 77	175	
5470.48 m		0. 2	*s*	Ti I	1. 44	108	13
5470.636	46	8. 4	*s,N*	Mn I	2. 16	4	15
5470.965	0. 5	0. 1	*s*				
5471.205m	6. 5	1. 2	*S*	Ti I	1. 44	106	
5471.32 a	1	0. 2					
5471.96 a	2	0. 4					
5472.304	3	0. 5		Ce II	1. 25	24	
5472.487	2. 5	0. 5					
5472.713m	39	7. 1	*s*	Ti I— |Fe I	1. 44 4. 21	107 1108	
5472.928	2	0. 4					
5473.010	0. 5	0. 1					
5473.168	18	3. 3	*s*	Fe I	4. 19	1064	
5473.394	7. 5	1. 4	*u*	Y II	1. 74	27	
5473.553	4	0. 7	*s*	Ti I	2. 33	259	
5473.742	3. 5	0. 6					
5473.910S	80	*14. 4*	*s*	Fe I	4. 15	1062	
5474.094	2	0. 4		Fe I p	4. 99	1314	
5474.232m	9. 5	*2. 0*	*S*	Ti I	1. 46	108	
5474 467	3	0. 5	*s*	Ti I	2. 34	259	
5474.764	1. 5	0. 3					
5475.440	4	0. 7	*w*	Ni I	3. 83	159	
5475.729	3	0. 5					
5476.016	2. 5	0. 5					
5476.183 5476.295m	86	4. 0 12. 4	*u* *s*	Fe I	4. 14	1029	
5476.576m	104	19. 0	*s*	Fe I	4. 10	1062	
5476.921m	164	29. 9	*s*	Ni I	1. 83	59	
5477.090	6	1. 3		Co I	3. 71	175	
5477.285	4. 5	0. 8					
5477.502	6. 5	1. 2		Cr II?	4. 14	50	
5477.705 5477.791	26	2. 9 2. 0	*s* *u*	Ti I Zr II?	2. 43 1. 83	265 115	
5477.968	1. 5	0. 3					
5478.157r	2	0. 4		Atm			
5478.378 5478.464	46	2. 9 5. 7	*w?* *s*	Cr II Fe I	4. 18 4. 19	50 1062	
5478.697	1	0. 2	*s?*				
5478.793	2	0. 4					
5479.028	1	0. 2		Ni I? p	3. 83	159	
5479.248	1	0. 2					
5479.427	3	0. 5					
5479.785	0. 5	0. 1					
5479.980	1. 5	0. 3		Fe I p	4. 95	1282	
5480.205	0. 5	0. 1					
5480.362	1	0. 2					
5480.518	9. 5	1. 7	*s*	Cr I	3. 45 3. 89	204	
5480.761 5480.865m	68	1. 8 10. 5	*s*	Y II Ni I —Fe I (Sr I)	1. 72 3. 85 4. 22 2. 27	27 191 1062 9	
5481.072	1. 5	0. 3					
5481.252m	56	10. 2	*s*	Fe I	4. 10	1058	
5481.443m	64	11. 7	*s*	Ti I Mn I— |Fe I	2. 41 2. 16 4. 19	265 4 1061	
5481.610	1	0. 2					
5481.71 m			*s*				13
5481.742	3	0. 5					
5481.873m	10	*1. 8*	*s*	Ti I	1. 43	106	
5481.999	3	0. 5	*S*	Se I	1. 86	16	
5482.264	3	0. 5		Fe I p	3. 63	873	
5482.606	3	0. 5					
5482.931	0. 5	0. 1					
5483.108m	42	7. 7	*s*	Fe I	4. 15	1061	
5483.364m	42	7. 7	*s*	Co I	1. 71	39	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5483.555	1	0. 2					
5483.683	2	0. 4					
5483.912	3. 5	0. 6		—Co I	3. 63	175	
5484.042	3. 5	0. 6					
5484.314	1	0. 2					
5484.646	3	0. 5	*S*	Sc I	1. 85	16	
5485.068	1. 5	0. 3					
5485.378	1	0. 2					
5485.548	3. 5	0. 6					
5485.706	2. 5	0. 5		Nd II	1. 26	79	
5485.813	3	0. 5	*o*?				
5486.120	1. 5	0. 3					
5486.524	1	0. 2		Cr I?	4. 53		
5486.767	1	0. 2					
5486.965	4. 5	0. 8		—V II	2. 26	53	
5487.153m	32	5. 8	*s*?	Fe I	4. 41	1143	
5487.327	1. 5	0. 3					
5487.524	22	4. 0	*s*	Fe I p	3. 64 4. 19	870 1064	
5487.755S	88	16. 0	*s*	Fe I	4. 14	1025	
5487.934	8. 5	1. 5	*s*	V I	2. 37	129	
5488.170	18	3. 3	*s,d*	Fe I p— |Ti I	4. 61 2. 40	1183 265	
5488.344	2	0. 4					
5488.514	1	0. 2					
5488.989	18	3. 3	*w,N*				
5489.686	6	1. 1	*u,N*	Co I	4. 07		
5489.868	14	2. 6	*s*	Fe I p	4. 44	1148	
5490.159m	18	*3. 5*	*S*	Ti I	1. 46	107	
5490.327	1	0. 2		C_2?	R 24	2,3	19
5490.475	0. 5	0. 1					
5490.703	17	3. 1	*w*?				
5490.840	2. 5	0. 5	*S*	Ti I	0. 05	3	
5491.149	1	0. 2					
5491.688	1	0. 2	*s*				
5491.845	11	2. 0	*u,N*	Fe I	4. 19	1031	
5492.037	1	0. 2					
5492.218	3. 5	0. 6					
5492.362	3. 5	0. 6					
5492.894	12	2. 2	*w*				
5493.068	3	0. 5					
5493.244	16	2. 9	*u*	Si I	5. 08		
5493.354	1. 5	0. 3		Fe I p	3. 64	873	
5493.506m	35	6. 4	*s*	Fe I	4. 10	1061	
5493.661	1	0. 2					
5493.857	27	4. 9	*s*?,*d*	Fe I	3. 02 4. 22	464 1062	
5493.990	4	0. 7					
5494.155	2. 5	0. 5					
5494.328	1. 5	0. 3					
5494.474	25	4. 6	*s*	Fe I	4. 07	1024	
5494.706	5	0. 9	*s*	Ti I	1. 46	108	16
5494.888	18	3. 3	*u*	Ni I	4. 10	231	
5495.706	2	0. 4		Co I?	3. 41	166	
5495.916	1	0. 2					
5496.258	0. 5	0. 1					
5496.45 a	2	0. 4					
5496.573	9	1. 6	*s*	Fe I p	4. 91	1281	
5496.807	5	0. 9					
5496.991	1. 5	0. 3					
5497.115	4	0. 7					
5497.241	3	0. 5					
5497.356	128	*1. 8*		Y II	1. 75	27	
5497.526m		*22. 2*	*S*	Fe I	1. 01	15	
5497.707	2	0. 4					
5497.901	3	0. 5		C_2?			
5497.98 m	2	0. 4	*s*	Ti I? p	0. 90	51	
5498.189	2. 5	0. 5		S I Fe II p	7. 86 2. 58	12 24	
5498.365	1. 5	0. 3					
5498.749	0. 5	0. 1		C_2	R 21	2,3	19
5499.030	2. 5	0. 5		C_2	P 59 P 46	1,2 2,3	19
5499.169	[1.5]	0. 3		C_2	P 57 P 44	1,2 2,3	19
5499.434	2. 5	0. 5		Ni I	3. 84	176	
5499.598	3	0. 5		Fe I p	4. 47	1159	
5500.355	0. 5	0. 1		C_2			
5500.603	2. 5	0. 4		C_2			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5500.749	3	0. 6		C_2	R 19	2,3	19
5500.983	3. 5	0. 5		C_2	R 20	2,3	19
5501.259	4. 5	0. 8		C_2?	R 20	2,3	19
5501.477S	115	*22. 2*	*S*	Fe I	0. 96	15	
5501.712	7. 5	1. 4		C_2	R 42	0,1	19
5501.876	8. 5	1. 5		C_2			
5502.092	23	4. 2	*u*	Cr II	4. 17	50	
5502.270	1. 5	0. 3					
5502.577	0. 5	0. 1					
5502.747	1	0. 2					
5502.943	14	2. 5	*w*				
5503.080m	42	7. 6	*s*	Fe I			
5503.240	15	2. 7	*w*	Cr II	4. 14	50	
5503.500	10	1. 8	*u,N*				
5503.720	3	0. 5					
5503.904m	13	2. 4	*s*	Ti I	2. 58	287	
5504.106	10	1. 8	*u*	Ni I	3. 83	175	
5504.227	2	0. 4		Mn I	3. 13	31	
5504.395	11	2. 0	*s*				
5504.665	1. 5	0. 3		C_2	R 30	1,2	19
5504.894	1	0. 2	*s*				
5505.284	0. 5	0. 1					
5505.543	1. 5	0. 3		C_2?	R 18	2,3	19
5505.728	2. 5	0. 4		Fe I p	4. 47	1162	
5505.889m	52	9. 4	*s,N*	Mn I— Fe I	2. 18 4. 41	4 1145	
5506.043	3	0. 5		C_2?	R 18	2,3	19
5506.189	6. 5	1. 2		C_2	R 41	0,1	19
5506.368	4	0. 8		C_2			
5506.510	5. 5	1. 0	*s*	Mo I	1. 33	4	
5506.618	1. 5	0. 3					
5506.791m	120	*23. 0*	*S*	Fe I	0. 99	15	
5506.992	7	1. 2		S I	7. 87	12	
5507.771	|2.5|	*0. 4*	*s*	V I	2. 36	129	
5507.951	1	0. 2					
5508.083	0. 5	0. 1		C_2?	R 15	2,3	19
5508.245	0. 5	0. 1		Cr I?			
5508.419	18	3. 3	*u*				
5508.633	17	3. 1	*w*	Cr II	4. 15	50	
5508.851	2	0. 4					
5509.114	0. 5	0. 1		Pr II?	0. 48		
5509.544	7. 5	1. 4	*u,N*	Mg I?	5. 11		16
5509.727	5. 5	1. 0	*u*				
5509.909	19	3. 4	*u*	Y II	0. 99	19	
5510.020	41	7. 4	*u*	Ni I	3. 85	190	
5510.237	2. 5	0. 4	*s,N*	Fe I p	4. 07	1023	16
5510.376	1	0. 2					
5510.619	15	2. 7	*u,N*	C_2—	R 16	2,3	19
5510.730	16	2. 9	*u,N*	Cr II—	3. 83	23	
5510.958	0. 5	0. 1					
5511.167	1	0. 2					
5511.436	4. 5	0. 8		C_2— C_2	R 30 R 29	1,2 1,2	19 19
5511.659	2	0. 4		Fe I			
5511.802	6. 5	1. 2	*s*	Ti I	1. 46 2. 49	108 275	
5512.062	9	1. 6	*u*	Ce II	1. 01	24	
5512.265m	38	6. 9	*u*	Fe I	4. 37	1143	
5512.408	15	2. 7	*u*	Fe I p	4. 41	1148	
5512.535m	47	8. 5	*s*	Ti I	1. 46	106	
5512.715	2. 5	0. 4		Cr I	3. 01	121	
5512.818	3. 5	0. 6		C_2?	R 15	2,3	19
5512.989S	94	*16. 8*	*s*	Ca I	2. 93	48	
5513.231	2	0. 4		C_2	P 55	1,2	19
5513.384	2. 5	0. 4		C_2	P 53	1,2	19
5513.558	2	0. 4					
5513.714	1	0. 2					
5513.850	0. 5	0. 1		Fe I p	3. 69	925	
5514.221	1. 5	0. 3	*s*	Sc I	1. 85	15	
5514.353m	35	*6. 2*	*s*	Ti I	1. 43	106	
5514.544m	43	*7. 6*	*s*	Ti I	1. 44	106	
5514.689	1	0. 2		W I	0. 41	1	
5514.802	7. 5	1. 4	*u*	Ni I	3. 85	189	
5514.935	5	0. 9		C_2	R 40	0,1	19
5515.110	3	0. 5		C_2	R 39 R 27	0,1 1,2	19
5515.354	2	0. 4		C_2			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5515.491	2	0. 4					
5515.649	7	1. 3	*u*				
5515.93 a	1	0. 2					
5516.045	2	0. 4					
5516.300	4. 5	0. 8	*u*	C_2 Fe I p	 4. 10	 1057	
5516.502	5	0. 9	*s,N*	C_2	R 11	2,3	19
5516.738	41	3. 3	*s,N*	Mn I	2. 18	4	
5516.821		4. 4					
5517.075	18	3. 3	*u*	Fe I	4. 21	1109	
5517.18 m			*s*	V I?	0. 00	2	13
5517.254	0. 5	0. 1					
5517.380	0. 5	0. 1					
5517.552	14	2. 5	*u,N*	Si I	5. 08		
5517.774	1. 5	0. 3					
5518.095	2	0. 4	*s*	Ti I p	2. 41	265	
5518.170	1. 5	0. 3		C_2	R 27	1,2	19
5518.371	2	0. 4		C_2	R 12	2,3	19
5518.545	4. 5	0. 8		Fe I p	5. 03	1314	
5518.796	2	0. 4		C_2	R 12	2,3	19
5518.980	1. 5	0. 3					
5519.077	2	0. 4					
5519.426	4	0. 8		C_2	R 39 R 40	0,1 0,1	19
5519.585	25	4. 5	*d,w?*	Fe I			
5519.858	5. 5	1. 0	*s,N*	Fe II p— C_2	3. 34 P 53 R 10	52 1,2 2,3	17 19
5520.035	2	0. 4					
5520.226	3	0. 5		Fe I? p	4. 44	1144	
5520.511	7. 5	1. 4	*s,d*	Sc I	1. 86	15	
5520.715	1. 5	0. 3					
5520.946	10	1. 9	*u*				
5521.139	7	1. 3	*u*	Ca I Fe I	1. 89 3. 63	 839	
5521.302	6. 5	1. 2	*u*	Fe I p	4. 43	1162	
5521.437	3	0. 5		Ni I	3. 84	175	
5521.590	5. 5	1. 0	*w*	Y I Y II	1. 90 1. 74	 27	
5521.791	1. 5	0. 3		Sr I?	2. 25	9	
5522 197	5. 5	1. 0		C_2	P 34	2,3	19
5522.454m	43	7. 8	*u*	Fe I	4. 21	1108	
5522.673	2. 5	0. 4					
5522.971	0. 5	0. 1					
5523.261	11	0. 9	*u,N*	Co I	2. 33	112	
5523.338		1. 1					
5523.573	5	0. 9	*u,N*				
5523.753	2	0. 4					
5523.870	3	0. 5		C_2	P 33 P 34	2,3 2,3	19
5524.000	9. 5	1. 7	*u*				
5524.108	1	0. 2					
5524.268	5	0. 9		Fe I	4. 15	1059	
5524.471	1. 5	0. 3		C_2	R 26	1,2	19
5524.578	2	0. 4		C_2	R 25	1,2	19
5524.800	2	0. 4		C_2	R 24 R 7	1,2 2,3	19
5524.999	3. 5	0. 6	*s,N*	Co I	4. 11	192	16
5525.135	13	2. 4	*w*	Fe II? p	3. 27	56	
5525.354	2	0. 4					
5525.552S	102	18. 4	*u*	Fe I	4. 23	1062	
5525.716	3. 5	0. 6					
5525.853	4. 5	0. 8					
5526.194	3. 5	0. 6		C_2	P 51 R 6	1,2 2,3	19
5526.313	1	0. 2					
5526.572	1	0. 2					
5526.821m	76	13. 8	*u*	Sc II	1. 77	31	
5526.993	1. 5	0. 3		C_2	P 31	2,3	19
5527.112	2	0. 4		C_2	P 30	2,3	19
5527.410	1. 5	0. 3					
5527.580	6	1. 1	*s,d?*	Y I— Ti I	1. 40 2. 43	12 265	
5527.873	6. 5	1. 2		C_2	R 37 R 38	0,1 0,1	19
5528.086	3	0. 5					
5528.418m	293	*53. 8*	*S*	Mg I	4. 34	9	
5528.905	22	4. 0	*u*	Fe I p	4. 47	1161	
5529.171	17	3. 1	*s*	Fe I	3. 64	872	
5529.347	4	0. 7					
5529.46 a	2	0. 4					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5529.791	1. 5	0. 3		Fe I p	2. 86	344	
5529.966	5	0. 9					
5530.281	1	0. 2					
5530.491	11	2. 0	*s*				
5530.786	|14|	2. 5	*s,d*	Co I	1. 71	38	
5531.113	1. 5	0. 3		C_2	P 27	2,3	19
5531.444	1. 5	0. 3					
5531.697	1. 5	0. 3					
5531.985	18	3. 2	*w*	Fe I	4. 91	1281	
5532.137	6. 5	1. 2		C_2	R 35 P 28	0,1 2,3	19
5532.355	5	0. 9		C_2	P 47 P 26	1,2 2,3	19
5532.751m	39	7. 0	*u*	Fe I	3. 57	783	
5532.879	21	3. 8	*w*	Fe I?			
5533.039	7	1. 3	*s*	Mo I	1. 33	4	
5533.156	|3.5|	0. 6					
5533.438	2	0. 4		C_2	R 23 P 25	1,2 2,3	19
5533.584	2	0. 4		C_2	R 24	1,2	19
5533.798	3	0. 5		C_2	R 24	1,2	19
5534.295	3	0. 5		C_2	P 25	2,3	19
5534.406	|2.5|	0. 4					
5534.676	10	1. 8	*s*	Fe I	3. 64 4. 15	871 1063	
5534.848S	63	11. 4	*w*	Fe II	3. 24	55	
5535.062	2	0. 4					
5535.190	5	0. 9	*u?*	C_2	P 48 P 25	1,2 2,3	19
5535.425m	113	13. 6	*u*	Fe I	3. 25 4. 19	626 1029	
5535.51 m			*S*	Ba I	0. 00	2	13
5535.561		7. 9	*u*				
5535.767	1	0. 2					
5535.859	1. 5	0. 3					
5536.086	3. 5	0. 6		C_2	P 24	2,3	19
5536.280	4. 5	0. 8		C_2	R 34	0,1	19
5536.465	2	0. 4		C_2?	R 23	1,2	19
5536.598	7	1. 3	*s*	Fe I p	2. 83	345	
5536.814	1	0. 2		C_2	P 23	2,3	19
5536.929	1	0. 2		C_2?	P 23	2,3	19
5537.119	3	0. 5	*o?*	Ni I	3. 85	188	
5537.297	1	0. 2					
5537.517	2	0. 4					
5537.718	34	2. 7	*s*	Mn I	2. 19	4	
5537.811		3. 6					
5538.045	2	0. 4					
5538.189	2	0. 4					
5538.316	1. 5	0. 3					
5538.522m	38	*6. 9*	*u*	Fe I	3. 63 4. 22	839 1064	
5538.718	3	0. 5		C_2	P 20	2,3	19
5539.063	2. 5	0. 4		C_2	R 22	1,2	19
5539.291	22	4. 0	*u*	Fe I	3. 64	871	
5539.534	3. 5	0. 6		Cr I— C_2	P 19	2,3	19
5539.832	9. 5	1. 7	*u*	Fe I	4. 29	1130	
5539.978	5	0. 9		C_2?	P 17 P 18	2,3 2,3	19
5540.181	4. 5	0. 8		C_2	P 17	2,3	19
5540.452	8	1. 4		C_2	P 15 P 16	2,3 2,3	19
5540.724	5. 5	1. 0		C_2	P 14 P 16	2,3 2,3	19
5540.898	6. 5	1. 2	*u*	C_2	P 44	1,2	16,19
5541.290	1	0. 2					
5541.592	1. 5	0. 3		Fe I p	3. 30	627	
5541.909	1. 5	0. 3		C_2?	R 21	1,2	19
5542.149	1. 5	0. 3		C_2	R 21	1,2	19
5542.326	1. 5	0. 3					
5542.541	1	0. 2					
5542.749	0. 5	0. 1					
5542.897	2	0. 4					
5543.046	10	1. 8	*u*	Fe I p	3. 69 4. 19	926 1064	
5543.199m	61	11. 0	*u*	Fe I	3. 69	926	
5543.411	3. 5	0. 6					
5543.57 a	2	0. 4					
5543.758	2	0. 4					
5543.944m	63	*11. 4*	*u*	Fe I	4. 22	1062	
5544.174	6	1. 1					
5544.348	4	0. 7		C_2?	R 20	1,2	19

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5544.616	8	1. 4	*u*?	Y I	1. 90		17
				‖Y II	1. 74		27
5544.770	2	0. 4		C_2	R 20	1,2	19
5545.052	4	0. 7		C I	8. 64		
					8. 64		
5545.275	2. 5	0. 4		Fe II p	2. 58	24	
5545.433	2	0. 4					
5545.704	0. 5	0. 1					
5545.936	5	0. 9	*s,d*	V I	1. 06	38	
				Co I	4. 11	191	
5546.032	6. 5	1. 2		Y II	1. 75	27	
5546.344	1	0. 2					
5546.514S	53	9. 6	*u*	Fe I	4. 37	1145	
5546.745	6	1. 1	*u*				
5547.000m	29	*4. 1*	*u*	Fe I	4. 22	1061	
5547.06 m		*0. 7*	*S*	V I	1. 08	38	
5547.306	4	0. 7					
5547.694	3. 5	0. 6					
5547.945	2. 5	0. 4		C_2?	R 31	0,1	19
5548.200	2. 5	0. 4					
5548.318	3	0. 5					
5548.481	2. 5	0. 4					
5548.617	2	0. 4		Cr I?	3. 42		
5548.76 m			*s*				13
5548.93 a	1. 5	0. 3					
5549.325	1. 5	0. 3		C_2	R 18	1,2	19
5549.532	1	0. 2		Fe I p	4. 39	1159	
5549.656	9. 5	1. 7	*u*	Fe I p	4. 99	1314	
5549.958	10	1. 8	*s*	Fe I	3. 69	926	
5550.29 a	1. 5	0. 3					
5550.659	1	0. 2					
5550.891	1	0. 2					
5551.025	2. 5	0. 4					
5551.311	1	0. 2		Fe I p	3. 41	714	
5551.548	5. 5	1. 0		C I?	8. 64		
5551.778	6	1. 1		Fe I p	4. 10	1059	
5551.978	8. 5	1. 5	*u*	Mn I	5. 49		
5552.237	5. 5	1. 0	*w*	Sc II	1. 45	25	
5552.459	1	0. 2	*s*				16
5552.700	7	1. 3	*u*	Fe I p	4. 95	1281	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5552.855	1. 5	0. 3		Fe I p	2. 83	344	
5553.130	5. 5	1. 0	*u*?				
5553.235	3. 5	0. 6		Fe I p	4. 22	1064	
5553.400	1. 5	0. 3					
5553.589m	40	7. 2	*s*?	Fe I	4. 43	1161	
5553.707	22	4. 0	*s*	Ni I	1. 93	69	
5554.00 a	2	0. 4		C_2	R 16	1,2	19
5554.245	2	0. 4		C_2	R 16	1,2	19
5554.528	1. 5	0. 3		C_2	R 16	1,2	19
5554.660	2	0. 4					
5554.820	102	2. 2					
5554.900m		16. 9	*s*	Fe I	4. 55	1183	
5555.178	7	1. 3		Fe I p	3. 55	740	
5555.358	2	0. 4					
5555.469	2. 5	0. 4					
5555.646	3. 5	0. 6	*s,d*	C_2	P 38	1,2	17,19
5555.734	5. 5	1. 0					
5556.202	1	0. 2		Cr I	3. 01	121	
				C_2	R 15	1,2	19
5556.478	1	0. 2	*s*?	Yb I—	0. 00	1	17
				C_2	R 15	1,2	19
5556.714	1. 5	0. 2					
5556.974	4	0. 7	*u*?				
5557.070	5	*1. 1*	*s*	Al I	3. 14	6	
5557.482	5	*1. 1*	*s*	C_2	P 37	1,2	16,19
					P 39	1,2	
				V I?	0. 02	1	
5557.728	2	0. 4					
5557.916	57	4. 1	*u*	Fe I p	3. 11	464	
					4. 47	1164	
				Al I	3. 14	6	
5557.995		6. 8	*u*	Fe I	4. 47	1163	
5558.177	2	0. 4					
5558.260	2. 5	0. 4					
5558.600	1	0. 2		C_2	R 14	1,2	19
5558.77 a	3	*1. 1*	*s,N*	V I	1. 71	77	
5558.850	3	0. 5		Co I?	3. 53	166	
5559.061	5. 5	1. 0					
5559.648	7. 5	1. 3	*o*	Fe I p	4. 99	1282	
5559.896	4. 5	0. 8	*u*				
5560.025	0. 5	0. 1					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5560.220m	44	*8. 3*	*u*	Fe I	4. 43	1164	
5560.431	2	0. 4					
5560.552	1	0. 2	*s*	V I	0. 04	1	
5560.694	1	0. 2		C_2	R 13	1,2	19
5561.015	1. 5	0. 3		C_2	R 13	1,2	19
5561.246	8. 5	1. 5	*w*?				
5561.479	2	0. 4					
5561.608	4	*0. 9*					
5561.825	3. 5	0. 6					
5562.125	8	1. 4	*o*	Fe I p	4. 39	1162	
5562.283	5. 5	1. 0		C_2	R 12	1,2	19
5562.497	5	0. 9					
5562.716m	52	9. 3	*u*	Fe I	3. 27 4. 43	626 1163	
5562.929	3. 5	0. 6					
5563.286	5	0. 9					
5563.405	1	0. 2					
5563.608	92	14. 0	*u*	Fe I	4. 19	1062	
5563.702		3. 4	*s*	Fe I p	2. 42 4. 14	112 1023	
5564.134	1. 5	0. 3		—C_2?	R 11	1,2	19
5564.58 a	1	0. 2		C_2	R 11	1,2	19
5564.972	4	0. 7		C_2	R 11	1,2	19
5565.32 a	2. 5	0. 4					
5565.485m	[16]	2. 9	*S*	Ti I	2. 24	229	
5565.713m	79	14. 2	*s*	Fe I	4. 61	1183	
5565.953	4. 5	0. 8		C_2	R 28 R 10	0,1 1,2	19
5566.085	16	2. 9	*u*				
5566.241	2	0. 4					
5566.415	0. 5	0. 1		C_2	R 10	1,2	19
5566.563	0. 5	0. 1		Cr I?	3. 43		
5566.729	5	0. 9					
5566.814	3	0. 5		C_2 Fe I p	R 10 3. 25	1,2 625	19
5566.994	1	0. 2					
5567.152	0. 5	0. 1					
5567.285	10	1. 8	*s*				
5567.400m	57	10. 2	*s*	Fe I	2. 61	209	
5567.586	2	0. 4					
5567.776	7. 5	1. 3	*s*	Y I? Mn I	1. 92 5. 52		
5568.075	3	0. 5	*s,d*	Fe I p	4. 15	1059	17
5568.280	3. 5	0. 6	*s*	Cr I	3. 00		16
5568.470	1	0. 2		Fe I p	4. 15	1058	
5568.705	2. 5	0. 4		Fe I p	4. 14	1026	
5568.871	8. 5	*2. 0*	*s*	Fe I	3. 63	869	
5569.034	1. 5	0. 3					
5569.157	2	0. 4					
5569.329	1. 5	0. 3					
5569.631m	162	*30. 3*	*s*	Fe I	3. 42	686	
5570.069	2. 5	0. 4	*u,N*	Fe I p	2. 84	345	
5570.397	6. 5	1. 2	*s*	Mo I	1. 33	4	
5570.613	2. 5	0. 4					
5570.763	1. 5	0. 3		C_2	R 7	1,2	19
5571.488	4. 5	0. 8		C_2 Cr I	R 7	1,2	19
5572.155	4. 5	0. 8		C_2—	R 6	1,2	19
5572.352	4. 5	0. 4					
5572.454		0. 4					
5572.652	4. 5	0. 8		C_2?	R 27	0,1	19
5572.851m	205	36. 8	*s*	Fe I	3. 40	686	
5573.107m	44	7. 9	*u*	Fe I	4. 19	1061	
5573.308	1. 5	0. 3					
5573.544	2	0. 4	*o*	—C_2	R 6 R 5	1,2 1,2	19
5573.655	4	0. 7		Mn I?	5. 54		
5573.757	2	0. 4		C_2	P 28	1,2	19
5574.04m	1	0. 2	*s*	V I?	0. 04		
5574.399	3	0. 5	*s*	Cr I	4. 45		
5574.912	2	0. 4		C_2	P 29	1,2	19
5575.093	1. 5	0. 3		C_2	R 5	1,2	19
5575.396	0. 5	0. 1					
5575.544	1. 5	0. 3		C_2	R 26	0,1	19
5575.683	2. 5	0. 4		C_2	R 26	0,1	19
5575.862	4	0. 7		C_2	R 26	0,1	19
5576.099m	113	*21. 9*	*u*	Fe I	3. 43	686	
5576.371	6	1. 1					
5577.028	13	*2. 7*	*w*	Fe I	5. 03	1314	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5577.341	6	1. 1	*w*?	C_2	P 27	1,2	19
				|[O I]	1. 97	3F	25
5577.562	3	0. 5					
5577.76 a	1	0. 2					
5578.525	5	0. 9					
5578.729m	46	*9. 3*	*s*	Ni I	1. 68	47	
5579.039	4	0. 7		C_2	R 25	0,1	19
5579.165	2. 5	0. 4	*s*	Ti I?			
5579.352	10	1. 8	*s*	Fe I p	4. 23	1061	17
5579.493	3. 5	0. 6		C_2	P 25	1,2	19
5579.70 a	3. 5	0. 6					
5579.907	3	0. 5	*s,N*				17
5580.04 a	3. 5	0. 6					
5580.309	2	0. 4	*s*				
5580.453	3. 5	0. 6		C_2	P 24	1,2	19
5580.664	4. 5	0. 8					
5581.058	3. 5	0. 6					
5581.284	5	0. 9		C_2	P 23	1,2	19
5581.524	3	0. 5		C_2	P 21	1,2	19
5581.706	5	0. 9		C_2	R 24	0,1	19
5581.979m	91	*16. 7*	*S*	Ca I	2. 52	21	
5582.149	2. 5	0. 4					
5582.287	5. 5	1. 0		C_2	P 3	1,2	19
					P 20	1,2	
5582.414	3. 5	0. 6		C_2	P 4	1,2	19
					P 15	1,2	
5582.757	5. 5	1. 0		C_2	P 21	1,2	19
5582.970	3. 5	0. 6	*s*	Ti I			
5583.145	1	0. 2					
5583.391	2	0. 4		C_2	P 20	1,2	19
5583.627	1. 5	0. 3		C_2	P 5,6	1,2	19
					P 18	1,2	
5583.991	8	1. 4	*u,N*	Fe I p	4. 19	1059	
5584.313	1. 5	0. 3		C_2	P 18	1,2	19
5584.514	4. 5	*1. 1*	*s*	V I	1. 06	37	
5584.773m	32	*6. 3*	*s*	Fe I	3. 57	782	
				(V I)	1. 87	85	
5585.045	4. 5	0. 8		C_2	R 23	0,1	19
					P 17	1,2	
5585.180	12	2. 1		C_2	P 16	1,2	19
5585.325	3	0. 5		C_2	P 11	1,2	19
					P 12	1,2	
					P 13	1,2	
5585.513	4	0. 7		C_2	P 16	1,2	19
5585.663	5. 5	1. 0	*s*	Ti I			
5586.002	2	0. 4	*s,N*	V I	1. 86	85	
5586.280	8. 5	1. 5	*s*				17
5586.682r	245	*1. 2*					
5586.771m		*43. 5*	*s*	Fe I	3. 37	686	
5586.91 m		*5. 9*	*s*				
5587.132	4	0. 7					
5587.369	1. 5	0. 3		Fe I p	3. 27	583	
5587.581m	31	*6. 4*	*u*	Fe I	4. 14	1026	
5587.728	1	0. 2		C_2?	R 22	0,1	19
5587.868m	49	*9. 8*	*s*	Ni I	1. 93	70	
5588.142	4. 5	0. 8					
5588.251	3	0. 5					
5588.764m	141	*28. 1*	*s*	Ca I	2. 52	21	
5589.010	11	2. 0	*s,N*	Fe I p—	4. 47	1160	
5589.207	0. 5	0. 1					
5589.366	25	*5. 2*	*u*	Ni I	3. 90	205	
5589.578	1	0. 2					
5589.861	16	2. 9	*w*	Fe I			
5590.126S	86	*16. 3*	*S*	Ca I	2. 52	21	
5590.371	2. 5	0. 4		C_2	R 21	0,1	19
5590.508	1	0. 2		C_2	R 21	0,1	19
5590.706	6	1. 1	*s*	Co I	2. 04	90	
5590.818	5. 5	1. 0	*s*				
5591.003	1. 5	0. 3					
5591.369	7	1. 3	*s,N*	Sc I—	1. 99	18	
				Fe II? p	3. 27	55	
5591.978	|2|	0. 4					
5592.152	32	5. 7	*u*	Ni I	4. 23	250	
5592.266m	50	8. 9	*s*	Ni I	1. 95	69	
5592.427	5	0. 9	*s*	V I	1. 05	37	
5592.663	5	0. 9	*s*				
5592.958	1	0. 2	*s,N*	V I	0. 04	1	
5593.240	0. 5	0. 1		C_2	R 20	0,1	19
5593.458	3	0. 5	*u*?				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5593.746m	42	*8. 0*	*u*	Ni I	3. 90	206	
5593.979	1. 5	0. 3					
5594.169	2. 5	0. 4					
5594.471m	117	20. 9	*s*	Ca I (Nd II)	2. 52 1. 12	21 79	
5594.666m	60	10. 7	*s*	Fe I	4. 55	1182	
5594.897	1. 5	0. 3					
5595.067	6. 5	1. 2	*s*	Fe I p	5. 06	1314	
5595.486	1	0. 2					
5595.691	0. 5	0. 1		C_2	R 19	0,1	19
5595.912	1. 5	0. 3		C_2?	R 19	0,1	19
5596.185	6	1. 1		C_2			
5596.341	1	0. 2		C_2	P 41	0,1	19
5596.591	1	0. 2					
5597.072	3. 5	0. 6	*u*				
5597.248	0. 5	0. 1					
5597.471	2	0. 4					
5597.[illegible] m			*s,N*	Ti I?			13,16
5597.876	3	0. 5	*s,N*	Cr I	3. 84	239	16
5598.005m	83	1[illegible]. 8	*u*	Fe I	4. 65	1183	
5598.491m	118	[illegible]. 1	*s*	Ca I	2. 52	21	
5598.820	3	0. [illegible]		C_2	P 42	0,1	19
5598.86?m		0. 2					
5598.956	2	0. 4		C_2	P 40	0,1	19
5599.147	3	0. 5					
5600.028	23	4. 1	*u*	Ni I	4. 09	219	
5600.103	5	0. 9					
5600.234	35	6. 2	*u,N*	Fe I	3. 63 4. 26	866 1108	
5600.463	2	0. 4					
5600.695	3. 5	0. 6		C_2	R 17	0,1	19
5600.821	|12|	2. 1	*s*	Ti I			
5601.286S	100	17. 8	*S*	Ca I	2. 52	21	
5601.435	4. 5	0. 8					
5601.820	16	2. 8	*u,N*	Cr I?	3. 45		
5602.076	|7|	1. 2	*s,N*				17
5602.562	|9|	1. 6	*u*	Fe I p	4. 95	1281	
5602.773	215	6. 6	*s*	Fe I	4. 15	1062	
5602.864		15. 9		Ca I	2. 52	21	
5602.969		18. 6	*s*	Fe I	3. 43	686	
5603.303	6. 5	1. 2		C_2	R 16	0,1	19
5603.519	2. 5	0. 4		C_2	R 16	0,1	19
5603.771	20	*3. 7*	*u*				
5604.198	1	0. 2	*s*	V I	1. 85 1. 95	85	
5604.956	3. 5	*0. 9*	*S*	V I	1. 04	37	
5605.348	1. 5	0. 3		C_2	R 15	0,1	19
5605.649	1. 5	0. 3		C_2?	R 15	0.1	19
5605.903	5	0. 9		C_2	R 15	0,1	19
5606.049	2	0. 4		C_2	P 37	0,1	19
5607.003	2	0. 4	*o*?	Ni I	3. 90	205	
5607.154	0. 5	0. 1		Fe II? p	2. 58	24	
5607.399	1	0. 2					
5607.542	1. 5	0. 3		C_2	R 14	0,1	19
5607.669	13	*2. 3*	*u*	Fe I p	4. 15	1058	
5607.842	1. 5	0. 3		C_2	R 14	0,1	19
5608.174	1. 5	0. 3		C_2	P 37 P 38	0.1 0,1	19
5608.314	1	0. 2		C_2	P 36	0,1	19
5608.981	8. 5	*1. 7*	*u*	Fe I p	4. 21	1108	
5609.180	0. 5	0. 1	*s,N*?	Cr I	3. 45	223	
5609.682	1. 5	0. 3		C_2	R 13	0,1	19
5609.806	3	0. 5	*u*				
5609.987	6	1. 1	*s*	Fe I p	3. 64	866	
5610.246	5	0. 9	*s*	Ce II C_2	1. 05 P 37	26 0,1	17 19
5610.391	4	0. 7		C_2	P35	0,1	19
5610.601	2. 5	0. 5					
5610.90 a	2	0. 4					
5611.056	2	0. 4					
5611.368	8	1. 4	*u*	Fe I p	3. 63	869	
5611.644	3	0. 5	*o*				
5612.350	4	0. 7		C_2	R 12	0,1	19
5612.498	1	0. 2		C_2	P 34	0,1	19
5613.715	3	0. 5	*u,N*	Fe I p	5. 01	1282	
5614.041	1. 5	0. 3		C_2	R 11	0.1	19

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
5614.282	14	2. 5	*u,N*	Fe I p	5. 08	1314	
5614.423	2	0. 4		C_2	P 35 R 11	0,1 0,1	19
5614.602	2	0. 4		Fe I? p	3. 55	739	
5614.781m	40	7. 1	*w*?	Ni I	4. 15	250	
5614.983	8. 5	1. 5					
5615.163	68	0. 4		Fe I p	4. 37	1143	
5615.308m		12. 6	*s*	Fe I	2. 59	209	
5615.529	288	*8. 7*	*u,N*?				
5615.658m		*45. 2*	*S*	Fe I	3. 33	686	
5616.188	3	0. 5					
5616.331	2. 5	0. 4		C_2	P 34 R 10	0,1 0,1	19
5616.952	1	0. 2					
5617.148	30	2. 8	*u*	Fe I p	4. 22	1088	
5617.236		2. 5	*w*?	Fe I	3. 25	626	
5617.421	1	0. 2					
5617.755	0. 5	0. 1		C_2	R 9	0,1	19
5617.918	1. 5	0. 3		C_2	P 33	0,1	19
5618.080	1	0. 2		C_2	P 33	0,1	19
5618.38 m	1	0. 1	*S*				16
5618.431		0. 1					
5618.642m	42	*8. 0*	*s*	Fe I	4. 21	1107	
5618.847	1. 5	0. 3		C_2	R 8	0,1	19
5618.979	0. 5	0. 1					
5619.239	3. 5	0. 6	*w*	Fe I? p	3. 69	923	
5619.423	1	0. 2					
5619.609	29	*6. 0*	*u*	Fe I	4. 39	1161	
5619.819	3	0. 5		C_2	P 32	0,1	19
5620.030	7	1. 2	*w*?,*N*	Fe I	4. 14 4. 56	1026 1205	
5620.17?m	0. 5	0. 1	*s*	Zr I	0. 52	25	
5620.236	0. 5	0. 1					
5620.411	7	1. 2	*s*?				
5620.496	30	5. 3	*u*	Fe I	4. 15	1061	
5620.647	2	0. 4		Nd II	1. 54	86	
5621.221	5	0. 9		C_2	P 30	0,1	19
5621.385	5	0. 9		C_2	P 29	0,1	19
5621.621	11	2. 0	*s,d*?	Si I	5. 08		16
5621.77 a to 5622.12 a	5. 5	1. 0					
5622.231	5. 5	1. 0		Si I	4. 93	11	
5622.782	2. 5	0. 4	*u*	C_2			
5622.959	7	1. 2	*u,N*	C_2	P 28	0,1	19
5623.639	2	0. 4		Fe I p	3. 27	625	
5624.030m	49	*9. 2*	*u*	Fe I	4. 39	1160	
5624.192	4. 5	0. 8		C_2	P 29	0,1	19
5624.356	2. 5	0. 4		$-C_2$?	P 29	0,1	19
5624.558S	140	*25. 6*	*s*	‖Fe I— V I	3. 42 1. 06	686 37	
5624.880	6	1. 1	*S*	V I	1. 05	37	
5625.092	2	0. 4					
5625.328m	37	*7. 1*	*w*	Ni I	4. 09	221	
5625.541	1	0. 2		C_2?	P 28	0,1	19
5625.687	28	*5. 2*	*w*?,*N*	—Fe I			
5626.027	3. 5	*0. 7*	*S,d*?	V I	1. 04	37	17
5626.250	1	0. 2					
5626.599	1. 5	0. 3					
5626.819	3. 5	0. 6		C_2	P 27	0,1	19
5627.097	2. 5	0. 4		Fe I p	4. 18	1084	
5627.262	1	0. 2					
5627.373	0. 5	0. 1					
5627.502	7. 5	1. 3	*o*	Fe II p	3. 39	57	
5627.642	20	*3. 6*	*S*	V I	1. 08	37	
5627.874	0. 5	0. 1					
5628.022	2. 5	0. 4	*o*	$-C_2$	P 26	0,1	19
5628.193	1. 5	0. 3		C_2	P 26	0,1	19
5628.354	14	*2. 8*	*u*	Ni I	4. 09	215	
5628.650	15	*2. 7*	*s*	Cr I	3. 42	203	
5628.883	0. 5	0. 1					
5629.048	2	0. 4		C_2?	P 25	0,1	19
5629.237	4	0. 7		C_2?	P 25	0,1	19
5629.709	1	0. 2					
5629.876	0. 5	0. 1					
5630.101	3	0. 5	*s*	C_2 Y I?	P 24 1. 36	0,1 12	19
5630.303	2	0. 4		C_2	P 24	0,1	19
5630.980	1. 5	0. 3		C_2	P 23	0,1	19

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5631.157	1. 5	0. 3					
5631.693	3	0. 5		Fe I	4. 47	1159	
5631.826	8. 5	1. 5		C_2	P 22	0,1	19
5632.011	2. 5	0. 4		C_2	P 20	0,1	19
5632.455	3. 5	*0. 7*	*s,N*	V I	0. 07	1	
5632.756	3	0. 5		C_2	P 21	0,1	19
5633.220	4	0. 7		C_2	P 20	0,1	19
5633.443	1. 5	0. 3		C_2	P 20	0,1	19
5633.646	2. 5	0. 4		C_2			
5633.753	2. 5	0. 4		C_2	P 19	0,1	19
5633.953m	68	*12. 4*	*u*	Fe I	4. 99	1314	
5634.231	3. 5	0. 6		C_2	P 18	0,1	19
5634.523	4. 5	0. 8		C_2 Fe I p	P 18 4. 99	0,1 1281	19
5634.874	7. 5	1. 3		C_2	P 16 P 17	0,1 0,1	19
5635.198	|6.5|	1. 2		C_2?	P 16	0,1	19
5635.346	3	0. 5		C_2	P 15	0,1	19
5635.514	3	0. 5		C_2	P 13 P 14	0,1 0,1	19
5635.831m	30	*5. 7*	*s?*	Fe I	4. 26	1088	
5636.003	0. 5	0. 1		Fe I p	4. 19	1058	
5636.124	1. 5	0. 3		Co I	4. 15		
5636.234	3. 5	0. 6	*u,N*	Ru I	1. 06	10	
5636.475	1	0. 2					
5636.705	17	*3. 5*	*s?*	Fe I	3. 64	868	
5636.901	0. 5	0. 1					
5637.123m	31	*5. 8*	*u*	Ni I	4. 09	218	
5637.414m	44	*8. 2*	*w*	Fe I			
5637.707	3. 5	0. 6		— Co I?	4. 15	195	
5638.271m	74	*13. 6*	*s*	Fe I	4. 22	1087	
5638.485	2. 5	0. 4					
5638.758	10	1. 8	*u*	Ni I	3. 90	203	
5639.353	4	0. 7	*u*				16
5639.555	1	0. 2	*s?*				
5639.996	1	0. 2		Co I	2. 04		
5640.176	4	0. 7					
5640.319	18	3. 2	*w*				
5640.502	2. 5	0. 4		Fe I	4. 56	1202	
5640.687	1	0. 2					
5640.989m	39	6. 9	*w*	Sc II	1. 50	29	
5641.131	4	0. 7		Ni I	4. 10	230	
5641.291	1	0. 2					
5641.448S	64	*12. 0*	*u*	Fe I	4. 26	1087	
5641.737	3. 5	0. 6		Cr I	3. 82		
5641.893	24	4. 2	*w?*	Ni I	4. 10	234	
5642.178	3	0. 5					
5642.381	5	0. 9	*s*	Cr I	3. 86	239	
5642.623	4. 5	0. 8	*u*	Ni I	3. 90	203	
5642.761	9. 5	1. 7	*s?*	Fe I p	4. 61	1184	
5643.087	14	*2. 8*	*w?*	Ni I	4. 16	259	
5643.290	0. 5	0. 1					
5643.934	10	1. 8	*u*	Fe I p	4. 07	1021	
5644.037	14	2. 5	*u*	Fe I			
5644.146m	29	5. 1	*s*	Ti I	2. 27	240	
5644.350	4	0. 7		Fe I p	4. 15	1057	
5645.039	|5.5|	1. 0	*o*				
5645.292	2	0. 4					
5645.618m	35	6. 2	*w,N*	Si I	4. 93	10	
5645.837	12	2. 1	*u*				
5646.111	5	*0. 9*	*S*	V I	1. 05	37	
5646.319	0. 5	0. 1					
5646.689	6	*1. 6*	*w?*	Fe I p	4. 26	1109	17
5647.241	11	*2. 3*	*s*	Co I	2. 28	112	
5647.447	1	0. 2					
5647.550	0. 5	0. 1					
5647.779	1. 5	0. 3					
5647.896	2	0. 4		Cr I	3. 82		
5648.279	5	*1. 2*	*u*	Cr I	3. 82	239	
5648.578m	10	*1. 9*	*s*	Ti I	2. 49	269	
5648.756	2	0. 4	*s?*				
5648.914	1	0. 2		Fe I p	3. 25	625	
5649.087	10	*1. 9*	*s*				
5649.390	8	1. 4	*s*	Cr I	3. 84	239	
5649.682	32	*6. 2*	*u-* *o*	Fe I— Ni I	3. 63 4. 17	838 231	
5649.996m	33	*6. 4*	*u*	Fe I	5. 10	1314	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5650.204	1. 5	0. 3					
5650.285	1	0. 2		Fe I p	4. 55	1180	
5650.460	5. 5	1. 0					
5650.694m	34	*6. 7*	*w?*	Fe I	5. 08	1314	
5650.883	1. 5	0. 3					
5651.040	0. 5	0. 1					
5651.275	1. 5	0. 3					
5651.477	16	*3. 5*	*w?*	Fe I p	4. 47	1161	
5651.742	2	0. 4		Co I?	1. 96 4. 26	56	
5652.029	2. 5	0. 4		Fe I p	4. 22	1059	
5652.327m	24	*4. 6*	*u*	Fe I	4. 26	1108	
5653.171	1. 5	0. 3					
5653.685	2	0. 4					
5653.874m	36	*6. 7*	*u*	Fe I	4. 39	1159	
5654.018	1	0. 2	*s*				
5654.501	75	13. 3	*u,N*				
5654.774	0. 5	0. 1					
5654.937	16	2. 8	*u*	Si I	5. 61		
5655.183m	49	8. 7	*u*	Fe I	5. 06	1314	
5655.343	1	0. 2					
5655.500S	68	12. 0	*s?*	Fe I	4. 26 5. 03	1107 1314	
5655.694	3. 5	0. 6					
5656.900	1	0. 2	*s,N*			16	
5657.260	0. 5	0. 1					
5657.450	5. 5	*1. 2*	*S*	V I	1. 06	37	
5657.677	1. 5	0. 3					
5657.880m	64	*12. 2*	*w*	Sc II	1. 51	29	
5658.165	3. 5	0. 6					
5658.346	31	5. 5	*w*	Sc II	1. 50	29	
5658.542m	222	9. 5	*u,N*	Fe I	3. 43	686	
5658.668		7. 4	*u*	Fe I p	4. 28	1087	
5658.830m		21. 4	*s*	Fe I	3. 40	686	
5659.112	9	1. 6		Ti I?	0. 90	50	
5659.16 m			*s*	Co I	2. 04	82	13
5659.335	3	0. 5					
5659.593	19	*3. 9*	*w,N*				
5659.784	1. 5	0. 3					
5659.916	1	0. 2					
5660.144	1. 5	0. 3					
5660.310	1. 5	0. 3					
5660.520	11	1. 9	*o*	Si I	5. 61		
5660.680	13	2. 3	*w*	Si I	5. 61		
5660.809	16	2. 8	*s*	Fe I	3. 64	869	
5661.025	4. 5	0. 8	*s,N*	Fe I p	4. 58	1234	
5661.204	1	0. 2					
5661.354	19	*3. 9*	*u*	Fe I	4. 28	1108	
5661.497	1. 5	0. 2					
5661.617		0. 1					
5661.86 a	1	0. 2					
5661.986	4. 5	0. 8	*u?*	Fe I p	4. 26	1109	
5662.159m	21	3. 7	*s*	Ti I	2. 32	249	
5662.319	2. 5	0. 4					
5662.524m	92	*17. 1*	*s*	Fe I	4. 18	1087	
5662.754	3	0. 5					
5662.939m	49	*9. 4*	*s*	|Fe I |Ti I— Y II	3. 69 2. 48 1. 94	924 269 38	
5663.132	1	0. 2					
5663.25 a	2. 5	0. 4					
5663.523	|4|	0. 7					
5663.824	5	0. 9					
5664.009m	35	6. 2	*s*	Ni I |Cr I	4. 54 3. 43	272 203	
5664.198	1. 5	0. 3					
5664.26 m			*s*				13
5664.365	1. 5	0. 3					
5664.52 m	0. 5	0. 1	*s*	Zr I	0. 63	47	
5664.581	4. 5	0. 8	*s*	Cr I	3. 82		16
5664.77 a	1. 5	0. 3					
5665.00 a	1	0. 2					
5665.343	2	0. 4					
5665.563m	40	*7. 2*	*w, N*	Si I	4. 92	10	
5665.920	1. 5	0. 3		Atm H_2O	R 3	203	26
5666.686	22	3. 9	*w*	Si I	5. 61		
5666.794	6	1. 1	*u?*	Fe I	4. 15 4. 15	1053 1060	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5667.153	25	4. 4	*w*?	Sc II	1. 50	29	
5667.328	2. 5	0. 4					
5667.524S	48	8. 5	*u*	Fe I			
5667.786	3	0. 5					
5668.091	2	0. 4					
5668.369	5	*1. 1*	*S, d*?	V I	1. 08	37	
5668.916	3	0. 5		Ce II— C I?	1. 01 8. 53	23	
5669.040m	34	*6. 4*	*w*	Sc II	1. 50	29	
5669.251	2	0. 4					
5669.746	19	3. 4	*w, N*	Si I	5. 62		
5669.950	16	2. 8	*u*	Ni I	4. 26	250	
5670.153	1	0. 2					
5670.358	1	0. 2		Atm			
5670.858	16	*3. 0*	*S*	V I	1. 08	36	
5671.073	2	0. 4					
5671.491	9. 5	1. 7	*w*				
5671.826	14	2. 5	*S*	Sc I	1. 45	12	
5672.266	3	0. 5		Fe I	4. 58	1234	
5672.807	1	0. 2					
5673.059	1. 5	0. 3	*s*	Ti I?			
5673.422	3. 5	0. 6	*s*	Ti I	3. 11		
5673.75 a	1. 5	0. 3					
5673.982r	1. 5	0. 3		Atm?			
5674.170	2. 5	0. 4	*s*	Cr I?	3. 55		
5674.280r	2	0. 4		Atm			
5674.45 a	2	0. 4					
5674.623	4. 5	0. 8					
5674.88 a	3. 5	0. 6					
5675.092	|7. 5|	1. 3	*s*	Fe I p	3. 30	583	
5675.434m	71	12. 5	*s*	Si I Ti I	5. 62 2. 30	249	
5675.732	12	2. 1	*u,N*	Si I?—	5. 62		16
5676.105	3. 5	0. 6					
5676.351	3	0. 5					
5676.790	2	0. 4		Atm H_2O	R 5	203	26
5676.957	1. 5	0. 3					
5677.462	1. 5	0. 3					
5677.695	6. 5	*1. 3*	*u*	Fe I p	4. 10	1057	
5678.063	1	0. 2		Fe I p	4. 08	1290	
5678.390	5	*1. 2*	*o*?	Fe I p	3. 88	982	17
5678.609	3. 5	0. 6	*u*	Fe I p	2. 42	113	
5678.808r	1. 5	0. 3		Atm			
5679.032S	58	*10. 9*	*u*	Fe I	4. 65	1183	
5679.284	3. 5	0. 6					
5679.604r	1	0. 2		Atm			
5679.70 a	1. 5	0. 3					
5679.933	6. 5	1. 1	*S*	Ti I	2. 47	269	
5680.248	10	1. 8	*u,N*	Fe I	4. 19	1026	
5680.551r	0. 5	0. 1		Atm?			
5680.760r	1	0. 2		Atm			
5680.91 m	1	0. 2	*s*	Zr I	0. 54	25	
5681.068	4	0. 7	*w*?	Cr I?			
5681.237	5	0. 9	*u*	Cr I?			
5681.529	3	0. 5					
5681.747	5	0. 4		Atm			
5681.813r		0. 4		Atm?			
5682.208m	52	*9. 7*	*w*?	Ni I	4. 10	232	
5682.493	7	1. 2	*u*	Cr I	3. 84	239	
5682.647m	104	*18. 5*	*s*	Na I	2. 10	6	
5683.006	|8|	1. 4	*u*				
5683.25 a	3	0. 5					
5683.479r	8	1. 4	*u*				
5683.782	3	0. 5		Atm			
5683.878	8	1. 4		Atm H_2O	R 7	203	26
5684.198m	37	*6. 9*	*w*	Sc II	1. 51	29	
5684.493m	63	*11. 2*	*w*	Si I	4. 95	11	
5684.733	3. 5	0. 6					
5685.033r	|2|	0. 4		Atm			
5685.438	3. 5	0. 6		Atm H_2O	R 6	203	26
5685.779r	1	0. 2		Atm?			
5685.881	2	0. 4		Fe I p	4. 99	1281	
5686.155r	27	0. 7					
5686.207		4. 0	*w*	Fe I?			
5686.360	10	1. 8	*u*	Rh I?	1. 68		
5686.540m	72	12. 7	*u*	Fe I	4. 55	1182	
5686.839	12	2. 1	*S*	Sc I	1. 44	12	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5686.972	2	0. 4					
5687.32 a	2. 5	0. 4					
5687.486	|12|	2. 1		Atm H_2O	R 3	203	26
5687.617	3	0. 5		Atm?			
5688.217m	121	*22. 3*	*S*	Na I (Na I)	2. 10 2. 10	6 6	
5688.535 5688.598	24	4. 2	*u*?	Nd II Atm Co I	0. 99 2. 08	79 90	
5688.88 a	3	0. 5					
5689.039r	|2. 5|	0. 4		Atm?			
5689.477m	11	1. 9	*s*	Ti I	2. 30	249	
5689.599	6	1. 1		Atm H_2O	R 4	203	26
5689.901	2	0. 4		Atm			
5690.070	1	0. 2		Fe I p	5. 01	1281	
5690.228	4	0. 7		Atm H_2O	R 3	203	26
5690.433S	53	*9. 7*	*w*	Si I	4. 93	10	
5690.957	3. 5	0. 6		Cr I?	3. 10		
5691.08 a to 5691.38 a	5. 5	1. 0					
5691.505m	38	*7. 0*	*u*	Ni I— ‖Fe I	4. 10 4. 30	228 1087	
5691.699	5. 5	1. 0		Fe I p	4. 22	1084	
5692.424	9. 5	1. 7		Atm H_2O	R 3	203	26
5692.756	2. 5	0. 4					
5692.873	6	1. 1					
5693.132	2. 5	0. 4		C I	8. 53		
5693.325	3	0. 5					
5693.650m	48	*8. 6*	*w*?	Fe I			
5693.952	1	0. 2					
5694.163	2	0. 4		Atm H_2O	R 3	203	26
5694.744	19	3. 3	*s*	Cr I	3. 86	239	
5694.991m	41	*7. 6*	*w*	Ni I	4. 09	220	
5695.241r	3. 5	0. 6		Atm?			
5695.959	2. 5	0. 4		Atm H_2O	R 2	203	26
5696.099	13	2. 3	*w,N*	Fe I p Fe II p	4. 55 2. 64	1179 18	
5696.367r	3	0. 5	*u,N*				
5696.652	3. 5	0. 6		S I?	7. 86	11	
5696.824	5	0. 9		Atm H_2O	R 3	203	26
5697.399r	1	0. 2		Atm H_2O	R 3	203	26
5697.579r	1. 5	0. 3		Atm			
5697.832r	1. 5	0. 3		Atm?			
5698.027	14	2. 4	*u*	Fe I	3. 64	867	
5698.194	8. 5	1. 5		Atm H_2O	R 2	203	26
5698 340m	30	5. 3	*s*	‖Cr I Fe I	3. 88 4. 29	239 1130	
5698.530m	34	*5. 8*	*S*	V I	1. 06	35	
5698.695	4. 5	0. 8		Atm H_2O	R 2	203	26
5698.887	2	0. 4					
5699.321	7	1. 2		Atm H_2O (Fe I)	R 1	203	26
5699.424	4	0. 7	*u*				
5699.590r	1	0. 2					
5699.76 a	1	0. 2					
5700.186 5700.284	29	2. 6 2. 6	*S* *s*	Sc I Cu I	1. 43 1. 64	12 2	
5700.524	6	1. 1	*s,N*	Cr I	3. 45 3. 55	203 228	
5700.727	9. 5	1. 7	*w*	|Atm H_2O—	R 1	203	26
5700.920	2. 5	0. 4					
5701.108m	40	*7. 2*	*w*	Si I	4. 93	10	
5701.335	4	0. 7	*s*				16
5701.557S	86	*15. 6*	*s*	Fe I	2. 56	209	
5701.743	2. 5	0. 4					
5701.895	5	0. 9		Atm H_2O	R 1	500	26
5702.013	2	0. 4					
5702.328m	27	*4. 7*	*s*	Cr I	3. 45	203	
5702.535	1. 5	0. 3					
5702.661	7	1. 2	*S*	Ti I	2. 29	249	
5702.797r	2	0. 4		Atm			
5702.917	6	1. 1	*w*?				
5703.090	2	0. 4		Fe I p	4. 19	1053	
5703.223	3	0. 5		Atm H_2O	R 1	203	26
5703.382	1. 5	0. 3					
5703.587m	26	4. 6	*S*	V I	1. 05	35	
5703.697	5. 5	1. 0		Ni I	3. 94		
5703.882	1. 5	0. 3					
5704.212r	1	0. 2		Atm H_2O	Q 4	203	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5704.390	0. 5	0. 1					
5704.57 a	1	0. 2					
5704.740	21	*3. 7*	*w*	Fe I			
5705.066r	0. 5	0. 1		Atm?			
5705.309r	1	0. 2		Atm? Fe I p	 4. 22	 1058	
5705.473m	37	*6. 8*	*u*	Fe I	4. 30	1087	
5706.008m	74	13. 0	*w*	Fe I	4. 61	1183	
5706.108	25	4. 4	*w,N*	Fe I p	4. 28	1088	
5706.34 a	5. 5	1. 0					
5706.715	14	2. 4	*w,N*				
5706.982	43	1. 9	*S*	V I	1. 04	35	
5707.048		5. 6	*u*	Fe I	3. 64	868	
5707.245	4	0. 7		Fe I p	3. 64	866	
5707.398	1. 5	0. 3					
5707.713	1. 5	0. 3		Fe I p	4. 10	1056	
5707.921	1	0. 2					
5708.102m	37	6. 5	*w*	Fe I	4. 43	1161	
5708.214	4	0. 7	*S*	Ti I	2. 32	249	
5708.405m	77	*13. 7*	*w*	Si I	4. 95	10	
5708.663	6	1. 1	*S*	Sc I	1. 45	12	
5708.892?	6	1. 1	*s*				
5709.110	4	0. 7					
5709.386m	103	18. 0	*s*	Fe I	3. 37	686	
5709.555m	90	15. 8	*s?*	Ni I	1. 68	46	
5709.779	3	0. 5					
5709.929	12	2. 1	*u*	Fe I p	4. 26	1088	
5710.297	1	0. 2					
5710.800r	6	1. 0		Atm H_2O	R 1	500	26
5711.095m	107	*18. 9*	*u*	Mg I	4. 34	8	
5711.398r	8. 5	1. 5		Atm H_2O	Q 2	203	26
5711.543r	3	0. 5		Atm H_2O?	R 2	500	26
5711.76 m	3. 5	0. 6	*S,N*	Sc I	1. 43	12	
5711.884m	77	13. 5	*s*	Fe I Ni I	4. 28 1. 93	1087 69	
5712.138m	54	*9. 8*	*w?*	Fe I	3. 42	686	
5712.400	3	0. 5					
5712.627	5	0. 8	*s*	Cr I	4. 53		
5712.778	17	3. 0	*s*	Cr I	3. 01	119	
5713.11a	2	0. 3					
5713.458	2	0. 3					
5713.896	5	0. 8	*S*	Ti I	2. 29	249	17
5714.060r	1. 5	0. 3		Atm H_2O	Q 1	203	26
5714.159	21	3. 7	*u*	Fe I			
5714.397	2	0. 3					
5714.554	7. 5	1. 3	*o*				
5714.744	1	0. 2					
5714.901	1. 5	0. 3		Fe I p	3. 24	552	
5715.094m	73	*13. 1*	*s?*	Ni I Fe I Ti I	4. 09 4. 19 4. 28 2. 25	231 1061 1086 228	
5715.318	2. 5	0. 4					
5715 471	4	0. 7	*u*	Fe I p	4. 15	1054	
5715.821	3. 5	0. 6	*s*	Ca I Fe I p	2. 71 4. 56	 1198	
5716.226	2	0. 3					
5716.455m	6. 5	1. 1	*S,d*	Ti I	2. 30	249	
5716.970r	1. 5	0. 3		Atm			
5717.311	2. 5	0. 4	*S*	Sc I	1. 44	12	
5717.508	7. 5	1. 3		Atm H_2O	Q 1	203	26
5717.695	3. 5	0. 6					
5717.841m	63	*11. 2*	*u*	Fe I	4. 28	1107	
5718.122	4	0. 7		Nd II?	1. 41	86	
5718.294r	4. 5	0. 8		—Atm?			
5718.60 a	1	0. 2					
5718.938	5	0. 8		Atm H_2O	Q 4	203	26
5718.992r		0. 1		Atm H_2O—	Q 3	500	26
5719.320r	3. 5	0. 6		Atm?			
5719.584	5. 5	1. 0	*o*	Atm H_2O—	Q 2	203	26
5719.718	1	0. 2		Atm H_2O	Q 3	203	26
5719.828	5	0. 8	*s*	Cr I	3. 01	119	
5720.450	3. 5	0. 6	*s,N*	Ti I	2. 29	249	
5720.54 a	3	0. 5		Atm H_2O	Q 2	203	26
5720.722	0. 5	0. 1					
5720.898	14	2. 4	*u*	Fe I p	4. 55	1178	
5721.053	2	0. 3					
5721.706	4. 5	0. 8		Fe I p	4. 15 4. 28	1057 1088	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5721.831r	2	0. 3		Atm H_2O	Q 1	500	26
5721.955	3	0. 5		Atm H_2O	P 1	203	26
5722.181r	1. 5	0. 3		Atm			
5722.510	2. 5	0. 4					
5722.781	1	0. 2					
5723.374r	1	0. 2		Atm?			
5723.543	1. 5	0. 3					
5723.671	4	0. 7	s,N	Fe I	4. 47	1160	
5723 773	3. 5	0. 6	s,N				
5723.895	4	0. 7		Atm H_2O	Q 3	203	26
5724.095	1. 5	0. 3	S	Sc I	1. 43	12	
5724.466	5	0. 8	o	Fe I	4. 28	1109	
5725.008	0. 5	0. 1					
5725.298	0. 5	0. 1					
5725.36 m	0. 5	0. 1	s			16	
5725.658	2	*0. 5*	s	V I	2. 36	135	
5725.953r	2. 5	0. 4		Fe II p—Atm	3. 42	57	
5726.489	1	0. 2					
5726.705	1. 5	0. 3		Atm H_2O	Q 3	203	26
5726.885	4	0. 7		Atm H_2O	Q 3	203	26
5727.057m	37	6. 5	S	V I	1. 08	35	
5727.286	1	0. 2					
5727.467	0. 5	0. 1					
5727.661	7. 5	*1. 3*	S	V I	1. 05	35	
5727.882	0. 5	0. 1					
5728.106	1	0. 2					
5728.26 a	1	0. 2					
5728.527r	3	0. 5		Atm H_2O	Q 4	203	26
5728.877	4. 5	0. 8	o	Atm—Y II	1. 84	34	
5729.202	3	0. 5	s	Cr I	3. 84	257	
5729.668	5. 5	1. 0		Atm H_2O	P 2	203	26
5729.822	2	0. 3		Atm H_2O	P 2	203	26
5729.901r	0. 5	0. 1		Atm H_2O	Q 4	203	26
5730.862	7	1. 2	w,d?				
5731.037	1	0. 2					
5731.220	7. 5	1. 3	S	V I	1. 06	36	
5731.323	3. 5	0. 6	S				
5731.552	1	0. 2					
5731.772S	59	*10. 1*	w	Fe I	4. 26	1087	
5731.996	2. 5	0. 4					
5732.121	1	0. 2					
5732.304	15	2. 6	w?	Fe I p	4. 99	1313	
5732.576r	1. 5	0. 3		Atm H_2O	Q 1	500	26
5732.730	3. 5	0. 6		Fe II p	3. 39	57	
5732.881	3. 5	0. 6		Fe I p	4. 10	1055	
5733.092r	3. 5	0. 6		Atm H_2O	P 2	203	26
5733.332	1. 5	0. 3					
5733.694r	1	0. 2		Atm H_2O	Q 5	203	26
5733.891	0. 5	0. 1		Gd II	1. 37	94	
5734.048	4	0. 7	s	V I	2. 36	135	
5734.355	1. 5	0. 3					
5734.569	6	1. 0	w				
5735.574	4. 5	0. 8		Atm H_2O	Q 4	203	26
5735.713	7. 5	1. 3	s	Zr I—	0. 00	4	
5736.026	1. 5	0. 3					
5736.644	4	0. 7		Cr I	3. 56	228	
5737.073	11	*1. 9*	S	V I	1. 06	35	
5737.316r	1. 5	0. 3		Atm H_2O	Q 5	203	26
5737.476	1	0. 2					
5737.691	8. 5	1. 5	o?	Atm H_2O	P 3	203	26
				Fe II p	3. 42	58	
5737.90 a	1	0. 2					
5738.240	13	2. 3	u	Fe I	4. 22	1084	
5738.479r	4	0. 4		Atm?			
5738.552	4	0. 4	s	Cr I	3. 55	227	
5739.061r	1	0. 2	s,N	Ti I p	2. 30	249	
5739.244	0. 5	0. 1					
5739.483m	6. 5	*1. 1*	s	Ti I	2. 25	228	
5739.807r	0. 5	0. 1		Atm?			
				Fe I p	4. 19	1057	
5739.987	7	*1. 4*	s	Ti I	2. 24	228	
5740.158	0. 5	0. 1					
5740.369r	0. 5	0. 1		Atm			
5740.606	0. 5	0. 1					
5740.875r	2	0. 3		Atm			
				Nd II?	1. 16	86	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5741.219r	1. 5	0. 3	*S*	Ti I Atm?	2. 50	280	
5741.400	2	0. 3					
5741.502r	|0.5|	0. 1					
5741.712	0. 5	0. 1					
5741.856S	31	*5. 6*	*u*	Fe I	4. 26	1086	
5742.079	2. 5	0. 4					
5742.212	4. 5	0. 8		Atm H_2O	P 3	203	26
5742.572r	2. 5	0. 4		Atm—			
5742.812	1	0. 2					
5742.968	12	*2. 4*	*w*?	Fe I	4. 18	1084	
5743.195	7	1. 2	*u*				
5743.432	8	*1. 4*	*S*	V I	1. 08	35	
5743.561r	1	0. 2		Atm H_2O	P 3	203	26
5743.748r	1. 5	0. 3		Atm H_2O	Q 3	500	26
5743.940	4	*0. 8*					
5744.202	0. 5	0. 1					
5744.470	1	0. 2		Ti I?	3. 21		
5744.782r	3	0. 5		Atm H_2O?	P 3	500	26
5744.952r	3. 5	0. 6		Atm H_2O	P 3	203	26
5745.077r	1. 5	0. 3		Atm			
5745.278r	1	0. 2		Atm			
5745.493r	1	0. 2		Atm			
5745.719r	2	0. 3		Atm H_2O	P 4	203	26
5745.793	6. 5	1. 1		Atm H_2O	P 4	203	26
5746.422	3. 5	0. 6	*s*	Cr I	3. 85	243	
5746.812r	3	0. 5		—Atm			
5747.289r	|3|	0. 5		Atm H_2O	Q 2	500	26
5747.41 a	2. 5	0. 4					
5747.669m	35	6. 1	*w,N*	Si I	5. 61		
5747.858	7	1. 2		Cr I Fe I p	3. 89 2. 83	 343	
5747.955m	35	6. 1	*u*	Fe I	4. 61	1182	
5748.170	2	0. 3		Fe I p	5. 01	1290	
5748.361m	26	*4. 5*	*s*	Ni I	1. 68	45	
5748.524	2. 5	0. 4					
5748.725	1. 5	0. 3					
5748.899	2. 5	0. 4	*s*	V I	1. 89	92	
5749.298	6	1. 0	*w*?	Ni I	3. 94	176	17
5749.641	2	0. 3		Fe I p	4. 43	1160	
5750.057r	2. 5	0. 4		Atm			
5750.216	1	0. 2					
5750.510r	1	0. 2		Atm			
5750.643	1	0. 2					
5751.145	$\widehat{4}$	0. 7					
5751.42 m	1	0. 2	*s,N*	Mo I?	1. 42	5	
5751.805r	3	0. 5	*s*	Atm H_2O	P 4	203	26
5752.042S	56	*10. 1*	*w*?	Fe I	4. 55	1180	
5752.246r	3	0. 5		—Atm?			
5752.86 m 5752.892r	7. 5	1. 3	*s*	Ti I Atm H_2O	2. 24 P 4	214 203	13 26
5753.132m	78	*14. 6*	*u*	Fe I	4. 26	1107	
5753.396	12	2. 1		Fe I p	4. 26	1084	
5753.646m	49	8. 5	*w,N*	Si I	5. 61		
5753.990	6. 5	1. 1	*s*	Fe I p Atm?	2. 45	170	16
5754.093	7. 5	1. 3					
5754.235	12	2. 1	*w*	Si I	4. 95	10	
5754.411	18	3. 1	*u*	Fe I	3. 64	866	
5754.666m	73	*13. 4*	*s*	Ni I	1. 93	68	
5754.922	4. 5	0. 8		Fe I p	2. 48	113	
5755.157r	6	1. 0		Atm			
5755.372r	2	0. 3		Atm			
5755.488r	2	0. 3		Atm			
5755.757r	1	0. 2		Atm			
5755.969	1	0. 2		Atm			
5756.40?m			*s*	Ti I	2. 25	228	13
5756.60 a	1	0. 2					
5756.828m	28	*5. 0*	*w*?				
5757.080r	1. 5	0. 3		Atm			
5757.948r	1. 5	0. 3		Atm H_2O	Q 4	500	26
5758.280r	1. 5	0. 3		Atm			
5758.441r	1. 5	0. 3		Atm H_2O	P 2	500	26
5758.764	2. 5	0. 4					
5758.907r	1. 5	0. 3		Atm H_2O	P 4	203	26
5759.02?m	0. 5	0. 1	*s*	Cr I			
5759.125r	1	0. 2		Atm			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5759.273	6. 5	1. 1	*w*	Fe I	4. 65	1184	
5759.545	10	1. 7	*w,N*	Fe I	4. 30 4. 56	1087 1204	
5760.359m	18	*3. 6*	*u*	Fe I	3. 64	867	
5760.532	3. 5	0. 6	*u*	Fe I p	4. 15	1054	
5760.701r	1. 5	0. 3		Atm? Fe I p	4. 15	1056	
5760.841S	28	*5. 6*	*w,d*	Ni I	4. 10	231	
5761.091	2. 5	0. 4		Fe I p	4. 22	1057	
5761.270	2. 5	0. 4		Fe I Atm?	3. 63	867	
5761.424	0. 5	0. 1		V I?	1. 06	35	
5761.588	7	1. 2		Atm H_2O—	P 5	203	26
5761.854	1	0. 2					
5762.266	7	1. 2	*S*	Ti I	3. 28	309	
5762.423m	22	3. 8	*u*	Fe I	3. 64	866	
5762.626r	3	0. 5	*u,N*	Atm—			
5762.845	10	1. 9	*s*	Fe I p	4. 30	1086	
5763.002m	101	*17. 5*	*u*	Fe I	4. 21	1107	
5763.246r	1	0. 2		Atm H_2O	P 6	203	26
5763.410	8. 5	1. 5		Atm H_2O	P 6	203	26
5765.866r	1	0. 2		Atm			
5766.271r	8. 5	0. 2		—Atm H_2O	P 5	500	26
5766.333		1. 3	*s*	Ti I	3. 29	309	
5766.592	0. 5	0. 1					
5767.144r	[2]	0. 4		Atm H_2O	P 5	203	26
5768.011r	1. 5	0. 3		Atm			
5768.361r	1	0 2		Atm			
5768.902	1	0. 2		Ce II?	1. 32	32	
5769.081r	2. 5	0. 4					
5769.28 m	7	1. 2		Atm H_2O	P 5	203	26
5769.335			*u*	Fe I	4. 61	1179	
5769.482	1	0. 2					
5769.686r	1. 5	0. 3		Atm			
5770.191r	1	0. 2		Atm H_2O Fe I p	P 5 4. 58	203 1236a	26
5770.305	1. 5	0. 3					
5770.500r	1. 5	0. 3	*u*	Atm			16
5771.381r	1. 5	0. 3		Atm			
5771.608	6. 5	1. 1	*s*				
5771.828	1	0. 2					
5772.149m	47	*8. 5*	*w*	Si I	5. 08	17	
5772.415	2. 5	*0. 7*	*S*	V I	1. 93	92	
5772.586r	1. 5	0. 3		Atm H_2O	P 6	203	26
5772.674	2	0. 3	*s*	Cr I	3. 56	227	
5772.941r	1	0. 2		Atm			
5773.149r	1	0. 2		Atm H_2O	P 7	203	26
5773.504r	2	0. 3		Atm—			
5773.769	0. 5	0. 1					
5774.038	9	1. 6	*s*	Ti I	3. 30	309	
5774.240	5	0. 8	*o*				
5774.38 a	2	0. 3					
5774.547	2. 5	0. 3		Atm Ti I?	2. 25	228	
5774.803	0. 5	0. 1					
5775.088m	48	*9. 4*	*u*	Fe I	4. 22	1087	
5775.305	2. 5	0. 4					
5775.617	1	0. 2					
5775.755r	0. 5	0. 1		Atm			
5776.079r	1. 5	0. 3		Atm H_2O	P 5	203	26
5776.254r	2. 5	0. 4		Atm			
5776.744r	1. 5	0. 3	*S,d*	V I?—	1. 08	36	
5776.978	2	0. 3		Atm			
5777.07 a	1. 5	0. 3		Cr I?			
5777.521	1	0. 2					
5777.762	1. 5	0. 3		Cr I	3. 85	257	
5778.296	1	0. 2					
5778.463m	16	*3. 1*	*s*	Fe I	2. 59	209	
5778.676r	1. 5	0. 3		—Atm			
5778.811r	1	0. 2		Atm? Fe I p	4. 56	1203	
5779.098	1	0. 2					
5779.369r	1. 5	0. 2		Atm			
5779.564	1	0. 2					
5779.696	3. 5	0. 6					
5779.963r	2	0. 3		Atm			
5780.167	3. 5	0. 6		Atm H_2O Mn I	P 6 4. 25	203	26
5780.306	4	0. 7					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5780.388	22	3.8	*w*	Si I	4.92	9	
5780.608m	29	5.0	*u*	Fe I	3.24	552	
5780.812	21	3.6	*s*	Ti I—	2.25	214	
				|Fe I	3.26	552	
					3.69	922	
					4.43	1159	
5780.919	6.5	1.1	*s*	Cr I	3.32	188	
5781.067	0.5	0.1					
5781.187	12	2.1	*s*	Cr I	3.01	119	
					3.32	188	
5781.359	2.5	0.4					
5781.549	1	0.2					
5781.759	16	2.8	*s,d*?	Cr I	3.32	188	
5781.923	3.5	0.6					
5782.136	62	10.7	*s*	Cu I	1.64	2	7
5782.371	3	0.5		K I	1.61		
5782.601	1	0.2	*s,N*	V I	1.08	35	
					2.38	127	
5782.863	0.5	0.1					
5783.073m	24	*4.7*	*s,d*	Cr I	3.32	188	
5783.248	1.5	0.3					
5783.485	0.5	0.1					
5783.676	0.5	0.1					
5783.866m	34	*6.6*	*s*	Cr I	3.32	188	
5784.051	2	0.4					
5784.385	1	0.2	*s*	V I	2.77	141	
5784.666m	20	*4.1*	*u*	Fe I	3.40	686	
5784.822	1	0.2					
5784.976m	26	*5.4*	*s*	Cr I	3.32	188	
5785.285m	40	*7.8*	*w*	Mg I	5.11	24	
				Fe I			
5785.561	12	2.1	*u*?	Mg I	5.11	24	
5785.735m	24	4.1	*s*	Cr I	3.32	188	
5785.94 m			*S*	Cr I	0.97	17	13
					0.98	17	
5785.980	11	1.9	*s*	Ti I	3.32	309	
5786.159	2	0.3	*s*	V I	2.72	141	
					2.74	141	
5786.536	0.5	0.1					
5787.021	6	*1.4*	*s,d*	‖Cr I	3.01	119	
				Fe I p	4.26	1084	
5787.275	0.5	0.1		Fe I p	3.25	625	
5787.730	0.5	0.1					
5787.926m	36	*7.1*	*s*	Cr I	3.32	188	
5788.102m	2.5	0.4		Atm O_2	R 13	3,0	22
5788.187m	1	0.2		Atm O_2	R 11	3,0	22
5788.289m	0.5	0.1		Atm O_2	R 15	3,0	22
5788.394	5	0.8	*s*	Cr I	3.01	119	
5788.549m	1.5	0.3		Atm O_2	R 9	3,0	22
5788.61 m			*s*	V I	1.87	92	13
5788.650r	0.5	0.1		Atm			
5788.763m	1	0.1		Atm O_2	R 17	3,0	22
5788.801m		0.1		Atm O_2	R 13	3,0	22
5788.877m	1	0.2		Atm O_2	R 11	3,0	22
5788.995m	1	0.2		Atm O_2	R 15	3,0	22
5789.189m	2.5	0.2		Atm O_2	R 7	3,0	22
5789.234m		0.2		Atm O_2	R 9	3,0	22
5789.350r	0.5	0.1		Atm			
5789.489m	1	0.2		Atm O_2	R 17	3,0	22
					R 19	3,0	
5789.635r	0.5	0.1		Fe I			
				Atm?			
5789.763r	0.5	0.1	*s*	Ti I?			
5789.865m	1	0.2		Atm O_2	R 7	3,0	22
5789.971r	0.5	0.1		Atm			
5790.101m	1	0.2		Atm O_2	R 5	3,0	22
5790.15 m	6	1.0	*S*				
5790.227m	1.5	0.3		Atm O_2	R 19	3,0	22
5790.366r	1	0.2					
5790.534m	1	0.2		Atm O_2	R 21	3,0	22
5790.663r	2	0.3	*S*	Cr I	1.00	17	
5790.769m	2	0.3		Atm O_2	R 5	3,0	22
5790.990	74	12.8	*s*	Cr I	3.32	188	7
				Fe I	3.21	552	
5791.191	4.5	0.8					
5791.293m	3	0.5		Atm O_2	R 3	3,0	22
					R 21	3,0	
5791.405r	1	0.2		Atm			
5791.533	7	1.2	*u,d*	Fe I p	4.58	1234	
5791.760	4	0.7	*s*	Cr I	3.85	243	
5791.92 m	1	0.2	*s*				
5791.946m	1	0.2		Atm O_2	R 3	3,0	22

