A Critical Compilation of Atomic Transition Probabilities for Neutral and Singly Ionized Iron

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We have carried out a new, expanded tabulation of the atomic transition probabilities for allowed and forbidden lines of Fe I and Fe II, based on the critical evaluation of all available literature sources. The compiled data are taken mainly from recent experimental and theoretical results that became available after the publication of our first compilation in 1988. The data are arranged in multiplet format and are ordered according to increasing excitation energies. © *2006 by the U.S. Secretary of Commerce on behalf of the United States. All rights reserved.* [DOI: 10.1063/1.2218876]

Key words: allowed and forbidden transitions; atomic transition probabilities; *f* values; line strengths; neutral iron; oscillator strengths; singly ionized iron; stage of ionization.

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1. Introduction

This new compilation of the atomic transition probabilities for neutral and singly ionized iron is mainly in response to strong continuing interests and needs of the astrophysical and magnetic fusion science communities.

Those needs have also been responsible for significant experimental and theoretical activity on Fe I and Fe II during the last 15 years that produced a large amount of new material after the publication of our earlier 1988 tables.[1] Thus our earlier compilation is superseded by this new, enlarged edition which is produced in the same format. (Editor's Comment: the format is the same, but each reference has a unique number; all references are collected together in Sec. 5, as well as being given in four different subsections within the paper.)

For the allowed or electric dipole ($E1$) lines of Fe I, we have compiled data for 2425 transitions, an expansion of about 25%. All material originates from experimental sources. For Fe II, the great majority of the data again come from recent experiments, but this material is supplemented by some results of a new semiempirical calculation. We compiled a total of 926 transitions, which is an increase of 42% from our earlier tables.

For the forbidden lines, specifically magnetic dipole ($M1$) and electric quadrupole ($E2$) transitions, the data situation is greatly improved for Fe II due to new comprehensive calculations as well as a few experimental checks. However, for Fe I, no activity has taken place in recent years, and consequently our earlier data tables remain unchanged.

Most of the new data are of significantly better quality than those listed in our earlier compilation. For example, 1050 allowed ($E1$) lines of Fe I are now estimated to have uncertainties less than ±10%, while only 199 lines were estimated to be this accurate in our 1988 compilation. Figures 1 and 2 show the overall improvement graphically for the allowed lines of Fe I and Fe II.

We provided detailed explanations of our data evaluation method and our error assessment in our earlier transition probability compilations, (Wiese *et al.*[24,25]), and will therefore not discuss this here again.

1.1. List of Symbols

Symbols for indication of data accuracy

A = uncertainties within ±3%,
B = uncertainties within ±10%,
C = uncertainties within ±25%,
D = uncertainties within ±50%,
E = uncertainties greater than ±50%, but within factors of 3.

Symbols used for the table headings

λ = Wavelength in (Å)
E_i = Lower energy level, $(cm^{-1})^*$
E_k = Upper energy level, $(cm^{-1})^*$
g_i = Statistical weight of the lower level
g_k = Statistical weight of the upper level

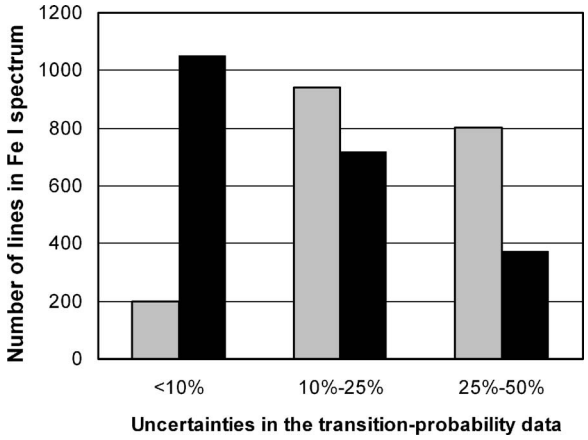

FIG. 1. Improvement in the quality of transition-probability data for Fe I as compared to our first tabulation in 1988 (Fuhr *et al.*[1]). The columns in gray show the number of lines compiled in 1988 for the three indicated ranges of accuracy, and the black columns show the same for the present tables. The number of lines with uncertainties estimated to be less than ±10% has increased more than fivefold. It should be noted that the combined height of the black columns is larger than that of the gray columns, reflecting the increased number of lines tabulated now.

A_{ki} = Atomic transition probability for spontaneous emission (10^8 s^{-1})
f_{ik} = (Absorption) oscillator strength
S = Line strength in atomic units

* The customary unit for atomic energy levels, used here, is related to the SI unit for energy (Joules) by $1\ cm^{-1} = 1.986 \times 10^{-23}$ J.

Abbreviations appearing in the column labeled *Source* (allowed lines only):

n = Normalized to a scale different from that of the author

Abbreviations appearing in the column labeled *Type* (forbidden lines only):

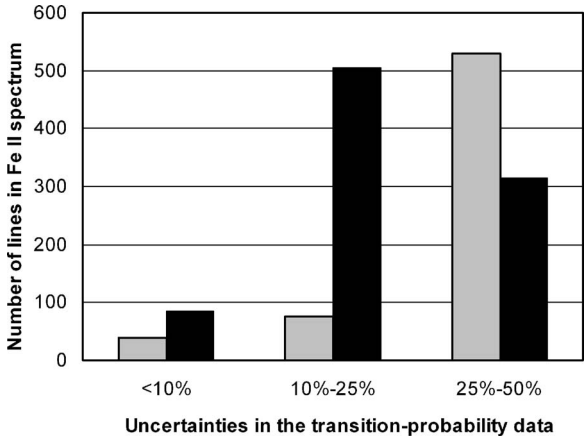

FIG. 2. Improvement in the quality and coverage of transition-probability data compiled for Fe II in 1988 (Fuhr *et al.*[1]) and now. The columns in gray show the number of lines compiled in 1988 for the three indicated ranges of accuracy and the black columns show the same material for the present tables. The number of lines with uncertainties estimated to be less than ±25% has increased almost sixfold. It should be noted that the combined height of the black columns is larger than that of the gray columns, reflecting the increased number of lines tabulated now.

$M1$ = Magnetic dipole transitions
$E2$ = Electric quadrupole transitions

Special symbols used in the wavelength and energy level columns: Numbers in italics indicate multiplet values, i.e., weighted averages of line values.

In all tables, we have shown the power of ten by the exponential notation. For example, 3.88E-03 stands for 3.88×10^{-3}.

1.2. Useful Relations

(1) Statistical weight g:

The statistical weight of a level is related to the total angular momentum or quantum number J_L of that level (initial or final state of a line) by

$$g_L = 2J_L + 1 .$$

Similarly, the statistical weight of a term (initial or final state of a multiplet) is

$$g_M = (2L + 1)(2S + 1),$$

where L is the total orbital angular momentum and S is the total spin angular momentum.

(2) Line strength S: The line strength of a multiplet is the sum of the strengths of its component lines, i.e.,

$$S(\text{Multiplet}) = \sum S(\text{line})$$

or

$$S(i,k) = \sum_{J_i,J_k} S(J_i,J_k),$$

where k denotes the upper term and i the lower term.

(3) Conversions: For electric dipole ($E1$ allowed) transitions,

$$A_{ki} = \frac{6.6703 \times 10^{15} g_i}{g_k \lambda^2} f_{ik} = \frac{2.0261 \times 10^{18}}{g_k \lambda^3} S$$

For magnetic dipole ($M1$ forbidden) transitions,

$$A_{ki} = \frac{2.6974 \times 10^{13}}{g_k \lambda^3} S$$

For electric quadrupole ($E2$ forbidden) transitions,

$$A_{ki} = \frac{1.1199 \times 10^{18}}{g_k \lambda^5} S$$

For these conversions, λ is the vacuum wavelength (in Å), and g_i and g_k are the statistical weights of the lower and upper level respectively. The line strength (S) is given in atomic units, the transition probability (A_{ki}) is in units of s^{-1}, and the f value is dimensionless. For more detail on these units and conversion factors, we refer the reader to our recent NIST publication: *Atomic Transition Probabilities of Carbon, Nitrogen, and Oxygen, A Critical Data Compilation*, W. L. Wiese, J. R. Fuhr, and T. M. Deters, J. Phys. Chem. Ref. Data, Monograph No. 7 (1996).[25]

2. References for Section 1

[1] J. R. Fuhr, G. A. Martin, and W. L. Wiese, "Atomic transition probabilities—Iron through nickel." J. Phys. Chem. Ref. Data **17**, Suppl. 4 (1988).

[24] W. L. Wiese, M. W. Smith, and B. M. Miles, "Atomic transition probabilities—Sodium through calcium," Vol. II, NSRDS-NBS **22** (1969).

[25] W. L. Wiese, J. R. Fuhr, and T. M. Deters, "Atomic transition probabilities of carbon, nitrogen, and oxygen, A critical data compilation," J. Phys. Chem. Ref. Data, Monograph No. 7 (1996).

3. Spectra

3.1. Fe I

Ground state: $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2\ ^5D_4$
Ionization energy: 7.9024 eV = 63 737 cm^{-1}

3.1.1. Allowed Transitions

TABLE 1. Fe I allowed transitions—List of tabulated lines

Wavelength (Å)	Multiplet No.
In vacuum	
1934.5351	35
1937.2685	34
1940.6604	35
in air	
2132.0173	32
2138.5925	31
2145.1896	33
2153.0067	33
2161.5791	33
2166.7733	28
2171.2972	31
2173.2137	31
2176.8402	30
2191.2043	29
2191.8391	28
2196.0420	28
2200.3900	28
2200.7243	28
2228.1717	27
2250.7904	25
2259.2826	24
2259.5102	25
2265.0543	25
2267.0847	26
2272.0696	25
2275.1916	24
2276.0258	23
2279.9371	25
2283.3041	24
2283.6552	24
2284.0856	23
2287.2496	23
2292.5248	24
2293.8482	25
2294.4081	23
2296.9269	23
2297.7871	23
2298.1690	23
2298.6603	25
2299.2201	23
2300.1418	24
2301.6839	23
2303.4243	25
2303.5806	25
2308.9989	23
2313.1041	23
2320.3577	23

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2350.4130	21
2355.9092	22
2369.4562	21
2371.4304	21
2373.6245	21
2374.5186	21
2381.8362	21
2389.9729	21
2420.3957	75
2438.1826	73
2439.7449	216
2442.5685	216
2443.8718	74
2445.2130	74
2447.7095	19
2453.4760	73
2453.5690	216
2457.5967	73
2458.5688	71
2462.1810	19
2462.6473	19
2463.7304	76
2465.1492	73
2468.8799	71
2470.9654	74
2472.3411	71
2472.3411	74
2472.8713	19
2472.8949	19
2473.1568	18
2474.8144	73
2476.6566	73
2476.8656	76
2479.4804	76
2479.6280	71
2479.7764	19
2483.2708	19
2483.5334	73
2484.1876	19
2485.9903	71
2486.3727	18
2486.6919	73
2487.0659	73
2487.3699	20
2488.1425	19
2489.7524	19
2489.9133	76
2490.6443	19
2491.1550	19
2491.9892	253
2492.6307	74
2494.0010	73
2494.2515	69
2495.8730	69
2496.5338	71
2498.8184	20
2498.8738	18
2501.1319	17

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2501.4236	71
2501.6940	68
2505.0079	253
2506.5723	253
2507.9003	71
2508.7533	74
2510.8349	17
2512.2754	67
2512.3649	18
2515.8537	109
2516.2506	69
2516.5709	72
2517.6611	71
2518.1017	17
2519.6294	71
2521.9190	70
2522.4799	69
2522.8494	17
2524.2925	17
2527.2662	215
2527.4350	17
2529.1350	17
2529.3077	252
2529.8354	17
2530.6916	18
2532.8761	68
2533.1415	215
2535.6070	17
2537.1747	215
2537.4589	108
2538.6993	69
2539.3569	67
2540.6635	18
2540.9721	17
2542.1013	215
2543.9225	215
2544.6566	70
2545.9784	17
2549.5253	68
2549.6134	17
2552.6058	18
2552.8307	67
2556.3038	108
2556.8629	65
2560.5573	68
2561.8551	67
2563.3989	66
2564.5594	70
2568.8647	66
2569.5970	64
2569.7436	67
2572.7554	108
2576.6902	64
2579.2702	65
2584.5360	64
2594.1510	64
2596.6161	63
2599.5669	64

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2605.6573	63
2606.8263	64
2609.2209	288
2610.7509	16
2612.7722	16
2614.4946	64
2618.0180	64
2618.7107	16
2623.3660	16
2623.5339	64
2627.2242	63
2629.5725	16
2632.2376	64
2632.5939	16
2635.7213	214
2635.8088	64
2636.4786	63
2641.0293	214
2641.6438	62
2643.9986	64
2645.4216	16
2647.5576	16
2651.7062	63
2656.1454	213
2656.7919	106
2660.3972	63
2662.0566	62
2666.3986	62
2666.8125	60
2666.9650	107
2667.9127	16
2669.4933	213
2673.2132	62
2679.0242	213
2679.0618	60
2680.4531	62
2684.8560	62
2689.2122	60
2689.8289	106
2690.0464	212
2690.0682	14
2692.2482	104
2692.6503	62
2695.0355	59
2697.0210	107
2699.1067	60
2701.9104	251
2702.4502	210
2706.0126	210
2706.5819	59
2708.5708	251
2710.5437	107
2711.6552	60
2714.8693	60
2716.2574	211
2716.4187	210
2717.3663	59
2717.7865	61

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2718.4363	59
2719.0274	15
2719.0605	251
2719.4203	210
2720.9023	15
2722.0390	103
2723.5775	15
2724.9532	60
2725.0162	14
2725.6019	59
2725.8060	251
2726.0553	59
2728.0210	59
2728.8202	210
2728.9698	14
2730.9819	59
2731.2814	251
2733.3655	105
2733.5805	58
2734.0055	60
2734.6152	60
2735.4753	58
2737.3092	15
2737.6409	209
2738.2133	59
2741.5768	104
2742.0158	14
2742.2542	58
2742.4053	15
2743.5654	59
2744.0674	15
2744.5275	58
2747.0024	60
2749.6827	61
2750.1406	15
2753.6869	58
2754.0321	60
2754.4273	59
2755.1819	207
2756.2667	14
2756.3282	15
2757.3155	58
2757.4226	102
2759.8138	60
2760.6129	143
2761.7798	58
2762.0266	58
2763.0924	57
2763.1095	59
2766.9091	60
2767.5221	58
2769.2982	208
2769.6693	56
2772.0740	57
2772.1101	15
2774.7299	58
2778.2203	56
2780.6973	250

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2780.8818	57
2781.8356	58
2784.3420	208
2787.9314	101
2788.1048	56
2789.8016	287
2792.3989	102
2794.7021	58
2795.0047	13
2795.5400	56
2797.7753	57
2803.1662	13
2803.6134	208
2804.5203	56
2804.8617	287
2806.9842	57
2807.2439	12
2808.3270	57
2812.0403	287
2813.2864	56
2815.5066	102
2817.5038	56
2817.9450	100
2820.8029	12
2823.2757	56
2825.5557	57
2825.6875	13
2827.8920	13
2828.8082	57
2832.4355	56
2834.1734	101
2834.7526	249
2835.4564	12
2835.9507	101
2838.1195	56
2840.4223	12
2840.9374	142
2843.6308	55
2843.9212	12
2843.9764	56
2845.5476	99
2845.5947	55
2845.7132	97
2846.8298	96
2848.7147	55
2851.7969	56
2853.6840	97
2853.7717	248
2858.8964	12
2862.4947	55
2863.4300	96
2863.8631	12
2866.6249	55
2867.3094	101
2867.5617	99
2868.4541	172
2869.3078	12
2872.3339	55

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2874.1722	12
2875.3021	95
2877.3007	95
2878.9498	99
2883.7472	285
2886.3160	96
2887.8051	285
2887.9580	206
2889.9000	206
2892.4776	184
2893.7627	55
2893.8806	97
2894.5042	172
2895.0348	96
2899.4146	171
2901.3807	98
2901.9104	184
2904.0846	285
2907.5174	285
2908.8560	184
2910.9280	286
2912.1573	10
2912.2567	95
2914.3034	98
2918.0248	477
2919.8405	184
2920.6906	96
2923.2856	477
2923.8526	283
2925.3577	285
2925.8989	98
2929.0071	10
2929.1170	477
2929.6179	96
2936.9034	10
2941.3427	10
2947.3621	169
2947.8760	10
2948.4336	281
2953.4857	284
2953.9400	10
2954.6523	171
2956.8562	282
2957.3645	10
2957.4846	170
2959.9922	282
2960.6594	377
2965.2544	10
2966.8982	10
2968.4779	172
2969.3598	11
2969.4746	53
2970.0994	10
2970.1181	11
2973.1324	10
2973.2354	10
2976.1266	169
2980.5324	281

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2981.4450	11
2981.8509	141
2982.2280	377
2983.5697	9
2984.7681	52
2986.4559	11
2987.2906	53
2988.4713	94
2988.9432	282
2990.3915	281
2994.4268	9
2994.5022	11
2996.3857	172
2999.5118	53
3000.4511	94
3000.9478	9
3003.0307	53
3004.1136	205
3005.3027	205
3007.1452	93
3007.2824	11
3008.1382	9
3009.0932	204
3009.5693	53
3011.4810	282
3014.1734	54
3015.9191	204
3016.1847	53
3017.6272	9
3018.9830	53
3019.2875	205
3020.4907	9
3020.6390	9
3021.0727	9
3024.0327	11
3025.2800	52
3025.6364	204
3025.8424	9
3026.4619	53
3029.2340	94
3030.1483	204
3031.6366	53
3033.0980	169
3037.3887	9
3037.7796	54
3039.3171	205
3040.4273	53
3041.6372	94
3041.7388	53
3042.0196	53
3042.6649	53
3045.0784	52
3045.5887	204
3047.6046	9
3053.0656	169
3053.4535	54
3055.2624	93
3057.4458	51

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3059.0858	9
3060.5378	376
3060.9833	93
3066.4789	280
3066.9970	476
3067.1183	94
3067.2439	51
3068.1735	93
3073.9785	280
3075.7196	51
3078.0157	52
3078.4322	169
3079.9885	476
3083.7409	51
3090.2048	280
3091.5765	51
3092.7817	52
3093.8052	93
3095.2670	279
3098.1893	280
3099.8945	51
3099.9682	51
3100.3035	51
3100.6650	51
3100.8363	203
3101.0024	280
3102.6367	52
3112.0772	374
3116.6315	51
3117.6401	52
3119.4949	202
3120.4354	202
3125.6505	51
3125.6825	202
3129.3331	92
3132.5180	448
3134.1100	51
3135.8606	202
3142.4539	183
3142.8889	168
3143.2426	7
3143.9905	448
3145.0570	372
3147.7948	375
3151.8656	7
3153.1997	182
3153.3136	181
3154.4966	182
3156.2738	448
3157.0362	181
3157.1432	168
3157.8850	183
3157.9873	180
3160.6574	176
3161.3710	92
3161.9463	181
3165.8577	181
3166.4355	247

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3168.8542	181
3171.3513	429
3171.6623	181
3172.0837	139
3175.4447	176
3176.3593	246
3178.0128	177
3180.2234	176
3180.7554	7
3181.5194	246
3181.9114	176
3182.0555	180
3182.9740	140
3184.8947	7
3188.5675	180
3188.8191	180
3190.6495	428
3190.8167	426
3191.1116	246
3191.6592	8
3192.8004	176
3193.2259	7
3193.2999	180
3194.4238	176
3196.1226	300
3196.9274	176
3196.9868	8
3199.4996	7
3199.5304	177
3200.7844	8
3202.5558	426
3205.3980	176
3207.0752	180
3210.2291	180
3210.8292	177
3211.6075	300
3211.9873	179
3213.7560	373
3214.0126	177
3214.0616	179
3214.3958	7
3215.9380	177
3217.3772	178
3219.5821	177
3219.7662	8
3219.8046	179
3221.9162	177
3222.0671	177
3223.2675	91
3225.6074	201
3225.7872	176
3226.0135	245
3227.0612	177
3227.7955	178
3228.2490	178
3228.5975	475
3229.1203	8
3229.9909	427

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3230.1563	177
3230.2072	179
3230.9636	178
3233.0518	475
3233.9675	179
3234.6132	8
3236.2223	7
3239.4329	178
3239.4574	178
3243.1084	201
3244.1876	177
3245.9657	50
3246.0048	8
3246.4802	244
3246.9607	138
3247.2100	244
3248.2042	178
3250.6235	138
3250.7590	475
3252.9144	244
3253.5990	507
3254.3619	475
3254.7233	278
3257.2345	371
3257.5927	136
3259.9895	178
3264.5122	136
3265.0469	8
3265.6166	137
3268.2329	138
3270.9999	137
3271.4847	506
3271.6835	90
3272.5964	91
3276.4704	136
3280.2604	475
3282.8903	506
3284.5875	137
3286.7530	137
3288.9653	136
3290.9883	138
3292.0208	506
3292.5895	137
3293.1406	91
3298.1319	136
3303.5689	370
3305.9708	137
3306.3396	425
3306.3548	137
3307.2337	473
3310.3412	370
3310.4907	505
3314.7413	506
3317.1209	167
3319.2531	370
3322.4729	339
3323.7364	327
3324.5366	200

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3325.4647	200
3328.8659	473
3331.6111	200
3334.2177	199
3335.7685	327
3336.2567	474
3337.6651	276
3339.1946	199
3340.5643	167
3341.9060	277
3342.2918	326
3347.9255	165
3351.5219	135
3351.7440	276
3353.2603	199
3354.0594	326
3355.2277	473
3356.4015	166
3369.5474	276
3370.7834	276
3372.0738	132
3373.8711	277
3379.0180	134
3380.1100	276
3381.3339	325
3382.4020	133
3383.6917	134
3383.9791	132
3392.3049	132
3392.6524	134
3394.0774	198
3394.5832	131
3396.9755	49
3397.6382	49
3398.2170	276
3399.3331	134
3401.5187	49
3402.2559	472
3403.2900	326
3404.2702	48
3404.3539	132
3406.4367	504
3406.7995	134
3407.4596	132
3407.5317	131
3410.1692	536
3410.8953	48
3411.3532	275
3413.1324	134
3415.5312	132
3417.8406	131
3418.5071	131
3422.6560	134
3424.2844	131
3425.0100	424
3426.3243	164
3426.3825	48
3426.6280	130

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3426.6659	472
3426.9880	49
3427.1195	131
3428.1927	131
3431.8116	325
3440.6059	6
3440.9887	6
3442.3619	163
3442.6690	49
3443.8765	6
3445.1491	131
3447.2782	130
3450.3281	130
3451.6134	167
3451.9145	131
3452.2746	48
3458.3033	167
3459.4265	274
3459.9140	404
3459.9543	162
3463.3028	89
3465.8606	6
3466.2829	197
3466.4988	47
3468.8445	243
3469.0119	472
3469.8305	243
3471.2656	130
3471.3431	160
3475.4502	6
3475.6516	129
3476.3444	590
3476.7018	6
3476.8543	243
3483.0071	47
3484.8506	197
3484.9785	165
3485.3402	129
3489.6677	369
3490.5740	6
3493.2805	89
3493.6892	274
3495.2867	241
3497.1033	129
3497.1482	129
3497.8406	6
3500.5647	241
3504.8612	159
3505.0586	403
3506.4977	160
3508.4745	369
3508.5182	242
3509.1188	296
3509.8616	129
3510.4391	167
3511.7377	241
3512.2256	296
3513.0531	89

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3513.8180	47
3514.6272	196
3516.4090	369
3516.5574	296
3518.6829	297
3518.8697	129
3520.8465	241
3521.2612	47
3521.8368	129
3522.2680	296
3522.8976	299
3523.3087	296
3524.0742	242
3524.2398	160
3526.0408	6
3526.1658	47
3526.2380	297
3526.3814	296
3526.4675	159
3526.6746	296
3527.7928	296
3529.8198	296
3530.3868	296
3531.4378	195
3533.0066	296
3533.1982	296
3534.5257	578
3534.9063	89
3536.5559	296
3537.4921	242
3537.7291	242
3537.8949	297
3540.1211	298
3540.7097	46
3541.0833	296
3542.0756	296
3543.3851	196
3543.6749	535
3544.6298	242
3545.6400	291
3547.1942	471
3549.8648	89
3552.1060	404
3552.8280	291
3552.8551	404
3553.7386	577
3554.1182	46
3554.5014	295
3554.9246	296
3556.6806	295
3556.8779	297
3558.5151	47
3559.5033	403
3560.6968	501
3564.5153	196
3564.5570	196
3565.3790	47
3566.3098	158

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3567.0312	295
3567.3690	196
3568.4324	291
3568.8234	502
3568.9745	271
3570.0103	164
3570.0977	47
3571.2257	88
3571.9953	291
3572.5905	295
3573.3936	502
3573.8291	194
3573.8886	470
3575.1136	291
3575.2452	292
3575.3700	401
3576.7587	469
3578.3825	291
3578.6765	158
3581.1930	46
3581.6467	272
3581.8075	403
3582.1999	467
3582.5642	194
3584.6594	271
3584.7858	292
3584.9577	470
3585.1897	366
3585.3189	46
3585.7054	46
3586.1126	470
3586.7385	295
3586.9848	46
3587.2392	295
3588.5264	337
3588.6093	295
3588.9178	292
3589.1050	46
3589.4519	272
3589.6054	368
3590.0840	367
3591.3493	291
3591.4840	445
3592.4702	240
3592.6749	446
3594.6322	292
3595.3014	292
3595.8646	194
3596.1960	194
3597.0211	446
3598.7173	503
3599.6251	576
3602.0827	292
3602.4621	292
3602.5255	294
3603.2035	272
3603.6810	239
3603.8179	401

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3605.4528	271
3605.5006	292
3606.3760	238
3606.5334	162
3606.6794	271
3608.1416	295
3608.8593	46
3610.1591	291
3610.6946	293
3612.0686	295
3613.1448	294
3613.4434	501
3614.7724	338
3615.1912	446
3615.6626	88
3616.3199	161
3617.7861	401
3618.2990	294
3618.3858	272
3618.7679	46
3619.7687	193
3620.2402	294
3621.4607	271
3621.7190	575
3622.0034	272
3623.1860	193
3623.4466	238
3624.3079	162
3625.1417	293
3627.0562	575
3628.0916	128
3628.8106	366
3630.3478	293
3631.0970	292
3631.4632	46
3632.0388	401
3632.5554	365
3632.9769	164
3633.0691	335
3633.8268	367
3634.3278	334
3636.1614	128
3636.2236	553
3636.6491	398
3636.9941	238
3637.2486	193
3637.8675	330
3638.2386	273
3638.2965	271
3640.3885	272
3643.7154	238
3644.7951	447
3645.0748	293
3645.8201	401
3647.4238	402
3647.8428	46
3649.3029	5
3649.3332	423

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3649.5063	269
3650.0296	337
3650.2792	193
3651.0975	292
3651.4669	272
3653.7545	193
3654.6741	128
3655.4649	324
3657.1329	160
3657.8985	338
3658.0203	366
3659.5168	193
3661.3635	192
3663.2591	364
3663.4514	236
3664.5374	336
3664.6913	335
3666.2416	192
3667.2531	447
3668.2105	445
3668.8921	236
3669.1519	365
3669.5212	269
3670.0244	324
3670.0884	364
3670.8075	162
3671.6878	273
3672.7075	193
3674.7636	324
3676.3110	237
3676.8725	334
3677.3061	551
3677.6277	269
3678.8603	159
3678.9977	157
3679.9134	5
3681.6440	335
3682.1676	330
3682.2441	552
3683.0548	5
3684.1076	270
3684.1376	468
3685.9971	330
3686.2580	159
3687.0971	125
3687.4567	44
3687.6580	269
3688.4605	500
3689.3690	336
3689.4582	331
3690.4547	402
3690.7267	574
3693.0265	364
3694.0060	337
3695.0515	236
3695.5146	233
3697.4255	334
3698.6029	397

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3699.1387	396
3701.0863	330
3702.0294	324
3702.4920	126
3703.5479	269
3703.6909	334
3703.8212	324
3704.0140	400
3704.4612	268
3705.5660	5
3707.4566	236
3707.8221	5
3707.9199	127
3708.6025	233
3709.2464	44
3709.6654	233
3711.2227	237
3711.4083	399
3715.9116	157
3716.4422	333
3718.4065	270
3719.9347	5
3721.2724	126
3721.3934	159
3721.5027	334
3722.0241	269
3722.5630	5
3724.3770	157
3725.4908	421
3726.8961	126
3726.9265	330
3727.0924	332
3727.6190	44
3727.6738	233
3727.8092	331
3728.6680	235
3730.3864	422
3730.4604	334
3730.9463	237
3731.3737	233
3732.3964	127
3733.3176	5
3734.8638	44
3735.3238	333
3737.1315	5
3738.3051	466
3739.1158	125
3739.3142	126
3740.2395	499
3742.6166	332
3743.3621	44
3743.4682	573
3743.7765	268
3744.1026	330
3745.5613	5
3745.8995	5
3746.4747	124
3746.9270	331

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3748.2622	5
3748.9646	331
3749.4854	44
3751.8214	266
3753.1377	191
3753.6109	124
3754.5002	331
3756.0683	125
3756.9374	572
3757.4546	498
3758.2330	44
3759.1548	598
3760.0497	191
3760.5318	127
3761.4085	235
3762.2036	526
3763.7891	44
3765.5389	465
3765.7001	465
3766.0888	234
3766.6592	331
3767.1918	44
3768.0270	124
3770.3015	266
3770.4045	191
3771.4916	464
3773.3586	421
3773.6916	331
3774.8243	124
3775.8541	266
3776.4548	125
3777.0666	363
3777.4495	231
3778.3147	323
3778.5090	497
3778.6968	124
3779.4160	230
3779.4537	497
3779.5082	126
3781.1863	125
3781.9399	624
3782.4490	333
3785.7063	465
3785.9483	191
3786.1494	322
3786.1869	323
3786.6768	45
3787.1633	625
3787.8802	44
3789.1761	267
3789.8192	523
3790.0929	45
3790.6547	332
3790.7540	124
3791.5058	231
3791.7424	524
3792.1544	266
3792.8266	126

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3793.4806	332
3793.8716	323
3794.3398	191
3795.0022	44
3797.5149	464
3797.9492	230
3798.5114	44
3799.5475	44
3801.6794	323
3801.9840	525
3802.2789	498
3804.0094	523
3805.3426	465
3806.2167	534
3806.6957	464
3807.5369	124
3808.2810	395
3808.7286	230
3809.0399	323
3809.5643	332
3810.7557	497
3811.0350	266
3811.8910	266
3812.9645	45
3813.0580	230
3813.6349	264
3813.8845	597
3813.9334	190
3814.5232	45
3815.8403	87
3816.3402	124
3817.6395	522
3819.4932	524
3820.4252	43
3821.1778	465
3821.8345	230
3824.4437	4
3825.4027	156
3825.8812	43
3826.8415	264
3827.5716	265
3827.8226	87
3828.5040	266
3829.4518	495
3829.7642	229
3830.7574	232
3830.8619	265
3833.3082	229
3834.2225	43
3836.3304	497
3837.1350	230
3839.2558	420
3840.4375	43
3841.0480	87
3842.8963	230
3842.9887	229
3843.2568	419
3845.1689	157

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3845.6950	550
3845.9851	524
3846.4094	571
3846.7998	497
3846.9335	190
3848.2888	232
3849.9666	43
3850.8179	45
3852.5727	124
3853.4567	360
3854.3666	444
3856.3716	4
3859.2125	189
3859.9114	4
3863.6906	442
3863.7413	262
3865.5231	43
3867.2159	394
3867.9205	229
3869.5583	265
3869.6080	265
3871.7480	360
3872.5012	43
3872.9212	265
3873.7606	189
3876.0400	45
3878.0182	43
3878.5733	4
3878.6709	189
3878.7259	496
3883.2800	495
3884.3587	263
3885.1456	361
3885.5106	157
3886.2823	4
3887.0482	43
3888.5135	87
3888.8216	394
3890.3958	444
3890.8405	262
3891.9264	533
3893.3094	321
3893.3903	361
3893.9125	189
3894.0120	495
3895.4255	442
3895.6564	4
3897.4487	360
3897.8899	262
3898.0089	43
3899.0289	189
3899.7074	4
3900.5150	442
3902.9457	87
3903.8979	360
3906.4798	4
3906.7471	497
3907.4653	265

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3907.9341	262
3909.6576	442
3909.8296	321
3910.8437	265
3910.9991	440
3913.6318	155
3914.2730	444
3916.7310	462
3917.1810	43
3918.3153	157
3918.4154	321
3918.6417	361
3919.0655	361
3920.2581	4
3920.8370	444
3921.2724	228
3922.9118	4
3925.2005	444
3925.6438	321
3925.9413	321
3926.0132	440
3927.9199	4
3928.0829	442
3929.1164	262
3929.2083	493
3930.2967	4
3931.1172	442
3932.6273	262
3933.5997	394
3935.3067	319
3935.8124	319
3937.3279	260
3940.8776	43
3941.2753	440
3942.3641	362
3942.4399	321
3943.3407	123
3944.7387	320
3944.8893	361
3944.9811	463
3945.1172	262
3946.9949	439
3947.5309	320
3948.0973	440
3948.7749	461
3949.1414	532
3949.9530	123
3951.1632	494
3952.6015	260
3952.6958	319
3953.1514	361
3953.8576	319
3955.3413	440
3955.9555	394
3956.4554	461
3956.6768	260
3957.0184	440
3960.2792	623

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3961.1402	320
3962.3520	443
3963.1005	440
3964.5153	320
3965.5088	442
3966.0617	87
3966.8100	493
3967.4206	461
3967.9614	439
3969.2572	85
3970.3891	394
3971.3227	259
3973.6493	549
3974.3807	441
3974.7576	123
3975.2055	175
3976.3856	393
3976.6132	532
3977.7410	123
3981.7711	260
3983.9564	259
3985.3873	494
3989.8572	548
3990.3733	417
3994.1132	416
3995.9835	261
3996.9639	635
3997.3922	260
3998.0527	258
4000.2522	434
4000.4572	359
4001.6617	123
4003.7619	531
4005.2420	85
4006.3108	460
4006.6242	394
4007.2721	259
4009.7128	123
4010.1763	622
4011.4075	226
4011.7113	175
4013.7818	391
4014.5308	418
4017.0835	261
4017.1485	417
4018.2675	438
4019.0420	227
4020.4836	623
4021.8665	260
4024.0963	259
4024.7250	438
4030.1849	123
4030.4885	438
4030.8904	634
4031.9607	492
4032.6275	86
4033.1863	226
4036.3665	261

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4040.6381	492
4043.8966	435
4044.6092	318
4045.5939	437
4045.8124	85
4046.0623	435
4047.3040	154
4049.3270	226
4051.9053	521
4054.1771	435
4054.8669	520
4055.0355	226
4057.3435	259
4058.2170	436
4058.7539	155
4059.7135	547
4062.4409	318
4063.5942	85
4065.3812	520
4066.5852	358
4067.2712	225
4067.9777	437
4069.0678	435
4070.7707	436
4071.5201	226
4071.7380	85
4072.5024	520
4073.7623	436
4074.7858	415
4076.2180	392
4076.4898	226
4076.6291	436
4076.8000	435
4078.3539	225
4079.1681	521
4079.8380	318
4080.2092	436
4080.8769	435
4082.1079	520
4082.4246	621
4083.5492	154
4084.4915	520
4085.0041	317
4085.3031	437
4085.9842	692
4087.0939	517
4088.5568	621
4089.2169	356
4090.0726	521
4090.9535	518
4091.5531	316
4095.9707	225
4097.0834	436
4098.1758	436
4100.7379	41
4101.2611	520
4101.6849	155
4104.9407	517

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4106.2587	225
4106.4229	519
4107.4883	314
4108.1330	437
4109.0561	436
4109.8017	316
4112.3185	518
4112.9589	708
4114.4450	316
4114.9376	518
4118.5450	570
4118.8868	437
4120.2065	357
4121.8026	315
4122.5155	315
4123.7283	356
4125.6175	708
4125.8804	314
4126.1827	518
4126.8545	314
4127.6078	316
4129.4611	518
4132.0582	85
4132.8992	316
4133.8557	520
4134.3363	3
4134.4207	390
4134.6776	316
4136.5213	517
4136.9977	530
4139.9273	41
4141.8633	356
4142.5889	708
4143.4146	414
4143.8680	85
4145.1995	257
4146.0642	356
4147.6690	84
4149.3650	517
4150.2491	518
4152.1692	41
4153.8997	518
4154.4987	313
4154.8055	517
4156.6714	355
4156.7988	314
4157.7801	518
4158.7924	518
4161.0769	512
4161.4844	356
4167.8587	459
4168.6147	512
4168.9416	517
4169.7562	516
4170.9018	390
4171.6908	633
4171.8993	491
4172.1222	490

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4172.6408	512
4172.7448	42
4173.3151	313
4173.9207	42
4174.9131	42
4175.6361	314
4177.5939	41
4181.7547	314
4182.3826	388
4182.7577	517
4183.0061	519
4184.8918	313
4187.0390	174
4187.5870	517
4187.7954	174
4189.5566	632
4191.4307	174
4191.6765	313
4195.3291	516
4195.6179	389
4196.2083	516
4196.5311	354
4198.2469	516
4198.3043	174
4198.6341	516
4199.0952	413
4200.9242	512
4202.0292	84
4202.7530	412
4203.5678	42
4203.9383	596
4203.9848	313
4205.5385	512
4206.6967	3
4207.1271	312
4210.3436	174
4210.3833	390
4213.6474	313
4215.4233	355
4216.1838	3
4217.5456	516
4219.3604	569
4219.4144	355
4220.0495	653
4220.3417	390
4222.2131	174
4224.1717	512
4224.5128	512
4225.4543	516
4225.9557	412
4226.4240	312
4227.4266	516
4229.5102	490
4229.7516	83
4232.7263	3
4233.6028	174
4235.3873	513
4235.9370	174

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4237.0742	42
4238.8100	516
4239.3613	620
4239.7324	352
4239.8477	256
4240.3708	546
4241.1143	311
4242.5960	256
4242.7294	490
4243.8162	653
4245.2572	312
4245.3444	514
4246.0850	619
4247.3061	188
4247.4255	516
4248.2240	390
4250.1195	174
4250.7869	84
4254.9453	355
4255.5004	352
4258.3158	3
4258.6112	311
4258.9517	355
4259.3358	352
4259.9992	512
4260.1352	388
4260.4744	174
4264.2034	515
4266.9645	256
4267.8265	390
4268.7488	490
4271.1538	174
4271.7605	84
4275.6986	224
4276.6761	646
4278.2314	514
4279.4887	652
4279.8700	311
4280.5396	458
4282.4029	122
4284.4054	353
4285.4420	457
4285.8225	618
4286.4342	350
4288.1458	256
4288.9560	223
4290.3789	352
4290.8647	311
4291.4637	3
4294.1248	83
4298.0364	411
4299.2349	174
4299.6286	352
4300.2066	645
4302.1858	411
4304.5408	350
4305.2070	543
4305.4505	387

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4307.9023	84
4309.0307	595
4309.3745	350
4310.3741	653
4315.0846	122
4317.0475	545
4325.7619	84
4325.9400	458
4326.7533	349
4327.0956	544
4327.9034	457
4337.0463	83
4338.2478	121
4343.2712	488
4343.6975	409
4346.5526	458
4347.2336	2
4347.8326	587
4348.9366	350
4351.5439	349
4352.7347	122
4358.4991	348
4360.8032	617
4365.8967	351
4367.5785	350
4367.9036	83
4369.7718	410
4372.9817	385
4373.5607	349
4374.4892	489
4375.4768	567
4375.9301	2
4376.7742	384
4377.7916	488
4382.7680	568
4383.5450	83
4384.6722	386
4387.8912	387
4388.4068	589
4389.2449	2
4390.4480	349
4390.9505	350
4391.8633	651
4392.5797	643
4395.2741	587
4401.2899	587
4401.4429	310
4404.7504	83
4405.0190	2
4407.7092	119
4408.4135	119
4409.1195	488
4415.1225	83
4422.5681	310
4423.1415	348
4423.8408	589
4424.0683	617
4427.3099	2

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4430.1891	383
4430.6140	119
4432.5678	567
4433.2187	589
4433.7824	585
4435.1489	2
4436.9206	408
4438.3433	587
4439.6341	407
4439.8808	153
4440.4793	588
4440.8239	651
4442.3390	119
4442.8316	120
4443.1942	310
4445.4715	2
4446.8321	587
4447.1304	120
4447.7173	119
4450.3156	387
4450.7669	642
4452.6095	640
4454.3810	310
4455.0273	644
4456.3257	408
4456.6302	643
4459.1176	119
4461.6528	2
4461.9698	585
4464.7665	383
4466.5518	310
4466.9386	651
4469.3756	589
4471.6772	2
4476.0186	310
4478.0182	120
4480.1366	407
4481.6093	586
4482.1699	2
4482.2527	119
4482.7393	587
4483.7770	616
4484.2198	587
4485.6756	589
4485.9725	585
4487.7364	455
4488.1331	580
4488.9069	586
4489.7391	2
4490.0840	382
4492.6783	640
4494.5632	119
4495.9531	585
4502.5909	566
4504.8306	433
4514.1839	406
4515.1667	290
4517.5245	383

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4518.4321	454
4518.5771	120
4523.3987	588
4525.8635	290
4527.7827	487
4528.6142	119
4528.7570	456
4531.1482	81
4537.6734	455
4541.9416	454
4542.4121	615
4547.0169	81
4547.8474	542
4551.6470	642
4554.4512	290
4556.1259	581
4556.9250	486
4560.0881	584
4565.3102	487
4565.6619	432
4566.5145	487
4566.9885	529
4571.4378	290
4574.2162	432
4574.7179	152
4580.5774	586
4581.5080	433
4587.1276	565
4587.7204	641
4592.6511	81
4593.5252	641
4595.3586	455
4596.0605	581
4596.4155	584
4600.9340	453
4602.0010	81
4602.9410	81
4603.3424	307
4603.9489	347
4611.1849	290
4613.2027	432
4614.2054	486
4618.7577	346
4619.2880	582
4630.1203	152
4632.9117	81
4633.7558	347
4635.6170	290
4635.8462	309
4637.5034	432
4638.0098	583
4643.4634	581
4647.4342	346
4649.8165	452
4654.4983	81
4654.6050	582
4657.5848	306
4658.2947	453

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4661.5344	757
4661.9703	346
4663.1782	541
4667.4531	583
4669.1711	582
4673.1636	581
4674.6478	82
4678.8458	582
4679.2255	484
4680.2948	81
4680.4672	306
4682.5605	329
4683.5597	306
4685.0246	308
4687.3865	307
4690.1380	581
4691.4117	346
4701.0447	581
4701.0447	173
4704.9481	582
4705.4570	539
4707.4877	306
4708.9685	614
4710.2833	346
4712.1057	381
4714.0703	756
4714.1179	453
4721.0006	346
4726.1370	329
4727.3946	582
4728.5457	583
4729.0192	677
4729.6766	511
4733.5917	80
4734.0980	718
4735.8439	680
4736.7734	432
4737.6354	451
4740.3401	346
4741.5297	306
4745.1286	118
4745.8001	582
4749.9477	756
4766.8659	511
4768.3965	329
4771.6965	118
4772.8030	80
4772.8303	381
4776.0673	485
4779.4394	528
4785.9566	679
4786.8070	381
4787.8269	329
4788.7569	450
4789.6508	540
4790.7431	482
4791.2462	483
4793.9619	405

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4798.2649	680
4798.7313	80
4799.4061	613
4800.1288	329
4800.6490	680
4802.8797	613
4807.7088	511
4808.1483	483
4809.9384	564
4813.1128	481
4817.7781	118
4832.7276	613
4834.5069	152
4835.8679	689
4838.5118	510
4839.5445	450
4840.3217	689
4842.7884	690
4843.1438	510
4844.0138	537
4848.8836	151
4859.1218	689
4859.7414	289
4860.9785	511
4869.4639	538
4870.0368	649
4871.3182	289
4871.9281	481
4872.1378	289
4873.7513	483
4875.8776	510
4876.1879	480
4877.6064	329
4878.2112	289
4881.7178	450
4889.0015	118
4890.7551	289
4891.4924	289
4896.4385	648
4903.3102	289
4905.1328	650
4911.5294	707
4911.7794	648
4917.2300	688
4918.0125	691
4918.9940	289
4920.5031	289
4924.7695	151
4927.4182	563
4930.3154	649
4938.8138	289
4939.6867	40
4942.4592	706
4945.6374	715
4957.2986	289
4957.5968	289
4961.9140	594
4962.5719	706

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4966.0889	510
4968.6979	612
4970.4958	610
4973.1019	648
4978.6033	639
4985.2529	648
4985.5473	289
4986.2226	691
4988.9501	688
4991.8675	704
4993.6805	713
4994.1295	40
4995.4097	715
4999.1125	678
5001.8636	638
5002.7927	510
5004.0443	714
5006.1191	289
5012.068	440
5012.6947	703
5014.9425	638
5021.5912	703
5022.2355	638
5022.7891	345
5023.1866	705
5023.4978	727
5027.2255	610
5027.7567	712
5028.1264	562
5029.6176	527
5030.7786	449
5031.9145	727
5036.9222	380
5039.2520	510
5041.0716	40
5041.7560	78
5044.2114	289
5048.4361	648
5049.8198	151
5051.6345	40
5054.6426	611
5055.9916	726
5056.8412	713
5060.0790	1
5065.1927	610
5068.7658	328
5074.7483	704
5079.2230	117
5079.7400	40
5080.9361	449
5083.3386	40
5088.1531	688
5090.7740	700
5098.6981	117
5099.0773	638
5104.0302	380
5104.1912	702
5104.4375	700

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
5107.4474	40
5107.6411	78
5110.3588	561
5110.4131	1
5115.7781	560
5121.6392	705
5123.7200	40
5126.1930	699
5127.3593	40
5127.6796	1
5129.6308	638
5131.4687	117
5136.0931	676
5137.3822	700
5139.2515	328
5139.4628	328
5141.7390	151
5142.9285	40
5143.7237	116
5145.0937	117
5146.3064	727
5150.8395	40
5151.9109	40
5154.1006	637
5164.5506	736
5166.2822	1
5167.4885	79
5168.8981	1
5171.5964	78
5177.2340	631
5178.8006	736
5184.2661	699
5187.9142	675
5191.4550	328
5192.3442	328
5194.9418	78
5197.9373	701
5198.7111	117
5202.3360	117
5204.5826	1
5207.9376	609
5208.5940	431
5215.1806	431
5216.2740	78
5217.3893	431
5217.9193	609
5223.1855	609
5224.2983	116
5225.5261	1
5226.8623	328
5227.1895	79
5228.3767	701
5232.9403	328
5235.3867	674
5236.2041	675
5242.4911	593
5243.7769	699

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
5247.0504	1
5249.1054	736
5250.2089	1
5250.6460	117
5253.4617	431
5254.9554	1
5262.8809	479
5263.3063	431
5263.8650	559
5266.5554	328
5267.2699	723
5269.5374	39
5270.3564	79
5273.1636	431
5273.3736	151
5280.3620	609
5281.7904	328
5283.6210	431
5284.4248	592
5285.1286	736
5288.5247	630
5293.0294	735
5293.9588	674
5294.5482	607
5295.3121	723
5298.7758	607
5302.3010	431
5307.3610	78
5320.0356	608
5321.1080	735
5322.0408	149
5324.1790	431
5326.1428	557
5328.0387	39
5328.5317	79
5329.9891	672
5332.6602	674
5332.8997	78
5339.9294	431
5341.0240	79
5349.7376	733
5361.6251	720
5364.8713	723
5365.3991	558
5367.4668	723
5369.9619	723
5371.4897	39
5373.7086	736
5376.8334	717
5379.5740	629
5383.3692	723
5385.5753	628
5386.3341	687
5387.4804	674
5393.1676	431
5395.2184	720
5397.1280	39
5398.2794	722

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
5401.2689	723
5403.8215	671
5404.1516	735
5405.3499	732
5405.7752	39
5409.1336	724
5410.9098	735
5412.7857	732
5415.1993	735
5417.0332	725
5429.5045	686
5429.6967	39
5432.9479	720
5434.5238	39
5436.2958	731
5436.5962	150
5441.3387	721
5446.8746	79
5446.9168	39
5455.6095	39
5461.5499	722
5463.2762	733
5464.2796	673
5466.9878	556
5470.0940	721
5472.7091	710
5473.1642	687
5473.9005	686
5476.2885	671
5476.5642	686
5478.4556	686
5480.8608	686
5481.2430	684
5481.4387	685
5483.0988	685
5487.1451	720
5487.7380	115
5491.8315	674
5493.3219	606
5493.4988	685
5494.4626	669
5497.5161	39
5501.4653	39
5506.7791	39
5512.2567	720
5517.0655	711
5522.4465	710
5525.5443	686
5529.1602	605
5531.9839	770
5532.7472	555
5535.4179	671
5536.5801	305
5539.2800	604
5543.9357	686
5546.5058	722
5546.9924	685
5549.9527	627

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
5552.6937	770
5553.5778	731
5557.9822	733
5560.2116	734
5563.6002	686
5567.3911	222
5569.6181	509
5572.8424	509
5573.1024	685
5576.0888	509
5584.7647	554
5586.7559	509
5594.6553	746
5600.2242	710
5602.7673	686
5602.9451	509
5615.2966	222
5615.6439	509
5618.6327	709
5619.5954	731
5620.4924	685
5624.0220	730
5624.5422	509
5633.9465	777
5635.8226	698
5636.6962	602
5638.2621	697
5641.4340	697
5642.7513	748
5643.9262	668
5649.6306	591
5649.9873	777
5650.7055	777
5652.3180	710
5653.8668	729
5655.1765	777
5658.5317	509
5658.6579	697
5658.8164	509
5660.8011	603
5661.3455	710
5662.5162	697
5662.9380	626
5667.5180	694
5667.6648	222
5679.0229	747
5680.2404	670
5686.5302	746
5691.4970	697
5696.0896	743
5698.0200	600
5701.5446	222
5702.3479	601
5705.4646	697
5705.9922	747
5707.0495	602
5708.0945	731
5709.3783	509

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
5711.8486	697
5712.1316	509
5717.8329	709
5731.7623	697
5741.8484	696
5742.9600	695
5747.9542	746
5753.1227	709
5754.4026	601
5760.3446	600
5762.4135	601
5762.9922	709
5775.0806	697
5778.4533	222
5780.6001	430
5784.6584	509
5791.0180	430
5793.9148	696
5798.1714	647
5804.0350	636
5804.4627	697
5806.7249	744
5809.2181	647
5814.8075	696
5815.2178	683
5816.3735	743
5838.3718	636
5852.2187	742
5855.0766	743
5856.0880	716
5879.4870	755
5883.8170	647
5905.6720	745
5909.9736	430
5916.2474	187
5927.7891	739
5929.6772	740
5934.6549	647
5952.7184	636
5956.6944	38
6012.2099	114
6027.0509	666
6065.4822	221
6079.0093	740
6082.7106	114
6085.2590	255
6093.6444	741
6094.3736	741
6096.6653	636
6103.2939	765
6120.2494	38
6127.9066	665
6136.6153	186
6136.9947	113
6137.6917	221
6141.7320	579
6147.8347	664
6151.6181	113

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
6157.7284	663
6163.5445	114
6165.3603	666
6173.3356	113
6180.2042	255
6187.9904	636
6191.5584	186
6200.3129	221
6213.4303	113
6215.1438	666
6219.2810	113
6229.2283	304
6230.7230	221
6232.6412	579
6240.6462	114
6246.3188	579
6252.5554	186
6254.2585	148
6256.3615	186
6265.1340	113
6270.2250	304
6271.2788	508
6280.6182	37
6297.7931	113
6301.5012	579
6311.5003	304
6315.3068	663
6315.8115	662
6318.0175	185
6322.6855	221
6330.8495	763
6335.3308	113
6336.8243	579
6338.8775	764
6344.1491	186
6353.8363	37
6355.0290	304
6358.6337	664
6358.6976	37
6362.8763	667
6364.3657	762
6380.7433	663
6393.6013	185
6400.0012	579
6400.3180	37
6408.0184	579
6411.6493	579
6419.9496	764
6421.3508	148
6430.8464	113
6462.7251	37
6462.7251	185
6469.1930	764
6475.6244	220
6481.8703	147
6494.9805	185
6495.7422	762
6496.4666	764

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
6498.9392	37
6518.3671	304
6533.9294	754
6546.2395	254
6569.2155	762
6574.2284	37
6575.0158	220
6581.2101	77
6592.9138	254
6593.8705	185
6597.5611	762
6609.1103	220
6625.0220	37
6633.7497	754
6648.0810	37
6663.4421	148
6667.7113	760
6677.9870	254
6699.1418	760
6703.5674	254
6739.5219	77
6750.1525	148
6752.7071	753
6786.8604	682
6793.2592	660
6804.0009	738
6804.2713	758
6806.8449	254
6810.2628	754
6820.3719	754
6828.5912	753
6837.0061	758
6839.8305	219
6841.3391	753
6842.6858	754
6843.6560	737
6854.8228	759
6855.1621	753
6858.1498	737
6885.7564	737
6916.6815	682
6945.2052	148
6963.0216	661
6971.9323	344
6978.8516	148
6999.8841	681
7000.6150	660
7016.3920	681
7022.9539	681
7024.0622	658
7024.6412	750
7038.2234	681
7068.4097	659
7090.3835	681
7107.4610	660
7112.1680	344
7130.9221	681
7132.9863	657

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
7187.3180	681
7189.1487	379
7207.1116	656
7223.6610	379
7292.8294	752
7307.9318	657
7320.6826	751
7401.6849	659
7418.6674	656
7511.0205	693
7583.7882	343
7653.7596	761
7664.2933	343
7710.3645	693
7723.2080	146
7748.2694	343
7912.8670	36
7941.0892	478
8075.1509	36
8204.1030	36
8220.3790	719
8239.1281	146
8293.5146	478
8327.0563	112
8365.6336	478
8387.7725	112
8468.4074	112
8514.0721	112
8515.1084	342
8526.6690	769
8582.2574	342
8598.8302	728
8611.8040	303
8621.6007	342
8661.9000	112
8674.7465	303
8688.6255	112
8699.4540	768
8713.1875	341
8757.1876	303
8790.5217	768
8804.6258	145
8824.2211	112
8838.4290	303
8929.0777	776
8975.4007	341
8999.5566	303
9010.5946	217
9012.0745	776
9088.3186	303
9089.4044	341
9118.8816	302
9146.1293	217
9210.0258	302
9246.5589	218
9259.0055	767
9359.4130	218
9362.3616	145

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
9372.8974	217
9401.1137	774
9414.0422	775
9443.8023	775
9569.9078	773
9626.4973	773
9738.5726	773
9763.3796	773
9861.7368	773
9889.0362	773
11 119.798	301
11 251.116	301
11 298.862	301
11 374.081	111
11 422.323	111
11 439.127	301
11 593.591	111
11 607.575	111
11 638.264	111
11 689.976	111
11 783.267	301
11 882.847	111
11 884.085	111
11 973.050	111
12 053.083	749
12 190.099	599
12 556.999	144
12 648.742	749
12 879.769	144
13 260.730	780
13 287.296	783
13 287.829	340
13 667.989	599
14 308.700	378
14 331.390	779
14 439.341	778
14 814.735	772
15 077.291	110
15 120.509	778
15 219.622	782
15 490.339	110
15 878.449	782
15 921.096	781
16 474.085	784
18 392.461	766
18 856.647	655
18 987.010	655
19 113.679	655
19 635.309	766
20 698.313	766
21 894.998	785
22 380.797	771
22 473.278	785
23 144.597	785
23 566.671	785
24 547.953	786
24 729.104	786
25 380.229	787

TABLE 1. Fe I allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
26 222.051	654
26 617.848	654
26 659.187	654

The spectrum of neutral iron in the visible, near ultraviolet, and near infrared is very complex, featuring thousands of lines of moderate strength. Our first tabulation[1] of the transition probabilities of Fe I, published in 1988, contained data for about 1950 transitions. The largest part of the numerical material was taken from two comprehensive emission experiments by May *et al.*[2] and Bridges and Kornblith,[3] who provided data for about 1500 lines. This material was supplemented with: (a) very accurate data from Blackwell and co-workers,[4–11] done in absorption but limited to about 200 lines, and (b) some 180 astrophysical f values derived from solar spectra by Gurtovenko and Kostik,[12] plus a few lines contributed from other sources.

For this new compilation of approximately 2425 lines (see Table 1), about 90% of the tabulated data are from high quality experiments in the 1990s that used a combination of emission branching fraction and atomic lifetime measurements. The comprehensive work by O'Brian *et al.*[13] is especially noteworthy, in that it provides very accurate transition probabilities for 1814 spectral lines of Fe I. Earlier emission measurements, utilized in our first tabulation, were carried out with stabilized arcs, which were shown to be in a state of partial local thermodynamic equilibrium (PLTE). The emission measurements provided relative values, which were normalized to the few available lifetime data. Those experiments are now largely superseded by the new, different approach in which simpler emission "branching fraction" measurements are combined with numerous correlated lifetime determinations.[13–16] The plasma sources are inductively coupled plasmas or hollow cathodes of lower density. Local thermodynamic equilibrium is not assumed and not required, since the emission intensity measurements are confined to sets of lines arising from common upper energy levels which yield the so-called "branching fractions." Lifetimes are then determined for the upper energy levels to put the branching ratio data on an absolute scale. Thus, each set of lines or "branches" from a given upper level has its own independent absolute scale. In total, O'Brian *et al.*[13] measured the lifetimes of 186 energy levels and directly obtained absolute transition probability values for 1174 transitions with this technique.

In the present compilation, just as in the earlier tabulation, our first choice is the very accurate absorption data set by Blackwell *et al.*[4–11] for about 200 transitions, which they estimated to be accurate within ±2% on a relative scale and within ±4% on the absolute scale. As shown below, we have indeed closely confirmed their absolute scale, which is entirely based on the lifetime of the $z\ ^5F_5^0$ level. It turns out that by replacing the 1970s and 1980s data available to Blackwell *et al.* with recent, more accurate lifetime results by O'Brian *et al.*,[13] Hannaford and Lowe,[17] and Engelke *et al.*,[18] almost the same absolute scale is obtained. All three recent lifetime experiments used the laser-induced fluorescence (LIF) method and are thus entirely cascade-free, in contrast to some of the earlier measurements. O'Brian *et al.*, as well as Hannaford and Lowe, also consider quantum beat and polarization effects, and their results have been weighted higher than the data of Engelke *et al.*, in which only the quantum Zeeman beats are discussed and treated. It happens that the thus derived new mean lifetime for the $z\ ^5F_5^0$ level is only about 0.5% shorter than the one used by Blackwell *et al.*[4–11] Since the overall uncertainties of the data of Blackwell *et al.* are estimated to be at least four times larger, we have left their absolute scale unchanged.

We also compared the lifetimes for other levels measured by O'Brian *et al.*[13] against lifetimes that may be derived from Blackwell's normalized absorption data. For some lines, we added transition-probability data for a few extra spectral lines from other data sources to Blackwell's data[4–11] in order to obtain complete sets of branches. The comparison of these data, shown in Table 2, is quite impressive. The mean ratio of the two data sets is close to unity, 0.972 to be exact. There appears to be a small systematic difference between the two sets of data, with the lifetimes by O'Brian *et al.* always being slightly shorter, but within the uncertainty estimates. These differences are, by the way, larger for the short lifetimes measured by O'Brian *et al.* (±5%) Indeed, for the four levels with long lifetimes that they have in common, the agreement improves to 0.985. We thus estimate that the best Blackwell data, in view of the newly confirmed absolute scale and the impressive consistency with the lifetime data of O'Brian *et al.*, deserve an "A" rating, since their combined standard uncertainty amounts to only about ±2%. In general, our accuracy estimates closely adhere to the authors' own estimates.

The line absorption measurements by Blackwell *et al.*,[4–11] carried out with a very stable and carefully diagnosed apparatus, cover only 200 lines. On the other hand, O'Brian *et al.*[13] determined the f values for a much larger number of transitions, a total of 1174 lines, with a combination of emission-branching fraction and 186 LIF lifetime measurements. Furthermore, they determined the transition probabilities for 640 additional lines by interpolating to levels of known lifetimes. They estimated that for about three quarters of their measured lines, the uncertainties of the transition probabilities do not exceed ±10%. A comparison with Blackwell's absorption data for 163 overlapping lines, shown in Fig. 3, is consistent with this estimate (see Table 2).

Other, smaller branching-fraction/lifetime experiments were carried out by Kock and co-workers.[14–16] For lines, for which there is overlap with O'Brian and Blackwell *et al.*, the results agree very well, as shown in Fig. 4, considering that the estimated uncertainties by Kock and co-workers are, on average, somewhat larger than those of O'Brian *et al.*

The measurements discussed above cover the great majority of Fe I lines of at least moderate strength in the ultravio-

TABLE 2. Comparison of atomic lifetimes τ (in ns) from the LIF measurements of O'Brian *et al.*[13] and the absorption data of Blackwell *et al.*[4–11] The column "Blackwell *et al.*" includes small additions from other data sources which complete the sets of branches from the indicated terms

Term	J value	τ (in ns) (Blackwell *et al.*)	τ (in ns) (O'Brian *et al.*)	τ (O'Brian)/τ (Blackwell)
$y\,^5D^\circ$	0	5.95	5.8	0.975
$y\,^5D^\circ$	1	5.93	5.8	0.978
$y\,^5D^\circ$	3	5.88	5.7	0.970
$z\,^5D^\circ$	4	80.0	78.2	0.978
$y\,^5F^\circ$	1	8.03	7.8	0.971
$y\,^5F^\circ$	2	8.02	7.7	0.960
$y\,^5F^\circ$	3	7.99	7.7	0.964
$y\,^5F^\circ$	4	8.04	7.7	0.958
$y\,^5F^\circ$	5	8.28	7.9	0.954
$z\,^5F^\circ$	4	64.0	63.6	0.993
$z\,^5F^\circ$	5	61.2	60.6	0.989
$z\,^5F^\circ$	2	39.2	38.3	0.978
			Mean value of the ratio:	0.972

let, visible, and near infrared. In order to make our tabulation as complete as possible, we have added some results from earlier emission experiments of Bridges and Kornblith,[3] May *et al.*,[2] and from the "hook" measurements by Banfield and Huber[19] for transitions that would otherwise be missing. The absolute scales of May *et al.*[2] and Bridges and Kornblith[3] are identical, since May *et al.*[2] normalized their data to the Bridges and Kornblith[3] scale. We have modified this scale for transitions originating from energy levels above 36 000 cm^{-1} for the following reason. Bridges and Kornblith[3] had to rely on early lifetime data produced in the 1960s and early 1970s. We have compared these lifetimes with the recent results of O'Brian *et al.*,[13] obtained with the cascade-free LIF technique. We found that for energy levels below 36 000 cm^{-1}, there are random, but not systematic, differences. However, for a group of 13 energy levels in the range from 52 000 to 57 000 cm^{-1}, a systematic difference of 20% occurs, in the sense that the O'Brian *et al.*[13] data produce shorter lifetimes, probably due to the absence of cascading effects. We have therefore corrected all emission data of May *et al.*[2] and Bridges and Kornblith[3] for lines originating from high-lying states, starting at 36 000 cm^{-1}, to make them consistent with the lifetime data of O'Brian *et al.*[13] The other results of May *et al.*[2] and Bridges and Kornblith[3] are in fair agreement with those of O'Brian *et al.*[13] and Blackwell *et al.* where they overlap, but the scatter is quite large, and we estimate that the uncertainties of these measurements are significantly higher than those given by the authors. We have therefore applied more conservative uncertainty estimates to this early work[2,3,19] than we did in our 1988 compilation.[1] From the emission experiment of May *et al.*[2] we included results for 425 lines. However, we estimate that 286 of their tabulated lines are now in the "E" category, having uncertainties larger than 50%, but within

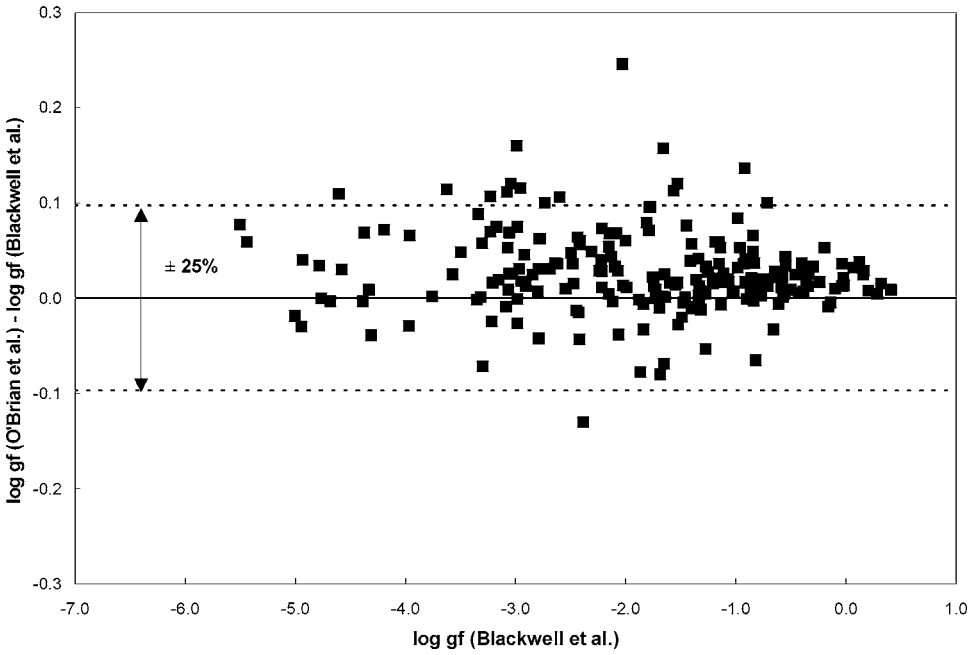

FIG. 3. Comparison between the emission/lifetime data of O'Brian *et al.*[13] and the absorption data of Blackwell *et al.*[4–11]

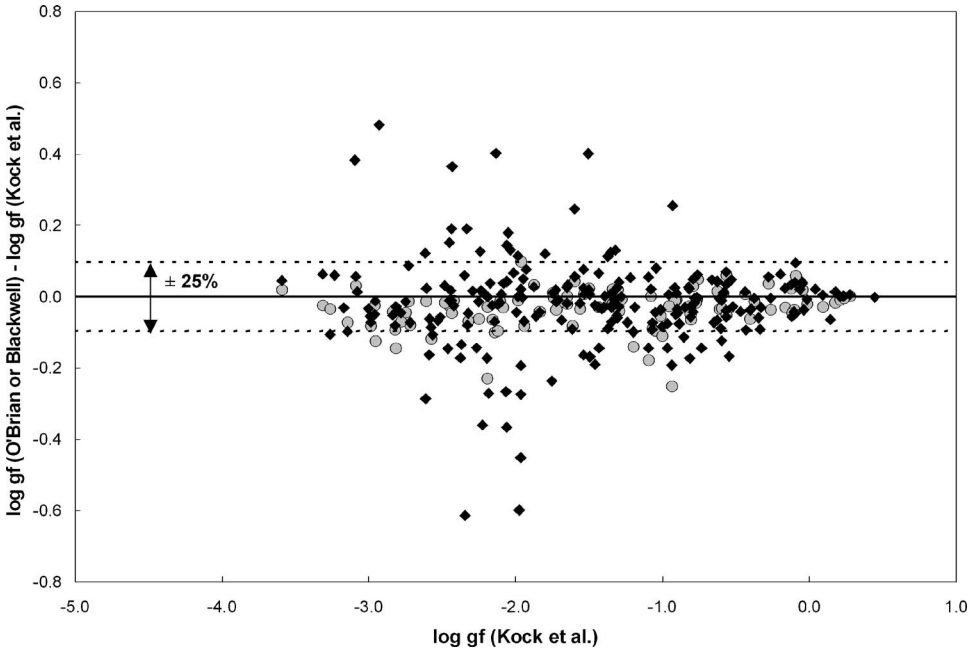

FIG. 4. Comparison of the emission/lifetime data by Kock and co-workers[14–16] with the absorption data of Blackwell *et al.*[4–11] and the emission/lifetime data of O'Brian *et al.*[13] The ratios involving the data of Blackwell *et al.* are denoted by the gray circles and those of O'Brian *et al.*[13] by black diamonds.

factors of 2. Nevertheless, we included these results in our tables, since they often compliment other data or make multiplets complete.

Bard *et al.*[14,15] have observed small systematic differences between their results and the absorption measurements of Blackwell *et al.*, when the lower energy level is significantly above the ground state, specifically by 1–2.5 eV. They find that this difference increases with increasing lower-level energy and reaches about 15% for 2.4 eV levels. Thus, Bard and Kock suggest a small temperature error in the Blackwell *et al.* measurements. However, O'Brian *et al.*[13] do not observe such a trend; the ratios of their results with the Blackwell *et al.* data are constant up to 1.6 eV and close to unity. Only for some lines with lower energy levels near 2.5 eV does the ratio decrease noticeably. Since the observations and conclusions of O'Brian *et al.*[13] and Bard and co-workers[14,15] are not consistent, we have used the affected lines of Blackwell *et al.* without any modifications, but have increased the uncertainty estimates.

This compilation, with the exception of the data from May *et al.*,[2] contains only lines with transition probabilities estimated to be accurate within ±50%, i.e., we consider it a collection of reference data. Many additional data are available from semiempirical calculations,[20] but these often contain large disagreements with the experimental data tabulated here, and it is impossible to estimate their uncertainties. Also, we have not used the recent solar *f* values of Borrero *et al.*[21] for 42 lines in the near infrared, because of major disagreements with the laboratory data of O'Brian *et al.*[13] We consider the latter results to be quite accurate, as discussed earlier. The two data sources overlap for eight lines, and for six of these they differ by more than 50%. We have taken the wavelength and energy level data from the extensive multiplet table of Nave *et al.*,[22] and for this printed version (see Table 3), we have strictly adhered to their abbreviated term designations in order to save space. In the web-based version, the NIST Atomic Spectra Database,[23] the full term designations are provided.

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TABLE 3. Fe I allowed transitions

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
1	$a\,^5D-z\,^7D^\circ$											
		5166.2822	5167.7212	0.000	19350.890	9–11	1.45E−05	7.09E−06	1.09E−03	−4.195	A	4
		5247.0504	5248.5110	704.007	19 757.031	5–7	3.92E−06	2.26E−06	1.96E−04	−4.946	A	4
		5254.9554	5256.4181	888.132	19 912.494	3–5	8.31E−06	5.74E−06	2.98E−04	−4.764	A	4
		5250.2089	5251.6703	978.074	20 019.634	1–3	9.30E−06	1.15E−05	1.99E−04	−4.938	A	4
		5110.4131	5111.8373	0.000	19 562.438	9–9	4.93E−05	1.93E−05	2.92E−03	−3.760	A	4
		5168.8981	5170.3378	415.933	19 757.031	7–7	3.83E−05	1.53E−05	1.83E−03	−3.969	A	4
		5204.5826	5206.0318	704.007	19 912.494	5–5	2.29E−05	9.31E−06	7.98E−04	−4.332	A	4
		5225.5261	5226.9809	888.132	20 019.634	3–3	1.32E−05	5.42E−06	2.80E−04	−4.789	A	4
		5060.0790	5061.4898	0.000	19 757.031	9–7	1.38E−06	4.12E−07	6.18E−05	−5.431	C+	13
		5127.6796	5129.1084	415.933	19 912.494	7–5	3.80E−07	1.07E−07	1.27E−05	−6.125	A	4
2	$a\,^5D-z\,^7F^\circ$											
		4375.9301	4377.1597	0.000	22 845.867	9–11	2.95E−04	1.03E−04	1.34E−02	−3.031	A	4
		4427.3099	4428.5530	415.933	22 996.672	7–9	3.41E−04	1.29E−04	1.32E−02	−3.044	A	4
		4461.6528	4462.9050	704.007	23 110.937	5–7	2.95E−04	1.23E−04	9.06E−03	−3.210	A	4
		4482.1699	4483.4275	888.132	23 192.498	3–5	2.09E−04	1.05E−04	4.66E−03	−3.501	A	4
		4489.7391	4490.9987	978.074	23 244.836	1–3	1.19E−04	1.08E−04	1.60E−03	−3.966	A	4
		4347.2336	4348.4557	0.000	22 996.672	9–9	1.23E−06	3.49E−07	4.50E−05	−5.503	A	4
		4405.0190	4406.2563	415.933	23 110.937	7–7	2.95E−06	8.59E−07	8.72E−05	−5.221	C+	13
		4445.4715	4446.7194	704.007	23 192.498	5–5	2.44E−06	7.24E−07	5.30E−05	−5.441	A	4
		4471.6772	4472.9321	888.132	23 244.836	3–3	1.12E−06	3.37E−07	1.49E−05	−5.995	A	4
		4389.2449	4390.4781	415.933	23 192.498	7–5	1.81E−05	3.73E−06	3.78E−04	−4.583	A	4
		4435.1489	4436.3941	704.007	23 244.836	5–3	4.72E−05	8.36E−06	6.10E−04	−4.379	A	4
3	$a\,^5D-z\,^7P^\circ$											
		4216.1838	4217.3714	0.000	23 711.454	9–9	1.84E−04	4.90E−05	6.12E−03	−3.356	A	4
		4206.6967	4207.8818	415.933	24 180.860	7–7	5.9E−05	1.6E−05	1.5E−03	−3.96	D+	13
		4134.3363	4135.5024	0.000	24 180.860	9–7	1.06E−05	2.11E−06	2.59E−04	−4.721	C+	13
		4291.4637	4292.6710	415.933	23 711.454	7–9	3.35E−05	1.19E−05	1.18E−03	−4.080	B	13
		4258.3158	4259.5145	704.007	24 180.860	5–7	2.54E−05	9.66E−06	6.77E−04	−4.316	A	4
		4232.7263	4233.9182	888.132	24 506.915	3–5	8.78E−06	3.93E−06	1.65E−04	−4.928	A	4
4	$a\,^5D-z\,^5D^\circ$	*3882.732*	*3883.832*	*402.96*	*26 150.73*	25–25	1.02E−01	2.30E−02	7.34E−00	−0.241	A	4,13
		3859.9114	3861.0058	0.000	25 899.987	9–9	9.69E−02	2.17E−02	2.48E−00	−0.710	A	4
		3886.2823	3887.3836	415.933	26 140.177	7–7	5.29E−02	1.20E−02	1.07E−00	−1.076	A	4
		3899.7074	3900.8122	704.007	26 339.694	5–5	2.58E−02	5.89E−03	3.78E−01	−1.531	A	4
		3906.4798	3907.5864	888.132	26 479.379	3–3	8.32E−03	1.90E−03	7.35E−02	−2.243	A	4
		3824.4437	3825.5289	0.000	26 140.177	9–7	2.83E−02	4.83E−03	5.47E−01	−1.362	A	4
		3856.3716	3857.4651	415.933	26 339.694	7–5	4.64E−02	7.39E−03	6.57E−01	−1.286	A	4
		3878.5733	3879.6726	704.007	26 479.379	5–3	6.17E−02	8.36E−03	5.34E−01	−1.379	B+	13
		3895.6564	3896.7602	888.132	26 550.477	3–1	9.39E−02	7.13E−03	2.74E−01	−1.670	A	4
		3922.9118	3924.0226	415.933	25 899.987	7–9	1.08E−02	3.19E−03	2.89E−01	−1.651	A	4
		3930.2967	3931.4095	704.007	26 140.177	5–7	1.99E−02	6.46E−03	4.18E−01	−1.491	B+	13
		3927.9199	3929.0321	888.132	26 339.694	3–5	2.60E−02	1.00E−02	3.89E−01	−1.522	B+	13
		3920.2581	3921.3683	978.074	26 479.379	1–3	2.60E−02	1.79E−02	2.32E−01	−1.746	A	4
5	$a\,^5D-z\,^5F^\circ$	*3727.987*	*3729.047*	*402.96*	*27 219.46*	25–35	1.54E−01	4.49E−02	1.38E+01	0.050	B+	4,13,17,18

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3719.9347	3720.9928	0.000–26 874.548		9–11	1.62E−01	4.11E−02	4.53E−00	−0.432	A	13,17,18
		3737.1315	3738.1941	415.933–27 166.818		7–9	1.41E−01	3.81E−02	3.28E−00	−0.574	A	4
		3745.5613	3746.6260	704.007–27 394.689		5–7	1.15E−01	3.39E−02	2.09E−00	−0.771	A	4
		3748.2622	3749.3276	888.132–27 559.581		3–5	9.15E−02	3.21E−02	1.19E−00	−1.016	A	4
		3745.8995	3746.9643	978.074–27 666.346		1–3	7.32E−02	4.62E−02	5.70E−01	−1.335	A	4
		3679.9134	3680.9611	0.000–27 166.818		9–9	1.38E−02	2.80E−03	3.05E−01	−1.599	A	4
		3705.5660	3706.6204	415.933–27 394.689		7–7	3.21E−02	6.62E−03	5.66E−01	−1.334	A	4
		3722.5630	3723.6218	704.007–27 559.581		5–5	4.97E−02	1.03E−02	6.33E−01	−1.287	A	4
		3733.3176	3734.3791	888.132–27 666.346		3–3	6.48E−02	1.35E−02	5.00E−01	−1.391	B+	13
		3649.3029	3650.3427	0.000–27 394.689		9–7	4.50E−04	6.99E−05	7.57E−03	−3.201	C+	13
		3683.0548	3684.1033	415.933–27 559.581		7–5	2.65E−03	3.85E−04	3.26E−02	−2.570	B+	13
		3707.8221	3708.8770	704.007–27 666.346		5–3	6.33E−03	7.83E−04	4.78E−02	−2.407	B	13
6	$a\ ^5D–z\ ^5P^\circ$	*3456.082*	*3457.072*	*402.96–29 329.17*		25–15	2.50E−01	2.68E−02	7.63E−00	−0.173	B	13
		3440.6059	3441.5921	0.000–29 056.322		9–7	1.71E−01	2.36E−02	2.41E−00	−0.673	B	13
		3440.9887	3441.9749	415.933–29 469.022		7–5	1.24E−01	1.57E−02	1.25E−00	−0.958	B	13
		3443.8765	3444.8634	704.007–29 732.734		5–3	7.92E−02	8.45E−03	4.79E−01	−1.374	B	13
		3490.5740	3491.5729	415.933–29 056.322		7–7	6.14E−02	1.12E−02	9.03E−01	−1.105	B	13
		3475.4502	3476.4453	704.007–29 469.022		5–5	9.75E−02	1.77E−02	1.01E−00	−1.054	B	13
		3465.8606	3466.8532	888.132–29 732.734		3–3	1.19E−01	2.14E−02	7.34E−01	−1.192	B	13
		3526.0408	3527.0488	704.007–29 056.322		5–7	1.14E−02	2.97E−03	1.73E−01	−1.828	B	13
		3497.8406	3498.8414	888.132–29 469.022		3–5	3.08E−02	9.42E−03	3.25E−01	−1.549	B	13
		3476.7018	3477.6972	978.074–29 732.734		1–3	5.72E−02	3.11E−02	3.56E−01	−1.507	B	13
7	$a\ ^5D–z\ ^3F^\circ$											
		3193.2259	3194.1490	0.000–31 307.243		9–9	4.43E−03	6.77E−04	6.41E−02	−2.215	B	13
		3184.8947	3185.8157	415.933–31 805.069		7–7	2.35E−03	3.57E−04	2.62E−02	−2.602	B	13
		3180.7554	3181.6754	704.007–32 133.989		5–5	1.23E−03	1.87E−04	9.77E−03	−3.030	C+	13
		3143.2426	3144.1531	0.000–31 805.069		9–7	1.27E−04	1.46E−05	1.36E−03	−3.880	C+	13
		3151.8656	3152.7782	415.933–32 133.989		7–5	1.37E−04	1.46E−05	1.06E−03	−3.991	C+	13
		3236.2223	3237.1563	415.933–31 307.243		7–9	2.18E−03	4.40E−04	3.28E−02	−2.511	B	13
		3214.3958	3215.3243	704.007–31 805.069		5–7	2.22E−03	4.81E−04	2.55E−02	−2.618	C+	13
		3199.4996	3200.4243	888.132–32 133.989		3–5	1.23E−03	3.15E−04	9.94E−03	−3.025	C+	13
8	$a\ ^5D–z\ ^3D^\circ$											
		3191.6592	3192.5820	0.000–31 322.611		9–7	2.37E−03	2.82E−04	2.66E−02	−2.596	B	13
		3196.9868	3197.9109	415.933–31 686.349		7–5	1.94E−03	2.12E−04	1.56E−02	−2.828	B	13
		3200.7844	3201.7095	704.007–31 937.323		5–3	5.90E−04	5.44E−05	2.87E−03	−3.566	C+	13
		3234.6132	3235.5468	415.933–31 322.611		7–7	1.15E−03	1.80E−04	1.34E−02	−2.899	B	13
		3219.7662	3220.6960	888.132–31 937.323		3–3	1.80E−04	2.80E−05	8.90E−04	−4.076	C+	13
		3265.0469	3265.9882	704.007–31 322.611		5–7	8.89E−04	1.99E−04	1.07E−02	−3.002	C+	13
		3246.0048	3246.9413	888.132–31 686.349		3–5	1.68E−03	4.42E−04	1.42E−02	−2.877	B	13
		3229.1203	3230.0525	978.074–31 937.323		1–3	1.67E−03	7.83E−04	8.33E−03	−3.106	C+	13
9	$a\ ^5D–y\ ^5D^\circ$	*3020.195*	*3021.075*	*402.96–33 503.76*		25–25	9.70E−01	1.33E−01	3.30E+01	0.521	B	4,13
		3020.6390	3021.5187	0.000–33 095.939		9–9	7.59E−01	1.04E−01	9.29E−00	−0.029	B	13
		3021.0727	3021.9526	415.933–33 507.121		7–7	4.55E−01	6.24E−02	4.34E−00	−0.360	A	4
		3020.4907	3021.3704	704.007–33 801.570		5–5	1.94E−01	2.65E−02	1.32E−00	−0.877	B	13
		3017.6272	3018.5063	888.132–34 017.101		3–3	6.81E−02	9.31E−03	2.78E−01	−1.554	A	4
		2983.5697	2984.4402	0.000–33 507.121		9–7	2.79E−01	2.90E−02	2.57E−00	−0.583	A	4
		2994.4268	2995.3000	415.933–33 801.570		7–5	4.39E−01	4.22E−02	2.91E−00	−0.530	B+	13
		3000.9478	3001.8226	704.007–34 017.101		5–3	6.42E−01	5.20E−02	2.57E−00	−0.585	A	4
		3008.1382	3009.0149	888.132–34 121.601		3–1	1.07E−00	4.85E−02	1.44E−00	−0.837	A	4
		3059.0858	3059.9751	415.933–33 095.939		7–9	1.63E−01	2.94E−02	2.07E−00	−0.687	C+	13
		3047.6046	3048.4911	704.007–33 507.121		5–7	2.84E−01	5.53E−02	2.78E−00	−0.558	A	4
		3037.3887	3038.2727	888.132–33 801.570		3–5	2.91E−01	6.71E−02	2.01E−00	−0.696	B	13
		3025.8424	3026.7235	978.074–34 017.101		1–3	3.48E−01	1.43E−01	1.43E−00	−0.844	A	4
10	$a\ ^5D–y\ ^5F^\circ$	*2965.198*	*2966.064*	*402.96–34 117.68*		25–35	3.15E−01	5.81E−02	1.42E+01	0.162	B+	4,13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2966.8982	2967.7646	0.000–33	695.395	9–11	2.72E−01	4.38E−02	3.85E−00	−0.404	A	4
		2973.2354	2974.1034	415.933–34	039.514	7–9	1.83E−01	3.13E−02	2.14E−00	−0.660	A	4
		2973.1324	2974.0003	704.007–34	328.750	5–7	1.35E−01	2.51E−02	1.23E−00	−0.901	A	4
		2970.0994	2970.9666	888.132–34	547.209	3–5	1.08E−01	2.38E−02	6.97E−01	−1.147	B+	4
		2965.2544	2966.1204	978.074–34	692.146	1–3	1.16E−01	4.60E−02	4.49E−01	−1.337	A	4
		2936.9034	2937.7624	0.000–34	039.514	9–9	1.40E−01	1.81E−02	1.58E−00	−0.788	C+	13
		2947.8760	2948.7376	415.933–34	328.750	7–7	1.83E−01	2.38E−02	1.62E−00	−0.778	B	13
		2953.9400	2954.8032	704.007–34	547.209	5–5	1.89E−01	2.47E−02	1.20E−00	−0.908	A	4
		2957.3645	2958.2286	888.132–34	692.146	3–3	1.77E−01	2.32E−02	6.78E−01	−1.157	A	4
		2912.1573	2913.0101	0.000–34	328.750	9–7	2.6E−02	2.6E−03	2.2E−01	−1.63	D	13
		2929.0071	2929.8641	415.933–34	547.209	7–5	5.10E−02	4.69E−03	3.16E−01	−1.484	B	13
		2941.3427	2942.2028	704.007–34	692.146	5–3	5.12E−02	3.98E−03	1.93E−01	−1.701	B	13
11	$a\ ^5D–z\ ^3P^\circ$											
		2981.4450	2982.3151	415.933–33	946.931	7–5	6.53E−02	6.22E−03	4.28E−01	−1.361	A	4
		2970.1181	2970.9853	704.007–34	362.871	5–3	3.43E−02	2.72E−03	1.33E−01	−1.866	B+	4
		2969.3598	2970.2268	888.132–34	555.595	3–1	3.66E−02	1.61E−03	4.73E−02	−2.315	A	4
		3007.2824	3008.1589	704.007–33	946.931	5–5	2.73E−02	3.71E−03	1.84E−01	−1.732	A	4
		2986.4559	2987.3272	888.132–34	362.871	3–3	2.19E−03	2.92E−04	8.62E−03	−3.057	A	4
		3024.0327	3024.9133	888.132–33	946.931	3–5	4.87E−02	1.11E−02	3.33E−01	−1.476	A	4
		2994.5022	2995.3754	978.074–34	362.871	1–3	1.49E−02	6.01E−03	5.93E−02	−2.221	A	4
12	$a\ ^5D–z\ ^5G^\circ$											
		2874.1722	2875.0157	0.000–34	782.419	9–11	9.30E−03	1.41E−03	1.20E−01	−1.897	B	13
		2869.3078	2870.1500	415.933–35	257.322	7–9	9.25E−03	1.47E−03	9.72E−02	−1.988	B	13
		2863.8631	2864.7040	704.007–35	611.623	5–7	5.69E−03	9.79E−04	4.62E−02	−2.310	C+	13
		2858.8964	2859.7361	888.132–35	856.400	3–5	2.12E−03	4.33E−04	1.22E−02	−2.886	B	13
		2835.4564	2836.2904	0.000–35	257.322	9–9	3.24E−03	3.91E−04	3.28E−02	−2.454	C+	13
		2840.4223	2841.2575	415.933–35	611.623	7–7	4.12E−03	4.98E−04	3.26E−02	−2.457	C+	13
		2843.9212	2844.7572	704.007–35	856.400	5–5	2.73E−03	3.31E−04	1.55E−02	−2.781	C+	13
		2807.2439	2808.0709	0.000–35	611.623	9–7	1.7E−03	1.5E−04	1.3E−02	−2.86	D	13
		2820.8029	2821.6332	415.933–35	856.400	7–5	6.1E−04	5.2E−05	3.4E−03	−3.44	D+	13
13	$a\ ^5D–z\ ^3G^\circ$											
		2825.6875	2826.5191	0.000–35	379.206	9–11	8.79E−04	1.29E−04	1.08E−02	−2.936	C+	13
		2827.8920	2828.7241	415.933–35	767.562	7–9	1.48E−03	2.28E−04	1.49E−02	−2.797	C+	13
		2795.0047	2795.8287	0.000–35	767.562	9–9	9.29E−04	1.09E−04	9.02E−03	−3.009	C+	13
		2803.1662	2803.9922	415.933–36	079.370	7–7	6.0E−04	7.1E−05	4.57E−03	−3.306	C	13
14	$a\ ^5D–y\ ^3F^\circ$											
		2756.2667	2757.0814	415.933–36	686.174	7–9	6.56E−03	9.61E−04	6.10E−02	−2.172	C+	13
		2742.0158	2742.8270	704.007–37	162.744	5–7	4.11E−03	6.5E−04	2.93E−02	−2.489	C	13
		2728.9698	2729.7778	888.132–37	521.158	3–5	1.6E−03	2.9E−04	7.8E−03	−3.06	D+	13
		2725.0162	2725.8232	0.000–36	686.174	9–9	3.1E−04	3.5E−05	2.8E−03	−3.51	D+	13
		2690.0682	2690.8668	0.000–37	162.744	9–7	2.53E−03	2.14E−04	1.70E−02	−2.716	C+	13
15	$a\ ^5D–y\ ^5P^\circ$	*2729.737*	*2730.545*	*402.96–37*	*025.68*	25–15	1.68E−00	1.12E−01	2.53E+01	0.449	B	13
		2719.0274	2719.8330	0.000–36	766.964	9–7	1.42E−00	1.22E−01	9.86E−00	0.042	B+	13
		2720.9023	2721.7083	415.933–37	157.564	7–5	1.04E−00	8.24E−02	5.17E−00	−0.239	B	13
		2723.5775	2724.3842	704.007–37	409.552	5–3	5.69E−01	3.80E−02	1.70E−00	−0.722	B	13
		2750.1406	2750.9537	415.933–36	766.964	7–7	2.74E−01	3.11E−02	1.97E−00	−0.663	B	13
		2742.4053	2743.2166	704.007–37	157.564	5–5	4.70E−01	5.30E−02	2.39E−00	−0.577	C+	13
		2737.3092	2738.1192	888.132–37	409.552	3–3	7.25E−01	8.14E−02	2.20E−00	−0.612	B	13
		2772.1101	2772.9286	704.007–36	766.964	5–7	4.12E−02	6.65E−03	3.03E−01	−1.479	B	13
		2756.3282	2757.1428	888.132–37	157.564	3–5	1.41E−01	2.68E−02	7.29E−01	−1.095	B	13
		2744.0674	2744.8791	978.074–37	409.552	1–3	3.09E−01	1.05E−01	9.46E−01	−0.980	B	13
16	$a\ ^5D–y\ ^3D^\circ$											
		2618.7107	2619.4922	0.000–38	175.352	9–7	5.21E−03	4.17E−04	3.23E−02	−2.426	B	13
		2612.7722	2613.5523	415.933–38	678.036	7–5	5.1E−03	3.71E−04	2.23E−02	−2.59	C	13
		2610.7509	2611.5305	704.007–38	995.733	5–3	3.6E−03	2.2E−04	9.5E−03	−2.96	D	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2647.5576	2648.3460	415.933–38 175.352		7–7	5.20E−03	5.47E−04	3.34E−02	−2.417	B	13
		2632.5939	2633.3788	704.007–38 678.036		5–5	9.0E−03	9.4E−04	4.05E−02	−2.330	C	13
		2623.3660	2624.1486	888.132–38 995.733		3–3	8.6E−03	8.9E−04	2.3E−02	−2.57	D	13
		2667.9127	2668.7060	704.007–38 175.352		5–7	1.69E−03	2.52E−04	1.11E−02	−2.899	B	13
		2645.4216	2646.2095	888.132–38 678.036		3–5	3.38E−03	5.9E−04	1.55E−02	−2.75	C	13
		2629.5725	2630.3566	978.074–38 995.733		1–3	2.0E−02	6.2E−03	5.4E−02	−2.21	D+	14
17	$a\ ^5D–x\ ^5D^\circ$	*2526.513*	*2527.273*	*402.96–39 971.31*		25–25	2.94E−00	2.82E−01	5.87E+01	0.848	B	13
		2522.8494	2523.6084	0.000–39 625.801		9–9	2.13E−00	2.03E−01	1.52E+01	0.262	B	13
		2527.4350	2528.1950	415.933–39 969.850		7–7	1.93E−00	1.85E−01	1.08E+01	0.112	B	13
		2529.1350	2529.8954	704.007–40 231.333		5–5	9.91E−01	9.51E−02	3.96E−00	−0.323	B	13
		2529.8354	2530.5960	888.132–40 404.515		3–3	3.83E−01	3.68E−02	9.20E−01	−0.957	B	13
		2501.1319	2501.8858	0.000–39 969.850		9–7	6.75E−01	4.93E−02	3.65E−00	−0.353	C+	13
		2510.8349	2511.5911	415.933–40 231.333		7–5	1.29E−00	8.71E−02	5.04E−00	−0.215	B	13
		2518.1017	2518.8595	704.007–40 404.515		5–3	1.93E−00	1.10E−01	4.57E−00	−0.259	B	13
		2524.2925	2525.0517	888.132–40 491.281		3–1	3.23E−00	1.03E−01	2.56E−00	−0.511	B	13
		2549.6134	2550.3786	415.933–39 625.801		7–9	2.31E−01	2.90E−02	1.70E−00	−0.693	B	13
		2545.9784	2546.7428	704.007–39 969.850		5–7	7.16E−01	9.75E−02	4.09E−00	−0.312	C+	13
		2540.9721	2541.7353	888.132–40 231.333		3–5	9.59E−01	1.55E−01	3.89E−00	−0.333	C+	13
		2535.6070	2536.3689	978.074–40404.515		1–3	9.59E−01	2.77E−01	2.32E−00	−0.557	B	13
18	$a\ ^5D–y\ ^7P^\circ$											
		2473.1568	2473.9041	0.000–40 421.935		9–9	2.75E−02	2.52E−03	1.85E−01	−1.644	B+	13
		2512.3649	2513.1214	415.933–40 207.088		7–7	2.00E−02	1.89E−03	1.10E−01	−1.878	B+	13
		2540.6635	2541.4266	704.007–40 052.032		5–5	1.41E−02	1.36E−03	5.71E−02	−2.166	B+	13
		2486.3727	2487.1231	0.000–40 207.088		9–7	3.08E−02	2.22E−03	1.64E−01	−1.699	B+	13
		2498.8738	2499.6272	415.933–40 421.935		7–9	5.90E−04	7.11E−05	4.09E−03	−3.303	B	13
		2530.6916	2531.4524	704.007–40 207.088		5–7	6.40E−03	8.61E−04	3.59E−02	−2.366	B	13
		2552.6058	2553.3717	888.132–40 052.032		3–5	6.19E−03	1.01E−03	2.54E−02	−2.519	B	13
19	$a\ ^5D–x\ ^5F^\circ$	*2484.245*	*2484.995*	*402.96–40 644.50*		25–35	4.79E−00	6.20E−01	1.27E+02	1.191	C+	13
		2483.2708	2484.0205	0.000–40 257.311		9–11	4.80E−00	5.43E−01	4.00E+01	0.689	B	13
		2488.1425	2488.8933	415.933–40 594.429		7–9	4.20E−00	5.01E−01	2.87E+01	0.545	B	13
		2490.6443	2491.3958	704.007–40 842.151		5–7	3.44E−00	4.49E−01	1.84E+01	0.351	B	13
		2491.1550	2491.9065	888.132–41 018.048		3–5	2.91E−00	4.52E−01	1.11E+01	0.132	B	13
		2489.7524	2490.5036	978.074–41 130.596		1–3	2.31E−00	6.44E−01	5.28E−00	−0.191	C+	13
		2462.6473	2463.3923	0.000–40 594.429		9–9	5.85E−01	5.32E−02	3.88E−00	−0.320	C+	13
		2472.8949	2473.6422	415.933–40 842.151		7–7	1.30E−00	1.19E−01	6.79E−00	−0.079	B	13
		2479.7764	2480.5253	704.007–41 018.048		5–5	1.74E−00	1.60E−01	6.55E−00	−0.096	B	13
		2484.1876	2484.9376	888.132–41 130.596		3–3	2.26E−00	2.09E−01	5.13E−00	−0.203	C+	13
		2447.7095	2448.4510	0.000–40 842.151		9–7	3.3E−02	2.3E−03	1.7E−01	−1.68	D+	13
		2462.1810	2462.9258	415.933–41 018.048		7–5	1.10E−01	7.14E−03	4.05E−01	−1.301	C+	13
		2472.8713	2473.6186	704.007–41 130.596		5–3	2.10E−01	1.16E−02	4.71E−01	−1.238	C	13
20	$a\ ^5D–z\ ^5S^\circ$											
		2487.3699	2488.1205	704.007–40 894.987		5–5	2.74E−02	2.54E−03	1.04E−01	−1.896	C+	13
		2498.8184	2499.5717	888.132–40 894.987		3–5	1.22E−03	1.90E−04	4.70E−03	−3.243	C+	13
21	$a\ ^5D–x\ ^5P^\circ$											
		2350.4130	2351.1330	0.000–42 532.738		9–7	1.6E−03	1.0E−04	7.2E−03	−3.03	D	13
		2373.6245	2374.3492	415.933–42 532.738		7–7	6.53E−02	5.52E−03	3.02E−01	−1.413	B	13
		2371.4304	2372.1546	704.007–42 859.775		5–5	2.67E−02	2.25E−03	8.78E−02	−1.949	C+	13
		2369.4562	2370.1800	888.132–43 079.020		3–3	2.53E−02	2.13E−03	4.98E−02	−2.195	B	13
		2389.9729	2390.7013	704.007–42532.738		5–7	4.47E−02	5.36E−03	2.11E−01	−1.572	B	13
		2381.8362	2382.5628	888.132–42 859.775		3–5	4.34E−02	6.15E−03	1.45E−01	−1.734	C+	13
		2374.5186	2375.2435	978.074–43 079.020		1–3	3.14E−02	7.98E−03	6.24E−02	−2.098	B	13
22	$a\ ^5D–y\ ^5G^\circ$											
		2355.9092	2356.6299	704.007–43 137.484		5–7	5.2E−03	6.0E−04	2.34E−02	−2.52	C	13
23	$a\ ^5D–w\ ^5D^\circ$	*2298.162*	*2298.870*	*402.96–43 902.59*		25–25	3.9E−01	3.1E−02	5.8E−00	−0.12	D+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2298.1690	2298.8769	0.000–43 499.502		9–9	3.1E−01	2.5E−02	1.7E−00	−0.66	D+	13
		2297.7871	2298.4950	415.933–43 922.665		7–7	1.4E−01	1.1E−02	6.0E−01	−1.10	D+	13
		2299.2201	2299.9283	704.007–44 183.625		5–5	7.0E−02	5.6E−03	2.11E−01	−1.56	C	13
		2296.9269	2297.6345	888.132–44 411.157		3–3	4.0E−02	3.2E−03	7.3E−02	−2.02	D+	13
		2276.0258	2276.7289	0.000–43 922.665		9–7	1.3E−01	7.6E−03	5.1E−01	−1.17	D+	13
		2284.0856	2284.7904	415.933–44 183.625		7–5	1.29E−01	7.2E−03	3.80E−01	−1.297	C	13
		2287.2496	2287.9552	704.007–44 411.157		5–3	2.23E−01	1.05E−02	3.95E−01	−1.280	B+	13
		2294.4081	2295.1152	888.132–44 458.931		3–1	3.61E−01	9.50E−03	2.15E−01	−1.545	B	13
		2320.3577	2321.0705	415.933–43 499.502		7–9	1.41E−01	1.46E−02	7.8E−01	−0.99	C	13
		2313.1041	2313.8153	704.007–43 922.665		5–7	1.2E−01	1.3E−02	5.0E−01	−1.18	D+	13
		2308.9989	2309.7092	888.132–44 183.625		3–5	1.02E−01	1.36E−02	3.10E−01	−1.390	C	13
		2301.6839	2302.3926	978.074–44 411.157		1–3	8.68E−02	2.07E−02	1.57E−01	−1.684	B+	13
24	$a\ ^5D–v\ ^5D^\circ$											
		2259.2826	2259.9821	415.933–44 664.072		7–5	1.3E−02	7.0E−04	3.6E−02	−2.31	C	19
		2275.1916	2275.8945	888.132–44 826.897		3–1	6.2E−02	1.6E−03	3.6E−02	−2.32	D+	13
		2292.5248	2293.2315	415.933–44 022.522		7–9	2.96E−02	3.01E−03	1.59E−01	−1.677	B	13
		2300.1418	2300.8502	704.007–44 166.203		5–7	4.99E−02	5.55E−03	2.10E−01	−1.557	B	13
		2283.6552	2284.3600	888.132–44 664.072		3–5	1.53E−02	1.99E−03	4.50E−02	−2.223	C	13
		2283.3041	2284.0088	978.074–44 760.743		1–3	2.59E−02	6.07E−03	4.56E−02	−2.217	B+	13
25	$a\ ^5D–w\ ^5F^\circ$											
		2259.5102	2260.2097	0.000–44 243.682		9–11	5.66E−02	5.29E−03	3.55E−01	−1.322	B+	13
		2272.0696	2272.7718	415.933–44 415.071		7–9	2.92E−02	2.90E−03	1.52E−01	−1.692	B+	13
		2279.9371	2280.6410	704.007–44 551.332		5–7	1.88E−02	2.05E−03	7.70E−02	−1.989	B+	13
		2303.5806	2304.2897	888.132–44 285.451		3–5	4.83E−02	6.41E−03	1.46E−01	−1.716	C+	13
		2303.4243	2304.1334	978.074–44 378.339		1–3	7.33E−02	1.75E−02	1.33E−01	−1.757	C+	13
		2250.7904	2251.4880	0.000–44 415.071		9–9	1.23E−02	9.35E−04	6.24E−02	−2.075	C+	13
		2265.0543	2265.7550	415.933–44 551.332		7–7	1.43E−02	1.10E−03	5.7E−02	−2.114	C	13
		2293.8482	2294.5552	704.007–44 285.451		5–5	1.09E−02	8.59E−04	3.24E−02	−2.367	C+	13
		2298.6603	2299.3683	888.132–44 378.339		3–3	1.59E−02	1.26E−03	2.86E−02	−2.423	C	13
26	$a\ ^5D–y\ ^5S^\circ$											
		2267.0847	2267.7858	415.933–44 511.809		7–5	4.57E−02	2.52E−03	1.32E−01	−1.754	B	13
27	$a\ ^5D–x\ ^3D^\circ$											
		2228.1717	2228.8645	415.933–45 281.830		7–5	2.1E−02	1.1E−03	5.7E−02	−2.11	D+	19
28	$a\ ^5D–w\ ^5P^\circ$											
		2166.7733	2167.4533	0.000–46 137.094		9–7	2.7E−00	1.5E−01	9.6E−00	0.13	D+	19
		2191.8391	2192.5242	704.007–46 313.534		5–5	1.2E−00	8.3E−02	3.0E−00	−0.38	C+	19
		2196.0420	2196.7280	888.132–46 410.378		3–3	1.2E−00	8.6E−02	1.9E−00	−0.59	C+	19
		2200.7243	2201.4113	888.132–46 313.534		3–5	2.8E−01	3.4E−02	7.4E−01	−0.99	C	19
		2200.3900	2201.0769	978.074–46 410.378		1–3	8.9E−01	1.9E−01	1.4E−00	−0.71	C	19
29	$a\ ^5D–z\ ^3S^\circ$											
		2191.2043	2191.8893	978.074–46 600.815		1–3	7.3E−02	1.6E−02	1.1E−01	−1.80	C	19
30	$a\ ^5D–y\ ^3P^\circ$											
		2176.8402	2177.5223	978.074–46 901.829		1–3	1.0E−01	2.2E−02	1.6E−01	−1.66	C+	19
31	$a\ ^5D–u\ ^5D^\circ$											
		2138.5925	2139.2668	0.000–46 744.990		9–7	2.8E−02	1.5E−03	9.5E−02	−1.87	D+	19
		2171.2972	2171.9781	704.007–46 744.990		5–7	5.1E−02	5.0E−03	1.8E−01	−1.60	D+	19
		2173.2137	2173.8950	888.132–46 888.514		3–5	8.3E−02	9.8E−03	2.1E−01	−1.53	D+	19
32	$a\ ^5D–x\ ^3F^\circ$											
		2132.0173	2132.6902	0.000–46 889.139		9–9	7.6E−02	5.2E−03	3.3E−01	−1.33	C+	19
33	$a\ ^5D–w\ ^3D^\circ$											
		2145.1896	2145.8652	415.933–47 017.185		7–7	5.7E−02	3.9E−03	1.9E−01	−1.56	C	19
		2153.0067	2153.6838	704–47 136		5–5	6.9E−02	4.8E−03	1.7E−01	−1.62	C	19
		2161.5791	2162.2580	888–47 136		3–5	5.0E−02	5.8E−03	1.2E−01	−1.76	D+	19
34	$a\ ^5D–u\ ^5F^\circ$											
			1937.2685	0.000–51 619.073		9–7	2.2E−01	9.5E−03	5.4E−01	−1.07	C+	19
35	$a\ ^5D–u\ ^5P^\circ$											
			1934.5351	0.000–51 692.007		9–7	2.5E−01	1.1E−02	6.4E−01	−1.00	C+	19

