

Faint Lines in the Arc Spectrum of Iron (Fe I)

Carl C. Kiess, Vera C. Rubin, and Charlotte E. Moore

(September 9, 1960)

A search for new faint iron lines has been made on spectrograms taken with an arc-in-air as source. The range of observations is from 2102 to 8679 Å. The reciprocal dispersion of the spectrographs used for the various spectral regions varies from 1 Å/mm to 3 Å/mm.

Twelve new energy levels have been found, resulting in a total of 121 classified lines. A table containing 698 classified lines includes many lines whose wavelengths had been predicted as combinations among the known energy levels, and found in the solar spectrum in earlier work. Their reality has been confirmed in the present work.

A list containing 1,102 newly measured unclassified lines is included. Many of the lines listed in the tables have been reported by other observers with varying degrees of accuracy. All such reference sources are indicated in the tables. As a result of the new measurements, these lines may safely be attributed to Fe I.

A comparison of the new lines with the solar spectrum has resulted in the identification of 306 solar lines of Fe I unblended, and of 85 as blends to which Fe I is a contributor.

When the analysis of Fe I was carried out in 1944,^[1] it was recognized that the laboratory observations were far from complete. From the known atomic energy levels, wavelengths were calculated for missing members of multiplets. The presence in the solar spectrum of almost all known lines of neutral iron indicated that a search for these "predicted" lines might be rewarding. The predicted lines were graded into three classes, good, fair, and poor, the grades being assigned roughly on the likelihood of the transition according to the rules of the quantum theory, the agreement between calculated and solar wavelengths, and the solar intensity with respect to known lines in the respective multiplets. The lines in the categories "good" and "fair" were published in Table C of the 1944 Monograph [1].

A search for faint iron lines has been made on spectrograms taken with an arc-in-air as source, and with exposures long enough to reveal fainter lines than have been recorded previously. The range of observations is from 2102 to 8679 Å. The electrodes used in the arcs were prepared from the purest iron obtainable at the time. The observations were made by the senior author (CCK) with the spectrographs at NBS. The spectrograms that have been measured are listed in table 1. The letters indicate the type of instrument used to cover the various spectral regions, namely:

- H Prism: reciprocal dispersion 1 Å/mm to 1/3 Å/mm.
- X Grating: Wood, 21 ft. concave grating 30,000 lines per inch, reciprocal dispersion 1 Å/mm in the second order.
- R Grating: Rowland, 21 ft. concave grating 20,000 lines per inch, reciprocal dispersion 3 Å/mm.

TABLE 1. List of spectrograms

Plate	Region A	Plate	Region A
H 53	2102 to 2178	X 242	3007 to 3773
H 55	2103 to 2178	X 441	3090 to 3820
H 41	2136 to 2224	X 546	3348 to 3631
H 42	2138 to 2231	X 430	3358 to 4482
H 27	2184 to 2301	X 436	3581 to 3820
H 26	2184 to 2303	X 244	3614 to 4294
H 13	2260 to 2368	X 132	4250 to 4635
H 1	2327 to 2474	X 275	4280 to 4425
H 65	2404 to 2582	X 303	4400 to 6625
H 76	2488 to 2714	X 630	4632 to 5216
H 86	2611 to 2851	X 453	4752 to 6421
H 96	2767 to 3083	X 304	5145 to 6253
		X 452	6885 to 8643
		R 640	6608 to 7945
		R 638	7832 to 8679

In order to obtain at least two exposures over the entire range it has been necessary to fill in gaps by using Fe comparison spectra from miscellaneous spectrograms in the collection at the Georgetown College Observatory. These were taken with the Rowland grating described above. A serious attempt has been made to eliminate all possible impurities from the spectra.

The present work has been carried out to confirm the predicted lines attributed to Fe I in the solar spectrum, and to extend the identifications of Fe I in the sun. It was hoped, also, that the analysis could be extended by additional observations. A search has been made among the new unclassified lines for levels combining with the known low terms of Fe I. Twelve new levels have been found, of which three are subject to some question. These levels are listed in table 2 with their respective *J*-values entered in column 2. They account for a

¹ Figures in brackets indicate the literature references on page 3.

TABLE 2. *New odd levels of Fe I*

Level	<i>J</i>	Level	<i>J</i>
<i>49457. 36°?</i>	4	<i>53881. 91°</i>	4
<i>53357. 53°</i>	3	<i>54289. 09°</i>	3
<i>53610. 44°</i>	4	<i>54357. 40°</i>	3
<i>53733. 51°</i>	3	<i>57565. 35°?</i>	3
<i>53749. 39°</i>	2	<i>60563. 61°</i>	3
<i>53784. 74°</i>	3	<i>62081. 27°?</i>	2

total of 121 classified lines. Observations with a more suitable source will be required to extend this study further. One serious disadvantage encountered here is the masking of faint lines by wings of stronger ones. An electrodeless lamp doubtless would excite many new faint lines, and thus make it possible to find additional terms and assign their configurations.

The classified lines are listed in table 3. The wave lengths in column 1 are the mean values from the present work. They include early unpublished measurements by Burns and Kiess, as well as a number of more recent ones by various workers. In preparing the final lists no line has been included as real unless it has been measured on at least two exposures. Many have more than two measurements. The classifications are new except for those lines in Table C of the Monograph that have been confirmed in the present work, and those lines having notes (a) and (b).

Some wavelengths are in italics. These were included in the original Princeton line list as unclassified and have been used for combinations with the new levels in Table 2. The best available reference source has been adopted for these lines, as was done in the Monograph. They are not new lines, but are newly classified.

The total number of lines in table 3 is 698. The lines are mostly faint. Estimated intensities on an arbitrary scale are given in column 2. Diffuse lines are indicated by "n" and "N". The next two columns contain, respectively, the observed wave numbers and those calculated from the term combinations. The designations in column 5 are those used for Fe I in the 1944 Monograph [1] and in "Atomic Energy Levels" [2]. The multiplet numbers in column 6 are from the 1945 Princeton Multiplet Table [3]. New lines belonging to known multiplets have been assigned the appropriate multiplet number. The notes in column 7 explain the different categories of lines. Most of the classifications are either "New" or "Pred". The latter include lines from Table C of the Monograph, i.e., those predicted lines classed as "good" or "fair" for which a solar wavelength was used. Additional predicted lines are also included, as indicated by the note (b) in this column. Although the predicted Fe I lines were classified earlier, they are included because for the first time they have been confirmed from laboratory observations. A few lines have the note "SS". The solar wavelengths were previously used for these lines as preferable to various laboratory values.

The letters in the last column are the same ones used for reference sources in the Monograph line list. They refer to lines that are not new but are newly classified, to lines measured by earlier observers that needed additional confirmation, or to unpublished measurements from the Massachusetts Institute of Technology, kindly furnished by G. R. Harrison in 1942. References Z, BK, and ZZ have been added.

In 1934 a list of faint lines of Fe I was compiled by Burns and Kiess. It contains early unpublished measurements made by Burns at Bonn and possibly at the Allegheny Observatory, and, also, measurements by Kiess of "H" plates described above. Lines in tables 3 and 4 that are present in this early list are so indicated by "BK" in the last column.

Table 4 contains the newly measured unclassified lines of Fe I, 1102 in all. The four columns contain respectively, the wavelengths, estimated intensities, wave numbers, and a column headed "Notes and References". As before, diffuse lines are marked "n" and "N" in the intensity column. In the last column the letters denote the same reference sources as were used in the 1944 paper. The symbols and references are described at the end of table 3.

Table 5 contains the solar lines that have been newly identified as Fe I, from the present work. The total number is 391, of which 306 are unblended, and 85 blended in the solar spectrum. The left-hand part of the table contains the laboratory data, i.e., wavelength and intensity from tables 3 and 4. The solar data are entered in the right-hand part of the table: wavelength, disk intensity, the difference between the solar and laboratory wavelength, (\odot —lab.), and the solar identification. These data are from the current revision of the solar spectrum now in progress [5]. From λ 2945 to λ 3164 the disk intensities are eye estimates: those in the range λ 2945 to the λ 3062 are from the 1948 paper [6], from λ 3062 to λ 3164 they are from Rowland's Preliminary Table of Solar Spectrum Wavelengths, as quoted in the 1928 edition [4]. The estimated intensities are entered in brackets. From λ 3164 to longer waves Rowland's estimated intensities are replaced by equivalent widths measured by Minnaert and Houtgast at Utrecht [5]. Italics denote that the reduced equivalent width is the weighted mean of the Utrecht measurements and of those by other observers.

In the last column of table 5 a predominant contributor to a solar line that is a blend, is indicated by the symbol "||". A leading contributor has the symbol "|". A dash is used in this column to show whether the contributors to a blend are on the short- or long-wave side of the solar line. For example, the solar line at 4424.072 Å is identified as a blend of Fe I on the short-wave side and Cr I on the long-wave side. Approximately 50 more lines in the present lists, whose identification in the solar spectrum is more dubious, have been omitted from table 5.

In conclusion, it is a pleasure to express our gratitude to those who have assisted with this laborious program. Special thanks are due Misses Eva Novotny and Janet Rountree for their work in measuring the plates. Mrs. Isabel Murray has prepared the tabular data with meticulous care. The work could not have been brought to its present stage of completion without special financial aid. The project has been carried in part by grants NR 046-136 from the Office of Naval Research and G 8193 from the National Science Foundation to the Georgetown College Observatory. Both of these are gratefully acknowledged.

References

- [1] H. N. Russell and C. E. Moore, *Trans. Am. Phil. Soc.* **34**, pt. II, 113 to 179 (1944).
- [2] C. E. Moore, *NBS Circ.* 467, Vol. II, 49 to 54 (1952).
- [3] C. E. Moore, *NBS Tech. Note* 36, PB 151395 (1959).
- [4] C. E. St. John, C. E. Moore, L. M. Ware, E. F. Adams, H. D. Babcock, *Carnegie Inst. Wash. Publ. No.* 396, *Papers Mt. Wilson Obs.* III (1928).
- [5] M. Minnaert and C. E. Moore, *Revised Solar Table in progress*, Utrecht Obs. and NBS, 1960; M. Minnaert, *Recherches Astron. Obs. Utrecht* **15**, 168 (λ 3164 to λ 8770), (1960).
- [6] H. D. Babcock, C. E. Moore, and M. F. Coffeen, *Astroph. J.* **107**, 287 to 302, *Contr. Mount Wilson Obs. No.* 745 (1948).

TABLE 3. *Classified faint lines of Fe I*

Wavelength A	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
10400.94	1	9611.88	2.08	$e^5D_4-54289_3$		New	D
8656.702	1	11548.57	8.63	$x^5D_0-e^3D_1$	1269	Pred	U
8616.275	2n	11602.76	2.77	$x^5D_4-e^7G_3$	1266	Pred	
8571.827	1n	11662.92	2.91	$x^5D_7-e^5P_2$	1272	Pred	
8562.138	1n	11676.12	6.14	$z^3G_3-e^5F_3$	1153	Pred	U
8538.016	1	11709.11	9.11	$x^5D_4-e^7G_4$	1266	Pred	
8481.992	1	11786.44	6.50	$c^3F_2-x^3D_1$	999	Pred	
8446.394	3	11836.12	6.09	$x^5D_2-e^5P_2$	1272	Pred ^b	BK
8434.504	1n	11852.80	2.79	$x^5D_7-g^5D_0$	1270	Pred	U
8358.512	1	11960.56	0.54	$b^3G_4-z^3G_3$	401	Pred	U
8300.006	1	12044.87	4.87	$X_3-v^3P_2$	1331	Pred	
8269.663	1	12089.07	9.08	$d^3F_4-v^3D_3$	1218	Pred	
8231.749	2	12144.75	4.75	$x^5D_4-g^5D_3$	1270	New	
8204.959	1	12184.40	4.44	$a^5F_3-z^7D_2$	12	Pred	U
8196.492	1	12196.99	6.95	$d^3F_4-w^3F_3$	1217	Pred	
8126.520	1	12302.01	2.08	$d^3F_2-v^3D_2?$	1218	New	
8112.178	2	12323.76	3.77	$a^3G_3-y^5F_1$	265	Pred	U
8108.344	1	12329.58	9.61	$a^3G_4-y^5F_3$	265	Pred	U
8090.341	1	12357.02	7.06	$d^3F_2-v^3D_1?$	1218	New	
8027.967	2	12453.03	3.04	$a^3D_3-y^3D_2$	623	Pred	
8002.586	1	12492.52	2.58	$d^3F_2-w^3F_2$	1217	Pred	
7941.810	1	12588.12	8.08	$a^1G_4-y^3F_3$	508	Pred	
7924.184	1	12616.12	6.20	$y^3D_2-e^3D_3$	1250	Pred	U
7810.836	0n	12799.20	9.25	$x^5F_4-g^5F_1$	1303	Pred	
7808.004	2n	12803.85	3.91	$x^5F_3-g^5F_3$	1303	Pred	BK, O, Z
7745.496	0	12907.18	7.20	$x^5F_2-f^5P_1$	1305	Pred	
7719.064	1	12951.37	1.41	$x^5F_4-h^5D_3$	1304	Pred	
7650.948	1	13066.68	6.68	$a^3G_3-z^5G_5$	266	New	
7647.850	0	13071.97	2.00	$z^5G_2-e^3F_2$	1137	Pred	U
7617.984	0	13123.22	3.25	$c^3F_2-u^5D_2$	1001	Pred	
7617.242	0	13124.50	4.59	$x^5F_3-h^5D_2$	1304	Pred	
7606.460	0	13143.10	3.12	$x^5F_2-f^5G_3$	1306	New	
7588.287	1	13174.58	4.55	$x^5F_4-f^5G_4$	1306	Pred	U
7547.902	0	13245.07	5.10	$x^5F_1-f^5G_2$	1306	Pred	U
7540.415	0	13258.22	8.18	$a^3G_4-z^5G_3$	266	Pred	U
7537.531	0	13263.29	3.46	$c^3F_4-w^5P_3$	1000	Pred ^b	
7476.378	1	13371.78	1.75	$y^3D_2-g^5D_2$	1251	SS	O, U
7382.670	1	13541.50	1.58	$a^3G_3-z^5G_4$	266	Pred	U
7359.950	1	13583.31	3.31	$x^5F_2-e^3H_6$	1310	Pred	
7344.171	1	13612.49	2.48	$a^3G_4-z^5G_3$	266	Pred	

TABLE 3. *Classified faint lines of Fe I—Continued*

Wavelength A	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
7330. 148	1	13638. 53	8. 52	<i>y</i> ⁵ P ₁ ^o - <i>f</i> ⁷ D ₁	1187	Pred	U
7317. 402	1	13662. 29	2. 28	<i>x</i> ⁵ D ₁ ^o - <i>f</i> ³ D ₂	1278	Pred	
7316. 752	1	13663. 50	3. 47	<i>a</i> ³ G ₅ ^o - <i>z</i> ³ G ₅ ^o	267	Pred	U
7315. 595	1	13665. 66	5. 68	<i>z</i> ³ P ₀ ^o - <i>e</i> ⁵ F ₁	1105	New	
7300. 532	1 _n	13693. 86	3. 76	<i>c</i> ³ F ₃ ^o - <i>z</i> ³ H ₄ ^o	1003	Pred	U
7256. 180	1 _n	13777. 56	7. 67	<i>x</i> ⁵ D ₃ ^o - <i>f</i> ³ D ₃	1278	SS	U
7213. 900	0	13858. 31	8. 43	<i>z</i> ³ P ₁ ^o - <i>e</i> ⁵ F ₁	1105	Pred	
7197. 182	1	13890. 50	0. 51	<i>y</i> ⁵ P ₂ ^o - <i>f</i> ⁷ D ₁	1187	New	
7190. 143	1	13904. 10	4. 14	<i>c</i> ³ P ₀ ^o - <i>y</i> ³ D ₁ ^o	463	Pred	
7127. 576	1 _n	14026. 15	6. 16	<i>x</i> ⁵ D ₂ ^o - <i>g</i> ⁵ F ₂	1273	Pred	U
7119. 987	1	14041. 10	1. 06	<i>y</i> ⁵ P ₃ ^o - <i>f</i> ⁷ D ₄	1187	Pred	
7118. 106	1 _n	14044. 81	4. 79	<i>x</i> ⁵ D ₁ ^o - <i>f</i> ³ D ₁	1278	Pred	
7114. 527	1 _n	14051. 87	1. 82	<i>a</i> ³ G ₅ ^o - <i>z</i> ³ G ₄ ^o	267	Pred	
7093. 042	1 _n	14094. 44	4. 32	<i>y</i> ⁵ P ₃ ^o - <i>e</i> ⁷ P ₂	1189	Pred	O, U
7092. 866	1 _n	14094. 79	4. 85	<i>y</i> ⁵ P ₃ ^o - <i>f</i> ⁷ D ₃	1187	New	U
7072. 832	1	14134. 71	4. 75	<i>c</i> ³ F ₄ ^o - <i>z</i> ³ H ₅ ^o	1003	Pred	
7069. 571	0	14141. 23	1. 30	<i>b</i> ³ F ₄ ^o - <i>z</i> ⁵ G ₅ ^o	205	SS	U
6936. 501	1	14412. 52	2. 57	<i>y</i> ⁵ P ₂ ^o - <i>e</i> ⁷ S ₃	1196	Pred	U
6847. 605	1	14599. 62	9. 65	<i>y</i> ⁵ F ₃ ^o - <i>e</i> ³ F ₂	1078	SS	U
6785. 754	1	14732. 69	2. 69	<i>d</i> ³ F ₃ ^o - <i>y</i> ¹ D ₂ ^o	1226	Pred	
6745. 969	1	14819. 58	9. 61	<i>c</i> ³ F ₄ ^o - <i>w</i> ⁵ G ₃ ^o	1005	Pred	
6704. 513	1	14911. 21	1. 30	<i>y</i> ⁵ D ₁ ^o - <i>e</i> ³ F ₂	1052	SS	U
6565. 700	1 _n	15226. 46	6. 39	<i>X</i> ₃ - <i>s</i> ³ G ₃ ^o ?		New	
6249. 667	2 _n	15996. 43	6. 49	<i>z</i> ⁵ F ₃ ^o - <i>e</i> ⁷ D ₄	685	Pred	
6028. 344	1	16583. 71	3. 68	<i>c</i> ³ F ₄ ^o -494574?		New	U
5905. 030	1	16930. 02	0. 07	<i>e</i> ⁷ D ₂ ^o -60564/3		New	U
5899. 094	2	16947. 06	7. 22	<i>a</i> ¹ D ₂ ^o - <i>x</i> ³ D ₁ ^o	738	New	
5738. 248	3	17422. 09	2. 17	<i>y</i> ⁵ F ₄ ^o - <i>f</i> ⁵ F ₄	1084	Pred	
5473. 171	2	18265. 87	5. 85	<i>y</i> ⁵ D ₂ ^o - <i>e</i> ⁵ P ₂	1064	Pred	BK
5470. 105	3	18276. 11	6. 06	<i>z</i> ⁵ G ₂ ^o - <i>h</i> ⁵ D ₁	1144	(*)	W
5438. 024	3	18383. 92	3. 89	<i>d</i> ³ F ₄ ^o - <i>v</i> ³ H ₅ ^o	1237	Pred	
5407. 401	3	18488. 03	8. 17	<i>a</i> ¹ D ₂ ^o - <i>x</i> ³ F ₃ ^o ?		New	
5406. 790	3	18490. 12	0. 20	<i>z</i> ⁵ G ₄ ^o - <i>f</i> ³ D ₃	1148	Pred	
5401. 260	3	18509. 05	9. 04	<i>z</i> ⁵ G ₅ ^o - <i>e</i> ⁵ H ₆	1146	Pred	
5308. 678	1	18831. 84	1. 75	<i>y</i> ⁵ F ₃ ^o - <i>f</i> ⁵ P ₃ ^o	1091	Pred	
5305. 397	0	18843. 49	3. 44	<i>b</i> ³ D ₁ ^o - <i>v</i> ⁵ P ₂ ^o	877	Pred ^b	
5300. 403	1	18861. 24	1. 22	<i>d</i> ³ F ₄ ^o - <i>s</i> ³ G ₃ ^o	1240	Pred	
5297. 142	2	18872. 85	2. 81	<i>b</i> ³ G ₄ ^o - <i>z</i> ⁵ H ₅ ^o	407	New	
5245. 717	3	19057. 87	7. 88	<i>a</i> ¹ P ₁ ^o - <i>z</i> ³ S ₁ ^o	715	Pred	
5238. 246	2	19085. 05	5. 04	<i>z</i> ³ F ₂ ^o - <i>e</i> ⁵ G ₃ ^o	962	Pred	
5234. 594	3	19098. 36	8. 54	<i>b</i> ³ H ₄ ^o - <i>x</i> ⁵ G ₂ ^o		New ^c	BK
5221. 046	1	19147. 92	7. 92	<i>b</i> ¹ D ₂ ^o -53785/3		New	U
5214. 616	3	19171. 53	1. 55	<i>b</i> ¹ D ₂ ^o - <i>v</i> ³ P ₁ ^o	1131	New	
5213. 827	1	19174. 43	4. 53	<i>z</i> ³ F ₃ ^o - <i>e</i> ⁵ G ₄ ^o	962	Pred	
5211. 216	2	19184. 04	4. 14	<i>a</i> ¹ P ₁ ^o - <i>y</i> ³ P ₂ ^o	716	New	
5209. 883	3	19188. 95	8. 91	<i>b</i> ³ H ₆ ^o - <i>y</i> ³ G ₂ ^o	584	Pred	
5207. 960	3	19196. 03	6. 10	<i>b</i> ³ D ₁ ^o - <i>x</i> ³ P ₁ ^o	880	SS	W, ZZ
5205. 372	1	19205. 58	5. 60	<i>b</i> ³ H ₄ ^o - <i>x</i> ⁵ G ₄ ^o		New	
5204. 953	2	19207. 12	7. 13	<i>b</i> ³ G ₄ ^o - <i>z</i> ⁵ H ₃ ^o	407	Pred ^b	
5197. 942	3	19233. 03	3. 09	<i>y</i> ⁵ F ₁ ^o - <i>f</i> ⁵ P ₁	1091	Pred	U
5174. 703	2	19319. 40	9. 56	<i>c</i> ³ P ₀ ^o - <i>w</i> ⁵ D ₁ ^o ?	465	New	
5157. 156	3 _n	19385. 13	5. 25	<i>X</i> ₅ -60564/3		New	U, W
5156. 599	2	19387. 23	7. 22	<i>z</i> ³ F ₃ ^o - <i>e</i> ⁷ F ₄	960	New	
5149. 492	1	19413. 98	3. 96	<i>z</i> ³ F ₂ ^o - <i>e</i> ⁵ G ₄ ^o	962	New	
5146. 322	3	19425. 94	6. 05	<i>z</i> ⁵ G ₄ ^o - <i>f</i> ³ F ₄	1150	Pred	BK