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5792.096r	0. 5	0. 1		Atm			
5792.190r	0. 5	0. 1	*s*	Cr I	0. 96	17	
5792.769m	0. 5	0. 1		Atm O_2	R 1	3,0	22
5792.790r	1	0. 2					
5792.873	0. 5	0. 1					
5793.079m	38	*7. 2*	*w,N*	Si I	4. 93	9	
5793.411m	4. 5	0. 8		Atm O_2	R 1	3,0	22
5793.705r	2. 5	0. 4		Fe I p	4. 59	1236a	
5793.922m	28	*5. 2*	*u*	Fe I	4. 22	1086	
5794.168	1. 5	0. 3					
5794.348	0. 5	0. 1					
5794.455	1	0. 2		C I?	7. 94		
5794.624	1. 5	0. 3		Cr I?	4. 53		
5794.999	0. 5	0. 1					
5795.292	0. 5	0. 1					
5795.884	2	0. 3					
5796.092m	6. 5	1. 1	*u*	Atm O_2 Ni I	P 1 1. 95	3,0 68	22
5796.422	1	0. 2					
5796.671	2	0. 3		Fe I p	4. 19	1054	
5796.770	2. 5	0. 4	*s*	Cr I	4. 53		
5797.282r	0. 5	0. 1		Atm			
5797.436	2	0. 3	*s*	Ti I	3. 30	309	
5797.530m	2. 5	0. 4		Atm O_2	P 3	3,0	22
5797.55 m			*s*	Cr I?p	3. 10	185	13
5797.601	1. 5	0. 2		La II	0. 24	4	
5797.751	2	0. 3	*S*	Zr I	0. 07	4	
5797.865m	32	5. 5	*W,N*	Si I	4. 95	9	
5798.010	3. 5	0. 6		Atm			
5798.182m	37	6. 4	*s*	Atm O_2 ‖Fe I	P 3 3. 93	3,0 982	22
5798.513r	2. 5	0. 4	*s*	Cr I	1. 03	17	
5799.150	0. 5	0. 1		Atm			
5799.840r	1. 5	0. 3		Atm			
5799.90 m			*s*				13
5799.963m	1. 5	0. 3		Atm O_2	P 5	3,0	22
5800.228r	4. 5	0. 8		Atm—			
5800.640m	7	1. 2		Atm O_2	P 5	3,0	22
5800.842r	2	0. 3		Atm			
5801.271	5. 5	1. 0	*u,d*				
5801.749r	1. 5	0. 3		K I	1. 62		
5802.330r	0. 5	0. 1					
5802.663m	1	0. 2		Atm O_2	P 7	3,0	22
5803.327m	1	0. 2		Atm O_2	P 7	3,0	22
5803.590	1	0. 2					
5804.038m	20	3. 4	*u*	Fe I	3. 88	959	
5804.266m	12	2. 1	*s*	Ti I	3. 34	309	
5804.462	18	3. 1	*w,N*	Fe I	4. 28	1087	
5805.030	0. 5	0. 1					
5805.226S	38	*6. 6*	*w*	Ni I	4. 17	234	
5805.419	2	0. 3					
5805.631m	1	0. 2		Atm O_2	P 9	3,0	22
5805.769	11	1. 9	*u*	Fe I (La II)	5. 03 0. 13	1313 4	
5805.98 m	0. 5	0. 1		Atm			
5806.289m	2	0. 3		Atm O_2	P 9	3,0	22
5806.534	0. 5	0. 1					
5806.732m	51	*9. 1*	*u*	Fe I	4. 61	1180	
5807.097	2	0. 3					
5807.14 m			*s*	V I	3. 09	142	13
5807.249	0. 5	0. 1		Fe I p	3. 24	581	
5807.30 m			*s*				13
5807.792	7. 5	1. 3	*u?*	Fe I	3. 29	552	
5807.992	3. 5	0. 6		Fe I p	4. 61	1178	
5808.190r	1	0. 2	*s*	Cr I?			
5808.314	0. 5	0. 1		La II?	0. 00	4	
5808.565r	0. 5	0. 1		Atm?			
5808.878m	1	0. 2		Atm O_2	P 11	3,0	22
5809.040	0. 5	0. 1					
5809.224S	50	*8. 6*	*u*	Fe I	3. 88	982	
5809.451	1. 5	0. 3					
5809.523m 5809.614	5	0. 8 0. 2		Atm O_2	P 11	3,0	22
5809.873	|2.5|	0. 4		Fe I p	4. 28	1084	
5810.08 a	1. 5	0. 3					
5810.38 a	1	0. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5810.792	6.5	1. 1	*w*				16
5811.00 a	2.5	0. 4					
5811.117	|1|	0. 2					
5811.606	5.5	1. 0	*s,N*				16
5811.919	10.5	*1. 9*	*u*	Fe I	4. 14	1022	
5812.131	1	0. 2		K I	1. 61		
5812.400m	2.5	0. 4		Atm O_2	P 13	3,0	22
5812.502		0. 1					
5812.839	2.5	0. 4	*s*	Ti I	3. 32	309	
5813.041m	4	0. 7		Atm O_2	P 13	3,0	22
5813.339	2	0. 3		Fe I p	4. 19	1054	
5813.670	|5|	0. 8	*o*	Fe II	5. 57	163	
5813.81 a	1	0. 2					
5813.97 m			*S*	Ti I	1. 07	73	13
5814.006	6.5	*1. 1*	*u,N*				
5814.570	0.5	0. 1					
5814.815m	21	*3. 6*	*s*	Fe I	4. 28	1086	
5815.029	0.5	0. 1					
5815.224	10	*1. 7*	*u*	Fe I	4. 15 4. 59	1055 1234	16
5815.448	0.5	0. 1		Fe I p	4. 22	1053	
5815.546	0.5	0. 1					
5815.650	3.5	0. 6	*o*?				
5815.868	1	*0. 2*		Cr I?	3. 85		
5816.068	12	2. 1	*w*	Fe I? p	4. 29	1127	
5816.263m	85	3. 6	*u*	Atm O_2—	P 15	3,0	22
5816.380S		11. 3	*s*?	Fe I	4. 55	1179	
5816.631	0.5	0. 1					
5816.833m	3	0. 5	*u,N*	Atm O_2— Mn I	P 15 4. 26	3,0	22
5817.080	14	*2. 4*	*s*	V I—	1. 89	92	
5817.381	1.5	0. 3					
5817.493	2	0. 3	*s*	V I	3. 10	142	
5818.173	0.5	0. 1		Atm			
5818.279	0.5	0. 1		Atm			
5819.302	1.5	0. 3					
5819.564	2	0. 3					
5819.931	|3.5|	0. 6	*w*?	V II	2. 52	99	
5820.278m	2.5	0. 4		Atm O_2	P 17	3,0	22
5820.912m	1	0. 2		Atm O_2	P 17	3,0	22
5821.30 a	1	0. 2					
5821.890	7	1. 2	*u*				
5822.465	5. 5	1. 0	*s*				
5822.863	0. 5	0. 1					
5823.176	2	0. 3		Fe II	5. 57	164	
5823.366	1	0. 2					
5823.695	3	0. 5	*S*	Ti I	2. 27	239	
5824.173	1. 5	0. 3					
5824.414	2. 5	0. 4		Fe II p	3. 42	58	
5824.636m	1. 5	0. 3		Atm O_2	P 19	3,0	22
5825.755	4	0. 7	*s,d*				
5825.81?m	1	0. 2		Cr I	0. 96	17	
5826.110	0. 5	0. 1		Fe II? p	5. 91	182	
5826.330	1	0. 2		Co I	3. 62	169	
5826.646	3. 5	0. 6	*s*	Fe I p	4. 28	1084	16
5827.086	1	0. 2					
5827.377	2. 5	0. 4					
5827.475	5	0. 8	*u*				16
5827.682r	2	0. 3		—Atm			
5827.884	9. 5	*1. 7*	*u*	Fe I p	3. 28	552	
5828.245r	0. 5	0. 1		Atm H_2O	R′ 6	321	26
5828.765	2. 5	0. 4					
5829.147	0. 5	0. 1					
5829.44 a	1. 5	0. 3					
5829.983	2	0. 3					
5830.090r	3. 5	0. 6		Atm H_2O	R′ 4	401	26
5830.684	3	0. 5	*s*	V I	3. 11	142	
5831.253r	0. 5	0. 1		Atm			
5831.606m	22	3. 8	*u*	Ni I	4. 17 4. 23	233 250	
5831.753	4	0. 7					
5831.938	0. 5	0. 1	*s,N*	K I	1. 62		
5832.01?m	1	0. 2	*s,N*				
5832.275	0. 5	0. 1					
5832.480	2	0. 3	*s*	Ti I	3. 34	309	
5832.978	2	0. 3					
5833.52 a	1. 5	0. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5833.670	0. 5	0. 1		Fe II			
5833.937	3	0. 5	*s,N*	Fe I p	2. 61	209	
5834.036	14	2. 4	*s*	Fe I			
5834.225r	1	0. 2					
5834.537	1. 5	0. 3					
5834.855r	1. 5	0. 3					
5835.109	12	*2. 2*	*w?*	Fe I p	4. 26	1084	
5835.262	1. 5	0. 3		Fe I			
5835.434	8	1. 4	*u*	Fe I p	5. 06	1313	
5835.588	7	1. 2	*w*	Fe I p	2. 83	343	
5836.149	1	0. 2					
5836.777	1. 5	*0. 4*					
5837.28 m	2	0. 3		Atm			
5837.709	9	*1. 6*	*s,d*	Fe I	4. 29	1129	16
5838.015	3	0. 5	*s*				
5838.167	5	0. 8	*u,N*				
5838.381m	16	*2. 9*	*u*	—Fe I	3. 94	959	
5838.555r	1	0. 2		Atm			
5838.678	5	0. 8	*s*	Cr I	3. 01	119	
5838.939r	2	0. 3		—Atm H_2O	R′ 5	401	26
5839.42 m	1	0. 2		Atm			
5839.53 m	0. 5	0. 1	*s*	Cr I			
5839.607	3. 5	0. 6					
5839.768	1	0. 2	*s*	Ti I	1. 46	105	
5839.92 a	1	0. 2					
5840.835r	1	0. 2		Atm			
5841.188	1. 5	0. 3	*s,N*	Ti I?			
5842.385	1. 5	0. 3		Nd II?	1. 28	86	
5842.541r	2	0. 3		Atm			
5842.897	3	0. 5					
5843.227	3	0. 5	*s*	Cr I	3. 01	119	
5843.654r	1	0. 2		Atm?			
5843.842r	0. 5	0. 1		Atm?			
5844.190r	1	0. 2		Atm?			
5844.608	4. 5	0. 8	*s*	Cr I	3. 01	119	
5844.933	3	0. 5	*w*	Fe I	4. 15	1056	
5845.294	6. 5	1. 1	*u*	Fe I p	5. 03	1313	
5845.481r	2. 5	0. 4		Atm H_2O	R′ 5	321	26
5845.750r	1	0. 2		Atm?			
5845.970	5	0. 8	*w*				
5846.272	5	0. 8	*s,d*	—V I	3. 13	142	17
5846.569	2	0. 3		Co I	3. 57	169	
5846.799	0. 5	0. 1					
5847.006m	19	*3. 4*	*s*	Ni I	1. 68	44	
5847.719	1	0. 2		Atm H_2O	R′ 4	321	26
5847.893	1	0. 2					
5848.03 m	38	0. 4	*s*				
5848.122m		*6. 3*	*u*	Fe I	3. 26 4. 61	552 1175	
5848.449	1	0. 2	*s*				16
5848.673r	0. 5	0. 1		Atm			
5848.975	3.5	0. 6	*s,NN*	Mn I?— Atm H_2O	4. 27 R′ 3	321	26
5849.204	2	0. 3	*s,NN*				
5849.691	7	1. 2	*s?,d?*	Fe I p	3. 69	922	
5849.933	0. 5	0. 1					
5850.105	3	0. 5					
5850.338r	1	*0. 3*		Atm			
5850.810r	1. 5	0. 3		Atm H_2O	R′ 4	321	26
5851.005r	0. 5	0. 1		Atm H_2O	R′ 3	321	26
5851.210	5. 5	1. 0	*w*				
5851.791	1	0. 2					
5852.011	2. 5	0. 4					
5852.228m	36	*6. 5*	*s?*	Fe I	4. 55	1178	
5852.34 m	2	0. 2	*S*	Ti I			
5852.569	4	0. 7					
5853.161	7	1. 2	*s*	Fe I	1. 48	35	
5853.326	1	0. 2					
5853.479	2	0. 2		Fe I? p	5. 07	1340	
5853.688S	55	*10. 1*	*s*	Ba II	0. 60	2	
5853.953r	1. 5	0. 3		Atm			
5854.112r	0. 5	0. 1		Atm?			
5854.319	3. 5	0. 6		Sc II? p	1. 36	21	
5854.596r	1	0. 2		Atm H_2O—	R′ 5	321	26
5854.845r	2	0. 2		Atm			
5855.086m	18	*3. 2*	*u*	Fe I	4. 61	1179	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5855.262	2.5	0.2					
5855.352r		0.2		Atm?			
5855.540	0.5	0.1					
5855.888	2	0.3	*s*				
5856.096m	29	*5.1*	*u*	Fe I	4.29	1128	
5856.28 a	2	0.3		Atm H_2O	R′ 2	401	26
5856.433	1.5	0.3					
5856.623	2	0.3					
5857.048	11	1.9					
5857.459S	132	*24.5*	*S*	Ca I	2.93	47	
5857.608		0.4					
5857.758m	56	9.6	*u*	Ni I	4.17	228	
5857.992	5	0.8					
5858.280	4.5	0.8	*s*	Mo I Fe I p	1.47 2.43	5 170	
5858.533	3	0.5	*u*				
5858.785	12	*2.0*	*u*	Fe I p	4.22	1084	
5859.000r	1	0.2		—Atm			
5859.245	4.5	0.8		Fe I	4.30	1084	
5859.411	1.5	0.3					
5859.596S	74	*13.1*	*s*	Fe I	4.55	1181	
5859.959	2.5	0.4		Fe I p	4.19	1054	
5860.091r	1	0.2		Atm?			
5861.111	8.5	1.4	*u*	Fe I p	4.28	1084	
5861.630r	|4|	0.7		Atm H_2O	R′ 3	401	26
5861.806r	2.5	0.4		Atm			
5862.03 a	3.5	0.6					
5862.368S	87	*15.2*	*s*	Fe I	4.55	1180	
5862.599	5	0.8					
5862.859	5	0.8					
5863.165r	1.5	0.3		Atm			
5863.470r	3	0.5	*u*	Atm H_2O?	R 3	302	26
5863.722	1.5	0.3		La II?	0.93	62	
5863.952	5	0.8		Cr I Ni I?	3.12 4.26	185 253	
5864.053	2	0.3	*u*				
5864.246	6.5	1.1	*w*	Fe I	4.30	1086	
5864.360r	4	0.7		Atm			
5864.531	2.5	0.4		Fe II p	2.70	24	
5864.812r	1	0.2		Atm			
5865.026	0.5	0.1					
5865.418r	0.5	0.1		Atm			
5865.637r	2	0.3		Atm			
5865.853r	1.5	0.3		Atm			
5865.957r	0.5	0.1		Atm			
5866.148r	3	0.2		Atm			
5866.264		0.2					
5866.461S	40	*7.3*	*S*	Ti I	1.07	72	
5866.642	1	0.2					
5867.004	0.5	0.1		Fe I p	4.64	1203	
5867.084	3.5	0.6		Cr I	3.55		
5867.248	2	0.3					
5867.572S	22	*4.3*	*s*	Ca I	2.93	46	
5867.797	1.5	0.3					
5867.920	1	0.2					
5868.151	1	0.2					
5868.296	1.5	0.3					
5868.773r	3.5	0.6		Atm			
5869.106	4	0.7					
5869.351r	1.5	0.3		Atm H_2O	R′ 4	321	26
5869.673r	2.5	0.4		Atm			
5869.793r	3	0.5		Atm			
5870.644	7	1.2		Fe I p	4.58	1235	
5870.887	0.5	0.1					
5871.149r	3	0.5		Atm			
5871.308	7.5	1.3	*u,d*?	Atm H_2O Fe I	R′ 3 4.15	321 1055	16,26
5871.784r	1	0.2		Atm			
5872.031r	1	0.2		Atm			
5872.211r	1.5	0.3		Atm			
5872.274r	1.5	0.3		Atm H_2O	R′ 2	401	26
5872.939	2.5	0.4		Fe I			
5873.123	2.5	0.4					
5873.218m	18	3.1	*u*	Fe I	4.26	1087	
5873.579	3.5	0.6		Atm H_2O	R 6	401	26
5873.769	6	1.0	*w,N*	Si I	4.93		
5873.959r	2	0.3		Atm			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5874.649r	2	0. 3		Atm			
5874.778	0. 5	0. 1					
5875.143	6. 5	1. 1	*u,N*	Atm—			16
5875.444r	|4|	0. 7		Atm H_2O	R′ 2	302	26
5875.596	8	1. 4		Atm H_2O	R 5	401	26
5875.769r	3	0. 5	*s,N*	Atm—			
5876.124	11	1. 9		Atm H_2O	R 5	302	26
5876.296	7	1. 2	*u*	Fe I p	4. 30	1084	
5876.449	9. 5	1. 6		Atm H_2O	R 5	401	26
5876.556	3	0. 5	*s*	Cr I	3. 01	119	
5877.057r	2	0. 3		Atm			
5877.328	4	0. 7		Atm H_2O	R 4	302	26
5877.426	1. 5	0. 3		Co I?	4. 39		
5877.564r	2	0. 3		Atm			
5877.685	1. 5	0. 3					
5877.797	16	2. 7	*s*	Fe I	4. 18	1083	
				Ti I	3. 56 3. 58		
5878.029	3. 5	0. 6	*u*	Fe I— Cr I	5. 66		
5878.288r	1	0. 2		Atm			
5878.572	2	0. 3	*s,N*				16
5879.009r	|5|	0. 8	*s,NN*	Atm—			
5879.201r	5	0. 8		Atm			
5879.294	3	0. 5					
5879.493	12	2. 0	*s,d*?	Fe I p	4. 61	1201	
5879.606	12	2. 0		Atm H_2O	R 3 R 6	302 401	26
5879.729	12	2. 0		Atm H_2O	R 5	401	26
5879.79 m			*S*	Zr I	0. 15	4	13
5879.819r	2	0. 3					
5879.88a	2	0. 3					
5880.026	15	2. 6	*w*?	Fe I	4. 56	1201	16
5880.270	7. 5	1. 3	*S*	Ti I	1. 05	71	
5880.429	1	0. 2					
5880.509r	2. 5	0. 4		Atm			
5880.616	1. 5	0. 3					
5880.734	7	1. 2		Atm H_2O	R 4	401	26
5880.933	14	2. 4		Atm H_2O	R 8	401	26
5881.101	10	1. 7		Atm			
5881.279	16	2. 7	*u*	Fe I p	4. 61	1178	
5881.420r	3. 5	0. 6		Atm			
5881.545	2. 5	0. 4					
5881.722	5. 5	1. 0		Fe I	2. 18	63	
5881.871	12	2. 0		Atm H_2O	R 7	401	26
5881.987r	7	1. 2		Atm H_2O	R 4, 7	401	26
5882.196r	3. 5	0. 6		Atm			
5882.373r	3	0. 5		Atm H_2O	R 5	401	26
5882.493	4	0. 7		Atm H_2O	R 4	401	26
5882.808	12	2. 0		Atm H_2O	R 4	401	26
5883.001	8. 5	1. 4		Atm			
5883.070	2	0. 3		Fe I? p	4. 29	1124	
5883.313r	0. 5	0. 1					
5883.373r	1	0. 2		Atm			
5883.442	1	0. 2		Co I	2. 04	90	
5883.574	0. 5	0. 1					
5883.814	95	13. 3	*s*	Fe I	3. 96	982	
5883.905		3. 3		Atm H_2O	R 6	401	26
5884.033	1. 5	0. 3					
5884.194	8	1. 4		Atm H_2O	R 4	401	26
5884.439	3	0. 5	*s*	Cr I	3. 01	119	
5884.744r	2. 5	0. 4		Atm			
5884.94 a	1	0. 2					
5885.050	6	1. 0	*u,d*?	—Cr I?	3. 85		17
5885.377	3	0. 5					
5885.517r	2	0. 3		Atm H_2O	R 1	302	26
5885.629	2. 5	0. 4	*u*	Zr I—	0. 07	2	
5885.757r	0. 5	0. 1		Atm? Fe II?			
5885.977m	19	3. 2		Atm H_2O	R 5	401	26
5886.170	3	0. 5					
5886.337	8	1. 4		Atm H_2O	R 4, 5	401	26
5886.405	4	0. 7		Atm			
5886.687	4	0. 7		Atm			
5886.829r	2. 5	0. 4		Atm			
5887.222m	17	2. 9		Atm H_2O	R 3	401	26
5887.476	6	1. 0	*u*	Fe I p	4. 56	1203	
5887.660m	14	2. 4		Atm H_2O	R 3	401	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5887.840	5. 5	1. 0		Atm H_2O	R 1	302	26
5888.193	|1|	0. 2					
5888.440	|1|	0. 2					
5888.703	10	1. 7		Atm H_2O	R 4	302	26
5888.898	3	0. 5					
5889.085	3	0. 5		Atm H_2O	R 4	401	26
5889.370	0. 5	0. 1					
5889.637	14	2. 4		Atm H_2O	R 4	401	26
5889.756		3. 7		S I?	7. 87		
				Atm H_2O	R 3	401	26
5889.884r		16. 0		Atm			
5889.973m	752	*120*	*S*	Na I(D_2)	0. 00	1	
5890.203		2. 5		Atm H_2O	R 4	302	26
5890.314		0. 4					
5890.495	4. 5	0. 8	*s?*	Co I	2. 04	82	
				Fe I p	5. 06	1313	
5890.734r	1	0. 2		Atm			
5890.909r	1	0. 2		Atm?			
5891.178	17	2. 9	*s*	Atm H_2O	R 3	401	17,26
				Fe I p	4. 65	1179	
5891.361	1. 5	0. 3		Fe II	7. 27	211	
5891.500	6	1. 0		Atm			
5891.660	18	3. 0		Atm H_2O	R 3	302	26
5891.887	4. 5	0. 8	*u*	Fe I	4. 59	1236	
5892.055r	1	0. 2		Atm?			
5892.277r	1. 5	0. 3		Atm?			
5892.397m	17	2. 9		Atm H_2O	R 3	401	26
5892.478	3	0. 5		Fe I p	4. 64	1201	
5892.700	18	3. 0	*u*	Fe I	4. 26	1086	
5892.883S	66	11. 2	*s*	Ni I	1. 99	68	
5893.045	11	1. 9		Atm H_2O	R 2	401	26
5893.231	7	1. 2	*u,N*	Fe I p	4. 22	1055	
5893.508	9. 5	1. 6		Atm H_2O	R 3	401	26
5893.68 a	2. 5	0. 4					
5893.834r	0. 5	0. 1		Atm?			
5894.22 a	1	0. 2		Atm?			
5894.385	5	0. 8		Atm H_2O	R 3	302	26
5894.604r	2. 5	0. 4		Atm			
5894.944	8. 5	1. 4		Atm H_2O	R 2	302	26
5895.140	5. 5	1. 0		Atm H_2O	R 2	401	26
5895.366	2	0. 3					
5895.685		0. 2					
5895.940m	564	*91. 0*	*S*	Na I(D_1)	0. 00	1	
5896.145		1. 0					
5896.294	5	1. 0		Atm H_2O	Q 6	401	26
5896.418	18	1. 3		Atm H_2O	R 5	321	26
5896.492		2. 4		Atm H_2O	R 2	401	26
5896.643	1	0. 2		Atm H_2O	Q' 4	401	26
5896.832	10	1. 7		Atm H_2O	R 2	401	26
5897.084r	2. 5	0. 4		Atm			
5897.186	4	0. 7					
5897.250	4	0. 7					
5897.461	7. 5	1. 3		Atm H_2O	Q 2	401	26
					R 5	321	
5897.542	2. 5	0. 4		V II	2. 49	98	
5897.755	3. 5	0. 6		Atm			
5897.939	3	0. 5		Atm			
5898.166S	30	4. 7		Atm H_2O	R 2	401	26
5898.218		0. 4	*u*	Fe I	4. 73	1259	
5898.399r	3. 5	0. 6		Atm			
5898.533	0. 5	0. 1					
5898.764r	1	0. 2		Atm			
5898.998	12	2. 0		Atm H_2O	R 1	302	26
5899.106	0. 5	0. 1		Fe I	3. 55	738	
5899.304m	26	*4. 7*	*S*	Ti I	1. 05	72	
5899.532	14	2. 4	*w,N*				
5899.673	4	0. 7					
5899.919	14	2. 4		Atm H_2O	R 2	302	26
5900.045	32	5. 4		Atm H_2O	R 1	401	26
5900.42 a	1	0. 2		Atm			
5900.48 a	0. 5	0. 1					
5900.760	1	0. 2		Atm H_2O	Q 2	302	26
5900.920	5	0. 8		Atm H_2O	R 6	321	26
5901.080r	1	0. 2		Atm?			
5901.243	6	1. 0		Atm H_2O	R 5	321	26
5901.468m	42	6. 3		Atm H_2O	R 1	401	26
5901.529r		0. 9	*u*	Fe I p	4. 22	1083	

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5901.712	1. 5	0. 3					
5901.815	0. 5	0. 1					
5902.025	2. 5	0. 4		Atm			
5902.143	10	1. 7		Atm (Cr I)	3. 01	119	
5902.248	2. 5	0. 4	*s*				
5902.476	|12|	2. 0	*s*?	Fe I	4. 59	1234	
5902.654r	1. 5	0. 3		Atm H_2O	R′ 1	321	26
5902.819r	1. 5	0. 3		Atm			
5903.118r	0. 5	0. 1					
5903.332	5. 5	1. 0	*S*	Ti I	1. 07	71	
5903.534	9. 5	1. 6		Atm H_2O	R 1	401	26
5903.702r	4	0. 7		Atm H_2O	R 4	321	26
5903.854r	4. 5	0. 8		Atm			
5903.944r	3	0. 5		Atm H_2O	R 5	321	26
5904.204r	2	0. 3		Cr I Atm?	5. 67		
5904.376r	1. 5	0. 3		Atm H_2O	R 0	302	26
5904.634r	1. 5	0. 3		Atm			
5904.834r	2. 5	0. 4	*s*,*N*	Atm			16
5904.938	4	0. 7					
5905.05 a	2	0. 3		Fe I?	5. 41		
5905.119	4	0. 7		Atm H_2O	Q 4	401	26
5905.289	7	1. 2		Atm H_2O	R 4	321	26
5905.372	3. 5	0. 5		Atm H_2O	R 4	321	26
5905.436		0. 1					
5905.529r	1	0. 2		Atm?			
5905.680S	58	*10. 2*	*u*	Fe I	4. 65	1181	
5905.914r	2	0. 3		Atm?			
5906.174r	1	0. 2		Atm			
5906.289r	2	0. 3		Atm H_2O	R 1	302	26
5906.512	4. 5	0. 8	*s*	Ti I	1. 46	105	
5906.843	14	*2. 5*	*u*				
5907.001	4	0. 7	*u*				
5907.260	6. 5	1. 1		Atm H_2O	R 2	302	26
5907.359	3	0. 5		Atm H_2O	R 4	321	26
5907.476	3	0. 5		Atm			
5907.661	1	0. 2					
5907.852	15	2. 5	*u*	Atm H_2O?-	Q 3 R 4	302 321	16,26
5908.042r	1. 5	0. 3		Atm H_2O	Q 3	302	26
5908.208	9. 5	1. 6		Atm H_2O (Fe I)	R 0 2. 48	401 150	26
5908.424r	2	0. 3		Fe I Atm?			
5908.579r	0. 5	0. 1		Atm?			
5908.726	0. 5	0. 1					
5908.802	0. 5	0. 1					
5908.997m	18	3. 0		Atm H_2O	R 3	321	26
5909.179	2. 5	0. 4					
5909.447	2. 5	0. 4		Atm H_2O	Q 3	401	26
5909.662r	0. 5	0. 1		Atm?			
5909.844r	1. 5	0. 3		Atm H_2O	Q 2	302	26
5909.983	30	5. 1	*s*	Fe I	3. 21	552	
5910.181	10	1. 7		Atm H_2O	R 3	321	26
5910.312r	4	0. 7		Atm			
5910.489	4. 5	0. 8		Atm			
5910.639r	6	1. 0		Atm H_2O	R 3	321	26
5910.769	12	2. 0		Atm H_2O	R 3	321	26
5910.924r	3. 5	0. 6		Atm H_2O	Q 1	302	26
5911.148	2. 5	0. 2					
5911.219r		0. 2		Atm H_2O	Q′ 5	321	26
5911.494r	1	0. 2		Atm			
5911.877	2	0. 3		Atm			
5912.020	2. 5	0. 4		Atm H_2O	R 5	321	26
5912.129	2	0. 3					
5912.541r	4	0. 7		Atm H_2O	Q 6	401	26
5912.698	6. 5	1. 1	*u*	Atm H_2O?	R 3	321	26
5912.996m	16	2. 7		Atm H_2O	Q 2	401	26
5913.142r	2. 5	0. 4		Atm?			
5913.353	0. 5	0. 1		Fe I p	3. 57	781	
5913.719	1	0. 2	*S*	Ti I	0. 02	2	
5913.905	2. 5	0. 4					
5914.120	139	10. 1	*u*	Fe I	4. 61	1180	
5914.213		15. 2	*s*	Fe I	4. 61	1181	
5914.484r	4	0. 7		Atm?			
5914.636	1. 5	0. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5914.928	9	1. 5		Atm			
5915.166	1. 5	0. 3		Dy II?			
5915.432	10	1. 7		Atm H_2O	Q 1	401	26
5915.565	5	0. 8	*S*	Co I	2. 14	82	
5915.626	10	1. 7		Atm H_2O	R 4 Q 5	321 401	26
5915.834r	2. 5	0. 4		Atm			
5916.024	5. 5	1. 0	*s*	Cr I—	1. 03 3. 14	17 185	
5916.257S	50	*8. 8*	*S*	Fe I—	2. 45	170	
5916.456	2	0. 3					
5916.585	6	1. 0		Atm H_2O	R 2	321	26
5916.772	4	0. 7	*s*	Cr I	3. 14	185	
5916.877r	1	0. 2		Atm			
5917.149r	1	0. 2		Atm			
5917.385	6. 5	1. 1		Atm H_2O	R 2	321	26
5917.609	1	0. 2					
5917.806	1	0. 2		Fe I			
5918.009r	5	0. 8		Atm			
5918.204r	1. 5	0. 3		Atm H_2O	Q′ 4	401	26
5918.422	27	4. 6		Atm H_2O	R 2, 3 Q 4	321 401	26
5918.554	14	2. 4	*S*	Ti I	1. 07	71	
5918.764	3	0. 5	*s*,?*N*				
5918.959	8. 5	1. 4		Atm H_2O Fe I	R 3 4. 26	321 1083	26
5919.054S	34	5. 7		Atm H_2O	Q 1	401	26
5919.291	3	0. 5		Cr I?			
5919.369r	1. 5	0. 3		Atm?			
5919.644S	41	6. 9		Atm H_2O	Q 2	401	26
5919.844r	2. 5	0. 4		Atm?			
5920.163	1. 5	0. 3		Atm			
5920.330r	0. 5	0. 1		Atm H_2O	P′ 3	401	26
5920.560	12	2. 0		Atm H_2O (Fe I)	Q 2 3. 24	401 581	26
5920.765r	1. 5	0. 3		Atm?			
5921.154	3. 5	0. 6		Atm			
5921.341r	0. 5	0. 1		Cr I Atm?			
5921.655	3. 5	0. 6		Atm			
5921.884	2	0. 3		Atm?			
5922.123m	17	*2. 9*	*S*	Ti I	1. 05	72	
5922.365	7. 5	1. 3		Atm H_2O	Q 3	401	26
5922.519	15	2. 5		Atm H_2O	Q 3	401	26
5922.711	6	1. 0		Atm H_2O	Q 4	401	26
5922.92 a	0. 5	0. 1		Atm H_2O	Q 5	321	26
5923.188r	3	0. 5		Atm H_2O	R 2	321	26
5923.284	1. 5	0. 3					
5923.484	1. 5	0. 3					
5923.646	14	2. 4		Atm H_2O	R 2	321	26
5923.751	5. 5	0. 9					
5923.827	19	3. 2		Atm H_2O	Q 2, 3	401	26
5923.963	8	1. 4	*u*,*N*	Ni I	4. 16	259	
5924.272m	26	4. 4		Atm H_2O	P 1	401	26
5924.570	2. 5	0. 4		Atm H_2O	Q 5	401	26
5924.752	2. 5	0. 4		Atm			
5924.865	0. 5	0. 1					
5925.003	16	2. 7		Atm H_2O	Q 4	401	26
5925.246	2. 5	0. 4					
5925.582r	0. 5	0. 1		Atm?			
5925.830	0. 5	0. 1		Ni I p	1. 68	42	
5926.199	1	0. 2		Fe I			
5926.618r	2	0. 3		Atm H_2O	Q 2	302	26
5926.823r	3. 5	0. 6		Fe I p Atm?	4. 58	1231	
5927.210	1	0. 2					
5927.532	0. 5	0. 1					
5927.797S	39	*6. 7*	*u*	Fe I	4. 65	1175	
5928.059	2	0. 3					
5928.291	18	3. 0		Atm H_2O	Q 5	401	26
5928.523	3	0. 5		Fe I p	4. 22	1055	
5928.673r	1	0. 2		Atm?			
5928.843	4. 5	0. 8		Atm H_2O	Q 4	321	26
5928.888	3. 5	0. 6		V II	2. 52	98	
5929.129	4. 5	0. 8		Atm H_2O	R 1	321	26
5929.413r	2	0. 3		Atm H_2O	Q 4	401	26
5929.682m	38	*6. 7*	*s*	Fe I	4. 55	1176	
5929.928r	2	0. 4		Atm?			
5930.013	2	0. 4					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes	Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5930.191S	86	*14. 5*	*s*	Fe I	4. 65	1180		5939.235	1	0. 2		Fe I			
5930.423	2	0. 3						5939.423	1. 5	0. 3					
5930.607	5	0. 8		Atm				5939.757	0. 5	0. 1					
5930.766	2. 5	0. 4						5939.966	6. 5	1. 1		Atm H_2O	Q 4	321	26
5931.014	3. 5	0. 6		Atm H_2O	Q 3	401	26	5940.183r	3. 5	0. 6		Atm H_2O	Q 4	401	26
5931.903	3	0. 5		Fe I p	4. 07	1017		5940.423	16	2. 7		Atm H_2O	P 3	401	26
5932.092S	26	4. 4		Atm H_2O	P 2	401	26	5940.658	4. 5	0. 8	*S*	Ti I	0. 05	2	
5932.239r	3. 5	0. 6		Atm?				5940.872	7	1. 2		Atm H_2O	Q 1	321	26
5932.482r	1. 5	0. 3		Atm?				5940.997	14	2. 4	*u*	Fe I	4. 18	1083	
5932.784m	17	2. 9		Atm H_2O	P 2	401	26	5941.076m	37	6. 2		Atm H_2O	P 3	401	26
5933.016r	3	0. 5		Atm H_2O	Q 2	302	26	5941.252	7	1. 2		Atm H_2O	Q 3	321	26
5933.208	1	0. 2						5941.413r	5	0. 8		Atm?			
5933.453r	1. 5	0. 3		Atm?				5941.627	28	4. 7		Atm H_2O	Q 2	321	26
5933.655r	1. 5	0. 3		Atm H_2O	Q 6	321	26	5941.764	17	2. 9	*S*	Ti I	1. 05	72	
5933.803	7. 5	1. 3		Fe I p	4. 64	1198		5942.003r	2. 5	0. 4		Atm?			
5933.923r	2	0. 3		Atm H_2O	Q 3	321	26	5942.179	2	0. 3					
5934.088	5	0. 8		Atm				5942.285	6. 5	1. 1		Atm			
5934.275	2. 5	0. 4		Atm H_2O	Q 3	302	26	5942.419	19	3. 2		Atm H_2O	Q 2,3	321	26
5934.441	2	0. 3						5942.573	33	5. 6		Atm H_2O	Q 3	321	26
5934.665S	78	*12. 8*	*s*	Fe I	3. 93	982		5942.721	9	1. 5		Fe I p Atm H_2O	4. 58 Q 5	1233 302	 26
5934.948r	3. 5	0. 6						5942.905	2. 5	0. 4					
5935.186	6. 5	1. 1	*s*	Zr I Atm H_2O	0. 00 R 0	2 321	 26	5943.110	3	0. 5		Fe I p	4. 19	1021	
5935.402	3. 5	0. 6	*u*	Co I	1. 88	55		5943.394	5	0. 8	*u,N*				
5935.646r	1	0. 2		Atm?				5943.592	10	1. 7	*s,N*	Fe I p	{2. 20 4. 26	63 1085	
5935.818	9. 5	1. 6		Atm H_2O	P 2	401	26	5943.849	0. 5	0. 1					
5936.068	0. 5	0. 1						5944.015	0. 5	0. 1					
5936.211r	0. 5	0. 1		Atm?				5944.312	16	2. 7		Atm H_2O	Q 4	321	26
5936.966	1. 5	0. 3		Atm H_2O	Q 5	321	26	5944.500	0. 5	0. 1					
5937.128r	2	0. 3		Atm				5944.68 m	1	0. 2	*S*	Ti I	0. 00	2	
5937.306r	1. 5	0. 3		Atm				5944.732	12	2. 0		Atm H_2O	Q 1	321	26
5937.453r	2. 5	0. 4		Atm H_2O	Q 5	401	26	5945.015	3. 5	0. 6					
5937.814	7	1. 2	*S*	Ti I	1. 07	72		5945.250	11	0. 9		Atm H_2O	P 3	401	26
5937.944	3. 5	0. 6		Atm H_2O	Q 2	302	26	5945.313		0. 9		Atm H_2O	Q 4	321	26
5938.052	8	1. 3		Atm H_2O	Q 2	321	26	5945.648	10	1. 7		Atm H_2O	Q 3	321	26
5938.283r	2	0. 3		Atm				5945.887r	4. 5	0. 8		Atm H_2O	Q 5	321	26
5938.593r	2. 5	0. 4		Atm H_2O	P 3	302	26	5946.006S	28	4. 7		Atm H_2O	P 3	401	26
5938.753	1. 5	0. 3		Fe I				5946.268r	1	0. 2		Atm?			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5946.466	1. 5	0. 3		Co I	3. 66	169	
5946.646	2	0. 3		Atm H_2O	Q 6	321	26
5946.846	14	2. 4		Atm H_2O	P 3	401	26
5947.067	23	3. 9		Atm H_2O	Q 4	321	26
5947.284	1	0. 2		Fe I p	4. 19	1056	
5947.427r	9. 5	0. 2		Atm H_2O	Q 3	302	26
5947.506		1. 4	*u,d?*	Fe I	4. 61	1199	16
5947.738r	0. 5	0. 1		Atm?			
5947.978r	0. 5	0. 1		Atm H_2O	Q 6	401	26
5948.224	7. 5	1. 3		Atm H_2O	P 4	302	26
5948.548m	88	14. 8	*w*	Si I	5. 08	16	
5948.767	11	1. 8		Atm			
5949.020	7	1. 2		Atm H_2O	Q 4	302	26
5949.175	32	5. 4		Atm H_2O	P 4	401	26
5949.346	40	6. 7	*s,d*	Fe I	0. 91 4. 61	14 1176	
5949.576r	4. 5	0. 8		Atm H_2O	Q 2	321	26
5949.673	8	1. 3		Atm H_2O	Q 5	321	26
5949.820	15	2. 5		Atm H_2O	P 4	401	26
5950.010	2	0. 3					
5950.145	6	1. 0	*o?*	Atm H_2O Fe I p	Q 5 4. 56	321 1200	26
5950.344	12	2. 0		Atm H_2O	Q 5	321	26
5950.474	1	0. 2					
5950.852r	2. 5	0. 4		Atm H_2O	Q 5	401	26
5950.966	6. 5	1. 1		Atm H_2O	P 4	302	26
5951.095	4	0. 6					
5951.222r	4	0. 6		Atm H_2O	Q 4	321	26
5951.312r	3	0. 5		Atm			
5951.500	16	2. 7		Atm H_2O	P 1	321	26
5951.802	3	0. 5					
5952.190	0. 5	0. 1		Fe I p	5. 08	1313	
5952.360r	1	0. 2		Atm			
5952.522	5	0. 8		Fe II? p	5. 95	182	
5952.726S	68	11. 4	*s?*	Fe I	3. 98	959	
5952.997	7. 5	1. 3					
5953.170m	34	*5. 5*	*S*	Ti I	1. 89	154	
5953.365r	2. 5	0. 4		Atm?			
5953.467	6	1. 0		Atm H_2O	Q 6	321	26
5953.717	0. 5	0. 1					
5953.982r	2	0. 3		Atm			
5954.377r	3	0. 5		Atm H_2O	Q 6	321	26
5954.688	3	0. 5					
5954.953	22	3. 7		Atm H_2O	P 4	401	26
5955.113	2. 5	0. 4		Fe I p	4. 58	1233	
5955.16 m			*s*				13
5955.352r	1	0. 2	*S*	Zr I	0. 00	3	
5955.671	1. 5	0. 3		Fe I	4. 26	1106	
5955.821r	4	0. 6		Atm H_2O	Q 5	321	26
5956.034r	1	0. 2		Atm			
5956.146r	1	0. 2		Atm H_2O	P′ 2	401	26
5956.352	12	2. 0		Atm H_2O	P 4	401	26
5956.505	3. 5	0. 6					
5956.706S	60	*9. 6*	*S*	Fe I	0. 86	14	
5956.957	2. 5	0. 4					
5957.037	1. 5	0. 3					
5957.147r	1. 5	0. 3		Atm?			
5957.569	5. 5	0. 9					
5957.881	35	5. 9		Atm H_2O	P 5 P 2	302 321	26
5958.080	5. 5	0. 9					
5958.244	36	6. 0	*u,N*	Atm H_2O Fe I	P 5 0. 96 4. 56	401 14 1199	17,26
5958.344	12	2. 0	*s*	Fe I p	2. 18	63	
5958.623	24	4. 0		Atm H_2O	P 5	401	26
5958.807r	5. 5	0. 9		Atm?			
5959.160	5. 5	0. 9		Cr I? Atm H_2O	4. 45 P 5	302	26
5959.320	4	0. 6		Atm H_2O	Q 5	321	26
5959.610	|5|	0. 8					
5959.720	4. 5	0. 8		Atm H_2O	Q 7	321	26
5959.90 a	3	0. 5		Fe I	4. 14	1020	
5959.990	10	1. 7	*u,d?*	Atm H_2O —	P 2	321	17,26
5960.343	3	0. 5					
5960.587	2. 5	0. 4					
5961.228	2	0. 4					
5961.445	8. 5	1. 4		Atm H_2O	P 2	321	26
5961.738	5. 5	0. 9					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5961.894	3	0. 5		Fe I p	4. 22	1080	
5962.170r	7	1. 2		Atm			
5962.299	2	0. 3		Atm?			
5962.469	13	1. 8		Atm			
5962.53 m		0. 4	*s*				
5962.621	3	0. 5					
5962.914	2	0. 3		Fe I			
5963.104	1. 5	0. 3					
5963.268	4	0. 6	*s,N*	Atm Fe I	2. 22	63	16
5963.570	5	0. 8		Atm H_2O	Q 6	302	26
5963.983	2	0. 3		C I	8. 64		
5964.612	1. 5	0. 3		Cr I?	3. 01		
5964.943r	2. 5	0. 4		Atm (Co I)	3. 51	169	
5965.150r	0. 5	0. 1		Atm?			
5965.323r	0. 5	0. 1		Atm?			
5965.516	1. 5	0. 3					
5965.835	23	*4. 2*	*s*	Ti I	1. 88	154	
5966.005	4. 5	0. 8					
5966.214	2. 5	0. 4		Atm			
5966.333	3. 5	0. 6		Atm H_2O	P′ 3	302	26
5966.486r	1. 5	0. 3					
5966.665	10	1. 7		Atm H_2O	P 5	401	26
5966.998r	4. 5	0. 8		Atm			
5967.319	5	0. 8		Atm H_2O	P 3	321	26
5967.501	2	0. 3					
5967.672	6	1. 0	*s,N*	Atm H_2O	Q′ 2 P 6	321 302	26
5967.840	14	2. 3		Atm H_2O	P 6	401	26
5968.063	4. 5	0. 8	*u*	Atm H_2O?	P 6	401	26
5968.278	14	2. 3		Atm H_2O	P 3	321	26
5968.409	3. 5	0. 6		Atm H_2O	P 6	302	26
5968.662r	[1.5]	0. 3		Atm?			
5968.90 a	2	0. 3					
5969.035	6	1. 0		Atm H_2O	P 3	321	26
5969.290r	3. 5	0. 6		Atm?			
5969.578	5	0. 8	*s,d*	Fe I	4. 28	1086	17
5970.058	7	1. 2		Atm H_2O	P 5	321	26
5970.260r	1	0. 2		Atm			
5970.687r	1	0. 2		Atm			
5971.145r	0. 5	0. 1	*s*				
5971.335	10	1. 7		Atm H_2O	P 3	321	26
5971.771	1	0. 2					
5972.755	3. 5	0. 6		Atm H_2O	P 3	302	26
5972.986	1. 5	0. 3					
5973.356	2	0. 3		Fe I p	4. 65	1175	
5973.475	2	0. 3					
5973.67 a	2	0. 3		Ni I	4. 17	226	
5973.870	1. 5	0. 3					
5974.277	3	0. 5					
5974.596	1	0. 2		Fe I p	4. 19	1055	
5975.101	10	1. 7		Atm H_2O	P 4	321	26
5975.200	3	0. 5		Atm H_2O	P 6	401	26
5975.353S	44	*7. 9*	*u*	Fe I	4. 07 4. 83	1017 1260	
5975.602	1. 5	0. 3					
5975.824	1	0. 2		Ce II?	1. 33	30	
5975.929r	1	0. 2		Atm			
5976.168	2	0. 4		Fe I p	4. 29	1125	
5976.281	1	0. 2		Atm H_2O	Q 4	321	26
5976.479	16	0. 9	*s,d*	Atm H_2O—	P 6	401	26
5976.509r		1. 8		Atm			
5976.787S	64	*11. 4*	*s*	Fe I	3. 94	959	
5977.028	18	3. 0		Atm H_2O	P 4	321	26
5977.291	1. 5	0. 3					
5977.434r	3. 5	0. 6		Atm H_2O	Q 5	321	26
5977.804	7. 5	1. 3		Atm H_2O	P 7	401	26
5977.970	2	0. 3					
5978.072	3. 5	0. 1					
5978.144r		0. 5	*u*	Fe I p	4. 64	1199	
5978.343	1	0. 2					
5978.549m	20	*3. 5*	*s*	Ti I	1. 87	154	
5978.789	2. 5	0. 4					
5978.910	5. 5	0. 9		Si II?	10. 07	4	
5979.311	0. 5	0. 1					
5979.692	1	0. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5980.171	3. 5	0. 6		Atm			
5980.519r	1. 5	0. 3		Atm H_2O	P 6	302	26
5980.744r	0. 5	0. 1	*S*	V I	1. 19	49	
5980.822r	1	0. 2	*S*	Ti I	1. 07	72	
5980.93 m	0. 5	0. 1	*S,N*				
5981.229r	3	0. 5		Atm H_2O	P 4	321	26
5981.392	1. 5	0. 3		Fe I p	3. 63	837	
5981.709r	2	0. 4		Atm H_2O	P 6	401	26
5981.868	2	0. 4	*s?,NN*				
5981.983	|2|	0. 4		Cr I Atm H_2O	3. 17 P 4	185 302	 26
5982.312	3. 5	0. 6					
5982.537	1	0. 2	*S*	Ti I?	2. 41	264	
5982.617r	1	0. 2					
5982.877r	4	0. 6	*s*	Cr I	3. 17	185	
5983.186	1	0. 2		Atm H_2O	P'4	401	26
5983.304r	3	0. 5		Atm H_2O	P 7	302	26
5983.428	1. 5	0. 3					
5983.688S	68	*11. 9*	*u*	Fe I	4. 55	1175	
5983.974r	5	0. 8					
5984.066	4. 5	0. 8		Co I	1. 74	37	
5984.274	4. 5	0. 8	*s*	Co I Atm H_2O	4. 39 P 5	201 321	16 26
5984.440	1	0. 2					
5984.594	2	0. 4	*S*	|Ti I V I	0. 02 1. 18	2 49	
5984.826S	84	*14. 9*	*s*	Fe I	4. 73	1260	
5985.215	12	2. 0		Atm H_2O	P 5	321	26
5985.394r	1. 5	0. 3		Atm?			
5985.510r	0. 5	0. 1		Atm?			
5985.703r	1. 5	0. 3		Atm H_2O	P 7	401	26
5986.122	3	0. 5	*u*				16
5986.454	1	0. 2					
5986.755	1. 5	0. 3					
5987.070m	68	*12. 0*	*u*	Fe I	4. 79	1260	
5987.310	6	1. 0					
5988.105r	1. 5	0. 3		Atm H_2O	P 5	321	26
5988.361	1	0. 2					
5988.562	9. 5	1. 6	*s*	‖Ti I Atm H_2O	1. 89 P 8	154 401	 26
5988.768	6	1. 0	*w*				
5988.966	1. 5	0. 3					
5989.093r	1. 5	0. 3		Atm?			
5989.287	6	1. 0	*u,d?*	Atm H_2O—	P 5	321	17,26
5989.568	1	0. 2					
5989.812	1	0. 2					
5990.072	0. 5	0. 1					
5990.377	1	0. 2					
5990.610r	3. 5	0. 6		Atm H_2O	P 5	321	26
5990.845	6. 5	1. 1	*w*	Atm H_2O—	P 5	321	17,26
5991.015	0. 5	0. 1					
5991.378m	29	*5. 2*	*w*	Fe II	3. 15	46	
5991.569	0. 5	0. 1		Fe I p	4. 58	1232	
5991.791 5991.90?m	6. 5	0. 7 0. 4	*s,N*	Co I	2. 08	90	
5991.998r	12	2. 0		Atm H_2O	P 5	321	26
5992.183	1	0. 2					
5992.332	0. 5	0. 1					
5992.677	1. 5	0. 3		Fe I p	4. 18	1080	
5993.055r	2. 5	0. 4		Atm			
5993.453	1	0. 2					
5993.655	1. 5	0. 3					
5993.915r	2. 5	0. 4		Atm H_2O	P 7	401	26
5994.41 a	1	0. 2					
5994.529	5	0. 8		Atm H_2O	P 6	321	26
5995.18 a	2	0. 4					
5995.271r	0. 5	0. 1		Atm H_2O	P 6	321	26
5995.698	1. 5	0. 3	*S*	Ti I	3. 46	311	
5995.944	2	0. 4		Fe I p	4. 61	1198	
5996.033	2	0. 4	*S*	Ti I	1. 88	154	
5996.505	1	0. 2		Fe I p	4. 28	1083	
5996.740m	19	*3. 3*	*w?*	Ni I	4. 23	249	
5996.978	1. 5	0. 3					
5997.214	2	0. 4					
5997.352	10	1. 7		Atm H_2O	P 6	321	26
5997.604	11	1. 8	*w,N*	Ni I	4. 23	252	
5997.782m	67	11. 2	*u*	Fe I	4. 61	1175	
5998.225	3	0. 5					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
5998.544	2. 5	0. 4					
5998.897	3. 5	0. 6		Ni I?—	4. 10	226	
5998.984	2. 5	0. 4	*s*				
5999.047	0. 5	0. 1	*S*	Ti I	2. 17	198	
5999.209	7. 5	1. 3	*w*				
5999.698	11	1. 8	*S,d*	Atm H_2O |Ti I	P 9 2. 24	401 227	26
6000.150r	2	0. 3		Atm H_2O	P 6	321	26
6000.678	4	0. 7	*s,d*?	Co I	3. 62	169	
6001.126r	3	0. 5		Atm			
6001.546r	2	0. 3		Atm			
6002.156r	1	0. 2		Atm			
6002.30 m	1. 5	*0. 5*	*S*	V I	1. 22	49	
6002.648	|6|	1. 0	*S*	‖V I Atm H_2O?	1. 05 P 6	34 321	26
6002.751r	1. 5	0. 2					
6003.022S	86	*14. 5*	*s*	Fe I	3. 88	959	
6003.319r	2	0. 3					
6003.52 a	3	0. 5					
6003.876r	3	0. 5		Atm			
6004.384r	1	0. 2					
6004.670	3	0. 5		Atm H_2O	P 7	321	26
6004.879r	1	0. 2		Atm?			
6005.009r	|1|	0. 2		Co I	1. 71	37	
6005.367r	|1|	0. 2					
6005.551m	21	*3. 7*	*s*	Fe I	2. 59 4. 18	207 1079	
6005.784r	1. 5	0. 2					
6006.061r	3. 5	0. 6		Atm C I?	8. 64		
6006.387r	4. 5	0. 7		Atm			
6007.317m	20	*3. 7*	*s*	Ni I	1. 68	42	
6007.68 m 6007.717	4	0. 2 0. 5	*s*	Fe I p	3. 27	581	16
6007.968m	59	*10. 0*	*s*	Fe I	4. 65	1178	
6008.566S	88	*15. 1*	*s*	Fe I	3. 88	982	
6008.813r	2	0. 3					
6009.359	2	0. 3		Atm H_2O	P 7	321	26
6009.848r	1	0. 2		Fe I p Atm?	3. 25	624	
6010.65 a	5	0. 8		C I	8. 64		
6011.45 a	1	0. 2					
6011.67 m	2	0. 3					
6011.95 a	1	0. 2					
6012.229	22	*3. 6*	*u*	Ni I			
6012.443r	3	0. 5					
6012.770	4	0. 7	*s*	Fe I p—	4. 56	1198	
6012.98 m	1	0. 2	*s,N*				
6013.199r	7	1. 2		C I	8. 64 8. 64		
6013.497S	86	*14. 1*	*S*	Mn I	3. 07	27	
6013.914r	4	0. 7					
6014.425r	1. 5	0. 2					
6014.842r	4. 5	0. 7		C I	8. 64		
6015.042r	2. 5	0. 4					
6015.253	4	0. 7		Fe I p	2. 22	63	
6015.611	0. 5	0. 1		Atm H_2O	P 7	321	26
6015.850	2	0. 3		Atm H_2O	P 7	321	26
6016.017r	1	0. 2		Atm H_2O	P 7	321	26
6016.408r	2	0. 3		C I?	8. 64		
6016.647S 6016.925r	92	*15. 4* 0. 5	*S*	Mn I Fe I p	3. 07 4. 59	27 1232	
6017.00 m	1. 5	0. 2	*s*				
6017.56 m	1. 5	0. 2	*s*	Ti I? p	2. 33	257	
6017.92 m	0. 5	*0. 3*	*s*	V I?	1. 19	49	
6018.300	8	1. 3	*o*	—Fe I p	4. 65	1176	
6018.40 m	1	0. 2	*S*	Ti I	2. 15	198	
6018.545r	2	0. 3					
6018.66 m	0. 5	0. 1	*S*	Ti I	1. 05	70	
6018.824r				Atm?			
6019.157r	|2|	0. 3		Atm H_2O	P 8	321	26
6019.364	5	0. 8	*s,d*?	Fe I p	3. 57	780	
6019.785r	1. 5	0. 2					
6020.016	49	8. 1	*u*				
6020.186	94	15. 6	*u*	Fe I	4. 61	1178	
6021.803m	96	*16. 0*	*S*	Mn I	3. 07	27	
6022.04 a	2. 5	0. 4					
6022.226r	4. 5	0. 7					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6022.476r	3. 5	0. 6		Si I?			
6023.025r	0. 5	0. 1					
6023.42 m	1. 5	0. 2	*S*	Y I	0. 00	3	
6023.957r	117	0. 2					
6024.068S		*19. 8*	*u*	Fe I	4. 55	1178	
6025.211r	|2.5|	0. 4					
6025.44 m	1	0. 2	*s*	Zr I?	0. 15	3	
6025.767	4	0. 7	*u*	Ni I	4. 23	251	16
6026.166r	2	0. 3					
6026.401r	1. 5	0. 2		Atm?			
6026.826r	1. 5	0. 2					
6027.059S	|61|	*10. 8*	*u*	Fe I	4. 07	1018	
6027.436r	1. 5	0. 2					
6027.726	4	0. 7		Fe I p Atm	4. 99	1312	
6028.006r	2	0. 3		Atm			
6028.276r	3	0. 5		V II?—Atm?	2. 49	97	
6028.506r	0. 5	0. 1					
6029.00 a	3	0. 5		V II	2. 56	125	
6029.286r	2	0. 3		Cr I	3. 85	242	
6029.876	15	2. 5	*u,NN*	Atm—			16
6030.336r	2. 5	0. 4					
6030.68 m	1. 5	0. 2	*S,N*	Mo I	1. 53	5	
6031.016	6	1. 0	*w,N*	—V II	2. 52	97	
6031.306r	2	0. 3		Nd II?	1. 28		
6031.718r	1	0. 2	*S*	Ti I	0. 05	2	
6032.00?m	1	0. 2					
6032.161r	2	0. 3					
6032.60 m			*s*	Zr I?	1. 48		13
6032.672r	1	0. 2	*s*	Fe I	4. 22	1082	16
6033.317r	1. 5	0. 2					
6033.597r	2	0. 3					
6034.038	7	1. 2	*s*	Fe I p	4. 31	1142	
6034.227r	1	0. 2		Nd II?	1. 54		
6034.502r	1	0. 2					
6034.924r	2	0. 3					
6035.350	6	1. 0	*u*	Fe I? p	4. 29	1125	
6035.97 a	2	0. 3					
6036.221r	2	0. 3					
6036.459	7	1. 2	*u*	Atm—⊙			
6036.796r	|1.5|	0. 2					
6037.10 m	1. 5	0. 2					
6039.327r	2	0. 3		Ni I	4. 23	248	
6039.736	11	*2. 2*	*S*	V I	1. 06	34	
6039.977r	1. 5	0. 2					
6041.93 a	|3. 5|	0. 6		S I	7. 86	10	
6042.104S	51	8. 4	*w*	Fe I			
6042.267r	3. 5	0. 6					
6043.40 a	2	0. 3	*u,N*	Ce II	1. 21	30	
6045.492r	3. 5	0. 6		Fe II	6. 21	200	
6045.772r	3	0. 5					
6046.015?	16	2. 6	*o*	—‖S I	7. 87	10	
6047.067r	1. 5	0. 2		Atm?			
6047.667r	1. 5	0. 2	*s*?	Cr I?	3. 85	242	
6048.798r	|2|	0. 3	*S,d*	⊙—Atm			17
6049.124r	|4|	0. 7		Co I	4. 50	201	
6051.032r	1. 5	0. 2		Fe I p—	2. 56	207	
6051.848r	2	0. 3					
6052.615r	|3|	0. 5					
6052.682	11	1. 8		S I	7. 87	10	
6052.93 a	1. 5	0. 2					
6053.08 a	1. 5	0. 2					
6053.263r	1	0. 2					
6053.475	5	0. 8		Cr II	4. 74	105	
6053.693	18	3. 0	*u*	Ni I	4. 23	247	
6053.912r	2	0. 3					
6054.075	8	1. 3	*u*	Fe I	4. 37	1142	
6055.097r	3	0. 5		Cr I?			
6055.407r	2. 5	0. 4					
6055.767r	1. 5	0. 2					
6056.013m	73	*12. 2*	*u*	Fe I	4. 73	1259	
6056.343	5	0. 8					
6056.897r	|1. 5|	0. 2					
6057.08 m	1. 5	0. 2	*s*				
6057.251	5	0. 8	*o*?				