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			1940.6604	415.933–51	944.781	7–5	2.6E−01	1.0E−02	4.6E−01	−1.14	D+	19
36	$a\,^5F–z\,^7D^\circ$											
		8204.1030	8206.3584	7376.764–19	562.438	9–9	9.76E−08	9.86E−08	2.40E−05	−6.052	B+	9
		7912.8670	7915.0437	6928.268–19	562.438	11–9	1.68E−06	1.29E−06	3.70E−04	−4.848	A	5
		8075.1509	8077.3715	7376.764–19	757.031	9–7	1.19E−06	9.07E−07	2.17E−04	−5.088	B+	9
37	$a\,^5F–z\,^7F^\circ$											
		6358.6976	6360.4557	6928.268–22	650.414	11–13	4.32E−06	3.09E−06	7.13E−04	−4.468	A	5
		6462.7251	6464.5111	7376.764–22	845.867	9–11	9.7E−04	7.4E−04	1.42E−01	−2.175	C	16
		6648.0810	6649.9169	8154.713–23	192.498	3–5	3.64E−07	4.03E−07	2.64E−05	−5.918	B+	9
		6280.6182	6282.3553	6928.268–22	845.867	11–11	6.26E−06	3.70E−06	8.43E−04	−4.390	B+	9
		6400.3180	6402.0872	7376.764–22	996.672	9–9	8.69E−06	5.34E−06	1.01E−03	−4.318	C+	13
		6498.9392	6500.7350	7728.059–23	110.937	7–7	4.64E−06	2.94E−06	4.40E−04	−4.687	B+	9
		6574.2284	6576.0444	7985.784–23	192.498	5–5	3.06E−06	1.98E−06	2.15E−04	−5.004	B+	9
		6625.0220	6626.8517	8154.713–23	244.836	3–3	2.34E−06	1.54E−06	1.01E−04	−5.336	B+	9
		6353.8363	6355.5930	7376.764–23	110.937	9–7	7.87E−08	3.70E−08	6.98E−06	−6.477	B+	9
38	$a\,^5F–z\,^7P^\circ$											
		6120.2494	6121.9435	7376.764–23	711.454	9–9	2.12E−07	1.19E−07	2.16E−05	−5.970	B+	9
		5956.6944	5958.3446	6928.268–23	711.454	11–9	5.15E−06	2.24E−06	4.84E−04	−4.608	B+	9
39	$a\,^5F–z\,^5D^\circ$	*5348.687*	*5350.175*	*7459.75–26*	*150.73*	35–25	1.63E−02	4.98E−03	3.07E−00	−0.759	A	5,13
		5269.5374	5271.0039	6928.268–25	899.987	11–9	1.27E−02	4.34E−03	8.29E−01	−1.321	A	5
		5328.0387	5329.5208	7376.764–26	140.177	9–7	1.15E−02	3.80E−03	6.00E−01	−1.466	A	5
		5371.4897	5372.9834	7728.059–26	339.694	7–5	1.05E−02	3.24E−03	4.01E−01	−1.645	A	5
		5405.7752	5407.2781	7985.784–26	479.379	5–3	1.09E−02	2.86E−03	2.55E−01	−1.844	A	5
		5434.5238	5436.0344	8154.713–26	550.477	3–1	1.70E−02	2.52E−03	1.35E−01	−2.122	A	5
		5397.1280	5398.6285	7376.764–25	899.987	9–9	2.58E−03	1.13E−03	1.81E−01	−1.993	A	5
		5429.6967	5431.2060	7728.059–26	140.177	7–7	4.27E−03	1.89E−03	2.36E−01	−1.879	A	5
		5446.9168	5448.4306	7985.784–26	339.694	5–5	5.48E−03	2.44E−03	2.19E−01	−1.914	B+	13
		5455.6095	5457.1257	8154.713–26	479.379	3–3	6.05E−03	2.70E−03	1.46E−01	−2.091	B+	13
		5501.4653	5502.9937	7728.059–25	899.987	7–9	2.20E−04	1.28E−04	1.63E−02	−3.047	B	13
		5506.7791	5508.3090	7985.784–26	140.177	5–7	5.01E−04	3.19E−04	2.89E−02	−2.797	A	5
		5497.5161	5499.0434	8154.713–26	339.694	3–5	6.25E−04	4.72E−04	2.56E−02	−2.849	A	5
40	$a\,^5F–z\,^5F^\circ$	*5059.392*	*5060.803*	*7459.75–27*	*219.46*	35–35	9.03E−04	3.47E−04	2.02E−01	−1.916	B+	5,13
		5012.0684	5013.4664	6928.268–26	874.548	11–11	5.50E−04	2.07E−04	3.76E−02	−2.642	A	5
		5051.6345	5053.0431	7376.764–27	166.818	9–9	4.65E−04	1.78E−04	2.67E−02	−2.795	A	5
		5083.3386	5084.7555	7728.059–27	394.689	7–7	4.06E−04	1.57E−04	1.84E−02	−2.958	A	5
		5107.4474	5108.8708	7985.784–27	559.581	5–5	4.18E−04	1.64E−04	1.38E−02	−3.087	A	5
		5123.7200	5125.1476	8154.713–27	666.346	3–3	7.24E−04	2.85E−04	1.44E−02	−3.068	A	5
		4939.6867	4941.0654	6928.268–27	166.818	11–9	1.39E−04	4.16E−05	7.44E−03	−3.340	A	5
		4994.1295	4995.5228	7376.764–27	394.689	9–7	3.18E−04	9.24E−05	1.37E−02	−3.080	A	5
		5041.0716	5042.4773	7728.059–27	559.581	7–5	4.29E−04	1.17E−04	1.36E−02	−3.087	B	13
		5079.7400	5081.1560	7985.784–27	666.346	5–3	5.19E−04	1.21E−04	1.01E−02	−3.220	A	5
		5127.3593	5128.7880	7376.764–26	874.548	9–11	1.14E−04	5.48E−05	8.33E−03	−3.307	A	5
		5142.9285	5144.3613	7728.059–27	166.818	7–9	2.4E−04	1.2E−04	1.5E−02	−3.07	D+	13
		5150.8395	5152.2744	7985.784–27	394.689	5–7	3.30E−04	1.84E−04	1.56E−02	−3.037	C	13
		5151.9109	5153.3461	8154.713–27	559.581	3–5	2.39E−04	1.59E−04	8.08E−03	−3.322	A	5
41	$a\,^5F–z\,^3F^\circ$	4100.7379	4101.8952	6928.268–31	307.243	11–9	2.92E−04	6.02E−05	8.94E−03	−3.179	A	5
		4177.5939	4178.7713	7376.764–31	307.243	9–9	3.71E−04	9.72E−05	1.20E−02	−3.058	A	5
		4152.1692	4153.3400	7728.059–31	805.069	7–7	3.24E−04	8.37E−05	8.01E−03	−3.232	A	5
		4139.9273	4141.0949	7985.784–32	133.989	5–5	1.83E−04	4.70E−05	3.20E−03	−3.629	A	5
42	$a\,^5F–z\,^3D^\circ$											
		4174.9131	4176.0898	7376.764–31	322.611	9–7	5.87E−04	1.19E−04	1.48E−02	−2.969	A	5
		4172.7448	4173.9209	7728.059–31	686.349	7–5	6.46E−04	1.20E−04	1.16E−02	−3.074	A	5
		4173.9207	4175.0972	7985.784–31	937.323	5–3	6.50E−04	1.02E−04	7.00E−03	−3.293	B	13
		4237.0742	4238.2672	7728.059–31	322.611	7–7	2.22E−05	5.97E−06	5.83E−04	−4.379	B+	9

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		4203.5678	4204.7521	8154.713–31	937.323	3–3	1.70E−04	4.51E−05	1.87E−03	−3.869	C	13
43	$a\ ^5F–y\ ^5D^\circ$	*3838.565*	*3839.654*	*7459.75–33*	*503.76*	35–25	6.53E−01	1.03E−01	4.56E+01	0.557	A	5,13
		3820.4252	3821.5094	6928.268–33	095.939	11–9	6.67E−01	1.20E−01	1.65E+01	0.119	A	5
		3825.8812	3826.9668	7376.764–33	507.121	9–7	5.97E−01	1.02E−01	1.16E+01	−0.037	A	5
		3834.2225	3835.3102	7728.059–33	801.570	7–5	4.52E−01	7.13E−02	6.30E−00	−0.302	A	5
		3840.4375	3841.5269	7985.784–34	017.101	5–3	4.70E−01	6.24E−02	3.94E−00	−0.506	A	5
		3849.9666	3851.0585	8154.713–34	121.601	3–1	6.05E−01	4.49E−02	1.71E−00	−0.871	A	5
		3887.0482	3888.1498	7376.764–33	095.939	9–9	3.52E−02	7.98E−03	9.19E−01	−1.144	A	5
		3878.0182	3879.1174	7728.059–33	507.121	7–7	7.72E−02	1.74E−02	1.56E−00	−0.914	A	5
		3872.5012	3873.5989	7985.784–33	801.570	5–5	1.05E−01	2.36E−02	1.51E−00	−0.928	A	5
		3865.5231	3866.6190	8154.713–34	017.101	3–3	1.55E−01	3.47E−02	1.33E−00	−0.982	A	5
		3940.8776	3941.9931	7728.059–33	095.939	7–9	1.20E−03	3.59E−04	3.26E−02	−2.600	A	5
		3917.1810	3918.2903	7985.784–33	507.121	5–7	4.34E−03	1.40E−03	9.03E−02	−2.155	A	5
		3898.0089	3899.1133	8154.713–33	801.570	3–5	8.00E−03	3.04E−03	1.17E−01	−2.040	C+	13
44	$a\ ^5F–y\ ^5F^\circ$	*3750.164*	*3751.230*	*7459.75–34*	*117.68*	35–35	9.14E−01	1.93E−01	8.33E+01	0.829	A	5
		3734.8638	3735.9258	6928.268–33	695.395	11–11	9.01E−01	1.89E−01	2.55E+01	0.317	A	5
		3749.4854	3750.5511	7376.764–34	039.514	9–9	7.63E−01	1.61E−01	1.79E+01	0.161	A	5
		3758.2330	3759.3010	7728.059–34	328.750	7–7	6.34E−01	1.34E−01	1.16E+01	−0.027	A	5
		3763.7891	3764.8585	7985.784–34	547.209	5–5	5.44E−01	1.16E−01	7.17E−00	−0.238	A	5
		3767.1918	3768.2621	8154.713–34	692.146	3–3	6.39E−01	1.36E−01	5.07E−00	−0.389	A	5
		3687.4567	3688.5064	6928.268–34	039.514	11–9	8.00E−02	1.34E−02	1.78E−00	−0.833	A	5
		3709.2464	3710.3017	7376.764–34	328.750	9–7	1.56E−01	2.51E−02	2.76E−00	−0.646	A	5
		3727.6190	3728.6791	7728.059–34	547.209	7–5	2.24E−01	3.34E−02	2.87E−00	−0.631	A	5
		3743.3621	3744.4263	7985.784–34	692.146	5–3	2.60E−01	3.28E−02	2.02E−00	−0.785	A	5
		3798.5114	3799.5899	7376.764–33	695.395	9–11	3.23E−02	8.55E−03	9.62E−01	−1.114	A	5
		3799.5475	3800.6263	7728.059–34	039.514	7–9	7.31E−02	2.04E−02	1.78E−00	−0.846	A	5
		3795.0022	3796.0798	7985.784–34	328.750	5–7	1.15E−01	3.47E−02	2.17E−00	−0.761	A	5
		3787.8802	3788.9559	8154.713–34	547.209	3–5	1.29E−01	4.61E−02	1.73E−00	−0.859	A	5
45	$a\ ^5F–z\ ^3P^\circ$											
		3812.9645	3814.0468	7728.059–33	946.931	7–5	7.91E−02	1.23E−02	1.08E−00	−1.064	A	5
		3790.0929	3791.1692	7985.784–34	362.871	5–3	2.68E−02	3.47E−03	2.16E−01	−1.761	A	5
		3786.6768	3787.7522	8154.713–34	555.595	3–1	2.77E−02	1.99E−03	7.43E−02	−2.225	A	5
		3850.8179	3851.9099	7985.784–33	946.931	5–5	1.66E−02	3.69E−03	2.34E−01	−1.734	A	5
		3814.5232	3815.6058	8154.713–34	362.871	3–3	6.24E−03	1.36E−03	5.13E−02	−2.389	A	7
		3876.0400	3877.1386	8154.713–33	946.931	3–5	1.15E−03	4.31E−04	1.65E−02	−2.888	C+	13
46	$a\ ^5F–z\ ^5G^\circ$											
		3581.1930	3582.2153	6928.268–34	843.955	11–13	1.02E−00	2.32E−01	3.00E+01	0.406	A	5
		3647.8428	3648.8822	7376.764–34	782.419	9–11	2.91E−01	7.11E−02	7.68E−00	−0.194	A	5
		3631.4632	3632.4984	7728.059–35	257.322	7–9	5.17E−01	1.31E−01	1.10E+01	−0.036	A	5
		3618.7679	3619.7998	7985.784–35	611.623	5–7	7.22E−01	1.99E−01	1.18E+01	−0.003	B+	13
		3608.8593	3609.8887	8154.713–35	856.400	3–5	8.13E−01	2.65E−01	9.44E−00	−0.100	A	5
		3589.1050	3590.1293	6928.268–34	782.419	11–11	3.61E−03	6.98E−04	9.07E−02	−2.115	A	5
		3585.7054	3586.7288	7376.764–35	257.322	9–9	3.75E−02	7.22E−03	7.68E−01	−1.187	A	5
		3585.3189	3586.3422	7728.059–35	611.623	7–7	1.17E−01	2.25E−02	1.86E−00	−0.802	B+	13
		3586.9848	3588.0085	7985.784–35	856.400	5–5	1.66E−01	3.20E−02	1.89E−00	−0.796	B+	13
		3540.7097	3541.7215	7376.764–35	611.623	9–7	2.45E−03	3.58E−04	3.76E−02	−2.492	C+	13
		3554.1182	3555.1335	7728.059–35	856.400	7–5	6.57E−03	8.89E−04	7.28E−02	−2.206	B+	13
47	$a\ ^5F–z\ ^3G^\circ$											
		3513.8180	3514.8229	6928.268–35	379.206	11–11	3.40E−02	6.30E−03	8.02E−01	−1.159	A	5
		3521.2612	3522.2680	7376.764–35	767.562	9–9	6.14E−02	1.14E−02	1.19E−00	−0.988	B+	13
		3526.1658	3527.1739	7728.059–36	079.370	7–7	4.14E−02	7.73E−03	6.28E−01	−1.267	B+	13
		3466.4988	3467.4915	6928.268–35	767.562	11–9	1.24E−03	1.83E−04	2.30E−02	−2.70	C	16
		3483.0071	3484.0041	7376.764–36	079.370	9–7	1.45E−03	2.05E−04	2.12E−02	−2.734	B	13
		3570.0977	3571.1171	7376.764–35	379.206	9–11	6.76E−01	1.58E−01	1.67E+01	0.153	A	5
		3565.3790	3566.3971	7728.059–35	767.562	7–9	4.29E−01	1.05E−01	8.64E−00	−0.133	B+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3558.5151	3559.5315	7985.784–36 079.370		5–7	1.77E−01	4.70E−02	2.75E−00	−0.629	B+	13
48	$a\ ^5F–y\ ^3F^\circ$											
		3410.8953	3411.8738	7376.764–36 686.174		9–9	3.1E−04	5.4E−05	5.5E−03	−3.31	D+	13
		3452.2746	3453.2637	7728.059–36 686.174		7–9	7.49E−03	1.72E−03	1.37E−01	−1.919	B	13
		3426.3825	3427.3649	7985.784–37 162.744		5–7	9.99E−03	2.46E−03	1.39E−01	−1.909	B	13
		3404.2702	3405.2470	8154.713–37 521.158		3–5	3.02E−03	8.8E−04	2.94E−02	−2.58	C	13
49	$a\ ^5F–y\ ^5P^\circ$											
		3401.5187	3402.4948	7376.764–36 766.964		9–7	7.19E−03	9.70E−04	9.78E−02	−2.059	C+	13
		3396.9755	3397.9505	7728.059–37 157.564		7–5	4.3E−03	5.4E−04	4.2E−02	−2.43	D+	13
		3397.6382	3398.6133	7985.784–37 409.552		5–3	1.3E−03	1.3E−04	7.5E−03	−3.17	D	13
		3442.6690	3443.6557	7728.059–36 766.964		7–7	1.75E−03	3.11E−04	2.47E−02	−2.66	C	13
		3426.9880	3427.9706	7985.784–37 157.564		5–5	2.8E−03	5.0E−04	2.8E−02	−2.60	D+	13
50	$a\ ^5F–y\ ^3D^\circ$											
		3245.9657	3246.9022	7376.764–38 175.352		9–7	1.55E−03	1.90E−04	1.83E−02	−2.766	B	13
51	$a\ ^5F–x\ ^5D^\circ$	*3074.936*	*3075.830*	*7459.75–39 971.31*		35–25	4.67E−01	4.73E−02	1.68E+01	0.219	C+	13
		3057.4458	3058.3348	6928.268–39 625.801		11–9	3.13E−01	3.59E−02	3.97E−00	−0.404	B	13
		3067.2439	3068.1354	7376.764–39 969.850		9–7	3.12E−01	3.42E−02	3.11E−00	−0.511	C+	13
		3075.7196	3076.6131	7728.059–40 231.333		7–5	3.14E−01	3.18E−02	2.26E−00	−0.652	C+	13
		3083.7409	3084.6365	7985.784–40 404.515		5–3	3.08E−01	2.63E−02	1.34E−00	−0.880	C+	13
		3091.5765	3092.4740	8154.713–40 491.281		3–1	5.5E−01	2.64E−02	8.1E−01	−1.101	C	13
		3099.9682	3100.8678	7376.764–39 625.801		9–9	8.23E−02	1.19E−02	1.09E−00	−0.972	C+	13
		3100.6650	3101.5648	7728.059–39 969.850		7–7	1.35E−01	1.95E−02	1.39E−00	−0.87	C	13
		3100.3035	3101.2032	7985.784–40 231.333		5–5	1.87E−01	2.69E−02	1.38E−00	−0.871	C+	13
		3099.8945	3100.7941	8154.713–40 404.515		3–3	1.93E−01	2.78E−02	8.51E−01	−1.079	C+	13
		3134.1100	3135.0182	7728.059–39 625.801		7–9	7.9E−03	1.49E−03	1.08E−01	−1.98	C	13
		3125.6505	3126.5566	7985.784–39 969.850		5–7	2.12E−02	4.35E−03	2.27E−01	−1.66	C	13
		3116.6315	3117.5354	8154.713–40 231.333		3–5	3.04E−02	7.4E−03	2.27E−01	−1.66	C	13
52	$a\ ^5F–y\ ^7P^\circ$											
		3025.2800	3026.1609	7376.764–40 421.935		9–9	1.66E−03	2.28E−04	2.04E−02	−2.688	B	13
		3078.0157	3078.9099	7728.059–40 207.088		7–7	3.11E−03	4.42E−04	3.13E−02	−2.510	C+	13
		3117.6401	3118.5441	7985.784–40 052.032		5–5	4.30E−04	6.27E−05	3.22E−03	−3.504	C+	13
		2984.7681	2985.6390	6928.268–40 421.935		11–9	2.58E−03	2.82E−04	3.05E−02	−2.508	B	13
		3045.0784	3045.9643	7376.764–40 207.088		9–7	6.97E−03	7.54E−04	6.80E−02	−2.169	B	13
		3092.7817	3093.6795	7728.059–40 052.032		7–5	8.40E−04	8.60E−05	6.13E−03	−3.220	C+	13
		3102.6367	3103.5370	7985.784–40 207.088		5–7	3.0E−04	6.1E−05	3.1E−03	−3.52	D+	13
53	$a\ ^5F–x\ ^5F^\circ$	*3012.555*	*3013.433*	*7459.75–40 644.50*		35–35	2.11E−01	2.87E−02	1.00E+01	0.002	C	13
		2999.5118	3000.3863	6928.268–40 257.311		11–11	1.70E−01	2.29E−02	2.49E−00	−0.60	C	13
		3009.5693	3010.4463	7376.764–40 594.429		9–9	1.43E−01	1.94E−02	1.73E−00	−0.758	C+	13
		3018.9830	3019.8624	7728.059–40 842.151		7–7	1.03E−01	1.41E−02	9.79E−01	−1.006	C+	13
		3026.4619	3027.3431	7985.784–41 018.048		5–5	1.10E−01	1.51E−02	7.5E−01	−1.122	C	13
		3031.6366	3032.5192	8154.713–41 130.596		5–3	1.4E−01	1.9E−02	5.7E−01	−1.24	D+	13
		2969.4746	2970.3416	6928.268–40 594.429		11–9	2.1E−02	2.3E−03	2.4E−01	−1.60	D+	13
		2987.2906	2988.1621	7376.764–40 842.151		9–7	5.25E−02	5.47E−03	4.84E−01	−1.308	C+	13
		3003.0307	3003.9061	7728.059–41 018.048		7–5	7.5E−02	7.2E−03	5.0E−01	−1.295	C	13
		3016.1847	3017.0633	7985.784–41 130.596		5–3	8.9E−02	7.2E−03	3.6E−01	−1.44	D+	13
		3040.4273	3041.3120	7376.764–40 257.311		9–11	2.5E−02	4.2E−03	3.7E−01	−1.43	D+	13
		3041.7388	3042.6238	7728.059–40 594.429		7–9	5.2E−02	9.3E−03	6.5E−01	−1.19	D+	13
		3042.6649	3043.5501	7985.784–40 842.151		5–7	5.20E−02	1.01E−02	5.06E−01	−1.297	C+	13
		3042.0196	3042.9047	8154.713–41 018.048		3–5	4.7E−02	1.1E−02	3.3E−01	−1.49	D+	13
54	$a\ ^5F–z\ ^5S^\circ$											
		3014.1734	3015.0515	7728.059–40 894.987		7–5	2.57E−03	2.50E−04	1.74E−02	−2.757	B	13
		3037.7796	3038.6637	7985.784–40 894.987		5–5	3.44E−03	4.76E−04	2.38E−02	−2.624	B	13
		3053.4535	3054.3414	8154.713–40 894.987		3–5	1.17E−03	2.73E−04	8.22E−03	−3.087	C+	13
55	$a\ ^5F–x\ ^5P^\circ$											
		2843.6308	2844.4668	7376.764–42 532.738		9–7	6.96E−02	6.56E−03	5.53E−01	−1.229	B+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2845.5947	2846.4312	7728.059–42	859.775	7–5	7.86E−02	6.82E−03	4.47E−01	−1.321	B	13
		2848.7147	2849.5519	7985.784–43	079.020	5–3	2.70E−02	1.97E−03	9.24E−02	−2.006	B	13
		2872.3339	2873.1769	7728.059–42	532.738	7–7	1.98E−02	2.45E−03	1.62E−01	−1.766	C+	13
		2866.6249	2867.4665	7985.784–42	859.775	5–5	1.99E−02	2.45E−03	1.16E−01	−1.912	B	13
		2862.4947	2863.3353	8154.713–43	079.020	3–3	1.17E−02	1.44E−03	4.06E−02	−2.365	B	13
		2893.7627	2894.6109	7985.784–42	532.738	5–7	1.76E−03	3.09E−04	1.47E−02	−2.811	C+	13
56	$a\ ^5F–y\ ^5G^\circ$	*2815.617*	*2816.446*	*7459.75–42*	*965.49*	35–45	4.73E−01	7.23E−02	2.35E+01	0.403	B+	13
		2788.1048	2788.9272	6928.268–42	784.349	11–13	5.92E−01	8.15E−02	8.23E−00	−0.047	B+	13
		2813.2864	2814.1150	7376.764–42	911.914	9–11	3.42E−01	4.96E−02	4.14E−00	−0.350	B+	13
		2832.4355	2833.2687	7728.059–43	022.982	7–9	2.38E−01	3.68E−02	2.40E−00	−0.589	B+	13
		2843.9764	2844.8125	7985.784–43	137.484	5–7	3.17E−01	5.38E−02	2.52E−00	−0.570	B+	13
		2851.7969	2852.6349	8154.713–43	210.022	3–5	3.37E−01	6.85E−02	1.93E−00	−0.687	B+	13
		2778.2203	2779.0402	6928.268–42	911.914	11–11	9.08E−02	1.05E−02	1.06E−00	−0.937	B+	13
		2804.5203	2805.3467	7376.764–43	022.982	9–9	1.05E−01	1.24E−02	1.03E−00	−0.953	B+	13
		2823.2757	2824.1067	7728.059–43	137.484	7–7	1.51E−01	1.80E−02	1.17E−00	−0.899	B+	13
		2838.1195	2838.9541	7985.784–43	210.022	5–5	1.28E−01	1.55E−02	7.22E−01	−1.112	B+	13
		2769.6693	2770.4872	6928.268–43	022.982	11–9	7.17E−03	6.75E−04	6.77E−02	−2.130	B+	13
		2795.5400	2796.3642	7376.764–43	137.484	9–7	1.42E−02	1.29E−03	1.07E−01	−1.934	B	13
		2817.5038	2818.3334	7728.059–43	210.022	7–5	1.49E−02	1.27E−03	8.23E−02	−2.052	B+	13
57	$a\ ^5F–z\ ^5H^\circ$											
		2806.9842	2807.8111	7376.764–42	991.694	9–11	1.15E−01	1.66E−02	1.38E−00	−0.826	B+	13
		2825.5557	2826.3872	7728.059–43	108.914	7–9	1.32E−01	2.03E−02	1.32E−00	−0.847	B+	13
		2828.8082	2829.6405	7985.784–43	325.961	5–7	1.87E−02	3.14E−03	1.46E−01	−1.804	B+	13
		2772.0740	2772.8925	6928.268–42	991.694	11–11	2.34E−02	2.70E−03	2.71E−01	−1.528	B+	13
		2797.7753	2798.6001	7376.764–43	108.914	9–9	4.52E−02	5.30E−03	4.40E−01	−1.321	B+	13
		2808.3270	2809.1543	7728.059–43	325.961	7–7	4.48E−03	5.30E−04	3.43E−02	−2.431	B+	13
		2763.0924	2763.9086	6928.268–43	108.914	11–9	3.93E−03	3.68E−04	3.69E−02	−2.392	B	13
		2780.8818	2781.7025	7376.764–43	325.961	9–7	7.20E−04	6.49E−05	5.35E−03	−3.233	C+	13
58	$a\ ^5F–w\ ^5D^\circ$											
		2733.5805	2734.3896	6928.268–43	499.502	11–9	7.10E−01	6.51E−02	6.44E−00	−0.145	C+	13
		2735.4753	2736.2849	7376.764–43	922.665	9–7	5.0E−01	4.4E−02	3.6E−00	−0.40	D+	13
		2742.2542	2743.0654	7728.059–44	183.625	7–5	3.41E−01	2.75E−02	1.74E−00	−0.716	C+	13
		2744.5275	2745.3392	7985.784–44	411.157	5–3	2.53E−01	1.71E−02	7.75E−01	−1.067	B+	13
		2753.6869	2754.5009	8154.713–44	458.931	3–1	4.00E−01	1.52E−02	4.12E−01	−1.342	B	13
		2767.5221	2768.3394	7376.764–43	499.502	9–9	1.48E−01	1.70E−02	1.39E−00	−0.815	C+	13
		2762.0266	2762.8426	7728.059–43	922.665	7–7	1.8E−01	2.0E−02	1.3E−00	−0.85	D+	13
		2761.7798	2762.5958	7985.784–44	183.625	5–5	1.94E−01	2.22E−02	1.01E−00	−0.955	B+	13
		2757.3155	2758.1304	8154.713–44	411.157	3–3	2.85E−01	3.25E−02	8.85E−01	−1.011	B+	13
		2794.7021	2795.5261	7728.059–43	499.502	7–9	1.10E−02	1.66E−03	1.07E−01	−1.94	C	13
		2781.8356	2782.6565	7985.784–43	922.665	5–7	2.3E−02	3.7E−03	1.7E−01	−1.74	D+	13
		2774.7299	2775.5490	8154.713–44	183.625	3–5	2.64E−02	5.08E−03	1.39E−01	−1.817	B+	13
59	$a\ ^5F–v\ ^5D^\circ$	*2712.747*	*2713.552*	*7459.75–44*	*311.82*	35–25	1.76E−01	1.38E−02	4.33E−00	−0.315	B	13
		2695.0355	2695.8353	6928.268–44	022.522	11–9	4.77E−03	4.25E−04	4.15E−02	−2.330	B	13
		2717.3663	2718.1715	7376.764–44	166.203	9–7	1.92E−03	1.65E−04	1.33E−02	−2.83	C	13
		2706.5819	2707.3845	7728.059–44	664.072	7–5	2.69E−01	2.11E−02	1.32E−00	−0.831	B+	13
		2718.4363	2719.2417	7985.784–44	760.743	5–3	3.79E−01	2.52E−02	1.13E−00	−0.900	B+	13
		2726.0553	2726.8626	8154.713–44	826.897	3–1	5.52E−01	2.05E−02	5.52E−01	−1.211	B+	13
		2728.0210	2728.8287	7376.764–44	022.522	9–9	3.45E−02	3.85E−03	3.11E−01	−1.460	B	13
		2743.5654	2744.3770	7728.059–44	166.203	7–7	4.84E−02	5.46E−03	3.45E−01	−1.418	B+	13
		2725.6019	2726.4091	7985.784–44	664.072	5–5	4.92E−03	5.48E−04	2.46E−02	−2.562	B	13
		2730.9819	2731.7904	8154.713–44	760.743	3–3	6.28E−02	7.02E−03	1.89E−01	−1.676	B+	13
		2754.4273	2755.2414	7728.059–44	022.522	7–9	1.62E−02	2.37E−03	1.50E−01	−1.780	B	13
		2763.1095	2763.9258	7985.784–44	166.203	5–7	3.27E−02	5.24E−03	2.38E−01	−1.582	B+	13
		2738.2133	2739.0236	8154.713–44	664.072	3–5	4.10E−03	7.68E−04	2.08E−02	−2.637	B	13
60	$a\ ^5F–w\ ^5F^\circ$											

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2679.0618	2679.8578	6928.268–44 243.682		11–11	1.50E−01	1.61E−02	1.57E−00	−0.751	B+	13
		2699.1067	2699.9075	7376.764–44 415.071		9–9	5.59E−02	6.11E−03	4.88E−01	−1.260	B+	13
		2714.8693	2715.6739	7728.059–44 551.332		7–7	8.38E−03	9.27E−04	5.80E−02	−2.188	B+	13
		2754.0321	2754.8461	7985.784–44 285.451		5–5	7.29E−02	8.29E−03	3.76E−01	−1.383	B+	13
		2759.8138	2760.6293	8154.713–44 378.339		3–3	7.60E−02	8.68E−03	2.37E−01	−1.584	C+	13
		2666.8125	2667.6055	6928.268–44 415.071		11–9	8.91E−02	7.77E−03	7.51E−01	−1.068	B+	13
		2689.2122	2690.0107	7376.764–44 551.332		9–7	1.68E−01	1.42E−02	1.13E−00	−0.894	B+	13
		2734.6152	2735.4246	7728.059–44 285.451		7–5	9.68E−03	7.76E−04	4.89E−02	−2.265	B+	13
		2747.0024	2747.8148	7985.784–44 378.339		5–3	6.61E−02	4.49E−03	2.03E−01	−1.649	C+	13
		2711.6552	2712.4590	7376.764–44 243.682		9–11	4.99E−02	6.73E−03	5.41E−01	−1.218	B+	13
		2724.9532	2725.7603	7728.059–44 415.071		7–9	4.76E−02	6.81E−03	4.28E−01	−1.322	B+	13
		2734.0055	2734.8147	7985.784–44 551.332		5–7	2.20E−02	3.45E−03	1.55E−01	−1.763	B+	13
		2766.9091	2767.7263	8154.713–44 285.451		3–5	4.04E−02	7.73E−03	2.11E−01	−1.635	B+	13
61	$a\ ^5F–y\ ^5S^\circ$											
		2717.7865	2718.5918	7728.059–44 511.809		7–5	1.92E−02	1.52E−03	9.52E−02	−1.973	B	13
		2749.6827	2750.4957	8154.713–44 511.809		3–5	4.85E−03	9.16E−04	2.49E−02	−2.561	C+	13
62	$a\ ^5F–x\ ^3D^\circ$											
		2641.6438	2642.4308	7376.764–45 220.678		9–7	6.5E−02	5.3E−03	4.13E−01	−1.324	C	13
		2662.0566	2662.8485	7728.059–45 281.830		7–5	4.64E−02	3.52E−03	2.16E−01	−1.608	B	13
		2666.3986	2667.1916	7728.059–45 220.678		7–7	1.79E−02	1.91E−03	1.17E−01	−1.874	B	13
		2680.4531	2681.2494	7985.784–45 281.830		5–5	3.42E−02	3.68E−03	1.62E−01	−1.735	B	13
		2673.2132	2674.0078	8154.713–45 551.764		3–3	2.27E−02	2.43E−03	6.42E−02	−2.137	B	13
		2684.8560	2685.6534	7985.784–45 220.678		5–7	1.87E−03	2.83E−04	1.25E−02	−2.849	C+	13
		2692.6503	2693.4495	8154.713–45 281.830		3–5	3.99E−03	7.23E−04	1.92E−02	−2.664	C+	13
63	$a\ ^5F–y\ ^3G^\circ$											
		2605.6573	2606.4357	6928.268–45 294.843		11–11	1.45E−02	1.47E−03	1.39E−01	−1.790	B	13
		2627.2242	2628.0078	7376.764–45 428.399		9–9	1.09E−03	1.13E−04	8.79E−03	−2.993	B	13
		2596.6161	2597.3923	6928.268–45 428.399		11–9	5.79E−04	4.79E−05	4.51E−03	−3.278	C+	13
		2636.4786	2637.2644	7376.764–45 294.843		9–11	7.86E−03	1.00E−03	7.83E−02	−2.045	B	13
		2651.7062	2652.4956	7728.059–45 428.399		7–9	9.72E−03	1.32E−03	8.06E−02	−2.035	B	13
		2660.3972	2661.1887	7985.784–45 562.971		5–7	6.32E−03	9.40E−04	4.12E−02	−2.328	B	13
64	$a\ ^5F–x\ ^5G^\circ$	*2609.542*	*2610.322*	*7459.75–45 769.21*		35–45	3.51E−01	4.61E−02	1.39E+01	0.208	B+	13
		2584.5360	2585.3095	6928.268–45 608.358		11–13	3.15E−01	3.73E−02	3.49E−00	−0.387	B+	13
		2606.8263	2607.6050	7376.764–45 726.127		9–11	2.43E−01	3.03E−02	2.34E−00	−0.565	B+	13
		2623.5339	2624.3166	7728.059–45 833.220		7–9	2.13E−01	2.82E−02	1.71E−00	−0.704	B+	13
		2635.8088	2636.5944	7985.784–45 913.494		5–7	2.11E−01	3.08E−02	1.34E−00	−0.813	B+	13
		2643.9986	2644.7862	8154.713–45 964.954		3–5	2.34E−01	4.09E−02	1.07E−00	−0.911	B+	13
		2576.6902	2577.4617	6928.268–45 726.127		11–11	1.13E−01	1.12E−02	1.05E−00	−0.908	B+	13
		2599.5669	2600.3439	7376.764–45 833.220		9–9	1.47E−01	1.49E−02	1.15E−00	−0.873	B+	13
		2618.0180	2618.7994	7728.059–45 913.494		7–7	1.50E−01	1.54E−02	9.30E−01	−0.967	B+	13
		2632.2376	2633.0224	7985.784–45 964.954		5–5	1.21E−01	1.26E−02	5.44E−01	−1.202	B+	13
		2569.5970	2570.3669	6928.268–45 833.220		11–9	1.01E−02	8.18E−04	7.61E−02	−2.046	B+	13
		2594.1510	2594.9267	7376.764–45 913.494		9–7	1.86E−02	1.46E−03	1.12E−01	−1.882	B+	13
		2614.4946	2615.2752	7728.059–45 964.954		7–5	1.80E−02	1.32E−03	7.94E−02	−2.035	B+	13
65	$a\ ^5F–z\ ^3I^\circ$											
		2556.8629	2557.6298	6928.268–46 026.968		11–13	7.51E−03	8.70E−04	8.06E−02	−2.019	C+	13
		2579.2702	2580.0424	7376.764–46 135.817		9–11	3.15E−03	3.84E−04	2.94E−02	−2.461	C+	13
66	$a\ ^5F–y\ ^3P^\circ$											
		2563.3989	2564.1673	7728.059–46 727.071		7–5	1.12E−02	7.89E−04	4.66E−02	−2.258	C+	13
		2568.8647	2569.6345	7985.784–46 901.829		5–3	2.04E−02	1.21E−03	5.12E−02	−2.218	C+	13
67	$a\ ^5F–u\ ^5D^\circ$											
		2512.2754	2513.0319	6928.268–46 720.839		11–9	2.19E−02	1.70E−03	1.54E−01	−1.729	C+	13
		2539.3569	2540.1197	7376.764–46 744.990		9–7	2.41E−02	1.81E−03	1.36E−01	−1.788	C+	13
		2552.8307	2553.5966	7728.059–46 888.514		7–5	1.43E−02	9.97E−04	5.87E−02	−2.156	C+	13
		2569.7436	2570.5136	7985.784–46 888.514		5–5	1.17E−02	1.16E−03	4.90E−02	−2.237	C+	13
		2561.8551	2562.6232	8154.713–47 177.231		3–3	1.67E−02	1.64E−03	4.16E−02	−2.307	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
68	$a\ ^5F–x\ ^3F^\circ$											
		2501.6940	2502.4480	6928.268–46	889.139	11–9	3.69E−02	2.84E−03	2.57E−01	−1.506	C+	13
		2532.8761	2533.6374	7728.059–47	197.007	7–5	1.43E−02	9.82E−04	5.73E−02	−2.163	B	13
		2549.5253	2550.2905	7985.784–47	197.007	5–5	6.62E−03	6.46E−04	2.71E−02	−2.491	C+	13
		2560.5573	2561.3250	8154.713–47	197.007	3–5	1.59E−02	2.61E−03	6.59E−02	−2.107	B	13
69	$a\ ^5F–z\ ^3H^\circ$											
		2495.8730	2496.6250	6928.268–46	982.317	11–13	1.43E−02	1.58E−03	1.43E−01	−1.760	C	13
		2522.4799	2523.2388	7376.764–47	008.368	9–11	1.14E−02	1.33E−03	9.94E−02	−1.922	C+	13
		2538.6993	2539.4620	7728.059–47	106.481	7–9	2.74E−03	3.40E−04	1.99E−02	−2.623	C+	13
		2494.2515	2495.0038	6928.268–47	008.368	11–11	1.10E−02	1.03E−03	9.28E−02	−1.947	B	13
		2516.2506	2517.0080	7376.764–47	106.481	9–9	3.73E−03	3.54E−04	2.64E−02	−2.497	C	13
70	$a\ ^5F–w\ ^3D^\circ$											
		2521.9190	2522.6777	7376.764–47	017.185	9–7	2.42E−02	1.79E−03	1.34E−01	−1.792	C+	13
		2544.6566	2545.4207	7985.784–47	272.024	5–3	2.86E−02	1.67E−03	6.99E−02	−2.079	C+	13
		2564.5594	2565.3281	8154.713–47	136.081	3–5	1.43E−02	2.35E−03	5.95E−02	−2.152	C+	13
71	$a\ ^5F–w\ ^3G^\circ$											
		2472.3411	2473.0883	6928.268–47	363.373	11–13	7.21E−02	7.81E−03	6.99E−01	−1.066	B	13
		2496.5338	2497.2866	7376.764–47	420.225	9–11	2.15E−01	2.45E−02	1.82E−00	−0.656	B	13
		2507.9003	2508.6557	7728.059–47	590.045	7–9	1.93E−01	2.34E−02	1.35E−00	−0.786	B+	13
		2517.6611	2518.4188	7985.784–47	693.236	5–7	1.58E−01	2.10E−02	8.72E−01	−0.978	B	13
		2519.6294	2520.3875	8154.713–47	831.150	3–5	1.34E−01	2.13E−02	5.30E−01	−1.195	C+	13
		2468.8799	2469.6263	6928.268–47	420.225	11–11	2.40E−01	2.19E−02	1.96E−00	−0.618	B+	13
		2485.9903	2486.7406	7376.764–47	590.045	9–9	2.94E−02	2.72E−03	2.00E−01	−1.611	B	13
		2501.4236	2502.1776	7728.059–47	693.236	7–7	1.56E−03	1.46E−04	8.4E−03	−2.99	C	13
		2458.5688	2459.3128	6928.268–47	590.045	11–9	1.07E−02	7.9E−04	7.1E−02	−2.059	C	13
		2479.6280	2480.3769	7376.764–47	693.236	9–7	7.1E−03	5.1E−04	3.72E−02	−2.341	C	13
72	$a\ ^5F–z\ ^1G^\circ$											
		2516.5709	2517.3283	7728.059–47	452.714	7–9	1.71E−02	2.09E−03	1.21E−01	−1.84	C	13
73	$a\ ^5F–v\ ^5F^\circ$											
		2457.5967	2458.3405	6928.268–47	606.111	11–11	4.81E−01	4.36E−02	3.88E−00	−0.319	B	13
		2465.1492	2465.8948	7376.764–47	929.994	9–9	4.35E−01	3.97E−02	2.90E−00	−0.447	B	13
		2474.8144	2475.5621	7728.059–48	122.925	7–7	6.13E−01	5.64E−02	3.21E−00	−0.404	B	13
		2483.5334	2484.2832	7985.784–48	238.844	5–5	2.09E−01	1.93E−02	7.9E−01	−1.015	C	13
		2487.0659	2487.8165	8154.713–48	350.603	3–3	6.40E−01	5.94E−02	1.46E−00	−0.749	C+	13
		2438.1826	2438.9219	6928.268–47	929.994	11–9	7.09E−02	5.17E−03	4.57E−01	−1.245	B	13
		2453.4760	2454.2188	7376.764–48	122.925	9–7	1.89E−01	1.33E−02	9.65E−01	−0.923	B	13
		2476.6566	2477.4048	7985.784–48	350.603	5–3	3.05E−01	1.68E−02	6.86E−01	−1.075	B	13
		2486.6919	2487.4424	7728.059–47	929.994	7–9	1.47E−01	1.75E−02	1.01E−00	−0.911	B	13
		2494.0010	2494.7532	8154.713–48	238.844	3–5	8.9E−02	1.38E−02	3.41E−01	−1.382	C	13
74	$a\ ^5F–x\ ^3G^\circ$											
		2443.8718	2444.6124	6928.268–47	834.547	11–11	5.89E−02	5.28E−03	4.67E−01	−1.236	B+	13
		2472.3411	2473.0883	7376.764–47	812.115	9–9	1.07E−01	9.81E−03	7.19E−01	−1.054	B+	13
		2492.6307	2493.3826	7728.059–47	834.218	7–7	5.4E−03	5.0E−04	2.9E−02	−2.46	D+	13
		2445.2130	2445.9539	6928.268–47	812.115	11–9	1.18E−02	8.66E−04	7.67E−02	−2.021	C+	13
		2470.9654	2471.7123	7376.764–47	834.547	9–11	2.36E−02	2.64E−03	1.93E−01	−1.624	B+	13
		2508.7533	2509.5089	7985.784–47	834.218	5–7	1.71E−02	2.26E−03	9.33E−02	−1.947	C+	13
75	$a\ ^5F–y\ ^5H^\circ$											
		2420.3957	2421.1309	6928.268–48	231.277	11–11	1.05E−03	9.2E−05	8.1E−03	−2.99	C	13
76	$a\ ^5F–x\ ^3P^\circ$											
		2463.7304	2464.4756	7728.059–48	304.640	7–5	1.64E−01	1.07E−02	6.06E−01	−1.127	B	13
		2479.4804	2480.2292	7985.784–48	304.640	5–5	2.10E−01	1.94E−02	7.91E−01	−1.014	B	13
		2476.8656	2477.6138	8154.713–48	516.135	3–3	2.93E−02	2.70E−03	6.60E−02	−2.092	C+	13
		2489.9133	2490.6646	8154.713–48	304.640	3–5	8.72E−02	1.35E−02	3.32E−01	−1.392	B	13
77	$a\ ^3F–z\ ^5F^\circ$											
		6581.2101	6583.0280	11 976.238–27	166.818	9–9	3.58E−06	2.33E−06	4.54E−04	−4.679	C+	14
		6739.5219	6741.3823	12 560.933–27	394.689	7–7	3.37E−06	2.30E−06	3.57E−04	−4.79	C	14

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
78	$a\ ^3F–z\ ^3F^\circ$	*5189.954*	*5191.400*	*12 407.40–31 670.03*	21–21	5.18E−03	2.09E−03	7.51E−01	−1.357	A	6,13
		5171.5964	5173.0368	11 976.238–31 307.243	9–9	4.46E−03	1.79E−03	2.74E−01	−1.793	A	6
		5194.9418	5196.3884	12 560.933–31 805.069	7–7	2.87E−03	1.16E−03	1.39E−01	−2.090	A	6
		5216.2740	5217.7263	12 968.553–32 133.989	5–5	3.47E−03	1.42E−03	1.22E−01	−2.150	A	6
		5041.7560	5043.1619	11 976.238–31 805.069	9–7	2.35E−03	6.96E−04	1.04E−01	−2.203	B	13
		5107.6411	5109.0645	12 560.933–32 133.989	7–5	1.95E−03	5.46E−04	6.42E−02	−2.418	A	6
		5332.8997	5334.3831	12 560.933–31 307.243	7–9	4.36E−04	2.39E−04	2.94E−02	−2.776	B	13
		5307.3610	5308.8376	12 968.553–31 805.069	5–7	3.48E−04	2.06E−04	1.80E−02	−2.987	A	6
79	$a\ ^3F–z\ ^3D^\circ$	*5217.918*	*5219.371*	*12 407.40–31 566.80*	21–15	3.39E−02	9.89E−03	3.57E−00	−0.683	B+	13
		5167.4885	5168.9278	11 976.238–31 322.611	9–7	2.72E−02	8.47E−03	1.30E−00	−1.118	B+	13
		5227.1895	5228.6447	12 560.933–31 686.349	7–5	2.89E−02	8.45E−03	1.02E−00	−1.228	B+	13
		5270.3564	5271.8231	12 968.553–31 937.323	5–3	3.67E−02	9.16E−03	7.95E−01	−1.339	B+	13
		5328.5317	5330.0139	12 560.933–31 322.611	7–7	4.74E−03	2.02E−03	2.48E−01	−1.850	B	13
		5341.0240	5342.5096	12 968.553–31 686.349	5–5	5.21E−03	2.23E−03	1.96E−01	−1.953	B	13
		5446.8746	5448.3885	12 968.553–31 322.611	5–7	2.50E−04	1.56E−04	1.40E−02	−3.109	B+	13
80	$a\ ^3F–y\ ^5D^\circ$										
		4733.5917	4734.9157	11 976.238–33 095.939	9–9	3.41E−04	1.14E−04	1.61E−02	−2.987	A	6
		4772.8030	4774.1375	12 560.933–33507.121	7–7	5.3E−04	1.8E−04	2.0E−02	−2.90	D+	13
		4798.7313	4800.0727	12 968.553–33 801.570	5–5	4.1E−05	1.4E−05	1.1E−03	−4.15	E	2*n*
81	$a\ ^3F–y\ ^5F^\circ$										
		4602.9410	4604.2305	11 976.238–33 695.395	9–11	1.72E−03	6.70E−04	9.13E−02	−2.220	A	6
		4654.4983	4655.8015	12 560.933–34 039.514	7–9	5.64E−04	2.35E−04	2.53E−02	−2.783	A	6
		4680.2948	4681.6048	12 968.553–34 328.750	5–7	7.32E−05	3.37E−05	2.59E−03	−3.774	A	6
		4531.1482	4532.4187	11 976.238–34 039.514	9–9	2.52E−03	7.78E−04	1.04E−01	−2.155	A	6
		4592.6511	4593.9379	12 560.933–34 328.750	7–7	1.61E−03	5.08E−04	5.38E−02	−2.449	A	6
		4632.9117	4634.2091	12 968.553–34 547.209	5–5	7.59E−04	2.44E−04	1.86E−02	−2.913	A	6
		4547.0169	4548.2916	12 560.933–34 547.209	7–5	1.5E−04	3.3E−05	3.5E−03	−3.63	E	2*n*
		4602.0010	4603.2903	12 968.553–34 692.146	5–3	7.36E−04	1.40E−04	1.06E−02	−3.154	A	6
82	$a\ ^3F–z\ ^3P^\circ$										
		4674.6478	4675.9562	12 560.933–33 946.931	7–5	1.2E−05	2.9E−06	3.1E−04	−4.69	E	2*n*
83	$a\ ^3F–z\ ^5G^\circ$										
		4383.5450	4384.7766	11 976.238–34 782.419	9–11	5.00E−01	1.76E−01	2.29E+01	0.200	A	6
		4404.7504	4405.9876	12 560.933–35 257.322	7–9	2.75E−01	1.03E−01	1.05E+01	−0.142	A	6
		4415.1225	4416.3625	12 968.553–35 611.623	5–7	1.19E−01	4.85E−02	3.53E−00	−0.615	A	6
		4294.1248	4295.3328	11 976.238–35 257.322	9–9	3.12E−02	8.62E−03	1.10E−00	−1.110	B+	13
		4337.0463	.2657	12 560.933–35 611.623	7–7	1.02E−02	2.88E−03	2.88E−01	−1.695	A	6
		4367.9036	4369.1311	12 968.553–35 856.400	5–5	9.09E−04	2.60E−04	1.87E−02	−2.886	C+	13
		4229.7516	4230.9428	11 976.238–35 611.623	9–7	1.99E−04	4.16E−05	5.21E−03	−3.427	A	6
84	$a\ ^3F–z\ ^3G^\circ$	*4293.812*	*4295.020*	*12 407.40–35 690.18*	21–27	3.94E−01	1.40E−01	4.16E+01	0.469	B+	6,13
		4271.7605	4272.9627	11 976.238–35 379.206	9–11	2.28E−01	7.62E−02	9.64E−00	−0.164	A	6
		4307.9023	4309.1139	12 560.933–35 767.562	7–9	3.38E−01	1.21E−01	1.20E+01	−0.072	B+	13
		4325.7619	4326.9783	12 968.553–36 079.370	5–7	5.16E−01	2.03E−01	1.44E+01	0.006	B+	13
		4202.0292	4203.2131	11 976.238–35 767.562	9–9	8.22E−02	2.18E−02	2.71E−00	−0.708	A	6
		4250.7869	4251.9836	12 560.933–36 079.370	7–7	1.02E−01	2.76E−02	2.70E−00	−0.714	B+	13
		4147.6690	4148.8386	11 976.238–36 079.370	9–7	4.36E−03	8.74E−04	1.07E−01	−2.104	A	6
85	$a\ ^3F–y\ ^3F^\circ$	*4057.883*	*4059.029*	*12 407.40–37 043.84*	21–21	9.92E−01	2.45E−01	6.88E+01	0.711	B+	6,13
		4045.8124	4046.9554	11 976.238–36 686.174	9–9	8.62E−01	2.12E−01	2.54E+01	0.280	A	6
		4063.5942	4064.7417	12 560.933–37 162.744	7–7	6.65E−01	1.65E−01	1.54E+01	0.062	B+	13
		4071.7380	4072.8877	12 968.553–37 521.158	5–5	7.64E−01	1.90E−01	1.27E+01	−0.022	A	6
		3969.2572	3970.3802	11 976.238–37 162.744	9–7	2.26E−01	4.15E−02	4.88E−00	−0.428	B+	13
		4005.2420	4006.3743	12 560.933–37 521.158	7–5	2.04E−01	3.51E−02	3.24E−00	−0.610	A	6
		4143.8680	4145.0367	12 560.933–36 686.174	7–9	1.33E−01	4.40E−02	4.21E−00	−0.511	B+	13
		4132.0582	4133.2237	12 968.553–37 162.744	5–7	1.18E−01	4.23E−02	2.88E−00	−0.675	B+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
86	$a\ ^3$F–$y\ ^5$P$^\circ$											
		4032.6275	4033.7670	11 976.238–36 766.964		9–7	2.5E−03	4.7E−04	5.6E−02	−2.38	D+	13
87	$a\ ^3$F–$y\ ^3$D$^\circ$	*3830.391*	*3831.478*	*12 407.40–38 506.99*		21–15	1.34E−00	2.10E−01	5.57E+01	0.645	B+	6,10,13
		3815.8403	3816.9233	11 976.238–38 175.352		9–7	1.12E−00	1.90E−01	2.14E+01	0.232	A	10
		3827.8226	3828.9087	12 560.933–38 678.036		7–5	1.05E−00	1.65E−01	1.45E+01	0.062	A	6
		3841.0480	3842.1375	12 968.553–38 995.733		5–3	1.36E−00	1.80E−01	1.14E+01	−0.045	B+	13
		3902.9457	3904.0514	12 560.933–38 175.352		7–7	2.14E−01	4.89E−02	4.40E−00	−0.466	A	6
		3888.5135	3889.6154	12 968.553–38 678.036		5–5	2.50E−01	5.66E−02	3.63E−00	−0.548	B+	13
		3966.0617	3967.1838	12 968.553–38 175.352		5–7	1.32E−02	4.36E−03	2.84E−01	−1.662	B+	13
88	$a\ ^3$F–$x\ ^5$D$^\circ$											
		3615.6626	3616.6937	11 976.238–39 625.801		9–9	1.1E−03	2.2E−04	2.4E−02	−2.70	E	13
		3571.2257	3572.2453	11 976.238–39 969.850		9–7	2.3E−03	3.4E−04	3.6E−02	−2.52	E	2*n*
89	$a\ ^3$F–$x\ ^5$F$^\circ$											
		3493.2805	3494.2801	11 976.238–40 594.429		9–9	9.4E−04	1.7E−04	1.8E−02	−2.81	E	2*n*
		3534.9063	3535.9166	12 560.933–40 842.151		7–7	1.1E−03	2.0E−04	1.6E−02	−2.85	E	2*n*
		3463.3028	3464.2948	11 976.238–40 842.151		9–7	1.5E−03	2.1E−04	2.2E−02	−2.72	E	13
		3513.0531	3514.0578	12 560.933–41 018.048		7–5	3.8E−03	5.1E−04	4.1E−02	−2.45	E	2*n*
		3549.8648	3550.8790	12 968.553–41 130.596		5–3	6.1E−03	6.9E−04	4.0E−02	−2.46	E	2*n*
90	$a\ ^3$F–$x\ ^5$P$^\circ$											
		3271.6835	3272.6265	11 976.238–42 532.738		9–7	1.52E−03	1.90E−04	1.84E−02	−2.768	C+	13
91	$a\ ^3$F–$z\ ^5$H$^\circ$											
		3223.2675	3224.1982	11 976.238–42 991.694		9–11	3.1E−04	5.9E−05	5.6E−03	−3.28	D+	13
		3272.5964	3273.5396	12 560.933–43 108.914		7–9	4.50E−04	9.3E−05	7.0E−03	−3.187	C	13
		3293.1406	3294.0891	12 968.553–43 325.961		5–7	6.70E−04	1.53E−04	8.27E−03	−3.118	C+	13
92	$a\ ^3$F–$w\ ^5$D$^\circ$											
		3129.3331	3130.2401	11 976.238–43 922.665		9–7	9.1E−03	1.0E−03	9.6E−02	−2.03	D+	13
		3161.3710	3162.2861	12 560.933–44 183.625		7–5	2.14E−02	2.29E−03	1.67E−01	−1.795	C+	13
93	$a\ ^3$F–$x\ ^3$D$^\circ$											
		3007.1452	3008.0216	11 976.238–45 220.678		9–7	7.34E−02	7.74E−03	6.90E−01	−1.157	B+	13
		3055.2624	3056.1508	12 560.933–45 281.830		7–5	9.48E−02	9.49E−03	6.68E−01	−1.178	B+	13
		3068.1735	3069.0651	12 968.553–45 551.764		5–3	1.11E−01	9.40E−03	4.75E−01	−1.328	B+	13
		3060.9833	3061.8732	12 560.933–45 220.678		7–7	9.08E−03	1.28E−03	9.01E−02	−2.049	B	13
		3093.8052	3094.7032	12 968.553–45 281.830		5–5	1.28E−02	1.84E−03	9.36E−02	−2.037	B	13
94	$a\ ^3$F–$y\ ^3$G$^\circ$											
		3000.4511	3001.3259	11 976.238–45 294.843		9–11	5.41E−02	8.92E−03	7.94E−01	−1.095	B+	13
		3041.6372	3042.5223	12 560.933–45 428.399		7–9	4.24E−02	7.56E−03	5.30E−01	−1.276	B+	13
		3067.1183	3068.0097	12 968.553–45 562.971		5–7	3.89E−02	7.68E−03	3.88E−01	−1.416	B+	13
		2988.4713	2989.3431	11 976.238–45 428.399		9–9	5.44E−03	7.29E−04	6.46E−02	−2.183	B+	13
		3029.2340	3030.1159	12 560.933–45 562.971		7–7	6.98E−03	9.60E−04	6.71E−02	−2.173	B+	13
95	$a\ ^3$F–$u\ ^5$D$^\circ$											
		2877.3007	2878.1449	11 976.238–46 720.839		9–9	4.61E−02	5.72E−03	4.88E−01	−1.288	B	13
		2875.3021	2876.1459	11 976.238–46 744.990		9–7	1.52E−02	1.47E−03	1.25E−01	−1.880	B	13
		2912.2567	2913.1095	12 560.933–46 888.514		7–5	1.36E−02	1.24E−03	8.29E−02	−2.063	C+	13
96	$a\ ^3$F–$x\ ^3$F$^\circ$											
		2863.4300	2864.2708	11 976.238–46 889.139		9–9	4.13E−02	5.08E−03	4.31E−01	−1.340	B	13
		2895.0348	2895.8834	12 560.933–47 092.709		7–7	4.24E−02	5.33E−03	3.56E−01	−1.428	B	13
		2920.6906	2921.5456	12 968.553–47 197.007		5–5	6.38E−02	8.16E−03	3.92E−01	−1.389	B	13
		2846.8298	2847.6666	11 976.238–47 092.709		9–7	8.74E−03	8.27E−04	6.98E−02	−2.128	B	13
		2886.3160	2887.1624	12 560.933–47 197.007		7–5	1.29E−02	1.15E−03	7.66E−02	−2.094	B	13
		2929.6179	2930.4751	12 968.553–47 092.709		5–7	6.72E−03	1.21E−03	5.84E−02	−2.218	C+	13
97	$a\ ^3$F–$z\ ^3$H$^\circ$											
		2853.6840	2854.5224	11 976.238–47 008.368		9–11	3.29E−03	4.91E−04	4.15E−02	−2.355	C+	13
		2893.8806	2894.7289	12 560.933–47 106.481		7–9	6.88E−03	1.11E−03	7.41E−02	−2.109	C+	13
		2845.7132	2846.5497	11 976.238–47 106.481		9–9	7.32E−03	8.89E−04	7.50E−02	−2.097	C+	13
98	$a\ ^3$F–$w\ ^3$D$^\circ$											
		2914.3034	2915.1567	12 968.553–47 272.024		5–3	3.30E−02	2.52E−03	1.21E−01	−1.899	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2901.3807	2902.2308	12 560.933–47 017.185		7–7	2.46E−02	3.10E−03	2.08E−01	−1.663	B	13
		2925.8989	2926.7551	12 968.553–47 136.081		5–5	8.10E−03	1.04E−03	5.01E−02	−2.284	B	13
99	$a\ ^3F–w\ ^5G^\circ$											
		2878.9498	2879.7944	12 968.553–47 693.236		5–7	3.61E−03	6.28E−04	2.98E−02	−2.503	C+	13
		2845.5476	2846.3840	12 560.933–47 693.236		7–7	7.76E−03	9.42E−04	6.18E−02	−2.181	C+	13
		2867.5617	2868.4036	12 968.553–47 831.150		5–5	2.37E−02	2.92E−03	1.38E−01	−1.84	C	13
100	$a\ ^3F–z\ ^1G^\circ$											
		2817.9450	2818.7750	11 976.238–47 452.714		9–9	1.17E−03	1.39E−04	1.16E−02	−2.90	C	13
101	$a\ ^3F–x\ ^3G^\circ$											
		2787.9314	2788.7537	11 976.238–47 834.547		9–11	2.27E−02	3.23E−03	2.67E−01	−1.536	B+	13
		2835.9507	2836.7848	12 560.933–47 812.115		7–9	1.30E−02	2.02E−03	1.32E−01	−1.851	B	13
		2867.3094	2868.1511	12 968.553–47 834.218		5–7	1.25E−02	2.16E−03	1.02E−01	−1.967	B+	13
		2834.1734	2835.0070	12 560.933–47 834.218		7–7	2.4E−03	2.8E−04	1.9E−02	−2.70	D+	13
102	$a\ ^3F–y\ ^5H^\circ$											
		2757.4226	2758.2375	11 976.238–48 231.277		9–11	7.26E−03	1.01E−03	8.27E−02	−2.041	B	13
		2792.3989	2793.2223	12 560.933–48 361.879		7–9	1.17E−02	1.76E−03	1.13E−01	−1.910	B	13
		2815.5066	2816.3357	12 968.553–48 475.683		5–7	1.45E−02	2.41E−03	1.12E−01	−1.919	B	13
103	$a\ ^3F–y\ ^1G^\circ$											
		2722.0390	2722.8454	11 976.238–48 702.532		9–9	6.31E−03	7.01E−04	5.65E−02	−2.200	C+	13
104	$a\ ^3F–w\ ^3F^\circ$											
		2692.2482	2693.0473	11 976.238–49 108.893		9–9	6.27E−03	6.82E−04	5.44E−02	−2.212	C+	13
		2741.5768	2742.3879	12 968.553–49 433.128		5–5	7.0E−03	7.9E−04	3.56E−02	−2.405	C	13
105	$a\ ^3F–v\ ^3D^\circ$											
		2733.3655	2734.1746	12 560.933–49 135.020		7–7	4.75E−03	5.32E−04	3.35E−02	−2.429	C+	13
106	$a\ ^3F–y\ ^3H^\circ$											
		2656.7919	2657.5825	11 976.238–49 604.424		9–11	1.45E−02	1.87E−03	1.48E−01	−1.773	B	13
		2689.8289	2690.6275	12 560.933–49 726.987		7–9	3.04E−02	4.24E−03	2.63E−01	−1.528	C+	13
107	$a\ ^3F–v\ ^3G^\circ$											
		2666.9650	2667.7580	11 976.238–49 460.899		9–11	5.16E−02	6.73E−03	5.32E−01	−1.218	B	13
		2697.0210	2697.8213	12 560.933–49 627.881		7–9	3.51E−02	4.93E−03	3.07E−01	−1.462	B	13
		2710.5437	2711.3472	12 968.553–49 850.587		5–7	5.99E−02	9.25E−03	4.13E−01	−1.335	C+	13
108	$a\ ^3F–u\ ^3G^\circ$											
		2537.4589	2538.2212	11 976.238–51 373.907		9–11	3.19E−02	3.76E−03	2.83E−01	−1.470	C+	13
		2556.3038	2557.0706	12 560.933–51 668.183		7–9	2.55E−02	3.21E−03	1.89E−01	−1.648	C+	13
		2572.7554	2573.5260	12 968.553–51 825.770		5–7	2.49E−02	3.46E−03	1.47E−01	−1.762	C+	13
109	$a\ ^3F–u\ ^3D^\circ$											
		2515.8537	2516.6110	12 560.933–52 296.916		7–5	1.22E−02	8.3E−04	4.80E−02	−2.237	C	13
110	$a\ ^5P–z\ ^7P^\circ$											
		15 490.339	6453.873 cm^{-1}	17 726.987–24 180.860		5–7	1.06E−06	5.3E−06	1.36E−03	−4.57	C	13
		15 077.291	6630.680 cm^{-1}	17 550.180–24 180.860		7–7	2.62E−06	8.93E−06	3.10E−03	−4.204	C+	13
111	$a\ ^5P–z\ ^5D^\circ$	*11 808.48*	*8466.17* cm^{-1}	17 684.56–26 150.73		15–25	1.79E−03	6.22E−03	3.63E−00	−1.030	C+	13
		11 973.050	8349.807 cm^{-1}	17 550.180–25 899.987		7–9	1.70E−03	4.70E−03	1.30E−00	−1.483	B	13
		11 882.847	8413.190 cm^{-1}	17 726.987–26 140.177		5–7	1.45E−03	4.30E−03	8.40E−01	−1.668	B	13
		11 884.085	8412.313 cm^{-1}	17 927.381–26 339.694		3–5	7.80E−04	2.75E−03	3.23E−01	−2.083	C+	13
		11 638.264	8589.997 cm^{-1}	17 550.180–26 140.177		7–7	4.30E−04	8.73E−04	2.34E−01	−2.214	B	13
		11 607.575	8612.707 cm^{-1}	17 726.987–26 339.694		5–5	9.69E−04	1.96E−03	3.74E−01	−2.009	C+	13
		11 689.976	8551.998 cm^{-1}	17 927.381–26 479.379		3–3	1.39E−03	2.85E−03	3.29E−01	−2.069	C+	13
		11 374.081	8789.514 cm^{-1}	17 550.180–26 339.694		7–5	6.00E−05	8.32E−05	2.18E−02	−3.235	C+	13
		11 422.323	8752.392 cm^{-1}	17 726.987–26 479.379		5–3	3.40E−04	3.99E−04	7.50E−02	−2.700	C+	13
		11 593.591	8623.096 cm^{-1}	17 927.381–26 550.477		3–1	1.77E−03	1.19E−03	1.36E−01	−2.448	C+	13
112	$a\ ^5P–z\ ^5P^\circ$	*8585.302*	*8587.660*	*17 684.56–29 329.17*		15–15	1.18E−02	1.30E−02	5.53E−00	−0.709	B	7,13
		8688.6255	8691.0119	17 550.180–29 056.322		7–7	7.74E−03	8.77E−03	1.76E−00	−1.212	B	7
		8514.0721	8516.4113	17 726.987–29 469.022		5–5	1.09E−03	1.18E−03	1.65E−01	−2.229	B	7
		8468.4074	8470.7343	17 927.381–29 732.734		3–3	2.63E−03	2.82E−03	2.36E−01	−2.072	B	7
		8387.7725	8390.0775	17 550.180–29 469.022		7–5	6.09E−03	4.59E−03	8.88E−01	−1.493	B	7

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		8327.0563	8329.3450	17 726.987–29 732.734		5–3	9.57E−03	5.97E−03	8.19E−01	−1.525	B	7
		8824.2211	8826.6442	17 726.987–29 056.322		5–7	3.53E−03	5.8E−03	8.4E−01	−1.54	C	13
		8661.9000	8664.2792	17 927.381–29 469.022		3–5	5.16E−03	9.68E−03	8.28E−01	−1.537	C+	13
113	$a\ ^5P–y\ ^5D^\circ$	*6319.682*	*6321.430*	*17 684.56–33 503.76*		15–25	2.07E−03	2.07E−03	6.46E−01	−1.508	B	7,13
		6430.8464	6432.6238	17 550.180–33 095.939		7–9	1.77E−03	1.41E−03	2.09E−01	−2.006	B	7
		6335.3308	6337.0826	17 726.987–33 507.121		5–7	1.58E−03	1.33E−03	1.39E−01	−2.177	C+	13
		6297.7931	6299.5348	17 927.381–33 801.570		3–5	6.12E−04	6.07E−04	3.77E−02	−2.740	B	7
		6265.1340	6266.8669	17 550.180–33 507.121		7–7	6.84E−04	4.03E−04	5.81E−02	−2.550	B	7
		6219.2810	6221.0016	17 726.987–33 801.570		5–5	1.27E−03	7.38E−04	7.56E−02	−2.433	B	7
		6213.4303	6215.1493	17 927.381–34 017.101		3–3	1.9E−03	1.1E−03	6.7E−02	−2.48	D+	13
		6151.6181	6153.3206	17 550.180–33 801.570		7–5	1.77E−04	7.18E−05	1.02E−02	−3.299	B	7
		6136.9947	6138.6932	17 726.987–34 017.101		5–3	6.62E−04	2.24E−04	2.27E−02	−2.950	B	7
		6173.3356	6175.0438	17 927.381–34 121.601		3–1	2.31E−03	4.39E−04	2.68E−02	−2.880	B	7
114	$a\ ^5P–z\ ^3P^\circ$											
		6012.2099	6013.8750	17 927.381–34 555.595		3–1	1.69E−04	3.05E−05	1.81E−03	−4.038	C+	14
		6163.5445	6165.2502	17 726.987–33 946.931		5–5	8.44E−05	4.81E−05	4.88E−03	−3.619	C+	14
		6082.7106	6084.3946	17 927.381–34 362.871		3–3	1.61E−04	8.91E−05	5.35E−03	−3.573	B	7
		6240.6462	6242.3726	17 927.381–33 946.931		3–5	2.3E−04	2.2E−04	1.4E−02	−3.17	D+	13
115	$a\ ^5P–z\ ^3G^\circ$											
		5487.7380	5489.2630	17 550.180–35 767.562		7–9	2.49E−03	1.45E−03	1.83E−01	−2.00	C	16
116	$a\ ^5P–y\ ^3F^\circ$											
		5224.2983	5225.7528	17 550.180–36 686.174		7–9	2.8E−05	1.5E−05	1.8E−03	−3.98	E	2*n*
		5143.7237	5145.1567	17 726.987–37 162.744		5–7	7.3E−05	4.0E−05	3.4E−03	−3.69	E	2*n*
117	$a\ ^5P–y\ ^5P^\circ$	*5168.890*	*5170.330*	*17 684.56–37 025.68*		15–15	8.4E−03	3.38E−03	8.6E−01	−1.295	C	7,13
		5202.3360	5203.7846	17 550.180–36 766.964		7–7	5.11E−03	2.07E−03	2.49E−01	−1.838	B	7
		5145.0937	5146.5270	17 726.987–37 157.564		5–5	6.7E−04	2.7E−04	2.3E−02	−2.88	D+	13
		5131.4687	5132.8984	17 927.381–37 409.552		3–3	2.6E−03	1.0E−03	5.2E−02	−2.52	D+	13
		5098.6981	5100.1192	17 550.180–37 157.564		7–5	4.8E−03	1.4E−03	1.6E−01	−2.03	D+	13
		5079.2230	5080.6389	17 726.987–37 409.552		5–3	7.38E−03	1.71E−03	1.43E−01	−2.067	B	7
		5250.6460	5252.1075	17 726.987–36 766.964		5–7	2.3E−03	1.3E−03	1.1E−01	−2.18	D+	13
		5198.7111	5200.1588	17 927.381–37 157.564		3–5	3.62E−03	2.44E−03	1.25E−01	−2.135	B	7
118	$a\ ^5P–y\ ^3D^\circ$											
		4771.6965	4773.0307	17 726.987–38678.036		5–5	3.4E−04	1.2E−04	9.2E−03	−3.23	D+	15
		4745.1286	4746.4557	17 927.381–38 995.733		3–3	8.2E−05	2.8E−05	1.3E−03	−4.08	E	2*n*
		4889.0015	4890.3668	17 726.987–38175.352		5–7	1.13E−03	5.66E−04	4.56E−02	−2.548	C+	13
		4817.7781	4819.1245	17 927.381–38678.036		3–5	2.1E−04	1.2E−04	5.7E−03	−3.44	D	2*n*
119	$a\ ^5P–x\ ^5D^\circ$	*4485.712*	*4486.971*	*17 684.56–39 971.31*		15–25	6.09E−02	3.06E−02	6.79E−00	−0.338	C+	7,11,13
		4528.6142	4529.8841	17 550.180–39 625.801		7–9	5.44E−02	2.15E−02	2.25E−00	−0.822	B	11
		4494.5632	4495.8241	17 726.987–39 969.850		5–7	3.45E−02	1.46E−02	1.08E−00	−1.136	B	7
		4482.2527	4483.5104	17 927.381–40 231.333		3–5	2.19E−02	1.10E−02	4.87E−01	−1.482	C	13
		4459.1176	4460.3692	17 550.180–39 969.850		7–7	2.52E−02	7.51E−03	7.72E−01	−1.279	B	7
		4442.3390	4443.5861	17 726.987–40 231.333		5–5	3.76E−02	1.11E−02	8.13E−01	−1.255	B	7
		4447.7173	4448.9658	17 927.381–40 404.515		3–3	5.11E−02	1.52E−02	6.66E−01	−1.342	B	7
		4407.7092	4408.9471	17 550.180–40 231.333		7–5	7.3E−03	1.5E−03	1.5E−01	−1.97	D+	13
		4408.4135	4409.6517	17 726.987–40 404.515		5–3	1.9E−02	3.4E−03	2.4E−01	−1.78	D+	13
		4430.6140	4431.8580	17 927.381–40 491.281		3–1	7.45E−02	7.31E−03	3.20E−01	−1.659	B	7
120	$a\ ^5P–y\ ^7P^\circ$											
		4447.1304	4448.3788	17 726.987–40 207.088		5–7	8.91E−04	3.70E−04	2.71E−02	−2.733	C+	13
		4518.5771	4519.8443	17 927.381–40 052.032		3–5	9.1E−05	4.6E−05	2.1E−03	−3.86	E	2*n*
		4478.0182	4479.2747	17 726.987–40 052.032		5–5	1.6E−04	4.8E−05	3.6E−03	−3.62	E	2*n*
		4442.8316	4444.0788	17 550.180–40 052.032		7–5	1.09E−03	2.31E−04	2.36E−02	−2.792	B	7
121	$a\ ^5P–x\ ^5F^\circ$											
		4338.2478	4339.4675	17550.180–40 594.429		7–9	7.9E−04	2.9E−04	2.9E−02	−2.70	D	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
122	$a\ ^5P–z\ ^5S^\circ$	*4307.196*	*4308.408*	*17 684.56–*	40 894.987	15–5	2.34E−01	2.17E−02	4.63E−00	−0.487	B+	13
		4282.4029	4283.6079	17 550.180–40	894.987	7–5	1.21E−01	2.38E−02	2.35E−00	−0.779	B+	13
		4315.0846	4316.2982	17 726.987–40	894.987	5–5	7.76E−02	2.17E−02	1.54E−00	−0.965	B+	13
		4352.7347	4353.9582	17 927.381–40	894.987	3–5	3.63E−02	1.72E−02	7.40E−01	−1.287	B+	13
123	$a\ ^5P–x\ ^5P^\circ$	*3988.268*	*3989.396*	*17 684.56–42*	*751.01*	15–15	5.93E−02	1.41E−02	2.79E−00	−0.673	C+	13
		4001.6617	4002.7931	17 550.180–42	532.738	7–7	7.47E−03	1.79E−03	1.66E−01	−1.901	C+	13
		3977.7410	3978.8662	17 726.987–42	859.775	5–5	6.41E−02	1.52E−02	9.96E−01	−1.119	B	13
		3974.7576	3975.8820	17 927.381–43	079.020	3–3	3.44E−03	8.16E−04	3.21E−02	−2.611	C+	13
		3949.9530	3951.0709	17 550.180–42	859.775	7–5	4.79E−02	8.01E−03	7.30E−01	−1.251	B	13
		3943.3407	3944.4568	17 726.987–43	079.020	5–3	6.46E−03	9.04E−04	5.87E−02	−2.345	C+	13
		4030.1849	4031.3237	17 726.987–42	532.738	5–7	2.85E−03	9.71E−04	6.44E−02	−2.314	C+	13
		4009.7128	4010.8463	17 927.381–42	859.775	3–5	4.64E−02	1.87E−02	7.39E−01	−1.252	B	13
124	$a\ ^5P–w\ ^5D^\circ$	*3813.087*	*3814.169*	*17 684.56–43*	*902.59*	15–25	8.2E−02	3.0E−02	5.6E−00	−0.35	D+	13
		3852.5727	3853.6652	17 550.180–43	499.502	7–9	3.26E−02	9.3E−03	8.3E−01	−1.185	C	13
		3816.3402	3817.4233	17 726.987–43	922.665	5–7	4.2E−02	1.3E−02	8.0E−01	−1.20	D+	13
		3807.5369	3808.6177	17 927.381–44	183.625	3–5	9.37E−02	3.40E−02	1.28E−00	−0.992	C+	13
		3790.7540	3791.8305	17 550.180–43	922.665	7–7	9.7E−03	2.1E−03	1.8E−01	−1.84	D+	13
		3778.6968	3779.7702	17 726.987–44	183.625	5–5	9.1E−03	1.95E−03	1.21E−01	−2.011	C	13
		3774.8243	3775.8966	17 927.381–44	411.157	3–3	5.57E−02	1.19E−02	4.44E−01	−1.447	C+	13
		3753.6109	3754.6778	17 550.180–44	183.625	7–5	1.22E−01	1.84E−02	1.59E−00	−0.89	C	13
		3746.4747	3747.5396	17 726.987–44	411.157	5–3	6.1E−03	7.7E−04	4.76E−02	−2.414	C	13
		3768.0270	3769.0975	17 927.381–44	458.931	3–1	1.08E−01	7.67E−03	2.86E−01	−1.638	C+	13
125	$a\ ^5P–v\ ^5D^\circ$											
		3776.4548	3777.5275	17 550.180–44	022.522	7–9	1.67E−02	4.59E−03	4.00E−01	−1.493	C+	13
		3781.1863	3782.2603	17 726.987–44	166.203	5–7	7.7E−03	2.30E−03	1.43E−01	−1.94	C	13
		3739.1158	3740.1789	17 927.381–44	664.072	3–5	4.51E−03	1.58E−03	5.83E−02	−2.325	C+	13
		3756.0683	3757.1357	17 550.180–44	166.203	7–7	5.13E−03	1.09E−03	9.40E−02	−2.119	C+	13
		3687.0971	3688.1467	17 550.180–44	664.072	7–5	1.72E−02	2.51E−03	2.13E−01	−1.756	B	13
126	$a\ ^5P–w\ ^5F^\circ$											
		3721.2724	3722.3308	17 550.180–44	415.071	7–9	8.72E−03	2.33E−03	2.00E−01	−1.788	C+	13
		3726.8961	3727.9560	17 726.987–44	551.332	5–7	5.29E−03	1.54E−03	9.46E−02	−2.113	B	13
		3792.8266	3793.9036	17 927.381–44	285.451	3–5	2.96E−03	1.06E−03	3.99E−02	−2.496	C	13
		3702.4920	3703.5455	17 550.180–44	551.332	7–7	4.13E−03	8.49E−04	7.25E−02	−2.226	C+	13
		3779.5082	3780.5817	17 927.381–44	378.339	3–3	8.5E−03	1.82E−03	6.8E−02	−2.262	C	13
		3739.3142	3740.3773	17 550.180–44	285.451	7–5	5.3E−03	7.9E−04	6.8E−02	−2.25	E	2*n*
127	$a\ ^5P–y\ ^5S^\circ$	*3726.493*	*3727.553*	*17 684.56–*	44 511.809	15–5	6.54E−01	4.54E−02	8.35E−00	−0.167	B+	13
		3707.9199	3708.9748	17 550.180–44	511.809	7–5	3.32E−01	4.89E−02	4.18E−00	−0.466	B+	13
		3732.3964	3733.4577	17 726.987–44	511.809	5–5	2.69E−01	5.62E−02	3.46E−00	−0.551	B+	13
		3760.5318	3761.6004	17 927.381–44	511.809	3–5	55.50E−02	1.94E−02	7.23E−01	−1.234	B+	13
128	$a\ ^5P–x\ ^3D^\circ$											
		3628.0916	3629.1260	17 726.987–45	281.830	5–5	5.76E−03	1.14E−03	6.80E−02	−2.245	C+	13
		3636.1614	3637.1978	17 726.987–45	220.678	5–7	9.78E−03	2.72E−03	1.63E−01	−1.867	B	13
		3654.6741	3655.7153	17 927.381–45	281.830	3–5	1.6E−03	5.4E−04	2.0E−02	−2.79	D	2*n*
129	$a\ ^5P–w\ ^5P^\circ$											
		3497.1033	3498.1039	17 550.180–46	137.094	7–7	9.02E−02	1.66E−02	1.33E−00	−0.936	B	13
		3497.1482	3498.1488	17 726.987–46	313.534	5–5	4.29E−02	7.87E−03	4.53E−01	−1.405	C+	13
		3509.8616	3510.8655	17 927.381–46	410.378	3–3	1.7E−02	3.2E−03	1.1E−01	−2.01	E	2*n*
		3475.6516	3476.6467	17 550.180–46	313.534	7–5	8.61E−02	1.11E−02	8.93E−01	−1.108	C+	13
		3485.3402	3486.3378	17 726.987–46	410.378	5–3	1.30E−01	1.42E−02	8.14E−01	−1.149	C+	13
		3518.8697	3519.8758	17 726.987–46	137.094	5–7	8.51E−03	2.21E−03	1.28E−01	−1.956	B	13
		3521.8368	3522.8438	17 927.381–46	313.534	3–5	3.51E−02	1.09E−02	3.79E−01	−1.486	C+	13
130	$a\ ^5P–y\ ^3P^\circ$											

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3426.6280	3427.6106	17 726.987–46 901.829		5–3	1.94E−01	2.05E−02	1.16E−00	−0.989	B	13
		3447.2782	3448.2660	17 726.987–46 727.071		5–5	1.07E−01	1.91E−02	1.08E−00	−1.021	B	13
		3450.3281	3451.3167	17 927.381–46 901.829		3–3	2.34E−01	4.18E−02	1.42E−00	−0.902	B	13
		3471.2656	3472.2596	17 927.381–46 727.071		3–5	3.98E−02	1.20E−02	4.11E−01	−1.444	C+	13
131	$a\ ^5P–u\ ^5D^\circ$	*3429.622*	*3430.605*	*17 684.56–46 833.93*		15–25	4.50E−01	1.32E−01	2.24E+01	0.298	B	13
		3427.1195	3428.1022	17 550.180–46 720.839		7–9	5.04E−01	1.14E−01	9.01E−00	−0.098	B	13
		3445.1491	3446.1364	17 726.987–46 744.990		5–7	2.34E−01	5.83E−02	3.31E−00	−0.535	B	13
		3451.9145	3452.9035	17 927.381–46 888.514		3–5	1.13E−01	3.36E−02	1.15E−00	−0.996	B	13
		3424.2844	3425.2663	17 550.180–46 744.990		7–7	1.61E−01	2.83E−02	2.23E−00	−0.703	B	13
		3428.1927	3429.1756	17 726.987–46 888.514		5–5	1.71E−01	3.01E−02	1.70E−00	−0.822	B	13
		3417.8406	3418.8208	17 927.381–47 177.231		3–3	4.01E−01	7.02E−02	2.37E−00	−0.676	B	13
		3407.5317	3408.5094	17 550.180–46 888.514		7–5	1.88E−02	2.34E−03	1.84E−01	−1.786	B	13
		3394.5832	3395.5575	17 726.987–47 177.231		5–3	8.70E−02	9.03E−03	5.05E−01	−1.345	B	13
		3418.5071	3419.4876	17 927.381–47 171.528		3–1	9.88E−01	5.78E−02	1.95E−00	−0.761	B	13
132	$a\ ^5P–x\ ^3F^\circ$											
		3407.4596	3408.4372	17 550.180–46 889.139		7–9	6.09E−01	1.36E−01	1.07E+01	−0.020	B	13
		3404.3539	3405.3308	17 726.987–47 092.709		5–7	1.09E−01	2.65E−02	1.49E−00	−0.878	B	13
		3415.5312	3416.5109	17 927.381–47 197.007		3–5	4.64E−02	1.35E−02	4.56E−01	−1.392	C+	13
		3383.9791	3384.9507	17 550.180–47 092.709		7–7	6.52E−02	1.12E−02	8.73E−01	−1.106	B	13
		3392.3049	3393.2787	17 726.987–47 197.007		5–5	9.93E−02	1.71E−02	9.58E−01	−1.067	C+	13
		3372.0738	3373.0424	17 550.180–47 197.007		7–5	1.30E−02	1.58E−03	1.23E−01	−1.955	B	13
133	$a\ ^5P–z\ ^3H^\circ$											
		3382.4020	3383.3732	17 550.180–47 106.481		7–9	7.97E−03	1.76E−03	1.37E−01	−1.910	C+	13
134	$a\ ^5P–w\ ^3D^\circ$											
		3392.6524	3393.6262	17 550.180–47 017.185		7–7	1.88E−01	3.24E−02	2.54E−00	−0.644	B	13
		3399.3331	3400.3086	17 726.987–47 136.081		5–5	2.76E−01	4.78E−02	2.68E−00	−0.621	B	13
		3406.7995	3407.7769	17 927.381–47 272.024		3–3	2.08E−01	3.62E−02	1.22E−00	−0.964	B	13
		3379.0180	3379.9883	17 550.180–47 136.081		7–5	4.59E−02	5.61E−03	4.37E−01	−1.406	B	13
		3383.6917	3384.6632	17 726.987–47 272.024		5–3	8.33E−02	8.58E−03	4.78E−01	−1.368	B	13
		3413.1324	3414.1114	17 726.987–47 017.185		5–7	3.23E−01	7.90E−02	4.44E−00	−0.404	B	13
		3422.6560	3423.6375	17 927.381–47 136.081		3–5	1.38E−01	4.04E−02	1.37E−00	−0.917	B	13
135	$a\ ^5P–y\ ^3S^\circ$											
		3351.5219	3352.4852	17 726.987–47 555.607		5–3	1.57E−02	1.59E−03	8.75E−02	−2.101	C+	13
136	$a\ ^5P–v\ ^5F^\circ$											
		3288.9653	3289.9127	17 726.987–48 122.925		5–7	1.10E−02	2.50E−03	1.35E−01	−1.904	C+	13
		3298.1319	3299.0816	17 927.381–48 238.844		3–5	9.0E−02	2.45E−02	8.0E−01	−1.133	C	13
		3276.4704	3277.4146	17 726.987–48 238.844		5–5	3.16E−02	5.1E−03	2.74E−01	−1.595	C	13
		3257.5927	3258.5321	17 550.180–48 238.844		7–5	8.9E−02	1.02E−02	7.6E−01	−1.148	C	13
		3264.5122	3265.4534	17 726.987–48 350.603		5–3	1.01E−01	9.68E−03	5.20E−01	−1.315	C+	13
137	$a\ ^5P–v\ ^5P^\circ$	*3287.196*	*3288.143*	*17 684.56–48 096.86*		15–15	9.4E−01	1.52E−01	2.47E+01	0.359	C	3*n*, 13
		3286.7530	3287.6998	17 550.180–47 966.582		7–7	5.99E−01	9.70E−02	7.35E−00	−0.168	B	13
		3284.5875	3285.5337	17 726.987–48 163.443		5–5	5.64E−02	9.12E−03	4.93E−01	−1.341	B	13
		3292.5895	3293.5378	17 927.381–48 289.868		3–3	3.0E−01	4.8E−02	1.6E−00	−0.84	D+	3*n*
		3265.6166	3266.5580	17 550.180–48 163.443		7–5	3.06E−01	3.49E−02	2.63E−00	−0.612	B	13
		3270.9999	3271.9427	17 726.987–48 289.868		5–3	6.4E−01	6.2E−02	3.3E−00	−0.51	D+	3*n*
		3305.9708	3306.9225	17 726.987–47 966.582		5–7	4.05E−01	9.29E−02	5.06E−00	−0.333	B	13
		3306.3548	3307.3066	17 927.381–48 163.443		3–5	4.84E−01	1.32E−01	4.32E−00	−0.402	B	13
138	$a\ ^5P–x\ ^3P^\circ$											
		3250.6235	3251.5611	17 550.180–48 304.640		7–5	3.83E−02	4.33E−03	3.25E−01	−1.518	B	13
		3246.9607	3247.8974	17 726.987–48 516.135		5–3	1.09E−01	1.03E−02	5.53E−01	−1.287	B	13
		3268.2329	3269.1750	17 927.381–48 516.135		3–3	6.06E−02	9.70E−03	3.13E−01	−1.536	B	13
		3290.9883	3291.9362	17 927.381–48 304.640		3–5	7.58E−02	2.05E−02	6.67E−01	−1.211	C+	13
139	$a\ ^5P–w\ ^3F^\circ$											
		3172.0837	3173.0015	17 726.987–49 242.883		5–7	7.15E−03	1.51E−03	7.89E−02	−2.122	C+	13
140	$a\ ^5P–v\ ^3D^\circ$											

