Table 1. Target levels of Fe XIII with their threshold energies (in Ryd) and life-times (τ in s).

Index	Configuration	Level	Expt.^{a}	GRASP^b	GRASP^c	CIV3^d	τ^b	τ^c
1......	$3s^23p^2$	$^3P_0$	0.0000	0.0000	0.0000	0.0000	....	....
2......	$3s^23p^2$	$^3P_1$	0.0848	0.0835	0.0835	0.0768	7.479-02	7.505-02
3......	$3s^23p^2$	$^3P_2$	0.1691	0.1700	0.1693	0.1582	9.398-02	9.601-02
4......	$3s^23p^2$	$^1D_2$	0.4380	0.4629	0.4570	0.4366	6.043-03	6.134-03
5......	$3s^23p^2$	$^1S_0$	0.8339	0.8497	0.8513	0.8612	8.807-04	8.789-04
6......	$3s3p^3$	$^5S^o{}_2$		1.9719	1.8987		9.295-08	8.680-08
7......	$3s3p^3$	$^3D^o{}_1$	2.6172	2.7427	2.6004	2.5978	5.597-10	6.316-10
8......	$3s3p^3$	$^3D^o{}_2$	2.6186	2.7437	2.6017	2.5982	6.028-10	6.847-10
9......	$3s3p^3$	$^3D^o{}_3$	2.6445	2.7683	2.6271	2.6212	6.865-10	7.822-10
10......	$3s3p^3$	$^3P^o{}_0$		3.1533	2.9915	2.9906	2.109-10	2.404-10
11......	$3s3p^3$	$^3P^o{}_1$	3.0040	3.1595	2.9978	2.9956	2.144-10	2.416-10
12......	$3s3p^3$	$^3P^o{}_2$	3.0097	3.1649	3.0033	2.9910	2.375-10	2.687-10
13......	$3s3p^3$	$^1D^o{}_2$	3.3017	3.5222	3.3084	3.2968	1.698-10	1.888-10
14......	$3s^23p3d$	$^3F^o{}_2$		4.1285	3.9508	3.9906	2.120-09	1.918-09
15......	$3s3p^3$	$^3S^o{}_1$	3.7860	4.1498	3.8485	3.8390	1.650-11	1.592-11
16......	$3s^23p3d$	$^3F^o{}_3$		4.1901	4.0120	4.0500	3.290-09	3.247-09
17......	$3s^23p3d$	$^3F^o{}_4$		4.2822	4.1025	4.1366	7.745-03	8.152-03
18......	$3s3p^3$	$^1P^o{}_1$	3.9918	4.3144	4.0650	4.0348	1.524-11	2.290-11
19......	$3s^23p3d$	$^3P^o{}_2$	4.4320	4.7668	4.5045	4.4884	1.706-11	1.853-11
20......	$3s^23p3d$	$^3P^o{}_1$	4.5102	4.8245	4.5788	4.5594	1.582-11	1.794-11
21......	$3s^23p3d$	$^3P^o{}_0$	4.5867	4.8765	4.6310	4.6076	1.790-11	2.022-11
22......	$3s^23p3d$	$^1D^o{}_2$	4.5460	4.9284	4.6237	4.5960	1.258-11	1.633-11
23......	$3s^23p3d$	$^3D^o{}_1$	4.6156	4.9392	4.6924	4.6642	1.273-11	1.446-11
24......	$3s^23p3d$	$^3D^o{}_2$	4.6406	4.9689	4.7194	4.6918	1.290-11	1.432-11
25......	$3s^23p3d$	$^3D^o{}_3$	4.6400	4.9694	4.7219	4.6968	1.222-11	1.393-11
26......	$3s^23p3d$	$^1F^o{}_3$	5.0745	5.4286	5.1884	5.2120	1.161-11	1.294-11
27......	$3p^4$	$^3P_2$		5.5487	5.5444		1.326-10	1.224-10
28......	$3s^23p3d$	$^1P^o{}_1$	5.2005	5.5975	5.3014	5.2694	1.303-11	1.650-11
29......	$3p^4$	$^3P_1$		5.6581	5.6547		1.293-10	1.193-10
30......	$3p^4$	$^3P_0$		5.6877	5.6844		1.248-10	1.156-10
31......	$3s3p^23d$	$^5F_1$		5.7727	5.7591		1.464-08	1.259-08
32......	$3s3p^23d$	$^5F_2$		5.7924	5.7792		4.381-09	5.591-09
33......	$3p^4$	$^1D_2$		5.7955	5.7830		2.082-10	1.776-10
34......	$3s3p^23d$	$^5F_3$		5.8246	5.8116		2.687-08	2.500-08
35......	$3s3p^23d$	$^5F_4$		5.8698	5.8569		1.284-07	1.202-07
36......	$3s3p^23d$	$^5F_5$		5.9286	5.9151		1.078-07	1.269-07
37......	$3s3p^23d$	$^5D_0$		5.9856	5.9873		3.072-09	3.266-09
38......	$3s3p^23d$	$^5D_1$		5.9911	5.9924		2.464-09	2.487-09
39......	$3s3p^23d$	$^5D_2$		6.0016	6.0024		1.797-09	1.711-09
40......	$3s3p^23d$	$^5D_3$		6.0179	6.0183		1.612-09	1.444-09
41......	$3s3p^23d$	$^5D_4$		6.0444	6.0456		4.472-08	3.703-08
42......	$3s3p^2(^1D)3d$	$^3F_2$		6.2614	6.2600		1.310-09	1.270-09
43......	$3s3p^2(^1D)3d$	$^3F_3$		6.3008	6.2996		1.387-09	1.280-09
44......	$3s3p^2(^1D)3d$	$^3F_4$		6.3595	6.3587		2.038-09	1.853-09
45......	$3s3p^23d$	$^5P_3$		6.4703	6.4298		1.464-11	1.669-11
46......	$3s3p^23d$	$^5P_2$		6.5030	6.4626		1.432-11	1.629-11
47......	$3s3p^23d$	$^5P_1$		6.5227	6.4821		1.406-11	1.599-11
48......	$3p^4$	$^1S_0$		6.6097	6.6104		9.492-11	9.222-11

Table 1. Target levels of Fe XIII with their threshold energies (in Ryd) and life-times (τ in s).

Index	Configuration	Level	Expt.[a]	GRASP[b]	GRASP[c]	CIV3[d]	τ^b	τ^c
49......	$3s3p^2(^3P)(^4P)3d$	$^3P_2$		6.7648	6.7631		1.758-11	2.015-11
50......	$3s3p^2(^3P)(^4P)3d$	$^3P_1$		6.8482	6.8462		1.739-11	1.985-11
51......	$3s3p^2(^3P)(^4P)3d$	$^3P_0$		6.9048	6.9047		1.777-11	2.016-11
52......	$3s3p^23d$	$^3G_3$		7.0072	6.9720		9.153-11	1.156-10
53......	$3s3p^23d$	$^3G_4$		7.0220	6.9868		9.985-11	1.252-10
54......	$3s3p^23d$	$^3G_5$		7.0414	7.0060		1.089-10	1.372-10
55......	$3s3p^2(^3P)(^4P)3d$	$^3D_1$		7.0666	7.0097		2.613-11	2.598-11
56......	$3s3p^2(^3P)(^4P)3d$	$^3D_2$		7.0752	7.0186		2.473-11	2.514-11
57......	$3s3p^2(^3P)(^4P)3d$	$^3D_3$		7.0921	7.0339		2.250-11	2.329-11
58......	$3s3p^23d$	$^1G_4$		7.1333	7.1225		4.598-10	4.727-10
59......	$3s3p^2(^1D)3d$	$^1F_3$		7.2445	7.2348		3.146-11	3.946-11
60......	$3s3p^2(^3P)(^4P)3d$	$^3F_2$		7.3369	7.3136		1.493-11	1.746-11
61......	$3s3p^2(^3P)(^4P)3d$	$^3F_3$		7.3838	7.3622		1.444-11	1.674-11
62......	$3s3p^2(^1D)3d$	$^3D_1$		7.3972	7.3870		1.789-11	2.243-11
63......	$3s3p^2(^1D)3d$	$^3D_2$		7.4209	7.4109		1.935-11	2.392-11
64......	$3s3p^2(^3P)(^4P)3d$	$^3F_4$		7.4509	7.4280		1.382-11	1.581-11
65......	$3s3p^2(^1D)3d$	$^3P_0$		7.4676	7.4415		1.653-11	1.778-11
66......	$3s3p^2(^1D)3d$	$^3D_3$		7.4687	7.4609		2.296-11	2.887-11
67......	$3s3p^2(^1D)3d$	$^3P_1$		7.4842	7.4587		1.682-11	1.798-11
68......	$3s3p^2(^1D)3d$	$^3P_2$		7.5160	7.4910		1.683-11	1.790-11
69......	$3s3p^2(^3P)3d$	$^1P_1$		7.5402	7.5333		1.666-11	1.759-11
70......	$3s3p^23d$	$^3S_1$		7.6629	7.6561		1.610-11	1.800-11
71......	$3s3p^2(^1S)3d$	$^3D_1$		7.7297	7.6830		1.756-11	1.822-11
72......	$3s3p^2(^1S)3d$	$^3D_2$		7.7356	7.6721		1.860-11	1.909-11
73......	$3s3p^2(^1S)3d$	$^3D_3$		7.7962	7.7111		1.696-11	1.750-11
74......	$3s3p^2(^3P)(^2P)3d$	$^3F_2$		7.8615	7.8205		1.338-11	1.531-11
75......	$3s3p^2(^3P)(^2P)3d$	$^3F_3$		7.9025	7.8650		1.390-11	1.550-11
76......	$3s3p^2(^3P)(^2P)3d$	$^3F_4$		7.9385	7.8993		1.399-11	1.606-11
77......	$3s3p^2(^1D)3d$	$^1D_2$		7.9594	7.9241		2.016-11	2.471-11
78......	$3s3p^2(^3P)(^2P)3d$	$^3D_3$		8.1752	8.1095		1.252-11	1.384-11
79......	$3s3p^2(^3P)(^2P)3d$	$^3D_2$		8.2051	8.1212		1.213-11	1.351-11
80......	$3s3p^2(^3P)(^2P)3d$	$^3D_1$		8.2295	8.1344		1.239-11	1.359-11
81......	$3s3p^2(^1S)3d$	$^1D_2$		8.2398	8.1926		1.278-11	1.266-11
82......	$3s3p^2(^1D)3d$	$^1P_1$		8.3951	8.3257		1.039-11	1.112-11
83......	$3s3p^23d$	$^1S_0$		8.3971	8.3913		1.037-11	1.086-11
84......	$3s3p^2(^3P)(^2P)3d$	$^3P_2$		8.6544	8.6114		5.702-12	6.700-12
85......	$3s3p^2(^3P)(^2P)3d$	$^3P_1$		8.7027	8.6585		5.622-12	6.589-12
86......	$3s3p^2(^3P)(^2P)3d$	$^3P_0$		8.7262	8.6850		5.588-12	6.592-12
87......	$3s3p^2(^3P)3d$	$^1F_3$		8.8997	8.8197		6.851-12	7.550-12
88......	$3s^23d^2$	$^3F_2$		9.0282	8.9791		8.305-12	9.695-12
89......	$3s^23d^2$	$^3F_3$		9.0382	8.9900		8.557-12	9.987-12
90......	$3s^23d^2$	$^3F_4$		9.0472	9.0001		8.834-12	1.031-11
91......	$3s3p^2$	$^1D_2$		9.2874	9.1905		5.295-12	7.081-12
92......	$3s^23d^2$	$^1G_4$		9.3583	9.2835		1.263-11	1.591-11
93......	$3s^23d^2$	$^3P_0$		9.3808	9.2843		5.850-12	7.453-12
94......	$3s^23d^2$	$^3P_1$		9.3883	9.2913		5.883-12	7.512-12
95......	$3s^23d^2$	$^3P_2$		9.4030	9.3049		5.915-12	7.588-12
96......	$3s^23d^2$	$^1D_2$		9.4997	9.4177		5.957-12	7.182-12
97......	$3s^23d^2$	$^1S_0$		10.1460	10.1260		4.809-12	6.016-12

a: NIST (`http://www.physics.nist/gov/PhysRefData`)
b: Present results from 6 configurations and 97 levels - see Aggarwal & Keenan (2004a)
c: Present results from 13 configurations and 301 levels - see Aggarwal & Keenan (2004a)
d: Gupta & Tayal (1998)

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
1	2	1.337+01	2.592-2	1.708-2	1.189-2	8.770-3	6.711-3	5.311-3	3.587-3	2.569-3	1.953-3
1	3	2.679-03	9.467-2	9.268-2	9.320-2	9.490-2	9.742-2	1.007-1	1.085-1	1.187-1	1.307-1
1	4	2.772-01	1.006-2	7.607-3	6.359-3	5.860-3	5.853-3	6.172-3	7.524-3	9.610-3	1.233-2
1	5	0.000-00	6.054-4	3.415-4	2.155-4	1.518-4	1.135-4	8.947-5	6.414-5	4.927-5	4.231-5
1	6	6.831-01	7.195-3	4.888-3	3.404-3	2.493-3	1.899-3	1.493-3	1.000-3	7.138-4	5.390-4
1	7	1.360+09	3.038-1	3.472-1	3.839-1	4.106-1	4.318-1	4.531-1	4.910-1	5.258-1	5.584-1
1	8	4.111-00	1.057-2	7.205-3	5.014-3	3.661-3	2.776-3	2.177-3	1.446-3	1.029-3	7.723-4
1	9	0.000-00	1.866-3	1.840-3	1.896-3	1.969-3	2.038-3	2.106-3	2.222-3	2.322-3	2.392-3
1	10	0.000-00	7.149-4	4.890-4	3.411-4	2.481-4	1.876-4	1.466-4	9.697-5	6.864-5	5.139-5
1	11	1.399+09	1.870-1	2.151-1	2.380-1	2.553-1	2.689-1	2.823-1	3.056-1	3.267-1	3.461-1
1	12	1.597-00	3.511-3	2.369-3	1.640-3	1.198-3	9.068-4	7.129-4	4.765-4	3.413-4	2.583-4
1	13	6.299-00	7.033-3	4.630-3	3.159-3	2.279-3	1.709-3	1.331-3	8.720-4	6.148-4	4.577-4
1	14	7.322-00	8.770-3	5.459-3	3.631-3	2.590-3	1.931-3	1.499-3	9.840-4	6.966-4	5.222-4
1	15	5.378+09	2.782-1	3.223-1	3.574-1	3.849-1	4.062-1	4.269-1	4.624-1	4.934-1	5.212-1
1	16	0.000-00	1.738-2	1.786-2	1.884-2	1.985-2	2.074-2	2.154-2	2.284-2	2.390-2	2.465-2
1	17	0.000-00	2.388-3	1.478-3	1.000-3	7.143-4	5.329-4	4.129-4	2.688-4	1.883-4	1.391-4
1	18	5.478+09	2.381-1	2.778-1	3.081-1	3.327-1	3.517-1	3.700-1	4.010-1	4.280-1	4.520-1
1	19	7.461-01	8.893-3	5.262-3	3.404-3	2.404-3	1.786-3	1.393-3	9.362-4	6.830-4	5.336-4
1	20	5.100+10	1.522-0	1.784-0	1.980-0	2.144-0	2.270-0	2.391-0	2.595-0	2.770-0	2.925-0
1	21	0.000-00	4.526-4	2.621-4	1.651-4	1.126-4	8.122-5	6.148-5	3.880-5	2.656-5	1.950-5
1	22	8.199-02	2.181-3	1.368-3	9.186-4	6.565-4	4.921-4	3.855-4	2.572-4	1.844-4	1.398-4
1	23	1.427+10	3.685-1	4.309-1	4.775-1	5.169-1	5.474-1	5.766-1	6.258-1	6.681-1	7.052-1
1	24	1.006+01	3.317-3	2.031-3	1.353-3	9.754-4	7.386-4	5.879-4	4.058-4	3.016-4	2.375-4
1	25	0.000-00	8.623-3	7.654-3	7.265-3	7.146-3	7.123-3	7.152-3	7.258-3	7.384-3	7.477-3
1	26	0.000-00	4.993-3	3.060-3	2.051-3	1.498-3	1.161-3	9.457-4	6.980-4	5.664-4	4.890-4
1	27	8.938+04	3.885-2	4.209-2	4.422-2	4.565-2	4.659-2	4.742-2	4.855-2	4.947-2	5.010-2
1	28	6.069+08	1.156-2	1.303-2	1.416-2	1.528-2	1.617-2	1.702-2	1.848-2	1.972-2	2.081-2
1	29	8.037-00	1.749-4	1.115-4	7.472-5	5.312-5	3.926-5	3.014-5	1.924-5	1.329-5	9.729-6
1	30	0.000-00	5.833-4	5.100-4	4.623-4	4.194-4	3.827-4	3.502-4	3.010-4	2.665-4	2.387-4
1	31	1.475-01	5.709-3	3.716-3	2.524-3	1.810-3	1.352-3	1.045-3	6.732-4	4.683-4	3.434-4
1	32	8.348+02	6.864-3	4.551-3	3.175-3	2.351-3	1.825-3	1.474-3	1.051-3	8.198-4	6.804-4
1	33	4.894+03	1.058-3	8.943-4	7.978-4	7.408-4	7.054-4	6.834-4	6.599-4	6.524-4	6.516-4
1	34	0.000-00	5.414-3	3.518-3	2.393-3	1.716-3	1.283-3	9.918-4	6.387-4	4.440-4	3.257-4
1	35	0.000-00	1.917-5	1.112-5	6.982-6	4.695-6	3.348-6	2.500-6	1.526-6	1.024-6	7.354-7
1	36	0.000-00	5.616-5	3.328-5	2.122-5	1.447-5	1.036-5	7.767-6	4.750-6	3.180-6	2.268-6
1	37	0.000-00	1.004-5	8.404-6	7.356-6	6.588-6	5.958-6	5.404-6	4.603-6	4.057-6	3.630-6
1	38	2.408-02	4.925-4	3.196-4	2.165-4	1.549-4	1.155-4	8.906-5	5.720-5	3.962-5	2.901-5
1	39	9.049+02	2.549-3	1.749-3	1.276-3	9.920-4	8.116-4	6.911-4	5.466-4	4.686-4	4.220-4
1	40	0.000-00	4.913-3	3.187-3	2.162-3	1.548-3	1.155-3	8.913-4	5.728-4	3.972-4	2.910-4
1	41	0.000-00	2.142-5	1.194-5	7.467-6	5.097-6	3.771-6	2.933-6	1.984-6	1.485-6	1.193-6
1	42	2.398+05	3.505-2	3.936-2	4.219-2	4.407-2	4.533-2	4.635-2	4.778-2	4.889-2	4.967-2
1	43	0.000-00	5.269-4	3.445-4	2.344-4	1.694-4	1.273-4	9.903-5	6.461-5	4.558-5	3.391-5
1	44	0.000-00	5.018-5	4.271-5	3.784-5	3.410-5	3.113-5	2.869-5	2.480-5	2.196-5	1.970-5
1	45	0.000-00	3.900-3	2.539-3	1.697-3	1.202-3	8.877-4	6.795-4	4.311-4	2.964-4	2.160-4
1	46	7.027-00	6.333-4	4.129-4	2.777-4	1.978-4	1.475-4	1.144-4	7.523-5	5.406-5	4.153-5
1	47	8.488-00	8.129-5	4.716-5	2.957-5	2.003-5	1.425-5	1.066-5	6.621-6	4.471-6	3.249-6
1	48	0.000-00	5.904-5	4.975-5	4.388-5	3.986-5	3.674-5	3.360-5	2.908-5	2.592-5	2.343-5
1	49	8.184+04	7.134-3	7.609-3	7.915-3	8.137-3	8.276-3	8.400-3	8.582-3	8.733-3	8.846-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
1	50	3.535-01	3.869-4	2.541-4	1.746-4	1.261-4	9.453-5	7.330-5	4.779-5	3.354-5	2.493-5
1	51	0.000-00	2.832-4	2.518-4	2.271-4	2.133-4	1.986-4	1.827-4	1.592-4	1.428-4	1.298-4
1	52	0.000-00	1.604-4	7.709-5	4.190-5	2.572-5	1.740-5	1.266-5	7.722-6	5.392-6	4.064-6
1	53	0.000-00	1.564-4	1.147-4	9.838-5	8.922-5	8.316-5	8.010-5	7.514-5	7.205-5	6.929-5
1	54	0.000-00	5.880-5	3.236-5	1.874-5	1.222-5	8.662-6	6.443-6	3.938-6	2.666-6	1.917-6
1	55	7.117-00	5.011-4	3.239-4	2.168-4	1.540-4	1.138-4	8.727-5	5.600-5	3.886-5	2.868-5