TABLE 3. *Classified faint lines of Fe I—Continued*

Wavelength Å	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
5143. 740	2n	19435. 69	5. 75	a ⁵ P ₂ -y ³ F ₃	65	Pred ^b	} BK, U
5123. 284	3n	19513. 29	3. 41	a ³ D ₂ -w ⁵ P ₃	629	New	
			3. 32	z ⁵ G ₃ -f ³ F ₃	1150	Pred	
			4. 29	a ¹ D ₂ -v ⁵ F ₃	745	Pred ^b	
5091. 722	2	19634. 25	4. 25	a ¹ P ₁ -u ⁵ D ₁	717	Pred	} ZZ
5088. 164	3	19647. 98	7. 99	y ⁵ D ₃ -h ⁵ D ₄	1066	SS	
5084. 549	1	19661. 95	1. 96	b ¹ G ₄ -v ³ G ₃	932	Pred	
5080. 928	3	19675. 96	5. 89	b ³ H ₅ -z ³ I ₆	585	Pred	
5052. 989	3	19784. 75	4. 83	b ³ H ₅ -z ³ I ₅	585	Pred	
5031. 180	1	19870. 51	0. 38	b ³ D ₂ -3 ³ ?	885	New	
5025. 768	3	19891. 91	2. 07	c ³ P ₁ -v ⁵ D ₂	466	New	
5025. 306	3	19893. 74	3. 69	z ³ P ₀ -f ³ D ₁ ?		New	
5021. 610	3	19908. 38	8. 42	y ⁵ F ₃ -e ⁵ H ₄	1093	Pred	BK, U
5019. 734	3	19915. 82	5. 81	z ³ F ₂ -g ⁵ D ₂	966	Pred	BK, U
5019. 216	1	19917. 88	8. 05	d ³ F ₂ -u ³ F ₂	1242	Pred	
5016. 494	3	19928. 68	8. 74	y ⁵ F ₃ -g ⁵ F ₂	1089	Pred	
5015. 310	3	19933. 39	3. 44	z ³ F ₂ -e ⁵ P ₂	968	Pred	
5012. 718	1	19943. 69	3. 84	y ⁵ F ₃ -e ⁵ H ₃	1093	Pred	W
5011. 234	2	19949. 60	9. 59	y ⁵ D ₁ -h ⁵ D ₂	1066	Pred	W
5007. 710	3	19963. 64	3. 53	b ¹ D ₂ -t ³ G ₃ ?		New	U
4995. 406	3	20012. 81	2. 83	z ³ P ₁ -f ⁵ G ₂	1113	Pred	
4992. 814	2	20023. 20	3. 27	z ³ P ₁ -g ⁵ F ₁	1110	Pred	BK
4991. 867	3	20027. 00	7. 03	y ⁵ F ₃ -e ³ G ₄	1094	Pred	U
4986. 921	3	20046. 86	6. 94	y ⁵ F ₃ -f ⁵ G ₂	1092	Pred	BK, U
4980. 278	3	20073. 60	3. 60	y ⁵ F ₃ -f ⁵ G ₁	1092	New	BK
4978. 117	3	20082. 31	2. 36	z ³ D ₁ -e ⁵ P ₁	986	Pred	
4942. 484	3	20227. 10	7. 22	y ⁵ F ₃ -e ³ H ₅	1097	New	U
4937. 328	3	20248. 22	8. 35	c ³ F ₃ -y ¹ F ₃	1039	New	
4912. 500	2	20350. 55	0. 50	c ³ F ₃ -x ¹ F ₃	1040	Pred ^b	
4908. 612	0	20366. 67	6. 68	a ³ P ₀ -x ⁵ D ₁	115	Pred	BK, U
4908. 056	3	20368. 98	9. 03	y ⁵ D ₁ -g ⁵ F ₁	1065	New	BK
4893. 680	1	20428. 82	8. 75	z ³ P ₂ -f ⁵ G ₂	1113	Pred	
4880. 548	2	20483. 78	3. 85	c ³ F ₄ -53358 ₃		New	
4877. 622	3	20496. 07	6. 13	z ⁷ P ₂ -e ⁵ D ₁	384	Pred	U
4876. 194	0	20502. 07	2. 11	a ³ D ₃ -y ³ P ₂	631	Pred	
4874. 355	3	20509. 81	9. 83	c ³ P ₁ -x ³ D ₂	467	Pred	
4873. 758	2	20512. 32	2. 41	a ³ D ₂ -w ³ D ₂	633	Pred	
4870. 081	3	20527. 81	7. 95	z ³ D ₂ -g ⁵ D ₁	985	Pred	
4869. 476	3	20530. 36	0. 47	a ¹ D ₂ -v ³ D ₃	751	Pred	
4868. 382	3	20534. 97	5. 01	a ³ F ₃ -y ⁵ D ₄	38	Pred	
4867. 563	1	20538. 42	8. 57	a ³ F ₂ -y ⁵ D ₃	38	Pred	U
4860. 988	3	20566. 20	6. 27	z ⁵ F ₃ -e ³ F ₁	688	SS	U, ZZ
4858. 274	3	20577. 69	7. 74	y ⁵ F ₃ -f ³ F ₃	1098	Pred	} BK
			7. 84	y ⁵ D ₂ -e ³ G ₃	1069	New	
4849. 655	2	20614. 26	4. 22	a ¹ H ₅ -y ³ H ₆	793	Pred	
4847. 699	0	20622. 58	2. 55	a ¹ D ₂ -3 ₃		New	
4838. 086	2	20663. 56	3. 55	a ³ D ₃ -u ⁵ D ₂	630	Pred	
4837. 662	0	20665. 37	5. 42	d ³ F ₃ -t ³ F ₃	1243	Pred	
4822. 684	1n	20729. 55	9. 65	a ³ D ₁ -w ³ D ₂	633	Pred	
4821. 028	0	20736. 67	6. 76	c ³ F ₄ -53610 ₄		New	Z
4815. 238	3	20761. 60	1. 71	a ¹ P ₁ -x ³ P ₂	720	Pred	
4805. 529	0n	20803. 55	3. 59	y ⁵ P ₁ -4 ₂	1207	New	
4802. 503	2n	20816. 66	6. 57	y ⁵ P ₂ -i ⁵ D ₂	1206	Pred	
4794. 353	2	20852. 04	2. 05	a ³ P ₁ -x ⁵ D ₁	115	Pred	BK, U
4793. 951	2	20853. 79	3. 77	a ¹ G ₄ -y ³ G ₄	512	(s)	W
4792. 537	2n	20859. 94	0. 03	y ⁵ F ₃ -e ³ H ₄	1097	New	
4790. 764	1	20867. 66	7. 75	a ³ D ₃ -x ³ F ₃	632	Pred	
4790. 542	0n	20868. 63	8. 58	y ⁵ D ₃ -f ⁵ G ₂	1068	Pred	BK, U

TABLE 3. *Classified faint lines of Fe I—Continued*

Wavelength Å	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
4782. 789	1 _n	20902. 46	2. 48	<i>b</i> ³ H ₆ — <i>z</i> ³ H ₅	588	Pred	
4780. 789	2	20911. 20	1. 11	<i>a</i> ³ D ₃ — <i>w</i> ³ D ₂	633	Pred	
4773. 496	0	20943. 15	3. 08	<i>b</i> ³ G ₃ — <i>x</i> ³ D ₃	408	Pred ^b	
4760. 050	1	21002. 31	2. 23	<i>z</i> ⁷ P ₂ — <i>e</i> ⁵ D ₁	384		U
4758. 689	1	21008. 32	8. 23	<i>c</i> ³ F ₄ —53882 ₄		New	
4749. 580	1	21048. 61	8. 55	<i>a</i> ³ F ₂ — <i>y</i> ⁵ D ₁	38	New	
4744. 615	1 _n	21070. 63	0. 55	<i>a</i> ⁵ F ₂ — <i>z</i> ⁵ P ₃	17	Pred	BK, U
4742. 920	1	21078. 16	8. 12	<i>y</i> ⁵ D ₃ — <i>e</i> ³ P ₂	1072	Pred	
4718. 410	1	21187. 65	7. 57	<i>c</i> ³ F ₃ — <i>t</i> ³ G ₃	1042	New	
4716. 816	0 _n	21194. 81	4. 69	<i>a</i> ³ D ₃ —1 ₂	634	Pred	
4702. 926	0	21257. 41	7. 44	<i>b</i> ³ H ₆ — <i>w</i> ⁵ G ₅		New	
4690. 367	1	21314. 33	4. 31	<i>a</i> ⁵ F ₁ — <i>z</i> ⁵ P ₂	17	Pred	BK, U
4685. 036	3	21338. 58	8. 62	<i>b</i> ³ P ₁ — <i>w</i> ⁵ F ₃	347	Pred	
4677. 572	2 _n	21372. 63	2. 58	<i>y</i> ⁵ D ₃ — <i>e</i> ³ P ₂	1072	Pred	
4674. 651	2	21385. 98	6. 01	<i>a</i> ³ F ₃ — <i>z</i> ³ P ₂	40	Pred	U
4665. 522	0	21427. 83	7. 68	<i>c</i> ³ F ₄ —13 ₁ ?	1044	Pred	
4653. 446	1	21483. 44	3. 53	<i>b</i> ³ H ₅ — <i>x</i> ³ G ₅	591	New	BK
4642. 624	1	21533. 51	3. 72	<i>z</i> ⁵ F ₃ — <i>e</i> ³ F ₂ ?	688	Pred	
4636. 672	1	21561. 16	1. 23	<i>a</i> ¹ G ₄ — <i>z</i> ³ I ₅	513	Pred	
4634. 170	1	21572. 80	2. 82	<i>b</i> ³ P ₂ — <i>w</i> ⁵ D ₁	346	New	
4628. 696	0	21598. 31	8. 34	<i>z</i> ⁵ P ₁ — <i>e</i> ⁷ F ₂	819	Pred	
4627. 532	2	21603. 74	3. 69	<i>b</i> ³ H ₄ — <i>w</i> ³ G ₅	593	New	
4605. 070	0	21709. 12	9. 00	<i>b</i> ³ P ₀ — <i>v</i> ⁵ D ₁	348	Pred	
4604. 850	0	21710. 15	0. 15	<i>a</i> ¹ I ₆ — <i>x</i> ³ H ₆	846	Pred	
4598. 728	1	21739. 05	9. 01	<i>z</i> ⁵ P ₂ — <i>e</i> ⁷ F ₁	819	Pred	
4591. 502	2 _n	21773. 26	3. 09	<i>a</i> ³ G ₃ — <i>w</i> ⁵ F ₁ ?		New	U
4583. 726	2	21810. 20	0. 27	<i>c</i> ³ P ₀ — <i>y</i> ³ P ₁	472	Pred	
4572. 849	2	21862. 08	2. 06	<i>z</i> ⁵ P ₃ — <i>e</i> ⁷ F ₂	819	(^a)	U, W
4571. 448	2	21868. 78	8. 83	<i>z</i> ⁷ F ₃ — <i>e</i> ⁵ D ₃	319	Pred	U
4561. 426	2	21916. 83	6. 78	<i>a</i> ³ G ₃ — <i>w</i> ⁵ F ₃		New	U
4546. 477	1	21988. 89	8. 96	<i>c</i> ³ F ₂ — <i>w</i> ¹ D ₃	1047	Pred	
4541. 319	2	22013. 86	3. 87	<i>a</i> ³ D ₃ — <i>v</i> ⁵ F ₂	640	New	BK, U
4540. 651	1	22017. 10	7. 07	<i>b</i> ³ G ₄ — <i>z</i> ³ I ₅	411	New	U
4533. 953	1	22049. 63	9. 59	<i>b</i> ³ G ₅ — <i>x</i> ⁵ G ₁	410	New	
4520. 240	2	22116. 52	6. 52	<i>c</i> ³ P ₁ — <i>u</i> ⁵ D ₃	471	(^{a,c})	BK, Z
4518. 583	2	22124. 63	4. 67	<i>a</i> ⁵ P ₁ — <i>y</i> ⁷ P ₃	69	Pred	
4516. 265	1	22135. 98	5. 98	<i>z</i> ⁵ P ₃ — <i>e</i> ⁷ F ₄	819	Pred	U
4515. 146	2	22141. 47	1. 37	<i>z</i> ⁷ F ₃ — <i>e</i> ⁵ D ₂	319	SS	U, ZZ
4513. 713	1	22148. 50	8. 48	<i>b</i> ³ F ₃ — <i>y</i> ⁵ G ₁	213	Pred ^b	U
4507. 232	1	22180. 34	0. 48	<i>c</i> ³ P ₀ — <i>w</i> ³ D ₁	474	New ^c	
4487. 748	1	22276. 64	6. 68	<i>b</i> ³ H ₆ — <i>z</i> ¹ H ₅	594	Pred	U
4483. 771	1	22296. 40	6. 36	<i>b</i> ³ D ₅ — <i>u</i> ³ G ₄	898	Pred	U
4474. 722	1	22341. 49	1. 51	<i>c</i> ³ F ₃ — <i>w</i> ¹ D ₃	1047	New	
4473. 004	0	22350. 07	0. 24	<i>z</i> ⁷ F ₁ — <i>e</i> ⁵ D ₀ ?	319	New	
4463. 147	2	22399. 43	9. 46	<i>c</i> ³ P ₁ — <i>u</i> ⁵ D ₀	471	Pred	U
			9. 38	<i>b</i> ³ D ₂ —7 ₂	901	Pred ^b	
4453. 325	2	22448. 83	9. 03	<i>z</i> ⁵ D ₁ — <i>e</i> ³ F ₂	555	New	
4452. 616	1 _n	22452. 40	2. 42	<i>z</i> ³ F ₃ — <i>g</i> ⁵ F ₂	969	Pred	U
4450. 765	2	22461. 74	1. 75	<i>z</i> ³ F ₁ — <i>f</i> ⁵ G ₄	972	Pred	U
4443. 885	1	22496. 52	6. 37	<i>b</i> ³ F ₄ — <i>y</i> ⁵ G ₃ ?	213	New	
4437. 695	1	22527. 90	7. 90	<i>a</i> ³ G ₅ — <i>w</i> ⁵ F ₅		New	
4428. 554	2	22574. 40	4. 34	<i>z</i> ³ F ₃ — <i>e</i> ³ G ₃	973	Pred	U
4419. 790	0	22619. 16	9. 22	<i>a</i> ³ D ₂ — <i>w</i> ³ F ₃	644	Pred	
4419. 076	2 _n	22622. 81	2. 64	<i>z</i> ³ G ₅ — <i>g</i> ⁵ G ₆ ?	1170	New	
4417. 334	1 _n	22631. 73	1. 89	<i>z</i> ⁵ D ₁ — <i>e</i> ³ F ₃	555	New	
4407. 230	3	22683. 62	3. 62	<i>z</i> ⁵ P ₃ — <i>e</i> ³ D ₂	827	New	U

TABLE 3. *Classified faint lines of Fe I—Continued*

Wavelength A	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
4393. 014	0	22757. 02	{ 6. 85	<i>a</i> ¹ D ₂ — <i>t</i> ⁵ D _{3/2} ?		New	
4391. 865	1	22762. 98	{ 6. 97	<i>c</i> ³ P ₂ — <i>x</i> ³ F ₃	473	Pred	
4370. 982	1	22871. 73	{ 2. 95	<i>z</i> ³ D ₃ — <i>f</i> ³ D ₁	992	Pred	
4350. 972	1	22976. 91	{ 1. 68	<i>a</i> ⁵ P ₃ — <i>y</i> ⁷ P ₄	69	Pred ^b	
4341. 802	0 <i>n</i>	23025. 44	{ 6. 81	<i>b</i> ³ H ₄ — <i>y</i> ³ H ₃	597	New	
			{ 5. 46	<i>a</i> ¹ D ₂ — <i>t</i> ⁵ D _{3/2}		New	
4341. 248	1	23028. 38	{ 8. 48	<i>z</i> ⁵ F ₃ — <i>f</i> ⁵ D ₄	691	Pred	U
4340. 490	1	23032. 40	{ 2. 30	<i>z</i> ⁵ F ₃ — <i>f</i> ⁵ D ₂	691	} (a)	U, W
4330. 812	1	23083. 87	{ 2. 43	<i>a</i> ³ G ₃ — <i>x</i> ³ D ₂	272		
4319. 433	1 <i>n</i>	23144. 68	{ 3. 92	<i>c</i> ³ P ₂ —1 ₂	475		Pred
4310. 363	1	23193. 38	{ 4. 62	<i>b</i> ³ F ₂ — <i>w</i> ⁵ D _{3/2}	214	Pred	BK, U
			{ 3. 34	<i>z</i> ³ D ₂ — <i>e</i> ³ P ₂	994	Pred	U
4305. 128	1	23221. 58	{ 1. 57	<i>a</i> ³ G ₄ — <i>x</i> ³ D _{3/2}	272	Pred ^b	
4304. 878	0 <i>n</i>	23222. 93	{ 2. 98	<i>a</i> ¹ D ₂ — <i>u</i> ⁵ F _{3/2}	756	Pred ^b	} BK, U
4304. 165	0	23226. 78	{ 2. 97	<i>b</i> ³ H ₄ — <i>v</i> ³ G ₃	598	Pred ^b	
4300. 205	1 <i>n</i>	23248. 16	{ 6. 88	<i>a</i> ³ D ₂ — <i>v</i> ³ G ₃	647	Pred ^b	
4292. 136	1	23291. 87	{ 8. 18	<i>z</i> ³ F ₄ — <i>e</i> ³ H ₄	975	Pred	
			{ 1. 72	<i>b</i> ³ F ₃ — <i>w</i> ⁵ F ₃	215	New	} BK, U
			{ 1. 92	<i>a</i> ⁵ P ₃ — <i>x</i> ⁵ F ₃	70	Pred	
4289. 924	2	23303. 88	{ 3. 96	<i>z</i> ⁵ F ₃ — <i>f</i> ⁵ D ₂	691	New	U
4286. 872	1 <i>n</i>	23320. 47	{ 0. 55	<i>z</i> ⁵ F ₃ — <i>f</i> ⁵ D ₁	691	New	} V, Z
4283. 384	1 <i>n</i>	23339. 46	{ 0. 66	<i>a</i> ³ H ₄ — <i>z</i> ⁵ H ₄	172	New	
4277. 389	1 <i>n</i>	23372. 17	{ 9. 40	<i>b</i> ³ F ₂ — <i>w</i> ⁵ F ₁	215	Pred	
4275. 688	2 <i>n</i>	23381. 47	{ 2. 16	<i>b</i> ³ F ₂ — <i>w</i> ⁵ D ₁	214	Pred	BK, U
			{ 1. 41	<i>b</i> ³ F ₁ — <i>w</i> ⁵ F ₄	215	(a)	U
4273. 335	1 <i>n</i>	23394. 34	{ 4. 19	<i>a</i> ³ H ₆ — <i>y</i> ⁵ G ₆ ?	171	New ^c	U, W
4259. 332	0	23471. 25	{ 1. 22	<i>b</i> ³ G ₁ — <i>w</i> ⁵ G ₁	416	Pred	
4256. 289	1	23488. 03	{ 7. 91	<i>a</i> ³ H ₅ — <i>z</i> ⁵ H ₄	172	Pred	U
4253. 933	1	23501. 04	{ 1. 06	<i>b</i> ³ D ₂ —8 ₁	905	Pred	Z
4246. 540	2	23541. 96	{ 1. 68	<i>z</i> ⁵ F ₁ — <i>e</i> ⁷ F ₁ ?	689	SS	U, ZZ
4243. 560	2	23558. 49	{ 8. 57	<i>b</i> ¹ G ₄ —53358 ₃		New	U
4239. 375	3	23581. 74	{ 1. 82	<i>b</i> ³ D ₃ —8 ³ D ₃	907	Pred	U
4237. 675	1	23591. 20	{ 1. 24	<i>b</i> ³ G ₃ — <i>v</i> ⁵ F ₄	418	Pred	
4228. 705	1 <i>n</i>	23641. 24	{ 1. 22	<i>z</i> ⁵ F ₄ — <i>f</i> ⁷ D ₄	690	SS	U, ZZ
4223. 722	2	23669. 13	{ 9. 12	<i>b</i> ³ G ₅ — <i>z</i> ¹ G ₄	417	Pred	
4220. 034	1	23689. 82	{ 9. 74	<i>z</i> ³ D ₃ — <i>e</i> ³ P ₁	994	Pred	U
4197. 088	2	23819. 33	{ 9. 30	<i>a</i> ⁵ F ₂ — <i>z</i> ³ F ₃	18	Pred	U
4194. 479	1	23834. 15	{ 4. 07	<i>a</i> ³ G ₄ — <i>x</i> ⁵ G ₄	274	Pred	BK, U
4188. 729	2 <i>n</i>	23866. 86	{ 7. 01	<i>z</i> ³ P ₃ — <i>i</i> ⁵ D ₃	1116	New	U
4181. 210	1 <i>n</i>	23909. 78	{ 9. 89	<i>b</i> ³ D ₁ — <i>z</i> ¹ P ₁	908	Pred	U
4180. 404	1	23914. 39	{ 4. 36	<i>a</i> ³ G ₄ — <i>x</i> ⁵ G ₃	274	Pred	BK, U
4167. 960	1	23985. 79	{ 5. 67	<i>b</i> ³ D ₃ —53358 ₃ ?		New	V
4149. 759	3	24090. 99	{ 1. 00	<i>a</i> ⁵ D ₃ — <i>z</i> ⁷ P ₂	3	SS	U, ZZ
4140. 240	1	24146. 38	{ 6. 39	<i>b</i> ³ G ₅ — <i>v</i> ⁵ F ₄	418	Pred ^b	
4137. 980	1	24159. 57	{ 9. 63	<i>z</i> ⁷ F ₅ — <i>e</i> ⁵ F ₅	320	Pred	U
4137. 456	1	24162. 63	{ 2. 85	<i>y</i> ⁵ F ₂ — <i>g</i> ⁵ G ₃	1103	Pred	U
4134. 202	1 <i>N</i>	24181. 64	{ 1. 72	<i>b</i> ³ F ₂ — <i>x</i> ³ D ₃	217	Pred	
4129. 474	1	24209. 33	{ 9. 44	<i>z</i> ⁵ F ₃ — <i>f</i> ⁵ F ₃	695	Pred	U
4124. 490	1	24238. 58	{ 8. 58	<i>b</i> ³ D ₃ —53610 ₂		New	U
4112. 094	1	24311. 65	{ 1. 72	<i>a</i> ¹ D ₂ — <i>v</i> ³ P ₂	766	Pred	U
4108. 129	1	24335. 11	{ 5. 13	<i>z</i> ⁵ D ₃ — <i>e</i> ⁷ P ₄	559	Pred	U
4104. 460	1	24356. 87	{ 6. 89	<i>b</i> ³ G ₄ — <i>w</i> ³ G ₃	422	Pred	U
4103. 620	2	24361. 85	{ 1. 86	<i>a</i> ³ D ₃ — <i>z</i> ¹ F ₃	650	Pred	U
4095. 642	1	24409. 31	{ 9. 40	<i>a</i> ¹ I ₆ — <i>y</i> ¹ H ₃	851	Pred	
4095. 252	1 <i>N</i>	24411. 63	{ 1. 57	<i>y</i> ⁵ D ₂ —4 ₂	1075	Pred	