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3182.9740	3183.8940	17 726.987–49	135.020	5–7	1.42E−01	3.02E−02	1.58E−00	−0.821	C+	13
141	$a\ ^5P–t\ ^5D^\circ$											
		2981.8509	2982.7210	17 550.180–51	076.625	7–9	1.86E−01	3.19E−02	2.19E−00	−0.651	B	13
142	$a\ ^5P–v\ ^3P^\circ$											
		2840.9374	2841.7727	17 726.987–52	916.291	5–5	2.37E−02	2.87E−03	1.34E−01	−1.844	C+	13
143	$a\ ^5P–x\ ^1F^\circ$											
		2760.6129	2761.4286	17 550.180–53	763.276	7–7	1.81E−02	2.07E−03	1.32E−01	−1.839	C+	13
144	$a\ ^3P–z\ ^5D^\circ$											
		12 879.769	7761.992 cm^{-1}	18 378.185–26	140.177	5–7	2.00E−05	6.97E−05	1.48E−02	−3.458	C+	13
		12556.999	7961.509 cm^{-1}	18 378.185–26	339.694	5–5	2.00E−05	4.73E−05	9.78E−03	−3.626	C+	13
145	$a\ ^3P–z\ ^5P^\circ$											
		9362.3616	9364.9304	18 378.185–29	056.322	5–7	7.7E−05	1.4E−04	2.2E−02	−3.15	D+	13
		8804.6258	8807.0437	18 378.185–29	732.734	5–3	1.67E−04	1.17E−04	1.69E−02	−3.234	B	7
146	$a\ ^3P–z\ ^3D^\circ$											
		7723.2080	7725.3335	18 378.185–31	322.611	5–7	3.86E−05	4.83E−05	6.14E−03	−3.617	B	7
		8239.1281	8241.3930	19 552.477–31	686.349	3–5	1.30E−04	2.21E−04	1.80E−02	−3.179	C+	13
147	$a\ ^3P–y\ ^5D^\circ$											
		6481.8703	6483.6614	18 378.185–33	801.570	5–5	3.29E−04	2.08E−04	2.21E−02	−2.984	B	7
148	$a\ ^3P–z\ ^3P^\circ$	*6577.482*	*6579.299*	*18 954.02–34*	*153.21*	9–9	4.35E−03	2.82E−03	5.50E−01	−1.595	B	7,13
		6421.3508	6423.1257	18 378.185–33	946.931	5–5	3.04E−03	1.88E−03	1.99E−01	−2.027	B	7
		6750.1525	6752.0157	19 552.477–34	362.871	3–3	1.17E−03	7.98E−04	5.32E−02	−2.621	B	7
		6254.2585	6255.9885	18 378.185–34	362.871	5–3	2.13E−03	7.50E−04	7.72E−02	−2.426	C+	13
		6663.4421	6665.2821	19 552.477–34	555.595	3–1	4.98E−03	1.11E−03	7.28E−02	−2.479	B	7
		6945.2052	6947.1210	19 552.477–33	946.931	3–5	9.11E−04	1.10E−03	7.54E−02	−2.482	B	7
		6978.8516	6980.7765	20 037.815–34	362.871	1–3	1.44E−03	3.16E−03	7.27E−02	−2.500	B	7
149	$a\ ^3P–y\ ^3F^\circ$											
		5322.0408	5323.5213	18 378.185–37	162.744	5–7	5.3E−04	3.15E−04	2.76E−02	−2.80	C	13
150	$a\ ^3P–y\ ^5P^\circ$											
		5436.5962	5438.1072	18 378.185–36	766.964	5–7	3.50E−04	2.17E−04	1.95E−02	−2.96	C	13
151	$a\ ^3P–y\ ^3D^\circ$											
		5049.8198	5051.2278	18 378.185–38	175.352	5–7	1.65E−02	8.83E−03	7.34E−01	−1.355	B	13
		4924.7695	4926.1443	18 378.185–38	678.036	5–5	4.23E−03	1.54E−03	1.25E−01	−2.114	C	13
		5141.7390	5143.1715	19 552.477–38	995.733	3–3	4.9E−03	1.9E−03	9.8E−02	−2.24	D	13
		4848.8836	4850.2382	18 378.185–38	995.733	5–3	6.9E−04	1.46E−04	1.16E−02	−3.137	C	13
		5273.3736	5274.8411	20 037.815–38	995.733	1–3	5.6E−03	7.0E−03	1.2E−01	−2.16	D	13
152	$a\ ^3P–x\ ^5D^\circ$											
		4630.1203	4631.4170	18 378.185–39	969.850	5–7	1.2E−03	5.2E−04	4.0E−02	−2.59	D+	13
		4834.5069	4835.8577	19 552.477–40	231.333	3–5	2.7E−04	1.6E−04	7.5E−03	−3.33	E	2*n*
		4574.7179	4576.0000	18 378.185–40	231.333	5–5	8.2E−04	2.6E−04	2.0E−02	−2.89	D	2*n*
153	$a\ ^3P–z\ ^5S^\circ$											
		4439.8808	4441.1272	18 378.185–40	894.987	5–5	6.73E−04	1.99E−04	1.46E−02	−3.002	B	7
154	$a\ ^3P–x\ ^5P^\circ$											
		4083.5492	4084.7020	18 378.185–42	859.775	5–5	1.84E−03	4.60E−04	3.09E−02	−2.64	C	13
		4047.3040	4048.4473	18 378.185–43	079.020	5–3	2.15E−03	3.17E−04	2.11E−02	−2.80	C	13
155	$a\ ^3P–w\ ^5D^\circ$											
		3913.6318	3914.7402	18 378.185–43	922.665	5–7	1.35E−02	4.35E−03	2.80E−01	−1.663	B	7
		4058.7539	4059.9003	19 552.477–44	183.625	3–5	6.5E−03	2.68E−03	1.08E−01	−2.094	C	13
		4101.6849	4102.8425	20 037.815–44	411.157	1–3	3.9E−03	3.0E−03	4.0E−02	−2.53	E	2*n*
156	$a\ ^3P–y\ ^5S^\circ$											
		3825.4027	3826.4882	18 378.185–44	511.809	5–5	6.5E−03	1.42E−03	8.9E−02	−2.149	C	13
157	$a\ ^3P–x\ ^3D^\circ$											
		3724.3770	3725.4362	18 378.185–45	220.678	5–7	1.04E−01	3.03E−02	1.86E−00	−0.820	B+	13
		3885.5106	3886.6117	19 552.477–45	281.830	3–5	7.26E−02	2.74E−02	1.05E−00	−1.085	B+	13
		3918.3153	3919.4249	20 037.815–45	551.764	1–3	6.03E−02	4.17E−02	5.38E−01	−1.380	B+	13
		3715.9116	3716.9686	18 378.185–45	281.830	5–5	2.60E−02	5.40E−03	3.30E−01	−1.569	B	7
		3845.1689	3846.2595	19 552.477–45	551.764	3–3	6.07E−02	1.35E−02	5.11E−01	−1.394	B+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3678.9977	3680.0452	18 378.185–45	551.764	5–3	7.22E−03	8.80E−04	5.33E−02	−2.357	C+	13
158	$a\ ^3P$–$w\ ^5P^\circ$											
		3578.6765	3579.6981	18 378.185–46	313.534	5–5	1.8E−02	3.5E−03	2.1E−01	−1.75	E	2*n*
		3566.3098	3567.3282	18 378.185–46	410.378	5–3	3.3E−02	3.8E−03	2.2E−01	−1.72	E	2*n*
159	$a\ ^3P$–$y\ ^3P^\circ$											
		3526.4675	3527.4756	18 378.185–46	727.071	5–5	1.29E−01	2.40E−02	1.40E−00	−0.920	B	13
		3504.8612	3505.8638	18 378.185–46	901.829	5–3	2.94E−02	3.25E−03	1.88E−01	−1.789	C+	13
		3686.2580	3687.3073	19 552.477–46	672.537	3–1	1.3E−01	9.1E−03	3.3E−01	−1.56	E	2*n*
		3678.8603	3679.9078	19 552.477–46	727.071	3–5	4.59E−02	1.55E−02	5.64E−01	−1.332	B	13
		3721.3934	3722.4519	20 037.815–46	901.829	1–3	6.72E−02	4.19E−02	5.13E−01	−1.378	B	13
160	$a\ ^3P$–$u\ ^5D^\circ$											
		3524.2398	3525.2473	18 378.185–46	744.990	5–7	5.04E−02	1.32E−02	7.63E−01	−1.182	B	13
		3657.1329	3658.1747	19 552.477–46	888.514	3–5	1.22E−02	4.07E−03	1.47E−01	−1.913	C+	13
		3506.4977	3507.5007	18 378.185–46	888.514	5–5	7.35E−02	1.36E−02	7.82E−01	−1.169	B	13
		3471.3431	3472.3371	18 378.185–47	177.231	5–3	7.36E−02	7.98E−03	4.56E−01	−1.399	C+	13
161	$a\ ^3P$–$x\ ^3F^\circ$											
		3616.3199	3617.3512	19 552.477–47	197.007	3–5	6.86E−03	2.24E−03	8.01E−02	−2.172	C+	13
162	$a\ ^3P$–$w\ ^3D^\circ$											
		3624.3079	3625.3413	19 552.477–47	136.081	3–5	1.02E−02	3.35E−03	1.20E−01	−1.998	C+	13
		3670.8075	3671.8528	20 037.815–47	272.024	1–3	1.83E−02	1.11E−02	1.34E−01	−1.955	C+	13
		3606.5334	3607.5622	19 552.477–47	272.024	3–3	3.16E−02	6.16E−03	2.20E−01	−1.733	C+	13
		3459.9543	3460.9454	18 378.185–47	272.024	5–3	4.8E−03	5.1E−04	2.9E−02	−2.59	D+	15
163	$a\ ^3P$–$Psp3\ ^1D^\circ$											
		3442.3619	3443.3484	18 378.185–47	419.684	5–5	4.55E−02	8.09E−03	4.59E−01	−1.393	B	7
164	$a\ ^3P$–$y\ ^3S^\circ$	*3495.309*	*3496.309*	*18 954.02*–47	555.607	9–3	1.75E−01	1.07E−02	1.11E−00	−1.017	B	13
		3426.3243	3427.3068	18 378.185–47	555.607	5–3	4.52E−02	4.77E−03	2.69E−01	−1.622	B	13
		3570.0103	3571.0296	19 552.477–47	555.607	3–3	6.03E−02	1.15E−02	4.07E−01	−1.461	B	13
		3632.9769	3634.0125	20 037.815–47	555.607	1–3	6.06E−02	3.60E−02	4.30E−01	−1.444	B	13
165	$a\ ^3P$–$v\ ^5F^\circ$											
		3484.9785	3485.9760	19 552.477–48	238.844	3–5	1.8E−02	5.6E−03	1.9E−01	−1.78	D+	13
		3347.9255	3348.8879	18 378.185–48	238.844	5–5	4.91E−02	8.3E−03	4.55E−01	−1.385	C	13
166	$a\ ^3P$–$v\ ^5P^\circ$											
		3356.4015	3357.3660	18 378.185–48	163.443	5–5	1.56E−02	2.63E−03	1.46E−01	−1.880	C+	13
167	$a\ ^3P$–$x\ ^3P^\circ$											
		3340.5643	3341.5249	18 378.185–48	304.640	5–5	4.95E−02	8.28E−03	4.56E−01	−1.383	B	13
		3451.6134	3452.6023	19 552.477–48	516.135	3–3	5.08E−02	9.08E−03	3.09E−01	−1.565	B	13
		3317.1209	3318.0755	18 378.185–48	516.135	5–3	3.11E−02	3.08E−03	1.68E−01	−1.812	B	7
		3458.3033	3459.2940	19 552.477–48	460.110	3–1	2.92E−01	1.75E−02	5.96E−01	−1.281	B	13
		3510.4391	3511.4431	20 037.815–48	516.135	1–3	6.24E−02	3.46E−02	4.00E−01	−1.461	B	13
168	$a\ ^3P$–$w\ ^3P^\circ$											
		3142.8889	3143.7993	18 378.185–50	186.831	5–5	5.65E−02	8.37E−03	4.33E−01	−1.378	B	13
		3157.1432	3158.0573	18 378.185–50	043.210	5–3	1.81E−02	1.62E−03	8.44E−02	−2.091	C+	13
169	$a\ ^3P$–$u\ ^3D^\circ$											
		2976.1266	2976.9953	18 378.185–51	969.098	5–7	9.70E−02	1.81E−02	8.85E−01	−1.045	B	13
		3053.0656	3053.9535	19 552.477–52	296.916	3–5	1.53E−01	3.56E−02	1.07E−00	−0.971	B	13
		3078.4322	3079.3265	20 037.815–52	512.453	1–3	1.52E−01	6.48E−02	6.57E−01	−1.189	B	13
		2947.3621	2948.2236	18 378.185–52	296.916	5–5	9.30E−02	1.21E−02	5.88E−01	−1.217	B	13
		3033.0980	3033.9810	19 552.477–52	512.453	3–3	5.26E−02	7.25E−03	2.17E−01	−1.662	C+	13
170	$a\ ^3P$–$^2P4p\ ^1P^\circ$											
		2957.4846	2958.3486	18 378.185–52	180.817	5–3	1.31E−01	1.03E−02	5.0E−01	−1.288	C	13
171	$a\ ^3P$–$t\ ^3D^\circ$											
		2954.6523	2955.5157	18 378.185–52	213.227	5–7	1.06E−01	1.94E−02	9.45E−01	−1.013	C+	13
		2899.4146	2900.2642	18 378.185–52	857.800	5–3	4.68E−01	3.54E−02	1.69E−00	−0.752	C+	13
172	$a\ ^3P$–$v\ ^3P^\circ$											
		2894.5042	2895.3527	18 378.185–52	916.291	5–5	4.83E−01	6.07E−02	2.89E−00	−0.518	B	13
		2968.4779	2969.3446	19 552.477–53	229.937	3–3	8.26E−02	1.09E−02	3.20E−01	−1.485	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2868.4541	2869.2961	18 378.185–53 229.937		5–3	1.45E−01	1.07E−02	5.07E−01	−1.270	B	13
		2996.3857	2997.2594	19 552.477–52 916.291		3–5	1.70E−01	3.81E−02	1.13E−00	−0.942	B	13
173	$z\,^7D^\circ$–$d^8\,^3P$											
		4701.0447	4702.3601	19 912.494–41 178.409		5–3	8.4E−03	1.7E−03	1.3E−01	−2.08	D+	13
174	$z\,^7D^\circ$–$e\,^7D$											
		4260.4744	4261.6736	19 350.890–42 815.852		11–11	3.99E−01	1.09E−01	1.68E+01	0.077	B	13
		4235.9370	4237.1298	19 562.438–43 163.323		9–9	1.88E−01	5.07E−02	6.36E−00	−0.341	B	7
		4222.2131	4223.4023	19 757.031–43 434.624		7–7	5.76E−02	1.54E−02	1.50E−00	−0.967	B	7
		4210.3436	4211.5296	20 019.634–43 763.977		3–3	1.48E−01	3.93E−02	1.64E−00	−0.928	B	13
		4198.3043	4199.4872	19 350.890–43 163.323		11–9	8.03E−02	1.74E−02	2.64E−00	−0.719	B	7
		4187.7954	4188.9756	19 562.438–43 434.624		9–7	1.52E−01	3.10E−02	3.85E−00	−0.554	B	7
		4187.0390	4188.2189	19 757.031–43 633.530		7–5	2.15E−01	4.04E−02	3.90E−00	−0.548	B	7
		4191.4307	4192.6118	19 912.494–43 763.977		5–3	2.73E−01	4.32E−02	2.98E−00	−0.666	B	13
		4299.2349	4300.4444	19 562.438–42 815.852		9–11	1.29E−01	4.37E−02	5.57E−00	−0.405	B+	13
		4271.1538	4272.3558	19 757.031–43 163.323		7–9	1.82E−01	6.40E−02	6.30E−00	−0.349	B	7
		4250.1195	4251.3160	19 912.494–43 434.624		5–7	2.07E−01	7.87E−02	5.51E−00	−0.405	B	7
		4233.6028	4234.7950	20 019.634–43 633.530		3–5	1.85E−01	8.30E−02	3.47E−00	−0.604	B	7
175	$z\,^7D^\circ$–$e\,^5D$											
		4011.7113	4012.8453	19 757.031–44 677.003		7–9	1.1E−03	3.4E−04	3.1E−02	−2.63	D	2*n*
		3975.2055	3976.3300	19 912.494–45 061.326		5–7	1.2E−03	4.0E−04	2.6E−02	−2.70	D	2*n*
176	$z\,^7D^\circ$–$e\,^7F$											
		3225.7872	3226.7186	19 350.890–50 342.126		11–13	1.18E−00	2.18E−01	2.54E+01	0.379	B+	13
		3196.9274	3197.8515	19 562.438–50 833.435		9–11	5.97E−01	1.12E−01	1.06E+01	0.003	B+	13
		3180.2234	3181.1432	19 757.031–51 192.270		7–9	4.42E−01	8.62E−02	6.32E−00	−0.220	B+	13
		3192.8004	3193.7234	20 019.634–51 331.049		3–5	5.01E−01	1.28E−01	4.03E−00	−0.417	B+	13
		3175.4447	3176.3634	19 350.890–50 833.435		11–11	1.44E−01	2.18E−02	2.50E−00	−0.621	B+	13
		3160.6574	3161.5723	19 562.438–51 192.270		9–9	1.93E−01	2.89E−02	2.71E−00	−0.585	B+	13
		3181.9114	3182.8317	19 912.494–51 331.049		5–5	1.8E−02	2.7E−03	1.4E−01	−1.87	D+	13
		3205.3980	3206.3242	20 019.634–51 207.995		3–3	9.77E−01	1.51E−01	4.77E−00	−0.345	B+	13
		3194.4238	3195.3473	19 912.494–51 207.995		5–3	1.08E−01	9.91E−03	5.21E−01	−1.305	B	13
177	$z\,^7D^\circ$–$f\,^7D$											
		3222.0671	3222.9976	19 350.890–50 377.905		11–11	8.65E−01	1.35E−01	1.57E+01	0.171	B+	13
		3199.5304	3200.4551	19 562.438–50 807.994		9–9	2.23E−01	3.42E−02	3.25E−00	−0.511	B+	13
		3214.0126	3214.9410	19 757.031–50 861.813		7–7	8.38E−01	1.30E−01	9.61E−00	−0.042	B+	13
		3215.9380	3216.8669	19 912.494–50 998.642		5–5	6.19E−01	9.60E−02	5.08E−00	−0.319	B+	13
		3221.9162	3222.8466	20 019.634–51 048.104		3–3	1.22E−01	1.90E−02	6.04E−01	−1.244	C+	13
		3178.0128	3178.9321	19 350.890–50 807.994		11–9	1.28E−01	1.59E−02	1.83E−00	−0.758	B+	13
		3210.8292	3211.7568	19 912.494–51 048.104		5–3	9.24E−01	8.58E−02	4.53E−00	−0.368	B+	13
		3244.1876	3245.1236	19 562.438–50 377.905		9–11	3.06E−01	5.90E−02	5.67E−00	−0.275	B+	13
		3219.5821	3220.5119	19 757.031–50 807.994		7–9	4.64E−01	9.27E−02	6.88E−00	−0.188	B+	13
		3230.1563	3231.0888	19 912.494–50 861.813		5–7	1.51E−02	3.31E−03	1.76E−01	−1.782	C+	13
		3227.0612	3227.9928	20 019.634–50 998.642		3–5	4.52E−02	1.18E−02	3.75E−01	−1.452	B	13
178	$z\,^7D^\circ$–$f\,^5D$											
		3217.3772	3218.3064	19 350.890–50 423.134		11–9	1.50E−01	1.90E−02	2.22E−00	−0.679	B	13
		3227.7955	3228.7274	19 562.438–50 534.394		9–7	4.96E−01	6.03E−02	5.76E−00	−0.266	B	13
		3230.9636	3231.8963	19 757.031–50 698.617		7–5	3.7E−01	4.1E−02	3.1E−00	−0.54	D+	3*n*
		3228.2490	3229.1809	19 912.494–50 880.099		5–3	3.72E−01	3.49E−02	1.85E−00	−0.759	C+	13
		3239.4329	3240.3677	19 562.438–50 423.134		9–9	2.95E−01	4.64E−02	4.46E−00	−0.379	B	13
		3248.2042	3249.1413	19 757.031–50 534.394		7–7	1.92E−01	3.04E−02	2.27E−00	−0.672	B	13
		3239.4574	3240.3922	20 019.634–50 880.099		3–3	6.74E−02	1.06E−02	3.39E−01	−1.497	C+	13
		3259.9895	3260.9295	19 757.031–50 423.134		7–9	2.99E−02	6.12E−03	4.60E−01	−1.368	B	13
179	$z\,^7D^\circ$–$e\,^7P$											
		3211.9873	3212.9152	19 350.890–50 475.285		11–9	4.64E−01	5.87E−02	6.83E−00	−0.190	B	13
		3219.8046	3220.7344	19 562.438–50 611.258		9–7	3.61E−01	4.36E−02	4.16E−00	−0.406	B	13
		3214.0616	3214.9900	19 757.031–50 861.324		7–5	1.18E−00	1.31E−01	9.67E−00	−0.039	B	13
		3233.9675	3234.9009	19 562.438–50 475.285		9–9	2.08E−01	3.26E−02	3.13E−00	−0.532	B	13
		3230.2072	3231.1397	19 912.494–50 861.324		5–5	2.06E−01	3.22E−02	1.71E−00	−0.793	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
180	$z\,^7D^\circ - e\,^5G$											
		3207.0752	3208.0018	19 350.890–50 522.941		11–13	1.32E−02	2.41E−03	2.79E−01	−1.58	C	13
		3210.2291	3211.1565	19 562.438–50 703.867		9–11	1.15E−01	2.17E−02	2.07E−00	−0.709	B+	13
		3193.2999	3194.2230	19 912.494–51 219.012		5–7	3.07E−01	6.57E−02	3.45E−00	−0.483	B+	13
		3188.8191	3189.7411	20 019.634–51 370.142		3–5	2.53E−01	6.43E−02	2.03E−00	−0.715	B+	13
		3188.5675	3189.4895	19 350.890–50 703.867		11–11	5.0E−02	7.6E−03	8.8E−01	−1.08	D+	13
		3182.0555	3182.9758	19 562.438–50 979.576		9–9	3.23E−02	4.90E−03	4.62E−01	−1.355	C+	13
		3157.9873	3158.9015	19 562.438–51 219.012		9–7	2.25E−02	2.62E−03	2.45E−01	−1.628	C+	13
181	$z\,^7D^\circ - e\,^7G$											
		3161.9463	3162.8615	19 350.890–50 967.828		11–13	4.7E−02	8.2E−03	9.4E−01	−1.04	D+	13
		3157.0362	3157.9502	19 562.438–51 228.550		9–11	1.26E−01	2.30E−02	2.15E−00	−0.684	B+	13
		3165.8577	3166.7739	19 757.031–51 334.908		7–9	5.35E−02	1.03E−02	7.54E−01	−1.141	C+	13
		3168.8542	3169.7711	19 912.494–51 460.515		5–7	2.60E−02	5.48E−03	2.86E−01	−1.562	C+	13
		3171.6623	3172.5800	20 019.634–51 539.717		3–5	2.75E−02	6.91E−03	2.17E−01	−1.683	C+	13
		3153.3136	3154.2267	19 757.031–51 460.515		7–7	2.63E−02	3.92E−03	2.85E−01	−1.562	B	13
182	$z\,^7D^\circ - f\,^5F$											
		3153.1997	3154.1128	19 757.031–51 461.667		7–9	7.91E−02	1.52E−02	1.10E−00	−0.974	B+	13
		3154.4966	3155.4100	19 912.494–51 604.100		5–7	4.64E−02	9.69E−03	5.03E−01	−1.315	B	13
183	$z\,^7D^\circ - e\,^7S$											
		3142.4539	3143.3642	19 757.031–51 570.094		7–7	3.93E−02	5.8E−03	4.21E−01	−1.390	C	13
		3157.8850	3158.7993	19 912.494–51 570.094		5–7	1.61E−01	3.37E−02	1.75E−00	−0.773	C+	13
184	$z\,^7D^\circ - g\,^7D$											
		2901.9104	2902.7607	19 350.890–53 800.855		11–11	1.78E−01	2.25E−02	2.36E−00	−0.607	B+	13
		2892.4776	2893.3255	19 562.438–54 124.740		9–9	8.78E−02	1.10E−02	9.45E−01	−1.003	C+	13
		2919.8405	2920.6952	19 562.438–53 800.855		9–11	7.44E−02	1.16E−02	1.01E−00	−0.980	B	13
		2908.8560	2909.7080	19 757.031–54 124.740		7–9	8.98E−02	1.47E−02	9.83E−01	−0.989	C+	13
185	$a\,^3H - z\,^3G^\circ$											
		6593.8705	6595.6917	19 621.005–34 782.419		11–11	5.28E−04	3.44E−04	8.22E−02	−2.422	B	7
		6462.7251	6464.5111	19 788.250–35 257.322		9–9	5.6E−04	3.51E−04	6.7E−02	−2.50	C	13
		6494.9805	6496.7751	19 390.167–34 782.419		13–11	7.66E−03	4.10E−03	1.14E−00	−1.273	B	7
		6393.6013	6395.3687	19 621.005–35 257.322		11–9	4.81E−03	2.41E−03	5.6E−01	−1.58	C	13
		6318.0175	6319.7647	19 788.250–35 611.623		9–7	3.8E−03	1.7E−03	3.3E−01	−1.80	D+	16
186	$a\,^3H - z\,^3G^\circ$											
		6252.5554	6254.2850	19 390.167–35 379.206		13–11	3.19E−03	1.58E−03	4.23E−01	−1.687	B	7
		6191.5584	6193.2716	19 621.005–35 767.562		11–9	7.41E−03	3.49E−03	7.82E−01	−1.416	C+	13
		6136.6153	6138.3138	19 788.250–36 079.370		9–7	1.01E−02	4.42E−03	8.04E−01	−1.400	B	7
		6344.1491	6345.9033	19 621.005–35 379.206		11–11	1.80E−04	1.09E−04	2.49E−02	−2.923	B	7
		6256.3615	6258.0921	19 788.250–35 767.562		9–9	7.4E−04	4.34E−04	8.1E−02	−2.408	C	13
187	$a\,^3H - y\,^3F^\circ$											
		5916.2474	5917.8867	19 788.250–36 686.174		9–9	2.15E−04	1.13E−04	1.98E−02	−2.994	B	7
188	$a\,^3H - z\,^5H^\circ$											
		4247.3061	4248.5018	19 788.250–43 325.961		9–7	1.02E−03	2.15E−04	2.70E−02	−2.714	C+	13
189	$a\,^3H - y\,^3G^\circ$											
		3859.2125	3860.3068	19 390.167–45 294.843		13–11	7.25E−02	1.37E−02	2.27E−00	−0.749	B+	13
		3873.7606	3874.8587	19 621.005–45 428.399		11–9	6.57E−02	1.21E−02	1.70E−00	−0.876	B+	13
		3878.6709	3879.7703	19 788.250–45 562.971		9–7	7.02E−02	1.23E−02	1.42E−00	−0.955	B+	13
		3893.9125	3895.0158	19 621.005–45 294.843		11–11	5.45E−03	1.24E−03	1.75E−01	−1.865	B+	13
		3899.0289	3900.1335	19 788.250–45 428.399		9–9	7.60E−03	1.73E−03	2.00E−01	−1.807	B+	13
190	$a\,^3H - x\,^5G^\circ$											
		3813.9334	3815.0158	19 621.005–45 833.220		11–9	2.91E−03	5.2E−04	7.2E−02	−2.243	C	13
		3846.9335	3848.0246	19 621.005–45 608.358		11–13	3.44E−03	9.03E−04	1.26E−01	−2.003	C+	13
191	$a\,^3H - z\,^3I^\circ$											
		3760.0497	3761.1181	19 390.167–45 978.005		13–15	4.47E−02	1.09E−02	1.76E−00	−0.847	B	7
		3785.9483	3787.0236	19 621.005–46 026.968		11–13	4.14E−02	1.05E−02	1.44E−00	−0.937	B+	13
		3794.3398	3795.4171	19 788.250–46 135.817		9–11	4.15E−02	1.10E−02	1.23E−00	−1.006	B+	13
		3753.1377	3754.2044	19 390.167–46 026.968		13–13	1.14E−03	2.40E−04	3.86E−02	−2.505	B	13
		3770.4045	3771.4757	19 621.005–46 135.817		11–11	2.15E−03	4.58E−04	6.25E−02	−2.298	B	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
192	$a\ ^3H–x\ ^3F^\circ$											
		3666.2416	3667.2858	19 621.005–46 889.139		11–9	3.87E−02	6.38E−03	8.47E−01	−1.154	C+	13
		3661.3635	3662.4064	19 788.250–47 092.709		9–7	2.8E−03	4.5E−04	4.8E−02	−2.40	D	2*n*
193	$a\ ^3H–z\ ^3H^\circ$	*3642.058*	*3643.096*	*19 575.68–47 024.86*		33–33	7.10E−02	1.41E−02	5.59E−00	−0.332	B	13
		3623.1860	3624.2191	19 390.167–46 982.317		13–13	6.68E−02	1.32E−02	2.04E−00	−0.767	B+	13
		3650.2792	3651.3193	19 621.005–47 008.368		11–11	6.15E−02	1.23E−02	1.63E−00	−0.869	B	13
		3659.5168	3660.5593	19 788.250–47 106.481		9–9	6.31E−02	1.27E−02	1.37E−00	−0.943	B	13
		3619.7687	3620.8009	19 390.167–47 008.368		13–11	2.81E−03	4.67E−04	7.23E−02	−2.217	C+	13
		3637.2486	3638.2853	19 621.005–47 106.481		11–9	8.98E−03	1.46E−03	1.92E−01	−1.795	C+	13
		3653.7545	3654.7955	19 621.005–46 982.317		11–13	6.12E−03	1.45E−03	1.92E−01	−1.798	C+	13
		3672.7075	3673.7534	19 788.250–47 008.368		9–11	3.48E−03	8.61E−04	9.37E−02	−2.111	C+	13
194	$a\ ^3H–w\ ^5G^\circ$											
		3573.8291	3574.8494	19 390.167–47 363.373		13–13	2.41E−02	4.61E−03	7.06E−01	−1.222	B	13
		3596.1960	3597.2221	19 621.005–47 420.225		11–11	4.32E−03	8.39E−04	1.09E−01	−2.035	B	7
		3595.8646	3596.8906	19 788.250–47 590.045		9–9	4.1E−03	8.0E−04	8.6E−02	−2.14	D+	13
		3582.5642	3583.5868	19 788.250–47 693.236		9–7	2.44E−03	3.65E−04	3.88E−02	−2.483	C	13
195	$a\ ^3H–v\ ^5F^\circ$											
		3531.4378	3532.4473	19 621.005–47 929.994		11–9	6.65E−03	1.02E−03	1.30E−01	−1.951	C+	13
196	$a\ ^3H–x\ ^3G^\circ$											
		3514.6272	3515.6323	19 390.167–47 834.547		13–11	4.72E−03	7.40E−04	1.11E−01	−2.017	B	13
		3564.5570	3565.5749	19 788.250–47 834.218		9–7	6.39E−03	9.48E−04	1.00E−01	−2.069	B	13
		3543.3851	3544.3976	19 621.005–47 834.547		11–11	4.88E−03	9.20E−04	1.18E−01	−1.995	C+	13
		3567.3690	3568.3877	19 788.250–47 812.115		9–9	4.71E−03	8.99E−04	9.50E−02	−2.092	C+	13
		3564.5153	3565.5332	19 788.250–47 834.547		9–11	2.5E−03	5.8E−04	6.2E−02	−2.28	D+	13
197	$a\ ^3H–y\ ^5H^\circ$											
		3466.2829	3467.2756	19 390.167–48 231.277		13–11	9.50E−04	1.45E−04	2.15E−02	−2.725	C+	13
		3484.8506	3485.8480	19 788.250–48 475.683		9–7	1.34E−03	1.90E−04	1.96E−02	−2.768	C+	13
198	$a\ ^3H–w\ ^3F^\circ$											
		3394.0774	3395.0516	19 788.250–49 242.883		9–7	4.82E−03	6.47E−04	6.51E−02	−2.235	C+	13
199	$a\ ^3H–y\ ^3H^\circ$											
		3334.2177	3335.1766	19 621.005–49 604.424		11–11	4.91E−03	8.18E−04	9.88E−02	−2.046	C+	13
		3339.1946	3340.1548	19 788.250–49 726.987		9–9	1.37E−02	2.29E−03	2.27E−01	−1.686	B	13
		3353.2603	3354.2241	19 621.005–49 434.160		11–13	4.1E−03	8.2E−04	9.9E−02	−2.05	D+	13
200	$a\ ^3H–v\ ^3G^\circ$											
		3324.5366	3325.4930	19 390.167–49 460.899		13–11	1.72E−02	2.41E−03	3.43E−01	−1.504	B	13
		3331.6111	3332.5694	19 621.005–49 627.881		11–9	1.78E−02	2.42E−03	2.92E−01	−1.574	B	13
		3325.4647	3326.4214	19 788.250–49 850.587		9–7	2.37E−02	3.06E−03	3.01E−01	−1.561	C+	13
201	$a\ ^3H–x\ ^1G^\circ$											
		3243.1084	3244.0442	19 788.250–50 613.980		9–9	4.81E−03	7.6E−04	7.3E−02	−2.166	C	13
		3225.6074	3226.5388	19 621.005–50 613.980		11–9	4.65E−03	5.9E−04	6.9E−02	−2.185	C	13
202	$a\ ^3H–u\ ^3G^\circ$											
		3125.6825	3126.5886	19 390.167–51 373.907		13–11	8.46E−02	1.05E−02	1.40E−00	−0.865	B	13
		3119.4949	3120.3995	19 621.005–51 668.183		11–9	8.28E−02	9.88E−03	1.12E−00	−0.964	B	13
		3120.4354	3121.3401	19 788.250–51 825.770		9–7	7.26E−02	8.24E−03	7.62E−01	−1.130	B	13
		3135.8606	3136.7693	19 788.250–51 668.183		9–9	4.9E−03	7.2E−04	6.7E−02	−2.19	D+	15
203	$a\ ^3H–Hsp3\ ^1H^\circ$											
		3100.8363	3101.7361	19 390.167–51 630.175		13–11	2.73E−02	3.33E−03	4.42E−01	−1.364	B	13
204	$a\ ^3H–w\ ^3H^\circ$											
		3025.6364	3026.5174	19 390.167–52 431.443		13–13	5.86E−01	8.04E−02	1.04E+01	0.019	B+	13
		3030.1483	3031.0305	19 621.005–52 613.086		11–11	5.04E−01	6.94E−02	7.62E−00	−0.117	B+	13
		3009.0932	3009.9700	19 390.167–52 613.086		13–11	7.77E−02	8.92E−03	1.15E−00	−0.935	B+	13
		3015.9191	3016.7976	19 621.005–52 768.739		11–9	6.3E−02	7.0E−03	7.7E−01	−1.11	D+	3*n*
		3045.5887	3046.4747	19 788.250–52 613.086		9–11	1.78E−02	3.03E−03	2.73E−01	−1.565	C+	13
205	$a\ ^3H–y\ ^3I^\circ$											
		3005.3027	3006.1786	19 390.167–52 654.988		13–15	2.94E−02	4.59E−03	5.9E−01	−1.224	C	13
		3039.3171	3040.2016	19 621.005–52 513.556		11–13	1.60E−02	2.62E−03	2.88E−01	−1.541	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3019.2875	3020.1670	19 788.250–	52 898.994	9–11	2.33E−02	3.89E−03	3.48E−01	−1.456	C+	13
		3004.1136	3004.9893	19 621.005–	52 898.994	11–11	2.79E−02	3.77E−03	4.11E−01	−1.382	B	13
206	$a\ ^3H–t\ ^3G^\circ$											
		2889.9000	2890.7473	19 390.167–	53 983.289	13–11	5.7E−03	6.0E−04	7.4E−02	−2.11	D+	13
		2887.9580	2888.8050	19 621.005–	54 237.411	11–9	1.4E−02	1.4E−03	1.5E−01	−1.80	D+	13
207	$a\ ^3H–s\ ^3G^\circ$											
		2755.1819	2755.9962	19 621.005–	55 905.532	11–9	5.13E−02	4.78E−03	4.77E−01	−1.279	C+	13
208	$a\ ^3H–v\ ^3H^\circ$											
		2769.2982	2770.1159	19 390.167–	55 489.738	13–13	1.80E−01	2.07E−02	2.45E−00	−0.570	C+	13
		2784.3420	2785.1635	19 621.005–	55 525.558	11–11	2.30E−02	2.67E−03	2.70E−01	−1.532	C+	13
		2803.6134	2804.4395	19 788.250–	55 446.004	9–9	1.04E−01	1.23E−02	1.02E−00	−0.957	B	13
209	$a^3H–^2H4p\ ^1H^\circ$											
		2737.6409	2738.4510	19 390.167–	55 907.174	13–11	1.14E−01	1.08E−02	1.27E−00	−0.851	B	13
210	$a\ ^3H–u\ ^3H^\circ$											
		2706.0126	2706.8150	19 390.167–	56 333.956	13–13	2.28E−01	2.50E−02	2.90E−00	−0.488	B+	13
		2719.4203	2720.2260	19 621.005–	56 382.658	11–11	3.20E−01	3.55E−02	3.49E−00	−0.409	B+	13
		2728.8202	2729.6282	19 788.250–	56 423.279	9–9	2.98E−01	3.33E−02	2.69E−00	−0.524	B	13
		2702.4502	2703.2518	19 390.167–	56 382.658	13–11	4.23E−02	3.92E−03	4.53E−01	−1.293	B	13
		2716.4187	2717.2236	19 621.005–	56 423.279	11–9	4.96E−02	4.49E−03	4.42E−01	−1.306	C+	13
211	$a\ ^3H–u\ ^3F^\circ$											
		2716.2574	2717.0624	19 788.250–	56 592.699	9–9	3.7E−02	4.1E−03	3.3E−01	−1.43	D+	13
212	$a\ ^3H–v\ ^1G^\circ$											
		2690.0464	2690.8450	19 788.250–	56 951.297	9–9	1.7E−02	1.8E−03	1.5E−01	−1.78	D+	13
213	$a\ ^3H–x\ ^3I^\circ$											
		2656.1454	2656.9359	19 390.167–	57 027.509	13–15	1.63E−01	1.99E−02	2.26E−00	−0.587	B	13
		2669.4933	2670.2869	19 621.005–	57 070.167	11–13	1.34E−01	1.69E−02	1.64E−00	−0.730	B	13
		2679.0242	2679.8202	19 788.250–	57 104.213	9–11	1.10E−01	1.45E−02	1.15E−00	−0.885	B	13
214	$a\ ^3H–t\ ^3F^\circ$											
		2635.7213	2636.5069	19 621.005–	57 550.006	11–9	4.29E−02	3.66E−03	3.50E−01	−1.395	C	13
		2641.0293	2641.8162	19 788.250–	57 640.997	9–7	7.7E−02	6.3E−03	4.9E−01	−1.25	D+	13
215	$a\ ^3H–H\mathrm{sp1}\ ^3I^\circ$											
		2537.1747	2537.9370	19 390.167–	58 792.251	13–15	3.70E−00	4.12E−01	4.48E+01	0.729	B	13
		2542.1013	2542.8647	19 621.005–	58 946.728	11–13	4.47E−00	5.12E−01	4.72E+01	0.751	C+	13
		2543.9225	2544.6864	19 788.250–	59 085.823	9–11	4.70E−00	5.58E−01	4.21E+01	0.701	B	13
		2527.2662	2528.0262	19 390.167–	58 946.728	13–13	3.5E−01	3.3E−02	3.6E−00	−0.37	D+	13
		2533.1415	2533.9029	19 621.005–	59 085.823	11–11	2.07E−01	1.99E−02	1.83E−00	−0.659	C+	13
216	$a\ ^3H–t\ ^3H^\circ$											
		2439.7449	2440.4846	19 390.167–	60 365.633	13–13	3.46E−00	3.09E−01	3.23E+01	0.604	C+	13
		2442.5685	2443.3088	19 621.005–	60 549.112	11–11	3.12E−00	2.79E−01	2.47E+01	0.487	B	13
		2453.5690	2454.3118	19 621.005–	60 365.633	11–13	1.23E−01	1.31E−02	1.17E−00	−0.84	C	13
217	$b\ ^3F–z\ ^3F^\circ$											
		9372.8974	9375.4691	20 641.109–	31 307.243	9–9	2.05E−04	2.70E−04	7.51E−02	−2.614	C+	13
		9146.1293	9148.6395	20 874.481–	31 805.069	7–7	1.79E−04	2.24E−04	4.73E−02	−2.804	C+	13
		9010.5946	9013.0681	21 038.986–	32 133.989	5–5	1.83E−04	2.23E−04	3.31E−02	−2.953	C+	13
218	$b\ ^3F–z\ ^3D^\circ$											
		9359.4130	9361.9810	20 641.109–	31 322.611	9–7	1.50E−04	1.53E−04	4.25E−02	−2.860	B	13
		9246.5589	9249.0964	20 874.481–	31 686.349	7–5	1.80E−04	1.65E−04	3.51E−02	−2.938	B	13
219	$b\ ^3F–z\ ^5G^\circ$											
		6839.8305	6841.7179	20 641.109–	35 257.322	9–9	7.1E−05	5.0E−05	1.0E−02	−3.35	E	2*n*
220	$b\ ^3F–z\ ^3G^\circ$											
		6609.1103	6610.9356	20 641.109–	35 767.562	9–9	3.45E−04	2.26E−04	4.42E−02	−2.692	C+	8
		6575.0158	6576.8320	20 874.481–	36 079.370	7–7	4.30E−04	2.79E−04	4.22E−02	−2.710	C+	13
		6475.6244	6477.4139	20 641.109–	36 079.370	9–7	2.60E−04	1.27E−04	2.44E−02	−2.94	C	13
221	$b\ ^3F–y\ ^3F^\circ$											
		6230.7230	6232.4467	20 641.109–	36 686.174	9–9	9.99E−03	5.82E−03	1.07E−00	−1.281	B	8
		6137.6917	6139.3904	20 874.481–	37 162.744	7–7	1.00E−02	5.65E−03	7.99E−01	−1.403	B	8
		6065.4822	6067.1615	21 038.986–	37 521.158	5–5	1.07E−02	5.90E−03	5.89E−01	−1.530	B	8

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		6322.6855	6324.	20 874.481–36 686.174		7–9	6.95E−04	5.36E−04	7.81E−02	−2.426	C+	8
		6200.3129	6202.0285	21 038.986–37 162.744		5–7	9.06E−04	7.31E−04	7.46E−02	−2.437	C+	8
222	$b\ ^3F–y\ ^3D^\circ$											
		5701.5446	5703.1265	20 641.109–38 175.352		9–7	1.78E−03	6.76E−04	1.14E−01	−2.216	C+	8
		5615.2966	5616.8554	20 874.481–38 678.036		7–5	2.39E−03	8.1E−04	1.04E−01	−2.248	C	13
		5567.3911	5568.9371	21 038.986–38 995.733		5–3	1.5E−03	4.3E−04	3.9E−02	−2.67	D	13
		5778.4533	5780.0558	20 874.481–38 175.352		7–7	1.06E−04	5.3E−05	7.1E−03	−3.430	C	15
		5667.6648	5669.2376	21 038.986–38 678.036		5–5	4.8E−04	2.3E−04	2.1E−02	−2.94	E	2*n*
223	$b\ ^3F–w\ ^5D^\circ$											
		4288.9560	4290.1628	20 874.481–44 183.625		7–5	2.92E−03	5.8E−04	5.7E−02	−2.40	C	13
224	$b\ ^3F–v\ ^5D^\circ$											
		4275.6986	4276.9019	20 641.109–44 022.522		9–9	5.6E−04	1.5E−04	1.9E−02	−2.86	D+	13
225	$b\ ^3F–x\ ^3D^\circ$											
		4067.2712	4068.4198	20 641.109–45 220.678		9–7	2.19E−02	4.23E−03	5.10E−01	−1.419	B	8
		4095.9707	4097.1268	20 874.481–45 281.830		7–5	2.65E−02	4.76E−03	4.50E−01	−1.477	B+	13
		4078.3539	4079.5053	21 038.986–45 551.764		5–3	4.55E−02	6.81E−03	4.57E−01	−1.468	B+	13
		4106.2587	4107.4175	20 874.481–45 220.678		7–7	3.3E−03	8.2E−04	7.8E−02	−2.24	E	2*n*
226	$b\ ^3F–y\ ^3G^\circ$	*4064.679*	*4065.827*	*20 813.63–45 408.88*		21–27	5.76E−03	1.84E−03	5.16E−01	−1.414	B	13
		4055.0355	4056.1809	20 641.109–45 294.843		9–11	4.43E−03	1.34E−03	1.61E−01	−1.920	B+	13
		4071.5201	4072.6698	20 874.481–45 428.399		7–9	4.28E−03	1.37E−03	1.28E−01	−2.019	B+	13
		4076.4898	4077.6407	21 038.986–45 562.971		5–7	4.43E−03	1.55E−03	1.04E−01	−2.112	B	13
		4033.1863	4034.3260	20 641.109–45 428.399		9–9	8.40E−04	2.05E−04	2.45E−02	−2.734	C+	13
		4049.3270	4050.4708	20 874.481–45 562.971		7–7	2.11E−03	5.19E−04	4.84E−02	−2.440	B	13
		4011.4075	4012.5414	20 641.109–45 562.971		9–7	2.26E−03	4.24E−04	5.05E−02	−2.418	B	13
227	$b\ ^3F–x\ ^5G^\circ$											
		4019.0420	4020.1779	21 038.986–45 913.494		5–7	1.1E−03	3.8E−04	2.5E−02	−2.72	E	2*n*
228	$b\ ^3F–z\ ^3I^\circ$											
		3921.2724	3922.3828	20 641.109–46 135.817		9–11	5.54E−04	1.56E−04	1.82E−02	−2.852	C+	13
229	$b\ ^3F–u\ ^5D^\circ$											
		3829.7642	3830.8508	20 641.109–46 744.990		9–7	7.5E−03	1.3E−03	1.5E−01	−1.94	E	2*n*
		3842.9887	3844.0788	20 874.481–46 888.514		7–5	3.91E−03	6.2E−04	5.5E−02	−2.363	C	13
		3833.3082	3834.3957	20 641.109–46 720.839		9–9	4.68E−02	1.03E−02	1.17E−00	−1.032	B	8
		3867.9205	3869.0171	20 874.481–46 720.839		7–9	7.06E−03	2.04E−03	1.82E−01	−1.846	C+	13
230	$b\ ^3F–x\ ^3F^\circ$	*3813.285*	*3814.368*	*20 813.63–47 030.30*		21–21	6.12E−02	1.34E−02	3.52E−00	−0.552	B	8,13
		3808.7286	3809.8097	20 641.109–46 889.139		9–9	3.54E−02	7.70E−03	8.70E−01	−1.159	B	8
		3813.0580	3814.1403	20 874.481–47 092.709		7–7	5.52E−02	1.20E−02	1.06E−00	−1.074	B	13
		3821.8345	3822.9190	21 038.986–47 197.007		5–5	7.30E−02	1.60E−02	1.01E−00	−1.097	B	13
		3779.4160	3780.4895	20 641.109–47 092.709		9–7	6.76E−03	1.13E−03	1.26E−01	−1.994	C+	13
		3797.9492	3799.0275	20 874.481–47 197.007		7–5	9.37E−03	1.45E−03	1.27E−01	−1.994	C+	13
		3842.8963	3843.9863	20 874.481–46 889.139		7–9	4.87E−03	1.39E−03	1.23E−01	−2.013	C	13
		3837.1350	3838.2235	21 038.986–47 092.709		5–7	1.08E−02	3.33E−03	2.11E−01	−1.78	C	13
231	$b\ ^3F–z\ ^3H^\circ$											
		3791.5058	3792.5825	20 641.109–47 008.368		9–11	4.46E−03	1.17E−03	1.32E−01	−1.976	C+	13
		3777.4495	3778.5225	20 641.109–47 106.481		9–9	8.58E−03	1.84E−03	2.05E−01	−1.782	B	8
232	$b\ ^3F–w\ ^3D^\circ$											
		3830.7574	3831.8443	21 038.986–47 136.081		5–5	1.04E−02	2.29E−03	1.44E−01	−1.942	C+	13
		3848.2888	3849.3802	21 039.000–47 017.000		5–7	4.8E−03	1.5E−03	9.5E−02	−2.13	D	3*n*
233	$b\ ^3F–w\ ^5G^\circ$											
		3709.6654	3710.7208	20 641.109–47 590.045		9–9	9.51E−03	1.96E−03	2.16E−01	−1.753	C+	13
		3727.6738	3728.7339	20 874.481–47 693.236		7–7	2.20E−02	4.58E−03	3.94E−01	−1.494	C+	13
		3731.3737	3732.4347	21 038.986–47 831.150		5–5	3.37E−02	7.05E−03	4.33E−01	−1.453	B	8
		3695.5146	3696.5663	20 641.109–47 693.236		9–7	1.6E−03	2.6E−04	2.8E−02	−2.64	D+	13
		3708.6025	3709.6577	20 874.481–47 831.150		7–5	8.1E−03	1.2E−03	1.0E−01	−2.08	D+	13
234	$b\ ^3F–Psp3\ ^1D^\circ$											
		3766.0888	3767.1588	20 874.481–47 419.684		7–5	7.7E−03	1.2E−03	1.0E−01	−2.09	E	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
235	$b\ ^3F–z\ ^1G^\circ$											
		3728.6680	3729.7284	20 641.109–47 452.714		9–9	1.30E−02	2.71E−03	2.99E−01	−1.613	B	13
		3761.4085	3762.4774	20 874.481–47 452.714		7–9	1.04E−02	2.84E−03	2.46E−01	−1.702	B	13
236	$b\ ^3F–v\ ^5F^\circ$											
		3707.4566	3708.5114	20 641.109–47 606.111		9–11	8.0E−03	2.01E−03	2.21E−01	−1.74	C	13
		3695.0515	3696.1031	20 874.481–47 929.994		7–9	2.01E−01	5.29E−02	4.51E−00	−0.431	B	13
		3663.4514	3664.4948	20 641.109–47 929.994		9–9	1.10E−02	2.21E−03	2.40E−01	−1.701	C+	13
		3668.8921	3669.9370	20 874.481–48 122.925		7–7	2.7E−03	5.4E−04	4.6E−02	−2.42	E	2*n*
237	$b\ ^3F–x\ ^3G^\circ$											
		3676.3110	3677.3578	20 641.109–47 834.547		9–11	4.63E−02	1.15E−02	1.25E−00	−0.986	C+	8
		3711.2227	3712.2785	20 874.481–47 812.115		7–9	3.62E−02	9.61E−03	8.22E−01	−1.172	B	13
		3730.9463	3732.0072	21 038.986–47 834.218		5–7	3.50E−02	1.02E−02	6.29E−01	−1.291	B+	13
238	$b\ ^3F–y\ ^5H^\circ$											
		3623.4466	3624.4797	20 641.109–48 231.277		9–11	1.15E−02	2.77E−03	2.97E−01	−1.604	B	13
		3636.9941	3638.0308	20 874.481–48 361.879		7–9	1.96E−02	5.00E−03	4.19E−01	−1.456	B	13
		3643.7154	3644.7537	21 038.986–48 475.683		5–7	2.61E−02	7.28E−03	4.37E−01	−1.439	B	13
		3606.3760	3607.4047	20 641.109–48 361.879		9–9	1.73E−03	3.37E−04	3.60E−02	−2.518	C+	13
239	$b\ ^3F–z\ ^1H^\circ$											
		3603.6810	3604.7090	20 641.109–48 382.600		9–11	4.55E−03	1.08E−03	1.16E−01	−2.01	C	13
240	$b\ ^3F–y\ ^1G^\circ$											
		3592.4702	3593.4953	20 874.481–48 702.532		7–9	2.2E−03	5.4E−04	4.5E−02	−2.42	E	2*n*
241	$b\ ^3F–w\ ^3F^\circ$											
		3511.7377	3512.7421	20 641.109–49 108.893		9–9	2.5E−03	4.6E−04	4.8E−02	−2.39	E	2*n*
		3520.8465	3521.8532	21 038.986–49 433.128		5–5	1.50E−02	2.79E−03	1.62E−01	−1.856	C+	13
		3495.2867	3496.2869	20 641.109–49 242.883		9–7	9.46E−02	1.35E−02	1.40E−00	−0.916	B	8
		3500.5647	3501.5662	20 874.481–49 433.128		7–5	5.28E−02	6.93E−03	5.59E−01	−1.314	C+	13
242	$b\ ^3F–v\ ^3D^\circ$											
		3508.5182	3509.5217	20 641.109–49 135.020		9–7	2.07E−02	2.97E−03	3.09E−01	−1.573	B	13
		3524.0742	3525.0817	20 874.481–49 242.618		7–5	9.9E−02	1.3E−02	1.1E−00	−1.04	D	3*n*
		3537.7291	3538.7401	21 038.986–49 297.632		5–3	1.33E−01	1.50E−02	8.72E−01	−1.126	C+	13
		3537.4921	3538.5031	20 874.481–49 135.020		7–7	2.27E−02	4.26E−03	3.47E−01	−1.526	B	13
		3544.6298	3545.6426	21 038.986–49 242.618		5–5	1.6E−02	3.1E−03	1.8E−01	−1.82	E	2*n*
243	$b\ ^3F–v\ ^3G^\circ$											
		3468.8445	3469.8378	20 641.109–49 460.899		9–11	2.61E−02	5.75E−03	5.91E−01	−1.286	B	13
		3476.8543	3477.8497	20 874.481–49 627.881		7–9	3.21E−02	7.48E−03	5.99E−01	−1.281	B+	13
		3469.8305	3470.8241	21 038.986–49 850.587		5–7	2.19E−02	5.5E−03	3.16E−01	−1.56	C	13
244	$b\ ^3F–u\ ^3G^\circ$											
		3252.9144	3253.8527	20 641.109–51 373.907		9–11	2.20E−02	4.27E−03	4.11E−01	−1.416	B	13
		3246.4802	3247.4169	20 874.481–51 668.183		7–9	2.50E−02	5.08E−03	3.80E−01	−1.449	B	13
		3247.2100	3248.1468	21 038.986–51 825.770		5–7	1.69E−02	3.74E−03	2.00E−01	−1.728	C+	13
245	$b\ ^3F–H\mathrm{sp3}\ ^1H^\circ$											
		3226.0135	3226.9449	20 641.109–51 630.175		9–11	6.59E−03	1.26E−03	1.20E−01	−1.947	C+	13
246	$b\ ^3F–u\ ^3D^\circ$											
		3191.1116	3192.0342	20 641.109–51 969.098		9–7	1.33E−02	1.58E−03	1.50E−01	−1.846	C+	15
		3181.5194	3182.4396	20 874.481–52 296.916		7–5	1.84E−01	1.99E−02	1.46E−00	−0.855	B	13
		3176.3593	3177.2781	21 038.986–52 512.453		5–3	5.90E−02	5.35E−03	2.80E−01	−1.572	C+	13
247	$b\ ^3F–t\ ^3D^\circ$											
		3166.4355	3167.3518	20 641.109–52 213.227		9–7	1.14E−01	1.33E−02	1.25E−00	−0.921	B	8
248	$b\ ^3F–s\ ^3G^\circ$											
		2853.7717	2854.6102	20 874.481–55 905.532		7–9	5.91E−02	9.28E−03	6.10E−01	−1.187	C+	13
249	$b\ ^3F–{}^2H4p\ ^1H^\circ$											
		2834.7526	2835.5863	20 641.109–55 907.174		9–11	5.41E−02	7.97E−03	6.69E−01	−1.145	C+	13
250	$b\ ^3F–u\ ^3F^\circ$											
		2780.6973	2781.5178	20 641.109–56 592.699		9–9	9.01E−02	1.05E−02	8.62E−01	−1.026	B	13
251	$b\ ^3F–t\ ^3F^\circ$											
		2708.5708	2709.3739	20 641.109–57 550.006		9–9	6.49E−01	7.14E−02	5.73E−00	−0.192	B+	13
		2719.0605	2719.8661	20 874.481–57 640.997		7–7	7.40E−01	8.21E−02	5.14E−00	−0.241	B	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2701.9104	2702.7119	20 641.109	–57 640.997	9–7	1.1E−01	8.9E−03	7.2E−01	−1.10	D+	13
		2725.8060	2726.6133	20 874.481	–57 550.006	7–9	2.4E−02	3.5E−03	2.2E−01	−1.62	D+	13
		2731.2814	2732.0899	21 038.986	–57 640.997	5–7	6.8E−02	1.1E−02	4.8E−01	−1.27	D+	13
252	$b\ ^3F$–Fsp1 $^3G^\circ$											
		2529.3077	2530.0682	21 038.986	–60 563.610	5–7	4.86E−00	6.53E−01	2.72E+01	0.514	B	13
253	$b\ ^3F$–$t\ ^3H^\circ$											
		2505.0079	2505.7626	20 641.109	–60 549.112	9–11	2.56E−01	2.94E−02	2.18E−00	−0.577	C+	13
		2506.5723	2507.3275	20 874.481	–60 757.592	7–9	2.04E−01	2.47E−02	1.43E−00	−0.762	C+	13
		2491.9892	2492.7410	20 641.109	–60 757.592	9–9	3.3E−01	3.0E−02	2.2E−00	−0.57	D+	13
254	$a\ ^3G$–$y\ ^3F^\circ$											
		6677.9870	6679.8308	21 715.731	–36 686.174	11–9	6.34E−03	3.47E−03	8.40E−01	−1.418	B	13
		6592.9138	6594.7348	21 999.129	–37 162.744	9–7	7.37E−03	3.74E−03	7.31E−01	−1.473	C+	13
		6546.2395	6548.0479	22 249.428	–37 521.158	7–5	9.1E−03	4.16E−03	6.3E−01	−1.54	C	13
		6806.8449	6808.7234	21 999.129	–36 686.174	9–9	1.2E−03	8.2E−04	1.7E−01	−2.13	E	2*n*
		6703.5674	6705.4182	22 249.428	–37 162.744	7–7	1.8E−04	1.2E−04	1.9E−02	−3.06	D	2*n*
255	$a\ ^3G$–$y\ ^3D^\circ$											
		6180.2042	6181.9143	21 999.129	–38 175.352	9–7	5.6E−04	2.5E−04	4.6E−02	−2.65	D+	13
		6085.2590	6086.9437	22 249.428	–38 678.036	7–5	7.0E−04	2.8E−04	3.9E−02	−2.71	D+	13
256	$a\ ^3G$–$y\ ^3G^\circ$											
		4239.8477	4241.0415	21 715.731	–45 294.843	11–11	7.67E−03	2.07E−03	3.18E−01	−1.643	B+	13
		4266.9645	4268.1654	21 999.129	–45 428.399	9–9	6.27E−03	1.71E−03	2.17E−01	−1.812	B+	13
		4288.1458	4289.3523	22 249.428	–45 562.971	7–7	4.49E−03	1.24E−03	1.22E−01	−2.062	B+	13
		4242.5960	4243.7905	21 999.129	–45 562.971	9–7	1.19E−03	2.50E−04	3.14E−02	−2.648	C+	13
257	$a\ ^3G$–$x\ ^5G^\circ$											
		4145.1995	4146.3685	21 715.731	–45 833.220	11–9	7.8E−04	1.6E−04	2.5E−02	−2.74	E	2*n*
258	$a\ ^3G$–$u\ ^5D^\circ$											
		3998.0527	3999.1832	21 715.731	–46 720.839	11–9	5.70E−02	1.12E−02	1.62E−00	−0.910	B	13
259	$a\ ^3G$–$x\ ^3F^\circ$											
		3971.3227	3972.4462	21 715.731	–46 889.139	11–9	4.97E−02	9.63E−03	1.39E−00	−0.975	B	13
		3983.9564	3985.0832	21 999.129	–47 092.709	9–7	5.72E−02	1.06E−02	1.25E−00	−1.021	B	13
		4007.2721	4008.4050	22 249.428	–47 197.007	7–5	4.40E−02	7.57E−03	6.99E−01	−1.276	B	13
		4024.0963	4025.2335	22 249.428	–47 092.709	7–7	1.07E−03	2.60E−04	2.41E−02	−2.74	C	13
		4057.3435	4058.4895	22 249.428	–46 889.139	7–9	4.95E−03	1.57E−03	1.47E−01	−1.96	C	13
260	$a\ ^3G$–$z\ ^3H^\circ$	*3986.702*	*3987.829*	*21 948.56*	*–47 024.86*	27–33	1.37E−01	3.99E−02	1.41E+01	0.032	B+	13
		3956.6768	3957.7964	21 715.731	–46 982.317	11–13	1.22E−01	3.39E−02	4.85E−00	−0.429	B+	13
		3997.3922	3998.5225	21 999.129	–47 008.368	9–11	1.26E−01	3.69E−02	4.37E−00	−0.479	B+	13
		4021.8665	4023.0032	22 249.428	–47 106.481	7–9	8.55E−02	2.67E−02	2.47E−00	−0.729	B	13
		3952.6015	3953.7201	21 715.731	–47 008.368	11–11	2.97E−02	6.96E−03	9.97E−01	−1.116	B+	13
		3981.7711	3982.8973	21 999.129	–47 106.481	9–9	3.57E−02	8.49E−03	1.00E−00	−1.117	B	13
		3937.3279	3938.4425	21 715.731	–47 106.481	11–9	1.66E−02	3.16E−03	4.51E−01	−1.459	B	13
261	$a\ ^3G$–$w\ ^3D^\circ$											
		3995.9835	3997.1134	21 999.129	–47 017.185	9–7	1.60E−02	2.98E−03	3.53E−01	−1.572	B	13
		4017.0835	4018.2189	22 249.428	–47 136.081	7–5	8.4E−03	1.46E−03	1.35E−01	−1.99	C	13
		4036.3665	4037.5070	22 249.428	–47 017.185	7–7	9.6E−04	2.3E−04	2.2E−02	−2.79	E	2*n*
262	$a\ ^3G$–$w\ ^5G^\circ$											
		3897.8899	3898.9942	21 715.731	–47 363.373	11–13	6.20E−02	1.67E−02	2.36E−00	−0.736	B	13
		3932.6273	3933.7407	21 999.129	–47 420.225	9–11	2.70E−02	7.65E−03	8.92E−01	−1.162	C+	13
		3945.1172	3946.2338	22 249.428	–47 590.045	7–9	1.65E−02	4.95E−03	4.50E−01	−1.460	C+	13
		3929.1164	3930.2288	22 249.428	–47 693.236	7–7	8.11E−03	1.88E−03	1.70E−01	−1.881	C+	13
		3863.7413	3864.8368	21 715.731	–47 590.045	11–9	1.84E−02	3.37E−03	4.72E−01	−1.431	C+	13
		3890.8405	3891.9430	21 999.129	–47 693.236	9–7	3.06E−02	5.40E−03	6.23E−01	−1.313	C+	13
		3907.9341	3909.0410	22 249.428	–47 831.150	7–5	6.7E−02	1.09E−02	9.8E−01	−1.12	C	13
263	$a\ ^3G$–$z\ ^1G^\circ$											
		3884.3587	3885.4595	21 715.731	–47 452.714	11–9	3.99E−02	7.39E−03	1.04E−00	−1.090	B	13
264	$a\ ^3G$–$v\ ^5F^\circ$											
		3813.6349	3814.7173	21 715.731	–47 929.994	11–9	2.07E−02	3.69E−03	5.10E−01	−1.391	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3826.8415	3827.9273	21 999.129–48 122.925		9–7	2.29E−02	3.91E−03	4.43E−01	−1.454	C+	13
265	$a\ ^3G–x\ ^3G^\circ$	*3863.128*	*3864.223*	*21 948.56–47 826.98*		27–27	2.86E−02	6.41E−03	2.20E−00	−0.762	B	13
		3827.5716	3828.6576	21 715.731–47 834.547		11–11	1.56E−02	3.42E−03	4.75E−01	−1.424	B	13
		3872.9212	3874.0191	21 999.129–47 812.115		9–9	8.86E−03	1.99E−03	2.29E−01	−1.746	B	13
		3907.4653	3908.5721	22 249.428–47 834.218		7–7	8.15E−03	1.87E−03	1.68E−01	−1.884	B	13
		3830.8619	3831.9488	21 715.731–47 812.115		11–9	1.07E−02	1.93E−03	2.67E−01	−1.674	B	13
		3869.6080	3870.7050	21 999.129–47 834.218		9–7	9.83E−03	1.72E−03	1.97E−01	−1.811	B	13
		3869.5583	3870.6552	21 999.129–47 834.547		9–11	1.59E−02	4.36E−03	5.00E−01	−1.406	B	13
		3910.8437	3911.9514	22 249.428–47 812.115		7–9	1.37E−02	4.04E−03	3.64E−01	−1.549	C+	13
266	$a\ ^3G–y\ ^5H^\circ$											
		3811.0350	3812.1168	21 999.129–48 231.277		9–11	2.06E−03	5.48E−04	6.19E−02	−2.307	C+	13
		3828.5040	3829.5903	22 249.428–48 361.879		7–9	3.22E−03	9.10E−04	8.03E−02	−2.196	B	13
		3770.3015	3771.3726	21 715.731–48 231.277		11–11	1.31E−02	2.79E−03	3.81E−01	−1.513	B+	13
		3792.1544	3793.2313	21 999.129–48 361.879		9–9	1.93E−02	4.16E−03	4.67E−01	−1.427	B	13
		3811.8910	3812.9729	22 249.428–48 475.683		7–7	2.52E−02	5.49E−03	4.83E−01	−1.415	B+	13
		3751.8214	3752.8878	21 715.731–48 361.879		11–9	4.74E−03	8.20E−04	1.11E−01	−2.045	B	13
		3775.8541	3776.9267	21 999.129–48 475.683		9–7	3.38E−03	5.62E−04	6.29E−02	−2.296	C+	13
267	$a\ ^3G–z\ ^1H^\circ$											
		3789.1761	3790.2521	21 999.129–48 382.600		9–11	2.16E−02	5.69E−03	6.38E−01	−1.291	B	13
268	$a\ ^3G–y\ ^1G^\circ$											
		3704.4612	3705.5153	21 715.731–48 702.532		11–9	1.42E−01	2.39E−02	3.21E−00	−0.580	B	13
		3743.7765	3744.8408	21 999.129–48 702.532		9–9	3.55E−03	7.5E−04	8.3E−02	−2.17	C	13
269	$a\ ^3G–w\ ^3F^\circ$	*3664.351*	*3665.395*	*21 948.56–49 230.76*		27–21	4.40E−01	6.89E−02	2.24E+01	0.269	B	13
		3649.5063	3650.5462	21 715.731–49 108.893		11–9	3.94E−01	6.44E−02	8.51E−00	−0.150	B	13
		3669.5212	3670.5662	21 999.129–49 242.883		9–7	2.34E−01	3.67E−02	3.99E−00	−0.481	B	13
		3677.6277	3678.6748	22 249.428–49 433.128		7–5	6.08E−01	8.81E−02	7.47E−00	−0.210	B	13
		3687.6580	3688.7077	21 999.129–49 108.893		9–9	7.38E−02	1.51E−02	1.65E−00	−0.868	B	13
		3703.5479	3704.6017	22 249.428–49 242.883		7–7	3.84E−02	7.91E−03	6.75E−01	−1.257	B	13
		3722.0241	3723.0828	22 249.428–49 108.893		7–9	6.76E−03	1.81E−03	1.55E−01	−1.898	C+	13
270	$a\ ^3G–v\ ^3D^\circ$											
		3684.1076	3685.1564	21 999.129–49 135.020		9–7	2.97E−01	4.70E−02	5.13E−00	−0.374	B	13
		3718.4065	3719.4642	22 249.428–49 135.020		7–7	5.17E−02	1.07E−02	9.18E−01	−1.125	B	13
271	$a\ ^3G–y\ ^3H^\circ$	*3619.243*	*3620.275*	*21 948.56–49 570.78*		27–33	7.82E−01	1.88E−01	6.04E+01	0.705	B+	13
		3606.6794	3607.7082	21 715.731–49 434.160		11–13	8.29E−01	1.91E−01	2.50E+01	0.323	B+	13
		3621.4607	3622.4933	21 999.129–49 604.424		9–11	4.45E−01	1.07E−01	1.15E+01	−0.016	B+	13
		3638.2965	3639.3335	22 249.428–49 726.987		7–9	2.36E−01	6.02E−02	5.05E−00	−0.375	B+	13
		3584.6594	3585.6826	21 715.731–49 604.424		11–11	3.29E−01	6.33E−02	8.22E−00	−0.157	B+	13
		3605.4528	3606.4813	21 999.129–49 726.987		9–9	4.66E−01	9.09E−02	9.72E−00	−0.087	B+	13
		3568.9745	3569.9936	21 715.731–49 726.987		11–9	4.64E−02	7.25E−03	9.38E−01	−1.098	B+	13
272	$a\ ^3G–v\ ^3G^\circ$	*3613.119*	*3614.149*	*21 948.56–49 617.59*		27–27	6.55E−01	1.28E−01	4.12E+01	0.540	B	13
		3603.2035	3604.2315	21 715.731–49 460.899		11–11	2.59E−01	5.04E−02	6.58E−00	−0.256	B+	13
		3618.3858	3619.4177	21 999.129–49 627.881		9–9	8.88E−02	1.74E−02	1.87E−00	−0.804	B+	13
		3622.0034	3623.0361	22 249.428–49 850.587		7–7	5.14E−01	1.01E−01	8.44E−00	−0.150	B+	13
		3581.6467	3582.6691	21 715.731–49 627.881		11–9	3.21E−02	5.05E−03	6.56E−01	−1.255	C+	13
		3589.4519	3590.4763	21 999.129–49 850.587		9–7	1.05E−01	1.58E−02	1.68E−00	−0.848	B	13
		3640.3885	3641.4260	21 999.129–49 460.899		9–11	3.57E−01	8.68E−02	9.37E−00	−0.107	B+	13
		3651.4669	3652.5073	22 249.428–49 627.881		7–9	5.83E−01	1.50E−01	1.26E+01	0.021	B+	13
273	$a\ ^3G–Fsp3\ ^1F^\circ$											
		3638.2386	3639.2756	21 999.129–49 477.124		9–7	4.84E−03	7.5E−04	8.1E−02	−2.172	C	13
		3671.6878	3672.7334	22 249.428–49 477.124		7–7	6.47E−03	1.31E−03	1.11E−01	−2.038	C+	13
274	$a\ ^3G–x\ ^1G^\circ$											
		3459.4265	3460.4174	21 715.731–50 613.980		11–9	1.45E−02	2.13E−03	2.66E−01	−1.631	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3493.6892	3494.6889	21 999.129–50 613.980		9–9	8.6E−03	1.57E−03	1.63E−01	−1.85	C	13
275	$a\ ^3G–v\ ^3F^\circ$											
		3411.3532	3412.3318	21 999.129–51 304.601		9–9	6.0E−02	1.1E−02	1.1E−00	−1.02	D+	3*n*
276	$a\ ^3G–u\ ^3G^\circ$											
		3370.7834	3371.7516	21 715.731–51 373.907		11–11	2.89E−01	4.92E−02	6.01E−00	−0.266	B	13
		3369.5474	3370.5153	21 999.129–51 668.183		9–9	2.15E−01	3.66E−02	3.65E−00	−0.482	B	13
		3380.1100	3381.0806	22 249.428–51 825.770		7–7	1.66E−01	2.84E−02	2.22E−00	−0.701	B	13
		3337.6651	3338.6249	21 715.731–51 668.183		11–9	6.06E−02	8.28E−03	1.00E−00	−1.041	B	13
		3351.7440	3352.7074	21 999.129–51 825.770		9–7	2.19E−02	2.87E−03	2.85E−01	−1.588	B	13
		3398.2170	3399.1922	22 249.428–51 668.183		7–9	6.15E−03	1.37E−03	1.07E−01	−2.018	C+	15
277	$a\ ^3G–Hsp3\ ^1H^\circ$											
		3341.9060	3342.8669	21 715.731–51 630.175		11–11	3.02E−02	5.06E−03	6.12E−01	−1.255	C+	13
		3373.8711	3374.8402	21 999.129–51 630.175		9–11	2.82E−03	5.9E−04	5.9E−02	−2.28	C	13
278	$a\ ^3G–w\ ^3H^\circ$											
		3254.7233	3255.6620	21 715.731–52 431.443		11–13	5.7E−03	1.1E−03	1.3E−01	−1.93	D+	13
279	$a\ ^3G–Dsp3\ ^5F^\circ$											
		3095.2670	3096.1654	21 715.731–54 013.748		11–11	1.93E−02	2.77E−03	3.11E−01	−1.516	C+	13
280	$a\ ^3G–t\ ^3G^\circ$											
		3098.1893	3099.0885	21 715.731–53 983.289		11–11	7.52E−02	1.08E−02	1.21E−00	−0.924	B	13
		3101.0024	3101.9023	21 999.129–54 237.411		9–9	5.53E−02	7.97E−03	7.33E−01	−1.144	C+	13
		3090.2048	3091.1020	22 249.428–54 600.346		7–7	2.4E−02	3.4E−03	2.4E−01	−1.62	D+	13
		3073.9785	3074.8716	21 715.731–54 237.411		11–9	3.83E−02	4.44E−03	4.94E−01	−1.311	C	13
		3066.4789	3067.3702	21 999.129–54 600.346		9–7	9.11E−02	1.00E−02	9.09E−01	−1.046	B	13
281	$a\ ^3G–s\ ^3G^\circ$											
		2948.4336	2949.2954	21 999.129–55 905.532		9–9	3.32E−01	4.33E−02	3.78E−00	−0.410	B	13
		2980.5324	2981.4022	22 249.428–55 790.692		7–7	1.66E−01	2.21E−02	1.52E−00	−0.810	B	13
		2990.3915	2991.2638	21 999.129–55 429.815		9–11	3.5E−01	5.8E−02	5.1E−00	−0.28	D+	3*n*
282	$a\ ^3G–v\ ^3H^\circ$											
		2959.9922	2960.8569	21 715.731–55 489.738		11–13	5.02E−01	7.79E−02	8.36E−00	−0.067	B	13
		3011.4810	3012.3585	22 249.428–55 446.004		7–9	3.79E−01	6.63E−02	4.60E−00	−0.334	B+	13
		2956.8562	2957.7201	21 715.731–55 525.558		11–11	1.8E−02	2.3E−03	2.5E−01	−1.59	D+	13
		2988.9432	2989.8150	21 999.129–55 446.004		9–9	8.0E−03	1.1E−03	9.5E−02	−2.02	D+	13
283	$a\ ^3G–{}^2H4p\ ^1H^\circ$											
		2923.8526	2924.7083	21 715.731–55 907.174		11–11	2.97E−01	3.81E−02	4.03E−00	−0.378	B	13
284	$a\ ^3G–Gsp3\ ^1F^\circ$											
		2953.4857	2954.3488	22 249.428–56 097.832		7–7	3.64E−01	4.76E−02	3.24E−00	−0.477	C+	13
285	$a\ ^3G–u\ ^3H^\circ$											
		2887.8051	2888.6519	21 715.731–56 333.956		11–13	7.98E−02	1.18E−02	1.23E−00	−0.887	B+	13
		2907.5174	2908.3691	21 999.129–56 382.658		9–11	1.61E−01	2.49E−02	2.15E−00	−0.649	B	13
		2925.3577	2926.2138	22 249.428–56 423.279		7–9	1.69E−01	2.79E−02	1.88E−00	−0.710	B	13
		2883.7472	2884.5931	21 715.731–56 382.658		11–11	2.91E−02	3.63E−03	3.79E−01	−1.399	C+	13
		2904.0846	2904.9354	21 999.129–56 423.279		9–9	1.8E−02	2.3E−03	1.9E−01	−1.69	D+	13
286	$a\ ^3G–u\ ^3F^\circ$											
		2910.9280	2911.7800	22 249.428–56 592.699		7–9	2.4E−02	3.9E−03	2.6E−01	−1.56	D+	13
287	$a\ ^3G–t\ ^3F^\circ$											
		2789.8016	2790.6244	21 715.731–57 550.006		11–9	2.36E−01	2.25E−02	2.28E−00	−0.606	B+	13
		2804.8617	2805.6881	21 999.129–57 640.997		9–7	2.4E−01	2.2E−02	1.8E−00	−0.70	D+	13
		2812.0403	2812.8685	21 999.129–57 550.006		9–9	5.00E−02	5.93E−03	4.94E−01	−1.273	C+	13
288	$a\ ^3G–Fsp1\ ^3G^\circ$											
		2609.2209	2610.0002	22 249.428–60 563.610		7–7	4.60E−01	4.70E−02	2.83E−00	−0.483	C+	13
289	$z\ ^7F^\circ–e\ ^7D$	*4924.977*	*4926.352*	*22 928.04–43 227.04*		49–35	5.03E−01	1.31E−01	1.04E+02	0.807	B+	13
		4957.5968	4958.9803	22 650.414–42 815.852		13–11	4.22E−01	1.32E−01	2.79E+01	0.233	B+	13
		4920.5031	4921.8768	22 845.867–43 163.323		11–9	3.58E−01	1.06E−01	1.89E+01	0.068	B+	13
		4891.4924	4892.8584	22 996.672–43 434.624		9–7	3.08E−01	8.59E−02	1.24E+01	−0.112	B+	13
		4871.3182	4872.6789	23 110.937–43 633.530		7–5	2.44E−01	6.21E−02	6.97E−00	−0.362	B+	13
		4859.7414	4861.0990	23 192.498–43 763.977		5–3	1.62E−01	3.44E−02	2.76E−00	−0.764	B+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		5006.1191	5007.5155	22 845.867–42 815.852		11–11	5.87E−02	2.21E−02	4.00E−00	−0.615	B+	13
		4957.2986	4958.6820	22 996.672–43 163.323		9–9	1.18E−01	4.34E−02	6.38E−00	−0.408	B	13
		4918.9940	4920.3673	23 110.937–43 434.624		7–7	1.79E−01	6.50E−02	7.37E−00	−0.342	B	13
		4890.7551	4892.1209	23 192.498–43 633.530		5–5	2.25E−01	8.07E−02	6.50E−00	−0.394	B+	13
		4872.1378	4873.4986	23 244.836–43 763.977		3–3	2.54E−01	9.03E−02	4.35E−00	−0.567	B+	13
		5044.2114	5045.6179	22 996.672–42 815.852		9–11	2.29E−03	1.07E−03	1.60E−01	−2.017	B	13
		4985.5473	4986.9382	23 110.937–43 163.323		7–9	1.39E−02	6.67E−03	7.66E−01	−1.331	B	13
		4938.8138	4940.1923	23 192.498–43 434.624		5–7	3.27E−02	1.68E−02	1.36E−00	−1.077	B+	13
		4903.3102	4904.6793	23 244.836–43 633.530		3–5	6.58E−02	3.95E−02	1.91E−00	−0.926	B+	13
		4878.2112	4879.5736	23 270.382–43 763.977		1–3	1.21E−01	1.29E−01	2.08E−00	−0.888	B+	13
290	$z\,^7F^\circ - e\,^5D$											
		4611.1849	4612.4766	22 996.672–44 677.003		9–9	6.6E−04	2.1E−04	2.9E−02	−2.72	D+	14
		4554.4512	4555.7279	23 110.937–45 061.326		7–7	4.7E−04	1.5E−04	1.5E−02	−2.99	D	2*n*
		4515.1667	4516.4330	23 192.498–45 333.872		5–5	4.4E−04	1.4E−04	1.0E−02	−3.17	E	2*n*
		4635.6170	4636.9152	23 110.937–44 677.003		7–9	1.0E−04	4.2E−05	4.5E−03	−3.53	E	2*n*
		4571.4378	4572.7190	23 192.498–45 061.326		5–7	2.8E−04	1.2E−04	9.3E−03	−3.21	E	2*n*
		4525.8635	4527.1326	23 244.836–45 333.872		3–5	4.7E−04	2.4E−04	1.1E−02	−3.14	E	2*n*
291	$z\,^7F^\circ - e\,^7F$											
		3610.1591	3611.1888	22 650.414–50 342.126		13–13	5.90E−01	1.15E−01	1.78E+01	0.176	C+	13
		3571.9953	3573.0151	22 845.867–50 833.435		11–11	2.89E−01	5.53E−02	7.15E−00	−0.216	B+	13
		3545.6400	3546.6530	22 996.672–51 192.270		9–9	2.05E−01	3.86E−02	4.06E−00	−0.459	B+	13
		3552.8280	3553.8429	23 192.498–51 331.049		5–5	1.74E−01	3.30E−02	1.93E−00	−0.783	B+	13
		3575.1136	3576.1343	23 244.836–51 207.995		3–3	1.60E−01	3.07E−02	1.08E−00	−1.036	B	13
		3568.4324	3569.4514	23 192.498–51 207.995		5–3	5.32E−02	6.10E−03	3.58E−01	−1.516	C+	13
		3591.3493	3592.3742	22 996.672–50 833.435		9–11	7.8E−03	1.8E−03	2.0E−01	−1.78	E	2*n*
		3578.3825	3579.4040	23 270.382–51 207.995		1–3	7.82E−02	4.51E−02	5.31E−01	−1.346	C+	13
292	$z\,^7F^\circ - f\,^7D$											
		3605.5006	3606.5291	22 650.414–50 377.905		13–11	2.12E−01	3.50E−02	5.40E−00	−0.342	B	13
		3575.2452	3576.2659	22 845.867–50 807.994		11–9	7.43E−02	1.17E−02	1.51E−00	−0.892	C+	13
		3584.7858	3585.8089	23 110.937–50 998.642		7–5	1.56E−01	2.15E−02	1.77E−00	−0.823	B	13
		3588.9178	3589.9420	23 192.498–51 048.104		5–3	2.15E−01	2.49E−02	1.47E−00	−0.905	C+	13
		3631.0970	3632.1321	22 845.867–50 377.905		11–11	2.15E−01	4.25E−02	5.59E−00	−0.330	B	13
		3594.6322	3595.6579	22 996.672–50 807.994		9–9	3.14E−01	6.08E−02	6.48E−00	−0.262	B+	13
		3602.4621	3603.4899	23 110.937–50 861.813		7–7	1.02E−01	1.99E−02	1.65E−00	−0.857	B	13
		3595.3014	3596.3272	23 192.498–50 998.642		5–5	8.21E−02	1.59E−02	9.43E−01	−1.099	B	13
		3651.0975	3652.1378	22 996.672–50 377.905		9–11	7.7E−03	1.89E−03	2.04E−01	−1.77	C	13
		3602.0827	3603.1103	23 244.836–50 998.642		3–5	3.2E−02	1.0E−02	3.7E−01	−1.50	D	2*n*
293	$z\,^7F^\circ - f\,^5D$											
		3625.1417	3626.1753	22 845.867–50 423.134		11–9	8.15E−02	1.31E−02	1.73E−00	−0.840	C+	13
		3630.3478	3631.3827	22 996.672–50 534.394		9–7	1.04E−01	1.60E−02	1.72E−00	−0.842	B	13
		3610.6946	3611.7245	23 192.498–50 880.099		5–3	1.05E−01	1.23E−02	7.31E−01	−1.211	C+	13
		3645.0748	3646.1135	22 996.672–50 423.134		9–9	2.9E−02	5.8E−03	6.3E−01	−1.28	D+	13
294	$z\,^7F^\circ - e\,^7P$											
		3618.2990	3619.3308	22 845.867–50 475.285		11–9	4.89E−02	7.86E−03	1.03E−00	−1.063	C+	13
		3620.2402	3621.2725	22 996.672–50 611.258		9–7	1.3E−02	2.0E−03	2.2E−01	−1.74	E	2*n*
		3602.5255	3603.5532	23 110.937–50 861.324		7–5	2.12E−01	2.94E−02	2.44E−00	−0.686	C+	13
		3613.1448	3614.1752	23 192.498–50 861.324		5–5	3.39E−02	6.6E−03	3.95E−01	−1.479	C	13
295	$z\,^7F^\circ - e\,^5G$											
		3586.7385	3587.7621	22 650.414–50 522.941		13–13	3.62E−02	7.0E−03	1.07E−00	−1.042	C	13
		3588.6093	3589.6334	22 845.867–50 703.867		11–11	1.19E−01	2.30E−02	2.99E−00	−0.597	B	13
		3572.5905	3573.6105	22 996.672–50 979.576		9–9	3.31E−02	6.3E−03	6.7E−01	−1.244	C	13
		3556.6806	3557.6965	23 110.937–51 219.012		7–7	3.15E−02	5.97E−03	4.89E−01	−1.379	B	13
		3612.0686	3613.0988	22 845.867–50 522.941		11–13	1.11E−01	2.57E−02	3.36E−00	−0.549	B	13
		3608.1416	3609.1708	22 996.672–50 703.867		9–11	6.22E−02	1.49E−02	1.59E−00	−0.874	C+	13
		3587.2392	3588.2630	23 110.937–50 979.576		7–9	7.7E−02	1.92E−02	1.59E−00	−0.87	C	13
		3567.0312	3568.0498	23 192.498–51 219.012		5–7	8.34E−02	2.23E−02	1.31E−00	−0.953	B+	13
		3554.5014	3555.5167	23 244.836–51 370.142		3–5	9.87E−02	3.12E−02	1.09E−00	−1.029	B	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
296	$z\,^7F^\circ$–$e\,^7G$											
		3554.9246	3555.9400	22 845.867–50 967.828		11–13	1.40E−00	3.14E−01	4.04E+01	0.538	B+	13
		3541.0833	3542.0952	22 996.672–51 228.550		9–11	8.65E−01	1.99E−01	2.09E+01	0.253	B+	13
		3542.0756	3543.0878	23 110.937–51 334.908		7–9	9.51E−01	2.30E−01	1.88E+01	0.207	B+	13
		3536.5559	3537.5666	23 192.498–51 460.515		5–7	9.95E−01	2.61E−01	1.52E+01	0.116	B+	13
		3533.1982	3534.2081	23 244.836–51 539.717		3–5	8.25E−01	2.58E−01	8.99E−00	−0.112	B+	13
		3533.0066	3534.0165	23 270.382–51 566.799		1–3	8.52E−01	4.79E−01	5.57E−00	−0.320	B	13
		3530.3868	3531.3959	22 650.414–50 967.828		13–13	4.7E−02	8.7E−03	1.3E−00	−0.95	D+	13
		3522.2680	3523.2751	22 845.867–51 228.550		11–11	5.03E−02	9.37E−03	1.20E−00	−0.987	B	13
		3527.7928	3528.8013	22 996.672–51 334.908		9–9	2.17E−01	4.05E−02	4.24E−00	−0.438	B+	13
		3526.3814	3527.3895	23 110.937–51 460.515		7–7	4.13E−01	7.71E−02	6.27E−00	−0.268	B+	13
		3526.6746	3527.6828	23 192.498–51 539.717		5–5	5.26E−01	9.82E−02	5.70E−00	−0.309	B+	13
		3529.8198	3530.8288	23 244.836–51 566.799		3–3	7.75E−01	1.45E−01	5.05E−00	−0.362	B	13
		3509.1188	3510.1225	22 845.867–51 334.908		11–9	5.0E−03	7.5E−04	9.5E−02	−2.08	E	2*n*
		3512.2256	3513.2300	22 996.672–51 460.515		9–7	2.51E−02	3.61E−03	3.76E−01	−1.488	C+	13
		3516.5574	3517.5630	23 110.937–51 539.717		7–5	6.82E−02	9.03E−03	7.32E−01	−1.199	B	13
		3523.3087	3524.3160	23 192.498–51 566.799		5–3	1.06E−01	1.18E−02	6.86E−01	−1.228	C+	13
297	$z\,^7F^\circ$–$f\,^5F$											
		3537.8949	3538.9060	22 845.867–51 103.188		11–11	8.0E−02	1.5E−02	1.9E−00	−0.78	E	2*n*
		3556.8779	3557.8938	22 996.672–51 103.188		9–11	4.1E−01	9.6E−02	1.0E+01	−0.06	D	3*n*
		3526.2380	3527.2460	23110.937–51 461.667		7–9	1.70E−01	4.07E−02	3.31E−00	−0.545	B+	13
		3518.6829	3519.6890	23 192.498–51 604.100		5–7	2.35E−02	6.11E−03	3.54E−01	−1.515	C+	13
298	$z\,^7F^\circ$–$g\,^5D$											
		3540.1211	3541.1328	23 110.937–51 350.489		7–9	9.48E−02	2.29E−02	1.87E−00	−0.795	C+	13
299	$z\,^7F^\circ$–$e\,^7S$											
		3522.8976	3523.9048	23 192.498–51 570.094		5–7	3.51E−02	9.14E−03	5.30E−01	−1.340	C+	13
300	$z\,^7F^\circ$–$g\,^7D$											
		3196.1226	3197.0464	22 845.867–54 124.740		11–9	1.40E−01	1.75E−02	2.03E−00	−0.715	B+	13
		3211.6075	3212.5353	22 996.672–54 124.740		9–9	3.07E−02	4.75E−03	4.52E−01	−1.369	C+	13
301	$b\,^3P$–$z\,^3D^\circ$											
		11 783.267	8484.290 cm^{-1}	22 838.321–31 322.611		5–7	1.83E−03	5.33E−03	1.03E−00	−1.574	B	13
		11 439.127	8739.535 cm^{-1}	22 946.814–31 686.349		3–5	1.81E−03	5.91E−03	6.68E−01	−1.751	B	13
		11 251.116	8885.575 cm^{-1}	23 051.748–31 937.323		1–3	1.13E−03	6.43E−03	2.38E−01	−2.192	B	13
		11 298.862	8848.028 cm^{-1}	22 838.321–31 686.349		5–5	2.70E−04	5.16E−04	9.61E−02	−2.588	B	13
		11 119.798	8990.509 cm^{-1}	22 946.814–31 937.323		3–3	1.13E−03	2.09E−03	2.30E−01	−2.202	C+	13
302	$b\,^3P$–$y\,^5D^\circ$											
		9210.0258	9212.5533	22 946.814–33 801.570		3–5	6.2E−04	1.3E−03	1.2E−01	−2.40	D+	13
		9118.8816	9121.3845	22 838.321–33 801.570		5–5	1.2E−03	1.5E−03	2.3E−01	−2.12	D+	13
303	$b\,^3P$–$z\,^3P^\circ$	*8882.495*	*8884.934*	*22 898.20–34 153.21*		9–9	1.30E−02	1.54E−02	4.05E−00	−0.86	C	13
		8999.5566	9002.0272	22 838.321–33 946.931		5–5	1.1E−02	1.3E−02	1.9E−00	−1.19	D+	13
		8757.1876	8759.5926	22 946.814–34 362.871		3–3	3.52E−03	4.05E−03	3.51E−01	−1.92	C	13
		8674.7465	8677.1291	22 838.321–34 362.871		5–3	6.2E−03	4.18E−03	6.0E−01	−1.68	C	13
		8611.8040	8614.1696	22 946.814–34 555.595		3–1	1.27E−02	4.71E−03	4.01E−01	−1.850	C+	13
		9088.3186	9090.8132	22 946.814–33 946.931		3–5	2.2E−03	4.5E−03	4.0E−01	−1.87	D	13
		8838.4290	8840.8559	23 051.748–34 362.871		1–3	3.83E−03	1.35E−02	3.92E−01	−1.87	C	13
304	$b\,^3P$–$y\,^3D^\circ$											
		6518.3671	6520.1681	22 838.321–38 175.352		5–7	1.1E−03	1.0E−03	1.1E−01	−2.30	D+	13
		6355.0290	6356.7861	22 946.814–38 678.036		3–5	1.69E−03	1.71E−03	1.07E−01	−2.291	C	13
		6270.2250	6271.9593	23 051.748–38 995.733		1–3	1.4E−03	2.5E−03	5.1E−02	−2.61	D	13
		6311.5003	6313.2457	22 838.321–38 678.036		5–5	2.42E−04	1.45E−04	1.50E−02	−3.141	C+	15
		6229.2283	6230.9516	22 946.814–38 995.733		3–3	9.0E−04	5.2E−04	3.2E−02	−2.81	D+	14
305	$b\,^3P$–$z\,^5S^\circ$											
		5536.5801	5538.1179	22 838.321–40 894.987		5–5	8.1E−05	3.7E−05	3.4E−03	−3.73	E	2*n*
306	$b\,^3P$–$w\,^5D^\circ$											
		4741.5297	4742.8559	22 838.321–43 922.665		5–7	7.3E−03	3.4E−03	2.7E−01	−1.76	D+	13
		4707.4877	4708.8049	22 946.814–44 183.625		3–5	2.92E−03	1.62E−03	7.5E−02	−2.314	C	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		4680.4672	4681.7773	23 051.748	–44 411.157	1–3	1.9E–03	1.9E–03	2.9E–02	–2.73	D	13
		4683.5597	4684.8705	22 838.321	–44 183.625	5–5	2.92E–03	9.6E–04	7.4E–02	–2.319	C	13
		4657.5848	4658.8887	22 946.814	–44 411.157	3–3	1.5E–03	4.9E–04	2.2E–02	–2.84	D	2*n*
307	$b\ ^3P–v\ ^5D^\circ$											
		4687.3865	4688.6983	22 838.321	–44 166.203	5–7	7.5E–04	3.46E–04	2.67E–02	–2.76	C	13
		4603.3424	4604.6320	22 946.814	–44 664.072	3–5	5.3E–04	2.8E–04	1.3E–02	–3.08	E	2*n*
308	$b\ ^3P–w\ ^5F^\circ$											
		4685.0246	4686.3358	22 946.814	–44 285.451	3–5	3.2E–04	1.8E–04	8.2E–03	–3.27	E	2*n*
309	$b\ ^3P–y\ ^5S^\circ$											
		4635.8462	4637.1444	22 946.814	–44 511.809	3–5	2.72E–03	1.46E–03	6.69E–02	–2.358	C+	13
310	$b\ ^3P–x\ ^3D^\circ$	*4461.225*	*4462.477*	*22 898.20*	*–45 307.28*	9–15	1.40E–01	6.97E–02	9.21E–00	–0.203	B+	13
		4466.5518	4467.8053	22 838.321	–45 220.678	5–7	1.20E–01	5.02E–02	3.69E–00	–0.600	B+	13
		4476.0186	4477.2746	22 946.814	–45 281.830	3–5	1.01E–01	5.06E–02	2.24E–00	–0.819	B+	13
		4443.1942	4444.4415	23 051.748	–45 551.764	1–3	1.02E–01	9.06E–02	1.33E–00	–1.043	B+	13
		4454.3810	4455.6312	22 838.321	–45 281.830	5–5	3.38E–02	1.00E–02	7.37E–01	–1.299	B+	13
		4422.5681	4423.8100	22 946.814	–45 551.764	3–3	8.72E–02	2.56E–02	1.12E–00	–1.115	B+	13
		4401.4429	4402.6793	22 838.321	–45 551.764	5–3	8.18E–03	1.43E–03	1.03E–01	–2.147	C+	13
311	$b\ ^3P–w\ ^5P^\circ$											
		4290.8647	4292.0719	22 838.321	–46 137.094	5–7	3.83E–03	1.48E–03	1.05E–01	–2.131	C+	13
		4279.8700	4281.0743	23 051.748	–46 410.378	1–3	6.5E–03	5.3E–03	7.5E–02	–2.27	D	2*n*
		4258.6112	4259.8099	22 838.321	–46 313.534	5–5	8.0E–03	2.2E–03	1.5E–01	–1.96	D	2*n*
		4241.1143	4242.3084	22 838.321	–46 410.378	5–3	4.3E–03	7.0E–04	4.9E–02	–2.45	D	2*n*
312	$b\ ^3P–z\ ^3S^\circ$	*4217.756*	*4218.944*	*22 898.20*	*–46 600.815*	9–3	1.8E–01	1.6E–02	2.0E–00	–0.83	D+	3*n*
		4207.1271	4208.3123	22 838.321	–46 600.815	5 3	4.8E–02	7.7E–03	5.3E–01	–1.41	D+	3*n*
		4226.4240	4227.6142	22 946.814	–46 600.815	3–3	4.3E–02	1.1E–02	4.8E–01	–1.46	D+	3*n*
		4245.2572	4246.4524	23 051.748	–46 600.815	1–3	9.0E–02	7.3E–02	1.0E–00	–1.13	D+	3*n*
313	$b\ ^3P–y\ ^3P^\circ$	*4186.238*	*4187.418*	*22 898.20*	*–46 779.26*	9–9	2.31E–01	6.1E–02	7.5E–00	–0.263	C	3*n*, 13
		4184.8918	4186.0712	22 838.321	–46 727.071	5–5	1.03E–01	2.70E–02	1.86E–00	–0.869	B	13
		4173.3151	4174.4914	22 946.814	–46 901.829	3–3	2.63E–02	6.87E–03	2.83E–01	–1.686	C+	13
		4154.4987	4155.6701	22 838.321	–46 901.829	5–3	2.64E–01	4.10E–02	2.81E–00	–0.688	B	13
		4213.6474	4214.8343	22 946.814	–46 672.537	3–1	2.1E–01	1.9E–02	7.7E–01	–1.25	D+	3*n*
		4203.9848	4205.1692	22 946.814	–46 727.071	3–5	7.37E–02	3.26E–02	1.35E–00	–1.010	B	13
		4191.6765	4192.8577	23 051.748	–46 901.829	1–3	4.06E–02	3.21E–02	4.44E–01	–1.493	B	13
314	$b\ ^3P–u\ ^5D^\circ$											
		4181.7547	4182.9332	22 838.321	–46 744.990	5–7	2.32E–01	8.51E–02	5.86E–00	–0.371	B	13
		4175.6361	4176.8130	22 946.814	–46 888.514	3–5	1.14E–01	4.96E–02	2.05E–00	–0.827	B	13
		4156.7988	4157.9708	22 838.321	–46 888.514	5–5	1.20E–01	3.11E–02	2.13E–00	–0.808	B	13
		4125.8804	4127.0443	22 946.814	–47 177.231	3–3	8.0E–03	2.03E–03	8.3E–02	–2.215	C	13
		4107.4883	4108.6474	22 838.321	–47 177.231	5–3	1.74E–01	2.64E–02	1.79E–00	–0.879	B	13
		4126.8545	4128.0186	22 946.814	–47 171.528	3–1	1.3E–02	1.1E–03	4.4E–02	–2.49	D	2*n*
315	$b\ ^3P–x\ ^3F^\circ$											
		4121.8026	4122.9655	22 838.321	–47 092.709	5–7	1.99E–02	7.10E–03	4.82E–01	–1.450	B	13
		4122.5155	4123.6785	22 946.814	–47 197.007	3–5	3.23E–02	1.37E–02	5.58E–01	–1.386	B	13
316	$b\ ^3P–w\ ^3D^\circ$	*4129.430*	*4130.595*	*22 898.20*	*–47 107.78*	9–15	1.58E–01	6.73E–02	8.23E–00	–0.218	C+	13,15
		4134.6776	4135.8438	22 838.321	–47 017.185	5–7	1.25E–01	4.49E–02	3.06E–00	–0.649	C+	13
		4132.8992	4134.0649	22 946.814	–47 136.081	3–5	7.70E–02	3.29E–02	1.34E–00	–1.006	B	13
		4127.6078	4128.7721	23 051.748	–47 272.024	1–3	1.43E–01	1.10E–01	1.49E–00	–0.960	B	13
		4114.4450	4115.6059	22 838.321	–47 136.081	5–5	3.92E–02	9.95E–03	6.74E–01	–1.303	C+	13
		4109.8017	4110.9614	22 946.814	–47 272.024	3–3	1.51E–01	3.83E–02	1.55E–00	–0.940	B	13
		4091.5531	4092.7080	22 838.321	–47 272.024	5–3	1.14E–02	1.71E–03	1.15E–01	–2.068	B	15
317	$b\ ^3P–Psp3\ ^1D^\circ$											
		4085.0041	4086.1573	22 946.814	–47 419.684	3–5	4.7E–02	2.0E–02	8.0E–01	–1.23	D	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
318	$b\ ^3P–y\ ^3S^\circ$	*4054.431*	*4055.576*	*22 898.20*	*–47 555.607*	9–3	3.27E−01	2.68E−02	3.23E−00	−0.617	C+	13
		4044.6092	4045.7518	22 838.321	–47 555.607	5–3	8.17E−02	1.20E−02	8.01E−01	−1.221	B	13
		4062.4409	4063.5882	22 946.814	–47 555.607	3–3	1.85E−01	4.58E−02	1.84E−00	−0.862	C+	13
		4079.8380	4080.9899	23 051.748	–47 555.607	1–3	5.83E−02	4.37E−02	5.86E−01	−1.360	B	13
319	$b\ ^3P–v\ ^5F^\circ$											
		3953.8576	3954.9765	22 838.321	–48 122.925	5–7	6.4E−03	2.1E−03	1.4E−01	−1.98	D	2*n*
		3952.6958	3953.8144	22 946.814	–48 238.844	3–5	3.5E−02	1.4E−02	5.3E−01	−1.39	D+	13
		3935.8124	3936.9267	22 838.321	–48 238.844	5–5	1.14E−01	2.65E−02	1.72E−00	−0.878	C+	13
		3935.3067	3936.4208	22 946.814	–48 350.603	3–3	2.2E−02	5.0E−03	2.0E−01	−1.82	D	2*n*
320	$b\ ^3P–v\ ^5P^\circ$											
		3964.5153	3965.6370	22 946.814	–48 163.443	3–5	2.17E−02	8.53E−03	3.34E−01	−1.592	C+	13
		3961.1402	3962.2610	23 051.748	–48 289.868	1–3	2.6E−02	1.8E−02	2.4E−01	−1.74	E	2*n*
		3947.5309	3948.6481	22 838.321	–48 163.443	5–5	5.12E−02	1.20E−02	7.78E−01	−1.223	B	13
		3944.7387	3945.8553	22 946.814	–48 289.868	3–3	1.3E−02	3.0E−03	1.2E−01	−2.04	E	2*n*
321	$b\ ^3P–x\ ^3P^\circ$	*3921.348*	*3922.459*	*22 898.20*	*–48 392.41*	9–9	2.40E−01	5.53E−02	6.43E−00	−0.303	C+	13
		3925.6438	3926.7553	22 838.321	–48 304.640	5–5	8.04E−02	1.86E−02	1.20E−00	−1.032	B	13
		3909.8296	3910.9370	22 946.814	–48 516.135	3–3	6.99E−02	1.60E−02	6.19E−01	−1.318	B	13
		3893.3094	3894.4125	22 838.321	–48 516.135	5–3	4.52E−02	6.17E−03	3.95E−01	−1.511	B	13
		3918.4154	3919.5251	22 946.814	–48 460.110	3–1	4.22E−01	3.24E−02	1.26E−00	−1.012	C+	13
		3942.4399	3943.5559	22 946.814	–48 304.640	3–5	9.62E−02	3.74E−02	1.46E−00	−0.950	C+	13
		3925.9413	3927.0529	23 051.748	–48 516.135	1–3	1.67E−01	1.16E−01	1.50E−00	−0.936	C+	13
322	$b\ ^3P–w\ ^3F^\circ$											
		3786.1494	3787.2246	22 838.321	–49 242.883	5–7	3.20E−02	9.64E−03	6.01E−01	−1.317	B	13
323	$b\ ^3P–v\ ^3D^\circ$											
		3801.6794	3802.7587	22 838.321	–49 135.020	5–7	6.26E−02	1.90E−02	1.19E−00	−1.022	C+	13
		3809.0399	3810.1211	23 051.748	–49 297.632	1–3	1.7E−02	1.1E−02	1.4E−01	−1.95	E	2*n*
		3786.1869	3787.2622	22 838.321	–49 242.618	5–5	1.3E−01	2.8E−02	1.7E−00	−0.86	D	2*n*
		3793.8716	3794.9489	22 946.814	–49 297.632	3–3	6.13E−02	1.32E−02	4.96E−01	−1.401	B	13
		3778.3147	3779.3879	22 838.321	–49 297.632	5–3	2.21E−02	2.84E−03	1.77E−01	−1.848	C+	13
324	$b\ ^3P–w\ ^3P^\circ$											
		3655.4649	3656.5063	22 838.321	–50 186.831	5–5	1.18E−01	2.37E−02	1.42E−00	−0.927	B	13
		3674.7636	3675.8100	22 838.321	–50 043.210	5–3	7.91E−02	9.62E−03	5.82E−01	−1.318	B	13
		3702.0294	3703.0828	22 946.814	–49 951.341	3–1	3.7E−01	2.5E−02	9.3E−01	−1.12	D+	3*n*
		3670.0244	3671.0695	22 946.814	–50 186.831	3–5	8.60E−02	2.90E−02	1.05E−00	−1.061	B	13
		3703.8212	3704.8751	23 051.748	–50 043.210	1–3	1.02E−01	6.30E−02	7.68E−01	−1.201	B	13
325	$b\ ^3P–u\ ^3D^\circ$											
		3431.8116	3432.7955	22 838.321	–51 969.098	5–7	5.53E−02	1.37E−02	7.73E−01	−1.165	B	13
		3381.3339	3382.3048	22 946.814	–52 512.453	3–3	2.71E−02	4.65E−03	1.55E−01	−1.86	C	13
326	$b\ ^3P–t\ ^3D^\circ$											
		3403.2900	3404.2666	22 838.321	–52 213.227	5–7	3.98E−02	9.68E−03	5.42E−01	−1.315	C+	13
		3354.0594	3355.0233	23 051.748	–52 857.800	1–3	1.34E−01	6.78E−02	7.49E−01	−1.169	B	13
		3342.2918	3343.2528	22 946.814	–52 857.800	3–3	9.42E−02	1.58E−02	5.21E−01	−1.324	C+	13
327	$b\ ^3P–v\ ^3P^\circ$											
		3323.7364	3324.6927	22 838.321	–52 916.291	5–5	2.8E−01	4.7E−02	2.6E−00	−0.63	D+	3*n*
		3335.7685	3336.7278	22 946.814	–52 916.291	3–5	7.48E−02	2.08E−02	6.85E−01	−1.205	C+	13
328	$z\ ^7P^\circ–e\ ^7D$	*5215.109*	*5216.561*	*24 057.32*	*–43 227.04*	21–35	2.07E−01	1.41E−01	5.07E+01	0.470	B	13
		5232.9403	5234.3971	23 711.454	–42 815.852	9–11	1.94E−01	9.74E−02	1.51E+01	−0.057	B+	13
		5266.5554	5268.0211	24 180.860	–43 163.323	7–9	1.10E−01	5.89E−02	7.15E−00	−0.385	B	13
		5281.7904	5283.2601	24 506.915	–43 434.624	5–7	5.00E−02	2.93E−02	2.55E−00	−0.834	B	13
		5139.4628	5140.8947	23 711.454	–43 163.323	9–9	8.69E−02	3.44E−02	5.24E−00	−0.509	B+	13
		5192.3442	5193.7902	24 180.860	–43 434.624	7–7	1.34E−01	5.42E−02	6.49E−00	−0.421	B+	13
		5226.8623	5228.3175	24 506.915	–43 633.530	5–5	1.36E−01	5.57E−02	4.80E−00	−0.555	B	13
		5068.7658	5070.1789	23 711.454	–43 434.624	9–7	3.37E−02	1.01E−02	1.52E−00	−1.042	B+	13
		5139.2515	5140.6833	24 180.860	–43 633.530	7–5	9.16E−02	2.59E−02	3.07E−00	−0.741	B+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		5191.4550	5192.9007	24 506.915–43 763.977		5–3	2.32E−01	5.62E−02	4.81E−00	−0.551	B	13
329	$z\,^7P^\circ - e\,^5D$											
		4768.3965	4769.7298	23 711.454–44 677.003		9–9	1.13E−03	3.84E−04	5.4E−02	−2.461	C	14
		4787.8269	4789.1654	24 180.860–45 061.326		7–7	1.1E−03	3.6E−04	4.0E−02	−2.60	D+	13
		4800.1288	4801.4705	24 506.915–45 333.872		5–5	1.2E−03	4.2E−04	3.3E−02	−2.68	E	2*n*
		4682.5605	4683.8710	23 711.454–45 061.326		9–7	3.7E−04	9.5E−05	1.3E−02	−3.07	E	2*n*
		4726.1370	4727.4591	24 180.860–45 333.872		7–5	3.9E−04	9.2E−05	1.0E−02	−3.19	E	2*n*
		4877.6064	4878.9686	24 180.860–44 677.003		7–9	2.6E−04	1.2E−04	1.3E−02	−3.09	E	2*n*
330	$z\,^7P^\circ - e\,^7F$											
		3685.9971	3687.0464	23 711.454–50 833.435		9–11	3.34E−01	8.31E−02	9.08E−00	−0.126	B	13
		3701.0863	3702.1395	24 180.860–51 192.270		7–9	6.35E−01	1.68E−01	1.43E+01	0.070	B+	13
		3637.8675	3638.9044	23 711.454–51 192.270		9–9	5.9E−02	1.2E−02	1.3E−00	−0.97	D	2*n*
		3726.9265	3727.9864	24 506.915–51 331.049		5–5	4.57E−01	9.53E−02	5.85E−00	−0.322	B+	13
		3682.1676	3683.215924	4180.860–51 331.049		7–5	1.04E−01	1.51E−02	1.28E−00	−0.976	B	13
		3744.1026	3745.1670	24 506.915–51 207.995		5–3	3.17E−01	4.00E−02	2.47E−00	−0.699	B	13
331	$z\,^7P^\circ - f\,^7D$											
		3748.9646	3750.0302	23 711.454–50 377.905		9–11	1.48E−01	3.81E−02	4.23E−00	−0.465	B	13
		3754.5002	3755.5673	24 180.860–50 807.994		7–9	2.42E−02	6.58E−03	5.69E−01	−1.337	C+	13
		3689.4582	3690.5084	23 711.454–50 807.994		9–9	3.70E−01	7.55E−02	8.25E−00	−0.168	B+	13
		3746.9270	3747.9921	24 180.860–50 861.813		7–7	2.33E−01	4.91E−02	4.24E−00	−0.464	B+	13
		3773.6916	3774.7636	24 506.915–50 998.642		5–5	4.41E−02	9.42E−03	5.85E−01	−1.327	C+	13
		3727.8092	3728.8693	24 180.860–50 998.642		7–5	1.91E−01	2.84E−02	2.44E−00	−0.701	B+	13
		3766.6592	3767.7294	24 506.915–51 048.104		5–3	7.58E−02	9.68E−03	6.01E−01	−1.315	C+	13
332	$z\,^7P^\circ - f\,^5D$											
		3742.6166	3743.6805	23 711.454–50 423.134		9–9	6.75E−02	1.42E−02	1.57E−00	−0.894	B	13
		3793.4806	3794.5578	24 180.860–50 534.394		7–7	7.92E−02	1.71E−02	1.49E−00	−0.922	B	13
		3727.0924	3728.1524	23 711.454–50 534.394		9–7	1.71E−01	2.77E−02	3.06E−00	−0.603	C+	13
		3790.6547	3791.7311	24 506.915–50 880.099		5–3	4.41E−02	5.7E−03	3.56E−01	−1.55	C	13
		3809.5643	3810.6457	24 180.860–50 423.134		7–9	1.43E−02	4.00E−03	3.51E−01	−1.553	C+	13
333	$z\,^7P^\circ - e\,^7P$											
		3735.3238	3736.3859	23 711.454–50 475.285		9–9	2.70E−01	5.65E−02	6.25E−00	−0.294	B	13
		3782.4490	3783.5233	24 180.860–50 611.258		7–7	1.18E−02	2.53E−03	2.20E−01	−1.75	C	13
		3716.4422	3717.4993	23 711.454–50 611.258		9–7	3.49E−01	5.62E−02	6.19E−00	−0.296	B	13
334	$z\,^7P^\circ - e\,^5G$											
		3703.6909	3704.7447	23 711.454–50 703.867		9–11	6.31E−02	1.59E−02	1.74E−00	−0.845	C+	13
		3730.4604	3731.5212	24 180.860–50 979.576		7–9	3.09E−02	8.30E−03	7.13E−01	−1.236	B	13
		3697.4255	3698.4778	24 180.860–51 219.012		7–7	1.94E−01	3.98E−02	3.39E−00	−0.555	B+	13
		3721.5027	3722.5612	24 506.915–51 370.142		5–5	1.94E−01	4.03E−02	2.47E−00	−0.696	C+	13
		3634.3278	3635.3637	23 711.454–51 219.012		9–7	1.05E−01	1.62E−02	1.74E−00	−0.837	B+	13
		3676.8725	3677.9194	24 180.860–51 370.142		7–5	2.5E−02	3.5E−03	3.0E−01	−1.60	D	2*n*
335	$z\,^7P^\circ - e\,^7G$											
		3633.0691	3634.1047	23 711.454–51 228.550		9–11	3.54E−02	8.57E−03	9.22E−01	−1.113	B	13
		3681.6440	3682.6922	24 180.860–51 334.908		7–9	1.67E−02	4.36E−03	3.70E−01	−1.52	C	13
		3664.6913	3665.7351	24 180.860–51 460.515		7–7	8.8E−03	1.77E−03	1.50E−01	−1.91	C	13
336	$z\,^7P^\circ - f\,^5F$											
		3664.5374	3665.5811	24 180.860–51 461.667		7–9	4.68E−02	1.21E−02	1.02E−00	−1.071	B	13
		3689.3690	3690.4192	24 506.915–51 604.100		5–7	2.62E−02	7.48E−03	4.55E−01	−1.427	C+	13
337	$z\,^7P^\circ - e\,^7S$	*3633.639*	*3634.675*	*24 057.32*–51 570.094		21–7	1.18E−00	7.76E−02	1.95E+01	0.212	B	13
		3588.5264	3589.5505	23 711.454–51 570.094		9–7	7.2E−02	1.08E−02	1.15E−00	−1.011	C	13
		3650.0296	3651.0696	24 180.860–51 570.094		7–7	2.26E−01	4.52E−02	3.80E−00	−0.500	B+	13
		3694.0060	3695.0574	24 506.915–51 570.094		5–7	8.35E−01	2.39E−01	1.46E+01	0.078	B+	13
338	$z\,^7P^\circ - e\,^5P$											
		3614.7724	3615.8033	24 180.860–51 837.235		7–7	2.67E−02	5.23E−03	4.36E−01	−1.436	C+	13
		3657.8985	3658.9405	24 506.915–51 837.235		5–7	3.23E−02	9.08E−03	5.47E−01	−1.343	C+	13
339	$z\,^7P^\circ - g\,^7D$											
		3322.4729	3323.4289	23 711.454–53 800.855		9–11	8.21E−02	1.66E−02	1.64E−00	−0.825	B	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
340	$b\ ^3G–z\ ^3F^\circ$											
		13 287.829	7523.626 cm^{-1}	23 783.617–31	307.243	11–9	4.00E−05	8.7E−05	4.17E−02	−3.021	C	13
341	$b\ ^3G–z\ ^5G^\circ$											
		9089.4044	9091.8993	23 783.617–34	782.419	11–11	1.6E−03	1.9E−03	6.3E−01	−1.68	D+	13
		8975.4007	8977.8647	24 118.817–35	257.322	9–9	5.6E−04	6.8E−04	1.80E−01	−2.216	C	13
		8713.1875	8715.5805	23 783.617–35	257.322	11–9	3.33E−04	3.10E−04	9.8E−02	−2.467	C	14
342	$b\ ^3G–z\ ^3G^\circ$											
		8621.6007	8623.9690	23 783.617–35	379.206	11–11	3.9E−04	4.3E−04	1.4E−01	−2.32	D+	13
		8582.2574	8584.6150	24 118.817–35	767.562	9–9	7.4E−04	8.2E−04	2.08E−01	−2.133	C	13
		8515.1084	8517.4479	24 338.765–36	079.370	7–7	1.11E−03	1.21E−03	2.37E−01	−2.073	B	13
343	$b\ ^3G–y\ ^3F^\circ$											
		7748.2694	7750.4017	23 783.617–36	686.174	11–9	2.19E−03	1.61E−03	4.53E−01	−1.75	C	13
		7664.2933	7666.4029	24 118.817–37	162.744	9–7	3.4E−03	2.3E−03	5.3E−01	−1.68	D+	13
		7583.7882	7585.8761	24 338.765–37	521.158	7–5	3.0E−03	1.9E−03	3.3E−01	−1.89	D+	13
344	$b\ ^3G–y\ ^3D^\circ$											
		7112.1680	7114.1288	24 118.817–38	175.352	9–7	1.9E−04	1.1E−04	2.4E−02	−2.99	D+	15
		6971.9323	6973.8552	24 338.765–38	678.036	7–5	1.25E−04	6.5E−05	1.05E−02	−3.340	C	15
345	$b\ ^3G–v\ ^5D^\circ$											
		5022.7891	5024.1900	24 118.817–44	022.522	9–9	1.87E−03	7.1E−04	1.05E−01	−2.196	C	13
346	$b\ ^3G–y\ ^3G^\circ$	*4678.236*	*4679.545*	*24 039.28–45*	*408.88*	27–27	1.24E−02	4.07E−03	1.69E−00	−0.959	B	13
		4647.4342	4648.7355	23 783.617–45	294.843	11–11	1.25E−02	4.05E−03	6.82E−01	−1.351	B	13
		4691.4117	4692.7246	24 118.817–45	428.399	9–9	1.01E−02	3.33E−03	4.63E−01	−1.523	B+	13
		4710.2833	4711.6012	24 338.765–45	562.971	7–7	1.05E−02	3.49E−03	3.79E−01	−1.612	B+	13
		4618.7577	4620.0514	23 783.617–45	428.399	11–9	1.36E−03	3.56E−04	5.96E−02	−2.407	B	13
		4661.9703	4663.2754	24 118.817–45	562.971	9–7	1.38E−03	3.50E−04	4.83E−02	−2.502	B	13
		4721.0006	4722.3214	24 118.817–45	294.843	9–11	4.30E−04	1.76E−04	2.46E−02	−2.801	C+	13
		4740.3401	4741.6660	24 338.765–45	428.399	7–9	7.69E−04	3.33E−04	3.64E−02	−2.632	C+	13
347	$b\ ^3G–x\ ^5G^\circ$											
		4603.9489	4605.2387	24 118.817–45	833.220	9–9	5.8E−04	1.8E−04	2.5E−02	−2.78	E	2*n*
		4633.7558	4635.0535	24 338.765–45	913.494	7–7	4.7E−04	1.5E−04	1.6E−02	−2.97	E	2*n*
348	$b\ ^3G–u\ ^5D^\circ$											
		4358.4991	4359.7242	23 783.617–46	720.839	11–9	8.09E−03	1.89E−03	2.98E−01	−1.683	C+	13
		4423.1415	4424.3835	24 118.817–46	720.839	9–9	1.3E−03	3.9E−04	5.1E−02	−2.46	E	2*n*
349	$b\ ^3G–x\ ^3F^\circ$											
		4326.7533	4327.9699	23 783.617–46	889.139	11–9	4.63E−03	1.06E−03	1.67E−01	−1.93	C	13
		4351.5439	4352.7670	24 118.817–47	092.709	9–7	9.39E−03	2.07E−03	2.67E−01	−1.729	B	13
		4373.5607	4374.7896	24 338.765–47	197.007	7–5	1.04E−02	2.13E−03	2.15E−01	−1.83	C	13
		4390.4480	4391.6814	24 118.817–46	889.139	9–9	1.4E−03	4.0E−04	5.2E−02	−2.45	D	2*n*
350	$b\ ^3G–z\ ^3H^\circ$											
		4309.3745	4310.5866	23 783.617–46	982.317	11–13	1.78E−02	5.86E−03	9.14E−01	−1.191	C+	13
		4367.5785	4368.8059	24 118.817–47	008.368	9–11	1.56E−02	5.45E−03	7.06E−01	−1.309	B	13
		4390.9505	4392.1841	24 338.765–47	106.481	7–9	1.16E−02	4.31E−03	4.37E−01	−1.520	C+	13
		4304.5408	4305.7516	23 783.617–47	008.368	11–11	3.06E−03	8.50E−04	1.33E−01	−2.029	B	13
		4348.9366	4350.1591	24 118.817–47	106.481	9–9	2.8E−03	8.0E−04	1.0E−01	−2.14	D+	13
		4286.4342	4287.6403	23 783.617–47	106.481	11–9	1.7E−03	3.7E−04	5.8E−02	−2.39	D	2*n*
351	$b\ ^3G–w\ ^3D^\circ$											
		4365.8967	4367.1236	24 118.817–47	017.185	9–7	2.81E−03	6.3E−04	8.1E−02	−2.250	C	13
352	$b\ ^3G–w\ ^5G^\circ$											
		4239.7324	4240.9262	23 783.617–47	363.373	11–13	8.46E−03	2.70E−03	4.14E−01	−1.528	B	13
		4290.3789	4291.5860	24 118.817–47	420.225	9–11	6.29E−03	2.12E−03	2.70E−01	−1.719	C+	13
		4299.6286	4300.8381	24 338.765–47	590.045	7–9	2.65E−03	9.44E−04	9.35E−02	−2.180	B	15
		4259.3358	4260.5348	24 118.817–47	590.045	9–9	4.2E−04	1.1E−04	1.4E−02	−2.99	D+	15
		4255.5004	4256.6983	24 338.765–47	831.150	7–5	7.1E−03	1.4E−03	1.4E−01	−2.01	D+	13
353	$b\ ^3G–z\ ^1G^\circ$											
		4284.4054	4285.6109	24 118.817–47	452.714	9–9	1.1E−03	3.1E−04	4.0E−02	−2.55	E	2*n*
354	$b\ ^3G–v\ ^5F^\circ$											