1	56	6.130+05	4.886-2	5.621-2	6.104-2	6.419-2	6.630-2	6.798-2	7.032-2	7.205-2	7.323-2
1	57	0.000-00	1.629-4	9.243-5	5.593-5	3.803-5	2.889-5	2.290-5	1.626-5	1.279-5	1.065-5
1	58	0.000-00	8.726-5	6.155-5	4.707-5	3.854-5	3.300-5	2.885-5	2.319-5	1.959-5	1.700-5
1	59	0.000-00	6.501-4	4.138-4	2.819-4	2.010-4	1.515-4	1.184-4	7.768-5	5.487-5	4.085-5
1	60	1.300+06	8.406-2	9.715-2	1.057-1	1.113-1	1.150-1	1.180-1	1.221-1	1.251-1	1.272-1
1	61	0.000-00	2.951-4	1.548-4	8.230-5	4.808-5	3.271-5	2.291-5	1.289-5	8.246-6	5.768-6
1	62	6.472-01	1.132-4	7.127-5	4.924-5	3.643-5	2.765-5	2.176-5	1.498-5	1.106-5	8.685-6
1	63	5.724+04	2.968-3	3.353-3	3.624-3	3.802-3	3.922-3	4.022-3	4.165-3	4.273-3	4.350-3
1	64	0.000-00	6.437-5	6.368-5	6.014-5	5.635-5	5.277-5	4.941-5	4.362-5	3.904-5	3.527-5
1	65	0.000-00	9.244-4	8.662-4	8.076-4	7.677-4	7.234-4	6.747-4	5.968-4	5.415-4	4.945-4
1	66	0.000-00	6.336-5	3.724-5	2.441-5	1.739-5	1.326-5	1.087-5	7.844-6	6.029-6	4.837-6
1	67	1.744-00	1.790-4	1.182-4	8.140-5	5.907-5	4.442-5	3.456-5	2.277-5	1.617-5	1.222-5
1	68	2.440+04	3.549-3	3.439-3	3.354-3	3.296-3	3.240-3	3.220-3	3.189-3	3.171-3	3.155-3
1	69	4.133-01	8.116-4	5.418-4	3.729-4	2.684-4	1.999-4	1.539-4	9.810-5	6.733-5	4.894-5
1	70	9.350-01	7.488-5	4.761-5	3.258-5	2.352-5	1.757-5	1.358-5	8.855-6	6.227-6	4.659-6
1	71	4.663-01	3.129-4	2.016-4	1.369-4	9.792-5	7.295-5	5.622-5	3.600-5	2.479-5	1.807-5
1	72	4.712+05	2.388-2	2.749-2	2.983-2	3.134-2	3.231-2	3.308-2	3.414-2	3.490-2	3.541-2
1	73	0.000-00	9.320-4	6.200-4	4.284-4	3.102-4	2.340-4	1.844-4	1.238-4	8.963-5	6.855-5
1	74	3.031+05	2.482-2	2.338-2	2.259-2	2.180-2	2.123-2	2.107-2	2.085-2	2.076-2	2.069-2
1	75	0.000-00	3.785-3	2.539-3	1.758-3	1.269-3	9.593-4	7.493-4	4.918-4	3.469-4	2.587-4
1	76	0.000-00	1.493-4	1.030-4	8.015-5	6.765-5	5.937-5	5.460-5	4.802-5	4.418-5	4.130-5
1	77	7.888+04	3.205-3	3.624-3	3.910-3	4.086-3	4.203-3	4.306-3	4.450-3	4.558-3	4.631-3
1	78	0.000-00	1.295-3	8.508-4	5.777-4	4.097-4	3.066-4	2.368-4	1.525-4	1.055-4	7.744-5
1	79	2.980+04	8.184-3	6.608-3	5.578-3	4.800-3	4.220-3	3.906-3	3.449-3	3.141-3	2.917-3
1	80	7.801-02	8.440-4	5.646-4	3.907-4	2.827-4	2.120-4	1.643-4	1.065-4	7.408-5	5.469-5
1	81	1.748+04	1.726-3	1.405-3	1.202-3	1.060-3	9.493-4	8.889-4	8.016-4	7.421-4	6.990-4
1	82	7.449-02	3.419-4	2.226-4	1.486-4	1.037-4	7.547-5	5.707-5	3.588-5	2.441-5	1.780-5
1	83	0.000-00	2.607-4	2.259-4	2.042-4	1.959-4	1.856-4	1.721-4	1.517-4	1.375-4	1.261-4
1	84	5.953+05	2.496-2	2.446-2	2.407-2	2.372-2	2.333-2	2.323-2	2.304-2	2.291-2	2.279-2
1	85	2.763-00	1.700-4	1.130-4	7.700-5	5.447-5	4.000-5	3.060-5	1.960-5	1.362-5	1.009-5
1	86	0.000-00	1.575-3	1.413-3	1.308-3	1.268-3	1.212-3	1.132-3	1.008-3	9.184-4	8.443-4
1	87	0.000-00	1.226-3	8.239-4	5.622-4	4.001-4	2.982-4	2.298-4	1.478-4	1.023-4	7.530-5
1	88	1.092+03	1.383-2	1.065-2	8.466-3	6.873-3	5.711-3	5.046-3	4.073-3	3.398-3	2.907-3
1	89	0.000-00	3.701-4	2.367-4	1.654-4	1.252-4	1.016-4	8.658-5	6.661-5	5.420-5	4.560-5
1	90	0.000-00	1.741-4	1.202-4	9.207-5	7.544-5	6.488-5	5.845-5	4.981-5	4.448-5	4.064-5
1	91	3.972+03	9.182-4	6.530-4	4.669-4	3.480-4	2.710-4	2.193-4	1.562-4	1.205-4	9.899-5
1	92	0.000-00	2.709-4	1.341-4	7.271-5	4.668-5	3.380-5	2.633-5	1.861-5	1.499-5	1.294-5
1	93	0.000-00	2.746-3	2.516-3	2.387-3	2.331-3	2.258-3	2.132-3	1.924-3	1.772-3	1.641-3
1	94	4.242-00	1.181-4	7.804-5	4.946-5	3.345-5	2.346-5	1.722-5	1.039-5	6.852-6	4.936-6
1	95	4.482+03	5.874-4	4.416-4	3.490-4	2.840-4	2.394-4	2.118-4	1.723-4	1.455-4	1.263-4
1	96	6.044+03	3.106-4	2.301-4	1.794-4	1.460-4	1.232-4	1.099-4	9.120-5	7.868-5	6.985-5
1	97	0.000-00	1.064-4	9.225-5	8.375-5	8.109-5	7.799-5	7.348-5	6.631-5	6.117-5	5.678-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
2	3	1.064+01	2.251-1	2.141-1	2.175-1	2.301-1	2.493-1	2.744-1	3.399-1	4.255-1	5.299-1
2	4	7.234+01	4.574-2	3.472-2	2.864-2	2.527-2	2.328-2	2.221-2	2.155-2	2.211-2	2.343-2
2	5	1.090+03	3.190-3	1.841-3	1.166-3	8.057-4	5.841-4	4.406-4	2.817-4	1.884-4	1.401-4
2	6	3.886+06	2.490-2	1.946-2	1.608-2	1.408-2	1.289-2	1.219-2	1.161-2	1.155-2	1.178-2
2	7	3.842+08	1.075-1	1.161-1	1.241-1	1.306-1	1.359-1	1.417-1	1.523-1	1.625-1	1.722-1
2	8	1.589+09	6.610-1	7.562-1	8.332-1	8.902-1	9.364-1	9.819-1	1.064-0	1.140-0	1.212-0
2	9	3.117-00	1.558-2	1.173-2	9.385-3	7.999-3	7.137-3	6.595-3	5.999-3	5.723-3	5.570-3
2	10	4.741+09	2.350-1	2.689-1	2.969-1	3.198-1	3.370-1	3.539-1	3.832-1	4.095-1	4.340-1
2	11	1.990+09	3.010-1	3.436-1	3.784-1	4.060-1	4.274-1	4.485-1	4.853-1	5.186-1	5.495-1
2	12	5.378+08	1.361-1	1.537-1	1.678-1	1.787-1	1.872-1	1.960-1	2.116-1	2.260-1	2.393-1
2	13	7.025+07	3.610-2	2.974-2	2.610-2	2.421-2	2.321-2	2.275-2	2.267-2	2.312-2	2.381-2
2	14	1.053+08	3.924-2	3.979-2	4.145-2	4.335-2	4.505-2	4.669-2	4.956-2	5.204-2	5.402-2
2	15	1.270+10	7.057-1	8.165-1	9.048-1	9.759-1	1.030-0	1.083-0	1.173-0	1.251-0	1.322-0
2	16	8.872-00	2.199-2	1.471-2	1.090-2	8.765-3	7.456-3	6.631-3	5.702-3	5.233-3	4.966-3
2	17	0.000-00	3.107-2	2.901-2	2.893-2	2.947-2	3.017-2	3.094-2	3.233-2	3.356-2	3.446-2
2	18	1.734+10	8.102-1	9.427-1	1.046-0	1.131-0	1.196-0	1.258-0	1.363-0	1.455-0	1.536-0
2	19	3.252+10	1.783-0	2.084-0	2.312-0	2.499-0	2.644-0	2.782-0	3.017-0	3.221-0	3.402-0
2	20	7.126+06	1.183-2	7.567-3	5.408-3	4.289-3	3.617-3	3.218-3	2.798-3	2.612-3	2.540-3
2	21	5.586+10	5.599-1	6.513-1	7.267-1	7.896-1	8.359-1	8.813-1	9.563-1	1.020-0	1.077-0
2	22	1.540+10	7.879-1	9.222-1	1.024-0	1.107-0	1.172-0	1.233-0	1.338-0	1.429-0	1.509-0
2	23	4.922+10	1.416-0	1.657-0	1.840-0	1.994-0	2.112-0	2.225-0	2.415-0	2.577-0	2.721-0
2	24	2.761+10	1.266-0	1.481-0	1.644-0	1.778-0	1.881-0	1.980-0	2.149-0	2.294-0	2.423-0
2	25	9.101-00	2.931-2	2.323-2	2.031-2	1.893-2	1.820-2	1.784-2	1.759-2	1.762-2	1.768-2
2	26	4.351-01	1.690-2	1.010-2	6.553-3	4.605-3	3.408-3	2.640-3	1.753-3	1.276-3	9.945-4
2	27	2.360+05	7.599-2	8.287-2	8.717-2	9.008-2	9.206-2	9.377-2	9.615-2	9.812-2	9.956-2
2	28	1.263+08	6.780-3	5.273-3	4.620-3	4.417-3	4.352-3	4.383-3	4.536-3	4.726-3	4.926-3
2	29	1.699+05	3.165-2	3.420-2	3.582-2	3.683-2	3.754-2	3.813-2	3.895-2	3.963-2	4.011-2
2	30	4.891+01	1.705-4	1.089-4	7.292-5	5.178-5	3.826-5	2.933-5	1.872-5	1.289-5	9.429-6
2	31	9.727+01	4.844-3	3.153-3	2.143-3	1.539-3	1.151-3	8.917-4	5.770-4	4.036-4	2.980-4
2	32	1.457+03	9.064-3	6.172-3	4.467-3	3.434-3	2.776-3	2.337-3	1.808-3	1.522-3	1.351-3
2	33	3.260+04	9.533-3	9.998-3	1.030-2	1.052-2	1.068-2	1.083-2	1.104-2	1.124-2	1.138-2
2	34	5.030+02	1.530-2	1.000-2	6.862-3	4.974-3	3.761-3	2.952-3	1.971-3	1.432-3	1.104-3
2	35	0.000-00	1.859-2	1.210-2	8.219-3	5.890-3	4.396-3	3.400-3	2.189-3	1.522-3	1.116-3
2	36	0.000-00	1.181-4	6.875-5	4.331-5	2.946-5	2.103-5	1.580-5	9.766-6	6.658-6	4.870-6
2	37	9.582-01	2.563-3	1.668-3	1.130-3	8.100-4	6.044-4	4.665-4	3.000-4	2.081-4	1.525-4
2	38	2.315+02	6.567-3	4.297-3	2.943-3	2.134-3	1.615-3	1.267-3	8.462-4	6.145-4	4.742-4
2	39	9.826+01	6.909-3	4.492-3	3.053-3	2.193-3	1.642-3	1.274-3	8.291-4	5.843-4	4.363-4
2	40	3.375+03	4.438-3	3.290-3	2.611-3	2.214-3	1.962-3	1.796-3	1.601-3	1.503-3	1.447-3
2	41	0.000-00	6.796-3	4.410-3	2.989-3	2.141-3	1.596-3	1.233-3	7.929-4	5.501-4	4.033-4
2	42	2.088+05	3.474-2	3.822-2	4.045-2	4.196-2	4.301-2	4.387-2	4.509-2	4.606-2	4.675-2
2	43	3.020+05	6.856-2	7.636-2	8.140-2	8.480-2	8.717-2	8.897-2	9.155-2	9.360-2	9.505-2
2	44	0.000-00	6.093-4	4.150-4	2.975-4	2.265-4	1.797-4	1.475-4	1.068-4	8.317-5	6.773-5
2	45	1.544+01	9.908-3	6.441-3	4.309-3	3.051-3	2.254-3	1.726-3	1.097-3	7.553-4	5.513-4
2	46	2.870+02	4.381-3	2.841-3	1.904-3	1.348-3	9.967-4	7.655-4	4.907-4	3.420-4	2.535-4
2	47	3.201+01	1.042-3	6.784-4	4.596-4	3.300-4	2.475-4	1.928-4	1.276-4	9.190-5	7.041-5
2	48	1.111+02	4.601-5	2.766-5	1.702-5	1.152-5	8.174-6	6.031-6	3.670-6	2.396-6	1.709-6
2	49	6.027+04	1.035-2	1.020-2	1.005-2	1.000-2	9.956-3	9.959-3	9.977-3	1.002-2	1.006-2
2	50	6.691+04	6.525-3	6.695-3	6.815-3	6.877-3	6.915-3	6.942-3	6.979-3	7.019-3	7.043-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
2	51	1.939-00	1.767-4	1.142-4	7.836-5	5.673-5	4.250-5	3.298-5	2.157-5	1.519-5	1.134-5
2	52	1.014+03	5.482-4	3.929-4	3.237-4	2.880-4	2.654-4	2.526-4	2.366-4	2.280-4	2.216-4
2	53	0.000-00	4.008-4	2.145-4	1.257-4	8.445-5	6.165-5	4.792-5	3.275-5	2.506-5	2.046-5
2	54	0.000-00	3.532-4	2.292-4	1.769-4	1.485-4	1.316-4	1.230-4	1.110-4	1.041-4	9.877-5
2	55	8.514+05	4.275-2	4.894-2	5.304-2	5.563-2	5.747-2	5.892-2	6.091-2	6.238-2	6.339-2
2	56	1.772+04	3.018-3	2.943-3	2.913-3	2.910-3	2.914-3	2.927-3	2.956-3	2.987-3	3.010-3
2	57	5.518+05	6.427-2	7.377-2	7.993-2	8.400-2	8.681-2	8.891-2	9.189-2	9.412-2	9.568-2
2	58	0.000-00	1.976-4	1.148-4	7.289-5	5.029-5	3.663-5	2.792-5	1.767-5	1.232-5	9.130-6
2	59	5.259+04	7.607-3	7.793-3	7.975-3	8.119-3	8.227-3	8.316-3	8.458-3	8.583-3	8.671-3
2	60	8.523+05	5.842-2	6.747-2	7.324-2	7.704-2	7.963-2	8.168-2	8.450-2	8.657-2	8.798-2
2	61	1.864+06	1.694-1	1.962-1	2.135-1	2.249-1	2.328-1	2.386-1	2.468-1	2.529-1	2.571-1
2	62	4.963+05	1.935-2	2.228-2	2.424-2	2.549-2	2.637-2	2.707-2	2.803-2	2.873-2	2.922-2
2	63	3.944+05	2.654-2	3.053-2	3.310-2	3.480-2	3.595-2	3.687-2	3.812-2	3.905-2	3.968-2
2	64	0.000-00	6.808-4	4.678-4	3.400-4	2.660-4	2.186-4	1.883-4	1.490-4	1.249-4	1.083-4
2	65	9.268-02	1.808-4	1.172-4	7.957-5	5.747-5	4.304-5	3.338-5	2.197-5	1.561-5	1.183-5
2	66	1.278+04	1.788-3	1.622-3	1.547-3	1.500-3	1.469-3	1.459-3	1.450-3	1.451-3	1.452-3
2	67	2.251+04	4.725-3	4.346-3	4.036-3	3.796-3	3.607-3	3.420-3	3.133-3	2.934-3	2.771-3
2	68	1.360+05	1.161-2	1.199-2	1.218-2	1.232-2	1.239-2	1.248-2	1.261-2	1.272-2	1.279-2
2	69	1.632+05	8.289-3	8.666-3	8.925-3	9.089-3	9.216-3	9.334-3	9.512-3	9.663-3	9.770-3
2	70	8.584+04	3.219-3	3.668-3	3.962-3	4.148-3	4.279-3	4.381-3	4.522-3	4.626-3	4.695-3
2	71	1.455+06	4.353-2	5.084-2	5.555-2	5.855-2	6.065-2	6.227-2	6.448-2	6.607-2	6.713-2
2	72	3.954+05	1.931-2	2.210-2	2.391-2	2.509-2	2.589-2	2.653-2	2.742-2	2.808-2	2.853-2
2	73	1.331+05	1.550-2	1.544-2	1.534-2	1.523-2	1.504-2	1.498-2	1.491-2	1.485-2	1.480-2
2	74	1.783+05	2.285-2	1.982-2	1.794-2	1.660-2	1.573-2	1.527-2	1.471-2	1.442-2	1.424-2
2	75	6.986+05	6.788-2	6.902-2	7.003-2	7.029-2	7.046-2	7.098-2	7.183-2	7.264-2	7.317-2
2	76	0.000-00	5.125-3	3.425-3	2.402-3	1.772-3	1.361-3	1.087-3	7.480-4	5.557-4	4.366-4
2	77	8.775+02	1.538-3	1.110-3	8.336-4	6.515-4	5.275-4	4.513-4	3.502-4	2.872-4	2.448-4
2	78	2.563+04	1.389-2	1.069-2	8.659-3	7.204-3	6.188-3	5.581-3	4.778-3	4.263-3	3.906-3
2	79	3.113+04	8.785-3	6.980-3	5.827-3	5.044-3	4.508-3	4.193-3	3.776-3	3.526-3	3.359-3
2	80	6.464+04	1.814-2	1.445-2	1.172-2	1.017-2	8.893-3	8.136-3	7.041-3	6.308-3	5.788-3
2	81	2.597+04	1.993-3	1.720-3	1.575-3	1.495-3	1.440-3	1.411-3	1.375-3	1.357-3	1.344-3
2	82	1.232+04	2.379-3	1.843-3	1.489-3	1.281-3	1.133-3	1.034-3	9.049-4	8.253-4	7.717-4
2	83	2.234-00	4.268-5	2.417-5	1.509-5	1.018-5	7.270-6	5.414-6	3.338-6	2.249-6	1.631-6
2	84	1.157+06	6.261-2	6.263-2	6.224-2	6.184-2	6.129-2	6.124-2	6.103-2	6.088-2	6.068-2
2	85	6.180+05	2.455-2	2.398-2	2.330-2	2.307-2	2.272-2	2.240-2	2.186-2	2.147-2	2.114-2
2	86	8.896-00	2.736-4	1.796-4	1.226-4	8.678-5	6.381-5	4.887-5	3.134-5	2.178-5	1.614-5
2	87	4.196+01	4.774-3	3.227-3	2.228-3	1.613-3	1.213-3	9.493-4	6.298-4	4.504-4	3.422-4
2	88	6.857+02	1.602-2	1.231-2	9.697-3	7.910-3	6.593-3	5.816-3	4.676-3	3.889-3	3.320-3
2	89	9.125+02	2.776-2	2.135-2	1.701-2	1.385-2	1.145-2	1.008-2	8.150-3	6.806-3	5.830-3
2	90	0.000-00	9.050-4	5.950-4	4.330-4	3.362-4	2.795-4	2.438-4	1.975-4	1.684-4	1.480-4
2	91	7.938+03	3.123-3	2.192-3	1.552-3	1.150-3	8.931-4	7.205-4	5.149-4	4.023-4	3.367-4
2	92	0.000-00	8.059-4	3.819-4	1.915-4	1.109-4	7.209-5	4.955-5	2.690-5	1.665-5	1.123-5
2	93	5.114-00	1.164-4	7.676-5	4.862-5	3.294-5	2.318-5	1.705-5	1.033-5	6.850-6	4.955-6
2	94	1.983+02	8.932-3	8.357-3	7.912-3	7.596-3	7.349-3	6.924-3	6.224-3	5.716-3	5.281-3
2	95	4.100+02	1.301-3	9.717-4	7.459-4	6.006-4	5.014-4	4.386-4	3.518-4	2.948-4	2.548-4
2	96	7.666+02	2.530-4	1.552-4	1.037-4	7.802-5	6.261-5	5.335-5	4.299-5	3.741-5	3.421-5
2	97	1.091+02	6.024-5	3.519-5	2.059-5	1.294-5	8.519-6	5.855-6	3.195-6	1.878-6	1.243-6