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6057.867r	1. 5	0. 2					
6058.172r	3	*0. 7*	*S*	V I	1. 04	34	
6058.76 m			*S*	Ti I p	1. 07	70	13
6059.271r	|3|	0. 5		Sc II? p	1. 36	20	
6059.757r	1. 5	0. 2					
6060.17 a	1. 5	0. 2					
6060.45 a	2	0. 3					
6060.640r	1. 5	0. 2					
6060.824r	1. 5	0. 2		Fe I p	4. 22	1081	
6061.05 a	2	0. 3					
6061.657r	2. 5	0. 4	*u*?				
6062.676	4	0. 7	*S*	Cr I	3. 19	185	
6062.856	18	3. 0	*S*	Zr I ‖Fe I	0. 07 2. 18	3 63	
6063.15 a	1	0. 2	*s*				
6063.309r	2	0. 3					
6064.046r	3. 5	0. 6					
6064.626	7	*1. 2*	*S*	Ti I	1. 05	69	
6065.18 a	3. 5	0. 6					
6065.494S	115	*19. 4*	*s*	Fe I	2. 61	207	
6065.808r	2. 5	0. 4		Fe I p	3. 30	581	
6067.638r	4	0. 7		Si I	5. 08	15	
6067.960r	3	0. 5					
6068.39 a	1. 5	0. 2					
6070.091r	1	0. 2					
6070.55 a	4	0. 7					
6071.363r	2	0. 3					
6071.758r	2	0. 3					
6073.198r	2. 5	0. 4					
6073.560r	1. 5	0. 2					
6074.018r	2	0. 3					
6076.148r	3	0. 5					
6076.608r	2	0. 3					
6076.896	12	2. 0	*u,N*				17
6077.268r	|1. 5|	0. 2					
6077.37 m			*s*	V I?	0. 00		13
6077.490r	1	0. 2					
6077.848r	4. 5	0. 7					
6078.499S	91	15. 0	*u*	Fe I	4. 79	1259	
6078.766r	2. 5	0. 4					
6079.016S	55	9. 0	*w*	Fe I	4. 65	1176	
6080.018r	4. 5	0. 7					
6080.238r	3	0. 5					
6081.210r	2	0. 3					
6081.448	15	*2. 6*	*S*	V I	1. 05	34	
6081.718r	3	0. 5		Fe I p	4. 41	1142	
6081.838r	2	0. 3		Fe I p	4. 14	1018	
6082.35 a	5	0. 8	*u*	Co I	3. 51	169	
6082.54 m	5. 5	0. 9	*s*				
6082.718S	34	5. 6	*s*	Fe I	2. 22	64	
6083.703r	|3|	0. 5	*s*?,*N*	Fe I p—	3. 88	981	
6084.105	22	3. 6	*w*	Fe II	3. 20	46	
6085.257S	40	6. 6	*S* *s*	Ti I Fe I	1. 05 2. 76	69 269	
6086.288S	43	7. 1	*w*	Ni I	4. 26	249	
6086.673r	4. 5	0. 7	*s*	Co I	3. 41	165	
6087.50 m	1. 5	0. 2	*s*	V I	1. 05	33	
6087.790	|17|	2. 8	*o*?	Si I	5. 87		17
6088.278r	1. 5	0. 2					
6088.65 a	1	0. 2					
6089.063r	2. 5	0. 4					
6089.574S	32	5. 2	*u*	Fe I	5. 02	1327	
6089.798r	1. 5	0. 2					
6089.974r	1	0. 2					
6090.075r	1	0. 2					
6090.216S	29	*4. 6*	*S*	V I	1. 08	34	
6090.510r	1. 5	0. 2	*s*	V I p	1. 06	33	
6091.177	14	2. 3	*S*	Ti I	2. 27	238	
6091.368r	3	0. 5					
6091.502r	2. 5	0. 4					
6091.730	6	1. 0	*u*	Fe I p	4. 61	1200	
6091.920	30	4. 9	*w*	Si I—	5. 87		15, 17
6092.18 a	5. 5	0. 9					
6092.525r	3	0. 5					
6092.818r	6	1. 0	*S*	Ti I	1. 89	153	
6093.151	11	1. 8	*s*	Co I	1. 74	37	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6093.368r	2	0.3		Atm?			
6093.649S	31	5.1	*u*	Fe I	4.61	1177	
6093.863r	|2|	0.3		V I?	0.04		
6094.20 a	3	0.5					
6094.377	20	3.3	*u*	Fe I	4.65	1177	
6094.70 a	2.5	0.4					
6095.364r	3	0.5		Ni I	4.42		
6096.149r	1	0.2					
6096.671S	36	5.9	*s*?	Fe I	3.98	959	
6096.884r	2.5	0.4					
6097.101r	4.5	0.7	*s*	Fe I p	2.18	64	
6097.294r	4	0.7	*S*	Ca I	2.52		
6097.46 m	2	0.3	*s*	V I	1.08	33	
6097.67 a	3	0.5					
6098.250	16	2.6	*u*	Fe I p	4.56	1200	
6098.664	7	1.1	*S*	Ti I	3.06	304	
6100.271	10	1.6	*u*?	Fe I p Fe I p	4.56 4.61	1199 1199	17
6100.95 a	2	0.3					
6102.183S	84	*14.4*	*w*?	Fe I	4.83	1259	
6102.425r	8	1.3		Ca I p	2.52		
6102.727S	135	22.1	*S*	Ca I	1.88	3	
6103.079r	89	0.2	*u*	Fe I	4.83	1260	
6103.190		10.0					
6103.298		5.1					16
6103.480r	3.5	0.6					
6103.586r	2	0.3					
6104.620r	2	0.3					
6105.132	12	2.0	*u*	Fe I p	4.55	1175	
6105.520r	1.5	0.2		Co I	2.04		
6105.785r	3	0.5		Ni I	4.23		
6106.441r	3.5	0.6		Zr II	1.76	106	
6106.616	10	1.6	*o*	Si I	5.61	30	
6106.78 m			*s*				13
6106.860r	3.5	0.6		Fe I p	2.61	208	
6106.98 m			*S*	V I	1.38	60	13
6107.099r	3	0.5		Fe I	4.26	1081	
6107.26 m	2	0.3	*s*	Ca I	2.71		
6107.350r	2.5	0.4		Fe I p	4.07	1015	
6107.898r	|3.5|	0.6					
6108.125m	60	*10.3*	*s*	Ni I	1.68	45	
6108.293r	4	0.7					
6108.465r	2.5	0.4					
6108.895r	5	0.8					
6110.345r	3	0.5					
6110.795r	2	0.3	*s*				
6111.078S	36	5.9	*w*	Ni I	4.09	230	
6111.336r	1.5	0.2					
6111.652	12	*1.8*	*S*	V I	1.04	34	
6112.026r	3	0.5					
6112.291r	3.5	0.6					
6112.412r	1	0.2					
6112.932	11	1.8	*w*?,*N*	—Si I	5.61		
6113.131r	6	1.0		Si I	5.61	30	
6113.329	17	2.8		Fe II	3.22	46	
6114.391r	1.5	0.2		Fe I p	3.93	981	
6114.801r	1.5	0.2		Zr II	1.66	93	
6115.751r	|2|	0.3					
6116.059r	5	0.8		Fe II p	3.23	46	
6116.198S	65	8.9	*u*	Ni I	4.09 4.26	218 251	
6116.246r		2.9	*u*	Fe I			
6116.456r	3	0.5					
6116.76 a	1.5	0.2					
6117.001	8	1.3	*s*	Co I	1.78		
6117.206r	5	0.8	*u*	Ca I p	2.71		
6117.414r	1	0.2					
6117.637r	1.5	0.2					
6117.819r	2	0.1					
6117.930r		0.2					
6118.111r	$\widehat{5}$	0.8		Ni I	4.09	230	
6119.175r	1.5	0.2					
6119.532	20	*3.3*	*S*	V I	1.06	34	
6119.760	12	2.0	*w*?	Ni I	4.26	244	
6120.249	6	1.0	*s*	Fe I	0.91	14	
6120.50 a	2.5	0.4					

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6120.802r	4	0. 7					
6121.006	5	0. 8	*S*	Ti I	1. 88	153	
6121.333r	4	0. 7					
6121.778r	2	0. 3					
6122.226S	222	*33. 8*	*S*	Ca I	1. 89	3	
6122.622r	3	0. 5		Co I	3. 57	169	
6123.260r	|4.5|	0. 7					
6123.45 m	|4|	0. 7	*o*?	Si I? p	5. 62		
6124.495r	1	0. 2					
6124.82 m	1.5	0. 2	*S*	Zr I	0. 52	24	
6125.026m	36	5. 9	*w*	Si I	5. 61	30	
6125.313r	4	0. 7					
6126.224m	20	*3. 3*	*S*	Ti I	1. 07	69	
6126.456r	1	0. 2					
6126.792r	2	0. 3					
6127.475r	3.5	0. 6	*S*	Zr I	0. 15	2	
6127.643r	1.5	0. 2					
6127.912S	48	*7. 8*	*u*	Fe I	4. 14 4. 28	1017 1082	
6128.112r	5	0. 8					
6128.33 m	2	0. 3	*s*	V I	1. 05	33	
6128.984S	21	*3. 5*	*s*	Ni I	1. 68	42	
6129.222r	3	0. 5		Cr II	4. 75	105	
6129.532r	7	1. 1					
6129.732r	5	0. 8		Fe II p	3. 20	46	
6130.141m	23	*3. 6*	*w*	Ni I	4. 26	248	
6130.352r	2.5	0. 4		Fe I p	3. 25	624	
6131.282r	6	1. 0					
6131.577	26	4. 2	*o*	Si I	5. 61	30	
6131.858	27	4. 4	*o*	Si I	5. 61	30	
6132.282r	4	0. 7					
6132.496r	4	0. 7					
6132.812r	1.5	0. 2					
6133.232r	|5|	0. 8					
6133.977	5	0. 8		Ni I	4. 09	229	
6134.57 m	3.5	0. 6	*S*	Zr I	0. 00	2	
6134.71 m			*s*				13
6135.072r	|2.5|	*0. 5*	*S*	V I	1. 35	60	
6135.370	12	*1. 8*	*S*	V I	1. 05	34	
6135.775	17	2. 8	*w*	Cr I?—	4. 82	314	
6136.293r	|4|	0. 7					
6136.624S	137	*22. 8*	*s*	Fe I	2. 45	169	
6137.002S	64	10. 4	*s*	Fe I	2. 20	62	
6137.221r	2.5	0. 4					
6137.294	7	1. 1	*s*				
6137.506	12	2. 0	*s*	Fe I p	3. 33	685	
6137.702S	129	*21. 8*	*s*	Fe I	2. 59	207	
6138.059r	|3|	0. 5					
6138.43 m	8	1. 3	*S*	Ti I?— Y I	2. 15 0. 07	197 3	
6138.522	17	2. 8	*o*				
6139.651	3	0. 5		Fe I p	2. 59	208	
6140.46 m	2	0. 3	*S*	Zr I	0. 52	24	
6141.058r	2	0. 3					
6141.388r	3.5	0. 6					
6141.727S	113	*19. 4*	*s*	|Ba II— Fe I	0. 70 3. 60	2 816	
6142.018r	5	0. 8		Ni I	4. 15	244	
6142.213r	4	0. 7		Si I p	5. 62	30	
6142.494	34	*5. 5*	*w*	Si I	5. 62	30	
6142.837r	|3.5|	0. 6					
6143.183r	2.5	0. 4	*S*	Zr I	0. 07	2	
6144.343r	2.5	0. 4					
6144.781r	1	0. 2					
6145.020S	38	6. 2	*W*	Si I	5. 61	29	
6145.411	4	0. 7	*u*	Fe I p	3. 37	685	
6146.235	3	0. 5	*S*	Ti I	1. 87	153	
6146.85 m	|3.5|	0. 6					
6147.173r	|1|	0. 2		Cr II?	4. 76	105	
6147.742	76	5. 4	*o*	Fe II	3. 89	74	
6147.834		7. 6	*u*	Fe I	4. 07	1016	
6148.092r	2	0. 3					
6148.272r	0.5	0. 1					
6148.662r	|3.5|	0. 6		Fe I p	4. 32	1141	
6149.001r	2	0. 3					
6149.249S	35	*5. 8*	*W*	Fe II	3. 89	74	
6149.558r	2	0. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6149.742r	2. 5	0. 4	*S*	Ti I	2. 16	197	
6150.154	12	*1. 8*	*S*	V I	0. 30	20	
6151.623S	41	*7. 0*	*s*	Fe I	2. 18	62	
6151.846r	1	0. 2					
6152.018r	2	0. 3					
6152.312r	3	0. 5					
6152.646r	1. 5	0. 2					
6152.847r	2	0. 3		Fe I? p	5. 03	1312	
6153.921r	1	0. 2					
6154.230S	27	*4. 6*	*S*	Na I	2. 10	5	
6154.442r	2. 5	0. 4		Cr I?	4. 80	314	
6154.689r	2	0. 3					
6154.892r	2. 5	0. 4					
6155.142m	72	*11. 0*	*W,N*	Si I	5. 62	29	
6155.241r		0. 6		Fe II? p	5. 57	161	
6155.706	5	0. 8	*u*	Si I	5. 62	29	
6156.030	7	1. 1	*S*	Ca I (O I)	2. 52 10. 74	20 10	
6156.281r	4	0. 6					
6156.801r	5	0. 8	*o?*	O I	10. 74	10	
6157.241r	|1.5|	0. 2					
6157.421r	3	0. 5	*u*	Fe I p	3. 30	624	
6157.733S	48	*8. 4*	*s?*	Fe I	4. 07	1015	
6157.921r	1. 5	0. 2					
6158.171r	3. 5	0. 6		O I	10. 74	10	
6158.679r	1. 5	0. 2					
6159.091r	0. 5	0. 1					
6159.382	8	*1. 3*	*u,d?*	Fe I	4. 61	1175	16
6160.228r	2. 5	0. 4					
6160.40 a	2	0. 3					
6160.753m	44	*7. 5*	*S*	Na I	2. 10	5	
6161.089r	2. 5	0. 4					
6161.295S	52	8. 4	*S*	Ca I	2. 52	20	
6161.634r	3	0. 5					
6162.180S	222	*38. 5*	*S*	Ca I	1. 90	3	
6163.421	29	*4. 7*	*u?*	Ni I	4. 10	230	
6163.554	24	3. 9	*u*	Fe I	2. 20	64	
6163.754m	49	8. 0	*S*	Ca I	2. 52	20	
6164.567r	2	0. 3					
6165.168r	1	0. 2					
6165.363S	33	*6. 0*	*s*	Fe I	4. 14	1018	
6165.550r	1	0. 2					
6165.895r	|2|	0. 3					
6166.056r	1	0. 2					
6166.440S	54	*10. 2*	*s*	Ca I	2. 52	20	
6167.872r	1. 5	0. 2					
6168.75 a	2. 5	0. 4					
6169.044m	85	*13. 8*	*S*	Ca I	2. 52	20	
6169.564S	98	*16. 5*	*S*	Ca I	2. 52	20	
6169.967r	6	1. 0					
6170.209r	2	0. 3					
6170.33 m	3	0. 5	*S*	V I	0. 29	20	
6170.516S	66	10. 7	*w*	Fe I (Ni I)	4. 79 4. 09 4. 10	1260 228 230	
6170.817r	3. 5	0. 6					
6171.004r	2. 5	0. 4		Fe I p	4. 73	1256	
6171.232r	1	0. 2					
6171.59 a	2	0. 3					
6171.950r	1. 5	0. 2					
6172.734r	1. 5	0. 2					
6173.065r	1. 5	0. 2		Eu II	1. 32	9	
6173.341S	50	*9. 7*	*u*	Fe I	2. 22	62	
6173.571r	2. 5	0. 4					
6174.737r	2	0. 3		Ti I?	2. 66	293	
6175.11 m	3	0. 5	*s*				17
6175.162				Fe II	6. 22	200	
6175.370S	36	5. 8	*w*	Ni I	4. 09	217	
6175.595r	|3|	0. 5					
6176.816S	50	*8. 7*	*u*	Ni I	4. 09	228	
6177.043r	2. 5	0. 4					
6177.253	10	1. 6	*s*	Ni I	1. 83	58	
6177.535r	2	0. 3		Ni I p	4. 23	244	
6178.518r	3	0. 5					
6179.395	2. 5	0. 4		Fe II	5. 57	163	
6180.061	3	0. 5					
6180.209S	40	*7. 1*	*s*	Fe I	2. 73	269	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes	Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6180.375r	$\widehat{5}$	0. 8						6203.345r	1. 5	0. 2					
6182.637r	1. 5	0. 2						6204.610m	16	2. 6	*w*	Ni I	4. 09	226	
6183.122r	1. 5	0. 2		Ni I	3. 46			6205.23 m	1. 5	0. 2	*S*				
6183.574	12	1. 9	*o*?				15, 17	6205.47 m	1	0. 2					
6183.872	5	0. 8		Ni I	4. 17	226		6207.232	2. 5	*0. 6*		Fe I			
6185.38 a	1. 5	0. 2		Fe I				6208.212	3. 5	0. 6					
6185.704	12	1. 9	*w*?,*d*?					6208.560	5	0. 8					
6186.14 m	|9|	0. 3	*S*	Ti I	2. 17	197		6208.892r	0. 5	0. 1					
6186.217		1. 1						6209.754r	1	0. 2		Fe I p	3. 96	981	
6186.717S	22	*3. 9*	*w*	Ni I	4. 10	229		6210.671	|2|	0. 3	*S*	Sc I	0. 00	2	
6187.410	2. 5	0. 4		Fe I p	2. 83	342		6211.19 m	1	0. 2					
6187.995S	36	*6. 3*	*u*	Fe I	3. 94	959		6212.067r	2. 5	0. 4		Fe I	4. 37	1142	
6188.55 a	1	0. 2						6212.271r	1	0. 2	*s*				
6188.998	6	1. 0	*s*,*N*	Co I	1. 71	37		6213.12 m	0. 5	0. 1	*s*	Zr I	0. 54	24	
6189.383r	—	*0. 3*	*S*	V I	0. 28	20		6213.437S	61	*11. 3*	*S*	Fe I	2. 22	62	
6190.400r	2	0. 3						6213.632r	0. 5	0. 1					
6190.837r	2	0. 3						6213.866	3	*0. 8*	*S*	V I	0. 30	20	
6191.186m	56	*9. 8*	*s*	Ni I	1. 68	45		6214.50 m	1	0. 2	*s*				
6191.571S	110	*19. 7*	*u*	Fe I	2. 43	169		6214.663	4. 5	0. 7	*s*,*d*				17
6191.74 m	3	0. 5	*S*	Y I	0. 00	2		6215.023r	|3|	0. 5					
6192.95 m			*s*,*N*	Zr I	0. 54	24	13	6215.149S	40	6. 4	*u*	Fe I	4. 19	1018	
6193.69 m			*S*	Sc I	0. 00	3	13	6215.22 m	11	1. 8	*S*	Ti I	2. 69	293	
6193.77 a	1. 5	0. 2						6215.420	7	1. 1	*o*				
6194.230r	2	0. 3						6215.723r	1	0. 2					
6194.424	11	1. 8	*o*					6215.884	4. 5	0. 7					
6194.873	3	0. 5						6216.358S	30	*5. 1*	*S*	V I	0. 28	19	
6195.18 m	1. 5	0. 2		Cr II	4. 76	105		6216.602r	3	0. 5					
6195.448	13	2. 1	*w*					6217.45 m	0. 5	0. 1					
6196.163r	1	0. 2						6217.690	3	0. 5					
6196.68 m	$\widehat{2}$	0. 3		Fe II? p	3. 22	46		6218.60 a	1. 5	0. 2					
6198.655r	1	0. 2		Ni I	4. 26			6218.91 a	1	0. 2					
6199.186	8	*1. 4*	*S*	V I	0. 29	19		6219.287S	82	*13. 8*	*S*	Fe I	2. 20	62	
6199.508	3. 5	0. 6	*s*	Fe I	2. 56	208		6219.522r	2. 5	0. 4		Fe I p	3. 42	685	
6200.321S	55	*9. 5*	*s*	Fe I	2. 61	207		6219.943	5	0. 8					
6200.481r	1. 5	0. 2						6220.235	11	1. 8	*o*				
6200.64 a	2	0. 3						6220.488	9	1. 4	*S*	Ti I	2. 68	293	
6200.967r	2	0. 3						6220.791	17	2. 7	*u*,*d*	Fe I	3. 88	958	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6221.015r	1. 5	0. 2					
6221.342	13	2. 1	*S*	Ti I |Fe I	2. 66 3. 93	293 981	
6221.643r	2. 5	0. 4		Fe I	0. 86	13	
6221.72 m	1	0. 2	*s*				
6222.61 m	1. 5	0. 2	*S*	Y I	0. 00	2	
6223.990m	24	*4. 0*	*u*	Ni I	4. 10	228	
6224.196	2	0. 3		Fe I? p	4. 73	1257	
6224.506	5	0. 8	*S*	V I	0. 29	20	
6225.173r	2. 5	0. 4					
6225.493r	2. 5	0. 4					
6226.320r	3. 5	0. 6		V II?	2. 56	124	
6226.740S	24	*4. 2*	*s*?	Fe I	3. 88	981	
6227.556	8	1. 3	*s,N,d*				17
6229.232S	33	*5. 4*	*s*	Fe I	2. 84	342	
6229.645r	1	0. 2					
6229.843r	1. 5	0. 2					
6230.098	18	*2. 7*	*w*	Ni I	4. 10	227	
6230.736S	151	*25. 4*	*s*	||Fe I V I	2. 56 0. 27	207 19	
6230.85 m			*S*				13
6231.003r	2. 5	0. 4		Co I	1. 78	37	
6231.34 m	2	0. 3					
6232.648S	|76|	*12. 8*	*s*	Fe I	3. 65	816	
6233.201	4	*0. 8*	*S*	V I	0. 28	20	
6233.498	4	0. 6	*s,d*	—Fe II	5. 48		17
6235.92 a	2	0. 3					
6237.328m	60	*9. 8*	*w*	Si I	5. 61	28	
6237.84 m	2. 5	0. 4					
6238.390m	41	*6. 9*	*o*	Fe II (Si I)	3. 89 5. 08	74	
6239.361	6	1. 0	*S,N*	Sc I	0. 00	2	
6239.771r	2	0. 3	*S*	Sc I	0. 00	3	
6239.948	10	1. 6	*o*	Fe II	3. 89	74	
6240.161r	2	0. 3	*S*	V I	0. 27	20	
6240.318	13	2. 1	*s*	Fe I—	4. 14	1015	
6240.653S	40	*6. 9*	*s*	Fe I	2. 22	64	
6241.31 m			*s*				13
6242.838	7	1. 1	*S*	V I	0. 26	19	
6243.114m	24	3. 8	*S*	V I	0. 30	19	
6243.331r	2	0. 3					
6243.57 a	1. 5	0. 2					
6243.823m	43	*6. 9*	*w*	Si I	5. 61	28	
6244.118	7	1. 1		Si I p	5. 61	28	
6244.476S	45	*7. 4*	*W*	Si I	5. 61	27	
6245.204r	1	0. 2	*S*	V I	0. 26	20	
6245.620S	30	*5. 0*	*w*?	Sc II	1. 51	28	
6245.891r	2. 5	0. 4		Fe I?	5. 01	1289	
6246.327S	112	*19. 4*	*s*	Fe I	3. 60	816	
6247.350	5	0. 8					
6247.562S	49	*8. 3*	*W*	Fe II	3. 89	74	
6248.26 m	1. 5	0. 2					
6248.910	|4|	0. 6		Fe II	5. 51		
6249.05 a	3	0. 5					
6249.501r	4	0. 6		Co I	2. 04		
6249.643	6	1. 0		Fe I	3. 37	685	
6249.91 m	0. 5	0. 1	*s,N*	La I	0. 51	7	
6251.286r	2	0. 3		Fe I p	4. 61	1176	
6251.825	11	*2. 1*	*S*	V I	0. 29	19	
6252.201r	1. 5	0. 2					
6252.565S	109	*18. 7*	*s*	Fe I	2. 40	169	
6253.55 a	2. 5	0. 4		Si I?	5. 08		
6253.834	17	2. 7	*s,d*	Fe I p	4. 73	1256	17
6254.173r?	115	4. 7	*s*	Si I	5. 62	28	
6254.253S		15. 0		Fe I	2. 28	111	
6254.845	4. 5	0. 7		Si I	5. 62	28	
6255.952	18	*2. 7*	*s*	Fe I			
6256.367S	81	12. 9	*S*	Fe I Ni I	2. 45 1. 68	169 43	
6256.887	3	*0. 5*	*S*	V I	0. 28	19	
6257.594r	2	0. 3		Co I	3. 71		
6257.63 m			*s*?				13
6257.81 m	3	0. 5	*S*	Ti I	0. 00	1	
6258.110S	42	*7. 2*	*S*	Ti I	1. 44	104	
6258.362r	2	0. 3					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6258.573	14	2. 2	*S*	V I	0. 26	19	
6258.713S	43	6. 9	*S*	Ti I	1. 46	104	
6258.936r	3	0. 5	*S*	Sc I	0. 02	3	
6259.594	|14|	*2. 2*	*w*	Ni I	4. 09	216	17
6259.772r	|4|	0. 6					
6259.93 a	3	0. 5					
6261.106m	40	*7. 0*	*S*	Ti I	1. 43	104	
6261.23 m			*S*	V I	0. 27	20	13
6261.293r	2	0. 3					
6261.552r	2. 5	0. 4					
6261.965r	1	0. 2					
6262.250r	3	0. 5		—La II?	0. 40	33	
6264.807r	2. 5	0. 4	*s*	Ti I	1. 74	144	
6265.141S	72	*12. 4*	*S*	Fe I	2. 18	62	
6265.600	3	0. 5	*u*?				
6266.015r	1	0. 2	*S*	Ti I	1. 75	144	
6266.326	3	*0. 5*	*S*	V I	0. 28	20	
6266.834r	1	0. 2					
6267.216r	|1|	0. 2					
6267.62 m	4	0. 6		Atm			
6267.845	5	0. 8		Fe I	4. 29	1123	
6268.225r	0. 5	0. 1					
6268.53 m	2. 5	0. 1	*S*	Ti I	1. 43	103	
6268.611r		0. 3					
6268.872r	3	0. 5	*S*	V I	0. 30 0. 29	20 20	
6269.422r	0. 5	0. 1					
6269.977	6	1. 0	*o*?				
6270.231S	46	*8. 0*	*s*	Fe I	2. 86	342	
6270.420r	1	0. 2					
6270.904r	1	0. 2					
6271.283m	19	*3. 0*	*s*	Fe I	3. 33	685	
6271.495r	3	0. 5		Fe I p	4. 58	1231	
6271.767	3. 5	0. 6		Ni I	3. 31		
6271.949r	2	0. 3		Atm			
6272.415r	3	0. 5		Atm			
6272.645	4	0. 6		Ni I	4. 26	244	
6273.098r	1. 5	0. 2					
6273.39 m			*S*	Ti I	0. 02	1	13
6273.65 m	1	0. 2					
6273.949	|3|	0. 5					
6274.658	6	*1. 1*	*S*	V I	0. 27	19	
6275.278	|3|	0. 5		Atm H_2O	R 6	113	26
6275.72 m	1	0. 2					
6276.32 m			*S*	Sc I	0. 02	2	13
6276.44 m	2	0. 3		Atm H_2O	R 3	113	26
6276.590m	24	3. 8		Atm O_2	R 15	2,0	22
6276.633m				Atm O_2	R 17	2,0	22
6276.818m	21	3. 3		Atm O_2	R 13	2,0	22
6276.938m	8	1. 3		Atm O_2—Fe I?	R 19	2,0	22
6277.151r	$\widehat{5}$	0. 8	*u*?	Atm?			
6277.312m	26	4. 1		Atm O_2	R 11	2,0	22
6277.419m	27	1. 8	*s,N*	Atm O_2	R 15	2,0	22
6277.470m		1. 6		Atm O_2—Ti I	R 17 1. 73	2,0 144	22
6277.525m		1. 0		Atm O_2	R 21	2,0	22
6277.638m	19	3. 0		Atm O_2	R 13	2,0	22
6277.785m	8	1. 3		Atm O_2	R 19	2,0	22
6278.00 m	4	0. 6		Atm H_2O	R 5	113	26
6278.073m	|52|	4. 9		Atm O_2	R 9	2,0	22
6278.126m		4. 0		Atm O_2	R 11	2,0	22
6278.374m	3. 5	0. 6		Atm O_2	R 21 R 23	2,0 2,0	22
6278.878m	22	3. 5		Atm O_2	R 9	2,0	22
6279.101S	27	4. 3		Atm O_2	R 7	2,0	22
6279.233m	4	0. 6		Atm O_2	R 23	2,0	22
6279.318	12	1. 9		Atm—Si I	5. 86		
6279.506m	2	0. 3		Atm O_2	R 25	2,0	22
6279.740	23	3. 7	*u*	Sc II	1. 50	28	
6279.896S	23	3. 7		Atm O_2	R 7	2,0	22
6280.393S	26	4. 1		Atm O_2	R 5	2,0	22
6280.622S	52	8. 3	*S*	Fe I	0. 86	13	
6280.791	6	1. 0					
6280.89 m	1. 5	0. 2		Atm O_2	R 27	2,0	22
6281.020r	1	0. 2					
6281.178S	20	3. 2		Atm O_2	R 5	2,0	22

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6281.627r	1	0. 2		Atm H_2O	R 3	113	26
6281.781m	0. 5	0. 1		Atm O_2	R 27	2,0	22
6281.956S	22	3. 5		Atm O_2	R 3	2,0	22
6282.500m	5	0. 8		Atm H_2O	R 4	113	26
6282.599r	6	1. 0	*s,N*	Co I	1. 74	37	
6282.726m	22	3. 5		Atm O_2	R 3	2,0	22
6282.816	13	2. 1	*u*				
6283.796S	12	1. 9		Atm O_2	R 1	2,0	22
6284.001r	0. 5	0. 1		Fe I p	3. 30	624	
6284.536m	6	1. 0		Atm O_2	R 1	2,0	22
6285.165	7	*1. 1*	*S*	V I	0. 28	19	
6285.42 m			*s*				13,16
6285.801	10	1. 6	*w*	—Atm H_2O	R 3	113	26
6286.142	19	3. 0	*w*				
6286.40 a	1	0. 2					
6286.800r	1	0. 2		Atm			
6287.285r	2. 5	0. 4		Atm H_2O	R 3	113	26
6287.749m	13	2. 1		Atm O_2	P 1	2,0	22
6287.945r	3	0. 5		Atm			
6288.315	3. 5	0. 6					
6289.140	2. 5	0. 4		Atm H_2O	R 2	113	26
6289.398S	|15|	2. 4		Atm O_2	P 3	2,0	22
6289.581r	1. 5	0. 2					
6289.95 a	1. 5	0. 2		Atm H_2O	Q_3	113	26
6290.221S	21	3. 3		Atm O_2	P 3	2,0	22
6290.532	6	1. 0		Fe I p	2. 59	208	
6290.974m	66	10. 5	*s*?	Fe I	4. 73	1258	
6292.162S	|19|	3. 0		Atm O_2	P 5	2,0	22
6292.362r	2	0. 3					
6292.614	8	1. 3		Atm H_2O	R 2	113	26
6292.816	9	*1. 9*	*S*	V I	0. 29	19	
6292.958S	25	4. 0		Atm O_2	P 5	2,0	22
6293.21 a	2	0. 3					
6293.60 a	1. 5	0. 2					
6293.933	12	1. 9	*u,NN*	Fe I p—	4. 83	1260	
6294.650	3. 5	0. 6		Atm H_2O	R 1	113	26
6295.178S	|23|	3. 6		Atm O_2	P 7	2,0	22
6295.28[illegible]m			*s*	Ti I	{0. 05 1.75	{1 144	13
6295.380r	1. 5	0. 2					
6295.650r	0. 5	0. 1		Atm			
6295.960S	24	3. 8		Atm O_2	P 7	2,0	22
6296.149r	4. 5	0. 7					
6296.371r	2. 5	0. 4					
6296.495	6	*1. 1*	*S,d*	V I	0. 30	19	
6296.66 m	2	0. 3	*S*	Ti I	0. 00	1	
6297.262	7	1. 1		Atm H_2O	R 1	113	26
6297.799S	65	*11. 0*	*s*	Fe I	2. 22	62	
6298.084r	|5|	0. 8		Ti I?	1. 73	144	
6298.457m	22	3. 5		Atm O_2	P 9	2,0	22
6298.60 a to 6299.05 a	9	1. 4					
6299.228S	30	4. 8		Atm O_2	P 9	2,0	22
				Atm H_2O	R 1	113	26
6299.414r	3. 5	0. 6					
6299.588	36	5. 7	*u,N*				
6300.311	5	0. 8		[O I]	0. 00	1F	25
6300.49 m	1	0. 2					
6300.678	6	1. 0		Sc II	1. 51	28	
6301.508S	127	*19. 4*	*s*?	Fe I	3. 65	816	
6301.845r	1. 5	0. 2		Fe I p	3. 64	863	
6302.000m	23	3. 6		Atm O_2	P 11	2,0	22
6302.190r	3. 5	0. 6					
6302.499S	83	*13. 0*	*w*	Fe I	3. 69	816	
6302.764S	21	3. 3		Atm O_2	P 11	2,0	22
6302.948r	5	0. 8					
6303.461	4	0. 6	*u*	Fe I	4. 32	1140	15
6303.767m	5	0. 8	*S*	Ti I	1. 44	104	
6304.324	4. 5	0. 7		Zr I?	0. 54	24	
6305.314r	5	0. 8		Fe II	6. 22	200	
				Atm H_2O	Q 1	113	26
6305.667r	3. 5	0. 6	*S*	Sc I	0. 02	2	
6305.810S	18	2. 8		Atm O_2	P 13	2,0	22
6306.04 m	1. 5	0. 2	*S*	Sc I	0. 02	3	
6306.218r	1. 5	0. 2		Fe I p	4. 59	1230	
6306.565S	17	2. 7		Atm O_2	P 13	2,0	22

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6306.738r	2. 5	0. 4	*s*				
6307.551r	2. 5	0. 4					
6307.854	5	0. 8	*s*	Fe I p	3. 64	863	
6308.62 m			*s*				13
6308.813	6	1. 0	*u*				
6309.394	2. 5	0. 4		Atm H_2O	Q 2	113	26
6309.886S	22	3. 5		Atm O_2 Sc II	P 15 1. 50	2,0 28	22
6310.266	|13|	2. 1	*u*				
6310.636m	12	1. 9		Atm O_2	P 15	2,0	22
6311.239	|8|	1. 3	*s*	Ti I?	1. 44	103	17
6311.504m	23	*3. 6*	*s*	Fe I	2. 83	342	
6311.724r	2	0. 3					
6312.241m	5	0. 8	*S*	Ti I	1. 46	104	
6312.758	2. 5	0. 4					
6312.876m	1	0. 2		Atm H_2O	Q 1	113	26
6313.03 m	1	0. 2	*s*	Zr I	1. 58	65	17
6314.235m	10	1. 6		Atm O_2	P 17	2,0	22
6314.668m	67	*10. 8*	*s*	Ni I	1.93 (4.15)	67 249	
6314.977m	11	1. 7		Atm O_2	P 17	2,0	22
6315.314S	52	8. 2	*w*	Fe I	4. 14	1015	
6315.412	16	2. 5	*s*	Fe I p Atm	4. 14	1016	
6315.814S	33	5. 2	*u*	Fe I	4. 07	1014	
6316.319	3. 5	0. 6		Atm H_2O	Q 2	113	26
6316.584	2	0. 3		Ni I	4. 15	248	
6317.214	3. 5	0. 6		Atm H_2O	Q 1	113	26
6317.418	4. 5	0. 7		Atm H_2O	Q 2	113	26
6318.027S	96	*15. 7*	*s*	Fe I (Ti I)	2. 45 1. 43	168 103	
6318.311r	3	0. 5					
6318.61	49	7. 7		Ca I	4. 43	53	27
6318.708	37	5. 9	*u*	Mg I	5. 11	23	
6318.853m	4. 5	0. 7		Atm O_2	P 19	2,0	22
6319.242	18	2. 8	*w*	Mg I	5. 11	23	
6319.490	9. 5	1. 5		Atm (Mg I)	5. 11	23	
6319.591m	4. 5	0. 7		Atm O_2	P 19	2,0	22
6319.84 a	2	0. 3					
6319.943	4. 5	0. 7		Atm H_2O	Q 3	113	26
6320.429	|4|	0. 6	*u,N*	La II	0. 17	19	
6320.843	6	0. 9	*u*	Sc II	1. 50	28	16
6321.329	1. 5	0. 2	*o*?	Atm H_2O—	Q 4	113	17,26
6322.169	19	3. 0	*w*	Ni I	4. 15	249	
6322.359m	2	0. 3		Atm H_2O	Q 2,4	113	26
6322.694S	75	*11. 9*	*s*	Fe I	2. 59	207	
6323.750m	4. 5	0. 7		Atm O_2	P 21	2,0	22
6323.870m	3. 5	0. 6		Atm H_2O	P 1	113	26
6324.479m	4	0. 6		Atm O_2	P 21	2,0	22
6325.165	2	0. 3	*S*	Ti I	0. 02	1	
6326.46 m	1. 5	0. 2					
6326.823r	2	*0. 5*	*S*	V I	1. 87	84	
6327.270r	1	0. 2					
6327.604S	36	*5. 7*	*s*	Ni I	1. 68	44	
6328.913m	2. 5	0. 4		Atm O_2	P 23	2,0	22
6329.636m	2. 5	0. 4		Atm O_2	P 23	2,0	22
6330.096m	25	*4. 3*	*S*	Cr I	0. 94	6	
6330.852S	32	*5. 0*	*w*	Fe I	4. 73	1254	
6331.129r	1	0. 2					
6331.58 m	2	0. 3					
6331.953	11	1. 7	*o*	Si I Fe II	5. 08 6. 22	199	
6332.066m	|5|	0. 8		Atm H_2O	P 2	113	26
6333.235	2	0. 3		Atm H_2O	P 2	113	26
6334.358m	2. 5	0. 4		Atm O_2	P 25	2,0	22
6334.687r	1. 5	0. 2					
6335.072m	3. 5	0. 6		Atm O_2	P 25	2,0	22
6335.337S	103	*16. 1*	*s*	Fe I	2. 20	62	
6336.113m	8	1. 3	*S*	Ti I	1. 44	103	
6336.450r	|3.5|	0. 6		Atm?			
6336.830S	121	*18. 5*	*s*	Fe I	3. 69	816	
6337.59 m	2	0. 3					
6338.15 a	3	0. 5					
6338.45 a	2	0. 3					
6338.880	42	6. 6	*w*	Fe I	4. 79	1258	
6339.118	|44|	6. 9	*u*	Ni I	4. 15	248	
6339.92 m			*s,N*				13