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		4196.5311	4197.7135	23 783.617–47 606.111		11–11	3.0E−03	7.9E−04	1.2E−01	−2.06	E	2*n*
355	$b\ ^3G–x\ ^3G^\circ$											
		4156.6714	4157.8434	23 783.617–47 834.547		11–11	5.27E−03	1.37E−03	2.06E−01	−1.823	B	13
		4219.4144	4220.6028	24 118.817–47 812.115		9–9	5.29E−03	1.41E−03	1.77E−01	−1.896	B	13
		4254.9453	4256.1430	24 338.765–47 834.218		7–7	1.43E−03	3.88E−04	3.81E−02	−2.566	C+	13
		4215.4233	4216.6107	24 118.817–47 834.547		9–11	5.98E−03	1.95E−03	2.43E−01	−1.756	B	13
		4258.9517	4260.1505	24 338.765–47 812.115		7–9	2.34E−03	8.18E−04	8.03E−02	−2.242	C+	13
356	$b\ ^3G–y\ ^5H^\circ$											
		4146.0642	4147.2334	24 118.817–48 231.277		9–11	3.78E−03	1.19E−03	1.46E−01	−1.970	C+	13
		4161.4844	4162.6577	24 338.765–48 361.879		7–9	3.01E−03	1.00E−03	9.63E−02	−2.153	B	13
		4089.2169	4090.3712	23 783.617–48 231.277		11–11	3.45E−03	8.64E−04	1.28E−01	−2.022	C+	13
		4123.7283	4124.8917	24 118.817–48 361.879		9–9	6.04E−03	1.54E−03	1.88E−01	−1.858	B	13
		4141.8633	4143.0314	24 338.765–48 475.683		7–7	6.57E−03	1.69E−03	1.61E−01	−1.927	B	13
357	$b\ ^3G–z\ ^1H^\circ$											
		4120.2065	4121.3689	24 118.817–48 382.600		9–11	1.93E−02	6.01E−03	7.34E−01	−1.267	B	13
358	$b\ ^3G–y\ ^1G^\circ$											
		4066.5852	4067.7336	24 118.817–48 702.532		9–9	1.17E−02	2.90E−03	3.50E−01	−1.583	B	13
359	$b\ ^3G–w\ ^3F^\circ$											
		4000.4572	4001.5883	24 118.817–49 108.893		9–9	1.01E−02	2.43E−03	2.88E−01	−1.661	C+	13
360	$b\ ^3G–y\ ^3H^\circ$											
		3897.4487	3898.5529	23 783.617–49 434.160		11–13	1.8E−02	4.8E−03	6.8E−01	−1.28	D+	13
		3871.7480	3872.8455	23 783.617–49 604.424		11–11	5.83E−02	1.31E−02	1.84E−00	−0.841	B	13
		3903.8979	3905.0038	24 118.817–49 726.987		9–9	7.61E−02	1.74E−02	2.01E−00	−0.805	B	13
		3853.4567	3854.5495	237 83.617–49 726.987		11–9	5.8E−03	1.0E−03	1.5E−01	−1.94	D	3*n*
361	$b\ ^3G–v\ ^3G^\circ$											
		3893.3903	3894.4935	23 783.617–49 460.899		11–11	1.00E−01	2.27E−02	3.21E−00	−0.602	B+	13
		3919.0655	3920.1754	24 118.817–49 627.881		9–9	3.72E−02	8.57E−03	9.95E−01	−1.113	C+	13
		3918.6417	3919.7514	24 338.765–49 850.587		7–7	1.17E−01	2.69E−02	2.43E−00	−0.725	C+	13
		3885.1456	3886.2466	24 118.817–49 850.587		9–7	8.4E−03	1.47E−03	1.69E−01	−1.88	C	13
		3944.8893	3946.0059	24 118.817–49 460.899		9–11	1.40E−02	3.99E−03	4.66E−01	−1.445	B	13
		3953.1514	3954.2701	24 338.765–49 627.881		7–9	2.97E−02	8.95E−03	8.16E−01	−1.203	C+	13
362	$b\ ^3G–F\mathrm{sp3}\ ^1F^\circ$											
		3942.3641	3943.4800	24 118.817–49 477.124		9–7	5.17E−03	9.37E−04	1.09E−01	−2.074	C+	13
363	$b\ ^3G–z\ ^1F^\circ$											
		3777.0666	3778.1395	24 118.817–50 586.875		9–7	9.43E−03	1.57E−03	1.76E−01	−1.850	C+	13
364	$b\ ^3G–x\ ^3H^\circ$											
		3670.0884	3671.1335	23 783.617–51 023.159		11–13	7.20E−02	1.72E−02	2.29E−00	−0.72	D+	3*n*
		3693.0265	3694.0776	24 338.765–51 409.121		7–9	2.04E−02	5.37E−03	4.57E−01	−1.42	D	2*n*
		3663.2591	3664.3025	24 118.817–51 409.121		9–9	1.11E−02	2.24E−03	2.44E−01	−1.69	E	2*n*
365	$b\ ^3G–v\ ^3F^\circ$											
		3632.5554	3633.5909	23 783.617–51 304.601		11–9	5.69E−02	9.21E−03	1.21E−00	−0.99	D	2*n*
		3669.1519	3670.1968	24 118.817–51 365.308		9–7	8.03E−02	1.26E−02	1.37E−00	−0.94	D	2*n*
366	$b\ ^3G–u\ ^3G^\circ$											
		3628.8106	3629.8451	24 118.817–51 668.183		9–9	3.50E−03	6.9E−04	7.4E−02	−2.206	C	15
		3585.1897	3586.2130	23 783.617–51 668.183		11–9	3.19E−02	5.03E−03	6.53E−01	−1.257	B	13
		3658.0203	3659.0623	24 338.183–51 668.183		7–9	5.63E−03	1.45E−03	1.22E−01	−1.993	C+	15
367	$b\ ^3G–H\mathrm{sp3}\ ^1H^\circ$											
		3590.0840	3591.1085	23 783.617–51 630.175		11–11	9.23E−03	1.78E−03	2.32E−01	−1.707	C+	13
		3633.8268	3634.8626	24 118.817–51 630.175		9–11	1.58E−02	3.83E−03	4.12E−01	−1.463	C+	13
368	$b\ ^3G–u\ ^3D^\circ$											
		3589.6054	3590.6298	24 118.817–51 969.098		9–7	9.28E−03	1.40E−03	1.48E−01	−1.901	C+	15
369	$b\ ^3G–w\ ^3H^\circ$											
		3489.6677	3490.6664	23 783.617–52 431.443		11–13	7.47E−02	1.61E−02	2.04E−00	−0.751	B	13
		3508.4745	3509.4780	24 118.817–52 613.086		9–11	6.46E−02	1.46E−02	1.52E−00	−0.882	B+	13
		3516.4090	3517.4145	24 338.765–52 768.739		7–9	3.6E−02	8.6E−03	7.0E−01	−1.22	E	2*n*
370	$b\ ^3G–t\ ^3G^\circ$											
		3310.3412	3311.2940	23 783.617–53 983.289		11–11	3.78E−02	6.21E−03	7.45E−01	−1.166	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3319.2531	3320.2082	24 118.817–54	237.411	9–9	3.73E−02	6.2E−03	6.1E−01	−1.256	C	13
		3303.5689	3304.5200	24 338.765–54	600.346	7–7	1.5E−02	2.4E−03	1.8E−01	−1.78	D+	13
371	$b\ ^3G–w\ ^1G^\circ$											
		3257.2345	3258.1739	24 118.817–54	810.852	9–9	4.76E−02	7.57E−03	7.31E−01	−1.167	C+	13
372	$b\ ^3G–s\ ^3G^\circ$											
		3145.0570	3145.9680	24 118.817–55	905.532	9–9	4.65E−02	6.90E−03	6.43E−01	−1.207	C+	13
373	$b\ ^3G–v\ ^3H^\circ$											
		3213.7560	3214.6850	24 338.765–55	446.004	7–9	1.1E−02	2.2E−03	1.6E−01	−1.82	D+	13
374	$b\ ^3G–{}^2H4p\ ^1H^\circ$											
		3112.0772	3112.9799	23 783.617–55	907.174	11–11	5.24E−02	7.61E−03	8.58E−01	−1.077	C+	13
375	$b\ ^3G–Gsp3\ ^1F^\circ$											
		3147.7948	3148.7065	24 338.765–56	097.832	7–7	7.59E−02	1.13E−02	8.18E−01	−1.103	C+	13
376	$b\ ^3G–u\ ^3F^\circ$											
		3060.5378	3061.4275	24 118.817–56	783.318	9–7	6.8E−02	7.4E−03	6.7E−01	−1.18	D+	13
377	$b\ ^3G–t\ ^3F^\circ$											
		2960.6594	2961.5242	23 783.617–57	550.006	11–9	8.48E−02	9.12E−03	9.78E−01	−0.999	C+	13
		2982.2280	2983.0990	24 118.817–57	640.997	9–7	3.4E−02	3.6E−03	3.2E−01	−1.49	D+	13
378	$c\ ^3P–z\ ^3D^\circ$											
		14308.700	6986.847 cm^{-1}	24 335.764–31	322.611	5–7	9.99E−05	4.30E−04	1.01E−01	−2.668	B	13
379	$c\ ^3P–y\ ^3D^\circ$											
		7223.6610	7225.6518	24 335.764–38	175.352	5–7	1.1E−03	1.2E−03	1.5E−01	−2.21	D+	13
		7189.1487	7191.1302	24 772.016–38	678.036	3–5	3.7E−04	4.7E−04	3.4E−02	−2.85	D+	13
380	$c\ ^3P–w\ ^5D^\circ$											
		5104.0302	5105.4526	24 335.764–43	922.665	5–7	5.7E−04	3.1E−04	2.6E−02	−2.80	E	2*n*
		5036.9222	5038.3268	24 335.764–44	183.625	5–5	4.7E−04	1.8E−04	1.5E−02	−3.04	E	2*n*
381	$c\ ^3P–x\ ^3D^\circ$											
		4786.8070	4788.1452	24 335.764–45	220.678	5–7	1.03E−02	4.95E−03	3.91E−01	−1.606	B+	13
		4772.8303	4774.1648	24 335.764–45	281.830	5–5	3.76E−03	1.29E−03	1.01E−01	−2.192	C+	13
		4712.1057	4713.4241	24 335.764–45	551.764	5–3	8.5E−04	1.7E−04	1.3E−02	−3.07	E	2*n*
382	$c\ ^3P–z\ ^3S^\circ$											
		4490.0840	4491.3437	24 335.764–46	600.815	5–3	3.3E−02	6.0E−03	4.4E−01	−1.52	D	2*n*
383	$c\ ^3P–y\ ^3P^\circ$											
		4464.7665	4466.0195	24 335.764–46	727.071	5–5	6.66E−03	1.99E−03	1.46E−01	−2.002	C+	13
		4517.5245	4518.7914	24 772.016–46	901.829	3–3	1.51E−02	4.62E−03	2.06E−01	−1.858	C+	13
		4430.1891	4431.4330	24 335.764–46	901.829	5–3	2.0E−02	3.5E−03	2.6E−01	−1.75	E	13
384	$c\ ^3P–u\ ^5D^\circ$											
		4376.7742	4378.0040	24 335.764–47	177.231	5–3	5.4E−03	9.2E−04	6.7E−02	−2.34	D+	13
385	$c\ ^3P–x\ ^3F^\circ$											
		4372.9817	4374.2106	24 335.764–47	197.007	5–5	1.8E−03	5.3E−04	3.8E−02	−2.58	D	2*n*
386	$c\ ^3P–w\ ^3D^\circ$											
		4384.6722	4385.9041	24 335.764–47	136.081	5–5	5.4E−03	1.6E−03	1.1E−01	−2.11	E	2*n*
387	$c\ ^3P–y\ ^3S^\circ$	*4348.411*	*4349.633*	*24 565.16*–47	555.607	9–3	1.02E−01	9.61E−03	1.24E−00	−1.063	C+	13
		4305.4505	4306.6615	24 335.764–47	555.607	5–3	5.54E−02	9.25E−03	6.56E−01	−1.335	C+	13
		4387.8912	4389.1239	24 772.016–47	555.607	3–3	3.46E−02	1.00E−02	4.33E−01	−1.523	C+	13
		4450.3156	4451.5648	25 091.597–47	555.607	1–3	1.15E−02	1.02E−02	1.50E−01	−1.990	C+	13
388	$c\ ^3P–v\ ^5F^\circ$											
		4260.1352	4261.3343	24 772.016–48	238.844	3–5	2.20E−02	9.97E−03	4.20E−01	−1.524	C+	13
		4182.3826	4183.5613	24 335.764–48	238.844	5–5	5.0E−02	1.3E−02	9.1E−01	−1.18	D+	13
389	$c\ ^3P–v\ ^5P^\circ$											
		4195.6179	4196.8000	24 335.764–48	163.443	5–5	1.21E−02	3.19E−03	2.20E−01	−1.797	C+	13
390	$c\ ^3P–x\ ^3P^\circ$	*4195.693*	*4196.875*	*24 565.16–48*	*392.41*	9–9	1.38E−01	3.65E−02	4.54E−00	−0.483	C+	13
		4170.9018	4172.0775	24 335.764–48	304.640	5–5	6.29E−02	1.64E−02	1.13E−00	−1.086	C+	13
		4210.3833	4211.5694	24 772.016–48	516.135	3–3	7.18E−02	1.91E−02	7.94E−01	−1.242	B	13
		4134.4207	4135.5869	24 335.764–48	516.135	5–3	2.62E−02	4.03E−03	2.74E−01	−1.696	C+	13
		4220.3417	4221.5304	24 772.016–48	460.110	3–1	1.83E−01	1.63E−02	6.79E−01	−1.311	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		4248.2240	4249.4200	24 772.016–48 304.640		3–5	3.82E−02	1.73E−02	7.24E−01	−1.286	C+	13
		4267.8265	4269.0276	25 091.597–48 516.135		1–3	8.17E−02	6.70E−02	9.41E−01	−1.174	B	13
391	$c\ ^3P–w\ ^3F^\circ$											
		4013.7818	4014.9164	24 335.764–49 242.883		5–7	4.19E−03	1.42E−03	9.38E−02	−2.149	C	13
392	$c\ ^3P–v\ ^3D^\circ$											
		4076.2180	4077.3689	24 772.016–49 297.632		3–3	1.4E−02	3.4E−03	1.4E−01	−1.99	E	2*n*
393	$c\ ^3P–Fsp3\ ^1F^\circ$											
		3976.3856	3977.5104	24 335.764–49 477.124		5–7	3.98E−03	1.32E−03	8.7E−02	−2.180	C	13
394	$c\ ^3P–w\ ^3P^\circ$											
		3867.2159	3868.3123	24 335.764–50 186.831		5–5	3.16E−01	7.08E−02	4.51E−00	−0.451	B	13
		3955.9555	3957.0749	24 772.016–50 043.210		3–3	4.19E−02	9.84E−03	3.84E−01	−1.530	B	13
		3888.8216	3889.9236	24 335.764–50 043.210		5–3	1.95E−01	2.65E−02	1.70E−00	−0.877	C+	13
		3970.3891	3971.5123	24 772.016–49 951.341		3–1	3.9E−01	3.0E−02	1.2E−00	−1.04	E	2*n*
		3933.5997	3934.7133	24 772.016–50 186.831		3–5	5.92E−02	2.29E−02	8.90E−01	−1.163	C+	13
		4006.6242	4007.7569	25 091.597–50 043.210		1–3	5.89E−02	4.26E−02	5.62E−01	−1.371	B	13
395	$c\ ^3P–z\ ^1F^\circ$											
		3808.2810	3809.3620	24 335.764–50 586.875		5–7	7.59E−03	2.31E−03	1.45E−01	−1.937	C+	13
396	$c\ ^3P–t\ ^5D^\circ$											
		3699.1387	3700.1914	24 335.764–51 361.388		5–7	4.9E−02	1.4E−02	8.5E−01	−1.15	D	3*n*
397	$c\ ^3P–v\ ^3F^\circ$											
		3698.6029	3699.6555	24 335.764–51 365.308		5–7	3.6E−02	1.0E−02	6.3E−01	−1.28	D	3*n*
398	$c\ ^3P–u\ ^3G^\circ$											
		3636.6491	3637.6856	24 335.764–51 825.770		5–7	2.97E−02	8.24E−03	4.94E−01	−1.385	B	13
399	$c\ ^3P–y\ ^1D^\circ$											
		3711.4083	3712.4642	24 772.016–51 708.304		3–5	1.28E−01	4.40E−02	1.61E−00	−0.879	B	13
400	$c\ ^3P–x\ ^1D^\circ$											
		3704.0140	3705.0680	24 772.016–51 762.073		3–5	1.7E−02	5.7E−03	2.1E−01	−1.77	E	2*n*
401	$c\ ^3P–u\ ^3D^\circ$											
		3617.7861	3618.8178	24 335.764–51 969.098		5–7	7.09E−01	1.95E−01	1.16E+01	−0.011	B	13
		3632.0388	3633.0742	24 772.016–52 296.916		3–5	6.74E−01	2.22E−01	7.98E−00	−0.176	B	13
		3645.8201	3646.8590	25 091.597–52 512.453		1–3	4.87E−01	2.91E−01	3.49E−00	−0.536	C+	13
		3575.3700	3576.3907	24 335.764–52 296.916		5–5	3.06E−01	5.86E−02	3.45E−00	−0.533	B	13
		3603.8179	3604.8460	24 772.016–52 512.453		3–3	1.70E−01	3.31E−02	1.18E−00	−1.003	C+	13
402	$c\ ^3P–^2P4p\ ^1P^\circ$											
		3647.4238	3648.4631	24 772.016–52 180.817		3–3	3.38E−01	6.74E−02	2.43E−00	−0.694	B	13
		3690.4547	3691.5052	25 091.597–52 180.817		1–3	1.22E−01	7.46E−02	9.07E−01	−1.127	C+	13
403	$c\ ^3P–t\ ^3D^\circ$											
		3581.8075	3582.8299	24 772.016–52 682.916		3–5	8.68E−02	2.79E−02	9.86E−01	−1.078	C+	13
		3559.5033	3560.5199	24 772.016–52 857.800		3–3	2.2E−01	4.1E−02	1.4E−00	−0.91	D+	3*n*
		3505.0586	3506.0612	24 335.764–52 857.800		5–3	1.77E−01	1.95E−02	1.13E−00	−1.010	B	13
404	$c\ ^3P–v\ ^3P^\circ$											
		3459.9140	3460.9051	24 335.764–53 229.937		5–3	2.17E−01	2.34E−02	1.33E−00	−0.932	B	13
		3552.1060	3553.1207	24 772.016–52 916.291		3–5	4.8E−02	1.5E−02	5.3E−01	−1.34	E	2*n*
		3552.8551	3553.8700	25 091.597–53 229.937		1–3	5.91E−02	3.36E−02	3.93E−01	−1.474	C+	13
405	$a\ ^1G–y\ ^3G^\circ$											
		4793.9619	4795.3020	24 574.653–45 428.399		9–9	1.1E−04	3.8E−05	5.4E−03	−3.47	E	2*n*
406	$a\ ^1G–u\ ^5D^\circ$											
		4514.1839	4515.4500	24 574.653–46 720.839		9–9	4.4E−03	1.4E−03	1.8E−01	−1.92	D+	3*n*
407	$a\ ^1G–x\ ^3F^\circ$											
		4480.1366	4481.3936	24 574.653–46 889.139		9–9	4.31E−03	1.30E−03	1.72E−01	−1.93	C	13
		4439.6341	4440.8805	24 574.653–47 092.709		9–7	7.9E−04	1.8E−04	2.4E−02	−2.79	E	2*n*
408	$a\ ^1G–z\ ^3H^\circ$											
		4456.3257	4457.5765	24 574.653–47 008.368		9–11	2.06E−03	7.49E−04	9.90E−02	−2.171	B	13
		4436.9206	4438.1663	24 574.653–47 106.481		9–9	2.82E−03	8.3E−04	1.10E−01	−2.125	C	13
409	$a\ ^1G–w\ ^5G^\circ$											
		4343.6975	4344.9186	24 574.653–47 590.045		9–9	6.21E−03	1.76E−03	2.26E−01	−1.801	B	15

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
410	$a\ ^1G–z\ ^1G^\circ$	*4369.7718*	*4370.9998*	24 574.653–47 452.714		9–9	6.09E−02	1.74E−02	2.26E−00	−0.804	C+	13
411	$a\ ^1G–x\ ^3G^\circ$											
		4298.0364	4299.2455	24 574.653–47 834.547		9–11	1.23E−02	4.17E−03	5.31E−01	−1.426	B	13
		4302.1858	4303.3960	24 574.653–47 812.115		9–9	7.70E−03	2.14E−03	2.72E−01	−1.716	B	13
412	$a\ ^1G–y\ ^5H^\circ$											
		4225.9557	4227.1459	24 574.653–48 231.277		9–11	1.32E−02	4.32E−03	5.41E−01	−1.410	B+	13
		4202.7530	4203.9370	24 574.653–48 361.879		9–9	2.53E−03	6.70E−04	8.34E−02	−2.220	C+	13
413	$a\ ^1G–z\ ^1H^\circ$	*4199.0952*	*4200.2783*	24 574.653–48 382.600		9–11	4.92E−01	1.59E−01	1.98E+01	0.156	B	13
414	$a\ ^1G–y\ ^1G^\circ$	4143.4146	4144.5831	24 574.653–48 702.532		9–9	2.70E−01	6.95E−02	8.53E−00	−0.204	B	13
415	$a\ ^1G–w\ ^3F^\circ$											
		4074.7858	4075.9363	24 574.653–49 108.893		9–9	3.43E−02	8.55E−03	1.03E−00	−1.114	C+	13
416	$a\ ^1G–y\ ^3H^\circ$											
		3994.1132	3995.2426	24 574.653–49 604.424		9–11	9.22E−03	2.70E−03	3.19E−01	−1.615	C+	13
417	$a\ ^1G–v\ ^3G^\circ$											
		4017.1485	4018.2840	24 574.653–49 460.899		9–11	3.25E−02	9.61E−03	1.14E−00	−1.063	B+	13
		3990.3733	3991.5018	24 574.653–49 627.881		9–9	1.43E−02	3.41E−03	4.03E−01	−1.513	B	13
418	$a\ ^1G–Fsp3\ ^1F^\circ$	*4014.5308*	*4015.6656*	24 574.653–49 477.124		9–7	1.53E−01	2.88E−02	3.42E−00	−0.587	C+	13
419	$a\ ^1G–z\ ^1F^\circ$	3843.2568	3844.3469	24 574.653–50 586.875		9–7	3.70E−01	6.38E−02	7.27E−00	−0.241	B	13
420	$a\ ^1G–x\ ^1G^\circ$	*3839.2558*	*3840.3449*	24 574.653–50 613.980		9–9	2.35E−01	5.20E−02	5.91E−00	−0.330	B	13
421	$a\ ^1G–x\ ^3H^\circ$											
		3773.3586	3774.4305	24 574.653–51 068.715		9–11	3.1E−03	8.2E−04	9.1E−02	−2.13	D	2*n*
		3725.4908	3726.5504	24 574.653–51 409.121		9–9	1.7E−02	3.6E−03	3.9E−01	−1.49	D	3*n*
422	$a\ ^1G–u\ ^3G^\circ$											
		3730.3864	3731.4472	24 574.653–51 373.907		9–11	9.73E−02	2.48E−02	2.74E−00	−0.651	B	13
423	$a\ ^1G–u\ ^3D^\circ$											
		3649.3332	3650.3730	24 574.653–51 969.098		9–7	1.3E−02	2.0E−03	2.2E−01	−1.74	D+	15
424	$a\ ^1G–x\ ^1F^\circ$	*3425.0100*	*3425.9921*	24 574.653–53 763.276		9–7	2.57E−01	3.52E−02	3.57E−00	−0.500	C+	13
425	$a\ ^1G–w\ ^1G^\circ$	3306.3396	3307.2914	24 574.653–54 810.852		9–9	5.74E−01	9.41E−02	9.22E−00	−0.072	B	13
426	$a\ ^1G–s\ ^3G^\circ$											
		3190.8167	3191.7393	24 574.653–55 905.532		9–9	5.55E−02	8.47E−03	8.01E−01	−1.118	C+	13
		3202.5558	3203.4813	24 574.653–55 790.692		9–7	6.18E−02	7.39E−03	7.02E−01	−1.177	B	13
427	$a\ ^1G–v\ ^3H^\circ$											
		3229.9909	3230.9233	24 574.653–55 525.558		9–11	1.06E−01	2.03E−02	1.94E−00	−0.739	B+	13
428	$a\ ^1G–^2H4p\ ^1H^\circ$	*3190.6495*	*3191.5720*	24 574.653–55 907.174		9–11	5.75E−02	1.07E−02	1.01E−00	−1.015	C+	13
429	$a\ ^1G–Gsp3\ ^1F^\circ$	3171.3513	3172.2689	24 574.653–56 097.832		9–7	1.85E−01	2.17E−02	2.04E−00	−0.709	B	13
430	$z\ ^5D^\circ–e\ ^7D$											
		5909.9736	5911.6112	25 899.987–42 815.852		9–11	4.49E−04	2.88E−04	5.04E−02	−2.587	C+	15
		5791.0180	5792.6238	25 899.987–43 163.323		9–9	1.3E−03	6.5E−04	1.1E−01	−2.23	D+	13
		5780.6001	5782.2031	26 140.177–43 434.624		7–7	7.6E−04	3.8E−04	5.1E−02	−2.57	E	2*n*
431	$z\ ^5D^\circ–e\ ^5D$											
		5324.1790	5325.6601	25 899.987–44 677.003		9–9	2.06E−01	8.77E−02	1.38E+01	−0.103	B	14
		5283.6210	5285.0913	26 140.177–45 061.326		7–7	1.02E−01	4.26E−02	5.19E−00	−0.525	B	13
		5263.3063	5264.7711	26 339.694–45 333.872		5–5	6.36E−02	2.64E−02	2.29E−00	−0.879	B	14
		5253.4617	5254.9240	26 479.379–45 509.149		3–3	2.15E−02	8.91E−03	4.62E−01	−1.573	B	15
		5217.3893	5218.8420	25 899.987–45 061.326		9–7	2.41E−02	7.65E−03	1.18E−00	−1.162	B	13
		5208.5940	5210.0442	26 140.177–45 333.872		7–5	6.23E−02	1.81E−02	2.17E−00	−0.897	B	14
		5215.1806	5216.6327	26 339.694–45 509.149		5–3	1.10E−01	2.69E−02	2.31E−00	−0.871	B	15
		5393.1676	5394.6671	26 140.177–44 677.003		7–9	4.91E−02	2.75E−02	3.42E−00	−0.715	B	14
		5339.9294	5341.4147	26 339.694–45 061.326		5–7	6.36E−02	3.81E−02	3.35E−00	−0.720	C+	13
		5302.3010	5303.7760	26 479.379–45 333.872		3–5	9.04E−02	6.35E−02	3.33E−00	−0.720	B	14
		5273.1636	5274.6311	26 550.477–45 509.149		1–3	8.12E−02	1.02E−01	1.76E−00	−0.993	B	15
432	$z\ ^5D^\circ–e\ ^5F$											

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		4736.7734	4738.0983	25 899.987–47 005.503		9–11	4.78E−02	1.97E−02	2.76E−00	−0.752	B	13
		4637.5034	4638.8020	26 479.379–48 036.670		3–5	2.8E−02	1.5E−02	7.0E−01	−1.34	D	2*n*
		4613.2027	4614.4949	26 550.477–48 221.321		1–3	2.5E−02	2.4E−02	3.6E−01	−1.62	D	2*n*
		4574.2162	4575.4981	25 899.987–47 755.534		9–7	1.6E−03	3.9E−04	5.4E−02	−2.45	E	2*n*
		4565.6619	4566.9416	26 140.177–48 036.670		7–5	4.0E−03	9.0E−04	9.5E−02	−2.20	E	2*n*
433	$z\,^5D^\circ - e\,^3F$											
		4581.5080	4582.7918	26 140.177–47 960.937		7–9	5.9E−03	2.4E−03	2.5E−01	−1.78	D	2*n*
		4504.8306	4506.0942	26 339.694–48 531.862		5–7	2.8E−03	1.2E−03	8.9E−02	−2.22	D	2*n*
434	$z\,^5D^\circ - e\,^7F$											
		4000.2522	4001.3832	26 339.694–51 331.049		5–5	2.2E−02	5.2E−03	3.4E−01	−1.58	E	2*n*
435	$z\,^5D^\circ - f\,^7D$											
		4076.8000	4077.9510	26 339.694–50 861.813		5–7	3.8E−02	1.3E−02	8.9E−01	−1.18	D+	13
		4080.8769	4082.0290	26 550.477–51 048.104		1–3	2.3E−02	1.7E−02	2.3E−01	−1.76	D	2*n*
		4043.8966	4045.0391	26 140.177–50 861.813		7–7	8.7E−02	2.1E−02	2.0E−00	−0.83	D+	13
		4054.1771	4055.3222	26 339.694–50 998.642		5–5	7.7E−03	1.9E−03	1.3E−01	−2.02	D	2*n*
		4069.0678	4070.2168	26 479.379–51 048.104		3–3	1.9E−02	4.7E−03	1.9E−01	−1.85	D	2*n*
		4046.0623	4047.2053	26 339.694–51 048.104		5–3	6.85E−02	1.01E−02	6.72E−01	−1.297	C+	13
436	$z\,^5D^\circ - f\,^5D$											
		4076.6291	4077.7801	25 899.987–50 423.134		9–9	1.32E−01	3.29E−02	3.97E−00	−0.529	B	13
		4098.1758	4099.3324	26 140.177–50 534.394		7–7	7.49E−02	1.89E−02	1.78E−00	−0.879	B	13
		4097.0834	4098.2397	26 479.379–50 880.099		3–3	2.9E−02	7.4E−03	3.0E−01	−1.65	E	2*n*
		4058.2170	4059.3632	25 899.987–50 534.394		9–7	4.47E−02	8.59E−03	1.03E−00	−1.112	C+	13
		4070.7707	4071.9202	26 140.177–50 698.617		7–5	1.1E−01	2.0E−02	1.9E−00	−0.85	D+	3*n*
		4073.7623	4074.9125	26 339.694–50 880.099		5–3	1.68E−01	2.51E−02	1.68E−00	−0.902	B	13
		4080.2092	4081.3611	26 479.379–50 981.009		3–1	2.3E−01	1.9E−02	7.9E−01	−1.23	D	3*n*
		4109.0561	4110.2156	26 550.477–50 880.099		1–3	3.62E−02	2.75E−02	3.73E−01	−1.56	C	13
437	$z\,^5D^\circ - e\,^7P$											
		4067.9777	4069.1265	25 899.987–50 475.285		9–9	1.51E−01	3.75E−02	4.52E−00	−0.472	B	13
		4085.3031	4086.4563	26 140.177–50 611.258		7–7	8.92E−02	2.23E−02	2.10E−00	−0.806	C+	13
		4045.5939	4046.7367	25 899.987–50 611.258		9–7	7.4E−02	1.41E−02	1.69E−00	−0.90	C	13
		4108.1330	4109.2922	26 140.177–50 475.285		7–9	3.5E−03	1.1E−03	1.1E−01	−2.10	E	2*n*
		4118.8868	4120.0488	26 339.694–50 611.258		5–7	1.9E−02	6.8E−03	4.6E−01	−1.47	E	2*n*
438	$z\,^5D^\circ - e\,^5G$											
		4030.4885	4031.6275	25 899.987–50 703.867		9–11	1.04E−01	3.10E−02	3.70E−00	−0.555	B	13
		4024.7250	4025.8625	26 140.177–50 979.576		7–9	8.09E−02	2.53E−02	2.35E−00	−0.752	B	13
		4018.2675	4019.4033	26 339.694–51 219.012		5–7	3.44E−02	1.17E−02	7.72E−01	−1.234	B	13
439	$z\,^5D^\circ - e\,^7G$											
		3946.9949	3948.1120	25 899.987–51 228.550		9–11	3.91E−02	1.12E−02	1.31E−00	−0.998	C+	13
		3967.9614	3969.0840	26 140.177–51 334.908		7–9	6.09E−02	1.85E−02	1.69E−00	−0.888	B+	13
440	$z\,^5D^\circ - f\,^5F$											
		3948.0973	3949.2147	26 140.177–51 461.667		7–9	1.31E−01	3.93E−02	3.58E−00	−0.560	B	13
		3957.0184	3958.1381	26 339.694–51 604.100		5–7	1.67E−01	5.48E−02	3.57E−00	−0.562	B+	13
		3963.1005	3964.2218	26 479.379–51 705.011		3–5	1.5E−01	5.8E−02	2.3E−00	−0.76	D+	3*n*
		3910.9991	3912.1069	25 899.987–51 461.667		9–9	2.68E−02	6.15E−03	7.13E−01	−1.257	C+	13
		3926.0132	3927.1248	26 140.177–51 604.100		7–7	7.26E−02	1.68E−02	1.52E−00	−0.930	B	13
		3941.2753	3942.3909	26 339.694–51 705.011		5–5	9.1E−02	2.1E−02	1.4E−00	−0.98	D	2*n*
		3955.3413	3956.4606	26 479.379–51 754.494		3–3	1.5E−01	3.5E−02	1.4E−00	−0.98	D	2*n*
441	$z\,^5D^\circ - e\,^3D$											
		3974.3807	3975.5050	26 140.177–51 294.217		7–7	8.2E−03	2.0E−03	1.8E−01	−1.86	E	2*n*
442	$z\,^5D^\circ - g\,^5D$											
		3928.0829	3929.1951	25 899.987–51 350.489		9–9	5.64E−02	1.31E−02	1.52E−00	−0.930	B	13
		3900.5150	3901.6200	26 140.177–51 770.554		7–7	7.9E−02	1.8E−02	1.6E−00	−0.90	D	3*n*
		3863.6906	3864.7860	26 339.694–52 214.342		5–3	4.37E−02	5.88E−03	3.74E−01	−1.532	B	15
		3965.5088	3966.6308	26 140.177–51 350.489		7–9	7.9E−03	2.38E−03	2.18E−01	−1.78	C	13
		3931.1172	3932.2302	26 339.694–51 770.554		5–7	4.8E−02	1.6E−02	1.0E−00	−1.11	E	2*n*
		3909.6576	3910.7649	26 479.379–52 049.820		3–5	5.7E−02	2.2E−02	8.4E−01	−1.19	E	2*n*
		3895.4255	3896.5292	26 550.477–52 214.342		1–3	3.38E−02	2.31E−02	2.96E−01	−1.637	C+	15

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
443	$z\ ^5D^\circ - e\ ^7S$											
		3962.3520	3963.4731	26 339.694–	51 570.094	5–7	1.2E−02	4.0E−03	2.6E−01	−1.70	E	2*n*
444	$z\ ^5D^\circ - e\ ^5P$											
		3854.3666	3855.4596	25 899.987–	51 837.235	9–7	5.07E−02	8.79E−03	1.00E−00	−1.102	C+	13
		3890.3958	3891.4982	26 140.177–	51 837.235	7–7	1.67E−02	3.79E−03	3.40E−01	−1.58	C	13
		3914.2730	3915.3816	26 479.379–	52 019.666	3–3	5.8E−02	1.3E−02	5.2E−01	−1.40	D	2*n*
		3920.8370	3921.9473	26 339.694–	51 837.235	5–7	2.92E−02	9.42E−03	6.08E−01	−1.327	C+	13
		3925.2005	3926.3119	26 550.477–	52 019.666	1–3	6.2E−02	4.3E−02	5.5E−01	−1.37	D	2*n*
445	$z\ ^5D^\circ - g\ ^5F$											
		3668.2105	3669.2552	26 140.177–	53 393.669	7–9	3.2E−02	8.3E−03	7.1E−01	−1.23	E	2*n*
		3591.4840	3592.5089	26 550.477–	54 386.182	1–3	6.3E−02	3.7E−02	4.3E−01	−1.44	E	2*n*
446	$z\ ^5D^\circ - h\ ^5D$											
		3615.1912	3616.2222	26 479.379–	54 132.547	3–3	6.1E−02	1.2E−02	4.3E−01	−1.45	D	2*n*
		3592.6749	3593.7001	26 140.177–	53 966.658	7–5	4.3E−02	5.9E−03	4.9E−01	−1.39	E	2*n*
		3597.0211	3598.0474	26 339.694–	54 132.547	5–3	1.8E−01	2.1E−02	1.3E−00	−0.98	D	2*n*
447	$z\ ^5D^\circ - f\ ^5P$											
		3667.2531	3668.2976	25 899.987–	53 160.589	9–7	1.3E−01	2.0E−02	2.2E−00	−0.74	D	2*n*
		3644.7951	3645.8338	26 140.177–	53 568.747	7–5	8.3E−02	1.2E−02	9.9E−01	−1.08	E	2*n*
448	$z\ ^5D^\circ - i\ ^5D$											
		3143.9905	3144.9012	25 899.987–	57 697.489	9–9	6.10E−01	9.04E−02	8.42E−00	−0.090	B	13
		3156.2738	3157.1876	26 140.177–	57 813.938	7–7	6.36E−01	9.50E−02	6.91E−00	−0.177	C+	13
		3132.5180	3133.4258	25 899.987–	57 813.938	9–7	3.39E−01	3.88E−02	3.60E−00	−0.457	C+	13
449	$b\ ^3H - z\ ^3I^\circ$											
		5030.7786	5032.1816	26 105.906–	45 978.005	13–15	2.60E−04	1.14E−04	2.45E−02	−2.830	C+	13
		5080.9361	5082.3524	26 351.038–	46 026.968	11–13	1.8E−04	8.4E−05	1.6E−02	−3.03	E	2*n*
450	$b\ ^3H - z\ ^3H^\circ$											
		4788.7569	4790.0956	26 105.906–	46 982.317	13–13	3.86E−03	1.33E−03	2.72E−01	−1.763	C+	13
		4839.5445	4840.8967	26 351.038–	47 008.368	11–11	3.90E−03	1.37E−03	2.40E−01	−1.822	C+	13
		4881.7178	4883.0812	26 627.607–	47 106.481	9–9	5.15E−03	1.84E−03	2.66E−01	−1.781	C+	13
451	$b\ ^3H - z\ ^1G^\circ$											
		4737.6354	4738.9605	26 351.038–	474 52.714	11–9	1.87E−03	5.15E−04	8.83E−02	−2.247	C+	13
452	$b\ ^3H - v\ ^5F^\circ$											
		4649.8165	4651.1184	26 105.906–	47 606.111	13–11	6.4E−04	1.8E−04	3.5E−02	−2.64	E	2*n*
453	$b\ ^3H - x\ ^3G^\circ$											
		4600.9340	4602.2230	26 105.906–	47 834.547	13–11	7.8E−04	2.09E−04	4.13E−02	−2.57	C	13
		4658.2947	4659.5988	26 351.038–	47 812.115	11–9	3.5E−04	9.3E−05	1.6E−02	−2.99	E	2*n*
		4714.1179	4715.4368	26 627.607–	47 834.547	9–11	6.5E−04	2.7E−04	3.7E−02	−2.62	E	2*n*
454	$b\ ^3H - y\ ^5H^\circ$											
		4518.4321	4519.6992	26 105.906–	48 231.277	13–11	2.1E−04	5.4E−05	1.0E−02	−3.15	E	2*n*
		4541.9416	4543.2149	26 351.038–	48 361.879	11–9	3.0E−04	7.5E−05	1.2E−02	−3.08	E	2*n*
455	$b\ ^3H - z\ ^1H^\circ$											
		4537.6734	4538.9457	26 351.038–	48 382.600	11–11	3.1E−04	9.5E−05	1.6E−02	−2.98	E	2*n*
		4487.7364	4488.9954	26 105.906–	48 382.600	13–11	5.8E−04	1.5E−04	2.9E−02	−2.71	E	2*n*
		4595.3586	4596.6461	26 627.607–	48 382.600	9–11	5.01E−03	1.94E−03	2.64E−01	−1.758	B	13
456	$b\ ^3H - y\ ^1G^\circ$											
		4528.7570	4530.0269	26 627.607–	48 702.532	9–9	3.69E−03	1.13E−03	1.52E−01	−1.99	C	13
457	$b\ ^3H - y\ ^3H^\circ$											
		4285.4420	4286.6478	26 105.906–	49 434.160	13–13	1.8E−02	4.9E−03	9.0E−01	−1.20	D+	13
		4327.9034	4329.1203	26 627.607–	49 726.987	9–9	7.16E−03	2.01E−03	2.58E−01	−1.742	C+	13
458	$b\ ^3H - v\ ^3G^\circ$											
		4280.5396	4281.7441	26 105.906–	49 460.899	13–11	3.1E−03	7.2E−04	1.3E−01	−2.03	E	2*n*
		4325.9400	4327.1564	26 351.038–	49 460.899	11–11	4.8E−03	1.4E−03	2.1E−01	−1.83	D+	13
		4346.5526	4347.7745	26 627.607–	49 627.881	9–9	7.52E−03	2.13E−03	2.75E−01	−1.717	B	13
459	$b\ ^3H - x\ ^1G^\circ$											
		4167.8587	4169.0336	26 627.607–	50 613.980	9–9	5.9E−03	1.52E−03	1.88E−01	−1.863	C	13
460	$b\ ^3H - v\ ^3F^\circ$											
		4006.3108	4007.4434	26 351.038–	51 304.601	11–9	5.1E−02	1.0E−02	1.5E−00	−0.95	D	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
461	$b\ ^3H-u\ ^3G^\circ$											
		3956.4554	3957.5750	26 105.906–51	373.907	13–11	1.76E−01	3.49E−02	5.91E−00	−0.343	B	13
		3948.7749	3949.8925	26 351.038–51	668.183	11–9	2.08E−01	3.98E−02	5.69E−00	−0.359	B	13
		3967.4206	3968.5431	26 627.607–51	825.770	9–7	1.52E−01	2.79E−02	3.28E−00	−0.600	B	13
462	$b\ ^3H-Hsp3\ ^1H^\circ$											
		3916.7310	3917.8402	26 105.906–51	630.175	13–11	9.83E−02	1.91E−02	3.21E−00	−0.604	B	13
463	$b\ ^3H-u\ ^3D^\circ$											
		3944.9811	3946.0977	26 627.607–51	969.098	9–7	5.7E−03	1.0E−03	1.2E−01	−2.03	D+	15
464	$b\ ^3H-w\ ^3H^\circ$											
		3797.5149	3798.5931	26 105.906–52	431.443	13–13	4.57E−01	9.89E−02	1.61E+01	0.109	B+	13
		3806.6957	3807.7763	26 351.038–52	613.086	11–11	4.35E−01	9.45E−02	1.30E+01	0.017	B+	13
		3771.4916	3772.5630	26 105.906–52	613.086	13–11	6.4E−03	1.2E−03	1.9E−01	−1.82	D	2*n*
465	$b\ ^3H-y\ ^3I^\circ$											
		3765.5389	3766.6089	26 105.906–52	654.988	13–15	9.51E−01	2.33E−01	3.76E+01	0.482	B+	13
		3821.1778	3822.2622	26 351.038–52	513.556	11–13	5.54E−01	1.43E−01	1.99E+01	0.198	B+	13
		3805.3426	3806.4228	26 627.607–52	898.994	9–11	8.60E−01	2.28E−01	2.58E+01	0.313	B+	13
		3785.7063	3786.7815	26 105.906–52	513.556	13–13	1.51E−02	3.24E−03	5.26E−01	−1.375	C+	13
		3765.7001	3766.7700	26 351.038–52	898.994	11–11	2.36E−02	5.02E−03	6.85E−01	−1.258	C+	13
466	$b\ ^3H-z\ ^1I^\circ$											
		3738.3051	3739.3680	26 351.038–53	093.525	11–13	3.44E−01	8.52E−02	1.15E+01	−0.028	B	13
467	$b\ ^3H-Dsp3\ ^5F^\circ$											
		3582.1999	3583.2224	26 105.906–54	013.748	13–11	2.35E−01	3.83E−02	5.87E−00	−0.303	B	13
468	$b\ ^3H-x\ ^1F^\circ$											
		3684.1376	3685.1865	26 627.607–53	763.276	9–7	9.29E−02	1.47E−02	1.61E−00	−0.878	B	13
469	$b\ ^3H-Dsp3\ ^5D^\circ$											
		3576.7587	3577.7798	26 351.038–54	301.336	11–9	8.8E−02	1.4E−02	1.8E−00	−0.82	E	2*n*
470	$b\ ^3H-t\ ^3G^\circ$											
		3586.1126	3587.1361	26 105.906–53	983.289	13–11	7.02E−01	1.15E−01	1.76E+01	0.173	B+	13
		3584.9577	3585.9809	26 351.038–54	237.411	11–9	6.74E−01	1.06E−01	1.38E+01	0.068	B+	13
		3573.8886	3574.9090	26 627.607–54	600.346	9–7	5.73E−01	8.55E−02	9.05E−00	−0.114	B+	13
471	$b\ ^3H-w\ ^1G^\circ$											
		3547.1942	3548.2077	26 627.607–54	810.852	9–9	7.13E−02	1.35E−02	1.41E−00	−0.917	B	13
472	$b\ ^3H-v\ ^3H^\circ$											
		3402.2559	3403.2322	26 105.906–55	489.738	13–13	2.19E−01	3.80E−02	5.54E−00	−0.306	C+	13
		3426.6659	3427.6484	26 351.038–55	525.558	11–11	1.07E−01	1.88E−02	2.34E−00	−0.684	B	13
		3469.0119	3470.0053	26 627.607–55	446.004	9–9	8.58E−02	1.55E−02	1.59E−00	−0.856	B	13
473	$b\ ^3H-u\ ^3H^\circ$											
		3307.2337	3308.1857	26 105.906–56	333.956	13–13	1.97E−01	3.23E−02	4.57E−00	−0.377	B+	13
		3328.8659	3329.8235	26 351.038–56	382.658	11–11	2.21E−01	3.67E−02	4.43E−00	−0.394	B+	13
		3355.2277	3356.1920	26 627.607–56	423.279	9–9	2.59E−01	4.37E−02	4.35E−00	−0.405	C+	13
474	$b\ ^3H-u\ ^3F^\circ$											
		3336.2567	3337.2162	26 627.607–56	592.699	9–9	4.91E−02	8.19E−03	8.10E−01	−1.132	C+	13
475	$b\ ^3H-x\ ^3I^\circ$											
		3233.0518	3233.9850	26 105.906–57	027.509	13–15	4.19E−01	7.58E−02	1.05E+01	−0.007	B+	13
		3254.3619	3255.3005	26 351.038–57	070.167	11–13	4.24E−01	7.96E−02	9.38E−00	−0.058	B+	13
		3280.2604	3281.2056	26 627.607–57	104.213	9–11	4.21E−01	8.30E−02	8.07E−00	−0.127	B+	13
		3228.5975	3229.5296	26 105.906–57	070.167	13–13	1.7E−02	2.7E−03	3.8E−01	−1.45	D+	13
		3250.7590	3251.6967	26 351.038–57	104.213	11–11	2.85E−02	4.52E−03	5.32E−01	−1.304	B	13
476	$b\ ^3H-Hsp1\ ^3I^\circ$											
		3066.9970	3067.8884	26 351.038–58	946.728	11–13	1.71E−01	2.85E−02	3.17E−00	−0.504	C+	13
		3079.9885	3080.8831	26 627.607–59	085.823	9–11	8.4E−02	1.5E−02	1.3E−00	−0.88	D+	13
477	$b\ ^3H-t\ ^3H^\circ$											
		2918.0248	2918.8791	26 105.906–60	365.633	13–13	1.18E−00	1.51E−01	1.88E+01	0.292	C+	13
		2923.2856	2924.1412	26 351.038–605	49.112	11–11	1.39E−00	1.78E−01	1.89E+01	0.292	C+	13
		2929.1170	2929.9740	26 627.607–60	757.592	9–9	1.53E−00	1.97E−01	1.71E+01	0.248	C+	13
478	$a\ ^3D-y\ ^3D^\circ$											
		8365.6336	8367.9326	262 24.967–38	175.352	7–7	1.69E−03	1.77E−03	3.42E−01	−1.91	C	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		8293.5146	8295.7942	26 623.733–	38 678.036	5–5	1.4E−03	1.5E−03	2.0E−01	−2.14	D+	13
		7941.0892	7943.2736	26 406.463–	38 995.733	3–3	1.82E−03	1.73E−03	1.35E−01	−2.286	C+	14
479	$a\ ^3D–x\ ^3D^\circ$											
		5262.8809	5264.3457	26 224.967–	45 220.678	7–7	8.7E−04	3.6E−04	4.4E−02	−2.60	E	2*n*
480	$a\ ^3D–y\ ^3P^\circ$											
		4876.1879	4877.5498	26 224.967–	46 727.071	7–5	2.7E−04	6.8E−05	7.6E−03	−3.33	E	2*n*
481	$a\ ^3D–u\ ^5D^\circ$											
		4871.9281	4873.2889	26 224.967–	46 744.990	7–7	2.84E−03	1.01E−03	1.14E−01	−2.150	C+	13
		4813.1128	4814.4580	26 406.463–	47 177.231	3–3	1.4E−03	4.9E−04	2.3E−02	−2.84	E	2*n*
482	$a\ ^3H–x\ ^3F^\circ$											
		4790.7431	4792.0823	26 224.967–	47 092.709	7–7	2.7E−04	9.3E−05	1.0E−02	−3.19	E	2*n*
483	$a\ ^3D–w\ ^3D^\circ$											
		4808.1483	4809.4922	26 224.967–	47 017.185	7–7	7.6E−04	2.6E−04	2.9E−02	−2.74	D	2*n*
		4873.7513	4875.1125	26 623.733–	47 136.081	5–5	5.5E−04	2.0E−04	1.6E−02	−3.01	E	2*n*
		4791.2462	4792.5855	26 406.463–	47 272.024	3–3	3.56E−03	1.22E−03	5.79E−02	−2.435	C+	15
484	$a\ ^3D–w\ ^5G^\circ$											
		4679.2255	4680.5352	26 224.967–	47 590.045	7–9	1.29E−03	5.46E−04	5.89E−02	−2.418	C+	15
485	$a\ ^3D–y\ ^3S^\circ$											
		4776.0673	4777.4027	26 623.733–	47 555.607	5–3	2.2E−03	4.5E−04	3.5E−02	−2.65	E	2*n*
486	$a\ ^3D–v\ ^5P^\circ$											
		4556.9250	4558.2024	26 224.967–	48 163.443	7–5	1.4E−03	3.1E−04	3.3E−02	−2.66	D	2*n*
		4614.2054	4615.4979	26 623.733–	48 289.868	5–3	2.8E−03	5.4E−04	4.1E−02	−2.57	E	2*n*
487	$a\ ^3D–x\ ^3P^\circ$											
		4527.7827	4529.0524	26 224.967–	48 304.640	7–5	1.3E−03	2.9E−04	3.0E−02	−2.69	E	2*n*
		4566.5145	4567.7944	26 623.733–	48 516.135	5–3	4.5E−03	8.4E−04	6.3E−02	−2.38	D+	13
		4565.3102	4566.5898	26 406.463–	48 304.640	3–5	2.2E−03	1.2E−03	5.2E−02	−2.46	E	2*n*
488	$a\ ^3D–v\ ^3D^\circ$											
		4343.2712	4344.4922	26 224.967–	49 242.618	7–5	1.6E−02	3.2E−03	3.2E−01	−1.66	D	2*n*
		4409.1195	4410.3579	26 623.733–	49 297.632	5–3	7.4E−03	1.3E−03	9.5E−02	−2.19	D	2*n*
		4377.7916	4379.0217	26 406.463	49 242.618	3–5	3.8E−03	1.8E−03	7.8E−02	−2.27	D	2*n*
489	$a\ ^3D–Fsp3\ ^1F^\circ$											
		4374.4892	4375.7184	26 623.733–	49 477.124	5–7	1.68E−03	6.8E−04	4.86E−02	−2.472	C	13
490	$a\ ^3D–w\ ^3P^\circ$											
		4172.1222	4173.2982	26 224.967–	50 186.831	7–5	9.80E−02	1.83E−02	1.76E−00	−0.893	C+	13
		4268.7488	4269.9502	26 623.733–	50 043.210	5–3	3.30E−02	5.41E−03	3.80E−01	−1.568	C+	13
		4242.7294	4243.9239	26 623.733–	50 186.831	5–3	1.32E−02	3.56E−03	2.49E−01	−1.749	C+	13
		4229.5102	4230.7013	26 406.463–	50 043.210	3–3	2.93E−02	7.85E−03	3.28E−01	−1.628	C+	13
491	$a\ ^3D–z\ ^1F^\circ$											
		4171.8993	4173.0753	26 623.733–	50 586.875	5–7	1.09E−02	3.98E−03	2.73E−01	−1.701	C+	13
492	$a\ ^3D–v\ ^3F^\circ$											
		4040.6381	4041.7797	26 623.733–	51 365.308	5–7	4.8E−02	1.6E−02	1.1E−00	−1.08	D+	3*n*
		4031.9607	4033.1000	26 406.463–	51 201.286	3–5	7.6E−02	3.1E−02	1.2E−00	−1.03	D+	3*n*
493	$a\ ^3D–u\ ^3G^\circ$											
		3929.2083	3930.3208	26 224.967–	51 668.183	7–9	2.09E−02	6.22E−03	5.64E−01	−1.361	C+	13
		3966.8100	3967.9323	26 623.733–	51 825.770	5–7	6.8E−03	2.25E−03	1.47E−01	−1.95	C	13
494	$a\ ^3D–y\ ^1D^\circ$											
		3985.3873	3986.5144	26 623.733–	51 708.304	5–5	8.53E−02	2.03E−02	1.33E−00	−0.993	B	13
		3951.1632	3952.2814	26 406.463–	51 708.304	3–5	4.29E−01	1.67E−01	6.54E−00	−0.299	B	13
495	$a\ ^3D–u\ ^3D^\circ$											
		3883.2800	3884.3805	26 224.967–	51 969.098	7–7	1.28E−01	2.90E−02	2.59E−00	−0.693	C+	13
		3894.0120	3895.1153	26 623.733–	52 296.916	5–5	1.03E−01	2.34E−02	1.50E−00	−0.932	B	13
		3829.4518	3830.5384	26 406.463–	52 512.453	3–3	1.32E−01	2.90E−02	1.10E−00	−1.060	C	13
496	$a\ ^3D–{}^2P4p\ ^1P^\circ$											
		3878.7259	3879.8252	26 406.463–	52 180.817	3–3	5.34E−01	1.20E−01	4.62E−00	−0.442	C+	13
497	$a\ ^3D–t\ ^3D^\circ$											
		3846.7998	3847.8909	26 224.967–	52 213.227	7–7	6.20E−01	1.38E−01	1.22E+01	−0.016	B	13
		3836.3304	3837.4187	26 623.733–	52 682.916	5–5	3.29E−01	7.26E−02	4.59E−00	−0.440	C+	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		3779.4537	3780.5272	26 406.463	–52 857.800	3–3	1.05E−01	2.25E−02	8.40E−01	−1.171	C+	13
		3778.5090	3779.5823	26 224.967	–52 682.916	7–5	1.17E−01	1.79E−02	1.56E−00	−0.902	C+	13
		3810.7557	3811.8373	26 623.733	–52 857.800	5–3	1.94E−01	2.54E−02	1.59E−00	−0.897	C+	13
		3906.7471	3907.8537	26 623.733	–52 213.227	5–7	7.05E−02	2.26E−02	1.45E−00	−0.947	B	13
498	$a\ ^3D–v\ ^3P^\circ$											
		3757.4546	3758.5224	26 623.733	–53 229.937	5–3	8.26E−02	1.05E−02	6.49E−01	−1.280	C+	13
		3802.2789	3803.3583	26 623.733	–52 916.291	5–5	5.63E−02	1.22E−02	7.65E−01	−1.214	C+	13
499	$a\ ^3D–Gsp3\ ^3F^\circ$											
		3740.2395	3741.3028	26 224.967	–52 953.625	7–9	1.3E−01	3.4E−02	2.9E−00	−0.62	D	3*n*
500	$a\ ^3D–\ ^4F5p\ ^3F^\circ$											
		3688.4605	3689.5104	26 224.967	–53 328.831	7–9	7.3E−02	1.9E−02	1.6E−00	−0.87	D	2*n*
501	$a\ ^3D–Dsp3\ ^5D^\circ$											
		3560.6968	3561.7137	26 224.967	–54 301.336	7–9	7.4E−02	1.8E−02	1.5E−00	−0.90	D+	3*n*
		3613.4434	3614.4740	26 224.967	–53 891.522	7–7	7.0E−02	1.4E−02	1.1E−00	−1.02	E	2*n*
502	$a\ ^3D–t\ ^3G^\circ$											
		3568.8234	3569.8424	26 224.967	–54 237.411	7–9	6.7E−02	1.65E−02	1.36E−00	−0.94	C	13
		3573.3936	3574.4138	26 623.733	–54 600.346	5–7	1.1E−01	2.8E−02	1.7E−00	−0.85	D+	13
503	$a\ ^3D–t\ ^5P^\circ$											
		3598.7173	3599.7440	26 224.967	–54 004.714	7–7	3.1E−02	6.0E−03	5.0E−01	−1.38	D	2*n*
504	$a\ ^3D–w\ ^1D^\circ$											
		3406.4367	3407.4140	26 406.463	–55 754.229	3–5	2.7E−01	7.8E−02	2.6E−00	−0.63	D+	3*n*
505	$a\ ^3D–u\ ^3H^\circ$											
		3310.4907	3311.4436	26 224.967	–56 423.279	7–9	6.17E−02	1.30E−02	9.95E−01	−1.040	C+	13
506	$a\ ^3D–u\ ^3F^\circ$											
		3292.0208	3292.9690	26 224.967	–56 592.699	7–9	5.77E−01	1.21E−01	9.15E−00	−0.074	B+	13
		3314.7413	3315.6953	26 623.733	–56 783.318	5–7	7.25E−01	1.67E−01	9.13E−00	−0.078	B+	13
		3282.8903	3283.8362	26 406.463	–56 858.649	3–5	3.42E−01	9.21E−02	2.99E−00	−0.559	B	13
		3271.4847	3272.4277	26 224.967	–56 783.318	7–7	8.47E−02	1.36E−02	1.02E−00	−1.022	C+	13
507	$a\ ^3D–v\ ^1G^\circ$											
		3253.5990	3254.5374	26 224.967	–56 951.297	7–9	1.62E−01	3.31E−02	2.48E−00	−0.636	B	13
508	$z\ ^5F^\circ–e\ ^7D$											
		6271.2788	6273.0133	26 874.548	–42 815.852	11–11	3.05E−04	1.80E−04	4.09E−02	−2.703	C+	15
509	$z\ ^5F^\circ–e\ ^5D$											
		5615.6439	5617.2028	26 874.548	–44 677.003	11–9	2.64E−01	1.02E−01	2.07E+01	0.050	B	14
		5586.7559	5588.3071	27 166.818	–45 061.326	9–7	2.19E−01	7.98E−02	1.32E+01	−0.144	B	13
		5572.8424	5574.3899	27 394.689	–45 333.872	7–5	2.28E−01	7.58E−02	9.74E−00	−0.275	B	14
		5569.6181	5571.1647	27 559.581	–45 509.149	5–3	2.34E−01	6.53E−02	5.99E−00	−0.486	B	15
		5576.0888	5577.6371	27 666.346	–45 595.083	3–1	2.5E−01	3.8E−02	2.1E−00	−0.94	D	2*n*
		5709.3783	5710.9623	27 166.818	–44 677.003	9–9	2.13E−02	1.04E−02	1.76E−00	−1.028	B	14
		5658.8164	5660.3869	27 394.689	–45 061.326	7–7	4.34E−02	2.08E−02	2.72E−00	−0.836	B	13
		5624.5422	5626.1035	27 559.581	–45333.872	5–5	7.41E−02	3.52E−02	3.26E−00	−0.755	B	14
		5602.9451	5604.5006	27 666.346	–45 509.149	3–3	1.00E−01	4.71E−02	2.61E−00	−0.850	B	15
		5784.6584	5786.2625	27 394.689	–44 677.003	7–9	6.50E−04	4.20E−04	5.60E−02	−2.532	C+	14
		5712.1316	5713.7163	27 559.581	–45 061.326	5–7	2.99E−03	2.05E−03	1.92E−01	−1.990	B	14
		5658.5317	5660.1020	27 666.346	–45 333.872	3–5	5.80E−03	4.64E−03	2.60E−01	−1.856	B	14
510	$z\ ^5F^\circ–e\ ^5F$											
		4966.0889	4967.4747	26 874.548	–47 005.503	11–11	3.31E−02	1.22E−02	2.20E−00	−0.871	C+	13
		4875.8776	4877.2394	26 874.548	–47 377.952	11–9	3.4E−03	9.8E−04	1.7E−01	−1.97	E	2*n*
		4843.1438	4844.4970	27 394.689	–48 036.670	7–5	9.2E−03	2.3E−03	2.6E−01	−1.79	E	2*n*
		4838.5118	4839.8637	27 559.581	–48 221.321	5–3	1.2E−02	2.5E−03	2.0E−01	−1.90	D	2*n*
		5039.2520	5040.6572	27 166.818	–47 005.503	9–11	6.38E−03	2.97E−03	4.44E−01	−1.573	B	13
		5002.7927	5004.1883	27 394.689	–47 377.952	7–9	8.8E−03	4.2E−03	4.9E−01	−1.53	D	2*n*
511	$z\ ^5F^\circ–e\ ^3F$											
		4807.7088	4809.0525	27 166.818	–47960.937	9–9	2.3E−03	7.9E−04	1.1E−01	−2.15	D	2*n*
		4729.6766	4730.9996	27 394.689	–48 531.862	7–7	1.6E−03	5.4E−04	5.9E−02	−2.42	E	2*n*
		4860.9785	4862.3363	27 394.689	–47 960.937	7–9	1.3E−03	6.0E−04	6.7E−02	−2.38	E	2*n*
		4766.8659	4768.1988	27 559.581	–48 531.862	5–7	2.3E−03	1.1E−03	8.6E−02	−2.26	E	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
512	$z\,^5F^\circ$–$e\,^7F$											
		4259.9992	4261.1983	26 874.548	–50 342.126	11–13	1.6E−02	5.1E−03	7.8E−01	−1.26	D	13
		4224.1717	4225.3613	27 166.818	–50 833.435	9–11	1.06E−01	3.47E−02	4.34E−00	−0.506	B+	13
		4200.9242	4202.1078	27 394.689	–51 192.270	7–9	6.25E−02	2.13E−02	2.06E−00	−0.827	C+	13
		4224.5128	4225.7025	27 666.346	–51 331.049	3–5	6.8E−02	3.04E−02	1.27E−00	−1.040	C	13
		4172.6408	4173.8169	26 874.548	–50 833.435	11–11	2.24E−02	5.84E−03	8.83E−01	−1.192	B	13
		4161.0769	4162.2500	27 166.818	–51 192.270	9–9	9.5E−03	2.5E−03	3.0E−01	−1.65	D	2*n*
		4205.5385	4206.7233	27 559.581	–51 331.049	5–5	2.8E−02	7.4E−03	5.1E−01	−1.44	D+	13
		4168.6147	4169.7898	27 166.818	–51 148.845	9–7	6.8E−03	1.4E−03	1.7E−01	−1.90	D	2*n*
513	$z\,^5F^\circ$–$f\,^7D$											
		4235.3873	4236.5799	27 394.689	–50 998.642	7–5	1.6E−02	3.0E−03	3.0E−01	−1.68	D+	13
514	$z\,^5F^\circ$–$f\,^5D$											
		4245.3444	4246.5397	26 874.548	–50 423.134	11–9	1.01E−02	2.23E−03	3.43E−01	−1.610	C+	13
		4278.2314	4279.4353	27 166.818	–50 534.394	9–7	1.0E−02	2.2E−03	2.8E−01	−1.70	D	2*n*
515	$z\,^5F^\circ$–$e\,^7P$											
		4264.2034	4265.4037	27 166.818	–50 611.258	9–7	1.62E−02	3.43E−03	4.34E−01	−1.510	C+	13
516	$z\,^5F^\circ$–$e\,^5G$											
		4227.4266	4228.6171	26 874.548	–50 522.941	11–13	5.29E−01	1.68E−01	2.57E+01	0.266	B	13
		4247.4255	4248.6213	27 166.818	–50 703.867	9–11	1.94E−01	6.41E−02	8.07E−00	−0.239	B	13
		4238.8100	4240.0035	27 394.689	–50 979.576	7–9	2.41E−01	8.35E−02	8.16E−00	−0.233	B+	13
		4225.4543	4226.6443	27 559.581	–51 219.012	5–7	1.65E−01	6.18E−02	4.30E−00	−0.510	B+	13
		4217.5456	4218.7336	27 666.346	–51 370.142	3–5	2.46E−01	1.09E−01	4.56E−00	−0.484	B+	13
		4195.3291	4196.5112	26 874.548	–50 703.867	11–11	1.11E−01	2.93E−02	4.45E−00	−0.492	B	13
		4198.2469	4199.4297	27 166.818	–50 979.576	9–9	1.47E−01	3.89E−02	4.84E−00	−0.456	B+	13
		4196.2083	4197.3907	27 394.689	–51 219.012	7–7	1.09E−01	2.88E−02	2.78E−00	−0.696	B+	13
		4198.6341	4199.8170	27 559.581	–51 370.142	5–5	1.25E−01	3.30E−02	2.28E−00	−0.782	B	13
		4169.7562	4170.9316	27 394.689	–51 370.142	7–5	1.0E−02	1.9E−03	1.8E−01	−1.87	D	2*n*
517	$z\,^5F^\circ$–$e\,^7G$											
		4149.3650	4150.5351	26 874.548	–50 967.828	11–13	4.23E−02	1.29E−02	1.94E−00	−0.85	C	13
		4154.8055	4155.9770	27 166.818	–51 228.550	9–11	1.40E−01	4.42E−02	5.45E−00	−0.400	B	13
		4182.7577	4183.9366	27 559.581	–51 460.515	5–7	1.3E−02	4.7E−03	3.3E−01	−1.63	D	2*n*
		4187.5870	4188.7671	27 666.346	–51 539.717	3–5	4.48E−02	1.96E−02	8.12E−01	−1.230	C+	13
		4104.9407	4106.0991	26 874.548	–51 228.550	11–11	2.6E−03	6.5E−04	9.7E−02	−2.14	D	2*n*
		4136.5213	4137.6880	27 166.818	–51 334.908	9–9	1.32E−02	3.39E−03	4.15E−01	−1.52	C	13
		4168.9416	4170.1167	27 559.581	–51 539.717	5–5	1.9E−02	4.8E−03	3.3E−01	−1.62	D	2*n*
		4087.0939	4088.2476	26 874.548	–51 334.908	11–9	1.9E−02	3.8E−03	5.7E−01	−1.37	D	3*n*
518	$z\,^5F^\circ$–$f\,^5F$											
		4126.1827	4127.3466	26 874.548	–51 103.188	11–11	4.2E−02	1.1E−02	1.6E−00	−0.92	D	2*n*
		4114.9376	4116.0987	27 166.818	–51 461.667	9–9	1.57E−02	3.99E−03	4.86E−01	−1.445	C+	13
		4129.4611	4130.6259	27 394.689	–51 604.100	7–7	6.5E−03	1.7E−03	1.6E−01	−1.94	E	2*n*
		4150.2491	4151.4194	27 666.346	–51 754.494	3–3	7.7E−02	2.0E−02	8.1E−01	−1.23	D	2*n*
		4090.9535	4092.1083	27 166.818	–51 604.100	9–7	1.1E−02	2.1E−03	2.5E−01	−1.73	D	2*n*
		4112.3185	4113.4789	27 394.689	–51 705.011	7–5	1.5E−02	2.7E−03	2.6E−01	−1.72	D	2*n*
		4153.8997	4155.0709	27 394.689	–51 461.667	7–9	2.05E−01	6.82E−02	6.53E−00	−0.321	B+	13
		4157.7801	4158.9523	27 559.581	–51 604.100	5–7	2.18E−01	7.91E−02	5.41E−00	−0.403	B+	13
		4158.7924	4159.9650	27 666.346	–51 705.011	3–5	1.6E−01	6.7E−02	2.8E−00	−0.70	D	2*n*
519	$z\,^5F^\circ$–$e\,^3D$											
		4106.4229	4107.5817	27 394.689	–51 739.917	7–5	2.52E−02	4.55E−03	4.31E−01	−1.497	C+	13
		4183.0061	4184.1850	27 394.689	–51 294.217	7–7	4.0E−03	1.0E−03	1.0E−01	−2.14	E	2*n*
520	$z\,^5F^\circ$–$g\,^5D$											
		4084.4915	4085.6446	26 874.548	–51 350.489	11–9	8.66E−02	1.77E−02	2.62E−00	−0.710	C+	13
		4054.8669	4056.0122	27 559.581	–52 214.342	5–3	9.61E−02	1.42E−02	9.50E−01	−1.148	B	15
		4065.3812	4066.5292	27 666.346	–52 257.342	3–1	1.7E−01	1.4E−02	5.7E−01	−1.37	D+	3*n*
		4133.8557	4135.0217	27 166.818	–51 350.489	9–9	2.12E−02	5.43E−03	6.65E−01	−1.311	C+	13
		4101.2611	4102.4185	27 394.689	–51 770.554	7–7	2.6E−02	6.4E−03	6.1E−01	−1.35	D	3*n*
		4082.1079	4083.2603	27 559.581	–52 049.820	5–5	2.5E−02	6.2E−03	4.2E−01	−1.51	D	2*n*
		4072.5024	4073.6523	27 666.346	–52 214.342	3–3	4.88E−02	1.21E−02	4.88E−01	−1.439	B	15