3	4	9.285+01	1.611-1	1.388-1	1.285-1	1.242-1	1.233-1	1.249-1	1.325-1	1.450-1	1.612-1

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
3	5	4.379+01	2.494-2	2.314-2	2.306-2	2.387-2	2.537-2	2.740-2	3.288-2	4.017-2	4.916-2
3	6	6.720+06	3.988-2	3.219-2	2.749-2	2.478-2	2.326-2	2.246-2	2.202-2	2.236-2	2.311-2
3	7	1.104+07	7.195-3	7.266-3	7.493-3	7.791-3	8.063-3	8.348-3	8.871-3	9.357-3	9.791-3
3	8	6.078+07	4.482-2	4.345-2	4.317-2	4.372-2	4.447-2	4.552-2	4.793-2	5.051-2	5.313-2
3	9	1.374+09	8.897-1	1.005-0	1.099-0	1.171-0	1.228-0	1.285-0	1.391-0	1.490-0	1.584-0
3	10	5.726-00	3.236-3	2.198-3	1.515-3	1.105-3	8.376-4	6.571-4	4.384-4	3.128-4	2.363-4
3	11	1.191+09	1.991-1	2.250-1	2.450-1	2.631-1	2.766-1	2.902-1	3.136-1	3.348-1	3.548-1
3	12	3.673+09	1.002-0	1.150-0	1.265-0	1.358-0	1.430-0	1.501-0	1.626-0	1.738-0	1.843-0
3	13	1.108+08	6.549-2	5.506-2	4.921-2	4.622-2	4.462-2	4.406-2	4.426-2	4.531-2	4.672-2
3	14	1.053+08	3.833-2	3.377-2	3.208-2	3.172-2	3.180-2	3.225-2	3.342-2	3.472-2	3.595-2
3	15	3.201+10	1.910-0	2.212-0	2.446-0	2.651-0	2.804-0	2.951-0	3.197-0	3.410-0	3.603-0
3	16	2.789+08	8.414-2	8.425-2	8.676-2	9.010-2	9.299-2	9.616-2	1.020-1	1.074-1	1.122-1
3	17	1.746-00	6.002-2	5.224-2	4.957-2	4.900-2	4.918-2	4.977-2	5.122-2	5.273-2	5.388-2
3	18	1.326+10	6.568-1	7.559-1	8.342-1	9.032-1	9.546-1	1.005-0	1.088-0	1.160-0	1.225-0
3	19	2.137+10	1.254-0	1.463-0	1.618-0	1.751-0	1.854-0	1.952-0	2.116-0	2.258-0	2.384-0
3	20	1.079+10	3.598-1	4.138-1	4.573-1	4.953-1	5.243-1	5.523-1	5.985-1	6.379-1	6.731-1
3	21	1.748+01	3.252-3	2.011-3	1.338-3	9.810-4	7.616-4	6.210-4	4.538-4	3.574-4	2.969-4
3	22	5.906+09	3.360-1	3.856-1	4.239-1	4.574-1	4.830-1	5.083-1	5.507-1	5.873-1	6.199-1
3	23	1.392+10	4.519-1	5.209-1	5.758-1	6.242-1	6.607-1	6.962-1	7.545-1	8.042-1	8.484-1
3	24	3.566+10	1.789-0	2.093-0	2.317-0	2.510-0	2.656-0	2.799-0	3.036-0	3.240-0	3.420-0
3	25	7.948+10	5.559-0	6.524-0	7.274-0	7.853-0	8.296-0	8.729-0	9.471-0	1.011+1	1.068+1
3	26	3.348+09	2.072-1	2.270-1	2.457-1	2.612-1	2.739-1	2.868-1	3.097-1	3.297-1	3.476-1
3	27	1.897+05	7.023-2	7.576-2	7.934-2	8.151-2	8.306-2	8.443-2	8.630-2	8.787-2	8.902-2
3	28	1.288+07	9.478-3	6.173-3	4.631-3	3.898-3	3.493-3	3.271-3	3.071-3	3.001-3	2.985-3
3	29	3.992+05	7.540-2	8.247-2	8.710-2	8.984-2	9.186-2	9.361-2	9.604-2	9.800-2	9.943-2
3	30	4.735+05	3.553-2	3.874-2	4.089-2	4.216-2	4.307-2	4.387-2	4.498-2	4.587-2	4.649-2
3	31	9.070+02	7.028-4	5.393-4	4.446-4	3.887-4	3.534-4	3.312-4	3.051-4	2.923-4	2.851-4
3	32	2.489+03	2.279-3	1.788-3	1.501-3	1.332-3	1.225-3	1.156-3	1.076-3	1.038-3	1.018-3
3	33	6.746+03	3.346-3	3.193-3	3.097-3	3.031-3	2.983-3	2.951-3	2.908-3	2.891-3	2.879-3
3	34	2.952+02	5.116-3	3.324-3	2.260-3	1.623-3	1.216-3	9.443-4	6.145-4	4.334-4	3.236-4
3	35	4.304+02	1.418-2	9.249-3	6.299-3	4.538-3	3.408-3	2.655-3	1.741-3	1.238-3	9.324-4
3	36	0.000-00	3.893-2	2.535-2	1.718-2	1.232-2	9.201-3	7.117-3	4.585-3	3.188-3	2.338-3
3	37	2.553+03	9.779-4	7.340-4	5.887-4	5.022-4	4.475-4	4.122-4	3.703-4	3.487-4	3.360-4
3	38	2.512+03	3.322-3	2.301-3	1.695-3	1.333-3	1.103-3	9.513-4	7.689-4	6.711-4	6.131-4
3	39	1.536+03	7.631-3	5.028-3	3.492-3	2.572-3	1.984-3	1.592-3	1.118-3	8.585-4	7.024-4
3	40	2.728+03	1.579-2	1.062-2	7.581-3	5.753-3	4.588-3	3.812-3	2.878-3	2.371-3	2.066-3
3	41	1.274+04	2.802-2	2.027-2	1.569-2	1.294-2	1.123-2	1.008-2	8.729-3	8.029-3	7.622-3
3	42	2.196+04	6.298-3	5.749-3	5.446-3	5.267-3	5.164-3	5.110-3	5.063-3	5.066-3	5.079-3
3	43	1.381+05	3.325-2	3.611-2	3.787-2	3.912-2	4.000-2	4.072-2	4.175-2	4.261-2	4.323-2
3	44	4.035+05	1.185-1	1.324-1	1.414-1	1.470-1	1.515-1	1.546-1	1.591-1	1.627-1	1.653-1
3	45	1.911+03	1.079-2	7.062-3	4.793-3	3.450-3	2.598-3	2.038-3	1.370-3	1.009-3	7.950-4
3	46	1.009+01	1.232-2	8.013-3	5.408-3	3.839-3	2.847-3	2.191-3	1.408-3	9.810-4	7.252-4
3	47	9.842+01	9.118-3	5.923-3	3.981-3	2.814-3	2.076-3	1.589-3	1.009-3	6.943-4	5.062-4
3	48	4.703+04	6.622-4	6.120-4	5.713-4	5.557-4	5.429-4	5.375-4	5.328-4	5.329-4	5.363-4
3	49	1.210+04	7.321-3	5.931-3	5.040-3	4.469-3	4.088-3	3.812-3	3.449-3	3.232-3	3.084-3
3	50	4.085+04	5.364-3	5.018-3	4.800-3	4.652-3	4.552-3	4.499-3	4.431-3	4.400-3	4.381-3
3	51	1.806+05	3.163-3	3.328-3	3.454-3	3.516-3	3.561-3	3.606-3	3.669-3	3.720-3	3.760-3
3	52	1.351+04	4.845-3	3.999-3	3.527-3	3.261-3	3.093-3	2.992-3	2.878-3	2.831-3	2.807-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
3	53	7.796+02	3.147-3	2.070-3	1.456-3	1.093-3	8.556-4	7.008-4	5.097-4	4.028-4	3.357-4
3	54	0.000-00	2.289-3	1.464-3	1.018-3	7.614-4	5.969-4	4.930-4	3.645-4	2.931-4	2.478-4
3	55	2.991+05	1.548-2	1.773-2	1.919-2	2.009-2	2.074-2	2.126-2	2.197-2	2.249-2	2.286-2
3	56	5.430+05	5.114-2	5.838-2	6.294-2	6.590-2	6.796-2	6.960-2	7.186-2	7.354-2	7.469-2
3	57	5.878+05	8.292-2	9.411-2	1.010-1	1.057-1	1.089-1	1.113-1	1.148-1	1.174-1	1.192-1
3	58	4.129+05	6.516-2	7.520-2	8.166-2	8.583-2	8.897-2	9.112-2	9.420-2	9.656-2	9.820-2
3	59	3.467+05	4.026-2	4.522-2	4.838-2	5.056-2	5.205-2	5.325-2	5.494-2	5.623-2	5.713-2
3	60	4.186+04	3.694-3	3.992-3	4.173-3	4.297-3	4.379-3	4.447-3	4.538-3	4.607-3	4.652-3
3	61	1.493+05	1.638-2	1.834-2	1.950-2	2.033-2	2.088-2	2.131-2	2.190-2	2.235-2	2.265-2
3	62	1.428+05	7.322-3	7.808-3	8.141-3	8.365-3	8.536-3	8.688-3	8.913-3	9.090-3	9.218-3
3	63	5.193+05	3.773-2	4.316-2	4.661-2	4.889-2	5.047-2	5.175-2	5.354-2	5.485-2	5.576-2
3	64	1.825+06	2.180-1	2.514-1	2.727-1	2.862-1	2.964-1	3.033-1	3.131-1	3.206-1	3.257-1
3	65	2.460+05	6.334-3	6.515-3	6.652-3	6.723-3	6.775-3	6.835-3	6.918-3	6.986-3	7.032-3
3	66	1.024+06	9.603-2	1.112-1	1.208-1	1.272-1	1.316-1	1.349-1	1.397-1	1.432-1	1.456-1
3	67	4.131+05	1.965-2	2.117-2	2.215-2	2.276-2	2.318-2	2.357-2	2.409-2	2.448-2	2.476-2
3	68	3.221+05	2.834-2	3.112-2	3.268-2	3.367-2	3.429-2	3.473-2	3.528-2	3.568-2	3.591-2
3	69	2.511+05	1.198-2	1.274-2	1.318-2	1.350-2	1.372-2	1.393-2	1.423-2	1.447-2	1.464-2
3	70	1.830+03	6.634-4	5.146-4	4.227-4	3.725-4	3.387-4	3.169-4	2.909-4	2.766-4	2.678-4
3	71	1.895+05	7.643-3	8.130-3	8.437-3	8.656-3	8.815-3	8.960-3	9.168-3	9.333-3	9.449-3
3	72	1.018+06	5.125-2	5.954-2	6.473-2	6.812-2	7.044-2	7.230-2	7.483-2	7.667-2	7.792-2
3	73	1.326+06	8.912-2	1.041-1	1.134-1	1.196-1	1.238-1	1.270-1	1.315-1	1.347-1	1.369-1
3	74	6.064+03	1.647-3	1.243-3	1.006-3	8.760-4	7.878-4	7.320-4	6.632-4	6.263-4	6.028-4
3	75	3.825+02	1.017-2	7.150-3	5.301-3	4.101-3	3.260-3	2.743-3	2.084-3	1.685-3	1.424-3
3	76	7.272+05	1.064-1	1.035-1	1.022-1	1.014-1	1.003-1	1.001-1	1.003-1	1.009-1	1.014-1
3	77	3.440+03	7.205-4	5.756-4	4.950-4	4.541-4	4.275-4	4.102-4	3.887-4	3.767-4	3.690-4
3	78	1.559+05	5.259-2	4.315-2	3.683-2	3.224-2	2.900-2	2.717-2	2.469-2	2.310-2	2.198-2
3	79	3.639+04	2.914-2	2.256-2	1.786-2	1.487-2	1.268-2	1.135-2	9.477-3	8.238-3	7.369-3
3	80	5.656+03	7.990-3	5.938-3	4.494-3	3.658-3	3.046-3	2.649-3	2.103-3	1.751-3	1.510-3
3	81	8.070+04	6.654-3	6.529-3	6.482-3	6.474-3	6.464-3	6.482-3	6.507-3	6.535-3	6.550-3
3	82	4.743+05	1.597-2	1.657-2	1.688-2	1.712-2	1.727-2	1.743-2	1.764-2	1.780-2	1.791-2
3	83	7.535+05	6.259-3	6.685-3	6.931-3	7.110-3	7.212-3	7.303-3	7.413-3	7.488-3	7.535-3
3	84	1.126+06	6.060-2	6.136-2	6.142-2	6.129-2	6.118-2	6.102-2	6.058-2	6.027-2	5.991-2
3	85	1.796+06	5.664-2	5.690-2	5.652-2	5.659-2	5.641-2	5.644-2	5.633-2	5.624-2	5.611-2
3	86	2.984+06	2.400-2	2.412-2	2.401-2	2.412-2	2.409-2	2.413-2	2.413-2	2.412-2	2.409-2
3	87	3.673+04	1.662-2	1.260-2	9.937-3	8.243-3	7.065-3	6.319-3	5.353-3	4.756-3	4.358-3
3	88	2.183+02	3.102-3	2.315-3	1.769-3	1.451-3	1.217-3	1.071-3	8.612-4	7.205-4	6.204-4
3	89	1.188+03	1.518-2	1.164-2	9.171-3	7.463-3	6.182-3	5.451-3	4.396-3	3.668-3	3.142-3
3	90	5.795+01	5.214-2	3.991-2	3.183-2	2.621-2	2.140-2	1.870-2	1.505-2	1.257-2	1.077-2
3	91	2.435+03	7.893-3	6.120-3	4.778-3	3.934-3	3.408-3	2.970-3	2.388-3	2.032-3	1.785-3
3	92	1.312+05	9.169-3	8.415-3	8.089-3	7.930-3	7.745-3	7.704-3	7.687-3	7.710-3	7.723-3
3	93	5.260+03	7.202-4	5.294-4	3.946-4	3.233-4	2.706-4	2.338-4	1.834-4	1.506-4	1.281-4
3	94	6.120+01	1.636-3	1.201-3	8.849-4	7.156-4	5.908-4	5.074-4	3.944-4	3.220-4	2.727-4
3	95	4.144-00	1.413-2	1.345-2	1.243-2	1.177-2	1.138-2	1.069-2	9.557-3	8.744-3	8.061-3
3	96	1.118+05	3.748-3	3.803-3	3.803-3	3.837-3	3.850-3	3.865-3	3.878-3	3.886-3	3.886-3
3	97	1.842+04	2.791-4	2.876-4	2.905-4	2.915-4	2.929-4	2.944-4	2.960-4	2.970-4	2.970-4
4	5	1.647-00	2.958-1	2.988-1	3.049-1	3.106-1	3.158-1	3.213-1	3.313-1	3.428-1	3.543-1
4	6	1.526+05	2.112-3	1.657-3	1.370-3	1.193-3	1.079-3	1.002-3	9.007-4	8.370-4	7.918-4
4	7	2.689+07	3.324-2	2.805-2	2.494-2	2.329-2	2.245-2	2.213-2	2.223-2	2.284-2	2.371-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a{\pm}b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
4	8	8.697+06	3.762-2	2.847-2	2.266-2	1.932-2	1.719-2	1.592-2	1.465-2	1.422-2	1.422-2
4	9	8.227+07	1.205-1	1.198-1	1.211-1	1.234-1	1.259-1	1.295-1	1.374-1	1.458-1	1.544-1
4	10	2.231-00	1.436-3	9.283-4	6.259-4	4.492-4	3.359-4	2.606-4	1.717-4	1.209-4	9.067-5
4	11	6.001+07	2.155-2	2.123-2	2.140-2	2.193-2	2.244-2	2.311-2	2.448-2	2.588-2	2.730-2
4	12	8.927+04	1.928-2	1.324-2	9.484-3	7.246-3	5.814-3	4.860-3	3.738-3	3.114-3	2.743-3
4	13	5.709+09	1.447-0	1.670-0	1.843-0	1.983-0	2.090-0	2.196-0	2.379-0	2.544-0	2.696-0
4	14	2.612+08	6.538-2	6.071-2	5.918-2	5.933-2	6.000-2	6.132-2	6.436-2	6.756-2	7.076-2
4	15	9.262+09	6.878-1	7.956-1	8.789-1	9.516-1	1.006-0	1.058-0	1.146-0	1.222-0	1.292-0
4	16	2.510+07	4.993-2	3.412-2	2.535-2	2.053-2	1.755-2	1.572-2	1.378-2	1.292-2	1.258-2
4	17	4.944+01	7.208-2	4.614-2	3.160-2	2.345-2	1.843-2	1.516-2	1.137-2	9.351-3	8.174-3
4	18	2.728+10	1.818-0	2.110-0	2.334-0	2.530-0	2.676-0	2.817-0	3.053-0	3.257-0	3.442-0
4	19	4.719+09	3.808-1	4.380-1	4.812-1	5.189-1	5.479-1	5.759-1	6.236-1	6.649-1	7.020-1
4	20	1.316+09	6.808-2	7.296-2	7.786-2	8.271-2	8.657-2	9.056-2	9.741-2	1.035-1	1.090-1
4	21	8.798-00	5.738-3	3.554-3	2.328-3	1.632-3	1.202-3	9.224-4	5.938-4	4.135-4	3.057-4
4	22	5.820+10	3.665-0	4.304-0	4.777-0	5.176-0	5.479-0	5.771-0	6.261-0	6.683-0	7.059-0
4	23	1.110+09	5.838-2	6.081-2	6.420-2	6.782-2	7.080-2	7.393-2	7.939-2	8.424-2	8.870-2
4	24	1.424+10	9.468-1	1.101-0	1.216-0	1.315-0	1.391-0	1.464-0	1.587-0	1.693-0	1.788-0
4	25	2.384+09	2.476-1	2.739-1	2.971-1	3.165-1	3.317-1	3.471-1	3.745-1	3.988-1	4.208-1
4	26	8.275+10	5.091-0	6.001-0	6.708-0	7.251-0	7.670-0	8.077-0	8.771-0	9.370-0	9.899-0
4	27	4.996+03	4.023-3	3.873-3	3.789-3	3.723-3	3.672-3	3.636-3	3.586-3	3.570-3	3.557-3
4	28	1.270+09	6.255-2	6.823-2	7.360-2	7.843-2	8.217-2	8.570-2	9.140-2	9.614-2	1.000-1
4	29	1.965+04	5.912-3	6.183-3	6.370-3	6.479-3	6.566-3	6.653-3	6.780-3	6.894-3	6.981-3
4	30	7.263+02	1.084-3	1.078-3	1.077-3	1.077-3	1.078-3	1.082-3	1.088-3	1.095-3	1.098-3
4	31	2.881+02	4.180-5	3.519-5	3.164-5	2.960-5	2.840-5	2.773-5	2.712-5	2.709-5	2.734-5
4	32	1.913+04	1.636-2	1.773-2	1.860-2	1.915-2	1.953-2	1.987-2	2.035-2	2.074-2	2.104-2
4	33	4.261+05	1.511-1	1.639-1	1.720-1	1.771-1	1.807-1	1.838-1	1.882-1	1.918-1	1.945-1
4	34	1.072+02	2.563-4	1.667-4	1.138-4	8.260-5	6.261-5	4.934-5	3.338-5	2.480-5	1.982-5
4	35	2.199+01	7.122-4	4.613-4	3.120-4	2.242-4	1.675-4	1.300-4	8.468-5	5.988-5	4.485-5
4	36	0.000-00	1.903-3	1.230-3	8.279-4	5.901-4	4.400-4	3.392-4	2.176-4	1.508-4	1.104-4
4	37	1.055+01	4.927-5	3.225-5	2.189-5	1.584-5	1.191-5	9.278-6	6.081-6	4.313-6	3.237-6
4	38	1.306+02	2.036-4	1.430-4	1.069-4	8.546-5	7.184-5	6.284-5	5.206-5	4.629-5	4.288-5
4	39	2.139+02	5.089-4	3.961-4	3.309-4	2.922-4	2.678-4	2.523-4	2.339-4	2.248-4	2.194-4
4	40	6.692+02	4.814-4	3.279-4	2.391-4	1.869-4	1.536-4	1.315-4	1.056-4	9.239-5	8.553-5
4	41	2.497+02	3.960-4	3.517-4	3.280-4	3.147-4	3.076-4	3.033-4	2.992-4	2.987-4	2.990-4
4	42	3.176+03	8.476-3	5.894-3	4.371-3	3.458-3	2.878-3	2.495-3	2.036-3	1.790-3	1.644-3
4	43	1.779+03	1.321-2	8.871-3	6.288-3	4.751-3	3.768-3	3.114-3	2.325-3	1.896-3	1.639-3
4	44	1.286+04	2.469-2	1.813-2	1.421-2	1.189-2	1.043-2	9.463-3	8.319-3	7.733-3	7.397-3
4	45	7.659+01	4.118-4	2.651-4	1.779-4	1.265-4	9.415-5	7.297-5	4.781-5	3.422-5	2.619-5
4	46	3.036+01	5.122-4	3.321-4	2.242-4	1.591-4	1.183-4	9.128-5	5.902-5	4.147-5	3.093-5