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6339.975r	1	0. 2		Fe I p	3. 40	685	
6341.26 m	2	0. 3		Atm H_2O	P 3	113	26
6342.26 m			*s*				13
6342.389	4. 5	0. 7		Atm H_2O	P 3	113	26
6342.86 a	2	0. 3					
6343.71 a	70	11. 0		Ca I	4. 44	53	27
6344.155S	56	8. 8	*s*	Fe I	2. 43	169	
6344.82 m			*S*	Sc I	0. 00	1	13
6347.095	54	8. 5	*o*	Si II	8. 12	2	
6347.305m	6	0. 9		Atm H_2O	P 3	113	26
6347.860	4	0. 6		Co I	4. 39	200	
6349.48 m	3	*0. 6*	*S*	V I	1. 85	84	
6349.75 m	4. 5	0. 7					
6350.495	8	1. 3		Ni I—	4. 16		
6350.719	4	0. 6		Atm H_2O	P 4	113	26
6351.287	|3|	0. 4	*s,NN*	Fe I p	4. 31	1140	
6352.517r	2. 5	0. 4					
6352.944	4. 5	0. 7	*S*				
6353.388	3. 5	0. 6					
6353.849r	1. 5	0. 2	*S*	Fe I p	0. 91	13	
6354.657r	3	0. 5					
6355.035S	62	9. 8	*s*	Fe I	2. 84	342	
6355.187	17	2. 7	*s*?	Atm H_2O	P 4	113	26
6357.29 m	1. 5	0. 2	*S*	V I	1. 85	84	
6357.86 m	1	0. 2					
6358.687S	|82|	*12. 9*	*s*	Fe I	0. 86	13	
6359.91 m			*S*	Ti I	0. 05	1	13
6360.818	16	2. 5	*w*	Ni I	4. 17	229	
6361.07 m			*s*				13
6361.205r	4. 5	0. 2	*s*				
6361.252		0. 5		Atm H_2O	P 5	113	26
6361.94	89?	14.2?		Ca I	4. 45	53	27
6362.350m	23	3. 6	*w*	Zn I	5. 79	6	17
6362.876m	30	4. 7	*S*	Cr I	0. 94	6	
				Fe I	4. 19	1019	
6363.79 m	3	0. 5		[O I]	0. 02	1F	25
6364.00 a	1. 5	0. 2					
6364.369m	25	3. 9	*w*?	Fe I	4. 79	1253	
6364.706	12	1. 9	*w*	Fe I	4. 58	1229	
6366.356	4	0. 6	*S*	Ti I	1. 46	103	
6366.491m	26	4. 1	*w*	Ni I	4. 17	230	
6366.772r	1.5	0. 2					
6367.128	2.5	0. 4	*o*				
6367.418	2.5	0. 4					
6367.82 m			*s,N*				13
6367.92 m			*s*				13
6368.464	2.5	0. 4		Atm H_2O	P 5	113	26
6368.96 a	1.5	0. 2					
6369.463	18	2. 8	*o*	Fe II	2. 89	40	
6370.357	11	1. 7	*u*	Ni I	3. 54	127	
6370.61 m	3	0. 5	*S*				16
6371.26 m	35	1. 4					
6371.355m		4. 1	*o*	Si II	8. 12	2	
6371.568	|4.5|	0. 7		Atm H_2O	P 6	113	26
6372.231m	1	0. 2		Atm H_2O	P 5	113	26
6374.50 a	2.5	0. 4					
6374.73 m	1	0. 2	*S*				
6375.225	3	0. 5		Ni I	4. 16		
6375.818	4	0. 6		Atm H_2O	P 5	113	26
6376.198	1.5	0. 2		Fe I p	4. 32	1140	
6378.256S	27	*4. 4*	*w*	Ni I	4. 15	247	
6378.72 a	1	0. 2					
6378.85 m			*S*	Sc I	0. 00	1	13
6378.953r	1.5	0. 2					
6379.39 m	1	0. 2	*S*	V I?	2. 12		16
6379.666r	1	0. 2					
6380.750S	40	*7. 2*	*w*	Fe I	4. 19	1015	
6380.93 m	1.5	0. 2	*s*				
6381.142	2	0. 3		Ni I	4. 42		
6381.44 m			*S*				13,16
6381.632r	1.5	0. 2	*s*				
6382.60 a	2	0. 3					
6383.44 m			*s*				13
6383.715	8	1. 3	*o*	Fe II	5. 55		
6383.906r	2	0. 3		CN	Q 20	5,1	12
6384.42 a	1.5	0. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6384.668	20	3. 1	*w*?	Mn I— Ni I	3. 77 4. 15	39 246	17
6385.458	2	0. 3		Fe II	5. 55		
6385.726	8	1. 3	*u*	Fe I p	4. 73	1253	
6388.22 a	2	0. 3					
6388.427	2. 5	0. 4		CN Fe I p	Q 21 3. 37	5,1 685	12
6390.493	2	0. 3		La II	0. 32	33	
6391.259r	|2|	0. 3					
6392.538	10	*1. 6*	*s*	Fe I	2. 28	109	
6393.19 a	2	0. 3					
6393.612S	117	*19. 1*	*s*	Fe I	2. 43	168	
6394.223	6	0. 9					
6394.487r	1. 5	0. 2		Atm H_2O	P 8	113	26
6395.148	6	0. 9		Co I Ca I	3. 81	174	15
6395.47 m	1	0. 2	*S*				
6396.388r	1	0. 2		CN Fe I p	Q 21 3. 69	5,1 921	12
6397.545r	1	0. 2		Atm			
6397.974	3	0. 5	*s,d*?	CN	Q 23	5,1	12
6398.917r	|3|	0. 5		Atm			
6400.009S	181	28. 3	*s*	Fe I	3. 60	816	
6400.323S	46	7. 2	*S*	Fe I	0. 91	13	
6400.811r	2	0. 3		CN	Q 22	5,1	12
6401.95 m			*s*	Y I	0. 07	2	13
6402.295r	1. 5	0. 2					
6403.127	2	0. 3	*o*	CN—	Q 24	5,1	12
6403.698r	1	0. 2					
6404.180r	1	0. 2					
6405.45 m	6	0. 9		CN	Q 23	5,1	12
6405.763	13	2. 0	*u?,NN*				
6406.07 m	1. 5	0. 2	*s*				16
6406.28 m	2	0. 3					
6407.113	6	0. 9		Si I? p	5. 87		
6407.291	|26|	4. 0	*o*	Si I Fe II	5. 87 3. 89	 74	
6408.026S	|80|	12. 5	*s*	Fe I	3. 69	816	
6408.375r	|5|	0. 8		CN	Q 25	5,1	12
6408.47 m	3	0. 5	*s*	Sr I	2. 27	8	
6408.682	8	1. 2	*s*	Atm H_2O	R′ 5	311	16, 26
6410.431r	2	0. 3					
6410.926	6	0. 9	*u*				
6411.113	6	0. 9	*o*?	Fe I	4. 73	1256	
6411.658S	129	20. 1	*s*	Fe I	3. 65	816	
6412.233r	2	0. 3		Fe I	2. 45	169	
6413.14 a	0.5	0. 1	*s*	Ti I p	0. 05	1	
6413.32 m	1.5	0. 2	*S*	Sc I	0. 02	1	
6413.588r	2.5	0. 4					
6413.932	2	0. 3		CN	Q 26	5,1	12
6414.594	15	2. 3	*w*	Ni I	4. 15	244	
6414.987	45	*7. 2*	*W*	Si I	5. 87		
6415.424r	5	0. 8		CN	Q 25	5,1	12
6416.031r	2	0. 3					
6416.530r	2	0. 3					
6416.928m	|47.5|	*7. 3*	*w*	Fe II	3. 89	74	
6417.685	9	1. 4	*s*	Ca I	4. 44		
6417.884r	2.5	0. 4					
6419.09 m	1.5	0. 2	*S*	Ti I	2. 17	196	
6419.374r	2	0. 3					
6419.650	9	1. 4	*u*?	CN Fe I p	Q 27 3. 94	5,1 958	12
6419.956S	80	*13. 2*	*w*	Fe I	4. 73	1258	
6420.75 m	2	0. 3		CN	Q 26	5,1	12
6421.360S	87	13. 5	*s*	Fe I	2. 28	111	
6421.526	16	2. 5	*o*?	Ni I	4. 16	258	
6424.862	11	1. 7	*u* *o*?	Atm H_2O Ni I	R 4 4. 17	212 227	17, 26
6425.537r	2.5	0. 4		CN	Q 28	5,1	12
6426.281	2	0. 3		CN	Q 27	5,1	12
6426.683	3	0. 5					
6428.174r	1	0. 2		Ca I? p	4. 44		
6428.67 a	0.5	0. 1					
6429.902	2.5	0. 4	*u,N*	Co I	2. 14	81	
6430.274r	2	0. 3		Atm			
6430.454r 6430.50 m	1.5	0. 1 0. 1	 *s*	 V I	 1. 95	 107	
6430.856S	106	*16. 8*	*s*	Fe I	2. 18	62	
6431.255r	1.5	0. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6431.63 m			*s*	V I	1. 95	107	13
6431.679r	1.5	0. 2		—CN	Q 29	5,1	12
6432.023	1.5	0. 2		CN Ni I	Q 28 3. 54	5,1 126	12
6432.683m	38	5. 9	*W*	Fe II	2. 89	40	
6432.966	4.5	0. 7		Atm H_2O	R 3	212	26
6433.452	15	2. 3	*u,N*				17
6433.737r	5	0. 8					
6434.571	2	0. 3	*o*?	Atm?			
6435.049r	|1.5|	0. 2	*S*	Y I	0. 07	2	
6436.25 a	1.5	0. 2		Atm			
6436.413	7	1. 1	*s*	Fe I	4. 19	1016	
6436.923r	1.5	0. 2		Atm			
6437.698	6	0. 9		Eu II—	1. 32	8	
6438.040r	2	0. 3		CN— CN	Q 29 Q 30	5,1 5,1	12 12
6438.773	7	1. 1	*s*	Fe I	4. 43	1158	
6439.083m	156	*25. 6*	*S*	Ca I	2. 52	18	
6439.53 a 6439.72 a	2	0. 2 0. 1					
6440.19 a	1.5	0. 2		Atm			
6440.645	1.5	0. 2					
6440.934	4	0. 6	*s,d*?	Mn I	3. 77	39	
6441.624r	1.5	0. 2		Atm			
6442.482r	2	0. 3					
6442.950	3.5	0. 5		Fe II	5. 55		
6443.55 a	4	0. 6		Atm H_2O	R′ 3	311	26
6444.218r 6444.41 a	4.5	0. 2 0. 5		CN	Q 30	5,1	12
6444.71 a	3	0. 5		CN	Q 31	5,1	12
6445.72?m	1	0. 2	*s*	Zr I	1. 00	57	
6446.133r	2	0. 3		Atm			
6446.400	5	0. 8		Fe II	6. 22	199	
6447.943	2.5	0. 4		Atm H_2O	R 3	212	26
6449.127	34	5. 3	*s,N,d*				17
6449.601	2.5	0. 4		Atm			
6449.820S	98	15. 2	*S*	Ca I	2. 52	19	
6450.179	24	3. 7	*s,N*	Co I	1. 71	37	
6450.325	20	3. 1	*s,N*				
6450.654r	1	0. 2		CN	Q 31	5,1	12
6451.573r	3	0. 5		Ni I Fe I	4. 16 3. 69	257 921	
6452.08 m			*s*?				13
6452.315	6	*0. 9*	*S*	V I	1. 19	48	
6452.688r	1.5	0. 2	*s*	Ni I? Atm	4. 09	226	
6453.602r	2.5	0. 4					
6453.92 a	1	0. 2		Atm			
6454.139	4	0. 6		Atm H_2O	R 6	311	26
6455.001	11	1. 7	*s,d*?	Co I	3. 63	174	
6455.605S	48	7. 4	*S*	Ca I	2. 52	19	
6455.90 m	2	0. 3					
6456.391S	57	*9. 3*	*W*	Fe II	3. 90	74	
6456.58 a	3	0. 5					
6456.865	17	2. 6	*w*?	Fe I p Ca II	4. 79 8. 44	1256 19	
6457.114	6	0. 9	*s,d*?	—Atm?			17
6457.380	8	1. 2					
6458.556r	2	0. 3		CN	Q 33	5,1	12
6458.682	3	0. 5		Atm			
6458.892	10	1. 5		Atm H_2O	R 5	311	26
6459.080r	1	0. 2		Atm			
6459.683	5	0. 8		Atm H_2O	R 5	311	26
6459.987	3	0. 5		Atm			
6460.223	2.5	0. 4		Atm H_2O	R 5	311	26
6460.934r	3	0. 5		Atm?			
6461.10 m	|1.5|	0. 2					
6461.838	5	0. 8		Atm			
6462.032	4.5	0. 7		Atm			
6462.570 6462.749	216	23. 2 11. 6	*S* *s*	Ca I Fe I	2. 52 2. 45 ((0.91)	18 168 13	
6463.19 m	4	0. 6		Atm H_2O	R 5	311	26
6463.493	8	1. 2		Atm			
6463.744r	3	0. 5		Atm			
6463.955r	1.5	0. 2					
6464.183r	2	0. 3		CN	Q 33	5,1	12
6464.427	9	1. 4		Atm H_2O	R 5	311	26
6464.679	10	1. 5	*S*	Ca I	2. 52	19	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6465.409r	2	0. 3		Atm?			
6465.787r	2.5	0. 4		CN	Q 34	5,1	12
6466.138	4	0. 6		Atm H_2O	R 9	311	26
6466.265	|8|	1. 2		Atm H_2O	R 4	311	26
6466.726	|5|	0. 8		Atm H_2O	R 5	311	26
6466.997	5	0. 8	*s*	V I	1. 05	32	
6467.593	6	0. 9		Atm H_2O	R 8	311	26
6467.83 m			*s*				13
6467.887	5	0. 8		Atm H_2O	R′ 1 R 4	311 311	26
6467.984	|4|	0. 6					
6468.363	3	0. 5		Atm H_2O	R 4	311	26
6468.834r	3	0. 5		Fe I p	4. 79	1254	
6469.192m	52	8. 0	*u*	Fe I	4. 83 (2.40)	1258 168	
6469.364	6	0. 9		Atm H_2O	R 4	311	26
6469.642	12	1. 8		Atm H_2O	R 7	311	26
6469.989	9	0. 7		Atm H_2O	R 4	311	26
6470.02 m		0. 7	*s*				
6470.23 m	|1|	0. 2	*s*	Zr I	1. 58	65	
6470.896	2.5	0. 4					
6471.17 m	|1.5|	0. 2					
6471.668S	83	*13. 4*	*S*	Ca I	2. 52	18	
6472.144r	2.5	0. 4		Fe I p	4. 37	1140	
6472.477	12	1. 8		Atm H_2O	R 6	311	26
6472.605	6	0. 9		Atm?			
6473.183	17	2. 6		Atm H_2O	R 4	311	26
6473.528r	1	0. 2					
6474.117	4	0. 6		Atm			
6474.614r	4	0. 6		Fe I	3. 63	861	
6475.058	18	2. 8		Atm H_2O	R 3	311	26
6475.213	25	3. 9		Atm H_2O	R 5	311	26
6475.632S	57	8. 8	*s*	Fe I	2. 56	206	
6475.824	16	2. 5		Atm H_2O	R 3	311	26
6476.568	4.5	0. 7		Atm			
6477.013	4	0. 6		Atm H_2O	R 3	311	26
6477.329	5	0. 8		Atm— Fe I?			
6477.869	6	0. 9	*o*	Co I	3. 77	174	
6478.65 a	4. 5	0. 7		CN	Q 35	5,1	12
6479.188	5	0. 8		Atm			
6479.490	2. 5	0. 4		Atm H_2O	R 3 R 4	311 311	26
6480.066	9	1. 4		Atm H_2O	R 4	311	26
6480.252r	1	0. 2		Atm			
6480.983	1. 5	0. 2		CN Atm	Q 36	5,1	12
6481.684	1	0. 2		Atm			
6481.878m	63	9. 7	*s*	Fe I	2. 28	109	
6482.185	7	1. 1		Fe II?	6. 22	199	
6482.809S	38	5. 9	*s*	Ni I	1. 93	66	
6483.062r	1. 5	0. 2		Atm			
6483.245	10	1. 5		Atm H_2O	R 3	311	26
6483.453r	1	0. 2		Atm			
6483.762	5	0. 8		Atm H_2O	R 2	311	26
6483.940	11	1. 7	*s*	Fe I p Atm H_2O	1. 48 R 3	34 212	26
6484.470r	2	0. 3		Atm			
6484.672	2. 5	0. 4		Atm H_2O	R 2	311	26
6485.18 a	3	0. 5					
6485.559	2. 5	0. 4		Atm H_2O	R 3	311	26
6486.277r	|3|	0. 5		CN Fe I?	Q 36	5,1	12
6486.782	4. 5	0. 7		Atm H_2O	R 2	311	26
6487.291r	2	0. 3		Atm			
6487.539	1. 5	0. 2		Atm H_2O	Q 3	311	26
6488.025	2	0. 3		Atm H_2O	R 2	212	26
6489.129	5	0. 8		Atm H_2O	R 2	311	26
6489.651r	6	0. 9	*s*	Zr I	1. 55	65	
6490.376r	5	0. 8		Co I	2. 04	81	
6490.652r	2. 5	0. 4		Atm			
6490.793	|14|	2. 2		Atm H_2O	R 2	311	26
6491.246r	3. 5	0. 5		Fe II	5. 58		
6491.582m	45	5. 9	*w*	Ti II	2. 06	91	
6491.666		1. 1	*s*	Mn I	3. 76	39	
6492.909	10	1. 5		Atm H_2O	R 1	311	26
6493.06 m	6	0. 9		Fe II	5. 58		
6493.245	5	0. 8		Atm H_2O	R 1 R 2	212 212	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6493.788S	133	*20. 6*	*s*	Ca I	2. 52	18	
6494.10 a	2	0. 3		Atm			
6494.304r	3	0. 5		Atm?			
6494.499	34	5. 2	*w*	Fe I p	4. 73	1255	
6494.994S	165	*26. 2*	*s*	Fe I	2. 40	168	
6495.740	42	6. 5	*w*?	Fe I	4. 83	1253	
6495.862	8	1. 2		Atm H_2O	R 1	311	26
6496.120r	3	0. 5					
6496.472m	69	10. 6	*w*?	Fe I	4. 79	1258	
6496.908m	98	*15. 4*	*s*	Ba II	0. 60	2	
6497.50	2	0. 3		Atm H_2O	Q 4	311	26
6497.594	3	0. 5		Atm H_2O	R 1	311	15,26
6497.68 a	5	0. 8	*S*	Ti I	1. 44	102	
6498.24 a	2	0. 3					
6498.433r	1.5	0. 2					
6498.75 m			*s*	Ba I?	1. 19	6	13
6498.945S	43	*8. 6*	*S*	Fe I	0. 96	13	
6499.216r	4.5	0. 7					
6499.654S	81	12. 5	*S*	Ca I	2. 52	18	
6499.93 m	2	0. 3		Atm?			
6500.39 m	3.5	0. 5					
6500.839r	2.5	0. 4					
6501.203	9	1. 4	*S,d*	Cr I—Atm	0. 98	16	
6501.678	25	*3. 6*	*s*	Fe I			
6502.22 a	7	1. 1		Ni I	3. 40		
6502.40 a	2	0. 3		Atm			
650 .95 a	6	0. 9		Atm			
6503.45 a	4	0. 6		Atm H_2O	Q 6	311	26
6503.75 a	5	0. 8		Atm H_2O	Q 3	311	26
6504.00 m	1.5	0. 2	*s*	Sr I	2. 26	8	
6504.186	17	2. 6	*s*	‖V I Atm H_2O	1. 18 R 0	48 311	26
6504.472r	1.5	0. 2		Atm			
6504.92 a	|1.5|	0. 2					
6505.08 a	1	0. 2					
6505.488r	6	0. 9		CN—	Q 39	5,1	12
6506.36 m	|2|	0. 3		Atm Fe II	5. 59		
6506.39 m			*s*	Zr I	0. 63		13
6507.661r	3	0. 5		Atm H_2O	Q 1	212	26
6508.154r	3	0. 5	*S*	Ti I	1. 43	102	
6508.593	14	2. 2	*o*	Atm H_2O	Q 2	311	26
6508.846	11	1. 7	*S*	Ca I	2. 52	18	
6509.608	3. 5	0. 5	*u,d*?	Fe I p	4. 07	1012	16
6510.42 a	2	0. 3		CN	Q 39	5,1	12
6511.10 m	3	0. 5					
6511.449r	0. 5	0. 1		Atm			
6511.999	8	1. 2		Atm H_2O	Q 1	311	26
6512.242	8	1. 2		Atm H_2O	Q 4	311	26
6512.921r	0. 5	0. 1					
6513.070r	|3|	0. 5		Atm			
6513.602	2	0. 3		Atm H_2O	Q 5	311	26
6514.288	6	0. 9		Atm H_2O	Q 3	311	26
6514.727	33	5. 1		Atm H_2O—	Q 2	311	26
6515.231r	0. 5	0. 1					
6515.73 m	4	0. 6					
6515.848	|12|	1. 8		Atm H_2O	Q 2	311	26
6516.083S	61	9. 4	*w*	Fe II	2. 89	40	
6516.437	56	1. 1		Atm H_2O	Q 3	311	26
6516.543		3. 5		Atm H_2O	Q 1	311	26
6516.625		4. 0		Atm H_2O	Q 3	311	26
6517.082	|18|	2. 8		Atm H_2O	Q 4	311	26
6517.700r	1. 5	0. 2					
6518.011	12	1. 8		Atm H_2O	Q 4	311	26
6518.373S	61	*9. 4*	*s*	Fe I	2. 83	342	
6518.741	|23|	3. 5	*w*	Si I Atm H_2O	5. 95 Q 6	62 311	26
6519.02 a	|3|	0. 5					
6519.170	5	0. 8		Atm H_2O	Q 4	311	26
6519.452	|20|	3. 1		Atm H_2O	Q 3	311	26
6519.75 a	3. 5	0. 5					
6520.124	1. 5	0. 2					
6521.50 a to 6521.65 a	10	1. 5					
6521.891r	1	0. 2		Atm H_2O	Q 6	311	26
6522.192	3	0. 5		Atm H_2O	Q 2	311	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6522.913r	|3|	0. 4		Atm CN	Q 41	5,1	12
6523.327	3	0. 5		Atm H_2O	Q 5	311	26
6523.656	4	0. 6		Atm H_2O	Q 1	212	26
6523.843	21	3. 2		Atm H_2O	P 1	311	26
6524.7 a to 6525.3 a	5	0. 8		Fe I p—	5. 01	1280	
6525.807r	|3. 5|	0. 5		Atm H_2O	Q 4	311	26
6526.421	6	0. 9		Si I? p	5. 87		
6526.653	28	4. 3	*w,d*	Si I—	5. 87		17
6526.95 a	2	0. 3		La II?	0. 23	33	
6527.215m	53	8. 1	*o*?	Si I	5. 87	52	17
6527.30 m			*s*				13
6527.598r	4	0. 6		CN	Q 41	5,1	12
6528.113r	1	0. 2					
6528.539	11	1. 7	*s*	Fe I			
6529.187r	2	0. 3	*s*	Cr I	3. 89	265	
6530.10 a	1	0. 2					
6530.598	7	1. 1		Atm H_2O	Q 3	311	26
6531.077r	2	0. 3		Atm			
6531.429	5	*0. 8*	*S*	V I	1. 22	48	
6532.359	24	3. 7		Atm H_2O	P 2	311	26
6532.572r	3	0. 5	*u*				
6532.881	18	2. 8	*s*	Ni I	1. 93	64	
6533.102r	2. 5	0. 4					
6533.535r	2	0. 3					
6533.940	46	5. 2	*w,d*	Fe I	4. 56	1197	17
6534.000		1. 9		Atm H_2O	P 2	311	26
6534.236r	7	1. 1		Atm			
6534.641	2. 5	0. 4		Atm			
6534.975r	4	0. 6		Atm H_2O	Q 5	311	26
6535.60 a	2. 5	0. 4					
6535.977r	0. 5	0. 1		Atm			
6536.47 m	3	0. 5	*s*				16
6536.720r	8	1. 2		Atm H_2O	P 2	311	26
6537.431r	2	0. 3		Atm			
6537.938	2. 5	*0. 9*	*S*	Cr I	1. 00	16	15
6538.538r	6	0. 9		Atm H_2O— S I?	P 2 8. 04	212	26
6540.430r	3. 5	0. 5		Atm H_2O	Q 2	212	26
6541.274r	2	0. 3		Atm H_2O	P 3	212	26
6542.313	14	2. 1		Atm H_2O	P 3	311	26
6543.044r	5	0. 8		Atm H_2O	Q′ 2	311	26
6543.51 m	3	*0. 6*	*S*	V I	1. 19	48	
6543.907	34	5. 2		Atm H_2O	P 3	311	26
6545.781	8	1. 2		Atm H_2O	P 3 Q 3	311 212	26 26
6546.252m	103	15. 7	*s*	Fe I Ti I	2. 76 1. 43	268 102	
6546.94 m	2. 5	0. 4					
6547.29 m	1	0. 2		Atm			
6547.705	16	2. 4	*u,d*?	Atm H_2O—	P 3	311	17, 26
6548.34 m	3. 5	0. 5	*s*	Ti I?			
6548.622	20	3. 0		Atm H_2O	P 3	311	26
6549.054r	2. 5	0. 4		Atm			
6550.26 m	5	0. 4	*s*	Sr I	2. 69	12	
6550.278r		0. 4		Atm			
6550.90 a	|2|	0. 3					
6551.701	|8|	1. 2	*S*	Fe I p	0. 99	13	
6552.035	3	0. 5		Atm?—			
6552.629	|19|	2. 9		Atm H_2O	P 4	311	26
6552.77 m	1. 5	0. 2		Atm H_2O Fe I	Q 4 5. 02	311 1325	26
6553.785	13	2. 0		Atm H_2O	P 4	311	26
6554.238	14	*2. 1*	*S*	Ti I	1. 44	102	
6554.843	3	0. 5	*S*				
6555.11 a	3	0. 5		Atm H_2O	P 4	212	26
6555.466	40	6. 1	*w*	Si I	5. 98	62	
6555.856r	4	0. 6	*s*?	Fe I p	4. 07	1007	
6556.077	14	*2. 1*	*S*	Ti I	1. 46	102	
6556.321r	1. 5	0. 2		Atm?			
6556.806	16	2. 4	*u*?,*d*	Fe I— Atm	4. 79	1255	17
6557.171	15	2. 3		Atm H_2O	P 4	311	26
6557.37 m			*s*	Y I	0. 00	1	13
6557.857r	1. 5	0. 2		Atm			
6558.03 m	1	0. 2	*S,N*	V I Sc I?	1. 38 2. 61	59 24	
6558.149	7	1. 1		Atm H_2O	P 4	311	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6558.65 a	1. 5	0. 2		Atm H_2O	P 4	311	26
6558.955r	1. 5	0. 2		Atm			
6559.576	14	2. 1	*w*	Ti II	2. 05	91	
6559.813r	3	0. 5					
6560.258r	3	0. 5					
6560.555	22	3. 4	*w,d*	Atm H_2O— Si I	P 4 5. 96	311 62	17, 26
6561.097	|5|	0. 8		Atm H_2O	P 4	311	26
6562.808m	4020	*649*	*W*	Hα	10. 20	1	
6563.41 m			*S*	Co I	2. 04	80	13
6563.521	4. 5	0. 7		Atm H_2O	P 5	212	26
6564.061	4. 5	0. 7		Atm H_2O	P 5	311	26
6564.206	14	2. 1		Atm H_2O	P 5	311	26
6565.545	3	0. 5	*s*	Atm H_2O—	R 3	231	26
6565.90 a	1	0. 2	*s*?	V I	1. 18	48	
6567.85 a	2	0. 3		Atm			
6568.806	3. 5	0. 5		Atm H_2O	P 5	311	26
6568.90 m	5	0. 8					
6569.224S	71	*11. 9*	*w*	Fe I (Sm II)	4. 73 1. 49	1253 62	
6570.052m	|1|	0. 2		Atm H_2O	R 2	231	26
6570.630m	4	0. 6		Atm H_2O	P 5	311	26
6570.84 a	3	0. 5					
6570.979m	2	0. 3		Atm			
6571.18 a	5	0. 8		Fe I	4. 29	1121	
6572.086	|19|	2. 9		Atm H_2O	P 5	311	26
6572.795	|26|	*4. 1*	*S*	Ca I	0. 00	1	
6573.526r	|1|	0. 2		Atm H_2O	R 4	231	26
6574.254	22	*3. 6*	*s*	Fe I	0. 99	13	
6574.474r	|1.5|	0. 2					
6574.852	19	2. 9		Atm H_2O	{P 5 {P 6	311 311	}26
6575.037	64	9. 7	*s*	Fe I	2. 59	206	
6575.18 m	0. 5	0. 1	*s*	Ti I	2. 58	286	
6576.376	5	0. 8		Atm H_2O Ni I	P 6	311	26
6576.59 m	2	0. 3	*s*				
6576.894	1. 5	0. 2					
6577.60 a	$\widehat{9}$	1. 4					
6578.28 a	3	0. 5					
6578.96 m	2	0. 3	*s*	V I	1. 04	32	
6579.08 m	1	0. 2	*s*?				
6580.233r	10	1. 5	*o*	Ni I— Atm	4. 42	265	
6580.785	3. 5	0. 5		Atm H_2O	P 6	311	26
6580.99 a	2	0. 3	*s*	Cr I	1. 03	16	
6581.218	14	*2. 4*	*s*	Fe I	1. 48	34	
6583.259	1. 5	0. 2		Atm H_2O	P 6	311	26
6583.538	1. 5	0. 2		Atm H_2O	P 6	311	26
6583.710	15	2. 3	*o*?,*d*	Si I	5. 95		17
6584.558	3	0. 5		Atm			
6585.529r	1. 5	0. 2					
6585.710r	2	0. 3		Atm H_2O	Q 3	231	26
6586.319m	35	5. 3	*s*	Ni I	1. 95	64	
6586.511	4	0. 6		Atm H_2O	P 7	311	26
6586.682	4	0. 6		Atm H_2O	P 6	311	26
6587.622	21	*2. 7*	*o*	C I	8. 53	22	
6588.590	2	0. 3		Atm			
6589.10 a	2. 5	0. 4					
6590.011r	1	0. 2					
6591.326	10	*1. 5*	*w*	Fe I	4. 59	1229	
6591.599r	1. 5	0. 2					
6591.841r	4	0. 6					
6592.522	23	3. 5	*w*	Ni I	4. 23	248	
6592.926S	123	*18. 8*	*s*	Fe I (Ti I p)	2. 73 1. 44	268 102	
6593.63 a	1. 5	0. 2					
6593.884m	89	*13. 3*	*S*	Fe I	2. 43	168	
6594.361	$\widehat{8}$	1. 2		Atm H_2O	P 7	311	26
6595.355r	4	0. 6	*s*	Ti I?			
6595.887	7	1. 1	*o*?	Co I	3. 71	174	
6597.038r	1. 5	0. 2		Atm H_2O	P 7	311	26
6597.571	44	*6. 7*	*w*	Fe I (Cr I)	4. 79 4. 17	1253 282	
6598.38 m	3	0. 5					
6598.611	26	*3. 8*	*w*	Ni I	4. 23	249	
6599.113	8. 5	*1. 4*	*S*	Ti I	0. 90	49	
6599.324	4	0. 6		Atm H_2O	P 8	311	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6600.65 a	4	0. 6					
6601.20 a	1	0. 2					
6601.48	2	0. 3	*s*	⊙?			
6601.98	3	0. 5		Atm H_2O	P 7	311	26
6602.134r				Atm			
6603.25	1. 5	0. 2		Fe I ? p	3. 64	862	
6603.43	1. 5	0. 2		Atm			
6603.65	3	0. 4		Fe I p	3. 63	860	
6604.40	1	0. 2					
6604.600	36	*5. 6*	*w*	Sc II	1. 36	19	
6604.80 a	1. 5	0. 2					
6605.574r	6	0. 9	*s*	Cr I	4. 14	282	17
				Atm H_2O	P 8	311	26
6605.924r	5	0. 8	*S*	V I	1. 19	48	
6606.04 a	3	0. 5					
6606.75	2	0. 3		⊙?			
6606.979r	8	*1. 5*	*o*	Ti II p	2. 06	91	
6607.40 a	5	0. 8		⊙			
6607.90			*s*	V I	1. 35	59	13
6608.044r	18	*2. 7*	*s*	Fe I	2. 28	109	
6609. 118S	76	*10. 9*	*s*	Fe I	2. 56	206	
6609.582r	13	2. 0	*s,N*	Fe I			
6609.693r	5	0. 8	*s*	Fe I p	0. 99	13	
6610.079r	3	0. 5		⊙			
6610.82 a	4	0. 6		Ni I?	5. 28		
6611.50 a	3	0. 5					
6611.96	1	0. 2		Atm			
6612.237r	5	0. 8	*s*	Cr I	4. 16	282	
6612.553r	0. 5	0. 1		Atm H_2O	P 9	311	26
6613.420	10	1. 5	*w*	⊙			
6613.73	4	0. 6	*w,N*	Y II	1. 75	26	
6613.83	5	0. 8	*s*	Fe I p	1. 01	13	16
6614.71	1	0. 2		Atm?			
6615.01	2	0. 3		Fe I p	4. 47	1155	
6615.63	3	0. 5		⊙?			
6616.20	[2.5]	0. 4		Si I? p	5. 95		
6616.83	3	0. 5		⊙?			
6616.95 a	2	0. 3					
6617.14	3	0. 5		Atm?			
				Ni I	4. 23	248	
6617.27	0. 5	0. 1	*s*	Sr I	2. 25	8	
6617.60	2. 5	0. 4		Co I?	4. 47		
6617.743r	3. 5	0. 5		⊙?			
6618.349r	2. 5	0. 4		⊙?			
6619.12	2. 5	0. 4		Atm?			
6619.588r	[3]	0. 5		Si I? p	5. 96		
6621.11	1	0. 2	*S*				17
6621.204r	2. 5	0. 4		Ni I?	3. 60	97	
6622.402r	[3]	0. 5		Fe I p	4. 39	1157	
6622.94	2	0. 3		Atm?			
6623.22 a	2	0. 3					
6623.82	5	0. 8		Fe I p	4. 07	1010	
6623.924r				⊙?			
6624.368r	2	0. 3		⊙?			
6624.840r	4	0. 6	*S*	V I	1. 22	48	
6625.039r	[11]	*1. 8*	*s*	Fe I	1. 01	13	
6626.267r	1. 5	0. 2		Atm			
6626.43	[1]	0. 2		Atm H_2O	P 10	311	26
6627.32	2. 5	0. 4		Fe II	7. 27	210	
6627.560r	24	*3. 9*	*w*	Fe I	4. 55	1174	
6628.165r	1	0. 2		Atm?			
6629.390r	1	0. 2		Atm			
6629.686r	1	0. 2		⊙			
6630.032r	6	0. 9	*S*	Cr I	1. 03	16	
6630.73 a	2	0. 3					
6631.087r	1. 5	0. 2		Si I? p	5. 98	62	
6631.773r	1. 5	0. 2		Atm?			
6632.029r	4	0. 6		⊙			
6632.472r	5	0. 8	*u*	Co I	2. 28	111	
6632.73	1	0. 2		⊙?			
6633.427r	30	*4. 1*	*w*	Fe I	4. 83	1258	
6633.758m	70	*10. 4*	*w*	Fe I	4. 56	1197	
6634.123r	40	*5. 6*	*w*	Fe I	4. 79	1258	
6635.137r	19	*3. 5*	*w*	Ni I	4. 42	264	
6635.398r	1	0. 2		CN?	R 10	7,3	12
6635.702r	7	1. 1	*w*	Si I	5. 86		
				Fe I p	4. 43	1155	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6636.332r	2	0.3		Cr I	4.14	282	
6637.24			*S*	⊙			13
6638.14 a	4	0.6					
6639.45 a	2	0.3		CN	Q 5	7,3	12
6639.717r	17	*2.6*	*w*	Fe I p	4.61	1195	
6639.897	11	1.7	*s*	Fe I	4.07	1007	
6640.95 a	1.5	0.2					
6641.63 a	1	0.2					
6642.272r	1.5	0.2		Atm?			
6642.53	1	0.2		Atm?			
6643.00	2	0.3		Cr I	3.84	256	
6643.638S	83	*13.6*	*s*	Ni I	1.68	43	
6643.864r	2	0.3		⊙?			
6644.35 a	2	0.3		CN	R 15	7,3	12
6645.127r	4	0.6		Eu II	1.38	8	
6645.41 a	1	0.2					
6646.20			*s*	⊙			13
6646.966r	|7|	*1.2*	*s*	Fe I	2.61	206	
6647.856r	2.5	0.4		Fe I p	3.24	551	
6648.121r	5	0.8	*S*	Fe I p	1.01	13	
6649.20	2	0.3		⊙			
6649.51			*S*	⊙			13
6650.60	1	0.2		Atm			
6651.132r	1.5	0.2		⊙			
6652.361r	3	0.5		Si I? p	5.96		
6653.04 a	1	0.2		CN?	R 1	7,3	12
6653.37 a	1	0.2					
6653.67	0.5	0.1		⊙			
6653.911r	8	*1.4*	*w*	Fe I	4.15	1052	
6655.531r	3	0.5		Atm C I	8.53		
6656.36	1.5	0.2		⊙			
6656.65	1.5	0.2		⊙			
6657.00 a	1.5	0.2		CN?	R 16	7,3	12
6657.43	0.5	0.1		Cr I Atm?	4.16	282	
6657.639r	2	0.3					
6657.95	1	0.2		Atm?			
6659.00 a	1	0.2					
6659.866r	3	0.5	*o*?	⊙			
6660.32	0.5	0.1		Atm?			
6661.081r	10	1.5	*s*	Cr I	4.19	282	
6661.341r	6	*1.2*	*w*	Ni I	4.23	246	
6662.580r	1.5	0.2		⊙?			
6663.01	|3|	0.5		C I	8.85		
6663.246	31	4.7	*w*	Fe I	4.56	1195	
6663.448	76	*11.9*	*s*	Fe I	2.42	111	
6663.84 a	2	0.3					
6664.310r	1	0.2		CN?	R 19	7,3	12
6665.06	1	0.2		⊙			
6665.27	5	0.8					
6665.47	2	0.3	*S*	Fe I p	1.56	34	
6665.83	1.5	0.2		Atm?			
6666.540r	2	0.3	*S*	Ti I	1.46	101	
6666.73	1.5	0.2		Atm?			
6667.23	1.5	0.2		CN?	P 6 R 20	7,3 7,3	12
6667.455r	3.5	0.5	*s*	Fe I	2.45	168	
6667.740r	7	*1.2*	*s*	Fe I	4.58	1228	
6668.400r	3	*0.6*	*s*	⊙			
6668.801r	|1|	0.1		Si I? p	5.96		
6669.01 a	1.5	0.2					
6669.310r	5	*0.7*	*u*	Cr I	4.17	282	
6671.82	6	0.9		C I	8.85		
6672.675r	2.5	0.4		⊙			
6673.88	1	0.1		Fe I p	4.73	1254	
6674.19	1	0.1		C I?	8.84		
6676.89	1	0.1		Fe I p	4.56	1194	
6677.24	2	0.3	*S*	Ti I	2.49	274	
6677.54	3	0.4		Fe I p Fe I p	3.21 5.01	551 1280	
6677.997S	122	*19.0*	*s*	Fe I	2.69	268	
6678.576r	2	0.3	*s*	Ti I	2.25	213	
6678.849r	5	0.7		Co I	1.96	54	
6679.58	1	0.1		C I? p	8.85		
6680.155r	6	*0.9*	*w,N*	Cr I	4.16	282	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6680.32 a	2. 5	0. 4					
6681.30	3	0. 4		CN?— Fe I p	Q 16 4. 39	7,3 1155	12
6682.00 a	1. 5	0. 2					
6682.24	|1|	0. 1		Fe I p	4. 07	1008	
6682.78	2	0. 3					
6683.69	1	0. 1		Atm?			
6684.05	2	0. 3		Atm			
6684.890r 6685.04	2	0. 3		Co I ⊙	2. 72	140	
6687.26 a	1	0. 1					
6687.508r	3	0. 4	*S*	Y I	0. 00	1	
6687.74	2	0. 3		⊙?			
6687.96	1	0. 1		CN	Q 20	7,3	12
6688.83 a	1. 5	0. 2		C I? CN?	8. 85 Q 18	7,3	12
6689.30	1	0. 1		⊙?			
6690.61	0. 5	0. 1		⊙?			
6690.825r	$\widehat{3}$	0. 4		Ni I	3. 63	140	
6691.61	1	0. 1		⊙			
6692.304r	2	0. 3		Fe I?			
6692.50 a	1. 5	0. 2		Fe I	4. 56	1192	
6692.856r	3	0. 4		CN?	Q 19	7,3	12
6694.62	1	0. 1		CN?	P 14	7,3	12
6696.032	33	*5. 1*	*s*	Al I	3. 14	5	
6696.322r	16	2. 4	*w*	Fe I p	4. 83	1255	
6696.69	1. 5	0. 2		⊙?			
6696.92 a	3	0. 4					
6697.406r	4	0. 6		⊙			
6698.00	1. 5	0. 2		CN	Q 22	7,3	12
6698.669r	21	*3. 1*	*s*	Al I	3. 14	5	
6699.136r	7	*1. 0*	*u*	Fe I	4. 59	1228	
6700.56 a	1	0. 1		⊙			
6700.919r	1. 5	0. 2		Ni I Fe I p	4. 26 4. 47 5. 07	248 1156 1333	
6701.377r	1. 5	0. 2		⊙			
6702.55	1	0. 1		⊙?			
6703.37 a	1	0. 1		CN	Q 23	7,3	12
6703.576m	32	*5. 2*	*s*	Fe I	2. 76	268	
6703.97 a	2. 5	0. 4		CN	P 16	7,3	12
6704.500r	5	*0. 7*	*s*	Fe I	4. 22	1052	
6705.105	42	*6. 6*	*w*	Fe I (Fe I p)	4. 61 4. 95	1197 1280	
6705.507r	1. 5	0. 2		⊙?			
6706.75	1	0. 1		CN?	Q 22	7,3	12
6707.05	1. 5	0. 2		Si I? p	5. 95	61	
6707.449r	|5|	0. 7	*s*?	⊙			
6707.76	1. 5	0. 2	*S*	Li I	0. 00	1	
6707.98	0. 5	0. 1	*S,N*	Li I	0. 00	1	
6708.32	0. 5	0. 1		⊙			
6708.80	1	0. 1	*u,NN*	⊙			
6709.10 a	2	0. 3	*o*	CN?	P 17	7,3	12
6709.87 m			*s*	Ca I	2. 93	45	13
6709.935r	2	0. 3					
6710.323r	12	*1. 8*	*s*	Fe I	1. 48	34	
6710.542r	1	0. 1		⊙			
6710.70 a	1. 5	0. 2					
6711.282r	2	0. 3		Fe I p	4. 58	1220	
6711.58	1	0. 1		⊙			
6711.847r	3	0. 4		CN?	Q 23	7,3	12
6712.467r	2. 5	0. 4		Fe I p	4. 99	1279	
6713.044	24	3. 6	*o*	Fe I	4. 61	1195	
6713.207r	7	1. 0	*s*	Fe I	4. 14	1013	
6713.745	23	*3. 5*	*w*	Fe I	4. 79	1255	
6714.80	2	0. 3		Atm			
6715.386	33	*4. 6*	*u*	Fe I (Cr I)	4. 61 4. 17	1174 282	
6715.70 a	2. 5	0. 4					
6716.252r	15	*2. 4*	*W*	Fe I	4. 58	1225	
6716.666r	2	0. 3	*S*	Ti I	2. 49	273	
6716.95 a	1	0. 1		⊙			
6717.19 a	1. 5	0. 2		CN	Q 24	7,3	12
6717.38 a	2	0. 3					
6717.527r	11	1. 9	*o*?	Fe I	4. 61	1194	
6717.687S	120	*17. 7*	*s*	Ca I	2. 71	32	
6719.62	$\widehat{21}$	*3. 1*	*s,N*	⊙			
6720.77	2	0. 3		⊙			
6721.844m	55	*7. 5*	*o*	Si I	5. 86	38	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6722.82 a	2	0. 3		CN?	Q 25	7,3	12
6724.685r	4	*0. 7*	*o*?	⊙			
6725.364m	17	2. 5	*w*	Fe I	4. 10	1052	
6725.710r	—	—		⊙			
6726.282	1	0. 1		O I	9. 14	2	
6726.673m	50	*7. 6*	*w*	Fe I	4. 61	1197	
6729.05 a	9	*1. 3*	*s*	Fe I			
6729.745r	5	0. 7		Atm Cr I	4. 39	301	
6730.307r	5	0. 7					
6731.89 a	3	0. 4		Sm II?	1. 17	59	
6732.068r	8	1. 2	*u,N*	Fe I	4. 58	1225	
6732.669r	1	0. 1		Atm?			
6733.153m	25	*3. 7*	*w*	Fe I	4. 64	1195	
6733.531r	5	0. 7		⊙			
6734.272r	|7|	1. 0		Cr I?—	4. 19	282	
6734.67	2	0. 3		Atm			
6735.025r	2	0. 3		Fe I p	4. 43	1157	
6735.456r	5	0. 7	*S*?	⊙			
6735.847r	3	0. 4		⊙			
6736.546r	1. 5	0. 2		Fe I p	4. 29	1122	
6737.28	1. 5	0. 2		Fe I p	3. 26	551	
6737.978r	24	*3. 4*	*u*	Fe I	4. 56	1192	
6738.233	10	1. 5		⊙			
6738.62	5	0. 7		⊙?			
6738.828r	8	1. 2	*o*?	⊙			
6739.21	1	0. 1		Si I?p	5. 96	61	
6739.524r	11	1. 6	*s*	Fe I	1. 56	34	
6740.11 a	3	0. 4					
6740.95 a	3	0. 4		CN?	Q 28	7,3	12
6741.629r	18	*2. 4*	*o*?	Si I	5. 98		
6741.92 a	2	0. 3					
6742.284r	1. 5	0. 2		⊙			
6742.565r	1	0. 1		Atm?— Ni I?	4. 42		
6742.90	1	0. 1		⊙?			
6743.127m	19	*2. 4*	*S*	Ti I	0. 90	48	
6743.575r	12	1. 8	*o*	S I	7. 86	8	
6743.89	2. 5	0. 4		⊙			
6744.50	2. 5	0. 4		⊙			
6745.113r	7	1. 0	*u*	Fe I	4. 58	1227	
6745.547r	4	0. 6	*S*	Ti I p	2. 24	226	
6745.984	8	1. 2	*s*?	Fe I	4. 07	1005	
6746.20 a	2	0. 3					
6746.36	0. 5	0. 1	*S,N*	Ti I	1. 89	152	
6746.975r	5	0. 7		Fe I	2. 61	205	
6747.40 a	3	0. 4					
6747.62 a	2	0. 3		CN	Q 29	7,3	12
6748.139r	4	0. 6		⊙			
6748.435r	11	1. 6		|Atm Ti I?	1. 88	152	
6748.65 a	5	0. 7					
6748.779r	5	0. 7		S I	7. 87	8	
6748.870r	17	2. 5		Cr I	4. 39		
6749.541r	1	0. 1		Fe I p	3. 64	860	
6749.88	3	0. 4		Atm?			
6750.164	75	*11. 1*	*s*	Fe I	2. 42	111	
6751.440r	3	0. 4		Cr I	5. 28	315	
6752.43	2	0. 3		Atm			
6752.716m	42	*5. 9*	*w*	Fe I	4. 64	1195	
6753.470r	5	0. 7		Fe I p	4. 56	1196	
6754.44	2	0. 3		⊙?			
6754.68	0. 5	0. 1		Atm			
6754.939r	4	0. 6		⊙			
6755.605r	12	*1. 8*	*u*	Fe I			
6755.82 a	3	0. 4					
6756.568r	5	0. 7		Fe I p	4. 29	1120	
6757.08	5	0. 7		⊙?			
6757.195r	19	2. 8	*o*	S I	7. 87	8	
6757.660r	1	0. 1		Atm			
6758.27	2. 5	0. 4		Atm			
6758.897r	7	1. 0		⊙			
6759.46	1. 5	0. 2		Ni I	4. 23	245	
6761.011r	3. 5	0. 5		Fe I p	4. 58	1227	
6762.156r	2	0. 3		CN?	Q 32	7,3	12
6762.398r	2	0. 3	*S*	Zr I	0. 00	1	
6763.690r	1	0. 1		⊙			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6763.95 a	1. 5	0. 2					
6764.11 a	2	0. 3		Fe I p	4. 59	1225	
6766.16	1	0. 1		⊙?			
6766.50 m			*S,N*	V I	1. 06	31	13
6767.784	83	*12. 1*	*s*	Ni I	1. 83	57	
6768.83	1	0. 1		CN?	Q 32	7,3	12
6769.682r	3	0. 4		Fe I p	4. 58	1226	
6770.97	5	*0. 7*	*u*	Co I	1. 88	54	
6771.12	10	*1. 6*	*u*	⊙			
6772.321	51	*7. 8*	*u*	Ni I	3. 66	127	
6773.37	1	0. 1		⊙			
6774.33	2	0. 3		La II	0. 13	2	
6774.800r	2. 5	0. 4		⊙			
6776.26	2	0. 3		⊙			
6776.42 a	1	0. 1		CN?	Q 33	7,3	12
6777.15	1. 5	0. 2		⊙			
6777.406r	6	*1. 2*	*w*	Fe I	4. 14 4. 19	1010 1013	
6777.775r	|1.5|	0. 2		⊙?			
6780.25	1	0. 1		Atm			
6780.925r	1. 5	0. 2		⊙?			
6781.815r	1. 5	0. 2		⊙			
6782.219r	4	0. 6		⊙			
6782.502r	4	0. 6		Ni I	5. 34		
6783.28	2	0. 3		Fe I p	2. 56	206	
6783.714r	|9|	1. 3	*s*	Fe I	2. 59	205	
6784.214r	$\widehat{11}$	1. 6	*s,NN*	⊙			
6785.00 a	3	0. 4		V I	1. 05	31	
6785.76	2. 5	0. 4		Fe I	4. 58	1226	
6785.88	1. 5	0. 2		Fe I p	4. 07	1007	
6786.204	2	0. 3					
6786.46	4	0. 6		Fe I p	3. 24	551	
6786.860m	16	*2. 8*	*w*?	Fe I	4. 19	1052	
6787.16	2	0. 3		Zr II?	2. 49	135	
6787.604r	1	0. 1		Fe I p	4. 47	1156	
6789.154r	3	0. 4		Cr I	3. 84		
6789.530r	1. 5	0. 2		Atm			
6789.960r	2	0. 3					
6790.322r	1. 5	0. 2		Atm?			
6790.686r	1. 5	0. 2		⊙?			
6792.330r	0. 5	0. 1		⊙?			
6793.273r	10	*1. 5*	*s,N*	Fe I	4. 07	1005	
6793.628r	12	*1. 8*	*w*?	Fe I—Y I	0. 07	1	
6794.313r	4	0. 6		⊙			
6794.623r	3	0. 4		Fe I p	4. 95	1279	
6795.428r	3	0. 4		Y II	1. 72 1. 74	26 26	
6795.798r	6	0. 9		⊙			
6796.128r	8	1. 2	*s*	Fe I	4. 14	1007	
6796.490r	3	0. 4		Cr I	4. 40	301	
6796.814r	$\widehat{3}$	0. 4		⊙			
6798.15	0. 5	0. 1		Cr I	3. 85		
6798.467r	4	0. 6	*S*	Ca I	2. 71	31	
6798.888r	3	0. 4		⊙			
6799.05	1. 5	0. 2		Mg I p	5. 75		
6800.607r	9	1. 3	*w*	⊙			
6801.202r	0. 5	0. 1		Fe I? p	3. 28	551	
6801.849r	1	0. 1		Fe I p	1. 61	34	
6803.27	1	0. 1		Fe I p	4. 56	1192	
6803.854r	2. 5	0. 4		Fe I p	4. 56	1191	
6804.010r	14	*2. 5*	*u*	Fe I	4. 65	1174	
6804.297r	10	*1. 9*	*u*	Fe I	4. 58	1225	
6804.61	2. 5	0. 4		⊙			
6805.106r	0. 5	0. 1		Cr I	3. 85		
6806.856m	24	*4. 1*	*s*	Fe I	2. 73	268	
6807.893r	0. 5	0. 1		Atm			
6808.769r	0. 5	0. 1		Fe I p	2. 83	340	
6809.27	0. 5	0. 1		⊙			
6809.630r	1	0. 1		⊙			
6810.14	1. 5	0. 2					
6810.267S	42	*6. 8*	*s*	Fe I	4. 61	1197	
6811.56	1	0. 1		⊙			
6812.356r	2	*1. 2*		V I?	1. 04	31	
6813.00	0. 5	0. 1		Cr I	3. 85		
6813.54	1. 5	0. 2		Fe I? p	4. 98	1288	
6813.616r	4	0. 6		Ni I	5. 34	288	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6813.911r	2	0. 3					
6814.83	1. 5	0. 2		⊙?			
6814.961r	12	*1. 9*	*s*	Co I	1. 96	54	
6815.96	0. 5	0. 1		Atm			
6816.96 a	0. 5	0. 1					
6817.653r	0. 5	0. 1		⊙			
6819.49	1. 5	0. 2		Fe I p	3. 02	463	
6819.595r	5	0. 7	*s*	Fe I	4. 10	1051	
6820.374m	37	*5. 4*	*s*	Fe I	4. 64	1197	
6822.042r	1	0. 1	*s*	Fe I	2. 48 4. 58	110 1220	
6823.67	1	0. 1		⊙?			
6824.52	1	0. 1		⊙?			
6824.857r	2	0. 3		Fe I p	4. 99	1280	
6826.04	1	0. 1		⊙			
6827.15	1. 5	0. 2		⊙?			
6827.277r	1	0. 1					
6827.963r	7	1. 0		⊙			
6828.193r	5	0. 7		C I	8. 53	21	
6828.37	3	0. 4		⊙			
6828.596	56	8. 0	*u*	Fe I	4. 64	1195	
6728.97a	1	0. 1					
6829.13a	1. 5	0. 2					
6829.580r	3	0. 4		⊙			
6830.04	1	0. 1		V I?	1. 08	31	
6830.846r	0. 5	0. 1		Atm			
6831.478r	1	0. 1		Fe I? p	3. 21	550	
6831.74 a	1	0. 1					
6832.18	2	0. 3		⊙?			
6832.474r	0. 5	0. 1		V I? Y II?	1. 06 1. 75	31 26	
6833.08	3	0. 4		Zr I?	0. 07	1	
6833.248r	8	1. 2	*o*?	Fe I	4. 64	1194	
6833.592r	3	0. 4		⊙			
6834.11	1	0. 1		⊙?			
6834.34	2. 5	0. 4		⊙			
6835.12	7	1. 0					
6835.368r	2	0. 3		⊙			
6835.75	3	0. 4		⊙?			
6836.702r	5	0. 7		⊙			
6837.013	15	*2. 3*	*o*?	Fe I	4. 59	1225	
6837.39	4	0. 6		⊙			
6838.04 a	4	0. 6					
6838.357r	5	0. 7		⊙?			
6838.70 a	3. 5	0. 5					
6838.85 a	31	*4. 5*	*w*	Fe I			
6839.15 a	5	0. 7		⊙			
6839.835	30	*4. 2*	*s*	Fe I	2. 56	205	
6840.443r	3	0. 4		Atm			
6841.19	8	1. 2		Mg I p	5. 75		
6841.341	65	*9. 6*	*s*	Fe I	4. 61	1195	
6841.642r	3	0. 4		Fe I p	5. 10	1333	
6841.85 a	4	0. 6		V I?	1. 05	31	
6842.043m	26	*3. 9*	*w*	Ni I	3. 66	126	
6842.40 a	5	0. 7		Si I $^{1}_{4}$p	5. 98	61	
6842.689m	41	*6. 0*	*u*	Fe I	4. 64	1197	
6843.164r	4	0. 6		⊙?			
6843.655	59	*8. 9*	*w*	Fe I	4. 55	1173	
6844.683r	|3|	0. 4		Fe I	1. 56	34	
6845.22	3. 5	0. 5	*s*	Y I Atm	2. 37	16	
6845.57	1	0. 1		⊙?			
6845.98	3. 5	0. 5		Fe I p Atm H_2O	4. 56 R 7	1190 103	26
6846.33	1	0. 1		⊙?			
6847.06	2	0. 3		Atm H_2O —	R 5	103	26
6847.603r	|5|	0. 7		Atm Fe I	4. 26	1078	
6848.566r	15	*2. 2*		Si I	5. 86	37	
6848.87	3	0. 4		Fe I p	4. 61	1192	
6849.302r	2	0. 3		⊙?			
6850.439	10	1. 5		Ni I	3. 68	157	
6851.47	|3|	0. 4		⊙			
6851.652r	4. 5	0. 7		Fe I	1. 61	34	
6852.28	1. 5	0. 2		Atm			
6852.722r	|4|	0. 6		Atm			
6853.50	1	0. 1		⊙?			
6853.851r	|2|	0. 3		⊙?			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6854.332r	|4.5|	0. 7		⊙			
6854.538r	4	0. 6		⊙			
6854.850	12	1. 7	*o*?	Fe I	4. 59	1224a	
6855.166	85	*12. 1*	*s*	Fe I	4. 56	1195	
6855.723m	23	*3. 1*	*u*	Fe I	4. 61	1194	
6856.13	|3.5|	0. 5					
6856.64	3	0. 4		⊙?			
6856.87	3. 5	0. 5		⊙?			
6857.251	27	*3. 6*	*w*	Fe I	4. 07	1006	
6857.850r	3	0. 4		⊙			
6858.155S	57	*8. 2*	*u*	Fe I	4. 61	1173	
6858.29	5	0. 7		Y II?	1. 74	26	
6858.47 a	4	0. 6					
6859.03 a	3	0. 4		⊙?			
6859.23 a	1. 5	0. 2					
6859.493r	1. 5	0. 2		Fe I p	2. 84	340	
6859.748r	2	0. 3		⊙			
6860.099r	2	0. 3		Fe I p	4. 83	1255	
6860.327	7	1. 0		Fe I	2. 61	205	
6860.46 a	3. 5	0. 5					
6860.80	7	1. 0		⊙			
6860.953r	6	0. 9		Fe I	2. 83	341	
6861.268r	5	0. 7		Ni I	5. 36	293	
6861.50	12	1. 7	*S*?	Ti I	2. 27	237	
6861.753r	4	0. 6		⊙			
6861.945	22	*2. 8*	*s*?	Fe I	2. 42	109	
6862.496	39	*5. 1*	*u*?	Fe I	4. 56	1191	
6862.858r	|3|	0. 4		⊙?			
6863.00	2	0. 3		⊙?			
6863.18	2	0. 3		⊙?			
6863.41	2	0. 3		⊙?			
6863.787r	2	0. 3		⊙?			
6863.95	3	0. 4		⊙?			
6864.17	2	0. 3		Atm			
6864.324r	9	1. 3		Fe I p	4. 56	1186	
6864.514r	3	0. 4		⊙?			
6865.24	5	0. 7		⊙			
6865.443r	1. 5	0. 2		⊙			
6865.645r	6	0. 9		Atm H_2O	R 5	103	26
6866.01	5	0. 7		Atm H_2O	R 4	103	26
6866.342r	6	0. 9					
6866.56	3	0. 4		⊙?			
6866.775r	2	0. 3		⊙?			
6867.05	3	0. 4		⊙?			
6867.187m	153	22. 3		Atm O_2	R 21	1,0	22
6867.252m				Atm O_2	R 19	1,0	22
6867.394m	29	4. 2		Atm O_2	R 23	1,0	22
6867.547m	154	22. 5		Atm O_2	R 17	1,0	22
6867.856m	32	4. 7		Atm O_2	R 25	1,0	22
6868.105m	137	20. 0		Atm O_2	R 15	1,0	22
6868.245m	174	25. 4		Atm O_2	R 19	1,0	22
6868.421m	35	5. 1		Atm O_2	R 23	1,0	22
6868.525m	149	21. 7		Atm O_2	R 17	1,0	22
6868.577m				Atm O_2	R 27	1,0	22
6868.915m	216	31. 4		Atm O_2	R 13 R 25	1,0 1,0	22
6869.096m	216	31. 4		Atm O_2	R 15	1,0	22
6869.567m	6	0. 9		Atm O_2	R 29	1,0	22
6869.627m	9	1. 3		Atm O_2	R 27	1,0	22
6869.887m	382	55. 6		Atm O_2	R 13	1,0	22
6870.007m				Atm O_2	R 11	1,0	22
6870.620m	7	1. 0		Atm O_2	R 29	1,0	22
6870.819m	6	0. 9		Atm O_2	R 31	1,0	22
6870.946S	233	34. 0		Atm O_2	R 11	1,0	22
6871.285m	264	38. 5		Atm O_2	R 9	1,0	22
6871.872m	6	0. 9		Atm O_2	R 31	1,0	22
6872.247m	257	37. 4		Atm O_2	R 9	1,0	22
6872.44	5	0. 7		Co I	2. 01	54	
6872.843m	272	39. 6		Atm O_2	R 7	1,0	22
6873.392m	1.5	0. 2		Atm O_2	R 33	1,0	22
6873.798m	258	37. 6		Atm O_2	R 7	1,0	22
6874.653m	268	39. 0		Atm O_2	R 5	1,0	22
6875.45	4	0. 6		Fe I	2. 45	167	
6875.590m	249	36. 2		Atm O_2	R 5	1,0	22
6875.995	12	1. 7		Fe I	4. 19	1013	
6876.38	10	1. 5		Si I?	5. 98		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6876.715m	241	35. 1		Atm O_2	R 3	1,0	22
6876.972m	7	1. 0		Atm O_2	R 17	1,0	23
6877.637m	200	29. 1		Atm O_2	R 3	1,0	22
6877.991m	6	0. 9		Atm O_2	R 14 R 17	1,0 1,0	23
6878.315m	3	0. 4		Atm O_2	R 16	1,0	23
6878.436m	1. 5	0. 2		Atm O_2	R 13	1,0	23
6878.630m	5	0. 7		Atm O_2	R 15	1,0	23
6879.041m 6879.265r	191	27. 8		Atm O_2	R 1	1,0	22
6879.55	10	1. 5		Fe I p— Atm H_2O Fe I p	4. 47 R 5 3. 26	1157 103 551	26
6879.928 S	117	17. 0		Atm O_2	R 1	1,0	22
6880.08 m	4	0. 6		Atm O_2	R 10	1,0	23
6880.446m	4	0. 6		Atm O_2	R 11	1,0	23
6880.637	14	*1. 9*		Fe I	4. 15	1051	
6880. 757m	|2|	0. 3		Atm O_2	R 9	1,0	23
6881.054	4. 5	0. 7		Fe I p Atm O_2	4. 65 R 10	1174 1,0	23
6881.25 a	2. 5	0. 4					
6881.463	11	1. 6		Fe I Atm O_2	R 8	1,0	23
6881.716	28	*4. 1*	*s*?	Cr I (Atm O_2)	3. 44 R 9	222 1,0	23
6882.277m	2	0. 3		Atm O_2	R 7	1,0	23
6882.502	34	*4. 6*	*s*	Cr I	3. 44	222	
6882.74 a	4. 5	0. 6		Atm H_2O	R 3	103	26
6883.070	31	*4. 4*	*s*	Cr I	3. 44	222	
6883.230m	5	0. 7		Atm O_2	R 7	1,0	23
6883.371	3	0. 4		⊙?			
6883.833m	146	21. 2		Atm O_2	P 1	1,0	22
6884.041m 6884.78 a	9 4	1. 3 0. 6		Atm O_2	R 5 R 6	1,0 1,0	23
6885.004m	4	0. 6		Atm O_2	R 4 R 5	1,0 1,0	23
6885.279m	2	0. 3		Atm O_2	R 20 R 21	1,0 1,0	24
6885.349m	2	0. 3		Atm O_2	R 19 R 22	1,0 1,0	24
6885.477m	2. 5	0. 4		Atm O_2	R 18	1,0	24
6885.754m	175	25. 4		Atm O_2 (Fe I)	P 3 4. 65	1,0 1173	22
6886.048m	0. 5	0. 1		Atm O_2	R 3	1,0	23
6886.131 6886.209m	1	0. 1		Atm Atm O_2	R 20	1,0	24
6886.303m 6886.372m	2	0. 3		Atm O_2 Atm O_2	R 21 R 19 R 22	1,0 1,0 1,0	24 24
6886.476m	1	0. 1		Atm O_2	R 18	1,0	24
6886.579m	1	0. 1		Atm O_2	R 14 R 17	1,0 1,0	24
6886.743m	208	30. 2		Atm O_2	P 3	1,0	22
6887.000m	3	0. 4		Atm O_2	R 3 R 13 R 16	1,0 1,0 1,0	23 24
6887.154m 6887.196m	2. 5	0. 4		Atm O_2 Atm O_2	R 2 R 15	1,0 1,0	23 24
6887.476m	4	0. 6		Atm O_2	R 12	1,0	24
6887.564m	4. 5	0. 7		Atm O_2	R 14	1,0	24
6887.75	3	0. 4					
6888.000m	5	0. 7		Atm O_2	R 2 R 11 R 13	1,0 1,0 1,0	23 24
6888.323m	1	0. 1		Atm O_2	R 1	1,0	23
6888.457m	1. 5	0. 2		Atm O_2	R 12	1,0	24
6888.612m	2. 5	0. 4		Atm O_2	R 10	1,0	24
6888.948m	190	27. 6		Atm O_2	P 5	1,0	22
6889.271m	2. 5	0. 4		Atm O_2	R 9	1,0	24
6889.585m	2. 5	0. 4		Atm O_2	R 10	1,0	24
6889.903m	222	32. 2		Atm O_2	P 5	1,0	22
6890.10 m	3	0. 4		Atm O_2	R 8	1,0	24
6890.240m	3	0. 4		Atm O_2	R 9	1,0	24
6890.760m	2	0. 3		Atm O_2	R 7	1,0	24
6890.948m	2	0. 3		Atm O_2	R 8	1,0	24
6891.593m	2. 5	0. 4		Atm O_2	R 6	1,0	24
6891.719	2	0. 3		Atm O_2 ⊙	R 7	1,0	24
6892.369m	208	30. 2		Atm O_2	P 7	1,0	22
6892.57 m	1	0. 1		Atm O_2	R 5 R 6	1,0 1,0	24
6893.309m	213	30. 9		Atm O_2	P 7	1,0	22
6893.40 m	3	0. 4		Atm O_2	R 5	1,0	24

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6894.18 a	2	0. 3					
6894.379	1. 5	0. 2		—Atm O_2	R 4	1,0	24
6894.451m	2	0. 3		Atm O_2	R 3	1,0	24
6894.68 a	3	0. 4					
6894.89	|6|	0. 9		Mg I	5. 75	34	
6895.12 a	5	0. 7					
6895.382m	4	0. 6		Atm O_2	R 3	1,0	24
6895.521m	2	0. 3		Atm O_2	R 2	1,0	24
6895.73	4	0. 6		Atm			
6896.037m	202	29. 3		Atm O_2	P 9	1,0	22
6896.445m	1. 5	0. 2		Atm O_2	R 2	1,0	24
6896.664m	1	0. 1		Atm O_2	R 1	1,0	24
6896.965m	216	31. 4		Atm O_2	P 9	1,0	22
6897.562m	0. 5	0. 1		Atm O_2	R 1	1,0	24
6897.688	1	0. 1		Atm			
6897.886	2	0. 3		Atm			
6897.946m	1	0. 1		Atm O_2	P 5	1,0	23
6898.14 a	2	0. 3					
6898.307	|16|	*2. 0*	*w*?	Fe I	4. 22	1078	
6899.34 a	4	0. 6					
6899.500	2. 5	0. 4		Atm H_2O	R 2	103	26
6899.596m				Atm O_2	P 6	1,0	23
6899.954m	191	27. 7		Atm O_2	P 11	1,0	22
6900.543m	4	0. 6		Atm O_2	P 6	1,0	23
6900.868m	211	30. 6		Atm O_2	P 11	1,0	22
6901.10 a	5	0. 7					
6901.271m	2	0. 3		Atm O_2	P 1	1,0	24
6901.607m	7	1. 0		Atm O_2	P 2	1,0	24
6901.90 a	6	0. 9		Ni I?	5. 36		
6902.230m	1	0. 1		Atm O_2	P 7	1,0	23
6902.620m	3	0. 4		Atm O_2	P 2	1,0	24
6902.874	22	3. 2	*w,N*	Fe I			
6903.040m	2. 5	0. 4		Atm O_2	P 3	1,0	24
6903.149	2	0. 3		Atm H_2O	R 3	400	26
6903.828	1. 5	0. 2		Atm			
6904.117m	165	23. 9		Atm O_2	P 13	1,0	22
6904.531m	4. 5	0. 7		Atm O_2	P 4	1,0	24
6905.023m	169	24. 5		Atm O_2	P 13	1,0	22
6905.317	14	2. 0		⊙			
6905.494m	4	0. 6		Atm O_2	P 4	1,0	24
6905.786m	5	0. 7		Atm O_2	P 9	1,0	23
6906.000	4. 5	0. 7		Atm H_2O	R 3	103	26
6906.059m	3	0. 4		Atm O_2	P 5	1,0	24
6906.27	6	0. 9		Al I? p	4. 02		
6906.60	10	1. 4		Atm			
6906.728m				Atm O_2	P 10	1,0	23
6906.830				Atm HO	R 2	103	26
6907.023m	1. 5	0. 2		Atm O_2	P 5	1,0	24
6907.39	2. 5	0. 4		Atm			
6907.655m	3	0. 4		Atm O_2	P 6	1,0	24
6908.28	2	0. 3		Atm			
6908.534m	137	19. 8		Atm O_2	P 15	1,0	22
6908.75 a	3. 5	0. 5					
6909.32 m	1	0. 1		Atm O_2	P 7	1,0	24
6909.431m	143	20. 7		Atm O_2	P 15	1,0	22
6909.87 a	3. 5	0. 5					
6910.250m	2	0. 3		Atm O_2	P 7	1,0	24
6910.648m	1	0. 1		Atm O_2	P 12	1,0	23
6910.728r	4	0. 6		⊙?			
6911.015m	5	0. 7		Atm O_2	P 8	1,0	24
6911.369	6	0. 9		Atm H_2O	R 7	103	26
6911.522	14	2. 0		Fe I	2. 42	109	
6911.72 a	2. 5	0. 4					
6911.952m	3	0. 4		Atm O_2	P 8	1,0	24
6912.27	0. 5	0. 1		⊙			
6912.45	3	0. 4		Fe I? p	2. 84	341	
6912.73 m	1	0. 1		Atm O_2	P 13	1,0	23
6912.786m	3	0. 4		Atm O_2	P 9	1,0	24
6913.200m	112	16. 2		Atm O_2	P 17	1,0	22
6913.371	5	0. 7		Atm			
6913.615m	4	0. 6		Atm O_2	P 13	1,0	23
6913.713m	6	0. 9		Atm O_2	P 9	1,0	24
6913.88 a	2. 5	0. 4					
6914.090m	107	15. 5		Atm O_2	P 17	1,0	22

