TABLE 2

ABSOLUTE TRANSITION PROBABILITIES AND OSCILLATOR STRENGTHS OF Fe II TRANSITIONS.

λ_{vac} (Å)	λ_{air} (Å)	σ (cm^{-1})		BF	Un.$_{BF}$ (%)	A (s^{-1})	(Un.$_A$) (± %)	log gf	(Un.$_{log\ gf}$) (± dex)	log gf Raassen	log gf Kurucz	log gf Nahar
Level 62065 cm^{-1}	$3d^6(a^3F)4p$	$y^4F_{3.5}$	3.50 ns ± 0.3ns	99.87 % complete, 0.02 % outside, 0.11 % blended								
3500.882	3499.881	28564.23		0.15	11	.429E+06	14	-2.20	0.06	-2.37	-2.38	-
3496.622	3495.621	28599.03		0.09	13	.262E+06	15	-2.42	0.06	-2.46	-2.38	-
3325.963	3325.006	30066.48		0.12	20	.335E+06	22	-2.35	0.09	-2.85	-2.51	-
3305.379	3304.428	30253.71		0.07	25	.203E+06	27	-2.57	0.10	-2.71	-2.45	-
3259.713	3258.773	30677.55		3.29	3	.939E+07	9	-0.92	0.04	-1.15	-1.08	-0.99
3194.781	3193.857	31301.05		1.35	3	.386E+07	9	-1.33	0.04	-1.44	-1.42	-
3156.867	3155.953	31676.98		0.15	12	.417E+06	15	-2.30	0.06	-2.61	-2.39	-
2903.169	2902.318	34445.12		0.31	12	.881E+06	15	-2.05	0.06	-2.12	-2.27	-
2877.647	2876.803	34750.61		3.35	3	.956E+07	9	-1.02	0.04	-1.10	-1.00	-
2800.119	2799.294	35712.76		5.41	3	.155E+08	9	-0.84	0.04	-0.87	-0.84	-
2776.998	2776.178	36010.11		0.93	5	.266E+07	10	-1.61	0.04	-1.62	-1.54	-3.56
2757.845	2757.030	36260.20		2.83	3	.807E+07	9	-1.13	0.04	-1.24	-1.34	-1.07
2555.834	2555.067	39126.18		6.87	3	.196E+08	9	-0.81	0.04	-0.82	-0.76	-0.61
2547.434	2546.670	39255.18		27.94	3	.798E+08	9	-0.21	0.04	-0.21	-0.15	0.15
2536.248	2535.486	39428.33		26.16	3	.747E+08	9	-0.24	0.04	-0.25	-0.24	-0.72
2478.092	2477.343	40353.63		5.95	3	.170E+08	9	-0.90	0.04	-0.89	-0.80	-
2470.117	2469.371	40483.91		0.78	8	.223E+07	12	-1.79	0.05	-1.81	-1.79	-
2425.124	2424.390	41235.01		5.63	6	.161E+08	10	-0.95	0.04	-0.91	-1.05	-
2423.669	2422.933	41259.76		1.03	14	.294E+07	16	-1.68	0.07	-1.96	-1.67	-
2406.822	2406.090	41548.57		0.72	15	.205E+07	17	-1.85	0.07	-2.01	-1.75	-
2188.370	2187.685	45696.12		1.00	5	.287E+07	10	-1.78	0.04	-1.64	-1.36	-
2057.991	2057.332	48591.08		0.98	11	.280E+07	14	-1.85	0.06	-1.62	-1.44	-
1688.404		59227.54		0.89	19	.253E+07	20	-2.06	0.08	-1.90	-1.59	-1.68
1676.857		59635.39		2.36	11	.675E+07	14	-1.64	0.06	-1.64	-1.30	-0.92
1611.200		62065.53		1.54	17	.440E+07	19	-1.86	0.08	-1.87	-2.56	-
1863.114		53673.57	x	0.10		.294E+06		-2.91		-2.99	-2.80	-3.47
1661.325		60192.93	x	0.34		.964E+06		-2.50		-2.38	-2.11	-1.78
1621.252		61680.74	x	0.38		.109E+07		-2.46		-2.40	-3.11	-
2771.321	2770.503	36083.88	b							-2.56	-2.57	-
Level 63948 cm^{-1}	$3d^6(a^3F)4p$	$y^4G_{4.5}$	2.7 ns ± 0.3ns	99.97% complete, 0.03% outside								
3280.592	3279.647	30482.30		0.16	13	.575E+06	17	-2.03	0.07	-2.23	-2.31	-
3129.915	3129.008	31949.75		0.06	49	.225E+06	50	-2.48	0.18	-2.70	-2.53	-
2979.715	2978.846	33560.25		0.19	17	.717E+06	20	-2.02	0.08	-2.29	-2.53	-
2729.713	2728.905	36633.88		3.37	5	.125E+08	12	-0.86	0.05	-0.97	-0.96	-
2647.000	2646.212	37778.62		0.39	10	.144E+07	15	-1.82	0.06	-1.90	-2.26	-
2596.053	2595.277	38520.01		0.04	13	.167E+06	17	-2.77	0.07	-1.83	-1.65	-1.99
2430.816	2430.078	41138.45		51.57	3	.191E+09	12	0.23	0.05	0.23	0.24	0.26
2420.628	2419.892	41311.60		0.60	29	.222E+07	31	-1.71	0.12	-1.90	-1.85	-0.78
2367.598	2366.875	42236.90		0.95	10	.351E+07	15	-1.53	0.06	-1.67	-1.62	-3.19
2360.317	2359.596	42367.18		6.08	3	.225E+08	12	-0.73	0.05	-0.70	-0.65	-1.41
2351.921	2351.201	42518.44		19.41	3	.719E+08	12	-0.22	0.05	-0.20	-0.19	-0.29
2293.128	2292.421	43608.55		0.23	8	.842E+06	14	-2.18	0.06	-2.25	-2.07	-
2078.823	2078.160	48104.15		0.77	10	.284E+07	15	-1.74	0.06	-1.64	-1.46	-
1625.523		61518.66		10.90	7	.404E+08	13	-0.80	0.05	-0.70	-0.52	-1.12
1610.923		62076.20		5.25	8	.194E+08	14	-1.12	0.06	-1.04	-0.78	-2.16
2659.855	2659.064	37596.03	x	0.07		.265E+06		-2.55		-2.58	-2.48	-