4	47	3.633+01	4.358-4	2.817-4	1.887-4	1.329-4	9.795-5	7.494-5	4.759-5	3.281-5	2.399-5
4	48	7.896+05	3.546-2	3.862-2	4.054-2	4.184-2	4.273-2	4.354-2	4.466-2	4.553-2	4.614-2
4	49	1.369+02	3.606-3	2.364-3	1.627-3	1.183-3	8.997-4	7.085-4	4.778-4	3.496-4	2.715-4
4	50	2.792+01	3.654-3	2.382-3	1.618-3	1.163-3	8.712-4	6.763-4	4.423-4	3.126-4	2.344-4
4	51	1.129+03	2.307-3	1.810-3	1.498-3	1.322-3	1.208-3	1.136-3	1.050-3	1.005-3	9.781-4
4	52	2.437+04	2.460-2	1.800-2	1.410-2	1.176-2	1.026-2	9.266-3	8.080-3	7.456-3	7.089-3
4	53	8.748+03	3.024-2	2.094-2	1.543-2	1.212-2	9.972-3	8.545-3	6.823-3	5.886-3	5.321-3
4	54	0.000-00	3.559-2	2.323-2	1.587-2	1.149-2	8.579-3	6.665-3	4.326-3	3.022-3	2.227-3
4	55	1.372+04	4.288-3	3.432-3	2.905-3	2.589-3	2.394-3	2.273-3	2.135-3	2.071-3	2.037-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
4	56	2.310+04	7.070-3	5.762-3	4.931-3	4.452-3	4.149-3	3.961-3	3.750-3	3.657-3	3.609-3
4	57	2.098+04	8.810-3	6.884-3	5.654-3	4.932-3	4.474-3	4.183-3	3.852-3	3.695-3	3.613-3
4	58	1.693+06	3.115-1	3.578-1	3.876-1	4.068-1	4.213-1	4.314-1	4.457-1	4.567-1	4.646-1
4	59	1.895+06	2.644-1	3.022-1	3.252-1	3.406-1	3.511-1	3.593-1	3.708-1	3.795-1	3.856-1
4	60	1.284+04	6.698-3	4.913-3	3.812-3	3.175-3	2.785-3	2.535-3	2.251-3	2.109-3	2.030-3
4	61	8.839+04	1.812-2	1.684-2	1.606-2	1.567-2	1.545-2	1.536-2	1.533-2	1.541-2	1.550-2
4	62	1.614+02	6.077-3	3.969-3	2.689-3	1.915-3	1.421-3	1.093-3	7.025-4	4.885-4	3.612-4
4	63	2.245+04	1.101-2	7.973-3	6.139-3	5.037-3	4.344-3	3.894-3	3.371-3	3.102-3	2.949-3
4	64	3.780+05	6.787-2	7.517-2	7.985-2	8.289-2	8.529-2	8.695-2	8.939-2	9.131-2	9.268-2
4	65	1.415+02	9.748-4	6.795-4	5.028-4	4.016-4	3.366-4	2.941-4	2.436-4	2.162-4	1.998-4
4	66	3.474+05	5.600-2	5.930-2	6.139-2	6.290-2	6.402-2	6.498-2	6.644-2	6.767-2	6.855-2
4	67	3.654-01	3.308-3	2.141-3	1.436-3	1.020-3	7.550-4	5.803-4	3.742-4	2.613-4	1.946-4
4	68	1.306+04	8.185-3	5.768-3	4.296-3	3.420-3	2.870-3	2.509-3	2.090-3	1.869-3	1.742-3
4	69	1.264+06	5.845-2	6.743-2	7.294-2	7.643-2	7.884-2	8.079-2	8.342-2	8.532-2	8.663-2
4	70	3.789+04	9.386-3	7.047-3	5.603-3	4.734-3	4.181-3	3.821-3	3.401-3	3.183-3	3.060-3
4	71	4.455+05	1.851-2	2.132-2	2.305-2	2.415-2	2.492-2	2.554-2	2.639-2	2.700-2	2.743-2
4	72	8.248+01	1.281-3	9.453-4	7.303-4	6.027-4	5.196-4	4.634-4	3.937-4	3.544-4	3.286-4
4	73	1.501+05	1.174-2	1.290-2	1.362-2	1.412-2	1.449-2	1.479-2	1.523-2	1.558-2	1.584-2
4	74	9.355+04	7.514-3	7.694-3	7.845-3	7.979-3	8.089-3	8.198-3	8.367-3	8.511-3	8.618-3
4	75	7.732+03	3.360-3	2.328-3	1.745-3	1.397-3	1.177-3	1.036-3	8.653-4	7.682-4	7.079-4
4	76	9.650+04	1.432-2	1.384-2	1.369-2	1.365-2	1.363-2	1.366-2	1.378-2	1.394-2	1.406-2
4	77	1.208+06	7.560-2	8.635-2	9.289-2	9.715-2	9.993-2	1.022-1	1.052-1	1.073-1	1.087-1
4	78	3.972+04	7.962-3	7.098-3	6.618-3	6.325-3	6.147-3	6.066-3	5.984-3	5.963-3	5.955-3
4	79	5.163+04	3.864-3	3.735-3	3.711-3	3.721-3	3.735-3	3.761-3	3.805-3	3.848-3	3.879-3
4	80	3.397+04	1.988-3	1.919-3	1.907-3	1.921-3	1.935-3	1.955-3	1.987-3	2.015-3	2.035-3
4	81	1.565+05	4.516-2	3.865-2	3.371-2	3.064-2	2.818-2	2.664-2	2.433-2	2.271-2	2.151-2
4	82	2.298+06	7.078-2	7.841-2	8.302-2	8.606-2	8.804-2	8.967-2	9.176-2	9.320-2	9.415-2
4	83	2.054+06	2.165-2	2.397-2	2.537-2	2.627-2	2.683-2	2.728-2	2.785-2	2.823-2	2.848-2
4	84	7.225+04	6.782-3	6.549-3	6.339-3	6.195-3	6.078-3	6.016-3	5.913-3	5.842-3	5.782-3
4	85	5.362+05	1.609-2	1.705-2	1.756-2	1.794-2	1.816-2	1.837-2	1.863-2	1.880-2	1.891-2
4	86	9.006+05	6.503-3	6.801-3	6.957-3	7.099-3	7.171-3	7.241-3	7.325-3	7.381-3	7.420-3
4	87	8.089+05	1.248-1	1.102-1	9.944-2	9.192-2	8.595-2	8.261-2	7.776-2	7.431-2	7.173-2
4	88	3.944+03	2.793-3	1.926-3	1.385-3	1.065-3	8.674-4	7.326-4	5.699-4	4.794-4	4.246-4
4	89	6.188+02	5.534-3	3.824-3	2.739-3	2.054-3	1.614-3	1.329-3	9.671-4	7.484-4	6.070-4
4	90	5.289+03	8.008-3	5.610-3	4.133-3	3.200-3	2.529-3	2.115-3	1.596-3	1.277-3	1.065-3
4	91	4.282+04	2.183-2	2.057-2	1.913-2	1.807-2	1.752-2	1.651-2	1.483-2	1.364-2	1.265-2
4	92	1.640+06	1.180-1	1.179-1	1.181-1	1.181-1	1.170-1	1.172-1	1.179-1	1.187-1	1.193-1
4	93	2.538+04	4.966-4	3.405-4	2.410-4	1.802-4	1.406-4	1.140-4	8.168-5	6.363-5	5.302-5
4	94	7.505-00	1.566-3	1.068-3	7.374-4	5.358-4	4.033-4	3.143-4	2.066-4	1.463-4	1.102-4
4	95	1.743+04	5.638-3	4.744-3	4.069-3	3.618-3	3.342-3	3.090-3	2.738-3	2.517-3	2.355-3
4	96	2.051+06	6.920-2	7.341-2	7.499-2	7.642-2	7.711-2	7.765-2	7.815-2	7.844-2	7.849-2
4	97	1.589+06	3.570-3	4.500-3	5.023-3	5.353-3	5.571-3	5.733-3	5.941-3	6.074-3	6.159-3
5	6	7.547-05	1.632-5	1.069-5	7.332-6	5.413-6	4.122-6	3.247-6	2.213-6	1.594-6	1.227-6
5	7	3.937+06	3.452-3	3.841-3	4.178-3	4.397-3	4.559-3	4.691-3	4.843-3	4.895-3	4.903-3
5	8	1.373-02	3.741-4	2.361-4	1.535-4	1.064-4	7.701-5	5.788-5	3.615-5	2.430-5	1.765-5
5	9	0.000-00	3.971-4	2.562-4	1.808-4	1.413-4	1.174-4	1.032-4	8.970-5	8.414-5	8.206-5
5	10	0.000-00	4.950-3	3.361-3	2.334-3	1.700-3	1.288-3	1.009-3	6.701-4	4.764-4	3.578-4
5	11	2.290+07	2.272-2	1.986-2	1.813-2	1.724-2	1.678-2	1.652-2	1.629-2	1.615-2	1.599-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
5	12	3.220-00	1.682-2	1.138-2	7.871-3	5.730-3	4.340-3	3.400-3	2.259-3	1.607-3	1.207-3
5	13	2.797-00	3.637-3	2.448-3	1.746-3	1.279-3	9.889-4	8.003-4	5.643-4	4.228-4	3.333-4
5	14	9.827-02	3.999-3	2.498-3	1.664-3	1.180-3	8.774-4	6.786-4	4.413-4	3.091-4	2.283-4
5	15	1.258+09	1.411-1	1.635-1	1.817-1	1.954-1	2.061-1	2.165-1	2.347-1	2.510-1	2.658-1
5	16	0.000-00	7.536-3	4.822-3	3.355-3	2.515-3	1.990-3	1.650-3	1.251-3	1.036-3	9.073-4
5	17	0.000-00	1.337-2	8.248-3	5.514-3	3.923-3	2.911-3	2.247-3	1.455-3	1.015-3	7.477-4
5	18	2.269+09	2.206-1	2.564-1	2.852-1	3.069-1	3.239-1	3.403-1	3.689-1	3.942-1	4.172-1
5	19	3.075-00	4.290-3	2.682-3	1.813-3	1.319-3	1.007-3	8.055-4	5.610-4	4.189-4	3.322-4
5	20	8.158+07	7.814-3	7.319-3	7.304-3	7.382-3	7.496-3	7.701-3	8.131-3	8.564-3	8.988-3
5	21	0.000-00	1.867-3	1.128-3	7.282-4	5.071-4	3.713-4	2.843-4	1.826-4	1.262-4	9.372-5
5	22	1.005+01	4.883-3	3.451-3	2.630-3	2.145-3	1.829-3	1.619-3	1.328-3	1.131-3	9.862-4
5	23	1.255+07	3.355-3	2.307-3	1.778-3	1.528-3	1.393-3	1.321-3	1.269-3	1.268-3	1.291-3
5	24	6.412-00	4.214-3	2.454-3	1.566-3	1.090-3	8.042-4	6.256-4	4.206-4	3.067-4	2.403-4
5	25	0.000-00	3.068-3	1.614-3	9.121-4	5.731-4	3.818-4	2.673-4	1.497-4	9.157-5	6.234-5
5	26	0.000-00	1.954-2	2.088-2	2.212-2	2.331-2	2.423-2	2.500-2	2.620-2	2.713-2	2.778-2
5	27	3.942-00	1.914-4	1.917-4	1.928-4	1.935-4	1.938-4	1.946-4	1.952-4	1.962-4	1.963-4
5	28	7.474+10	2.281-0	2.693-0	3.002-0	3.255-0	3.451-0	3.637-0	3.951-0	4.221-0	4.458-0
5	29	1.218+01	1.534-5	8.682-6	5.355-6	3.572-6	2.541-6	1.884-6	1.184-6	7.712-7	5.622-7
5	30	0.000-00	1.404-5	9.814-6	8.157-6	6.763-6	5.785-6	5.090-6	4.182-6	3.581-6	3.157-6
5	31	1.142-02	6.157-5	3.989-5	2.699-5	1.934-5	1.444-5	1.117-5	7.192-6	5.004-6	3.671-6
5	32	1.509+03	2.511-3	2.673-3	2.774-3	2.847-3	2.893-3	2.935-3	2.993-3	3.045-3	3.083-3
5	33	3.563+04	2.123-2	2.289-2	2.390-2	2.461-2	2.507-2	2.546-2	2.601-2	2.649-2	2.683-2
5	34	0.000-00	5.959-5	3.836-5	2.601-5	1.865-5	1.393-5	1.076-5	6.926-6	4.814-6	3.528-6
5	35	0.000-00	6.100-7	3.358-7	1.952-7	1.278-7	8.966-8	6.674-8	4.066-8	2.757-8	1.997-8
5	36	0.000-00	1.774-6	1.076-6	6.075-7	3.920-7	2.812-7	2.109-7	1.297-7	8.807-8	6.351-8
5	37	0.000-00	5.741-7	4.540-7	3.899-7	3.359-7	2.950-7	2.645-7	2.219-7	1.935-7	1.720-7
5	38	2.368-01	5.827-6	3.748-6	2.512-6	1.777-6	1.315-6	1.007-6	6.408-7	4.402-7	3.207-7
5	39	7.130+01	5.490-5	4.828-5	4.441-5	4.221-5	4.092-5	4.015-5	3.939-5	3.924-5	3.926-5
5	40	0.000-00	5.425-5	3.478-5	2.329-5	1.662-5	1.234-5	9.473-6	6.044-6	4.169-6	3.043-6
5	41	0.000-00	9.101-7	4.844-7	2.609-7	1.716-7	1.205-7	8.596-8	4.916-8	3.152-8	2.203-8
5	42	1.572+03	6.544-4	7.138-4	7.526-4	7.797-4	7.983-4	8.135-4	8.347-4	8.518-4	8.641-4
5	43	0.000-00	2.913-5	1.593-5	9.291-6	5.879-6	4.032-6	2.897-6	1.689-6	1.091-6	7.638-7
5	44	0.000-00	3.315-5	1.770-5	9.967-6	6.259-6	4.209-6	2.948-6	1.634-6	1.008-6	6.777-7
5	45	0.000-00	1.134-5	6.835-6	4.222-6	2.896-6	2.069-6	1.543-6	9.420-7	6.299-7	4.510-7
5	46	1.522+01	1.893-6	1.279-6	9.499-7	7.941-7	7.067-7	6.617-7	6.225-7	6.193-7	6.371-7
5	47	7.126-02	4.146-7	2.444-7	1.480-7	1.016-7	7.480-8	5.743-8	3.934-8	2.739-8	2.140-8
5	48	0.000-00	1.816-3	1.616-3	1.476-3	1.349-3	1.234-3	1.132-3	9.765-4	8.666-4	7.775-4
5	49	2.925+02	7.335-5	5.014-5	3.647-5	2.911-5	2.387-5	2.071-5	1.686-5	1.474-5	1.357-5
5	50	9.269-00	4.160-5	2.519-5	1.573-5	1.103-5	8.046-6	6.089-6	3.846-6	2.636-6	1.927-6
5	51	0.000-00	7.979-5	7.003-5	6.274-5	5.725-5	5.271-5	4.834-5	4.174-5	3.707-5	3.330-5
5	52	0.000-00	9.213-5	4.669-5	2.710-5	1.744-5	1.191-5	8.559-6	4.880-6	3.047-6	2.054-6
5	53	0.000-00	1.250-4	6.187-5	3.559-5	2.319-5	1.647-5	1.230-5	7.747-6	5.490-6	4.231-6
5	54	0.000-00	1.716-4	7.978-5	4.170-5	2.559-5	1.685-5	1.156-5	6.089-6	3.548-6	2.242-6
5	55	3.448-03	2.273-3	1.461-3	9.860-4	7.038-4	5.240-4	4.041-4	2.597-4	1.801-4	1.320-4
5	56	5.352-00	3.584-3	2.313-3	1.569-3	1.122-3	8.410-4	6.531-4	4.267-4	3.018-4	2.264-4
5	57	0.000-00	4.661-3	2.994-3	2.014-3	1.433-3	1.065-3	8.195-4	5.253-4	3.634-4	2.662-4
5	58	0.000-00	3.622-4	3.580-4	3.471-4	3.320-4	3.172-4	3.019-4	2.744-4	2.520-4	2.332-4
5	59	0.000-00	4.575-4	2.702-4	1.742-4	1.206-4	8.801-5	6.775-5	4.360-5	3.041-5	2.241-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
5	60	2.902+02	1.126-4	7.454-5	5.218-5	3.987-5	3.254-5	2.777-5	2.221-5	1.923-5	1.750-5
5	61	0.000-00	8.647-5	4.733-5	2.742-5	1.691-5	1.162-5	8.156-6	4.471-6	2.710-6	1.778-6
5	62	7.163-02	4.342-4	2.587-4	1.687-4	1.187-4	8.769-5	6.736-5	4.323-5	2.991-5	2.192-5
5	63	3.636+03	1.268-3	9.649-4	8.109-4	7.207-4	6.704-4	6.390-4	6.038-4	5.876-4	5.792-4
5	64	0.000-00	8.714-5	6.005-5	4.460-5	3.522-5	2.997-5	2.618-5	2.146-5	1.862-5	1.669-5
5	65	0.000-00	9.488-5	7.615-5	6.200-5	5.516-5	4.897-5	4.407-5	3.725-5	3.287-5	2.956-5
5	66	0.000-00	1.947-3	1.207-3	8.089-4	5.690-4	4.257-4	3.286-4	2.119-4	1.471-4	1.081-4
5	67	5.821+01	1.220-4	7.382-5	4.665-5	3.166-5	2.265-5	1.667-5	1.001-5	6.455-6	4.523-6
5	68	1.290+04	3.255-4	2.374-4	1.888-4	1.617-4	1.453-4	1.359-4	1.272-4	1.259-4	1.295-4
5	69	5.580-01	1.860-4	1.211-4	8.170-5	5.808-5	4.304-5	3.299-5	2.104-5	1.447-5	1.058-5
5	70	1.294-00	3.553-4	2.064-4	1.269-4	8.347-5	5.782-5	4.213-5	2.488-5	1.628-5	1.142-5
5	71	4.223-03	3.343-3	2.198-3	1.484-3	1.055-3	7.809-4	5.981-4	3.800-4	2.610-4	1.900-4
5	72	2.926+04	9.411-3	7.329-3	6.061-3	5.307-3	4.829-3	4.523-3	4.175-3	4.007-3	3.917-3
5	73	0.000-00	1.147-2	7.576-3	5.130-3	3.654-3	2.713-3	2.084-3	1.329-3	9.151-4	6.678-4
5	74	1.240+05	9.544-3	1.105-2	1.205-2	1.270-2	1.313-2	1.347-2	1.395-2	1.430-2	1.455-2
5	75	0.000-00	1.978-3	1.294-3	8.717-4	6.206-4	4.606-4	3.536-4	2.253-4	1.549-4	1.129-4
5	76	0.000-00	1.762-4	8.324-5	4.197-5	2.552-5	1.688-5	1.164-5	6.379-6	4.061-6	2.899-6
5	77	1.165+06	8.392-2	9.651-2	1.049-1	1.103-1	1.139-1	1.168-1	1.209-1	1.240-1	1.261-1
5	78	0.000-00	2.653-3	1.713-3	1.156-3	8.205-4	6.100-4	4.696-4	3.016-4	2.092-4	1.538-4
5	79	4.589+04	8.240-3	7.447-3	6.967-3	6.697-3	6.529-3	6.441-3	6.358-3	6.343-3	6.343-3
5	80	1.042-01	3.419-3	2.240-3	1.520-3	1.089-3	8.104-4	6.246-4	4.012-4	2.780-4	2.041-4
5	81	1.813+06	1.172-1	1.358-1	1.480-1	1.559-1	1.611-1	1.654-1	1.713-1	1.757-1	1.787-1
5	82	1.079-01	1.151-4	1.004-4	8.690-5	7.272-5	6.224-5	5.466-5	4.393-5	3.666-5	3.143-5
5	83	0.000-00	1.358-3	1.142-3	1.003-3	9.492-4	8.840-4	8.144-4	7.141-4	6.470-4	5.962-4
5	84	6.872+04	2.899-3	3.322-3	3.600-3	3.785-3	3.905-3	4.005-3	4.146-3	4.250-3	4.324-3
5	85	3.849-01	3.331-5	2.297-5	1.593-5	1.176-5	8.936-6	7.056-6	4.771-6	3.482-6	2.694-6
5	86	0.000-00	2.282-4	1.975-4	1.759-4	1.680-4	1.577-4	1.456-4	1.276-4	1.153-4	1.056-4
5	87	0.000-00	5.203-4	3.880-4	3.039-4	2.450-4	2.034-4	1.794-4	1.441-4	1.198-4	1.020-4
5	88	1.364+04	2.298-4	2.237-4	2.291-4	2.346-4	2.397-4	2.450-4	2.538-4	2.612-4	2.672-4
5	89	0.000-00	1.219-4	6.624-5	3.859-5	2.536-5	1.788-5	1.344-5	8.539-6	5.983-6	4.523-6
5	90	0.000-00	1.409-4	7.612-5	4.099-5	2.590-5	1.736-5	1.237-5	7.138-6	4.594-6	3.268-6
5	91	4.151+05	3.733-2	3.297-2	2.989-2	2.758-2	2.571-2	2.471-2	2.320-2	2.212-2	2.130-2