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6914.26	4	0. 6		Atm			
6914.564	83	*11. 9*	*S*	Ni I	1. 95	62	
6915.004r	1	0. 1		⊙?			
6915.19	3	0. 4		Fe I?			
6915.43	1	0. 1		Atm			
6915.533m	3	0. 4		Atm O_2	P 10	1,0	24
6915.670	3	0. 4		Atm			
6916.475	4	0. 6		|Atm Atm O_2	P 11	1,0	24
6916.686	60	*8. 2*	*w*	Fe I	4. 15	1052	
6917.018	6	0. 9		⊙			
6917.409m	4	0. 6		Atm O_2	P 11	1,0	24
6917.505	7	1. 0		Atm H_2O (Fe I p)	R 6 4. 56	103 1190	26
6917.815	6	0. 9		Atm			
6918.122S	89	12. 9		Atm O_2	P 19	1,0	22
6918.429m	13	1. 9		Atm O_2	P 12	1,0	24
6918.592r	7	1. 0		⊙?			
6919.002S	97	14. 0		Atm O_2	P 19	1,0	22
6919.327	7	1. 0		|Atm Atm O_2	P 12	1,0	24
6919.77	5	0. 7					
6919.97				Atm			
6920.149	9	1. 3		|Atm Atm O_2	P 16	1,0	23
6920.168				Fe I p	4. 61	1192	
6920.274	2	0. 3		⊙?			
6920.426m	4	0. 6		Atm O_2	P 13	1,0	24
6920.672	1. 5	0. 2		Atm			
6920.900	4	0. 6		Atm			
6921.168	0. 5	0. 1		Atm			
6921.338m	4	0. 6		Atm O_2	P 13	1,0	24
6921.577	5	0. 7		Atm			
6921.924	4	0. 6		Atm H_2O	R 2	103	26
6922.243	5	0. 7		⊙			
6922.260				Atm			
6922.478m	8	1. 2		Atm O_2	P 14	1,0	24
6922.661	2	0. 3		|Atm ⊙?			
6923.05 a	5	0. 7					
6923.369		11. 2		Atm O_2 |Atm H_2O	P 14 R 8	1,0 103	24 26
6923.44 a	93	1. 7					
6923.50 a		0. 6					
6923.756	5	0. 7					
6923.86	6	0. 9		Atm			
6924.164m	95	13. 7		Atm O_2	P 21	1,0	22
6924.450	10	1. 4		Atm H_2O	R 7	103	26
6924.597m	2	0. 3		Atm O_2	P 15	1,0	24
6924.820	4	0. 6		Atm			
6925.280	45	*5. 9*	*s*	Cr I	3. 45	222	
6925.497	1	0. 1		Atm O_2 Atm	P 15	1,0	24
6926.097	21	*2. 9*	*s*	Cr I	3. 45	222	
6926.385	2	0. 3		Fe I p	4. 58	1222	
6926.567	5	0. 7		Atm			
6926.767	20	2. 9		Atm H_2O	R 8	103	26
6926.91	3	0. 4		Atm			
6927.120	4	0. 6		Atm			
6927.261	2	0. 3		Atm H_2O	R 3	400	26
6927.675m	1. 5	0. 2		Atm O_2	P 16	1,0	24
6927.89	1	0. 1		⊙?			
6928.330	4	0. 6		Ni I?	3. 70	110	
6928.491	5	0. 7		Atm			
6928.728S	42	6. 1		Atm O_2	P 23	1,0	22
6928.88	4	0. 6		⊙			
6929.091	30	4. 3		Atm H_2O	R 6	103	26
6929.310	47	6. 8		Atm H_2O	R 5	103	26
6929.599m	45	6. 5		Atm O_2	P 23	1,0	22
6929.839	30	4. 3		Atm H_2O	R 7	103	26
6929.938	|13|	1. 9		Atm H_2O	R 7	103	26
6930.384	1. 5	0. 2		Fe I? p	4. 56	1186	
6930.605	17	2. 5		Fe I |Atm	4. 58	1221	
6930.837	2	0. 3		Atm			
6931.103	2	0. 3		⊙			
6931.323	19	2. 7		Atm H_2O	R 5	103	26
6931.769	|12|	1. 7		Atm H_2O	R 5 R 4	103 103	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6932.042	3	0. 4		Atm			
6932.150	10	1. 4		Atm H_2O ⊙	R 5	103	26
6932.498r	3	0. 4		Atm (Fe I p)	4. 58	1220	
6932.757r	3	0. 4		Atm			
6933.026	16	*2. 3*	*w,N*	Fe I	4. 19	1051	
6933.163	3	0. 4		⊙			
6933.467	7	1. 0		Atm H_2O	R 6	103	26
6933.605	54	7. 8		|Atm H_2O	R 4	103	26
				Fe I	2. 43	167	
					4. 14	1005	
6933.817	29	4. 2		Atm H_2O	R 6	103	26
6934.422S	35	5. 0		Atm O_2	P 25	1,0	22
6934.531m	2	0. 3		Atm O_2	P 19	1,0	24
6934.886r	2. 5	0. 4		Atm			
6935.113	3	0. 4		Atm H_2O	R 1	103	26
6935.280m	33	4. 8		Atm O_2	P 25	1,0	22
6935.422	7	1. 0		Atm			
6935.818	8	1. 2		Atm H_2O	R 4	400	26
6936.066m	1. 5	0. 2		Atm O_2	P 20	1,0	24
6936.496	6	0. 9		Fe I	4. 61	1196	
6936.80 a	1	0. 1					
6936.962m	0. 5	0. 1		Atm O_2	P 20	1,0	24
6937.17 a	1	0. 1	*s,NN*	⊙			
6937.703	|38|	5. 5		Atm H_2O	R 5	103	26
6938.199	1. 5	0. 2		Atm			
6938.269	10	1. 4		Atm H_2O	R 5	103	26
6938.548m	2	0. 3		Atm O_2	P 21	1,0	24
6938.737	3	0. 4	*s*	K I	1. 62		
6939.277	0. 5	0. 1		⊙?			
6939.40 a	2	0. 3					
6939.613	31	4. 5		Atm H_2O	R 4	103	26
6939.738	6	0. 9		Atm H_2O	R 4	103	26
6940.192	37	5. 3		Atm H_2O	R 3	103	26
6940.375m	23	3. 3		Atm O_2	P 27	1,0	22
6940.62 a	1	0. 1					
6940.77 a	0. 5	0. 1					
6940.998	6	0. 9		Atm			
6941.218	26	3. 8		|Atm H_2O	R 4	103	26
				Atm O_2	P 27	1,0	22
6941.356	2. 5	0. 4		Atm			
6941.72 a	1. 5	0. 2					
6942.153	29	4. 2		Atm H_2O	R 3	103	26
6942.372	20	2. 9		Atm H_2O	R 4	103	26
6942.488	3	0. 4		Atm			
6942.84	1. 5	0. 2		Fe I? p	4. 14	1008	
6943.18	1. 5	0. 2		⊙			
6943.637	1	0. 1		CN	Q 9	3,0	12
6943.803	39	5. 6		Atm H_2O	R 4	103	26
6944.90 a	3. 5	0. 5					
6945.210	82	*11. 4*	*u*	Fe I	2. 42	111	
6945.520	2	0. 3		⊙			
6945.900	3	0. 4		⊙?			
6946.330	2	0. 3		Co I?	2. 28	110	
6946.590m	7	1. 0		Atm O_2	P 29	1,0	22
6946.728	1. 5	0. 2		Atm			
6947.139r	5	0. 7					
6947.48 a		1. 4		Atm H_2O	R 5	103	26
				|Atm H_2O	R 3	103	26
6947.55 a	88	11. 5		Fe I	4. 58	1221	
					4. 59	1224	
6947.64		0. 9		Atm H_2O	R 3	103	26
6947.879	5	0. 7		Atm H_2O	R 5	103	26
6948.979	16	2. 3		Atm H_2O	R 2	103	26
6949.086	|27|	3. 9		Atm H_2O	R 3	103	26
6949.782	1	0. 1		Atm H_2O ⊙	R 4	400	26
6949.921r	1	0. 1		Atm?			
6950.749	|19|	2. 7		Atm H_2O	R 3	103	26
6951.237	|60|	*8. 8*		Atm H_2O	R 3	103	26
				Fe I	4. 56	1186	
					4. 56	1193	
6951.656	7	1. 0		Fe I	4. 28	1078	
				Atm H_2O	Q 5	103	26
6952.33	2	0. 3	*s,N*	|⊙			
				Atm H_2O	Q 6	103	26
6952.920	1	0. 1		Atm			
6953.057	2	0. 3	*w,N*	Fe I p—	3. 60	815	
6953.072m	27	3. 9		Atm O_2	P 31	1,0	22
6953.576	24	3. 5		Atm H_2O	R 2	103	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6953.776	10	1. 4		Atm H_2O	R 2	103	26
6953.912m	3	0. 4		Atm O_2	P 31	1,0	22
6954.014m	1	0. 1		Atm O_2	R 17	2,1	22
6954.22	0. 5	0. 1		⊙?			
6954.494m	2	0. 3		Atm O_2	R 15	2,1	22
6955.040	13	1. 9	*o*?	Ni I	3. 70	157	
6955.241	2	0. 3		Atm H_2O	Q 4	103	26
6955.521m	0. 5	0. 1		Atm O_2	R 15	2,1	22
6955.641	1. 5	0. 2		Atm H_2O	R 4	103	26
6955.818	0. 5	0. 1		Atm H_2O	R 5	400	26
6956.214m	1. 5	0. 2		Atm O_2	R 11 R 13	2,1 2,1	22
6956.401	56	8. 0		Atm H_2O	R 2	103	26
6956.487	30	4. 3		Atm H_2O	R 2	103	26
6957.009	2	0. 3		Atm H_2O	R 3	400	26
6957.204m	1	0. 1		Atm O_2	R 11	2,1	22
6957.404	1. 5	0. 2		Atm H_2O	Q 3	103	26
6957.703	2	0. 3		CN	Q 8 R 19	3,0 3,0	12
6958.247	0. 5	0. 1		Atm H_2O	Q 2 Q 5	103 103	26
6958.462m	0. 5	0. 1		Atm O_2	R 9	2,1	22
6958.936	1. 5	0. 2		Atm H_2O	R 5	103	26
6959.452S	33	2. 8		Atm H_2O	R 1	103	26
6959.812m	7	1. 0		Atm O_2	P 33	1,0	22
6959.946m	0. 5	0. 1		Atm O_2	R 7	2,1	22
6960.330	13	*1. 7*	*o*?	Fe I	4. 59	1222	
6960.476	1	0. 1		Atm			
6960.647m	2	0. 3		Atm O_2	P 33	1,0	22
6960.746m 6960.89	2	0. 3		Atm O_2 Atm	R 5	2,1	22
6961.260S	51	7. 3		Atm H_2O	R 1	103	26
6961.707m	2	0. 3		Atm O_2	R 5	2,1	22
6961.808r	1	0. 1		⊙?			
6961.946r	2	0. 3		Atm?			
6962.804m	2	0. 3		Atm O_2	R 3	2,1	22
6963.01	2	0. 3		Fe I p	4. 19	1007	
6963.622	6	0. 9		Atm H_2O	R 3	400	26
6964.538	18	2. 6		Atm H_2O	R 1	103	26
6965.052	6	0. 9		Atm H_2O	Q 4	103	26
6965.408	25	3. 6	*o*	Mg I	5. 75	33	
6965.925	8	1. 1		CN	Q 12	3,0	12
6966.75 a	2. 5	0. 4		CN	Q 16	3,0	12
6966.95 a	2. 5	0. 4					
6967.650m 6967.743	1. 5	0. 2		Atm O_2 — Atm	P 35	1,0	22
6967.999	3	0. 4		⊙?			
6968.265	1	0. 1		⊙?			
6968.582	2	0. 3		CN?	Q 13	3,0	12
6969.015	2	0. 3		Atm H_2O	Q 7	103	26
6970.495	11	1. 6	*w*	Fe I p Atm H_2O	3. 02 R 2	463 400	26
6970.874	10	1. 4		Atm H_2O	R 0	103	26
6971.136	6	0. 9		Atm H_2O	R 2	400	26
6971.51	3	0. 4		CN	Q 14	3,0	12
6971.799	1	0. 1		Atm H_2O ⊙?	Q 3	103	26
6971.917	17	*2. 3*	*s*?	Fe I	3. 02	404	
6973.027	1. 5	0. 2		Atm			
6973.374	0. 5	0. 1		Atm H_2O	R 2	400	26
6973.52 a	3. 5	0. 5		Ni I	5. 30		
6974.32 a	1. 5	0. 2					
6974.489	1	0. 1		Atm H_2O	R 5	400	26
6974.763	2	0. 3		Atm H_2O	Q 6	103	26
6975.239m	2	0. 3		Atm O_2	P 5	2,1	22
6975.440	22	*2. 9*	*W*	Fe I			
6975.754	1	0. 1		⊙?			
6976.24	11	1. 6	*o*	Fe I	4. 64	1194	
6976.504	47	*6. 3*	*W*	Si I	5. 95	60	
6976.708	2	0. 3		Atm			
6976.908	16	2. 3		Fe I	4. 58	1221	
6977.466	48	6. 9	*u*	Atm H_2O Fe I	Q 2 4. 59	103 1225	26
6978.045r	3	0. 4		⊙			
6978.383	68	*9. 3*	*s*	Cr I	3. 46	222	
6978.862S	90	*12. 2*	*s*	Fe I	2. 48	111	
6979.156 6979.251	9	1. 3		Fe I p Atm H_2O	2. 83 R 3	340 400	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
6979.45 a	1. 5	0. 2					
6979.806	41	*5. 4*	*S*	Cr I	3. 46	222	
6980.369	2	0. 3		⊙?			
6980.910	8	1. 1	*s*?	Cr I	3. 46	222	
6981.464	23	3. 3		Atm H_2O—	Q 1	103	26
6981.601r	8	1. 1		⊙			
6981.946	3	0. 4		⊙?			
6982.285	5	0. 7		⊙?			
6982.501m	2	0. 3		Atm O_2	P 9	2,1	22
6983.52	5	0. 7		Fe I? p	4. 59	1220	
6984.114	4	0. 6		⊙ Atm H_2O	R 2 R 3	400 103	26
6984.606r	2	0. 3		⊙ Atm?			
6984.936	13	1. 9		Atm H_2O	Q 4	103	26
6985.512	2	0. 3		Atm?			
6985.812	8	1. 1		⊙?			
6986.087	1. 5	0. 2		⊙?			
6986.579S	75	10. 7		Atm H_2O	Q 1	103	26
6987.482	1	0. 1		Atm O_2	P 11	2,1	22
6987.731	3	0. 4		Atm			
6987.866	11	1. 6		Atm H_2O	R 1 Q 3	400 103	26
6988.272r	—	—		⊙?			
6988.533	36	*4. 7*	*s*	Fe I	2. 40	167	
6988.986S	75	10. 7		Atm H_2O	Q 2	103	26
6989.561r	4	0. 6		⊙			
6989.72	1	0. 1		Fe I p	4. 61	1191	
6990.073	4	0. 6		⊙?			
6990.370	32	4. 6		Atm H_2O	Q 2	103	26
6990.90 a	2	0. 3		Atm O_2?	P 13	2,1	22
6991.026	8	1. 1		Atm H_2O	R 1	400	26
6991.804	9	1. 3		Atm H_2O	R 4	400	26
6992.00 a	1. 5	0. 2					
6992.16	1. 5	0. 2		Atm			
6992.50 a	1	0. 1					
6992.846	29	4. 2		Atm H_2O	Q 2	103	26
6993.521	48	6. 9		Atm H_2O	P 1	103	26
6994.05	1	0. 1		S I? Atm H_2O	8. 04 R 4	400	26
6994.110m	38	5. 4		Atm H_2O	Q 3	103	26
6994.371r	8	1. 1		CN	Q 20	3,0	12
6994.622	13	1. 9		S I? Atm H_2O	8. 04 R 3	400	26
6994.83	2. 5	0. 4		CN?	Q 22	3,0	12
6994.958	8	1. 1		Atm			
6995.378	2	0. 3		Atm O_2	P 15	2,1	22
6995.92 a	1	0. 1					
6996.310	2	0. 3		Atm O_2	P 15	2,1	22
6996.634	4	0. 6	*s,N*	Ti I	2. 33	256	
6997.080	7	1. 0		Fe I p	4. 95	1273	
6997.811r	4	0. 6		Atm H_2O	Q 6	400	26
6998.012	17	2. 4	*S*	Atm H_2O ⊙	R 4	103	26
6998.236r	3	0. 4		Atm H_2O	R 3	400	26
6998.718	15	2. 1		Atm H_2O	Q 3	103	26
6998.962	79	11. 3		Atm H_2O	Q 3	103	26
6999.228r	8	1. 1		Atm H_2O	Q 4	103	26
6999.563r	8	1. 1		Atm H_2O	R 2	400	26
6999.885	71	*9. 1*	*u*	Fe I	4. 10	1051	
7000.291r	5	0. 7		CN	Q 23	3,0	12
7000.623	23	3. 3	*w*	Fe I	4. 14	1005	
7000.91 a	5	0. 7		Atm H_2O	Q 4	103	26
7001.215r	3	0. 4		⊙			
7001.551	11	1. 6	*s,N*	Ni I	1. 93	64	
7001.92	1. 5	0. 2		Atm? O I?	10. 99	21	
7002.128	18	2. 6		Atm H_2O (O I)	Q 3 10. 99	103 21	26
7002.62	4	0. 6		Atm H_2O	Q 5	103	26
7003.574	81	*10. 4*	*w,N*	Si I	5. 96	60	
7003.977r	4	0. 6		CN?	Q 22	3,0	12
7004.314	23	3. 3		Atm H_2O	Q 4	400	26
7004.41	6	0. 9		Atm H_2O	Q 4	400	26
7004.745	65	9. 3		Atm H_2O	P 2	103	26
7005.119	27	3. 8		Atm H_2O	P 2	103	26
7005.37	9	1. 3		Atm H_2O	Q 3	400	26

Wave-length (Å)	Equi-valent Width Δλ (mÅ)	Re-duced Width Δλ/λ (F)	Spot	Solar Identi-fication	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7005.61	23	3.3		Atm H_2O	R 1	400	26
7005.900	89	12.7	*W,N*	Si I	5.98	60	
7006.156	11	1.6		Atm H_2O	R 2	400	26
7006.31	5	0.7		Atm H_2O	Q 5	400	26
7006.876	12	1.7		Atm			
7007.115	8	1.1		Atm H_2O	Q 3	400	26
7007.75 a	4	0.6		Atm H_2O	Q 6	400	26
7007.976	31	*4.0*	*w?*	Fe I	4.18	1078	
7008.265	7	1.0	*s,N*	Atm H_2O Ti I	Q 3 2.33	400 256	26
7008.42	2	0.3		Atm?			
7009.18 a	3	0.4		Atm H_2O CN?	Q 2 Q 23	400 3,0	26 12
7009.26 a	5	0.7		Atm			
7009.90 a	16	2.3		Atm H_2O	P 2	103	26
7010.37 a	13	1.9	*o?*	Fe I	4.58	1221	
7010.62 7010.71	7	1.0		Atm Atm H_2O	 Q 5	 103	 26
7010.99 a	16	2.3	*s*	Atm Ti I	 2.33	 256	
7011.323	60	8.5		Atm H_2O (Fe I)	Q 4 4.59	103 1221	26
7011.92 a	5	0.7		CN	Q 25	3,0	12
7012.229r	9	1.3		Atm H_2O	Q 4	400	26
7012.612	|47|	6.7	*o*	⊙			
7013.31	10	1.4		Atm H_2O	R 0	400	26
7013.816r	5	0.7		Atm			
7014.08	2	0.3		Atm			
7014.28	2	0.3		Atm?			
7014.546r	2	0.3		CN	Q 24	3,0	12
7014.996	13	1.9	*u*	Fe I	2.45	167	
7015.295	12	1.7		Atm H_2O	Q 5	103	26
7015.536r	4	0.6		Atm H_2O	Q 2	103	26
7015.77	2	0.3		Atm H_2O	R 1	400	26
7015.915r	8	1.1		Atm H_2O	P 3	103	26
7016.067	62	*9.8*	*s*	Fe I	2.42	109	
7016.442	146	20.8	*u*	Fe I Atm H_2O	4.15 P 3	1051 103	 26
7016.62 7016.72	38	5.4		Co I Si I	2.01 5.96	54 60	
7017.312r	12	1.7	*o?*	Si I	5.87	51	
7017.45	13	1.9		Atm H_2O	Q 3	400	26
7017.666	51	7.3	*o?*	Si I	5.87	51	
7018.06	5	0.7		CN	Q 26	3,0	12
7018.79	6	0.9		Atm H_2O	Q 6	103	26
7019.10	6	0.9		⊙			
7019.356	20	2.8		Atm H_2O	Q 3	400	26
7020.14	$\widehat{7}$	1.0		Atm H_2O— CN	Q 3 Q 25	103 3,0	26 12
7020.63	8	1.1		Atm			
7020.83	10	1.4		Atm H_2O	Q 2	400	26
7021.54	5	0.7		Atm H_2O	Q 4	400	26
7022.035r	2	0.3		Atm?			
7022.395r	16	2.3		Fe I p	4.30	1078	
7022.52	8	1.1		Atm H_2O	Q 1	400	26
7022.957S	72	*9.8*	*s*	Fe I	4.19	1051	
7023.504S	65	9.3		Atm H_2O	P 3	103	26
7023.73	5	0.7		Atm			
7024.065	31	*4.3*	*w*	Fe I	4.07	1003	
7024.392r	2	0.3		CN?	Q 27	3,0	12
7024.644	51	7.6	*w,N*	Fe I	4.56	1187	
7024.86	34	4.8	*u*	Ni I (Atm H_2O)	4.54 P 3	271 103	 26
7025.58	1.5	0.2		⊙?			
7025.75	1.5	0.2		⊙?			
7026.18	2	0.3		Atm CN?	 Q 26	 3,0	 12
7026.394	18	2.6		Atm H_2O	R 3	400	26
7026.61	13	1.8		Atm H_2O Si I	Q 5 5.86	103	26
7026.937	37	5.3		Atm H_2O	P 3	103	26
7027.478S	62	8.8		Atm H_2O	P 4	103	26
7027.65	2	0.3		Fe I Atm?	4.58	1221	
7027.859	28	4.0		Atm H_2O	P 4	103	26
7028.196r	2	0.3		⊙?			
7028.59	5	0.7		Fe I p Ni I	3.07 3.70	463 156	
7029.05	$\widehat{20}$	2.8	*u,N*	Ni I Atm H_2O	1.93 Q 5	61 103	 26
7029.712r	1.5	0.2		⊙?			
7030.021	23	*3.0*	*w*	Ni I	3.54	126	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7030.386r	1. 5	0. 2		Atm			
7030.68	4	0. 6		Atm H_2O	Q 6	103	26
7030.944r	5	0. 7		Atm			
7031.09	4	0. 6		CN Fe I p	Q 28 4. 65	3,0 1173	12
7031.40	1. 5	0. 2		Fe I p	4. 99	1278	
7032.09	1. 5	0. 2		⊙?			
7032.319	33	*4. 1*	*w*	⊙			
7032.51	3	0. 4		Atm			
7033.40 a	2	0. 4					
7034.090	7	1. 0		Fe I p	{4. 56 {4. 61	1190 1190	
7034.380	11	1. 6	*u*?	Ni I	3. 54	97	
7034.910S	|80|	*10. 5*	*w*	Si I	5. 87	50	
7035.22 a	10	1. 4					
7035.856r	3	0. 4	*s,N*	Ti I	3. 14	307	
7036.96	0. 5	0. 1		Fe I? p	2. 22	61	
7037.196	21	3. 0		Atm H_2O	P 4	103	26
7037.38	6	0. 9		Ni I	5. 49	288	
7037.534	31	4. 4		Atm H_2O	P 4	103	26
7037.98	3	0. 4		CN	Q 29	3,0	12
7038.220	76	*9. 8*	*s*	Fe I	4. 22	1051	
7038.765	40	*5. 3*	*s*	|Fe I Ti I	4. 26 2. 34	1078 256	
7039.284	21	3. 0		Atm H_2O (Ti I)	P 5 3. 15	103 307	26
7039.793	62	8. 8		Atm H_2O	P 5	103	26
7040.587r	2	0. 3		Atm			
7040.81	1	0. 1		⊙?			
7041.095	1	0. 1		Atm			
7041.751	10	1. 4		Atm H_2O	P 4	103	26
7042.13	3	0. 4		Atm			
7042.44	4	0. 6		Atm?			
7042.96	1. 5	0. 2		Atm			
7043.40	2	0. 3		⊙?			
7043.74	3	0. 4		Atm			
7043.990r	3	0. 4		Atm H_2O	Q 6	103	26
7044.50	7	1. 0		Atm H_2O	Q 2	400	26
7044.65	14	2. 0		Fe I	4. 95	1276	
7044.93	2	0. 3		⊙?			
7045.038r	2	0. 3		CN	Q 30	3,0	12
7045.233	6	0. 8		⊙?			
7045.44	2	0. 3		CN?	Q 29	3,0	12
7045.781r	1	0. 1		⊙?			
7046.863	17	2. 4		Atm H_2O	P 4	103	26
7047.08	5	0. 7		⊙?			
7047.349	5	0. 7		Atm H_2O	P 4	103	26
7048.00	2	0. 3		Atm H_2O	P 2	400	26
7048.22	3	0. 4		Atm H_2O	P 1	400	26
7048.68	2	0. 3		Atm			
7048.996	3	0. 4		Atm H_2O	Q 6	103	26
7049.41	1	0. 1		Atm			
7049.60 a	1. 5	0. 2		Ni I?	5. 28		
7050.50	9	1. 3		Atm H_2O	P 5	103	26
7050.78	2	0. 3	*s*	Ti I	2. 34	256	
7050.853	28	4. 0		Atm H_2O	P 5	103	26
7051.22	5	0. 7		Atm			
7051.72	3	0. 4		⊙?			
7051.85	3	0. 4		Atm H_2O	P 4	400	26
7052.34	1. 5	0. 2		CN	{Q 30 {Q 31	3,0 3,0	}12
7052.404	13	1. 8		Atm H_2O	P 6	103	26
7052.60	6	0. 9		Atm H_2O	Q 3	400	26
7052.776	52	7. 4		Atm H_2O	P 6	103	26
7052.87	13	1. 8	*s*	Co I	1. 96	54	
7053.484	2	0. 3		Atm			
7053.85	1	0. 1		Atm H_2O?	P 3	103	26
7054.000	5	0. 7		Co I	2. 72	140	
7054.58	6	0. 8		Atm			
7054.706	7	1. 0		Atm H_2O	Q 3	400	26
7054.98 a	|3|	0. 4		⊙?			
7055.80	|3|	0. 4		Atm H_2O	P 3	400	26
7055.927	20	2. 8	*o*?	⊙			
7056.30	4	0. 6		Atm			
7056.474r	4	0. 6		⊙?			
7056.65	2. 5	0. 4		⊙?			
7056.997	26	3. 7		|Atm H_2O—	P 5	103	26
7057.20 a	1. 5	0. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7057.35 a	1. 5	0. 2					
7057.544r	1	0. 1		Atm			
7057.92	4	0. 6		Fe I p	3. 65	815	
7058.20	8	1. 1		Atm H_2O	P 2	400	26
7058.632	5	0. 7		Atm H_2O	P 5	103	26
7058.96 a	2. 5	0. 4		⊙?			
7059.17 a	2	0. 3		⊙?			
7059.47	3	0. 4		CN	Q 31	3,0	12
7059.64	4	0. 6		Atm H_2O	Q 7 R 7	103 301	26
7060.00	5	0. 7		CN	Q 32	3,0	12
7060.446	47	6. 7	*u*?	Atm H_2O Mg I	P 5 Q 2 5. 75	103 400 32	26
7060.62 a	11	1. 6					
7060.85 a	3	0. 4					
7061.35	|2|	0. 3					
7061.507	11	1. 6		Atm H_2O	P 3	400	26
7062.31	1. 5	0. 2		Atm H_2O	Q 7	103	26
7062.473r	1. 5	0. 2		⊙?			
7062.79	3	0. 4		Atm Fe I p	4. 99	1273	
7062.978r	13	1. 8	*u*	Ni I	1. 95	64	
7063.36	1	0. 1	*w*?	⊙? — Atm H_2O	P 6	103	26
7063.483	17	2. 5	*w*				
7063.60 a	5	0. 7		Ni I	4. 54	270	
7064.12	4	0. 6		Atm H_2O	Q 4	400	26
7064.64	5	0. 7		Atm H_2O	P 6	103	26
7064.88	4	0. 6		Atm			
7065.24	1. 5	0. 2					
7065.642	21	3. 0		Atm H_2O	P 7 P 7	103 103	26
7065.91	1	0. 1		C I? p	8. 64		
7066.218r	6	0. 8	*w*?	Fe I? p	4. 99	1277	
7066.29	5	0. 7		Atm H_2O	Q 5	400	26
7066.60	1	0. 1		Atm?			
7066.933r	8	1. 1		Atm H_2O	P 5	400	26
7067.04	4	0. 6		Atm H_2O	Q 3	400	26
7067.460	13	1. 8	*w*	Fe II			
7067.83	4	0. 6		CN? Atm H_2O	Q 33 P 3	3,0 400	12 26
7068.07	7	1. 0		Fe I p	4. 99	1276	
7068.423	64	*8. 4*	*u*	Fe I	4. 07	1004	
7068.64	11	1. 6		Fe I p	4. 91	1276	
7068.84	2	0. 3		Atm			
7069.06	3	0. 4	*s*	Ti I	3. 18	307	
7069.54	4. 5	0. 6		Fe I	2. 56	205	
7069.80	1. 5	0. 2		Atm			
7070.10	1	0. 1	*s*	Sr I	1. 85	3	
7070.35	1	0. 1		Atm H_2O	R 5	301	26
7070.663r	4	0. 6		Atm H_2O	R 6	301	26
7071.63	2	0. 3		Atm			
7071.866	35	*4. 8*	*o*	Fe I	4. 61	1194	
7072.07	3. 5	0. 5		Atm H_2O	P 5 P 6	103 103	26
7072.46	5	0. 7		Atm H_2O	P 6	103	26
7072.80	6	0. 8	*o*?	Fe I	4. 07	1003	
7073.21	1	0. 1		Atm H_2O	P 4	400	26
7073.49	3	0. 4		Atm H_2O	P 6	400	26
7073.618r	2	0. 3		Atm H_2O	R 6	301	26
7074.50	7	1. 0	*o*?	Atm H_2O? Fe I p — CN	P 4 4. 61 Q 33	103 1173 3,0	26 12
7074.90	6	0. 8		Atm H_2O	P 4	400	26
7075.08	3	0. 4		Atm H_2O	Q 3	400	26
7075.27	3	0. 4		Atm H_2O	Q 5	400	26
7075.43	1	0. 1		Atm H_2O	Q 4	400	26
7075.63	2	0. 3		Atm H_2O	Q 4	400	26
7075.89	3	0. 4		CN	Q 34	3,0	12
7076.10 7076.34	3. 5	0. 5		Atm H_2O Atm	P 6 P 7	103	26
7076.52	2	0. 3		Atm? C I	8. 64		
7076.815r	3	0. 4		Atm?			
7077.22	1	0. 1		Atm H_2O (Eu II)	R 4 1. 25	301 8	26
7077.61	3	0. 4		Atm			
7077.81	8	1. 1		Atm H_2O	P 2	400	26
7078.05	3	0. 4		Atm H_2O	Q 3	400	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7078.252	15	2. 1		Atm H_2O	P 4	400	26
7078.841	10	1. 4		Atm H_2O	P 7	103	26
7079.27	5	0. 7		Fe I p	4. 91	1278	
7079.51	1. 5	0. 2		Atm			
7079.591	11	1. 6		Atm H_2O	P 8	103	26
7079.89	3	0. 4		Atm			
7080.970	7	1. 0	*w*	Atm H_2O	P 2	400	26
7082.168r	4	0. 6	*s,N*	⊙			
7082.480	5	0. 7		Atm CN	Q 34	3,0	12
7082.827r	5	0. 7	*s,N*	⊙			
7083.394	27	3. 8	*W*	Fe I	4. 91	1277	
7083.716r	6	0. 8					
7083.960	21	3. 0	*w*	Al I Si I	4. 02 5. 98	 60	
7084.254r	7	1. 0	*s·*	CN |Ti I p	Q 35 1. 43	3,0 99	12
7084.656	17	2. 4		Al I	4. 02		
7084.975	61	*8. 1*	*s?*	Co I Atm H_2O	1. 88 P 7	54 103	 26
7085.533r	3	0. 4		C I	8. 64		
7086.319	5	0. 7		Atm H_2O	Q 5	400	26
7086.730	23	*3. 0*	*w*	Fe I	{3. 60 {5. 08	815 1311	
7087.35	3	0. 4					
7087.59	3	0. 4		⊙			
7087.822r	7	1. 0		C I	8. 64		
7088.154	24	3. 4		Atm H_2O	{P 7 {P 5	103 400	}26
7088.23	2	0. 3					
7088.64	|2|	0. 3		Atm H_2O	P 3	400	26
7089.04	3	0. 4					
7089.71	6	0. 8		Atm H_2O Fe I? p	P 5 4. 58	400 1220	26
7090.390	73	*9. 7*	*u*	Fe I	4. 23	1051	
7090.69	4. 5	0. 6		CN	Q 35	3,0	12
7090.92	1	0. 1					
7091.18	5	0. 7		CN Atm H_2O	R 9 P 5	4,1 400	12 26
7091.363r	1	0. 1		⊙			
7091.942	16	2. 3	*s·*	Fe I p Fe I	4. 95 4. 95	1277 1278	
7092.31	1. 5	0. 2		CN Ca I? p	R 10 2. 93	4,1	12
7092.59	0. 5	0. 1		Atm H_2O	P 8	103	26
7092.848	8	1. 1		CN— Fe I	Q 36 4. 56	3,0 1187	12
7093.09	18	2. 5	*w?*	Fe I	4. 56	1189	
7093.34	4	0. 6		C I	8. 64		
7093.68	2	0. 3		CN	R 11	4,1	12
7094.05	5	0. 7		Atm H_2O	P 9	103	26
7094.334	5	0. 7		Fe I p	3. 57	778	
7095.01	3	0. 4		Atm			
7095.18	1. 5	0. 2		CN	R 12	4,1	12
7095.407	32	*3. 9*	*o?*	Ni I?— ‖Fe I	5. 28 4. 21	276 1105	
7095.58	2	0. 3		Atm			
7095.859	7	1. 0		Atm H_2O	P 7	103	26
7096.383r	2	0. 3		Atm			
7096.63	1	0. 1		⊙?			
7096.93 a	2	0. 3		CN	R 13	4,1	12
7097.123	20	2. 8		Atm ⊙			
7097.45 a	2. 5	0. 4		Si I p	5. 98	60	
7097.666	3. 5	0. 5		Atm H_2O	R 4	301	26
7097.76 m	1	0. 1	*s*	Zr I	0. 69	42	
7098.02	6	0. 8		Atm H_2O	Q 6	400	26
7098.63	1. 5	0. 2		Atm?			
7098.80	1	0. 1		Atm?			
7098.91	5	0. 7		Atm H_2O	P 4	400	26
7099.22	2	0. 3		CN?	Q 36	3,0	12
7099.38	2	0. 3		Atm H_2O	R 5	221	26
7099.540r	2	0. 3		Atm H_2O	Q 4	400	26
7100.130	16	2. 3	*w?*	Atm H_2O C I	Q 4 8. 64	400	26
7100.75 a	4	0. 6		Atm H_2O	R 5	301	26
7101.09	1. 5	0. 2		CN	R 15	4,1	12
7101.31	1	0. 1		Fe I p	2.20	61	
7101.59 7101.69	5	0. 7		Atm Atm H_2O CN	 P 6 Q 37	 400 3,0	 26 12
7101.96	7	1. 0		Atm			
7102.279	8	1. 1		Atm H_2O	P 6	400	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7102.89 m			*s*	Zr I	0. 65	42	13
7103.150	6	0. 8	*s,N*	Atm Fe I p	2. 43	167	
7103.47	3	0. 4		CN	R 16	4,1	12
7103.80	1. 5	0. 2	*s*	Zr I	0. 62	42	
7103.90	1. 5	0. 2		Atm			
7104.39	1	0. 1		Atm H_2O	P 8	103	26
7104.71	1	0. 1		Atm H_2O	P 7	103	26
7105.28	0. 5	0. 1		Atm H_2O	R 4	301	26
7105.61	1	0. 1		⊙?			
7105.87	2. 5	0. 4		Fe I p	4. 19	1008	
7106.164	11	1. 5		Atm H_2O	R 5	301	26
7106.44	5. 5	0. 8		Atm H_2O ⊙	R 4	301	26
7107.01	3	0. 4					
7107.25	1	0. 1		Fe I p	5. 02	1324	
7107.468	24	3. 4	*s*	Fe I	4. 19	1005	
7107.65	1. 5	0. 2					
7107.909r	3	0. 4		CN?	Q 37	3,0	12
7108.109r	2	0. 3		Atm?			
7108.92	3. 5	0. 5		C I	8. 64		
7109.06	6	0. 8		Atm H_2O	P 9	103	26
7109.23	2. 5	0. 4		Atm H_2O	P 10	103	26
7109.32	3. 5	0. 5		Atm H_2O Dy II?	Q 6	400	26
7109.70	2	0. 3		Fe I p	4. 61	1190	
7109.96	1	0. 1					
7110.14	1	0. 1		CN			
7110.33	2	0. 3					
7110.46	1. 5	0. 2					
7110.905	41	*5. 2*	*w?*	Ni I	1. 93	64	
7111.14	3	0. 4		Atm H_2O	P 3	400	26
7111.450	23	3. 2		C I	8. 64	26	
7111.94	7	1. 0		Atm H_2O Zr I?	P 3 0. 52	400 23	26
7112.170	33	4. 6	*u*	Fe I	2. 99	404	
7113.171	30	4. 2	*o*	C I	8. 64	26	
7113.422r 7113.592r	5	0. 7					
7113.90 7114.041r	6	0. 8		Atm? Atm H_2O	R 6	221	26
7114.175r	1	0. 1		Atm?			
7114.574	8	1. 1	*u,N*	Fe I	2. 69	267	
7115.05	2	0. 3		⊙			
7115.17	33	4. 6	*o*	C I	8. 64 8. 64	26	
7115.33	3. 5	0. 5		Fe I? p	4. 61	1186	
7115.47	5	0. 7		Atm H_2O	P 7	400	26
7115.66	1	0. 1		Atm?			
7115.83 a	1. 5	0. 2		CN	R 0	4,1	12
7116.388	3	0. 4		Atm H_2O	P 7	103	26
7116.963	21	2. 9	*o?*	C I	8. 64		
7117.25 a	2	0. 3		CN	R 17	4,1	12
7117.669r	4	0. 6		Atm? CN	Q 1	4,1	12
7118.105	16	2. 2	*u*	Fe I	5. 01	1278	
7118.284	16	2. 2	*w,d*	Atm H_2O ⊙	R 5	301	26
7118.42	5	0. 7		Atm			
7118.975r	4	0. 6		CN	R 21	4,1	12
7119.38	3	0. 4		CN	Q 6	4,1	12
7119.704	19	2. 7		Atm H_2O (C I)	P 6 8. 64	400	26
7120.03	13	1. 8		Atm Fe I CN	4. 56 Q 7	1187 4,1	12
7120.58	1. 5	0. 2		Fe I p	4. 14	1006	
7120.96 a	1. 5	0. 2					
7121.67	1. 5	0. 2		CN	P 9	4,1	12
7122.206S	107	*14. 9*	*s*	Ni I	3. 54	126	
7122.50	13	1. 8		Atm H_2O	R 3	301	26
7122.75	5	0. 7		CN Atm?	R 22	4,1	12
7123.41	2	0. 3		CN	Q 14	4,1	12
7123.80 a	1	0. 1		CN	Q 9	4,1	12
7124.00 a	2	0. 3		Atm H_2O ⊙	P 4	400	26
7124.70 a	3. 5	0. 5		⊙ Atm			
7125.02 a	3	0. 4		Fe I p	3. 69	815	
7125.33	1	0. 1	*s*	Fe I p Atm?	4. 59	1220	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7125.84 a	1. 5	0. 2		CN	Q 10	4,1	12
7126.06 a	4	0. 6		Atm H_2O	P 7 R 6	400 301	26
7126.25 a	1. 5	0. 2		Atm			
7126.71	5	0. 7		Ni I	3. 54	97	
7127.37	1	0. 1		CN CN	Q 15 P 5	4,1 4,1	12 12
7127.573	29	4. 1	*W*	Fe I	4. 99	1273	
7127.76	4	0. 6		⊙— Atm H_2O	P 4	400	26
7128.150	9	1. 3		Atm H_2O	R 4	301	26
7128.528r	1	0. 1		Atm H_2O	P 9	103	26
7129.129	7	1. 0		Atm H_2O ⊙	R 4	301	26
7129.23	5	0. 7		Fe I? p	4. 59	1219	
7129.47	4	0. 6		Atm?			
7129.87	10	1. 4		Atm? Si I? p	5. 86		
7130.12	4	0. 6		Atm			
7130.64	3	0. 4		CN	Q 12	4,1	12
7130.925	105	*13. 6*	*u*	Fe I	4. 22	1051	
7131.360	11	1. 5		CN	Q 16	4,1	12
7131.63	2	0. 3		Atm H_2O	R 4	202	26
7131.82	2	0. 3		Hf I? Atm?	0. 00		
7132.21	$\widehat{3}$	0. 4		C I?	8. 64	26	
7132.985	44	*5. 9*	*w*	Fe I	4. 07	1002	
7133.389	6	0. 8		CN	Q 13	4,1	12
7134.116	10	1. 4		Atm			
7134.32	2	0. 3		Co-I?	4. 06	179	
7134.61	1. 5	0. 2		Atm?			
7135.03	2	0. 3		Atm			
7135.58	2	0. 3		CN? Atm	Q 40	3,0	12
7135.83	5	0. 7		Atm			
7136.56	1. 5	0. 2		Atm			
7137.21	4	0. 6		Atm H_2O	R 2	301	26
7137.469	26	3. 6		Atm H_2O	R 3	301	26
7137.88	2	0. 3		Atm			
7138.08	4	0. 6	*s*?	Ti I p	1. 43	98	
7138.926	5	0. 7	*S*	Ti I	1. 44	99	
7139.20	2	0. 3		CN Atm?	P 9	4,1	12
7139.55	1	0. 1		Atm?			
7139.68	2. 5	0. 4		CN?	Q 41	3,0	12
7139.80 a	3	0. 4		CN	Q 15 R 24	4,1 4,1	12
7140.279	10	1. 4	*u,N*	Atm H_2O? ⊙?	R 4	202	26
7141.03 7141.14	2	0. 3		CN?	P 13	4,1	12
7141.64	3	0. 4		Ni I?	5. 30	283	
7142.16	3	0. 4		Atm			
7142.517	44	*5. 9*	*w*	Fe I	4. 95	1274	
7142.987	15	2. 1	*o*?	Atm H_2O ⊙	R 4	202	26
7143.382	3	0. 4		Atm CN	Q 16	4,1	12
7143.96	3	0. 4		CN	R 25	4,1	12
7144.754	1. 5	0. 2		Atm?			
7145.14	3	0. 4		Atm H_2O CN?	R 2 Q 19	301 4,1	26 12
7145.312	42	*5. 9*	*w*?	Fe I	4. 61 4. 61	1186 1193	
7145.55	3	0. 4					
7145.90	1. 5	0. 2		Atm?			
7146.16	2. 5	0. 4		Atm H_2O	P 6	400	26
7146.57	12	1. 7		Atm H_2O	P 4	400	26
7147.28	3	0. 4		CN	Q 17	4,1	12
7147.634	28	3. 9		Atm H_2O	R 3	301	26
7148.150	157	*20. 3*	*s*	Ca I	2. 71	30	
7148.50 a	3	0. 4		CN	R 26	4,1	12
7148.704	14	2. 0	*w*	Fe I	4. 28 5. 07	1078 1339	
7149.33	3	0. 4		⊙?			
7149.750	6	0. 8		CN	Q 42	3,0	12
7150.172	12	1. 7		CN—	Q 20	4,1	12
7150.680	11	1. 5		Atm H_2O	R 5	202	26
7151.143	18	2. 5		Atm H_2O	R 3	202	26
7151.464	24	3. 4	*s*	Fe I	2. 48	109	
7151.80 a	2	0. 3		⊙?			
7152.22	2. 5	0. 3		⊙?			
7152.51	1. 5	0. 2		Atm?			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7153.06	2. 5	0. 3		Atm?			
7153.330	7	1. 0		Atm			
7153.746	6	0. 8		Atm H_2O	R 4	202	26
7154.707	4. 5	0. 6		Atm Co I	 2. 04	 89	
7155.09	5	0. 7		Atm			
7155.37 a	3	0. 4		CN Atm H_2O	Q 42 Q 21 R 3	3,0 4,1 202	12 26
7155.634	45	*6. 1*	*w,d*	Fe I	5. 01	1276	
7156.422	21	2. 9		Atm			
7157.73	7	1. 0	*w,NN*	⊙			
7158.508	14	2. 0	*u,N*	Fe I	3. 65	815	
7158.776	20	2. 8	*u,d*	⊙ Atm H_2O	 R 7	 301	 26
7159.310	15	2. 1		Atm H_2O	R 3	202	26
7160.20 a	3	0. 4		CN	Q 43 P 14	3,0 4,1	12
7160.35 a	4	0. 6	*S,N*	Ti I Atm	1. 43	98	
7160.859	4	0. 6		CN Fe I p	Q 22 5. 03	4,1 1310	12
7161.11	2	0. 3		Atm Fe I p	 4. 64	 1190	
7161.57	4	0. 6		Atm H_2O	P 5	400	26
7162.053	21	2. 9		Atm H_2O	R 6	301	26
7162.34	15	2. 1	*o?*	Atm H_2O? Fe I p	P 5 5. 02	400 1278	26
7162.731	7	1. 0		Atm H_2O	R 6	301	26
7163.13	2. 5	0. 3		Atm?			
7163.27	2. 5	0. 3		Atm?			
7163.54	3	0. 4		Atm H_2O	R 13	301	26
7163.82	15	2. 1		Atm H_2O	R 2 R 12	301 301	26
7164.23	3	0. 4					
7164.432	153	21. 4	*u*	Fe I	4. 19	1051	
7164.62	33	5. 0	*o*	Si I	5. 87	49	
7164.83	3	0. 4					
7165.14	12	1. 7		Si I p	5. 87	49	
7165.578	93	*12. 4*	*o*	Si I	5. 87	48	
7165.71	8	1. 3	*u?*	⊙			
7166.09	15	2. 1		Atm H_2O	R 10	301	26
7166.27	7	1. 0		Atm ⊙?			
7166.57	5	0. 7		CN	Q 23	4,1	12
7166.71	4	0. 6		Atm			
7166.96	14	2. 0	*o*	Ni I	3. 74	109	
7167.10	23	3. 2		Atm H_2O	R 3 R 8	202 301	26
7167.360	46	6. 4		Atm H_2O	R 7	301	26
7167.904	132	18. 4		Atm H_2O	R 5	301	26
7168.73	6	0. 8	*o?*	⊙			
7169.063	21	2. 9		Atm H_2O	R 7	301	26
7169.11 m			*S*	Zr I	0. 73	42	13
7169.895	18	2. 5	*u,N*	Atm H_2O—	R 2	202	26
7170.086	40	5. 6		Atm H_2O	R 6	301	26
7170.33	23	3. 2		Atm			
7170.568	80	11. 2		Atm H_2O	R 8	301	26
7170.869	25	3. 5		Atm			
7171.038	12	1. 7		Atm			
7171.33 a	2	0. 3					
7171.75	1. 5	0. 2					
7171.954	23	3. 2		Atm			
7172.714	126	17. 6		Atm H_2O	R 5	301	26
7172.90	36	5. 0		Atm H_2O	R 6	301	26
7173.417	120	16. 7		Atm H_2O	R 7	301	26
7173.774	62	8. 6		Atm H_2O	R 6	301	26
7174.166	66	9. 2		Atm H_2O	R 5	301	26
7174.45 a	3	0. 4		Mn I?	3. 76		
7174.84	2	0. 3		Atm			
7175.316	7. 5	1. 0		P I?— Atm H_2O	8. 15 R 6	 301	 26
7175.50	1. 5	0. 2		Atm			
7175.960	79	11. 0	*w*	Fe I— Atm H_2O	4. 56 R 3	1188 202	 26
7176.146	64	8. 9		Atm H_2O	R 4	301	26
7176.37 a	2. 5	0. 3					
7176.59	2	0. 3		P I?	8. 13		
7176.878	44	6. 1	*u*	Fe I	4. 99	1276	
7177.112	22	3. 1		Atm H_2O	R 6 R 6	301 301	26
7177.367	48	6. 7		Atm H_2O	R 6	301	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7177.618	30	4. 2		Atm H_2O	R 4	301	26
7178.422	13	1. 8		Atm H_2O	R 5	301	26
7178.765	4	0. 6		CN	Q 25	4,1	12
7178.97	0. 5	0. 1		⊙?			
7179.298	|5.5|	0. 8		Atm H_2O	R 5	301	26
7179.61	1	0. 1		Atm H_2O Zr II?	R 5 1. 74	221	26
7180.004	19	2. 6	*S*	Fe I	1. 48	33	
7180.202	3	0. 4		CN? Atm	R 33	4,1	12
7180.56	2. 5	0. 3					
7180.79	2	0. 3		CN	R 32	4,1	12
7181.198	71	9. 9	*s*	Fe I	4. 22	1078	
7181.520	67	9. 3		Atm H_2O	R 5	301	26
7181.760	30	4. 2		Atm H_2O	R 5	301	26
7181.955	81	11. 3	*w*	Ni I (Fe I)	3. 74 4. 91	126 1274	
7182.400	3	0. 4	*s*?	Atm?			
7182.825	2	0. 3		Atm			
7183.46	1	0. 1		CN Atm?	P 20	4,1	12
7184.38	2. 5	0. 3		Atm H_2O	R 5	301	26
7184.526	146	20. 4		Atm H_2O	R 4 R 3	301 301	26
7184.90	24	3. 3	*w,N*	‖Si I Atm H_2O	5. 61 R 5	25 301	26
7185.15	6	0. 8		CN	Q 26	4,1	12
7185.29				Atm H_2O	P 5	400	26
7185.56	|7|	1. 0	*s*	Cr I	3. 89	264	
7185.70 a	5	0. 7					
7186.141	45	6. 3		Atm H_2O	R 4	301	26
7186.384	73	10. 2		Atm H_2O	R 3	301	26
7187.010	43	6. 0		Atm H_2O	R 4	301	26
7187.388	240	33. 5	*u,d*	Fe I— Atm H_2O	4. 10 R 4	1051 301	26
7188.00	8	1. 1		Atm H_2O Cr I?	Q 8 3. 89	301 264	26
7188.27 a	3	0. 4					
7188.62	9	1. 3	*S*	Ti I	1. 43	99	
7188.99	4	0. 6		Atm H_2O	R 5	301	26
7189.141	43	*5. 8*	*u*	Fe I	3. 07	463	
7189.45 a	3	0. 4					
7189.860	|13|	1. 8	*S*	Ti I	2. 58	285	
7190.128	15	2. 1	*u*	Fe I	3. 11	463	
7190.42	1. 5	0. 2		Atm H_2O	Q 1	301	26
7190.96	1	0. 1		Atm H_2O	Q 7	301	26
7191.497	115	16. 0		Atm H_2O	R 3	301	26
7191.67	5	0. 7	*w*?	Fe I	4. 99	1274	
7191.868	37	5. 1		Atm H_2O	R 3	301	26
7192.465	32	4. 4	*u,d*	Fe I |Atm H_2O	R 3	202	26
7192.759r	4	0. 6					
7193.183	60	8. 3	*o*?	Mg I	5. 75	31	
7193.561	75	10. 4		Atm H_2O (Si I)	R 4 R 2 5. 61	301 301 25	26
7193.768	54	7. 5		Atm H_2O (Si I)	R 3 5. 61	301 25	26
7194.07	$\widehat{7}$	1. 0		Fe I p	5. 03	1307	
7194.38	4	0. 6		CN	P 20	4,1	12
7194.569r	1	0. 1		Fe I			
7194.93	33	4. 6	*w*	Fe I	5. 02	1273	
7195.044	26	3. 6		Atm H_2O	R 3	301	26
7195.27 a	2	0. 3		Atm H_2O	Q 6	202	26
7195.525r	10	1. 4		Cr I ?	4. 19		
7195.797	|12|	1. 7		Atm H_2O	R 3	301	26
7196.48	2	0. 3		Atm?			
7197.020	70	9. 7	*s*	Ni I	1. 93	62	
7197.231	25	3. 5		Atm H_2O	R 2	202	26
7197.41	6	0. 8		Atm H_2O	Q 5 Q 6	301 301	26
7197.865	22	3. 1		Atm H_2O	R 2	301	26
7198.440	|35|	4. 9		Atm H_2O	R 2	301	26
7198.86	4	0. 6		CN	Q 28	4,1	12
7199.07 a	1. 5	0. 2		Atm			
7199.42	2	0. 3		Atm H_2O	Q 6	301	26
7199.80	8	1. 1		⊙?			
7200.027	4	0. 6		Atm H_2O	Q 4	301	26
7200.097r	3	0. 4		⊙?			
7200.22 a	5	0. 7		CN	Q 27	4,1	12
7200.37	9	1. 2		Atm H_2O	R 2	221	26
7200.56	73	10. 2		Atm H_2O	R 2	301	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7201.197	100	13. 9		Atm H_2O	R 2	301	26
7201.476	5	0. 7		Atm H_2O	Q 3 Q 7	301 301	26
7201.63	1. 5	0. 2		Atm H_2O	Q 2	301	26
7201.80	3	0. 4		Atm H_2O	R 2	320	26
7202.208	124	*16. 6*	*s*	Ca I	2. 71	29	
7202.543	1. 5	0. 2		Atm H_2O	Q 4	202	26
7202.900a	|1. 5|	0. 2		Atm H_2O	R 3	202	26
7203.10 a	1. 5	0. 2					
7203.27	1	0. 1		Atm H_2O	P 6	400	26
7203.850	12	1. 7		Atm H_2O	R 1	202	26
7204.08	1. 5	0. 2		Atm H_2O	Q 5	301	26
7204.308	|82|	11. 4		Atm H_2O	R 1	301	26
7204.85 a	2. 5	0. 3		Atm H_2O	Q 4	202	26
7205.22 a	1	0. 1		Atm			
7205.536	2	0. 3		Atm H_2O Fe I p	Q 6 4. 73	202 1251	26
7206.15	3	0. 4		Atm			
7206.421	102	14. 2		Atm H_2O	R 1	301	26
7206.861r	1	0. 1		CN	Q 28	4,1	12
7207.131	72	10. 4	*u*	Fe I	4. 07	1001	
7207.396	150	21. 0	*u*	Fe I	4. 15	1051	
7207.90 a	4	0. 6		Atm H_2O	Q 2	202	26
7208.220	8	1. 1		Si I	5. 62	25	
7208.60 a	1. 5	0. 2		CN	R 37	4,1	12
7209.504	81	11. 2	*u,d*	Ti I— |Atm H_2O	1. 46 R 1	99 301	26
7210.08	3	0. 4		Atm?			
7210.37 a	6	0. 8		Atm H_2O	R 6	221	26
7211.203	12	1. 7		Atm H_2O	Q 4	301	26
7212.037	4	0. 6		Atm H_2O	R 0	202	26
7212.440	34	4. 3	*w,N*	Fe I	4. 95	1273	
7212.91	1	0. 1		CN	P 24	4,1	12
7213.28	1	0. 1		Atm?			
7213.41 m			*S*	Ti I	1. 74	143	13
7213.51	3	0. 4		CN	Q 30	4,1	12
7213.847	9	1. 2	*w,N*	Fe I	4. 26	1105	
7214.74	25	3. 5	*o*?	Ti II p	2. 59	101	
7214.93	13	1. 8	*s*	Ti I	3. 70?	314	
7215.539	6	0. 8		Atm H_2O ⊙	R 2	202	26
7216.19	22	3. 0	*S*	Ti I	1. 44	98	
7216.527	24	3. 3		Atm H_2O	R 0	301	26
7216.63	20	2. 8	*o*?	Fe I	5. 01	1273	
7217.28	0. 5	0. 1		Atm H_2O Co I?	Q 7 2. 54	301 126	26
7217.63	4	0. 6		Atm			
7218.022	7	1. 0		Atm H_2O	Q 3	301	26
7218.47	31	4. 3	*o*?	⊙— Atm H_2O	Q 3	202	26
7218.65	4	0. 6		Atm H_2O	R 6	221	26
7219.056	3	0. 4		Atm H_2O	R 5	221	26
7219.40 m			*S*				13
7219.680	53	*7. 1*	*s*	Fe I	4. 07	1001	
7220.12	1. 5	0. 2		Atm			
7220.786	10	1. 4		Ni I	5. 36	294	
7221.204	49	*6. 1*	*w*	Fe I	4. 56	1189	
7221.586r	0. 5	0. 1		Atm H_2O	Q 5	202	26
7222.397	27	*3. 3*	*o*	Fe II	3. 89	73	
7222.90 a	24	3. 3	*w*?	Fe I	4. 61 5. 06	1187 1311	
7223.00	2	0. 3		Atm H_2O	Q 6	301	26
7223.636	101	14. 0	*u*?	Atm H_2O |Fe I	Q 2 3. 02	301 463	26
7224.129r	3	0. 4		Atm?			
7224.464	28	3. 9	*o*	Fe II	3. 89	73	
7225.056	3. 5	0. 5	*s*?	Ni I?	5. 61		
7225.85 a	5	0. 7		Fe I p	4. 99	1278	
7226.05	5	0. 7					
7226.208	46	6. 4	*o*	Si I	5. 61	26	
7227.493	42	5. 8		Atm H_2O	Q 1	301	26
7227.63	1. 5	0. 2		Atm H_2O	R 5	221	26
7228.243	4. 5	0. 6		Atm H_2O	Q 5	301	26
7228.700	29	4. 0	*u*	Fe I	2. 76		267
7229.121	15	2. 1		CN	P 26 Q 32	4,1 4,1	12
7229.46	7	1. 0		Atm H_2O— ⊙	R 5	301	26
7230.06	3	0. 4		⊙?			
7230.56	2	0. 3		Cr I?	4. 62		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7230.677	2. 5	0. 3		Atm H_2O	R 3	301	26
7231.06 a	2	0. 3		Atm H_2O	R 6	221	26
7231.50 a	3. 5	0. 5					
7231.69	0. 5	0. 1		Atm H_2O	R 3	202	26
7232.234	26	3. 6		Atm H_2O	Q 4	301	26
7232.55 a	2	0. 3		CN	R 40	4,1	12
7232.902	89	12. 3		Atm H_2O	Q 1	301	26
7233.33	2. 5	0. 3		CN	Q 49	3,0	12
7234.09	1. 5	0. 2		Atm			
7234.400	18	2. 5		Atm H_2O	Q 3	301	26
7234.738	100	13. 8		Atm H_2O	Q 2	301	26
7235.325	47	6. 5	*W*	Si I	5. 61	26	
7235.85	31	4. 3	*w*	Si I	5. 61	25	
7236.136	38	5. 3		Atm H_2O	Q 2	301	26
7236.425	7	1. 0		Atm H_2O	R 5	221	26
7237.40	4. 5	0. 6		|CN Hf I?	Q 33 0. 57	4,1	12
7237.84	2	0. 3		Atm H_2O	R 4	221	26
7237.946	5	0. 7		Atm H_2O	R 4	221	26
7238.24	3	0. 4		Atm?			
7238.58	3	0. 4		CN Atm?	R 40	4,1	12
7239.042	8	1. 1		Atm H_2O	R 7	221	26
7239.50	1. 5	0. 2		Atm H_2O	R 5	221	26
7239.848	75	10. 4	*u,N*	|Atm H_2O— Fe I	Q 2 4. 21	301 1105	26
7240.53	2	0. 3	*u?*	Atm H_2O	R 5	221	26
7240.62	86	11. 9		Atm H_2O	P 1	301	26
7240.822	67	9. 3		Atm H_2O	Q 3	301	26
7241.26	2	0. 3		Atm H_2O C I	Q 8 9. 00	301	26
7242.24	7	1. 0		⊙			
7242.49	3	0. 4		S I?	8. 04	15	
7243.09	6	0. 8		S I	8. 04	15	
7243.48	26	3. 6		Atm H_2O	Q 3	301	26
7243.72	88	12. 2		Atm H_2O	Q 3	301	26
7244.48	4	0. 6		CN	Q 33	4,1	12
7244.850	63	*8. 5*	*S*	|Ti I Fe I (S I)	1. 44 4. 95 8. 04	99 1276 15	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7245.40	2	0. 3		Atm H_2O	P 5	301	26
7245.676	41	5. 7		Atm H_2O	Q 4	301	26
7245.90 a	2	0. 3		CN	Q 34	4,1	12
7246.09	2	0. 3		Atm H_2O	P 2	202	26
7246.37 a	3	0. 4		CN	P 27 P 28	4,1 4,1	12
7246.794	4	0. 6		Atm H_2O	R 6	221	26
7247.07	5	0. 7	*s*	Atm H_2O— |⊙	Q 6	301	26
7247.210	20	2. 8		Atm H_2O	Q 4 Q 5	301 301	26
7247.39	2	0. 3		Atm H_2O	R 4	221	26
7248.26 a	3	0. 4		⊙?			
7248.924	13	1. 8		Atm H_2O	Q 4 R 4	301 221	26
7249.34 7249.47	4	0. 6		Atm H_2O ⊙	Q 3	221	26
7249.90 a	1. 5	0. 2		CN	R 42	4,1	12
7250.216	23	3. 2		Atm H_2O	Q 3	301	26
7250.64 7250.68	71	*9. 3*	*o*	Si I Atm H_2O	5. 62 R 5	25 221	26
7251.717	34	*4. 1*	*s*	Ti I	1. 43	99	
7252.075	3	0. 4	*u?,N*	—Atm H_2O	R 4	221	26
7252.374	|77|	10. 6		Atm H_2O	P 2	301	26
7252.853	|18|	2. 5		Atm H_2O	Q 5	301	26
7253.224	34	4. 7		Atm H_2O	P 2	301	26
7253.42	2	0. 3		Atm H_2O	Q 3	202	26
7253.728	42	5. 8		Atm H_2O (Ti I)	Q 4 1. 75 2. 16	301 143	26
7254.648	32	4. 4	*u*	Fe I			
7254.93 a	1. 5	0. 2		CN—	P 28	4,1	12
7255.29	3	0. 4		Si I p	5. 96	59	
7255.42	4	0. 6		CN	P 29	4,1	12
7255.79	5	0. 7		CN	R 42	4,1	12
7256.142	17	2. 3	*w?*	Fe I	4. 95	1278	
7256.58 a	2. 5	0. 3		Atm H_2O	R 1	221	26
7256.80 a	0. 5	0. 1		Ni I	3. 60	97	
7256.99	2	0. 3		Atm H_2O	P 3	202	26
7257.104	9	1. 2		Atm H_2O	Q 5	301	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7257.371	20	2. 8		Atm H_2O	Q 5	301	26
7257.934	31	4. 3		⊙?— Atm H_2O	P 2	301	26
7258.45	2. 5	0. 3		Atm?			
7258.65	4. 5	0. 6		Atm H_2O	R 3	221	26
7258.90 a	3	0. 4		Atm			
7259.10	5	0. 7		Atm H_2O	R 3	221	26
7259.556	1	0. 1		Atm H_2O	P 2	202	26
7260.066	3	0. 4		Atm H_2O	R 4	221	26
7260.266	3	0. 4		Atm H_2O	R 7	221	26
7260.730	12	1. 7		Atm H_2O	Q 5 Q 6	301 301	26
7261.016	19	2. 6		Fe I	2. 73	267	
7261.30	9	1. 2		Fe I p	4. 91	1273	
7261.45	45	6. 2		Atm H_2O	R 4	221	26
7261.52			*u*	Fe I	4. 56	1188	
7261.97	78	9. 6	*s*	Ni I	1. 95	62	
7262.01		1. 1		Atm H_2O	Q 5	301	26
7262.272r	1	0. 1		⊙?			
7262.47	0. 5	0. 1		Fe I? p	3. 64	859	
7262.973	14	1. 9		Atm H_2O	P 3	202	26
7263.380	3	0. 4		Atm H_2O	Q 4	301	26
7263.63	5	0. 7		CN	Q 36 P 29	4,1 4,1	12
7264.04	1	0. 1		⊙?			
7264.20 a	4	0. 6		Y II	1. 84	33	
7264.390	11	1. 5		Atm H_2O	R 3 R 6	221 221	26
7264.598	44	6. 0		Atm H_2O	P 3	301	26
7264.90 a	3	0. 4					
7265.149	2	0. 3		Atm (Fe II)	6. 22	197	
7265.594	89	12. 2		Atm H_2O	P 3	301	26
7265.86	8	1. 1		Atm H_2O	Q 4	202	26
7266.28	12	1. 6	*s*	Ti I	1. 73	143	
7266.96	2	0. 3		Fe I p	2. 18	61	
7267.75	6	0. 8		⊙?			
7268.05	1	0. 1		Atm H_2O	Q 5	202	26
7268.217	3	0. 4		Atm H_2O	Q 7	301	26
7268.566	8	1. 1		Atm H_2O Fe I p	Q 3 3. 88	202 957	26
7269.05 a	8	1. 1		⊙?			
7269.752	15	2. 1		Atm H_2O	R 3	221	26
7269.94	2	0. 3		Atm H_2O	R 3	221	26
7270.131	12	1. 6		Atm H_2O	R 5	221	26
7270.300	5	0. 7		Atm H_2O	R 5	221	26
7270.60 a	3	0. 4					
7270.95 a	4	0. 6		Atm			
7271.18	0. 5	0. 1		Atm?			
7271.40 a	3	0. 4					
7271.55	6	0. 8	*s*	Ti I	1. 44	97	
7272.112	10	1. 4		⊙			
7272.973	100	13. 8		Atm H_2O	P 3 P 3	301 301	26
7273.835	8	1. 1		Atm H_2O	Q 7	301	26
7274.259	3	0. 4		Atm			
7274.73 a	1. 5	0. 2		Atm H_2O	Q 5	221	26
7275.33	94	12. 9	*o*?	Si I	5. 61	24	
7275.398				Atm H_2O	P 3	301	26
7275.819	9	1. 2		Atm H_2O	R 4	221	26
7276.316	19	2. 6		Atm H_2O	R 4	221	26
7276.560	11	1. 5		Atm			
7276.850	14	1. 9		Atm H_2O	P 4	202	26
7277.148	9	1. 2		Atm H_2O	Q 4 R 2	301 221	26
7277.402	73	10. 0		Atm H_2O	P 4	301	26
7278.085	25	3. 4		Atm H_2O	P 4	301	26
7278.526	16	2. 2		Atm Fe I p	4. 99	1274	
7278.792	4	0. 6		Atm H_2O	Q 5	301	26
7279.03 a	6	0. 8		Atm H_2O	Q 5	202	26
7279.38	5	0. 7		CN	Q 37	4,1	12
7279.698	8	1. 1		Atm H_2O	R 2	221	26
7280.32	1. 5	0. 2		Atm H_2O	Q 5	202	26
7280.671	9	1. 2		Atm H_2O	Q 3	221	26
7280.967	4	0. 5		Atm H_2O	R 2	221	26
7281.540	2	0. 3		Atm H_2O	P 4	320	26
7282.02	4	0. 5		Atm			
7282.302	48	6. 6		Atm H_2O (Fe I)	R 3 5. 01	221 1274	26
7282.844	68	9. 3	*w,N*	Si I—	6. 20		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7283.220	14	1. 9		Atm H_2O	R 3	221	26
7283.61	8	1. 1					
7283.770	13	1. 8	*o*?	Mn I	4. 42	50	
7284.18	2	0. 3		⊙?			
7284.56	0. 5	0. 1		⊙?			
7284.842	41	*5. 6*	*u*	Fe I	4. 14	1004	
7285.09	1	0. 1	*s*?,*N*	⊙			
7285.305	25	3. 4	*w*,*N*	Fe I	4. 61	1188	
7285.78 a	0. 5	0. 1		Atm?			
7285.98	4	0. 5		Si I ?	5. 96	58	
7286.52	5	0. 7		Ni I	3. 77	109	
7286.90 a	1. 5	0. 2		CN?	R 16	5,2	12
7287.378	46	6. 3		Atm H_2O (Fe II)	P 4 6. 22	301 197	26
7287.858	6	0. 8		Atm H_2O	Q 5	301	26
7288.132	28	3. 8		Atm H_2O	P 4	301	26
7288.47	3	0. 4					
7288.741	70	*9. 3*	*u*,*N*	Fe I	4. 22	1077	
7289.188	116	*14. 6*	*w*,*N*	Si I	5. 62	24	
7289.53	9	1. 2		Atm			
7289.818	8	1. 1		Atm H_2O	R 2	221	26
7290.25 a	4	0. 5		Si I	5. 62	24	
7290.415	91	12. 5		Atm H_2O	P 5 P 5	301 301	26
7290.895	16	2. 2		Atm? Ni I	5. 34	287	
7291.098	25	3. 4		Atm H_2O (Mg I)	R 2 5. 39	221	26
7291.438	47	6. 5	*u*	Atm H_2O— Ni I	P 5 1. 93	202 63	26
7291.75	4	0. 5		Atm H_2O?	P 3	202	26
7292.172	19	2. 6		Atm H_2O	P 4	301	26
7292.695	7	1. 0		Atm H_2O	Q 5	221	26
7292.841	47	6. 7	*u*	Fe I	4. 56	1189	
7293.052	85	12. 0	*u*	Fe I	4. 26	1077	
7293.372	8	1. 1		Atm H_2O	R 1	221	26
7293.889	3	0. 4		Atm H_2O	Q 7	301	26
7294.20	1	0. 1		Atm H_2O	Q 4	301	26
7294.364	4	0. 5		Atm H_2O	P 5	202	26
7294.863	2	0. 3		Atm H_2O	Q 6	301	26
7295.031	39	5. 4		Atm H_2O	P 4	301	26
7295.28	4	0. 5		Fe I p	4. 61	1189	
7295.610	6	0. 8		Atm H_2O	P 4	301	26
7295.78 a	2	0. 3		CN	Q 9	5,2	12
7296.265	6	0. 8		Atm H_2O	Q 6	221	26
7297.072	1. 5	0. 2		Atm H_2O	Q 4	221	26
7297.33	2	0. 3		Atm H_2O	Q 5	301	26
7297.70	10	1. 4		Atm? Ni I?	5. 63	293	
7297.93	2	0. 3		CN?	R 47	4,1	12
7298.169	8	1. 1		Atm H_2O	R 1	320	26
7298.51	5	0. 7		CN	Q 39	4,1	12
7299.33 a	5	0. 7					
7299.643	14	1. 9	*s*	Atm H_2O Ti I	R 1 1. 43	221 97	26
7299.77	1	0. 1		Atm H_2O	R 1	221	26
7299.926	19	2. 6		Atm H_2O	R 4	221	26
7300.50	33	4. 5		Fe I— Fe I	4. 99 4. 14	1275 1003	
7300.63	6	0. 8		Atm H_2O	Q 7	221	26
7300.874	8	1. 1		Atm H_2O	Q 6	301	26
7301.262	4	0. 5		Atm H_2O	Q 6	202	26
7301.577	7	1. 0	*o*	Fe II	3. 89	72	
7302.129	8	1. 1		Atm H_2O	P 5	301	26
7302.348	3	0. 4		CN Atm H_2O	Q 40 Q 5	4,1 221	12 26
7302.603	4	0. 5		Atm H_2O	Q 5	221	26
7302.777	16	2. 2		Atm H_2O	P 3	202	26
7302.88			*o*	Mn I	4. 43	50	
7303.197	42	5. 8		Atm H_2O	P 5	301	26
7303.76	7	1. 0		Atm H_2O	P 6	202	26
7304.134	15	2. 1		Atm H_2O	P 6	301	26
7304.214	42	5. 8		Atm H_2O	P 6	301	26
7304.80	1	0. 1		Atm H_2O	Q 5	202	26
7304.954	3	0. 4	*s*	⊙ Atm H_2O	Q 6	221	26
7305.628	3	0. 4		Atm H_2O	P 3	301	26
7305.873	3	0. 4	*s*	Ti I	1. 73	143	
7306.03	1. 5	0. 2		Atm H_2O	Q 3	221	26
7306.570	43	*5. 5*	*u*	Fe I	4. 18	1077	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7307.48	4	0. 5		⊙			
7307.960	52	*7. 4*	*u*	Fe I Fe II	4. 14 3. 89	1002 73	
7308.08	26	3. 7	*u*	⊙			
7308.50 a	4. 5	0. 6		CN	Q 40	4,1	12
7308.757	17	2. 3		Atm H_2O	Q 3	221	26
7309.518	37	5. 1		Atm H_2O	P 5	301	26
7310.201	23	3. 2		Atm H_2O Fe II	Q 4 3. 89	221 73	26
7310.402	2	0. 2		Atm H_2O	R 0	221	26
7310.62	3	0. 4		Atm H_2O	Q 6	221	26
7310.73 a	2. 5	0. 3					
7311.080	67	9. 2	*s*	Fe I	4. 28	1077	
7311.265	28	4. 0		Fe I p Atm H_2O	4. 26 Q 4	1105 221	 26
7311.484	1	0. 1		Atm H_2O	Q 4	221	26
7311.64	5	0. 7		⊙?			
7311.80 a	2	0. 2		CN	P 34	4,1	12
7312.08	6	0. 8		Fe I p	5. 03	1310	
7312.270	1	0. 1		Atm H_2O	Q 7	301	26
7312.616	20	2. 7		Atm H_2O	P 5	301	26
7312.962	6	0. 8		Atm H_2O	Q 6	202	26
7313.176	6	0. 8		Atm H_2O	Q 2	221	26
7313.50 a	2. 5	0. 3		Atm H_2O	P 5	202	26
7313.72 a	1	0. 1		CN	R 48	4,1	12
7314.545	5	0. 7		Atm H_2O	Q 3	221	26
7314.96	1	0. 1		CN	P 35	4,1	12
7315.516	32	4. 4		Atm H_2O Fe I	Q 2 4. 28	221 1105	26
7315.886	2. 5	0. 3		Atm H_2O	Q 5	221	26
7316.41	3	0. 4		⊙ Atm H_2O	 P 3	 202	 26
7316.739	16	2. 2		Fe I	2. 69	267	
7316.858	5	0. 7		Atm H_2O	Q 2	221	26
7317.291	21	2. 9		Atm H_2O	P 6	301	26
7317.43	13	1. 8		Fe I	5. 01	1278	
7318.09	13	1. 8		Atm H_2O	P 6 Q 1	301 221	26
7318.382	17	2. 3	*s,d*	Atm H_2O Ti I	P 7 2. 25	301 212	26
7318.692	33	4. 5		Atm H_2O	P 7	301	26
7320.689	72	*10. 1*	*W*	Fe I Fe II	4. 56 4. 91 3. 89	1188 1276 73	
7320.846	19	2. 7		Atm H_2O	Q 3	221	26
7321.27 a	2. 5	0. 3					
7321.44	1	0. 1	*s*	V I	2. 12	117	
7321.52	2	0. 3		Atm?			
7322.201	4	0. 5		Atm			
7323.10	3	0. 4		Atm H_2O	Q 6	221	26
7323.354	9	1. 2		CN Fe I? p	Q 42 3. 64	4,1 859	12
7323.972	31	4. 2		Atm H_2O ⊙	Q 1	221	26
7324.29	5	0. 7		CN	R 49	4,1	12
7324.680	10	1. 4	*u*	Atm H_2O ⊙	P 6	202	26
7325.28	2	0. 3		CN? Fe I p	Q 56 3. 93	3,0 980	12
7325.56	4	0. 5		⊙?			
7325.89 a	1	0. 1		CN	P 36	4,1	12
7326.160	136	*16. 9*	*S*	Ca I	2. 93	44	
7326.456	25	3. 4	*u,N*	Mn I Atm	4. 43	50	
7326.713	2	0. 3		Atm H_2O	P 7	202	26
7327.104	11	1. 5		Atm H_2O	P 6	301	26
7327.370	11	1. 5		Atm H_2O	P 6	301	26
7327.650	18	2. 5		Ni I	3. 80	140	
7328.25	1. 5	0. 2		Atm H_2O	Q 4	221	26
7328.45 a	1. 5	0. 2					
7328.828	5	0. 7		CN	Q 21	5,2	12
7329.30 a	5	0. 7		Atm H_2O— CN	P 4 Q 42	202 4,1	26 12
7330.150	17	2. 3		Fe I	4. 64	1187	
7330.34	5	0. 7		⊙?			
7330.859	$\widehat{68}$	9. 3		Atm H_2O	P 6 Q 2	301 221	26
7331.04	0. 5	0. 1	*s*	Ti I	1. 74	143	
7332.28	1. 5	0. 2	*s,N*	Ti I	1. 75	143	
7332.49	2	0. 3		Cr I?	5. 15		
7332.74	1. 5	0. 2		Atm H_2O	P 3	301	26
7332.905	6	0. 8		Atm H_2O	P 7	301	26
7333.049	8	1. 1		Atm H_2O	P 7	301	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7333.58	36	4. 9		Fe I	4. 26	1078	
7333.684	24	3. 3		Atm H_2O	P 8	301	26
7334.25	4	0. 5		CN	Q 43 Q 20	4,1 5,2	12
7334.62	1. 5	0. 2		Fe II CN	7. 27 Q 22	209 5,2	12
7334.91	1. 5	0. 2		⊙?			
7335.335	16	2. 2		Atm H_2O	P 6 P 1	301 221	26
7335.712	6	0. 8		Atm H_2O	P 6	301	26
7336.02	1. 5	0. 2		⊙?			
7337.043	5	0. 7		Atm CN	P 37	4,1	12
7337.78	|2|	0. 3	*s*	Ti I p	2. 24	212	
7338.07	1. 5	0. 2		CN	R 29	5,2	12
7338.94	2	0. 3	*s*	V I	2. 14	117	
7339.340	3	0. 4		Atm H_2O CN	Q 5 Q 21	221 5,2	26 12
7339.67	1. 5	0. 2		CN?	Q 57	3,0	12
7339.90	1. 5	0. 2		⊙?			
7340.188	|2.5|	0. 3	*u*	Atm H_2O CN	P 6 Q 43	301 4,1	26 12
7340.60	1. 5	0. 2		CN	Q 23	5,2	12
7341.351	3	0. 4		Atm H_2O	Q 3	221	26
7341.78	1	0. 1	*s*	Atm H_2O Fe I p	P 5 4. 99	202 1307	26
7342.317	6	0. 8		CN	R 31	5,2	12
7343.226	20	2. 7		⊙			
7343.52 a	2. 5	0. 3					
7343.63 a	1	0. 1		Atm?			
7343.939	21	2. 9		Atm H_2O	P 2	221	26
7344.200	14	1. 9	*u*	Fe I— Atm H_2O	2. 73 P 7	266 301	26
7344.46	1	0. 1		CN	P 16	5,2	12
7344.759	40	5. 4	*S,d*	Ti I— Atm H_2O	1. 46 P 7	97 301	26
7345.21	5	0. 7		Dy II?			
7345.42	4	0. 5		CN	Q 44	4,1	12
7346.37 a	2	0. 3					
7346.56	1. 5	0. 2		CN	R 51	4,1	12
7346.87 a	2	0. 3		CN Fe I p	Q 24 3. 30	5,2	12
7347.17 a	4	0. 5		Fe I p	2. 76	266	
7347.309	1	0. 1		Atm			
7348.047	|3.5|	0. 5		Atm H_2O	P 2	221	26
7348.214	3	0. 4		Atm			
7348.51	5	0. 7		CN? Fe I p	P 38 4. 14	4,1 1004	12
7348.76	0. 5	0. 1		Atm			
7349.249	7	1. 0		Atm H_2O	P 8 P 2	301 221	26
7349.493	8	1. 1		Atm H_2O	P 9	301	26
7350.088	5	0. 7		Atm H_2O	P 7	301	26
7350.49	$\widehat{5}$	0. 7		CN Fe I p	Q 23 3. 05	5,2 509	12
7351.113	48	6. 5	*w*	Fe I	4. 99	1273	
7351.519	62	8. 4	*w*	Fe I	4. 95	1275	
7352.14	6	0. 8	*S*	Ti I	2. 49	272	
7352.72 a	|3|	0. 4					
7352.791	5	0. 7	*w,N*	⊙ Atm H_2O	P 7	301	26
7352.90 a	3	0. 4					
7353.03	1. 5	0. 2		Atm H_2O	P 5	202	26
7353.213	2. 5	0. 3		Atm H_2O	P 4 Q 6	202 221	26
7353.379	2. 5	0. 3	*s*	CN Atm H_2O	Q 25 P 4	5,2 202	12 26
7353.507	37	5. 0	*u*	Fe I	4. 73	1251	
7353.923	7	1. 0		|Atm H_2O ⊙?	P 7	301	26
7354.26 a	2	0. 3		CN	Q 58	3,0	12
7354.606	6	0. 8	*u,d*?	Atm H_2O Co I	P 3 1. 88	221 53	26
7355.108	4	0. 5	*s*?	⊙			
7355.457	22	3. 0	*w,N*	Atm H_2O Ti II p	P 5 2. 60	301 101	26
7355.891	79	*9. 8*	*S*	Cr I	2. 89	93	
7356.262	10	1. 4		Atm H_2O	P 3	221	26
7356.40	4	0. 5	*s*	CN— V I	Q 24 2. 13	5,2 117	12
7356.76	|2|	0. 3		Fe I p	4. 64	1187	
7356.95 a	2. 5	0. 3		CN	Q 45	4,1	12
7357.097	|5|	0. 7		Ti I? p |Atm H_2O	1. 05 P 3	221	26
7357.739	26	3. 5	*S*	Ti I	1. 44	97	
7358.26	3. 5	0. 5		⊙?			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7358.856	5	0. 7		Atm H_2O ⊙?	P 3	320	26
7359.983	6	0. 8		Fe I	4. 99	1310	
7360.13 a	3	0. 4		CN	P 39 Q 26	4,1 5,2	12
7360.347	9	1. 2		Atm H_2O	P 3	221	26
7360.70	0. 5	0. 1	*s*	⊙			
7361.029	4	0. 5		Atm H_2O	P 4	221	26
7361.550	|31|	*4. 2*	*s*	‖Al I Ti I p	4. 02 2. 25	11 212	
7361.782	4	0. 5		⊙			
7361.994	3	0. 4		Atm H_2O	P 5	301	26
7362.291	43	*5. 8*	*s*	Al I	4. 02	11	
7362.568	14	1. 9		CN CN Atm H_2O	Q 45 Q 25 P 8	4,1 5,2 301	12 12 26
7362.95	8	1. 1		Atm H_2O Si I?	Q 3 5. 98	221	26
7363.742	11	1. 5		Atm H_2O	P 3	221	26
7363.916	41	5. 8	*o*	Fe I	4. 95	1274	
7364.106	24	3. 4	*S*	Ti I	1. 43	97	
7364.38	0. 5	0. 1		Atm?			
7364.75	5	0. 7		CN C I?	R 53 9. 00	4,1	12
7365.305	6	0. 8		Atm H_2O	P 9	301	26
7365.70	8	1. 1		⊙? Atm			
7366.036	1	0. 1		Atm?			
7366.367	19	2. 6		Fe I	4. 64	1188	
7366.602	3	0. 4	*S,N*	Atm Ti I	1. 43	96	
7366.83	7	1. 0		CN	P 39	4,1	12
7367.21	1. 5	0. 2		CN	Q 27	5,2	12
7367.76	2. 5	0. 3		⊙?			
7368.468	6	0. 8		Atm H_2O	P 4	221	26
7368.75 a	2. 5	0. 3		CN	Q 46	4,1	12
7368.97 a	2	0. 3					
7369.206	|18|	2. 4		Atm H_2O	P 4	221	26
7369.60	1	0. 1		Atm H_2O?	P 5	202	26
7369.88	6	0. 8		CN— CN	R 53 R 35	4,1 5,2	12 12
7370.119	24	3. 2	*w,d?*	Atm H_2O— Fe I	Q 4 Q 5 4. 73	221 221 1250	26
7370.798	0. 5	0. 1		Atm H_2O	P 8	301	26
7371.496	7	1. 0		Atm H_2O	P 4	221	26
7372.13 a	2	0. 3		CN	P 40	4,1	12
7372.383	1	0. 1		Atm? Nb I?	1. 41		
7373.011	42	5. 7	*w,N*	‖Si I— Fe I p	5. 98 2. 28	58 108	
7373.25	4	0. 5		Atm H_2O	P 8	301	26
7373.622	|8|	1. 1		Atm H_2O	P 4	221	26
7374.29	7	1. 0	*S*	CN—	Q 46	4,1	12
7374.45 a	2. 5	0. 3		CN— Atm?	Q 28	5,2	12
7375.251	45	6. 1	*s,N*	⊙			
7375.932	5	0. 7		CN	Q 27	5,2	12
7376.275	2	0. 3	*o?*	CN	P 21	5,2	12
7376.494	39	5. 3	*o?*	Fe II Fe I			
7377.01	6	0. 8		CN?	R 54 R 35	4,1 5,2	12
7377.57	3	0. 4		CN?	R 36	5,2	12
7377.865	5	0. 7		|Atm H_2O ⊙?	P 4	221	26
7378.332	4	0. 5		Atm H_2O	P 5	221	26
7378.77	1. 5	0. 2		CN	P 40	4,1	12
7380.10	2	0. 3		Atm H_2O	Q 5	221	26
7380.492	1	0. 1		Atm H_2O	P 9	301	26
7380.73	3	0. 4		CN	Q 47	4,1	12
7381.342	10	1. 4		⊙			
7381.504	2	0. 3		Atm H_2O	P 6	221	26
7381.942	26	3. 5	*W*	Ni I	5. 36	292	
7382.357	3	0. 4		Atm H_2O	P 5	221	26
7382.614	11	1. 5	*u*	Fe I Atm H_2O	2. 69 P 5	266 221	26
7382.933	35	4. 7	*u*	Fe I CN	4. 59 4. 61 Q 28	1188 5,2	12
7383.350	1. 5	0. 2		Atm H_2O	P 11	301	26
7383.54	1. 5	0. 2		CN Atm?	P 22	5,2	12
7383.721	9	1. 2		Atm H_2O	P 5	221	26
7384.45	5	0. 7		CN	Q 60 P 41 R 36	3,0 4,1 5,2	12
7384.77	1	0. 1					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7385.244	52	7. 0	*u*	Ni I	2. 74	84	
7385.51	3	0. 4		CN Fe I p	R 37 4. 79	5,2 1251	12
7385.89	6	0. 8		⊙?			
7386.201	16	2. 8		Ni I	5. 34	286	
7386.336	94	12. 7	*w*	Fe I	4. 91	1275	
7386.66	3	0. 4		Atm?			
7387.00 a	5	0. 7		Mg I Atm H_2O	5. 75 P 7	301	26
7387.25 a	2. 5	0. 3					
7387.700	118	16. 0	*w*	Mg I	5. 75	30	
7388.15 a	7	1. 0					
7388.605	$\widehat{13}$	1. 8	*s,N*	Atm H_2O— Co I	P 7 2. 72	221 139	26
7389.391	144	*18. 1*	*w*	Fe I p— |Fe I	4. 91 4. 30	1274 1077	
7389.66 a	3. 5	0. 5					
7389.88	9	1. 2		CN	Q 30	5,2	12
7390.241	7	1. 0		Atm H_2O	P 5	221	26
7390.88	1	0. 1		Atm? CN?	P 41	4,1	12
7391.270	6	0. 8		Atm H_2O	P 5	221	26
7391.48	2	0. 3		Atm?			
7391.717	7	1. 0		Atm H_2O ⊙	P 6	221	26
7392.13	4	0. 5		CN?	R 37	5,2	12
7392.654	2	0. 3		Atm H_2O	P 5	202	26
7393.111	4	0. 5		CN	Q 48	4,1	12
7393.609	|112|	*14. 1*	*w*	Ni I	3. 61	109	
7393.85 a	6	0. 8					
7394.06 a	3	0. 4					
7395.539	|11|	1. 5		Atm (Si I)	5. 95		
7396.053	6	0. 8		Atm H_2O	P 6	221	26
7396.526	14	1. 9	*o*?	Fe I p	4. 99	1278	
7396.752	2	0. 3		Atm H_2O	P 6	221	26
7397.123	5	0. 7		Atm H_2O	P 6	221	26
7397.535	1	0. 1		⊙			
7397.939	4	0. 5		CN	Q 31	5,2	12
7398.52	2	0. 3		CN	Q 48	4,1	12
7398.76	2	0. 3		Fe I p CN?	3. 43 P 24	684 5,2	12
7398.96	2	0. 3		Fe I p	4. 99	1306	
7399.308	2	0. 3		Atm H_2O	P 7	221	26
7400.188	89	*11. 1*	*S*	Cr I	2. 90	93	
7400.48	1	0. 1					
7400.851	8	1. 1		Fe I p	2. 61	204	
7401.134	19	2. 6	*w*	Ni I	5. 36	291	
7401.46	0. 5	0. 1		Atm H_2O	P 3	221	26
7401.691	48	6. 5	*u*	Fe I	4. 19	1004	
7401.96	2	0. 3		Atm? CN	R 39	5,2	12
7402.155	8	1. 1		CN	R 56	4,1	12
7403.33	1	0. 1		CN?	P 42	4,1	12
7403.857	1. 5	0. 2		Atm H_2O	P 6	221	26
7405.17	1	0. 1		Atm?			
7405.790	108	*13. 6*	*W*	Si I	5. 61	23	
7406.289	4. 5	0. 6		CN Atm H_2O	Q 32 P 6	5,2 221	12 26
7406.61	1. 5	0. 2		Atm H_2O	P 8	221	26
7407.06	|1.5|	0. 2		Atm?			
7408.135	1	0. 1		Atm H_2O	P 7	301	26
7408.43	3	0. 4		CN	R 39	5,2	12
7408.78	0. 5	0. 1		Atm?			
7409.100	72	10. 2	*W,N*	Si I	5. 61	23	
7409.352	98	*12. 3*	*W*	Ni I	3. 80	139	
7409.99	2	0. 3		CN	P 43	4,1	12
7410.324	3	0. 4		Atm H_2O	P 7	221	26
7410.733	4	0. 5		Atm H_2O	P 7	221	26
7411.162	140	*17. 1*	*w*	Fe I	4. 28	1077	
7413.06	4	0. 5		⊙?			
7413.52	1. 5	0. 2		Atm?			
7414.00	3	0. 4		CN	Q 32	5,2	12
7414.514	76	*9. 6*	*u*	Ni I	1. 99	62	
7414.93	3	0. 4		CN	Q 33	5,2	12
7415.193	13	1. 8	*u*	Fe I p CN?	4. 99 P 26	1308 5,2	12
7415.363	28	3. 8	*o*?	Si I	5. 61	23	
7415.68	3	0. 4					
7415.958	118	*14. 3*	*W,N*	Si I	5. 61	22	
7417.06	1. 5	0. 2		CN Ti I p	R 40 1. 07	5,2	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7417.39	12	1. 6	*s,N*	Co I	2. 04	89	
7418.330	4	0. 5		Fe I p	4. 14	1002	
7418.672	49	*6. 3*	*w*	Fe I	4. 14	1001	
7419.31	6	0. 8		Ni I	5. 49	287	
7419.670	4	0. 5		CN	R 41	5,2	12
7420.241	4	0. 5	*s*	Fe I p	5. 08	1307	
7420.75 a	1. 5	0. 2					
7421.030	2	0. 3		Atm H_2O	P 7	221	26
7421.560	20	2. 7	*o*	Fe I	4. 64	1188	
7421.86	1	0. 1		⊙?			
7422.286	106	*13. 4*	*w*	Ni I	3. 63	139	
7422.77	|3|	0. 4		⊙?— Atm H_2O	P 4	221	26
7423.16	1. 5	0. 2	*s*	Ti I	1. 44	97	
7423.509	120	*15. 2*	*W*	Si I (N I)	5. 62 10. 32	23 3	
7423.842	10	1. 3		CN	Q 50 Q 34	4,1 5,2	12
7424.27	2	0. 3		Atm?			
7424.647	22	3. 0	*u,N*	|Si I Atm H_2O	5. 62 P 8	23 221	26
7425.048	0. 5	0. 1		—Fe II? p	7. 27	209	
7425.560	1	0. 1		Atm			
7425.850	1	0. 1		Atm H_2O	P 8	221	26
7427.562	8	1. 1	*w*	⊙			
7429.78 a	2	0. 3					
7430.553	14	1. 9	*s*	Fe I	2. 59	204	
7430.846	32	4. 3	*o*	Fe I— Fe I Si I p	5. 48 4. 61 5. 61	1351 1189 23	
7431.19	2	0. 3		CN?	Q 34	5,2	12
7431.599	14	1. 9	*u*				
7431.97	1. 5	0. 2	*s*	CN? |Ti I p Fe I p	Q 51 1. 74 4. 64	4,1 142 1189	12
7432.19 a	4	0. 5	*o*	CN?	Q 63	3,0	12
7432.44	4	0. 5	*w,N*	⊙?			
7432.98 a	2	0. 3		CN	Q 35	5,2	12
7433.460	|6|	0. 8	*u,N*	Ni I Ti I p	5. 41 0. 81	280	
7434.58	|0.5|	0. 1	*s*	⊙			
7435.08	2	0. 3	*s*	⊙			
7435.584	32	4. 3	*W,N*	⊙			
7435.95	2	0. 3		⊙?			
7437.07	3	0. 4		Co I?	1. 96	53	
7437.608	7	0. 9		⊙			
7437.87	1	0. 1		Atm?			
7438.38	2	0. 3		CN Fe I?	R 43	5,2	12
7439.24	0. 5	0. 1	*s,N*	⊙			
7439.87 m			*S*	Zr I	0. 54	23	13
7440.253	7	0. 9		CN— Atm?	Q 35	5,2	12
7440.58	3	0. 4	*S*	Ti I	2. 25	225	
7440.919	68	*8. 4*	*w*	Fe I	4. 91	1273	
7441.81	2	0. 3		⊙?			
7442.23	3	0. 4		N I	10. 33	3	
7442.47	2	0. 3	*s?*	CN	Q 36	5,2	12
7442.71	1	0. 1		Atm H_2O	P 8	221	26
7443.026	38	5. 1	*w*	Fe I	4. 19	1002	
7443.25	7	0. 9		Fe I p	5. 08	1309	
7444.47	|1.5|	0. 2		CN	R 43	5,2	12
7445.758	178	*21. 4*	*w*	Fe I	4. 26	1077	
7446.99	1. 5	0. 2		Atm?			
7447.400	38	5. 1	*s*	Fe I	4. 95	1273	
7447.912	20	2. 7	*o*	—Fe I p	5. 52	1352	
7448.20	2. 5	0. 3		CN Ca I	R 44 3. 91	5,2	12
7448.92	2. 5	0. 3		⊙?			
7449.338	24	3. 2	*w*	Fe II	3. 89	73	
7450.33	11	1. 5		Y II	1. 75	25	
7451.478	3	0. 4		CN—	P 30	5,2	12
7452.110	11	1. 5	*o*	Fe I p	5. 06	1303	
7452.96	2. 5	0. 3		CN	P 31	5,2	12
7454.004	11	1. 5	*w*	Fe I	4. 19	1001	
7455.389	8	1. 1	*o*	Si I	5. 96		
7456.28 a	1. 5	0. 2	*S?*	CN— Ti I p	P 46 0. 82	4,1	12
7457.354	5	0. 7		Co I ?	3. 93		
7458.00	1. 5	0. 2		⊙?			
7458.384	1	0. 1		Atm H_2O	P 10	221	26
7459.00 a	2	0. 3		CN	Q 37	5,2	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7459.33 a	0.5	0.1		CN	Q 53	4,1	12
7460.549	4	0.5		⊙			
7461.25	2	0.3		CN— Fe I p	P 31 5.51	5,2 1352	12
7461.527	26	3.5	*s*	Fe I	2.56	204	
7462.342	119	*15.0*	*s*	Cr I (Fe II)	2.91 3.89	93 73	
7463.19	1	0.1		CN Atm?	P 32	5,2	12
7463.395	8	1.1	*o*?	Fe I p	5.06	1307	
7463.99	1.5	0.2	*s*	⊙			
7464.268	12	1.6	*o*	S I? p	8.04		
7465.85	3	0.4		⊙			
7466.533	5	0.7	*s,NN*	Ti I p—	1.74	142	
7467.51	1	0.1		Atm?			
7468.27	4	0.5	*o*	N I	10.33	3	
7468.927	2	0.3	*s*	CN	Q 38	5,2	12
7470.05	1	0.1	*S*	Ti I p	0.84		
7470.61	1	0.1		CN	R 61	4,1	12
7471.34	2	0.3	*s*	Ti I p	0.81		
7471.757	2	0.3		Fe I p	2.73	267	
7472.755	16	2.2		⊙			
7473.563	23	3.1	*w*	Fe I	4.61	1188	
7474.513	6	0.8		Fe I p— Fe I p	3.98 3.93	957 980	
7474.92	1.5	0.2	*s,N*	Ti I	1.75	142	
7475.87	0.5	0.1	*s*	⊙			
7476.149	12	1.6	*o*	C I	8.77		
7476.376	18	2.4	*s*	Fe I	4.79	1251	
7477.595	21	2.8	*u,N*	Fe I p	3.88	957	
7478.84	3	0.4	*s,N*	CN Fe I p	P 48 3.37	4,1 683	12
7479.10	2	0.3	*s*	CN—	Q 39	5,2	12
7479.701	$\widehat{11}$	1.5	*o*	Fe II p	3.89	72	
7480.816	5	0.7		Atm H_2O	P 5	221	26
7481.478	13	1.8	*w*	Ni I	5.49	286	
7481.736	5	0.7		Fe I p	2.76	266	
7481.934	15	2.0	*s,N*?	Fe I	4.79	1250	
7482.213	20	2.7	*u*	Si I Fe I p	5.86 5.08	1308	
7482.871	|3|	0.4		⊙			
7483.415	9	1.2		C I	8.77		
7484.308	9	1.2	*o*?	Fe I p	5.08	1306	
7484.68	1.5	0.2		CN CN	P 48 P 34	4,1 5,2	12 12
7485.00	<2.5	<0.3		⊙?			
7485.14	1.5	0.2		CN— CN	R 47 R 62	5,2 4,1	12 12
7486.118	5	0.7		Fe I p	3.88	980	
7486.667	13	1.8		⊙			
7488.00	2	0.3		CN	Q 55	4,1	12
7488.706	3	0.4		Ni I	3.83	157	
7488.92	1.5	0.2		Atm?			
7489.569	|9|	1.2	*S*	CN— |Ti I	Q 40 2.25	5,2 225	12
7490.84	4	0.5		Fe I p— Si I ?	3.30 6.12		
7491.08	3	0.4		Si I p	5.96		
7491.652	71	*9.1*	*s*	Fe I	4.30	1077	
7492.333	2	0.3		CN	P 34	5,2	12
7492.941	2	0.3		⊙?			
7493.11	1.5	0.2		Atm?			
7493.58	2	0.3		CN	P 49	4,1	12
7493.940	3	0.4		CN	Q 41	5,2	12
7494.404	13	1.7	*o*	⊙			
7494.74	1.5	0.2		Fe I p	1.56	33	
7495.077	174	*22.5*	*u*	Fe I	4.22	1077	
7495.66	1	0.1		Fe I p CN	4.99 P 35	1275 5,2	12
7496.12	6	0.8	*S*	Ti I	2.24	225	
7497.44	1	0.1		⊙?			
7498.535	21	2.8	*u*	Fe I	4.14	1001	
7498.78	1	0.1		⊙?			
7499.18	4	0.5		CN	P 49	4,1	12
7500.242	4	0.5		CN	R 63 Q 41	4,1 5,2	12
7500.55	<3	<0.4		⊙?			
7501.280	3	0.4		Fe I p	4.19	1002	
7501.76	5	0.7		CN— Ni I?	R 49 5.59	5,2 282	12
7502.78	1.5	0.2	*S*	CN—	Q 56	4,1	12
7503.31	2	0.3		CN	P 35	5,2	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7503.94	2. 5	0. 3		⊙			
7504.276	8	1. 1		⊙			
7504.940	10	1. 3	*o*?	Si I? p	5. 96		
7505.19	3	0. 4		CN	Q 42	5,2	12
7506.030	$\widehat{26}$	3. 5	*u,N*	Fe I	5. 06	1306	
7507.273	67	*8. 1*	*u*	Fe I	4. 41	1137	
7507.80 a	2	0.3					
7508.60	2	0. 3		CN Fe I p	P 50 4. 99	4,1 1274	12
7511.031	221	*27. 3*	*u*	Fe I	4. 18	1077	
7511.51	3	0. 4		⊙?			
7511.80	1	0. 1		⊙?			
7512.166	5	0. 7		Fe I p	2. 28 4. 14	108 1001	
7512.77	1. 5	0. 2		⊙?			
7513.16	1. 5	0. 2		CN	R 50	5,2	12
7514.205	19	2. 5	*w*	⊙			
7514.54	1. 5	0. 2		CN Atm?	P 36	5,2	12
7515.10	4	0. 5		⊙?			
7515.43	1. 5	0. 2		⊙?			
7515.837	15	2. 0	*o*	Fe II	3. 90	73	
7516.21	2	0. 3		CN?	Q 20	6,3	12
7516.623	3	0. 4		CN	Q 43	5,2	12
7516.82	6	0. 8		⊙?			
7517.96 a	2	0. 3		CN Atm?	Q 57	4,1	12
7518.66	2	0. 3		CN	Q 68 R 50	3,0 5,2	12
7519.89	5	0. 7		Fe I			
7521.06	|5|	0. 7	*w,N*	Ni I	5. 51	282	
7521.58	2	0. 3		CN?	Q 21	6,3	12
7522.778	84	*10. 8*	*u*	Ni I	3. 66	126	
7523.217	20	2. 7	*w*	⊙			
7523.93	1	0. 1		CN	P 51	4,1	12
7525.118	73	*9. 7*	*s*	Ni I	3. 63	139	
7526.10	1. 5	0. 2		CN	P 37	5,2	12
7526.43	1	0. 1		⊙?			
7526.67	3	0. 4		Fe I p	5. 51	1352	
7527.26	1	0. 1		CN?	Q 22	6,3	12
7528.18	4	0. 5	*s*	Fe I p— CN	5. 03 Q 44	1307 5,2	12
7528.41	2	0. 3		⊙?			
7529.48	2. 5	0. 3		CN	P 51 Q 24	4,1 6,3	12
7530.58	2	0. 3		Atm			
7531.153	101	*12. 9*	*s*	Fe I	4. 37	1137	
7531.789	20	2. 7	*o*	⊙			
7532.12	2	0. 3		⊙?			
7533.373	18	2. 4	*u*	CN— Fe II	Q 58 3. 90	4,1 72	12
7534.28	3	0. 4		⊙			
7534.60 a	2. 5	0. 3		Ni I?	5. 51		
7534.85	3	0. 4		Fe II p	3. 94	87	
7536.25 a	1. 5	0. 2					
7537.475	6	0. 8		Fe I?	4. 07	1000	
7537.96	1. 5	0. 2		CN— Fe I p	P 38 5. 52	5,2 1352	12
7538.17 a	1. 5	0. 2					
7539.52	2	0. 3		CN? CN?	P 52 Q 24	4,1 6,3	12 12
7540.444	8	1. 1	*s*	Fe I	2. 73	266	
7541.57	3	0. 4		Fe I	3. 94	957	
7541.920	9	1. 2	*w*	⊙			
7545.63 a	5	0. 7		—Ni I	5. 61	287	
7546.183	40	5. 3	*s*	Fe I			
7546.63	1. 5	0. 2		⊙?			
7547.00	4	0. 5		⊙?			
7547.38	4	0. 5		⊙?			
7547.904	24	3. 2	*w*	Fe I	5. 10	1306	
7549.08	1	0. 1		CN	Q 59	4,1	12
7549.82	1	0. 1		CN	R 53	5,2	12
7550.13 a	1	0. 1		CN	P 39	5,2	12
7551.108	9	1. 2	*w*	Fe I p	5. 08	1303	
7552.501	9	1. 2	*u*	Ni I p	5. 61	286	
7552.795	2	0. 2	*s*	Fe I p— CN	5. 03 Q 46	1303 5,2	12
7553.42	1. 5	0. 2					
7553.953	4	0. 5		Co I?	3. 95	183	
7554.841	13	1. 7	*u,N*	⊙			
7555.607	98	*12. 7*	*u*	Ni I	3. 85	187	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7557.695	9	1. 2		⊙			
7558.16	6	0. 8		⊙?			
7558.87	1. 5	0. 2		⊙?			
7559.705	34	4. 5	*u,d*	|Fe I Ni I	5. 06 5. 52	1308 292	
7561.00 a	0. 5	0. 1		Atm?			
7562.62	1	0. 1		CN	P 40	5,2	12
7563.016	16	2. 1	*u*	Fe I	4. 83	1251	
7563.66	1	0. 1		⊙?			
7564.498	5	0. 7		⊙			
7564.95 a	1. 5	0. 2		Co I	4. 91		
7565.21	1. 5	0. 2		⊙?			
7565.534	8	1. 1		CN?—	Q 47	5,2	12
7566.34	3	0. 4		CN?	Q 29	6,3	12
7567.170	21	2. 8	*w,NN*	⊙			
7567.61	2. 5	0. 3		⊙			
7568.60	1. 5	0. 2		CN	P 41	5,2	12
7568.906S	90	*11. 1*	*S*	Fe I	4. 28	1077	
7569.556	10	1. 3	*w*	⊙			
7569.95 a	2. 5	0. 3		⊙?			
7570.22	1. 5	0. 2		⊙?			
7570.79	1	0. 1		Cr I?	5. 18		
7571.40	1. 5	0. 2		⊙?			
7572.38	1. 5	0. 2		⊙?			
7573.426	18	2. 4	*u*	Fe I			
7573.72	1. 5	0. 2		Fe I p	3. 98	957	
7574.048S	64	*8. 4*	*u*	Ni I	3. 83	156	
7574.36	2. 5	0. 3		⊙?			
7574.58	1	0. 1		CN?	Q 30	6,3	12
7574.88	1	0. 1		CN?	Q 29	6,3	12
7575.39	4	0. 5	*s,N*	CN—	P 41	5,2	12
7577.30	1	0. 1	*s*	⊙			
7578.47	1. 5	0. 2		Atm			
7578.787	|6|	0. 8	*o*?	⊙			
7579.08	1	0. 1	*s,N*	⊙			
7580.28	1	0. 1	*S*	Ti I	2. 23	211	
7582.120	8	1. 1	*u*	Fe I p	4. 95	1274	
7582.48	1	0. 1		⊙?			
7583.12	1. 5	0. 2		CN? Si I p	Q 30 Q 31 5. 98	6,3 6,3	12
7583.796	81	*11. 0*	*u*	Fe I	3. 02	402	
7584.29	1. 5	0. 2		⊙?			
7584.77	1	0. 1		Atm?			
7586.027S	132	*17. 5*	*u*	Fe I	4. 31	1137	
7586.52	0. 5	0. 1		⊙?			
7586.70 a	2	0. 3		Co I	2. 87	139	
7586.92	1	0. 1		Atm?			
7588.310	28	3. 7	*u*	Fe I	5. 03	1306	
7588.849	9	1. 2	*u*	Fe I?			
7590.76	|2|	0. 3		Atm? CN?	Q 31	6,3	12
7591.32	2	0. 3		⊙			
7591.80 a	4	0. 5		CN? Atm?	Q 32	6,3	12
7593.695m	193	25. 4		Atm O_2	R 27 R 29	0,0 0,0	22
7593.850m	3	0. 4		Atm O_2	R 31	0,0	22
7593.997m	226	29. 8		Atm O_2	R 25	0,0	22
7594.287m	11	1. 4		Atm O_2	R 24	0,0	24
7594.507m	288	37. 9		Atm O_2	R 23	0,0	22
7594.974m	139	18. 3		Atm O_2	R 27 R 29	0,0 0,0	22
7595.235m	446	58. 7		Atm O_2	R 21 R 25	0,0 0,0	22
7595.590m	5	0. 7		Atm O_2	R 25 R 26 R 27	0,0 0,0 0,0	24
7595.770S	299	39. 4		Atm O_2	R 23	0,0	22
7596.228m	425	55. 9		Atm O_2	R 19	0,0	22
7596.503m	485	63. 8		Atm O_2	R 21	0,0	22
7596.768m	8	1. 1		Atm O_2	R 18	0,0	24
7596.975m	6	0. 8		Atm O_2	R 20	0,0	24
7597.438m	845	111. 2		Atm O_2	R 17 R 19	0,0 0,0	22
7598.006m	25	3. 3		Atm O_2	R 16 R 18	0,0 0,0	24
7598.650m 7598.847m	1120	147		Atm O_2 Atm O_2	R 17 R 15	0,0 0,0	22 22
7599.228m	14	1. 8		Atm O_2	R 16	0,0	24
7599.462S	17	2. 2		Atm O_2	R 14	0,0	24