TABLE 3. Classified faint lines of Fe I—Continued

Wavelength Å	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
4092. 287	1	24429. 32	9. 34	<i>b</i> ³ D ₁ —53749 ₂		New	J
4090. 326	1	24441. 03	1. 00	<i>a</i> ³ F ₂ — <i>y</i> ⁵ F ₁	44	Pred	BK, U
4079. 214	3 <i>N</i>	24507. 61	7. 85	<i>z</i> ⁵ F ₂ — <i>e</i> ⁵ P ₂	700	Pred	BK, U
4078. 822	1	24509. 96	0. 05	<i>b</i> ³ D ₁ —53882 ₄		New	BK
4070. 422	0	24560. 54	0. 39	<i>a</i> ¹ G ₄ — <i>v</i> ³ D ₃ ⁹	525	Pred ^b	
4070. 010	0	24563. 03	3. 03	<i>z</i> ⁷ F ₂ — <i>e</i> ⁵ F ₃	320	New	BK
4057. 654	1	24637. 82	7. 82	<i>a</i> ¹ P ₁ — <i>t</i> ³ D ₁	729	Pred	U
4036. 370	1	24767. 74	7. 78	<i>a</i> ³ G ₃ — <i>w</i> ³ D ₃	279	Pred	BK, U
4031. 727	2	24796. 26	6. 28	<i>b</i> ³ G ₃ — <i>v</i> ³ D ₃	427	Pred	U
4022. 212	1 <i>n</i>	24854. 92	4. 93	<i>b</i> ³ P ₂ — <i>w</i> ⁵ G ₃	360	New	BK, U, W
4001. 212	1 <i>N</i>	24985. 36	5. 54	<i>b</i> ³ D ₃ —54357 ₃		New	BK, U
3998. 743	0	25000. 79	0. 62	<i>b</i> ³ D ₂ —54357 ₃		New	
3996. 779	1	25013. 08	3. 04	<i>y</i> ⁵ D ₃ — <i>g</i> ⁵ G ₄	1074	Pred	U
3996. 261	1 <i>n</i>	25016. 32	6. 36	<i>z</i> ⁵ D ₀ — <i>e</i> ⁷ G ₁	561	Pred	U
3992. 634	1	25039. 04	6. 23	<i>b</i> ³ G ₄ — <i>v</i> ³ D ₃	427	Pred	U
			9. 01	<i>b</i> ³ F ₃ — <i>x</i> ⁵ G ₃	219	Pred	BK, U
3989. 006	1 <i>N</i>	25061. 81	1. 93	<i>a</i> ¹ H ₅ —53882 ₄		New	Z
3984. 930	1	25087. 45	7. 47	<i>z</i> ⁵ D ₁ — <i>e</i> ⁷ G ₁	561	Pred	Z
3984. 446	1	25090. 50	0. 46	<i>b</i> ³ F ₃ — <i>x</i> ⁵ G ₂	219	Pred	BK
3980. 008	1	25118. 47	8. 56	<i>b</i> ³ G ₃ —49457 ₄ ²		New	U
3970. 994	1	25175. 49	5. 54	<i>y</i> ⁵ D ₄ — <i>g</i> ⁵ G ₅	1074	Pred	U
3963. 438	1	25223. 48	3. 58	<i>a</i> ³ D ₁ — <i>t</i> ⁵ D ₂	654	Pred ^b	U
3962. 635	0 <i>N</i>	25228. 60	8. 49	<i>b</i> ³ D ₃ — <i>t</i> ³ G ₃	913	Pred	
3953. 512	2	25286. 81	6. 93	<i>a</i> ¹ D ₂ —10 ₃	770	Pred ^b	U
3951. 638	1 <i>N</i>	25298. 80	8. 83	<i>b</i> ³ P ₀ — <i>v</i> ⁵ F ₁	362	New	U
3948. 458	1	25319. 18	9. 06	<i>z</i> ⁵ D ₄ — <i>e</i> ⁵ G ₃	560	Pred	BK
3930. 876	0 <i>N</i>	25432. 42	2. 46	<i>a</i> ³ H ₄ — <i>x</i> ³ D ₃ [?]		New	U
3922. 100	1 <i>N</i>	25489. 33	9. 51	<i>z</i> ⁷ D ₁ — <i>e</i> ⁵ D ₁	153	Pred	U
			9. 44	<i>z</i> ⁵ D ₀ — <i>e</i> ³ D ₁	564	Pred	BK, U
3908. 691	1 <i>N</i>	25576. 77	6. 84	<i>z</i> ⁷ D ₃ — <i>e</i> ⁵ D ₂	153	Pred	BK
3892. 302	1	25684. 46	4. 48	<i>a</i> ¹ D ₂ —54289 ₃		New	U
3889. 284	1 <i>N</i>	25704. 39	4. 46	<i>a</i> ³ G ₅ — <i>w</i> ⁵ G ₅	280	New	U
3847. 226	1 <i>N</i>	25985. 38	5. 44	<i>b</i> ³ H ₄ — <i>w</i> ³ H ₅	607	New	
3847. 077	1 <i>N</i>	25986. 39	6. 28	<i>z</i> ⁵ F ₂ — <i>h</i> ⁵ D ₃	702	New	BK, U
3842. 901	2	26014. 63	4. 69	<i>b</i> ³ F ₃ — <i>x</i> ³ F ₄	222	Pred	BK, Z
3819. 497	2 <i>N</i>	26174. 03	4. 02	<i>z</i> ⁵ F ₃ — <i>f</i> ⁵ P ₂	703	Pred	Z
3816. 908	1	26191. 78	1. 74	<i>z</i> ⁷ P ₂ — <i>f</i> ⁵ D ₂	387	Pred	U
3814. 785	1	26206. 36	6. 39	<i>a</i> ¹ P ₁ —53749 ₂		New	Z
3811. 808	0	26226. 83	6. 88	<i>z</i> ⁵ F ₄ — <i>g</i> ⁵ F ₄	701	Pred	BK, U
3803. 220	1 <i>N</i>	26286. 05	5. 91	<i>a</i> ³ P ₂ — <i>v</i> ⁵ D ₂	122	Pred	U
3801. 337	1	26299. 07	8. 89	<i>b</i> ¹ G ₄ — <i>s</i> ³ G ₃	948	New	Z
3789. 808	1 <i>N</i>	26379. 07	9. 04	<i>z</i> ⁵ F ₄ — <i>h</i> ⁵ D ₃	702	Pred	Z
3789. 292	0	26382. 66	2. 57	<i>a</i> ³ P ₂ — <i>v</i> ⁵ D ₁	122	New	
3784. 127	3 <i>n</i>	26418. 67	8. 86	<i>b</i> ³ D ₃ — <i>w</i> ¹ F ₃	917	New	U
3771. 473	2	26507. 31	7. 13	<i>b</i> ³ H ₆ — <i>w</i> ³ H ₅	607	Pred	BK, Z
3769. 766	0	26519. 31	9. 15	<i>z</i> ⁵ F ₅ — <i>g</i> ⁵ F ₄	701	New	
3759. 597	1 <i>n</i>	26591. 04	1. 16	<i>z</i> ⁵ F ₁ — <i>g</i> ⁵ F ₂	701	New	U
3751. 087	2	26651. 36	1. 42	<i>a</i> ⁵ P ₂ — <i>w</i> ⁵ F ₁	74	Pred ^d	Z
3743. 778	2	26703. 39	3. 40	<i>a</i> ³ G ₄ — <i>y</i> ¹ G ₄	290	SS	Z, ZZ
3742. 151	2 <i>n</i>	26715. 00	5. 08	<i>z</i> ³ F ₃ — <i>g</i> ⁵ G ₄	978	Pred	U
3741. 486	1 <i>n</i>	26719. 75	9. 80	<i>z</i> ⁵ F ₁ — <i>g</i> ⁵ F ₁	701	New	BK, Z
3739. 527	3	26733. 75	3. 80	<i>a</i> ³ D ₃ —53358 ₃		New	J
3707. 578	1 <i>n</i>	26964. 11	4. 23	<i>z</i> ³ F ₂ — <i>g</i> ⁵ G ₅	978	New	Z
3707. 458	2	26964. 99	4. 96	<i>b</i> ³ F ₄ — <i>v</i> ⁵ F ₅	229	New	Z
3707. 335	1	26965. 88	5. 85	<i>b</i> ³ G ₃ — <i>v</i> ³ F ₄	437	New	U
3699. 004	0	27026. 61	6. 50	<i>b</i> ³ G ₃ — <i>v</i> ³ F ₃	437	New	
3698. 148	1 <i>n</i>	27032. 87	2. 84	<i>z</i> ⁷ P ₂ — <i>e</i> ⁷ G ₂	390	New	W, Z

TABLE 3. *Classified faint lines of Fe I—Continued*

Wavelength Å	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
3698. 018	1	27033. 82	3. 77	<i>a</i> ⁵ P ₂ - <i>v</i> ⁵ D ₁ [†]	75	Pred	U
3696. 548	1 <i>n</i>	27044. 57	4. 45	<i>a</i> ¹ G ₄ - <i>u</i> ⁵ F ₃ [‡]	530	New	
3691. 180	0	27083. 90	3. 95	<i>b</i> ³ F ₂ - <i>v</i> ⁵ F ₃ [‡]	229	Pred	Z
3689. 010	1	27099. 83	9. 81	<i>a</i> ³ H ₅ - <i>v</i> ⁵ D ₄ [‡]	178	Pred ^b	U
3688. 198	1	27105. 80	5. 87	<i>b</i> ³ H ₄ -53734 ₃ [‡]		New	U
3684. 552	1	27132. 62	2. 50	<i>a</i> ³ D ₃ -53358 ₃ [‡]		New	
3681. 227	2	27157. 12	7. 10	<i>b</i> ³ H ₄ -53785 ₃ [‡]		New	Z
3677. 503	2	27184. 62	4. 64	<i>a</i> ³ D ₂ - <i>v</i> ³ P ₁ [†]	666	New ^d	V, Z
3675. 694	1 <i>n</i>	27198. 00	8. 12	<i>z</i> ⁷ P ₂ - <i>f</i> ⁵ F ₂ [‡]	391	New	Z
3675. 434	1	27199. 93	9. 88	<i>b</i> ³ F ₂ - <i>v</i> ⁵ F ₂ [‡]	229	Pred	U
3671. 689	2	27227. 67	7. 64	<i>a</i> ³ G ₃ - <i>z</i> ¹ D ₂ [‡]		New	Z
3666. 846	1 <i>n</i>	27263. 63	3. 65	<i>z</i> ⁷ P ₃ - <i>g</i> ⁵ D ₃ [‡]	393	Pred	
3666. 574	0	27265. 65	5. 69	<i>b</i> ³ F ₂ - <i>x</i> ³ P ₂ [‡]	235	New	U
3660. 402	2	27311. 62	1. 60	<i>b</i> ³ F ₂ - <i>v</i> ⁵ F ₁ [†]	229	Pred	
3656. 227	2	27342. 81	2. 90	<i>a</i> ³ D ₁ -53749 ₂ [‡]		New	V
3655. 354	1	27349. 34	9. 40	<i>a</i> ³ P ₁ - <i>y</i> ³ P ₁ [†]	131	Pred	U
3653. 352	1 <i>n</i>	27364. 33	4. 38	<i>b</i> ³ F ₃ - <i>v</i> ⁵ F ₂ [‡]	229	Pred	
3652. 256	1 <i>n</i>	27372. 54	4. 37	<i>z</i> ⁷ F ₃ - <i>e</i> ⁷ P ₄ [‡]	324	Pred	U
3650. 554	2 <i>n</i>	27385. 30	2. 53	<i>c</i> ³ P ₂ - <i>y</i> ¹ D ₂ [‡]	494	Pred	U
3643. 812	2 <i>n</i>	27435. 97	5. 41	<i>a</i> ³ D ₃ -53610 ₂ [‡]		New	W, Z
			5. 91	<i>a</i> ³ F ₂ - <i>x</i> ⁵ D ₁ [†]	46		
			6. 10	<i>a</i> ³ D ₃ - <i>y</i> ¹ F ₃ [‡]	670	SS	Z, ZZ
3641. 454	2	27453. 73	3. 82	<i>z</i> ⁷ F ₁ - <i>f</i> ⁵ D ₂ [‡]	323	Pred	
3637. 044	2	27487. 02	7. 00	<i>b</i> ³ G ₃ - <i>u</i> ³ G ₃ [‡]	438	Pred	BK
3636. 496	2 <i>n</i>	27491. 16	1. 25	<i>z</i> ³ D ₃ - <i>g</i> ⁵ F ₂ [‡]	568	Pred	
3633. 087	3 <i>n</i>	27516. 96	1. 13	<i>a</i> ³ F ₃ - <i>y</i> ⁷ P ₂ [‡]	47	Pred	BK, Z
3628. 806	2	27549. 42	7. 13	<i>z</i> ⁷ F ₄ - <i>e</i> ⁷ G ₅ [‡]	390	SS	Z, ZZ
			9. 37	<i>b</i> ³ G ₄ - <i>u</i> ³ G ₄ [‡]	438	Pred	Z
3624. 056	1	27585. 53	5. 55	<i>z</i> ⁵ D ₂ - <i>f</i> ⁵ P ₁ [†]	570	Pred	Z
3620. 880	2 <i>n</i>	27609. 72	9. 76	<i>z</i> ⁷ F ₀ - <i>f</i> ⁵ D ₁ [†]	323	Pred	
			9. 82	<i>b</i> ³ H ₄ - <i>t</i> ³ G ₄ [‡]	611	Pred	BK, U
3619. 628	1	27619. 27	9. 03	<i>a</i> ³ P ₁ - <i>u</i> ⁵ D ₀ [‡]	130	Pred	BK, U
3618. 285	3	27629. 52	9. 44	<i>z</i> ⁷ F ₂ - <i>e</i> ⁷ P ₄ [‡]	324	Pred	BK, Z
3618. 160	2	27630. 48	0. 34	<i>b</i> ³ G ₃ - <i>u</i> ³ D ₃ [‡]		New	
3617. 946	3	27632. 11	1. 95	<i>a</i> ³ H ₄ - <i>w</i> ⁵ G ₂ [‡]	181	Pred	U
3616. 162	3	27645. 74	5. 88	<i>z</i> ⁵ D ₄ - <i>h</i> ⁵ D ₃ [‡]	569	SS	Z, ZZ
3615. 959	1	27647. 30	7. 38	<i>a</i> ³ D ₂ - <i>t</i> ⁵ P ₁ [†]		New	BK, U, W
3615. 024	0	27654. 45	4. 62	<i>z</i> ⁷ D ₅ - <i>e</i> ⁵ F ₅ [‡]	154	Pred	
3614. 711	3	27656. 84	6. 88	<i>a</i> ³ D ₃ -53882 ₄ [‡]		New	BK
3614. 109	1	27661. 45	1. 45	<i>b</i> ³ H ₄ -54289 ₃ [‡]		New	BK
3613. 950	0	27662. 66	2. 69	<i>b</i> ³ H ₅ -12 ₅ [‡]	612	Pred	
3613. 711	1	27664. 49	4. 49	<i>a</i> ³ H ₄ - <i>z</i> ¹ G ₄ [‡]		New	
3613. 612	2	27665. 25	5. 36	<i>a</i> ³ D ₂ -54289 ₃ [‡]		New	Z
3613. 459	3	27666. 42	6. 51	<i>a</i> ³ D ₃ -10 ₃ [‡]	672	Pred	BK, Z
3612. 510	3	27673. 69	3. 72	<i>b</i> ³ H ₄ -13 ₄ [‡]	613a	Pred	Z
3610. 410	1	27689. 79	9. 93	<i>c</i> ³ F ₄ -60564 ₃ [‡] ?		New	
3609. 486	2	27696. 88	7. 10	<i>z</i> ⁷ F ₃ - <i>f</i> ⁷ D ₄ [‡]	322	Pred	
3606. 504	3	27719. 78	9. 60	<i>a</i> ³ P ₁ - <i>w</i> ³ D ₁ [†]	133	Pred	
3606. 363	2	27720. 86	0. 78	<i>b</i> ³ F ₄ - <i>w</i> ³ G ₄ [‡]	233	Pred	U
3605. 206	1	27729. 76	9. 76	<i>b</i> ³ H ₄ -54357 ₃ [‡]		New	BK
3604. 701	2	27733. 64	3. 67	<i>a</i> ³ D ₂ -54357 ₃ [‡]		New	BK
3603. 673	2	27741. 55	1. 49	<i>b</i> ³ F ₄ - <i>z</i> ¹ H ₅ [‡]		New	
			1. 59	<i>a</i> ³ G ₃ -49457 ₄ [‡]		New	U
3602. 774	1	27748. 47	8. 53	<i>b</i> ³ P ₂ - <i>z</i> ¹ F ₃ [‡]	370	Pred ^b	U
3601. 429	1 <i>n</i>	27758. 84	8. 92	<i>a</i> ³ P ₂ - <i>w</i> ⁵ P ₃ [‡]	127	Pred	BK, U

TABLE 3. *Classified faint lines of Fe I—Continued*

Wavelength Å	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
3593. 764	0 _n	27818. 04	7. 82	<i>a</i> ³ H ₄ - <i>v</i> ⁵ F ₆ ^o	182	Pred	
3591. 998	0	27831. 72	1. 73	<i>a</i> ³ H ₅ - <i>z</i> ¹ G ₄ ^o		New	
3589. 586	2	27850. 42	0. 29	<i>b</i> ³ G ₄ - <i>u</i> ³ D ₃ ^o		New	Z
3588. 516	3	27858. 72	8. 69	<i>z</i> ⁷ P ₃ - <i>e</i> ⁷ S ₃ ^o	394	Pred	BK, U
3587. 752	3	27864. 65	4. 62	<i>a</i> ³ D ₁ - <i>t</i> ⁵ P ₁ ^o		New	J
3586. 740	3 _n	27872. 52	2. 51	<i>z</i> ⁷ F ₆ - <i>e</i> ⁵ G ₆ ^o	325	SS	Z, ZZ
3582. 324	2 _n	27906. 87	6. 77	<i>z</i> ⁵ D ₁ - <i>g</i> ⁵ F ₁ ^o	568	Pred	BK, U
3579. 829	1	27926. 32	6. 38	<i>z</i> ⁵ D ₃ - <i>e</i> ³ G ₄ ^o	573	Pred	BK, Z
3575. 754	1	27958. 15	8. 16	<i>b</i> ³ G ₃ - <i>u</i> ³ D ₂ ^o		New	
3574. 364	0	27969. 02	9. 03	<i>a</i> ³ H ₅ - <i>w</i> ⁵ G ₄ ^o	181	Pred ^b	
3574. 256	1	27969. 86	9. 94	<i>z</i> ⁵ D ₁ - <i>f</i> ³ D ₁ ^o	574	New	
3567. 748	1	28020. 88	0. 99	<i>z</i> ⁵ D ₃ - <i>f</i> ⁵ G ₃ ^o	571	New	Z
3564. 533	3	28046. 16	6. 34	<i>a</i> ³ H ₄ - <i>x</i> ³ G ₃ ^o	183	Pred	BK, Z
3563. 618	1	28053. 36	3. 48	<i>z</i> ⁷ F ₆ - <i>e</i> ⁵ G ₅ ^o	325	Pred	U
3562. 269	1 _n	28063. 98	4. 06	<i>a</i> ³ D ₃ -54289 ₃ ^o		New	
3560. 076	1	28081. 27	1. 37	<i>z</i> ⁷ F ₃ - <i>e</i> ⁷ F ₄ ^o	321	Pred	
3551. 114	1	28152. 14	2. 18	<i>z</i> ⁷ F ₄ - <i>e</i> ⁷ F ₅ ^o	321	Pred	BK, Z
3530. 976	1	28312. 69	2. 76	<i>a</i> ³ P ₀ - <i>v</i> ⁵ F ₁ ^o	138	New	U
3528. 942	1	28329. 01	9. 06	<i>a</i> ⁵ F ₅ - <i>z</i> ⁵ G ₄ ^o	23	Pred ^b	
3528. 316	0	28334. 03	4. 07	<i>a</i> ³ F ₃ - <i>z</i> ⁵ S ₂ ^o ?		New	
3528. 233	1	28334. 70	4. 69	<i>a</i> ³ H ₄ - <i>v</i> ⁵ F ₃ ^o	182	Pred	U
3515. 404	1	28438. 10	8. 08	<i>b</i> ³ F ₂ - <i>z</i> ¹ D ₂ ^o	243	Pred	U
3509. 736	3	28484. 02	4. 14	<i>z</i> ⁷ F ₀ - <i>f</i> ⁵ F ₁ ^o	327	Pred	U
3507. 139	3	28505. 12	5. 13	<i>z</i> ⁵ P ₂ - <i>i</i> ⁵ D ₂ ^o	835	Pred	Z
3502. 853	1	28539. 99	0. 01	<i>z</i> ⁵ D ₂ - <i>e</i> ³ P ₂ ^o	577	Pred ^b	
3500. 164	2	28561. 92	2. 03	<i>z</i> ⁷ F ₂ - <i>f</i> ⁵ F ₁ ^o	327	New	U
3498. 755	2	28573. 42	3. 47	<i>z</i> ⁷ F ₄ - <i>e</i> ⁷ S ₃ ^o	330	New	W, Z
3487. 138	0	28668. 61	8. 49	<i>c</i> ³ F ₃ -62081 ₂ ^o ?		New	
3481. 292	1	28716. 75	6. 75	<i>c</i> ³ P ₀ - <i>v</i> ³ P ₁ ^o	499	New	
3473. 303	2	28782. 80	2. 84	<i>a</i> ¹ G ₄ -53358 ₃ ^o		New	V
3473. 015	0 _n	28785. 18	5. 27	<i>z</i> ⁵ D ₂ - <i>f</i> ³ F ₃ ^o	576	Pred	BK, U
3469. 278	0	28816. 19	6. 22	<i>b</i> ³ F ₄ -49457 ₄ ^o ?		New	
3467. 686	1	28829. 42	9. 43	<i>b</i> ³ G ₅ - <i>w</i> ³ H ₅ ^o	442	New	
3456. 374	1 _n	28923. 77	3. 76	<i>b</i> ³ P ₂ - <i>x</i> ¹ D ₂ ^o	375	New	
3448. 190	1	28992. 41	2. 43	<i>a</i> ³ H ₆ - <i>z</i> ¹ H ₃ ^o	186	Pred	
3434. 960	1 _n	29104. 08	4. 15	<i>a</i> ¹ D ₂ - <i>t</i> ³ F ₃ ^o	776	Pred	
3429. 808	1	29147. 79	7. 75	<i>a</i> ¹ G ₄ - <i>y</i> ¹ H ₃ ^o	540	Pred	
3418. 905	1	29240. 74	0. 62	<i>b</i> ³ F ₂ - <i>w</i> ³ P ₂ ^o	244	Pred	
3414. 564	1	29277. 92	7. 92	<i>z</i> ⁷ P ₂ - <i>f</i> ³ D ₃ ^o		New	W, Z
3410. 581	0 _n	29312. 11	2. 35	<i>b</i> ³ H ₄ - <i>s</i> ³ G ₄ ^o ?		New	U
				<i>b</i> ³ F ₃ - <i>w</i> ³ P ₂ ^o	244	Pred	
3409. 605	1	29320. 50	0. 66	<i>a</i> ³ H ₄ - <i>w</i> ³ F ₁ ^o	188	New	U
3401. 007	1	29394. 62	4. 71	<i>b</i> ³ G ₃ -53734 ₃ ^o		New	U
3400. 662	1	29397. 60	7. 71	<i>c</i> ³ P ₂ -53734 ₃ ^o		New	BK, U
3395. 080	1	29445. 94	5. 94	<i>b</i> ³ G ₃ -53785 ₃ ^o		New	V
3393. 623	2	29458. 58	8. 60	<i>b</i> ³ P ₂ - <i>u</i> ³ D ₂ ^o	376	(a, d)	U, V
3393. 590	1	29458. 86	8. 87	<i>a</i> ³ G ₃ - <i>y</i> ¹ D ₂ ^o	305	(a, d)	
3384. 765	1	29535. 67	5. 39	<i>a</i> ⁵ F ₂ - <i>y</i> ³ F ₃ ^o ?	25	Pred ^b	
3381. 990	1 _n	29559. 90	9. 89	<i>z</i> ⁷ P ₂ - <i>f</i> ³ D ₂ ^o		New	
3381. 498	1 _n	29564. 20	4. 19	<i>a</i> ³ F ₂ - <i>x</i> ⁵ P ₃ ^o	49	New	
3375. 724	1	29614. 77	4. 66	<i>b</i> ³ G ₄ -53734 ₃ ^o		New	U
3374. 176	2	29628. 36	8. 22	<i>a</i> ⁵ P ₁ - <i>y</i> ³ S ₁ ^o	89	(a)	V
3370. 254	0 _n	29662. 83	2. 77	<i>a</i> ¹ G ₄ - <i>t</i> ³ G ₄ ^o	542a	New	
3369. 146	2	29672. 59	2. 64	<i>a</i> ³ H ₄ - <i>v</i> ³ G ₃ ^o	191	Pred	Z
3364. 402	1	29714. 43	4. 40	<i>a</i> ¹ G ₄ -54289 ₃ ^o		New	Z
3358. 911	2	29763. 00	3. 06	<i>b</i> ³ G ₄ -53882 ₄ ^o		New	V