5	92	0.000-00	4.719-4	4.065-4	3.773-4	3.467-4	3.320-4	3.228-4	3.065-4	2.961-4	2.868-4
5	93	0.000-00	9.897-5	8.459-5	7.680-5	7.143-5	6.725-5	6.239-5	5.506-5	4.996-5	4.584-5
5	94	1.880+01	6.206-5	4.016-5	2.468-5	1.633-5	1.113-5	7.942-6	4.508-6	2.753-6	1.850-6
5	95	2.538+04	1.119-3	9.286-4	7.966-4	7.065-4	6.373-4	5.997-4	5.465-4	5.104-4	4.847-4
5	96	3.354+04	1.776-2	1.352-2	1.076-2	8.788-3	7.352-3	6.516-3	5.299-3	4.455-3	3.841-3
5	97	0.000-00	4.261-3	3.900-3	3.719-3	3.647-3	3.534-3	3.340-3	3.018-3	2.780-3	2.576-3
6	7	1.180+01	1.937-2	1.287-2	9.055-3	6.809-3	5.360-3	4.377-3	3.204-3	2.531-3	2.134-3
6	8	3.506+01	3.429-2	2.356-2	1.734-2	1.375-2	1.144-2	9.908-3	8.169-3	7.293-3	6.906-3
6	9	2.011-00	4.963-2	3.431-2	2.552-2	2.038-2	1.708-2	1.489-2	1.240-2	1.115-2	1.061-2
6	10	2.148+02	4.568-3	3.613-3	3.226-3	3.136-3	3.222-3	3.456-3	4.239-3	5.371-3	6.835-3
6	11	4.428+02	9.741-3	6.425-3	4.950-3	4.324-3	4.091-3	4.114-3	4.683-3	5.698-3	7.111-3
6	12	6.271+02	1.250-2	6.924-3	4.262-3	2.894-3	2.084-3	1.565-3	1.014-3	6.992-4	5.412-4
6	13	1.650+01	2.344-4	1.273-4	7.674-5	5.139-5	3.672-5	2.735-5	1.762-5	1.207-5	9.374-6
6	14	9.294-03	6.077-5	3.730-5	2.484-5	1.810-5	1.410-5	1.157-5	8.744-6	7.288-6	6.479-6
6	15	4.667+02	1.296-3	1.033-3	9.048-4	8.503-4	8.337-4	8.463-4	9.369-4	1.090-3	1.301-3
6	16	2.391-01	1.224-4	8.009-5	5.715-5	4.427-5	3.652-5	3.154-5	2.594-5	2.308-5	2.159-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
6	17	2.580-00	1.539-4	1.460-4	1.447-4	1.452-4	1.466-4	1.486-4	1.522-4	1.561-4	1.601-4
6	18	4.080+02	9.879-4	7.385-4	6.217-4	5.657-4	5.416-4	5.385-4	5.794-4	6.601-4	7.767-4
6	19	1.531+02	2.081-3	1.222-3	7.616-4	5.184-4	3.776-4	2.873-4	1.887-4	1.339-4	1.040-4
6	20	3.936+02	1.842-3	1.143-3	7.635-4	5.565-4	4.350-4	3.586-4	2.822-4	2.527-4	2.515-4
6	21	2.305+03	5.366-4	4.162-4	3.614-4	3.380-4	3.285-4	3.289-4	3.493-4	3.881-4	4.440-4
6	22	1.131+01	8.788-4	5.717-4	3.870-4	2.809-4	2.147-4	1.711-4	1.207-4	9.291-5	7.691-5
6	23	4.171+02	2.785-3	1.846-3	1.300-3	9.868-4	7.912-4	6.642-4	5.256-4	4.614-4	4.392-4
6	24	5.938+01	4.226-3	2.787-3	1.925-3	1.429-3	1.114-3	9.065-4	6.656-4	5.327-4	4.567-4
6	25	2.876+01	6.970-3	4.692-3	3.258-3	2.419-3	1.889-3	1.539-3	1.129-3	9.030-4	7.728-4
6	26	8.755-02	2.943-5	1.825-5	1.210-5	8.648-6	6.498-6	5.102-6	3.470-6	2.573-6	2.052-6
6	27	1.356+07	6.514-2	4.330-2	2.977-2	2.199-2	1.713-2	1.398-2	1.033-2	8.403-3	7.309-3
6	28	1.933+03	1.258-4	1.576-4	1.762-4	1.886-4	1.981-4	2.074-4	2.291-4	2.579-4	2.949-4
6	29	1.101+06	3.695-2	2.396-2	1.601-2	1.136-2	8.450-3	6.543-3	4.292-3	3.055-3	2.313-3
6	30	8.851+01	1.210-2	7.813-3	5.199-3	3.674-3	2.719-3	2.094-3	1.354-3	9.469-4	7.017-4
6	31	1.534+06	2.010-2	1.866-2	1.852-2	1.881-2	1.926-2	1.974-2	2.064-2	2.144-2	2.203-2
6	32	9.632+06	3.065-2	2.859-2	2.848-2	2.899-2	2.969-2	3.046-2	3.189-2	3.316-2	3.412-2
6	33	6.309+05	6.826-3	5.380-3	4.615-3	4.237-3	4.039-3	3.945-3	3.891-3	3.915-3	3.953-3
6	34	1.973+07	4.755-2	4.492-2	4.502-2	4.601-2	4.734-2	4.864-2	5.107-2	5.321-2	5.485-2
6	35	3.087-01	5.585-2	5.222-2	5.212-2	5.316-2	5.457-2	5.603-2	5.870-2	6.104-2	6.275-2
6	36	0.000-00	6.865-2	6.505-2	6.547-2	6.705-2	6.902-2	7.101-2	7.454-2	7.760-2	7.983-2
6	37	2.427+01	1.832-3	1.004-3	5.878-4	3.749-4	2.533-4	1.786-4	1.007-4	6.155-5	4.184-5
6	38	1.594+08	1.483-2	1.383-2	1.378-2	1.415-2	1.451-2	1.500-2	1.598-2	1.690-2	1.778-2
6	39	4.270+08	5.066-2	5.355-2	5.650-2	5.990-2	6.248-2	6.527-2	7.023-2	7.467-2	7.875-2
6	40	5.956+08	9.334-2	1.012-1	1.089-1	1.152-1	1.206-1	1.261-1	1.358-1	1.445-1	1.526-1
6	41	1.196+01	1.743-2	1.038-2	6.893-3	5.137-3	4.165-3	3.592-3	3.031-3	2.787-3	2.682-3
6	42	6.016+06	9.587-3	6.290-3	4.452-3	3.434-3	2.797-3	2.385-3	1.919-3	1.682-3	1.555-3
6	43	6.025+07	1.850-2	1.538-2	1.388-2	1.318-2	1.284-2	1.279-2	1.300-2	1.340-2	1.387-2
6	44	3.710-01	1.309-2	8.268-3	5.562-3	4.024-3	3.060-3	2.425-3	1.679-3	1.269-3	1.025-3
6	45	6.807+10	5.980-0	7.038-0	7.847-0	8.450-0	8.928-0	9.398-0	1.018+1	1.087+1	1.148+1
6	46	6.960+10	4.253-0	5.006-0	5.546-0	6.007-0	6.352-0	6.692-0	7.257-0	7.740-0	8.173-0
6	47	7.103+10	2.565-0	3.003-0	3.327-0	3.619-0	3.830-0	4.035-0	4.378-0	4.669-0	4.928-0
6	48	1.001-00	9.042-5	5.426-5	3.540-5	2.490-5	1.837-5	1.414-5	9.220-6	6.390-6	4.805-6
6	49	6.087+08	3.502-2	3.876-2	4.192-2	4.489-2	4.724-2	4.962-2	5.365-2	5.712-2	6.024-2
6	50	2.771+08	1.004-2	1.044-2	1.102-2	1.173-2	1.227-2	1.284-2	1.384-2	1.470-2	1.549-2
6	51	7.618-01	5.727-4	2.969-4	1.757-4	1.178-4	8.513-5	6.459-5	4.289-5	2.975-5	2.320-5
6	52	5.927+05	7.023-5	6.441-5	6.378-5	6.493-5	6.666-5	6.900-5	7.354-5	7.785-5	8.184-5
6	53	2.704-03	1.182-4	7.151-5	4.732-5	3.437-5	2.670-5	2.183-5	1.640-5	1.360-5	1.199-5
6	54	0.000-00	2.205-5	1.212-5	7.354-6	4.974-6	3.687-6	2.896-6	2.095-6	1.728-6	1.521-6
6	55	2.478+07	3.689-3	2.394-3	1.759-3	1.487-3	1.349-3	1.287-3	1.257-3	1.274-3	1.311-3
6	56	1.517+08	1.141-2	1.020-2	9.858-3	9.990-3	1.019-2	1.053-2	1.120-2	1.184-2	1.244-2
6	57	4.699+08	3.306-2	3.523-2	3.766-2	3.982-2	4.175-2	4.378-2	4.728-2	5.036-2	5.313-2
6	58	3.441-03	9.657-4	5.958-4	3.903-4	2.752-4	2.042-4	1.578-4	1.035-4	7.376-5	5.598-5
6	59	4.480+06	1.180-3	8.592-4	6.941-4	6.086-4	5.618-4	5.380-4	5.203-4	5.211-4	5.299-4
6	60	2.024+06	1.092-2	6.725-3	4.428-3	3.142-3	2.344-3	1.828-3	1.227-3	9.024-4	7.107-4
6	61	2.142+07	1.534-2	9.977-3	7.063-3	5.470-3	4.509-3	3.912-3	3.257-3	2.944-3	2.792-3
6	62	2.547+06	1.228-3	6.912-4	4.268-4	3.022-4	2.359-4	1.986-4	1.642-4	1.506-4	1.464-4
6	63	1.387+07	3.582-3	2.311-3	1.672-3	1.369-3	1.203-3	1.115-3	1.042-3	1.025-3	1.034-3
6	64	4.773-02	2.287-2	1.411-2	9.228-3	6.502-3	4.819-3	3.720-3	2.434-3	1.733-3	1.314-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
6	65	2.798+01	1.514-3	8.813-4	5.517-4	3.755-4	2.703-4	2.038-4	1.285-4	8.710-5	6.417-5
6	66	5.972+07	7.735-3	6.037-3	5.274-3	4.949-3	4.821-3	4.824-3	4.947-3	5.130-3	5.332-3
6	67	3.119+07	4.619-3	3.019-3	2.210-3	1.809-3	1.579-3	1.452-3	1.332-3	1.290-3	1.289-3
6	68	8.748+07	8.477-3	6.453-3	5.530-3	5.138-3	4.972-3	4.944-3	5.031-3	5.185-3	5.374-3
6	69	2.979+05	9.234-5	5.252-5	3.283-5	2.354-5	1.852-5	1.565-5	1.294-5	1.182-5	1.146-5
6	70	1.265+07	2.720-4	2.757-4	2.875-4	3.041-4	3.182-4	3.331-4	3.597-4	3.826-4	4.033-4
6	71	1.317+06	7.232-4	3.970-4	2.347-4	1.578-4	1.166-4	9.304-5	7.061-5	6.103-5	5.726-5
6	72	8.250+06	1.440-3	9.019-4	6.454-4	5.328-4	4.773-4	4.526-4	4.401-4	4.454-4	4.582-4
6	73	1.036+08	6.332-3	5.814-3	5.759-3	5.881-3	6.067-3	6.306-3	6.760-3	7.176-3	7.559-3
6	74	2.055+06	2.537-3	1.537-3	1.011-3	7.260-4	5.538-4	4.457-4	3.240-4	2.616-4	2.270-4
6	75	7.744+04	2.627-3	1.581-3	1.023-3	7.163-4	5.298-4	4.101-4	2.723-4	1.991-4	1.560-4
6	76	1.520-02	3.090-3	1.860-3	1.199-3	8.394-4	6.229-4	4.831-4	3.228-4	2.378-4	1.879-4
6	77	4.129+05	2.118-4	1.256-4	8.157-5	5.964-5	4.718-5	3.973-5	3.209-5	2.863-5	2.708-5
6	78	6.733+07	4.537-3	3.626-3	3.299-3	3.226-3	3.254-3	3.340-3	3.539-3	3.738-3	3.928-3
6	79	1.910+07	2.421-3	1.501-3	1.080-3	9.021-4	8.186-4	7.844-4	7.727-4	7.881-4	8.138-4
6	80	2.068+06	1.288-3	6.778-4	3.855-4	2.501-4	1.789-4	1.387-4	1.001-4	8.347-5	7.636-5
6	81	6.882+02	8.061-5	4.234-5	2.349-5	1.461-5	9.835-6	7.043-6	4.222-6	2.839-6	2.149-6
6	82	1.542+05	2.465-5	1.384-5	9.271-6	7.254-6	6.160-6	5.519-6	4.926-6	4.601-6	4.512-6
6	83	2.287-02	1.444-5	6.990-6	3.984-6	2.689-6	1.986-6	1.554-6	1.108-6	8.181-7	6.679-7
6	84	2.040+07	9.546-4	6.973-4	5.863-4	5.621-4	5.584-4	5.651-4	5.898-4	6.143-4	6.413-4
6	85	8.512+06	4.759-4	2.876-4	2.129-4	1.844-4	1.709-4	1.645-4	1.622-4	1.628-4	1.666-4
6	86	2.518-01	1.378-4	6.706-5	3.895-5	2.640-5	1.949-5	1.507-5	1.040-5	7.373-6	5.839-6
6	87	1.900+03	4.551-6	2.320-6	1.315-6	8.304-7	5.909-7	4.499-7	3.068-7	2.393-7	2.045-7
6	88	3.128+03	7.221-4	4.183-4	2.607-4	1.772-4	1.273-4	9.576-5	6.010-5	4.148-5	3.066-5
6	89	1.005+03	9.549-4	5.580-4	3.494-4	2.385-4	1.722-4	1.304-4	8.301-5	5.823-5	4.382-5
6	90	2.418-02	1.176-3	6.906-4	4.314-4	2.936-4	2.126-4	1.610-4	1.025-4	7.178-5	5.387-5
6	91	2.678+05	1.371-5	9.540-6	7.640-6	6.867-6	6.499-6	6.418-6	6.496-6	6.667-6	6.887-6
6	92	5.509-05	1.163-6	6.414-7	3.741-7	2.458-7	1.736-7	1.309-7	8.639-8	6.516-8	5.369-8
6	93	3.169-01	4.874-5	2.628-5	1.455-5	8.966-6	5.966-6	4.203-6	2.409-6	1.524-6	1.066-6
6	94	1.587+06	1.465-4	8.522-5	5.402-5	3.974-5	3.251-5	2.863-5	2.537-5	2.434-5	2.431-5
6	95	2.362+06	2.371-4	1.426-4	9.614-5	7.495-5	6.459-5	5.943-5	5.588-5	5.554-5	5.660-5
6	96	1.597+03	3.454-6	2.058-6	1.325-6	9.359-7	6.969-7	5.558-7	3.948-7	3.074-7	2.579-7
6	97	1.346-01	8.986-7	5.592-7	3.490-7	2.381-7	1.765-7	1.406-7	9.954-8	7.668-8	6.281-8
7	8	2.890-05	6.678-2	4.357-2	3.020-2	2.238-2	1.725-2	1.374-2	9.454-3	6.950-3	5.428-3
7	9	1.283-08	1.818-2	1.526-2	1.376-2	1.291-2	1.239-2	1.206-2	1.168-2	1.149-2	1.137-2
7	10	1.379+02	1.536-3	9.062-4	5.815-4	4.094-4	3.025-4	2.320-4	1.514-4	1.046-4	7.812-5
7	11	1.425+02	2.840-1	2.836-1	2.867-1	2.935-1	2.996-1	3.064-1	3.213-1	3.394-1	3.598-1
7	12	2.338+01	1.200-1	1.183-1	1.194-1	1.227-1	1.261-1	1.304-1	1.404-1	1.532-1	1.684-1
7	13	1.089-01	1.219-2	7.733-3	5.241-3	3.816-3	2.911-3	2.306-3	1.591-3	1.188-3	9.524-4
7	14	9.597-00	2.946-3	1.824-3	1.301-3	1.046-3	9.000-4	8.127-4	7.265-4	6.960-4	6.937-4
7	15	1.846+02	7.103-3	4.882-3	3.706-3	3.067-3	2.657-3	2.412-3	2.174-3	2.120-3	2.180-3
7	16	5.967-00	4.234-3	3.577-3	3.351-3	3.291-3	3.299-3	3.334-3	3.434-3	3.556-3	3.685-3
7	17	0.000-00	1.450-3	8.235-4	5.351-4	3.935-4	3.139-4	2.673-4	2.188-4	1.976-4	1.877-4
7	18	1.104+02	4.640-3	3.246-3	2.477-3	2.040-3	1.760-3	1.583-3	1.408-3	1.362-3	1.395-3
7	19	4.978+01	4.892-3	3.691-3	3.107-3	2.822-3	2.644-3	2.535-3	2.422-3	2.383-3	2.387-3
7	20	7.285+01	1.591-2	1.386-2	1.271-2	1.189-2	1.126-2	1.089-2	1.034-2	9.984-3	9.725-3
7	21	4.696-00	8.088-4	5.215-4	3.506-4	2.558-4	1.928-4	1.546-4	1.071-4	7.901-5	6.145-5
7	22	1.505+01	5.601-3	3.630-3	2.465-3	1.780-3	1.344-3	1.061-3	7.286-4	5.470-4	4.449-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
7	23	1.141+01	7.719-3	5.746-3	4.613-3	3.867-3	3.326-3	3.017-3	2.565-3	2.290-3	2.080-3
7	24	5.945-00	1.985-3	1.256-3	8.938-4	6.922-4	5.599-4	4.744-4	3.690-4	3.070-4	2.678-4
7	25	3.473-00	2.030-3	1.303-3	9.649-4	7.936-4	6.999-4	6.484-4	5.993-4	5.844-4	5.828-4
7	26	9.645-00	5.700-3	3.459-3	2.279-3	1.647-3	1.269-3	1.028-3	7.520-4	6.063-4	5.235-4
7	27	1.066+08	4.852-2	5.106-2	5.395-2	5.642-2	5.853-2	6.090-2	6.527-2	6.943-2	7.338-2
7	28	2.767+02	7.012-4	4.347-4	3.225-4	2.692-4	2.411-4	2.280-4	2.213-4	2.293-4	2.467-4
7	29	1.751+09	3.091-1	3.570-1	3.924-1	4.223-1	4.448-1	4.671-1	5.061-1	5.413-1	5.742-1
7	30	6.271+09	3.503-1	4.072-1	4.476-1	4.832-1	5.097-1	5.354-1	5.803-1	6.207-1	6.584-1
7	31	5.412+07	2.992-2	2.339-2	1.978-2	1.802-2	1.706-2	1.665-2	1.652-2	1.684-2	1.736-2
7	32	1.168+03	2.330-2	1.456-2	9.554-3	6.717-3	4.962-3	3.822-3	2.490-3	1.761-3	1.331-3
7	33	3.445+06	2.086-2	1.394-2	9.785-3	7.365-3	5.909-3	4.978-3	3.926-3	3.388-3	3.100-3
7	34	5.185-00	1.922-2	1.192-2	7.765-3	5.416-3	3.970-3	3.030-3	1.933-3	1.333-3	9.784-4
7	35	0.000-00	3.462-3	2.089-3	1.349-3	9.402-4	6.893-4	5.266-4	3.386-4	2.364-4	1.763-4
7	36	0.000-00	5.907-5	2.731-5	1.467-5	9.156-6	6.201-6	4.463-6	2.621-6	1.705-6	1.195-6
7	37	2.444+08	1.106-2	1.254-2	1.358-2	1.460-2	1.536-2	1.610-2	1.741-2	1.857-2	1.966-2
7	38	3.050+07	6.723-3	6.307-3	6.194-3	6.259-3	6.354-3	6.519-3	6.876-3	7.246-3	7.615-3
7	39	1.087+04	6.348-3	3.886-3	2.518-3	1.753-3	1.285-3	9.825-4	6.328-4	4.433-4	3.323-4
7	40	1.675-00	1.130-2	7.082-3	4.740-3	3.433-3	2.634-3	2.118-3	1.527-3	1.212-3	1.028-3
7	41	0.000-00	1.127-3	7.059-4	4.831-4	3.631-4	2.924-4	2.481-4	1.995-4	1.750-4	1.615-4
7	42	1.936+08	5.010-2	5.085-2	5.262-2	5.487-2	5.664-2	5.872-2	6.256-2	6.615-2	6.944-2
7	43	1.670+01	3.172-2	2.680-2	2.451-2	2.359-2	2.332-2	2.335-2	2.374-2	2.429-2	2.474-2
7	44	0.000-00	3.870-3	3.086-3	2.731-3	2.573-3	2.504-3	2.479-3	2.489-3	2.528-3	2.565-3
7	45	6.349-03	9.829-3	5.961-3	3.866-3	2.702-3	1.990-3	1.528-3	9.940-4	7.052-4	5.347-4
7	46	1.804+06	2.400-3	1.558-3	1.109-3	8.766-4	7.410-4	6.594-4	5.769-4	5.423-4	5.307-4
7	47	2.588+06	1.368-3	9.446-4	7.026-4	5.691-4	4.899-4	4.447-4	4.003-4	3.834-4	3.796-4