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7599.550m	1	0. 1		Atm O_2	R 17	0,0	23
7600.066m	1530	201		Atm O_2	R 15	0,0	22
7600.493m				Atm O_2	R 13	0,0	22
7601.127m	17	2. 2		Atm O_2	R 12	0,0	24
7601.240m	1. 5	0. 2		Atm O_2	R 14	0,0	23
7601.470m	?	2. 6		Atm O_2	R 13	0,0	24, 28
7601.697m	1210	159		Atm O_2	R 13	0,0	22
7602.036m	?	3. 0		Atm O_2	R 11	0,0	24, 28
7602.363m	1430	188		Atm O_2	R 11	0,0	22
7602.995S	30	3. 9		Atm O_2	R 10	0,0	24
7603.216m	25	3. 3		Atm O_2	R 11	0,0	24
7603.556m	1250	164		Atm O_2	R 11	0,0	22
7604.013m	32	4. 2		Atm O_2	R 9	0,0	24
7604.453m	1500	197		Atm O_2	R 9	0,0	22
7605.076m	33	4. 3		Atm O_2	R 8	0,0	24
7605.186m	33	4. 3		Atm O_2	R 9	0,0	24
7605.635m	1480	195		Atm O_2 (Fe I)	R 9 5. 03	0,0 1308	22
7606.198m	64	8. 4		Atm O_2	R 7	0,0	24
7606.238m				Atm O_2	R 8	0,0	24
7606.767m	1530	201		Atm O_2	R 7	0,0	22
7607.366m	46	6. 0		Atm O_2	R 6 R 7	0,0 0,0	24
7607.933m	1510	199		Atm O_2	R 7	0,0	22
7608.530m	61	8. 0		Atm O_2	R 6	0,0	24
7608.586m				Atm O_2	R 5	0,0	24
7608.82 m	8	1. 1		Atm O_2	R 6	0,0	23
7608.91 m				Atm O_2	R 5	0,0	23
7609.302m	1450	191		Atm O_2	R 5	0,0	22
7609.746m	24	3. 2		Atm O_2	R 5	0,0	24
7609.868m	25	3. 3		Atm O_2	R 4	0,0	24
7610.06 m	4	0. 5		Atm O_2	R 5	0,0	23
7610.455m	1330	175		Atm O_2	R 5	0,0	22
7611.007m	22	2. 9		Atm O_2	R 4	0,0	24
7611.194S	24	3. 2		Atm O_2	R 3	0,0	24
7611.364m	5	0. 7		Atm O_2	R 4	0,0	23
7611.584m	7	0. 9		Atm O_2	R 3	0,0	23
7612.060m	1390	183		Atm O_2	R 3	0,0	22
7612.314m	?	2. 6		Atm O_2	R 3	0,0	24, 28
7612.578m	26	3. 4		Atm O_2	R 2	0,0	24
7612.745m	3	0. 4		Atm O_2	R 3	0,0	23
7613.194m	1120	147		Atm O_2	R 3	0,0	22
7613.705m	14	1. 8		Atm O_2	R 2	0,0	24
7614.026m	20	2. 6		Atm O_2	R 1	0,0	24
7614.15 m	2	0. 3		Atm O_2	R 2	0,0	23
7614.516	8	1. 1	*s*	Ti I	2. 24	211	
7615.061m	985	129		Atm O_2	R 1	0,0	22
7615.552m	17	2. 2		Atm O_2	R 0	0,0	24
7616.146m	833	109		Atm O_2	R 1	0,0	22
7616.980S	120	*14. 8*	*s*	Ni I	3. 65	139	
7617.245	12	1. 6	*w*	Fe I	5. 06	1304	
7617.985	9	1. 2	*u*	Fe I	4. 19	1001	
7618.28 a	2	0. 3					
7619.214S	69	*8. 3*	*s*	Ni I	3. 68	156	
7619.698m	20	1. 6		Atm O_2	P 1	0,0	24
7620.077m	16	2. 1		Atm O_2	P 2	0,0	24
7620.322m	2. 5	0. 3		Atm O_2	P 1	0,0	23
7620.513	72	9. 4	*s*	Fe I	4. 73	1250	
7620.996m	1030	135		Atm O_2	P 1	0,0	22
7621.323m	27	3. 5		Atm O_2	P 2	0,0	24
7621.802S	24	3. 2		Atm O_2	P 3	0,0	24
7621.988m	7	0. 9		Atm O_2	P 2	0,0	23
7622.29	2. 5	0. 3		⊙			
7622.503m	5	0. 7		Atm O_2	P 3	0,0	23
7623.012m	30	3. 9		Atm O_2	P 3	0,0	24
7623.288m	1055	138		Atm O_2	P 3	0,0	22
7623.552m	?	4. 0		Atm O_2	P 4	0,0	24, 28
7623.715m	12	1. 6		Atm O_2	P 3	0,0	23
7624.500m	1240	163		Atm O_2 (Ni I)	P 3 5. 63	0,0 292	22
7625.354S	36	4. 7		Atm O_2	P 5	0,0	24
7625.475m	6	0. 8		Atm O_2	P 4	0,0	23
7626.157m	6	0. 8		Atm O_2	P 5	0,0	23
7626.524m	40	5. 2		Atm O_2	P 5	0,0	24
7627.054m	1165	153		Atm O_2	P 5	0,0	22
7628.225m	1490	195		Atm O_2	P 5	0,0	22
7629.092m	40	5. 2		Atm O_2	P 7	0,0	24

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7629.196m	3	0. 4		Atm O_2	P 6	0,0	23
7629.988m	6	0. 8		Atm O_2	P 7	0,0	23
7630.245m	37	4. 9		Atm O_2	P 7	0,0	24
7631.016m	1310	172		Atm O_2	P 7	0,0	22
7632.168m	1500	197		Atm O_2	P 7	0,0	22
7633.036m	44	5. 8		Atm O_2	P 9	0,0	24
7633.131m	3	0. 4		Atm O_2	P 8	0,0	23
7634.052m	4	0. 5		Atm O_2	P 9	0,0	23
7634.170m	43	5. 6		Atm O_2	P 9	0,0	24
7635.192m	1310	172		Atm O_2	P 9	0,0	22
7636.328m	1350	177		Atm O_2	P 9	0,0	22
7637.183m	41	5. 4		Atm O_2	P 11	0,0	24
7637.276m	2	0. 3		Atm O_2	P 10	0,0	23
7638.306S	46	6. 0		Atm O_2	P 11	0,0	24
7639.339m	30	3. 9		Atm O_2	P 12	0,0	24
7639.585m	1170	155		Atm O_2	P 11	0,0	22
7640.457m	31	4. 1		Atm O_2	P 12	0,0	24
7640.707m	1220	160		Atm O_2	P 11	0,0	22
7641.535m	36	4. 7		Atm O_2	P 13	0,0	24
7641.644m	4	0. 5		Atm O_2	P 12	0,0	23
7642.651m	37	4. 8		Atm O_2	P 13	0,0	24
7642.786m	4. 5	0. 6		Atm O_2	P 13	0,0	23
7643.793m	23	3. 0		Atm O_2	P 14	0,0	24
7644.200m	1010	132		Atm O_2	P 13	0,0	22
7644.900m	28	3. 7		Atm O_2	P 14	0,0	24
7645.312m	1060	139		Atm O_2	P 13	0,0	22
7646.098m	29	3. 8		Atm O_2	P 15	0,0	24
7646.209m	5	0. 7		Atm O_2	P 14	0,0	23
7647.202S	29	3. 8		Atm O_2	P 15	0,0	24
7647.460m	6	0. 8		Atm O_2	P 15	0,0	23
7647.84	9	1. 2		Fe I	4. 44	1137	
7648.12	2	0. 3					
7648.454m	21	2. 8		Atm O_2	P 16	0,0	24
7648.580m	2	0. 3		Atm O_2	P 15	0,0	23
7649.035m	842	110		Atm O_2	P 15	0,0	22
7649.553S	25	3. 3		Atm O_2	P 16	0,0	24
7650.135m	918	120		Atm O_2	P 15	0,0	22
7650.894m	54	7. 1	*u*	Atm O_2	P 17	0,0	24
7650.975				Fe I	2. 69	266	
7651.50	1. 5	0. 2		⊙			
7651.963S	20	2. 6		Atm O_2	P 17	0,0	24
7652.383m	4. 5	0. 6		Atm O_2	P 17	0,0	23
7653.343m	13	1. 7		Atm O_2	P 18	0,0	24
7653.47 m	2	0. 3		Atm O_2	P 17	0,0	23
7653.757	49	6. 4		Fe I	4. 79	1250	
7654.094m	756	98. 8		Atm O_2	P 17	0,0	22
7654.428m	24	3. 1	*s,N*	Atm O_2	P 18	0,0	24
				Ti I	2. 25	211	
7655.182m	747	97. 5		Atm O_2	P 17	0,0	22
7655.48	15	2. 0	*o*?	Fe II	3. 89	73	
7655.847m	11	1. 4		Atm O_2	P 19	0,0	24
7656.00 m	2	0. 3		Atm O_2	P 18	0,0	23
7656.940m	15	2. 0		Atm O_2	P 19	0,0	24
7657.26	7	0. 9		Ni I	5. 41	278	
7657.606S	142	*15. 1*	*u,N*	Mg I	5. 11	22	29
7658.03	1	0. 1					
7658.420m	$\widehat{13}$	1. 7		Atm O_2	P 20	0,0	24
7658.60	1	0. 1		Atm O_2	P 19	0,0	23
7659.148	17	2. 2		Mg I	5. 11	22	
7659.370m	657	85. 8		Atm O_2	P 19	0,0	22
7659.91	31	4. 0	*o*	Mg I	5. 11	22	
7660.454m	645	84. 1		Atm O_2	P 19	0,0	22
7661.05 m	8	1. 0		Atm O_2	P 21	0,0	24
7661.198	79	10. 3	*u*	Fe I	4. 26	1077	
7661.48	13	1. 7		Fe I p	5. 08	1309	
7662.122m	9	1. 2		Atm O_2	P 21	0,0	24
7662.42 a	8	1. 0		C I	8. 77		
7662.84 m	2	0. 3		Atm O_2	P 21	0,0	23
7663.00 a	1. 5	0. 2					
7663.22	0. 5	0. 1		⊙?			
7663.726m	5	0. 7		Atm O_2	P 22	0,0	24
7663.90 m	1	0. 1		Atm O_2	P 21	0,0	23
7664.15 a	7	0. 9		Fe I p	4. 83	1250	
7664.294	120	*14. 1*	*s*	Fe I	2. 99	402	
7664.872	521	68. 0	*S*	K I	0. 00	1	
				Atm O_2	P 21	0,0	22