TABLE 3. *Classified faint lines of Fe I—Continued*

Wavelength A	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
3357. 823	0	29772. 64	2. 69	$b\ ^3G_4-10\frac{3}{2}$	448	Pred ^b	U
3356. 695	3	29782. 65	2. 71	$a\ ^1G_4-54357\frac{3}{2}$		New	V
3344. 078	0	29895. 01	4. 93	$b\ ^3G_4-12\frac{3}{2}$	450	Pred	U
3337. 915	1	29950. 21	0. 29	$b\ ^3G_3-54289\frac{3}{2}$		New	U
3330. 316	1 _n	30018. 55	8. 60	$b\ ^3G_3-54357\frac{3}{2}$		New	V
3330. 206	1	30019. 54	9. 48	$b\ ^3P_2-x\ ^3S_1$	378	New	U
3329. 970	1 _n	30021. 67	1. 60	$c\ ^3P_2-54357\frac{3}{2}$		New	V
3316. 558	1	30143. 07	3. 08	$a\ ^5P_3-w\ ^3G_3?$	86	New	U
3315. 164	1	30155. 74	5. 69	$b\ ^3H_4-u\ ^3F_3$	618	Pred	U
3313. 555	0 _n	30170. 38	0. 24	$b\ ^3G_4-54289\frac{3}{2}$		New	
3304. 346	1 _n	30254. 46	4. 37	$z\ ^5F_3-i\ ^5D_3$	710	Pred	U
3298. 537	1	30307. 74	7. 80	$z\ ^5F_1-i\ ^5D_2$	710	New	U
3291. 410	0	30373. 37	3. 10	$b\ ^1G_4-r\ ^3G_4^2$	954	Pred	U
3281. 824	1	30462. 08	2. 04	$a\ ^3F_3-y\ ^3G_4^1$	50	Pred ^b	U
3276. 978	0	30507. 13	7. 14	$z\ ^7F_3-e\ ^5H_6$	51	New	
3272. 596	2	30547. 98	7. 99	$a\ ^3F_3-z\ ^5H_4^1$	95	Pred	Z
3269. 416	2	30577. 69	7. 69	$a\ ^5P_2-x\ ^3P_2$		Pred	BK, U
3263. 683	0	30631. 40	1. 31	$z\ ^7F_3-f\ ^5G_3$	680	New	U
3263. 487	0	30633. 24	3. 62	$a\ ^3D_3-u\ ^3F_3?$	50	Pred	
3261. 801	0	30649. 07	9. 09	$a\ ^3F_3-y\ ^3G_3$		New	BK, U
3258. 627	1	30678. 92	9. 02	$z\ ^7D_1-f\ ^5D_2$	157	Pred	U
3249. 504	1	30765. 05	5. 03	$a\ ^3F_3-z\ ^5H_3$	51	New	U
3241. 502	0	30841. 00	1. 04	$a\ ^5F_1-y\ ^3D_1$	27	(a)	BK, U, W
3240. 145	0 _n	30853. 91	4. 26	$z\ ^7D_3-e\ ^7P_3$	158	Pred	U
3238. 313	0	30871. 37	1. 37	$a\ ^1G_4-v\ ^3H_4^1$	545	Pred	U
3235. 833	1	30895. 03	5. 15	$b\ ^3P_2-53734\frac{3}{2}$		New	V
3235. 312	1	30900. 00	9. 89	$a\ ^3G_4-y\ ^3I_3$	309	Pred	U
3232. 155	1	30930. 18	0. 12	$b\ ^3F_2-u\ ^3D_3$	258	Pred ^b	U
3231. 356	1	30937. 83	7. 71	$b\ ^3H_4-57565\frac{3}{2}?$		New	U
3230. 085	1	30950. 00	5. 00	$a\ ^5F_3-y\ ^3D_3$	27	Pred	BK
3229. 595	2 _n	30954. 70	5. 02	$z\ ^7F_3-g\ ^7D_5?$	333	New	V
3226. 012	2	30989. 08	9. 09	$b\ ^3F_4-6\frac{3}{2}$		New	BK, Z
3223. 480	1 _n	31013. 42	3. 42	$b\ ^3H_4-t\ ^3F_3$		New ^c	Z
3223. 080	0	31017. 27	7. 33	$a\ ^3D_3-t\ ^3F_3$	682	Pred	U
3219. 187	1 _n	31054. 78	4. 96	$a\ ^3P_2-w\ ^3F_3?$	141	New ^c	
3205. 782	1	31184. 63	4. 66	$b\ ^3F_4-u\ ^3G_3?$	252	New	U
3204. 306	1	31198. 99	9. 00	$b\ ^3H_5-t\ ^3F_4^1$		New	U
3199. 920	1 _n	31241. 75	1. 65	$z\ ^7D_3-f\ ^7D_2$	156	New	U
3195. 968	1	31280. 38	0. 49	$a\ ^3H_4-x\ ^3H_3$	192 _a	New	U
3193. 726	0	31302. 34	2. 27	$a\ ^3D_1-t\ ^3F_3$	682	Pred	
3188. 026	2	31358. 31	8. 36	$a\ ^3G_4-53358\frac{3}{2}$		New	Z
3187. 171	1 _n	31366. 72	6. 87	$z\ ^7F_1-g\ ^7D_2$	333	Pred	BK, Z
3186. 814	1	31370. 23	0. 25	$a\ ^5P_1-v\ ^3D_1$	100	Pred ^b	U
3184. 112	1	31396. 85	6. 94	$z\ ^5F_3-g\ ^5G_3$	711	New	Z
3176. 278	1 _n	31474. 28	4. 26	$z\ ^5D_3-i\ ^5D_3$	578	New	U
3175. 318	1	31483. 80	4. 05	$a\ ^3G_3-53734\frac{3}{2}?$		New	U
3172. 292	1	31513. 83	3. 82	$a\ ^3G_3-x\ ^1F_3$	312	Pred	U
3167. 792	1	31558. 60	8. 73	$a\ ^3P_3-w\ ^3F_1$	99	Pred ^b	U
3166. 982	1	31566. 67	6. 76	$b\ ^3G_3-s\ ^3G_4^1$	455	Pred ^b	
3166. 259	2 _n	31573. 88	4. 05	$z\ ^7D_3-e\ ^7F_2$	155	Pred	Z
3161. 558	1	31620. 82	0. 90	$a\ ^3H_4-4\frac{3}{2}$	195	Pred	Z
3159. 437	1	31642. 05	2. 08	$a\ ^3G_3-10\frac{3}{2}$		New	U
3159. 248	1	31643. 94	3. 91	$b\ ^3F_2-t\ ^3D_3$	259	Pred	U
3155. 134	1 _n	31685. 20	5. 40	$z\ ^7D_1-f\ ^5F_3$	161	SS	Z, ZZ
3154. 106	1	31695. 53	5. 56	$a\ ^3F_2-v\ ^5D_3$	53	Pred	U
3150. 762	1	31729. 17	9. 20	$a\ ^1H_5-t\ ^3H_3$	813	New	U
3149. 492	1	31741. 96	1. 93	$b\ ^3G_5-x\ ^1H_3$	453	Pred	U
3148. 676	0	31750. 18	0. 08	$a\ ^5P_2-z\ ^1D_3$		New	U
3148. 178	1 _n	31755. 21	5. 36	$a\ ^3G_3-11\frac{3}{2}$		New	
3144. 924	1	31788. 06	8. 14	$a\ ^3H_5-4\frac{3}{2}$	195	Pred	U

TABLE 3. *Classified faint lines of Fe I*—Continued

Wavelength A	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
3138. 400	0	31854. 14	4. 18	$a^3F_3-v^5D_4^?$	53	Pred	
3135. 590	1 _n	31882. 69	2. 74	$a^3G_4-53882_4^?$		New	Z
3134. 641	0	31892. 34	2. 37	$a^3G_4-10_3^?$		New	U
3134. 401	1	31894. 78	4. 67	$a^3G_5-53610_4^?$		New	Z
3133. 174	0	31907. 27	7. 15	$a^5P_3-49457_4^?$		New	
3131. 238	0	31927. 00	6. 89	$a^5P_3-z^1D_2^?$		New	U
3126. 822	1	31972. 09	1. 94	$b^3F_4-w^3H_3^?$	260	Pred ^b	
3125. 012	1	31990. 60	0. 49	$a^3F_3-v^5D_3^?$	53	Pred	U
3123. 545	1 _n	32005. 63	5. 65	$a^3G_4-11_3^?$		New	Z
3121. 151	1	32030. 18	0. 17	$z^7D_1-g^5D_2$	163	New	
3120. 220	2 _n	32039. 73	9. 63	$a^3G_3-54289_3^?$		New	Z
3119. 032	0	32051. 94	1. 90	$a^3G_3-13_4^?$	315a	Pred	U
3116. 984	1 _n	32072. 99	2. 98	$z^5D_3-4_2$	578a	New	Z
3116. 502	1 _n	32077. 95	7. 8	$a^5P_2-x^7P_3^?$		New	BK, U
3116. 379	1	32079. 22	9. 16	$b^3F_3-s^3D_3^?$	261	Pred ^b	U
3115. 862	1	32084. 54	4. 53	$b^3G_3-u^3H_4^?$	456	New	U
3115. 656	2	32086. 66	6. 59	$c^3P_1-u^3F_3^?$		New	Z
3114. 054	1	32103. 17	3. 18	$a^3F_3-v^5D_3^?$	53	New	
3113. 592	2	32107. 93	7. 94	$a^3G_3-54357_3^?$		New	Z
3107. 978	2 _n	32165. 93	6. 13	$a^3G_5-53882_4^?$		New	Z
3103. 760	1	32209. 64	9. 63	$a^3P_1-x^1D_2^?$		New	Z
3099. 118	0	32257. 88	7. 92	$b^3F_4-y^3I_3^?$		New	
3098. 963	1	32259. 50	9. 46	$a^5P_1-w^3P_2^?$	102	New	U, W
3097. 500	0 _n	32274. 73	4. 82	$z^7D_2-e^5P_3$	165	Pred	Z
3096. 044	1	32289. 91	9. 92	$a^3G_4-54289_3^?$		New	Z
3087. 420	1 _n	32380. 10	9. 99	$z^5D_3-g^5G_4^?$		New	U, W
3081. 832	1	32438. 81	8. 87	$a^3F_4-v^5D_4^?$	53	Pred	BK, Z
3081. 278	1	32444. 64	4. 53	$b^3G_3-u^3F_3^?$	457	New	BK, U
3071. 276	1	32550. 30	0. 36	$b^3G_5-u^3H_6^?$	456	New ^c	BK, Z
3056. 250	2	32710. 33	0. 37	$b^3F_2-53749_2^?$		New	BK
3030. 605	2	32987. 11	7. 08	$a^3P_2-v^3F_3^?$	145	Pred ^b	BK, Z
3011. 883	2	33192. 15	2. 08	$a^3P_0-z^1P_1^?$	UV135	New	BK, U, W
3006. 598	0	33250. 49	0. 40	$b^3F_4-10_3^?$		New ^c	BK
2978. 060	1	33569. 11	9. 25	$a^3H_4-53358_3^?$		New	BK, W, Z
2975. 655	0	33596. 24	6. 32	$b^3F_4-t^3G_4^?$		New	BK, U
2964. 196	1	33726. 11	5. 83	$b^3F_3-t^3G_3^?$		New	BK, Z
2958. 462	1	33791. 48	1. 55	$a^3G_4-w^1F_3^?$	317	New	BK, W, Z
2951. 356	0	33872. 83	2. 85	$a^3H_4-y^1F_3^?$		New	BK, Z
2949. 688	0 _n	33891. 98	2. 12	$a^5P_2-u^5F_3^?$	UV117	New	BK, Z
2947. 116	0	33921. 56	1. 54	$b^3H_4-t^3H_3^?$	UV182	New	BK, Z
2946. 095	1	33933. 32	3. 32	$a^3F_2-y^3P_1^?$		New	BK, Z
2945. 870	0	33935. 91	5. 97	$b^3H_4-60564_3^?$		New ^c	BK, Z
2945. 050	3	33945. 36	5. 23	$a^3H_4-53734_3^?$		New	G
2931. 803	1	34098. 73	8. 68	$a^3G_4-s^3G_3^?$	UV166	(a)	BK, W, Z
2924. 002	0	34189. 70	9. 79	$a^3G_5-s^3G_4^?$	UV166	New	BK, Z
2906. 741	0	34392. 72	2. 74	$a^3H_5-12_5^?$	UV150	New	BK, U
2904. 522	0	34418. 99	8. 93	$a^5P_3-u^3D_3^?$		New	BK
2898. 867	1	34486. 13	6. 27	$a^5P_2-t^3D_3^?$		New	BK, W, Z
2897. 635	1 _n	34500. 79	0. 81	$a^3H_4-54289_3^?$		(a, e)	BK, W, Z
2896. 595	0	34513. 18	3. 08	$a^3H_4-13_4^?$		New	BK
2891. 904	1 _n	34569. 16	9. 12	$a^3H_4-54357_3^?$		New	V
2891. 705	1	34571. 54	1. 54	$b^3F_3-v^3H_4^?$	UV158	New ^{a, e}	W, Z
2890. 414	1	34586. 98	7. 06	$a^3F_2-y^3S_1^?$		New	BK, Z
2882. 634	0	34680. 32	0. 32	$a^3H_5-13_4^?$		New	
2879. 741	0	34715. 16	5. 27	$b^3F_2-w^1D_3^?$		New ^c	BK, U

TABLE 3. *Classified faint lines of Fe I—Continued*

Wavelength Å	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
2878. 962	1	34724. 55	4. 72	<i>a</i> ³ F ₂ - <i>w</i> ⁵ G ₃	UV90	New	BK, U, W
<i>2878. 762</i>	1	34726. 97	6. 99	<i>b</i> ³ P ₂ - <i>57565</i> ₃ ?		New	V
2876. 725	1	34751. 56	1. 70	<i>b</i> ³ F ₂ - <i>w</i> ¹ F ₃ ?		New	BK, Z
2866. 385	1	34876. 91	6. 99	<i>a</i> ³ G ₅ - <i>u</i> ³ F ₄	UV168	New	BK, U
2861. 996	0	34930. 39	0. 43	<i>a</i> ⁵ P ₁ - <i>x</i> ³ S ₁		New	BK
2860. 206	0 <i>n</i>	34952. 25	2. 10	<i>a</i> ³ G ₄ - <i>v</i> ¹ G ₄		New	BK, Z
<i>2857. 996</i>	1 <i>n</i>	34979. 28	9. 31	<i>a</i> ³ P ₂ - <i>53358</i> ₃		New	Z
2830. 754	0	35315. 89	5. 89	<i>a</i> ³ G ₃ - <i>57565</i> ₃ ?		New	BK, U, W
2819. 462	1	35457. 32	7. 24	<i>a</i> ³ D ₂ - <i>62081</i> ₃ ?		(<i>a</i> , <i>e</i>)	BK, W, Z
2815. 836	0	35502. 98	2. 92	<i>a</i> ⁵ P ₂ - <i>z</i> ¹ P ₁		New	BK, U
<i>2810. 834</i>	1	35566. 15	6. 18	<i>a</i> ³ G ₄ - <i>57565</i> ₃		New	U, W
2802. 285	0 <i>n</i>	35674. 65	4. 78	<i>a</i> ³ D ₁ - <i>62081</i> ₃ ?		New	BK, Z
2797. 046	0	35741. 47	1. 55	<i>b</i> ³ F ₄ - <i>u</i> ³ H ₅		New ^c	BK
2790. 762	0	35821. 94	1. 98	<i>a</i> ⁵ P ₁ - <i>53749</i> ₃		New ^c	BK
2783. 560	0	35914. 62	4. 79	<i>a</i> ³ F ₃ - <i>w</i> ³ G ₃	UV95	New	BK
2780. 880	1	35949. 23	9. 20	<i>a</i> ⁵ F ₄ - <i>z</i> ⁵ H ₃	UV45	New	BK, Z
2780. 526	1	35953. 81	3. 78	<i>a</i> ³ F ₄ - <i>v</i> ⁵ F ₄	UV92	New	BK, Z
2776. 767	1	36002. 48	2. 44	<i>a</i> ³ H ₄ - <i>w</i> ¹ F ₃		New ^c	BK, U
<i>2772. 511</i>	1	36057. 74	7. 72	<i>a</i> ⁵ P ₂ - <i>53785</i> ₃		New	V
2772. 320	1	36060. 23	0. 23	<i>a</i> ⁵ P ₃ - <i>53610</i> ₁		New	BK, W, Z
2766. 560	1	36135. 30	5. 38	<i>a</i> ³ H ₆ - <i>x</i> ¹ H ₅	UV152	New	BK
2760. 623	1	36213. 01	3. 07	<i>a</i> ⁵ P ₃ - <i>u</i> ¹ F ₃	UV127	New	BK
2759. 500	0	36227. 74	7. 81	<i>c</i> ³ P ₂ - <i>60564</i> ₃ ?		New	BK, U
2758. 993	1	36234. 40	4. 53	<i>a</i> ⁵ P ₃ - <i>53785</i> ₃		New	BK, W
2751. 808	1	36329. 00	9. 09	<i>a</i> ³ F ₂ - <i>v</i> ³ D ₁ ?		New	BK, W, Z
2749. 688	0	36357. 01	7. 14	<i>a</i> ⁵ F ₁ - <i>y</i> ⁵ S ₂	UV49	New	BK, Z
2745. 952	0	36406. 48	6. 37	<i>a</i> ³ F ₄ - <i>z</i> ¹ H ₅		New	BK, Z
2732. 778	1	36581. 97	2. 05	<i>b</i> ³ G ₅ - <i>t</i> ³ H ₆ ?		New	BK
2725. 311	1	36682. 20	2. 00	<i>a</i> ³ F ₃ - <i>w</i> ³ F ₃	UV98	New	BK, W, Z
2724. 344	1 <i>n</i>	36695. 22	5. 00	<i>z</i> ⁷ D ₃ - ₂₄	UV144	New	BK, U
2723. 032	0	36712. 90	2. 97	<i>a</i> ³ H ₅ - <i>u</i> ³ H ₆	UV154	New	BK
<i>2707. 451</i>	2	36924. 16	4. 21	<i>b</i> ³ F ₄ - <i>57565</i> ₃		New	Z
2679. 513	0	37309. 13	9. 21	<i>c</i> ³ P ₁ - <i>62081</i> ₃ ?		New	BK, U
<i>2667. 22</i>	1	37481. 08	1. 10	<i>a</i> ³ F ₄ - <i>49457</i> ₁ ?		New ^c	U
2648. 548	1	37745. 30	5. 47	<i>c</i> ³ P ₂ - <i>62081</i> ₃ ?		New	BK, W, Z
2648. 164	1	37750. 77	0. 80	<i>a</i> ³ F ₄ - <i>y</i> ³ H ₄	UV99	New ^c	BK, W, Z
2647. 390	1	37761. 81	1. 81	<i>a</i> ³ H ₄ - <i>t</i> ³ F ₄		New	BK, U
2642. 274	0	37834. 92	4. 96	<i>a</i> ⁵ F ₃ - <i>y</i> ³ G ₃	UV51	New	BK, U
2641. 031	1	37852. 72	2. 78	<i>a</i> ³ H ₄ - <i>t</i> ³ F ₃		New	BK, U
2627. 230	1	38051. 55	1. 68	<i>a</i> ⁵ F ₄ - <i>y</i> ³ G ₄	UV51	New	BK, Z
2627. 118	1	38053. 18	3. 06	<i>a</i> ³ F ₃ - <i>x</i> ¹ G ₄		New	BK, W, Z
<i>2609. 220</i>	2	38314. 19	4. 15	<i>a</i> ³ G ₃ - <i>60564</i> ₃		New	G
2603. 042	0	38405. 12	5. 11	<i>a</i> ³ P ₂ - <i>u</i> ³ F ₃		New	BK
2596. 618	0	38500. 12	0. 18	<i>a</i> ⁵ F ₅ - <i>y</i> ³ G ₄	UV51	New	BK, U
2596. 077	1	38508. 15	8. 22	<i>a</i> ³ G ₃ - <i>t</i> ³ H ₄	UV171	New	BK, U
2593. 268	0	38549. 86	0. 01	<i>a</i> ³ G ₄ - <i>t</i> ³ H ₅	UV171	New	BK, U
<i>2592. 285</i>	3	38564. 47	4. 44	<i>a</i> ³ G ₄ - <i>60564</i> ₃		New	G
2588. 898	0	38614. 92	5. 09	<i>a</i> ⁵ F ₂ - <i>z</i> ³ S ₁		New	BK, U
2580. 939	1	38733. 99	3. 86	<i>a</i> ⁵ F ₁ - <i>u</i> ⁵ D ₃	UV55	New	BK, Z
2580. 561	1	38739. 67	9. 76	<i>a</i> ³ F ₂ - <i>y</i> ¹ D ₂		New ^c	BK, U
2580. 281	0	38743. 87	3. 70	<i>a</i> ³ F ₃ - <i>v</i> ³ F ₄ ?		New	BK, Z
<i>2554. 518</i>	1	39134. 59	4. 41	<i>b</i> ³ P ₁ - <i>62081</i> ₃ ?		New	G
2550. 812	1	39191. 44	1. 45	<i>a</i> ⁵ F ₂ - <i>u</i> ⁵ D ₁	UV55	New	BK, Z
2547. 468	0	39242. 88	2. 91	<i>b</i> ³ P ₂ - <i>62081</i> ₃ ?		New	BK, U
2546. 176	1	39262. 80	2. 84	<i>a</i> ³ P ₂ - <i>t</i> ³ F ₃		New	BK, U
2544. 462	1	39289. 24	9. 17	<i>a</i> ⁵ F ₃ - <i>w</i> ³ D ₃	UV58	New	BK, U
2538. 693	1	39378. 52	8. 47	<i>a</i> ⁵ F ₃ - <i>z</i> ³ H ₄	UV57	New ^c	BK, Z
<i>2529. 306</i>	2	39524. 66	4. 59	(<i>b</i> ³ F ₂ - <i>60564</i> ₃)?		New ^f	Z
<i>2518. 824</i>	2	39689. 12	9. 09	<i>b</i> ³ F ₃ - <i>60564</i> ₃		New	Z
2512. 266	3	39792. 72	2. 57	<i>a</i> ⁵ F ₅ - <i>u</i> ⁵ D ₄	UV55	New	BK, U