TABLE 2—*Continued*

λ_{vac} (Å)	λ_{air} (Å)	σ (cm^{-1})		BF	Un.$_{BF}$ (%)	A (s^{-1})	(Un.$_{A}$) (± %)	log gf	(Un.$_{log\ gf}$) (± dex)	log gf Raassen	log gf Kurucz	log gf Nahar
1785.922		55993.48	x	0.34		.126E+07		-2.22		-2.77	-2.73	-
Level 62945 cm^{-1}		$3d^6(a^3F)4p$	$x^4D_{3.5}$	2.8 ns ± 0.3ns		99.98 % complete, 0.02 % outside, 3.44 % blended						
3396.307	3395.332	29443.75		0.10	19	.366E+06	22	-2.30	0.09	-2.43	-2.24	-
3212.002	3211.074	31133.23		0.06	38	.211E+06	39	-2.58	0.14	-2.85	-2.40	-
3178.453	3177.534	31461.84		4.88	3	.174E+08	11	-0.68	0.05	-0.89	-0.87	-0.82
3107.465	3106.564	32180.57		0.53	7	.188E+07	13	-1.66	0.05	-1.89	-1.76	-
3071.584	3070.691	32556.49		0.36	7	.128E+07	13	-1.84	0.05	-2.01	-1.80	-
2806.614	2805.787	35630.12		0.90	5	.322E+07	12	-1.52	0.05	-1.60	-1.42	-
2732.817	2732.008	36592.28		1.97	4	.705E+07	11	-1.20	0.05	-1.31	-1.16	-
2710.789	2709.986	36889.63		0.24	32	.868E+06	33	-2.12	0.13	-2.91	-2.87	-
2705.379	2704.577	36963.39		0.46	12	.166E+07	16	-1.84	0.06	-2.00	-1.93	-
2692.535	2691.736	37139.71		1.41	4	.504E+07	11	-1.36	0.05	-1.47	-1.55	-
2491.610	2490.858	40134.70		24.70	3	.882E+08	11	-0.18	0.05	-0.20	-0.22	-0.68
2480.907	2480.158	40307.84		43.47	3	.155E+09	11	0.06	0.05	0.04	0.08	0.26
2373.083	2372.359	42139.27		0.18	25	.661E+06	27	-2.35	0.10	-2.55	-2.15	-
2356.929	2356.208	42428.09		0.20	37	.710E+06	38	-2.33	0.14	-2.48	-2.24	-
2147.045	2146.370	46575.63		0.20	13	.713E+06	17	-2.40	0.07	-2.26	-1.85	-
2123.125	2122.454	47100.39		0.13	23	.480E+06	26	-2.59	0.10	-2.55	-2.10	-
2021.403	2020.751	49470.59		5.13	6	.183E+08	12	-1.05	0.05	-0.88	-0.64	-0.68
1818.522		54989.72		1.60	7	.570E+07	13	-1.65	0.05	-1.60	-1.62	-1.48
1637.400		61072.44		10.00	8	.357E+08	14	-0.94	0.06	-0.85	-0.58	-1.11
2425.233	2424.497	41233.14	x	0.24		.840E+06		-2.23		-2.68	-2.67	-
1833.077		54553.08	x	0.14		.512E+06		-2.69		-2.05	-2.05	-2.27
1663.698		60107.06	x	0.39		.140E+07		-2.33		-2.48	-2.24	-3.36
1588.687		62945.04	x	0.43		.155E+07		-2.33		-2.83	-2.93	-
3168.863	3167.946	31557.06	b							-2.66	-2.45	-1.60
2499.644	2498.891	40005.69	b							-1.14	-1.14	-1.98
2374.480	2373.755	42114.49	b							-1.80	-2.62	-2.08
Level 64040 cm^{-1}		$3d^6(a^3F)4p$	$y^4G_{3.5}$	2.8 ns ± 0.3ns		99.96% complete, 0.04% outside						
3274.438	3273.494	30539.59		0.23	12	.848E+06	16	-1.96	0.07	-2.22	-2.08	-
3270.711	3269.768	30574.39		0.14	17	.520E+06	21	-2.18	0.08	-2.42	-2.20	-
3102.788	3101.888	32229.08		0.24	24	.905E+06	26	-1.98	0.10	-2.57	-2.18	-
3005.132	3004.256	33276.41		0.23	13	.860E+06	17	-2.03	0.07	-2.16	-2.07	-
2971.561	2970.694	33652.34		1.12	6	.415E+07	13	-1.36	0.05	-1.60	-1.36	-
2745.708	2744.896	36420.48		0.98	7	.362E+07	13	-1.49	0.05	-1.60	-1.57	-
2722.869	2722.062	36725.97		3.83	5	.142E+08	12	-0.90	0.05	-1.11	-0.85	-
2653.356	2652.566	37688.12		1.20	7	.445E+07	13	-1.43	0.05	-1.56	-1.49	-
2627.483	2626.699	38059.24		0.52	10	.194E+07	15	-1.79	0.06	-2.14	-2.50	-1.00
2615.366	2614.586	38235.56		0.91	11	.337E+07	16	-1.56	0.06	-2.12	-1.77	-1.88
2432.999	2432.261	41101.54		42.27	3	.157E+09	12	0.05	0.05	0.07	0.06	0.13
2425.386	2424.650	41230.54		1.77	10	.655E+07	15	-1.34	0.06	-1.40	-1.46	-0.67
2415.244	2414.510	41403.69		0.11	39	.424E+06	40	-2.53	0.15	-3.73	-2.63	-2.31
2362.447	2361.725	42328.99		6.49	3	.240E+08	12	-0.79	0.05	-0.85	-0.82	-1.53
2355.198	2354.478	42459.27		21.94	3	.813E+08	12	-0.27	0.05	-0.22	-0.23	-0.38
2312.935	2312.223	43235.12		0.25	14	.931E+06	18	-2.22	0.07	-2.52	-2.16	-
2297.587	2296.879	43523.93		0.49	7	.182E+07	13	-1.94	0.05	-2.13	-1.66	-