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7665.944S	468	61. 0		Atm O_2	P 21	0,0	22
7666.44	4. 5	0. 6		Atm O_2	P 23	0,0	24
7666.669m	0. 5	0. 1		Atm O_2	P 22	0,0	23
7667.518m	5	0. 7		Atm O_2	P 23	0,0	24
7668.399m	|1|	0. 1		Atm O_2	P 23	0,0	23
7668.93 a	1. 5	0. 2					
7669.233m	5	0. 7		Atm O_2	P 24	0,0	24
7669.47 m 7669.668	63	8. 2	*w*	Atm O_2 —Si I	P 23 6. 19	0,0	23
7670.31 m	3	0. 4		Atm O_2	P 24	0,0	24
7670.600m	307	40. 1		Atm O_2	P 23	0,0	22
7671.669S	307	40. 1		Atm O_2	P 23	0,0	22
7672.09 m	3	0. 4		Atm O_2	P 25	0,0	24
7672.32 m	1	0. 1		Atm O_2	P 24	0,0	23
7673.127m	3	0. 4		Atm O_2	P 25	0,0	24
7674.183m	1	0. 1		Atm O_2	P 25	0,0	23
7674.962m	<2	<0. 3		Atm O_2	P 26	0,0	24
7675.240m	1	0. 1		Atm O_2	P 25	0,0	23
7675.82 a	1. 5	0. 2					
7676.026m	1	0. 1		Atm O_2	P 26	0,0	24
7676.565S	196	25. 6		Atm O_2	P 25	0,0	22
7677.619S	214	27. 9		Atm O_2	P 25	0,0	22
7678.953m	1	0. 1		Atm O_2	P 27	0,0	24
7679.60	4	0. 5		S I	7. 86	7	
7680.267	106	*12. 1*	*w,N*	Si I (Mn I)	5. 86 5. 49	36 55	
7680.912m	1	0. 1		Atm O_2	P 28	0,0	24
7681.953m	|0.5|	0. 1		Atm O_2	P 28	0,0	24
7682.758S	124	16. 2		Atm O_2	P 27	0,0	22
7683.47 a	1. 5	0. 2		CN?	Q 15	7,4	12
7683.802S	133	17. 4		Atm O_2	P 27	0,0	22
7684.331m	1	0. 1		Atm O_2	R 23	1,1	22
7684.964m	0. 5	0. 1		Atm O_2	R 21 P 29	1,1 0,0	22 24
7685.12	6	0. 8	*s,NN*	⊙			
7685.281m	0. 5	0. 1		Atm O_2	R 25	1,1	22
7685.764m	1	0. 1		Atm O_2	R 19	1,1	22
7686.13	6	0. 8		S I	7. 87	7	
7686.203m	1	0. 1		Atm O_2	R 21	1,1	22
7686.830m	2	0. 3		Atm O_2	R 17	1,1	22
7687.034m	1. 5	0. 2		Atm O_2	R 19	1,1	22
7687.51	6	0. 8		CN?	Q 16	7,4	12
7688.127m	7	0. 9		Atm O_2	R 17 R 15	1,1 1,1	22
7688.40	17	2. 2	*o*?	Si I p	6. 19		
7689.04	15	1. 9		CN Fe I p	P 49 5. 10	5,2 1304	12
7689.177m	107	13. 9		Atm O_2	P 29	0,0	22
7689.387m	2	0. 3		Atm O_2	R 15	1,1	22
7689.703m	3	0. 4		Atm O_2	R 13	1,1	22
7690.218S	95	12. 4		Atm O_2	P 29	0,0	22
7690.939m	4	0. 5		Atm O_2	R 13	1,1	22
7691.487 7691.569	172	*17. 6*	*w,N*	Atm O_2 Mg I	R 11 5. 75	1,1 29	22
7691.95 a	17	2. 2		⊙			
7692.722m	3. 5	0. 5		Atm O_2	R 11	1,1	22
7693.530m	4. 5	0. 6		Atm O_2	R 9	1,1	22
7694.748m	4	0. 5		Atm O_2	R 9	1,1	22
7695.62	12	1. 6		⊙			
7695.838S	64	8. 3		Atm O_2	P 31	0,0	22
7696.72 a	2. 5	0. 3		S I	7. 87	7	
7696.869S	57	7. 4		Atm O_2	P 31	0,0	22
7696.996m	2	0. 3		Atm O_2	R 7	1,1	22
7698.322m	4	0. 5		Atm O_2	R 5	1,1	22
7698.977	154	*19. 4*	*S*	K I	0. 00	1	
7699.506m	3	0. 4		Atm O_2	R 5	1,1	22
7701.078m	3	0. 4		Atm O_2	R 3	1,1	22
7702.240m	2. 5	0. 3		Atm O_2	R 3	1,1	22
7702.739m	26	3. 4		Atm O_2	P 33	0,0	22
7703.759m	27	3. 5		Atm O_2	P 33	0,0	22
7704.076m	1. 5	0. 2		Atm O_2	R 1	1,1	22
7705.207m	0. 5	0. 1		Atm O_2	R 1	1,1	22
7709.70 a	2	0. 3					
7709.871m	9	1. 2		Atm O_2	P 35	0,0	22
7710.099m	2	0. 3		Atm O_2	P 1	1,1	22
7710.367	70	*8. 7*	*u*	Fe I	4. 22	1077	
7710.874m	11	1. 3		Atm O_2	P 35	0,0	22
7711.731	48	*6. 1*	*w*	Fe II	3. 90	73	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7712.416m	4	0. 5		Atm O_2 (Mn I)	P 3 5. 52	1,1 55	22
7712.66	8	1. 0		Co I	2. 54	126	
7713.658m	4	0. 5		Atm O_2	P 3	1,1	22
7714.310S	103	*13. 6*	*s*	Ni I	1. 93	62	
7714.59	9	1. 2		Fe I?			
7714.91 a	1. 5	0. 2					
7715.219	12	1. 6	*w*	⊙			
7715.591	48	*6. 2*	*w*	Ni I	3. 70	109	
7716.251m	4	0. 5		Atm O_2	P 5	1,1	22
7717.251m	3	0. 4		Atm O_2	P 37	0,0	22
7717.450m	4	0. 5		Atm O_2	P 5	0,0	22
7718.257m	3	0. 4		Atm O_2	P 37	0,0	22
7719.046	27	3. 5	*w,N*	Fe I	5. 03	1304	
7720.304m	4	0. 5		Atm O_2	P 7	1,1	22
7720.72	6	0. 8		Fe I p—CN	5. 08 P 51	1304 5,2	12
7721.482m	4	0. 5		Atm O_2	P 7	1,1	22
7722.64	16	2. 1	*w,N*	Mg I	5. 94	44	
7723.210	41	*5. 2*	*s*	Fe I	2. 28	108	
7724.586m	3	0. 4		Atm O_2	P 9	1,1	22
7724.880m	1. 5	0. 2		Atm O_2	P 39	0,0	22
7725.17	4	0. 5		⊙			
7725.746m	5	0. 6		Atm O_2	P 9	1,1	22
7725.862m	2	0. 3		Atm O_2	P 39	0,0	22
7727.616S	94	*11. 8*	*s*	Ni I	3. 68	156	
7729.101m	3	0. 4		Atm O_2	P 11	1,1	22
7729.40	1	0. 1		⊙			
7730.03 a	0. 5	0. 1		⊙			
7730.254m	4	0. 5		Atm O_2	P 11	1,1	22
7730.97	2	0. 3		⊙			
7732.49	13	1. 7		⊙			
7732.746m	0. 5	0. 1		Atm O_2	P 41	0,0	22
7733.12	2. 5	0. 3		Mn I	5. 38	54	
7733.738m	10	1. 3	*s*	Atm O_2 Fe I p	P 41 5. 06	0,0 1306	22
7733.854m	2. 5	0. 3		Atm O_2	P 13	1,1	22
7734.40	|1|	0. 1		Mn I?	5. 54	55	
7734.995m	2. 5	0. 3		Atm O_2	P 13	1,1	22
7735.94	4	0. 5		Ni I?	5. 29	281	
7737.65	3	0. 4		Fe I p	4. 41	1137	
7738.848m	|2|	0. 3		Atm O_2	P 15	1,1	22
7739.978m	2	0. 3		Atm O_2	P 15	1,1	22
7740.50	2	0. 3		Atm?			
7741.44	4	0. 5		⊙			
7742.722	126	*14. 6*	*w*	Fe I	4. 99	1306	
7744.080m	1. 5	0. 2		Atm O_2	P 17	1,1	22
7745.202m	2	0. 3		Atm O_2	P 17	1,1	22
7745.521	22	2. 8	*u*	Fe I	5. 08	1305	
7746.605	18	2. 3	*u*	Fe I p	5. 06	1309	
7747.58	1	0. 1		⊙?			
7748.284S	103	*13. 2*	*s*	Fe I	2. 95	402	
7748.894	92	*11. 3*	*s*	Ni I	3. 70	156	
7749.554m	1. 5	0. 2		Atm O_2	P 19	1,1	22
7750.670m	1	0. 1		Atm O_2	P 19	1,1	22
7751.116S	46	*5. 8*	*w*	Fe I	4. 99	1304	
7755.275m	0. 5	0. 1		Atm O_2	P 21	1,1	22
7755.36	$\widehat{10}$	1. 3	*u,NN*				
7756.378m	0. 5	0. 1		Atm O_2	P 21	1,1	22
7759.37 a	7	0. 9	*u,NN*	Mg I?	5. 93		
7760.641	17	2. 2	*o*?	Si I p	6. 20		
7761.232m	0. 5	0. 1		Atm O_2	P 23	1,1	22
7764.66	4	0. 5		Mn I	5. 37	54	
7765.19	1	0. 1		⊙			
7766.62	0. 5	0. 1		Fe I p	3. 94	957	
7767.458m	0. 5	0. 1		Atm O_2	P 25	1,1	22
7768.513m	0. 5	0. 1		Atm O_2	P 25	1,1	22
7771.954	75	*9. 4*	*W,N*	O I	9. 14	1	
7772.68	2	0. 3		⊙?			
7774.177	66	*8. 5*	*W,N*	O I	9. 14	1	
7775.395	50	*6. 8*	*W,N*	O I	9. 14	1	
7777.10 a	3	0. 4					
7777.91 a	2	0. 3		Si I p	6. 08		
7780.568S	102	*14. 8*	*s*	Fe I	4. 47	1154	
7788.933S	82	*10. 8*	*s*	Ni I	1. 95	62	
7797.588S	79	*9. 9*	*s*	Ni I	3. 90	201	
7798.86	5. 5	0. 7		Fe I? p	3. 02	403	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7799.21	10	1. 3		⊙			
7800.000	61	*7. 1*	*W,N*	Si I	6. 18	81	
7800.29	5	0. 6	*S*	Rb I	0. 00	1	
7801.16	1. 5	0. 2		⊙			
7802.51	12	1. 5	*u*	Fe I p	5. 08	1303	
7804.70 a	1	0. 1					
7807.916S	64	*7. 7*	*u*	Fe I	4. 99	1303	
7810.815	13	1. 7	*w*	Fe I	5. 03	1303	
7811.16	46	5. 9	*W,N*	Mg I	5. 94	43	
7813.67	3	0. 4		Fe I? p	5. 10	1305	
7815.82	2	0. 3		⊙			
7820.81	5	0. 6		Fe I p	4. 29	1118	
7821.73	3	0. 4		Si I?	6. 08		
7826.77	11	1. 4	*u*	Ni I	3. 70	109	
7830.78 a	2	0. 3					
7832.208S	150	*18. 5*	*s*	Fe I	4. 43	1154	
7832.68 a	5	0. 6		C I	8. 84		
7833.06 a	4	0. 5		Si I p	6. 08	68	
7835.317	42	*5. 4*	*s,N*	Al I	4. 02	10	
7836.130S	64	*7. 5*	*s,N*	Al I	4. 02	10	
7837.10 a	|2|	0. 3		C I	8. 85	32	
7838.15	5	0. 6		Co I Fe II p	3. 97 3. 97	 87	
7839.64	1. 5	0. 2		⊙?			
7840.05 a	2	0. 3		Co I	4. 11		
7841.37	3	0. 4		Fe II p	3. 90	72	
7843.04	13	1. 7	*o?*	⊙			
7844.569	11	1. 4	*w*	Fe I	4. 83	1250	
7845.27	2	0. 3		Atm			
7846.272	1	0. 1		Atm H_2O	R 7	013	26
7846.52	2	0. 3		Atm? Fe I? p	 5. 02	 1323	
7848.20 a	1. 5	0. 2		C I	8. 85		
7848.74	2	0. 3		Atm H_2O	R' 3	013	26
7849.38	1. 5	0. 2	*s*	Zr I	0. 69	40	
7849.984	|66|	*7. 8*	*W,N*	Si I	6. 19	81	
7850.88	3. 5	0. 4	*s?*	CN?	R' 11	2,0	12
7851.95	2	0. 3		⊙?			
7852.71	5	0. 6	*S,d*	CN?— Ti I p	R' 9 0. 85	2,0 34	12
7854.692	0. 5	0. 1		Atm H_2O	R 6	013	26
7855.16	6	0. 8		Ni I	4. 54	267	
7555.405	25	*3. 6*	*w*	Fe I	5. 06	1305	
7855.822	3	0. 4	*o*	Co I?	4. 11		
7860.76	5	0. 6	*w*	C I Atm	8. 85	32	
7861.045	12	1. 5	*w*	Ni I	3. 70	156	
7861.32	3	0. 4		Atm			
7862.28	1	0. 1		Atm?			
7863.193	2	0. 3		Atm			
7863.799	|15|	1. 9	*w*	Ni I	4. 54	268	
7864.437S	6	0. 8		Atm H_2O	R 7	013	26
7865.71	2	0. 3		Atm			
7866.080	8	1. 0		Atm H_2O	R 5	013	26
7866.710	3	0. 4		Atm H_2O	R 10	013	26
7869.635	26	3. 3	*w*	Fe I	4. 37	1137	
7869.94	10	1. 3	*s*	Zr I |Atm H_2O	0. 69 R 5	41 013	 26
7870.50	1	0. 1		Atm H_2O	R 9	013	26
7871.30 a	2	0. 3		Co I	4. 17	189	
7871.67 a	1. 5	0. 2					
7872.79	11	1. 4	*s*	Atm H_2O (CN) (CN)	R 6 R 5 R 6	013 2,0 2,0	26 12 12
7873.34	3	0. 4		CN	R 7	2,0	12
7873.96	1	0. 1		CN	R 8	2,0	12
7874.84	1. 5	0. 2		CN	R 9	2,0	12
7875.320	$\widehat{8}$	1. 0		Atm H_2O	R 8	013	26
7876.114	6	0. 8		Atm H_2O (CN)	R 5 R 10	013 2,0	26 12
7876.570	11	1. 4		Atm H_2O	R 5	013	26
7876.705	1. 5	0. 2		Atm			
7877.059	20	2. 6	*o*	Mg II	9. 99	8	
7877.45 a	|11|	1. 4		Co I?— (CN)	 R 11	 2,0	12
7877.80 a	3	0. 4					
7878.89	2	0. 3		CN	R 12	2,0	12
7879.78	8	1. 0		Fe I	5. 03	1306	
7879.86	3	0. 4		Atm H_2O	R 4	013	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7880.699	7	0. 9		Atm H_2O	R 7	013	26
7880.847	3	0. 4		CN	R 13	2,0	12
7881.67	8	1. 0	*w,N*	Mg I	5. 93		
7881.92	17	2. 2		Atm H_2O	R 5	013	26
7882.30	1. 5	0. 2		CN	Q 4	2,0	12
7882.84	1. 5	0. 2		CN	R 14	2,0	12
7884.44	2	0. 3		CN	Q 5	2,0	12
7885.014S	5	0. 6	*S*	Atm H_2O Ti I p	R 4 0. 84	013 34	26
7885.18 a	4	0. 5		CN	R 15	2,0	12
7885.72	0. 5	0. 1		Atm? CN	 P 3	 2,0	 12
7886.202	2	0. 3		Atm H_2O	R 4	013	26
7886.802	6	0. 8		Atm H_2O	R 6	013	26
7887.117S	12	1. 5		Atm H_2O	R 6	013	26
7887.78	2	0. 3		CN	R 16	2,0	12
7889.339	7	0. 9		Atm H_2O (CN)	R 4 Q 7	013 2,0	26 12
7890.12	5	0. 6	*u,N*	Ni I	3. 90 4. 54	200 267	
7890.420	1. 5	0. 2	*u,N*	⊙			
7890.63 a	2	0. 3		CN	R 17	2,0	12
7890.99	1. 5	0. 2		Atm H_2O	R 4	013	26
7891.144	3. 5	0. 4		Atm H_2O	R 4	013	26
7891.90	14	1. 8		Atm H_2O	R 4	013	26
7892.10 a	3	0. 4		CN	Q 8	2,0	12
7892.57 a	2. 5	0. 3					
7893.512S	19	2. 4		Atm H_2O	R 5	013	26
7893.62	3	0. 4		CN	R 18	2,0	12
7894.15	6	0. 8		CN— CN CN	R 9 R 8 R 10	2,0 2,0 2,0	12 12 12
7894.849	|6|	0. 8		Atm H_2O CN	R 5 R 11	013 2,0	26 12
7895.13	2. 5	0. 3		CN	Q 9	2,0	12
7895.515	23	2. 9	*u*	Atm H_2O (Ti I p) (CN)	R 3 0. 83 R 12	013 34 2,0	26 12
7896.035	27	3. 4		Atm H_2O	R 3	013	26
7896.378	28	3. 6	*o*	Mg II	10. 00	8	
7896.66	3	0. 4		CN	R 13	2,0	12
7897.06	2	0. 3		CN	R 19	2,0	12
7898.12 a	1	0. 1		CN	R 14	2,0	12
7898.38	2	0. 3		CN— CN	Q 10 P 6	2,0 2,0	12 12
7899.53	1	0. 1		Atm H_2O	R 4	112	26
7899.86	3	0. 4		CN	R 15	2,0	12
7900.797	13	1. 6		Atm H_2O (CN)	R 4 R 20	013 2,0	26 12
7901.16	0. 5	0. 1		⊙			
7901.780	40	5. 1		Atm H_2O (CN)	R 4 R 3 Q 11 R 16	013 013 2,0 2,0	26 12
7902.880	2	0. 3		Atm H_2O	R 3	013	26
7903.160	6	0. 8	*s*	Atm H_2O CN	R 3 P 7	013 2,0	26 12
7903.794	2	0. 3		Atm H_2O	R 3	112	26
7904.18	4	0. 5		CN Fe I? p	R 17 2. 99	2,0 403	12
7904.53	3	0. 4	*u*	CN	R 21	2,0	12
7905.60	3	0. 4	*u*	CN	Q 12	2,0	12
7906.33	0. 5	0. 1		Atm H_2O	Q 6	013	26
7906.80	1. 5	0. 2		CN	R 18	2,0	12
7907.46	0. 5	0. 1		Atm H_2O	Q 5	013	26
7908.14	3	0. 4		CN Cr I?	P 8 5. 62	2,0 316	12
7908.750	42	5. 3		Atm H_2O	R 3	013	26
7909.05	1. 5	0. 2		CN	Q 4	2,0	12
7909.370	8	1. 0	*s,N*	Atm H_2O Ti I p	R 2 3. 32	013 308	26
7909.610	17	2. 2		CN	Q 13 R 19	2,0 2,0	12 12
7910.664	$\widehat{13}$	1. 6		Atm H_2O	R 3	013	26
7911.84 a	2	0. 3		CN	Q 7	2,0	12
7912.004	5	0. 6	*s*	Atm H_2O— ⊙	R 2	013	26
7912.384	15	1. 9	*w*	Si I	6. 10	68	
7912.870S	40	*5. 1*	*S*	Fe I	0. 86	12	
7913.12 a	3	0. 4		CN	R 23	2,0	12
7913.438	17	2. 2	*w*	Si I CN— CN	5. 86 P 9 Q 8	35 2,0 2,0	 12 12
7913.80	5	0. 6	*s*	CN	Q 14	2,0	12
7915.35	6	0. 8		CN	Q 9	2,0	12
7915.634S	14	1. 8		Atm H_2O	R 2	013	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7916.32	2. 5	0. 3		CN	R 21	2,0	12
7916.532	2. 5	0. 3		Atm H_2O	R 4	112	26
7916.79	1. 5	0. 2		Atm H_2O	Q 3	013	26
7917.428	31	3. 9	*s*	Ni I	3. 74	109	
7917.561	10	1. 3		Atm H_2O	R 4 R 2	112 013	26
7917.78	7	0. 9		CN	Q 10 R 24	2,0 2,0	12
7918.383	100	*11. 9*	*W*	Si I	5. 95	57	
7920.03	2	0. 3		CN	R 22	2,0	12
7920.24	3	0. 4		CN	Q 11	2,0	12
7920.666S	32	4. 0		Atm H_2O	R 2	013	26
7922.77 a	2	0. 3		CN	R 25	2,0	12
7922.98	7	0. 9	*s,NN*	CN— CN	Q 16 Q 12	2,0 2,0	12 12
7923.81	3	0. 4	*o*?	|S I CN	8. 41 P 6	22 2,0	12
7924.169	16	2. 0	*o*?	Fe I CN	4. 79 R 23	1250 2,0	12
7924.348	21	2. 7		Atm H_2O (CN)	R 1 P 11	013 2,0	26 12
7925.30	2	0. 3		Atm? Si I? p	6. 20	81	
7925.82	15	1. 9	*o*	Si I	6. 22		
7926.29	5	0. 6	*s*	CN Ti I	Q 13 3. 28	2,0 308	12
7926.54	5	0. 6		⊙			
7927.14	1	0. 1		CN	P 7	2,0	12
7927.928	8	1. 0		CN	Q 17 R 26	2,0 2,0	12
7928.24	2	0. 3		Atm H_2O	Q 4	013	26
7928.618S	27	3. 4		Atm H_2O (S I)	R 1 8. 41	013 22	26
7929.20	0. 5	0. 1		Atm H_2O	R 3	112	26
7929.339	4	0. 5		Atm H_2O	R 3	112	26
7929.81	3	0. 4		CN	Q 14	2,0	12
7929.939	1	0. 1		Atm H_2O	R 4	112	26
7930.28	2	0. 3		Gd II CN— S I	P 12 8. 41	2,0 22	12
7930.819	44	5. 5	*u,N*	Mg I	5. 94	42	
7931.772	5	0. 6		Atm H_2O (S I)	R 1 8. 42	013 22	26
7932.351	90	*11. 3*	*W,N*	Si I	5. 96	57	
7933.12	22	*2. 8*	*s*?	Cu I (CN)	3. 78 Q 18	6 2,0	12
7933.48	6	0. 8	*s*	CN— CN	R 27 Q 15	2,0 2,0	12 12
7934.11	2. 5	0. 3		⊙?			
7934.90 a	4	0. 5		CN	P 9	2,0	12
7936.39	3	0. 4		CN	P 13	2,0	12
7937.150S	166	*20. 7*	*u*	Fe I	4. 31	1136	
7937.65	3	0. 4		CN	Q 16	2,0	12
7938.05	3	0. 4		CN	R 26	2,0	12
7938.61	6	0. 8	*s*	|Ti I p— CN	1. 88 Q 19	151 2,0	12
7938.96	1	0. 1		Atm H_2O	Q 3	013	26
7939.23	6	0. 8		CN	P 10 R 28	2,0 2,0	12
7941.096S	38	4. 8	*s*	Fe I	3. 27	623	
7941.79	11	1. 4		Atm H_2O Fe I	R 0 3. 05	013 508	26
7942.00	8	1. 0	*s*	|Cr I CN	4. 39 Q 17	300 2,0	12
7942.74	4	0. 5		Atm H_2O (CN)	Q 5 P 14	013 2,0	26 12
7943.28	2. 5	0. 3	*u*?	CN	R 27	2,0	12
7944.001	147	*17. 6*	*w,N*	Si I (Ti I)	5. 98 3. 29	57 308	
7944.38	2	0. 3		CN	Q 20	2,0	12
7945.27	2	0. 3		CN	R 29	2,0	12
7945.858S	185	*22. 6*	*s*	Fe I	4. 39	1154	
7946.744	5	0. 6		Atm H_2O (CN)	Q 3 Q 18	112 2,0	26 12
7947.63	2. 5	0. 3	*S*	Rb I	0. 00	1	
7947.726	10	1. 3		Atm H_2O	Q 2	013	26
7948.78	6	0. 8	*u*	CN	P 12 R 28	2,0 2,0	12
7949.149	9	1. 1	*S*	Ti I	1. 50	125	
7949.38 a	2	0. 3					
7950.42	7	0. 9	*s*	CN	Q 21	2,0	12
7950.889	9	1. 1		Atm H_2O	Q 4	013	26
7951.176	10	1. 3		Atm H_2O	R 3	112	26
7951.73	10	1. 3	*s*	CN CN	Q 19 R 30	2,0 2,0	12 12
7953.07	2. 5	0. 3		Atm? Ni I	4. 54	266	

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Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7953.39	1. 5	0. 2		⊙?			
7953.64	10	1. 3		Atm?			
7953.84	8	1. 0		Atm H_2O	Q 1	013	26
7954.12	2	0. 3		CN	P 13	2,0	12
7954.57	3	0. 4	*s,N*	CN	R 29	2,0	12
7954.97	7	0. 9		Fe I p	2. 99	402	
7955.71	27	3. 4	*w*	Fe I	5. 03	1305	
7956.19	10	1. 3		Atm H_2O	Q 3	013	26
				(CN)	P 16	2,0	12
7956.71	7	0. 9	*s*	Zr I	0. 65	41	
				CN	Q 22	2,0	12
7957.01	6	0. 8	*s*	CN	Q 20	2,0	12
7957.77	$\widehat{4}$	0. 5		Atm			
7958.21	3	0. 4		CN	R 31	2,0	12
7958.492S	52	6. 6		Atm H_2O	Q 2	013	26
7959.148	23	*2. 8*	*w*	Fe I	5. 03	1304	
7959.70	1. 5	0. 2		CN	P 14	2,0	12
7960.270	15	1. 9		Atm H_2O	Q 2	013	26
7960.734	49	6. 2		Atm H_2O	Q 1	013	26
7961.604	27	3. 4	*s*	Atm H_2O	R 2	112	26
					Q 5	013	
				Ti I	3. 30	308	
7962.606	12	1. 5		CN	Q 21	2,0	12
7962.861	14	1. 8		Atm H_2O	Q 3	013	26
7963.00 a	8	1. 0		Atm H_2O	Q 4	013	26
					R 2	112	
7963.132	43	5. 4		Atm H_2O	Q 3	013	26
7963.42 a	6	0. 8		CN	Q 23	2,0	12
				CN	P 17	2,0	12
7964.349	27	3. 4		Atm H_2O	Q 3	013	26
7964.970	$\widehat{24}$	3. 0	*w,d*	Atm H_2O	Q 4	013	26
				Fe I p	5. 06	1303	
				(CN)	R 32	2,0	12
7965.55	3	0. 4	*s,N*	Fe I p—	5. 08	1305	
				CN	P 15	2,0	12
7966.43	1. 5	0. 2		Atm			
7967.10	3	0. 4	*s*	CN	R 31	2,0	12
7967.70	2	0. 3		Atm H_2O	Q 5	013	26
7968.121	30	3. 8		Atm H_2O	Q 5	013	26
					Q 4	013	
7968.473	14	1. 8		Atm H_2O	Q 2	013	26
				CN	Q 22	2,0	12
7968.765	6	0. 8		Atm H_2O	Q 5	013	26
7970.11	2	0. 3	*w,N*	CN	Q 24	2,0	12
7970.300	35	4. 4		Si I	5. 96	57	
7970.81	1. 5	0. 2		CN	P 18	2,0	12
7971.522S	30	3. 8		Atm H_2O	P 1	013	26
7971.86	4	0. 5		Atm			
				CN	P 16	2,0	12
7972.15	$\widehat{7}$	0. 9	*o?*	CN	R 33	2,0	12
7973.79	3	0. 4		CN	R 32	2,0	12
7974.136	6	0. 8		Atm H_2O	P 2	112	26
7974.69	7	0. 9		CN	Q 23	2,0	12
7975.002	6	0. 8		Atm H_2O	Q 5	013	26
7975.58	6	0. 8		Si I	6. 08	68	
7976.30	2	0. 3		⊙?			
7976.586	4	0. 5		Atm H_2O	Q 5	112	26
7977.215	4	0. 5		CN	Q 25	2,0	12
7977.995	3	0. 4		Atm			
7978.46 a	$\widehat{4}$	0. 5		CN—	P 17	2,0	12
				CN	P 19	2,0	12
7978.834	13	1. 6	*S*	Ti I	1. 89	151	
					3. 32	308	
7979.00 a	3	0. 4					
7979.81	3	0. 4		CN	R 34	2,0	12
7980.008	9	1. 1	*u*	Atm H_2O	Q 3	013	26
				Fe I p	5. 08	1304	
7980.452	13	1. 6		Atm H_2O	Q 3	112	26
7980.79	4	0. 5		CN	R 33	2,0	12
7981.150	6	0. 8	*s*	CN	Q 24	2,0	12
7981.54	1	0. 1		⊙?			
7982.06 a	1. 5	0. 2					
7982.87	1. 5	0. 2		Atm			
7983.65	1	0. 1		Atm			
7984.00	3	0. 4		Atm H_2O	Q 5	013	26
7984.342S	30	3. 8		Atm H_2O	P 2	013	26
7984.615	8	1. 0		CN	Q 26	2,0	12
7985.17	1. 5	0. 2		CN	P 18	2,0	12
7986.264	13	1. 6		Atm H_2O	P 2	013	26
7986.48 a	3	0. 4		CN	P 20	2,0	12
7987.24	22	2. 8	*s,N*	⊙			
7987.391			*s*	Atm			
				Co I	2. 08	89	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
7987.97	5	0. 6	*s*?	CN	Q 25	2,0	12
7988.113	11	1. 4		Atm H_2O (CN)	P 3 R 34	112 2,0	26 12
7988.40 a	1	0. 2					
7990.729	15	1. 9		Atm H_2O	P 2	013	26
7990.90	7	0. 9		Atm?			
7991.52	1	0. 1		Atm?			
7991.71	2	0. 3		⊙?			
7992.322	9	1. 1	*s*	CN	P 19 Q 27	2,0 2,0	12
7993.048	5	0. 6	*u,N*	Al I Atm H_2O	4. 08 R 6	211	26
7993.43	3	0. 4		C I?	9. 33		
7993.86	4	0. 5	*s*	Atm H_2O— ⊙	R 5	112	26
7994.02 a	6	0. 8	*w*	Atm H_2O	R 1	112	26
7994.488S	50	*6. 0*	*u*	Fe I			
7994.75 a	3. 5	0. 4		CN	P 21	2,0	12
7995.019	12	1. 5	*s*	CN Si I p	Q 26 5. 61	2,0 21	12
7995.63	6	0. 8	*s,N*	CN	R 35 R 36	2,0 2,0	12
7995.809	2. 5	0. 3		⊙			
7996.485	11	1. 4	*S*	Ti I	3. 34	308	
7996.80	2	0. 3		Co I?	2. 14	79	
7997.572	1. 5	0. 2		Atm			
7998.247	23	2. 9		Atm H_2O	R 1	112	26
7998.499	15	*1. 9*		Atm H_2O	P 3	013	26
7998.953	172	*20. 4*	*u*	Fe I	4. 37	1136	
7999.88	3	0. 4		CN	P 20	2,0	12
8000.300S	57	7. 1		Atm H_2O (CN)	P 3 Q 28	013 2,0	26 12
8000.52	2	0. 2		Atm?			
8000.959	4	0. 5		Atm H_2O	R 4	112	26
8001.40	1. 5	0. 2		Atm?			
8002.40	5	0. 6		CN	Q 27	2,0	12
8002.56	7	0. 9		Fe I	4. 58	1217	
8003.237	14	1. 8		Atm H_2O (CN)	R 4 P 22	112 2,0	26 12
8003.53	6	0. 7		Atm? CN	R 36	2,0	12
8003.93	|3|	0. 4		CN	R 37	2,0	12
8004.588	3. 5	0. 4		Atm			
8004.971	7	0. 9		Atm H_2O	P 3	013	26
8006.46	14	1. 8		⊙?			
8006.62	4	0. 5		Atm H_2O	Q 5	112	26
8006.97	5	0. 6		⊙?			
8007.470	95	11. 9		Atm H_2O	P 3	013	26
8007.720	14	1. 8		Atm H_2O	P 3	013	26
8008.455	14	1. 8		CN	Q 29	2,0	12
8009.38	4	0. 5		Si I p	6. 12	74	
8010.088	6	0. 7		CN	Q 28	2,0	12
8010.896	|10|	1. 2		Atm H_2O	Q 3	112	26
8011.72	4	0. 5		CN	R 37	2,0	12
8011.98	3	0. 4		CN	P 23	2,0	12
8012.273	10	1. 2	*o*?	S I ? p Atm H_2O?	7. 87 R 3	112	26
8012.484	15	1. 9	*w*	—CN	R 38	2,0	12
8012.940S	43	5. 4		Atm H_2O	P 4	013	26
8013.384	17	2. 1		Atm H_2O	Q 4	112	26
8013.81	3	0. 4		Atm H_2O	R 7	211	26
8014.051	25	3. 1		Atm H_2O	P 4	013	26
8014.713	6	0. 7		Atm H_2O	R 2	112	26
8015.03 a	3	0. 4					
8015.652	4	0. 5		Atm? CN	P 22	2,0	12
8016.523	7	0. 9		Atm H_2O Fe I p	Q 4 4. 79	112 1249	26
8017.04	8	1. 0		CN	Q 30	2,0	12
8017.425	12	1. 5		Atm H_2O	Q 5	112	26
8018.044	13	1. 6		Cr I— |CN	4. 39 Q 29	299 2,0	12
8018.304	6	0. 7		Atm H_2O	Q 3	112	26
8018.64 a	2	0. 2					
8020.240	|6|	0. 7	*s*	CN	R 38	2,0	12
8020.709	23	2. 9		Atm H_2O	P 4	013	26
8021.07 a	5	0. 6		CN	P 24	2,0	12
8021.44	2	0. 2		CN	R 39	2,0	12
8022.055	14	1. 8		Atm H_2O	Q 2	112	26
8022.52	2	0. 2	*u*	Atm H_2O	R 6	211	26
8022.971	10	1. 2		Atm H_2O	Q 5	112	26
8023.166	20	2. 5		Atm H_2O	R 1	112	26
8023.852	14	1. 8		Atm H_2O	P 4	013	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8024.178	12	1. 5		Atm H_2O	R 2	112	26
8024.547	14	1. 8	*o*				
8024.861	11	1. 4	*S*	Ti I	1. 88	151	
8025.193	8	1. 0		Atm H_2O	P 4	013	26
8025.865	8	1. 0		Atm H_2O CN	P 4 Q 31	013 2,0	26 12
8026.09	6	0. 7		Atm			
8026.38	6	0. 7		CN	Q 30	2,0	12
8026.925	|41|	5. 1	*w*	||Si I Atm H_2O	6. 26 R 4	211	26
8027.39	|2|	0. 2	*S,N*	V I	1. 06	30	
8027.838	13	1. 6	*W*	⊙			
8027.93	19	2. 4	*w*	Fe I	3. 25	623	
8028.318	70	*9. 5*	*w*	Fe I	4. 47	1154	
8028.544	44	5. 5		Atm H_2O	P 5	013	26
8029.02 a	3	0. 4		CN	R 39	2,0	12
8029.21 a	2. 5	0. 3		Co I	4. 05		
8029.453	3. 5	0. 4		Atm H_2O	R 5	211	26
8030.36	2	0. 2		CN	P 25	2,0	12
8030.67	3	0. 4		CN	R 40	2,0	12
8031.269	9	1. 1		Atm H_2O	Q 2	112	26
8032.04	1	0. 1		Atm?			
8032.77	3	0. 4		CN	P 24	2,0	12
8033.606	$\widehat{18}$	2. 2		Atm H_2O	Q 5	112	26
8034.293	23	2. 9		Atm H_2O	Q 3	112	26
8034.50 a	3	0. 4		Ni I	3. 74	109	
8034.962	14	1. 7	*s*	CN	Q 31 Q 32	2,0 2,0	12
8035.36	9	1. 1		Atm H_2O	R 2 Q 4	112 112	26
8035.608	32	4. 0	*w,N*	Si I	5. 98	57	
8036.460S	35	4. 4		Atm H_2O	Q 3 P 5	112 013	26
8037.878	3	0. 4		Atm H_2O	R 1 Q 6	112 013	26
8038.15	3	0. 4		Atm? CN	R 40	2,0	12
8039.600S	25	3. 1		Atm H_2O	P 5	013	26
8040.00	2. 5	0. 3		CN	P 26	2,0	12
8040.28	3	0. 4		CN	R 41	2,0	12
8041.038	3	0. 4		Atm			
8041.77	|3|	0. 4	*s,N*	CN— Atm H_2O	P 25 P 5	2,0 013	12 26
8042.321	9	1. 1	*u*	Atm H_2O—	Q 2	112	26
8043.169	|23|	2. 9		Atm H_2O	P 6	013	26
8043.612	|7|	0. 9		Atm H_2O	P 6	013	26
8043.874	17	2. 1		CN Atm H_2O	Q 32 P 5	2,0 013	12 26
8044.398	|25|	3. 1		Atm (CN)	Q 33	2,0	12
8045.530S	|39|	4. 8		Atm H_2O	Q 1 R 3	112 211	26
8046.058S	146	*18. 6*	*u*	Fe I	4. 41	1136	
8046.49	7	0. 9		Atm H_2O	P 5	013	26
8046.80	7	0. 9		Si I p	6. 12	73	
8047.625S	|58|	*7. 3*	*S*	Fe I	0. 86	12	
8048.980	10	1. 2		Atm H_2O	R 4	211	26
8049.33	|18|	2. 2	*w,NN*	⊙			
8049.54 a	12	1. 5					
8049.90	$\widehat{42}$	5. 2		Mg I	5. 93		
8050.24 a	Plate	Defect					
8051.12	2	0. 2		CN	P 26	2,0	12
8052.435	11	1. 4		Atm H_2O	P 6	013	26
8052.88	2	0. 2		⊙?			
8053.098	8	1. 0	*s*	CN—	Q 33	2,0	12
8053.81	2	0. 2		⊙?			
8054.311	52	6. 5	*s,N*	Mg I (CN)	5. 93 Q 34	2,0	12
8054.903	8	1. 0		Atm H_2O	P 6	013	26
8055.995	7	0. 9	*s*?	Co I?	4. 15	193	
8056.36	3	0. 4		⊙?			
8056.67	2	0. 2		⊙?			
8056.95	3	0. 4		⊙?			
8057.27	4	0. 5	*s*	CN	R 42	2,0	12
8057.91	2. 5	0. 3		Si I? p	6. 10	68	
8058.54	6	0. 7		Atm			
8058.74	7	0 9	*o*?	C I Atm H_2O?	8. 85 P 6	013	26
8059.538	13	1. 6		Atm H_2O	P 7	013	26
8060.249	11	1. 4		Atm H_2O CN	P 7 P 28 R 43	013 2,0 2,0	26 12
8060.70	2	0. 2		CN	P 27	2,0	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8061.16 m			*s*	Cr I	4. 41	300	13
8062.161	$\widehat{10}$	1. 2		Atm H_2O	P 6	013	26
				Atm H_2O	P 6	013	26
8062.594	8	1. 0	*s*	CN	Q 34	2,0	12
8062.89	1. 5	0. 2		Atm H_2O	P 6	013	26
8063.10 m			*s*	Zr I	0. 62	40	13
8063.286S	14	1. 7		Atm H_2O	R 5	211	26
8064.106	7	0. 9		CN	Q 35	2,0	12
8064.61	1. 5	0. 2		Atm?			
8065.226	8	1. 0		Atm			
8065.876	6	0. 7		Al I	4. 08	16	
8066.07 m			*s*	Ti I	1. 89	151	13
8067.08 a	1. 5	0. 2		CN	R 4	3,1	12
					R 5	3,1	
8067.26	6	0. 7		CN	R 43	2,0	12
					R 6	3,1	
8067.78	5	0. 6		CN	R 7	3,1	12
8068.261	7	0. 9	*S*	Ti I	1. 87	151	
8068.50	3	0. 4	*o*	Sm II	1. 75	68	
				CN	R 8	3,1	12
8069.34	2	0. 2		⊙?			
8069.79	9	1. 1		Si I? p	6. 27		
8070.016	25	3. 1	*o*?	⊙			
				Atm H_2O?	Q 1	112	26
8070.34	7	0. 9	*S*	Zr I	0. 73	40	
8070.620	29	3. 6		Si I—	6. 08		
				CN	P 28	2,0	12
					R 44	2,0	
					R 10	3,1	
				C I	8. 85		
8071.262	|21|	2. 6	*o*	Si I	6. 10		32
8071.50 a	2	0. 2					
8072.162	12	1. 5	*s*	Fe I	2. 42	108	
8072.381	6	0. 7		CN	Q 35	2,0	12
8073.029	|14|	1. 7	*w,N*	⊙			
8073.80	1. 5	0. 2		CN	R 12	3,1	12
8074.430	6	0. 7		CN	Q 36	2,0	12
8074.744	4	0. 5		⊙			
8075.158S	33	*3. 8*	*S*	Fe I	0. 91	12	
8075.35 a	5	0. 6		Al I	4. 09	16	
8075.549	6	0. 7	*o*	⊙			
8075.75 a	3. 5	0. 4		CN	R 13	3,1	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8076.293	10	1. 2		Atm H_2O	P 8	013	26
					P 8	013	
8077.012	2	0. 2		CN	Q 4	3,1	12
8077.68	2. 5	0. 3		CN	R 44	2,0	12
8077.96	3	0. 4		CN	R 14	3,1	12
8078.501	11	1. 4	*w*	Atm H_2O	R 4	211	26
				C I	8. 85		
8079.00 a	1	0. 1					
8079.252	3	0. 4		Atm H_2O	P 2	112	26
8079.597	3	0. 4		Atm H_2O	P 7	013	26
8080.00 a	1	0. 1					
8080.30 a	1. 5	0. 2					
8080.582	28	*3. 3*	*S,N*	Ti I p	2. 17	195	
8080.69	12	1. 5		Fe I	3. 30	623	
8080.97 a	2. 5	0. 3		CN	P 29	2,0	12
8081.523	12	1. 5	*s,N*	Atm H_2O	P 1	112	26
				CN—	R 45	2,0	12
				CN	P 30	2,0	12
8082.16	1	0. 1		Atm H_2O	P 7	013	26
8082.54	9	1. 1		CN	Q 36	2,0	12
8082.969	4	0. 5	*s*	⊙			
				Atm H_2O	P 3	112	26
8083.19	3	0. 4		CN	R 16	3,1	12
8083.82	5	0. 6		C I	8. 85		
8084.807	1. 5	0. 2		Atm H_2O	R 4	310	26
8085.175	|150|	*19. 6*	*w*	Fe I	4. 44	1136	
8085.431	14	1. 7		Atm H_2O	R 4	211	26
					Q 3	112	
8085.82	5	0. 6		Atm H_2O	R 4	310	26
8086.18	6	0. 7		CN	R 17	3,1	12
8087.46	2. 5	0. 3		CN	Q 8	3,1	12
8088.31	3	0. 4		CN	R 45	2,0	12
8088.56	2	0. 2		Atm?			
8089.361	13	1. 6	*w*?	CN?	R 18	3,1	12
8089.76	6	0. 7		CN	R 9	3,1	12
				CN—	R 8	3,1	12
				CN	R 10	3,1	12
8090.30 a	12	1. 5		Fe I	4. 58	1218	
8090.464	15	1. 9	*w,N*	Atm H_2O—	R 3	211	26
				CN	R 11	3,1	12
				CN	Q 9	3,1	12
8091.082	|2|	0. 2		Atm H_2O	R 2	211	26
8091.50	|3|	0. 4		CN	P 30	2,0	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8092.00 a	4	0. 5		CN	R 5	3,1	12
8092.640	38	*4. 7*	*w*	Cu I	3. 82	6	
8093.04	5	0. 6		CN	Q 37	2,0	12
8093.232	66	8. 2	*W,N*	‖Si I V I?	5. 86 1. 05	34 30	
8093.76	1	0. 1		Atm H_2O?	P 9	013	26
8093.937	25	*2. 9*	*w*	Co I	4. 02	189	
8094.270	12	1. 5		Atm H_2O	P 2	112	26
8094.836	6	0. 7		⊙?			
8095.352	2. 5	0. 3		Atm H_2O	Q 2	112	26
8096.02	$\widehat{12}$	1. 5	*u*	CN CN	Q 38 R 15	2,0 3,1	12 12
8096.580S	16	2. 0		Atm H_2O	P 3	112	26
8096.874	36	*4. 0*	*u*	Fe I	4. 07	999	
8097.524	$\widehat{10}$	1. 2		—CN	Q 11	3,1	12
8098.00 a	4	0. 5		CN	R 16	3,1	12
8098.746	114	14. 1	*w,N*	‖Mg I Atm H_2O	5. 94 Q 4	41 112	26
8098.90	6	0. 8		CN	P 7	3,1	12
8099.418	|16|	2. 0		Atm			
8099.75 a	4	0. 5		CN	R 1	3,1	12
8100.43	4	0. 5		CN	R 17	3,1	12
8100.90 a	3	0. 4		CN	R 21	3,1	12
8101.09	|2. 5|	0. 3					
8101.382	10	1. 2		Atm			
8101.86	1. 5	0. 2		Atm?			
8102.285	6	0. 7		CN	P 31	2,0	12
8103.165S	9	1. 1		Atm H_2O	Q 3	112	26
8103.764	8	1. 0		CN	Q 38	2,0	12
8103.95 a	3	0. 4		CN	R 47	2,0	12
8104.14 a	4	0. 5		CN CN	P 8 P 32	3,1 2,0	12 12
8104.709	8	1. 0		Atm H_2O	R 8	211	26
8105.25 a	1. 5	0. 2		CN	R 2	3,1	12
8105.69	5	0. 6		CN CN	Q 13 Q 5	3,1 3,1	12 12
8105.937	1. 5	0. 2					
8106.385	5	0. 6		Atm H_2O	P 3	112	26
8106.708	8	1. 0		CN	Q 6	3,1	12
8107.12	8	1. 0		CN	Q 39	2,0	12
8107.32	9	1. 1		⊙			
8107.842S	20	2. 5		Atm H_2O	R 7	211	26
8108.312	11	1. 4		Fe I	2. 73	265	
8109.018	7	0. 9		Atm H_2O	R 5	310	26
8109.65 a	2	0. 2		CN	R 20	3,1	12
8109.840	8	1. 0		CN— CN	Q 8 R 23	3,1 3,1	12 12
8110.090	7	0. 9		CN	Q 14	3,1	12
8110.568	13	1. 6		Atm H_2O	R 7	211	26
8111.01	2	0. 2		Atm?			
8111.85	3	0. 4		CN	Q 9	3,1	12
8112.179	18	2. 2		Fe I	2. 69	265	
8112.406	16	2. 0		Atm H_2O	R 3	211	26
8113.28 a	3	0. 4		CN	R 21	3,1	12
8113.631	22	2. 7		Atm H_2O	R 8	211	26
8113.948	27	3. 3		Atm H_2O	R 7	211	26
8114.21 a	4	0. 5		CN	Q 10	3,1	12
8114.69	35	4. 3	*w*	⊙			
8114.890			*u*	CN	Q 39	2,0	12
				CN	Q 15 R 24	3,1 3,1	12
8115.70 a	2. 5	0. 3		CN	R 48	2,0	12
8115.931	4	0. 5	*s*	CN	P 33	2,0	12
8116.38 a	2. 5	0. 3		Co I	4. 02		
8116.94 a	|6|	0. 7		V I— CN	1. 08 Q 11	30 3,1	12
8117.301	5	0. 6	*u*?	CN— CN	R 22 P 5	3,1 3,1	12 12
8118.105	6	0. 7		Atm H_2O	P 2	112	26
8118.446	2	0. 2		Atm H_2O	R 10	211	26
8118.72 a	3. 5	0. 4		CN	Q 40	2,0	12
8118.910S	11	1. 4		Atm H_2O	P 4	112	26
8119.70	4	0. 5	*s*	CN	Q 16	3,1	12
8119.992	8	1. 0		Atm CN CN	Q 12 R 25	3,1 3,1	12 12
8120.661	14	1. 7		Atm H_2O	R 6	211	26
8120.95 a	1	0. 1		CN	P 11	3,1	12
8121.248	6	0. 7		Atm H_2O	R 7	211	26
8121.499	14	1. 7		Atm H_2O	R 6	211	26
8122.22	3	0. 4		CN	R 48	2,0	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8122.576	15	1. 8		Atm H_2O	R 6 P 2	211 112	26
8122.820	10	1. 2		Atm H_2O	R 9	211	26
8123.316	10	1. 2		Atm H_2O	R 3	310	26
8123.579	7	0. 9		Atm H_2O	R 6	211	26
8124.289	1	0. 1	*u,N*	Atm?—			
8125.054	19	2. 4	*s,N*	—CN	P 33	2,0	12
8125.445S	|22|	2. 7		Atm H_2O	R 6	211	26
8126.227	13	1. 6	*s*	CN— CN	R 24 Q 40	3,1 2,0	12 12
8126.48	5	0. 6		Fe I?	4. 58	1218	
8126.852	23	2. 8		Atm H_2O	R 8	211	26
8127.130	9	1. 1		Atm H_2O CN	P 5 P 12	112 3,1	26 12
8127.70 a	1. 5	0. 2		CN	R 49	2,0	12
8127.94	4	0. 5	*s,N*	CN CN	P 34 P 8	2,0 3,1	12 12
8129.35	4	0. 5		Fe I p	2. 76	265	
8130.01	22	2. 7		Atm H_2O	P 5	112	26
8130.23	7	0. 9		Atm			
8130.460	51	6. 3		Atm H_2O	R 6	211	26
8131.00	7	0. 9		CN— CN	Q 15 R 25	3,1 3,1	12 12
8131.213	24	3. 0		Atm H_2O	R 7	211	26
8131.38	7	0. 9		CN Atm H_2O	R 27 P 3	3,1 112	12 26
8131.709	1. 5	0. 2		Atm H_2O	R 12	211	26
8132.373	4	0. 5		Atm H_2O	P 5	112	26
8133.04	1	0. 1	*s*	Zr I	0. 69	40	
8133.209S	24	3. 0		Atm H_2O	R 5 R 7	211 211	26
8133.564	13	1. 6		Atm H_2O	R 11	211	26
8133.777	94	11. 6		Atm H_2O	R 5	211	26
8134.520	7	0. 9		Atm H_2O	R 2	211	26
8135.047	76	9. 4		Atm H_2O	R 5	211	26
8136.207	17	2. 1		Atm H_2O	R 10	211	26
8136.525	25	3. 1		Atm H_2O	R 5	211	26
8137.149	|10|	1. 2		Atm H_2O	R 5	211	26
8137.47	3	0. 4	*s*	CN—	R 28	3,1	12
8137.974	5	0. 6	*s*	CN	Q 41	2,0	12
8138.777	16	2. 0		Atm H_2O	R 6	230	26
8139.718S	22	2. 7		Atm H_2O	R 9	211	26
8140.674	135	16. 6		Atm H_2O	R 6	211	26
8140.82 a	22	2. 7		Atm H_2O	R 5	211	26
8141.936	|152|	18. 7		Atm H_2O	R 5	211	26
8142.761	7	0. 9		CN	Q 42	2,0	12
8143.56	7	0. 9		Atm H_2O	P 4	112	26
8143.794	65	8. 0		Atm			
8144.193	30	3. 7		Atm			
8144.515	20	2. 5	*s,N*	|Atm H_2O V I	R 5 R 7 1. 04	131 131 30	26
8144.76	5	0. 6		CN	Q 18	3,1	12
8145.478	18	2. 2	*s*	Fe I			
8146.213S	83	10. 2		Atm H_2O	R 5	310	26
8146.67	15	1. 8		CN Fe I p	P 12 3. 27	3,1 623	12
8147.188S	|96|	11. 8		Atm			
8147.55 a	6	0. 7		CN	R 28	3,1	12
8147.80 a	5	0. 6					
8148.078	48	5. 9		Atm?			
8148.392	145	18. 8		Atm H_2O	R 7	211	26
8149.269	55	6. 8		Atm H_2O	R 7	211	26
8149.58 a	16	2. 0		Fe I	4. 58 4. 58	1217 1218	
8149.689	140	17. 2		Atm H_2O	R 4 R 5	211 211	26
8149.876	63	7. 7		Atm H_2O	R 4	211	26
8150.05 a	4	0. 5		CN	Q 42 Q 19	2,0 3,1	12
8150.54	6	0. 7		Si I CN	5. 61 R 30	20 3,1	12
8151.336	3	0. 4		⊙?			
8151.95	1	0. 1		Co I	4. 07	193	
8152.498	142	17. 4		Atm H_2O	R 1 R 4	211 211	26
8153.06	16	2. 0		CN	P 36	2,0	12
8153.703	99	12. 2		Atm H_2O	R 4	211	26
8154.409	240	5. 4		Atm H_2O	R 3	310	26
8154.63 a		27. 5		Atm H_2O	R 6	211	26
8154.70 a		6. 7		Atm H_2O	R 6	211	26
8154.90 a		1. 0		Si I	6. 10		

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
8155.22	7	0. 9		Atm CN— CN	 Q 22 Q 43	 3,1 2,0	 12 12
8155.467	13	1. 6		Atm ⊙?			
8155.85	3	0. 4		Atm H_2O	P 3	112	26
8156.13 a	1. 5	0. 2					
8156.51	1	0. 1		Atm H_2O?	Q 9	211	26
8156.854	8	1. 0		Atm H_2O	P 3	112	26
8157.57	1. 5	0. 2		CN	R 31	3,1	12
8158.019	205	25. 2		Atm H_2O	R 4	211	26
8158.84	2. 5	0. 3		⊙— Atm H_2O	 Q 4	 211	 26
8159.15	9	1. 1	*s,N*	Mg I CN	5. 93 R 51	 2,0	 12
8159.38 a	1. 5	0. 2					
8159.60 a	1	0. 1					
8159.88 a	1	0. 1					
8160.16	2	0. 2		CN	R 30	3,1	12
8160.78	1. 5	0. 2		⊙			
8160.98	0. 5	0. 1	*S,N*	V I	1. 06	30	
8161.434	239	29. 3		Atm H_2O	R 5	211	26
8161.972	116	14. 2		Atm H_2O	R 5	211	26
8162.35	257	31. 5		Atm H_2O	R 3	211	26
8162.801	9	1. 1		Atm H_2O	Q 7	211	26
8163.02	8	1. 0	*s,N*	Atm Cr I	 4. 39	 298	
8163.776	7	0. 9		Atm			
8164.157	16	2. 0		Atm H_2O	{R 4 R 6	{131 131	}26
8164.54	350	42. 8		Atm H_2O	{R 3 R 3	{211 211	}26
8165.337S	52	6. 4		Atm H_2O	R 3	211	26
8165.79	3	0. 4		CN	R 52	2,0	12
8166.06	2	0. 2		CN	P 37	2,0	12
8166.450	|5|	0. 6		Atm H_2O	P 6	112	26
8166.75	|3|	0. 4		Cr I?	4. 41	299	
8166.88 a	2	0. 2		CN	R 31	3,1	12
8167.138	6	0. 7		Atm			
8167.660	6	0. 7		CN	Q 22	3,1	12
8168.107	8	1. 0		CN	Q 44	2,0	12
8168.820	163	20. 0		Atm H_2O	R 4	211	26
8169.386S	114	13. 9		Atm H_2O	R 3	211	26
8169.995	309	37. 8		Atm H_2O	{Q 6 R 4	{211 211	}26
8170.75 a	1	0. 1		CN	P 16	3,1	12
8171.239	23	2. 8	*w*	Si I	6. 10		
8171.647	6	0. 7		Atm H_2O	P 4	112	26
8172.00	2	0. 2		CN	R 52	2,0	12
8172.36	2. 5	0. 3		CN	R 33	3,1	12
8172.80 a	2	0. 2					
8173.008	12	1. 5		Atm H_2O	R 1	310	26
8173.36	3	0. 4		⊙			
8173.754	10	1. 2		Atm H_2O	Q 6	211	26
8174.12	7	0. 9		CN	Q 23	3,1	12
8174.678	31	3. 8		Atm H_2O	Q 5	211	26
8175.12	6	0. 7		CN	Q 44	2,0	12
8175.72	2	0. 2		Atm?			
8176.20 a	4	0. 5					
8176.32	4	0. 5					
8176.975	350	42. 8		Atm H_2O	R 3	211	26
8177.40 a	9	1. 2					
8177.60 a	3. 5	0. 4		CN	{P 17 P 19	{3,1 3,1	}12
8177.932S	190	23. 3		Atm H_2O	R 2	211	26
8178.491S	104	12. 7		Atm H_2O	R 2	211	26
8179.056	190	23. 3		Atm H_2O (Fe I)	R 3 4. 31	211 1136	26
8179.48	$\widehat{5}$	0. 6		Si I p	5. 86	33	
8179.913	16	2. 0		Atm H_2O	Q 4	211	26
8180.23	4	0. 5		CN	R 34	3,1	12
8180.878	6	0. 7		CN	Q 24	3,1	12
8181.273	6	0. 7		CN	Q 45	2,0	12
8181.848S	219	26. 8		Atm H_2O	R 2	211	26
8182.25	10	1. 2		Atm H_2O	Q 5	310	26
8182.48	8	1. 0		Atm ⊙			
8183.12	19	2. 3		Atm H_2O	Q 3	211	26
8183.25 a	180	22. 0	*S,N*	Na I	2. 10	4	
8184.207	8	1. 0		⊙ Atm H_2O	 Q 2	 211	 26
8184.50	5	0. 6		CN	Q 26	3,1	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
8184.78	8	1. 0		Atm CN	 P 18	 3,1	 12
8185.34	3	0. 4		CN	R 53	2,0	12
8185.67	3	0. 4		Cr I?	4. 41	299	
8186.371	193	23. 6		Atm H_2O	R 2	211	26
8186.791	|50|	6. 1	*s*	Fe I (V I)	4. 91 1. 05	1272 30	
8187.852	12	1. 5		‖Atm H_2O N I	Q 5 10. 32	211 2	26
8188.11	13	1. 6	*s,N*	CN— CN	Q 25 Q 45	3,1 2,0	12 12
8188.38 a	2	0. 2		CN	R 35	3,1	12
8189.272	359	43. 9		Atm H_2O	R 2	211	26
8190.83	4	0. 5		⊙			
8191.02	3. 5	0. 4		Atm H_2O	R 2	310	26
8192.069	3	0. 4		Atm H_2O	P 4	112	26
8192.24	4	0. 5		CN	P 19	3,1	12
8192.55	3	0. 4		CN	Q 27	3,1	12
8193.113	290	35. 4		Atm H_2O	R 1	211	26
8193.738	4	0. 5		Atm H_2O	Q 7	211	26
8194.233	1	0. 1		Atm			
8194.836S	304	*34. 3*	*S,N*	Na I (Na I)	2. 10 2. 10	4 4	
8195.452	4	0. 5		Si I? CN	5. 96 Q 26	 3,1	 12
8196.51	5	0. 6		Fe I	4. 59	1217	
8196.96	5	0. 6		CN CN	R 35 R 36	3,1 3,1	12 12
8197.704	320	39. 1		Atm H_2O	R 1	211	26
8198.278	8	1. 0		⊙			
8198.98	129	15. 8	*S*	‖Fe I Atm H_2O V I	4. 43 Q 4 1. 04	1154 211 30	 26
8199.49	0. 5	0. 1		Atm			
8199.989	69	8. 4		Atm H_2O	R 1	310	26
8200.694S	138	16. 9		Atm H_2O	R 1	211	26
8200.99	8	1. 0		CN	Q 28	3,1	12
8201.20	1. 5	0. 2		CN	P 39	2,0	12
8201.57	10	1. 2		Atm (CN)	 Q 46	 2,0	 12
8201.695	42	5. 1	*w*	Atm |Ca II	 7. 50	 13	
8202.14	2	0. 2					
8202.94	3	0. 4		V I?	3. 13		
8203.230	5	0. 6	*o*?	CN Si I?	Q 27	3,1	12
8203.48 a	1. 5	0. 2		CN	P 22	3,1	12
8204.09	4	0. 5	*S*	Fe I p	0. 91	12	
8204.827	21	2. 6	*s*	Atm H_2O	Q 6	211	26
8204.95	14	1. 7	*s*	Fe I	0. 96	12	
8205.31	3	0. 4		CN	R 36	3,1	12
8205.67	2	0. 2		CN	R 37	3,1	12
8206.785	4	0. 5		Atm			
8207.04	2	0. 2		CN	P 40	2,0	12
8207.749S	64	*8. 4*	*s*	Fe I	4. 44	1136	
8208.15	1. 5	0. 2		CN	P 21	3,1	12
8208.56	|5|	0. 6		CN— Co I	Q 47 4. 24	2,0 193	12
8209.559	38	4. 6		Atm H_2O	Q 3	211	26
8209.85	6	0. 7		Mg I	5. 75		
8210.321	22	2. 7		Atm H_2O	R 0	310	26
8210.96 a	1. 5	0. 2		N I?	10. 33	2	
8211.151	|3. 5|	0. 4		Atm H_2O	P 5	112	26
8211.32 a	2	0. 2		CN	Q 28	3,1	12
8211.57	1	0. 1		Si I	5. 61	19	
8212.132S	93	11. 3		Atm H_2O	R 0	211	26
8212.55	2. 5	0. 3	*S*?	Zr I	0. 65	40	
8213.041	157	*17. 3*	*w,N*	Mg I	5. 75	28	
8213.85	$\widehat{10}$	1. 2	*s,N*	Atm H_2O— Mg II?	Q 3 9. 99	310 7	26
8214.413	18	2. 2		Atm H_2O	Q 5	211	26
8214.71	6	0. 7	*o*?	CN	R 38	3,1	12
8215.155	35	4. 2	*w,N*	‖Si I CN— CN	6. 26 P 40 Q 47	 2,0 2,0	 12 12
8215.798	8	1. 0	*o*				
8216.303	7	0. 9	*o*	N I	10. 33	2	
8216.975	2	0. 2		Atm			
8218.114S	180	21. 9		Atm H_2O	Q 2	211	26
8218.51	6	0. 7		—CN	Q 30	3,1	12
8219.710	5	0. 6		CN	Q 29	3,1	12
8220.388	221	*25. 8*	*s*	Fe I	4. 32	1136	
8221.553S	112	13. 6		Atm H_2O	Q 4	211	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low EP or Rot. Line	RMT No. or Vib. Band	Notes
8222.24	1	0. 1		CN	P 24	3,1	12
8222.70	2	0. 2		CN	Q 48	2,0	12
8222.88	5	0. 6		Atm H_2O	Q 1	310	26
				CN	R 38	3,1	12
8223.10 a	1. 5	0. 2		N I	10. 33	2	
8223.990	133	16. 2		Atm H_2O	Q 1	211	26
8224.460	22	2. 7		Atm H_2O	Q 6	211	26
8224.82	1	0. 1		Pt I?	2. 72		
8225.124	3	0. 4		Atm?			
8225.688S	88	10. 7		Atm H_2O	Q 3	211	26
8226.962	347	42. 2		Atm H_2O	Q 2	211	26
8227.986	196	23. 8		Atm H_2O	Q 5	211	
				Atm H_2O	Q 3	211	
8228.32	463	56. 2		Atm H_2O	Q 3	211	26
				Atm H_2O	Q 4	211	
8228.761	218	26. 5		Atm H_2O	Q 2	211	
8228.86	20	2. 4		Atm H_2O	Q 6	211	26
8229.27	5	0. 6		CN	P 41	2,0	12
					Q 48	2,0	
8229.762S	175	21. 3		Atm H_2O	Q 4	211	26
8230.486	22	2. 7		Atm H_2O	Q 5	211	26
8230.63	12	1. 5		Si I	5. 62	19	
8231.289	328	39. 9		Atm H_2O	Q 1	211	26
8231.703	197	24. 0		Atm H_2O	Q 5	211	26
8232.319	91	*10. 8*	*s*	Fe I	4. 41	1136	
8233.906S	213	25. 9		Atm H_2O	Q 3	211	26
8234.628S	53	6. 4		Atm H_2O	Q 6	211	26
				(Mg II)	10. 00	7	
8235.34	2. 5	0. 3		Ca I?	4. 45		
8235.81	9	1. 1		Cr I	4. 40	298	
				Atm H_2O	Q 7	211	26
8236.121	29	3. 5		Atm H_2O	Q 7	211	26
8237.341S	90	10. 9		Atm H_2O	Q 5	211	26
8238.538	6	0. 7		Atm H_2O	Q 8	211	26
8239.132S	39	*4. 6*	*s*	Fe I	2. 42	108	
8239.924S	64	7. 8		Atm H_2O	Q 2	211	26
8240.379	3	0. 4		Atm H_2O	Q 8	211	26
8241.277	1	0. 1		Atm H_2O	Q 8	211	26
8241.60 m			*S,N*	V I	1. 05	30	13
8241.765	3. 5	0. 4	*s?*	CN	R 40	3,1	12
8242.14 a	1. 5	0. 2		CN	P 26	3,1	12
8242.365	18	2. 2		Atm H_2O	Q 7	211	26
8242.50 a	11	1. 3		N I	10. 33	2	
8243.130	33	4. 0		Atm H_2O	Q 4	211	26
8243.488	278	33. 8		Atm H_2O	P 1	211	26
8244.05	4	0. 5		Atm			
				CN	P 25	3,1	12
					R 41	3,1	
8246.629	9	1. 1		Atm H_2O	Q 6	211	26
8246.81	6	0. 7		CN	Q 32	3,1	12
8247.307	6	0. 7		CN	Q 33	3,1	12
8247.85	1	0. 1		Atm			
8248.137S	81	*9. 3*	*w*	Fe I	4. 37	1136	
8248.802S	98	*11. 3*	*W*	Ca II	7. 51	13	
8249.620	5	0. 6		Atm			
8250.38	|3|	0. 4		Atm			
				⊙			
8250.99	5	0. 6		CN	P 43	2,0	12
8251.636	5	0. 6		CN	R 41	3,1	12
8252.02	8	1. 0		CN	Q 50	2,0	12
8252.727S	104	12. 6		Atm H_2O	Q 3	211	26
8253.60 m			*S,N*	V I	1. 08	30	13
8253.81	4	0. 5		CN	P 26	3,1	12
				Fe I? p	4. 58	1216	
8254.32	2	0. 2		CN	R 42	3,1	12
				Fe I p	3. 05	508	
8254.681	24	2. 9	*W*	Ca II	7. 51	13	
8255.57	4	0. 5		⊙?			
8256.00	0. 5	0. 1	*S,N*	V I	1. 06	30	
8256.515	294	35. 6		Atm H_2O	P 2	211	26
8257.283	8	1. 0		⊙			
8257.51	8	1. 0		CN	Q 34	3,1	12
8257.860	14	1. 7		Atm H_2O	P 2	310	26
8258.40	4	0. 5		CN	Q 50	2,0	12
8258.72	2	0. 2		CN	P 43	2,0	12
8259.692S	|130|	15. 8		Atm H_2O	P 2	211	26
8260.355	11	1. 3		Atm H_2O	Q 7	211	26
8260.79	3	0. 4		Atm?			
8261.00	1. 5	0. 2		Atm			
8261.849	6	0. 7		Atm			
8262.733	4	0. 5		Atm			
8263.445S	107	12. 9		Atm H_2O	P 2	211	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8263.850	32	3. 9	*u*	Fe I	4. 95	1272	
8264.276	26	3. 1	*o*?	Fe I	5. 10	1332	
8264.642	6	0. 7		Atm H_2O	Q 2	310	26
8264.969	9	1. 1		Atm H_2O	Q 3	310	26
8265.69	1. 5	0. 2		⊙?			
8266.433	11	1. 3	*s*	CN— CN	P 44 Q 34	2,0 3,1	12 12
8267.118	6	0. 7	*u*	CN	Q 51	2,0	12
8268.073	12	1. 4		CN	Q 35	3,1	12
8268.47	3	0. 4		Atm ⊙			
8268.83	4	0. 5		Atm ⊙			
8269.186	19	2. 3		Atm H_2O ⊙	Q 4	211	26
8269.32 a	5	0. 6		Co I	5. 15		
8269.644	16	1. 9	*w*	Fe I	4. 59	1218	
8270.16	1	0. 1		⊙			
8272.042S	124	15. 0		Atm H_2O	P 3	211	26
8272.47	8	1. 0		CN	R 43	3,1	12
8273.076	15	1. 8		Atm H_2O	Q′ 2	211	26
8273.475	10	1. 2	*s*	CN	Q 51	2,0	12
8274.354	296	35. 8		Atm H_2O (Fe I)	P 3 5. 07	211 1332	26
8275.553	4	0. 5		Atm H_2O	Q 6	211	26
8275.899	36	4. 3	*w*	Fe I	4. 95	1270	
8276.54	76	9. 2		Atm H_2O	P 3	211	26
8276.69	118	14. 3		Atm H_2O	P 3	310	26
8278.19	2	0. 2		⊙			
8278.710	19	2. 3	*u*	Atm H_2O CN	Q′ 3 Q 36	211 3,1	26 12
8279.600S	203	24. 5		Atm H_2O	P 3	211	26
8282.024	311	37. 6		Atm H_2O	P 3	211	26
8282.67	4	0. 5		CN	Q 52	2,0	12
8283.06	2	0. 2		Atm?			
8283.42	2.5	0. 3		Atm?— CN	R 44	3,1	12
8284.53	6	0. 7		⊙ Atm			
8285.17	14	1. 7		CN Atm	P 29	3,1	12
8285.40 a	2	0. 2					
8285.71	4	0. 5		CN	P 30	3,1	12
8286.17	3	0. 4		Atm			
8287.233	18	2. 2		Atm			
8287.50	6	0. 7		Atm H_2O CN	Q 3 Q 36 R 45	310 3,1 3,1	26 12
8287.940	290	35. 0		Atm H_2O	P 4	211	26
8288.221	23	2. 8		Atm H_2O	Q 5	211	26
8288.63	1. 5	0. 2					
8288.955	9	1. 1	*s*	CN	Q 52	2,0	12
8289.535	140	16. 9		Atm H_2O	P 4	211	26
8290.01	9	1. 1		CN	Q 37	3,1	12
8290.45	2. 5	0. 3					
8290.98	1. 5	0. 2		⊙			
8291.229	6	0. 7		Atm H_2O	R 4	131	26
8292.07	2	0. 2		CN	Q 8	4,2	12
8292.806	15	1. 8	*w*	⊙ Atm H_2O	Q 4	310	26
8293.52	52	*6. 5*	*s*	Fe I	3. 30	623	
8294.160	193	23. 3		Atm H_2O	P 4	211	26
8294.541	106	12. 8		Atm H_2O	P 4	211	26
8295.299	39	4. 7		Atm H_2O	P 4	211	26
8295.668	11	1. 3		Atm H_2O	Q 7	211	26
8296.028	15	1. 8		Atm H_2O	Q 4	310	26
8296.562	5	0. 6		Atm ⊙			
8297.37	1. 5	0. 2		CN	P 31	3,1	12
8297.65	4	0. 5		Cr I?— Si I?	4. 41 6. 12	297	
8298.066	7	0. 8		Atm H_2O	Q 5	310	26
8298.454	12	1. 4		CN— CN	Q 37 Q 53	3,1 2,0	12 12
8298.973	7	0. 8		Atm H_2O— CN	P 4 R 46	310 3,1	26 12
8299.45	1	0. 1		⊙ Atm			
8299.985	12	1. 4		Fe I	5. 07	1331	
8300.408S	170	20. 5		Atm H_2O	P 4 P 4	211 211	26
8301.49	5	0. 6	*o*	CN	Q 38	3,1	12
8302.681	1. 5	0. 2		⊙			
8303.17	3	0. 4		Fe I p Cr I?	2. 73 2. 71	265 57	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8303.39	10	1. 2		Mg I	5. 93		
8303.65 a	1. 5	0. 2		CN?	R 16	4,2	12
8304.300S	89	10. 7		Atm H_2O	P 5	211	26
8305.092	213	25. 7		Atm H_2O	P 5	211	26
8305.617	31	3. 7	*o*	Mg I	5. 93		
8306.20	4	0. 5	*s*	Zr I?— CN Ti I?	0. 62 R 46 3. 44	40 3,1	12
8306.699	6	0. 7		Atm (Si I)	5. 61	19	
8307.12	1	0. 1		Atm?			
8307.54 m			*s*	Ti I	0. 83	33	13
8307.603	15	1. 8		Atm H_2O Fe I p	P 5 0. 99	310 12	26
8308.670	3	0. 4		Atm H_2O	Q 6	211	26
8309.39	2. 5	0. 3		CN	P 32	3,1	12
8309.71	8	1. 0		CN	Q 38	3,1	12
8310.115	30	3. 6	*w,d*	Atm H_2O	P 5	310	26
8310.252	60	7. 2		Mg I	5. 93		
8310.829	$\widehat{19}$	2. 3		Atm H_2O	Q′ 6	211	26
8311.28	11	1. 3					
8311.767	29	3. 5	*w*	Atm H_2O ⊙	P 5	211	26
8311.956S	97	11. 7		Atm H_2O	P 5 P 5	211 211	26
8312.44	$\widehat{7}$	0. 8					
8312.874	4	0. 5		Atm H_2O	P 3	310	26
8313.301	5	0. 6		CN	Q 39	3,1	12
8313.873	30	3. 6		Atm H_2O	P 5	211	26
8314.45	2	0. 2	*o*?	CN	P 47	2,0	12
8314.77	5	0. 6		CN	Q 54	2,0	12
8315.67	9	1. 1		Atm			
8315.927	13	1. 6		Atm H_2O	Q′ 6	211	26
8316.224S	83	10. 0		Atm H_2O	P 5	211	26
8317.02	0. 5	0. 1					
8317.394	4	0. 5		Si I	5. 61	19	
8318.139	172	20. 7		Atm H_2O	P 5	211	26
8319.36	3	0. 4		CN	P 32	3,1	12
8319.90 a	1. 5	0. 2					
8320.183	7	0. 8		⊙			
8320.443	8	1. 0		CN	R 62	2,0	12
8320.90 a	4	0. 5		CN	Q 54	2,0	12
8321.242	168	20. 2		Atm H_2O	P 6	211	26
8321.587	190	22. 8		Atm H_2O	P 5 P 6	211 211	26
8322.527	5	0. 6					
8322.924	4	0. 5		⊙?			
8323.42	$\widehat{3}$	0. 4		CN	R 48	3,1	12
8324.142	8	1. 0		⊙			
8324.608	10	1. 2		Atm ⊙			
8324.99	3	0. 4		Ca I	4. 53		
8325.450	5	0. 6		CN	Q 40	3,1	12
8325.737	2	0. 2		Atm H_2O	P 4	310	26
8326.03 a	1. 5	0. 2					
8326.316	13	1. 6		Atm H_2O	P′ 3	211	26
8326.68	2	0. 2		Atm			
8327.061S	193	*24. 0*	*s*	Fe I	2. 20	60	
8328.474	12	1. 4		Atm H_2O	P 6	211	26
8328.950	17	2. 1	*o*?	⊙			
8329.254	12	1. 4		Atm H_2O	Q 7	211	26
8329.682S	125	1. 5		Atm H_2O	P 6	211	26
8330.26	5	0. 6		CN	R 48	3,1	12
8330.489	12	1. 4		Atm H_2O	R 4	131	26
8331.20	4	0. 5		CN Atm H_2O	P 48 P 6	2,0 310	12 26
8331.432	12	1. 4	*u*?	CN	Q 55 P 33	2,0 3,1	12
8331.926	130	*16. 1*	*s*	Fe I	4. 39	1153	
8332.145	35	4. 2		Atm H_2O	P 6	211	26
8332.55 a	10	1. 2					
8332.726	11	1. 3		Atm H_2O	P 6	211	26
8332.88	8	1. 0	*w,N*	⊙ Atm			
8333.584S	|58|	7. 0		Atm H_2O	P 6	211	26
8333.891	9	1. 1		Atm			
8334.20 a	6	0. 7					
8334.33 m	11	1. 3	*S*	Ti I	0. 82	33	
8334.50 a	22	2. 6		Atm H_2O	R 5	131	26
8335.150	114	13. 7	*o*	C I	7. 68	10	
8335.508	40	4. 8		Atm H_2O	P 6	211	26