TABLE 3. *Classified faint lines of Fe I*—Continued

Wavelength Å	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
2509.390	1	39838.32	8.33	$a^5P_2-57565\frac{3}{2}$	UV59	New	BK, U
2508.948	1	39845.34	5.40	$a^5F_2-w^5G_2\frac{3}{2}$		New	BK, Z
2504.635	1	39913.95	4.04	$a^5P_2-t^3F_3\frac{3}{2}$		New	BK, U
2504.101	1	39922.46	2.47	$b^3F_4-60564\frac{3}{2}$	UV104	New	BK, Z
2499.693	1	39992.86	2.88	$a^3F_4-u^3D_3\frac{3}{2}$		New	BK, U
2498.698	1	40008.78	8.77	$a^5F_1-v^5P_2\frac{3}{2}$	UV61	New	BK, U
2494.504	1	40076.04	6.00	$a^5F_4-z^1G_4\frac{3}{2}$		New	BK, U
2492.822	1	40103.08	3.13	$a^5F_3-w^5G_2\frac{3}{2}$	UV59	New	BK, U
2489.917	1	40149.87	9.98	$a^5F_1-x^3P_2\frac{3}{2}$	UV65	New	BK
2484.530	1	40236.92	7.03	$a^3F_4-t^3D_3\frac{3}{2}$	UV10	New	BK, U
2480.393	1	40304.02	4.09	$a^5F_2-v^5P_1\frac{3}{2}$		New	BK, U
2469.666	1	40479.07	9.09	$a^5D_3-z^5S_2\frac{3}{2}$	UV65	New	BK, U
2466.530	1	40530.53	0.35	$a^5F_2-x^3P_1\frac{3}{2}$	UV106	New	BK, U
2460.069	1	40636.97	6.82	$\sigma^3F_4-w^3H_3\frac{3}{2}$		New	BK, U
2456.704	1	40692.63	2.56	$a^3F_2-y^1P_3\frac{3}{2}$	New	BK	
2453.568	3	40744.64	4.66	$a^3H_3-t^3H_3\frac{3}{2}$	UV157	New	BK, U
2452.345	1	40764.95	4.94	$a^3F_2-53734\frac{3}{2}$	UV105	New	BK, U
2452.172	2	40767.83	7.92	$a^3F_3-9\frac{3}{2}$		New	BK, U
2451.384	2	40780.93	0.82	$a^3F_2-53749\frac{3}{2}$		New	G
2450.439	3	40796.66	6.58	$a^3F_3-53358\frac{3}{2}$		New	G
2448.570	0	40827.80	7.73	$a^3F_3-t^5P_3\frac{3}{2}$	UV64	New	BK
2444.905	1	40889.00	8.95	$a^3H_4-q^3G_3\frac{3}{2}$		New	BK, U
2439.630	3	40977.40	7.42	$a^3F_4-s^3D_3\frac{3}{2}$	UV68	New	BK, U
2439.169	1	40985.14	5.14	$a^5F_4-w^3G_3\frac{3}{2}$		New	BK, U
2433.056	2	41088.11	7.96	$a^5F_1-v^3D_2\frac{3}{2}$	New	BK, U	
2432.402	0	41099.16	8.96	$a^5F_4-w^3G_3\frac{3}{2}$	UV64	New	BK
2432.332	1	41100.34	0.18	$a^3F_3-y^1P_3\frac{3}{2}$	UV106	New	BK
2430.192	2	41136.53	6.64	$a^3H_3-t^3H_4\frac{3}{2}$	UV157	New	BK, Z
2429.431	1	41149.41	9.28	$a^5F_2-v^3D_3\frac{3}{2}$	UV68	New	BK, W
2426.313	1 _n	41202.29	2.33	$a^3F_3-x^1P_3\frac{3}{2}$		New	BK, Z
2414.318	0	41406.98	7.01	$a^5F_3-v^3D_3\frac{3}{2}$	UV68	New	BK
2412.766	1	41433.61	3.64	$a^5F_5-w^3G_4\frac{3}{2}$	UV64	New	BK
2412.172	0	41443.81	3.87	$a^3F_3-11\frac{3}{2}$	UV67	New	BK, U
2411.968	1	41447.32	7.38	$a^5F_2-w^3F_3\frac{3}{2}$		New	BK, U
2411.558	1	41454.36	4.35	$a^5F_5-z^1H_3\frac{3}{2}$		New	BK
2401.136	1	41634.28	4.18	$a^3F_4-53610\frac{3}{2}$	UV66	New	BK
2394.058	0	41757.36	7.25	$a^3F_4-53734\frac{3}{2}$		New	BK
2393.094	1	41774.18	4.29	$a^5F_5-y^1G_4\frac{3}{2}$	UV67	New	BK
2391.826	1	41796.33	6.45	$a^3F_3-54357\frac{3}{2}$		New	BK, Z
2387.830	1	41866.27	6.18	$a^5F_4-w^3F_3\frac{3}{2}$	New	BK, U	
2385.580	1	41905.75	5.65	$a^3F_4-53882\frac{3}{2}$	UV12	New	BK, Z
2378.604	1	42028.64	8.56	$a^3F_4-11\frac{3}{2}$		New	BK
2376.971	0	42057.51	7.45	$a^5F_2-w^3P_1\frac{3}{2}$		New	BK
2375.678	0	42080.40	0.58	$a^5F_4-49457\frac{3}{2}$		New	BK, U
2367.394	0	42227.64	7.67	$a^5F_4-y^3H_3\frac{3}{2}$		New	BK
2362.624	1	42312.89	2.83	$a^3F_4-54289\frac{3}{2}$	UV12	New	BK
2361.936	1	42325.21	5.10	$a^3F_4-13\frac{3}{2}$		New	BK
2356.196	1	42428.31	8.1	$a^5F_4-x^7P_3\frac{3}{2}$		New	BK
2351.884	1	42506.10	5.92	$a^5F_5-y^3H_3\frac{3}{2}$	UV12	New	BK
2350.626	1	42528.84	6.04	$a^5D_2-y^5G_2\frac{3}{2}$		New	BK
			8.78	$a^3P_1-62081\frac{3}{2}$		New	BK
2346.304	1	42607.18	7.06	$a^5D_3-y^5G_4\frac{3}{2}$	UV12	New	BK
2345.018	1 _n	42630.54	0.2	$a^5F_5-x^7P_4\frac{3}{2}$		New	BK, U, W
2331.088	1	42885.27	5.11	$a^3F_3-v^3H_3\frac{3}{2}$	UV108	New	BK
2323.627	1	43022.96	3.00	$a^5D_4-y^5G_4\frac{3}{2}$	UV12	New	BK, U
2296.188	2	43537.03	6.90	$a^3F_3-s^3G_3\frac{3}{2}$	UV111	New	BK, X, Z

TABLE 3. *Classified faint lines of Fe I—Concluded*

Wavelength A	Intensity	Wave number (cm ⁻¹)		Designation	Multiplet Number	Notes	Reference
		Observed	Calc.				
2295. 310	1	43553. 68	3. 61	$a^5F_1-y^1D_2$		New	BK, U
2294. 100	3	43576. 65	6. 58	$a^5F_3-v^3F_4$		New	BK, U
2290. 907	3	43637. 38	7. 23	$a^5F_3-v^3F_4$		New	BK
2288. 608	1	43681. 21	1. 11	$a^5F_3-4_4$	UV72	New	BK
2287. 462	3	43703. 09	3. 05	$a^3P_2-62081_2?$		New	BK, U
2286. 442	3	43722. 59	2. 53	$a^5F_2-y^1D_2$		New	BK, Z
2281. 629	2	43814. 81	4. 76	$a^3F_2-u^3F_3$	UV112	New ^{a, e}	U, X
2279. 152	2	43862. 42	2. 38	$a^3F_3-u^3H_4$		New	BK, U
2275. 758	3	43927. 83	7. 87	$a^5F_4-v^3F_4$		New	BK, U
2275. 676	1	43929. 42	9. 30	$a^3F_4-s^3G_4$	UV111	New	
2273. 893	1	43963. 86	3. 91	$a^5F_3-u^5P_3$	UV73	New	BK, U
2272. 610	3	43988. 68	8. 52	$a^5F_4-v^3F_3$		New	BK, X, Z
2270. 675	3	44026. 16	6. 10	$a^5F_1-t^3D_1$		New	BK, U
2270. 368	1	44032. 11	2. 40	$a^5F_4-4_4?$	UV72	New ^e	BK, Z
2256. 063	3	44311. 28	1. 16	$a^5F_2-u^3D_2$	UV75	New	BK
2231. 090	2	44807. 22	7. 07	$a^3F_4-u^3F_3$	UV112	New	U
2222. 059	2	44989. 30	9. 14	$a^3F_3-t^3F_4$	UV114	New	BK, U
2208. 714	1	45261. 10	0. 96	$a^5D_2-x^5G_2$	UV20	New	BK, U
2192. 819	3	45589. 15	9. 09	$a^3F_4-57565_3?$		New	BK, X, Z
2190. 879	3	45629. 52	9. 46	$a^5F_3-53358_3$		New	BK, U
2189. 720	1	45653. 66	3. 65	$a^5F_1-v^3P_1?$		New	BK, U
2185. 216	0	45747. 75	7. 71	$a^5F_2-53734_3$		New	BK, X, Z
2184. 46	1	45763. 58	3. 59	$a^5F_2-53749_2$		New	Z
2178. 797	2	45882. 52	2. 37	$a^5F_3-53610_4$		New	BK, U
2177. 690	1	45905. 84	5. 74	$a^5F_2-10_3$	UV80	New	BK, U
2174. 142	3	45980. 74	0. 75	$a^5F_4-53358_3$		New	BK, X, Z
2172. 332	0	46019. 05	9. 02	$a^5F_2-11_3$	UV82	New	BK
2172. 221	1	46021. 40	1. 32	$a^5F_3-53749_2$		New	BK
2170. 554	3	46056. 74	6. 67	$a^5F_3-53785_3$		New	BK, X, Z
2167. 271	1	46126. 50	6. 50	$a^5F_2-t^5P_2$	UV78	New	BK
2165. 982	3	46153. 95	3. 84	$a^5F_3-53882_2$		New	BK
2162. 243	3	46233. 75	3. 66	$a^5F_4-53610_4$		New	BK, X, Z
2158. 993	1	46303. 34	3. 29	$a^5F_2-54289_3$		New	BK
2158. 732	3	46308. 94	8. 94	$a^5D_1-x^3F_2$	UV25	New	BK
2156. 504	3	46356. 78	6. 73	$a^5F_4-53734_3?$		New ^d	BK, X, Z
2155. 816	3	46371. 57	1. 50	$a^5F_2-54357_3$		New	BK, X, Z
2155. 114	0	46386. 67	6. 50	$a^5F_4-x^1F_3$		New	BK
2154. 127	3	46407. 92	7. 96	$a^5F_4-53785_3$		New	U
2149. 620	1	46505. 22	5. 13	$a^5F_4-53882_2$		New	BK, X, Z
2147. 039	3	46561. 12	1. 02	$a^5F_3-54289_3$		New	BK, X, Z
2143. 892	3	46629. 45	9. 33	$a^5F_3-54357_3$		New	BK, Z
2141. 471	3	46682. 16	2. 16	$a^5F_5-53610_4$		New	Z
2130. 962	3	46912. 35	2. 31	$a^5F_4-54289_3$		New	C
2127. 863	2	46980. 67	0. 62	$a^5F_4-54357_3$		New	BK, X, Z
2127. 467	1	46989. 41	9. 29	$a^5D_2-w^5G_3$	UV28	New	BK, U
2124. 494	0	47055. 16	5. 02	$a^5F_5-t^3G_5$	UV81	New	BK, U
2123. 118	0	47085. 65	5. 50	$a^5F_5-12_5$		New	BK, U
2111. 220 (vac.)	0	47350. 98	0. 77	$a^5D_1-v^5F_2$	UV31	New	BK, N, U
1899. 21	1	52653. 4	3. 53	$a^5D_2-53358_3$		New	N
1891. 74	10	52861. 5	1. 26	$a^5D_1-53749_2$		New	N
1883. 91	2	53081. 2	0. 74	$a^5D_2-53785_3$		New	N
1865. 30	15	53610. 6	0. 44	$a^5D_4-53610_4$		New	N
1859. 26	2	53784. 9	4. 79	$a^5D_4-53785_3$		New	N

^a Improved wavelength of previously known line listed here as preferable to the value quoted in Table B of the Monograph.[1]

^b Predicted line not listed in Table C of the Monograph. See Ref. 3.
^c Blend of Fe I and Fe II. See J. C. Dobbie, Ann. Solar Phys. Obs. Cambridge, V, pt. 1, 1938.

^d Member of resolved doublet.

^e Designation in Table B of the Monograph to be rejected.

^f This line is listed as 10r III by A. S. King; the line classified here may be masked.

Reference Sources for Wavelengths

- BK K. Burns and C. C. Kiess, unpublished material (1934).
 C W. F. Meggers and C. J. Humphreys, NBS J. Research **18**, 543, RP 992 (1937).
 D C. C. Kiess, NBS J. Research **20**, 33, RP 1062 (1938).
 G K. Burns and F. M. Walters, Jr., Publ. Allegheny Obs. **8**, 39, No. 4 (1931).
 J C. E. St. John and H. D. Babcock, Mt. Wilson Contr. No. 202; *Astroph. J.* **53**, 260 (1921) (corrected).
 N L. C. Green, *Phys. Rev.* **55**, 1209 (1939), and unpublished material (1937).
 O W. F. Meggers and C. C. Kiess, BS Sci. Pap. **14**, 642, No. 324 (1918).
 S J. C. Dobbie, unpublished material.
 T Sinclair Smith, unpublished material.
 U G. R. Harrison, unpublished material, Mass. Inst. Tech. (June 1942).
 V K. Burns, *Lick Obs. Bull.* **8**, 27, No. 247 (1913).
 W H. Kayser, *Handbuch der Spectroscopie* **6**, 896 (1912).
 X H. Schumacher, *Zeit. Wiss. Ptg.* **19**, 149 (1919) (corrected).
 Z G. R. Harrison, Mass. Inst. Tech. Wavelength Tables (John Wiley and Sons, Inc., New York, 1956).
 ZZ H. M. Crosswhite, Johns Hopkins Spectroscopic Report No. 13, 120 pp. (1958).

TABLE 4.—New Fe I lines, unclassified

Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References
8558. 647	1	11680. 88		6347. 162	3	15750. 72	
7952. 338	1	12571. 46		6333. 354	3	15785. 06	
7945. 090	2	12582. 93		6242. 738	3	16014. 18	
7937. 914	1 _n	12594. 30		6143. 052	3	16274. 05	
7854. 150	0 _n	12728. 62		5884. 323	1	16989. 60	
7775. 383	1	12857. 56		5699. 308	2	17541. 12	
7714. 603	0	12958. 86		5644. 033	3	17712. 91	
7702. 968	0	12978. 44		5625. 704	3	17770. 62	
7693. 734	0	12994. 01		5601. 298	2	17848. 05	
7675. 972	1	13024. 08		5590. 661	3	17882. 01	
7674. 966	0	13025. 79		5589. 852	2 _n	17884. 60	
7657. 254	0	13055. 92		5582. 673	2 _n	17907. 59	
7643. 394	0	13079. 59		5553. 176	2 _n	18002. 71	
7626. 473	0	13108. 61		5532. 856	2	18068. 83	
7624. 011	0	13112. 85		5521. 096	2	18107. 32	U, W
7615. 529	0	13127. 45		5512. 658	3 _n	18135. 03	
7614. 148	0	13129. 83		5477. 744	1 _n	18250. 6	
7600. 948	0	13152. 63		5458. 572	2	18314. 72	
7599. 624	0	13154. 92		5418. 598	2 _n	18449. 83	W
7596. 842	0	13159. 74		5351. 751	1	18680. 28	
7588. 834	0	13173. 63		5350. 798	1	18683. 60	
7580. 647	0	13187. 86		5350. 434	0	18684. 88	
7576. 505	0	13195. 06		5333. 396	2	18744. 57	
7573. 444	0	13200. 40	U	5319. 079	2 _n	18795. 02	
7567. 043	0	13211. 56		5317. 854	1	18799. 35	
7554. 743	0	13233. 07		5313. 542	1 _n	18814. 60	
7528. 735	0	13278. 79		5312. 539	0	18818. 16	
7523. 388	0	13288. 22		5312. 024	0	18819. 98	
7501. 061	0	13327. 78		5311. 641	1	18821. 34	
7476. 098	0	13372. 28		5310. 855	0 _n	18824. 12	
7453. 230	1	13413. 31		5310. 270	0 _n	18826. 20	
7438. 336	1	13440. 16		5309. 780	0	18827. 93	U, W
7435. 798	0 _n	13444. 75		5308. 228	0	18833. 44	
7214. 630	1	13856. 91		5307. 736	1	18835. 18	
7192. 458	1 _n	13899. 62		5306. 060	0 _n	18841. 13	
7009. 530	1	14262. 36		5303. 874	1 _n	18848. 90	
6864. 229	1	14564. 26		5301. 408	1	18857. 67	
6692. 280	1	14938. 47		5199. 090	3	19228. 78	
6587. 388	1	15176. 33		5182. 983	2	19288. 54	
6515. 104	1 _n	15344. 71		5181. 335	3	19294. 67	T, U
6491. 395	1	15400. 75		5176. 806	1	19311. 55	
6478. 828	1	15430. 63		5173. 498	3	19323. 90	
6452. 148	1 _n	15494. 43		5166. 694	3	19349. 35	
6392. 988	3	15637. 82		5160. 094	3 _n	19374. 10	
6366. 040	3	15704. 01		5154. 039	2 _n	19396. 86	