7	48	8.335+08	1.727-2	2.014-2	2.217-2	2.400-2	2.535-2	2.666-2	2.890-2	3.082-2	3.258-2
7	49	1.672+09	1.648-1	1.916-1	2.127-1	2.289-1	2.413-1	2.537-1	2.747-1	2.929-1	3.094-1
7	50	1.906+10	9.882-1	1.163-0	1.287-0	1.397-0	1.477-0	1.555-0	1.686-0	1.799-0	1.901-0
7	51	3.842+10	6.178-1	7.299-1	8.063-1	8.772-1	9.291-1	9.785-1	1.062-0	1.133-0	1.197-0
7	52	8.131-00	1.880-2	1.514-2	1.362-2	1.307-2	1.294-2	1.297-2	1.324-2	1.359-2	1.388-2
7	53	0.000-00	1.532-2	1.386-2	1.363-2	1.383-2	1.419-2	1.456-2	1.527-2	1.590-2	1.636-2
7	54	0.000-00	3.078-3	1.898-3	1.243-3	8.764-4	6.477-4	4.969-4	3.194-4	2.212-4	1.624-4
7	55	2.210+10	9.214-1	1.093-0	1.212-0	1.318-0	1.396-0	1.471-0	1.597-0	1.704-0	1.800-0
7	56	8.913+09	6.332-1	7.488-1	8.375-1	9.050-1	9.568-1	1.008-0	1.094-0	1.168-0	1.234-0
7	57	4.436-00	4.426-3	2.728-3	1.784-3	1.253-3	9.257-4	7.125-4	4.640-4	3.280-4	2.471-4
7	58	0.000-00	1.001-2	6.031-3	3.887-3	2.732-3	2.035-3	1.591-3	1.090-3	8.248-4	6.729-4
7	59	2.006+01	1.687-2	1.085-2	7.446-3	5.534-3	4.361-3	3.608-3	2.744-3	2.285-3	2.020-3
7	60	3.559+10	1.982-0	2.354-0	2.638-0	2.854-0	3.021-0	3.187-0	3.461-0	3.695-0	3.905-0
7	61	2.932-01	4.220-3	2.491-3	1.602-3	1.157-3	8.995-4	7.366-4	5.561-4	4.596-4	4.047-4
7	62	2.310+10	7.631-1	9.057-1	1.005-0	1.095-0	1.160-0	1.223-0	1.328-0	1.417-0	1.497-0
7	63	9.417+09	5.257-1	6.211-1	6.943-1	7.503-1	7.937-1	8.369-1	9.080-1	9.690-1	1.023-0
7	64	0.000-00	6.008-3	3.882-3	2.720-3	2.082-3	1.697-3	1.450-3	1.169-3	1.024-3	9.388-4
7	65	6.009+08	8.103-3	9.062-3	9.734-3	1.052-2	1.108-2	1.164-2	1.259-2	1.340-2	1.414-2
7	66	3.847-01	5.663-3	5.030-3	4.841-3	4.829-3	4.890-3	4.968-3	5.130-3	5.280-3	5.392-3
7	67	1.892+08	9.603-3	8.861-3	8.622-3	8.728-3	8.861-3	9.090-3	9.549-3	1.000-2	1.044-2
7	68	4.234+08	3.157-2	3.563-2	3.907-2	4.179-2	4.400-2	4.614-2	4.966-2	5.263-2	5.519-2
7	69	1.248+09	4.052-2	4.613-2	5.020-2	5.425-2	5.728-2	6.025-2	6.525-2	6.954-2	7.339-2
7	70	1.608+08	7.547-3	7.266-3	7.278-3	7.496-3	7.691-3	7.954-3	8.435-3	8.875-3	9.288-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
7	71	9.003+07	2.977-3	2.914-3	2.919-3	3.036-3	3.136-3	3.250-3	3.467-3	3.667-3	3.855-3
7	72	1.509+09	6.753-2	7.954-2	8.873-2	9.597-2	1.016-1	1.071-1	1.163-1	1.241-1	1.311-1
7	73	7.286-01	3.448-3	2.505-3	1.988-3	1.712-3	1.546-3	1.444-3	1.328-3	1.269-3	1.234-3
7	74	2.277+10	8.757-1	1.054-0	1.186-0	1.288-0	1.368-0	1.446-0	1.573-0	1.681-0	1.776-0
7	75	5.140-00	4.720-3	3.031-3	2.094-3	1.589-3	1.295-3	1.113-3	9.140-4	8.166-4	7.645-4
7	76	0.000-00	3.792-4	2.129-4	1.367-4	9.909-5	7.868-5	6.597-5	5.151-5	4.373-5	3.896-5
7	77	1.964+08	9.558-3	9.797-3	1.020-2	1.071-2	1.115-2	1.163-2	1.249-2	1.325-2	1.395-2
7	78	6.568-01	3.046-3	3.082-3	3.199-3	3.321-3	3.438-3	3.538-3	3.701-3	3.830-3	3.921-3
7	79	6.185+07	7.635-3	7.974-3	8.388-3	8.812-3	9.166-3	9.496-3	1.003-2	1.047-2	1.081-2
7	80	3.016+08	5.660-3	6.601-3	7.287-3	7.941-3	8.428-3	8.897-3	9.678-3	1.033-2	1.091-2
7	81	1.385+08	5.261-3	5.726-3	6.195-3	6.625-3	6.974-3	7.336-3	7.947-3	8.472-3	8.939-3
7	82	1.522+08	4.026-3	3.829-3	3.845-3	3.982-3	4.119-3	4.289-3	4.601-3	4.882-3	5.141-3
7	83	3.629+08	2.373-3	2.597-3	2.788-3	3.019-3	3.199-3	3.376-3	3.677-3	3.929-3	4.154-3
7	84	4.476+06	2.473-3	1.625-3	1.166-3	9.197-4	7.724-4	6.808-4	5.824-4	5.365-4	5.140-4
7	85	2.068+07	1.000-3	7.506-4	6.285-4	5.806-4	5.585-4	5.524-4	5.588-4	5.750-4	5.948-4
7	86	6.660+07	3.370-4	3.566-4	3.836-4	4.133-4	4.389-4	4.652-4	5.097-4	5.470-4	5.799-4
7	87	2.371-00	4.182-3	2.501-3	1.596-3	1.101-3	8.037-4	6.128-4	3.940-4	2.770-4	2.083-4
7	88	8.807+08	1.413-2	1.770-2	2.034-2	2.247-2	2.415-2	2.572-2	2.828-2	3.038-2	3.220-2
7	89	1.925-00	4.970-4	2.978-4	1.950-4	1.454-4	1.181-4	1.009-4	8.148-5	7.120-5	6.512-5
7	90	0.000-00	1.166-4	5.761-5	3.292-5	2.140-5	1.515-5	1.141-5	7.325-6	5.235-6	4.012-6
7	91	1.826+07	1.239-3	9.037-4	7.382-4	6.631-4	6.307-4	6.204-4	6.253-4	6.427-4	6.646-4
7	92	0.000-00	2.892-4	1.166-4	5.423-5	2.818-5	1.773-5	1.191-5	6.536-6	4.335-6	3.280-6
7	93	3.503+06	9.641-5	6.776-5	5.210-5	4.509-5	4.138-5	3.906-5	3.698-5	3.628-5	3.640-5
7	94	1.740+06	1.671-4	1.063-4	7.368-5	5.879-5	5.053-5	4.580-5	4.114-5	3.919-5	3.849-5
7	95	8.834+05	2.162-4	1.905-4	1.841-4	1.849-4	1.886-4	1.927-4	2.006-4	2.075-4	2.128-4
7	96	9.062+06	4.292-4	3.153-4	2.652-4	2.454-4	2.382-4	2.377-4	2.437-4	2.526-4	2.627-4
7	97	4.145+07	8.733-5	9.912-5	1.112-4	1.223-4	1.315-4	1.400-4	1.544-4	1.662-4	1.764-4
8	9	3.366-01	1.150-1	8.743-2	7.211-2	6.337-2	5.773-2	5.397-2	4.941-2	4.685-2	4.524-2
8	10	8.903-01	2.092-1	2.103-1	2.142-1	2.178-1	2.205-1	2.237-1	2.288-1	2.341-1	2.392-1
8	11	6.393-01	6.279-2	6.165-2	6.231-2	6.381-2	6.544-2	6.747-2	7.218-2	7.814-2	8.517-2
8	12	8.195+01	3.523-1	3.490-1	3.530-1	3.633-1	3.736-1	3.863-1	4.158-1	4.529-1	4.967-1
8	13	3.087+01	3.468-2	2.710-2	2.319-2	2.113-2	1.990-2	1.922-2	1.874-2	1.894-2	1.955-2
8	14	1.543+01	3.430-3	2.286-3	1.810-3	1.612-3	1.520-3	1.483-3	1.476-3	1.506-3	1.547-3
8	15	4.598+02	1.021-2	6.592-3	4.669-3	3.566-3	2.873-3	2.409-3	1.856-3	1.536-3	1.342-3
8	16	1.620-00	4.653-3	2.783-3	1.905-3	1.471-3	1.221-3	1.068-3	9.063-4	8.359-4	8.094-4
8	17	1.287+01	7.338-3	6.387-3	6.046-3	5.912-3	5.887-3	5.927-3	6.051-3	6.225-3	6.428-3
8	18	2.707+02	7.094-3	4.751-3	3.451-3	2.672-3	2.162-3	1.814-3	1.379-3	1.113-3	9.398-4
8	19	9.223+01	1.603-2	1.299-2	1.129-2	1.024-2	9.461-3	9.006-3	8.421-3	8.093-3	7.895-3
8	20	7.863-00	4.282-3	2.595-3	1.737-3	1.283-3	1.008-3	8.360-4	6.408-4	5.411-4	4.859-4
8	21	9.035+01	5.997-3	5.849-3	5.787-3	5.744-3	5.705-3	5.681-3	5.638-3	5.613-3	5.595-3
8	22	5.187+01	1.191-2	8.885-3	7.077-3	5.969-3	5.211-3	4.731-3	4.135-3	3.796-3	3.585-3
8	23	1.422+02	8.748-3	7.268-3	6.447-3	5.905-3	5.516-3	5.276-3	4.958-3	4.766-3	4.653-3
8	24	7.985-00	1.328-2	9.853-3	7.878-3	6.569-3	5.623-3	5.073-3	4.299-3	3.826-3	3.465-3
8	25	3.159-00	5.283-3	3.260-3	2.264-3	1.723-3	1.399-3	1.200-3	9.726-4	8.556-4	7.888-4
8	26	1.982+01	8.478-3	4.937-3	3.085-3	2.096-3	1.503-3	1.127-3	6.985-4	4.727-4	3.433-4
8	27	1.225+09	4.303-1	4.898-1	5.365-1	5.748-1	6.040-1	6.335-1	6.856-1	7.333-1	7.781-1
8	28	4.300+01	9.973-4	5.173-4	3.019-4	1.986-4	1.402-4	1.052-4	6.796-5	4.946-5	3.982-5
8	29	4.450+09	7.765-1	8.965-1	9.883-1	1.068-0	1.126-0	1.183-0	1.282-0	1.372-0	1.455-0

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition		Energy (Ryd)									
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
8	30	5.481-00	2.025-3	1.201-3	7.629-4	5.314-4	3.929-4	3.029-4	1.999-4	1.420-4	1.075-4
8	31	9.538+04	7.139-3	4.375-3	2.840-3	1.984-3	1.458-3	1.117-3	7.220-4	5.073-4	3.818-4
8	32	2.000+07	2.916-2	2.005-2	1.481-2	1.193-2	1.016-2	9.113-3	8.016-3	7.557-3	7.410-3
8	33	5.432+07	3.935-2	3.377-2	3.092-2	2.962-2	2.910-2	2.915-2	2.990-2	3.103-2	3.231-2
8	34	1.852+06	3.808-2	2.415-2	1.615-2	1.158-2	8.811-3	6.999-3	4.913-3	3.798-3	3.164-3
8	35	1.323+01	4.705-2	2.944-2	1.927-2	1.349-2	9.929-3	7.610-3	4.900-3	3.417-3	2.541-3
8	36	0.000-00	1.537-3	9.068-4	5.775-4	3.980-4	2.897-4	2.196-4	1.393-4	9.574-5	7.037-5
8	37	1.901-00	3.685-3	2.247-3	1.453-3	1.010-3	7.379-4	5.608-4	3.556-4	2.437-4	1.777-4
8	38	1.635+08	2.989-2	2.960-2	3.001-2	3.108-2	3.193-2	3.302-2	3.515-2	3.720-2	3.920-2
8	39	2.053+06	1.183-2	7.589-3	5.265-3	3.960-3	3.173-3	2.676-3	2.123-3	1.845-3	1.701-3
8	40	1.253+05	7.122-3	4.433-3	2.945-3	2.115-3	1.613-3	1.291-3	9.246-4	7.304-4	6.195-4
8	41	3.425-00	1.528-2	9.797-3	6.712-3	4.991-3	3.947-3	3.278-3	2.521-3	2.124-3	1.897-3
8	42	4.941+07	4.644-2	4.204-2	4.054-2	4.049-2	4.089-2	4.162-2	4.325-2	4.491-2	4.633-2
8	43	1.305+08	4.298-2	4.429-2	4.626-2	4.846-2	5.031-2	5.227-2	5.587-2	5.920-2	6.223-2
8	44	1.276+01	3.683-2	3.008-2	2.682-2	2.534-2	2.473-2	2.454-2	2.468-2	2.511-2	2.549-2
8	45	4.882+07	2.335-2	1.909-2	1.713-2	1.625-2	1.587-2	1.585-2	1.621-2	1.678-2	1.745-2
8	46	1.806+06	8.618-3	5.397-3	3.599-3	2.614-3	2.009-3	1.622-3	1.184-3	9.547-4	8.268-4
8	47	1.398+07	3.088-3	2.367-3	2.012-3	1.848-3	1.764-3	1.731-3	1.732-3	1.771-3	1.827-3
8	48	4.119-00	1.241-3	7.694-4	4.917-4	3.351-4	2.405-4	1.800-4	1.119-4	7.575-5	5.497-5
8	49	1.431+10	1.344-0	1.579-0	1.750-0	1.894-0	2.002-0	2.107-0	2.284-0	2.437-0	2.575-0
8	50	2.324+10	1.174-0	1.378-0	1.528-0	1.663-0	1.760-0	1.854-0	2.011-0	2.146-0	2.267-0
8	51	6.099-00	3.510-3	2.148-3	1.380-3	9.553-4	6.970-4	5.311-4	3.396-4	2.356-4	1.743-4
8	52	3.672+07	2.082-2	1.852-2	1.785-2	1.792-2	1.821-2	1.862-2	1.948-2	2.032-2	2.105-2
8	53	1.170+01	1.979-2	1.618-2	1.474-2	1.424-2	1.416-2	1.424-2	1.458-2	1.499-2	1.532-2
8	54	0.000-00	2.488-2	2.128-2	2.006-2	1.981-2	1.997-2	2.027-2	2.098-2	2.169-2	2.224-2
8	55	1.409+10	6.039-1	7.117-1	7.918-1	8.629-1	9.141-1	9.635-1	1.046-0	1.116-0	1.179-0
8	56	2.018+10	1.391-0	1.649-0	1.833-0	1.989-0	2.105-0	2.219-0	2.408-0	2.570-0	2.716-0
8	57	6.319+09	6.220-1	7.346-1	8.200-1	8.850-1	9.351-1	9.847-1	1.068-0	1.140-0	1.205-0
8	58	4.919-02	1.801-2	1.080-2	6.898-3	4.773-3	3.489-3	2.664-3	1.726-3	1.223-3	9.324-4
8	59	3.150+09	2.911-1	3.361-1	3.712-1	3.982-1	4.199-1	4.414-1	4.776-1	5.094-1	5.380-1
8	60	2.246+10	1.300-0	1.545-0	1.720-0	1.869-0	1.979-0	2.088-0	2.268-0	2.421-0	2.557-0
8	61	4.156+10	3.145-0	3.749-0	4.205-0	4.547-0	4.814-0	5.076-0	5.512-0	5.887-0	6.222-0
8	62	7.576+09	2.655-1	3.102-1	3.432-1	3.735-1	3.955-1	4.167-1	4.520-1	4.816-1	5.080-1
8	63	9.284+09	4.951-1	5.864-1	6.510-1	7.064-1	7.479-1	7.885-1	8.560-1	9.133-1	9.644-1
8	64	2.707-01	1.250-2	8.143-3	5.871-3	4.676-3	3.996-3	3.574-3	3.119-3	2.900-3	2.779-3
8	65	9.383-02	1.432-3	8.709-4	5.607-4	3.998-4	3.021-4	2.398-4	1.667-4	1.255-4	1.003-4
8	66	8.862+09	6.552-1	7.782-1	8.712-1	9.411-1	9.959-1	1.050-0	1.139-0	1.216-0	1.285-0
8	67	1.326+08	1.385-2	1.356-2	1.378-2	1.429-2	1.473-2	1.520-2	1.605-2	1.678-2	1.742-2
8	68	1.580+09	9.455-2	1.079-1	1.184-1	1.273-1	1.342-1	1.410-1	1.523-1	1.620-1	1.704-1
8	69	3.546+07	6.020-3	4.443-3	3.596-3	3.176-3	2.931-3	2.805-3	2.707-3	2.701-3	2.739-3
8	70	1.543+09	4.712-2	5.339-2	5.831-2	6.312-2	6.665-2	7.014-2	7.602-2	8.098-2	8.542-2
8	71	5.616+07	4.194-3	3.441-3	3.042-3	2.882-3	2.778-3	2.741-3	2.726-3	2.750-3	2.797-3
8	72	3.908+08	1.978-2	2.114-2	2.231-2	2.370-2	2.481-2	2.596-2	2.796-2	2.973-2	3.132-2
8	73	6.861+09	4.054-1	4.867-1	5.472-1	5.934-1	6.295-1	6.646-1	7.226-1	7.721-1	8.159-1
8	74	3.331+09	1.340-1	1.578-1	1.748-1	1.897-1	2.010-1	2.121-1	2.304-1	2.459-1	2.597-1
8	75	1.496+10	7.567-1	9.163-1	1.034-0	1.123-0	1.193-0	1.260-0	1.371-0	1.466-0	1.549-0
8	76	4.940-00	5.388-3	3.297-3	2.122-3	1.471-3	1.081-3	8.303-4	5.395-4	3.808-4	2.875-4
8	77	3.393+08	1.686-2	1.723-2	1.791-2	1.883-2	1.962-2	2.049-2	2.204-2	2.341-2	2.466-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a{\pm}b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
8	78	4.208+07	9.970-3	1.046-2	1.108-2	1.166-2	1.218-2	1.263-2	1.336-2	1.396-2	1.441-2
8	79	3.447+08	1.086-2	1.273-2	1.409-2	1.532-2	1.625-2	1.717-2	1.869-2	1.995-2	2.108-2
8	80	1.098+08	7.990-3	8.440-3	8.967-3	9.460-3	9.862-3	1.023-2	1.082-2	1.129-2	1.166-2
8	81	2.226+07	3.041-3	2.255-3	1.888-3	1.745-3	1.678-3	1.660-3	1.680-3	1.726-3	1.784-3
8	82	3.295+05	2.576-3	1.432-3	8.473-4	5.502-4	3.849-4	2.847-4	1.793-4	1.265-4	9.895-5
8	83	1.766-05	8.506-4	4.398-4	2.412-4	1.457-4	9.503-5	6.536-5	3.559-5	2.141-5	1.432-5
8	84	4.634+06	3.171-3	2.016-3	1.389-3	1.052-3	8.471-4	7.180-4	5.744-4	5.023-4	4.634-4
8	85	6.027+07	1.888-3	1.613-3	1.504-3	1.486-3	1.491-3	1.523-3	1.599-3	1.677-3	1.754-3
8	86	3.627-01	5.012-4	3.015-4	1.921-4	1.336-4	9.798-5	7.491-5	4.829-5	3.389-5	2.532-5
8	87	1.151+06	6.575-3	3.954-3	2.541-3	1.774-3	1.313-3	1.019-3	6.847-4	5.076-4	4.050-4
8	88	1.260+08	2.656-3	2.927-3	3.175-3	3.432-3	3.644-3	3.851-3	4.198-3	4.489-3	4.745-3
8	89	8.924+08	1.963-2	2.473-2	2.848-2	3.147-2	3.382-2	3.602-2	3.959-2	4.255-2	4.512-2
8	90	1.497-00	5.341-4	3.011-4	1.894-4	1.339-4	1.020-4	8.317-5	6.140-5	4.953-5	4.233-5
8	91	3.653+06	1.595-3	9.558-4	6.138-4	4.365-4	3.379-4	2.783-4	2.167-4	1.879-4	1.745-4
8	92	1.279-02	4.661-4	1.869-4	8.620-5	4.537-5	2.809-5	1.904-5	1.071-5	7.408-6	5.892-6
8	93	9.822-01	6.902-5	3.723-5	2.032-5	1.259-5	8.446-6	6.022-6	3.531-6	2.330-6	1.682-6