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
521	$z\ ^5F^\circ$–$e\ ^5P$											
		4051.9053	4053.0499	27 394.689–	52 067.466	7–5	3.3E−02	5.7E−03	5.3E−01	−1.40	D	2*n*
		4090.0726	4091.2272	27 394.689–	51 837.235	7–7	1.0E−02	2.6E−03	2.4E−01	−1.75	D	2*n*
		4079.1681	4080.3198	27 559.581–	52 067.466	5–5	5.4E−02	1.4E−02	9.1E−01	−1.17	E	2*n*
522	$z\ ^5F^\circ$–$g\ ^5F$											
		3817.6395	3818.7229	26 874.548–	53 061.314	11–11	7.7E−02	1.7E−02	2.3E−00	−0.73	E	2*n*
523	$z\ ^5F^\circ$–$h\ ^5D$											
		3804.0094	3805.0893	26 874.548–	53 155.141	11–9	4.6E−02	8.2E−03	1.1E−00	−1.04	D	3*n*
		3789.8192	3790.8954	27 166.818–	53 545.829	9–7	4.1E−02	6.9E−03	7.8E−01	−1.20	E	2*n*
524	$z\ ^5F^\circ$–$f\ ^5P$											
		3845.9851	3847.0760	27 166.818–	53 160.589	9–7	4.5E−02	7.8E−03	8.9E−01	−1.15	D	2*n*
		3819.4932	3820.5771	27 394.689–	53 568.747	7–5	4.9E−02	7.6E−03	6.7E−01	−1.27	E	2*n*
		3791.7424	3792.8191	27 559.581–	53 925.196	5–3	6.7E−02	8.6E−03	5.4E−01	−1.37	E	2*n*
525	$z\ ^5F^\circ$–$f\ ^5G$											
		3801.9840	3803.0634	26 874.548–	53 169.142	11–13	3.7E−02	9.5E−03	1.3E−00	−0.98	E	2*n*
526	$z\ ^5F^\circ$–$e\ ^3G$											
		3762.2036	3763.2727	27 166.818–	53 739.434	9–11	2.4E−02	6.2E−03	6.9E−01	−1.25	D	3*n*
527	$a\ ^1P$–Pps3 $^1D^\circ$	*5029.6176*	*5031.0203*	27 543.001–	47 419.684	3–5	5.3E−03	3.3E−03	1.7E−01	−2.00	D	2*n*
528	$a\ ^1P$–$x\ ^3P^\circ$											
		4779.4394	4780.7756	27 543.001–	48 460.110	3–1	2.79E−02	3.18E−03	1.50E−01	−2.020	C	13
529	$a\ ^1P$–$w\ ^3F^\circ$											
		4566.9885	4568.2685	27 543.001–	49 433.128	3–5	5.9E−03	3.1E−03	1.4E−01	−2.04	D	2*n*
530	$a\ ^1P$–$y\ ^1D^\circ$	4136.9977	4138.1645	27 543.001–	51 708.304	3–5	2.75E−01	1.18E−01	4.81E−00	−0.452	B	13
531	$a\ ^1P$–$u\ ^3D^\circ$											
		4003.7619	4004.8938	27 543.001–	52 512.453	3–3	6.8E−02	1.63E−02	6.4E−01	−1.312	C	13
532	$a\ ^1P$–$t\ ^3D^\circ$											
		3976.6132	3977.7380	27 543.001–	52 682.916	3–5	1.20E−01	4.74E−02	1.86E−00	−0.847	C+	13
		3949.1414	3950.2591	27 543.001–	52 857.800	3–3	4.2E−02	9.8E−03	3.8E−01	−1.53	E	2*n*
533	$a\ ^1P$–$v\ ^3P^\circ$											
		3891.9264	3893.0292	27 543.001–	53 229.937	3–3	2.71E−01	6.15E−02	2.36E−00	−0.734	C+	13
534	$a\ ^1P$–$x\ ^3S^\circ$											
		3806.2167	3807.2972	27 543.001–	53 808.352	3–3	2.5E−01	5.5E−02	2.1E−00	−0.78	D+	3*n*
535	$a\ ^1P$–$w\ ^1D^\circ$	3543.6749	3544.6874	27 543.001–	55 754.229	3–5	1.6E−01	5.1E−02	1.8E−00	−0.81	E	2*n*
536	$a\ ^1P$–$u\ ^3F^\circ$											
		3410.1692	3411.1475	27 543.001–	56 858.649	3–5	5.07E−01	1.47E−01	4.96E−00	−0.355	C+	13
537	$a\ ^1D$–$w\ ^3F^\circ$											
		4844.0138	4845.3671	28 604.611–	49 242.883	5–7	3.62E−03	1.78E−03	1.42E−01	−2.050	C	13
538	$a\ ^1D$–$v\ ^3D^\circ$											
		4869.4639	4870.8240	28 604.611–	49 135.020	5–7	1.3E−03	6.7E−04	5.4E−02	−2.48	E	2*n*
539	$a\ ^1D$–$v\ ^3G^\circ$											
		4705.4570	4706.7736	28 604.611–	49 850.587	5–7	2.3E−03	1.1E−03	8.4E−02	−2.27	E	2*n*
540	$a\ ^1D$–Fsp3 $^1F^\circ$	4789.6508	4790.9897	28 604.611–	49 477.124	5–7	4.57E−02	2.20E−02	1.74E−00	−0.958	B	13
541	$a\ ^1D$–$w\ ^3P^\circ$											
		4663.1782	4664.4837	28 604.611–	50 043.210	5–3	4.3E−03	8.4E−04	6.4E−02	−2.38	E	2*n*
542	$a\ ^1D$–$z\ ^1F^\circ$	4547.8474	4549.1224	28 604.611–	50 586.875	5–7	4.5E−02	2.0E−02	1.5E−00	−1.01	D+	13
543	$a\ ^1D$–$u\ ^3G^\circ$											
		4305.2070	4306.4180	28 604.611–	51 825.770	5–7	4.7E−03	1.8E−03	1.3E−01	−2.04	E	2*n*
544	$a\ ^1D$–$y\ ^1D^\circ$	4327.0956	4328.3124	28 604.611–	51 708.304	5–5	1.12E−01	3.14E−02	2.24E−00	−0.804	B	13
545	$a\ ^1D$–$x\ ^1D^\circ$	4317.0475	4318.2616	28 604.611–	51 762.073	5–5	5.2E−03	1.5E−03	1.0E−01	−2.14	E	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
546	$a\ ^1D-{}^2P4p\ ^1P^\circ$	4240.3708	4241.5647	28 604.611	–52 180.817	5–3	6.70E−02	1.08E−02	7.57E−01	−1.266	C+	13
547	$a\ ^1D-v\ ^3P^\circ$	4059.7135	4060.8601	28 604.611	–53 229.937	5–3	5.71E−02	8.47E−03	5.66E−01	−1.373	C+	13
548	$a\ ^1D-{}^4F5p\ ^5F^\circ$	3989.8572	3990.9855	28 604.611	–53 661.075	5–7	5.3E−02	1.8E−02	1.2E−00	−1.05	D	2*n*
549	$a\ ^1D-x\ ^1F^\circ$	3973.6493	3974.7734	28 604.611	–53 763.276	5–7	5.81E−02	1.93E−02	1.26E−00	−1.016	B	13
550	$a\ ^1D-t\ ^3G^\circ$	3845.6950	3846.7858	28 604.611	–54 600.346	5–7	5.89E−02	1.83E−02	1.16E−00	−1.039	B	13
551	$a\ ^1D-s\ ^3G^\circ$	3677.3061	3678.3532	28 604.611	–55 790.692	5–7	2.28E−01	6.47E−02	3.92E−00	−0.490	C+	13
552	$a\ ^1D-w\ ^1D^\circ$	*3682.2441*	*3683.2924*	28 604.611	–55 754.229	5–5	1.5E−00	3.1E−01	1.9E+01	0.20	C+	3*n*
553	$a\ ^1D-Gsp3\ ^1F^\circ$	3636.2236	3637.2600	28 604.611	–56 097.832	5–7	2.20E−01	6.11E−02	3.66E−00	−0.515	B	13
554	$a\ ^1H-u\ ^5D^\circ$	5584.7647	5586.3154	28 819.952	-46720.839	11–9	1.3E−03	4.9E−04	1.0E−01	−2.27	E	2*n*
555	$a\ ^1H-x\ ^3F^\circ$	5532.7472	5534.2839	28 819.952	–46 889.139	11–9	1.9E−03	7.3E−04	1.5E−01	−2.10	E	2*n*
556	$a\ ^1H-z\ ^3H^\circ$	5466.9878	5468.5070	28 819.952	–47 106.481	11–9	1.5E−03	5.3E−04	1.1E−01	−2.23	D+	13
557	$a\ ^1H-w\ ^5G^\circ$	5326.1428	5327.6244	28 819.952	–47 590.045	11–9	2.22E−03	7.72E−04	1.49E−01	−2.071	B	15
558	$a\ ^1H-z\ ^1G^\circ$	5365.3991	5366.8911	28 819.952	–47 452.714	11–9	2.46E−02	8.68E−03	1.69E−00	−1.020	B	13
559	$a\ ^1H-x\ ^3G^\circ$	5263.8650	5265.3300	28 819.952	–47 812.115	11–9	1.96E−03	6.7E−04	1.27E−01	−2.135	C	13
560	$a\ ^1H-y\ ^5H^\circ$	5115.7781	5117.2037	28 819.952	–48 361.879	11–9	5.8E−04	1.8E−04	3.4E−02	−2.69	E	2*n*
561	$a\ ^1H-z\ ^1H^\circ$	5110.3588	5111.7829	28 819.952	–48 382.600	11–11	9.99E−03	3.91E−03	7.25E−01	−1.366	B	13
562	$a\ ^1H-y\ ^1G^\circ$	5028.1264	5029.5286	28 819.952	–48 702.532	11–9	2.21E−02	6.85E−03	1.25E−00	−1.123	B	13
563	$a\ ^1H-w\ ^3F^\circ$	4927.4182	4928.7937	28 819.952	–49 108.893	11–9	2.6E−03	7.7E−04	1.4E−01	−2.07	D+	13
564	$a\ ^1H-y\ ^3H^\circ$	4809.9384	4811.2827	28 819.952	–49 604.424	11–11	5.5E−04	1.9E−04	3.3E−02	−2.68	E	2*n*
565	$a\ ^1H-x\ ^1G^\circ$	4587.1276	4588.4129	28 819.952	–50 613.980	11–9	6.5E−03	1.67E−03	2.77E−01	−1.74	C	13
566	$a\ ^1H-x\ ^3H^\circ$	4502.5909	4503.8539	28 819.952	–51 023.159	11–13	1.2E−03	4.4E−04	7.2E−02	−2.31	E	2*n*
567	$a\ ^1H-u\ ^3G^\circ$	4432.5678	4433.8124	28 819.952	–51 373.907	11–11	8.4E−03	2.5E−03	4.0E−01	−1.56	D	2*n*
		4375.4768	4376.7063	28 819.952	–51 668.183	11–9	1.5E−03	3.6E−04	5.7E−02	−2.40	D+	15
568	$a\ ^1H-Hsp3\ ^1H^\circ$	4382.7680	4383.9994	28 819.952	–51 630.175	11–11	1.54E−02	4.43E−03	7.04E−01	−1.312	C+	13
569	$a\ ^1H-y\ ^3I^\circ$	4219.3604	4220.5488	28 819.952	–52 513.556	11–13	2.88E−01	9.09E−02	1.39E+01	0.000	B+	13
570	$a\ ^1H-z\ ^1I^\circ$	4118.5450	4119.7070	28 819.952	–53 093.525	11–13	4.96E−01	1.49E−01	2.23E+01	0.215	B	13
571	$a\ ^1H-w\ ^1G^\circ$	3846.4094	3847.5003	28 819.952	–54 810.852	11–9	1.68E−01	3.05E−02	4.25E−00	−0.474	C+	13
572	$a\ ^1H-s\ ^3G^\circ$	3756.9374	3758.0051	28 819.952	–55 429.815	11–11	2.2E−01	4.8E−02	6.5E−00	−0.28	D+	3*n*
573	$a\ ^1H-v\ ^3H^\circ$	3743.4682	3744.5324	28 819.952	–55 525.558	11–11	6.05E−01	1.27E−01	1.73E+01	0.146	B+	13
574	$a\ ^1H-{}^2H4p\ ^1H^\circ$	3690.7267	3691.7772	28 819.952	–55 907.174	11–11	2.99E−01	6.10E−02	8.16E−00	−0.173	B	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
575	$a\ ^1H$–$u\ ^3H^\circ$											
		3627.0562	3628.0903	28 819.952–56	382.658	11–11	2.0E−02	3.9E−03	5.1E−01	−1.37	D+	13
		3621.7190	3622.7517	28 819.952–56	423.279	11–9	1.07E−01	1.72E−02	2.26E−00	−0.723	C+	13
576	$a\ ^1H$–$u\ ^3F^\circ$											
		3599.6251	3600.6521	28 819.952–56	592.699	11–9	2.33E−01	3.70E−02	4.83E−00	−0.390	B+	13
577	$a\ ^1H$–$v\ ^1G^\circ$	3553.7386	3554.7537	28 819.952–56	951.297	11–9	1.09E−00	1.69E−01	2.17E+01	0.269	B	13
578	$a\ ^1H$–$x\ ^3I^\circ$											
		3534.5257	3535.5359	28 819.952–57	104.213	11–11	2.20E−02	4.12E−03	5.27E−01	−1.344	C+	13
579	$z\ ^5P^\circ$–$e\ ^5D$											
		6400.0012	6401.7704	29 056.322–44	677.003	7–9	9.27E−02	7.33E−02	1.08E+01	−0.290	B	14
		6411.6493	6413.4216	29 469.022–45	061.326	5–7	4.43E−02	3.83E−02	4.04E−00	−0.718	B	13
		6408.0184	6409.7896	29 732.734–45	333.872	3–5	3.12E−02	3.20E−02	2.02E−00	−1.018	B	14
		6246.3188	6248.0467	29 056.322–45	061.326	7–7	3.24E−02	1.90E−02	2.73E−00	−0.877	B	13
		6301.5012	6303.2439	29 469.022–45	333.872	5–5	6.43E−02	3.83E−02	3.97E−00	−0.718	B	14
		6336.8243	6338.5765	29 732.734–45	509.149	3–3	7.71E−02	4.64E−02	2.91E−00	−0.856	B	15
		6141.7320	6143.4318	29 056.322–45	333.872	7–5	1.23E−02	4.96E−03	7.03E−01	−1.459	B	14
		6232.6412	6234.3654	29 469.022–45	509.149	5–3	3.42E−02	1.20E−02	1.23E−00	−1.223	B	15
580	$z\ ^5P^\circ$–$e\ ^7F$											
		4488.1331	4489.3922	29 056.322–51	331.049	7–5	1.4E−02	3.0E−03	3.1E−01	−1.68	D	2*n*
581	$z\ ^5P^\circ$–$f\ ^7D$											
		4596.0605	4597.3482	29 056.322–50	807.994	7–9	1.50E−02	6.11E−03	6.47E−01	−1.369	C+	13
		4673.1636	4674.4717	29 469.022–50	861.813	5–7	3.8E−02	1.8E−02	1.3E−00	−1.06	D+	13
		4701.0447	4702.3601	29 732.734–50	998.642	3–5	7.2E−03	4.0E−03	1.8E−01	−1.92	E	2*n*
		4643.4634	4644.7636	29 469.022–50	998.642	5–5	4.41E−02	1.43E−02	1.09E−00	−1.147	B	13
		4690.1380	4691.4506	29 732.734–51	048.104	3–3	2.29E−02	7.55E−03	3.50E−01	−1.645	C+	13
		4556.1259	4557.4030	29 056.322–50	998.642	7–5	1.05E−01	2.33E−02	2.45E−00	−0.787	B	13
582	$z\ ^5P^\circ$–$f\ ^5D$											
		4678.8458	4680.1554	29 056.322–50	423.134	7–9	4.97E−02	2.10E−02	2.26E−00	−0.833	B	13
		4745.8001	4747.1274	29 469.022–50	534.394	5–7	2.27E−02	1.07E−02	8.39E−01	−1.270	C+	13
		4654.6050	4655.9081	29 056.322–50	534.394	7–7	3.68E−02	1.20E−02	1.28E−00	−1.077	B	13
		4727.3946	4728.7170	29 732.734–50	880.099	3–3	6.85E−02	2.30E−02	1.07E−00	−1.162	C+	13
		4619.2880	4620.5818	29 056.322–50	698.617	7–5	5.2E−02	1.2E−02	1.3E−00	−1.08	D	2*n*
		4669.1711	4670.4782	29 469.022–50	880.099	5–3	6.27E−02	1.23E−02	9.46E−01	−1.211	C+	13
		4704.9481	4706.2646	29 732.734–50	981.009	3–1	18.8E−02	9.8E−03	4.5E−01	−1.53	D	2*n*
583	$z\ ^5P^\circ$–$e\ ^7P$											
		4667.4531	4668.7597	29 056.322–50	475.285	7–9	6.03E−02	2.53E−02	2.73E−00	−0.751	B	13
		4728.5457	4729.8685	29 469.022–50	611.258	5–7	2.87E−02	1.35E−02	1.05E−00	−1.172	C	13
		4638.0098	4639.3086	29 056.322–50	611.258	7–7	3.37E−02	1.09E−02	1.16E−00	−1.119	C+	13
584	$z\ ^5P^\circ$–$e\ ^5G$											
		4560.0881	4561.3662	29 056.322–50	979.576	7–9	4.7E−03	1.9E−03	2.0E−01	−1.88	D	2*n*
		4596.4155	4597.7033	29 469.022–51	219.012	5–7	2.3E−03	1.0E−03	7.9E−02	−2.28	E	2*n*
585	$z\ ^5P^\circ$–$f\ ^5F$											
		4461.9698	4463.2221	29 056.322–51	461.667	7–9	2.31E−02	8.87E−03	9.12E−01	−1.207	B	13
		4433.7824	4435.0272	29 056.322–51	604.100	7–7	2.62E−02	7.73E−03	7.90E−01	−1.267	B	13
		4495.9531	4497.2144	29 469.022–51	705.011	5–5	1.4E−02	4.1E−03	3.0E−01	−1.69	D	2*n*
		4485.9725	4487.2311	29 469.022–51	754.494	5–3	5.3E−03	9.7E−04	7.1E−02	−2.32	E	2*n*
586	$z\ ^5P^\circ$–$e\ ^3D$											
		4488.9069	4490.1663	29 469.022–51	739.917	5–5	9.8E−03	2.95E−03	2.18E−01	−1.83	C	13
		4481.6093	4482.8668	29 732.734–52	039.889	3–3	4.5E−02	1.4E−02	6.0E−01	−1.39	D	2*n*
		4580.5774	4581.8610	29 469.022–51	4.217	5–7	4.0E−03	1.8E−03	1.3E−01	−2.05	D	2*n*
587	$z\ ^5P^\circ$–$g\ ^5D$											
		4484.2198	4485.4780	29 056.322–51	350.489	7–9	5.04E−02	1.95E−02	2.02E−00	−0.864	B	13
		4482.7393	4483.9971	29 469.022–51	770.554	5–7	2.3E−02	9.7E−03	7.1E−01	−1.32	E	2*n*
		4401.2899	4402.5261	29 056.322–51	770.554	7–7	6.4E−02	1.9E−02	1.9E−00	−0.89	D	3*n*
		4446.8321	4448.0804	29 732.734–52	214.342	3–3	5.38E−02	1.60E−02	7.01E−01	−1.320	B	15
		4347.8326	4349.0548	29 056.322–52	049.820	7–5	1.7E−02	3.4E−03	3.4E−01	−1.63	D	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		4395.2741	4396.5088	29 469.022–52 214.342		5–3	1.70E−02	2.96E−03	2.14E−01	−1.830	B	15
		4438.3433	4439.5893	29 732.734–52 257.342		3–1	8.5E−02	8.4E−03	3.7E−01	−1.60	D	2*n*
588	$z\ ^5P^\circ - e\ ^7S$											
		4440.4793	4441.7259	29 056.322–51 570.094		7–7	4.5E−03	1.3E−03	1.3E−01	−2.04	E	2*n*
		4523.3987	4524.6672	29 469.022–51 570.094		5–7	5.2E−03	2.2E−03	1.7E−01	−1.96	D	2*n*
589	$z\ ^5P^\circ - e\ ^5P$											
		4388.4068	4389.6397	29 056.322–51 837.235		7–7	1.03E−01	2.97E−02	3.01E−00	−0.682	B	13
		4423.8408	4425.0830	29 469.022–52 067.466		5–5	1.8E−02	5.3E−03	3.9E−01	−1.58	D	2*n*
		4485.6756	4486.9341	29 732.734–52 019.666		3–3	1.1E−01	3.4E−02	1.5E−00	−0.99	D	2*n*
		4433.2187	4434.4634	29 469.022–52 019.666		5–3	2.1E−01	3.7E−02	2.7E−00	−0.73	D	2*n*
		4469.3756	4470.6298	29 469.022–51 837.235		5–7	1.59E−01	6.67E−02	4.91E−00	−0.477	C+	13
590	$z\ ^5P^\circ - i\ ^5D$											
		3476.3444	3477.3397	29 056.322–57 813.938		7–7	2.7E−01	4.9E−02	3.9E−00	−0.47	D+	13
591	$a\ ^1I - z\ ^3H^\circ$											
		5649.6306	5651.1986	29 313.006–47 008.368		13–11	3.6E−04	1.5E−04	3.6E−02	−2.72	E	2*n*
592	$a\ ^1I - y\ ^5H^\circ$											
		5284.4248	5285.8953	29 313.006–48 231.277		13–11	8.29E−04	2.94E−04	6.65E−02	−2.418	C+	13
593	$a\ ^1I - z\ ^1H^\circ$	5242.4911	5243.9504	29 313.006–48 382.600		13–11	2.38E−02	8.30E−03	1.86E−00	−0.967	B	13
594	$a\ ^1I - v\ ^3G^\circ$											
		4961.9140	4963.2986	29 313.006–49 460.899		13–11	1.4E−03	4.4E−04	9.3E−02	−2.25	E	2*n*
595	$a\ ^1I - y\ ^3I^\circ$											
		4309.0307	4310.2426	29 313.006–52 513.556		13–13	1.96E−02	5.46E−03	1.01E−00	−1.149	B	13
596	$a\ ^1I - z\ ^1I^\circ$	4203.9383	4205.1227	29 313.006–53 093.525		13–13	2.97E−02	7.87E−03	1.42E−00	−0.990	B	13
597	$a\ ^1I - v\ ^3H^\circ$											
		3813.8845	3814.9669	29 313.006–55 525.558		13–11	6.62E−02	1.22E−02	2.00E−00	−0.799	B	13
598	$a\ ^1I - {}^2H4p\ ^1H^\circ$	3759.1548	3760.2231	29 313.006–55 907.174		13–11	4.55E−02	8.17E−03	1.31E−00	−0.974	C+	13
599	$b\ ^3D - y\ ^3F^\circ$											
		13 667.989	7314.364 cm^{-1}	29 371.810–36 686.174		7–9	2.1E−04	7.6E−04	2.4E−01	−2.28	D	13
		12 190.099	8201.134 cm^{-1}	29 320.024–37 521.158		3–5	4.2E−04	1.6E−03	1.9E−01	−2.33	D+	13
600	$b\ ^3D - y\ ^3P^\circ$											
		5760.3446	5761.9422	29 371.810–46 727.071		7–5	1.5E−03	5.2E−04	7.0E−02	−2.44	E	2*n*
		5698.0200	5699.6009	29 356.742–46 901.829		5–3	1.6E−03	4.7E−04	4.4E−02	−2.63	E	2*n*
601	$b\ ^3D - u\ ^5D^\circ$											
		5762.4135	5764.0117	29 371.810–46 720.839		7–9	1.3E−03	8.5E−04	1.1E−01	−2.23	E	2*n*
		5754.4026	5755.9986	29 371.810–46 744.990		7–7	6.5E−04	3.2E−04	4.3E−02	−2.65	E	2*n*
		5702.3479	5703.9300	29 356.742–46 888.514		5–5	6.3E−04	3.1E−04	2.9E−02	−2.82	E	2*n*
602	$b\ ^3D - x\ ^3F^\circ$											
		5707.0495	5708.6329	29 371.810–46 889.139		7–9	1.0E−03	6.4E−04	8.5E−02	−2.35	E	2*n*
		5636.6962	5638.2607	29 356.742–47 092.709		5–7	8.3E−04	5.6E−04	5.2E−02	−2.56	E	2*n*
603	$b\ ^3D - w\ ^3D^\circ$											
		5660.8011	5662.3721	29 356.742–47 017.185		5–7	4.4E−04	3.0E−04	2.8E−02	−2.83	E	2*n*
604	$b\ ^3D - Psp3\ ^1D^\circ$											
		5539.2800	5540.8185	29 371.810–47 419.684		7–5	1.1E−03	3.5E−04	4.5E−02	−2.61	E	2*n*
605	$b\ ^3D - z\ ^1G^\circ$											
		5529.1602	5530.6960	29 371.810–47 452.714		7–9	5.1E−04	3.0E−04	3.8E−02	−2.68	E	2*n*
606	$b\ ^3D - y\ ^3S^\circ$											
		5493.3219	5494.8482	29 356.742–47 555.607		5–3	1.55E−02	4.21E−03	3.81E−01	−1.677	C+	13
607	$b\ ^3D - v\ ^5F^\circ$											
		5294.5482	5296.0214	29 356.742–48 238.844		5–5	7.3E−04	3.1E−04	2.7E−02	−2.81	E	2*n*
		5298.7758	5300.2502	29 371.810–48 238.844		7–5	4.58E−03	1.38E−03	1.68E−01	−2.016	C+	13
608	$b\ ^3D - v\ ^5P^\circ$											
		5320.0356	5321.5156	29 371.810–48 163.443		7–5	1.5E−03	4.6E−04	5.7E−02	−2.49	D	2*n*
609	$b\ ^3D - x\ ^3P^\circ$											

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		5280.3620	5281.8314	29 371.810	–48 304.640	7–5	7.27E–03	2.17E–03	2.64E–01	–1.818	C+	13
		5217.9193	5219.3720	29 356.742	–48 516.135	5–3	1.56E–02	3.82E–03	3.28E–01	–1.719	C+	13
		5223.1855	5224.6397	29 320.024	–48 460.110	3–1	4.03E–02	5.49E–03	2.83E–01	–1.783	C+	13
		5207.9376	5209.3877	29 320.024	–48 516.135	3–3	3.2E–03	1.3E–03	6.8E–02	–2.40	E	2*n*
610	$b\ ^3D–w\ ^3F^\circ$											
		5065.1927	5066.6048	29 371.810	–49 108.893	7–9	8.9E–03	4.4E–03	5.1E–01	–1.51	D+	13
		5027.2255	5028.6275	29 356.742	–49 242.883	5–7	4.91E–03	2.61E–03	2.16E–01	–1.89	C	13
		4970.4958	4971.8828	29 320.024	–49 433.128	3–5	9.8E–03	6.1E–03	2.98E–01	–1.74	C	13
611	$b\ ^3D–v\ ^3D^\circ$											
		5054.6426	5056.0519	29 356.742	–49 135.020	5–7	4.47E–03	2.40E–03	2.00E–01	–1.921	C+	13
612	$b\ ^3D–Fsp3\ ^1F^\circ$											
		4968.6979	4970.0843	29 356.742	–49 477.124	5–7	7.1E–03	3.7E–03	3.0E–01	–1.74	E	2*n*
613	$b\ ^3D–w\ ^3P^\circ$											
		4802.8797	4804.2222	29 371.810	–50 186.831	7–5	1.77E–02	4.37E–03	4.84E–01	–1.514	C+	13
		4832.7276	4834.0780	29 356.742	–50 043.210	5–3	1.76E–02	3.70E–03	2.94E–01	–1.733	C+	13
		4799.4061	4800.7476	29 356.742	–50 186.831	5–5	3.7E–03	1.3E–03	1.0E–01	–2.19	E	2*n*
614	$b\ ^3D–z\ ^1F^\circ$											
		4708.9685	4710.2861	29 356.742	–50 586.875	5–7	3.98E–03	1.85E–03	1.44E–01	–2.033	C	13
615	$b\ ^3D–v\ ^3F^\circ$											
		4542.4121	4543.6856	29 356.742	–51 365.308	5–7	4.5E–03	1.9E–03	1.4E–01	–2.01	D	2*n*
616	$b\ ^3D–u\ ^3G^\circ$											
		4483.7770	4485.0350	29 371.810	–51 668.183	7–9	1.4E–03	5.2E–04	5.4E–02	–2.44	E	2*n*
617	$b\ ^3D–u\ ^3D^\circ$											
		4424.0683	4425.3106	29 371.810	–51 969.098	7–7	2.37E–03	7.0E–04	7.1E–02	–2.312	C	15
		4360.8032	4362.0289	29 371.810	–52 296.916	7–5	1.0E–02	2.1E–03	2.1E–01	–1.84	D	2*n*
618	$b\ ^3D–t\ ^3D^\circ$											
		4285.8225	4287.0284	29 356.742	–52 682.916	5–5	1.3E–02	3.6E–03	2.5E–01	–1.75	D	2*n*
619	$b\ ^3D–v\ ^3P^\circ$											
		4246.0850	4247.2804	29 371.810	–52 916.291	7–5	5.85E–02	1.13E–02	1.11E–00	–1.102	C+	13
620	$b\ ^3D–Gsp3\ ^3F^\circ$											
		4239.3613	4240.5550	29 371.810	–52 953.625	7–9	1.3E–02	4.6E–03	4.5E–01	–1.49	E	2*n*
621	$b\ ^3D–x\ ^3S^\circ$											
		4088.5568	4089.7109	29 356.742	–53 808.352	5–3	4.2E–02	6.3E–03	4.2E–01	–1.50	D	2*n*
		4082.4246	4083.5771	29 320.024	–53 808.352	3–3	4.0E–02	1.0E–02	4.0E–01	–1.52	E	2*n*
622	$b\ ^3D–Dsp3\ ^5D^\circ$											
		4010.1763	4011.3100	29 371.810	–54 301.336	7–9	7.9E–03	2.4E–03	2.3E–01	–1.77	E	2*n*
623	$b\ ^3D–t\ ^3G^\circ$											
		4020.4836	4021.6199	29 371.810	–54 237.411	7–9	8.2E–03	2.6E–03	2.4E–01	–1.75	E	2*n*
		3960.2792	3961.3998	29 356.742	–54 600.346	5–7	4.10E–02	1.35E–02	8.80E–01	–1.171	C+	13
624	$b\ ^3D–s\ ^3G^\circ$											
		3781.9399	3783.0140	29 356.742	–55 790.692	5–7	3.8E–02	1.1E–02	7.1E–01	–1.24	E	2*n*
625	$b\ ^3D–w\ ^1D^\circ$											
		3787.1633	3788.2388	29 356.742	–55 754.229	5–5	9.9E–02	2.1E–02	1.3E–00	–0.97	D	3*n*
626	$b\ ^1G–z\ ^1G^\circ$	5662.9380	5664.5096	29 798.934	–47 452.714	9–9	2.45E–03	1.18E–03	1.98E–01	–1.975	C+	13
627	$b\ ^1G–x\ ^3G^\circ$											
		5549.9527	5551.4940	29 798.934	–47 812.115	9–9	3.3E–04	1.5E–04	2.5E–02	–2.86	E	2*n*
628	$b\ ^1G–y\ ^5H^\circ$											
		5385.5753	5387.0728	29 798.934	–48 361.879	9–9	3.1E–04	1.3E–04	2.1E–02	–2.92	E	2*n*
629	$b\ ^1G–z\ ^1H^\circ$	5379.5740	5381.0699	29 798.934	–48 382.600	9–11	6.41E–03	3.40E–03	5.42E–01	–1.514	B	13
630	$b\ ^1G–y\ ^1G^\circ$	5288.5247	5289.9963	29 798.934	–48 702.532	9–9	8.22E–03	3.45E–03	5.41E–01	–1.508	B	13
631	$b\ ^1G–w\ ^3F^\circ$											
		5177.2340	5178.6760	29 798.934	–49 108.893	9–9	1.2E–03	4.7E–04	7.2E–02	–2.38	E	2*n*
632	$b\ ^1G–^4F5p\ ^5F^\circ$											
		4189.5566	4190.7372	29 798.934	–53 661.075	9–7	2.7E–02	5.5E–03	6.8E–01	–1.30	D	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
633	$b\ ^1G$–$x\ ^1F^\circ$	4171.6908	4172.8667	29 798.934–	53 763.276	9–7	2.01E−02	4.08E−03	5.1E−01	−1.435	C	13
634	$b\ ^1G$–$t\ ^3G^\circ$											
		4030.8904	4032.0295	29 798.934–	54 600.346	9–7	5.02E−02	9.52E−03	1.14E−00	−1.067	C+	13
635	$b\ ^1G$–$w\ ^1G^\circ$	3996.9639	3998.0940	29 798.934–	54 810.852	9–9	7.95E−02	1.90E−02	2.26E−00	−0.766	C+	13
636	$z\ ^3F^\circ$–$e\ ^3F$											
		5952.7184	5954.3675	32 133.989–	48 928.385	5–5	1.5E−02	8.1E−03	7.9E−01	−1.39	D	2*n*
		5804.0350	5805.6443	31 307.243–	48 531.862	9–7	1.6E−03	6.4E−04	1.1E−01	−2.24	E	2*n*
		5838.3718	5839.9903	31 805.069–	48 928.385	7–5	2.0E−03	7.3E−04	9.8E−02	−2.29	E	2*n*
		6187.9904	6189.7026	31 805.069–	47 960.937	7–9	4.1E−03	3.1E−03	4.4E−01	−1.67	E	2*n*
		6096.6653	6098.3530	32 133.989–	48 531.862	5–7	3.4E−03	2.6E−03	2.6E−01	−1.88	E	2*n*
637	$z\ ^3F^\circ$–$e\ ^5G$											
		5154.1006	5155.5363	31 307.243–	50 703.867	9–11	4.43E−03	2.16E−03	3.30E−01	−1.712	C+	13
638	$z\ ^3F^\circ$–$e\ ^3D$											
		5001.8636	5003.2589	31 307.243–	51 294.217	9–7	3.7E−01	1.1E−01	1.6E+01	−0.01	D+	3*n*
		5014.9425	5016.3412	31 805.069–	51 739.917	7–5	2.64E−01	7.11E−02	8.22E−00	−0.303	C+	13
		5022.2355	5023.6362	32 133.989–	52 039.889	5–3	2.4E−01	5.5E−02	4.6E−00	−0.56	D+	3*n*
		5129.6308	5131.0601	31 805.069–	51 294.217	7–7	5.5E−03	2.2E−03	2.6E−01	−1.81	E	2*n*
		5099.0773	5100.4984	32 133.989–	51 739.917	5–5	2.79E−02	1.09E−02	9.12E−01	−1.265	B	13
639	$z\ ^3F^\circ$–$g\ ^5D$											
		4978.6033	4979.9924	32 133.989–	52 214.342	5–3	1.19E−01	2.65E−02	2.18E−00	−0.877	B	15
640	$z\ ^3F^\circ$–$g\ ^5F$											
		4452.6095	4453.8593	31 805.069–	54 257.498	7–5	8.3E−03	1.8E−03	1.8E−01	−1.91	E	2*n*
		4492.6783	4493.9387	32 133.989–	54 386.182	5–3	2.6E−02	4.7E−03	3.5E−01	−1.63	D	2*n*
641	$z\ ^3F^\circ$–$f\ ^5P$											
		4593.5252	4594.8122	31 805.069–	53 568.747	7–5	5.8E−03	1.3E−03	1.4E−01	−2.03	E	2*n*
		4587.7204	4589.0059	32 133.989–	53 925.196	5–3	7.9E−03	1.5E−03	1.1E−01	−2.13	E	2*n*
642	$z\ ^3F^\circ$–$f\ ^5G$											
		4551.6470	4552.9230	31 805.069–	53 768.975	7–9	3.3E−03	1.3E−03	1.4E−01	−2.03	E	2*n*
		4450.7669	4452.0162	31 307.243–	53 768.975	9–9	2.3E−03	6.8E−04	8.9E−02	−2.21	E	2*n*
643	$z\ ^3F^\circ$–$e\ ^3G$											
		4456.6302	4457.8811	31 307.243–	53 739.434	9–11	6.8E−03	2.5E−03	3.3E−01	−1.65	E	2*n*
		4392.5797	4393.8137	31 307.243–	54 066.514	9–9	4.1E−03	1.2E−03	1.5E−01	−1.98	E	2*n*
644	$z\ ^3F^\circ$–$f\ ^3D$											
		4455.0273	4456.2777	31 307.243–	53 747.496	9–7	4.1E−02	9.6E−03	1.3E−00	−1.06	E	2*n*
645	$z\ ^3F^\circ$–$e\ ^3H$											
		4300.2066	4301.4162	31 307.243–	54 555.414	9–9	6.5E−03	1.8E−03	2.3E−01	−1.79	E	2*n*
646	$z\ ^3F^\circ$–$f\ ^3F$											
		4276.6761	4277.8796	31 307.243–	54 683.318	9–9	2.6E−02	7.2E−03	9.1E−01	−1.19	D	2*n*
647	$z\ ^3D^\circ$–$e\ ^3F$											
		5934.6549	5936.2992	31 686.349–	48 531.862	5–7	2.0E−02	1.5E−02	1.5E−00	−1.12	D	2*n*
		5883.8170	5885.4476	31 937.323–	48 928.385	3–5	1.9E−02	1.6E−02	9.4E−01	−1.31	D	2*n*
		5809.2181	5810.8288	31 322.611–	48 531.862	7–7	4.5E−03	2.3E−03	3.1E−01	−1.79	E	2*n*
		5798.1714	5799.7791	31 686.349–	48 928.385	5–5	5.7E−03	2.9E−03	2.7E−01	−1.84	E	2*n*
648	$z\ ^3D^\circ$–$e\ ^3D$											
		4985.2529	4986.6438	31 686.349–	51 739.917	5–5	1.48E−01	5.51E−02	4.52E−00	−0.560	B	13
		4973.1019	4974.4896	31 937.323–	52 039.889	3–3	1.1E−01	4.0E−02	2.0E−00	−0.92	D+	3*n*
		4896.4385	4897.8058	31 322.611–	51 739.917	7–5	5.4E−03	1.4E−03	1.6E−01	−2.02	E	2*n*
		4911.7794	4913.1507	31 686.349–	52 039.889	5–3	1.6E−02	3.5E−03	2.8E−01	−1.76	D	2*n*
		5048.4361	5049.8437	31 937.323–	51 739.917	3–5	4.88E−02	3.11E−02	1.55E−00	−1.030	B	13
649	$z\ ^3D^\circ$–$g\ ^5D$											
		4930.3154	4931.6916	31 937.323–	52 214.342	3–3	5.75E−02	2.10E−02	1.02E−00	−1.201	B	15
		4870.0368	4871.3971	31 686.349–	52 214.342	5–3	3.88E−03	8.28E−04	6.64E−02	−2.383	C+	15
650	$z\ ^3D^\circ$–$e\ ^5P$											
		4905.1328	4906.5024	31 686.349–	52 067.466	5–5	5.3E−03	1.9E−03	1.6E−01	−2.02	E	2*n*
651	$z\ ^3D^\circ$–$f\ ^3D$											

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		4466.9386	4468.1922	31 686.349–	54 066.769	5–5	3.2E−02	9.4E−03	6.9E−01	−1.33	E	2*n*
		4440.8239	4442.0706	31 937.323–	54 449.343	3–3	3.0E−02	8.8E−03	3.9E−01	−1.58	E	2*n*
		4391.8633	4393.0971	31 686.349–	54 449.343	5–3	1.1E−02	1.9E−03	1.4E−01	−2.02	E	2*n*
652	$z\ ^3D^\circ$–$f\ ^3F$											
		4279.4887	4280.6929	31 322.611–	54 683.318	7–9	1.5E−02	5.2E−03	5.1E−01	−1.44	D	2*n*
653	$z\ ^3D^\circ$–$e\ ^3P$											
		4243.8162	4245.0110	31 322.611–	54 879.679	7–5	2.5E−02	4.7E−03	4.6E−01	−1.48	D	2*n*
		4220.0495	4221.2381	31 686.349–	55 376.086	5–3	2.8E−02	4.6E−03	3.2E−01	−1.64	E	2*n*
		4310.3741	4311.5865	31 686.349–	54 879.679	5–5	2.4E−02	6.6E−03	4.7E−01	−1.48	E	2*n*
654	$c\ ^3F$–$y\ ^3F^\circ$											
		26 222.051	3812.544 cm^{-1}	32 873.630–	36 686.174	9–9	3.0E−03	3.1E−02	2.4E+01	−0.55	D+	13
		26 659.187	3750.029 cm^{-1}	33 412.715–	37 162.744	7–7	2.11E−03	2.25E−02	1.38E+01	−0.803	C+	13
		26 617.848	3755.854 cm^{-1}	33 765.304–	37 521.158	5–5	3.85E−03	4.09E−02	1.79E+01	−0.69	C	13
655	$c\ ^3F$–$y\ ^3D^\circ$											
		18 856.647	5301.722 cm^{-1}	32 873.630–	38 175.352	9–7	3.38E−03	1.40E−02	7.84E−00	−0.899	C+	13
		18 987.010	5265.321 cm^{-1}	33 412.715–	38 678.036	7–5	2.96E−03	1.14E−02	5.0E−00	−1.097	C	13
		19 113.679	5230.429 cm^{-1}	33 765.304–	38 995.733	5–3	3.47E−03	1.14E−02	3.59E−00	−1.244	C	13
656	$c\ ^3F$–$u\ ^5D^\circ$											
		7207.1116	7209.0979	32 873.630–	46 744.990	9–7	9.8E−03	6.0E−03	1.27E−00	−1.271	C	13
		7418.6674	7420.7108	33 412.715–	46 888.514	7–5	1.02E−02	6.01E−03	1.03E−00	−1.376	C+	13
657	$c\ ^3F$–$x\ ^3F^\circ$											
		7132.9863	7134.9526	32 873.630–	46 889.139	9–9	3.4E−03	2.6E−03	5.5E−01	−1.63	D+	13
		7307.9318	7309.9453	33 412.715–	47 092.709	7–7	5.25E−03	4.21E−03	7.09E−01	−1.531	C+	13
658	$c\ ^3F$–$z\ ^3H^\circ$											
		7024.0622	7025.9992	32 873.630–	47 106.481	9–9	9.3E−04	6.9E−04	1.4E−01	−2.21	D+	13
659	$c\ ^3F$–$w\ ^3D^\circ$											
		7068.4097	7070.3587	32 873.630–	47 017.185	9–7	8.99E−03	5.24E−03	1.10E−00	−1.33	D	2*n*
		7401.6849	7403.7236	33 765.304–	47 272.024	5–3	1.80E−02	8.9E−03	1.08E−00	−1.353	C	13
660	$c\ ^3F$–$w\ ^5G^\circ$											
		6793.2592	6795.1341	32 873.630–	47 590.045	9–9	7.58E−04	5.25E−04	1.06E−01	−2.326	B	15
		7000.6150	7002.5456	33 412.715–	47 693.236	7–7	8.0E−04	5.9E−04	9.5E−02	−2.385	C	13
		7107.4610	7109.4205	33 765.304–	47 831.150	5–5	1.2E−02	9.1E−03	1.1E−00	−1.34	D	13
661	$c\ ^3F$–$v\ ^5F^\circ$											
		6963.0216	6964.9422	33 765.304–	48 122.925	5–7	9.0E−03	9.1E−03	1.05E−00	−1.340	C	13
662	$c\ ^3F$–$y\ ^1G^\circ$											
		6315.8115	6317.5580	32 873.630–	48 702.532	9–9	4.0E−03	2.4E−03	4.5E−01	−1.66	D	2*n*
663	$c\ ^3F$–$w\ ^3F^\circ$											
		6157.7284	6159.4325	32 873.630–	49 108.893	9–9	1.2E−02	6.8E−03	1.2E−00	−1.22	D	2*n*
		6315.3068	6317.0532	33 412.715–	49 242.883	7–7	1.40E−02	8.4E−03	1.22E−00	−1.232	C	13
		6380.7433	6382.5072	33 765.304–	49 433.128	5–5	1.38E−02	8.4E−03	8.8E−01	−1.376	C	13
664	$c\ ^3F$–$v\ ^3D^\circ$											
		6147.8347	6149.5362	32 873.630–	49 135.020	9–7	5.37E−03	2.37E−03	4.32E−01	−1.671	C+	13
		6358.6337	6360.3918	33 412.715–	49 135.020	7–7	5.19E−03	3.15E−03	4.61E−01	−1.657	C+	13
665	$c\ ^3F$–$y\ ^3H^\circ$											
		6127.9066	6129.6027	33 412.715–	49 726.987	7–9	7.9E−03	5.7E−03	8.1E−01	−1.40	D+	13
666	$c\ ^3F$–$v\ ^3G^\circ$											
		6027.0509	6028.7200	32 873.630–	49 460.899	9–11	1.36E−02	9.05E−03	1.62E−00	−1.089	C+	13
		6165.3603	6167.0664	33 412.715–	49 627.881	7–9	6.54E−03	4.80E−03	6.82E−01	−1.474	C+	13
		6215.1438	6216.8633	33 765.304–	4 9850.587	5–7	1.18E−02	9.57E−03	9.80E−01	−1.320	C+	13
667	$c\ ^3F$–Fsp3 $^1F^\circ$											
		6362.8763	6364.6354	33 765.304–	49 477.124	5–7	2.8E−03	2.4E−03	2.5E−01	−1.93	E	2*n*
668	$c\ ^3F$–$z\ ^1F^\circ$											
		5643.9262	5645.4926	32 873.630–	50 586.875	9–7	2.9E−03	1.1E−03	1.8E−01	−2.01	E	2*n*
669	$c\ ^3F$–$x\ ^3H^\circ$											
		5494.4626	5495.9891	32 873.630–	51 068.715	9–11	1.8E−03	9.8E−04	1.6E−01	−2.05	E	2*n*
670	$c\ ^3F$–$v\ ^3F^\circ$											
		5680.2404	5681.8166	33 765.304–	51 365.308	5–7	8.4E−04	5.7E−04	5.3E−02	−2.54	E	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
671	$c\ ^3F–u\ ^3G^\circ$											
		5403.8215	5405.3239	32 873.630–	51 373.907	9–11	1.92E−02	1.03E−02	1.65E−00	−1.034	C+	13
		5476.2885	5477.8102	33 412.715–	51 668.183	7–9	2.87E−02	1.66E−02	2.09E−00	−0.935	B	13
		5535.4179	5536.9554	33 765.304–	51 825.770	5–7	2.16E−02	1.39E−02	1.27E−00	−1.158	C+	13
672	$c\ ^3F–Hsp3\ ^1H^\circ$											
		5329.9891	5331.4717	32 873.630–	51 630.175	9–11	1.29E−02	6.71E−03	1.06E−00	−1.219	C+	13
673	$c\ ^3F–y\ ^1D^\circ$											
		5464.2796	5465.7980	33 412.715–	51 708.304	7–5	1.8E−02	5.7E−03	7.1E−01	−1.40	D+	13
674	$c\ ^3F–u\ ^3D^\circ$											
		5235.3867	5236.8441	32 873.630–	51 969.098	9–7	3.8E−02	1.2E−02	1.9E−00	−0.97	D+	13
		5293.9588	5295.4319	33 412.715–	52 296.916	7–5	6.9E−03	2.1E−03	2.5E−01	−1.84	E	2*n*
		5332.6602	5334.1436	33 765.304–	52 512.453	5–3	6.8E−03	1.7E−03	1.5E−01	−2.06	E	2*n*
		5387.4804	5388.9783	33 412.715–	51 969.098	7–7	3.03E−03	1.32E−03	1.64E−01	−2.034	C+	15
		5491.8315	5493.3573	33 765.304–	51 969.098	5–7	2.05E−03	1.30E−03	1.17E−01	−2.188	C+	15
675	$c\ ^3F–t\ ^3D^\circ$											
		5187.9142	5189.3589	33 412.715–	52 682.916	7–5	2.11E−02	6.08E−03	7.27E−01	−1.371	C+	13
		5236.2041	5237.6618	33 765.304–	52 857.800	5–3	2.58E−02	6.4E−03	5.45E−01	−1.497	C	13
676	$c\ ^3F–v\ ^3P^\circ$											
		5136.0931	5137.5241	33 765.304–	53 229.937	5–3	6.8E−03	1.6E−03	1.4E−01	−2.09	E	2*n*
677	$c\ ^3F–Dsp3\ ^5F^\circ$											
		4729.0192	4730.3421	32 873.630–	54 013.748	9–11	6.59E−03	2.70E−03	3.79E−01	−1.614	C+	13
678	$c\ ^3F–x\ ^1F^\circ$											
		4999.1125	5000.5071	33 765.304–	53 763.276	5–7	7.3E−03	3.9E−03	3.2E−01	−1.71	E	2*n*
679	$c\ ^3F–Dsp3\ ^5D^\circ$											
		4785.9566	4787.2945	33 412.715–	54 301.336	9–9	4.0E−03	1.4E−03	2.0E−01	−1.91	E	2*n*
680	$c\ ^3F–t\ ^3G^\circ$											
		4735.8439	4737.1686	32 873.630–	53 983.289	9–11	1.3E−02	5.3E−03	7.4E−01	−1.33	D+	13
		4800.6490	4801.9909	33 412.715–	54 237.411	7–9	3.01E−02	1.34E−02	1.48E−00	−1.029	B	13
		4798.2649	4799.6061	33765.304–	54600.346	5–7	2.77E−02	1.34E−02	1.06E−00	−1.174	C+	13
681	$y\ ^5D^\circ–e^5F$											
		7187.3180	7189.2990	33 095.939–	47005.503	9–11	8.36E−02	7.92E−02	1.69E+01	−0.147	C+	13
		7130.9221	7132.8879	34 017.101–	48 036.670	3–5	4.1E−02	5.3E−02	3.7E−00	−0.80	D	2*n*
		7090.3835	7092.3384	34 121.601–	48 221.321	1–3	3.0E−02	6.9E−02	1.6E−00	−1.16	D	2*n*
		6999.8841	7001.8146	33 095.939–	47 377.952	9–9	4.7E−03	3.5E−03	7.2E−01	−1.51	D	2*n*
		7016.3920	7018.3270	33 507.121–	47 755.534	7–7	1.2E−02	8.8E−03	1.4E−00	−1.21	D	2*n*
		7022.9539	7024.8907	33 801.570–	48 036.670	5–5	1.7E−02	1.3E−02	1.5E−00	−1.20	D	2*n*
		7038.2234	7040.1643	34 017.101–	48 221.321	3–3	2.5E−02	1.9E−02	1.3E−00	−1.25	D	2*n*
682	$y\ ^5D^\circ–e^3F$											
		6916.6815	6918.5896	33 507.121–	47 960.937	7–9	6.2E−03	5.7E−03	9.1E−01	−1.40	D	2*n*
		6786.8604	6788.7335	33 801.570–	48 531.862	5–7	2.0E−03	1.9E−03	2.1E−01	−2.02	E	2*n*
683	$y\ ^5D^\circ–f^5D$											
		5815.2178	5816.8301	33 507.121–	50 698.617	7–5	1.0E−03	3.7E−04	5.0E−02	−2.58	E	2*n*
684	$y\ ^5D^\circ–e^7G$											
		5481.2430	5482.7660	33 095.939–	51 334.908	9–9	1.41E−02	6.35E−03	1.03E−00	−1.243	C+	13
685	$y\ ^5D^\circ–e^3D$											
		5493.4988	5495.0251	33 095.939–	51 294.217	9–7	5.0E−03	1.7E−03	2.8E−01	−1.80	E	2*n*
		5483.0988	5484.6223	33 507.121–	51 739.917	7–5	1.74E−02	5.60E−03	7.07E−01	−1.407	C+	13
		5481.4387	5482.9618	33 801.570–	52 039.889	5–3	2.8E−02	7.6E−03	6.9E−01	−1.42	E	2*n*
		5620.4924	5622.0526	33 507.121–	51 294.217	7–7	5.3E−03	2.5E−03	3.3E−01	−1.75	E	2*n*
		5573.1024	5574.6500	33 801.570–	51 739.917	5–5	2.07E−02	9.64E−03	8.84E−01	−1.317	C+	13
		5546.9924	5548.5330	34 017.101–	52 039.889	3–3	9.6E−03	4.4E−03	2.4E−01	−1.88	E	2*n*
686	$y\ ^5D^\circ–g^5D$											
		5476.5642	5478.0860	33 095.939–	51 350.489	9–9	8.70E−02	3.92E−02	6.35E−00	−0.453	B	13
		5473.9005	5475.4215	33 507.121–	51 770.554	7–7	5.2E−02	2.3E−02	2.9E−00	−0.79	D	3*n*
		5478.4556	5479.9778	33 801.570–	52 049.820	5–5	6.8E−03	3.0E−03	2.7E−01	−1.82	E	2*n*
		5429.5045	5431.0137	33 801.570–	52 214.342	5–3	7.27E−02	1.93E−02	1.72E−00	−1.016	C+	15
		5480.8608	5482.3837	34 017.101–	52 257.342	3–1	1.3E−01	2.0E−02	1.1E−00	−1.23	D	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i-g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		5602.7673	5604.3228	33 507.121	–51 350.489	7–9	1.73E–02	1.05E–02	1.35E–00	–1.135	B	13
		5563.6002	5565.1452	33 801.570	–51 770.554	5–7	3.4E–02	2.2E–02	2.0E–00	–0.96	D	2*n*
		5543.9357	5545.4754	34 017.101	–52 049.820	3–5	3.4E–02	2.6E–02	1.4E–00	–1.11	D	2*n*
		5525.5443	5527.0791	34 121.601	–52 214.342	1–3	6.00E–02	8.24E–02	1.50E–00	–1.084	B	15
687	$y\ ^5D^\circ - e\ ^5P$											
		5386.3341	5387.8318	33 507.121	–52 067.466	7–5	8.4E–03	2.6E–03	3.2E–01	–1.74	E	2*n*
		5473.1642	5474.6850	33 801.570	–52 067.466	5–5	3.5E–03	1.6E–03	1.4E–01	–2.11	E	2*n*
688	$y\ ^5D^\circ - h\ ^5D$											
		4988.9501	4990.3419	33 507.121	–53 545.829	7–7	5.2E–02	2.0E–02	2.2E–00	–0.86	D+	3*n*
		4917.2300	4918.6028	33 801.570	–54 132.547	5–3	6.4E–02	1.4E–02	1.1E–00	–1.16	D	2*n*
		5088.1531	5089.5714	33 507.121	–53 155.141	7–9	5.1E–03	2.5E–03	3.0E–01	–1.75	D	2*n*
689	$y\ ^5D^\circ - f\ ^5G$											
		4835.8679	4837.2191	33 095.939	–53 768.975	9–9	1.1E–02	3.7E–03	5.3E–01	–1.47	D	2*n*
		4840.3217	4841.6741	33 507.121	–54 161.135	7–7	1.7E–02	6.1E–03	6.9E–01	–1.37	D	2*n*
		4859.1218	4860.4792	33 801.570	–54 375.673	5–5	1.1E–02	3.9E–03	3.1E–01	–1.71	E	2*n*
690	$y\ ^5D^\circ - e\ ^3G$											
		4842.7884	4844.1414	33 095.939	–53 739.434	9–11	7.5E–03	3.2E–03	4.7E–01	–1.53	E	2*n*
691	$y\ ^5D^\circ - f\ ^3D$											
		4986.2226	4987.6138	34 017.101	–54 066.769	3–5	2.3E–02	1.4E–02	7.1E–01	–1.37	E	2*n*
		4918.0125	4919.3855	34 121.601	–54 449.343	1–3	4.2E–02	4.6E–02	7.4E–01	–1.34	E	2*n*
692	$y\ ^5D^\circ - i\ ^5D$											
		4085.9842	4087.1376	33 507.121	–57 974.133	7–5	5.1E–02	9.2E–03	8.6E–01	–1.19	E	2*n*
693	$y\ ^5F^\circ - e\ ^5F$											
		7511.0205	7513.0887	33 695.395	–47 005.503	11–11	1.35E–01	1.14E–01	3.11E+01	0.099	B	13
		7710.3645	7712.4865	34 039.514	–47 005.503	9–11	7.86E–03	8.57E–03	1.96E–00	–1.113	C+	13
694	$y\ ^5F^\circ - e\ ^7G$											
		5667.5180	5669.0908	33 695.395	–51 334.908	11–9	6.1E–03	2.41E–03	4.95E–01	–1.58	C	13
695	$y\ ^5F^\circ - f\ ^5F$											
		5742.9600	5744.5529	33 695.395	–51 103.188	11–11	6.2E–04	3.1E–04	6.4E–02	–2.47	E	2*n*
696	$y\ ^5F^\circ - e\ ^3D$											
		5793.9148	5795.5214	34 039.514	–51 294.217	9–7	6.1E–03	2.4E–03	4.1E–01	–1.66	E	2*n*
		5741.8484	5743.4411	34 328.750	–51 739.917	7–5	8.6E–03	3.03E–03	4.01E–01	–1.67	C	13
		5814.8075	5816.4197	34 547.209	–51 739.917	5–5	4.6E–03	2.3E–03	2.2E–01	–1.94	E	2*n*
697	$y\ ^5F^\circ - g\ ^5D$											
		5662.5162	5664.0877	33 695.395	–51 350.489	11–9	6.18E–02	2.43E–02	4.98E–00	–0.573	B	13
		5638.2621	5639.8271	34 039.514	–51 770.554	9–7	4.4E–02	1.6E–02	2.7E–00	–0.84	D	2*n*
		5641.4340	5642.9998	34 328.750	–52 049.820	7–5	3.0E–02	1.0E–02	1.3E–00	–1.15	D	2*n*
		5658.6579	5660.2283	34 547.209	–52 214.342	5–3	4.52E–02	1.30E–02	1.21E–00	–1.186	C+	15
		5691.4970	5693.0762	34 692.146	–52 257.342	3–1	6.7E–02	1.1E–02	6.1E–01	–1.49	E	2*n*
		5775.0806	5776.6821	34 039.514	–51 350.489	9–9	1.12E–02	5.59E–03	9.58E–01	–1.298	C+	13
		5731.7623	5733.3522	34 328.750	–51 770.554	7–7	1.6E–02	7.7E–03	1.0E–00	–1.27	D	2*n*
		5711.8486	5713.4333	34 547.209	–52 049.820	5–5	1.5E–02	7.5E–03	7.0E–01	–1.43	E	2*n*
		5705.4646	5707.0475	34 692.146	–52 214.342	3–3	3.01E–02	1.47E–02	8.30E–01	–1.355	B	15
		5804.4627	5806.0721	34 547.209	–51 770.554	5–7	2.8E–03	2.0E–03	1.9E–01	–2.01	E	2*n*
698	$y\ ^5F^\circ - e\ ^5P$											
		5635.8226	5637.3869	34 328.750	–52 067.466	7–5	5.8E–03	2.0E–03	2.6E–01	–1.86	E	2*n*
699	$y\ ^5F^\circ - g\ ^5F$											
		5126.1930	5127.6214	34 328.750	–53 830.971	7–7	3.2E–02	1.3E–02	1.5E–00	–1.06	E	2*n*
		5243.7769	5245.2366	34 328.750	–53 393.669	7–9	2.0E–02	1.1E–02	1.3E–00	–1.12	D	2*n*
		5184.2661	5185.7099	34 547.209	–53 830.971	5–7	3.8E–02	2.1E–02	1.8E–00	–0.98	D	2*n*
700	$y\ ^5F^\circ - h\ ^5D$											
		5137.3822	5138.8135	33 695.395	–53 155.141	11–9	1.0E–01	3.4E–02	6.3E–00	–0.43	D	3*n*
		5090.7740	5092.1929	34 328.750	–53 966.658	7–5	1.9E–01	5.2E–02	6.1E–00	–0.44	D	3*n*
		5104.4375	5105.8601	34 547.209	–54 132.547	5–3	1.8E–02	4.3E–03	3.6E–01	–1.67	E	2*n*
701	$y\ ^5F^\circ - f\ ^5P$											
		5228.3767	5229.8323	34 039.514	–53 160.589	9–7	1.9E–02	6.1E–03	9.4E–01	–1.26	E	2*n*
		5197.9373	5199.3847	34 692.146	–53 925.196	3–3	2.0E–02	8.1E–03	4.1E–01	–1.62	E	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
702	$y\ ^5F^\circ - f\ ^5G$											
		5104.1912	5105.6137	33 695.395–	53 281.685	11–11	2.7E−03	1.0E−03	1.9E−01	−1.94	E	2*n*
703	$y\ ^5F^\circ - e\ ^5H$											
		5021.5912	5022.9917	34 328.750–	54 237.209	7–9	6.2E−02	3.0E−02	3.5E−00	−0.68	D+	13
		5012.6947	5014.0929	34 547.209–	54 490.995	5–7	6.5E−03	3.4E−03	2.8E−01	−1.77	E	2*n*
704	$y\ ^5F^\circ - e\ ^3G$											
		4991.8675	4993.2601	34 039.514–	54 066.514	9–9	3.9E−03	1.4E−03	2.1E−01	−1.89	E	2*n*
		5074.7483	5076.1630	34 039.514–	53 739.434	9–11	1.4E−01	6.5E−02	9.7E−00	−0.23	D	3*n*
705	$y\ ^5F^\circ - f\ ^3D$											
		5023.1866	5024.5876	34 547.209–	54 449.343	5–3	2.3E−02	5.3E−03	4.4E−01	−1.58	E	2*n*
		5121.6392	5123.0663	34 547.209–	54 066.769	5–5	7.9E−02	3.1E−02	2.6E−00	−0.81	D	3*n*
706	$y\ ^5F^\circ - e\ ^3H$											
		4962.5719	4963.9567	33 695.395–	53 840.616	11–13	1.37E−02	5.98E−03	1.07E−00	−1.182	C+	13
		4942.4592	4943.8387	34 039.514–	54 266.712	9–11	9.67E−03	4.33E−03	6.35E−01	−1.409	C	13
707	$y\ ^5F^\circ - f\ ^3F$											
		4911.5294	4912.9007	34 328.750–	54 683.318	7–9	1.9E−03	8.6E−04	9.8E−02	−2.22	E	2*n*
708	$y\ ^5F^\circ - g\ ^5G$											
		4112.9589	4114.1194	33 695.395–	58 001.934	11–13	1.1E−01	3.4E−02	5.0E−00	−0.43	D	3*n*
		4125.6175	4126.7813	34 039.514–	58 271.458	9–11	9.9E−02	3.1E−02	3.8E−00	−0.55	E	2*n*
		4142.5889	4143.7572	34 692.146–	58 824.841	3–5	7.5E−02	3.2E−02	1.3E−00	−1.02	E	2*n*
709	$z\ ^3P^\circ - e\ ^3D$											
		5762.9922	5764.5905	33 946.931–	51 294.217	5–7	9.6E−02	6.7E−02	6.4E−00	−0.47	D	3*n*
		5753.1227	5754.7184	34 362.871–	51 739.917	3–5	8.26E−02	6.84E−02	3.89E−00	−0.688	B	13
		5717.8329	5719.4191	34 555.595–	52 039.889	1–3	5.4E−02	8.0E−02	1.5E−00	−1.10	D	2*n*
		5618.6327	5620.1925	33 946.931–	51 739.917	5–5	2.24E−02	1.06E−02	9.80E−01	−1.276	C+	13
710	$z\ ^3P^\circ - g\ ^5D$											
		5652.3180	5653.8867	34 362.871–	52 049.820	3–5	5.0E−03	4.0E−03	2.3E−01	−1.92	E	2*n*
		5661.3455	5662.9166	34 555.595–	52 214.342	1–3	1.22E−02	1.75E−02	3.27E−01	−1.756	B	15
		5522.4465	5523.9805	33 946.931–	52 049.820	5–5	1.3E−02	6.1E−03	5.5E−01	−1.52	D	2*n*
		5600.2242	5601.7789	34 362.871–	52 214.342	3–3	2.69E−02	1.27E−02	7.01E−01	−1.420	B	15
		5472.7091	5474.2298	33 946.931–	52 214.342	5–3	2.37E−02	6.40E−03	5.76E−01	−1.495	B	15
711	$z\ ^3P^\circ - e\ ^5P$											
		5517.0655	5518.5981	33 946.931–	52 067.466	5–5	2.0E−03	9.2E−04	8.3E−02	−2.34	E	2*n*
712	$z\ ^3P^\circ - g\ ^3F$											
		5027.7567	5029.1588	33 946.931–	53 830.971	5–7	2.2E−02	1.2E−02	9.9E−01	−1.23	E	2*n*
713	$z\ ^3P^\circ - h\ ^5D$											
		4993.6805	4995.0736	33 946.931–	53 966.658	5–5	1.9E−02	7.2E−03	5.9E−01	−1.45	E	2*n*
		5056.8412	5058.2511	34 362.871–	54 132.547	3–3	1.0E−02	3.9E−03	1.9E−01	−1.94	E	2*n*
714	$z\ ^3P^\circ - f\ ^5P$											
		5004.0443	5005.4402	33 946.931–	53 925.196	5–3	3.7E−02	8.4E−03	6.9E−01	−1.38	E	2*n*
715	$z\ ^3P^\circ - f\ ^5G$											
		4945.6374	4947.0177	33 946.931–	54 161.135	5–7	1.3E−02	6.5E−03	5.3E−01	−1.49	E	2*n*
		4995.4097	4996.8033	34 362.871–	54 375.673	3–5	7.3E−03	4.5E−03	2.2E−01	−1.87	E	2*n*
716	$b\ ^1D - y\ ^1D^\circ$	5856.0880	5857.7113	34 636.790–	51 708.304	5–5	1.83E−02	9.4E−03	9.1E−01	−1.328	C	13
717	$b\ ^1D - v\ ^3P^\circ$											
		5376.8334	5378.3286	34 636.790–	53 229.937	5–3	4.0E−03	1.0E−03	9.2E−02	−2.28	E	2*n*
718	$b\ ^1D - w\ ^1D^\circ$	4734.0980	4735.4223	34 636.790–	55 754.229	5–5	1.6E−02	5.5E−03	4.3E−01	−1.56	E	2*n*
719	$z\ ^5G^\circ - e\ ^5F$											
		8220.3790	8222.6388	34 843.955–	47 005.503	13–11	1.69E−01	1.45E−01	5.10E+01	0.275	C+	13
720	$z\ ^5G^\circ - g\ ^5F$											
		5361.6251	5363.1162	35 611.623–	54 257.498	7–5	1.8E−02	5.6E−03	6.9E−01	−1.41	E	2*n*
		5395.2184	5396.7184	35 856.400–	54 386.182	5–3	5.4E−03	1.4E−03	1.3E−01	−2.15	E	2*n*
		5512.2567	5513.7880	35 257.322–	53 393.669	9–9	9.9E−03	4.5E−03	7.3E−01	−1.39	E	2*n*
		5487.1451	5488.6697	35 611.623–	53 830.971	7–7	9.9E−03	4.5E−03	5.6E−01	−1.51	E	2*n*
		5432.9479	5434.4580	35 856.400–	54 257.498	5–5	4.3E−02	1.9E−02	1.7E−00	−1.02	D	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
721	$z\,^5G^\circ$–$h\,^5D$											
		5441.3387	5442.8510	34 782.419–	53 155.141	11–9	5.0E−03	1.8E−03	3.6E−01	−1.70	E	2*n*
		5470.0940	5471.6140	35 856.400–	54 132.547	5–3	1.2E−02	3.3E−03	2.9E−01	−1.79	E	2*n*
722	$z\,^5G^\circ$–$f\,^5G$											
		5398.2794	5399.7803	35 856.400–	54 375.673	5–5	9.0E−02	3.9E−02	3.5E−00	−0.71	E	2*n*
		5546.5058	5548.0463	35 257.322–	53 281.685	9–11	1.0E−02	5.8E−03	9.5E−01	−1.28	D	2*n*
		5461.5499	5463.0676	35 856.400–	54 161.135	5–7	4.2E−03	2.7E−03	2.4E−01	−1.88	E	2*n*
723	$z\,^5G^\circ$–$e\,^5H$											
		5383.3692	5384.8661	34 782.419–	53 352.985	11–13	7.81E−01	4.01E−01	7.83E+01	0.645	B+	13
		5369.9619	5371.4552	35 257.322–	53 874.253	9–11	7.22E−01	3.82E−01	6.08E+01	0.536	B+	13
		5367.4668	5368.9595	35 611.623–	54 237.209	7–9	7.13E−01	3.96E−01	4.90E+01	0.443	B	13
		5364.8713	5366.3632	35 856.400–	54 490.995	5–7	5.59E−01	3.38E−01	2.99E+01	0.228	C+	13
		5401.2689	5402.7706	34 843.955–	53 352.985	13–13	2.2E−03	9.8E−04	2.3E−01	−1.89	E	2*n*
		5267.2699	5268.7358	35 257.322–	54 237.209	9–9	6.77E−03	2.82E−03	4.40E−01	−1.596	C+	15
		5295.3121	5296.7855	35 611.623–	54 490.995	7–7	7.3E−03	3.1E−03	3.7E−01	−1.67	E	2*n*
724	$z\,^5G^\circ$–$e\,^3G$											
		5409.1336	5410.6373	35 257.322–	53 739.434	9–11	1.1E−02	5.9E−03	9.5E−01	−1.27	D	2*n*
725	$z\,^5G^\circ$–$f\,^3D$											
		5417.0332	5418.5391	35 611.623–	54 066.769	7–5	1.0E−02	3.2E−03	3.9E−01	−1.66	E	2*n*
726	$z\,^5G^\circ$–$e\,^3H$											
		5055.9916	5057.4013	34 782.419–	54 555.414	11–9	3.0E−03	9.3E−04	1.7E−01	−1.99	E	2*n*
727	$z\,^5G^\circ$–$f\,^3F$											
		5023.4978	5024.8989	34 782.419–	54 683.318	11–9	6.0E−03	1.9E−03	3.4E−01	−1.69	E	2*n*
		5031.9145	5033.3178	35 257.322–	55 124.934	9–7	8.4E−03	2.5E−03	3.7E−01	−1.65	E	2*n*
		5146.3064	5147.7401	35 257.322–	54 683.318	9–9	2.7E−03	1.1E−03	1.7E−01	−2.01	E	2*n*
728	$z\,^3G^\circ$–$e\,^5F$											
		8598.8302	8601.1924	35 379.206–	47 005.503	11–11	6.69E−03	7.42E−03	2.31E−00	−1.088	B	13
729	$z\,^3G^\circ$–$g\,^5F$											
		5653.8668	5655.4359	35 379.206–	53 061.314	11–11	4.6E−03	2.2E−03	4.6E−01	−1.61	E	2*n*
730	$z\,^3G^\circ$–$h\,^5D$											
		5624.0220	5625.5831	35 379.206–	53 155.141	11–9	8.3E−03	3.2E−03	6.5E−01	−1.45	E	2*n*
731	$z\,^3G^\circ$–$f\,^5G$											
		5619.5954	5621.1554	35 379.206–	53 169.142	11–13	3.5E−03	1.9E−03	3.9E−01	−1.67	E	2*n*
		5708.0945	5709.6782	35 767.562–	53 281.685	9–11	5.3E−03	3.2E−03	5.4E−01	−1.54	E	2*n*
		5553.5778	5555.1201	35 767.562–	53 768.975	9–9	9.9E−03	4.6E−03	7.5E−01	−1.38	E	2*n*
		5436.2958	5437.8068	35 379.206–	53 768.975	11–9	7.7E−03	2.8E−03	5.5E−01	−1.51	E	2*n*
732	$z\,^3G^\circ$–$e\,^5H$											
		5405.3499	5406.8527	35 379.206–	53 874.253	11–11	8.5E−03	3.70E−03	7.3E−01	−1.390	C	13
		5412.7857	5414.2904	35 767.562–	54 237.209	9–9	4.86E−03	2.14E−03	3.43E−01	−1.716	B	15
733	$z\,^3G^\circ$–$e\,^3G$											
		5463.2762	5464.7944	35 767.562–	54 066.514	9–9	2.9E−01	1.3E−01	2.1E+01	0.07	D+	3*n*
		5349.7376	5351.2255	35 379.206–	54 066.514	11–9	1.4E−02	4.8E−03	9.3E−01	−1.28	D	2*n*
		5557.9822	5559.5257	36 079.370–	54 066.514	7–9	1.3E−02	7.9E−03	1.0E−00	−1.26	E	2*n*
734	$z\,^3G^\circ$–$f\,^3D$											
		5560.2116	5561.7557	35 767.562–	53 747.496	9–7	2.1E−02	7.6E−03	1.3E−00	−1.16	D	2*n*
735	$z\,^3G^\circ$–$e\,^3H$											
		5415.1993	5416.7047	35 379.206–	53 840.616	11–13	7.67E−01	3.99E−01	7.82E+01	0.642	B+	13
		5404.1516	5405.6541	35 767.562–	54 266.712	9–11	6.92E−01	3.70E−01	5.93E+01	0.523	B+	13
		5410.9098	5412.4140	36 079.370–	54 555.414	7–9	6.33E−01	3.57E−01	4.46E+01	0.398	B+	13
		5293.0294	5294.5022	35 379.206–	54 266.712	11–11	1.0E−03	4.3E−04	8.2E−02	−2.33	E	2*n*
		5321.1080	5322.5882	35 767.562–	54 555.414	9–9	2.13E−02	9.0E−03	1.42E−00	−1.090	C	13
736	$z\,^3G^\circ$–$f\,^3F$											
		5178.8006	5180.2429	35 379.206–	54 683.318	11–9	4.2E−03	1.4E−03	2.6E−01	−1.82	E	2*n*
		5164.5506	5165.9892	35 767.562–	55 124.934	9–7	1.6E−02	5.1E−03	7.8E−01	−1.34	E	2*n*
		5285.1286	5286.5992	35 767.562–	54 683.318	9–9	6.4E−03	2.7E−03	4.2E−01	−1.62	E	2*n*
		5249.1054	5250.5665	36 079.370–	55 124.934	7–7	1.2E−02	4.9E−03	6.0E−01	−1.46	E	2*n*
		5373.7086	5375.2029	36 079.370–	54 683.318	7–9	3.7E−02	2.1E−02	2.6E−00	−0.84	D	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
737	$y\ ^3F^\circ$–$e\ ^3D$											
		6843.6560	6845.5444	36 686.174–51 294.217		9–7	2.6E−02	1.4E−02	2.9E−00	−0.89	D	2*n*
		6858.1498	6860.0421	37 162.744–51 739.917		7–5	3.33E−02	1.68E−02	2.65E−00	−0.930	C+	13
		6885.7564	6887.6562	37 521.158–52 039.889		5–3	2.1E−02	9.0E−03	1.0E−00	−1.35	E	2*n*
738	$y\ ^3F^\circ$–$g\ ^5D$											
		6804.0009	6805.8786	37 521.158–52 214.342		5–3	1.53E−02	6.38E−03	7.15E−01	−1.496	B	15
739	$y\ ^3F^\circ$–$g\ ^5F$											
		5927.7891	5929.4316	37 521.158–54 386.182		5–3	5.4E−02	1.7E−02	1.7E−00	−1.07	E	2*n*
740	$y\ ^3F^\circ$–$h\ ^5D$											
		6079.0093	6080.6922	37 521.158–53 966.658		5–5	2.9E−02	1.6E−02	1.6E−00	−1.10	E	2*n*
		5929.6772	5931.3202	36 686.174–53 545.829		9–7	1.1E−02	4.6E−03	8.1E−01	−1.38	E	2*n*
741	$y\ ^3F^\circ$–$f\ ^5P$											
		6093.6444	6095.3313	37 162.744–53 568.747		7–5	1.2E−02	4.8E−03	6.7E−01	−1.47	E	2*n*
		6094.3736	6096.0607	37 521.158–53 925.196		5–3	7.3E−03	2.4E−03	2.4E−01	−1.92	E	2*n*
742	$y\ ^3F^\circ$–$f\ ^5G$											
		5852.2187	5853.8409	36 686.174–53 768.975		9–9	1.1E−02	5.5E−03	9.6E−01	−1.30	E	2*n*
743	$y\ ^3F^\circ$–$e\ ^5H$											
		5816.3735	5817.9862	36 686.174–53 874.253		9–11	4.49E−02	2.78E−02	4.80E−00	−0.601	B	13
		5855.0766	5856.6996	37 162.744–54 237.209		7–9	7.19E−03	4.75E−03	6.41E−01	−1.478	B	15
		5696.0896	5697.6700	36 686.174–54 237.209		9–9	4.35E−03	2.12E−03	3.57E−01	−1.720	C+	15
744	$y\ ^3F^\circ$–$e\ ^3G$											
		5806.7249	5808.3349	37 162.744–54 379.380		7–7	2.7E−02	1.3E−02	1.8E−00	−1.03	D	2*n*
745	$y\ ^3F^\circ$–$f\ ^3D$											
		5905.6720	5907.3085	37 521.158–54 449.343		5–3	1.1E−01	3.4E−02	3.3E−00	−0.77	D	2*n*
746	$y\ ^3F^\circ$–$e\ ^3H$											
		5686.5302	5688.1081	36 686.174–54 266.712		9–11	6.71E−02	3.98E−02	6.71E−00	−0.446	B+	13
		5747.9542	5749.5485	37 162.744–54 555.414		7–9	8.8E−03	5.6E−03	7.4E−01	−1.41	E	2*n*
		5594.6553	5596.2086	36 686.174–54 555.414		9–9	5.20E−02	2.44E−02	4.05E−00	−0.658	B	13
747	$y\ ^3F^\circ$–$f\ ^3F$											
		5705.9922	5707.5752	37 162.744–54 683.318		7–9	6.1E−02	3.9E−02	5.1E−00	−0.57	D	2*n*
		5679.0229	5680.5988	37 521.158–55 124.934		5–7	3.7E−02	2.5E−02	2.4E−00	−0.90	D	2*n*
748	$y\ ^3F^\circ$–$e\ ^3P$											
		5642.7513	5644.3175	37 162.744–54 879.679		7–5	3.3E−03	1.1E−03	1.5E−01	−2.10	E	2*n*
749	$y\ ^5P^\circ$–$e\ ^5D$											
		12648.742	7903.762 cm^{-1}	37 157.564–45 061.326		5–7	4.32E−03	1.45E−02	3.02E−00	−1.139	C+	13
		12053.083	8294.362 cm^{-1}	36 766.964–45 061.326		7–7	1.9E−03	4.1E−03	1.1E−00	−1.54	D+	13
750	$y\ ^5P^\circ$–$f\ ^7D$											
		7024.6412	7026.5783	36 766.964–50 998.642		7–5	2.25E−02	1.19E−02	1.93E−00	−1.080	C	13
751	$y\ ^5P^\circ$–$f\ ^5D$											
		7320.6826	7322.6995	36 766.964–50 423.134		7–9	9.7E−03	1.00E−02	1.69E−00	−1.155	C	13
752	$y\ ^5P^\circ$–$e\ ^7P$											
		7292.8294	7294.8389	36 766.964–50 475.285		7–9	1.10E−02	1.13E−02	1.89E−00	−1.103	C	13
753	$y\ ^5P^\circ$–$g\ ^5D$											
		6855.1621	6857.0537	36 766.964–51 350.489		7–9	2.86E−02	2.59E−02	4.10E−00	−0.74	C	13
		6841.3391	6843.2269	37 157.564–51 770.554		5–7	3.4E−02	3.3E−02	3.8E−00	−0.78	D	2*n*
		6828.5912	6830.4756	37 409.552–52 049.820		3–5	3.7E−02	4.3E−02	2.9E−00	−0.89	D	2*n*
		6752.7071	6754.5711	37 409.552–52 214.342		3–3	3.05E−02	2.08E−02	1.39E−00	−1.204	B	15
754	$y\ ^5P^\circ$–$e\ ^5P$											
		6633.7497	6635.5816	36 766.964–51 837.235		7–7	3.44E−02	2.27E−02	3.47E−00	−0.799	C+	13
		6842.6858	6844.5740	37 409.552–52 019.666		3–3	2.4E−02	1.7E−02	1.2E−00	−1.29	E	2*n*
		65 33.9294	65 35.7346	36 766.964–52 067.466		7–5	1.2E−02	5.3E−03	8.0E−01	−1.43	E	2*n*
		6810.2628	6812.1422	37 157.564–51 837.235		5–7	2.12E−02	2.07E−02	2.32E−00	−0.986	C+	13
		6820.3719	6822.2541	37 409.552–52 067.466		3–5	1.5E−02	1.7E−02	1.2E−00	−1.29	E	2*n*
755	$y\ ^5P^\circ$–$f\ ^5G$											
		5879.4870	5881.1165	37 157.564–54 161.135		5–7	2.1E−03	1.5E−03	1.5E−01	−2.12	E	2*n*
756	$y\ ^5P^\circ$–$i\ ^5D$											
		4749.9477	4751.2762	36 766.964–57 813.938		7–7	2.0E−02	6.7E−03	7.3E−01	−1.33	E	2*n*

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		4714.0703	4715.3892	36 766.964–	57 974.133	7–5	1.8E−02	4.2E−03	4.6E−01	−1.53	E	2*n*
757	$y\ ^5P^\circ$–s^4D4$d\ ^5P$											
		4661.5344	4662.8394	36 766.964–	58 213.120	7–5	3.3E−02	7.8E−03	8.4E−01	−1.26	E	2*n*
758	$d\ ^3F$–$u\ ^3G^\circ$											
		6804.2713	6806.1492	36 975.586–	51 668.183	7–9	2.46E−03	2.20E−03	3.45E−01	−1.813	B	15
		6837.0061	6838.8928	37 045.932–	51 668.183	9–9	3.26E−03	2.28E−03	4.63E−01	−1.687	B	15
759	$d\ ^3F$–Hsp3 $^1H^\circ$											
		6854.8228	6856.7142	37 045.932–	51 630.175	9–11	1.53E−03	1.32E−03	2.68E−01	−1.926	B	15
760	$d\ ^3F$–$u\ ^3D^\circ$											
		6699.1418	6700.9914	37 045.932–	51 969.098	9–7	1.68E−03	8.81E−04	1.75E−01	−2.101	C+	15
		6667.7113	6669.5524	36 975.586–	51 969.098	7–7	1.66E−03	1.10E−03	1.70E−01	−2.112	C+	15
761	$y\ ^3D^\circ$–$e\ ^3D$											
		7653.7596	7655.8664	38 678.036–	51 739.917	5–5	2.96E−02	2.60E−02	3.28E−00	−0.89	C	13
762	$y\ ^3D^\circ$–$g\ ^5F$											
		6569.2155	6571.0301	38 175.352–	53 393.669	7–9	6.0E−02	5.0E−02	7.6E−00	−0.45	D	2*n*
		6597.5611	6599.3833	38 678.036–	53 830.971	5–7	2.0E−02	1.8E−02	2.0E−00	−1.05	E	2*n*
		6495.7422	6497.5371	38 995.733–	54 386.182	3–3	6.4E−02	4.0E−02	2.6E−00	−0.92	E	2*n*
		6364.3657	6366.1253	38 678.036–	54 386.182	5–3	2.1E−02	7.8E−03	8.2E−01	−1.41	E	2*n*
763	$y\ ^3D^\circ$–$h\ ^5D$											
		6330.8495	6332.6001	38 175.352–	53 966.658	7–5	6.4E−03	2.7E−03	4.0E−01	−1.72	E	2*n*
764	$y\ ^3D^\circ$–$f\ ^3D$											
		6419.9496	6421.7241	38 175.352–	53 747.496	7–7	1.2E−01	7.6E−02	1.1E+01	−0.27	D	2*n*
		6496.4666	6498.2616	38 678.036–	54 066.769	5–5	7.8E−02	5.0E−02	5.3E−00	−0.61	E	2*n*
		6469.1930	6470.9808	38 995.733–	54 449.343	3–3	8.3E−02	5.2E−02	3.3E−00	−0.81	E	2*n*
		6338.8775	6340.6302	38 678.036–	54 449.343	5–3	5.1E−02	1.8E−02	1.9E−00	−1.04	D	2*n*
765	$y\ ^3D^\circ$–$e\ ^3H$											
		6103.2939	6104.9834	38 175.352–	54 555.414	7–9	1.52E−02	1.09E−02	1.54E−00	−1.117	C	13
766	$x\ ^5D^\circ$–$e\ ^5D$											
		19 635.309	5091.476 cm^{-1}	39 969.850–	45 061.326	7–7	5.15E−03	2.98E−02	1.35E+01	−0.681	C+	13
		18 392.461	5435.525 cm^{-1}	39 625.801–	45 061.326	9–7	2.27E−03	8.95E−03	4.88E−00	−1.094	C+	13
		20 698.313	4829.993 cm^{-1}	40 231.333–	45 061.326	5–7	1.99E−03	1.79E−02	6.10E−00	−1.048	C+	13
767	$x\ ^5D^\circ$–$f\ ^5D$											
		9259.0055	9261.5463	39 625.801–	50 423.134	9–9	1.5E−02	2.0E−02	5.4E−00	−0.75	D+	13
768	$x\ ^5D^\circ$–$f\ ^5F$											
		8699.4540	8701.8433	39 969.850–	51 461.667	7–9	4.1E−02	6.0E−02	1.2E+01	−0.38	D+	13
		8790.5217	8792.9357	40 231.333–	51 604.100	5–7	3.20E−02	5.2E−02	7.5E−00	−0.59	C	13
769	$x\ ^5D^\circ$–$g\ ^5D$											
		8526.6690	8529.0116	39 625.801–	51 350.489	9–9	1.77E−02	1.93E−02	4.88E−00	−0.76	C	13
770	$x\ ^5D^\circ$–$i\ ^5D$											
		5531.9839	5533.5205	39 625.801–	57 697.489	9–9	6.1E−03	2.8E−03	4.6E−01	−1.60	E	2*n*
		5552.6937	5554.2358	39 969.850–	57 974.133	7–5	4.5E−03	1.5E−03	1.9E−01	−1.98	E	2*n*
771	$x\ ^5F^\circ$–$e\ ^5D$											
		22 380.797	4466.897 cm^{-1}	40 594.429–	45 061.326	9–7	6.53E−03	3.82E−02	2.53E+01	−0.464	C+	13
772	$x\ ^5F^\circ$–$e\ ^5F$											
		14 814.735	6748.192 cm^{-1}	40 257.311–	47 005.503	11–11	2.56E−03	8.4E−03	4.52E−00	−1.033	C	13
773	$x\ ^5F^\circ$–$e\ ^5G$											
		9738.5726	9741.2434	40 257.311–	50 522.941	11–13	7.6E−02	1.3E−01	4.5E+01	0.15	D+	13
		9889.0362	9891.7477	40 594.429–	50 703.867	9–11	2.2E−02	4.0E−02	1.2E+01	−0.45	D+	13
		9861.7368	9864.4409	40 842.151–	50 979.576	7–9	5.5E−02	1.0E−01	2.3E+01	−0.14	D+	13
		9763.3796	9766.0570	41 130.596–	51 370.142	3–5	5.4E−02	1.29E−01	1.25E+01	−0.412	C	13
		9569.9078	9572.5328	40 257.311–	50 703.867	11–11	2.50E−02	3.43E−02	1.19E+01	−0.423	C	13
		9626.4973	9629.1376	40 594.429–	50 979.576	9–9	4.5E−02	6.3E−02	1.8E+01	−0.25	D+	13
774	$x\ ^5F^\circ$–$e\ ^7G$											
		9401.1137	9403.6930	40 594.429–	51 228.550	9–11	2.64E−02	4.27E−02	1.19E+01	−0.415	C	13
775	$x\ ^5F^\circ$–$f\ ^5F$											
		9414.0422	9416.6250	40 842.151–	51 461.667	7–9	4.0E−02	6.8E−02	1.5E+01	−0.32	D+	13
		9443.8023	9446.3932	41 018.048–	51 604.100	5–7	6.4E−02	1.20E−01	1.86E+01	−0.223	C	13

TABLE 3. Fe I allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
776	$x\ ^5F^\circ - g\ ^5D$											
		9012.0745	9014.5485	40 257.311	–51 350.489	11–9	4.46E−02	4.44E−02	1.45E+01	−0.311	C	13
		8929.0777	8931.5292	41 018.048	–52 214.342	5–3	3.57E−02	2.56E−02	3.76E−00	−0.893	C+	15
777	$x\ ^5F^\circ - g\ ^5G$											
		5633.9465	5635.5103	40 257.311	–58 001.934	11–13	7.7E−02	4.3E−02	8.8E−00	−0.32	E	2*n*
		5655.1765	5656.7459	40 842.151	–58 520.159	7–9	4.7E−02	2.9E−02	3.8E−00	−0.69	E	2*n*
		5650.7055	5652.2738	41 018.048	–58 710.043	5–7	3.3E−02	2.2E−02	2.1E−00	−0.96	E	2*n*
		5649.9873	5651.5554	41 130.596	–58 824.841	3–5	5.1E−02	4.0E−02	2.3E−00	−0.92	E	2*n*
778	$w\ ^5D^\circ - f\ ^5D$											
		14 439.341	6923.632 cm^{-1}	43 499.502	–50 423.134	9–9	2.6E−03	8.0E−03	3.4E−00	−1.14	D+	13
		15 120.509	6611.729 cm^{-1}	43 922.665	–50 534.394	7–7	6.6E−03	2.27E−02	7.9E−00	−0.80	C	13
779	$w\ ^5D^\circ - e\ ^7P$											
		14 331.390	6975.783 cm^{-1}	43 499.502	–50 475.285	9–9	4.1E−03	1.3E−02	5.4E−00	−0.94	D+	13
780	$w\ ^5D^\circ - f\ ^5F$											
		13 260.730	7539.002 cm^{-1}	43 922.665	–51 461.667	7–9	9.61E−03	3.26E−02	9.96E−00	−0.642	C+	13
781	$w\ ^5F^\circ - e\ ^5G$											
		15 921.096	6279.259 cm^{-1}	44 243.682	–50 522.941	11–13	2.5E−03	1.1E−02	6.4E−00	−0.92	D	13
782	$e\ ^5D - t\ ^5D^\circ$											
		15 878.449	6296.126 cm^{-1}	45 333.872	–51 629.998	5–5	5.0E−03	1.90E−02	4.97E−00	−1.022	C	13
		15 219.622	6568.672 cm^{-1}	45 061.326	–51 629.998	7–5	8.61E−03	2.14E−02	7.50E−00	−0.825	C+	13
783	$e\ ^5D - t\ ^3D^\circ$											
		13 287.296	7523.928 cm^{-1}	45 333.872	–52 857.800	5–3	3.19E−02	5.1E−02	1.11E+01	−0.60	D+	13
784	$e\ ^3F - t\ ^3G^\circ$											
		16 474.085	6068.484 cm^{-1}	48 531.862	–54 600.346	7–7	3.86E−03	1.57E−02	6.1E−00	−0.96	D+	13
785	$n\ ^7D^\circ - g\ ^7D$											
		22 473.278	4448.517 cm^{-1}	49 352.338	–53 800.855	11–11	3.3E−02	2.5E−01	2.1E+02	0.44	D+	13
		21 894.998	4566.009 cm^{-1}	49 558.731	–54 124.740	9–9	6.82E−03	4.91E−02	3.18E+01	−0.355	B	13
		23 566.671	4242.124 cm^{-1}	49 558.731	–53 800.855	9–11	2.2E−02	2.3E−01	1.6E+02	0.31	D+	13
		23 144.597	4319.486 cm^{-1}	49 805.254	–54 124.740	7–9	1.2E−02	1.2E−01	6.5E+01	−0.07	D+	13
786	$n\ ^7F^\circ - g\ ^7D$											
		24 729.104	4042.716 cm^{-1}	49 758.139	–53 800.855	13–11	5.1E−02	4.0E−01	4.2E+02	0.71	D+	13
		24 547.953	4072.549 cm^{-1}	50 052.191	–54 124.740	11–9	3.72E−02	2.75E−01	2.45E+02	0.481	C	13
787	$n\ ^7P^\circ - g\ ^7D$											
		25 380.229	3939.000 cm^{-1}	50 185.740	–54 124.740	9–9	6.83E−03	6.60E−02	4.97E+01	−0.226	B	13

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

TABLE 4. Fe I forbidden transitions—List of tabulated lines

Wavelength (Å)	Multiplet No.
in air	
3403.648	10
3452.541	10
3454.339	10
3487.236	10
3489.070	10
3511.636	10
3516.172	10
3527.330	10
3812.078	9

TABLE 4. Fe I forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3856.972	9
3917.642	9
3931.499	9
4153.722	8
4458.577	7
4494.575	7
4510.634	7
4789.199	6
4843.348	6
4847.588	6
4886.568	6
4916.262	6

TABLE 4. Fe I forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4942.953	6
4956.358	6
4961.184	6
5052.095	5
5111.777	14
5156.317	14
5160.568	5
5220.565	4
5290.744	13
5303.995	4
5304.070	13
5356.320	4
5363.906	13
5382.257	4
5412.968	13
5427.173	13
5439.722	4
5477.405	13
5565.685	4
5639.551	3
5656.402	4
5696.367	3
5708.966	3
5715.950	4
5745.496	4
5775.054	3
5804.454	3
5834.647	3
5867.177	3
5872.784	3
5934.422	3
5937.001	3
5968.883	3
6000.001	3
6231.261	19
6393.706	19
6760.619	12
6836.952	12
6884.504	12
6972.080	12
7005.251	12
7008.898	12
7016.235	18
7316.467	18
7321.211	18
7439.584	18
7935.324	17
8321.529	17
9093.685	23
9106.166	23
9203.812	16
9411.919	11
9658.979	11
9801.885	11
9826.845	11
9974.427	15
9998.331	11
10 055.99	11

TABLE 4. Fe I forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
10 075.00	24
10 229.82	11
10 235.18	23
10 262.86	11
10 264.66	15
10 314.96	24
10 318.69	15
10 916.63	25
11 202.10	25
11 236.99	21
11 524.51	21
11 764.28	21
12 124.44	22
13 206.69	2
13 417.88	2
13 552.37	2
13 672.17	2
13 729.16	2
13 757.87	2
13 954.45	20
14 072.29	26
14 429.68	2
14 586.06	22
14 656.98	26

Wavenumber (cm^{-1})	Multiplet No.
89.942	1
184.125	1
288.074	1
415.933	1

3.1.3. Forbidden Transitions

For the electric-dipole-forbidden lines of Fe I, we have utilized two data sources. For the $M1$ transitions within the ground ($a\ ^5D$) term, we have used the LS coupling calculations by Brown and Evenson,[26] who provided transition probabilities. For all remaining lines of this spectrum, we have utilized the data of Grevesse *et al.*,[27] who employed wave functions constructed according to a computer code by Eissner and Nussbaumer,[28] and included limited configuration interaction. These data were already used by us in our earlier compilation[1] of 1988. The term for spin-orbit interaction was adjusted by them to minimize the differences between calculated and observed energy levels. The results for the magnetic dipole ($M1$) transitions are estimated to be more reliable than for the electric quadrupole ($E2$) transitions.

The quality of the results by Grevesse *et al.*[27] can be only roughly inferred from other, somewhat similar cases, where some experimental (mostly astrophysical) observations are available for comparison with analogous calculations. On this basis, we estimate that the uncertainties in the Grevesse *et al.*[27] data are rather large.

In this compilation, we have tabulated data for lines of at least moderate strength, which comprise about half the lines listed in Grevesse *et al.*[27] (see Tables 4 and 5). For most lines, we have assigned only one type of radiation if this is the predominant contribution to the strength of the line, i.e., if A_{ki} (specific radiation) $>(0.99)$ A_{ki} (total line). However, for some lines, it was necessary to tabulate both the magnetic dipole and the electric quadrupole contributions, when they are comparable in strength.

3.1.4. References for Fe I Forbidden Transitions

[1] J. R. Fuhr, G. A. Martin, and W. L. Wiese, "Atomic transition probabilities—iron through nickel," J. Phys. Chem. Ref. Data **17**, Suppl. 4 (1988).

[26] J. M. Brown and K. M. Evenson, Astrophys. J. **441**, L97 (1995).

[27] N. Grevesse, H. Nussbaumer, and J. P. Swings, Mon. Not. R. Astron. Soc. **151**, 239 (1971).

[28] W. Eissner and H. Nussbaumer, J. Phys. B **2**, 1028 (1969).