TABLE 2—*Continued*

λ_{vac} (Å)	λ_{air} (Å)	σ (cm^{-1})		BF	Un.$_{BF}$ (%)	A (s^{-1})	(Un.$_A$) (± %)	log gf	(Un.$_{log\ gf}$) (± dex)	log gf Raassen	log gf Kurucz	log gf Nahar
2097.690	2097.024	47671.48		0.29	20	.107E+07	23	-2.25	0.09	-2.14	-1.84	-
2074.851	2074.189	48196.24		0.62	13	.230E+07	17	-1.93	0.07	-1.86	-1.42	-
1633.909		61202.91		10.39	9	.385E+08	14	-0.91	0.06	-0.80	-0.65	-1.25
1623.093		61610.75		5.37	9	.199E+08	14	-1.20	0.06	-1.09	-0.86	-2.05
1608.537		62168.29		0.57	25	.210E+07	27	-2.19	0.10	-2.19	-1.86	-3.69
1796.980		55648.93	x	0.29		.108E+07		-2.38		-2.94	-2.86	-

NOTE.—Columns are as follows λ_{vac}, vacuum wavelength; λ_{air}, wavelength in air for $\lambda > 2000$Å; σ, vacuum wavenumber (Ritz wavenumbers rounded down to seven significant figures from Johansson (private communication)); BF, branching fraction; Un.$_{BF}$, % relative uncertainty in BF; A, absolute transition probability (s^{-1}), found by combining BF and the measured lifetime; Un.$_A$, % uncertainty in A; log gf measured in this work; uncertainty (dex) in log gf, log gf Raassen, calculated by Raassen (1999), log gf Kurucz, calculated by Kurucz (2000 private communication). Annotations to transitions indicate: x, transition not observed in this work or in that of Johansson (private communication); b, blended line. For lines annotated with x, the maximum possible branching fraction has been estimated and from this the maximum value of A and maximum possible log gf for that transition has also been estimated. Since the values of A and log gf for lines annotated with x are maximum values it may be preferable to use the theoretical values for these lines. No uncertainty in log gf is given for these transitions annotated x since it is an approximate estimate.