8	94	2.215+05	3.408-4	2.457-4	1.990-4	1.768-4	1.643-4	1.565-4	1.482-4	1.442-4	1.420-4
8	95	2.943+06	3.710-4	3.076-4	2.837-4	2.781-4	2.796-4	2.834-4	2.929-4	3.023-4	3.102-4
8	96	3.421+04	5.215-4	2.900-4	1.737-4	1.159-4	8.307-5	6.267-5	4.045-5	2.852-5	2.194-5
8	97	4.720-01	2.592-5	1.279-5	6.544-6	3.885-6	2.516-6	1.729-6	9.608-7	5.905-7	4.075-7
9	10	0.000-00	1.793-4	9.157-5	5.351-5	3.523-5	2.487-5	1.854-5	1.147-5	7.767-6	5.632-6
9	11	3.535-01	3.027-1	3.032-1	3.090-1	3.139-1	3.181-1	3.228-1	3.307-1	3.389-1	3.469-1
9	12	1.027+02	6.412-1	6.345-1	6.469-1	6.651-1	6.857-1	7.107-1	7.687-1	8.413-1	9.270-1
9	13	8.890-00	5.635-2	4.483-2	3.894-2	3.585-2	3.406-2	3.312-2	3.260-2	3.315-2	3.438-2
9	14	1.110-00	2.679-3	1.559-3	1.044-3	7.909-4	6.503-4	5.694-4	4.882-4	4.551-4	4.415-4
9	15	1.347+02	1.347-2	9.641-3	7.478-3	6.356-3	5.721-3	5.389-3	5.336-3	5.782-3	6.597-3
9	16	1.156+01	4.589-3	3.003-3	2.305-3	1.980-3	1.810-3	1.724-3	1.657-3	1.655-3	1.679-3
9	17	2.173+01	9.847-3	7.304-3	6.199-3	5.679-3	5.462-3	5.354-3	5.314-3	5.393-3	5.533-3
9	18	2.326+02	1.397-2	1.016-2	8.124-3	6.968-3	6.301-3	5.935-3	5.755-3	6.046-3	6.691-3
9	19	1.029+02	1.434-2	1.141-2	9.794-3	8.894-3	8.307-3	7.956-3	7.579-3	7.424-3	7.393-3
9	20	1.530+01	5.835-3	5.135-3	4.791-3	4.630-3	4.528-3	4.467-3	4.394-3	4.361-3	4.341-3
9	21	0.000-00	9.049-4	5.020-4	3.084-4	2.053-4	1.453-4	1.082-4	6.644-5	4.479-5	3.248-5
9	22	2.208+01	6.892-3	4.632-3	3.389-3	2.686-3	2.244-3	1.955-3	1.633-3	1.467-3	1.384-3
9	23	1.143+01	6.621-3	5.280-3	4.593-3	4.228-3	4.001-3	3.856-3	3.683-3	3.591-3	3.536-3
9	24	2.043+02	1.854-2	1.509-2	1.322-2	1.207-2	1.127-2	1.079-2	1.022-2	9.903-3	9.752-3
9	25	3.491+01	4.034-2	3.027-2	2.440-2	2.069-2	1.776-2	1.601-2	1.366-2	1.223-2	1.117-2
9	26	3.988+01	1.244-2	7.305-3	4.650-3	3.218-3	2.358-3	1.815-3	1.193-3	8.651-4	6.762-4
9	27	5.105+09	1.763-0	2.028-0	2.232-0	2.407-0	2.542-0	2.671-0	2.897-0	3.101-0	3.293-0
9	28	2.044+03	1.932-3	1.339-3	1.093-3	9.893-4	9.444-4	9.370-4	9.891-4	1.106-3	1.277-3
9	29	4.688-00	9.193-3	7.298-3	6.482-3	6.151-3	6.016-3	5.985-3	6.044-3	6.162-3	6.263-3
9	30	0.000-00	2.408-3	2.346-3	2.410-3	2.506-3	2.595-3	2.682-3	2.829-3	2.954-3	3.045-3
9	31	1.078-02	5.075-4	3.064-4	2.013-4	1.447-4	1.103-4	8.824-5	6.311-5	4.967-5	4.191-5
9	32	1.189+07	1.299-2	1.303-2	1.332-2	1.383-2	1.428-2	1.479-2	1.578-2	1.673-2	1.766-2
9	33	4.268+08	1.560-1	1.549-1	1.569-1	1.618-1	1.663-1	1.718-1	1.827-1	1.933-1	2.038-1
9	34	1.104+07	1.346-2	1.046-2	8.886-3	8.082-3	7.671-3	7.493-3	7.456-3	7.611-3	7.857-3
9	35	4.425+06	3.405-2	2.225-2	1.552-2	1.172-2	9.437-3	7.986-3	6.353-3	5.544-3	5.142-3
9	36	2.365+01	9.408-2	5.896-2	3.862-2	2.708-2	1.994-2	1.531-2	9.891-3	6.924-3	5.170-3
9	37	0.000-00	1.178-3	7.230-4	4.705-4	3.302-4	2.428-4	1.858-4	1.195-4	8.316-5	6.162-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a \pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
9	38	6.310-01	4.569-3	2.803-3	1.818-3	1.270-3	9.318-4	7.113-4	4.554-4	3.157-4	2.330-4
9	39	1.062+08	3.320-2	3.259-2	3.297-2	3.403-2	3.501-2	3.617-2	3.849-2	4.072-2	4.289-2
9	40	8.784+06	2.600-2	1.763-2	1.303-2	1.053-2	9.052-3	8.155-3	7.238-3	6.860-3	6.738-3
9	41	1.039+06	4.172-2	2.681-2	1.850-2	1.387-2	1.109-2	9.308-3	7.311-3	6.282-3	5.709-3
9	42	6.468+06	9.507-3	8.771-3	8.656-3	8.758-3	8.942-3	9.153-3	9.569-3	9.955-3	1.026-2
9	43	4.500+07	5.738-2	5.111-2	4.879-2	4.832-2	4.869-2	4.940-2	5.118-2	5.307-2	5.473-2
9	44	8.196+07	1.009-1	9.053-2	8.661-2	8.625-2	8.688-2	8.828-2	9.171-2	9.534-2	9.861-2
9	45	1.645+08	4.411-2	4.369-2	4.438-2	4.577-2	4.706-2	4.869-2	5.183-2	5.483-2	5.770-2
9	46	1.269+08	3.190-2	2.786-2	2.610-2	2.578-2	2.578-2	2.617-2	2.726-2	2.849-2	2.977-2
9	47	8.802-02	1.337-2	8.140-3	5.269-3	3.670-3	2.685-3	2.045-3	1.301-3	8.970-4	6.570-4
9	48	0.000-00	9.432-4	6.557-4	5.043-4	4.272-4	3.875-4	3.657-4	3.491-4	3.460-4	3.470-4
9	49	3.211+10	3.010-0	3.518-0	3.907-0	4.238-0	4.490-0	4.727-0	5.130-0	5.473-0	5.783-0
9	50	1.346-00	9.560-3	7.128-3	5.891-3	5.257-3	4.915-3	4.722-3	4.551-3	4.502-3	4.487-3
9	51	0.000-00	1.861-3	1.758-3	1.746-3	1.769-3	1.801-3	1.835-3	1.896-3	1.950-3	1.988-3
9	52	6.774+06	6.712-3	5.139-3	4.367-3	4.003-3	3.825-3	3.749-3	3.729-3	3.785-3	3.860-3
9	53	1.059+08	3.955-2	3.666-2	3.616-2	3.664-2	3.746-2	3.847-2	4.050-2	4.250-2	4.433-2
9	54	9.435-00	5.318-2	4.528-2	4.260-2	4.212-2	4.252-2	4.321-2	4.481-2	4.638-2	4.759-2
9	55	6.288-01	5.043-3	3.387-3	2.514-3	2.058-3	1.789-3	1.626-3	1.453-3	1.374-3	1.334-3
9	56	9.576+09	6.940-1	8.148-1	9.075-1	9.858-1	1.046-0	1.102-0	1.197-0	1.277-0	1.349-0
9	57	3.544+10	3.474-0	4.119-0	4.590-0	4.971-0	5.263-0	5.548-0	6.023-0	6.430-0	6.795-0
9	58	1.540+09	2.210-1	2.468-1	2.688-1	2.865-1	3.002-1	3.144-1	3.391-1	3.613-1	3.815-1
9	59	1.583+09	1.621-1	1.823-1	1.983-1	2.119-1	2.228-1	2.338-1	2.526-1	2.689-1	2.837-1
9	60	1.894+09	1.241-1	1.416-1	1.555-1	1.679-1	1.775-1	1.867-1	2.023-1	2.155-1	2.273-1
9	61	2.084+10	1.665-0	1.976-0	2.203-0	2.387-0	2.529-0	2.667-0	2.897-0	3.092-0	3.267-0
9	62	5.056-00	8.323-3	7.531-3	7.330-3	7.365-3	7.483-3	7.622-3	7.895-3	8.141-3	8.324-3
9	63	2.618+09	1.606-1	1.841-1	2.025-1	2.189-1	2.315-1	2.435-1	2.637-1	2.806-1	2.956-1
9	64	6.883+10	6.510-0	7.784-0	8.751-0	9.482-0	1.002+1	1.056+1	1.146+1	1.225+1	1.295+1
9	65	0.000-00	6.603-3	6.926-3	7.333-3	7.717-3	8.053-3	8.333-3	8.773-3	9.114-3	9.352-3
9	66	3.954+09	3.088-1	3.549-1	3.895-1	4.186-1	4.416-1	4.643-1	5.024-1	5.351-1	5.641-1
9	67	3.998-01	1.457-2	1.463-2	1.519-2	1.580-2	1.637-2	1.686-2	1.766-2	1.830-2	1.875-2
9	68	2.379+08	3.449-2	3.210-2	3.162-2	3.206-2	3.270-2	3.344-2	3.490-2	3.628-2	3.751-2
9	69	3.746-00	3.555-3	2.293-3	1.593-3	1.205-3	9.724-4	8.247-4	6.600-4	5.757-4	5.284-4
9	70	3.258+01	8.693-3	5.448-3	3.746-3	2.910-3	2.387-3	2.057-3	1.654-3	1.414-3	1.256-3
9	71	2.559-00	3.398-3	2.215-3	1.550-3	1.170-3	9.259-4	7.638-4	5.678-4	4.557-4	3.857-4
9	72	1.774+08	1.174-2	1.173-2	1.201-2	1.242-2	1.281-2	1.326-2	1.409-2	1.483-2	1.552-2
9	73	1.001+09	6.223-2	7.056-2	7.711-2	8.280-2	8.723-2	9.173-2	9.926-2	1.057-1	1.115-1
9	74	6.500+07	3.530-3	3.757-3	3.994-3	4.254-3	4.464-3	4.675-3	5.036-3	5.344-3	5.616-3
9	75	2.923+09	1.612-1	1.905-1	2.120-1	2.298-1	2.437-1	2.573-1	2.798-1	2.988-1	3.156-1
9	76	1.679+10	1.101-0	1.332-0	1.505-0	1.635-0	1.733-0	1.830-0	1.990-0	2.127-0	2.249-0
9	77	8.184+07	1.106-2	8.371-3	7.161-3	6.631-3	6.395-3	6.333-3	6.408-3	6.576-3	6.787-3
9	78	7.915+08	4.463-2	5.219-2	5.819-2	6.301-2	6.687-2	7.051-2	7.649-2	8.141-2	8.566-2
9	79	8.969+07	1.191-2	1.260-2	1.346-2	1.416-2	1.481-2	1.538-2	1.630-2	1.704-2	1.761-2
9	80	1.021-00	2.872-3	2.980-3	3.146-3	3.302-3	3.439-3	3.551-3	3.726-3	3.861-3	3.954-3
9	81	7.328+07	6.594-3	5.522-3	5.110-3	5.001-3	5.004-3	5.078-3	5.283-3	5.502-3	5.718-3
9	82	7.067-00	3.484-3	1.942-3	1.165-3	7.763-4	5.618-4	4.334-4	3.007-4	2.355-4	2.024-4
9	83	0.000-00	1.285-3	6.792-4	3.819-4	2.398-4	1.641-4	1.202-4	7.657-5	5.644-5	4.661-5
9	84	3.728+07	3.376-3	2.506-3	2.094-3	1.910-3	1.820-3	1.790-3	1.801-3	1.847-3	1.907-3
9	85	5.294-01	2.713-3	1.684-3	1.114-3	7.971-4	5.989-4	4.695-4	3.175-4	2.336-4	1.829-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
9	86	0.000-00	9.460-4	5.955-4	3.990-4	2.884-4	2.184-4	1.725-4	1.179-4	8.751-5	6.893-5
9	87	1.728+07	9.754-3	6.147-3	4.226-3	3.183-3	2.578-3	2.202-3	1.796-3	1.602-3	1.507-3
9	88	2.526+06	3.668-4	2.404-4	1.855-4	1.634-4	1.531-4	1.487-4	1.470-4	1.488-4	1.516-4
9	89	9.898+07	2.993-3	3.260-3	3.545-3	3.821-3	4.055-3	4.286-3	4.674-3	4.999-3	5.285-3
9	90	1.125+09	3.274-2	4.088-2	4.713-2	5.193-2	5.567-2	5.923-2	6.505-2	6.989-2	7.412-2
9	91	3.075+05	2.193-3	1.264-3	7.650-4	5.028-4	3.529-4	2.607-4	1.610-4	1.102-4	8.258-5
9	92	4.480+05	6.667-4	2.730-4	1.327-4	7.802-5	5.304-5	4.157-5	3.138-5	2.800-5	2.697-5
9	93	0.000-00	9.688-5	9.614-5	9.870-5	1.028-4	1.066-4	1.098-4	1.149-4	1.188-4	1.215-4
9	94	2.702-01	2.749-4	2.345-4	2.207-4	2.191-4	2.220-4	2.257-4	2.332-4	2.400-4	2.449-4
9	95	8.788+05	7.135-4	4.850-4	3.662-4	3.070-4	2.745-4	2.528-4	2.282-4	2.149-4	2.071-4
9	96	5.988+06	8.172-4	5.083-4	3.565-4	2.865-4	2.491-4	2.287-4	2.110-4	2.051-4	2.053-4
9	97	0.000-00	2.885-5	1.385-5	6.909-6	4.067-6	2.627-6	1.806-6	1.027-6	6.469-7	4.682-7
10	11	5.550-03	2.850-2	1.835-2	1.263-2	9.272-3	7.076-3	5.570-3	3.736-3	2.666-3	2.015-3
10	12	2.914-10	1.947-2	1.771-2	1.691-2	1.652-2	1.627-2	1.617-2	1.606-2	1.606-2	1.605-2
10	13	4.411-02	3.030-3	2.280-3	2.067-3	2.139-3	2.367-3	2.731-3	3.772-3	5.187-3	6.954-3
10	14	4.045-00	1.238-2	1.240-2	1.258-2	1.284-2	1.305-2	1.328-2	1.373-2	1.423-2	1.476-2
10	15	4.228+01	2.522-3	1.614-3	1.075-3	7.823-4	5.883-4	4.644-4	3.148-4	2.262-4	1.726-4
10	16	0.000-00	1.099-3	6.471-4	4.181-4	2.903-4	2.127-4	1.623-4	1.034-4	7.120-5	5.234-5
10	17	0.000-00	9.835-4	6.156-4	4.685-4	4.080-4	3.833-4	3.761-4	3.786-4	3.905-4	4.028-4
10	18	5.132+01	1.951-3	1.263-3	8.660-4	6.373-4	4.822-4	3.866-4	2.687-4	1.968-4	1.525-4
10	19	2.402+01	5.754-3	5.796-3	5.801-3	5.841-3	5.846-3	5.861-3	5.894-3	5.956-3	6.049-3
10	20	6.596-01	3.036-4	1.738-4	1.108-4	7.783-5	5.721-5	4.349-5	2.798-5	1.935-5	1.442-5
10	21	0.000-00	2.586-3	2.013-3	1.671-3	1.465-3	1.302-3	1.201-3	1.040-3	9.385-4	8.561-4
10	22	7.091+01	2.210-3	1.979-3	1.883-3	1.824-3	1.805-3	1.812-3	1.879-3	2.006-3	2.184-3
10	23	5.708-00	2.034-3	1.466-3	1.060-3	8.351-4	6.599-4	5.623-4	4.254-4	3.329-4	2.702-4
10	24	7.983-00	2.969-3	2.679-3	2.555-3	2.472-3	2.417-3	2.376-3	2.322-3	2.291-3	2.275-3
10	25	0.000-00	1.089-3	6.104-4	3.759-4	2.531-4	1.808-4	1.357-4	8.455-5	5.778-5	4.234-5
10	26	0.000-00	1.052-3	5.987-4	3.743-4	2.524-4	1.799-4	1.343-4	8.223-5	5.505-5	3.952-5
10	27	4.472-01	1.266-3	8.112-4	5.477-4	3.953-4	3.006-4	2.384-4	1.647-4	1.228-4	9.717-5
10	28	1.702+01	1.925-3	1.148-3	7.341-4	5.039-4	3.645-4	2.744-4	1.709-4	1.156-4	8.366-5
10	29	2.312+08	7.233-2	8.223-2	8.962-2	9.576-2	1.007-1	1.055-1	1.142-1	1.223-1	1.301-1
10	30	0.000-00	3.413-3	2.202-3	1.461-3	1.034-3	7.679-4	5.926-4	3.856-4	2.709-4	2.015-4
10	31	8.738+05	7.499-4	5.361-4	4.310-4	3.886-4	3.695-4	3.633-4	3.687-4	3.829-4	4.014-4
10	32	2.749-02	2.357-3	1.423-3	9.091-4	6.246-4	4.524-4	3.414-4	2.145-4	1.459-4	1.060-4
10	33	3.066-00	7.766-3	5.074-3	3.390-3	2.407-3	1.790-3	1.383-3	9.016-4	6.341-4	4.720-4
10	34	0.000-00	4.060-3	2.478-3	1.618-3	1.137-3	8.421-4	6.504-4	4.284-4	3.074-4	2.361-4
10	35	0.000-00	5.837-3	3.581-3	2.341-3	1.642-3	1.208-3	9.233-4	5.901-4	4.067-4	2.971-4
10	36	0.000-00	5.030-6	2.185-6	1.056-6	5.876-7	3.641-7	2.470-7	1.382-7	8.923-8	6.481-8
10	37	0.000-00	2.750-3	1.749-3	1.151-3	8.086-4	5.963-4	4.576-4	2.947-4	2.048-4	1.515-4
10	38	1.312+07	9.742-3	7.632-3	6.494-3	5.847-3	5.487-3	5.341-3	5.276-3	5.365-3	5.526-3
10	39	2.250-00	6.487-3	4.090-3	2.678-3	1.873-3	1.377-3	1.054-3	6.760-4	4.688-4	3.459-4
10	40	0.000-00	6.707-4	3.708-4	2.182-4	1.406-4	9.626-5	6.906-5	4.018-5	2.555-5	1.779-5
10	41	0.000-00	2.555-3	1.564-3	1.023-3	7.177-4	5.279-4	4.035-4	2.580-4	1.779-4	1.300-4
10	42	2.016-00	2.981-3	1.741-3	1.088-3	7.338-4	5.224-4	3.875-4	2.374-4	1.577-4	1.131-4
10	43	0.000-00	9.258-4	8.871-4	8.971-4	9.199-4	9.464-4	9.722-4	1.016-3	1.053-3	1.079-3
10	44	0.000-00	8.786-4	5.479-4	3.609-4	2.542-4	1.878-4	1.443-4	9.338-5	6.526-5	4.835-5
10	45	0.000-00	1.425-3	7.587-4	4.357-4	2.783-4	1.942-4	1.449-4	9.594-5	7.305-5	6.205-5
10	46	4.826-01	1.242-3	7.175-4	4.424-4	2.975-4	2.122-4	1.586-4	9.898-5	6.656-5	4.881-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
10	47	3.860+06	7.115-4	6.462-4	6.239-4	6.289-4	6.392-4	6.548-4	6.903-4	7.268-4	7.635-4
10	48	0.000-00	1.746-3	1.094-3	7.057-4	4.899-4	3.587-4	2.738-4	1.764-4	1.232-4	9.132-5
10	49	3.213-00	1.657-3	1.010-3	6.680-4	4.863-4	3.734-4	3.056-4	2.229-4	1.737-4	1.428-4
10	50	3.357+09	2.539-1	2.970-1	3.293-1	3.558-1	3.757-1	3.951-1	4.281-1	4.570-1	4.833-1
10	51	0.000-00	3.294-4	2.000-4	1.281-4	8.811-5	6.398-5	4.847-5	3.083-5	2.102-5	1.553-5
10	52	0.000-00	7.672-3	7.881-3	8.341-3	8.803-3	9.237-3	9.612-3	1.022-2	1.070-2	1.105-2
10	53	0.000-00	2.667-3	1.619-3	1.055-3	7.401-4	5.451-4	4.173-4	2.677-4	1.853-4	1.359-4