TABLE 5. Fe I forbidden transitions

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
1	$a\,^5D-a\,^5D$										
			415.933 cm^{-1}	0.000	– 415.933	9–7	*M*1	2.51E−03	9.04E+00	B	26
			288.074 cm^{-1}	415.933	– 704.007	7–5	*M*1	1.56E−03	1.21E+01	B	26
			184.125 cm^{-1}	704.007	– 888.132	5–3	*M*1	5.92E−04	1.05E+01	B	26
			89.942 cm^{-1}	888.132	– 978.074	3–1	*M*1	1.18E−04	6.03E+00	B	26
2	$a\,^5D-a\,^5F$										
		14 429.68	6928.268 cm^{-1}	0.000	– 6928.268	9–11	*E*2	2.0E−03	1.2E+01	E	26
		13 552.37	7376.764 cm^{-1}	0.000	– 7376.764	9–9	*E*2	1.5E−03	5.5E+00	E	26
		13 672.17	7312.126 cm^{-1}	415.933	– 7728.059	7–7	*E*2	1.7E−03	5.1E+00	E	26
		13 729.16	7281.777 cm^{-1}	704.007	– 7985.784	5–5	*E*2	1.6E−03	3.5E+00	E	26
		13 757.87	7266.581 cm^{-1}	888.132	– 8154.713	3–3	*E*2	1.9E−03	2.5E+00	E	26
		13 206.69	7569.851 cm^{-1}	415.933	– 7985.784	7–5	*E*2	1.1E−03	2.0E+00	E	26
		13 417.88	7450.706 cm^{-1}	704.007	– 8154.713	5–3	*E*2	1.5E−03	1.8E+00	E	26
3	$a\,^5D-a\,^5P$										
		5639.551	5641.117	0.000	– 17 726.987	9–5	*E*2	1.4E−01	3.6E+00	E	26
		5708.966	5710.550	415.933	– 17 927.381	7–3	*E*2	1.5E−01	2.4E+00	E	26
		5696.367	5697.947	0.000	– 17 550.180	9–7	*E*2	1.2E−01	4.5E+00	E	26
		5775.054	5776.656	415.933	– 17 726.987	7–5	*M*1	9.6E−03	3.4E−04	E	26
		5804.454	5806.063	704.007	– 17 927.381	5–3	*E*2	8.8E−02	1.6E+00	E	26
		5834.647	5836.265	415.933	– 17 550.180	7–7	*E*2	9.0E−02	3.8E+00	E	26
		5872.784	5874.412	704.007	– 17 726.987	5–5	*E*2	3.4E−02	1.1E+00	E	26
		5867.177	5868.803	888.132	– 17 927.381	3–3	*E*2	2.1E−02	3.9E−01	E	26
		5934.422	5936.066	704.007	– 17 550.180	5–7	*E*2	3.9E−02	1.8E+00	E	26
		5937.001	5938.646	888.132	– 17 726.987	3–5	*E*2	5.3E−02	1.7E+00	E	26
		6000.001	6001.663	888.132	– 17 550.180	3–7	*E*2	8.5E−03	4.1E−01	E	26
		5968.883	5970.537	978.074	– 17 726.987	1–5	*E*2	2.4E−02	8.1E−01	E	26
4	$a\,^5D-a\,^3P$										
		5439.722	5441.234	0.000	– 18 378.185	9–5	*E*2	5.3E−03	1.1E−01	E	26
		5565.685	5567.231	415.933	– 18 378.185	7–5	*M*1	3.6E−01	1.2E−02	E	26
		5303.995	5305.470	704.007	– 19 552.477	5–3	*M*1	4.6E−01	7.6E−03	E	26
		5220.565	5222.019	888.132	– 20 037.815	3–1	*M*1	5.7E−01	3.0E−03	E	26
		5656.402	5657.972	704.007	– 18 378.185	5–5	*E*2	1.8E−03	4.7E−02	E	26
		5356.320	5357.809	888.132	– 19 552.477	3–3	*E*2	1.0E−03	1.2E−02	E	26
		5715.950	5717.536	888.132	– 18 378.185	3–5	*M*1	3.4E−02	1.2E−03	E	26
		5715.950	5717.536	888.132	– 18 378.185	3–5	*E*2	3.8E−03	1.0E−01	E	26
		5382.257	5383.753	978.074	– 19 552.477	1–3	*M*1	7.9E−02	1.4E−03	E	26
		5745.496	5747.090	978.074	– 18 378.185	1–5	*E*2	2.0E−03	5.6E−02	E	26
5	$a\,^5D-a\,^3H$										
		5160.568	5162.005	415.933	– 19 788.250	7–9	*M*1	1.5E−03	6.9E−05	E	26
		5052.095	5053.504	0.000	– 19 788.250	9–9	*M*1	8.2E−03	3.5E−04	E	26
6	$a\,^5D-b\,^3F$										
		4843.348	4844.701	0.000	– 20 641.109	9–9	*M*1	4.2E−01	1.6E−02	E	26
		4886.568	4887.932	415.933	– 20 874.481	7–7	*M*1	2.3E−01	7.0E−03	E	26
		4916.262	4917.635	704.007	– 21 038.986	5–5	*M*1	9.2E−02	2.0E−03	E	26
		4789.199	4790.538	0.000	– 20 874.481	9–7	*M*1	3.9E−02	1.1E−03	E	26

TABLE 5. Fe I forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		4847.588	4848.943	415.933 –	21 038.986	7–5	*M*1	2.5E−02	5.3E−04	E	26
		4942.953	4944.333	415.933 –	20 641.109	7–9	*M*1	7.7E−02	3.1E−03	E	26
		4956.358	4957.742	704.007 –	20 874.481	5–7	*M*1	7.9E−02	2.5E−03	E	26
		4961.184	4962.569	888.132 –	21 038.986	3–5	*M*1	4.5E−02	1.0E−03	E	26
7	$a\ ^5D–b\ ^3P$										
		4458.577	4459.828	415.933 –	22 838.321	7–5	*M*1	3.0E−02	4.9E−04	E	26
		4458.577	4459.828	415.933 –	22 838.321	7–5	*E*2	3.0E−03	2.4E−02	E	26
		4494.575	4495.835	704.007 –	22 946.814	5–3	*M*1	4.4E−02	4.4E−04	E	26
		4494.575	4495.835	704.007 –	22 946.814	5–3	*E*2	4.0E−03	2.0E−02	E	26
		4510.634	4511.899	888.132 –	23 051.748	3–1	*M*1	1.0E−01	3.4E−04	E	26
8	$a\ ^5D–c\ ^3P$										
		4153.722	4154.893	704.007 –	24 772.016	5–3	*M*1	1.6E−02	1.3E−04	E	26
9	$a\ ^5D–a\ ^3D$										
		3812.078	3813.160	0.000 –	26 224.967	9–7	*M*1	1.4E−02	2.0E−04	E	26
		3812.078	3813.160	0.000 –	26 224.967	9–7	*E*2	7.0E−03	3.5E−02	E	26
		3856.972	3858.065	704.007 –	26 623.733	5–5	*M*1	1.1E−02	1.2E−04	E	26
		3917.642	3918.752	888.132 –	26 406.463	3–3	*M*1	1.2E−02	8.0E−05	E	26
		3917.642	3918.752	888.132 –	26 406.463	3–3	*E*2	4.0E−03	9.9E−03	E	26
		3931.499	3932.612	978.074 –	26 406.463	1–3	*M*1	1.1E−02	7.4E−05	E	26
10	$a\ ^5D–b\ ^3D$										
		3403.648	3404.625	0.000 –	29 371.810	9–7	*M*1	1.8E−01	1.8E−03	D	26
		3454.339	3455.328	415.933 –	29 356.742	7–5	*M*1	2.1E−02	1.6E−04	D	26
		3452.541	3453.530	415.933 –	29 371.810	7–7	*M*1	5.2E−02	5.6E−04	D	26
		3489.070	3490.068	704.007 –	29 356.742	5–5	*M*1	8.3E−02	6.5E−04	D	26
		3516.172	3517.177	888.132 –	29 320.024	3–3	*M*1	1.0E−01	4.8E−04	D	26
		3487.236	3488.234	704.007 –	29 371.810	5–7	*M*1	3.7E−02	4.1E−04	D	26
		3487.236	3488.234	704.007 –	29 371.810	5–7	*E*2	2.0E−03	6.5E−03	E	26
		3511.636	3512.641	888.132 –	29 356.742	3–5	*M*1	7.0E−02	5.6E−04	D	26
		3527.330	3528.339	978.074 –	29 320.024	1–3	*M*1	8.9E−02	4.3E−04	D	26
11	$a\ ^5F–a\ ^5P$										
		9411.919	9414.501	6928.268 –	17 550.180	11–7	*E*2	1.0E−02	4.6E+00	E	26
		9658.979	9661.628	7376.764 –	17 726.987	9–5	*E*2	5.4E−03	2.0E+00	E	26
		9801.885	9804.573	7728.059 –	17 927.381	7–3	*E*2	2.9E−03	7.0E−01	E	26
		9826.845	9829.540	7376.764 –	17 550.180	9–7	*E*2	2.9E−03	1.7E+00	E	26
		9998.331	9998.928 cm^{-1}	7728.059 –	17 726.987	7–5	*E*2	3.9E−03	1.7E+00	E	26
		10 055.99	9941.597 cm^{-1}	7985.784 –	17 927.381	5–3	*E*2	4.3E−03	1.2E+00	E	26
		10 262.86	9741.203 cm^{-1}	7985.784 –	17 726.987	5–5	*E*2	1.6E−02	8.1E+00	E	26
		10 229.82	9772.668 cm^{-1}	8154.713 –	17 927.381	3–3	*E*2	3.5E−03	1.1E+00	E	26
12	$a\ ^5F–a\ ^3G$										
		6760.619	6762.485	6928.268 –	21 715.731	11–11	*M*1	1.3E−01	1.6E−02	E	26
		6836.952	6838.839	7376.764 –	21 999.129	9–9	*M*1	7.2E−02	7.7E−03	E	26
		6884.504	6886.403	7728.059 –	22 249.428	7–7	*M*1	2.8E−02	2.4E−03	E	26
		6972.080	6974.003	7376.764 –	21 715.731	9–11	*M*1	2.6E−02	3.6E−03	E	26
		7005.251	7007.183	7728.059 –	21 999.129	7–9	*M*1	3.2E−02	3.7E−03	E	26
		7008.898	7010.831	7985.784 –	22 249.428	5–7	*M*1	2.2E−02	2.0E−03	E	26
13	$a\ ^5F–a\ ^3D$										
		5304.070	5305.546	7376.764 –	26 224.967	9–7	*M*1	1.8E−01	7.0E−03	E	26
		5290.744	5292.217	7728.059 –	26 623.733	7–5	*M*1	2.2E−01	6.0E−03	E	26
		5427.173	5428.682	7985.784 –	26 406.463	5–3	*M*1	1.7E−01	3.0E−03	E	26
		5363.906	5365.397	7985.784 –	26 623.733	5–5	*M*1	2.0E−02	5.7E−04	E	26
		5477.405	5478.927	8154.713 –	26 406.463	3–3	*M*1	8.2E−02	1.5E−03	E	26
		5412.968	5414.472	8154.713 –	26 623.733	3–5	*M*1	2.2E−02	6.5E−04	E	26
14	$a\ ^5F–a\ ^1P$										
		5111.777	5113.202	7985.784 –	27 543.001	5–3	*M*1	2.3E−02	3.4E−04	E	26
		5156.317	5157.753	8154.713 –	27 543.001	3–3	*M*1	1.1E−02	1.7E−04	E	26
15	$a\ ^3F–a\ ^3G$										
		10 264.66	9739.493 cm^{-1}	11 976.238 –	21 715.731	9–11	*M*1	1.1E−02	4.9E−03	E	26

TABLE 5. Fe I forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		9974.427	9977.161	11 976.238 –	21 999.129	9–9	*M*1	1.5E−02	5.0E−03	E	26
		10 318.69	9688.495 cm^{-1}	12 560.933 –	22 249.428	7–7	*M*1	1.2E−02	3.4E−03	E	26
16	$a\ ^3F–b\ ^3P$										
		9203.812	9206.337	11 976.238 –	22 838.321	9–5	*E*2	1.3E−02	3.8E+00	E	26
17	$a\ ^3F–b\ ^1G$										
		7935.324	7937.506	11 976.238 –	24 574.653	9–9	*M*1	6.4E−02	1.1E−02	E	26
		8321.529	8323.816	12 560.933 –	24 574.653	7–9	*M*1	4.1E−02	7.9E−03	E	26
18	$a\ ^3F–a\ ^3D$										
		7016.235	7018.170	11 976.238 –	26 224.967	9–7	*M*1	3.3E−02	3.0E−03	E	26
		7439.584	7441.633	12 968.553 –	26 406.463	5–3	*M*1	1.6E−02	7.3E−04	E	26
		7316.467	7318.483	12 560.933 –	26 224.967	7–7	*M*1	2.0E−02	2.0E−03	E	26
		7321.211	7323.228	12 968.553 –	26 623.733	5–5	*M*1	1.1E−02	8.0E−04	E	26
19	$a\ ^3F–a\ ^1D$										
		6231.261	6232.985	12 560.933 –	28 604.611	7–5	*M*1	1.7E−01	7.6E−03	E	26
		6393.706	6395.474	12 968.553 –	28 604.611	5–5	*M*1	9.3E−02	4.5E−03	E	26
20	$a\ ^5P–c\ ^3P$										
		13 954.45	7164.216 cm^{-1}	17 927.381 –	25 091.597	3–1	*M*1	2.0E−02	2.0E−03	D	26
21	$a\ ^5P–a\ ^3D$										
		11 524.51	8674.787 cm^{-1}	17 550.180 –	26 224.967	7–7	*M*1	6.8E−02	2.7E−02	E	26
		11 236.99	8896.746 cm^{-1}	17 726.987 –	26 623.733	5–5	*M*1	2.5E−02	6.6E−03	E	26
		11 764.28	8497.980 cm^{-1}	17 726.987 –	26 224.967	5–7	*M*1	1.5E−02	6.3E−03	E	26
22	$a\ ^3P–a\ ^3D$										
		12 124.44	8245.548 cm^{-1}	18 378.185 –	26 623.733	5–5	*M*1	2.0E−02	6.6E−03	E	26
		14 586.06	6853.986 cm^{-1}	19 552.477 –	26 406.463	3–3	*M*1	1.4E−02	4.8E−03	E	26
23	$a\ ^3P–b\ ^3D$										
		9093.685	9096.181	18 378.185 –	29 371.810	5–7	*M*1	3.4E−02	6.6E−03	E	26
		9093.685	9096.181	18 378.185 –	29 371.810	5–7	*E*2	3.0E−03	1.2E+00	E	26
		9106.166	9108.665	18 378.185 –	29 356.742	5–5	*M*1	2.8E−02	3.9E−03	E	26
		9106.166	9108.665	18 378.185 –	29 356.742	5–5	*E*2	2.0E−03	5.6E−01	E	26
		10 235.18	9767.547 cm^{-1}	19 552.477 –	29 320.024	3–3	*M*1	2.9E−02	3.5E−03	E	26
		10 235.18	9767.547 cm^{-1}	19 552.477 –	29 320.024	3–3	*E*2	1.0E−03	3.0E−01	E	26
24	$a\ ^3H–a\ ^1I$										
		10 075.00	9922.839 cm^{-1}	19 390.167 –	29 313.006	13–13	*M*1	7.9E−02	3.9E−02	E	26
		10 314.96	9692.001 cm^{-1}	19 621.005 –	29 313.006	11–13	*M*1	5.2E−02	2.8E−02	E	26
25	$b\ ^3F–b\ ^1G$										
		10 916.63	9157.825 cm^{-1}	20 641.109 –	29 798.934	9–9	*M*1	1.9E−01	8.3E−02	E	26
		11 202.10	8924.453 cm^{-1}	20 874.481 –	29 798.934	7–9	*M*1	9.2E−02	4.3E−02	E	26
26	$a\ ^3G–a\ ^1H$										
		14 072.29	7104.221 cm^{-1}	21 715.731 –	28 819.952	11–11	*M*1	3.3E−02	3.8E−02	E	26
		14 656.98	6820.823 cm^{-1}	21 999.129 –	28 819.952	9–11	*M*1	1.5E−02	1.9E−02	E	26

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

3.2. Fe II

3.2.1. Fe II Allowed Transitions

Manganese Isoelectronic Sequence
Ground state: $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s\ {}^6D_{9/2}$
Ionization energy: 16.1877 eV = 130 563 cm^{-1}

TABLE 6. Fe II allowed transitions—List of tabulated lines

Wavelength (Å)	Multiplet No.
in vacuum	
1055.262	19
1063.972	18
1068.346	18
1071.584	18
1096.877	17
1112.048	16
1121.975	14
1122.843	15
1125.448	13
1127.098	13
1128.046	15
1130.443	14
1133.405	12
1133.665	12
1138.632	12
1142.366	11
1143.226	11
1144.938	11
1147.409	11
1148.277	11
1151.146	11
1267.422	10
1272.613	10
1272.655	9
1371.022	92
1563.790	30
1580.629	29
1588.688	8
1608.451	6
1608.536	28
1610.923	28
1611.201	7
1618.468	6
1621.252	7
1621.686	6
1623.092	28
1625.522	28
1625.912	6
1629.160	6
1631.128	6
1633.909	28
1634.350	6
1635.401	40
1636.331	6
1637.399	27
1639.401	6
1641.762	40
1647.163	40
1661.324	26
1663.697	27
1670.746	25
1676.856	26
1688.403	26
1702.044	24
1761.372	54
1785.272	115
1786.752	115
1788.078	114
1796.979	39
1818.521	38
1833.076	38
1863.114	37
in air	
2020.750	48
2057.331	47
2074.189	53
2078.161	53
2097.022	53
2122.454	52
2146.368	52
2162.023	51
2182.362	271
2187.683	50
2189.033	49
2191.984	271
2201.587	271
2208.408	270
2209.034	270
2213.655	91
2218.261	270
2220.381	61
2228.734	270
2249.180	5
2250.176	4
2250.936	4
2251.556	5
2253.127	4
2254.406	5
2255.766	67
2260.081	4
2260.240	5
2260.860	4
2262.688	5
2265.995	5
2267.587	4
2268.564	5
2268.823	5
2279.916	4
2292.425	60
2296.879	66
2312.224	60
2327.397	3

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2327.876	322
2331.307	22
2332.800	3
2338.008	3
2338.545	278
2343.496	3
2343.960	22
2344.283	3
2345.339	90
2348.115	23
2348.303	3
2351.202	90
2351.667	275
2352.312	275
2353.470	324
2353.681	275
2354.479	90
2354.889	22
2356.209	65
2359.106	3
2359.598	90
2359.999	22
2360.293	23
2360.532	277
2361.726	90
2362.020	22
2363.861	275
2364.829	3
2365.765	283
2366.593	22
2366.876	90
2368.596	23
2369.955	275
2370.499	22
2372.359	59
2373.736	2
2375.193	23
2376.430	275
2378.554	276
2378.698	282
2379.276	23
2379.418	318
2380.762	3
2382.039	2
2382.358	22
2382.901	58
2383.062	2
2383.245	23
2384.388	23
2385.005	22
2388.389	58
2388.630	2
2390.098	326
2390.759	294
2391.478	22
2394.003	274
2395.420	2
2395.626	2

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2396.719	135
2399.242	2
2400.050	326
2401.292	294
2402.448	274
2402.599	23
2402.634	281
2404.432	2
2404.887	2
2406.090	64
2406.662	2
2410.271	274
2410.520	2
2411.069	2
2411.808	327
2412.009	282
2413.311	2
2414.105	88
2414.510	108
2416.447	287
2417.870	160
2418.170	77
2418.437	287
2419.893	108
2422.688	212
2422.934	57
2423.210	212
2424.146	108
2424.392	78
2424.499	89
2424.591	212
2424.651	108
2428.078	56
2428.365	210
2428.799	212
2429.035	212
2429.388	76
2429.860	321
2430.079	108
2432.262	108
2432.874	234
2433.500	88
2434.060	273
2434.239	280
2434.730	234
2434.952	108
2435.000	280
2436.623	281
2439.302	134
2440.424	210
2441.130	286
2442.376	328
2443.711	328
2444.516	76
2445.107	273
2445.573	76
2445.798	210
2446.110	210

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2446.472	88
2447.205	210
2447.327	211
2447.756	233
2449.965	210
2450.205	210
2453.976	293
2454.579	233
2455.712	286
2455.900	281
2457.101	312
2458.784	134
2458.973	209
2460.440	286
2461.284	134
2461.862	134
2463.282	133
2464.012	133
2464.906	133
2465.913	133
2466.499	305
2466.673	107
2466.821	107
2468.300	87
2469.372	86
2469.516	209
2470.410	133
2470.670	107
2470.848	85
2471.277	285
2472.606	286
2473.323	76
2475.119	286
2475.543	286
2476.266	87
2477.345	86
2478.573	107
2480.158	107
2481.050	159
2482.118	84
2482.326	268
2482.658	132
2482.868	292
2483.720	248
2484.236	107
2484.443	292
2489.110	77
2489.484	84
2489.831	132
2490.713	248
2490.859	107
2491.398	132
2492.345	159
2493.262	84
2493.878	292
2494.116	84
2497.683	106
2497.820	132

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2500.924	267
2501.350	292
2502.393	132
2503.327	131
2503.541	285
2503.566	84
2503.875	195
2506.094	132
2506.797	317
2508.342	316
2510.565	291
2511.761	84
2513.151	269
2514.383	195
2517.135	75
2519.048	180
2521.092	180
2521.816	247
2525.389	82
2525.919	269
2526.076	82
2526.295	73
2527.104	82
2527.705	246
2528.682	102
2529.078	267
2529.229	158
2529.546	105
2530.103	269
2533.628	82
2534.419	82
2535.362	301
2535.486	103
2536.674	158
2536.806	82
2536.845	82
2537.139	269
2538.205	232
2538.399	104
2538.501	83
2538.680	269
2538.911	81
2538.995	81
2539.806	102
2540.523	259
2540.661	256
2541.101	105
2541.836	81
2542.319	21
2542.736	145
2543.380	82
2543.431	105
2544.973	75
2545.221	82
2545.444	179
2545.531	104
2546.671	103
2547.339	81

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2548.158	102
2548.325	74
2548.591	81
2548.744	73
2548.923	232
2549.084	194
2549.395	105
2549.461	105
2549.775	178
2550.026	157
2550.152	269
2550.575	81
2550.684	156
2551.204	245
2554.945	130
2555.068	103
2555.454	105
2557.084	81
2557.506	101
2559.242	178
2559.773	130
2559.926	179
2560.283	144
2561.586	130
2562.093	144
2562.536	36
2563.476	36
2566.220	300
2566.401	301
2566.624	100
2566.913	36
2568.411	73
2568.886	101
2569.784	259
2570.548	310
2570.849	194
2571.549	100
2572.968	113
2573.211	130
2573.757	194
2574.367	73
2576.862	243
2577.430	101
2577.923	36
2580.721	244
2581.112	113
2582.413	223
2582.584	36
2583.054	100
2583.351	178
2585.616	243
2585.876	1
2586.060	113
2587.945	243
2588.193	73
2588.798	177
2590.551	73
2591.543	36

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2592.785	231
2593.729	36
2594.964	223
2595.278	128
2595.303	98
2598.370	1
2599.396	1
2604.053	300
2604.670	177
2605.037	300
2605.311	255
2605.425	129
2605.902	266
2606.517	255
2607.088	1
2608.853	97
2609.127	223
2609.442	177
2609.865	129
2611.074	36
2611.342	99
2611.874	1
2613.572	98
2613.825	1
2614.189	176
2614.586	128
2614.871	97
2617.618	1
2619.075	97
2620.172	99
2620.409	1
2620.696	97
2621.670	1
2623.130	231
2623.725	97
2625.490	231
2625.668	1
2626.501	99
2626.698	128
2628.294	1
2628.581	128
2629.589	97
2630.071	97
2631.048	1
2631.324	1
2631.609	97
2633.203	266
2636.697	266
2637.498	304
2637.644	144
2639.565	144
2641.123	73
2642.012	222
2646.212	155
2649.469	320
2650.482	304
2651.299	155
2652.566	155

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2654.630	304
2657.918	193
2658.253	222
2659.065	155
2662.556	304
2664.664	175
2666.637	175
2667.219	304
2669.933	311
2670.379	265
2671.393	304
2680.233	303
2682.507	320
2683.000	311
2684.754	193
2684.959	126
2686.107	127
2686.388	174
2691.737	127
2692.601	193
2692.834	34
2693.857	173
2697.328	254
2697.462	254
2697.727	242
2699.199	311
2703.990	173
2704.576	127
2707.133	253
2709.056	141
2709.381	34
2709.987	127
2711.842	126
2712.391	126
2714.413	35
2716.218	173
2716.441	253
2716.565	325
2716.697	34
2717.878	323
2718.640	315
2719.304	252
2721.814	125
2722.063	172
2722.741	311
2724.884	34
2726.520	173
2727.383	124
2727.539	35
2728.907	172
2730.734	34
2732.009	154
2732.446	20
2732.943	315
2736.489	143
2736.966	35
2739.548	35
2741.394	172

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2743.197	34
2744.897	172
2746.484	34
2746.982	35
2749.181	35
2749.321	34
2749.486	35
2750.008	125
2751.127	140
2752.150	272
2753.288	153
2754.889	272
2755.737	34
2756.512	124
2757.030	123
2759.332	20
2761.813	35
2762.333	272
2762.447	125
2763.655	329
2763.911	125
2764.790	122
2765.128	330
2767.503	153
2768.935	35
2769.152	124
2769.355	122
2770.505	122
2771.186	192
2771.555	121
2772.726	35
2774.688	141
2775.338	20
2776.179	123
2776.908	272
2779.300	152
2779.909	258
2780.051	258
2783.691	152
2784.277	208
2785.192	272
2787.242	279
2790.561	192
2793.886	122
2796.628	272
2797.917	152
2799.295	151
2799.722	122
2804.021	171
2805.318	208
2805.788	171
2809.783	279
2811.268	120
2812.494	138
2813.615	122
2817.088	279
2819.343	120
2826.027	167

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2827.427	150
2828.626	150
2831.562	140
2833.086	279
2835.711	139
2836.189	207
2836.512	207
2837.297	150
2838.217	279
2839.513	284
2839.800	279
2840.343	119
2840.651	140
2840.760	191
2841.356	120
2842.076	120
2843.316	150
2843.478	207
2844.959	290
2845.596	284
2847.210	121
2847.774	279
2848.106	290
2848.320	284
2848.906	230
2849.605	120
2852.865	142
2853.207	121
2855.666	120
2856.149	119
2856.377	279
2856.909	290
2857.174	207
2857.420	119
2858.341	189
2861.168	33
2864.972	207
2868.874	33
2869.159	170
2869.313	290
2869.699	170
2870.608	119
2871.060	119
2871.131	149
2872.384	149
2873.398	190
2875.349	169
2876.804	168
2879.245	188
2880.756	33
2883.710	149
2884.765	290
2885.933	230
2886.236	148
2887.314	170
2888.095	138
2892.827	33
2894.779	149

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
2895.220	207
2897.266	166
2902.319	168
2902.463	188
2906.124	138
2907.856	32
2910.763	188
2916.151	32
2917.083	251
2917.466	33
2922.022	206
2926.585	32
2934.494	188
2939.507	32
2944.396	46
2945.265	32
2947.654	46
2949.182	187
2953.775	32
2954.052	165
2959.599	166
2959.835	299
2961.276	32
2964.133	164
2964.623	46
2965.033	46
2965.406	163
2968.737	165
2969.937	187
2970.515	32
2970.694	186
2975.937	32
2978.846	186
2979.354	32
2980.963	165
2982.059	250
2984.825	46
2985.545	46
2997.300	250
2998.852	164
3000.062	186
3002.321	221
3002.646	46
3004.257	186
3020.009	229
3021.417	163
3036.963	302
3044.840	221
3048.991	302
3056.804	228
3062.237	227
3065.316	220
3070.691	185
3071.125	302
3076.435	302
3077.170	226
3078.680	302
3089.384	264

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3096.295	220
3101.889	219
3105.167	205
3105.554	205
3106.565	185
3114.297	205
3114.686	205
3116.579	205
3129.009	219
3131.724	225
3133.050	205
3135.360	205
3144.752	205
3146.755	184
3154.202	183
3155.953	182
3162.798	241
3163.094	44
3166.672	45
3167.857	183
3170.337	45
3177.532	205
3179.503	263
3180.149	263
3183.114	44
3185.317	44
3186.738	45
3187.297	241
3192.066	183
3192.909	45
3193.799	45
3193.859	182
3196.070	44
3210.444	45
3211.076	218
3213.309	45
3227.742	45
3231.706	203
3232.785	240
3237.399	204
3237.820	204
3241.685	203
3243.723	240
3247.175	204
3247.389	240
3255.887	31
3257.363	215
3258.771	202
3259.051	204
3266.936	181
3267.039	203
3268.510	239
3269.765	239
3273.490	239
3276.604	217
3277.348	31
3279.644	239
3281.292	31

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3285.408	31
3289.354	181
3295.233	201
3295.817	31
3297.880	214
3302.857	31
3303.464	31
3304.430	216
3313.988	31
3323.063	217
3325.007	216
3360.115	224
3366.967	298
3381.006	298
3388.138	200
3395.328	238
3398.360	224
3416.021	55
3425.575	43
3436.107	214
3442.219	213
3453.616	289
3456.924	199
3463.962	42
3464.495	237
3468.677	237
3475.739	42
3487.986	42
3493.470	237
3494.673	55
3495.618	236
3499.876	236
3503.466	42
3507.399	55
3508.202	42
3614.876	235
3621.270	257
3624.893	257
3632.292	235
3711.982	309
3748.483	262
3759.464	262
3814.124	261
3824.929	72
3827.083	261
3906.035	297
3914.503	41
3935.962	297
3938.290	41
3938.970	308
3945.210	41
3974.167	72
4024.547	249
4075.954	63
4087.284	70
4122.668	70
4124.787	62
4128.748	71

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4173.461	71
4178.862	70
4180.981	260
4233.172	71
4258.154	70
4273.326	71
4296.572	70
4303.176	71
4351.768	71
4369.411	70
4384.319	80
4385.387	71
4413.601	80
4416.830	71
4472.929	95
4489.183	95
4491.405	95
4508.288	96
4515.339	95
4520.224	95
4522.634	96
4534.168	95
4541.524	96
4549.192	307
4549.474	96
4555.893	95
4576.340	96
4582.835	95
4583.837	96
4620.521	96
4629.339	95
4635.316	307
4656.981	112
4666.758	95
4670.182	69
4720.149	137
4731.453	112
4833.197	79
4839.998	79
4893.820	94
4923.927	111
4990.509	333
4993.358	94
5000.743	69
5001.959	332
5018.440	111
5030.630	331
5035.708	331
5100.664	93
5132.669	93
5136.802	93
5144.355	340
5149.465	339
5169.033	111
5197.577	117
5227.481	335
5234.625	117
5247.952	338

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
5251.233	337
5262.479	136
5264.177	336
5264.812	118
5272.397	306
5276.002	117
5284.109	110
5306.180	343
5316.225	334
5316.615	117
5316.784	118
5325.553	117
5387.063	347
5395.857	351
5402.059	348
5414.073	118
5425.257	117
5427.826	319
5429.988	349
5465.931	350
5482.308	347
5493.833	341
5506.195	345
5510.779	346
5525.125	147
5529.053	342
5534.847	146
5544.763	344
5607.138	68
5627.497	161
5725.963	161
5783.630	357
5813.677	295
5823.155	296
5824.415	162
5885.015	356
5902.825	354
5955.698	355
5961.705	352
5965.622	353
5991.376	116
6084.111	116
6113.322	116
6129.703	116
6147.741	198
6149.258	198
6175.146	314
6179.384	295
6238.392	198
6239.953	198
6247.557	198
6305.296	314
6331.954	313
6369.462	109
6383.722	288
6416.919	198
6432.680	109
6446.410	313

TABLE 6. Fe II allowed transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
6456.383	198
6516.081	109
7222.394	197
7224.487	197
7301.560	196
7320.654	197
7449.335	197
7462.407	197
7479.694	196
7515.832	197
7711.724	197

This new tabulation of atomic transition probabilities for the allowed lines of Fe II has been expanded to 926 lines from the 650 lines listed in our earlier 1988 compilation.[1] The numerical data are given in Tables 6 and 7. The quality of the data has greatly improved as well. In the earlier tables, most data were estimated to be of only moderate quality, deserving a "C" or "D" accuracy rating, but experimental data by Whaling[29] for about 40 transitions stood out as being very good. These were obtained by a combination of emission branching fractions determined with a hollow cathode and a Fourier transform spectrometer (FTS), and lifetimes measured with the LIF method (by Hannaford and Lowe[30]).

In this new compilation, about two thirds of the tabulated data have been obtained with this advanced approach, which has been applied with similar instrumentation by groups at the Universities of Wisconsin[31,32] and of Hannover[33] and by the FERRUM-Project Group,[34–39] located primarily at Lund University, Sweden and at Imperial College, London.

All three teams have measured the required atomic lifetimes with the LIF method, and have generated the emission line intensity data for the branching fractions in hollow cathode or Penning sources and observed the spectra with high resolution FTS instruments, or—when it was sometimes necessary to achieve higher sensitivity—with fairly large grating spectrometers. Radiometric calibrations are needed on a relative scale to account for sensitivity variations with wavelength and are a source of significant uncertainties for deep ultraviolet transitions. In this wavelength range, deuterium (D_2) lamps calibrated by NIST and by the Physikalisch-Technische Bundesanstalt (PTB) have been applied, and sometimes argon miniarcs and known argon branching fractions have been utilized to cross check the deuterium lamp calibrations.

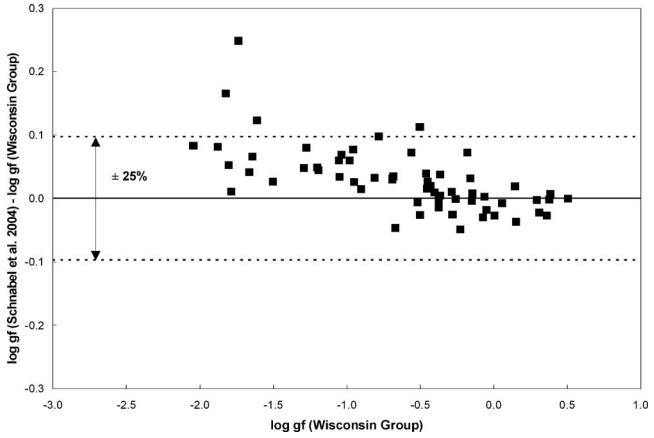

FIG. 5. Comparison between the branching-fraction/lifetime data of Schnabel *et al.*[33] and the absorption as well as branching-fraction/lifetime data of the Wisconsin Group (Lawler and co-workers).[31,32,41,42]

A significant amount of overlap exists between the Hannover and Wisconsin data, as well as with some of the earlier unpublished material by Whaling. The agreement, especially for the stronger lines, is very good and consistent with the authors' uncertainty estimates. For the three multiplets, a $a\ ^6\mathrm{D}-z\ ^6\mathrm{D}^\circ$, $a\ ^6\mathrm{D}-z\ ^6\mathrm{F}^\circ$, and $a\ ^6\mathrm{D}-z\ ^6\mathrm{P}^\circ$, theoretical results are also available from advanced calculations by Donnelly and Hibbert with the CIV 3 code.[40] The comparison with the experimental data is very good for the $a\ ^6\mathrm{D}-z\ ^6\mathrm{D}^\circ$ multiplet, but only fair-to-good for the other two multiplets. Therefore, we have not included these results in our averages. A graphical comparison of the overlapping data from Bergeson *et al.*[31] and Schnabel *et al.*[33] is shown in Fig. 5.

Overlap between the data from the FERRUM Project and the other experimental sources is limited to the multiplet UV 8, $3d^64s\ ^6\mathrm{D}-3d^54s4p\ ^6\mathrm{P}^\circ$ ($a\ ^6\mathrm{D}-y\ ^6\mathrm{P}^\circ$), which includes the important resonance line at 1608 Å. The data for this multiplet are a special case, since four closely agreeing results were recently obtained by four fundamentally different methods—two experimental and two theoretical. Bergeson *et al.*[41] and Mullman and Lawler[42] measured the f values of seven lines of this multiplet in absorption. They utilized a storage ring as the continuum background source and measured the intensity ratio with lines of well known f values that arise from the same lower levels. The uncertainties of their results were estimated to be in the range from 9% to 16%. The FERRUM-Project team, on the other hand, used the earlier mentioned technique of LIF lifetime determinations combined with emission branching-fraction measurements. They estimate smaller uncertainties of 6%–7% in their measurements for these same lines.

On the theoretical side, Pickering *et al.*[34] performed advanced calculations for multiplet UV 8, using extensive configuration interaction wave functions generated with the CIV 3 code. Also, Raassen and Uylings[43] calculated f values for these lines with the semiempirical orthogonal operator method.

For our tabulation, we selected the average of the experiments by Pickering *et al.*,[34] and Mullman and Lawler,[42] and the sophisticated multiconfiguration calculations by Pickering *et al.*[34] For the three lines at 1621.69, 1629.16, and 1636.33 Å, we assigned twice the weight to the experimental results of Pickering *et al.*,[34] since their estimated uncertainties are much lower than those of Mullman and Lawler.[42]

In addition to the mostly experimental results discussed up to this point, two large sets of calculated data exist for Fe II from the semiempirical orthogonal operator technique developed by Raassen and Uylings[43] as well as from the semi-

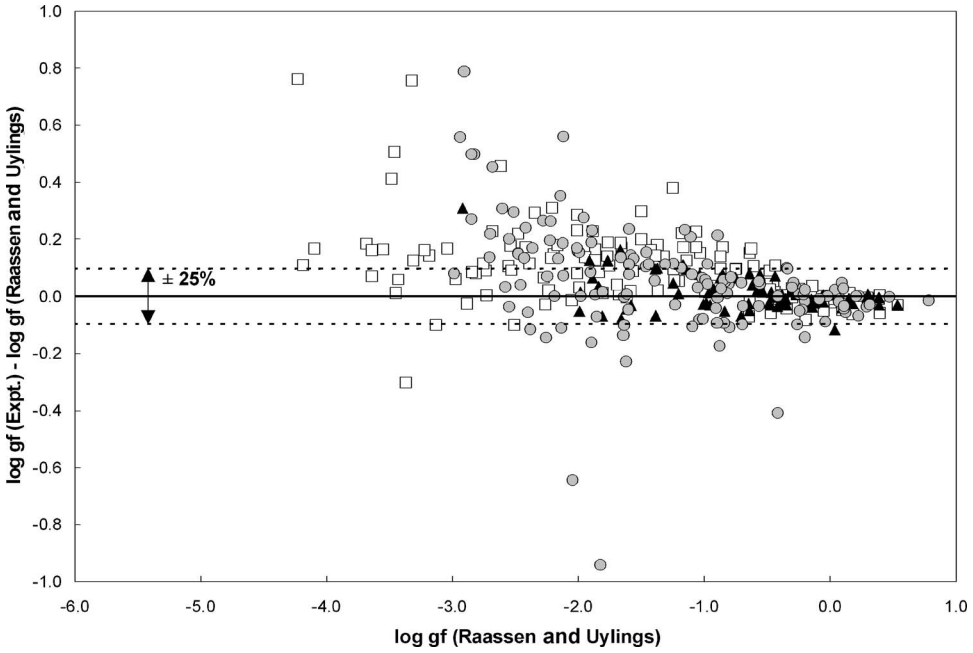

FIG. 6. Comparison of the experimental results from all sources[30–42] with data calculated by Raassen and Uylings[43] with their semiempirical orthogonal operator technique. The ratios involving the data of Schnabel *et al.*[33] are denoted by open squares, those of the FERRUM Project[34–40] by gray circles, and those of the Wisconsin Group (Lawler and co-workers)[31,32,41,42] by black triangles.

empirical calculations of Kurucz and Bell,[44] based on the Cowan code.[45] Comparisons with the experimental data have shown that these two methods have produced good results for most stronger transitions, especially the orthogonal operator technique. This is clearly observed in the comparison graph (Fig. 6). It is also seen that for weaker lines ($\log gf \leqslant -1.5$), the scatter with the experimental data increases markedly. We have therefore utilized the Raassen and Uylings results only for about 300 additional strong or moderately strong lines. Several thousand weaker lines with precise experimental wavelengths, but with larger uncertainties (typically our ratings classes "D" or "E") are available from Raassen and Uylings[43] and Kurucz and Bell.[44]

3.2.2. References for Fe II Allowed Transitions

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TABLE 7. Fe II allowed transitions

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
1	$a\,^6\mathrm{D}$–$z\,^6\mathrm{D}^\circ$	*2610.63*	*2611.41*	*416.30 – 38 709.84*		30–30	2.70E+00	2.76E−01	7.11E+01	0.918	B+	31,33
		2599.396	2600.173	0.000 – 38 458.981		10–10	2.35E+00	2.39E−01	2.04E+01	0.378	B+	31,33

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2611.874	2612.654	384.790	38 660.043	8–8	1.20E+00	1.22E−01	8.43E+00	−0.009	B+	31,33
		2617.618	2618.399	667.683	38 858.958	6–6	4.88E−01	5.01E−02	2.59E+00	−0.522	B	31,33
		2620.409	2621.191	862.613	39 013.206	4–4	4.30E−02	4.43E−03	1.53E−01	−1.752	C+	33
		2621.670	2622.452	977.053	39 109.307	2–2	5.60E−01	5.77E−02	9.96E−01	−0.938	B+	31,33
		2585.876	2586.650	0.000	38 660.043	10–8	8.94E−01	7.17E−02	6.11E+00	−0.144	B+	31,33
		2598.370	2599.147	384.790	38 858.958	8–6	1.43E+00	1.08E−01	7.41E+00	−0.062	B+	31,33
		2607.088	2607.866	667.683	39 013.206	6–4	1.73E+00	1.17E−01	6.05E+00	−0.152	B	31,33
		2613.825	2614.605	862.613	39 109.307	4–2	2.12E+00	1.09E−01	3.74E+00	−0.362	B+	31,33
		2625.668	2626.451	384.790	38 458.981	8–10	3.52E−01	4.55E−02	3.15E+00	−0.439	B+	31,33
		2631.324	2632.108	667.683	38 660.043	6–8	6.29E−01	8.70E−02	4.53E+00	−0.282	B+	31,33
		2631.048	2631.832	862.613	38 858.958	4–6	8.16E−01	1.27E−01	4.40E+00	−0.294	B+	31,33
		2628.294	2629.078	977.053	39 013.206	2–4	8.74E−01	1.81E−01	3.14E+00	−0.441	B	31,33
2	$a\ ^6\mathrm{D}-z\ ^6\mathrm{F}^\circ$											
		2382.039	2382.765	0.000	41 968.046	10–12	3.13E+00	3.20E−01	2.51E+01	0.505	B+	31,33
		2395.626	2396.356	384.790	42 114.818	8–10	2.59E+00	2.79E−01	1.76E+01	0.348	B+	31,33
		2404.887	2405.619	667.683	42 237.033	6–8	1.96E+00	2.27E−01	1.08E+01	0.134	B+	31,33
		2410.520	2411.253	862.613	42 334.822	4–6	1.55E+00	2.03E−01	6.45E+00	−0.090	B+	31,33
		2413.311	2414.045	977.053	42 401.302	2–4	1.02E+00	1.79E−01	2.84E+00	−0.447	B+	31,33
		2373.736	2374.461	0.000	42 114.818	10–10	4.25E−01	3.59E−02	2.81E+00	−0.444	B+	31,33
		2388.630	2389.358	384.790	42 237.033	8–8	1.05E+00	9.00E−02	5.67E+00	−0.142	B+	31,33
		2399.242	2399.973	667.683	42 334.822	6–6	1.39E+00	1.20E−01	5.68E+00	−0.143	B+	31,33
		2406.662	2407.394	862.613	42 401.302	4–4	1.61E+00	1.40E−01	4.44E+00	−0.252	B+	31,33
		2411.069	2411.802	977.053	42 439.822	2–2	2.37E+00	2.07E−01	3.28E+00	−0.384	B+	31,33
		2383.062	2383.788	384.790	42 334.822	8–6	1.0E−01	6.5E−03	4.0E−01	−1.29	D	40
		2395.420	2396.150	667.683	42 401.302	6–4	2.67E−01	1.53E−02	7.26E−01	−1.036	B	31
		2404.432	2405.164	862.613	42 439.822	4–2	6.44E−01	2.79E−02	8.84E−01	−0.952	B+	31,33
3	$a\ ^6\mathrm{D}-z\ ^6\mathrm{P}^\circ$	*2343.99*	*2344.70*	*416.30*	*43 065.62*	30–18	2.76E+00	1.37E−01	3.17E+01	0.613	B	31,33,40
		2343.496	2344.214	0.000	42 658.224	10–8	1.73E+00	1.14E−01	8.80E+00	0.057	B	31
		2332.800	2333.516	384.790	43 238.586	8–6	1.31E+00	8.0E−02	4.92E+00	−0.194	C	40
		2327.397	2328.111	667.683	43 620.957	6–4	6.55E−01	3.55E−02	1.63E+00	−0.672	B+	31
		2364.829	2365.552	384.790	42 658.224	8–8	5.90E−01	4.95E−02	3.08E+00	−0.402	B	31
		2348.303	2349.022	667.683	43 238.586	6–6	1.15E+00	9.5E−02	4.41E+00	−0.244	C	40
		2338.008	2338.725	862.613	43 620.957	4–4	1.13E+00	9.25E−02	2.85E+00	−0.432	B+	31
		2380.762	2381.489	667.683	42 658.224	6–8	3.10E−01	3.51E−02	1.65E+00	−0.676	B	31,33
		2359.106	2359.828	862.613	43 238.586	4–6	5.0E−01	6.3E−02	1.96E+00	−0.60	C	40
		2344.283	2345.001	977.053	43 620.957	2–4	9.27E−01	1.53E−01	2.36E+00	−0.515	B+	31,33
4	$a\ ^6\mathrm{D}-z\ ^4\mathrm{F}^\circ$											
		2260.081	2260.780	0.000	44 232.512	10–10	3.18E−02	2.44E−03	1.82E−01	−1.613	B	31
		2253.127	2253.825	384.790	44 753.799	8–8	4.41E−02	3.36E−03	1.99E−01	−1.571	C+	33
		2250.936	2251.634	667.683	45 079.879	6–6	3.19E−02	2.43E−03	1.08E−01	−1.837	C+	31,33
		2250.176	2250.874	862.613	45 289.801	4–4	1.67E−02	1.27E−03	3.76E−02	−2.295	C+	33
		2279.916	2280.620	384.790	44 232.512	8–10	4.49E−02	4.38E−03	2.63E−01	−1.456	B	31
		2267.587	2268.288	667.683	44 753.799	6–8	3.69E−02	3.80E−03	1.70E−01	−1.642	C+	31,33
		2260.860	2261.560	862.613	45 079.879	4–6	2.16E−02	2.49E−03	7.41E−02	−2.002	C+	31,33
5	$a\ ^6\mathrm{D}-z\ ^4\mathrm{D}^\circ$											
		2249.180	2249.877	0.000	44 446.878	10–8	3.00E−02	1.82E−03	1.35E−01	−1.740	B	31
		2251.556	2252.254	384.790	44 784.761	8–6	9.8E−03	5.6E−04	3.3E−02	−2.35	D	43
		2254.406	2255.105	862.613	45 206.450	4–2	5.5E−03	2.1E−04	6.3E−03	−3.07	D	43
		2268.823	2269.525	384.790	44 446.878	8–8	3.97E−03	3.06E−04	1.83E−02	−2.611	C+	31
		2265.995	2266.696	667.683	44 784.761	6–6	1.0E−02	7.7E−04	3.4E−02	−2.34	D	43
		2262.688	2263.388	862.613	45 044.168	4–4	1.98E−02	1.52E−03	4.53E−02	−2.216	C+	33
		2260.240	2260.940	977.053	45 206.450	2–2	3.4E−02	2.6E−03	3.9E−02	−2.28	D	43
		2268.564	2269.266	977.053	45 044.168	2–4	6.0E−03	9.3E−04	1.40E−02	−2.73	C	33
6	$a\ ^6\mathrm{D}-y\ ^6\mathrm{P}^\circ$		*1621.51*	*416.30*	*62 087.04*	30–18	2.49E+00	5.90E−02	9.44E+00	0.248	A	42,34
			1608.451	0.000	62 171.615	10–8	1.91E+00	5.91E−02	3.13E+00	−0.228	A	42,34

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
			1621.686	384.790	– 62 049.025	8–6	1.32E+00	3.90E−02	1.66E+00	−0.506	A	42,34
			1631.128	667.683	– 61 974.933	6–4	6.93E−01	1.84E−02	5.94E−01	−0.956	A	42,34
			1618.468	384.790	– 62 171.615	8–8	5.53E−01	2.17E−02	9.26E−01	−0.760	A	42,34
			1629.160	667.683	– 62 049.025	6–6	8.66E−01	3.45E−02	1.11E+00	−0.685	A	42,34
			1636.331	862.613	– 61 974.933	4–4	9.63E−01	3.86E−02	8.33E−01	−0.811	A	42,34
			1625.912	667.683	– 62 171.615	6–8	1.02E−01	5.39E−03	1.73E−01	−1.490	C+	34
			1634.350	862.613	– 62 049.025	4–6	3.21E−01	1.93E−02	4.15E−01	−1.112	A	34
			1639.401	977.053	– 61 974.933	2–4	6.85E−01	5.52E−02	5.96E−01	−0.957	B+	42,34
7	$a\ ^6$D–(°)[a]											
			1611.201	0.000	– 62 065.521	10–8	4.40E−02	1.37E−03	7.3E−02	−1.86	C	35
			1621.252	384.790	– 62 065.521	8–8	1.3E−02	4.9E−04	2.1E−02	−2.40	D	43
8	$a\ ^6$D–$x\ ^4$D°											
			1588.688	0.000	– 62 945.038	10–8	4.9E−03	1.5E−04	7.7E−03	−2.83	D	43
9	$a\ ^6$D–$w\ ^2$P°											
			1272.655	667.683	– 79 243.60	6–4	2.2E−01	3.5E−03	8.8E−02	−1.68	D	39
10	$a\ ^6$D–$x\ ^6$P°											
			1267.422	384.790	– 79 285.11	8–6	9.3E−01	1.7E−02	5.6E−01	−0.87	D	39
			1272.613	667.683	– 79 246.17	6–4	3.3E−01	5.3E−03	1.3E−01	−1.50	D	39
11	$a\ ^6$D–$y\ ^6$F°											
			1144.938	0.000	– 87 340.983	10–12	3.52E+00	8.30E−02	3.13E+00	−0.081	B	32
			1148.277	384.790	– 87 471.765	8–10	3.35E+00	8.3E−02	2.50E+00	−0.179	C	43
			1151.146	667.683	– 87 537.652	6–8	2.23E+00	5.9E−02	1.34E+00	−0.451	C	43
			1143.226	0.000	– 87 471.765	10–10	9.8E−01	1.92E−02	7.2E−01	−0.72	C	43
			1147.409	384.790	– 87 537.652	8–8	1.24E+00	2.46E−02	7.4E−01	−0.71	C	43
			1142.366	0.000	– 87 537.652	10–8	2.6E−01	4.0E−03	1.5E−01	−1.40	D	43
12	$a\ ^6$D–^{6}D°											
			1138.632	384.790	– 88 209.45	8–8	5.5E−01	1.1E−02	3.2E−01	−1.07	D	43
			1133.665	0.000	– 88 209.45	10–8	3.1E−01	4.7E−03	1.8E−01	−1.33	D	43
			1133.405	384.790	– 88 614.52	8–10	2.6E−01	6.3E−03	1.9E−01	−1.30	D	43
13	$a\ ^6$D–^{6}D°											
			1127.098	0.000	– 88 723.400	10–10	5.9E−02	1.1E−03	4.2E−02	−1.95	D	43
			1125.448	0.000	– 88 853.533	10–8	1.03E+00	1.56E−02	5.8E−01	−0.81	C	43
14	$a\ ^6$D–(°)[a]											
			1121.975	0.000	– 89 128.561	10–8	1.92E+00	2.90E−02	1.07E+00	−0.54	C	43
			1130.443	667.683	– 89 128.561	6–8	3.1E−01	7.9E−03	1.8E−01	−1.33	D	43
15	$a\ ^6$D–^{6}P°											
			1122.843	384.790	– 89 444.458	8–6	1.81E+00	2.57E−02	7.6E−01	−0.69	C	43
			1128.046	977.053	– 89 625.940	2–4	1.40E+00	5.4E−02	3.98E−01	−0.97	C	43
16	$a\ ^6$D–^{6}F°											
			1112.048	0.000	– 89 924.175	10–12	2.0E−01	4.5E−03	1.6E−01	−1.35	D	43
17	$a\ ^6$D–$w\ ^6$P°											
			1096.877	0.000	– 91 167.937	10–8	2.26E+00	3.26E−02	1.18E+00	−0.486	C	43
18	$a\ ^6$D–^{6}D°											
			1068.346	384.790	– 93 987.457	8–8	1.59E+00	2.72E−02	7.7E−01	−0.66	C	43
			1063.972	0.000	– 93 987.457	10–8	3.5E−01	4.7E−03	1.7E−01	−1.32	D	43
			1071.584	667.683	– 93 987.457	6–8	1.14E+00	2.61E−02	5.5E−01	−0.80	C	43
19	$a\ ^6$D–^{6}P°											
			1055.262	0.000	– 94 763.219	10–8	4.6E−01	6.1E−03	2.1E−01	−1.21	D	43
20	$a\ ^4$F–$z\ ^6$D°											
		2732.446	2733.255	1872.567	– 38 458.981	10–10	9.8E−04	1.10E−04	9.9E−03	−2.96	C	33
		2759.332	2760.148	2430.097	– 38 660.043	8–8	2.7E−04	3.1E−05	2.2E−03	−3.61	D	43
		2775.338	2776.158	2837.950	– 38 858.958	6–6	1.5E−04	1.7E−05	9.6E−04	−3.98	D	43
21	$a\ ^4$F–$z\ ^6$F°											
		2542.319	2543.082	3117.461	– 42 439.822	4–2	3.9E−03	1.9E−04	6.3E−03	−3.12	D	43
22	$a\ ^4$F–$z\ ^4$F°	*2363.48*	*2364.21*	*2416.57*	*– 44 714.07*	28–28	4.37E−01	3.66E−02	7.97E+00	0.010	C+	31,33
		2359.999	2360.721	1872.567	– 44 232.512	10–10	3.59E−01	3.00E−02	2.33E+00	−0.523	B	31,33

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2362.020	2362.742	2430.097	44 753.799	8–8	1.41E−01	1.18E−02	7.35E−01	−1.024	C+	31,33
		2366.593	2367.316	2837.950	45 079.879	6–6	1.01E−01	8.50E−03	3.97E−01	−1.292	C+	31
		2370.499	2371.222	3117.461	45 289.801	4–4	1.73E−01	1.46E−02	4.56E−01	−1.234	B	31,33
		2331.307	2332.023	1872.567	44 753.799	10–8	3.17E−01	2.07E−02	1.59E+00	−0.684	B	31
		2343.960	2344.678	2430.097	45 079.879	8–6	3.13E−01	1.94E−02	1.20E+00	−0.810	C+	31
		2354.889	2355.610	2837.950	45 289.801	6–4	2.67E−01	1.48E−02	6.90E−01	−1.051	B	31
		2391.478	2392.206	2430.097	44 232.512	8–10	3.77E−02	4.05E−03	2.55E−01	−1.490	B	31,33
		2385.005	2385.732	2837.950	44 753.799	6–8	3.60E−02	4.09E−03	1.93E−01	−1.610	C+	31,33
		2382.358	2383.085	3117.461	45 079.879	4–6	3.19E−02	4.08E−03	1.28E−01	−1.788	C+	31
23	$a\ ^4F–z\ ^4D^\circ$											
		2348.115	2348.834	1872.567	44 446.878	10–8	6.50E−01	4.30E−02	3.33E+00	−0.367	B+	31,33
		2360.293	2361.015	2430.097	44 784.761	8–6	6.23E−01	3.90E−02	2.43E+00	−0.505	B	33
		2368.596	2369.319	2837.950	45 044.168	6–4	6.06E−01	3.40E−02	1.59E+00	−0.690	B+	31,33
		2375.193	2375.918	3117.461	45 206.450	4–2	9.81E−01	4.15E−02	1.30E+00	−0.780	B	31
		2379.276	2380.001	2430.097	44 446.878	8–8	2.73E−01	2.32E−02	1.46E+00	−0.731	B+	31,33
		2383.245	2383.971	2837.950	44 784.761	6–6	3.59E−01	3.06E−02	1.44E+00	−0.736	B	33
		2384.388	2385.115	3117.461	45 044.168	4–4	3.22E−01	2.75E−02	8.64E−01	−0.959	B	31
		2402.599	2403.330	2837.950	44 446.878	6–8	2.17E−02	2.50E−03	1.19E−01	−1.824	C+	31
24	$a\ ^4F–z\ ^4G^\circ$											
			1702.044	1872.567	60 625.449	10–12	1.02E+00	5.3E−02	2.97E+00	−0.275	C	43
25	$a\ ^4F–y\ ^4D^\circ$											
			1670.746	1872.567	61 726.077	10–8	1.06E+00	3.54E−02	1.95E+00	−0.451	C	43
26	$a\ ^4F–(^\circ)^a$											
			1661.324	1872.567	62 065.521	10–8	1.2E−02	4.1E−04	2.3E−02	−2.38	D	43
			1676.856	2430.097	62 065.521	8–8	6.75E−02	2.85E−03	1.26E−01	−1.643	C+	35
			1688.403	2837.950	62 065.521	6–8	2.53E−02	1.44E−03	4.81E−02	−2.063	C	35
27	$a\ ^4F–x\ ^4D^\circ$											
			1637.399	1872.567	62 945.038	10–8	3.57E−01	1.15E−02	6.19E−01	−0.940	C+	35
			1663.697	2837.950	62 945.038	6–8	9.9E−03	5.5E−04	1.8E−02	−2.48	D	43
28	$a\ ^4F–y\ ^4G^\circ$											
			1625.522	2430.097	63 948.790	8–10	4.04E−01	2.00E−02	8.56E−01	−0.796	C+	35
			1633.909	2837.950	64 040.886	6–8	3.85E−01	2.05E−02	6.63E−01	−0.909	C+	35
			1610.923	1872.567	63 948.790	10–10	1.94E−01	7.55E−03	4.00E−01	−1.122	C+	35
			1623.092	2430.097	64 040.886	8–8	1.99E−01	7.86E−03	3.36E−01	−1.202	C+	35
			1608.536	1872.567	64 040.886	10–8	2.1E−02	6.5E−04	3.5E−02	−2.186	D+	35
29	$a\ ^4F–x\ ^4G^\circ$											
			1580.629	2430.097	65 696.038	8–10	5.8E−01	2.71E−02	1.13E+00	−0.66	C	43
30	$a\ ^4F–x\ ^4F^\circ$											
			1563.790	2430.097	66 377.283	8–8	1.33E+00	4.89E−02	2.01E+00	−0.408	C	43
31	$a\ ^4D–z\ ^6D^\circ$											
		3277.348	3278.293	7955.299	38 458.981	8–10	3.31E−03	6.67E−04	5.76E−02	−2.273	C+	33
		3302.857	3303.808	8391.938	38 660.043	6–8	2.78E−04	6.1E−05	3.96E−03	−3.439	C	33
		3313.988	3314.942	8846.768	39 013.206	2–4	1.4E−04	4.7E−05	1.0E−03	−4.03	D	43
		3255.887	3256.826	7955.299	38 660.043	8–8	2.78E−03	4.42E−04	3.79E−02	−2.451	C+	33
		3281.292	3282.238	8391.938	38 858.958	6–6	2.31E−03	3.73E−04	2.42E−02	−2.65	C	33
		3295.817	3296.766	8680.454	39 013.206	4–4	2.04E−03	3.32E−04	1.44E−02	−2.88	C	33
		3303.464	3304.415	8846.768	39 109.307	2–2	6.5E−04	1.07E−04	2.32E−03	−3.67	C	33
		3285.408	3286.355	8680.454	39 109.307	4–2	4.5E−04	3.6E−05	1.6E−03	−3.84	D	43
32	$a\ ^4D–z\ ^6F^\circ$											
		2926.585	2927.442	7955.299	42 114.818	8–10	5.1E−02	8.2E−03	6.3E−01	−1.182	C	33
		2953.775	2954.638	8391.938	42 237.033	6–8	5.2E−02	9.1E−03	5.3E−01	−1.264	C	33
		2970.515	2971.382	8680.454	42 334.822	4–6	2.70E−02	5.36E−03	2.10E−01	−1.669	C+	33
		2979.354	2980.223	8846.768	42 401.302	2–4	1.61E−02	4.29E−03	8.4E−02	−2.067	C	33
		2916.151	2917.005	7955.299	42 237.033	8–8	4.8E−04	6.2E−05	4.8E−03	−3.31	D	43
		2945.265	2946.126	8391.938	42 334.822	6–6	5.6E−04	7.3E−05	4.2E−03	−3.36	D	43
		2975.937	2976.806	8846.768	42 439.822	2–2	9.1E−03	1.2E−03	2.4E−02	−2.62	D	43
		2907.856	2908.708	7955.299	42 334.822	8–6	1.3E−03	1.2E−04	9.2E−03	−3.02	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i – E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2939.507	2940.367	8391.938 – 42 401.302	6–4	4.0E−03	3.4E−04	2.0E−02	−2.69	D	43
		2961.276	2962.141	8680.454 – 42 439.822	4–2	8.9E−03	5.9E−04	2.3E−02	−2.63	D	43
33	$a\ ^4$D–$z\ ^6$P°										
		2880.756	2881.601	7955.299 – 42 658.224	8–8	2.21E−02	2.75E−03	2.09E−01	−1.66	C	33
		2868.874	2869.716	8391.938 – 43 238.586	6–6	7.3E−03	9.0E−04	5.1E−02	−2.27	D	43
		2861.168	2862.008	8680.454 – 43 620.957	4–4	1.7E−03	2.0E−04	7.6E−03	−3.09	D	43
		2917.466	2918.320	8391.938 – 42 658.224	6–8	1.4E−03	2.3E−04	1.3E−02	−2.85	D	43
		2892.827	2893.675	8680.454 – 43 238.586	4–6	1.8E−03	3.4E−04	1.3E−02	−2.87	D	43
34	$a\ ^4$D–$z\ ^4$F°	*2746.92*	*2747.74*	*8320.47 – 44 714.07*	20–28	2.18E+00	3.45E−01	6.24E+01	0.839	B	31,33
		2755.737	2756.551	7955.299 – 44 232.512	8–10	2.15E+00	3.06E−01	2.22E+01	0.389	B	31,33
		2749.321	2750.134	8391.938 – 44 753.799	6–8	2.16E+00	3.27E−01	1.77E+01	0.292	B+	31
		2746.484	2747.296	8680.454 – 45 079.879	4–6	2.05E+00	3.48E−01	1.26E+01	0.143	B	31
		2743.197	2744.009	8846.768 – 45 289.801	2–4	1.97E+00	4.45E−01	8.04E+00	−0.051	B+	31
		2716.697	2717.502	7955.299 – 44 753.799	8–8	1.02E−03	1.13E−04	8.1E−03	−3.044	C	33
		2724.884	2725.691	8391.938 – 45 079.879	6–6	9.58E−02	1.07E−02	5.74E−01	−1.194	C+	31
		2730.734	2731.543	8680.454 – 45 289.801	4–4	2.79E−01	3.13E−02	1.12E+00	−0.903	B	31
		2692.834	2693.633	7955.299 – 45 079.879	8–6	1.64E−02	1.34E−03	9.49E−02	−1.971	C+	31
		2709.381	2710.184	8391.938 – 45 289.801	6–4	2.78E−03	2.04E−04	1.09E−02	−2.91	C	33
35	$a\ ^4$D–$z\ ^4$D°	*2744.69*	*2745.50*	*8320.47 – 44 743.66*	20–20	2.26E+00	2.55E−01	4.62E+01	0.708	B+	31,33,43
		2739.548	2740.358	7955.299 – 44 446.878	8–8	2.21E+00	2.49E−01	1.79E+01	0.298	B+	31,33
		2746.982	2747.795	8391.938 – 44 784.761	6–6	1.69E+00	1.91E−01	1.04E+01	0.060	B	33
		2749.181	2749.994	8680.454 – 45 044.168	4–4	1.21E+00	1.37E−01	4.97E+00	−0.260	B+	31,33
		2749.486	2750.299	8846.768 – 45 206.450	2–2	1.16E+00	1.32E−01	2.38E+00	−0.580	B	31
		2714.413	2715.218	7955.299 – 44 784.761	8–6	5.70E−01	4.73E−02	3.38E+00	−0.423	B	33
		2727.539	2728.347	8391.938 – 45 044.168	6–4	9.38E−01	6.98E−02	3.76E+00	−0.378	B+	31,33
		2736.966	2737.776	8680.454 – 45 206.450	4–2	1.22E+00	6.85E−02	2.47E+00	−0.562	B	31
		2772.726	2773.545	8391.938 – 44 446.878	6–8	1.1E−03	1.6E−04	9.0E−03	−3.01	D	43
		2768.935	2769.753	8680.454 – 44 784.761	4–6	4.75E−02	8.19E−03	2.99E−01	−1.484	B	33
		2761.813	2762.629	8846.768 – 45 044.168	2–4	1.38E−01	3.15E−02	5.73E−01	−1.201	B	31
36	$a\ ^4$D–$z\ ^4$P°	*2570.09*	*2570.86*	*8320.47 – 47 217.99*	20–12	2.47E+00	1.47E−01	2.49E+01	0.468	B	33,43
		2562.536	2563.304	7955.299 – 46 967.444	8–6	1.79E+00	1.32E−01	8.93E+00	0.024	B	33
		2563.476	2564.245	8391.938 – 47 389.779	6–4	1.51E+00	9.92E−02	5.03E+00	−0.225	B	33
		2566.913	2567.683	8680.454 – 47 626.076	4–2	1.15E+00	5.7E−02	1.92E+00	−0.64	C	43
		2591.543	2592.319	8391.938 – 46 967.444	6–6	5.72E−01	5.76E−02	2.95E+00	−0.461	B	33
		2582.584	2583.357	8680.454 – 47 389.779	4–4	8.80E−01	8.80E−02	3.00E+00	−0.453	B	33
		2577.923	2578.695	8846.768 – 47 626.076	2–2	1.24E+00	1.24E−01	2.11E+00	−0.61	C	43
		2611.074	2611.853	8680.454 – 46 967.444	4–6	7.28E−02	1.12E−02	3.84E−01	−1.350	B	33
		2593.729	2594.504	8846.768 – 47 389.779	2–4	1.63E−01	3.29E−02	5.62E−01	−1.182	B	33
37	$a\ ^4$D–(°)[a]										
			1863.114	8391.938 – 62 065.521	6–8	2.4E−03	1.7E−04	6.3E−03	−2.99	D	43
38	$a\ ^4$D–$x\ ^4$D°										
			1818.521	7955.299 – 62 945.038	8–8	5.70E−02	2.83E−03	1.35E−01	−1.646	C+	35
			1833.076	8391.938 – 62 945.038	6–8	2.2E−02	1.5E−03	5.4E−02	−2.05	D	43
39	$a\ ^4$D–$y\ ^4$G°										
			1796.979	8391.938 – 64 040.886	6–8	3.0E−03	1.9E−04	6.8E−03	−2.94	D	43
40	$a\ ^4$D–$x\ ^4$P°										
			1635.401	7955.299 – 69 102.38	8–6	2.28E+00	6.8E−02	2.95E+00	−0.261	C	43
			1641.762	8391.938 – 69 302.09	6–4	1.76E+00	4.74E−02	1.54E+00	−0.55	C	43
			1647.163	8391.938 – 69 102.38	6–6	4.98E−01	2.03E−02	6.6E−01	−0.91	C	43
41	$a\ ^4$P–$z\ ^6$D°										
		3938.290	3939.405	13 474.411 – 38 858.958	6–6	6.1E−05	1.4E−05	1.1E−03	−4.07	D	43
		3945.210	3946.327	13 673.185 – 39 013.206	4–4	3.9E−05	9.0E−06	4.7E−04	−4.44	D	43
		3914.503	3915.612	13 474.411 – 39 013.206	6–4	4.6E−05	7.1E−06	5.5E−04	−4.37	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
42	$a\ ^4P–z\ ^6F^\circ$											
		3475.739	3476.734	13 474.411	– 42 237.033	6–8	1.7E−04	4.0E−05	2.8E−03	−3.62	D	43
		3487.986	3488.984	13 673.185	– 42 334.822	4–6	1.7E−04	4.6E−05	2.1E−03	−3.74	D	43
		3508.202	3509.206	13 904.824	– 42 401.302	2–4	1.2E−04	4.3E−05	1.0E−03	−4.06	D	43
		3463.962	3464.954	13 474.411	– 42 334.822	6–6	7.6E−05	1.4E−05	9.3E−04	−4.09	D	43
		3503.466	3504.468	13 904.824	– 42 439.822	2–2	2.6E−04	4.9E−05	1.1E−03	−4.01	D	43
43	$a\ ^4P–z\ ^6P^\circ$											
		3425.575	3426.557	13 474.411	– 42 658.224	6–8	2.1E−04	5.0E−05	3.4E−03	−3.52	D	43
44	$a\ ^4P–z\ ^4F^\circ$											
		3196.070	3196.993	13 474.411	– 44 753.799	6–8	1.61E−02	3.29E−03	2.08E−01	−1.70	C	33
		3183.114	3184.035	13 673.185	– 45 079.879	4–6	9.80E−03	2.23E−03	9.37E−02	−2.049	C+	33
		3185.317	3186.238	13 904.824	– 45 289.801	2–4	3.00E−03	9.1E−04	1.92E−02	−2.74	C	33
		3163.094	3164.009	13 474.411	– 45 079.879	6–6	1.92E−03	2.88E−04	1.80E−02	−2.76	C	33
45	$a\ ^4P–z\ ^4D^\circ$	*3211.28*	*3212.21*	*13 612.40*	*– 44 743.66*	12–20	7.9E−02	2.04E−02	2.59E+00	−0.61	C	33,43
		3227.742	3228.674	13 474.411	– 44 446.878	6–8	8.9E−02	1.85E−02	1.18E+00	−0.96	C	33
		3213.309	3214.238	13 673.185	– 44 784.761	4–6	6.12E−02	1.42E−02	6.02E−01	−1.245	C+	33
		3210.444	3211.371	13 904.824	– 45 044.168	2–4	3.63E−02	1.12E−02	2.37E−01	−1.649	B	33
		3192.909	3193.832	13 474.411	– 44 784.761	6–6	1.27E−02	1.94E−03	1.23E−01	−1.93	C	33
		3186.738	3187.659	13 673.185	– 45 044.168	4–4	3.85E−02	5.86E−03	2.46E−01	−1.630	C+	33
		3193.799	3194.722	13 904.824	– 45 206.450	2–2	5.4E−02	8.3E−03	1.7E−01	−1.78	D	43
		3166.672	3167.589	13 474.411	– 45 044.168	6–4	1.4E−03	1.4E−04	8.6E−03	−3.08	D	43
		3170.337	3171.254	13 673.185	– 45 206.450	4–2	8.2E−03	6.2E−04	2.6E−02	−2.61	D	43
46	$a\ ^4P–z\ ^4P^\circ$	*2974.83*	*2975.70*	*13 612.40*	*– 47 217.99*	12–12	5.54E−01	7.35E−02	8.64E+00	−0.055	C+	33,43
		2984.825	2985.696	13 474.411	– 46 967.444	6–6	4.29E−01	5.7E−02	3.38E+00	−0.463	C	33
		2965.033	2965.899	13 673.185	– 47 389.779	4–4	9.43E−02	1.24E−02	4.86E−01	−1.303	B	33
		2964.623	2965.489	13 904.824	– 47 626.076	2–2	6.5E−02	8.6E−03	1.7E−01	−1.76	D	43
		2947.654	2948.516	13 474.411	– 47 389.779	6–4	2.01E−01	1.75E−02	1.02E+00	−0.980	B	33
		2944.396	2945.257	13 673.185	– 47 626.076	4–2	3.5E−01	2.3E−02	8.9E−01	−1.04	D	43
		3002.646	3003.521	13 673.185	– 46 967.444	4–6	1.79E−01	3.63E−02	1.44E+00	−0.838	C+	33
		2985.545	2986.416	13 904.824	– 47 389.779	2–4	2.39E−01	6.39E−02	1.26E+00	−0.893	B	33
47	$a\ ^4P–(^\circ)^a$											
		2057.331	2057.990	13 474.411	– 62 065.521	6–8	2.80E−02	2.37E−03	9.64E−02	−1.847	C+	35
48	$a\ ^4P–x\ ^4D^\circ$											
		2020.750	2021.402	13 474.411	– 62 945.038	6–8	1.83E−01	1.49E−02	5.97E−01	−1.047	C+	35
49	$a\ ^2G–z\ ^4I^\circ$											
		2189.033	2189.718	15 844.65	– 61 512.634	10–10	1.97E−02	1.41E−03	1.02E−01	−1.85	C	36
50	$a\ ^2G–(^\circ)^a$											
		2187.683	2188.368	16 369.36	– 62 065.521	8–8	2.87E−02	2.06E−03	1.19E−01	−1.783	C+	35
51	$a\ ^2G–z\ ^2G^\circ$											
		2162.023	2162.702	15 844.65	– 62 083.108	10–10	2.54E−01	1.78E−02	1.27E+00	−0.75	C	43
52	$a\ ^2G–x\ ^4D^\circ$											
		2122.454	2123.125	15 844.65	– 62 945.038	10–8	4.8E−03	2.6E−04	1.8E−02	−2.59	D+	35
		2146.368	2147.043	16 369.36	– 62 945.038	8–8	7.1E−03	4.93E−04	2.79E−02	−2.404	C	35
53	$a\ ^2G–y\ ^4G^\circ$											
		2078.161	2078.823	15 844.65	– 63 948.790	10–10	2.84E−02	1.84E−03	1.26E−01	−1.735	C+	35
		2097.022	2097.688	16 369.36	– 64 040.886	8–8	1.07E−02	7.1E−04	3.90E−02	−2.248	C	35
		2074.189	2074.851	15 844.65	– 64 040.886	10–8	2.30E−02	1.19E−03	8.1E−02	−1.93	C	35
54	$a\ ^2G–w\ ^2G^\circ$											
			1761.372	16 369.36	– 73 143.288	8–8	1.42E+00	6.6E−02	3.06E+00	−0.278	C	43
55	$a\ ^2P–z\ ^4P^\circ$											
		3494.673	3495.673	18 360.646	– 46 967.444	4–6	7.1E−04	2.0E−04	9.0E−03	−3.11	D	43
		3507.399	3508.403	18 886.780	– 47 389.779	2–4	4.1E−04	1.5E−04	3.5E−03	−3.52	D	43
		3416.021	3417.001	18 360.646	– 47 626.076	4–2	2.6E−03	2.3E−04	1.0E−02	−3.03	D	43
56	$a\ ^2H–z\ ^4I^\circ$											
		2428.078	2428.815	20 340.30	– 61 512.634	12–10	7.0E−03	5.2E−04	4.96E−02	−2.207	C	36

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i – E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
57	$a\ ^2$H–(°)[a]										
		2422.934	2423.669	20 805.77 – 62 065.521	10–8	2.94E−02	2.07E−03	1.65E−01	−1.68	C	35
58	$a\ ^2$H–$z\ ^2$I°										
		2382.901	2383.627	20 340.30 – 62 293.164	12–14	1.62E−01	1.61E−02	1.52E+00	−0.71	C	43
		2388.389	2389.117	20 805.77 – 62 662.244	10–12	2.02E−01	2.07E−02	1.63E+00	−0.684	C+	36
59	$a\ ^2$H–$x\ ^4$D°										
		2372.359	2373.083	20 805.77 – 62 945.038	10–8	6.6E−03	4.5E−04	3.5E−02	−2.35	D+	35
60	$a\ ^2$H–$y\ ^4$G°										
		2292.425	2293.131	20 340.30 – 63 948.790	12–10	8.42E−03	5.53E−04	5.01E−02	−2.178	C+	35
		2312.224	2312.935	20 805.77 – 64 040.886	10–8	9.3E−03	6.0E−04	4.55E−02	−2.224	C	35
61	$a\ ^2$H–(°)[a]										
		2220.381	2221.072	20 340.30 – 65 363.595	12–12	4.19E−01	3.10E−02	2.72E+00	−0.430	C	43
62	$a\ ^2$D2–$z\ ^4$F°										
		4124.787	4125.951	20 516.960 – 44 753.799	6–8	3.4E−05	1.2E−05	9.5E−04	−4.16	D	43
63	$a\ ^2$D2–$z\ ^4$D°										
		4075.954	4077.105	20 516.960 – 45 044.168	6–4	1.6E−05	2.7E−06	2.2E−04	−4.79	D	43
64	$a\ ^2$D2–(°)[a]										
		2406.090	2406.822	20 516.960 – 62 065.521	6–8	2.05E−02	2.37E−03	1.13E−01	−1.85	C	35
65	$a\ ^2$D2–$x\ ^4$D°										
		2356.209	2356.930	20 516.960 – 62 945.038	6–8	7.1E−03	7.9E−04	3.7E−02	−2.33	D	35
66	$a\ ^2$D2–$y\ ^4$G°										
		2296.879	2297.587	20 516.960 – 64 040.886	6–8	1.82E−02	1.92E−03	8.72E−02	−1.938	C+	35
67	$a\ ^2$D2–$z\ ^2$P°										
		2255.766	2256.465	20 516.960 – 64 834.073	6–4	4.75E−01	2.42E−02	1.08E+00	−0.84	C	43
68	$b\ ^4$P–$z\ ^6$D°										
		5607.138	5608.695	20 830.582 – 38 660.043	6–8	4.63E−05	2.91E−05	3.23E−03	−3.76	C	33
69	$b\ ^4$P–$z\ ^6$F°										
		4670.182	4671.489	20 830.582 – 42 237.033	6–8	3.2E−05	1.4E−05	1.3E−03	−4.07	D	43
		5000.743	5002.138	22 409.852 – 42 401.302	2–4	1.8E−05	1.3E−05	4.4E−04	−4.58	D	43
70	$b\ ^4$P–$z\ ^4$F°										
		4178.862	4180.040	20 830.582 – 44 753.799	6–8	1.72E−03	6.0E−04	4.96E−02	−2.443	C	33
		4296.572	4297.780	21 812.055 – 45 079.879	4–6	7.0E−04	2.9E−04	1.6E−02	−2.93	D	43
		4369.411	4370.639	22 409.852 – 45 289.801	2–4	2.3E−04	1.3E−04	3.8E−03	−3.58	D	43
		4122.668	4123.831	20 830.582 – 45 079.879	6–6	3.3E−04	8.3E−05	6.8E−03	−3.30	D	43
		4258.154	4259.353	21 812.055 – 45 289.801	4–4	3.1E−04	8.3E−05	4.7E−03	−3.48	D	43
		4087.284	4088.438	20 830.582 – 45 289.801	6–4	3.0E−05	5.0E−06	4.0E−04	−4.52	D	43
71	$b\ ^4$P–$z\ ^4$D°	*4286.46*	*4287.67*	*21 420.95 – 44 743.66*	12–20	7.07E−03	3.25E−03	5.50E−01	−1.409	C+	33,43
		4233.172	4234.364	20 830.582 – 44 446.878	6–8	7.22E−03	2.59E−03	2.16E−01	−1.809	C+	33
		4351.768	4352.992	21 812.055 – 44 784.761	4–6	4.86E−03	2.07E−03	1.19E−01	−2.082	C+	33
		4416.830	4418.070	22 409.852 – 45 044.168	2–4	2.1E−03	1.3E−03	3.6E−02	−2.60	D	43
		4173.461	4174.637	20 830.582 – 44 784.761	6–6	4.43E−03	1.16E−03	9.54E−02	−2.158	C+	33
		4303.176	4304.387	21 812.055 – 45 044.168	4–4	2.20E−03	6.1E−04	3.46E−02	−2.61	C	33
		4385.387	4386.619	22 409.852 – 45 206.450	2–2	4.5E−03	1.3E−03	3.8E−02	−2.58	D	43
		4128.748	4129.913	20 830.582 – 45 044.168	6–4	2.6E−04	4.4E−05	3.6E−03	−3.58	D	43
		4273.326	4274.528	21 812.055 – 45 206.450	4–2	9.1E−04	1.2E−04	7.0E−03	−3.30	D	43
72	$b\ ^4$P–$z\ ^4$P°										
		3824.929	3826.014	20 830.582 – 46 967.444	6–6	3.2E−05	7.0E−06	5.3E−04	−4.38	D	43
		3974.167	3975.291	21 812.055 – 46 967.444	4–6	6.3E−05	2.3E−05	1.2E−03	−4.05	D	43
73	$b\ ^4$P–$y\ ^4$P°	*2573.86*	*2574.63*	*21 420.95 – 60 261.54*	12–12	2.61E+00	2.59E−01	2.64E+01	0.493	C	43
		2526.295	2527.055	20 830.582 – 60 402.342	6–6	2.47E+00	2.36E−01	1.18E+01	0.152	C	43
		2641.123	2641.910	21 812.055 – 59 663.456	4–4	3.7E−02	3.9E−03	1.4E−01	−1.81	D	43
		2588.193	2588.968	22 409.852 – 61 035.287	2–2	1.5E−01	1.6E−02	2.6E−01	−1.51	D	43
		2574.367	2575.138	20 830.582 – 59 663.456	6–4	2.43E+00	1.61E−01	8.2E+00	−0.015	C	43
		2548.744	2549.509	21 812.055 – 61 035.287	4–2	2.43E+00	1.19E−01	3.98E+00	−0.324	C	43
		2590.551	2591.326	21 812.055 – 60 402.342	4–6	7.9E−02	1.2E−02	4.1E−01	−1.32	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2568.411	2569.181	22 409.852	– 61 332.764	2–4	4.77E−01	9.4E−02	1.60E+00	−0.72	C	43
74	$b\ ^4P–z\ ^4G^\circ$											
		2548.325	2549.090	21 812.055	– 61 041.748	4–6	2.69E−01	3.93E−02	1.32E+00	−0.80	C	43
75	$b\ ^4P–z\ ^2D^\circ$											
		2544.973	2545.737	21 812.055	– 61 093.413	4–6	3.93E−01	5.7E−02	1.92E+00	−0.64	C	43
		2517.135	2517.893	22 409.852	– 62 125.600	2–4	9.2E−01	1.76E−01	2.91E+00	−0.454	C	43
76	$b\ ^4P–y\ ^4D^\circ$											
		2444.516	2445.257	20 830.582	– 61 726.077	6–8	2.78E+00	3.32E−01	1.60E+01	0.300	C	43
		2445.573	2446.314	21 812.055	– 62 689.880	4–6	2.07E+00	2.78E−01	9.0E+00	0.046	C	43
		2429.388	2430.125	21 812.055	– 62 962.205	4–4	6.9E−01	6.1E−02	1.95E+00	−0.61	C	43
		2473.323	2474.070	22 409.852	– 62 829.075	2–2	2.74E+00	2.52E−01	4.10E+00	−0.298	C	43
77	$b\ ^4P–y\ ^6P^\circ$											
		2418.170	2418.904	20 830.582	– 62 171.615	6–8	2.0E−02	2.4E−03	1.1E−01	−1.85	D	34
		2489.110	2489.861	21 812.055	– 61 974.933	4–4	2.6E−02	2.5E−03	8.0E−02	−2.01	D+	34
78	$b\ ^4P–(^\circ)^a$											
		2424.392	2425.128	20 830.582	– 62 065.521	6–8	1.61E−01	1.89E−02	9.07E−01	−0.945	C+	35
79	$a\ ^4H–z\ ^6F^\circ$											
		4833.197	4834.548	21 430.359	– 42 114.818	12–10	4.6E−06	1.3E−06	2.6E−04	−4.79	D	43
		4839.998	4841.350	21 581.638	– 42 237.033	10–8	4.0E−06	1.1E−06	1.8E−04	−4.95	D	43
80	$a\ ^4H–z\ ^4F^\circ$											
		4384.319	4385.551	21 430.359	– 44 232.512	12–10	7.2E−05	1.7E−05	3.0E−03	−3.68	D	43
		4413.601	4414.841	21 581.638	– 44 232.512	10–10	2.2E−05	6.5E−06	9.5E−04	−4.19	D	43
81	$a\ ^4H–z\ ^4G^\circ$											
		2538.995	2539.757	21 251.608	– 60 625.449	14–12	1.93E+00	1.60E−01	1.87E+01	0.349	C	43
		2538.911	2539.673	21 581.638	– 60 956.781	10–8	1.28E+00	9.9E−02	8.3E+00	−0.005	C	43
		2541.836	2542.599	21 711.917	– 61 041.748	8–6	8.2E−01	6.0E−02	4.01E+00	−0.320	C	43
		2550.575	2551.340	21 430.359	– 60 625.449	12–12	1.6E−02	1.6E−03	1.6E−01	−1.73	D	43
		2548.591	2549.356	21 581.638	– 60 807.230	10–10	2.67E−01	2.60E−02	2.19E+00	−0.58	C	43
		2547.339	2548.104	21 711.917	– 60 956.781	8–8	2.28E−01	2.22E−02	1.49E+00	−0.75	C	43
		2557.084	2557.851	21 711.917	– 60 807.230	8–10	2.8E−02	3.5E−03	2.3E−01	−1.56	D	43
82	$a\ ^4H–z\ ^4H^\circ$											
		2525.389	2526.148	21 251.608	– 60 837.569	14–14	1.91E+00	1.83E−01	2.13E+01	0.408	C	43
		2533.628	2534.389	21 430.359	– 60 887.598	12–12	1.92E+00	1.85E−01	1.85E+01	0.346	C	43
		2536.806	2537.568	21 581.638	– 60 989.444	10–10	1.69E+00	1.63E−01	1.36E+01	0.212	C	43
		2534.419	2535.181	21 711.917	– 61 156.835	8–8	1.83E+00	1.76E−01	1.18E+01	0.149	C	43
		2527.104	2527.864	21 430.359	– 60 989.444	12–10	3.67E−01	2.93E−02	2.92E+00	−0.454	C	43
		2526.076	2526.835	21 581.638	– 61 156.835	10–8	3.52E−01	2.70E−02	2.24E+00	−0.57	C	43
		2536.845	2537.607	21 430.359	– 60 837.569	12–14	6.8E−01	7.7E−02	7.7E+00	−0.037	C	43
		2543.380	2544.143	21 581.638	– 60 887.598	10–12	6.7E−01	7.8E−02	6.5E+00	−0.108	C	43
		2545.221	2545.985	21 711.917	– 60 989.444	8–10	5.3E−01	6.5E−02	4.33E+00	−0.286	C	43
83	$a\ ^4H–z\ ^2D^\circ$											
		2538.501	2539.264	21 711.917	– 61 093.413	8–6	5.9E−01	4.27E−02	2.86E+00	−0.467	C	43
84	$a\ ^4H–z\ ^4I^\circ$											
		2493.262	2494.014	21 251.608	– 61 347.614	14–16	3.04E+00	3.24E−01	3.73E+01	0.66	C	43
		2511.761	2512.518	21 711.917	– 61 512.634	8–10	2.30E+00	2.72E−01	1.80E+01	0.338	B	36
		2482.118	2482.868	21 251.608	– 61 527.616	14–14	6.5E−01	6.0E−02	6.9E+00	−0.076	C	43
		2489.484	2490.235	21 430.359	– 61 587.214	12–12	5.1E−01	4.72E−02	4.65E+00	−0.246	C	43
		2503.566	2504.320	21 581.638	– 61 512.634	10–10	2.53E−01	2.38E−02	1.96E+00	−0.624	C+	36
		2494.116	2494.868	21 430.359	– 61 512.634	12–10	2.97E−02	2.31E−03	2.28E−01	−1.56	C	36
85	$a\ ^4H–y\ ^6P^\circ$											
		2470.848	2471.595	21 711.917	– 62 171.615	8–8	5.4E−03	4.9E−04	3.2E−02	−2.41	D	34
86	$a\ ^4H–(^\circ)^a$											
		2469.372	2470.119	21 581.638	– 62 065.521	10–8	2.23E−02	1.63E−03	1.33E−01	−1.787	C+	35
		2477.345	2478.093	21 711.917	– 62 065.521	8–8	1.70E−01	1.57E−02	1.02E+00	−0.902	B	35
87	$a\ ^4H–z^2G^\circ$											
		2468.300	2469.046	21 581.638	– 62 083.108	10–10	9.8E−02	9.0E−03	7.3E−01	−1.05	D	43
		2476.266	2477.014	21 711.917	– 62 083.108	8–10	9.7E−02	1.1E−02	7.3E−01	−1.05	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
88	$a\ ^4\mathrm{H}-z\ ^2\mathrm{I}^\circ$											
		2414.105	2414.839	21 251.608	– 62 662.244	14–12	1.05E−02	7.9E−04	8.8E−02	−1.96	C	36
		2446.472	2447.213	21 430.359	– 62 293.164	12–14	2.99E−01	3.13E−02	3.03E+00	−0.425	C	43
		2433.500	2434.239	21 581.638	– 62 662.244	10–12	1.30E−01	1.39E−02	1.11E+00	−0.858	C+	36
89	$a\ ^4\mathrm{H}-x\ ^4\mathrm{D}^\circ$											
		2424.499	2425.235	21 711.917	– 62 945.038	8–8	2.9E−03	2.6E−04	1.6E−02	−2.69	D	43
90	$a\ ^4\mathrm{H}-y\ ^4\mathrm{G}^\circ$											
		2345.339	2346.057	21 251.608	– 63 876.317	14–12	7.3E−01	5.2E−02	5.6E+00	−0.141	C	43
		2351.202	2351.921	21 430.359	– 63 948.790	12–10	7.19E−01	4.97E−02	4.62E+00	−0.225	C+	35
		2354.479	2355.200	21 581.638	– 64 040.886	10–8	8.13E−01	5.41E−02	4.19E+00	−0.267	C+	35
		2359.598	2360.319	21 581.638	– 63 948.790	10–10	2.25E−01	1.88E−02	1.46E+00	−0.726	C+	35
		2361.726	2362.448	21 711.917	– 64 040.886	8–8	2.40E−01	2.01E−02	1.25E+00	−0.794	C+	35
		2366.876	2367.600	21 711.917	– 63 948.790	8–10	3.51E−02	3.69E−03	2.30E−01	−1.530	C+	35
91	$a\ ^4\mathrm{H}-y\ ^4\mathrm{H}^\circ$											
		2213.655	2214.345	21 251.608	– 66 411.686	14–14	3.26E−01	2.39E−02	2.44E+00	−0.475	C	43
92	$a\ ^4\mathrm{H}-w\ ^4\mathrm{G}^\circ$											
			1371.022	21 251.608	– 94 189.880	14–12	1.74E+00	4.21E−02	2.66E+00	−0.23	C	43
93	$b\ ^4\mathrm{F}-z\ ^6\mathrm{F}^\circ$											
		5132.669	5134.099	22 637.205	– 42 114.818	10–10	2.0E−05	8.1E−06	1.4E−03	−4.09	D	43
		5100.664	5102.086	22 637.205	– 42 237.033	10–8	2.0E−05	6.4E−06	1.1E−03	−4.20	D	43
		5136.802	5138.233	22 939.358	– 42 401.302	6–4	2.8E−05	7.4E−06	7.5E−04	−4.36	D	43
94	$b\ ^4\mathrm{F}-z\ ^6\mathrm{P}^\circ$											
		4993.358	4994.751	22 637.205	– 42 658.224	10–8	6.9E−05	2.1E−05	3.4E−03	−3.68	D	43
		4893.820	4895.187	22 810.357	– 43 238.586	8–6	2.5E−05	6.8E−06	8.7E−04	−4.27	D	43
95	$b\ ^4\mathrm{F}-z\ ^4\mathrm{F}^\circ$	*4563.61*	*4564.89*	*22 807.72*	*– 44 714.07*	28–28	2.66E−03	8.3E−04	3.49E−01	−1.63	C	33,43
		4629.339	4630.636	22 637.205	– 44 232.512	10–10	1.72E−03	5.5E−04	8.4E−02	−2.257	C	33
		4555.893	4557.170	22 810.357	– 44 753.799	8–8	2.26E−03	7.0E−04	8.4E−02	−2.250	C	33
		4515.339	4516.606	22 939.358	– 45 079.879	6–6	2.37E−03	7.2E−04	6.5E−02	−2.362	C	33
		4491.405	4492.666	23 031.300	– 45 289.801	4–4	1.89E−03	5.7E−04	3.38E−02	−2.64	C	33
		4520.224	4521.492	22 637.205	– 44 753.799	10–8	9.8E−04	2.4E−04	3.6E−02	−2.62	D	43
		4489.183	4490.442	22 810.357	– 45 079.879	8–6	5.9E−04	1.3E−04	1.6E−02	−2.97	D	43
		4472.929	4474.184	22 939.358	– 45 289.801	6–4	2.5E−04	4.9E−05	4.3E−03	−3.53	D	43
		4666.758	4668.064	22 810.357	– 44 232.512	8–10	1.3E−04	5.4E−05	6.6E−03	−3.37	D	43
		4582.835	4584.119	22 939.358	– 44 753.799	6–8	3.44E−04	1.44E−04	1.31E−02	−3.062	C	33
		4534.168	4535.440	23 031.300	– 45 079.879	4–6	2.3E−04	1.1E−04	6.5E−03	−3.36	D	43
96	$b\ ^4\mathrm{F}-z\ ^4\mathrm{D}^\circ$											
		4583.837	4585.121	22 637.205	– 44 446.878	10–8	7.22E−03	1.82E−03	2.75E−01	−1.740	C+	33
		4549.474	4550.749	22 810.357	– 44 784.761	8–6	1.00E−02	2.33E−03	2.79E−01	−1.730	C+	33
		4522.634	4523.902	22 939.358	– 45 044.168	6–4	8.4E−03	1.71E−03	1.53E−01	−1.99	C	33
		4508.288	4509.552	23 031.300	– 45 206.450	4–2	7.3E−03	1.1E−03	6.7E−02	−2.35	D	43
		4620.521	4621.815	22 810.357	– 44 446.878	8–8	2.53E−04	8.1E−05	9.9E−03	−3.188	C	33
		4576.340	4577.622	22 939.358	– 44 784.761	6–6	6.4E−04	2.02E−04	1.83E−02	−2.92	C	33
		4541.524	4542.797	23 031.300	– 45 044.168	4–4	8.6E−04	2.7E−04	1.6E−02	−2.97	D	43
97	$b\ ^4\mathrm{F}-z\ ^4\mathrm{G}^\circ$											
		2631.609	2632.393	22 637.205	– 60 625.449	10–12	6.6E−01	8.2E−02	7.1E+00	−0.086	C	43
		2629.589	2630.373	22 939.358	– 60 956.781	6–8	7.2E−01	1.00E−01	5.2E+00	−0.222	C	43
		2630.071	2630.856	23 031.300	– 61 041.748	4–6	5.1E−01	7.9E−02	2.75E+00	−0.499	C	43
		2619.075	2619.857	22 637.205	– 60 807.230	10–10	2.48E−01	2.55E−02	2.20E+00	−0.59	C	43
		2620.696	2621.478	22 810.357	– 60 956.781	8–8	3.43E−01	3.53E−02	2.44E+00	−0.55	C	43
		2623.725	2624.507	22 939.358	– 61 041.748	6–6	1.92E−01	1.99E−02	1.03E+00	−0.92	C	43
		2608.853	2609.632	22 637.205	– 60 956.781	10–8	5.0E−02	4.1E−03	3.5E−01	−1.38	D	43
		2614.871	2615.652	22 810.357	– 61 041.748	8–6	3.5E−02	2.7E−03	1.9E−01	−1.66	D	43
98	$b\ ^4\mathrm{F}-z\ ^4\mathrm{H}^\circ$											
		2613.572	2614.352	22 637.205	– 60 887.598	10–12	2.0E−02	2.5E−03	2.1E−01	−1.61	D	43
		2595.303	2596.079	22 637.205	– 61 156.835	10–8	1.2E−02	9.4E−04	8.0E−02	−2.03	D	43
99	$b\ ^4\mathrm{F}-z\ ^2\mathrm{D}^\circ$											