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8335.80 a	3	0. 4					
8336.108	9	1. 1		Atm H_2O	P 7	310	26
8336.236	18	2. 2	*w*	⊙			
8336.98	0. 5	0. 1		⊙?			
8337.34	7	0. 8		CN— CN	Q 18 Q 55	4,2 2,0	12 12
8337.916	7	0. 8		CN Ca I?	{Q 41 {Q 15 4. 53	3,1 4,2	}12
8338.343	19	2. 3		CN Si I	P 48 5. 86	2,0 33	12
8338.666	28	3. 4		Atm H_2O	P 6	211	26
8338.902	28	3. 4		Atm H_2O	P 7	211	26
8339.034	111	13. 3		Atm H_2O	P 7	211	26
8339.413	109	13. 1	*w*	Fe I	4. 43	1153	
8340.500	8	1. 0	*w*?	Ni I p	3. 80	139	
8341.443	7	0. 8		Atm H_2O	P 3	211	26
8341.874	11	1. 3		Atm H_2O	P 3	211	26
8342.290S	50	6. 0		Atm H_2O (Fe I p)	P 6 2. 95	211 401	26
8342.866	19	2. 3	*w*	Fe I	4. 99	1270	
8343.33	1. 5	0. 2		CN	Q 19	4,2	12
8343.716	7	0. 8	*o*	⊙			
8343.932	7	0. 8		Atm H_2O	P 7	131	26
8344.765	2	0. 2		Atm			
8345.19	|4|	0. 5		Fe I p	2. 69	265	
8345.73	1	0. 1		CN	Q 41	3,1	12
8346.131	146	*16. 1*	*w*?,*N*	Mg I	5. 94	40	
8346.39	1. 5	0. 2		Atm			
8347.326	13	1. 6	*s*	CN Atm H_2O	Q 17 P 7	4,2 310	12 26
8347.829	4	0. 5	*w*	⊙ Atm H_2O	P 7	310	26
8348.304	12	1. 4	*S*	Cr I	2. 71	56	
8349.02 m			*S*	Fe I p	0. 91	12	13
8349.162S	57	6. 8		Atm H_2O	P 7	211	26
8349.383	29	3. 5		Atm H_2O	{P 7 {P 7	211 211	}26
8349.77	2	0. 2		CN	Q 20	4,2	12
8349.964	3	0. 3		Atm H_2O	R 4	131	26
8350.733	4	0. 5	*w*	CN	Q 42	3,1	12
8352.18	1. 5	0. 2		Atm			
8352.43	3	0. 4		CN Ca I	Q 18 4. 53	4,2	12
8352.806	9	1. 1		Atm			
8353.123	9	1. 1	*S*	Ti I	0. 81	33	
8353.55	12	1. 4		Atm H_2O	P 7	211	26
8353.642	36	4. 3		Atm H_2O	P 7	310	26
8354.36	6	0. 7		CN	Q 56	2,0	12
8354.723	18	2. 2		Atm H_2O	P 7	211	26
8355.15	1. 5	0. 2		Fe I p	4. 10	1050	
8355.36	1. 5	0. 2		CN	P 49	2,0	12
8356.02	4	0. 5		CN Fe I p	R 28 4. 29	4,2 1117	12
8356.37	4. 5	0. 5		CN	Q 21	4,2	12
8356.70 a	3	0. 4		CN	P 35	3,1	12
8357.040S	72	8. 6		Atm H_2O	P 8	211	26
8357.441	29	3. 5		Atm H_2O	P 8	211	26
8357.873	$\widehat{17}$	2. 0	*o*?	—CN	Q 19	4,2	12
8358.504	21	2. 5	*u*,*N*	Fe I	2. 99	401	
8359.542	15	1. 8		Atm H_2O	R 4	131	26
8360.795	50	*6. 1*	*u*	Fe I	4. 47	1153	
8362.000	35	4. 2		Atm H_2O	P 7	211	26
8362.302S	45	5. 4		Atm H_2O	P 7	211	26
8362.56	5	0. 6		CN—	{R 51 {R 29	3,1 4,2	}12
8363.254	2	0. 2		CN	Q 22	4,2	12
8363.58 m			*S*	Ti I p	2. 09	182	13
8363.837	7	0. 8		CN CN	Q 43 Q 20	3,1 4,2	12 12
8364.243	16	1. 9	*S*	Ti I	0. 84	33	
8364.948	1. 5	0. 2		⊙?			
8365.640	51	*6. 7*	*u*	Fe I	3. 25	623	
8366.022	3	0. 4		Atm			
8366.542	10	1. 2		Atm H_2O	P 8	211	26
8367.022	3	0. 4		Atm H_2O	P 8	131	26
8367.331S	51	6. 1		Atm H_2O	P 8	211	26
8369.06	0. 5	0. 1		Atm H_2O	R 4	131	26
8369.25	2	0. 2		CN— CN	R 51 R 30	3,1 4,2	12 12
8369.77	5	0. 6	*u*?,*N*	Atm H_2O	R 7	131	26
8369.858	5	0. 6	*u*?,*N*	CN Fe I p	P 36 4. 91	3,1 1271	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8370.472	5	0. 6		Atm H_2O	P 8	230	26
8370.802	1. 5	0. 2		Atm H_2O	P 8	211	26
8371.457	5	0. 6		CN—	Q 43	3,1	12
				CN	Q 57	2,0	12
8372.177	8	1. 0		Atm H_2O	P 9	131	26
8372.55 a	2	0. 2					
8372.777	11	1. 3		CN	P 50	2,0	12
				Co I	4. 07	193	
8373.236	4	0. 5		Atm			
8373.711	43	5. 1		Atm H_2O	P 8	211	26
8373.95 a	8	1. 0		Ca I	4. 44		
8374.27 a	4	0. 5		CN	P 37	3,1	12
8374.546	10	1. 2		Atm H_2O	Q 4	131	26
8374.80 a	1	0. 1					
8375.35 a	1. 5	0. 2					
8375.713	5	0. 6		Atm H_2O	R 6	131	26
8376.187	12	1. 4		Atm H_2O	Q 5	131	26
8376.381S	38	4. 5		Atm H_2O	P 9	211	26
8376.594	9	1. 1		Atm H_2O	Q 6	131	26
8376.90	4	0. 5		⊙			
8377.160	16	1. 9		Atm H_2O	P 9	211	26
8377.39	4	0. 5	*o*	CN—	Q 44	3,1	12
8377.870	25	*3. 2*	*S*	Ti I	0. 83	33	
8378.25	8	1. 0		⊙			
				Atm H_2O	P 8	211	26
8379.37	1. 5	0. 2		Co I	4. 21	193	
8381.440	8	1. 0		Atm H_2O	P 8	211	26
8382.217	8	1. 0		Fe I p	0. 99	12	
8382.541	29	3. 5	*S*	Ti I	0. 82	33	
8382.781	23	2. 8	*S*	Ti I	0. 81	33	
8383.302	7	0. 8		CN	Q 58	2,0	12
					P 37	3,1	
					Q 23	4,2	
8383.58	0. 5	0. 1		CN	P 51	2,0	12
8383.861	7	0. 8		Atm H_2O	P 5	310	26
8384.170	17	2. 0		Atm H_2O	R 3	131	26
8384.40 a	1. 5	0. 2					
8384.831	|7|	0. 8		Atm H_2O	R 5	131	26
				CN	Q 44	3,1	12
8385.03 a	1. 5	0. 2					
8385.48	13	1. 6	*u*	Atm H_2O	R 5	131	26
				⊙?			
8385.63	5	0. 6		Atm			
8385.95 a	2	0. 2		CN	Q 25	4,2	12
8386.182	4	0. 5		Atm H_2O	P 9	211	26
8386.35 m			*s*	Ti I p	2. 10	182	13
8386.53	3	0. 4		CN	P 19	4,2	12
8386.933	9	1. 1		Atm H_2O	P 9	211	26
8387.782	170	*20. 8*	*s*	Fe I	2. 18	60	
8388.328	10	1. 2		CN	P 38	3,1	12
8389.19	4	0. 5		CN	Q 58	2,0	12
8389.521	6	0. 7	*S*	‖Ti I	2. 09	182	
				Zr I	0. 60	40	
8390.459	7	0. 8		CN	P 51	2,0	12
					Q 24	4,2	
8391.185	4. 5	0. 5		CN	Q 45	3,1	12
8393.72 a	2	0. 2		Atm H_2O	P 9	211	26
8394.020S	18	2. 2		Atm H_2O	R 4	131	26
8394.518	4	0. 5		Atm H_2O	P 5	211	26
8394.882	|4|	0. 4		Atm H_2O	R 4	131	26
8395.134	12	1. 4		Fe I?			
8396.900	23	2. 8	*S*	Ti I	0. 81	33	
8397.152S	15	1. 8		Atm H_2O	P 10	211	26
8397.635	4	0. 5		Atm H_2O	P 10	211	26
8397.99	2. 5	0. 3		CN	Q 25	4,2	12
				Si I? p	5. 61	18	
8398.481	4	0. 5		CN	Q 45	3,1	12
8399.12	4	0. 5					
8399.947	9	1. 1		|Atm H_2O	P 9	211	26
				Fe I?			
8400.640	8	1. 0		Atm H_2O	R 2	131	26
8401.15 a	2	0. 2					
8401.401	25	*3. 0*	*s*	Fe I	2. 48	108	
8401.695	9	1. 1		Fe I p	4. 44	1136	
8402.629	5	0. 6	*s*	Ti I	2. 25	224	
				|CN	P 39	3,1	12
					Q 27	4,2	
8403.001	2. 5	0. 3		Atm H_2O	P 9	211	26
8404.182	6	0. 7		Atm H_2O	R 3	131	26
8404.382	11	1. 3	*u,N*	⊙			
8404.73	1. 5	0. 2		CN	R 54	3,1	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8405.374	|22|	2. 6		Atm H_2O	R 3	131	26
8405.665	11	1. 3		Atm H_2O	P 10	211	26
8407.257	6	0. 7		CN	Q 59	2,0	12
8408.229	10	1. 2		Atm H_2O	P 9	211	26
8408.550	10	1. 2		Atm H_2O	Q 3	131	26
8408.755	26	3. 1		Atm H_2O	Q 3	131	26
8409.585	12	1. 4		Atm H_2O	Q 4	131	26
8409.88 a	2	0. 2		Mn I?	5. 13		
8410.12 a	3	0. 4		CN?	P 20	4,2	12
8410.43	1	0. 1		⊙			
8411.127	4	0. 5		Atm H_2O	Q 4	131	26
8411.36	5	0. 6		CN— CN	P 39 Q 28	3,1 4,2	12 12
8411.62	3	0. 4	*s,NN*	⊙			
8412.356	44	*5. 0*	*S*	Ti I	0. 82	33	
8413.33	4	0. 5		Atm?			
8414.084	$\widehat{12}$	1. 4	*u,d*	Zr I Fe I p— Atm H_2O	0. 69 4. 47 P 10	40 1154 211	 26
8414.59	1	0. 1		Atm?			
8415.450	37	4. 4		Atm H_2O	R 2	131	26
8416.82 a	4	0. 4		CN	R 36	4,2	12
8416.934	5	0. 6	*S*	Ti I	2. 24	224	
8417.222	15	1. 8	*w*	|Ni I Atm H_2O	3. 83 R 2	156 131	 26
8417.51 m			*S,N*	Ti I	2. 12	182	13
8417.96	1	0. 1		Si I	5. 62	18	
8418.408	9	1. 1		Atm H_2O	R 1	131	26
8418.639	9	1. 1		Atm H_2O	P 11	211	26
8419.292	18	2. 1	*w,N*	⊙			
8419.59	1. 5	0. 2		CN	R 55	3,1	12
8419.872	7	0. 8		CN	Q 47	3,1	12
8420.496	6	0. 7	*u,d*	CN	Q 29	4,2	12
8421.443	10	1. 2	*w,d*?	⊙			
8422.06	1	0. 1		⊙?			
8422.412	2	0. 2		CN	Q 28	4,2	12
8422.923	21	*2. 5*	*u*	Fe I	4. 14	999	
8423.14	13	1. 5	*S*?	Ti I Ca I?	1. 88 4. 45	150	
8424.139	32	*3. 7*	*o*	Fe I	4. 95	1272	
8424.44	3	0. 4	*S*	Ti I	2. 10	182	
8425.62	2	0. 2		CN	Q 60	2,0	12
8425.889	5	0. 6		Fe I p	1. 01	12	
8426.126	6	0. 7		CN	R 37	4,2	12
8426.514S	43	*5. 1*	*S*	Ti I	0. 83	33	
8426.997	10	1. 2		CN—	Q 47	3,1	12
8427.769	2	0. 2		Atm H_2O	R 1	131	26
8428.107	1	0. 1		Atm H_2O	P 11	211	26
8429.595	4	0. 4		Atm H_2O	Q 4	131	26
8429.967	3	0. 4		CN	Q 30	4,2	12
8430.798	18	2. 1		Atm H_2O	R 1	131	26
8431.236	6	0. 7		CN	Q 29	4,2	12
8432.389	3	0. 4		CN	P 41	3,1	12
8433.23	2	0. 2		CN	P 24	4,2	12
8434.509	15	1. 8	*w*	Fe I	5. 01	1270	
8434.968S	57	*6. 8*	*S*	Ti I	0. 85	33	
8435.28	4	0. 4		Si I	4. 93	8	
8435.655	52	*6. 3*	*S*	Ti I	0. 84	33	
8436.376	18	2. 1		Atm H_2O	Q 2	131	26
8437.232	4	0. 4		⊙?			
8437.462	5	0. 6	*u,N*	⊙?			
8437.96				H I	12. 08	10	31
8438.054	5	0. 6		Atm H_2O	Q 2	131	26
8438.64	3. 5	0. 4		CN	Q 61	2,0	12
8438.920	11	1. 3	*S*	Ti I	2. 25	224	
8439.581S	79	*9. 1*	*u*	Fe I	4. 55	1172	
8440.02	2	0. 2					
8440.40	2	0. 2		CN	Q 30	4,2	12
8440.751	|7|	0. 8		|Atm H_2O CN	P 12 P 41	211 3,1	26 12
8441.480	4	0. 4		⊙			
8441.765	4	0. 4		CN	Q 48	3,1	12
8442.476	11	1. 3		Atm H_2O	Q 3	131	26
8443.00 m			*s*	Ti I	2. 25	210	13
8443.975	32	3. 8	*o*	Si I	5. 87	46	
8444.377	3	0. 4		Si I	5. 87	46	
8444.783	3	0. 4		Atm H_2O	Q 2	131	26
8445.278	1. 5	0. 2		CN	R 39	4,2	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8445.729	4	0. 4		⊙?			
8446.359	|74|	*8. 4*	*W*	O I	9. 52	4	
				O I	9. 52	4	
				(Fe I)	4. 99	1272	
8446.741	50	*5. 0*	*o*	O I	9. 52	4	
				(Fe I p)	4. 91	1267	
8447.34	1	0. 1		Fe I p	4. 91	1266	
8447.678	4	0. 4	*s*	Fe I p—	0. 96	12	
				CN	P 42	3,1	12
8448.60	1	0. 1		Atm H_2O	P 12	211	26
8450.022	$\widehat{11}$	1. 3	*u,N*	CN	Q 49	3,1	12
8450.247	4	0. 4	*s*	Cr I	2. 71	56	
8450.880	8	0. 9	*S*	Ti I	2. 25	224	
8452.086	5	0. 6		S I	8. 04	14	
				Atm H_2O	Q 1	131	26
8453.661	7	0. 8	*w,N*	⊙			
8455.295	4	0. 4	*S*	Cr I	2. 71	56	
8456.01	|1.5|	0. 2		CN	P 42	3,1	12
8456.945	5	0. 6		Atm			
				CN	Q 49	3,1	12
8457.15	2.5	0. 3	*S*	Ti I	1. 75	141	
8457.88	2.5	0. 3					
8458.70	1	0. 1		CN	P 55	2,0	12
8458.99	4	0. 4		Fe I p	4. 99	1270	
8459.734	3.5	0. 4		CN	Q 32	4,2	12
8460.245	24	2. 8		Atm H_2O	Q 1	131	26
8461.472	3	0. 4		Fe I p—	3. 60	814	
				Si I	5. 96		
8462.39	4	0. 4		⊙?			
8462.90	1	0. 1		Atm H_2O	Q 5	131	26
8463.539	4	0. 4		CN	P 43	3,1	12
8464.03	1.5	0. 2		Fe I p	5. 07	1330	
8464.69 m			*s*	Zr I	0. 65	40	13
8465.173	7	0. 8		Fe I p	5. 01	1270	
8465.634	|4|	0. 4		CN	Q 50	3,1	12
8466.102	5	0. 6		Fe I p	4. 99	1269	
8466.510	8	0. 9		Mg I—	5. 93		
				Fe I p	4. 14	999	
8467.158	4	0. 4	*S*	Ti I	2. 12	182	
8467.26				H I	12. 08	10	31
8467.734	3?	0. 4?		⊙?			
8468.418S	128	*15. 1*	*S*	Fe I	2. 22	60	
				(Ti I)	1. 89	150	
8468.839	10	1. 2		Mg I	5. 93		
8469.20	7	0. 8		Atm H_2O	Q 2	131	26
8469.892	3	0. 4		CN	Q 33	4,2	12
8470.377	6	0. 7		⊙?			
8470.949	4	0. 4		CN	Q 34	4,2	12
8471.28	0. 5	0. 1		Atm?			
8471.744S	44	*5. 2*	*w*	Fe I	4. 95	1270	
8472.399	8	0. 9		CN	Q 50	3,1	12
8473.663	11	1. 3	*o*	Mg I	5. 93		
8474.12 a	1	0. 1					
8474.362	4	0. 4		Atm			
8476.35	1	0. 1		CN	P 28	4,2	12
8476.69	1	0. 1		CN	R 42	4,2	12
8477.127	5	0. 6		⊙			
8477.54	1. 5	0. 2		CN	Q 63	2,0	12
8477.999	6	0. 7	*o?*	⊙			
				Atm H_2O	P 4	131	26
8478.456	3	0. 4		CN	P 56	2,0	12
8478.890	3. 5	0. 4		Atm H_2O	P 4	131	26
8479.67	2	0. 2		CN	P 44	3,1	12
8479.864	13	1. 5	*w,N*	CN	R 43	4,2	12
				Atm H_2O	P 1	131	26
8480.18 a	2	0. 2					
8480.42 a	2. 5	0. 3		CN	Q 34	4,2	12
8480.636	16	1. 9	*w*	Fe I p	4. 99	1272	
8481.22	0. 5	0. 1					
8481.60	2. 5	0. 3		CN	Q 51	3,1	12
8481.986	22	2. 6	*u*	Fe I	4. 19	999	
8482.412	3	0. 4		Atm H_2O	Q 3	131	26
8482.876	4	0. 4		Atm			
				⊙			
8483.16	4. 5	0. 5	*s,N*	CN	Q 63	2,0	12
				|Ti I	1. 87	150	
8483.447	10	1. 2		⊙			
8486.914	13	1. 5		Atm H_2O	P 2	131	26
8487.62	1. 5	0. 2		CN	P 44	3,1	12
8487.92	7	0. 8		CN	P 28	4,2	12
					P 29	4,2	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8488.306	8	0. 9		Atm H_2O	P 3	131	26
8491.291	3	0. 4		CN	Q 35	4,2	12
8491.735	13	1. 5		Atm H_2O	P 3	131	26
8492.082	10	1. 2		Si I	5. 86		
8493.39	2. 5	0. 3		CN	Q 36	4,2	12
8493.796	11	1. 3	*w*	Fe I p Atm H_2O	4. 95 P 2	1269 131	 26
8494.44 m			*S*	Ti I	1. 74	141	13
8495.73	2	0. 2					
8496.075	3	0. 4	*S*	|Ti I— CN	{2. 25 3. 70? P 45	209 313 3,1	 12
8496.483	5	0. 7		Atm H_2O Fe I p	P 2 4. 41	131 1136	26
8496.994	34	*5. 3*	*u*	Fe I	4. 61	1172	
8498.062	1470	*147*	*S*	Ca II	1. 69	2	
8499.326	7	1. 1	*o*	CN—	{P 29 R 44	4,2 4,2	}12
8499.883	6	0. 7		Atm H_2O	P 5	131	26
8500.330	1. 5	0. 2		⊙			
8501.553	34	*4. 0*	*w*	Si I	5. 87	47	
8501.803	17	2. 1	*o*?	Ni I	3. 85	186	
8502.228	50	*6. 6*	*W*	Si I	5. 87	46	
8502.49				(H I)	12. 08	10	31
8502.50 a	5	0. 6		CN	Q 36	4,2	12
8502.76	4	0. 4		⊙			
8503.145	12	1. 4		Atm H_2O	P 3	131	26
8503.54	3	0. 4					
8503.966	4	0. 4		CN	P 45	3,1	12
8504.536	5	0. 6		CN	Q 52	3,1	12
8505.112	6	0. 7		CN	Q 37	4,2	12
8505.852	|12|	1. 4		Atm H_2O	P 4	131	26
8509.65	4	0. 4		Fe I p	4. 37	1136	
8510.253	8	0. 9		Si I	6. 18		
8510.92	1. 5	0. 2		CN	P 30	4,2	12
8511.912	28	3. 3		Atm H_2O	P 3	131	26
8512.294	22	2. 6		Atm H_2O	P 3	131	26
8512.97	3	0. 4		CN Fe I p	P 46 3. 02?	3,1 462	12
8513.26	3	0. 4		Atm H_2O—	P 4	131	26
8513.45	2	0. 2		⊙?			
8514.082S	108	*12. 9*	*s*	Fe I	2. 20	60	
8514.63	4	0. 4		CN Si I? p	Q 53 5. 61	3,1 18	12
8515.122S	79	*8. 9*	*u*	Fe I	3. 02	401	
8515.63	1. 5	0. 2					
8516.007	6	0. 7		Atm H_2O—	P 6	131	26
8516.75	0. 5	0. 1					
8517.295	|11|	1. 3		CN—	Q 38	4,2	12
8518.011	6	0. 7	*S*	Ti I	2. 13	182	
8518.397	21	2. 5	*s*	Ti I	1. 88	150	
8519.10	3	0. 4		Fe I p	4. 95	1267	
8519.640	19	2. 2		Atm H_2O	P 4	131	26
8520.73	1. 5	0. 2		CN	P 46	3,1	12
8521.219	|4.5|	0. 5	*s,N*	CN—	Q 53	3,1	12
8522.01	2	0. 2		CN	R 61	3,1	12
8522.99	$\widehat{6}$	0. 7	*s,NN*	CN—	P 31	4,2	12
8523.46	2	0. 2		CN	{Q 65 R 46	2,0 4,2	}12
8524.72	3	0. 4		CN	P 32	4,2	12
8525.008	13	1. 5	*w*	Zr II—	2. 41		
8525.50	3	0. 4		⊙?			
8525.72	4. 5	0. 5	*s*	Ca I	4. 43		
8525.97 a	3	0. 4		CN	Q 38	4,2	12
8526.32	7	0. 8		Atm H_2O	P 4	131	26
8526.676S	58	*7. 3*	*w*	Fe I	4. 91	1270	
8526.994	10	1. 2		Atm			
8527.847	11	1. 3		Fe I p	5. 02	1270	
8529.68	3	0. 4		CN	Q 39	4,2	12
8529.90	4	0. 4		⊙ Atm H_2O	 P 4	 131	 26
8530.17	3	0. 4		CN	P 47	3,1	12
8531.51	4	0. 4	*s,d*	Ti I— Atm	1. 73	141	
8531.71	4	0. 4	*s*?	CN	Q 54	3,1	12
8533.34	1	0. 1		CN	R 62	3,1	12
8534.781	6	0. 7		Atm H_2O	P 5	131	26
8535.50	2	0. 2		⊙?			
8536.163	58	*6. 6*	*W*	Si I	6. 18	80	
8536.45 a	3	0. 4					
8536.68	3	0. 4		Atm			

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8538.021	|31|	*3. 7*	*w*	Fe I	4. 91	1266	
8538.25 a	2	0. 2		CN	Q 39	4,2	12
8538.77	0. 5	0. 1	*s*	CN?—	Q 66	2,0	12
8539.33	1	0. 1	*S*	CN—	R 62	3,1	12
				Ti I	2. 24	209	
8539.888	3. 5	0. 6		Atm H_2O	P 6	131	26
8540.817	8	0. 9		Atm H_2O	P 5	131	26
8542.144	3670	*398*	*S*	Ca II	1. 70	2	
8545.38				(H I)	12. 08	10	31
8546.222	5	0. 6		Atm H_2O	P 5	131	26
8547.19	1. 5	0. 2		Atm			
8547.74	3. 5	0. 5		CN	P 48	3,1	12
8548.079	8	0. 9	*S*	Ti I	1. 87	150	
8548.863	4. 5	0. 5	*s,N*	CN	R 48	4,2	12
				Cr I	2. 71	56	
8549.188	3	0. 4		CN	Q 55	3,1	12
8549.74	1. 5	0. 2		⊙			
8550.366	9	1. 1	*w*	Si I p	6. 22	88	
8550.52m			*s,N*	Ti I	1. 75	141	13
8550.85 a	5	0. 6		CN	Q 40	4,2	12
8553.762	9	1. 0		Atm H_2O	P 6	131	26
8554.271	3. 5	0. 4					
8555.000	7	0. 8		Atm H_2O—	P 6	131	26
8555.569	7	0. 8	*s*	|Cr I	2. 71	56	
				CN	Q 55	3,1	12
					Q 41	4,2	
8555.96 a	4	0. 5		Si I?	5. 61	18	
8556.32	2	0. 2		Atm H_2O	P 6	131	26
8556.797S	134	*15. 1*	*W,N*	Si I	5. 87	45	
8558.563	3	0. 4					
8559.061	7	0. 8					
8559.751	5	0. 6					
8560.02	2	0. 2		Fe I	5. 02	1321	
				CN	Q 67	2,0	12
8560.639	3	0. 4					
8561.05	2	0. 2		CN	P 34	4,2	12
8561.61	7	0. 8	*o*				
8562.109	16	1. 9	*w?*	Fe I	4. 47	1153	
8562.365	5	0. 6					
8563.83	1. 5	0. 2		CN	Q 41	4,2	12
8564.62	1. 5	0. 2		CN	P 35	4,2	12
8565.456	1. 5	0. 2	*s*	Ti I	1. 74	141	
				CN	Q 67	2,0	12
8567.043	3	0. 4		CN	Q 56	3,1	12
8567.776	7	0. 8		Fe I p	4. 91	1269	
8568.724	$\widehat{4}$	0. 4		Atm			
8569.02	1. 5	0. 2		CN	Q 42	4,2	12
8569.25 a	1	0. 1		CN?	R 64	3,0	12
8569.67	1	0. 1	*s*	Ti I	2. 23	209	
8571.08	3	0. 4					
8571.328	6	0. 7		Si I p	6. 19		
8571.807S	36	4. 2	*W*	Fe I	5. 01	1272	
8572.55 a	$\widehat{4}$	0. 4					
8573.141	9	1. 0		Atm H_2O	P 7	131	26
8573.47	10	1. 2	*u,N*	⊙			
8573.96	2	0. 2					
8574.538	7	0. 8	*s,N*	CN	P 35	4,2	12
				Co I	2. 70		
8575.268	7	0. 8		CN—	R 64	3,1	12
				Co I	2. 79		
8575.75	$\widehat{5}$	0. 6		CN	R 50	4,2	12
8576.48	2. 5	0. 3		Fe I p	4. 59	1215	
8577.19	2. 5	0. 3		CN	Q 42	4,2	12
8578.43 m			*s*	Ti I	1. 73	141	13
8579.08	4	0. 4		Si I	5. 98	56	
8581.76	2	0. 2		CN?	Q 68	2,0	12
8582.271S	86	*9. 4*	*s*	Fe I	2. 99	401	
8582.857	8	0. 9		CN	Q 43	4,2	12
8583.310	22	2. 6	*S*	Ca I	4. 44		
8584.09	2. 5	0. 3		CN	P 50	3,1	12
8584.791	5	0. 6		Fe I p	5. 01	1270	
8585.27	2	0. 2		CN	Q 57	3,1	12
8585.577	13	1. 5	*o?*	S I			
8586.211	11	1. 3	*w*	Ni I? p	5. 45	296	
8586.64	1	0. 1		Co I?	4. 15		
8586.90	0. 5	0. 1		Atm			
8587.04	2. 5	0. 3		CN	Q 68	2,0	12
8587.93	2	0. 2		CN	R 65	3,1	12
8588.34	5	0. 6		CN	P 36	4,2	12

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8589.59	$\widehat{10}$	1. 2		—Co I?	4. 15	193	
8590.327	3	0. 4					
8590.86 a	2. 5	0. 3		CN	Q 43	4,2	12
8591.191	3	0. 4					
8591.54	6	0. 7		CN	Q 57	3,1	12
8592.119	3	0. 4		Fe I p	5. 01	1269	
8592.969	|48|	*6. 1*	*w*	Fe I	4. 95	1267	
8595.968S	54	*5. 5*	*w,N*	Si I	6. 19	80	
8597.059	|36|	4. 2	*w,N*	Si I	6. 19	80	
8598.17	1	0. 1	*S*	Ti I	2. 27	236	
8598.39				H I	12. 08	9	31
8598.836S	54	*6. 6*	*w*	Fe I	4. 39	1153	
8601.03	2	0. 2	*S*	Ti I	1. 73 2. 25	141 209	
8602.18	|4|	0. 4		⊙?			
8602.77	$\widehat{8}$	0. 9	*S*	Ca I— Ti I? p	4. 44 2. 49		
8603.82	$\widehat{9}$	1. 0	*u*	CN	Q 58	3,1	12
8604.92	2	0. 2		CN	Q 44	4,2	12
8605.74	1. 5	0. 2		Atm?			
8606.00	9	1. 0	*o*	Si I	5. 95	55	
8606.383	8	0. 9	*o?*	Ni I	5. 28	275	
8607.075	19	2. 2	*w*	Fe I p	5. 01	1272	
8607.78	3	0. 4	*s*	⊙			
8608.337	12	1. 4	*w*	⊙			
8608.98 m			*s*				13
8610.10	4	0. 4		CN	Q 58	3,1	12
8610.609	26	*3. 6*	*w*	Fe I p	4. 43	1153	
8611.11 m			*s*				13
8611.812S	99	*11. 7*	*s*	Fe I	2. 84	339	
8612.90 m			*s,N*	Ti I	1. 74	141	13
8613.946S	33	*4. 2*	*W*	Fe I p	4. 99	1272	
8615.314	8	0. 9	*u,N*	⊙			
8616.284S	42	*5. 3*	*w*	Fe I	4. 91	1266	
8616.99	4	0. 4		—CN	P 38	4,2	12
8618.41	|2|	0. 2	*s,N*	Ti I	2. 24	209	
8619.10	8	0. 9	*u,N*				
8619.45	7	0. 8	*u,N*	CN—	Q 45	4,2	12
8621.618	75	*9. 0*	*s*	Fe I	2. 95	401	
8622.05	2. 5	0. 3		CN	P 52	3,1	12
8622.753	17	2. 0	*w,N*	⊙			
8623.738	4	0. 4					
8624.46	2	0. 2		Atm?			
8626.26 a	5	0. 6		CN	R 67	3,0	12
8626.59	5	0. 6		CN	Q 46	4,2	12
8629.16	7	0. 8		N I CN	10. 69 Q 59	8 3,1	12
8631.25	3	0. 4					
8631.92	3	0. 4		CN?	R 67	3,1	12
8632.424	15	1. 7	*w*	Fe I p	4. 10	1050	
8633.10	7	0. 8		⊙?			
8633.956	17	2. 0	*s*	Ca I	4. 45		
8634.16	5	0. 6		CN	Q 46	4,2	12
8636.26	1	0. 1	*s,d?*	Cr I	2. 71	56	
8637.003	13	1. 5	*w*	Ni I	3. 85	186	
8641.94 a	2	0. 2		CN	Q 47	4,2	12
8642.35 a	2	0. 2					
8643.00	3	0. 4	*u,N*	Cr I	2. 71	56	
8643.35	3	0. 4		Fe I p	4. 91	1261	
8646.358	9	1. 0	*o*	Si I			
8647.88	7	0. 8		⊙?			
8648.472S	161	*18. 7*	*W*	Si I	6. 20		
8650.91	3	0. 4		Atm?			
8652.475	6	0. 7		Fe I p	4. 15	1050	
8654.04	3. 5	0. 4		⊙?			
8654.436	9	1. 0	*w*	Fe I p	3. 30	623	
8655.20	2	0. 2		⊙?			
8656.672	9	1. 0	*w*	Fe I	5. 02	1269	
8657.57,	3	0. 4		CN?	Q 48	4,2	12
8658.94 a	1	0. 1					
8661.97	40	11. 6	*s?*	Fe I	2. 22	60	
8662.170	2600	*297*	*u*	Ca II	1. 69	2	
8663.723	6	1. 0	*o?*	Fe I p	4. 99	1270	
8664.90 a	1	0. 1		CN	Q 48	4,2	12
8665.02				(H I)	12. 08	9	31
8667.366	8	0. 9	*u*	Fe I? p— Si I	2. 45 5. 96	166 55	
8668.07 a	2	0. 2					

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8668.456	9	1. 0		⊙			
8670.20	8	0. 9		S I	7. 86	6	
8670.627	12	1. 4		S I	7. 86	6	
8671.308	6	0. 7		S I	7. 86	6	
8671.879	13	1. 5	*w*	Fe I p	5. 02	1272	
8674.756S	113	*14. 2*	*s*	Fe I	2. 83	339	
8675.370	18	2. 1	*S*	Ti I	1. 07	68	
8675.88	6	0. 7					
8677.12	2. 5	0. 3					
8678.950	8	0. 9		S I	7. 87	6	
8679.646	41	4. 7	*w*	Fe I p— S I	4. 96 7. 87	1286 6	
8680.097	19	2. 2	*o*	Si I— N I	5. 86 10. 33	 1	
8680.405	25	2. 9	*o*	S I	7. 87	6	
8680.82	9	1. 0		Fe I p	4. 19	999	
8681.85	3	0. 4		CN	P 55	3,1	12
8682.45	3	0. 4		CN	Q 62	3,1	12
8682.987	12	1. 4	*S*	Ti I	1. 05	68	
8683.384	8	0. 9	*w*	N I	10. 33	1	
8686.368	54	*5. 5*	*W*	Si I p (N I)	6. 20 10. 32	80 1	
8686.75	7	0. 8	*S,N*	Fe I p	{3. 88 {4. 99	956 1269	
8687.23	2	0. 2		⊙?			
8687.49	5	0. 6		Si I p	6. 20	80	
8687.90	4	0. 4		⊙?			
8688.642	268	*30. 1*	*s,N*	Fe I	2. 18	60	
8689.70 a	8	0. 9	*w,N*	Fe I p	3. 05	507	
8689.88 a	|10|	1. 1	*w,N*	Fe I p	5. 10	1330	
8692.342	|5|	0. 6	*S*	Ti I	1. 05	68	
8693.15	3	0. 4		S I	7. 87	6	
8693.958	17	2. 0	*o*	S I	7. 87	6	
8694.641	34	3. 9	*o*	S I	7. 87	6	
8696.45 a	1. 5	0. 2					
8697.20 a	|1.5|	0. 2		CN	Q 50	4,2	12
8698.717	20	2. 3	*u*	Fe I p	2. 99	400	
8699.461S	73	*8. 0*	*W*	Fe I	4. 95	1267	
8700.314	4	0. 4	*o*?	Fe I p	4. 95	1266	
8700.949	5	0. 6	*w,N*	Mn I	4. 43	49	
8701.15 a	2. 5	1					
8701.73	2	0. 2		CN?	Q 74	2,0	12
8702.510	9	1. 0		Ni I	2. 74	83	
8703.15	8	0. 9		CN— N I	Q 63 10. 32	3,1 1	12
8703.73	23	2. 6	*u,N*	Mn I	4. 43	49	
8704.52	1. 5	0. 2		CN	P 66	2,0	12
8705.18	5	0. 6		⊙?			
8706.055	5	0. 6		⊙?			
8706.89	3. 5	0. 4		CN	Q 51	4,2	12
8707.31	7	0. 8		Cr I	2. 71	56	
8707.942	5	0. 6		Cr I	4. 39	296	
8709.28	4	0. 4					
8710.21	21	2. 5		Mg I	5. 93		
8710.398	82	*10. 4*	*w*	Fe I	4. 91	1267	
8711.671	4. 5	0. 5		N I	10. 33	1	
8712.701	57	*5. 9*	*W*	Mg I	5. 93		
8713.208S	58	*6. 5*	*u*	Fe I	{2. 95 {4. 99	400 1267	
8713.56 a	3	0. 4					
8713.89	3	0. 4		CN	Q 51	4,2	12
8716.62	3	0. 4		Atm?			
8717.833S	105	*10. 8*	*W,N*	Mg I	5. 93		
8718.76	5	0. 6		N I	10. 33	1	
8719.66 m			*S*	Ti I	1. 74	140	13
8724.13	3	0. 4		CN— CN	Q 52 Q 64	4,2 3,1	12 12
8725.216	4	0. 4		⊙?			
8725.95	2	0. 2		Ti I?	1. 73	139	
8727.19	4	0. 4		Fe I p	4. 19	999	
8728.024	107	*11. 6*	*o*	Si I	6. 18	79	
8728.604	16	1. 8	*o*	Si I (N I)	6. 18 10. 33	79 1	
8729.171	22	2. 5	*u*	Fe I p	3. 41	713	
8729.35 a	5	0. 6		Si I p	6. 18		
8730.22	3	0. 4	*o*?				
8734.74	4	0. 4	*S*	Ti I	1. 05	68	
8736.040	289	*28. 0*	*W,N*	Mg I	5. 94	39	
8737.40	4	0. 4	*u*	Mn I	4. 43	49	

Wavelength (Å)	Equivalent Width Δλ (mÅ)	Reduced Width Δλ/λ (F)	Spot	Solar Identification	Low E P or Rot. Line	RMT No. or Vib. Band	Notes
8738.76	1. 5	0. 2		Atm?			
8739.50	1. 5	0. 2		Atm?			
8740.68 a	7	0. 8					
8741.00 a	7	0. 8		Mn I	4. 43	49	
8741.68	2	0. 2		CN P I?	Q 53 7. 96	4,2	12
8742.466	97	*11. 3*	*W,N*	Si I	5. 87	44	
8743.53	4	0. 4		⊙?			
8745.34	3	0. 4		CN?	P 58	3,1	12
8745.81	3	0. 4		CN?	Q 65	3,1	12
8747.438S	16	1. 8	*w*?	Fe I (N I)	3. 02 10. 33	401 1	
8747.85	2. 5	0. 3					
8750.48				H I	12. 08	9	31
8750.57	1	0. 1		CN?	Q 75	2,0	12
8751.198	14	1. 6	*o*?	Si I	5. 87	44	
8752.025	94	*11. 8*	*W,N*	Si I	5. 87	43	
8753.11	2	0. 2		C I	9. 00		
8755.75	6	0. 7		⊙			
8757.199	91	*10. 0*	*s*	Fe I	2. 84	339	
8758.466	1	0. 1		Atm H_2O	R′ 8	003	26
8759.72 a	0. 5	0. 1		CN	Q 54	4,2	12
8763.978	99	*11. 5*	*u*	Fe I	4. 65	1172	
8764.94	2	0. 2		Si I? p	6. 22		
8766.417	13	1. 5	*w*	Si I	5. 96	54	
8766.68	5	0. 6	*S*	Ti I	1. 07	68	
8767.05	3	0. 4					
8767.68	3. 5	0. 4		CN Fe I p	Q 66 3. 65	3,1 814	12
8770.681	11	1. 3	*w*	Ni I	2. 74	82	

Notes to the Solar Spectrum Ledger (See § 2.8)

Note Number

Designations for molecular lines in the solar spectrum; notes 1, 2, 3, 4, 6:

Note Number	Spectrum	Electronic Transition	Vibration Band	Spectral Range (Å)	References for Analysis
1	OH	$A\,^2\Sigma^+ - X\,^2\Pi$	0, 0 1, 1 2, 2	3021 to 3362 3109 to 3378 3184 to 3375	G. H. Dieke and H. M. Crosswhite, The Johns Hopkins University Bumblebee Series Report No. 87, 118 pp. (1948). See also C. E. Moore and H. P. Broida, J. Research Nat. Bur. Std. **63A,** 279 to 295 (1959).
2	CH	$C\,^2\Sigma^+ - X\,^2\Pi$	0, 0 1, 1	3086 to 3219 3119 to 3222	T. Heimer, Zeit. Phys. **78,** 771 to 780 (1932). See, also, C.E. Moore and H. P. Broida, J. Research Nat. Bur. Std. **63A,** 19 to 53 (1959).
3	CH	$B\,^2\Sigma^- - X\,^2\Pi$	0, 0 1, 0 1, 1	3871 to 4084 3627 to 3710 4025 to 4119	L. Gerö, Zeit. Phys. **118,** 27 to 36 (1941). See also, C. E. Moore and H. P. Broida, Ref. in Note 2.
4	CH	$A\,^2\Delta - X\,^2\Pi$	0, 0 1, 1 2, 2	4133 to 4413 4185 to 4446 4238 to 4468	L. Gerö, Zeit. Phys. **118,** 27 to 36 (1941).
			0, 1	4726 to 4941	N. H. Kiess and H. P. Broida, Astroph. J. **123,** 166 to 171 (1956). See also, C. E. Moore and H. P. Broida, Ref. in Note 2.

5 Wavelength measurement by J. L. Greenstein and E. Tanbderg-Hanssen, Astroph. J. **119,** 113 to 119 (1954):

Be II 3130.414 Å; 3131.058 Å.
Be I 3321.043 Å; 3321.252 Å.
3321.430 Å.

Note Number	Spectrum	Electronic Transition	Vibration Band	Spectral Range (Å)	References for Analysis
6	NH	$A\,^3\Pi_i - X\,^3\Sigma^-$	0, 0 1, 1	3280 to 3487 3307 to 3485	R. N. Dixon, Canadian J. Phys. **37,** 1171 to 1186 (1959). G. W. Funke, Zeit. Phys. **96,** 787 to 798 (1935). G. W. Funke, Zeit. Phys. **101,** 104 to 112 (1936). A. Fowler and C. C. L. Gregory, Phil. Trans. Roy. Soc. London [A] **218,** 351 to 372 (1919).

7 Lines recorded in Rowland's Table as double, but not resolved in Atlas. For lines short of 4000 Å the adopted wavelength is a mean of the Rowland lines weighted according to the estimated Rowland intensity. To longer waves, additional measurements are included in the adopted values.

Some of these lines are probably single but broadened by hyperfine structure or isotope effect. cf A. Abt, Astroph. J. **115,** 199 to 205 (1952).

λ Recorded Pair (Å)	λ Adopted (Å)	λ Recorded Pair (Å)	λ Adopted (Å)	λ Recorded Pair (Å)	λ Adopted (Å)	λ Recorded Pair (Å)	λ Adopted (Å)
3310. 913r 3310. 923r	3310. 918	3413. 465r 3413. 519r	3413. 492	3602. 068r 3602. 111r	3602. 085	4526. 412r 4526. 465r	4526. 442
3322. 927r 3322. 987r	3322. 949	3433. 028r 3433. 077r	3433. 048	3630. 736r 3630. 778r	3630. 754	4535. 711r 4535. 741r	4535. 712
3335. 168r 3335. 219r	3335. 185	3472. 544r 3472. 594r	3472. 558	3642. 774r 3642. 827r	3642. 806	5457. 435r 5457. 496r	5457. 474
3340. 332r 3340. 391r	3340. 356	3502. 255r 3502. 327r	3502. 291	3645. 290r 3645. 336r	3645. 313	5782. 099r 5782. 176r	5782. 136
3646. 728r 3346. 772r	3346. 746	3504. 876r 3504. 917r	3504. 892	3847. 826r 3847. 871r	3847. 848	5790. 959r 5791. 028r	5790. 990
3349. 386r 3349. 464r	3349. 447	3547. 178r 3547. 220r	3547. 199	4018. 085r 4018. 120r	4018. 104		
3372. 765r 3372. 858r	3372. 812	3564. 936r 3564. 989r	3564. 959	4030. 729r 4030. 798r	4030. 763		
3395. 370r 3395. 409r	3395. 386	3575. 355r 3575. 394r	3575. 374	4052. 453r 4052. 500r	4052. 482		
3405. 084r 3405. 169r	3405. 126	3590. 468r 3590. 510r	3590. 489	4187. 785r 4187. 861r	4187. 812		

8 Wavelength measurements of selected solar lines of NH, from A. Fowler and C. C. L. Gregory, Phil. Trans. Roy. Soc. London [A] **218**, 351 to 372 (1919), corrected to present scale adopted for Rowland lines.

λ Adopted (Å)	Rowland λ Corrected (Å)	Remarks
3360. 808m	3360. 854r	
3364. 651m		Solar line from Higgs
3364. 735m	3364. 697r	
3381. 033m	3381. 065r	
3427. 086m		Solar line from Higgs

9 The two components of this line, 4054.815 Å and 4054.873 Å have in the Atlas and on the plate, intensities which are clearly in the reverse order from that given by Rowland.

10 The Balmer Series of hydrogen extends through H_{17}. Because of the width and diffuseness of these solar lines, the calculated laboratory wavelength is given in column one for the members of this series from H_8 through H_{17}:

H I

Calc.λ (Å)	Series Member	Multiplet No.	Calc.λ (Å)	Series Member	Multiplet No.
3697. 15	H_{17}		3750. 15	H_{12}	
3703. 86	H_{16}		3770. 63	H_{11}	
3711. 97	H_{15}	3	3797. 90	H_{10}	2
3721. 94	H_{14}		3835. 39	H_9	
3734. 37	H_{13}		3889. 05	H_8	

Measurement of the equivalent widths of these difficult wide lines is described in § 2.2.

Designations for molecular lines in the solar spectrum, continued; notes 11, 12:

	Spectrum	Electronic Transition	Vibration Band	Wavelength Range (Å)	References for Analysis
11	CN	$B\,^2\Sigma^+ — X\,^2\Sigma^+$	0, 0 1, 1 2, 2 3, 3 4, 4	3583 to 3883	H. S. Uhler and R. A. Patterson, Astroph. J. **42,** 434 to 468 (1915) Measurement of solar equivalent width (228mÅ) refers to integrated first head of CN band, λ3883.287.
			0, 1 1, 2 2, 3 3, 4	3961 to 4216	T. Heurlinger, Lund Dissertation, Chapter VI, pp. I to XXIX following p. 66 (1918). J. Genard and J. Weinard, Ann. d'Astroph. **18,** 329 to 333 (1955). J. Weinard, Dissertation, Univ. des Saarlandes, 86 pp. (1955); Ann. d'Astroph. **18,** 334 to 353 (1955).
12	CN	$A\,^2\Pi_i — X\,^2\Sigma^+$	0, 0 etc 1, 0 etc.	Beyond range of present publication.	S. P. Davis and J. G. Phillips, Berkeley Analysis of Molecular Spectra, Monograph 1, 1963. Referred to below as "Mono".
			2, 0	7850 to 8798	W. S. Benedict, Unpubl. material, 1964. M. Rigutti and F. Drago-Chiuderi, Ann. d'Astroph. **26,** 253 to 262 (1963). (2, 0) and (3, 1). Mono pp. 168 to 174 and unpubl. material 1964.
			3, 1	8044 to 8812	Mono pp. 175 to 182.
			4, 2	8247 to 9008	Mono pp. 183 to 189.
			3, 0	6910 to 7593	Mono pp. 129 to 134.
			4, 1	7072 to 7588	Mono pp. 138 to 144.
			5, 2	7242 to 7812	Mono pp. 145 to 151.
			6, 3	7423 to 7801	Mono pp. 152 to 156.
			5, 1	6320 to 6741	Mono pp. 99 to 104.
			7, 3	6619 to 7180	Mono pp. 118 to 123.

13 Atomic lines present only in the sun-spot spectrum, based chiefly on work done by C. E. Moore in 1933 from a study of the Mount Wilson spot spectrograms.

λ(Å)	λ(Å)	λ(Å)	λ(Å)	λ(Å)	λ(Å)	λ(Å)	λ(Å)
3900. 44	4564. 23	4784. 45	5033. 61	†5331. 98	5797. 55	6367. 92	8349. 02
4069. 84	4573. 09	4787. 64	†5046. 55	†5332. 14	5799. 90	6378. 85	8363. 58
4077. 16	4575. 48	4851. 35	†5069. 36	5335. 24	5807. 14	6381. 44	8386. 35
4078. 89?	4578. 47	4861. 19	5070. 23	5335. 36	5807. 30	6383. 44	8417. 51
4116. 60	4581. 30	4862. 26	†5077. 55	†5335. 43	5813. 97	6401. 95?	8443. 00
4117. 56	4583. 90	4862. 90	†5078. 28	5339. 82?	5879. 79	6431. 63	8464. 69
4152. 36	4586. 93	4863. 75	5144. 64	†5354. 68	5955. 16	6452. 08	8494. 44
4179. 86	4590. 55	4881. 24	†5158. 30	†5356. 43	6032. 60	6467. 83?	8550. 52
4186. 84	4594. 50?	4893. 92	5161. 78	†5356. 60	6058. 76	6498. 75	8578. 43
4278. 79	4599. 79	4895. 99	†5190. 19	5359. 05	6077. 37	6506. 39	8608. 98
4281. 71	4609. 97	4900. 02?	†5194. 77	5361. 71	6106. 78?	6527. 30	8611. 11
4306. 18	4626. 49?	4904. 30	†5201. 82	†5377. 35	6106. 98	6557. 37	8612. 90
4306. 91	4643. 72	4908. 45	†5218. 09	†5382. 92	6134. 71	6563. 41	8719. 66
4314. 36	4643. 94	4924. 56	5222. 67	†5392. 06	6192. 95	6607. 90	
4314. 77	4644. 86	†4927. 59	†5222. 98	5401. 92	6193. 69	6637. 24	
4368. 92	4661. 92?	4930. 21	5228. 60	†5403. 98	6230. 85	6646. 20	
4387. 20	4663. 28?	4937. 16	†5231. 52	5444. 85	6241. 31?	6649. 51	
4393. 33	4679. 73	†4937. 99	5232. 82?	5465. 75	6257. 63	6709. 87	
4394. 51	4683. 44	†4940. 30	†5234. 82	5470. 48	6261. 23	6766. 50	
4397. 22	4684. 28	4941. 02	5238. 52	5481. 71	6273. 39	7102. 89	
4420. 46	4684. 50	4941. 38	†5252. 36	5517. 18	6276. 32	7169. 11	
4433. 97	4698. 83	†4944. 82	5273. 43	5535. 51	6285. 42	7213. 41	
4476. 62	4707. 69?	†4947. 33	5288. 40	5548. 76	6295. 28	7219. 40	
4491. 18	4714. 12	4947. 98	†5291. 60	5597. 69	6308. 62	7439. 87	
4497. 73	4737. 66	†4959. 12	†5294. 31	5659. 16	6339. 92	8061. 16	
4511. 82	4747. 27	4967. 32	5311. 20	5664. 26	6342. 26	8063. 10	
4535. 86	4747. 96	†4971. 62	5311. 43	5752. 86	6344. 82	8066. 07	
4541. 35	4751. 58	4973. 06	†5317. 89	5756. 40?	6359. 91	8241. 60	
4541. 61	4757. 48	†4994. 99	†5323. 93	5785. 94	6361. 07	8253. 60	
4563. 66	4779. 34	†4995. 56	†5326. 41	5788. 61	6367. 82	8307. 54	

†Rounded off wavelength measured by R. S. Richardson (unpublished) and kindly furnished to C.E.M. in 1932. Except for one line, at 5377 Å, all were measured independently by C.E.M.

Notes to the Solar Spectrum Ledger, continued (See § 2.8)

14 The observed equivalent width, (column two) relates to the combined lines 3968.492 Å, (Ca II) and 3970.076 Å, (H I). The reduced width (column three) for 3968.492 Å, Ca II (*H*), has been derived by theory from 3933.682 Å, Ca II (*K*); for 3970.076 Å, ($H\epsilon$), it has been interpolated between the other Balmer lines.

15 The line may be double.

λ(Å)	λ(Å)	λ(Å)	λ(Å)
3975. 051	4134. 438	5095. 176	6091. 920
3985. 789	4163. 480	5142. 530	6183. 574
3988. 332	4188. 315	5146. 776	6303. 461
4001. 940	4315. 458	5161. 764	6395. 148
4057. 957	4334. 166	5338. 333	6497. 594
4061. 733	4340. 848	5399. 479	6537. 938
4072. 888	5089. 212	5470. 636	

16 Possibly a molecular line in the sun-spot spectrum.

17 Blend of a molecular and an atomic line in the sun-spot spectrum.

18 Special notes pertaining to double lines:

λ(Å)	Remarks
3972. 440	Recorded by Rowland as two lines, but appears as single on Atlas records.
4049. 731	Line is a close unresolved double.
4868. 414	Line is a close unresolved double in the disk spectrum; two lines seen in the spot spectrum.
5040. 890	Line is an unresolved double in the disk spectrum, with separation 0.05 Å (HDB); two lines seen in the spot spectrum.
5342. 504	Line may be a close unresolved double.

Designations for molecular lines in the solar spectrum, continued notes 19, 20, 22, 23, 24, 26.

	Spectrum	Electronic Transition	Vibration Band	Wavelength Range (Å)	References for Analysis
19	C_2	$A\,^3\Pi_g$—$X\,^3\Pi u$	0, 0	4831 to 5165	R. C. Johnson, Phil. Trans. Roy. Soc. [A] **226**, 157 to 230 (1927).
			1, 1	4919 to 5129	J. G. Phillips, unpublished material (Nov. 1963).
			2, 2	4972 to 5097	Present identifications can be extended when Berkeley Monograph on C_2 has been completed.
			1, 0	4671 to 4737	
			2, 1	4664 to 4708	
			0, 1	5501 to 5635	
			1, 2	5499 to 5585	
			2, 3	5475 to 5540	
20	Mg H	$A\,^2\Pi_{3/2,1/2}$—$X\,^2\Sigma$	0, 0	4956 to 5210	R. H. Fowler, Mon. Not. Roy. Astron. Soc. **67**, 530 to 534 (1907). Phil. Trans. Roy. Soc. [A] **209**, 447 to 478 (1909). R. S. Richardson, Astroph. J. **73**, 216 to 249 (1931). A. Guntsch, Zeit. Phys. **104**, 585 to 591 (1936). A. Schadee, Dissertation, Utrecht (1964); Bull. Astron. Inst. Netherlands **17**, 311 (1964).

21 There are probably regions of continuous absorption from 4643 Å to 4650 Å; 4654 Å to 4658 Å; 4661 Å to 4665 Å; and also from: 4826 Å to 4830 Å; 4831 Å to 4835 Å. The note number appears near the strongest absorption dip in these intervals. The extent of the absorption is indicated by a vertical dashed line in the note column.

	Spectrum	Electronic Transition	Isotope	Vibration Band	Wavelength Range (Å)	References for Analysis
22	Atm O_2	$^1\Sigma_g^+$—$^3\Sigma_g^-$	O^{16} O^{16}	0, 0 1, 1	7593 to 7733 7684 to 7768	H. D. Babcock and L. Herzberg, Astroph. J. **108,** 167 to 190 (1948).
				1, 0 2, 1	6867 to 6967 6954 to 6996	First line in head of B group: 6867.187 Å.
				2, 0 3, 0	6276 to 6353 5788 to 5829	First line of α group: 6276.590 Å.
23	Atm O_2	$^1\Sigma_g^+$—$^3\Sigma_g^-$	O^{16} O^{17}	0, 0 1, 0	7599 to 7675 6876 to 6920	H. D. Babcock and L. Herzberg. See above.
24	Atm O_2	$^1\Sigma_g^+$—$^3\Sigma_g^-$	O^{16} O^{18}	0, 0 1, 0	7594 to 7684 6885 to 6938	H. D. Babcock and L. Herzberg. See above.

25 [O I] Brackets denote forbidden transition. Identification suggested by I. S. Bowen, Rev. Mod. Phys. **20,** 109 to 112 (1948) 5577.341 Å, 6300.311 Å, 6363.79 Å.

26 Unclassified "Atm" lines are probably due to H_2O. They are entered as "Atm" to distinguish them from classified lines in the H_2O Band System. In the present work they start at 5393 Å and extend to 8739 Å. Two short regions in this interval are free from atmospheric lines: 5478 Å to 5665 Å and 6093 Å to 6267 Å.

All lines identified as "Atm H_2O" have been assigned to specific transitions in the vibration-rotation spectrum. The designations are from the detailed analysis kindly furnished in advance of publication by W. S. Benedict (Dec. 1963). These lines occur in the range 5414 Å to 8758 Å. The following bands are represented in the solar table:

Atm H_2O

Vibration-Rotation Band	Range (Å)	Vibration-Rotation Band	Range (Å)	Vibration-Rotation Band	Range (Å)
411	5414 to 5470	212	6424 to 6563	013	7846 to 8093
203	5665 to 5769	231	6565 to 6585	112	7899 to 8211
500	5701 to 5766	103	6845 to 7128	310	8084 to 8383
321	5828 to 6019	400	6903 to 7203	211	7993 to 8448
401	5830 to 5999	301	7059 to 7408	230	8138 to 8370
302	5863 to 5983	221	7099 to 7480	131	8144 to 8573
113	6275 to 6375	202	7131 to 7392	003	8758
311	6408 to 6626	320	7201 to 7358		

This Band System is described by W. S. Benedict in the introduction to the Michigan Table on the infrared solar spectrum: See O. Mohler, *A Table of Solar Spectrum Wave Lengths,* 11984 Å *to* 25578 Å, p. 9, Univ. Michigan Press, 83 pp., 1955. A fuller discussion will appear in a forthcoming Table of Identifications in the Solar Spectrum, which is based on The *Photometric Atlas of the Solar Spectrum from* λ7498 *to* λ12016, by L. Delbouille and G. Roland, Mém. Soc. Roy. Sci. Liège, Special Volume 4 (1963). For the text and ledger accompanying this Atlas see J. W. Swensson, W. S. Benedict, O. C. Mohler, L. Delbouille and G. Roland; ibid 5, in press (1966).

27 The presence of this Ca I multiplet in the solar spectrum was first reported by W. Mitchell and explained by L. Goldberg, cf L. Goldberg, Harvard College Obs. Sci. Report No. 4, 22 pp (1965); W. E. Mitchell, Jr., and O. C. Mohler, Astroph. J. **141**, 1126 to 1130 (1965). See, also, R. F. Griffin, The Obs. 84, 154 to 156 (1964).

Ca I

Solar λ (Å) Mitchell and Mohler	Lab. λ (Å)	Multiplet No.
6318. 61	6318. 11	53
6343. 71	6343. 29	
6361. 94 [1]	6361. 79	

[1] Equivalent width not measurable; multiplet rules used to determine Δλ and Δλ/λ.

28 The value of Δλ/λ in column three has been interpolated between neighboring lines of the Atm O_2 band: 7601.470 Å, 7602.036 Å, 7612.314 Å, 7623.552 Å.

29 This line, 7657.606 Å, remeasured from the original plate, yields an equivalent width of 113 mÅ, corresponding to Δλ/λ = 14.7.

30 The measured intensities correspond to the total area of the band head, 4688.60 Å to 4689.00 Å.

31 For the members of the Paschen series of H having $n=12$ through 18, laboratory wavelengths are entered in column one. In the solar spectrum there is a background haze caused by the first of these Paschen lines.

n	Lab. λ (Å)	Remarks	n	Lab. λ (Å)	Remarks
12	8750. 48	Δλ 220 mÅ; Δλ/λ *34*	16	8502. 49	masked by Ca II
13	8665. 02	masked by Ca II	17	8467. 26	
14	8598. 39		18	8437. 96	
15	8545. 38	masked by Ca II			

32 The equivalent width refers to the central, symmetric component of this complex line, 8071.262 Å.

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