TABLE 4.—New Fe I lines, unclassified—Continued

Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References
5149.746	3	19413.02		4712.515	1	21214.16	
5147.107	2	19422.98		4710.650	0	21222.56	
5140.826	3	19446.71		4703.228	0	21256.04	
5097.498	3	19612.00		4702.642	0	21258.69	
5025.514	3	19892.91		4702.299	0 _n	21260.24	
5013.914	3	19938.94	U	4701.849	0 _n	21262.28	BK
4996.792	3	20007.26		4699.424	3 _n	21273.25	
4996.174	0 _n	20009.73		4691.769	0	21307.96	
4992.502	1	20024.45		4688.964	0	21320.71	
4974.246	0	20097.94	U, W	4686.641	0	21331.27	
4961.040	3	20151.44	U, W	4686.348	0 _n	21332.61	
4948.299	1	20203.33		4685.583	0 _n	21336.09	
4947.645	3 _n	20206.00	U	4684.662	2	21340.28	
4947.418	0	20206.92		4680.628	1	21358.68	
4944.306	3	20219.64		4676.757	0	21376.36	
4932.134	3	20269.54		4674.297	2	21387.60	U, W
4924.333	3	20301.65		4671.337	1 _n	21401.16	
4915.806	3	20336.87		4664.750	1	21431.38	
4913.168	3	20347.78		4660.920	1 _n	21448.99	
4911.587	3	20354.34	U	4660.478	1 _n	21451.02	
4906.144	0	20376.92		4656.548	1 _n	21469.12	
4902.368	1	20392.61		4650.388	0 _n	21497.56	
4901.272	2	20397.17		4648.986	0	21504.05	(°)
4900.816	2	20399.07		4640.958	1	21541.24	U, W
4900.520	0	20400.30		4640.340	2 _n	21544.11	U, W
4898.930	0	20406.92		4605.610	2 _n	21706.57	BK, U
4895.672	0	20420.50		4597.403	2	21745.32	U, W
4880.976	2	20482.82		4590.815	2 _n	21776.52	U
4875.081	3	20506.75		4585.337	1	21802.54	
4864.512	2	20551.31		4582.297	1 _n	21817.00	
4862.992	3	20557.73		4581.186	1	21822.29	
4861.947	3	20562.15	U, W	4566.940	3	21890.36	U, W
4833.817	1	20681.81		4560.892	1	21919.39	
4832.036	1	20689.43		4557.287	2	21936.73	U
4825.357	3	20718.07	U, W	4533.078	2 _n	22053.88	U
4821.572	2	20734.33		4517.136	1	22131.71	
4818.038	1	20749.54		4509.804	2 _n	22167.70	U, W
4814.365	2	20765.37		4509.430	2	22169.53	
4811.407	0	20778.13		4500.652	1 _n	22212.77	
4805.072	2 _n	20805.53		4480.731	1 _n	22311.53	(°)
4793.336	0	20856.47		4478.649	1 _n	22321.90	
4784.034	2	20897.02		4471.600	0	22357.09	
4782.147	1 _n	20905.26		4468.452	0	22372.84	
4776.451	3 _n	20930.19		4465.552	0	22387.36	
4774.939	1 _n	20936.82		4460.642	0	22412.01	
4768.697	3	20964.23	U	4452.773	1 _n	22451.61	
4766.821	3	20972.48		4451.684	0 _n	22457.11	
4756.888	0	21016.27		4445.050	0	22490.62	W
4756.356	1	21018.62		4432.087	1 _n	22556.40	
4752.470	1	21035.81		4431.799	1 _n	22557.87	U
4746.278	0	21063.25		4425.090	0 _n	22592.07	
4733.945	0	21118.12		4424.608	1	22594.53	
4730.009	3 _n	21135.70		4424.061	1	22597.32	
4728.160	1	21143.96		4420.266	2 _n	22616.72	
4722.522	0 _n	21169.20		4416.688	0	22635.04	W
4719.716	0	21181.79		4416.423	1	22636.40	U
4719.238	0 _n	21183.94		4416.137	0	22637.87	
4717.620	2 _n	21191.20		4412.146	1	22658.34	
4717.358	2 _n	21192.38		4411.914	2 _n	22659.54	
4716.483	0	21196.31		4406.946	1	22685.08	

TABLE 4.—New Fe I lines, unclassified—Continued

Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References
4399. 260	0	22724. 71		4282. 052	1n	23346. 72	
4395. 937	0n	22741. 89	U	4281. 921	1n	23347. 43	
4394. 098	1	22751. 41		4281. 855	1	23347. 79	
4385. 776	1n	22794. 58		4281. 490	1	23349. 78	BK
4384. 848	2	22799. 40		4280. 285	1n	23356. 36	U
4381. 429	1n	22817. 19		4278. 604	1n	23365. 53	
4380. 108	1	22824. 07		4276. 082	1	23379. 32	
4378. 486	2	22832. 53		4272. 528	1	23398. 76	U
4376. 446	1	22843. 17		4270. 838	1	23408. 02	
4374. 988	1	22850. 78		4270. 628	1n	23409. 17	
4374. 116	1	22855. 34		4270. 251	1n	23411. 24	
4372. 558	1	22863. 48		4269. 730	1n	23414. 10	U
4371. 742	0	22867. 75		4252. 911	1n	23506. 69	
4364. 772	1	22904. 27		4251. 999	1n	23511. 73	
4362. 484	1	22916. 28		4251. 657	0n	23513. 62	U
4357. 940	0	22940. 17		4251. 288	1n	23515. 66	
4357. 098	0	22944. 61		4249. 596	1n	23525. 03	U
4355. 144	1	22954. 90		4249. 216	1	23527. 13	
4347. 000	0	22997. 91		4236. 461	1	23597. 96	
4344. 928	1	23008. 87	U	4234. 122	1n	23611. 00	
4341. 392	1	23027. 61		4229. 406	1	23637. 32	U
4340. 950	0	23029. 96		4228. 384	1n	23643. 04	U
4340. 279	0	23033. 52		4223. 221	1	23671. 94	
4337. 455	0	23048. 51		4219. 850	1	23690. 85	W
4337. 366	1	23048. 99		4219. 018	1	23695. 52	
4336. 122	1	23055. 60		4218. 880	1	23696. 30	
4335. 773	0	23057. 46	U, W	4218. 812	1	23696. 68	
4335. 399	0	23059. 44		4218. 464	1	23698. 64	
4334. 928	1n	23061. 95		4211. 568	1	23737. 44	
4334. 428	0n	23064. 61		4210. 868	1	23741. 38	
4332. 711	1	23073. 75	U	4209. 447	1	23749. 40	
4332. 432	1	23075. 24	U	4206. 210	1n	23767. 68	U
4331. 411	1n	23080. 68	U	4203. 258	1n	23784. 37	U
4330. 640	1	23084. 78		4199. 557	1n	23805. 33	
4327. 410	0	23102. 01		4197. 512	0	23816. 93	
4323. 658	1n	23122. 06		4194. 099	1	23836. 31	
4320. 767	1n	23137. 53	U	4193. 600	1	23839. 14	U, W
4319. 231	0	23145. 76		4192. 794	0	23843. 72	
4316. 832	0	23158. 62		4192. 622	1n	23844. 70	
4316. 525	0	23160. 27		4192. 374	1n	23846. 11	
4315. 495	0	23165. 80		4191. 974	1n	23848. 39	
4315. 400	0	23166. 31		4190. 938	1n	23854. 28	
4313. 812	1	23174. 84	W	4190. 000	1n	23859. 62	
4312. 950	1n	23179. 47		4189. 015	1n	23865. 24	
4310. 531	1	23192. 48	U	4188. 300	1n	23869. 31	
4309. 704	0	23196. 92		4185. 793	3	23883. 60	
4306. 991	1	23211. 54	BK	4184. 546	1	23890. 72	
4306. 068	0	23216. 51		4184. 400	1	23891. 56	
4302. 541	0	23235. 54		4181. 278	1n	23909. 39	U
4302. 344	0	23236. 61		4180. 176	0	23915. 70	
4299. 770	1	23250. 52		4179. 689	1	23918. 48	
4298. 324	1	23258. 34		4174. 208	0n	23949. 89	
4297. 106	1n	23264. 93		4160. 333	1n	24029. 76	U
4293. 612	1n	23283. 86	U	4158. 366	1	24041. 13	U
4293. 400	0n	23285. 01	U	4157. 306	1	24047. 26	
4288. 297	1	23312. 72		4156. 322	1n	24052. 95	U
4287. 952	1	23314. 60		4155. 914	1	24055. 31	U
4285. 984	1	23325. 30		4152. 778	1	24073. 48	
4283. 770	1	23337. 36	BK	4152. 651	1	24074. 21	
4282. 914	1n	23342. 02		4148. 794	1n	24096. 60	

TABLE 4.—New Fe I lines, unclassified—Continued

Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References
4141. 400	1 _n	24139. 62	U	4003. 287	1 _n	24972. 41	
4139. 718	1	24149. 42	U	3999. 398	1	24996. 70	
4139. 276	1	24152. 00		3996. 540	1	25014. 57	
4137. 642	1	24161. 54	U, W	3996. 139	1	25017. 08	
4136. 200	1 _n	24169. 96	U	3995. 456	0 _n	25021. 36	
4135. 887	1	24171. 79		3993. 642	1	25032. 72	U
4135. 607	1 _n	24173. 43	U	3991. 395	1 _n	25046. 81	
4135. 039	1 _n	24176. 75		3983. 645	0	25095. 54	
4131. 146	1 _n	24199. 53		3983. 518	1 _n	25096. 34	U
4127. 252	1	24222. 36		3978. 247	1	25129. 59	
4127. 120	1	24223. 14		3977. 420	1	25134. 82	U
4126. 965	1	24224. 05		3970. 863	1	25176. 32	
4124. 332	0 _n	24239. 51		3966. 973	1 _n	25201. 01	
4119. 746	1 _n	24266. 50		3962. 717	1 _n	25228. 07	Z
4118. 065	1 _n	24276. 40	U	3960. 642	1	25241. 29	
4110. 814	0	24319. 22		3957. 836	1	25259. 18	
4110. 310	1	24322. 20	U	3946. 007	1	25334. 90	BK, U, W
4107. 160	1	24340. 86		3943. 166	1 _n	25353. 16	U
4107. 015	1 _n	24341. 72		3940. 422	1	25370. 81	U
4096. 695	1	24403. 03		3939. 730	1	25375. 27	
4095. 346	1	24411. 07	U	3936. 558	1	25395. 71	U
4094. 422	1	24416. 58	U	3934. 976	1	25405. 92	
4086. 406	1	24464. 48	U	3934. 356	1 _n	25409. 93	U, W
4081. 264	1	24495. 30	BK, U, W	3932. 266	1 _n	25423. 43	Z
4072. 332	0	24549. 02		3931. 883	0	25425. 91	U
4072. 183	0	24549. 92		3926. 422	1 _n	25461. 27	U
4071. 282	0	24555. 35	U	3924. 032	1 _n	25476. 78	
4071. 146	0	24556. 17		3915. 256	1	25533. 88	BK, U?, W
4070. 954	1	24557. 33		3904. 564	1 _n	25603. 80	
4070. 554	0	24559. 74		3843. 528	0 _n	26010. 38	
4070. 090	0	24562. 54		3842. 796	0	26015. 34	
4069. 786	0	24564. 38		3842. 556	0	26016. 96	
4069. 700	0	24564. 90		3838. 567	1	26044. 00	
4069. 610	1	24565. 44		3838. 201	0	26046. 48	
4068. 898	0	24569. 74		3838. 084	1	26047. 28	U ^c
4068. 800	0	24570. 33		3837. 914	1	26048. 43	U
4068. 704	0	24570. 91		3819. 679	1	26172. 78	U, W
4068. 483	0	24572. 25		3819. 354	0	26175. 01	
4068. 254	0	24573. 63		3819. 276	2	26175. 54	
4066. 768	1	24582. 61		3818. 950	3	26177. 78	
4061. 848	1 _n	24612. 38		3818. 815	0 _n	26178. 70	
4054. 454	1	24657. 27	BK, U	3818. 593	2 _n	26180. 23	Z
4049. 924	1	24684. 85	U	3818. 141	1	26183. 32	
4041. 828	1 _n	24734. 29		3818. 043	0	26184. 00	U
4037. 136	1 _n	24763. 04	U	3817. 793	2	26185. 71	
4036. 552	0 _n	24766. 62		3817. 424	1	26188. 24	
4033. 648	1	24784. 45	U	3817. 268	0	26189. 31	
4026. 770	1	24826. 78		3817. 094	3 _n	26190. 51	
4022. 564	0	24852. 74		3816. 702	1	26193. 20	
4021. 374	1	24860. 10		3816. 594	1	26193. 94	
4021. 002	1	24862. 40		3815. 188	1 _n	26203. 59	U
4015. 023	1	24899. 42		3815. 021	1	26204. 74	
4014. 340	1	24903. 66		3814. 892	1	26205. 62	
4014. 072	1	24905. 32		3814. 668	2	26207. 16	
4012. 628	1 _n	24914. 28	U	3814. 268	1	26209. 91	
4010. 618	1	24926. 77		3814. 044	2	26211. 45	
4010. 522	1	24927. 36		3812. 761	2	26220. 27	
4009. 388	1	24934. 41		3812. 624	1	26221. 21	
4009. 240	1 _n	24935. 33		3812. 518	2	26221. 94	U
4008. 531	1	24939. 74		3812. 306	1 _n	26223. 40	

TABLE 4.—*New Fe I lines, unclassified*—Continued

Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References
3812. 026	2	26225. 33		3791. 930	0	26364. 31	
3811. 484	3	26229. 06	U	3790. 917	0 _n	26371. 35	U
3811. 101	1	26231. 69	W	3790. 254	3	26375. 97	
3810. 526	2	26235. 65	U	3788. 944	1 _n	26385. 08	U
3810. 332	0 _n	26236. 98	U	3788. 593	0	26387. 53	
3809. 882	0	26240. 08		3788. 472	0	26388. 37	
3809. 334	0	26243. 86		3788. 281	1	26389. 70	
3808. 871	0	26247. 05		3787. 661	1	26394. 02	
3807. 986	1	26253. 15		3787. 379	0	26395. 99	U
3807. 791	0 _n	26254. 49	U	3787. 059	0	26398. 22	
3807. 313	0	26257. 79		3786. 907	0	26399. 28	U
3807. 088	0	26259. 34		3786. 811	2	26399. 95	
3806. 476	0	26263. 56	U	3786. 443	3	26402. 51	
3806. 052	0	26266. 49	W	3785. 486	3	26409. 19	
3805. 771	3	26268. 43	U	3785. 262	0	26410. 75	U
3805. 568	0	26269. 83	U	3785. 127	0	26411. 69	
3805. 478	1	26270. 45		3784. 934	0	26413. 04	
3805. 140	1	26272. 78		3784. 812	1	26413. 89	
3805. 024	1	26273. 58		3784. 698	1	26414. 68	
3804. 842	0 _n	26274. 84		3784. 386	3 _n	26416. 86	U
3804. 501	1	26277. 20		3783. 721	2	26421. 51	
3804. 228	0	26279. 08		3783. 470	0	26423. 26	
3803. 704	0	26282. 70	U	3783. 275	1	26424. 62	
3803. 408	3	26284. 75		3782. 862	3	26427. 50	U
3803. 106	1 _n	26286. 84		3781. 749	0	26435. 28	
3802. 936	0 _n	26288. 01		3781. 300	0	26438. 42	
3802. 682	1	26289. 76		3780. 966	0	26440. 76	
3802. 536	0	26290. 78		3780. 828	0	26441. 72	
3801. 468	1	26298. 16		3780. 678	0	26442. 77	
3801. 066	0	26300. 94	U	3780. 562	0	26443. 58	
3800. 955	0	26301. 71		3780. 256	0	26445. 72	U
3800. 813	0 _n	26302. 69		3780. 004	0	26447. 49	
3800. 699	2	26303. 48	U	3779. 810	0	26448. 84	U
3800. 407	1	26305. 50		3778. 928	0	26455. 02	
3800. 269	1	26306. 46		3778. 809	1	26455. 85	U
3800. 173	0	26307. 12		3777. 848	1	26462. 58	
3800. 026	0	26308. 14		3777. 588	0 _n	26464. 40	
3799. 208	1	26313. 80		3777. 186	3	26467. 22	U
3799. 109	1	26314. 49		3776. 838	0	26469. 66	
3799. 024	0	26315. 08		3776. 226	0	26473. 94	
3798. 910	1	26315. 87		3776. 110	0	26474. 76	
3798. 196	0	26320. 82		3775. 972	0	26475. 73	
3798. 072	1	26321. 68	U	3775. 656	2	26477. 94	
3797. 666	3	26324. 49		3775. 503	0	26479. 02	
3797. 191	0	26327. 78		3775. 364	0	26479. 99	
3797. 054	0	26328. 73		3775. 080	0	26481. 98	U
3796. 730	0	26330. 98		3774. 952	1	26482. 88	
3796. 608	0 _n	26331. 82	U, W	3774. 180	0	26489. 57	
3796. 259	1	26334. 24		3773. 999	0	26493. 28	
3795. 824	0	26337. 26	U	3773. 470	0	26494. 16	
3795. 741	1	26337. 84	U	3773. 166	1	26496. 75	
3795. 608	0	26338. 76		3772. 841	0	26497. 70	
3795. 386	1	26340. 30		3772. 702	0	26498. 67	
3794. 562	1	26346. 02		3772. 287	0	26501. 59	U
3794. 486	1	26346. 55		3771. 816	1 _n	26504. 90	
3794. 174	0	26348. 72		3771. 249	0 _n	26508. 88	
3793. 726	3	26351. 83		3770. 786	0	26512. 14	
3793. 136	1	26355. 93		3770. 548	0	26513. 81	
3792. 454	0	26360. 67	U, W	3769. 310	1 _n	26522. 52	
3792. 292	0	26361. 79	U	3769. 071	1 _n	26524. 20	

TABLE 4.—New Fe I lines, unclassified—Continued

Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References
3768. 697	0	26526. 83	U	3614. 272	1	27660. 20	BK
3768. 561	3	26527. 79		3613. 296	0	27667. 67	
3767. 788	1	26533. 23		3612. 783	1	27671. 60	
3767. 610	3	26534. 49		3612. 671	0	27672. 46	
3764. 718	0	26554. 87		3612. 418	0	27674. 40	
3759. 732	1	26590. 08		3612. 233	2	27675. 81	
3754. 068	0	26630. 20		3611. 935	1 _n	27678. 10	
3741. 903	0 _n	26716. 77		3611. 768	1	27679. 38	
3741. 743	0 _n	26717. 92	Z?	3611. 651	1 _n	27680. 27	
3728. 972	2	26809. 42	U	3611. 519	1	27681. 28	
3723. 946	1	26845. 60		3611. 392	0 _n	27682. 26	
3723. 570	0 _n	26848. 31		3611. 188	1 _n	27683. 82	U
3706. 070	1	26975. 08	U	3610. 972	0	27685. 48	
3699. 810	1	27020. 72	U	3610. 867	0	27686. 28	
3695. 632	2 _n	27051. 27	Z	3609. 996	1	27692. 96	
3694. 752	1	27057. 72		3609. 884	1 _n	27693. 82	
3680. 962	2 _n	27159. 08	U	3609. 426	1	27697. 34	U
3680. 396	2 _n	27163. 26	Z	3608. 365	1	27705. 48	
3676. 008	0	27195. 68		3607. 780	2 _n	27709. 97	
3672. 114	0	27224. 52	U	3607. 634	1 _n	27711. 09	
3668. 730	1 _n	27249. 63	U, W	3607. 333	1	27713. 41	U
3665. 845	1	27271. 07	U, W	3607. 256	1	27714. 00	
3665. 762	1	27271. 69		3607. 102	2 _n	27715. 18	
3659. 214	1	27320. 49		3606. 932	1	27716. 49	
3659. 094	1 _n	27321. 39		3606. 253	2	27721. 70	U
3658. 742	1	27324. 02	U	3606. 165	1	27722. 38	
3653. 157	0 _n	27365. 79	U	3606. 016	0	27723. 53	
3652. 969	0	27367. 20		3604. 874	0	27732. 31	
3651. 918	1 _n	27375. 07	U	3604. 090	0 _n	27738. 34	
3651. 182	1 _n	27380. 59		3603. 956	2	27739. 37	Z
3646. 580	1 _n	27415. 14	U	3603. 449	1	27743. 28	
3642. 198	0 _n	27448. 13		3603. 350	2	27744. 04	
3640. 834	1	27458. 41		3602. 898	0	27747. 52	
3640. 096	1	27463. 98	U	3602. 323	0	27751. 95	
3639. 964	1 _n	27464. 97	U	3602. 223	0	27752. 72	
3639. 605	1 _n	27467. 68		3601. 858	1	27755. 53	
3639. 502	1 _n	27468. 46	U	3601. 273	1	27760. 04	
3639. 308	1 _n	27469. 92	U	3601. 116	1	27761. 25	
3628. 868	1	27548. 95	W	3600. 870	1	27763. 15	
3628. 620	1	27550. 83		3600. 675	1	27764. 65	U
3628. 414	0	27552. 40	S, U	3600. 533	1	27765. 74	U
3628. 210	0	27553. 94		3600. 418	1	27766. 63	U
3627. 419	1 _n	27559. 95		3600. 036	1 _n	27769. 58	U
3625. 498	1	27574. 56		3599. 972	2 _n	27770. 07	Z
3622. 981	1	27593. 71		3599. 842	1	27771. 07	
3622. 751	1 _n	27595. 46		3599. 760	1	27771. 71	
3622. 431	3	27597. 90		3599. 468	0	27773. 96	U
3620. 679	1	27611. 26		3599. 293	0	27775. 31	
3619. 942	2 _n	27616. 88	U	3598. 554	0	27781. 01	
3617. 629	1 _n	27634. 53		3598. 233	1 _n	27783. 49	
3617. 472	1	27635. 73		3597. 804	1	27786. 80	BK, W
3617. 007	2	27639. 29	BK, U	3597. 478	0	27789. 32	
3616. 857	0	27640. 43		3597. 314	0	27790. 59	
3616. 722	1	27641. 46		3597. 158	0	27791. 79	
3616. 642	2	27642. 08		3596. 853	1 _n	27794. 15	
3616. 036	0	27646. 71	U, W	3596. 727	0	27795. 12	
3615. 814	2	27648. 40	U	3596. 612	0	27796. 01	
3615. 518	0	27650. 67		3596. 438	0	27797. 36	
3615. 328	0	27652. 12	Z	3596. 334	0	27798. 16	
3614. 404	0 _n	27659. 91		3595. 526	1	27804. 41	U