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2611.342	2612.122	22 810.357	– 61 093.413	8–6	1.4E−02	1.1E−03	7.3E−02	−2.07	D	43
		2620.172	2620.953	22 939.358	– 61 093.413	6–6	1.1E−01	1.2E−02	6.1E−01	−1.15	D	43
		2626.501	2627.285	23 031.300	– 61 093.413	4–6	3.48E−01	5.4E−02	1.87E+00	−0.67	C	43
100	$b\ ^4F–z\ ^4I^\circ$											
		2566.624	2567.394	22 637.205	– 61 587.214	10–12	7.1E−02	8.5E−03	7.2E−01	−1.07	D	43
		2583.054	2583.827	22 810.357	– 61 512.634	8–10	2.16E−02	2.70E−03	1.84E−01	−1.665	C	36
		2571.549	2572.319	22 637.205	– 61 512.634	10–10	2.89E−02	2.87E−03	2.43E−01	−1.54	C	36
101	$b\ ^4F–y\ ^4D^\circ$											
		2557.506	2558.273	22 637.205	– 61 726.077	10–8	1.53E−01	1.20E−02	1.01E+00	−0.92	C	43
		2568.886	2569.656	22 810.357	– 61 726.077	8–8	2.8E−02	2.8E−03	1.9E−01	−1.65	D	43
		2577.430	2578.202	22 939.358	– 61 726.077	6–8	7.8E−03	1.0E−03	5.3E−02	−2.21	D	43
102	$b\ ^4F–y\ ^6P^\circ$											
		2539.806	2540.569	22 810.357	– 62 171.615	8–8	5.6E−02	5.5E−03	3.65E−01	−1.360	C	34
		2528.682	2529.442	22 637.205	– 62 171.615	10–8	2.3E−02	1.7E−03	1.5E−01	−1.76	D	34
		2548.158	2548.923	22 939.358	– 62 171.615	6–8	8.0E−03	1.0E−03	5.2E−02	−2.20	D	34
103	$b\ ^4F–(^\circ)^a$											
		2535.486	2536.248	22 637.205	– 62 065.521	10–8	7.47E−01	5.76E−02	4.81E+00	−0.239	B	35
		2546.671	2547.436	22 810.357	– 62 065.521	8–8	7.98E−01	7.76E−02	5.21E+00	−0.207	B	35
		2555.068	2555.835	22 939.358	– 62 065.521	6–8	1.96E−01	2.56E−02	1.29E+00	−0.814	B	35
104	$b\ ^4F–z\ ^2G^\circ$											
		2545.531	2546.295	22 810.357	– 62 083.108	8–10	1.2E−02	1.4E−03	9.5E−02	−1.95	D	43
		2538.399	2539.162	22 939.358	– 62 322.431	6–8	3.7E−02	4.8E−03	2.4E−01	−1.54	D	43
105	$h\ ^4F–y\ ^4F^\circ$											
		2529.546	2530.306	22 637.205	– 62 158.110	10–10	2.20E+00	2.12E−01	1.76E+01	0.326	C	43
		2549.461	2550.227	22 939.358	– 62 151.561	6–6	1.12E+00	1.09E−01	5.5E+00	−0.184	C	43
		2549.395	2550.160	23 031.300	– 62 244.520	4–4	1.65E+00	1.61E−01	5.4E+00	−0.191	C	43
		2541.101	2541.864	22 810.357	– 62 151.561	8–6	9.6E−01	7.0E−02	4.68E+00	−0.253	C	43
		2543.431	2544.195	22 939.358	– 62 244.520	6–4	8.3E−01	5.4E−02	2.69E+00	−0.493	C	43
		2555.454	2556.220	23 031.300	– 62 151.561	4–6	2.49E−01	3.65E−02	1.23E+00	−0.84	C	43
106	$b\ ^4F–z\ ^2I^\circ$											
		2497.683	2498.436	22 637.205	– 62 662.244	10–12	8.4E−03	9.5E−04	7.8E−02	−2.023	C	36
107	$b\ ^4F–z\ ^4D^\circ$											
		2480.158	2480.907	22 637.205	– 62 945.038	10–8	1.55E+00	1.14E−01	9.35E+00	0.058	C+	35
		2470.670	2471.417	22 810.357	– 63 272.976	8–6	1.54E+00	1.06E−01	6.9E+00	−0.074	C	43
		2466.821	2467.567	22 939.358	– 63 465.109	6–4	1.77E+00	1.08E−01	5.3E+00	−0.189	C	43
		2466.673	2467.418	23 031.300	– 63 559.488	4–2	2.64E+00	1.20E−01	3.91E+00	−0.317	C	43
		2490.859	2491.611	22 810.357	– 62 945.038	8–8	8.8E−01	8.2E−02	5.4E+00	−0.183	C+	35
		2478.573	2479.321	22 939.358	– 63 272.976	6–6	9.1E−01	8.4E−02	4.10E+00	−0.299	C	43
		2484.236	2484.986	23 031.300	– 63 272.976	4–6	8.3E−02	1.1E−02	3.8E−01	−1.34	D	43
108	$b\ ^4F–y\ ^4G^\circ$											
		2424.146	2424.882	22 637.205	– 63 876.317	10–12	2.21E+00	2.33E−01	1.86E+01	0.368	C	43
		2430.079	2430.817	22 810.357	– 63 948.790	8–10	1.91E+00	2.11E−01	1.35E+01	0.228	C+	35
		2432.262	2433.000	22 939.358	– 64 040.886	6–8	1.57E+00	1.86E−01	8.93E+00	0.047	C+	35
		2434.952	2435.691	23 031.300	– 64 087.418	4–6	1.39E+00	1.86E−01	6.0E+00	−0.129	C	43
		2419.893	2420.628	22 637.205	– 63 948.790	10–10	2.2E−02	2.0E−03	1.6E−01	−1.71	D	35
		2424.651	2425.387	22 810.357	– 64 040.886	8–8	6.55E−02	5.78E−03	3.69E−01	−1.335	C+	35
		2414.510	2415.244	22 637.205	– 64 040.886	10–8	4.2E−03	3.0E−04	2.4E−02	−2.53	D	35
109	$a\ ^6S–z\ ^6D^\circ$											
		6516.081	6517.881	23 317.633	– 38 660.043	6–8	8.3E−05	7.1E−05	9.1E−03	−3.372	C	33
		6432.680	6434.458	23 317.633	– 38 858.958	6–6	8.5E−05	5.3E−05	6.7E−03	−3.50	C	33
		6369.462	6371.223	23 317.633	– 39 013.206	6–4	1.40E−04	5.7E−05	7.1E−03	−3.468	C	33
110	$a\ ^6S–z\ ^6F^\circ$											
		5284.109	5285.580	23 317.633	– 42 237.033	6–8	1.9E−04	1.1E−04	1.1E−02	−3.20	D	43
111	$a\ ^6S–z\ ^6P^\circ$	*5062.40*	*5063.81*	23 317.633	– *43 065.62*	6–18	3.52E−02	4.06E−02	4.06E+00	−0.61	C	33,43
		5169.033	5170.473	23 317.633	– 42 658.224	6–8	4.22E−02	2.26E−02	2.30E+00	−0.87	C	33
		5018.440	5019.840	23 317.633	– 43 238.586	6–6	2.0E−02	7.5E−03	7.5E−01	−1.35	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		4923.927	4925.302	23 317.633	– 43 620.957	6–4	4.28E−02	1.04E−02	1.01E+00	−1.206	C	33
112	$a\,^6S-z\,^4D^\circ$											
		4656.981	4658.285	23 317.633	– 44 784.761	6–6	1.37E−04	4.46E−05	4.10E−03	−3.57	C	33
		4731.453	4732.777	23 317.633	– 44 446.878	6–8	2.8E−04	1.2E−04	1.2E−02	−3.13	D	43
113	$a\,^6S-y\,^6P^\circ$	*2578.58*	*2579.35*	23 317.633	– *62 087.05*	6–18	7.32E−02	2.19E−02	1.12E+00	−0.882	C+	34
		2572.968	2573.739	23 317.633	– 62 171.615	6–8	7.89E−02	1.04E−02	5.31E−01	−1.203	B	34
		2581.112	2581.885	23 317.633	– 62 049.025	6–6	7.61E−02	7.61E−03	3.88E−01	−1.341	C+	34
		2586.060	2586.834	23 317.633	– 61 974.933	6–4	5.8E−02	3.8E−03	2.0E−01	−1.64	D	34
114	$a\,^6S-w\,^2P^\circ$											
			1788.078	23 317.633	– 79 243.600	6–4	4.6E+00	1.5E−01	5.2E+00	−0.05	D	39
115	$a\,^6S-x\,^6P^\circ$											
			1785.272	23 317.633	– 79 331.500	6–8	1.2E+01	7.4E−01	2.6E+01	0.65	D	39
			1786.752	23 317.633	– 79 285.110	6–6	1.2E+01	5.6E−01	2.0E+01	0.53	D	39
116	$a\,^4G-z\,^6F^\circ$											
		6129.703	6131.400	25 805.328	– 42 114.818	10–10	3.2E−06	1.8E−06	3.7E−04	−4.74	D	43
		5991.376	5993.036	25 428.784	– 42 114.818	12–10	4.2E−05	1.9E−05	4.4E−03	−3.65	D	43
		6084.111	6085.796	25 805.328	– 42 237.033	10–8	3.0E−05	1.3E−05	2.6E−03	−3.88	D	43
		6113.322	6115.014	25 981.629	– 42 334.822	8–6	1.7E−05	7.4E−06	1.2E−03	−4.23	D	43
117	$a\,^4G-z\,^4F^\circ$											
		5316.615	5318.094	25 428.784	– 44 232.512	12–10	3.89E−03	1.37E−03	2.89E−01	−1.78	C	33
		5276.002	5277.471	25 805.328	– 44 753.799	10–8	3.76E−03	1.26E−03	2.18E−01	−1.90	C	33
		5234.625	5236.082	25 981.629	– 45 079.879	8–6	2.5E−03	7.6E−04	1.1E−01	−2.21	D	33
		5197.577	5199.024	26 055.423	– 45 289.801	6–4	5.4E−03	1.47E−03	1.51E−01	−2.054	C	33
		5425.257	5426.765	25 805.328	– 44 232.512	10–10	9.2E−05	4.1E−05	7.3E−03	−3.39	D	43
		5325.553	5327.035	25 981.629	– 44 753.799	8–8	8.0E−04	3.39E−04	4.75E−02	−2.57	C	33
118	$a\,^4G-z\,^4D^\circ$											
		5316.784	5318.263	25 981.629	– 44 784.761	8–6	6.5E−04	2.1E−04	2.9E−02	−2.78	D	43
		5264.812	5266.277	26 055.423	– 45 044.168	6–4	3.52E−04	9.8E−05	1.01E−02	−3.233	C	33
		5414.073	5415.578	25 981.629	– 44 446.878	8–8	9.4E−05	4.12E−05	5.9E−03	−3.482	C	33
119	$a\,^4G-z\,^4G^\circ$											
		2840.343	2841.178	25 428.784	– 60 625.449	12–12	7.7E−02	9.3E−03	1.04E+00	−0.95	C	43
		2856.149	2856.988	25 805.328	– 60 807.230	10–10	5.0E−02	6.1E−03	5.8E−01	−1.21	D	43
		2857.420	2858.260	26 055.423	– 61 041.748	6–6	2.0E−02	2.5E−03	1.4E−01	−1.83	D	43
		2871.060	2871.903	25 805.328	– 60 625.449	10–12	2.2E−02	3.3E−03	3.1E−01	−1.48	D	43
		2870.608	2871.451	25 981.629	– 60 807.230	8–10	7.5E−03	1.2E−03	8.7E−02	−2.03	D	43
120	$a\,^4G-z\,^4H^\circ$											
		2849.605	2850.443	25 805.328	– 60 887.598	10–12	4.6E−02	6.8E−03	6.3E−01	−1.17	D	43
		2855.666	2856.505	25 981.629	– 60 989.444	8–10	9.2E−02	1.41E−02	1.06E+00	−0.95	C	43
		2819.343	2820.173	25 428.784	– 60 887.598	12–12	9.7E−03	1.2E−03	1.3E−01	−1.86	D	43
		2841.356	2842.192	25 805.328	– 60 989.444	10–10	4.3E−03	5.2E−04	4.9E−02	−2.28	D	43
		2842.076	2842.912	25 981.629	– 61 156.835	8–8	1.5E−02	1.8E−03	1.3E−01	−1.84	D	43
		2811.268	2812.096	25 428.784	– 60 989.444	12–10	1.2E−02	1.2E−03	1.3E−01	−1.86	D	43
121	$a\,^4G-z\,^2D^\circ$											
		2847.210	2848.047	25 981.629	– 61 093.413	8–6	1.7E−04	1.6E−05	1.2E−03	−3.90	D	43
		2771.555	2772.373	26 055.423	– 62 125.600	6–4	1.9E−02	1.4E−03	7.9E−02	−2.06	D	43
		2853.207	2854.045	26 055.423	– 61 093.413	6–6	2.3E−02	2.8E−03	1.6E−01	−1.77	D	43
122	$a\,^4G-z\,^4I^\circ$											
		2769.355	2770.173	25 428.784	– 61 527.616	12–14	2.07E−01	2.78E−02	3.04E+00	−0.477	C	43
		2793.886	2794.710	25 805.328	– 61 587.214	10–12	1.26E−01	1.77E−02	1.63E+00	−0.75	C	43
		2813.615	2814.443	25 981.629	– 61 512.634	8–10	3.40E−02	5.0E−03	3.74E−01	−1.394	C	36
		2764.790	2765.607	25 428.784	– 61 587.214	12–12	1.1E−02	1.3E−03	1.4E−01	−1.82	D	43
		2799.722	2800.547	25 805.328	– 61 512.634	10–10	5.0E−03	5.8E−04	5.4E−02	−2.23	D	43
		2770.505	2771.323	25 428.784	– 61 512.634	12–10	4.08E−02	3.92E−03	4.29E−01	−1.328	C	36
123	$a\,^4G-(^\circ)^a$											
		2757.030	2757.845	25 805.328	– 62 065.521	10–8	8.07E−02	7.36E−03	6.68E−01	−1.133	B	35
		2776.179	2776.999	26 055.423	– 62 065.521	6–8	2.66E−02	4.10E−03	2.25E−01	−1.609	C+	35

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
124	$a\ ^4G–z\ ^2G^\circ$											
		2727.383	2728.191	25 428.784	– 62 083.108	12–10	3.12E−01	2.90E−02	3.13E+00	−0.458	C	43
		2769.152	2769.970	25 981.629	– 62 083.108	8–10	6.6E−02	9.4E−03	6.9E−01	−1.12	D	43
		2756.512	2757.327	26 055.423	– 62 322.431	6–8	7.3E−02	1.1E−02	6.1E−01	−1.18	D	43
125	$a\ ^4G–y\ ^4F^\circ$											
		2721.814	2722.620	25 428.784	– 62 158.110	12–10	5.1E−02	4.7E−03	5.0E−01	−1.25	D	43
		2763.911	2764.727	25 981.629	– 62 151.561	8–6	2.9E−02	2.5E−03	1.8E−01	−1.70	D	43
		2762.447	2763.263	26 055.423	– 62 244.520	6–4	3.3E−02	2.5E−03	1.4E−01	−1.82	D	43
		2750.008	2750.821	25 805.328	– 62 158.110	10–10	1.8E−02	2.1E−03	1.9E−01	−1.68	D	43
126	$a\ ^4G–z\ ^2I^\circ$											
		2684.959	2685.756	25 428.784	– 62 662.244	12–12	6.4E−03	6.9E−04	7.3E−02	−2.084	C	36
		2711.842	2712.646	25 428.784	– 62 293.164	12–14	4.36E−01	5.6E−02	6.0E+00	−0.171	C	43
		2712.391	2713.195	25 805.328	– 62 662.244	10–12	1.29E−01	1.71E−02	1.52E+00	−0.768	C+	36
127	$a\ ^4G–x\ ^4D^\circ$											
		2691.737	2692.536	25 805.328	– 62 945.038	10–8	5.04E−02	4.38E−03	3.88E−01	−1.358	C+	35
		2704.576	2705.378	25 981.629	– 62 945.038	8–8	1.66E−02	1.82E−03	1.30E−01	−1.84	C	35
		2686.107	2686.904	26 055.423	– 63 272.976	6–6	9.4E−03	1.0E−03	5.4E−02	−2.21	D	43
		2709.987	2710.790	26 055.423	– 62 945.038	6–8	8.7E−03	1.3E−03	6.8E−02	−2.12	D+	35
128	$a\ ^4G–y\ ^4G^\circ$											
		2626.698	2627.482	25 981.629	– 64 040.886	8–8	1.94E−02	2.01E−03	1.39E−01	−1.794	C+	35
		2628.581	2629.365	26 055.423	– 64 087.418	6–6	3.4E−02	3.5E−03	1.8E−01	−1.67	D	43
		2595.278	2596.054	25 428.784	– 63 948.790	12–10	1.67E−03	1.41E−04	1.44E−02	−2.77	C	35
		2614.586	2615.367	25 805.328	– 64 040.886	10–8	3.37E−02	2.76E−03	2.38E−01	−1.56	C	35
129	$a\ ^4G–z\ ^2F^\circ$											
		2609.865	2610.645	25 981.629	– 64 286.345	8–8	1.34E−01	1.36E−02	9.4E−01	−0.96	C	43
		2605.425	2606.204	26 055.423	– 64 425.408	6–6	3.40E−01	3.47E−02	1.78E+00	−0.68	C	43
130	$a\ ^4G–y\ ^2G^\circ$											
		2561.586	2562.354	25 805.328	– 64 831.943	10–10	1.1E−02	1.1E−03	9.1E−02	−1.97	D	43
		2554.945	2555.711	25 981.629	– 65 109.679	8–8	2.6E−02	2.5E−03	1.7E−01	−1.70	D	43
		2573.211	2573.982	25 981.629	– 64 831.943	8–10	1.42E−01	1.76E−02	1.19E+00	−0.85	C	43
		2559.773	2560.540	26 055.423	– 65 109.679	6–8	2.42E−01	3.17E−02	1.60E+00	−0.72	C	43
131	$a\ ^4G–(^\circ)^a$											
		2503.327	2504.081	25 428.784	– 65 363.595	12–12	7.3E−01	6.9E−02	6.8E+00	−0.084	C	43
132	$a\ ^4G–x\ ^4G^\circ$											
		2489.831	2490.582	25 428.784	– 65 580.041	12–12	1.94E+00	1.80E−01	1.78E+01	0.336	C	43
		2506.094	2506.849	25 805.328	– 65 696.038	10–10	9.9E−01	9.3E−02	7.7E+00	−0.030	C	43
		2502.393	2503.147	25 981.629	– 65 931.334	8–8	1.43E+00	1.34E−01	8.9E+00	0.031	C	43
		2497.820	2498.573	26 055.423	– 66 078.269	6–6	1.68E+00	1.57E−01	7.8E+00	−0.025	C	43
		2482.658	2483.407	25 428.784	– 65 696.038	12–10	1.25E+00	9.6E−02	9.4E+00	0.062	C	43
		2491.398	2492.149	25 805.328	– 65 931.334	10–8	1.01E+00	7.5E−02	6.2E+00	−0.124	C	43
133	$a\ G4–x\ ^4F^\circ$											
		2463.282	2464.027	25 428.784	– 66 012.750	12–10	7.1E−01	5.4E−02	5.2E+00	−0.191	C	43
		2464.012	2464.757	25 805.328	– 66 377.283	10–8	1.32E+00	9.6E−02	7.8E+00	−0.017	C	43
		2465.913	2466.658	25 981.629	– 66 522.304	8–6	1.62E+00	1.11E−01	7.2E+00	−0.051	C	43
		2464.906	2465.651	26 055.423	– 66 612.656	6–4	2.22E+00	1.35E−01	6.6E+00	−0.092	C	43
		2470.410	2471.157	26 055.423	– 66 522.304	6–6	6.0E−01	5.5E−02	2.67E+00	−0.484	C	43
134	$a\ ^4G–y\ ^4H^\circ$											
		2439.302	2440.042	25 428.784	– 66 411.686	12–14	2.25E+00	2.34E−01	2.26E+01	0.449	C	43
		2458.784	2459.528	25 805.328	– 66 463.528	10–12	2.31E+00	2.51E−01	2.03E+01	0.400	C	43
		2461.862	2462.607	25 981.629	– 66 589.008	8–10	2.43E+00	2.76E−01	1.79E+01	0.344	C	43
		2461.284	2462.029	26 055.423	– 66 672.334	6–8	2.34E+00	2.84E−01	1.38E+01	0.231	C	43
135	$a\ ^4G–y\ ^2H^\circ$											
		2396.719	2397.449	25 805.328	– 67 516.332	10–12	2.15E−01	2.22E−02	1.75E+00	−0.65	C	43
136	$b\ ^2P–z\ ^4D^\circ$											
		5262.479	5263.944	25 787.598	– 44 784.761	4–6	8.0E−07	5.0E−07	3.5E−05	−5.70	D	43
137	$b\ ^2P–z\ ^4P^\circ$											
		4720.149	4721.470	25 787.598	– 46 967.444	4–6	7.5E−06	3.8E−06	2.3E−04	−4.82	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
138	$b\ ^2P-y\ ^4P^\circ$											
		2888.095	2888.942	25 787.598	– 60 402.342	4–6	6.1E−02	1.1E−02	4.4E−01	−1.34	D	43
		2906.124	2906.975	26 932.748	– 61 332.764	2–4	4.4E−02	1.1E−02	2.1E−01	−1.65	D	43
		2812.494	2813.322	25 787.598	– 61 332.764	4–4	2.9E−02	3.5E−03	1.3E−01	−1.86	D	43
139	$b\ ^2P-z\ ^4G^\circ$											
		2835.711	2836.545	25 787.598	– 61 041.748	4–6	5.1E−01	9.3E−02	3.48E+00	−0.429	C	43
140	$b\ ^2P-z\ ^2D^\circ$	*2829.06*	*2829.90*	*26 169.31*	*– 61 506.29*	6–10	8.8E−01	1.75E−01	9.8E+00	0.022	C	43
		2831.562	2832.395	25 787.598	– 61 093.413	4–6	7.6E−01	1.38E−01	5.1E+00	−0.258	C	43
		2840.651	2841.486	26 932.748	– 62 125.600	2–4	7.6E−01	1.85E−01	3.45E+00	−0.433	C	43
		2751.127	2751.940	25 787.598	– 62 125.600	4–4	2.92E−01	3.32E−02	1.20E+00	−0.88	C	43
141	$b\ ^2P-y\ ^4D^\circ$											
		2709.056	2709.860	25 787.598	– 62 689.880	4–6	3.88E−01	6.4E−02	2.29E+00	−0.59	C	43
		2774.688	2775.507	26 932.748	– 62 962.205	2–4	2.73E−01	6.3E−02	1.15E+00	−0.90	C	43
142	$b\ ^2P-y\ ^6P^\circ$											
		2852.865	2853.703	26 932.748	– 61 974.933	2–4	1.65E−02	4.03E−03	7.6E−02	−2.094	C	34
143	$b\ ^2P-x\ ^4D^\circ$											
		2736.489	2737.299	26 932.748	– 63 465.109	2–4	1.5E−02	3.4E−03	6.1E−02	−2.17	D	43
144	$b\ ^2P-z\ ^2P^\circ$	*2586.18*	*2586.95*	*26 169.31*	*– 64 824.88*	6–6	2.42E+00	2.43E−01	1.24E+01	0.164	C	43
		2560.283	2561.051	25 787.598	– 64 834.073	4–4	1.77E+00	1.74E−01	5.9E+00	−0.157	C	43
		2639.565	2640.352	26 932.748	– 64 806.487	2–2	8.0E−01	8.4E−02	1.45E+00	−0.78	C	43
		2562.093	2562.861	25 787.598	– 64 806.487	4–2	1.62E+00	8.0E−02	2.69E+00	−0.496	C	43
		2637.644	2638.430	26 932.748	– 64 834.073	2–4	6.6E−01	1.38E−01	2.40E+00	−0.56	C	43
145	$b\ ^2P-z\ ^2S^\circ$											
		2542.736	2543.499	26 932.748	– 66 248.660	2–2	1.61E+00	1.56E−01	2.62E+00	−0.50	C	43
146	$b\ ^2H-z\ ^4F^\circ$											
		5534.847	5536.384	26 170.181	– 44 232.512	12–10	3.0E−04	1.1E−04	2.5E−02	−2.86	D	43
147	$b\ ^2H-z\ ^4D^\circ$											
		5525.125	5526.660	26 352.766	– 44 446.878	10–8	3.17E−05	1.16E−05	2.11E−03	−3.94	C	33
148	$b\ ^2H-z\ ^4G^\circ$											
		2886.236	2887.082	26 170.181	– 60 807.230	12–10	6.9E−03	7.2E−04	8.2E−02	−2.06	D	43
149	$b\ ^2H-z\ ^4H^\circ$											
		2883.710	2884.555	26 170.181	– 60 837.569	12–14	1.48E−01	2.16E−02	2.46E+00	−0.59	C	43
		2894.779	2895.627	26 352.766	– 60 887.598	10–12	5.7E−02	8.7E−03	8.2E−01	−1.06	D	43
		2871.131	2871.973	26 170.181	– 60 989.444	12–10	3.0E−02	3.1E−03	3.5E−01	−1.43	D	43
		2872.384	2873.227	26 352.766	– 61 156.835	10–8	1.70E−01	1.68E−02	1.59E+00	−0.77	C	43
150	$b\ ^2H-z\ ^4I^\circ$											
		2827.427	2828.259	26 170.181	– 61 527.616	12–14	2.4E−02	3.3E−03	3.7E−01	−1.40	D	43
		2837.297	2838.132	26 352.766	– 61 587.214	10–12	1.9E−02	2.8E−03	2.6E−01	−1.55	D	43
		2843.316	2844.152	26 352.766	– 61 512.634	10–10	1.40E−02	1.70E−03	1.59E−01	−1.77	C	36
		2828.626	2829.458	26 170.181	– 61 512.634	12–10	6.9E−02	6.9E−03	7.7E−01	−1.081	C	36
151	$b\ ^2H-(^\circ)^a$											
		2799.295	2800.120	26 352.766	– 62 065.521	10–8	1.55E−01	1.46E−02	1.34E+00	−0.836	B	35
152	$b\ ^2H-z\ ^2G^\circ$	*2781.88*	*2782.70*	*26 253.17*	*– 62 189.47*	22–18	1.05E+00	1.0E−01	2.01E+01	0.342	C	43
		2783.691	2784.513	26 170.181	– 62 083.108	12–10	1.06E+00	1.02E−01	1.13E+01	0.089	C	43
		2779.300	2780.120	26 352.766	– 62 322.431	10–8	1.00E+00	9.3E−02	8.5E+00	−0.031	C	43
		2797.917	2798.742	26 352.766	– 62 083.108	10–10	3.2E−02	3.8E−03	3.5E−01	−1.42	D	43
153	$b\ ^2H-z\ ^2I^\circ$											
		2767.503	2768.321	26 170.181	– 62 293.164	12–14	1.58E+00	2.12E−01	2.32E+01	0.405	C	43
		2753.288	2754.102	26 352.766	– 62 662.244	10–12	1.89E+00	2.58E−01	2.34E+01	0.412	C	36
154	$b\ ^2H-x\ ^4D^\circ$											
		2732.009	2732.817	26 352.766	– 62 945.038	10–8	7.05E−02	6.31E−03	5.68E−01	−1.200	C+	35
155	$b\ ^2H-y\ ^4H^\circ$											
		2651.299	2652.088	26 170.181	– 63 876.317	12–12	4.0E−03	4.2E−04	4.4E−02	−2.29	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2659.065	2659.856	26 352.766	– 63 948.790	10–10	2.5E−03	2.6E−04	2.3E−02	−2.59	D	43
		2646.212	2647.001	26 170.181	– 63 948.790	12–10	1.44E−02	1.26E−03	1.32E−01	−1.820	C+	35
		2652.566	2653.356	26 352.766	– 64 040.886	10–8	4.45E−02	3.76E−03	3.28E−01	−1.425	C+	35
156	$b\ ^2H-(^\circ)$[a]											
		2550.684	2551.449	26 170.181	– 65 363.595	12–12	1.07E+00	1.05E−01	1.06E+01	0.100	C	43
157	$b\ ^2H-z\ ^2H^\circ$											
		2550.026	2550.792	26 352.766	– 65 556.280	10–10	1.74E+00	1.69E−01	1.42E+01	0.229	C	43
158	$b\ ^2H-x\ ^4G^\circ$											
		2536.674	2537.436	26 170.181	– 65 580.041	12–12	5.7E−01	5.5E−02	5.5E+00	−0.182	C	43
		2529.229	2529.989	26 170.181	– 65 696.038	12–10	3.27E−01	2.62E−02	2.61E+00	−0.50	C	43
159	$b\ ^2H-y\ ^4H^\circ$											
		2492.345	2493.096	26 352.766	– 66 463.528	10–12	2.30E−01	2.57E−02	2.11E+00	−0.59	C	43
		2481.050	2481.799	26 170.181	– 66 463.528	12–12	1.46E−01	1.35E−02	1.32E+00	−0.79	C	43
160	$b\ ^2H-y\ ^2H^\circ$											
		2417.870	2418.605	26 170.181	– 67 516.332	12–12	9.5E−01	8.3E−02	7.9E+00	−0.001	C	43
161	$a\ ^2F-z\ ^4F^\circ$											
		5725.963	5727.552	27 620.412	– 45 079.879	6–6	5.1E−06	2.5E−06	2.9E−04	−4.82	D	43
		5627.497	5629.060	27 314.922	– 45 079.879	8–6	2.93E−05	1.04E−05	1.55E−03	−4.078	C	33
162	$a\ ^2F-z\ ^4D^\circ$											
		5824.415	5826.029	27 620.412	– 44 784.761	6–6	8.3E−07	4.2E−07	4.9E−05	−5.60	D	43
163	$a\ ^2F-y\ ^4P^\circ$											
		3021.417	3022.297	27 314.922	– 60 402.342	8–6	3.8E−03	3.9E−04	3.1E−02	−2.50	D	43
		2965.406	2966.272	27 620.412	– 61 332.764	6–4	1.1E−02	9.6E−04	5.6E−02	−2.24	D	43
164	$a\ ^2F-z\ ^4G^\circ$											
		2998.852	2999.727	27 620.412	– 60 956.781	6–8	4.2E−03	7.6E−04	4.5E−02	−2.34	D	43
		2964.133	2964.999	27 314.922	– 61 041.748	8–6	4.6E−02	4.6E−03	3.6E−01	−1.44	D	43
165	$a\ ^2F-z\ ^4H^\circ$											
		2968.737	2969.604	27 314.922	– 60 989.444	8–10	2.4E−03	4.0E−04	3.2E−02	−2.49	D	43
		2980.963	2981.833	27 620.412	– 61 156.835	6–8	1.1E−02	1.9E−03	1.1E−01	−1.94	D	43
		2954.052	2954.916	27 314.922	– 61 156.835	8–8	1.2E−02	1.5E−03	1.2E−01	−1.91	D	43
166	$a\ ^2F-z\ ^2D^\circ$											
		2959.599	2960.464	27 314.922	– 61 093.413	8–6	9.7E−02	9.6E−03	7.5E−01	−1.12	D	43
		2897.266	2898.115	27 620.412	– 62 125.600	6–4	1.8E−01	1.5E−02	8.5E−01	−1.05	D	43
167	$a\ ^2F-y\ ^4D^\circ$											
		2826.027	2826.858	27 314.922	– 62 689.880	8–6	4.5E−02	4.0E−03	3.0E−01	−1.49	D	43
168	$a\ ^2F-(^\circ)$[a]											
		2876.804	2877.648	27 314.922	– 62 065.521	8–8	9.56E−02	1.19E−02	8.99E−01	−1.023	B	35
		2902.319	2903.170	27 620.412	– 62 065.521	6–8	8.81E−03	1.48E−03	8.51E−02	−2.050	C+	35
169	$a\ ^2F-z\ ^2G^\circ$											
		2875.349	2876.193	27 314.922	– 62 083.108	8–10	1.35E−01	2.10E−02	1.59E+00	−0.77	C	43
170	$a\ ^2F-y\ ^4F^\circ$											
		2869.159	2870.001	27 314.922	– 62 158.110	8–10	1.4E−02	2.2E−03	1.6E−01	−1.76	D	43
		2869.699	2870.541	27 314.922	– 62 151.561	8–6	1.1E−02	1.0E−03	7.6E−02	−2.09	D	43
		2887.314	2888.161	27 620.412	– 62 244.520	6–4	1.9E−02	1.6E−03	8.9E−02	−2.03	D	43
171	$a\ ^2F-x\ ^4D^\circ$											
		2805.788	2806.614	27 314.922	– 62 945.038	8–8	3.22E−02	3.80E−03	2.81E−01	−1.517	C+	35
		2804.021	2804.847	27 620.412	– 63 272.976	6–6	1.6E−02	1.9E−03	1.0E−01	−1.95	D	43
172	$a\ ^2F-y\ ^4G^\circ$											
		2728.907	2729.714	27 314.922	– 63 948.790	8–10	1.25E−01	1.75E−02	1.25E+00	−0.855	C+	35
		2744.897	2745.708	27 620.412	– 64 040.886	6–8	3.62E−02	5.46E−03	2.96E−01	−1.485	C+	35
		2722.063	2722.869	27 314.922	– 64 040.886	8–8	1.42E−01	1.58E−02	1.13E+00	−0.899	C+	35
		2741.394	2742.205	27 620.412	– 64 087.418	6–6	2.03E−01	2.28E−02	1.24E+00	−0.86	C	43
173	$a\ ^2F-z\ ^2F^\circ$	*2709.22*	*2710.02*	*27 445.85*	*– 64 345.94*	14–14	1.33E+00	1.46E−01	1.82E+01	0.310	C	43
		2703.990	2704.792	27 314.922	– 64 286.345	8–8	1.38E+00	1.51E−01	1.08E+01	0.083	C	43
		2716.218	2717.022	27 620.412	– 64 425.408	6–6	1.15E+00	1.27E−01	6.8E+00	−0.119	C	43
		2693.857	2694.656	27 314.922	– 64 425.408	8–6	4.2E−02	3.5E−03	2.5E−01	−1.56	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2726.520	2727.327	27 620.412	– 64 286.345	6–8	5.0E−02	7.4E−03	4.0E−01	−1.35	D	43
174	$a\ ^2$F–$z\ ^2$P°											
		2686.388	2687.185	27 620.412	– 64 834.073	6–4	1.6E−02	1.2E−03	6.2E−02	−2.15	D	43
175	$a\ ^2$F–$y\ ^2$G°											
		2664.664	2665.457	27 314.922	– 64 831.943	8–10	1.91E+00	2.54E−01	1.78E+01	0.307	C	43
		2666.637	2667.430	27 620.412	– 65 109.679	6–8	1.87E+00	2.65E−01	1.40E+01	0.202	C	43
176	$a\ ^2$F–$z\ ^2$H°											
		2614.189	2614.970	27 314.922	– 65 556.280	8–10	3.3E−02	4.2E−03	2.9E−01	−1.47	D	43
177	$a\ ^2$F–$x\ ^4$G°											
		2604.670	2605.448	27 314.922	– 65 696.038	8–10	1.2E−02	1.5E−03	1.0E−01	−1.93	D	43
		2609.442	2610.222	27 620.412	– 65 931.334	6–8	6.0E−02	8.2E−03	4.2E−01	−1.31	D	43
		2588.798	2589.573	27 314.922	– 65 931.334	8–8	8.4E−02	8.4E−03	5.7E−01	−1.17	D	43
178	$a\ ^2$F–$x\ ^4$F°											
		2583.351	2584.124	27 314.922	– 66 012.750	8–10	9.0E−03	1.1E−03	7.7E−02	−2.04	D	43
		2559.242	2560.009	27 314.922	– 66 377.283	8–8	6.4E−02	6.3E−03	4.2E−01	−1.30	D	43
		2549.775	2550.540	27 314.922	– 66 522.304	8–6	2.35E−01	1.72E−02	1.15E+00	−0.86	C	43
179	$a\ ^2$F–$y\ ^4$H°											
		2545.444	2546.208	27 314.922	– 66 589.008	8–10	1.52E−01	1.85E−02	1.24E+00	−0.83	C	43
		2559.926	2560.693	27 620.412	– 66 672.334	6–8	2.47E−01	3.24E−02	1.64E+00	−0.71	C	43
180	$a\ ^2$F–$y\ ^2$D°											
		2519.048	2519.806	27 314.922	– 67 000.517	8–6	2.10E+00	1.50E−01	9.9E+00	0.078	C	43
		2521.092	2521.851	27 620.412	– 67 273.826	6–4	2.05E+00	1.31E−01	6.5E+00	−0.106	C	43
181	$b\ ^2$G–$z\ ^4$H°											
		3266.936	3267.878	30 388.542	– 60 989.444	10–10	4.5E−03	7.2E−04	7.8E−02	−2.14	D	43
		3289.354	3290.302	30 764.485	– 61 156.835	8–8	2.1E−02	3.4E−03	2.9E−01	−1.57	D	43
182	$b\ ^2$G–(°)[a]											
		3155.953	3156.867	30 388.542	– 62 065.521	10–8	4.17E−03	4.98E−04	5.18E−02	−2.302	C+	35
		3193.859	3194.782	30 764.485	– 62 065.521	8–8	3.86E−02	5.91E−03	4.97E−01	−1.326	B	35
183	$b\ ^2$G–$z\ ^2$G°											
		3154.202	3155.115	30 388.542	– 62 083.108	10–10	2.06E−01	3.07E−02	3.19E+00	−0.51	C	43
		3167.857	3168.774	30 764.485	– 62 322.431	8–8	1.59E−01	2.39E−02	2.00E+00	−0.72	C	43
		3192.066	3192.988	30 764.485	– 62 083.108	8–10	5.2E−03	9.9E−04	8.3E−02	−2.10	D	43
184	$b\ ^2$G–$y\ ^4$F°											
		3146.755	3147.666	30 388.542	– 62 158.110	10–10	4.9E−06	7.3E−07	7.6E−05	−5.13	D	43
185	$b\ ^2$G–$x\ ^4$D°											
		3106.565	3107.467	30 764.485	– 62 945.038	8–8	1.88E−02	2.72E−03	2.23E−01	−1.662	C+	35
		3070.691	3071.584	30 388.542	– 62 945.038	10–8	1.28E−02	1.45E−03	1.46E−01	−1.839	C+	35
186	$b\ ^2$G–$y\ ^4$G°											
		2978.846	2979.716	30 388.542	– 63 948.790	10–10	7.2E−03	9.5E−04	9.4E−02	−2.020	C	35
		3004.257	3005.133	30 764.485	– 64 040.886	8–8	8.6E−03	1.16E−03	9.2E−02	−2.031	C	35
		2970.694	2971.561	30 388.542	– 64 040.886	10–8	4.15E−02	4.40E−03	4.30E−01	−1.357	C+	35
		3000.062	3000.936	30 764.485	– 64 087.418	8–6	3.0E−02	3.1E−03	2.4E−01	−1.61	D	43
187	$b\ ^2$G–$z\ ^2$F°											
		2949.182	2950.044	30 388.542	– 64 286.345	10–8	2.45E−01	2.56E−02	2.49E+00	−0.59	C	43
		2969.937	2970.804	30 764.485	– 64 425.408	8–6	2.28E−01	2.26E−02	1.77E+00	−0.74	C	43
188	$b\ ^2$G–$y\ ^2$G°	*2906.15*	*2907.00*	*30 555.63*	*– 64 955.38*	18–18	4.3E−02	5.5E−03	9.4E−01	−1.01	D	43
		2902.463	2903.314	30 388.542	– 64 831.943	10–10	3.2E−02	4.1E−03	3.9E−01	−1.39	D	43
		2910.763	2911.616	30 764.485	– 65 109.679	8–8	1.5E−02	1.9E−03	1.4E−01	−1.83	D	43
		2879.245	2880.090	30 388.542	– 65 109.679	10–8	3.6E−02	3.6E−03	3.4E−01	−1.45	D	43
		2934.494	2935.353	30 764.485	– 64 831.943	8–10	5.6E−03	9.1E−04	7.0E−02	−2.14	D	43
189	$b\ ^2$G–(°)[a]											
		2858.341	2859.181	30 388.542	– 65 363.595	10–12	4.85E−01	7.1E−02	6.7E+00	−0.147	C	43
190	$b\ ^2$G–$z\ ^2$H°											
		2873.398	2874.241	30 764.485	– 65 556.280	8–10	4.56E−01	7.1E−02	5.3E+00	−0.249	C	43
191	$b\ ^2$G–$x\ ^4$G°											
		2840.760	2841.595	30 388.542	– 65 580.041	10–12	1.49E−01	2.16E−02	2.02E+00	−0.67	C	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
192	$b\ ^2G-y\ ^4H^\circ$											
		2771.186	2772.004	30 388.542	– 66 463.528	10–12	4.3E−02	6.0E−03	5.5E−01	−1.22	D	43
		2790.561	2791.384	30 764.485	– 66 589.008	8–10	2.1E−02	3.1E−03	2.3E−01	−1.60	D	43
193	$b\ ^2G-y\ ^2H^\circ$	*2688.75*	*2689.55*	*30 555.63*	*– 67 736.54*	18–22	1.49E+00	1.98E−01	3.15E+01	0.55	C	43
		2692.601	2693.400	30 388.542	– 67 516.332	10–12	1.40E+00	1.83E−01	1.62E+01	0.263	C	43
		2684.754	2685.551	30 764.485	– 68 000.788	8–10	1.57E+00	2.12E−01	1.50E+01	0.230	C	43
		2657.918	2 658.709	30 388.542	– 68 000.788	10–10	3.2E−02	3.4E−03	3.0E−01	−1.46	D	43
194	$b\ ^2G-y\ ^2F^\circ$	*2558.76*	*2559.52*	*30 555.63*	*– 69 625.38*	18–14	1.88E+00	1.43E−01	2.18E+01	0.412	C	43
		2549.084	2549.849	30 388.542	– 69 606.552	10–8	1.89E+00	1.47E−01	1.23E+01	0.168	C	43
		2570.849	2571.620	30 764.485	– 69 650.484	8–6	1.84E+00	1.37E−01	9.3E+00	0.039	C	43
		2573.757	2574.528	30 764.485	– 69 606.552	8–8	2.3E−02	2.3E−03	1.6E−01	−1.73	D	43
195	$b\ ^2G-x\ ^2G^\circ$											
		2503.875	2504.630	30 388.542	– 70 314.604	10–10	2.23E+00	2.10E−01	1.73E+01	0.321	C	43
		2514.383	2515.140	30 764.485	– 70 523.706	8–8	2.11E+00	2.00E−01	1.33E+01	0.205	C	43
196	$b\ ^4D-z\ ^4F^\circ$											
		7479.694	7481.753	31 387.948	– 44 753.799	6–8	3.5E−05	3.9E−05	5.8E−03	−3.63	D	43
		7301.560	7303.572	31 387.948	– 45 079.879	6–6	2.1E−05	1.7E−05	2.4E−03	−4.00	D	43
197	$b\ ^4D-z\ ^4D^\circ$											
		7711.724	7713.846	31 483.176	– 44 446.878	8–8	4.94E−04	4.41E−04	9.0E−02	−2.453	C	33
		7462.407	7464.462	31 387.948	– 44 784.761	6–6	2.7E−04	2.2E−04	3.3E−02	−2.87	D	43
		7224.487	7226.478	31 368.450	– 45 206.450	2–2	2.8E−04	2.2E−04	1.0E−02	−3.36	D	43
		7515.832	7517.901	31 483.176	– 44 784.761	8–6	8.1E−05	5.1E−05	1.02E−02	−3.386	C	33
		7320.654	7322.671	31 387.948	– 45 044.168	6–4	1.4E−04	7.7E−05	1.1E−02	−3.34	D	43
		7222.394	7224.384	31 364.440	– 45 206.450	4–2	2.5E−04	9.9E−05	9.4E−03	−3.40	D	43
		7449.335	7451.387	31 364.440	– 44 784.761	4–6	1.68E−04	2.10E−04	2.06E−02	−3.076	C	33
198	$b\ ^4D-z\ ^4P^\circ$											
		6456.383	6458.168	31 483.176	– 46 967.444	8–6	1.7E−03	8.2E−04	1.4E−01	−2.19	D	43
		6247.557	6249.285	31 387.948	– 47 389.779	6–4	1.6E−03	6.1E−04	7.6E−02	−2.43	D	43
		6147.741	6149.443	31 364.440	– 47 626.076	4–2	1.3E−03	3.7E−04	3.0E−02	−2.83	D	43
		6416.919	6418.693	31 387.948	– 46 967.444	6–6	3.6E−04	2.2E−04	2.8E−02	−2.88	D	43
		6238.392	6240.118	31 364.440	– 47 389.779	4–4	7.5E−04	4.4E−04	3.6E−02	−2.75	D	43
		6149.258	6150.960	31 368.450	– 47 626.076	2–2	1.3E−03	7.2E−04	2.9E−02	−2.84	D	43
		6239.953	6241.679	31 368.450	– 47 389.779	2–4	1.1E−04	1.3E−04	5.5E−03	−3.57	D	43
199	$b\ ^4D-y\ ^4P^\circ$											
		3456.924	3457.914	31 483.176	– 60 402.342	8–6	7.1E−03	9.5E−04	8.6E−02	−2.12	D	43
200	$b\ ^4D-z\ ^4H^\circ$											
		3388.138	3389.110	31 483.176	– 60 989.444	8–10	3.8E−04	8.2E−05	7.3E−03	−3.18	D	43
201	$b\ ^4D-y\ ^4D^\circ$											
		3295.233	3296.182	31 387.948	– 61 726.077	6–8	3.6E−03	7.9E−04	5.1E−02	−2.33	D	43
202	$b\ ^4D-(^\circ)^a$											
		3258.771	3259.710	31 387.948	– 62 065.521	6–8	9.39E−02	1.99E−02	1.28E+00	−0.922	B	35
203	$b\ ^4D-z\ ^2G^\circ$											
		3241.685	3242.620	31 483.176	– 62 322.431	8–8	1.9E−03	2.9E−04	2.5E−02	−2.63	D	43
		3267.039	3267.981	31 483.176	– 62 083.108	8–10	2.0E−04	4.0E−05	3.4E−03	−3.50	D	43
		3231.706	3232.638	31 387.948	– 62 322.431	6–8	1.4E−02	2.9E−03	1.9E−01	−1.76	D	43
		6247.557	6249.285	31 387.948	– 47 389.779	6–4	1.6E−03	6.1E−04	7.6E−02	−2.43	D	43
		6147.741	6149.443	31 364.440	– 47 626.076	4–2	1.3E−03	3.7E−04	3.0E−02	−2.83	D	43
		6416.919	6418.693	31 387.948	– 46 967.444	6–6	3.6E−04	2.2E−04	2.8E−02	−2.88	D	43
		6238.392	6240.118	31 364.440	– 47 389.779	4–4	7.5E−04	4.4E−04	3.6E−02	−2.75	D	43
		6149.258	6150.960	31 368.450	– 47 626.076	2–2	1.3E−03	7.2E−04	2.9E−02	−2.84	D	43
		6239.953	6241.679	31 368.450	– 47 389.779	2–4	1.1E−04	1.3E−04	5.5E−03	−3.57	D	43
199	$b\ ^4D-y\ ^4P^\circ$											
		3456.924	3457.914	31 483.176	– 60 402.342	8–6	7.1E−03	9.5E−04	8.6E−02	−2.12	D	43
200	$b\ ^4D-z\ ^4H^\circ$											
		3388.138	3389.110	31 483.176	– 60 989.444	8–10	3.8E−04	8.2E−05	7.3E−03	−3.18	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
201	$b\ ^4D-y\ ^4D^\circ$											
		3295.233	3296.182	31 387.948	– 61 726.077	6–8	3.6E−03	7.9E−04	5.1E−02	−2.33	D	43
202	$b\ ^4D-(^\circ)^a$											
		3258.771	3259.710	31 387.948	– 62 065.521	6–8	9.39E−02	1.99E−02	1.28E+00	−0.922	B	35
203	$b\ ^4D-z\ ^2G^\circ$											
		3241.685	3242.620	31 483.176	– 62 322.431	8–8	1.9E−03	2.9E−04	2.5E−02	−2.63	D	43
		3267.039	3267.981	31 483.176	– 62 083.108	8–10	2.0E−04	4.0E−05	3.4E−03	−3.50	D	43
		3231.706	3232.638	31 387.948	– 62 322.431	6–8	1.4E−02	2.9E−03	1.9E−01	−1.76	D	43
204	$b\ ^4D-y\ ^4F^\circ$											
		3259.051	3259.991	31 483.176	– 62 158.110	8–10	6.7E−02	1.33E−02	1.14E+00	−0.97	C	43
		3247.175	3248.111	31 364.440	– 62 151.561	4–6	7.1E−02	1.7E−02	7.2E−01	−1.17	D	43
		3237.820	3238.754	31 368.450	– 62 244.520	2–4	6.8E−02	2.1E−02	4.6E−01	−1.37	D	43
		3237.399	3238.334	31 364.440	– 62 244.520	4–4	1.8E−02	2.9E−03	1.2E−01	−1.94	D	43
205	$b\ ^4D-x\ ^4D^\circ$											
		3177.532	3178.451	31 483.176	– 62 945.038	8–8	1.74E−01	2.64E−02	2.21E+00	−0.676	C+	35
		3135.360	3136.268	31 387.948	– 63 272.976	6–6	8.8E−02	1.3E−02	8.0E−01	−1.11	D	43
		3114.297	3115.200	31 364.440	– 63 465.109	4–4	6.4E−02	9.3E−03	3.8E−01	−1.43	D	43
		3105.554	3106.455	31 368.450	– 63 559.488	2–2	7.0E−02	1.0E−02	2.1E−01	−1.69	D	43
		3144.752	3145.663	31 483.176	– 63 272.976	8–6	2.7E−02	3.0E−03	2.5E−01	−1.62	D	43
		3116.579	3117.483	31 387.948	– 63 465.109	6–4	5.5E−02	5.3E−03	3.3E−01	−1.50	D	43
		3105.167	3106.068	31 364.440	– 63 559.488	4–2	7.5E−02	5.4E−03	2.2E−01	−1.66	D	43
		3133.050	3133.958	31 364.440	– 63 272.976	4–6	1.5E−02	3.2E−03	1.3E−01	−1.89	D	43
		3114.686	3115.589	31 368.450	– 63 465.109	2–4	2.5E−02	7.3E−03	1.5E−01	−1.84	D	43
206	$b\ ^4D-x\ ^4G^\circ$											
		2922.022	*2922.877*	31 483.176	– 65 696.038	8–10	3.8E−02	6.1E−03	4.7E−01	−1.31	D	43
207	$b\ ^4D-x\ ^4F^\circ$											
		2895.220	2896.068	31 483.176	– 66 012.750	8–10	1.09E−01	1.71E−02	1.31E+00	−0.86	C	43
		2857.174	2858.014	31 387.948	– 66 377.283	6–8	1.22E−01	1.99E−02	1.12E+00	−0.92	C	43
		2843.478	2844.314	31 364.440	– 66 522.304	4–6	9.6E−02	1.7E−02	6.5E−01	−1.16	D	43
		2836.512	2837.346	31 368.450	– 66 612.656	2–4	9.8E−02	2.4E−02	4.4E−01	−1.32	D	43
		2864.972	2865.813	31 483.176	– 66 377.283	8–8	4.3E−02	5.3E−03	4.0E−01	−1.37	D	43
		2836.189	2837.023	31 364.440	– 66 612.656	4–4	5.4E−02	6.5E−03	2.4E−01	−1.59	D	43
208	$b\ ^4D-y\ ^2D^\circ$											
		2805.318	2806.145	31 364.440	– 67 000.517	4–6	2.5E−02	4.5E−03	1.7E−01	−1.75	D	43
		2784.277	2785.098	31 368.450	– 67 273.826	2–4	3.4E−02	7.8E−03	1.4E−01	−1.80	D	43
209	$b\ ^4D-\ ^4P^\circ$											
		2469.516	2470.262	31 483.176	– 71 964.710	8–6	2.58E+00	1.77E−01	1.15E+01	0.151	C	43
		2458.973	2459.717	31 387.948	– 72 043.026	6–4	2.51E+00	1.51E−01	7.4E+00	−0.041	C	43
210	$b\ ^4D-w\ ^4F^\circ$											
		2428.365	2429.102	31 483.176	– 72 650.658	8–10	2.68E+00	2.97E−01	1.90E+01	0.376	C	43
		2440.424	2441.163	31 387.948	– 72 352.024	6–8	1.18E+00	1.41E−01	6.8E+00	−0.073	C	43
		2445.798	2446.539	31 364.440	– 72 238.513	4–6	1.23E+00	1.65E−01	5.3E+00	−0.181	C	43
		2450.205	2450.947	31 368.450	– 72 168.998	2–4	1.26E+00	2.28E−01	3.67E+00	−0.342	C	43
		2446.110	2446.851	31 483.176	– 72 352.024	8–8	1.06E+00	9.5E−02	6.13E+00	−0.119	C	43
		2447.205	2447.947	31 387.948	– 72 238.513	6–6	1.15E+00	1.04E−01	5.0E+00	−0.207	C	43
		2449.965	2450.707	31 364.440	– 72 168.998	4–4	1.24E+00	1.11E−01	3.60E+00	−0.351	C	43
211	$b\ ^4D-(^\circ)^a$											
		2447.327	2448.068	31 364.440	– 72 212.978	4–2	2.56E+00	1.15E−01	3.71E+00	−0.338	C	43
212	$b\ ^4D-w\ ^4D^\circ$											
		2424.591	2425.328	31 387.948	– 72 619.490	6–6	1.24E+00	1.09E−01	5.2E+00	−0.184	C	43
		2428.799	2429.536	31 364.440	– 72 524.566	4–4	1.38E+00	1.22E−01	3.91E+00	−0.311	C	43
		2422.688	2423.424	31 387.948	– 72 651.876	6–8	1.46E+00	1.71E−01	8.2E+00	0.011	C	43
		2423.210	2423.946	31 364.440	– 72 619.490	4–6	1.40E+00	1.85E−01	5.9E+00	−0.132	C	43
		2429.035	2429.773	31 368.450	– 72 524.566	2–4	1.23E+00	2.17E−01	3.47E+00	−0.362	C	43
213	$b\ ^2F-z\ ^4G^\circ$											
		3442.219	3443.206	31 999.048	– 61 041.748	8–6	3.2E−03	4.3E−04	3.9E−02	−2.46	D	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
214	$b\ ^2F–z\ ^2D^\circ$											
		3436.107	3437.092	31 999.048	– 61 093.413	8–6	5.7E−03	7.6E−04	6.9E−02	−2.22	D	43
		3297.880	3298.830	31 811.822	– 62 125.600	6–4	1.0E−02	1.1E−03	7.4E−02	−2.17	D	43
215	$b\ ^2F–y\ ^4D^\circ$											
		3257.363	3258.302	31 999.048	– 62 689.880	8–6	1.5E−03	1.8E−04	1.6E−02	−2.84	D	43
216	$b\ ^2F–(^\circ)^a$											
		3304.430	3305.381	31 811.822	– 62 065.521	6–8	2.0E−03	4.4E−04	2.9E−02	−2.58	D+	35
		3325.007	3325.964	31 999.048	– 62 065.521	8–8	3.35E−03	5.6E−04	4.87E−02	−2.352	C	35
217	$b\ ^2F–z\ ^2G^\circ$											
		3323.063	3324.019	31 999.048	– 62 083.108	8–10	1.4E−02	3.0E−03	2.6E−01	−1.62	D	43
		3276.604	3277.548	31 811.822	– 62 322.431	6–8	1.0E−02	2.2E−03	1.4E−01	−1.89	D	43
218	$b\ ^2F–x\ ^4D^\circ$											
		3211.076	3212.004	31 811.822	– 62 945.038	6–8	2.1E−03	4.4E−04	2.8E−02	−2.58	D	35
219	$b\ ^2F–b\ ^4G^\circ$											
		3129.009	3129.916	31 999.048	– 63 948.790	8–10	2.3E−03	4.1E−04	3.4E−02	−2.48	D	35
		3101.889	3102.789	31 811.822	– 64 040.886	6–8	9.1E−03	1.7E−03	1.1E−01	−1.98	D+	35
220	$b\ ^2F–z\ ^2F^\circ$											
		3096.295	3097.193	31 999.048	– 64 286.345	8–8	1.9E−02	2.7E−03	2.2E−01	−1.67	D	43
		3065.316	3066.207	31 811.822	– 64 425.408	6–6	2.9E−02	4.1E−03	2.5E−01	−1.61	D	43
221	$b\ ^2F–y\ ^2G^\circ$											
		3044.840	3045.726	31 999.048	– 64 831.943	8–10	1.2E−02	2.2E−03	1.7E−01	−1.76	D	43
		3002.321	3003.196	31 811.822	– 65 109.679	6–8	2.0E−02	3.6E−03	2.2E−01	−1.66	D	43
222	$b\ ^2F–y\ ^2F^\circ$											
		2658.253	2659.044	31 999.048	– 69 606.552	8–8	2.12E−01	2.25E−02	1.57E+00	−0.75	C	43
		2642.012	2642.800	31 811.822	– 69 650.484	6–6	2.29E−01	2.40E−02	1.25E+00	−0.84	C	43
223	$b\ ^2F–x\ ^2G^\circ$	*2597.39*	*2598.16*	*31 918.81*	*– 70 407.54*	14–18	2.97E−01	3.87E−02	4.63E+00	−0.267	C	43
		2609.127	2609.906	31 999.048	– 70 314.604	8–10	2.77E−01	3.53E−02	2.43E+00	−0.55	C	43
		2582.413	2583.186	31 811.822	– 70 523.706	6–8	2.22E−01	2.96E−02	1.51E+00	−0.75	C	43
		2594.964	2595.740	31 999.048	– 70 523.706	8–8	1.0E−01	1.0E−02	6.9E−01	−1.09	D	43
224	$a\ ^2I–z\ ^2I^\circ$											
		3398.360	3399.335	32 875.646	– 62 293.164	14–14	2.5E−03	4.4E−04	6.8E−02	−2.21	D	43
		3360.115	3361.080	32 909.905	– 62 662.244	12–12	2.1E−03	3.5E−04	4.6E−02	−2.38	D	43
225	$a\ ^2I–y\ ^2G^\circ$											
		3131.724	3132.632	32 909.905	– 64 831.943	12–10	6.6E−03	8.1E−04	1.0E−01	−2.01	D	43
226	$a\ ^2I–(^\circ)^a$											
		3077.170	3078.064	32 875.646	– 65 363.595	14–12	1.35E−01	1.65E−02	2.34E+00	−0.64	C	43
227	$a\ ^2I–z\ ^2H^\circ$											
		3062.237	3063.127	32 909.905	– 65 556.280	12–10	1.36E−01	1.59E−02	1.92E+00	−0.72	C	43
228	$a\ ^2I–x\ ^4G^\circ$											
		3056.804	3057.693	32 875.646	– 65 580.041	14–12	1.7E−02	2.0E−03	2.8E−01	−1.56	D	43
229	$a\ ^2I–x\ ^4F^\circ$											
		3020.009	3020.888	32 909.905	– 66 012.750	12–10	6.4E−04	7.3E−05	8.8E−03	−3.05	D	43
230	$a\ ^2I–y\ ^2H^\circ$											
		2885.933	2886.779	32 875.646	– 67 516.332	14–12	3.8E−02	4.0E−03	5.4E−01	−1.25	D	43
		2848.906	2849.743	32 909.905	– 68 000.788	12–10	5.3E−02	5.4E−03	6.1E−01	−1.19	D	43
231	$a\ ^2I–z\ ^2K^\circ$	*2607.93*	*2608.71*	*32 891.46*	*– 71 224.55*	26–30	2.70E+00	3.17E−01	7.1E+01	0.92	C	43
		2592.785	2593.560	32 875.646	– 71 432.680	14–16	2.74E+00	3.16E−01	3.78E+01	0.65	C	43
		2625.490	2626.273	32 909.905	– 70 986.677	12–14	2.55E+00	3.08E−01	3.20E+01	0.57	C	43
		2623.130	2623.912	32 875.646	– 70 986.677	14–14	8.8E−02	9.0E−03	1.09E+00	−0.90	C	43
232	$a\ ^2I–x\ ^2H^\circ$											
		2538.205	2538.968	32 875.646	– 72 261.729	14–12	1.26E+00	1.04E−01	1.22E+01	0.164	C	43
		2548.923	2549.688	32 909.905	– 72 130.39	12–10	6.0E−01	4.87E−02	4.91E+00	−0.233	C	43
233	$a\ ^2I–w\ ^2H^\circ$											
		2454.579	2455.322	32 875.646	– 73 603.50	14–12	1.16E+00	9.0E−02	1.02E+01	0.101	C	43
		2447.756	2448.497	32 909.905	– 73 751.282	12–10	1.97E+00	1.48E−01	1.43E+01	0.249	C	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
234	$a\ ^2$I–$y\ ^2$I$^\circ$											
		2432.874	2433.612	32 875.646 –	73 966.832	14–14	2.86E+00	2.54E−01	2.85E+01	0.55	C	43
		2434.730	2435.468	32 909.905 –	73 969.767	12–12	2.79E+00	2.48E−01	2.39E+01	0.474	C	43
235	$c\ ^2$G–$z\ ^4$H$^\circ$											
		3632.292	3633.327	33 466.463 –	60 989.444	10–10	1.2E−03	2.3E−04	2.8E−02	−2.63	D	43
		3614.876	3615.907	33 501.253 –	61 156.835	8–8	4.2E−03	8.3E−04	7.9E−02	−2.18	D	43
236	$c\ ^2$G–(°)[a]											
		3495.618	3496.619	33 466.463 –	62 065.521	10–8	2.62E−03	3.84E−04	4.42E−02	−2.415	C+	35
		3499.876	3500.877	33 501.253 –	62 065.521	8–8	4.29E−03	7.88E−04	7.27E−02	−2.200	C+	35
237	$c\ ^2$G–$z\ ^2$G$^\circ$											
		3493.470	3494.470	33 466.463 –	62 083.108	10–10	3.2E−02	5.9E−03	6.8E−01	−1.23	D	43
		3468.677	3469.671	33 501.253 –	62 322.431	8–8	2.0E−02	3.7E−03	3.4E−01	−1.53	D	43
		3464.495	3465.488	33 466.463 –	62 322.431	10–8	2.2E−03	3.1E−04	3.6E−02	−2.50	D	43
238	$c\ ^2$G–$x\ ^4$D$^\circ$											
		3395.328	3396.302	33 501.253 –	62 945.038	8–8	3.66E−03	6.3E−04	5.7E−02	−2.296	C	35
239	$c\ ^2$G–$y\ ^4$G$^\circ$											
		3279.644	3280.589	33 466.463 –	63 948.790	10–10	5.8E−03	9.3E−04	1.00E−01	−2.033	C	35
		3273.490	3274.434	33 501.253 –	64 040.886	8–8	8.5E−03	1.36E−03	1.18E−01	−1.962	C	35
		3269.765	3270.708	33 466.463 –	64 040.886	10–8	5.2E−03	6.7E−04	7.2E−02	−2.176	C	35
		3268.510	3269.452	33 501.253 –	64 087.418	8–6	6.8E−03	8.2E−04	7.1E−02	−2.18	D	43
240	$c\ ^2$G–$z\ ^2$F$^\circ$	*3239.08*	*3240.02*	*33 481.93 –*	*64 345.94*	18–14	5.4E−02	6.6E−03	1.3E+00	−0.92	D	43
		3243.723	3244.659	33 466.463 –	64 286.345	10–8	5.1E−02	6.5E−03	6.9E−01	−1.19	D	43
		3232.785	3233.718	33 501.253 –	64 425.408	8–6	5.0E−02	5.9E−03	5.0E−01	−1.33	D	43
		3247.389	3248.326	33 501.253 –	64 286.345	8–8	6.0E−03	9.5E−04	8.1E−02	−2.12	D	43
241	$c\ ^2$G–$y\ ^2$G$^\circ$											
		3187.297	3188.218	33 466.463 –	64 831.943	10–10	5.0E−02	7.6E−03	8.0E−01	−1.12	D	43
		3162.798	3163.713	33 501.253 –	65 109.679	8–8	5.5E−02	8.3E−03	6.9E−01	−1.18	D	43
242	$c\ ^2$G–$x\ ^2$G$^\circ$											
		2697.727	2698.528	33 466.463 –	70 523.706	10–8	2.6E−02	2.3E−03	2.0E−01	−1.64	D	43
243	$c\ ^2$G–$x\ ^2$H$^\circ$	*2581.86*	*2582.64*	*33 481.93 –*	*72 202.03*	18–22	1.63E+00	2.00E−01	3.06E+01	0.56	C	43
		2576.862	2577.634	33 466.463 –	72 261.729	10–12	1.32E+00	1.58E−01	1.34E+01	0.199	C	43
		2587.945	2588.719	33 501.253 –	72 130.39	8–10	1.69E+00	2.13E−01	1.45E+01	0.231	C	43
		2585.616	2586.390	33 466.463 –	72 130.39	10–10	3.09E−01	3.09E−02	2.63E+00	−0.51	C	43
244	$c\ ^2$G–$w\ ^4$F$^\circ$											
		2580.721	2581.494	33 501.253 –	72 238.513	8–6	2.2E−02	1.7E−03	1.1E−01	−1.88	D	43
245	$c\ ^2$G–$w\ ^4$D$^\circ$											
		2551.204	2551.970	33 466.463 –	72 651.876	10–8	2.48E−01	1.94E−02	1.63E+00	−0.71	C	43
246	$c\ ^2$G–(°)[a]											
		2527.705	2528.465	33 466.463 –	73 016.147	10–8	9.1E−01	7.0E−02	5.8E+00	−0.157	C	43
247	$c\ ^2$G–$w\ ^2$G$^\circ$											
		2521.816	2522.575	33 501.253 –	73 143.288	8–8	2.36E+00	2.25E−01	1.49E+01	0.255	C	43
248	$c\ ^2$G–$w\ ^2$H$^\circ$											
		2490.713	2491.464	33 466.463 –	73 603.500	10–12	1.44E+00	1.61E−01	1.32E+01	0.205	C	43
		2483.720	2484.470	33 501.253 –	73 751.282	8–10	5.4E−01	6.3E−02	4.11E+00	−0.299	C	43
249	$b\ ^2$D–$z\ ^2$D$^\circ$											
		4024.547	4025.685	36 252.918 –	61 093.413	6–6	2.5E−03	6.1E−04	4.8E−02	−2.44	D	43
250	$b\ ^2$D–$y\ ^2$F$^\circ$											
		2997.300	2998.174	36 252.918 –	69 606.552	6–8	8.6E−02	1.5E−02	9.1E−01	−1.03	D	43
		2982.059	2982.929	36 126.387 –	69 650.484	4–6	2.41E−01	4.82E−02	1.89E+00	−0.71	C	43
251	$b\ ^2$D–$x\ ^2$G$^\circ$											
		2917.083	2917.937	36 252.918 –	70 523.706	6–8	2.7E−02	4.6E−03	2.7E−01	−1.56	D	43
252	$b\ ^2$D–(°)[a]											
		2719.304	2720.109	36 252.918 –	73 016.147	6–8	4.44E−01	6.6E−02	3.53E+00	−0.404	C	43
253	$b\ ^2$D–(°)[a]											
		2707.133	2707.936	36 126.387 –	73 054.881	4–6	8.3E−01	1.38E−01	4.90E+00	−0.260	C	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2716.441	2717.246	36 252.918	– 73 054.881	6–6	2.8E−02	3.1E−03	1.7E−01	−1.73	D	43
254	$b\ ^2D–y\ ^2P^\circ$											
		2697.462	2698.262	36 126.387	– 73 187.280	4–2	1.65E+00	9.0E−02	3.20E+00	−0.444	C	43
		2697.328	2698.129	36 126.387	– 73 189.110	4–4	2.48E−01	2.70E−02	9.6E−01	−0.97	C	43
255	$b\ ^2D–x\ ^2D^\circ$											
		2605.311	2606.089	36 126.387	– 74 498.057	4–4	1.99E+00	2.02E−01	6.9E+00	−0.092	C	43
		2606.517	2607.295	36 252.918	– 74 606.841	6–6	2.31E+00	2.35E−01	1.21E+01	0.149	C	43
256	$b\ ^2D–w\ ^2F^\circ$											
		2540.661	2541.424	36 252.918	– 75 600.931	6–8	1.70E+00	2.19E−01	1.10E+01	0.119	C	43
257	$a\ ^2S–z\ ^2P^\circ$											
		3622.48	3623.51	37 227.326	– 64 824.88	2–6	2.3E−02	1.3E−02	3.2E−01	−1.57	D	43
		3624.893	3625.926	37 227.326	– 64 806.487	2–2	2.4E−02	4.8E−03	1.1E−01	−2.02	D	43
		3621.270	3622.303	37 227.326	– 64 834.073	2–4	2.2E−02	8.7E−03	2.1E−01	−1.76	D	43
258	$a\ ^2S–y\ ^2P^\circ$	*2779.96*	*2780.78*	37 227.326	*– 73 188.50*	2–6	2.8E−01	9.7E−02	1.8E+00	−0.71	D	43
		2780.051	2780.871	37 227.326	– 73 187.280	2–2	3.3E−01	3.8E−02	7.0E−01	−1.12	D	43
		2779.909	2780.730	37 227.326	– 73 189.110	2–4	2.56E−01	5.9E−02	1.09E+00	−0.93	C	43
259	$a\ ^2S–x\ ^2P^\circ$	*2559.96*	*2560.72*	*37 227.326*	*– 76 278.79*	2–6	1.16E+00	3.41E−01	5.7E+00	−0.166	C	43
		2569.784	2570.554	37 227.326	– 76 129.446	2–4	1.11E+00	2.19E−01	3.71E+00	−0.358	C	43
		2540.523	2541.286	37 227.326	– 76 577.482	2–2	1.26E+00	1.22E−01	2.04E+00	−0.61	C	43
260	$c\ ^2D–z\ ^2D^\circ$											
		4180.981	4182.159	38 214.507	– 62 125.600	4–4	2.2E−04	5.7E−05	3.1E−03	−3.64	D	43
261	$c\ ^2D–z\ ^2F^\circ$											
		3827.083	3828.169	38 164.194	– 64 286.345	6–8	2.5E−03	7.3E−04	5.5E−02	−2.36	D	43
		3814.124	3815.207	38 214.507	– 64 425.408	4–6	4.9E−03	1.6E−03	8.1E−02	−2.19	D	43
262	$c\ ^2D–z\ ^2P^\circ$											
		3748.483	3749.548	38 164.194	– 64 834.073	6–4	3.4E−02	4.7E−03	3.5E−01	−1.55	D	43
		3759.464	3760.532	38 214.507	– 64 806.487	4–2	3.2E−02	3.4E−03	1.7E−01	−1.86	D	43
263	$c\ ^2D–y\ ^2F^\circ$											
		3179.503	3180.423	38 164.194	– 69 606.552	6–8	1.11E−01	2.24E−02	1.41E+00	−0.87	C	43
		3180.149	3181.069	38 214.507	– 69 650.484	4–6	7.7E−02	1.7E−02	7.3E−01	−1.16	D	43
264	$c\ ^2D–x\ ^2G^\circ$											
		3089.384	3090.281	38 164.194	– 70 523.706	6–8	2.2E−02	4.2E−03	2.6E−01	−1.60	D	43
265	$c\ ^2D–w\ ^2F^\circ$											
		2670.379	2671.173	38 164.194	– 75 600.931	6–8	6.0E−02	8.6E−03	4.5E−01	−1.29	D	43
266	$c\ ^2D–x\ ^2P^\circ$	*2624.27*	*2625.05*	*38 184.32*	*– 76 278.79*	10–6	1.29E+00	8.0E−02	6.9E+00	−0.097	C	43
		2633.203	2633.988	38 164.194	– 76 129.446	6–4	1.21E+00	8.4E−02	4.38E+00	−0.297	C	43
		2605.902	2606.680	38 214.507	– 76 577.482	4–2	1.27E+00	6.4E−02	2.21E+00	−0.59	C	43
		2636.697	2637.483	38 214.507	– 76 129.446	4–4	8.8E−02	9.2E−03	3.2E−01	−1.43	D	43
267	$c\ ^2D–v\ ^2F^\circ$											
		2500.924	2501.678	38 164.194	– 78 137.364	6–8	2.41E+00	3.02E−01	1.49E+01	0.258	C	43
		2529.078	2529.838	38 214.507	– 77 742.730	4–6	1.80E+00	2.59E−01	8.6E+00	0.016	C	43
268	$c\ ^2D–w\ ^2D^\circ$											
		2482.326	2483.075	38 214.507	– 78 487.153	4–4	2.23E+00	2.06E−01	6.8E+00	−0.083	C	43
269	$z\ ^6D^\circ—e\ ^6D$											
		2537.139	2537.901	38 458.981	– 77 861.625	10–10	1.44E+00	1.39E−01	1.16E+01	0.142	C+	38
		2525.919	2526.679	38 660.043	– 78 237.685	8–8	7.4E−01	7.1E−02	4.72E+00	−0.246	C	38
		2513.151	2513.908	38 458.981	– 78 237.685	10–8	2.49E−01	1.89E−02	1.56E+00	−0.72	C	38
		2550.152	2550.917	38 660.043	– 77 861.625	8–10	3.91E−01	4.76E−02	3.20E+00	−0.419	C	38
		2538.680	2539.442	38 858.958	– 78 237.685	6–8	7.4E−01	9.5E−02	4.77E+00	−0.244	C	38
		2530.103	2530.864	39 013.206	– 78 525.407	4–6	6.6E−01	9.5E−02	3.17E+00	−0.420	C	43
270	$z\ ^6D^\circ—\ ^6D$											
		2208.408	2209.096	38 458.981	– 83 726.364	10–10	1.59E+00	1.17E−01	8.49E+00	0.067	C+	37
		2209.034	2209.722	38 458.981	– 83 713.536	10–8	1.27E+00	7.46E−02	5.43E+00	−0.127	C+	37

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2218.261	2218.952	38 660.043	– 83 726.364	8–10	1.57E+00	1.45E−01	8.46E+00	0.064	C+	37
		2228.734	2229.427	38 858.958	– 83 713.536	6–8	1.59E+00	1.58E−01	6.98E+00	−0.022	C+	37
271	$z\ ^6D^\circ$—^6P											
		2182.362	2183.045	38 458.981	– 84 266.556	10–8	8.6E−02	4.94E−03	3.55E−01	−1.306	C	37
		2191.984	2192.669	38 660.043	– 84 266.556	8–8	7.54E−01	5.43E−02	3.14E+00	−0.362	C+	37
		2201.587	2202.275	38 858.958	– 84 266.556	6–8	7.77E−01	7.53E−02	3.28E+00	−0.345	C+	37
272	$z\ ^6F^\circ$—$e\ ^6D$											
		2785.192	2786.014	41 968.046	– 77 861.625	12–10	1.53E+00	1.48E−01	1.63E+01	0.250	C	38
		2754.889	2755.704	42 237.033	– 78 525.407	8–6	1.21E+00	1.04E−01	7.5E+00	−0.081	C	43
		2796.628	2797.453	42 114.818	– 77 861.625	10–10	2.0E−01	2.4E−02	2.2E+00	−0.63	D+	38
		2776.908	2777.727	42 237.033	– 78 237.685	8–8	4.08E−01	4.72E−02	3.45E+00	−0.423	C	38
		2762.333	2763.150	42 334.822	– 78 525.407	6–6	6.0E−01	6.9E−02	3.76E+00	−0.383	C	43
		2752.150	2752.964	42 401.302	– 78 725.790	4–4	7.7E−01	8.8E−02	3.19E+00	−0.454	C	43
273	$z\ ^6F^\circ$—$e\ ^6F$											
		2445.107	2445.848	41 968.046	– 82 853.658	12–12	2.03E+00	1.82E−01	1.76E+01	0.340	C	43
		2434.060	2434.798	42 237.033	– 83 308.194	8–6	7.2E−01	4.81E−02	3.09E+00	−0.414	C	43
274	$z\ ^6F^\circ$—^6D											
		2394.003	2394.732	41 968.046	– 83 726.364	12–10	9.4E−02	6.7E−03	6.4E−01	−1.092	C	37
		2402.448	2403.179	42 114.818	– 83 726.364	10–10	5.8E−01	5.0E−02	3.98E+00	−0.298	C	37
		2410.271	2411.004	42 237.033	– 83 713.536	8–8	7.65E−01	6.67E−02	4.23E+00	−0.273	C+	37
275	$z\ ^6F^\circ$—$e\ ^6G$											
		2376.430	2377.155	41 968.046	– 84 035.14	12–14	6.4E+00	6.3E−01	5.9E+01	0.88	C	43
		2369.955	2370.679	42 114.818	– 84 296.83	10–12	5.9E+00	6.0E−01	4.65E+01	0.78	C	43
		2363.861	2364.584	42 237.033	– 84 527.778	8–10	5.3E+00	5.6E−01	3.48E+01	0.65	C	43
		2352.312	2353.032	42 439.822	– 84 938.18	2–4	4.38E+00	7.3E−01	1.13E+01	0.163	C	43
		2353.681	2354.401	42 237.033	– 84 710.685	8–8	1.30E+00	1.08E−01	6.7E+00	−0.062	C	43
		2351.667	2352.387	42 334.822	– 84 844.834	6–6	1.80E+00	1.49E−01	6.9E+00	−0.049	C	43
276	$z\ ^6F^\circ$—^6P											
		2378.554	2379.280	42 237.033	– 84 266.556	8–8	1.70E−01	1.44E−02	9.0E−01	−0.94	C	37
277	$z\ ^6F^\circ$—$f\ ^4D$											
		2360.532	2361.254	42 334.822	– 84 685.198	6–8	2.22E−01	2.48E−02	1.16E+00	−0.828	C+	37
278	$z\ ^6F^\circ$—$e\ ^4G$											
		2338.545	2339.262	42 114.818	– 84 863.351	10–12	5.6E−02	5.5E−03	4.21E−01	−1.262	C	37
279	$z\ ^6P^\circ$—$e\ ^6D$											
		2839.800	2840.635	42 658.224	– 77 861.625	8–10	5.8E−01	8.8E−02	6.6E+00	−0.153	C	38
		2856.377	2857.216	43 238.586	– 78 237.685	6–8	4.42E−01	7.2E−02	4.07E+00	−0.364	C	38
		2809.783	2810.610	42 658.224	– 78 237.685	8–8	3.10E−01	3.67E−02	2.72E+00	−0.53	C	38
		2833.086	2833.919	43 238.586	– 78 525.407	6–6	4.55E−01	5.5E−02	3.07E+00	−0.483	C	43
		2847.774	2848.611	43 620.957	– 78 725.790	4–4	5.1E−01	6.1E−02	2.31E+00	−0.61	C	43
		2787.242	2788.064	42 658.224	– 78 525.407	8–6	1.83E−01	1.60E−02	1.18E+00	−0.89	C	43
		2817.088	2817.917	43 238.586	– 78 725.790	6–4	3.37E−01	2.68E−02	1.49E+00	−0.79	C	43
		2838.217	2839.051	43 620.957	– 78 843.992	4–2	8.6E−01	5.2E−02	1.93E+00	−0.68	C	43
280	$z\ ^6P^\circ$—^6D											
		2434.239	2434.978	42 658.224	– 83 726.364	8–10	2.01E+00	2.24E−01	1.44E+01	0.253	C+	37
		2435.000	2435.738	42 658.224	– 83 713.536	8–8	2.02E+00	1.79E−01	1.15E+01	0.157	C+	37
281	$z\ ^6P^\circ$—^6P											
		2402.634	2403.365	42 658.224	– 84 266.556	8–8	8.19E−01	7.09E−02	4.49E+00	−0.246	C+	37
		2436.623	2437.362	43 238.586	– 84 266.556	6–8	2.70E+00	3.21E−01	1.54E+01	0.284	C+	37
		2455.900	2456.643	43 620.957	– 84 326.912	4–6	1.73E+00	2.34E−01	7.6E+00	−0.028	C	43
282	$z\ ^6P^\circ$—$f\ ^4D$											
		2378.698	2379.424	42 658.224	– 84 685.198	8–8	1.49E−01	1.27E−02	7.94E−01	−0.994	C+	43
		2412.009	2412.742	43 238.586	– 84 685.198	6–8	1.66E−01	1.93E−02	9.20E−01	−0.936	C+	43
283	$z\ ^6P^\circ$–^6S											
		2365.765	2366.488	43 238.586	– 85 495.304	6–6	2.16E+00	1.81E−01	8.5E+00	0.036	C	43
284	$z\ ^4F^\circ$–$e\ ^4D$											
		2839.513	2840.348	44 232.512	– 79 439.467	10–8	1.47E+00	1.42E−01	1.33E+01	0.152	C+	38
		2845.596	2846.433	44 753.799	– 79 885.493	8–6	1.57E+00	1.43E−01	1.07E+01	0.059	C+	38

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		2848.320	2849.157	45 079.879	– 80 177.975	6–4	1.59E+00	1.29E−01	7.3E+00	−0.111	C	43
285	$z\,^4F^\circ$–$f\,^4D$											
		2471.277	2472.024	44 232.512	– 84 685.198	10–8	4.15E−01	3.04E−02	2.47E+00	−0.517	C+	37
		2503.541	2504.295	44 753.799	– 84 685.198	8–8	3.32E−01	3.13E−02	2.06E+00	−0.602	C+	37
286	$z\,^4F^\circ$–$e\,^4G$											
		2460.440	2461.185	44 232.512	– 84 863.351	10–12	5.39E+00	5.87E−01	4.76E+01	0.769	C+	37
		2472.606	2473.354	44 753.799	– 85 184.734	8–10	3.22E+00	3.69E−01	2.40E+01	0.470	C+	37
		2475.543	2476.291	45 079.879	– 85 462.862	6–8	3.18E+00	3.90E−01	1.91E+01	0.369	C	43
		2475.119	2475.867	45 289.801	– 85 679.698	4–6	3.72E+00	5.1E−01	1.67E+01	0.312	C	43
		2441.130	2441.870	44 232.512	– 85 184.734	10–10	8.95E−01	8.00E−02	6.43E+00	−0.097	C+	37
		2455.712	2456.455	44 753.799	– 85 462.862	8–8	1.01E+00	9.1E−02	5.9E+00	−0.137	C	43
287	$z\,^4F^\circ$–$e\,^4F$											
		2416.447	2417.181	44 753.799	– 86 124.301	8–10	2.38E+00	2.61E−01	1.66E+01	0.320	C	43
		2418.437	2419.172	45 079.879	– 86 416.333	6–8	2.28E+00	2.67E−01	1.28E+01	0.205	C	43
288	$z\,^4D^\circ$–$c\,^4D$											
		6383.722	6385.486	44 784.761	– 60 445.275	6–6	1.1E−03	6.4E−04	8.1E−02	−2.41	D	43
289	$z\,^4D^\circ$–^4F											
		3453.616	3454.605	44 446.878	– 73 393.745	8–10	8.5E−03	1.9E−03	1.7E−01	−1.82	D	43
290	$z\,^4D^\circ$–$e\,^4D$											
		2856.909	2857.748	44 446.878	– 79 439.467	8–8	1.32E+00	1.62E−01	1.22E+01	0.113	C	38
		2848.106	2848.943	44 784.761	– 79 885.493	6–6	9.9E−01	1.20E−01	6.8E+00	−0.142	C	38
		2844.959	2845.795	45 206.450	– 80 346.016	2–2	5.5E−01	6.7E−02	1.26E+00	−0.87	C	43
		2884.765	2885.611	44 784.761	– 79 439.467	6–8	2.46E−01	4.10E−02	2.34E+00	−0.61	C	38
		2869.313	2870.155	45 044.168	– 79 885.493	4–6	4.04E−01	7.5E−02	2.83E+00	−0.52	C	38
291	$z\,^4D^\circ$–^6P											
		2510.565	2511.321	44 446.878	– 84 266.556	8–8	1.54E−01	1.46E−02	9.6E−01	−0.934	C	37
292	$z\,^4D^\circ$–$f\,^4D$											
		2484.443	2485.193	44 446.878	– 84 685.198	8–8	2.16E+00	2.00E−01	1.31E+01	0.205	C+	37
		2493.878	2494.630	44 784.761	– 84 870.863	6–6	1.74E+00	1.63E−01	8.0E+00	−0.011	C	43
		2501.350	2502.104	45 206.450	– 85 172.809	2–2	1.48E+00	1.39E−01	2.30E+00	−0.55	C	43
		2482.868	2483.618	44 784.761	– 85 048.602	6–4	1.69E+00	1.04E−01	5.1E+00	−0.204	C	43
293	$z\,^4D^\circ$–$e\,^4G$											
		2453.976	2454.719	44 446.878	– 85 184.734	8–10	1.31E+00	1.48E−01	9.56E+00	0.073	C+	37
294	$z\,^4D^\circ$–$e\,^4F$											
		2401.292	2402.023	44 784.761	– 86 416.333	6–8	1.89E+00	2.18E−01	1.03E+01	0.117	C	43
		2390.759	2391.488	44 784.761	– 86 599.738	6–6	1.17E+00	1.0E−01	4.72E+00	−0.222	C	43
295	$c\,^2F$–$z\,^2D^\circ$											
		6179.384	6181.094	44 915.046	– 61 093.413	8–6	4.6E−04	2.0E−04	3.2E−02	−2.80	D	43
		5813.677	5815.289	44 929.55	– 62 125.600	6–4	8.8E−04	3.0E−04	3.4E−02	−2.75	D	43
296	$c\,^2F$–$z\,^2G^\circ$											
		5823.155	5824.769	44 915.046	– 62 083.108	8–10	2.0E−04	1.3E−04	2.0E−02	−2.99	D	43
297	$c\,^2F$–$x\,^2G^\circ$											
		3935.962	3937.076	44 915.046	– 70 314.604	8–10	8.3E−03	2.4E−03	2.5E−01	−1.72	D	43
		3906.035	3907.142	44 929.55	– 70 523.706	6–8	1.1E−02	3.3E−03	2.5E−01	−1.70	D	43
298	$c\,^2F$–$x\,^2D^\circ$											
		3366.967	3367.934	44 915.046	– 74 606.841	8–6	2.2E−02	2.8E−03	2.5E−01	−1.65	D	43
		3381.006	3381.977	44 929.55	– 74 498.057	6–4	3.0E−02	3.4E−03	2.3E−01	−1.69	D	43
299	$c\,^2F$–$w\,^2D^\circ$											
		2959.835	2960.700	44 915.046	– 78 690.846	8–6	1.36E−01	1.34E−02	1.04E+00	−0.97	C	43
300	$c\,^2F$–$v\,^2G^\circ$	*2583.31*	*2584.09*	*44 921.26*	*– 83 619.66*	14–18	2.56E+00	3.29E−01	3.92E+01	0.66	C	43
		2566.220	2566.990	44 915.046	– 83 871.184	8–10	2.61E+00	3.23E−01	2.18E+01	0.412	C	43
		2605.037	2605.816	44 929.55	– 83 305.251	6–8	2.34E+00	3.17E−01	1.63E+01	0.280	C	43
		2604.053	2604.831	44 915.046	– 83 305.251	8–8	1.49E−01	1.52E−02	1.04E+00	−0.92	C	43
301	$c\,^2F$–$v\,^2D^\circ$											
		2566.401	2567.170	44 915.046	– 83 868.45	8–6	2.29E+00	1.69E−01	1.15E+01	0.132	C	43
		2535.362	2536.124	44 929.55	– 84 359.80	6–4	2.46E+00	1.58E−01	7.9E+00	−0.023	C	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
302	$z\,^4P^\circ$–$e\,^4D$											
		3078.680	3079.574	46 967.444	– 79 439.467	6–8	5.5E−01	1.05E−01	6.4E+00	−0.200	C	38
		3076.435	3077.329	47 389.779	– 79 885.493	4–6	3.75E−01	8.0E−02	3.23E+00	−0.496	C	38
		3071.125	3072.017	47 626.076	– 80 177.975	2–4	2.59E−01	7.3E−02	1.48E+00	−0.83	C	43
		3036.963	3037.847	46 967.444	– 79 885.493	6–6	2.22E−01	3.08E−02	1.85E+00	−0.73	C	38
		3048.991	3049.878	47 389.779	– 80 177.975	4–4	3.84E−01	5.4E−02	2.15E+00	−0.67	C	43
303	$z\,^4P^\circ$–^6P											
		2680.233	2681.029	46 967.444	– 84 266.556	6–8	1.10E−01	1.58E−02	8.4E−01	−1.022	C	37
304	$z\,^4P^\circ$–$f\,^4D$											
		2650.482	2651.271	46 967.444	– 84 685.198	6–8	1.60E+00	2.25E−01	1.18E+01	0.131	C+	37
		2667.219	2668.012	47 389.779	– 84 870.863	4–6	1.02E+00	1.63E−01	5.7E+00	−0.185	C	43
		2671.393	2672.187	47 626.076	– 85 048.602	2–4	6.5E−01	1.39E−01	2.44E+00	−0.56	C	43
		2637.498	2638.284	46 967.444	– 84 870.863	6–6	6.2E−01	6.5E−02	3.40E+00	−0.408	C	43
		2654.630	2655.420	47 389.779	– 85 048.602	4–4	8.1E−01	8.6E−02	3.01E+00	−0.464	C	43
		2662.556	2663.348	47 626.076	– 85 172.809	2–2	1.33E+00	1.41E−01	2.48E+00	−0.55	C	43
305	$z\,^4P^\circ$–^4P											
		2466.499	2467.245	47 626.076	– 88 157.116	2–4	2.40E+00	4.38E−01	7.1E+00	−0.058	C	43
306	$d\,^2D1$–$y\,^2D^\circ$											
		5272.397	5273.865	48 039.090	– 67 000.517	6–6	3.9E−03	1.6E−03	1.7E−01	−2.01	D	43
307	$d\,^2D1$–$y\,^2F^\circ$											
		4635.316	4636.614	48 039.090	– 69 606.552	6–8	1.0E−02	4.4E−03	4.0E−01	−1.58	D	43
		4549.192	4550.468	47 674.721	– 69 650.484	4–6	9.2E−03	4.3E−03	2.6E−01	−1.77	D	43
308	$d\,^2D1$–(°)[a]											
		3938.970	3940.085	47 674.721	– 73 054.881	4–6	8.4E−03	2.9E−03	1.5E−01	−1.93	D	43
309	$d\,^2D1$–$x\,^2D^\circ$											
		3711.982	3713.039	47 674.721	– 74 606.841	4–6	1.5E−03	4.5E−04	2.2E−02	−2.74	D	43
310	$d\,^2D1$–$v\,^4D^\circ$											
		2570.548	2571.318	48 039.090	– 86 929.649	6–8	1.1E−03	1.5E−04	7.6E−03	−3.05	D	43
311	$c\,^4P$–$v\,^4D^\circ$											
		2722.741	2723.547	50 212.826	– 86 929.649	6–8	8.2E−01	1.21E−01	6.5E+00	−0.138	C	43
		2683.000	2683.797	49 506.934	– 86 767.577	4–6	7.3E−01	1.18E−01	4.16E+00	−0.327	C	43
		2669.933	2670.726	49 100.976	– 86 543.974	2–4	5.2E−01	1.12E−01	1.97E+00	−0.65	C	43
		2699.199	2700.000	49 506.934	– 86 543.974	4–4	6.2E−01	6.8E−02	2.42E+00	−0.56	C	43
312	$c\,^4P$–$^4P^\circ$											
		2457.101	2457.845	50 212.826	– 90 898.873	6–4	4.71E−01	2.84E−02	1.38E+00	−0.77	C	43
313	$c\,^4F$–$x\,^4G^\circ$											
		6446.410	6448.191	50 187.813	– 65 696.038	8–10	1.3E−03	1.0E−03	1.8E−01	−2.08	D	43
		6331.954	6333.705	50 142.786	– 65 931.334	6–8	1.8E−03	1.4E−03	1.8E−01	−2.07	D	43
314	$c\,^4F$–$x\,^4F^\circ$											
		6305.296	6307.040	50 157.452	– 66 012.750	10–10	1.4E−03	8.1E−04	1.7E−01	−2.09	D	43
		6175.146	6176.854	50 187.813	– 66 377.283	8–8	1.8E−03	1.0E−03	1.7E−01	−2.09	D	43
315	$c\,^4F$–$v\,^4D^\circ$											
		2718.640	2719.446	50 157.452	– 86 929.649	10–8	1.18E+00	1.05E−01	9.4E+00	0.020	C	43
		2732.943	2733.752	50 187.813	– 86 767.577	8–6	9.5E−01	8.0E−02	5.8E+00	−0.194	C	43
316	$c\,^4F$–$^4G^\circ$											
		2508.342	2509.098	50 187.813	– 90 042.779	8–10	3.79E−01	4.48E−02	2.96E+00	−0.446	C	43
317	$c\,^4F$–(°)[a]											
		2506.797	2507.552	50 187.813	– 90 067.347	8–10	1.98E+00	2.34E−01	1.54E+01	0.271	C	43
318	$c\,^4F$–$u\,^2G^\circ$											
		2379.418	2380.144	50 157.452	– 92 171.716	10–10	3.68E−01	3.13E−02	2.45E+00	−0.50	C	43
319	$b\,^4G$–$w\,^4F^\circ$											
		5427.826	5429.335	54 232.195	– 72 650.658	12–10	5.9E−03	2.2E−03	4.7E−01	−1.58	D	43
320	$d\,^2F$–$u\,^2G^\circ$											
		2682.507	2683.304	54 904.222	– 92 171.716	8–10	9.2E−01	1.24E−01	8.8E+00	−0.003	C	43
		2649.469	2650.258	54 870.528	– 92 602.703	6–8	1.98E+00	2.78E−01	1.46E+01	0.222	C	43
321	$d\,^2G$–$^2G^\circ$											
		2429.860	2430.598	58 666.258	– 99 808.40	8–8	1.51E+00	1.33E−01	8.5E+00	0.028	C	43

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
322	$z\,^4G^\circ$–^4H											
		2327.876	2328.591	60 807.230 –	103 751.66	10–12	1.08E+00	1.06E−01	8.1E+00	0.024	C	43
323	$z\,^4I^\circ$–$e\,^4H$											
		2717.878	2718.683	61 347.614 –	98 130.131	16–14	1.51E+00	1.47E−01	2.10E+01	0.370	C	43
324	$z\,^4I^\circ$–^4I											
		2353.470	2354.190	61 587.214 –	104 064.670	12–14	4.98E+00	4.83E−01	4.49E+01	0.76	C	43
325	$z\,^2I^\circ$–$e\,^2H$											
		2716.565	2717.370	62 293.164 –	99 093.452	14–12	1.35E+00	1.28E−01	1.60E+01	0.254	C	43
326	$z\,^2I^\circ$–^2K											
		2390.098	2390.826	62 293.164 –	104 119.71	14–16	5.5E+00	5.4E−01	6.0E+01	0.88	C	43
		2400.050	2400.780	62 662.244 –	104 315.37	12–14	4.57E+00	4.60E−01	4.37E+01	0.74	C	43
327	$y\,^4G^\circ$–^4H											
		2411.808	2412.542	63 948.790 –	105 398.852	10–12	4.33E+00	4.53E−01	3.60E+01	0.66	C	43
328	$y\,^2G^\circ$–^2H											
		2442.376	2443.116	64 831.943 –	105 763.270	10–12	2.75E+00	2.96E−01	2.38E+01	0.471	C	43
		2443.711	2444.452	65 109.679 –	106 018.643	8–10	1.44E+00	1.61E−01	1.03E+01	0.109	C	43
329	$y\,^4H^\circ$–$f\,^4G$											
		2763.655	2764.472	66 411.686 –	102 584.963	14–12	1.34E+00	1.32E−01	1.68E+01	0.266	C	43
330	$w\,^4F^\circ$–^4D											
		2765.128	2765.945	72 650.658 –	108 804.667	10–8	1.47E+00	1.35E−01	1.23E+01	0.130	C	43
331	$e\,^6F$–$^2[5]^\circ$											
		5035.708	5037.113	82 978.677 –	102 831.320	10–12	9.4E−01	4.29E−01	7.1E+01	0.63	C	43
		5030.630	5032.033	82 978.677 –	102 851.360	10–10	7.1E−01	2.70E−01	4.47E+01	0.431	C	43
332	$e\,^6F$–$^2[6]^\circ$											
		5001.959	5003.354	82 853.658 –	102 840.250	12–14	1.57E+00	6.9E−01	1.36E+02	0.92	C	43
333	$e\,^6F$–$^2[4]^\circ$											
		4990.509	4991.902	83 308.194 –	103 340.64	6–8	5.2E−01	2.61E−01	2.58E+01	0.195	C	43
334	$e\,^6G$–$^2[6]^\circ$											
		5316.225	5317.704	84 035.14 –	102 840.25	14–14	3.69E−01	1.56E−01	3.83E+01	0.340	C	43
335	$e\,^6G$–$^2[6]^\circ$											
		5227.481	5228.936	84 296.83 –	103 421.18	12–14	1.22E+00	5.8E−01	1.21E+02	0.85	C	43
336	$e\,^6G$–$^2[5]^\circ$											
		5264.177	5265.642	84 710.685 –	103 701.72	8–10	4.76E−01	2.48E−01	3.43E+01	0.297	C	43
337	$e\,^6G$–$^2[4]^\circ$											
		5251.233	5252.695	84 844.834 –	103 882.68	6–8	8.0E−01	4.43E−01	4.59E+01	0.424	C	43
338	$e\,^6G$–$^2[3]^\circ$											
		5247.952	5249.413	84 938.18 –	103 987.93	4–6	1.43E+00	8.9E−01	6.1E+01	0.55	C	43
339	^6P–$^2[4]^\circ$											
		5149.465	5150.900	84 266.556 –	103 680.64	8–10	9.0E−01	4.47E−01	6.1E+01	0.55	C	43
340	^6P–$^2[2]^\circ$											
		5144.355	5145.788	84 424.37 –	103 857.74	4–6	8.5E−01	5.1E−01	3.43E+01	0.307	C	43
341	$f\,^4D$–$^2[4]^\circ$											
		5493.833	5495.359	84 685.198 –	102882.37	8–10	4.01E−01	2.27E−01	3.28E+01	0.259	C	43
342	$f\,^4D$–$^2[3]^\circ$											
		5529.053	5530.589	84 870.863 –	102 952.12	6–6	2.01E−01	9.2E−02	1.00E+01	−0.258	C	43
343	$f\,^4D$–$^2[4]^\circ$											
		5306.180	5307.656	84 870.863 –	103 711.57	6–8	3.28E−01	1.85E−01	1.94E+01	0.044	C	43
344	$e\,^4G$–$^2[6]^\circ$											
		5544.763	5546.303	84 863.351 –	102 893.38	12–12	2.49E−01	1.15E−01	2.51E+01	0.139	C	43
345	$e\,^4G$–$^2[7]^\circ$											
		5506.195	5507.724	84 863.351 –	103 019.67	12–14	1.14E+00	6.0E−01	1.31E+02	0.86	C	43
346	$e\,^4G$–$^2[5]^\circ$											
		5510.779	5512.310	85 184.734 –	103 325.95	10–12	2.28E−01	1.25E−01	2.26E+01	0.096	C	43
347	$e\,^4G$–$^2[6]^\circ$											
		5387.063	5388.561	84 863.351 –	103 421.18	12–14	5.2E−01	2.63E−01	5.6E+01	0.499	C	43
		5482.308	5483.831	85 184.734 –	103 420.16	10–12	4.78E−01	2.59E−01	4.67E+01	0.413	C	43
348	$e\,^4G$–$^2[5]^\circ$											

TABLE 7. Fe II allowed transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å)	E_i (cm^{-1})	E_k (cm^{-1})	g_i–g_k	A_{ki} (10^8 s^{-1})	f_{ik}	S (a.u.)	log gf	Acc.	Source
		5402.059	5403.561	85 184.734 –	103 691.05	10–12	5.6E−01	2.94E−01	5.2E+01	0.469	C	43
349	$e\,^4G-^2[4]^\circ$											
		5429.988	5431.498	85 462.862 –	103 873.99	8–10	6.0E−01	3.34E−01	4.78E+01	0.427	C	43
350	$e\,^4G-^2[3]^\circ$											
		5465.931	5467.450	85 679.698 –	103 969.76	6–8	6.2E−01	3.71E−01	4.01E+01	0.348	C	43
351	$^6S-^2[3]^\circ$											
		5395.857	5397.357	85 495.304 –	104 022.89	6–8	5.5E−01	3.21E−01	3.42E+01	0.285	C	43
352	$e\,^4F-^2[6]^\circ$											
		5961.705	5963.357	86 124.301 –	102 893.38	10–12	7.4E−01	4.73E−01	9.3E+01	0.67	C	43
353	$e\,^4F-^2[4]^\circ$											
		5965.622	5967.275	86 124.301 –	102 882.37	10–10	2.19E−01	1.17E−01	2.30E+01	0.068	C	43
354	$e\,^4F-^2[5]^\circ$											
		5902.825	5904.461	86 416.333 –	103 352.68	8–10	4.98E−01	3.26E−01	5.1E+01	0.416	C	43
355	$e\,^4F-^2[3]^\circ$											
		5955.698	5957.348	86 599.738 –	103 385.73	6–8	4.19E−01	2.97E−01	3.50E+01	0.252	C	43
356	$e\,^4F-^2[3]^\circ$											
		5885.015	5886.646	86 710.837 –	103 698.44	4–6	6.4E−01	4.96E−01	3.85E+01	0.298	C	43
357	$e\,^4F-^2[5]^\circ$											
		5783.630	5785.234	86 416.333 –	103 701.72	8–10	4.62E−01	2.90E−01	4.42E+01	0.365	C	43

[a]The *LS*-coupling designation of this term is not available.