TABLE 4.—*New Fe I lines, unclassified*—Continued

Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References
3595. 438	0	27805. 09		3486. 142	1	28676. 80	
3594. 427	1	27812. 91		3485. 766	1	28679. 89	(c)
3594. 312	0	27813. 80		3484. 586	2	28689. 60	
3594. 176	1	27814. 85	U	3483. 890	2	28695. 33	U
3593. 860	0	27817. 30		3482. 446	1	28707. 23	(c)
3593. 119	2	27823. 03		3472. 318	0 _n	28790. 96	U, W
3592. 354	1	27828. 96		3457. 894	1	28911. 05	
3591. 940	0	27832. 17		3455. 726	0	28929. 19	
3591. 174	0	27838. 10		3455. 393	1 _n	28931. 98	
3590. 500	1	27843. 33		3450. 743	1	28970. 96	
3590. 422	0	27843. 93		3448. 606	1 _n	28988. 92	
3590. 204	0	27845. 62		3447. 700	1	28996. 54	
3589. 876	0 _n	27848. 17		3444. 532	2	29023. 20	
3589. 224	2	27853. 23		3435. 219	0 _n	29101. 88	
3588. 724	0	27857. 11		3434. 182	0	29110. 67	
3588. 284	2	27860. 52		3430. 554	1 _n	29141. 46	
3587. 844	0	27863. 94		3430. 066	0 _n	29145. 60	
3587. 604	0	27865. 80		3429. 179	1	29153. 14	
3587. 527	1	27866. 40		3425. 441	1	29184. 95	
3587. 328	3	27867. 95		3423. 558	1	29201. 00	
3586. 390	0 _n	27875. 24		3422. 120	2	29213. 27	Z
3586. 332	0	27875. 69	U	3421. 930	1	29214. 90	
3584. 468	0	27890. 18		3420. 864	1	29224. 00	
3584. 354	1	27891. 07		3420. 250	0 _n	29229. 25	
3584. 264	1 _n	27891. 77		3419. 258	1 _n	29237. 73	
3584. 110	1	27892. 97		3416. 840	1	29258. 42	U
3583. 921	1 _n	27894. 44		3416. 562	1	29260. 80	
3583. 687	2	27896. 26	Z	3414. 432	0	29279. 05	
3583. 577	1	27897. 12		3412. 418	1	29296. 33	
3583. 036	0	27901. 33		3412. 134	1	29298. 77	
3582. 970	3 _n	27901. 84		3409. 742	1	29319. 32	U
3582. 908	1	27902. 32		3409. 461	0	29321. 74	
3582. 460	2	27905. 81		3408. 474	1	29330. 23	U, W
3582. 032	1 _n	27909. 15		3402. 743	1 _n	29379. 62	
3581. 951	1	27909. 78		3398. 945	1 _n	29412. 45	U
3580. 402	1	27921. 85	U	3398. 620	1	29415. 26	
3579. 562	1	27928. 41	Z	3398. 374	1	29417. 40	(c)
3577. 490	1 _n	27944. 58		3395. 692	0	29440. 63	U
3574. 609	2	27967. 10		3395. 436	0	29442. 85	
3555. 736	1	28115. 54		3393. 053	1 _n	29463. 53	
3550. 309	0	28158. 52		3390. 218	0	29488. 16	
3550. 189	0	28159. 47		3387. 558	1	29511. 32	
3539. 376	1	28245. 50		3384. 946	0 _n	29534. 09	
3538. 688	1	28250. 99	BK	3384. 392	0	29538. 92	
3525. 622	1	28355. 68	U	3381. 132	1	29567. 40	
3520. 668	0	28395. 58		3380. 756	1	29570. 69	U
3520. 214	0	28399. 24		3379. 688	1	29580. 04	
3519. 500	1	28405. 00		3379. 409	1 _n	29582. 48	U
3519. 350	0	28406. 22	U	3377. 971	3	29595. 07	V
3515. 534	1	28437. 05		3377. 833	0	29596. 28	
3515. 286	1	28439. 06	BK, U, W	3377. 345	0 _n	29600. 56	
3510. 682	2	28476. 35	U	3377. 006	0 _n	29603. 53	
3506. 946	1	28506. 68		3375. 372	2	29617. 86	V
3506. 092	1	28513. 63		3375. 046	1	29620. 72	U
3501. 375	1	28552. 04	U	3373. 750	0	29632. 10	
3499. 271	1	28569. 21		3373. 300	1	29636. 05	U
3499. 154	1	28570. 16		3371. 928	1	29648. 11	
3492. 310	1 _n	28626. 15		3371. 526	2	29651. 64	
3491. 780	0	28630. 50	U	3371. 304	1	29653. 60	U
3488. 827	2	28654. 73		3371. 200	1	29654. 51	

TABLE 4.—New Fe I lines, unclassified—Continued

Wavelength Å	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength Å	Intensity	Wave Number cm ⁻¹	Notes and References
3369. 958	0	29665. 44		3262. 878	1	30638. 96	U
3368. 800	1 _n	29675. 64		3262. 132	0	30645. 96	
3368. 556	0	29677. 78		3261. 636	0	30650. 62	U
3368. 435	0	29678. 85	(^c)	3261. 425	0	20652. 60	
3367. 660	1	29685. 68	U	3261. 146	0	30655. 23	
3367. 292	1	29688. 92	U	3260. 880	0	30657. 73	U
3366. 494	0	29695. 96		3260. 723	0	30659. 20	
3364. 492	0	29713. 63		3260. 624	0	30660. 14	
3359. 608	1	29756. 83	U	3260. 549	0	30660. 84	
3359. 390	1	29758. 76	U	3260. 460	0	30661. 68	S
3358. 573	1	29766. 00		3259. 708	1	30668. 75	U
3358. 386	2 _n	29767. 65		3258. 092	1	30683. 96	U
3358. 320	1	29768. 24		3255. 091	0	30712. 25	(^c)
3358. 044	0	29770. 68		3250. 212	0 _n	30758. 35	U
3357. 558	1	29774. 99	Z	3249. 844	1	30761. 83	W, Z
3354. 854	1 _n	29798. 99		3241. 378	1 _n	30842. 18	U
3354. 512	1	29802. 03		3232. 656	1	30925. 39	
3354. 176	1	29805. 02		3232. 347	0	30928. 34	U
3352. 004	1	29824. 33	U	3222. 808	0 _n	31019. 88	U
3351. 854	1	29825. 66		3220. 486	1 _n	31042. 25	U
3345. 234	0	29884. 68		3216. 581	0 _n	31079. 93	
3341. 626	0	29916. 95		3216. 343	0	31082. 23	
3341. 507	0	29918. 01		3204. 454	0 _n	31197. 55	U
3340. 292	0	29928. 90		3203. 677	0 _n	31205. 12	
3340. 184	0	29929. 86	U	3202. 958	2	31212. 12	Z
3332. 840	0 _n	29995. 81		3202. 188	0 _n	31219. 62	U
3328. 589	0	30034. 12		3200. 908	0	31232. 11	
3328. 470	1 _n	30035. 19	U	3200. 092	1	31240. 07	U
3324. 142	0	30074. 30		3198. 492	1	31255. 70	Z
3323. 454	0	30080. 52		3195. 235	1 _n	31287. 56	W, Z
3323. 352	0 _n	30081. 45		3192. 521	2	31314. 16	Z
3316. 838	0	30140. 52	U	3189. 612	0	31342. 71	U
3311. 307	0	30190. 87		3186. 276	0	31375. 53	U
3311. 200	0 _n	30191. 84	U, W	3184. 215	1	31395. 84	U
3310. 916	0 _n	30194. 43	U	3181. 142	0 _n	31426. 16	
3309. 660	1 _n	30205. 89	U	3170. 978	0	31526. 89	
3309. 283	1 _n	30209. 33	U	3165. 280	0	31583. 64	U
3305. 572	1 _n	30243. 24		3163. 494	0	31601. 47	
3305. 376	0 _n	30245. 04		3163. 372	0	31602. 69	U
3305. 258	0 _n	30246. 12		3158. 193	0	31654. 51	Z
3303. 918	0	30258. 38		3157. 293	1	31663. 54	U
3303. 046	1 _n	30266. 37		3146. 915	0	31767. 95	U
3301. 350	0 _n	30281. 92		3146. 270	1	31774. 46	U
3297. 728	0 _n	30315. 18		3145. 431	1	31782. 94	
3297. 414	0	30318. 06		3139. 485	1	31843. 13	U
3295. 897	0	30332. 02		3137. 238	0	31865. 94	U
3295. 316	0	30337. 37	U	3133. 732	1	31901. 59	U ^c
3294. 963	0 _n	30340. 62	W	3133. 440	0	31904. 56	U
3294. 829	0	30341. 85		3132. 660	1	31912. 50	Z
3294. 621	0 _n	30343. 77	U	3130. 972	0	31929. 71	U
3294. 267	0	30347. 03	U	3129. 800	0	31941. 66	U
3287. 483	1 _n	30409. 65	U ^c	3125. 390	0	31986. 73	
3284. 202	0	30440. 03		3119. 864	0 _n	32043. 39	
3282. 440	1	30456. 37	Z	3115. 954	0	32083. 60	
3270. 620	1	30566. 43		3109. 614	1 _n	32149. 01	Z
3270. 312	0 _n	30569. 31		3107. 322	1 _n	32172. 72	Z
3268. 885	1	30582. 66		3053. 781	0 _n	32736. 77	BK
3263. 989	0	30628. 53		3049. 564	1 _n	32782. 04	BK, U
3263. 805	0	30630. 25		3049. 356	1 _n	32784. 27	BK, W, Z
3263. 062	1	30637. 23	Z	3038. 334	0 _n	32903. 20	BK, U

TABLE 4.—New Fe I lines, unclassified—Continued

Wavelength Å	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength Å	Intensity	Wave Number cm ⁻¹	Notes and References
3012. 942	1 _n	33180. 48	BK	2642. 403	0	37833. 07	(c)
3010. 198	1 _n	33210. 73	BK ^c	2618. 850	1	38173. 31	BK
2995. 256	0	33376. 40	BK, W, Z	2610. 464	0	38295. 93	BK, U
2985. 750	0	33482. 65	BK, Z	2609. 600	1 _n	38308. 61	BK
2979. 867	0	33548. 75	BK, W, Z	2597. 443	0	38487. 90	BK, U
2975. 298	0	33600. 27	BK, U	2591. 782	0	38571. 96	BK, U
2971. 776	0	33640. 09	BK, W, Z	2581. 754	0 _n	38721. 77	BK, U
2963. 518	0 _n	33733. 83	BK, Z	2569. 322	1 _n	38909. 12	BK, Z ^c
2962. 585	1 _n	33744. 45	BK, W, Z	2568. 584	1	38920. 29	BK, U
2956. 377	0	33815. 30	BK, U	2563. 990	1	38990. 02	BK, U ^c
2955. 619	0	33823. 98	BK, U	2561. 068	2	39034. 51	
2954. 957	0	33831. 55	BK, U	2559. 080	0	39064. 83	BK, U
2945. 702	1	33937. 84	BK, W, Z	2558. 118	1	39079. 52	BK, U
2934. 598	0	34066. 25	BK, U	2557. 982	1	39081. 60	BK, U
2933. 051	1	34084. 22	BK	2557. 792	1 _n	39084. 50	BK, U
2930. 395	1	34115. 11	BK, U	2557. 020	0 _n	39096. 30	BK
2915. 658	0	34287. 54	BK, U	2554. 218	0 _n	39139. 18	BK, U
2896. 772	0	34511. 07	BK	2532. 269	1	39478. 41	BK, U, W
2880. 398	0	34707. 24	BK, U	2531. 449	1 _n	39491. 20	BK, W, Z ^{a, c}
2877. 724	0	34739. 49	BK	2527. 262	1	39556. 62	BK
2877. 582	0	34741. 21	BK	2524. 603	1	39598. 28	BK
2862. 080	0	34929. 37		2513. 246	1	39777. 20	
2841. 260	1	35185. 31	BK, U, W	2502. 503	3	39947. 95	BK, U
2830. 090	0 _n	35324. 17	BK ^c	2494. 797	1 _n	40071. 34	BK, U
2829. 485	0 _n	35331. 72	BK, W	2492. 236	1 _n	40112. 51	BK
2829. 312	0 _n	35333. 89	BK, U	2485. 435	0	40222. 26	BK, W
2808. 665	1	35593. 62	BK, W, Z	2485. 206	1 _n	40225. 97	BK
2801. 922	0	35679. 27	BK, U	2480. 732	0 _n	40298. 51	BK
2785. 002	1 _n	35896. 03	BK	2478. 300	1 _n	40338. 06	BK
2783. 845	0	35910. 94	BK	2477. 304	1 _n	40354. 27	BK ^c
2775. 818	1 _n	36014. 79	BK, U, W	2476. 464	1 _n	40367. 96	BK, U
2765. 254	1	36152. 36	BK, U, W ^c	2475. 758	1	40379. 47	BK
2764. 128	1 _n	36167. 09	BK, U ^c	2475. 466	2	40384. 23	BK
2762. 939	0	36182. 65	BK, U	2475. 018	1 _n	40391. 54	BK, U
2758. 093	0	36246. 22	BK, U	2467. 953	1 _n	40507. 16	BK, U
2757. 558	0	36253. 26	BK, U	2467. 573	2 _n	40513. 40	BK, U
2751. 325	1 _n	36335. 38	BK, Z?	2466. 348	1 _n	40533. 52	BK, U
2731. 883	0	36593. 96	BK ^c	2466. 093	0	40537. 71	BK, U
2730. 265	0	36615. 64	BK	2464. 349	1	40566. 40	BK, U
2723. 892	1 _n	36701. 30	(c)	2462. 963	1	40589. 23	BK, U
2715. 503	0	36814. 68	BK ^c	2456. 147	2 _n	40701. 86	BK, U
2713. 510	0 _n	36841. 72	BK, U ^c	2454. 399	1	40730. 84	BK, U
2704. 798	0	36960. 38	BK, U	2452. 965	1	40754. 65	BK
2702. 622	0 _n	36990. 13	BK	2451. 697	3 _n	40775. 73	BK, W
2685. 140	1	37230. 95	BK, U, W ^c	2448. 826	1 _n	40823. 53	BK, U
2684. 536	0	37239. 33	BK, U	2440. 335	2	40965. 56	BK, U
2676. 162	1 _n	37355. 84	BK	2436. 072	2	41037. 24	BK, U
2674. 625	1	37377. 31	BK, U	2419. 236	1	41322. 81	BK, U
2673. 552	0	37392. 31	BK	2413. 764	1	41416. 48	BK, U
2672. 831	0 _n	37402. 40	BK	2411. 738	1 _n	41451. 27	BK
2668. 904	1 _n	37457. 43	BK, U, W ^c	2405. 302	0	41562. 18	BK, U
2668. 724	1	37459. 95	BK	2403. 542	0 _n	41592. 61	BK, U
2665. 814	0	37500. 84	BK, U, W	2402. 938	1	41603. 06	BK, U
2664. 184	1 _n	37523. 78	BK ^c	2402. 109	1	41617. 42	(c)
2663. 169	0	37538. 08	BK, U	2398. 726	1	41676. 11	BK
2658. 699	1	37601. 19	BK, U	2396. 102	0 _n	41721. 74	BK, U ^c
2658. 111	0	37609. 51	BK	2395. 186	1	41737. 70	BK, U
2656. 337	0	37634. 63	BK, U	2394. 303	0 _n	41753. 09	BK
2652. 212	0	37693. 16	BK, U	2388. 090	1	41861. 71	BK
2648. 914	0	37740. 08	BK	2385. 386	1	41909. 16	BK, U

TABLE 4.—*New Fe I lines, unclassified—Concluded*

Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References	Wavelength A	Intensity	Wave Number cm ⁻¹	Notes and References
2383. 790	1 _n	41937. 22	BK, U	2300. 242	3	43460. 30	BK
2376. 276	0	42069. 81	BK	2274. 288	1	43956. 22	BK
2375. 990	0	42074. 88	BK	2223. 747	1	44955. 16	BK
2360. 755	2	42346. 38	BK, U	2213. 828	3	45156. 56	U
2358. 622	2	42384. 68	BK	2208. 280	0	45270. 00	BK, U
2341. 373	1	42696. 90	BK, U	2206. 444	1	45307. 66	BK, U
2335. 246	1	42808. 91	BK, U	2200. 494	3	45430. 16	BK, U
2333. 024	1	42849. 68	BK	2200. 084	1	45438. 62	U
2329. 093	0	42922. 00	BK	2189. 514	1	45657. 96	BK, U
2326. 047	0	42978. 20	BK, U	2186. 760	2	45715. 45	BK
2324. 970	0	42998. 11	BK, U	2176. 670	3	45927. 35	BK, U
2324. 260	0	43011. 24	BK	2176. 216	1	45936. 93	BK, U
2323. 416	1	43026. 86	BK, U	2175. 825	3	45945. 18	BK, X
2323. 286	0	43029. 27	BK, U	2173. 451	1	45995. 36	BK
2322. 684	0	43040. 42	BK ^c	2172. 658	3 _n	46012. 15	BK
2321. 583	0	43060. 83	BK, U	2172. 037	1	46025. 30	BK
2321. 220	0	43067. 57	BK, U ^c	2156. 432	3	46358. 32	X, Z ^d
2321. 029	0	43071. 11	BK	2151. 005	2	46475. 28	BK
2319. 680	1 _n	43096. 16	BK, U	2146. 806	3	46566. 17	BK, U
2319. 441	0	43100. 60	BK	2146. 458	1	46573. 72	BK
2316. 290	0	43159. 22	BK	2143. 369	2	46640. 83	BK, U
2314. 337	0	43195. 64	BK	2142. 820	1	46652. 78	BK, U
2313. 650	1	43208. 47	BK, U	2142. 575	1	46658. 11	BK, U
2310. 732	0	43263. 02	BK, U ^c	2135. 300	0 _n	46817. 06	BK
2304. 544	1	43378. 99	BK, U	2132. 526	0 _n	46877. 95	BK, U
				2124. 948	2 _n	47045. 11	BK, U
				2121. 864	1 _n	47113. 48	BK, U

TABLE 5.—*Faint lines of Fe I in the solar spectrum*

Laboratory		Sun				Laboratory		Sun			
Wave-length A	Inten- sity	Wave-length A	Inten- sity Δλ/λ	☉—Lab. A	Solar Identifi- cation	Wave-length A	Inten- sity	Wave-length A	Inten- sity Δλ/λ	☉—Lab. A	Solar Identifi- cation
8126. 520	1	8126. 48	0. 6	-0. 04	Fe I?	5173. 498	3	5173. 487	0. 9	-0. 011	Fe I
8090. 341	1	8090. 464	3. 7	+0. 123	Atm Fe I?	5149. 492	1	5149. 520	1. 1	+0. 028	Fe I—Fe II
7714. 603	0	7714. 59	1. 2	-0. 01	Fe I?	5147. 107	2	5147. 103	5. 0	-0. 004	Fe I—Fe II
7588. 834	0	7588. 849	1. 2	+0. 015	Fe I?	5140. 826	3	5140. 823	3. 1	-0. 003	Fe I
7438. 336	1	7438. 38	0. 2	+0. 04	Fe I?	5097. 498	3	5097. 492	7. 4	-0. 006	Fe I
7214. 630	1	7214. 60	0. 1	-0. 03	Atm? Fe I?	5031. 180	1	5031. 182	2. 2	+0. 002	Fe I?
7192. 458	1 _n	7192. 465	4. 4	+0. 007	Fe I—Atm	5025. 306	3	5025. 305	3. 6	-0. 001	Fe I
7092. 866	1 _n	7092. 848	1. 1	-0. 018	Fe I	5013. 914	3	5013. 920	4. 4	+0. 006	Fe I
6692. 280	1	6692. 304	0. 3	+0. 024	Fe I?	5007. 710	3	5007. 734	6. 6	+0. 024	Fe I?
5899. 094	2	5899. 106	0. 1	+0. 012	Fe I	4992. 502	1	4992. 480	0. 9	-0. 022	Fe I?
5699. 308	2	5699. 322	1. 2	+0. 014	Fe I	4980. 278	3	4980. 296	2. 8	+0. 018	Fe I
5644. 033	3	5644. 037	2. 5	+0. 004	Fe I	4974. 246	0	4974. 247	1. 6	+0. 001	Fe I
5625. 704	3	5625. 687	5. 2	-0. 017	-Fe I	4961. 040	3	4961. 054	3. 4	+0. 014	Fe I
5589. 852	2 _n	5589. 861	2. 9	+0. 009	Fe I	4944. 306	3	4944. 287	2. 0	-0. 019	Fe I
5458. 572	2	5458. 58	1. 1	+0. 01	Fe I	4902. 368	1	4902. 384	1. 7	+0. 016	Fe I
5350. 798	1	5350. 789	0. 7	-0. 009	Fe I	4900. 816	2	4900. 821	2. 4	+0. 005	Fe I
5350. 434	0	5350. 454	0. 2	+0. 020	Fe I?	4861. 947	3	4861. 952	4. 1	+0. 005	Fe I
5308. 228	0	5308. 212	0. 1	-0. 016	Fe I?	4833. 817	1	4833. 819	1. 7	+0. 002	Fe I
5303. 874	1 _n	5303. 845	1. 3	-0. 029	Fe I?	4825. 357	3	4825. 349	6. 2	-0. 008	Fe I
5181. 335	3	5181. 330	3. 7	-0. 005	Fe I?	4821. 572	2	4821. 601	0. 8	+0. 029	Fe I