TABLE 8. Fe II forbidden transitions—List of tabulated lines

Wavelength (Å)	Multiplet No.
in air	
2797.62	29
2825.90	29
2829.92	29
2848.41	29
2852.49	29
2907.79	28
2955.72	28
2991.80	28
3003.17	28
3028.60	28
3164.25	27
3175.38	11
3214.67	11
3217.49	27
3224.55	11
3244.18	11
3254.24	11
3256.73	11
3260.29	27
3275.02	11
3277.12	11
3277.55	11
3289.46	11
3289.89	11
3290.28	27
3318.38	26
3357.87	43

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3376.20	25
3380.95	26
3384.95	43
3387.09	25
3390.73	43
3402.50	26
3404.12	43
3428.24	26
3440.99	25
3450.40	26
3452.31	25
3455.11	25
3484.01	26
3489.98	25
3501.63	25
3504.02	25
3504.51	25
3505.80	24
3524.38	25
3528.27	24
3532.86	42
3536.25	25
3538.69	25
3539.19	25
3575.72	24
3579.80	24
3588.23	42
3604.60	42
3625.77	42
3628.65	24
3642.49	42

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
3664.70	42
3834.72	10
3874.07	9
3905.63	9
3913.41	41
3932.71	9
3937.79	9
3949.27	9
3979.78	10
4040.88	55
4049.11	55
4073.61	55
4081.98	55
4112.43	55
4120.96	55
4146.65	22
4149.10	23
4157.91	40
4177.20	22
4197.80	23
4208.82	54
4231.55	22
4234.82	40
4243.97	22
4244.34	54
4244.81	22
4249.08	39
4266.35	39
4268.67	40
4276.83	22
4280.08	23
4286.50	54
4287.39	8
4305.89	22
4319.62	22
4321.92	40
4329.43	39
4346.85	22
4351.05	39
4351.81	39
4352.78	22
4356.14	23
4358.36	22
4359.33	8
4372.43	22
4382.74	7
4382.97	38
4388.87	53
4402.60	39
4406.38	39
4409.85	23
4413.39	53
4413.78	8
4416.27	7
4427.51	53
4432.45	7
4439.71	39

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
4452.10	8
4452.46	53
4457.94	7
4468.51	38
4470.29	7
4474.90	8
4479.12	66
4488.75	7
4492.63	7
4498.87	53
4509.60	7
4514.90	7
4528.38	7
4533.00	7
4576.39	66
4586.96	66
4632.27	6
4639.67	5
4664.44	5
4728.07	5
4745.48	21
4772.06	5
4774.72	21
4798.27	5
4814.53	21
4852.73	21
4874.48	21
4889.62	5
4898.61	65
4905.34	21
4947.37	21
4950.74	21
4958.22	5
4965.79	4
4973.39	21
5005.51	21
5006.62	5
5020.23	21
5027.88	65
5035.40	76
5039.08	20
5043.52	21
5048.19	76
5060.08	65
5072.39	20
5083.73	37
5107.94	19
5111.63	20
5158.00	19
5158.78	20
5163.95	37
5172.47	76
5181.95	19
5184.79	20
5185.97	76
5199.17	37
5220.06	20

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
5261.62	20
5268.87	19
5273.35	19
5278.37	37
5280.26	17
5283.11	37
5296.83	20
5298.88	75
5333.65	20
5347.65	19
5362.05	18
5376.45	20
5412.65	18
5433.13	19
5450.89	75
5477.24	36
5495.82	18
5527.34	18
5527.61	36
5545.90	35
5551.31	52
5556.29	19
5580.82	52
5586.90	52
5587.45	74
5588.15	52
5613.27	52
5627.25	74
5643.44	52
5643.97	19
5648.93	94
5649.66	52
5650.94	52
5654.86	18
5659.83	35
5662.03	64
5665.04	94
5673.21	64
5683.57	35
5718.22	52
5724.60	52
5725.91	52
5745.70	18
5746.97	36
5750.85	100
5753.81	35
5756.74	74
5767.54	100
5798.99	74
5835.45	64
5843.89	36
5847.32	64
5858.24	63
5870.02	63
5901.26	36
5913.26	94
5930.91	94

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
5982.65	93
6044.08	63
6094.96	100
6097.08	99
6113.72	100
6188.55	62
6229.26	16
6261.12	62
6275.51	16
6279.95	93
6325.50	100
6353.12	92
6396.31	62
6404.61	92
6440.40	16
6471.90	83
6473.86	62
6482.31	98
6485.28	99
6511.23	118
6535.93	98
6544.77	118
6558.50	16
6566.40	118
6584.41	118
6602.93	73
6606.30	118
6671.92	34
6922.88	98
6933.66	34
6944.88	61
6966.31	34
6984.08	98
7011.23	34
7047.99	34
7131.12	61
7131.76	33
7155.16	15
7172.00	15
7214.71	33
7281.63	33
7328.43	51
7330.22	72
7370.92	33
7388.18	15
7432.25	72
7437.01	117
7452.54	15
7509.07	117
7539.65	50
7561.29	117
7613.12	33
7616.28	82
7637.54	3
7665.30	3
7685.58	71
7686.94	3

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
7699.49	91
7710.78	33
7720.18	91
7733.16	3
7734.79	72
7764.68	33
7874.65	82
7896.29	82
7953.51	81
7975.25	81
8037.25	33
8044.84	131
8077.54	131
8199.03	91
8206.20	126
8228.10	33
8252.36	50
8256.21	126
8259.37	81
8306.05	108
8387.23	108
8411.78	108
8479.91	108
8489.69	60
8505.01	108
8574.89	80
8575.23	107
8600.50	107
8616.95	14
8706.83	90
8708.75	107
8715.80	60
8734.82	107
8739.07	130
8825.05	107
8851.15	90
8861.43	131
8885.62	60
8891.91	14
8931.48	80
9033.50	14
9051.95	14
9083.42	80
9116.41	89
9133.62	60
9202.15	116
9214.68	140
9226.62	14
9231.71	116
9267.56	14
9351.19	116
9381.72	116
9384.81	97
9399.04	14
9436.63	140
9465.40	116
9469.46	97

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
9470.93	14
9481.66	140
9490.59	97
9513.84	59
9517.77	90
9552.75	129
9590.45	79
9596.68	106
9669.66	129
9682.08	59
9711.19	130
9795.16	32
9949.26	79
9957.42	32
10 013.9	59
10 028.6	32
10 038.7	79
10 127.3	88
10 156.5	49
10 200.4	59
10 321.3	58
10 365.8	49
10 432.5	79
10 440.0	97
10 461.3	97
10 465.7	97
10 571.9	88
10 683.0	48
10 708.4	48
10 789.0	48
10 796.5	70
10 874.1	129
10 880.0	115
10 886.9	105
10 910.7	48
10 941.3	48
10 954.1	48
11 034.9	115
11 043.6	105
11 065.6	48
11 159.4	97
11 159.9	105
11 164.8	70
11 185.1	139
11 301.5	114
11 351.6	105
11 442.9	47
11 446.9	70
11 527.1	114
11 581.0	139
11 662.6	69
11 701.2	114
11 753.2	139
11 833.1	114
11860.4	114
11 866.1	114
11 990.5	47

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
11 991.2	114
11 997.0	114
12 438.0	125
12 566.8	2
12 568.6	113
12 703.5	2
12 775.9	113
12 787.8	2
12 897.5	113
12 942.7	2
12 977.7	2
13 049.3	125
13 094.2	46
13 192.2	113
13 205.5	2
13 277.8	2
13 294.9	125
13 363.3	124
13 426.7	125
13 460.8	69
13 504.0	46
13 701.9	134
13 967.7	47
13 985.2	134
14 053.5	134
14 195.5	46
14 487.1	69
14 594.4	142
14 603.0	142
14 607.8	46
14 644.7	142
14 702.4	142
14 706.3	87
14 753.4	142
14 833.3	133
14 909.1	133
14 963.7	142
15 246.4	133
15 334.7	13
15 582.3	86
15 994.7	13
16 160.3	138
16 251.6	138
16 435.5	13
16 637.7	13
16 768.8	13
16 999.7	138
17 111.3	13
17 147.4	123
17 148.3	78
17 437.2	104
17 449.4	13
17 484.2	31
17 773.8	86
17 842.7	104
17 851.2	128
17 971.0	13

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
18 000.2	13
18 022.9	78
18 093.9	13
18 113.9	31
18 134.4	31
18 967.9	86
19 523.3	96
20 067.0	45
20 151.2	57
20 167.9	96
20 325.6	103
20 460.1	45
20 902.3	122
20 959.8	141
21 229.9	122
21 327.7	45
21 356.9	112
21 372.1	112
21 541.9	103
21 787.5	103
21 812.8	122
22 103.7	96
22 231.5	137
22 237.7	57
22 436.4	45
22 534.6	57
22 538.2	128
22 558.6	128
22 660.7	132
22 721.1	102
22 851.1	102
23 016.6	102
23 414.4	102
23 669.5	102
23 699.4	132
23 933.1	102
23 984.3	136
24 771.6	132
25 003.0	102
25 146.9	96
26 906.5	111
28 221.7	111
28 297.0	111
28 981.3	135
29 597.5	96
29 892.4	110
30 807.6	110
31 524.5	110
31 555.8	110
31 797.2	135
32 083.0	110
32 526.1	135
32 861.2	110
33 058.4	110
33 380.2	110
33 919.0	68
35 812.3	110

TABLE 8. Fe II forbidden transitions—List of tabulated lines—Continued

Wavelength (Å)	Multiplet No.
41 289.6	68
46 362.8	68
49 059.0	143
Wavenumber (cm^{-1})	**Multiplet No.**
114.440	1
173.152	109
178.751	101
194.930	1
198.774	44
279.511	12
282.893	1
288.516	30
376.544	119
384.790	1
407.853	12
436.639	30
465.47	77
524.71	56
526.134	67
557.530	12
597.797	95
741.397	120
791.08	84
981.473	95
1145.150	127
1295.095	85
1509.594	121
1564.989	121
1638.783	121
1961.589	143

3.2.3. Forbidden Transitions

Almost all of our tabulated data (see Tables 8 and 9) are from the extensive calculations of Quinet *et al.*,[46] in which configuration interaction and relativistic effects have been taken into account to some degree. They applied two independent computer programs for their numerical calculations, the Superstructure (SST) and the relativistic Hartree–Fock codes (HFR), since they felt that comprehensive comparisons between the two independent sets of data may be of help in assessing the reliability of the results. A detailed comparison of the data shows that for most of the stronger lines, the agreement between the two different approaches is within 15%, and for the weaker lines it is in the range from 15% to 40%. Generally, the *A* values from the HFR code are somewhat larger than from the SST data. There are some larger discrepancies, and many of these can be traced to cancellation in the transition integral. Cancellation is indicated (and marked) in some HFR results. Quinet *et al.*[46] estimate that their SST results are more accurate than their HFR data, since configuration interaction effects are more extensively treated in the SST model. We have therefore always used their SST data. If the two types of radiation, *M*1 and *E*2, contribute significantly to the total intensity of a line, i.e., if the transition probability of one is at least 1% of the other, then the sum of both components is given. This is indicated in the tables by "*M*1,*E*2" in the column "Type," and in these cases no conversion to the line strength *S* was possible. Quinet *et al.*[46] mention several comparisons of their SST results with astrophysical observations and find in most cases good agreement. Experimental results were recently obtained by Hartman *et al.*[47] for 13 transitions by combining laboratory lifetime measurements, carried out on a storage ring, with astrophysically observed branching fractions. They find an average of 0.88 for the ratio "SST/Experiment" and an even better value of 1.01 for the ratio "HFR/Experiment." Finally, for the line strengths of a few *M*1 fine structure transitions within the same configuration and term, we have applied a general formula developed by Shortley *et al.*[48] for the case of near *LS*-coupling conditions.

3.2.4. References for Fe II Forbidden Transitions

[46] P. Quinet, M. Le Dourneuf, and C. J. Zeippen, Astron. Astrophys., Suppl. Ser. **120**, 361 (1996).

[47] H. Hartman, A. Derkatch, M. P. Donnelly, T. Gull, A. Hibbert, S. Johansson, H. Lundberg, S. Mannervik, L.-O. Norlin, D. Rostohar, P. Royen, and P. Schef, Astron. Astrophys. **397**, 1143 (2003).

[48] G. H. Shortley, L. H. Aller, J. G. Baker, and D. H. Menzel, Astrophys. J. **93**, 178 (1941).

TABLE 9. Fe II forbidden transitions

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
1	$a\,^6D-a\,^6D$										
			384.790 cm^{-1}	0.000	– 384.790	10–8	*M*1	2.13E−03	1.11E+01	B	46
			282.893 cm^{-1}	384.790	– 667.683	8–6	*M*1	1.57E−03	1.54E+01	B	46
			194.930 cm^{-1}	667.683	– 862.613	6–4	*M*1	7.19E−04	1.44E+01	B	48
			114.440 cm^{-1}	862.613	– 977.053	4–2	*M*1	1.89E−04	9.33E+00	B	48
2	$a\,^6D-a\,^4D$										
		12 566.8	7955.299 cm^{-1}	0.000	– 7955.299	10–8	*M*1	4.74E−03	2.79E−03	C+	46
		13 205.5	7570.509 cm^{-1}	384.790	– 7955.299	8–8	*M*1	1.31E−03	9.0E−04	C	46
		12 942.7	7724.255 cm^{-1}	667.683	– 8391.938	6–6	*M*1	1.98E−03	9.6E−04	C	46
		12 787.8	7817.841 cm^{-1}	862.613	– 8680.454	4–4	*M*1	2.45E−03	7.6E−04	C	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		12 703.5	7869.715 cm^{-1}	977.053	–	8846.768	2–2	*M*1	3.32E−03	5.1E−04	C	46
		13 277.8	7529.325 cm^{-1}	862.613	–	8391.938	4–6	*M*1	1.17E−03	6.1E−04	C	46
		12 977.7	7703.401 cm^{-1}	977.053	–	8680.454	2–4	*M*1	1.08E−03	3.50E−04	C	46
3	$a\ ^6D–a\ ^4P$											
		7637.54	7639.64	384.790	–	13 474.411	8–6	*M*1	6.6E−03	6.6E−04	C	46
		7686.94	7689.05	667.683	–	13 673.185	6–4	*M*1	6.8E−03	4.59E−04	C	46
		7665.30	7667.41	862.613	–	13 904.824	4–2	*M*1	6.2E−03	2.08E−04	C	46
		7733.16	7735.29	977.053	–	13 904.824	2–2	*M*1	1.93E−03	6.6E−05	C	46
4	$a\ ^6D–a\ ^2D2$											
		4965.79	4967.17	384.790	–	20 516.960	8–6	*M*1	1.2E−02	3.2E−04	D+	46
5	$a\ ^6D–b\ ^4P$											
		4889.62	4890.98	384.790	–	20 830.582	8–6	*M*1	3.41E−01	8.87E−03	C+	46
		4728.07	4729.39	667.683	–	21 812.055	6–4	*M*1	4.53E−01	7.11E−03	C+	46
		4639.67	4640.97	862.613	–	22 409.852	4–2	*M*1	4.67E−01	3.46E−03	C+	46
		4958.22	4959.60	667.683	–	20 830.582	6–6	*M*1	5.0E−03	1.36E−04	C	46
		4772.06	4773.40	862.613	–	21 812.055	4–4	*M*1	2.30E−02	3.71E−04	C+	46
		4664.44	4665.75	977.053	–	22 409.852	2–2	*M*1	1.47E−01	1.11E−03	C+	46
		5006.62	5008.02	862.613	–	20 830.582	4–6	*M*1	2.70E−02	7.54E−04	C+	46
		4798.27	4799.62	977.053	–	21 812.055	2–4	*M*1	6.75E−02	1.11E−03	C+	46
6	$a\ ^6D–a\ ^4H$											
		4632.27	4633.57	0.000	–	21 581.638	10–10	*M*1	2.01E−03	7.4E−05	C	46
7	$a\ ^6D–b\ ^4F$											
		4416.27	4417.51	0.000	–	22 637.205	10–10	*M*1	4.19E−01	1.34E−02	C+	46
		4457.94	4459.20	384.790	–	22 810.357	8–8	*M*1	2.55E−01	6.71E−03	C+	46
		4488.75	4490.01	667.683	–	22 939.358	6–6	*M*1	1.35E−01	2.72E−03	C	46
		4509.60	4510.87	862.613	–	23 031.300	4–4	*M*1	5.2E−02	7.1E−04	C	46
		4382.74	4383.97	0.000	–	22 810.357	10–8	*M*1	5.14E−02	1.28E−03	C+	46
		4432.45	4433.69	384.790	–	22 939.358	8–6	*M*1	4.88E−02	9.46E−04	C+	46
		4470.29	4471.55	667.683	–	23 031.300	6–4	*M*1	2.51E−02	3.33E−04	C+	46
		4492.63	4493.89	384.790	–	22 637.205	8–10	*M*1	5.61E−02	1.89E−03	C+	46
		4514.90	4516.17	667.683	–	22 810.357	6–8	*M*1	6.00E−02	1.64E−03	C+	46
		4528.38	4529.65	862.613	–	22 939.358	4–6	*M*1	3.98E−02	8.23E−04	C+	46
		4533.00	4534.27	977.053	–	23 031.300	2–4	*M*1	1.45E−02	2.00E−04	C	46
8	$a\ ^6D–a\ ^6S$											
		4287.39	4288.60	0.000	–	23 317.633	10–6	*E*2	1.37E+00	1.06E+01	C	46
		4359.33	4360.56	384.790	–	23 317.633	8–6	*E*2	1.02E+00	8.6E+00	C	46
		4413.78	4415.02	667.683	–	23 317.633	6–6	*E*2	7.3E−01	6.5E+00	C	46
		4452.10	4453.35	862.613	–	23 317.633	4–6	*E*2	4.65E−01	4.36E+00	C	46
		4474.90	4476.16	977.053	–	23 317.633	2–6	*E*2	2.27E−01	2.19E+00	C	46
9	$a\ ^6D–a\ ^4G$											
		3874.07	3875.17	0.000	–	25 805.328	10–10	*M*1	6.8E−03	1.5E−04	D	46
		3905.63	3906.73	384.790	–	25 981.629	8–8	*M*1	4.0E−03	7.1E−05	D	46
		3937.79	3938.91	667.683	–	26 055.423	6–6	*M*1	1.2E−03	1.6E−05	E	46
		3932.71	3933.83	384.790	–	25 805.328	8–10	*M*1	1.5E−03	3.5E−05	D+	46
		3949.27	3950.39	667.683	–	25 981.629	6–8	*M*1	1.2E−03	2.2E−05	D	46
10	$a\ ^6D–b\ ^2P$											
		3979.78	3980.91	667.683	–	25 787.598	6–4	*M*1	4.05E−03	3.79E−05	C	46
		3834.72	3835.81	862.613	–	26 932.748	4–2	*M*1	1.5E−03	6.1E−06	D+	46
11	$a\ ^6D–b\ ^4D$											
		3175.38	3176.30	0.000	–	31 483.176	10–8	*M*1	1.90E−01	1.81E−03	C+	46
		3224.55	3225.48	384.790	–	31 387.948	8–6	*M*1	2.94E−02	2.19E−04	C+	46
		3256.73	3257.67	667.683	–	31 364.440	6–4	*M*1	1.05E−03	5.4E−06	C	46
		3277.12	3278.06	862.613	–	31 368.450	4–2	*M*1	3.52E−02	9.19E−05	C+	46
		3214.67	3215.60	384.790	–	31 483.176	8–8	*M*1	6.0E−02	5.9E−04	C	46
		3254.24	3255.18	667.683	–	31 387.948	6–6	*M*1	1.01E−01	7.75E−04	C+	46
		3277.55	3278.49	862.613	–	31 364.440	4–4	*M*1	1.34E−01	7.00E−04	C+	46
		3289.46	3290.40	977.053	–	31 368.450	2–2	*M*1	1.89E−01	4.99E−04	C+	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		3244.18	3245.12	667.683	–	31 483.176	6–8	*M*1	2.53E−02	2.56E−04	C+	46
		3275.02	3275.97	862.613	–	31 387.948	4–6	*M*1	4.91E−02	3.84E−04	C+	46
		3289.89	3290.84	977.053	–	31 364.440	2–4	*M*1	5.40E−02	2.85E−04	C+	46
12	$a\,^4F$–$a\,^4F$											
			557.530 cm^{-1}	1872.567	–	24 30.097	10–8	*M*1	5.84E−03	9.99E+00	B	46
			407.853 cm^{-1}	2430.097	–	28 37.950	8–6	*M*1	3.92E−03	1.29E+01	B	46
			279.511 cm^{-1}	2837.950	–	31 17.461	6–4	*M*1	1.41E−03	9.58E+00	B	46
13	$a\,^4F$–$a\,^4D$											
		15334.7	6519.371 cm^{-1}	1872.567	–	83 91.938	10–6	*E*2	3.12E−03	1.42E+01	C	46
		15994.7	6250.357 cm^{-1}	2430.097	–	86 80.454	8–4	*E*2	4.18E−03	1.57E+01	C	46
		16637.7	6008.818 cm^{-1}	2837.950	–	88 46.768	6–2	*E*2	4.75E−03	1.08E+01	C	46
		16435.5	6082.732 cm^{-1}	1872.567	–	79 55.299	10–8	*E*2	6.0E−03	5.1E+01	C	46
		16768.8	5961.841 cm^{-1}	2430.097	–	83 91.938	8–6	*E*2	2.49E−03	1.77E+01	C	46
		17111.3	5842.504 cm^{-1}	2837.950	–	86 80.454	6–4	*E*2	1.18E−03	6.2E+00	C	46
		17449.4	5729.307 cm^{-1}	3117.461	–	88 46.768	4–2	*E*2	2.47E−03	7.1E+00	C	46
		18093.9	5525.202 cm^{-1}	2430.097	–	79 55.299	8–8	*E*2	1.32E−03	1.83E+01	C	46
		18000.2	5553.988 cm^{-1}	2837.950	–	83 91.938	6–6	*E*2	1.82E−03	1.85E+01	C	46
		17971.0	5562.993 cm^{-1}	3117.461	–	86 80.454	4–4	*E*2	2.12E−03	1.42E+01	C	46
14	$a\,^4F$–$a\,^4P$											
		8616.95	8619.32	1872.567	–	13 474.411	10–6	*E*2	3.6E−02	9.1E+00	D+	46
		8891.91	8894.35	2430.097	–	13 673.185	8–4	*E*2	2.21E−02	4.39E+00	C	46
		9033.50	9035.98	2837.950	–	13 904.824	6–2	*E*2	1.61E−02	1.73E+00	C	46
		9051.95	9054.43	2430.097	–	13 474.411	8–6	*M*1,*E*2	8.8E−03	—	D+	46
		9226.62	9229.15	2837.950	–	13 673.185	6–4	*E*2	1.3E−02	3.1E+00	D+	46
		9267.56	9270.11	3117.461	–	13 904.824	4–2	*E*2	2.1E−02	2.6E+00	D+	46
		9399.04	9401.62	2837.950	–	13 474.411	6–6	*M*1,*E*2	1.7E−03	—	D+	46
		9470.93	9473.53	3117.461	–	13 673.185	4–4	*E*2	3.7E−03	9.9E−01	D+	46
15	$a\,^4F$–$a\,^2G$											
		7155.16	7157.13	1872.567	–	15 844.65	10–10	*M*1	1.46E−01	1.98E−02	C+	46
		7172.00	7173.98	2430.097	–	16 369.36	8–8	*M*1	5.51E−02	6.03E−03	C+	46
		6896.17	6898.08	1872.567	–	16 369.36	10–8	*M*1	5.3E−03	5.2E−04	C	46
		7452.54	7454.59	2430.097	–	15 844.65	8–10	*M*1	4.77E−02	7.33E−03	C+	46
		7388.18	7390.21	2837.950	–	16 369.36	6–8	*M*1	4.21E−02	5.04E−03	C+	46
16	$a\,^4F$–$a\,^2P$											
		6275.51	6277.25	2430.097	–	18 360.646	8–4	*E*2	3.2E−03	1.1E−01	D	46
		6229.26	6230.98	2837.950	–	18 886.780	6–2	*E*2	1.7E−03	2.9E−02	D+	46
		6440.40	6442.18	2837.950	–	18 360.646	6–4	*M*1,*E*2	2.33E−02	—	C	46
		6558.50	6560.31	3117.461	–	18 360.646	4–4	*M*1	1.61E−02	6.7E−04	C	46
17	$a\,^4F$–$a\,^2H$											
		5280.26	5281.73	1872.567	–	20 805.77	10–10	*M*1,*E*2	1.2E−03	—	D+	46
18	$a\,^4F$–$a\,^2D2$											
		5362.05	5363.54	1872.567	–	20 516.960	10–6	*E*2	9.1E−03	2.2E−01	E	46
		5527.34	5528.87	2430.097	–	20 516.960	8–6	*M*1	2.78E−01	1.05E−02	C+	46
		5412.65	5414.16	2837.950	–	21 308.04	6–4	*M*1	2.74E−01	6.45E−03	C+	46
		5654.86	5656.43	2837.950	–	20 516.960	6–6	*M*1,*E*2	3.14E−02	—	C+	46
		5495.82	5497.35	3117.461	–	21 308.04	4–4	*M*1	1.47E−01	3.62E−03	C+	46
		5745.70	5747.29	3117.461	–	20 516.960	4–6	*M*1	1.40E−02	5.91E−04	C+	46
19	$a\,^4F$–$b\,^4P$											
		5273.35	5274.81	1872.567	–	20 830.582	10–6	*E*2	4.8E−01	1.1E+01	D+	46
		5158.00	5159.44	2430.097	–	21 812.055	8–4	*E*2	3.8E−01	5.0E+00	D+	46
		5107.94	5109.37	2837.950	–	22 409.852	6–2	*E*2	3.1E−01	1.9E+00	D+	46
		5433.13	5434.64	2430.097	–	20 830.582	8–6	*M*1,*E*2	1.51E−01	—	C	46
		5268.87	5270.34	2837.950	–	21 812.055	6–4	*E*2	2.5E−01	3.6E+00	D+	46
		5181.95	5183.39	3117.461	–	22 409.852	4–2	*E*2	4.4E−01	2.9E+00	D+	46
		5556.29	5557.83	2837.950	–	20 830.582	6–6	*M*1,*E*2	3.01E−02	—	C	46
		5347.65	5349.14	3117.461	–	21 812.055	4–4	*E*2	7.6E−02	1.2E+00	D+	46
		5643.97	5645.53	3117.461	–	20 830.582	4–6	*M*1,*E*2	3.4E−03	—	D+	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
20	$a\ ^4F$–$a\ ^4H$											
		5158.78	5160.21	1872.567	–	21 251.608	10–14	*E*2	5.6E−01	2.54E+01	C	46
		5261.62	5263.09	2430.097	–	21 430.359	8–12	*E*2	4.01E−01	1.74E+01	C	46
		5333.65	5335.13	2837.950	–	21 581.638	6–10	*E*2	3.32E−01	1.28E+01	C	46
		5376.45	5377.95	3117.461	–	21 711.917	4–8	*E*2	3.31E−01	1.06E+01	C	46
		5111.63	5113.05	1872.567	–	21 430.359	10–12	*E*2	1.20E−01	4.49E+00	C	46
		5220.06	5221.51	2430.097	–	21 581.638	8–10	*E*2	1.34E−01	4.64E+00	C	46
		5296.83	5298.30	2837.950	–	21 711.917	6–8	*E*2	1.11E−01	3.31E+00	C	46
		5072.39	5073.81	1872.567	–	21 581.638	10–10	*E*2	2.5E−02	7.6E−01	D+	46
		5184.79	5186.23	2430.097	–	21 711.917	8–8	*E*2	2.39E−02	6.4E−01	C	46
		5039.08	5040.49	1872.567	–	21 711.917	10–8	*E*2	1.9E−03	4.3E−02	D+	46
21	$a\ ^4F$–$b\ ^4F$											
		4814.53	4815.88	1872.567	–	22 637.205	10–10	*E*2	4.6E−01	1.1E+01	D+	46
		4905.34	4906.71	2430.097	–	22 810.357	8–8	*E*2	2.5E−01	5.1E+00	D+	46
		4973.39	4974.78	2837.950	–	22 939.358	6–6	*E*2	1.6E−01	2.6E+00	D+	46
		5020.23	5021.63	3117.461	–	23 031.300	4–4	*E*2	2.1E−01	2.4E+00	D+	46
		4774.72	4776.05	1872.567	–	22 810.357	10–8	*E*2	1.5E−01	2.6E+00	D+	46
		4874.48	4875.85	2430.097	–	22 939.358	8–6	*E*2	2.0E−01	2.9E+00	D+	46
		4950.74	4952.13	2837.950	–	23 031.300	6–4	*E*2	2.0E−01	2.1E+00	D+	46
		4947.37	4948.75	2430.097	–	22 637.205	8–10	*E*2	6.6E−02	1.8E+00	D+	46
		5005.51	5006.91	2837.950	–	22 810.357	6–8	*E*2	9.3E−02	2.1E+00	D+	46
		5043.52	5044.93	3117.461	–	22 939.358	4–6	*E*2	8.5E−02	1.5E+00	D+	46
		4745.48	4746.81	1872.567	–	22 939.358	10–6	*E*2	1.5E−02	1.9E−01	D+	46
		4852.73	4854.09	2430.097	–	23 031.300	8–4	*E*2	2.6E−02	2.5E−01	D+	46
22	$a\ ^4F$–$a\ ^4G$											
		4346.85	4348.07	2430.097	–	25 428.784	8–12	*E*2	2.3E−01	3.8E+00	D+	46
		4352.78	4354.00	2837.950	–	25 805.328	6–10	*E*2	3.45E−01	4.82E+00	C	46
		4372.43	4373.66	3117.461	–	25 981.629	4–8	*E*2	3.1E−01	3.5E+00	D+	46
		4243.97	4245.16	1872.567	–	25 428.784	10–12	*E*2	1.0E+00	1.5E+01	D+	46
		4276.83	4278.03	2430.097	–	25 805.328	8–10	*E*2	7.5E−01	9.6E+00	C	46
		4319.62	4320.83	2837.950	–	25 981.629	6–8	*E*2	6.1E−01	6.5E+00	C	46
		4358.36	4359.59	3117.461	–	26 055.423	4–6	*E*2	8.1E−01	6.8E+00	C	46
		4177.20	4178.37	1872.567	–	25 805.328	10–10	*E*2	1.84E−01	2.09E+00	C	46
		4244.81	4246.01	2430.097	–	25 981.629	8–8	*E*2	3.18E−01	3.14E+00	C	46
		4305.89	4307.10	2837.950	–	26 055.423	6–6	*E*2	3.67E−01	2.91E+00	C	46
		4146.65	4147.82	1872.567	–	25 981.629	10–8	*E*2	1.33E−02	1.17E−01	C	46
		4231.55	4232.75	2430.097	–	26 055.423	8–6	*E*2	3.11E−02	2.26E−01	C	46
23	$a\ ^4F$–$b\ ^2P$											
		4280.08	4281.28	2430.097	–	25 787.598	8–4	*E*2	2.3E−03	1.2E−02	D	46
		4149.10	4150.27	2837.950	–	26 932.748	6–2	*E*2	1.4E−03	3.0E−03	D	46
		4356.14	4357.37	2837.950	–	25 787.598	6–4	*E*2	9.3E−03	5.2E−02	D	46
		4197.80	4198.98	3117.461	–	26 932.748	4–2	*E*2	9.9E−03	2.3E−02	D	46
		4409.85	4411.09	3117.461	–	25 787.598	4–4	*E*2	4.7E−03	2.8E−02	D	46
24	$a\ ^4F$–$b\ ^2G$											
		3505.80	3506.81	1872.567	–	30 388.542	10–10	*M*1,*E*2	4.6E−03	—	D	46
		3528.27	3529.28	2430.097	–	30 764.485	8–8	*M*1,*E*2	2.7E−03	—	D+	46
		3575.72	3576.74	2430.097	–	30 388.542	8–10	*M*1,*E*2	2.7E−03	—	D+	46
		3579.80	3580.82	2837.950	–	30 764.485	6–8	*E*2	1.5E−03	6.4E−03	D	46
		3628.65	3629.69	2837.950	–	30 388.542	6–10	*E*2	1.3E−03	7.3E−03	D	46
25	$a\ ^4F$–$b\ ^4D$											
		3387.09	3388.06	1872.567	–	31 387.948	10–6	*E*2	2.5E−01	6.0E−01	D+	46
		3455.11	3456.10	2430.097	–	31 364.440	8–4	*E*2	4.4E−01	7.7E−01	D+	46
		3504.02	3505.02	2837.950	–	31 368.450	6–2	*E*2	6.4E−01	6.0E−01	D+	46
		3376.20	3377.17	1872.567	–	31 483.176	10–8	*E*2	8.5E−01	2.7E+00	D+	46
		3452.31	3453.29	2430.097	–	31 387.948	8–6	*E*2	4.2E−01	1.1E+00	D+	46
		3504.51	3505.51	2837.950	–	31 364.440	6–4	*E*2	2.3E−01	4.4E−01	D+	46
		3538.69	3539.70	3117.461	–	31 368.450	4–2	*E*2	4.7E−01	4.7E−01	D+	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		3440.99	3441.98	2430.097	–	31 483.176	8–8	*E*2	2.9E−01	1.0E+00	D+	46
		3501.63	3502.63	2837.950	–	31 387.948	6–6	*E*2	4.0E−01	1.1E+00	D+	46
		3539.19	3540.20	3117.461	–	31 364.440	4–4	*E*2	4.5E−01	9.0E−01	D+	46
		3489.98	3490.98	2837.950	–	31 483.176	6–8	*E*2	4.2E−02	1.6E−01	D+	46
		3536.25	3537.26	3117.461	–	31 387.948	4–6	*E*2	7.7E−02	2.3E−01	D+	46
		3524.38	3525.38	3117.461	–	31 483.176	4–8	*E*2	1.9E−03	7.5E−03	D+	46
26	$a\ ^4F–b\ ^2F$											
		3318.38	3319.34	1872.567	–	31 999.048	10–8	*M*1	3.60E−02	3.90E−04	C	46
		3402.50	3403.48	2430.097	–	31 811.822	8–6	*M*1,*E*2	9.0E−03	—	D	46
		3380.95	3381.93	2430.097	–	31 999.048	8–8	*M*1	6.0E−03	6.8E−05	D+	46
		3450.40	3451.39	2837.950	–	31 811.822	6–6	*M*1,*E*2	7.2E−03	—	D	46
		3428.24	3429.23	2837.950	–	31 999.048	6–8	*M*1,*E*2	1.6E−02	—	D	46
		3484.01	3485.01	3117.461	–	31 811.822	4–6	*M*1,*E*2	4.11E−02	—	C	46
27	$a\ ^4F–c\ ^2G$											
		3164.25	3165.17	1872.567	–	33 466.463	10–10	*M*1,*E*2	2.73E−03	—	C+	46
		3217.49	3218.42	2430.097	–	33 501.253	8–8	*M*1,*E*2	1.39E−03	—	C+	46
		3260.29	3261.23	2837.950	–	33 501.253	6–8	*M*1,*E*2	1.66E−03	—	C	46
		3290.28	3291.23	3117.461	–	33 501.253	4–8	*E*2	2.2E−03	6.2E−03	D	46
28	$a\ ^4F–b\ ^2D$											
		2907.79	2908.64	1872.567	–	36 252.918	10–6	*E*2	2.1E−03	2.3E−03	D+	46
		2955.72	2956.58	2430.097	–	36 252.918	8–6	*M*1,*E*2	4.4E−03	—	D	46
		3003.17	3004.05	2837.950	–	36 126.387	6–4	*M*1,*E*2	8.6E−03	—	E	46
		2991.80	2992.67	2837.950	–	36 252.918	6–6	*M*1,*E*2	1.1E−03	—	D	46
		3028.60	3029.48	3117.461	–	36 126.387	4–4	*M*1,*E*2	1.1E−02	—	E	46
29	$a\ ^4F–c\ ^2D$											
		2797.62	2798.45	2430.097	–	38 164.194	8–6	*M*1,*E*2	2.3E−03	—	E	46
		2825.90	2826.73	2837.950	–	38 214.507	6–4	*M*1,*E*2	1.5E−03	—	E	46
		2829.92	2830.76	2837.950	–	38 164.194	6–6	*M*1,*E*2	5.9E−03	—	E	46
		2848.41	2849.24	3117.461	–	38 214.507	4–4	*M*1,*E*2	7.5E−03	—	E	46
		2852.49	2853.33	3117.461	–	38 164.194	4–6	*M*1,*E*2	2.8E−03	—	E	46
30	$a\ ^4D–a\ ^4D$											
			436.639 cm^{-1}	7955.299	–	83 91.938	8–6	*M*1	2.56E−03	6.84E+00	B	46
			288.516 cm^{-1}	8391.938	–	86 80.454	6–4	*M*1	1.36E−03	8.40E+00	B	46
31	$a\ ^4D–a\ ^4P$											
		17484.2	5717.886 cm^{-1}	7955.299	–	13 673.185	8–4	*E*2	2.25E−03	1.31E+01	C+	46
		18134.4	5512.886 cm^{-1}	8391.938	–	13 904.824	6–2	*E*2	2.76E−03	9.68E+00	C+	46
		18113.9	5519.112 cm^{-1}	7955.299	–	13 474.411	8–6	*M*1,*E*2	2.23E−03	—	C+	46
32	$a\ ^4D–a\ ^2P$											
		10028.6	9968.708 cm^{-1}	8391.938	–	18 360.646	6–4	*M*1	6.84E−03	1.02E−03	C+	46
		9795.16	9797.84	8680.454	–	18 886.780	4–2	*M*1,*E*2	6.67E−03	—	C+	46
		9957.42	9960.15	8846.768	–	18 886.780	2–2	*M*1	1.98E−03	1.45E−04	C+	46
33	$a\ ^4D–b\ ^4P$											
		7214.71	7216.70	7955.299	–	21 812.055	8–4	*E*2	3.0E−03	2.1E−01	E	46
		7131.76	7133.73	8391.938	–	22 409.852	6–2	*E*2	4.1E−03	1.3E−01	E	46
		7764.68	7766.82	7955.299	–	20 830.582	8–6	*M*1,*E*2	3.08E−02	—	C+	46
		7281.63	7283.64	8680.454	–	22 409.852	4–2	*M*1,*E*2	6.3E−03	—	D	46
		8037.25	8039.46	8391.938	–	20 830.582	6–6	*M*1,*E*2	1.02E−02	—	C	46
		7613.12	7615.22	8680.454	–	21 812.055	4–4	*M*1,*E*2	1.3E−02	—	D+	46
		7370.92	7372.95	8846.768	–	22 409.852	2–2	*M*1	1.71E−02	5.08E−04	C+	46
		8228.10	8230.37	8680.454	–	20 830.582	4–6	*M*1,*E*2	8.5E−03	—	C	46
		7710.78	7712.90	8846.768	–	21 812.055	2–4	*M*1,*E*2	6.2E−03	—	D	46
34	$a\ ^4D–b\ ^4F$											
		6809.23	6811.10	7955.299	–	22 637.205	8–10	*M*1	2.29E−02	2.68E−03	C+	46
		6933.66	6935.57	8391.938	–	22 810.357	6–8	*M*1,*E*2	1.8E−03	—	D+	46
		7011.23	7013.16	8680.454	–	22 939.358	4–6	*M*1,*E*2	1.9E−03	—	D+	46
		7047.99	7049.93	8846.768	–	23 031.300	2–4	*M*1	1.41E−02	7.3E−04	C	46
		6729.86	6731.71	7955.299	–	22 810.357	8–8	*M*1	1.43E−02	1.29E−03	C+	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		6872.18	6874.07	8391.938	–	22 939.358	6–6	*M*1	2.12E−02	1.53E−03	C	46
		6966.31	6968.23	8680.454	–	23 031.300	4–4	*M*1	2.26E−02	1.13E−03	C	46
		6671.92	6673.76	7955.299	–	22 939.358	8–6	*M*1	4.46E−03	2.95E−04	C+	46
		6829.01	6830.90	8391.938	–	23 031.300	6–4	*M*1	5.5E−03	2.61E−04	C	46
35	$a\ ^4D–a\ ^4G$											
		5683.57	5685.15	8391.938	–	25 981.629	6–8	*M*1,*E*2	2.2E−03	—	D	46
		5753.81	5755.41	8680.454	–	26 055.423	4–6	*M*1,*E*2	2.3E−03	—	D+	46
		5545.90	5547.44	7955.299	–	25 981.629	8–8	*M*1	4.8E−03	2.4E−04	D	46
		5659.83	5661.40	8391.938	–	26 055.423	6–6	*M*1	3.1E−03	1.2E−04	D+	46
36	$a\ ^4D–b\ ^2P$											
		5746.97	5748.56	8391.938	–	25 787.598	6–4	*M*1	3.62E−01	1.02E−02	C+	46
		5477.24	5478.76	8680.454	–	26 932.748	4–2	*M*1	4.23E−01	5.16E−03	C+	46
		5843.89	5845.51	8680.454	–	25 787.598	4–4	*M*1	1.41E−02	4.18E−04	C+	46
		5527.61	5529.14	8846.768	–	26 932.748	2–2	*M*1	1.19E−01	1.49E−03	C+	46
		5901.26	5902.90	8846.768	–	25 787.598	2–4	*M*1	4.11E−02	1.25E−03	C+	46
37	$a\ ^4D–a\ ^2F$											
		5163.95	5165.39	7955.299	–	27 314.922	8–8	*M*1	2.98E−01	1.22E−02	C+	46
		5199.17	5200.62	8391.938	–	27 620.412	6–6	*M*1	1.13E−01	3.54E−03	C+	46
		5083.73	5085.15	7955.299	–	27 620.412	8–6	*M*1	1.59E−02	4.65E−04	C+	46
		5283.11	5284.58	8391.938	–	27 314.922	6–8	*M*1	8.25E−02	3.61E−03	C+	46
		5278.37	5279.84	8680.454	–	27 620.412	4–6	*M*1	6.48E−02	2.12E−03	C+	46
38	$a\ ^4D–b\ ^2G$											
		4468.51	4469.76	8391.938	–	30 764.485	6–8	*M*1,*E*2	1.07E−03	—	C	46
		4382.97	4384.20	7955.299	–	30 764.485	8–8	*M*1	2.44E−03	6.1E−05	C	46
39	$a\ ^4D–b\ ^4D$											
		4249.08	4250.28	7955.299	–	31 483.176	8–8	*M*1,*E*2	4.0E−03	—	E	46
		4351.05	4352.27	8391.938	–	31 368.450	6–2	*E*2	1.4E−03	3.9E−03	E	46
		4266.35	4267.55	7955.299	–	31 387.948	8–6	*M*1,*E*2	2.04E−02	—	C+	46
		4351.81	4353.03	8391.938	–	31 364.440	6–4	*M*1,*E*2	1.56E−02	—	C	46
		4406.38	4407.62	8680.454	–	31 368.450	4–2	*M*1,*E*2	6.1E−03	—	E	46
		4329.43	4330.65	8391.938	–	31 483.176	6–8	*M*1,*E*2	1.63E−02	—	C+	46
		4402.60	4403.83	8680.454	–	31 387.948	4–6	*M*1,*E*2	1.47E−02	—	C+	46
		4439.71	4440.96	8846.768	–	31 364.440	2–4	*M*1,*E*2	7.9E−03	—	D+	46
40	$a\ ^4D–b\ ^2F$											
		4157.91	4159.09	7955.299	–	31 999.048	8–8	*M*1,*E*2	1.7E−02	—	E	46
		4268.67	4269.88	8391.938	–	31 811.822	6–6	*M*1	7.3E−03	1.3E−04	E	46
		4234.82	4236.01	8391.938	–	31 999.048	6–8	*M*1	4.0E−03	9.1E−05	E	46
		4321.92	4323.13	8680.454	–	31 811.822	4–6	*M*1	3.8E−03	6.8E−05	E	46
41	$a\ ^4D–c\ ^2G$											
		3913.41	3914.51	7955.299	–	33 501.253	8–8	*M*1	2.0E−03	3.6E−05	E	46
42	$a\ ^4D–b\ ^2D$											
		3532.86	3533.87	7955.299	–	36 252.918	8–6	*M*1	1.52E−01	1.49E−03	C+	46
		3604.60	3605.62	8391.938	–	36 126.387	6–4	*M*1	1.26E−02	8.76E−05	C+	46
		3588.23	3589.25	8391.938	–	36 252.918	6–6	*M*1	3.91E−02	4.02E−04	C+	46
		3642.49	3643.53	8680.454	–	36 126.387	4–4	*M*1	5.83E−02	4.18E−04	C+	46
		3625.77	3626.81	8680.454	–	36 252.918	4–6	*M*1	5.39E−02	5.72E−04	C+	46
		3664.70	3665.74	8846.768	–	36 126.387	2–4	*M*1	1.18E−01	8.62E−04	C+	46
43	$a\ ^4D–c\ ^2D$											
		3357.87	3358.83	8391.938	–	38 164.194	6–6	*M*1,*E*2	1.0E−03	—	E	46
		3384.95	3385.92	8680.454	–	38 214.507	4–4	*M*1,*E*2	2.1E−03	—	D	46
		3390.73	3391.70	8680.454	–	38 164.194	4–6	*M*1,*E*2	1.3E−03	—	E	46
		3404.12	3405.10	8846.768	–	38 214.507	2–4	*M*1,*E*2	3.2E−03	—	D	46
44	$a\ ^4P–a\ ^4P$											
			198.774 cm^{-1}	13 474.411	–	13 673.185	6–4	*M*1	1.91E−04	3.60E+00	B	48
45	$a\ ^4P–a\ ^2P$											
		20 460.1	4886.235 cm^{-1}	13 474.411	–	18 360.646	6–4	*M*1	6.56E−02	8.34E−02	C+	46
		21 327.7	4687.461 cm^{-1}	13 673.185	–	18 360.646	4–4	*M*1	3.38E−02	4.87E−02	C+	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		20 067.0	4981.956 cm^{-1}	13 904.824	–	18 886.780	2–2	*M*1	8.30E−02	4.98E−02	C+	46
		22 436.4	4455.822 cm^{-1}	13 904.824	–	18 360.646	2–4	*M*1	1.54E−02	2.58E−02	C+	46
46	$a\ ^4P–a\ ^2D2$											
		14 195.5	7042.549 cm^{-1}	13 474.411	–	20 516.960	6–6	*M*1	1.99E−02	1.27E−02	C+	46
		13 094.2	7634.86 cm^{-1}	13 673.185	–	21 308.04	4–4	*M*1	9.7E−03	3.23E−03	C	46
		14 607.8	6843.775 cm^{-1}	13 673.185	–	20 516.960	4–6	*M*1	7.1E−03	4.9E−03	D+	46
		13 504.0	7403.22 cm^{-1}	13 904.824	–	21 308.04	2–4	*M*1	4.83E−03	1.77E−03	C	46
47	$a\ ^4P–b\ ^4P$											
		11 990.5	8337.644 cm^{-1}	13 474.411	–	21 812.055	6–4	*M*1,*E*2	3.1E−03	—	D	46
		11 442.9	8736.667 cm^{-1}	13 673.185	–	22 409.852	4–2	*M*1	1.2E−03	1.3E−04	D	46
		13 967.7	7157.397 cm^{-1}	13 673.185	–	20 830.582	4–6	*M*1,*E*2	2.5E−03	—	D	46
48	$a\ ^4P–b\ ^4F$											
		10 910.7	9162.794 cm^{-1}	13 474.411	–	22 637.205	6–10	*E*2	4.99E−03	6.9E+00	C	46
		10 941.3	9137.172 cm^{-1}	13 673.185	–	22 810.357	4–8	*E*2	3.2E−03	3.6E+00	E	46
		11 065.6	9034.534 cm^{-1}	13 904.824	–	22 939.358	2–6	*E*2	1.68E−03	1.50E+00	C	46
		10 708.4	9335.946 cm^{-1}	13 474.411	–	22 810.357	6–8	*E*2	1.93E−03	1.94E+00	C	46
		10 789.0	9266.173 cm^{-1}	13 673.185	–	22 939.358	4–6	*E*2	3.07E−03	2.41E+00	C	46
		10 954.1	9126.476 cm^{-1}	13 904.824	–	23 031.300	2–4	*E*2	3.84E−03	2.17E+00	C	46
		10 683.0	9358.115 cm^{-1}	13 673.185	–	23 031.300	4–4	*E*2	1.54E−03	7.7E−01	C	46
49	$a\ ^4P–a\ ^6S$											
		10 156.5	9843.222 cm^{-1}	13 474.411	–	23 317.633	6–6	*M*1	2.9E−03	6.8E−04	E	46
		10 365.8	9644.448 cm^{-1}	13 673.185	–	23 317.633	4–6	*M*1	1.1E−03	2.8E−04	E	46
50	$a\ ^4P–b\ ^2P$											
		7539.65	7541.73	13 673.185	–	26 932.748	4–2	*M*1,*E*2	3.21E−03	—	C	46
		8252.36	8254.63	13 673.185	–	25 787.598	4–4	*M*1,*E*2	1.60E−03	—	C	46
51	$a\ ^4P–a\ ^2F$											
		7328.43	7330.44	13 673.185	–	27 314.922	4–8	*E*2	1.73E−03	2.62E−01	C	46
52	$a\ ^4P–b\ ^4D$											
		5613.27	5614.83	13 673.185	–	31 483.176	4–8	*E*2	8.1E−02	3.2E+00	D+	46
		5718.22	5719.80	13 904.824	–	31 387.948	2–6	*E*2	7.3E−02	2.4E+00	D+	46
		5551.31	5552.85	13 474.411	–	31 483.176	6–8	*M*1,*E*2	1.49E−01	—	C	46
		5643.44	5645.01	13 673.185	–	31 387.948	4–6	*M*1,*E*2	3.89E−03	—	C	46
		5725.91	5727.50	13 904.824	–	31 364.440	2–4	*E*2	4.4E−02	9.6E−01	D+	46
		5580.82	5582.37	13 474.411	–	31 387.948	6–6	*M*1,*E*2	1.38E−01	—	C	46
		5650.94	5652.51	13 673.185	–	31 364.440	4–4	*M*1,*E*2	8.5E−02	—	C	46
		5724.60	5726.19	13 904.824	–	31 368.450	2–2	*M*1	3.76E−03	5.23E−05	C	46
		5586.90	5588.45	13 474.411	–	31 368.450	6–2	*E*2	2.2E−02	2.1E−01	D+	46
		5588.15	5589.71	13 474.411	–	31 364.440	6–4	*M*1,*E*2	7.9E−02	—	C	46
		5649.66	5651.23	13 673.185	–	31 368.450	4–2	*M*1,*E*2	1.77E−01	—	C	46
53	$a\ ^4P–b\ ^2D$											
		4388.87	4390.10	13 474.411	–	36 252.918	6–6	*E*2	1.54E−03	1.35E−02	C	46
		4452.46	4453.71	13 673.185	–	36 126.387	4–4	*M*1,*E*2	8.2E−03	—	D+	46
		4413.39	4414.63	13 474.411	–	36 126.387	6–4	*M*1,*E*2	1.4E−03	—	D+	46
		4427.51	4428.75	13 673.185	–	36 252.918	4–6	*E*2	7.1E−03	6.5E−02	C	46
		4498.87	4500.13	13 904.824	–	36 126.387	2–4	*M*1,*E*2	6.3E−03	—	D	46
54	$a\ ^4P–a\ ^2S$											
		4208.82	4210.01	13 474.411	–	37 227.326	6–2	*E*2	6.9E−03	1.6E−02	E	46
		4244.34	4245.54	13 673.185	–	37 227.326	4–2	*M*1,*E*2	1.8E−02	—	D+	46
		4286.50	4287.70	13 904.824	–	37 227.326	2–2	*M*1	4.5E−03	2.6E−05	D	46
55	$a\ ^4P–c\ ^2D$											
		4049.11	4050.26	13 474.411	–	38 164.194	6–6	*M*1,*E*2	1.6E−02	—	E	46
		4073.61	4074.76	13 673.185	–	38 214.507	4–4	*M*1,*E*2	1.0E−02	—	D	46
		4040.88	4042.02	13 474.411	–	38 214.507	6–4	*M*1,*E*2	1.9E−03	—	E	46
		4120.96	4122.12	13 904.824	–	38 164.194	2–6	*E*2	2.0E−03	1.3E−02	D	46
		4081.98	4083.13	13 673.185	–	38 164.194	4–6	*M*1,*E*2	3.6E−02	—	D	46
		4112.43	4113.59	13 904.824	–	38 214.507	2–4	*M*1,*E*2	7.1E−03	—	D	46
56	$a\ ^2G–a\ ^2G$											

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
			524.71 cm^{-1}	15 844.65	–	16 369.36	10–8	*M*1	2.14E−03	4.39E+00	B	46
57	$a\,^2G$–$a\,^2H$											
		22 237.7	4495.65 cm^{-1}	15 844.65	–	20 340.30	10–12	*M*1	1.48E−02	7.25E−02	C+	46
		22 534.6	4436.41 cm^{-1}	16 369.36	–	20 805.77	8–10	*M*1	1.39E−02	5.90E−02	C+	46
		20 151.2	4961.12 cm^{-1}	15 844.65	–	20 805.77	10–10	*M*1	4.37E−02	1.33E−01	C+	46
58	$a\,^2G$–$a\,^4G$											
		10 321.3	9686.06 cm^{-1}	16 369.36	–	26 055.423	8–6	*M*1,*E*2	1.6E−03	—	D+	46
59	$a\,^2G$–$b\,^2H$											
		10 200.4	9800.82 cm^{-1}	16 369.36	–	26 170.181	8–12	*E*2	1.18E−03	1.40E+00	C	46
		9682.08	9684.73	15 844.65	–	26 170.181	10–12	*M*1,*E*2	2.07E−02	—	C+	46
		10 013.9	9983.41 cm^{-1}	16 369.36	–	26 352.766	8–10	*M*1,*E*2	1.74E−02	—	C+	46
		9513.84	9516.45	15 844.65	–	26 352.766	10–10	*M*1,*E*2	1.40E−02	—	C+	46
60	$a\,^2G$–$a\,^2F$											
		8489.69	8492.02	15 844.65	–	27 620.412	10–6	*E*2	6.9E−03	1.6E+00	D+	46
		8715.80	8718.19	15 844.65	–	27 314.922	10–8	*M*1,*E*2	7.47E−02	—	C+	46
		8885.62	8888.06	16 369.36	–	27 620.412	8–6	*M*1,*E*2	6.7E−02	—	C	46
		9133.62	9136.12	16 369.36	–	27 314.922	8–8	*M*1,*E*2	1.00E−02	—	C+	46
61	$a\,^2G$–$b\,^2G$											
		6873.84	6875.74	15 844.65	–	30 388.542	10–10	*E*2	1.40E−01	1.92E+01	C	46
		6944.88	6946.80	16 369.36	–	30 764.485	8–8	*E*2	1.26E−01	1.46E+01	C	46
		6700.64	6702.49	15 844.65	–	30 764.485	10–8	*E*2	1.3E−02	1.2E+00	D+	46
		7131.12	7133.08	16 369.36	–	30 388.542	8–10	*M*1,*E*2	1.50E−02	—	C+	46
62	$a\,^2G$–$b\,^2F$											
		6261.12	6262.85	15 844.65	–	31 811.822	10–6	*E*2	3.5E−02	1.8E+00	D+	46
		6188.55	6190.26	15 844.65	–	31 999.048	10–8	*M*1,*E*2	1.94E−01	—	C	46
		6473.86	6475.65	16 369.36	–	31 811.822	8–6	*M*1,*E*2	1.65E−01	—	C	46
		6396.31	6398.08	16 369.36	–	31 999.048	8–8	*M*1,*E*2	4.86E−02	—	C+	46
63	$a\,^2G$–$a\,^2I$											
		5870.02	5871.65	15 844.65	–	32 875.646	10–14	*E*2	1.95E−01	1.70E+01	C	46
		6044.08	6045.75	16 369.36	–	32 909.905	8–12	*E*2	1.51E−01	1.31E+01	C	46
		5858.24	5859.86	15 844.65	–	32 909.905	10–12	*E*2	1.6E−03	1.2E−01	D+	46
64	$a\,^2G$–$c\,^2G$											
		5673.21	5674.78	15 844.65	–	33 466.463	10–10	*E*2	3.77E−01	1.98E+01	C	46
		5835.45	5837.07	16 369.36	–	33 501.253	8–8	*E*2	4.07E−01	1.97E+01	C	46
		5662.03	5663.60	15 844.65	–	33 501.253	10–8	*M*1,*E*2	9.9E−03	—	C	46
		5847.32	5848.94	16 369.36	–	33 466.463	8–10	*E*2	4.07E−02	2.49E+00	C	46
65	$a\,^2G$–$b\,^2D$											
		4898.61	4899.97	15 844.65	–	36 252.918	10–6	*E*2	1.22E+00	1.85E+01	C	46
		5060.08	5061.49	16 369.36	–	36 126.387	8–4	*E*2	8.2E−01	9.8E+00	C	46
		5027.88	5029.28	16 369.36	–	36 252.918	8–6	*E*2	8.9E−02	1.53E+00	C	46
66	$a\,^2G$–$c\,^2D$											
		4479.12	4480.38	15 844.65	–	38 164.194	10–6	*E*2	1.8E−01	1.7E+00	D+	46
		4576.39	4577.68	16 369.36	–	38 214.507	8–4	*E*2	6.7E−01	4.80E+00	C	46
		4586.96	4588.24	16 369.36	–	38 164.194	8–6	*E*2	2.96E−02	3.22E−01	C	46
67	$a\,^2P$–$a\,^2P$											
			526.134 cm^{-1}	18 360.646	–	18 886.780	4–2	*M*1	2.46E−03	1.25E+00	B	46
68	$a\,^2P$–$a\,^2D2$											
		46 362.8	2156.314 cm^{-1}	18 360.646	–	20 516.960	4–6	*M*1	7.2E−03	1.59E−01	C	46
		41 289.6	2421.26 cm^{-1}	18 886.780	–	21 308.04	2–4	*M*1	9.3E−03	9.7E−02	C	46
		33 919.0	2947.39 cm^{-1}	18 360.646	–	21 308.04	4–4	*M*1	5.10E−02	2.95E−01	C+	46
69	$a\,^2P$–$b\,^2P$											
		13 460.8	7426.952 cm^{-1}	18 360.646	–	25 787.598	4–4	*M*1,*E*2	6.8E−03	—	C	46
		11 662.6	8572.102 cm^{-1}	18 360.646	–	26 932.748	4–2	*M*1,*E*2	1.20E−02	—	C+	46
		14 487.1	6900.818 cm^{-1}	18 886.780	–	25 787.598	2–4	*M*1,*E*2	3.90E−03	—	C	46
70	$a\,^2P$–$a\,^2F$											
		11 164.8	8954.276 cm^{-1}	18 360.646	–	27 314.922	4–8	*E*2	1.06E−02	1.32E+01	C	46
		11 446.9	8733.632 cm^{-1}	18 886.780	–	27 620.412	2–6	*E*2	8.3E−03	8.7E+00	D+	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		10 796.5	9259.766 cm^{-1}	18 360.646	–	27 620.412	4–6	*E*2	7.6E−03	6.0E+00	D+	46
71	$a\,^2P–b\,^4D$											
		7685.58	7687.69	18 360.646	–	31 368.450	4–2	*M*1,*E*2	2.18E−03	—	C	46
72	$a\,^2P–b\,^2F$											
		7330.22	7332.24	18 360.646	–	31 999.048	4–8	*E*2	1.21E−03	1.83E−01	C	46
		7734.79	7736.92	18 886.780	–	31 811.822	2–6	*E*2	1.1E−03	1.6E−01	E	46
		7432.25	7434.29	18 360.646	–	31 811.822	4–6	*M*1,*E*2	3.0E−03	—	D	46
73	$a\,^2P–c\,^2G$											
		6602.93	6604.76	18 360.646	–	33 501.253	4–8	*E*2	1.45E−03	1.30E−01	C	46
74	$a\,^2P–b\,^2D$											
		5756.74	5758.33	18 886.780	–	36 252.918	2–6	*E*2	2.74E−02	9.3E−01	C	46
		5587.45	5589.01	18 360.646	–	36 252.918	4–6	*E*2	3.84E−02	1.12E+00	C	46
		5798.99	5800.60	18 886.780	–	36 126.387	2–4	*E*2	1.32E−01	3.10E+00	C	46
		5627.25	5628.81	18 360.646	–	36 126.387	4–4	*E*2	2.21E−01	4.46E+00	C	46
75	$a\,^2P–a\,^2S$											
		5298.88	5300.35	18 360.646	–	37 227.326	4–2	*M*1,*E*2	2.32E−02	—	C	46
		5450.89	5452.40	18 886.780	–	37 227.326	2–2	*M*1	5.2E−03	6.2E−05	D	46
76	$a\,^2P–c\,^2D$											
		5185.97	5187.42	18 886.780	–	38 164.194	2–6	*E*2	1.7E−01	3.4E+00	D+	46
		5048.19	5049.60	18 360.646	–	38 164.194	4–6	*E*2	5.2E−01	9.1E+00	D+	46
		5172.47	5173.91	18 886.780	–	38 214.507	2–4	*E*2	2.3E−01	3.0E+00	D+	46
		5035.40	5036.80	18 360.646	–	38 214.507	4–4	*E*2	1.15E−01	1.33E+00	C	46
77	$a\,^2H–a\,^2H$											
			465.47 cm^{-1}	20 340.30	–	20 805.77	12–10	*M*1	1.46E−03	5.37E+00	B	46
78	$a\,^2H–b\,^2H$											
		17 148.3	5829.88 cm^{-1}	20 340.30	–	26 170.181	12–12	*E*2	4.3E−03	6.8E+01	D+	46
		18 022.9	5547.00 cm^{-1}	20 805.77	–	26 352.766	10–10	*E*2	3.3E−03	5.6E+01	D+	46
79	$a\,^2H–b\,^2G$											
		9590.45	9593.08	20 340.30	–	30 764.485	12–8	*E*2	2.7E−03	1.6E+00	D	46
		9949.26	9951.99	20 340.30	–	30 388.542	12–10	*M*1,*E*2	3.25E−02	—	C+	46
		10 038.7	9958.72 cm^{-1}	20 805.77	–	30 764.485	10–8	*M*1,*E*2	3.00E−02	—	C+	46
		10 432.5	9582.77 cm^{-1}	20 805.77	–	30 388.542	10–10	*M*1	2.56E−03	1.08E−03	C	46
80	$a\,^2H–b\,^2F$											
		8574.89	8577.25	20 340.30	–	31 999.048	12–8	*E*2	6.3E−02	2.09E+01	C	46
		9083.42	9085.91	20 805.77	–	31 811.822	10–6	*E*2	4.95E−02	1.64E+01	C	46
		8931.48	8933.93	20 805.77	–	31 999.048	10–8	*E*2	6.5E−03	2.6E+00	D+	46
81	$a\,^2H–a\,^2I$											
		7975.25	7977.44	20 340.30	–	32 875.646	12–14	*E*2	9.3E−02	3.7E+01	D+	46
		8259.37	8261.64	20 805.77	–	32 909.905	10–12	*E*2	8.1E−02	3.4E+01	D+	46
		7953.51	7955.70	20 340.30	–	32 909.905	12–12	*M*1,*E*2	2.9E−03	—	D+	46
82	$a\,^2H–c\,^2G$											
		7616.28	7618.37	20 340.30	–	33 466.463	12–10	*M*1,*E*2	5.9E−03	—	D	46
		7874.65	7876.82	20 805.77	–	33 501.253	10–8	*M*1,*E*2	5.5E−03	—	E	46
		7896.29	7898.46	20 805.77	–	33 466.463	10–10	*M*1,*E*2	7.3E−03	—	D+	46
83	$a\,^2H–b\,^2D$											
		6471.90	6473.69	20 805.77	–	36 252.918	10–6	*E*2	2.6E−03	1.6E−01	D	46
84	$a\,^2D2–a\,^2D2$											
			791.08 cm^{-1}	20 516.960	–	21 308.04	6–4	*M*1	7.4E−03	2.20E+00	C	46
85	$a\,^2D2–b\,^4P$											
			12 95.095 cm^{-1}	20 516.960	–	21 812.055	6–4	*M*1	1.0E−03	7.0E−02	D+	46
86	$a\,^2D2–b\,^2P$											
		15 582.3	6415.788 cm^{-1}	20 516.960	–	26 932.748	6–2	*E*2	2.7E−03	4.4E+00	D+	46
		18 967.9	5270.638 cm^{-1}	20 516.960	–	25 787.598	6–4	*M*1,*E*2	1.7E−03	—	D+	46
		17 773.8	5624.71 cm^{-1}	21 308.04	–	26 932.748	4–2	*M*1,*E*2	3.83E−03	—	C	46
87	$a\,^2D2–a\,^2F$											
		14 706.3	6797.962 cm^{-1}	20 516.960	–	27 314.922	6–8	*E*2	2.5E−03	1.2E+01	D+	46
88	$a\,^2D2–b\,^2G$											

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		10 127.3	9871.582 cm^{-1}	20 516.960	–	30 388.542	6–10	*E*2	1.16E−02	1.10E+01	C	46
		10 571.9	9456.45 cm^{-1}	21 308.04	–	30 764.485	4–8	*E*2	1.04E−02	9.8E+00	C	46
89	$a\ ^2$D2–$b\ ^4$D											
		9116.41	9118.92	20 516.960	–	31 483.176	6–8	*M*1	2.5E−03	5.7E−04	D+	46
90	$a\ ^2$D2–$b\ ^2$F											
		8706.83	8709.22	20 516.960	–	31 999.048	6–8	*M*1,*E*2	1.1E−02	—	D	46
		9517.77	9520.38	21 308.04	–	31 811.822	4–6	*M*1,*E*2	6.0E−03	—	D+	46
		8851.15	8853.58	20 516.960	–	31 811.822	6–6	*M*1,*E*2	9.9E−03	—	C	46
91	$a\ ^2$D2–$c\ ^2$G											
		7720.18	7722.30	20 516.960	–	33 466.463	6–10	*E*2	3.67E−02	9.0E+00	C	46
		8199.03	8201.28	21 308.04	–	33 501.253	4–8	*E*2	2.42E−02	6.4E+00	C	46
		7699.49	7701.61	20 516.960	–	33 501.253	6–8	*M*1,*E*2	2.45E−03	—	C	46
92	$a\ ^2$D2–$b\ ^2$D											
		6353.12	6354.87	20 516.960	–	36 252.918	6–6	*E*2	2.34E−01	1.30E+01	C	46
		6746.53	6748.39	21 308.04	–	36 126.387	4–4	*E*2	7.0E−02	3.51E+00	C	46
		6404.61	6406.39	20 516.960	–	36 126.387	6–4	*M*1,*E*2	8.33E−02	—	C+	46
		6689.41	6691.26	21 308.04	–	36 252.918	4–6	*M*1,*E*2	6.70E−02	—	C+	46
93	$a\ ^2$D2–$a\ ^2$S											
		5982.65	5984.31	20 516.960	–	37 227.326	6–2	*E*2	3.01E−01	4.13E+00	C	46
		6279.95	6281.69	21 308.04	–	37 227.326	4–2	*M*1,*E*2	2.05E−01	—	C	46
94	$a\ ^2$D2–$c\ ^2$D											
		5665.04	5666.61	20 516.960	–	38 164.194	6–6	*M*1,*E*2	2.69E−02	—	C+	46
		5913.26	5914.90	21 308.04	–	38 214.507	4–4	*E*2	1.32E−01	3.41E+00	C	46
		5648.93	5650.50	20 516.960	–	38 214.507	6–4	*M*1,*E*2	4.20E−02	—	C+	46
		5930.91	5932.55	21 308.04	–	38 164.194	4–6	*M*1,*E*2	1.05E−02	—	C+	46
95	$b\ ^4$P–$b\ ^4$P											
			981.473 cm^{-1}	20 830.582	–	21 812.055	6–4	*M*1	2.22E−02	3.48E+00	B	46
			597.797 cm^{-1}	21 812.055	–	22 409.852	4–2	*M*1	9.49E−03	3.29E+00	B	46
96	$b\ ^4$P–$b\ ^2$P											
		20 167.9	4957.016 cm^{-1}	20 830.582	–	25 787.598	6–4	*M*1	4.20E−02	5.11E−02	C+	46
		19 523.3	5120.693 cm^{-1}	21 812.055	–	26 932.748	4–2	*M*1	4.17E−03	2.30E−03	C	46
		25 146.9	3975.543 cm^{-1}	21 812.055	–	25 787.598	4–4	*M*1	1.42E−02	3.35E−02	C+	46
		22 103.7	4522.896 cm^{-1}	22 409.852	–	26 932.748	2–2	*M*1	2.20E−02	1.76E−02	C	46
		29 597.5	3377.746 cm^{-1}	22 409.852	–	25 787.598	2–4	*M*1	6.2E−03	2.37E−02	C	46
97	$b\ ^4$P–$b\ ^4$D											
		9384.81	9387.38	20 830.582	–	31 483.176	6–8	*M*1,*E*2	3.98E−02	—	C+	46
		10 440.0	9575.893 cm^{-1}	21 812.055	–	31 387.948	4–6	*M*1	5.8E−03	1.46E−03	C	46
		9469.46	9472.06	20 830.582	–	31 387.948	6–6	*M*1,*E*2	2.40E−02	—	C+	46
		10 465.7	9552.385 cm^{-1}	21 812.055	–	31 364.440	4–4	*M*1	3.25E−02	5.53E−03	C+	46
		11 159.4	8958.598 cm^{-1}	22 409.852	–	31 368.450	2–2	*M*1	4.24E−02	4.37E−03	C+	46
		9490.59	9493.20	20 830.582	–	31 364.440	6–4	*M*1,*E*2	1.58E−02	—	C+	46
		10 461.3	9556.395 cm^{-1}	21 812.055	–	31 368.450	4–2	*M*1,*E*2	2.90E−02	—	C+	46
98	$b\ ^4$P–$b\ ^2$D											
		6535.93	6537.74	20 830.582	–	36 126.387	6–4	*M*1,*E*2	2.1E−03	—	D+	46
		6482.31	6484.10	20 830.582	–	36 252.918	6–6	*M*1,*E*2	4.29E−02	—	C+	46
		6984.08	6986.01	21 812.055	–	36 126.387	4–4	*M*1,*E*2	2.19E−03	—	C	46
		6922.88	6924.79	21 812.055	–	36 252.918	4–6	*M*1	9.4E−03	6.9E−04	C	46
99	$b\ ^4$P–$a\ ^2$S											
		6097.08	6098.77	20 830.582	–	37 227.326	6–2	*E*2	5.2E−03	7.9E−02	D	46
		6485.28	6487.07	21 812.055	–	37 227.326	4–2	*M*1	5.54E−01	1.12E−02	C+	46
		6746.93	6748.79	22 409.852	–	37 227.326	2–2	*M*1	1.45E−01	3.30E−03	C+	46
100	$b\ ^4$P–$c\ ^2$D											
		5767.54	5769.14	20 830.582	–	38 164.194	6–6	*M*1,*E*2	6.42E−02	—	C+	46
		6094.96	6096.65	21 812.055	–	38 214.507	4–4	*M*1	3.97E−02	1.33E−03	C+	46
		5750.85	5752.44	20 830.582	–	38 214.507	6–4	*M*1,*E*2	1.22E−02	—	C	46
		6113.72	6115.41	21 812.055	–	38 164.194	4–6	*M*1,*E*2	1.00E−02	—	C+	46
		6325.50	6327.25	22 409.852	–	38 214.507	2–4	*M*1	9.5E−03	3.57E−04	C	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
101	$a\,^4$H–$a\,^4$H											
			178.751 cm^{-1}	21 251.608	–	21 430.359	14–12	$M1$	2.08E−04	1.62E+01	B	48
102	$a\,^4$H–$a\,^4$G											
		23 933.1	4177.176 cm^{-1}	21 251.608	–	25 428.784	14–12	$M1$	2.11E−02	1.29E−01	C+	46
		22851.1	4374.969 cm^{-1}	21 430.359	–	25 805.328	12–10	$M1,E2$	2.50E−03	—	C	46
		22 721.1	4399.991 cm^{-1}	21 581.638	–	25 981.629	10–8	$M1,E2$	2.78E−03	—	C	46
		23 016.6	4343.506 cm^{-1}	21 711.917	–	26 055.423	8–6	$M1$	3.04E−02	8.25E−02	C+	46
		25 003.0	3998.425 cm^{-1}	21 430.359	–	25 428.784	12–12	$M1$	1.14E−02	7.93E−02	C+	46
		23 669.5	4223.690 cm^{-1}	21 581.638	–	25 805.328	10–10	$M1$	1.73E−02	8.51E−02	C+	46
		23 414.4	4269.712 cm^{-1}	21 711.917	–	25 981.629	8–8	$M1$	1.86E−02	7.09E−02	C+	46
103	$a\,^4$H–$b\,^2$H											
		20 325.6	4918.573 cm^{-1}	21 251.608	–	26 170.181	14–12	$M1$	1.01E−02	3.78E−02	C	46
		21 787.5	4588.543 cm^{-1}	21 581.638	–	26 170.181	10–12	$M1$	1.3E−03	6.0E−03	D+	46
		21 541.9	4640.849 cm^{-1}	21 711.917	–	26 352.766	8–10	$M1$	1.3E−03	4.7E−03	D+	46
104	$a\,^4$H–$a\,^2$F											
		17 437.2	5733.284 cm^{-1}	21 581.638	–	27 314.922	10–8	$M1$	5.5E−03	8.7E−03	C	46
		17 842.7	5603.005 cm^{-1}	21 711.917	–	27 314.922	8–8	$M1$	1.5E−03	2.5E−03	D	46
105	$a\,^4$H–$b\,^2$G											
		11 159.9	8958.183 cm^{-1}	21 430.359	–	30 388.542	12–10	$M1$	1.74E−02	8.97E−03	C+	46
		10 886.9	9182.847 cm^{-1}	21 581.638	–	30 764.485	10–8	$M1$	1.69E−02	6.5E−03	C	46
		11 351.6	8806.904 cm^{-1}	21 581.638	–	30 388.542	10–10	$M1$	4.20E−03	2.28E−03	C	46
		11 043.6	9052.568 cm^{-1}	21 711.917	–	30 764.485	8–8	$M1$	1.24E−02	4.96E−03	C+	46
106	$a\,^4$H–$b\,^2$F											
		9596.68	9599.31	21 581.638	–	31 999.048	10–8	$M1,E2$	1.1E−03	—	E	46
107	$a\,^4$H–$a\,^2$I											
		8600.50	8602.86	21 251.608	–	32 875.646	14–14	$M1$	8.4E−02	2.77E−02	C	46
		8708.75	8711.15	21 430.359	–	32 909.905	12–12	$M1$	3.25E−02	9.6E−03	C	46
		8575.23	8577.58	21 251.608	–	32 909.905	14–12	$M1$	1.24E−03	3.48E−04	C	46
		8734.82	8737.22	21 430.359	–	32 875.646	12–14	$M1$	3.37E−02	1.17E−02	C	46
		8825.05	8827.48	21 581.638	–	32 909.905	10–12	$M1$	3.31E−02	1.01E−02	C	46
108	$a\,^4$H–$c\,^2$G											
		8306.05	8308.34	21 430.359	–	33 466.463	12–10	$M1$	1.27E−01	2.70E−02	C+	46
		8387.23	8389.53	21 581.638	–	33 501.253	10–8	$M1$	1.25E−01	2.19E−02	C+	46
		8411.78	8414.09	21 581.638	–	33 466.463	10–10	$M1$	1.60E−02	3.53E−03	C	46
		8479.91	8482.24	21 711.917	–	33 501.253	8–8	$M1$	8.73E−02	1.58E−02	C+	46
		8505.01	8507.35	21 711.917	–	33 466.463	8–10	$M1$	3.88E−03	8.9E−04	C	46
109	$b\,^4$F–$b\,^4$F											
			173.152 cm^{-1}	22 637.205	–	22 810.357	10–8	$M1$	1.75E−04	1.00E+01	B	48
110	$b\,^4$F–$a\,^4$G											
		35 812.3	2791.579 cm^{-1}	22 637.205	–	25 428.784	10–12	$M1$	1.32E−02	2.70E−01	C+	46
		33 380.2	2994.971 cm^{-1}	22 810.357	–	25 805.328	8–10	$M1$	1.45E−03	2.00E−02	C	46
		32 861.2	3042.271 cm^{-1}	22 939.358	–	25 981.629	6–8	$M1$	1.79E−03	1.89E−02	C	46
		33 058.4	3024.123 cm^{-1}	23 031.300	–	26 055.423	4–6	$M1$	1.50E−02	1.21E−01	C+	46
		31 555.8	3168.123 cm^{-1}	22 637.205	–	25 805.328	10–10	$M1$	1.41E−02	1.64E−01	C+	46
		31 524.5	3171.272 cm^{-1}	22 810.357	–	25 981.629	8–8	$M1$	2.02E−02	1.88E−01	C+	46
		32 083.0	3116.065 cm^{-1}	22 939.358	–	26 055.423	6–6	$M1$	1.81E−02	1.33E−01	C+	46
		29 892.4	3344.424 cm^{-1}	22 637.205	–	25 981.629	10–8	$M1$	1.7E−03	1.3E−02	D+	46
		30 807.6	3245.066 cm^{-1}	22 810.357	–	26 055.423	8–6	$M1$	1.9E−03	1.2E−02	D+	46
111	$b\,^4$F–$b\,^2$H											
		26 906.5	3715.561 cm^{-1}	22 637.205	–	26 352.766	10–10	$M1$	1.30E−03	9.4E−03	C	46
		28 297.0	3532.976 cm^{-1}	22 637.205	–	26 170.181	10–12	$M1$	1.4E−03	1.4E−02	E	46
		28 221.7	3542.409 cm^{-1}	22 810.357	–	26 352.766	8–10	$M1$	1.4E−03	1.1E−02	D	46
112	$b\,^4$F–$a\,^2$F											
		21 372.1	4677.717 cm^{-1}	22 637.205	–	27 314.922	10–8	$M1$	2.0E−03	5.7E−03	D	46
		21 356.9	4681.054 cm^{-1}	22 939.358	–	27 620.412	6–6	$M1$	1.2E−03	2.5E−03	D+	46
113	$b\,^4$F–$b\,^2$G											
		12 897.5	7751.337 cm^{-1}	22 637.205	–	30 388.542	10–10	$M1$	1.64E−02	1.31E−02	C	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
		12 568.6	7954.128 cm^{-1}	22 810.357	–	30 764.485	8–8	*M*1	5.3E−03	3.15E−03	C	46
		13 192.2	7578.185 cm^{-1}	22 810.357	–	30 388.542	8–10	*M*1	5.9E−03	5.0E−03	D+	46
		12 775.9	7825.127 cm^{-1}	22 939.358	–	30 764.485	6–8	*M*1	4.77E−03	2.95E−03	C	46
114	$b\ ^4F–b\ ^4D$											
		11 860.4	8429.092 cm^{-1}	22 939.358	–	31 368.450	6–2	*E*2	1.2E−03	5.1E−01	E	46
		11 301.5	8845.971 cm^{-1}	22 637.205	–	31 483.176	10–8	*M*1,*E*2	7.9E−03	—	C	46
		11 866.1	8425.082 cm^{-1}	22 939.358	–	31 364.440	6–4	*M*1,*E*2	1.52E−03	—	C	46
		11 991.2	8337.150 cm^{-1}	23 031.300	–	31 368.450	4–2	*M*1,*E*2	4.33E−03	—	C	46
		11 527.1	8672.819 cm^{-1}	22 810.357	–	31 483.176	8–8	*M*1,*E*2	2.8E−03	—	D	46
		11 833.1	8448.590 cm^{-1}	22 939.358	–	31 387.948	6–6	*M*1,*E*2	3.29E−03	—	C	46
		11 997.0	8333.140 cm^{-1}	23 031.300	–	31 364.440	4–4	*M*1,*E*2	2.75E−03	—	C	46
		11 701.2	8543.818 cm^{-1}	22 939.358	–	31 483.176	6–8	*M*1,*E*2	1.3E−03	—	D+	46
115	$b\ ^4F–b\ ^2F$											
		10 880.0	9188.691 cm^{-1}	22 810.357	–	31 999.048	8–8	*M*1	1.1E−03	4.2E−04	D+	46
		11 034.9	9059.690 cm^{-1}	22 939.358	–	31 999.048	6–8	*M*1	1.3E−03	5.2E−04	D	46
116	$b\ ^4F–c\ ^2G$											
		9231.71	9234.24	22 637.205	–	33 466.463	10–10	*M*1	1.75E−01	5.11E−02	C+	46
		9351.19	9353.75	22 810.357	–	33 501.253	8–8	*M*1	8.15E−02	1.98E−02	C+	46
		9202.15	9204.67	22 637.205	–	33 501.253	10–8	*M*1	1.08E−02	2.50E−03	C+	46
		9381.72	9384.29	22 810.357	–	33 466.463	8–10	*M*1	5.84E−02	1.79E−02	C+	46
		9465.40	9468.00	22 939.358	–	33 501.253	6–8	*M*1	5.75E−02	1.45E−02	C+	46
117	$b\ ^4F–b\ ^2D$											
		7437.01	7439.06	22 810.357	–	36 252.918	8–6	*M*1	1.20E−02	1.10E−03	C+	46
		7509.07	7511.14	22 939.358	–	36 252.918	6–6	*M*1	1.61E−03	1.52E−04	C	46
		7561.29	7563.37	23 031.300	–	36 252.918	4–6	*M*1	1.37E−03	1.32E−04	C	46
118	$b\ ^4F–c\ ^2D$											
		6511.23	6513.03	22 810.357	–	38 164.194	8–6	*M*1	1.57E−01	9.65E−03	C+	46
		6544.77	6546.58	22 939.358	–	38 214.507	6–4	*M*1	1.94E−01	8.07E−03	C+	46
		6566.40	6568.22	22 939.358	–	38 164.194	6–6	*M*1	2.00E−02	1.26E−03	C+	46
		6584.41	6586.22	23 031.300	–	38 214.507	4–4	*M*1	1.13E−01	4.79E−03	C+	46
		6606.30	6608.12	23 031.300	–	38 164.194	4–6	*M*1	7.7E−03	4.96E−04	C	46
119	$a\ ^4G–a\ ^4G$											
			376.544 cm^{-1}	25 428.784	–	25 805.328	12–10	*M*1	1.75E−03	1.22E+01	C+	46
120	$a\ ^4G–b\ ^2H$											
			741.397 cm^{-1}	25 428.784	–	26 170.181	12–12	*M*1	1.0E−03	1.1E+00	E	46
121	$a\ ^4G–a\ ^2F$											
			1509.594 cm^{-1}	25 805.328	–	27 314.922	10–8	*M*1	3.60E−03	3.10E−01	C	46
			1638.783 cm^{-1}	25 981.629	–	27 620.412	8–6	*M*1	3.04E−03	1.54E−01	C	46
			1564.989 cm^{-1}	26 055.423	–	27 620.412	6–6	*M*1	2.30E−03	1.33E−01	C	46
122	$a\ ^4G–b\ ^2G$											
		21 812.8	4583.214 cm^{-1}	25 805.328	–	30 388.542	10–10	*M*1	2.9E−03	1.1E−02	D	46
		20 902.3	4782.856 cm^{-1}	25 981.629	–	30 764.485	8–8	*M*1	2.7E−03	7.4E−03	D	46
		21 229.9	4709.062 cm^{-1}	26 055.423	–	30 764.485	6–8	*M*1	4.9E−03	1.4E−02	D+	46
123	$a\ ^4G–b\ ^2F$											
		17 147.4	5830.193 cm^{-1}	25 981.629	–	31 811.822	8–6	*M*1	1.0E−03	1.1E−03	E	46
124	$a\ ^4G–a\ ^2I$											
		13 363.3	7481.121 cm^{-1}	25 428.784	–	32 909.905	12–12	*M*1	4.0E−03	4.3E−03	D	46
125	$a\ ^4G–c\ ^2G$											
		12 438.0	8037.679 cm^{-1}	25 428.784	–	33 466.463	12–10	*M*1	8.1E−03	5.8E−03	D	46
		13 049.3	7661.135 cm^{-1}	25 805.328	–	33 466.463	10–10	*M*1	3.1E−03	2.6E−03	D	46
		13 294.9	7519.624 cm^{-1}	25 981.629	–	33 501.253	8–8	*M*1	2.3E−03	1.6E−03	E	46
		13 426.7	7445.830 cm^{-1}	26 055.423	–	33 501.253	6–8	*M*1	3.8E−03	2.7E−03	D	46
126	$a\ ^4G–c\ ^2D$											
		8206.20	8208.45	25 981.629	–	38 164.194	8–6	*M*1	5.5E−03	6.7E−04	D+	46
		8256.21	8258.48	26 055.423	–	38 164.194	6–6	*M*1	5.0E−03	6.3E−04	D	46
127	$b\ ^2P–b\ ^2P$											
			1145.150 cm^{-1}	25 787.598	–	26 932.748	4–2	*M*1	2.70E−02	1.33E+00	C+	46

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})		E_k (cm^{-1})	g_i–g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
128	$b\ ^2$P–$b\ ^4$D											
		17 851.2	5600.350 cm^{-1}	25 787.598	–	31 387.948	4–6	$M1$	6.6E−03	8.4E−03	C	46
		22 558.6	4431.692 cm^{-1}	26 932.748	–	31 364.440	2–4	$M1$	6.4E−03	1.09E−02	C	46
		22 538.2	4435.702 cm^{-1}	26 932.748	–	31 368.450	2–2	$M1$	2.35E−03	2.00E−03	C	46
129	$b\ ^2$P–$b\ ^2$D											
		9552.75	9555.37	25 787.598	–	36 252.918	4–6	$M1,E2$	1.68E−02	—	C+	46
		10 874.1	9193.639 cm^{-1}	26 932.748	–	36 126.387	2–4	$M1,E2$	1.36E−02	—	C+	46
		9669.66	9672.31	25 787.598	–	36 126.387	4–4	$M1,E2$	6.16E−02	—	C+	46
130	$b\ ^2$P–$a\ ^2$S											
		8739.07	8741.47	25 787.598	–	37 227.326	4–2	$M1$	1.56E−01	7.73E−03	C+	46
		9711.19	9713.85	26 932.748	–	37 227.326	2–2	$M1$	1.55E−01	1.05E−02	C+	46
131	$b\ ^2$P–$c\ ^2$D											
		8077.54	8079.77	25 787.598	–	38 164.194	4–6	$M1,E2$	2.25E−02	—	C	46
		8861.43	8863.87	26 932.748	–	38 214.507	2–4	$M1,E2$	9.2E−03	—	D+	46
		8044.84	8047.05	25 787.598	–	38 214.507	4–4	$M1,E2$	2.09E−02	—	C	46
132	$b\ ^2$H–$b\ ^2$G											
		23 699.4	4218.361 cm^{-1}	26 170.181	–	30 388.542	12–10	$M1$	1.50E−02	7.41E−02	C+	46
		22660.7	4411.719 cm^{-1}	26 352.766	–	30 764.485	10–8	$M1$	1.44E−02	4.97E−02	C+	46
		24771.6	4035.776 cm^{-1}	26 352.766	–	30 388.542	10–10	$M1$	2.00E−02	1.13E−01	C+	46
133	$b\ ^2$H–$a\ ^2$I											
		14 909.1	6705.465 cm^{-1}	26 170.181	–	32 875.646	12–14	$M1$	1.35E−02	2.32E−02	C+	46
		15 246.4	6557.139 cm^{-1}	26 352.766	–	32 909.905	10–12	$M1$	1.16E−02	1.83E−02	C+	46
		14 833.3	6739.724 cm^{-1}	26 170.181	–	32 909.905	12–12	$M1$	2.66E−02	3.87E−02	C+	46
134	$b\ ^2$H–$c\ ^2$G											
		13 701.9	7296.282 cm^{-1}	26 170.181	–	33 466.463	12–10	$M1$	2.64E−02	2.52E−02	C+	46
		13 985.2	7148.487 cm^{-1}	26 352.766	–	33 501.253	10–8	$M1$	2.93E−02	2.38E−02	C+	46
		14 053.5	7113.697 cm^{-1}	26 352.766	–	33 466.463	10–10	$M1$	5.27E−02	5.43E−02	C+	46
135	$a\ ^2$F–$b\ ^2$G											
		32 526.1	3073.620 cm^{-1}	27 314.922	–	30 388.542	8–10	$M1$	6.4E−03	8.1E−02	D+	46
		31 797.2	3144.073 cm^{-1}	27 620.412	–	30 764.485	6–8	$M1$	5.7E−03	5.4E−02	D+	46
		28 981.3	3449.563 cm^{-1}	27 314.922	–	30 764.485	8–8	$M1$	1.88E−02	1.36E−01	C+	46
136	$a\ ^2$F–$b\ ^4$D											
		23 984.3	4168.254 cm^{-1}	27 314.922	–	31 483.176	8–8	$M1$	1.21E−03	4.96E−03	C	46
137	$a\ ^2$F–$b\ ^2$F											
		22 231.5	4496.900 cm^{-1}	27 314.922	–	31 811.822	8–6	$M1,E2$	1.1E−03	—	E	46
138	$a\ ^2$F–$c\ ^2$G											
		16 251.6	6151.541 cm^{-1}	27 314.922	–	33 466.463	8–10	$M1$	2.75E−02	4.38E−02	C+	46
		16 999.7	5880.841 cm^{-1}	27 620.412	–	33 501.253	6–8	$M1$	1.85E−02	2.70E−02	C+	46
		16 160.3	6186.331 cm^{-1}	27 314.922	–	33 501.253	8–8	$M1$	5.63E−02	7.05E−02	C+	46
139	$a\ ^2$F–$b\ ^2$D											
		11 185.1	8937.996 cm^{-1}	27 314.922	–	36 252.918	8–6	$M1,E2$	1.8E−03	—	E	46
		11 753.2	8505.975 cm^{-1}	27 620.412	–	36 126.387	6–4	$M1,E2$	5.3E−03	—	D+	46
		11 581.0	8632.506 cm^{-1}	27 620.412	–	36 252.918	6–6	$M1,E2$	1.4E−03	—	E	46
140	$a\ ^2$F–$c\ ^2$D											
		9214.68	9217.21	27 314.922	–	38 164.194	8–6	$M1,E2$	4.17E−02	—	C+	46
		9436.63	9439.22	27 620.412	–	38 214.507	6–4	$M1,E2$	3.81E−02	—	C+	46
		9481.66	9484.26	27 620.412	–	38 164.194	6–6	$M1$	7.28E−02	1.38E−02	C+	46
141	$b\ ^4$D–$b\ ^2$D											
		20 959.8	4769.742 cm^{-1}	31 483.176	–	36 252.918	8–6	$M1$	1.44E−03	2.95E−03	C	46
142	$b\ ^4$D–$c\ ^2$D											
		14 963.7	6681.018 cm^{-1}	31 483.176	–	38 164.194	8–6	$M1$	4.22E−02	3.15E−02	C+	46
		14 644.7	6826.559 cm^{-1}	31 387.948	–	38 214.507	6–4	$M1$	4.86E−03	2.27E−03	C	46
		14 753.4	6776.246 cm^{-1}	31 387.948	–	38 164.194	6–6	$M1$	8.9E−03	6.3E−03	C	46
		14 594.4	6850.067 cm^{-1}	31 364.440	–	38 214.507	4–4	$M1$	1.40E−02	6.46E−03	C+	46
		14 702.4	6799.754 cm^{-1}	31 364.440	–	38 164.194	4–6	$M1$	1.75E−02	1.24E−02	C+	46
		14 603.0	6846.057 cm^{-1}	31 368.450	–	38 214.507	2–4	$M1$	3.61E−02	1.67E−02	C+	46
143	$b\ ^2$D–$c\ ^2$D											

TABLE 9. Fe II forbidden transitions—Continued

No.	Multiplet	λ_{air} (Å)	λ_{vac} (Å) or σ (cm^{-1})[a]	E_i (cm^{-1})	E_k (cm^{-1})	g_i-g_k	Type	A_{ki} (s^{-1})	S (a.u.)	Acc.	Source
			1961.589 cm^{-1}	36 252.918 –	38 214.507	6–4	*M*1	1.07E−02	2.10E−01	C+	46
		49 059.0	2037.807 cm^{-1}	36 126.387 –	38 164.194	4–6	*M*1	7.9E−03	2.06E−01	C	46

[a]Wavelengths (Å) are always given unless cm^{-1} is indicated.

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