TABLE 5.—Faint lines of Fe I in the solar spectrum—Continued

Laboratory		Sun				Laboratory		Sun			
Wave-length A	Inten- sity	Wave-length A	Inten- sity $\Delta\lambda/\lambda$	☉—Lab. A	Solar Identifi- cation	Wave-length A	Inten- sity	Wave-length A	Inten- sity $\Delta\lambda/\lambda$	☉—Lab. A	Solar Identifi- cation
4818.038	1	4818.032	3.9	-0.006	Fe I	4229.406	1	4229.408	7.1	+0.002	Fe I
4814.365	2	4814.369	2.7	+0.004	Fe I	4223.221	1	4223.236	5.2	+0.015	Fe I
4805.529	0n	4805.55	0.8	+0.02	Fe I?	4219.018	1	4219.016	0.4	-0.002	Fe I
4768.697	3	4768.700	5.2	+0.003	Fe I	4199.557	1n	4199.524	0.8	-0.033	Fe I
4756.356	1	4756.366	2.3	+0.010	Fe I	4197.512	0	4197.508	0.6	-0.004	Fe I
4728.160	1	4728.167	3.8	+0.007	Fe I	4194.099	1	4194.089	0.5	-0.010	Fe I
4716.483	0	4716.508	0.4	+0.025	Fe I?	4193.600	1	4193.621	3.3	+0.021	Fe I
4712.515	1	4712.497	2.8	-0.018	Fe I	4192.374	1n	4192.400	2.4	+0.026	CN Fe I
4686.641	0	4686.630	0.3	-0.011	Fe I?	4188.729	2n	4188.737	28.6	+0.008	Fe I—
4686.348	0n	4686.370	1.1	+0.022	Fe I?	4188.300	1n	4188.315	3.8	+0.015	Fe I CN?
4674.297	2	4674.303	2.8	+0.006	Fe I	4185.793	3	4185.779	4.5	-0.014	Fe I
4660.920	1n	4660.907	4.1	-0.013	Fe I?	4179.689	1	4179.674	0.6	-0.015	Fe I
4640.958	1	4640.973	3.2	+0.015	Fe I?	4174.208	0n	4174.183	0.5	-0.025	Fe I
4627.532	2	4627.549	2.6	+0.017	Fe I	4160.333	1n	4160.368	15.4	+0.035	Fe I—
4605.610	2n	4605.594	8.6	-0.016	Fe I	4158.366	1	4158.376	6.0	+0.010	Fe I
4597.403	2	4597.383	5.0	-0.020	Fe I	4156.322	1n	4156.307	20.4	-0.015	Fe I
4591.502	2n	4591.520	7.4	+0.018	Fe I	4155.914	1	4155.915	8.4	+0.001	Fe I
4590.815	2n	4590.793	5.4	-0.022	Fe I	4148.794	1n	4148.783	4.8	-0.011	Fe I Mn I
4585.337	1	4585.343	3.0	+0.006	Fe I	4139.718	1	4139.732	0.8	+0.014	Fe I
4582.297	1n	4582.309	3.5	+0.012	Fe I	4137.642	1	4137.655	8.0	+0.013	Ce II Fe I
4581.186	1	4581.196	4.8	+0.010	Fe I	4135.039	1n	4135.037	9.2	-0.002	Fe I Mn I
4561.426	2	4561.417	6.1	-0.009	Fe I	4131.146	1n	4131.117	11.9	-0.029	Mn I Fe I
4560.892	1	4560.869	3.1	-0.023	Fe I?	4124.490	1	4124.489	7.5	-0.001	Fe I
4557.287	2	4557.284	5.7	-0.003	Fe I	4124.332	0n	4124.358	0.5	+0.026	Fe I?
4541.319	2	4541.318	3.7	-0.001	Fe I	4110.310	1	4110.299	2.2	-0.011	Ca II—Fe I
4533.078	2n	4533.046	7.5	-0.032	Fe I?	4096.695	1	4096.696	9.0	+0.001	Fe I
4517.136	1	4517.154	6.6	+0.018	Fe I?	4095.346	1	4095.356	4.9	+0.010	Fe I
4507.232	1	4507.227	1.4	-0.005	Fe I	4094.422	1	4094.422	12.0	0.000	Fe I
4500.652	1n	4500.639	2.9	-0.013	Fe I	4081.264	1	4081.262	12.2	-0.002	Fe I
4480.731	1n	4480.704	1.0	-0.027	Fe I?	4072.332	0	4072.351	3.7	+0.019	Fe I
4478.649	1n	4478.626	2.7	-0.023	—Fe I	4070.010	0	4070.036	2.7	+0.026	Fe I
4445.050	0	4445.065	0.4	+0.015	Fe I?	4069.610	1	4069.610	8.4	0.000	Fe I
4437.695	1	4437.699	2.7	+0.004	Fe I?	4068.898	0	4068.90	0.2	0.00	Fe I
4424.608	1	4424.586	5.9	-0.022	—Fe I	4054.454	1	4054.442	6.9	-0.012	Fe I
4424.061	1	4424.072	5.4	+0.011	Fe I—Cr I	4037.136	1n	4037.121	10.9	-0.015	Fe I
4420.266	2n	4420.287	7.7	+0.021	Fe I	4036.552	0n	4036.567	2.1	+0.015	Fe I
4419.076	2n	4419.104	2.7	+0.028	Cr I Fe I	4033.648	1	4033.660	7.7	+0.012	Fe I
4416.137	0	4416.160	1.5	+0.023	Fe I?	4026.770	1	4026.771	2.4	-0.001	Fe I
4412.146	1	4412.138	1.8	-0.008	Fe I	4022.564	0	4022.536	1.1	-0.028	Fe I?
4411.914	2n	4411.935	12.0	+0.021	Ti II Fe I?	4022.212	1n	4022.226	10.4	+0.014	Fe I
4378.486	2	4378.512	5.7	+0.026	Fe I	4012.628	1n	4012.602	6.2	-0.026	Ni I?—Fe I
4372.558	1	4372.588	1.4	+0.030	Fe I	4010.618	1	4010.588	16.7	-0.030	—Fe I
4344.928	1	4344.891	8.0	-0.037	—Fe I?	4010.522	1	4010.492	2.7	-0.030	Fe I?
4341.802	0n	4341.826	2.8	+0.024	Fe I	4009.388	1	4009.420	0.9	+0.032	Fe I
4336.122	1	4336.135	0.1	+0.013	Fe I	4009.240	1n	4009.255	1.1	+0.015	Fe I
4335.773	0	4335.783	1.3	+0.010	Fe I?—	4003.287	1n	4003.275	2.5	-0.012	Mn I—Fe I
4334.928	1n	4334.938	3.2	+0.010	Fe I?	4001.212	1N	4001.241	1.0	+0.029	Fe I
4332.432	1	4332.453	1.8	+0.021	Fe I	3996.540	1	3996.546	2.6	+0.006	Fe I
4331.411	1n	4331.442	4.4	+0.031	Fe I—	3996.139	1	3996.117	4.0	-0.022	Fe I?
4288.297	1	4288.268	1.2	-0.029	Fe I?	3993.642	1	3993.612	5.0	-0.030	—Fe I
4276.082	1	4276.103	4.7	+0.021	CH Fe I	3989.006	1N	3988.992	18.8	-0.014	—Fe I
4272.528	1	4272.544	10.5	+0.016	Fe I—	3983.518	1n	3983.540	10.3	+0.022	Fe I
4269.730	1n	4269.740	17.8	+0.010	Fe I	3980.008	1	3980.012	6.8	+0.004	Fe I
4269.053	2	4269.034	3.5	-0.019	Fe I	3970.863	1	3970.843	3.3	-0.020	—Fe I?
4243.560	2	4243.547	13.7	-0.013	Fe I	3963.438	1	3963.437	12.1	-0.001	Fe I

TABLE 5.—*Faint lines of Fe I in the solar spectrum*—Continued

Laboratory		Sun				Laboratory		Sun			
Wave-length A	Inten- sity	Wave-length A	Inten- sity $\Delta\lambda/\lambda$	☉—Lab. A	Solar Identifi- cation	Wave-length A	Inten- sity	Wave-length A	Inten- sity $\Delta\lambda/\lambda$	☉—Lab. A	Solar Identifi- cation
3962. 717	1n	3962. 722	12. 0	+0. 005	Fe I	3628. 414	0	3628. 439	2. 2	+0. 025	Fe I
3960. 642	1	3960. 647	1. 4	+0. 005	Fe I	3625. 498	1	3625. 501	13. 5	+0. 003	Fe I
3951. 638	1N	3951. 626	7. 1	-0. 012	Fe I	3622. 431	3	3622. 438	0. 8	+0. 007	Fe I
3943. 166	1n	3943. 182	11. 5	+0. 016	Fe I	3619. 942	2n	3619. 937	13. 8	-0. 005	Fe I
3936. 558	1	3936. 557	16. 2	-0. 001	Fe I	3618. 160	2	3618. 187	5. 3	+0. 027	Fe I
3934. 356	1n	3934. 366	35. 3	+0. 010	Fe I	3617. 007	2	3617. 011	10. 6	+0. 004	Fe I
3932. 266	1n	3932. 254	5. 6	-0. 012	Fe I	3616. 857	0	3616. 878	0. 1	+0. 021	Fe I?
3931. 883	0	3931. 898	6. 1	+0. 015	Fe I	3616. 722	1	3616. 728	1. 0	+0. 006	Fe I
3930. 876	0N	3930. 889	10. 4	+0. 013	Fe I—	3615. 959	1	3615. 962	10. 2	+0. 003	Fe
3892. 302	1	3892. 314	10. 3	+0. 012	Fe I	3615. 814	2	3615. 811	2. 5	-0. 003	Fe I
3818. 593	2n	3818. 620	21. 7	+0. 027	Fe I	3615. 518	0	3615. 531	0. 5	+0. 013	Fe I?
3815. 188	1n	3815. 210	8. 9	+0. 022	Fe I—CN	3615. 328	0	3615. 324	0. 8	-0. 004	Fe I
3814. 785	1	3814. 784	18. 9	-0. 001	Fe I	3613. 711	1	3613. 719	9. 7	+0. 008	Fe I
3805. 771	3	3805. 745	11. 3	-0. 026	CN—Fe I	3613. 612	2	3613. 605	24. 4	-0. 007	Fe I
3804. 501	1	3804. 486	7. 1	-0. 015	CN—Fe I	3611. 188	1n	3611. 184	15. 0	-0. 004	Fe I
3801. 337	1	3801. 371	30. 2	+0. 034	Fe I—CN	3609. 996	1	3609. 978	1. 2	-0. 018	Fe I?
3799. 024	0	3799. 021	1. 1	-0. 003	Fe I?	3607. 780	2n	3607. 772	1. 8	-0. 008	Fe I
3794. 174	0	3794. 176	1. 6	+0. 002	Fe I?	3607. 256	1	3607. 251	0. 8	-0. 005	Fe I
3793. 136	1	3793. 125	11. 3	-0. 011	Fe I? CN?	3607. 102	2n	3607. 124	1. 7	+0. 022	Fe I
3786. 443	3	3786. 448	26. 6	+0. 005	Fe I?	3606. 253	2	3606. 251	1. 4	-0. 002	Fe I
3784. 812	1	3784. 826	2. 3	+0. 014	Fe I CN	3606. 016	0	3606. 039	7. 5	+0. 023	Fe I?
3784. 698	1	3784. 675	2. 4	-0. 023	CN Fe I?	3604. 701	2	3604. 702	17. 3	+0. 001	Fe I
3782. 862	3	3782. 848	1. 2	-0. 014	Fe I	3604. 090	0n	3604. 07	0. 5	-0. 02	Fe I?
3781. 300	0	3781. 321	1. 3	+0. 021	Fe I?	3603. 956	2	3603. 950	12. 6	-0. 006	Fe I
3780. 966	0	3780. 989	2. 6	+0. 023	Fe I?—CN?	3603. 673	2	3603. 691	9. 0	+0. 018	Fe I
3778. 809	1	3778. 798	23. 9	-0. 011	CN Fe I?	3603. 449	1	3603. 438	0. 9	-0. 011	Fe I
3776. 838	0	3776. 839	0. 5	+0. 001	Fe I?	3602. 898	0	3602. 878	0. 5	-0. 020	Fe I
3770. 548	0	3770. 531	3. 7	-0. 017	Fe I?	3601. 273	1	3601. 284	1. 7	+0. 011	Fe I
3769. 310	1n	3769. 316	2. 8	+0. 006	Fe I—	3599. 972	2n	3599. 970	16. 2	-0. 002	Fe I
3759. 597	1n	3759. 585	13. 8	-0. 012	Fe I	3599. 842	1	3599. 831	1. 8	-0. 011	Fe I
3741. 486	1n	3741. 479	20. 7	-0. 007	Fe I	3596. 853	1n	3596. 859	0. 8	+0. 006	Fe I
3728. 972	2	3728. 954	28. 1	-0. 018	Ni I—Fe I	3596. 727	0	3596. 752	0. 4	+0. 025	Fe I?
3707. 578	1n	3707. 562	29. 2	-0. 016	Ti I—Fe I	3595. 526	1	3595. 540	0. 3	+0. 014	Fe I
3707. 458	2	3707. 465	25. 4	+0. 007	Co I Fe I	3594. 312	0	3594. 317	2. 1	+0. 005	Fe I?
3707. 335	1	3707. 329	27. 6	-0. 006	—Fe I	3592. 354	1	3592. 367	1. 1	+0. 013	Fe I
3699. 810	1	3699. 825	12. 0	+0. 015	Fe I	3589. 876	0n	3589. 882	4. 7	+0. 006	Fe I?
3696. 548	1n	3696. 523	17. 6	-0. 025	Fe I	3584. 354	1	3584. 383	7. 9	+0. 029	Fe I
3695. 632	2n	3695. 652	19. 8	+0. 020	Fe I	3584. 264	1n	3584. 257	1. 5	-0. 007	Fe I
3688. 198	1	3688. 173	19. 0	-0. 025	Fe I	3584. 110	1	3584. 097	10. 3	-0. 013	Fe I
3684. 552	1	3684. 542	14. 1	-0. 010	Fe I	3583. 921	1n	3583. 911	27. 9	-0. 010	Fe I
3680. 962	2n	3680. 944	23. 8	-0. 018	Fe I	3583. 687	2	3583. 697	33. 2	+0. 010	Fe I—V I
3680. 396	2n	3680. 389	21. 2	-0. 007	Fe I	3583. 577	1	3583. 597	3. 9	+0. 020	Fe I
3677. 503	2	3677. 514	26. 4	+0. 011	Fe I	3582. 970	3n	3582. 964	5. 9	-0. 006	Fe I
3672. 114	0	3672. 124	6. 0	+0. 010	Fe I	3582. 908	1	3582. 877	6. 6	-0. 031	Fe I?
3665. 845	1	3665. 850	6. 3	+0. 005	Fe I	3582. 460	2	3582. 437	7. 8	-0. 023	Fe I
3659. 214	1	3659. 234	3. 8	+0. 020	Ce II? Fe I	3581. 951	1	3581. 941	16. 4	-0. 010	Fe I
3659. 094	1n	3659. 124	0. 7	+0. 030	Fe I	3580. 402	1	3580. 412	12. 5	+0. 010	Fe I
3651. 918	1n	3651. 921	25. 6	+0. 003	Fe I—CH	3579. 562	1	3579. 562	9. 9	0. 000	Fe I
3650. 554	2n	3650. 538	25. 5	-0. 016	—Fe I	3577. 490	1n	3577. 465	13. 1	-0. 025	Ce II—Fe I
3640. 096	1	3640. 118	2. 3	+0. 022	Fe I	3574. 609	2	3574. 584	1. 5	-0. 025	Fe I
3639. 964	1n	3639. 985	2. 6	+0. 021	Fe I	3574. 256	1	3574. 253	12. 6	-0. 003	Ti I—Fe I
3639. 502	1n	3639. 525	12. 3	+0. 023	Fe I—	3567. 748	1	3567. 742	9. 5	-0. 006	Fe I
3639. 308	1n	3639. 332	3. 3	+0. 024	Fe I	3562. 269	1n	3562. 270	10. 9	+0. 001	Fe I?—Cr I?
3628. 868	1	3628. 879	3. 4	+0. 011	Fe I	3555. 736	1	3555. 724	3. 2	-0. 012	Fe I
3628. 620	1	3628. 599	12. 7	-0. 021	—Fe I	3539. 376	1	3539. 371	1. 1	-0. 005	Fe I

TABLE 5.—Faint lines of Fe I in the solar spectrum—Continued

Laboratory		Sun				Laboratory		Sun			
Wave-length A	Inten- sity	Wave-length A	Inten- sity $\Delta\lambda/\lambda$	\odot —Lab. A	Solar Identifi- cation	Wave-length A	Inten- sity	Wave-length A	Inten- sity $\Delta\lambda/\lambda$	\odot —Lab. A	Solar Identifi- cation
3538.688	1	3538.690	2.3	+0.002	Fe I	3337.915	1	3337.923	42.3	+0.008	Fe I
3530.976	1	3530.965	7.1	-0.011	Fe I	3330.206	1	3330.234	13.2	+0.028	Fe I—NH
3528.316	0	3528.324	3.8	+0.008	Fe I?	3328.589	0	3328.583	2.9	-0.006	Fe I?
3525.622	1	3525.618	12.6	-0.004	—Fe I	3328.470	1n	3328.475	12.2	+0.005	Fe I
3519.500	1	3519.505	1.1	+0.005	Fe I	3324.142	0	3324.150	19.4	+0.008	Fe I?
3515.534	1	3515.535	7.7	+0.001	Fe I	3316.838	0	3316.851	12.5	+0.013	Fe I—V II
3510.682	2	3510.685	15.0	+0.003	Fe I	3316.558	1	3316.569	11.4	+0.011	Fe I
3506.946	1	3506.938	4.4	-0.008	Fe I	3311.200	0n	3311.215	15.4	+0.015	Fe I
3500.164	2	3500.157	11.1	-0.007	Fe I	3310.916	0n	3310.918	8.2	+0.002	Fe I
3499.271	1	3499.269	6.6	-0.002	Fe I	3298.537	1	3298.558	14.8	+0.021	Fe I
3498.755	2	3498.749	13.4	-0.006	Fe I	3294.621	0n	3294.622	11.4	+0.001	Fe I
3488.827	2	3488.826	19.5	-0.001	Fe I	3282.440	1	3282.447	11.0	+0.007	Fe I
3487.138	0	3487.150	3.7	+0.012	Fe I?	3268.885	1	3268.860	5.2	-0.025	Fe I?
3486.142	1	3486.143	10.3	+0.001	Fe I	3263.062	1	3263.073	12.9	+0.011	Fe I
3483.890	2	3483.884	13.4	-0.006	Fe I	3262.878	1	3262.902	21.7	+0.024	Fe I
3482.446	1	3482.451	10.6	+0.005	Fe I Fe II	3261.801	0	3261.817	16.9	+0.016	Fe I
3472.318	0n	3472.307	16.4	-0.011	—Fe I	3261.636	0	3261.639	37.2	+0.003	Fe I—
3457.894	1	3457.894	7.5	0.000	Fe I—	3260.723	0	3260.692	4.5	-0.031	Fe I?
3450.743	1	3450.747	2.0	+0.004	Fe I Ti I	3260.460	0	3260.472	4.6	+0.012	Fe I?
3448.606	1n	3448.592	6.7	-0.014	Fe I	3259.708	1	3259.713	8.6	+0.005	Fe I
3444.532	2	3444.518	13.2	-0.014	Fe I	3258.092	1	3258.100	11.4	+0.008	Fe I
3435.219	0n	3435.246	1.0	+0.027	Fe I?	3249.844	1	3249.861	13.7	+0.017	Fe I
3430.066	0n	3430.083	0.6	+0.017	Fe I?	3249.504	1	3249.535	25.6	+0.031	Fe I—V II
3429.179	1	3429.148	1.3	-0.031	Fe I?	3241.378	1n	3241.391	17.9	+0.013	Fe I
3425.441	1	3425.446	4.7	+0.005	Fe I Nb II	3232.656	1	3232.687	16.5	+0.031	Fe I—
3423.558	1	3423.534	3.2	-0.024	NH—Fe I?	3223.480	1n	3223.449	17.9	-0.031	Fe I
3422.120	2	3422.127	13.1	+0.007	Fe I	3216.343	0	3216.359	1.7	+0.016	Fe I?
3421.930	1	3421.900	0.6	-0.030	Fe I	3205.782	1	3205.783	12.2	+0.001	Fe I
3420.250	0n	3420.228	2.9	-0.022	Fe I?	3204.454	0n	3204.453	4.7	-0.001	Fe I
3418.905	1	3418.881	16.1	-0.024	Fe I	3204.306	1	3204.284	17.0	-0.022	—Fe I
3416.840	1	3416.869	6.1	+0.029	NH Fe I	3202.958	2	3202.942	4.7	-0.016	Fe I
3414.432	0	3414.403	4.7	-0.029	Fe I?	3198.492	1	3198.487	18.2	-0.005	Fe I
3408.474	1	3408.505	6.5	+0.031	Fe I	3195.968	1	3195.990	32.2	+0.022	Fe I
3401.007	1	3400.987	12.2	-0.020	Fe I	3195.235	1n	3195.230	26.1	-0.005	Fe I
3400.662	1	3400.645	10.3	-0.017	Fe I	3192.521	2	3192.534	31.9	+0.013	[[Fe I—CH?
3398.620	1	3398.612	11.8	-0.008	Fe I Ti I	3189.612	0	3189.634	0.5	+0.022	Fe I
3384.946	0n	3384.925	3.5	-0.021	Fe I	3186.276	0	3186.272	9.6	-0.004	Fe I
3384.392	0	3384.425	5.0	+0.033	Fe I?	3184.215	1	3184.210	17.6	-0.005	Fe I
3381.990	1n	3381.993	11.2	+0.003	Fe I	3181.142	0n	3181.131	4.1	-0.011	Fe I
3381.498	1n	3381.495	0.9	-0.003	Co I Fe I	3170.978	0	3170.985	14.7	+0.007	Fe I?
3381.132	1	3381.132	16.1	0.000	Fe I—	3165.280	0	3165.266	21.9	-0.014	Fe I
3380.756	1	3380.752	30.9	-0.004	Sr II—Fe I				Est. Int.		
3379.688	1	3379.706	0.9	+0.018	Fe I	3159.437	1	3159.436	[-1]	-0.001	Fe I
3377.971	3	3377.977	23.1	+0.006	Fe I	3158.193	0	3158.191	[-1]	-0.002	Fe I?
3377.345	0n	3377.361	1.8	+0.016	Fe I—V I	3157.293	1	3157.294	[0]	+0.001	Fe I
						3146.270	1	3146.301	[0]	+0.031	Fe I
3375.724	1	3375.730	6.8	+0.006	Fe I						
3373.300	1	3373.316	17.1	+0.016	Fe I	3139.485	1	3139.486	[-1]	+0.001	Fe I
3371.304	1	3371.295	18.1	-0.009	Fe I	3135.590	1n	3135.589	[0]	-0.001	Fe I
3368.800	1n	3368.821	16.5	+0.021	Fe I	3134.401	1	3134.396	[1]	-0.005	Fe I?
3367.660	1	3367.677	17.2	+0.017	NH Fe I	3132.660	1	3132.635	[1]	-0.025	—Fe I
						3123.545	1n	3123.561	[1]	+0.016	Fe I
3367.292	1	3367.299	8.9	+0.007	Fe I						
3364.402	1	3364.400	10.1	-0.002	Fe I NH	3120.220	2n	3120.237	[1]	+0.017	Fe I
3357.558	1	3357.569	11.6	+0.011	Fe I	3116.502	1n	3116.503	[1]	+0.001	Fe I
3354.512	1	3354.537	7.3	+0.025	Fe I? Ti II?	3115.862	1	3115.883	[0]	+0.021	Fe I
3340.184	0	3340.178	3.7	-0.006	Fe I	3115.656	2	3115.668	[1]	+0.012	Fe I Cr II
						3109.614	1n	3109.622	[1]	+0.008	Fe I

TABLE 5.—*Faint Lines of Fe I in the solar spectrum—Concluded*

Laboratory		Sun				Laboratory		Sun			
Wave-length Å	Inten- sity	Wave-length Å	Inten- sity $\Delta\lambda/\lambda$	\odot —Lab. Å	Solar Identifi- cation	Wave-length Å	Inten- sity	Wave-length Å	Inten- sity $\Delta\lambda/\lambda$	\odot —Lab. Å	Solar Identifi- cation
3107.322	1n	3107.322	[0]	0.000	Fe I	2985.750	0	2985.73	[1]	-0.02	Fe I
3098.963	1	3098.968	[-1]	+0.005	Fe I	2979.867	0	2979.88	[1]	+0.01	Fe I
3087.420	1n	3087.453	[0]	+0.033	Fe I OH	2978.060	1	2978.055	[3]	-0.005	Fe I
3081.278	1	3081.247	[2]	-0.031	OH Fe I	2975.298	0	2975.278	[3]	-0.020	-Fe I
3049.564	1n	3049.546	[2]	-0.018	Fe I	2971.776	0	2971.77	[1]	-0.01	Fe I
3049.356	1n	3049.349	[3]	-0.007	Fe I	2963.518	0n	2963.52	[3N]	0.00	Fe I? [Cr II
3038.334	0n	3038.312	[3]	-0.022	Fe I	2962.585	1n	2962.59	[-1]	0.00	Fe I
3012.942	1n	3012.937	[3]	-0.005	Fe I	2958.462	1	2958.45	[0N]	-0.01	Fe I
3011.883	2	3011.88	[0N]	0.00	Fe I	2947.116	0	2947.04	[-1]	-0.08	W I—Fe I?
2995.256	0	2995.260	[3]	+0.004	Fe I	2946.095	1	2946.08	[-1]	+0.02	Fe I
						2945.702	1	2945.65	[-1]	-0.05	Fe I

(Paper 65A1-80)