10	54	0.000-00	1.896-5	8.822-6	5.141-6	3.563-6	2.813-6	2.392-6	1.930-6	1.679-6	1.499-6
10	55	1.150+07	3.393-3	2.535-3	2.045-3	1.810-3	1.668-3	1.585-3	1.516-3	1.505-3	1.524-3
10	56	6.091-00	4.924-3	3.180-3	2.148-3	1.565-3	1.191-3	9.504-4	6.569-4	4.868-4	3.824-4
10	57	0.000-00	6.611-3	7.681-3	8.578-3	9.275-3	9.854-3	1.032-2	1.103-2	1.158-2	1.195-2
10	58	0.000-00	3.688-3	2.260-3	1.477-3	1.036-3	7.625-4	5.829-4	3.729-4	2.572-4	1.881-4
10	59	0.000-00	3.068-3	2.621-3	2.451-3	2.402-3	2.405-3	2.425-3	2.483-3	2.544-3	2.590-3
10	60	5.360-01	1.973-3	1.312-3	9.253-4	7.197-4	5.791-4	4.943-4	3.800-4	3.068-4	2.571-4
10	61	0.000-00	6.518-3	6.862-3	7.216-3	7.531-3	7.804-3	8.028-3	8.373-3	8.639-3	8.818-3
10	62	1.498+10	6.660-1	7.891-1	8.806-1	9.564-1	1.013-0	1.067-0	1.159-0	1.237-0	1.308-0
10	63	9.249-01	7.078-4	3.971-4	2.513-4	1.886-4	1.483-4	1.232-4	9.332-5	7.589-5	6.462-5
10	64	0.000-00	2.927-5	1.599-5	9.781-6	6.619-6	4.747-6	3.558-6	2.217-6	1.506-6	1.096-6
10	65	0.000-00	1.205-3	7.301-4	4.606-4	3.159-4	2.284-4	1.726-4	1.088-4	7.461-5	5.455-5
10	66	0.000-00	2.386-3	1.510-3	1.039-3	8.113-4	6.634-4	5.708-4	4.584-4	3.940-4	3.537-4
10	67	1.910+10	7.880-1	9.372-1	1.047-0	1.139-0	1.207-0	1.273-0	1.382-0	1.476-0	1.560-0
10	68	3.581-00	2.636-3	1.594-3	1.004-3	6.872-4	4.974-4	3.764-4	2.385-4	1.647-4	1.217-4
10	69	2.558+09	1.141-1	1.348-1	1.502-1	1.633-1	1.729-1	1.823-1	1.979-1	2.113-1	2.233-1
10	70	1.547+09	4.978-2	5.878-2	6.552-2	7.127-2	7.552-2	7.965-2	8.651-2	9.237-2	9.760-2
10	71	1.420+10	4.841-1	5.754-1	6.441-1	7.008-1	7.428-1	7.839-1	8.518-1	9.096-1	9.611-1
10	72	4.382-03	3.225-3	1.928-3	1.231-3	8.534-4	6.247-4	4.807-4	3.139-4	2.227-4	1.682-4
10	73	0.000-00	4.318-3	2.880-3	2.106-3	1.701-3	1.458-3	1.307-3	1.143-3	1.066-3	1.025-3
10	74	3.410-02	3.264-4	1.758-4	1.010-4	6.377-5	4.333-5	3.103-5	1.829-5	1.202-5	8.721-6
10	75	0.000-00	6.723-3	7.493-3	8.218-3	8.817-3	9.326-3	9.735-3	1.037-2	1.085-2	1.119-2
10	76	0.000-00	2.474-4	1.538-4	1.012-4	7.183-5	5.353-5	4.145-5	2.725-5	1.931-5	1.448-5
10	77	1.469-00	2.139-3	1.255-3	7.810-4	5.269-4	3.759-4	2.800-4	1.726-4	1.157-4	8.320-5
10	78	0.000-00	7.482-4	4.593-4	3.037-4	2.207-4	1.704-4	1.381-4	1.015-4	8.228-5	7.104-5
10	79	3.478-02	2.936-3	1.739-3	1.095-3	7.465-4	5.384-4	4.057-4	2.550-4	1.748-4	1.280-4
10	80	1.708+10	3.940-1	4.753-1	5.363-1	5.864-1	6.236-1	6.596-1	7.185-1	7.681-1	8.119-1
10	81	5.311-00	3.540-3	2.151-3	1.387-3	9.632-4	7.031-4	5.347-4	3.404-4	2.333-4	1.716-4
10	82	7.511+04	5.033-4	2.868-4	1.728-4	1.144-4	8.090-5	6.030-5	3.818-5	2.693-5	2.103-5
10	83	0.000-00	2.060-4	1.022-4	5.750-5	3.715-5	2.608-5	1.931-5	1.247-5	8.497-6	6.548-6
10	84	3.969-01	5.574-4	3.218-4	1.973-4	1.335-4	9.628-5	7.366-5	4.839-5	3.467-5	2.692-5
10	85	1.542+08	3.013-3	3.464-3	3.812-3	4.121-3	4.347-3	4.579-3	4.960-3	5.279-3	5.560-3
10	86	0.000-00	3.925-5	2.204-5	1.303-5	8.446-6	5.848-6	4.241-6	2.533-6	1.626-6	1.162-6
10	87	0.000-00	5.765-4	3.094-4	1.762-4	1.103-4	7.416-5	5.257-5	3.015-5	1.922-5	1.345-5
10	88	6.972-01	1.834-4	1.244-4	9.120-5	7.403-5	6.214-5	5.497-5	4.488-5	3.806-5	3.311-5
10	89	0.000-00	3.617-4	3.329-4	3.307-4	3.353-4	3.408-4	3.460-4	3.546-4	3.617-4	3.663-4
10	90	0.000-00	4.315-5	2.203-5	1.252-5	8.178-6	5.751-6	4.299-6	2.734-6	1.942-6	1.488-6
10	91	4.863-01	1.198-3	6.989-4	4.381-4	2.990-4	2.153-4	1.617-4	1.007-4	6.819-5	4.916-5
10	92	0.000-00	7.053-5	3.361-5	1.836-5	1.123-5	7.421-6	5.215-6	2.956-6	1.884-6	1.306-6
10	93	0.000-00	9.283-6	4.803-6	2.675-6	1.668-6	1.123-6	7.976-7	4.599-7	2.948-7	2.050-7
10	94	3.594+06	8.957-5	7.864-5	7.610-5	7.698-5	7.828-5	8.068-5	8.555-5	9.008-5	9.445-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
10	95	3.523-01	5.011-5	2.809-5	1.711-5	1.172-5	8.579-6	6.679-6	4.537-6	3.382-6	2.690-6
10	96	8.907-01	1.565-4	8.566-5	5.169-5	3.457-5	2.467-5	1.846-5	1.157-5	7.898-6	5.793-6
10	97	0.000-00	3.869-5	2.073-5	1.169-5	7.227-6	4.814-6	3.400-6	1.944-6	1.248-6	8.702-7
11	12	2.669-03	4.801-2	3.131-2	2.174-2	1.619-2	1.257-2	1.009-2	7.093-3	5.350-3	4.292-3
11	13	2.998+01	9.266-3	6.552-3	5.639-3	5.680-3	6.256-3	7.265-3	1.031-2	1.452-2	1.984-2
11	14	3.414-00	1.259-2	1.192-2	1.173-2	1.178-2	1.185-2	1.198-2	1.229-2	1.267-2	1.310-2
11	15	1.714+01	7.418-3	5.087-3	3.838-3	3.102-3	2.653-3	2.430-3	2.291-3	2.393-3	2.665-3
11	16	8.823-00	2.468-2	2.423-2	2.444-2	2.475-2	2.516-2	2.562-2	2.653-2	2.758-2	2.874-2
11	17	0.000-00	3.854-3	2.346-3	1.675-3	1.354-3	1.186-3	1.098-3	1.020-3	1.002-3	1.004-3
11	18	1.292+02	1.004-2	7.682-3	6.373-3	5.703-3	5.385-3	5.340-3	5.716-3	6.527-3	7.703-3
11	19	8.538-01	8.825-3	8.529-3	8.390-3	8.298-3	8.219-3	8.168-3	8.073-3	8.005-3	7.951-3
11	20	2.690+01	1.130-2	1.011-2	9.391-3	8.904-3	8.519-3	8.296-3	7.943-3	7.725-3	7.567-3
11	21	4.863-00	1.233-3	8.890-4	6.513-4	5.159-4	4.099-4	3.496-4	2.653-4	2.079-4	1.692-4
11	22	3.866+02	5.770-3	5.312-3	5.064-3	5.020-3	5.056-3	5.185-3	5.647-3	6.351-3	7.288-3
11	23	5.863-00	8.935-3	7.636-3	6.932-3	6.488-3	6.157-3	5.938-3	5.598-3	5.378-3	5.202-3
11	24	1.811+01	5.418-3	3.706-3	2.705-3	2.088-3	1.660-3	1.421-3	1.114-3	9.287-4	8.194-4
11	25	1.560+01	9.983-3	8.674-3	8.023-3	7.684-3	7.459-3	7.316-3	7.144-3	7.064-3	7.029-3
11	26	1.979-01	3.587-3	2.119-3	1.385-3	9.879-4	7.517-4	6.031-4	4.337-4	3.455-4	2.951-4
11	27	1.858+08	1.154-1	1.302-1	1.426-1	1.517-1	1.590-1	1.666-1	1.804-1	1.934-1	2.059-1
11	28	5.256+01	5.802-3	3.616-3	2.444-3	1.794-3	1.400-3	1.147-3	8.578-4	7.073-4	6.260-4
11	29	3.023+07	2.148-2	1.830-2	1.648-2	1.578-2	1.547-2	1.543-2	1.577-2	1.636-2	1.707-2
11	30	1.283+09	1.277-1	1.467-1	1.601-1	1.722-1	1.815-1	1.904-1	2.064-1	2.211-1	2.351-1
11	31	1.735+06	4.612-3	3.043-3	2.187-3	1.736-3	1.465-3	1.294-3	1.117-3	1.040-3	1.012-3
11	32	3.474+06	8.594-3	6.442-3	5.296-3	4.714-3	4.365-3	4.202-3	4.102-3	4.149-3	4.265-3
11	33	9.349+06	2.621-2	1.886-2	1.432-2	1.182-2	1.024-2	9.302-3	8.336-3	7.966-3	7.881-3
11	34	1.884-02	6.591-3	3.943-3	2.519-3	1.739-3	1.268-3	9.652-4	6.203-4	4.348-4	3.273-4
11	35	0.000-00	6.855-3	4.074-3	2.584-3	1.769-3	1.278-3	9.625-4	6.034-4	4.100-4	2.981-4
11	36	0.000-00	9.870-3	6.064-3	3.953-3	2.774-3	2.039-3	1.559-3	9.962-4	6.867-4	5.018-4
11	37	7.162+07	8.676-3	8.185-3	7.925-3	8.005-3	8.131-3	8.318-3	8.755-3	9.222-3	9.702-3
11	38	2.567+06	1.067-2	7.035-3	4.864-3	3.661-3	2.924-3	2.451-3	1.919-3	1.650-3	1.510-3
11	39	6.812+06	1.866-2	1.304-2	9.846-3	8.000-3	6.943-3	6.303-3	5.652-3	5.402-3	5.346-3
11	40	4.315-00	2.029-2	1.278-2	8.400-3	5.892-3	4.341-3	3.328-3	2.140-3	1.486-3	1.097-3
11	41	0.000-00	8.090-3	4.924-3	3.210-3	2.259-3	1.675-3	1.295-3	8.575-4	6.195-4	4.793-4
11	42	6.558+04	4.303-3	2.717-3	1.870-3	1.410-3	1.135-3	9.603-4	7.677-4	6.684-4	6.132-4
11	43	6.706-00	1.067-2	6.723-3	4.599-3	3.458-3	2.776-3	2.348-3	1.879-3	1.641-3	1.511-3
11	44	0.000-00	3.601-3	2.874-3	2.541-3	2.387-3	2.319-3	2.293-3	2.294-3	2.323-3	2.350-3
11	45	1.415-01	4.009-3	2.190-3	1.292-3	8.426-4	5.948-4	4.453-4	2.900-4	2.126-4	1.728-4
11	46	6.319+06	4.940-3	3.499-3	2.786-3	2.452-3	2.275-3	2.198-3	2.164-3	2.199-3	2.266-3
11	47	1.945+06	3.037-3	1.880-3	1.282-3	9.720-4	7.913-4	6.820-4	5.687-4	5.154-4	4.943-4
11	48	2.896+08	1.463-2	1.416-2	1.392-2	1.426-2	1.460-2	1.502-2	1.589-2	1.676-2	1.760-2
11	49	2.129+09	2.940-1	3.424-1	3.809-1	4.093-1	4.314-1	4.535-1	4.911-1	5.244-1	5.548-1
11	50	1.076+09	8.309-2	9.539-2	1.046-1	1.126-1	1.186-1	1.245-1	1.346-1	1.435-1	1.516-1
11	51	1.536+10	3.699-1	4.337-1	4.779-1	5.184-1	5.479-1	5.762-1	6.245-1	6.663-1	7.045-1
11	52	2.381-01	1.482-2	1.317-2	1.275-2	1.279-2	1.301-2	1.328-2	1.381-2	1.430-2	1.468-2
11	53	0.000-00	1.253-2	1.203-2	1.225-2	1.266-2	1.311-2	1.353-2	1.425-2	1.486-2	1.529-2
11	54	0.000-00	2.761-3	1.665-3	1.080-3	7.564-4	5.578-4	4.277-4	2.752-4	1.914-4	1.411-4
11	55	5.196+08	4.116-2	4.392-2	4.612-2	4.886-2	5.096-2	5.312-2	5.703-2	6.055-2	6.384-2
11	56	6.765+07	2.081-2	2.128-2	2.203-2	2.277-2	2.348-2	2.424-2	2.556-2	2.672-2	2.771-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
11	57	7.496-00	2.285-2	2.241-2	2.286-2	2.352-2	2.426-2	2.496-2	2.615-2	2.714-2	2.785-2
11	58	0.000-00	1.019-2	6.277-3	4.125-3	2.916-3	2.163-3	1.670-3	1.093-3	7.737-4	5.824-4
11	59	2.059-00	5.772-3	3.517-3	2.312-3	1.662-3	1.274-3	1.027-3	7.484-4	6.002-4	5.148-4
11	60	4.898+08	5.070-2	5.808-2	6.402-2	6.859-2	7.214-2	7.568-2	8.155-2	8.662-2	9.112-2
11	61	4.709-01	5.349-3	4.230-3	3.654-3	3.350-3	3.167-3	3.088-3	2.998-3	2.959-3	2.932-3
11	62	6.664+09	2.970-1	3.521-1	3.908-1	4.252-1	4.503-1	4.746-1	5.153-1	5.501-1	5.813-1
11	63	2.473+10	1.816-0	2.155-0	2.415-0	2.611-0	2.761-0	2.910-0	3.159-0	3.373-0	3.565-0
11	64	0.000-00	1.307-2	1.260-2	1.259-2	1.275-2	1.296-2	1.317-2	1.352-2	1.382-2	1.402-2
11	65	5.590+10	7.861-1	9.369-1	1.038-0	1.133-0	1.202-0	1.267-0	1.377-0	1.470-0	1.553-0
11	66	5.682-02	4.888-3	4.033-3	3.741-3	3.703-3	3.742-3	3.808-3	3.958-3	4.104-3	4.218-3
11	67	1.721+10	7.170-1	8.532-1	9.472-1	1.032-0	1.093-0	1.153-0	1.252-0	1.337-0	1.413-0
11	68	1.119+10	7.632-1	9.085-1	1.019-0	1.103-0	1.167-0	1.230-0	1.336-0	1.427-0	1.508-0
11	69	2.777+08	1.492-2	1.588-2	1.667-2	1.771-2	1.850-2	1.933-2	2.079-2	2.208-2	2.326-2
11	70	1.769+10	6.458-1	7.703-1	8.569-1	9.342-1	9.908-1	1.045-0	1.136-0	1.213-0	1.282-0
11	71	6.073+09	2.027-1	2.394-1	2.655-1	2.887-1	3.058-1	3.225-1	3.503-1	3.739-1	3.950-1
11	72	1.564+10	8.916-1	1.061-0	1.190-0	1.288-0	1.364-0	1.439-0	1.563-0	1.670-0	1.764-0
11	73	4.634-02	1.423-2	9.680-3	7.277-3	6.038-3	5.327-3	4.897-3	4.460-3	4.277-3	4.190-3
11	74	1.492+06	8.205-3	8.586-3	9.088-3	9.576-3	1.001-2	1.036-2	1.092-2	1.135-2	1.166-2
11	75	2.674-01	4.980-3	4.427-3	4.273-3	4.283-3	4.360-3	4.450-3	4.634-3	4.804-3	4.931-3
11	76	0.000-00	7.057-3	7.545-3	8.074-3	8.549-3	8.976-3	9.318-3	9.854-3	1.027-2	1.056-2
11	77	2.065+09	1.060-1	1.239-1	1.378-1	1.487-1	1.573-1	1.659-1	1.801-1	1.922-1	2.031-1
11	78	6.488-01	5.615-3	3.514-3	2.388-3	1.792-3	1.448-3	1.234-3	1.000-3	8.831-4	8.190-4
11	79	2.163+10	8.497-1	1.028-0	1.162-0	1.264-0	1.343-0	1.420-0	1.546-0	1.653-0	1.747-0
11	80	1.345+10	3.148-1	3.795-1	4.249-1	4.649-1	4.944-1	5.227-1	5.694-1	6.085-1	6.431-1
11	81	1.258+08	1.620-2	1.410-2	1.321-2	1.304-2	1.300-2	1.322-2	1.378-2	1.439-2	1.503-2
11	82	2.788+08	7.494-3	8.211-3	8.785-3	9.434-3	9.934-3	1.044-2	1.131-2	1.205-2	1.271-2
11	83	5.088+08	4.247-3	4.709-3	5.083-3	5.498-3	5.813-3	6.121-3	6.640-3	7.075-3	7.466-3
11	84	2.076+06	1.420-3	8.883-4	6.126-4	4.739-4	3.874-4	3.405-4	2.891-4	2.626-4	2.489-4
11	85	2.767+08	5.464-3	6.177-3	6.709-3	7.260-3	7.677-3	8.091-3	8.783-3	9.364-3	9.880-3
11	86	7.865+08	4.871-3	5.691-3	6.232-3	6.792-3	7.201-3	7.597-3	8.250-3	8.791-3	9.272-3
11	87	2.338-01	1.876-3	1.024-3	5.901-4	3.756-4	2.558-4	1.838-4	1.078-4	7.027-5	5.013-5
11	88	7.695+07	2.320-3	2.654-3	2.936-3	3.166-3	3.350-3	3.530-3	3.823-3	4.068-3	4.280-3
11	89	7.885-01	5.229-4	3.548-4	2.687-4	2.203-4	1.901-4	1.735-4	1.518-4	1.380-4	1.281-4
11	90	0.000-00	5.903-4	5.083-4	4.849-4	4.821-4	4.859-4	4.910-4	5.010-4	5.098-4	5.158-4
11	91	5.644+06	3.627-3	2.200-3	1.457-3	1.066-3	8.341-4	6.898-4	5.311-4	4.523-4	4.107-4
11	92	0.000-00	2.249-4	1.072-4	5.823-5	3.557-5	2.355-5	1.658-5	9.450-6	6.066-6	4.242-6
11	93	2.881+07	1.287-4	1.411-4	1.538-4	1.679-4	1.793-4	1.904-4	2.093-4	2.248-4	2.386-4
11	94	1.700+07	2.498-4	2.601-4	2.791-4	3.018-4	3.205-4	3.398-4	3.727-4	4.001-4	4.244-4
11	95	3.843+06	3.808-4	2.872-4	2.407-4	2.166-4	2.031-4	1.962-4	1.902-4	1.891-4	1.902-4
11	96	6.049+05	4.806-4	2.705-4	1.691-4	1.186-4	8.999-5	7.235-5	5.332-5	4.371-5	3.859-5
11	97	1.783+05	1.111-4	6.004-5	3.389-5	2.144-5	1.467-5	1.077-5	6.817-6	4.982-6	4.025-6
12	13	8.000+01	1.411-2	8.562-3	5.816-3	4.354-3	3.471-3	2.913-3	2.313-3	2.026-3	1.915-3
12	14	6.896-01	6.112-3	4.041-3	3.055-3	2.557-3	2.276-3	2.116-3	1.963-3	1.925-3	1.937-3
12	15	2.117+01	1.935-2	1.560-2	1.328-2	1.211-2	1.131-2	1.084-2	1.032-2	1.009-2	1.004-2
12	16	6.669-00	1.616-2	1.371-2	1.273-2	1.237-2	1.226-2	1.230-2	1.256-2	1.300-2	1.355-2
12	17	1.994+01	4.287-2	4.138-2	4.138-2	4.173-2	4.228-2	4.306-2	4.462-2	4.645-2	4.850-2
12	18	1.156+02	1.841-2	1.449-2	1.261-2	1.151-2	1.086-2	1.050-2	1.016-2	1.007-2	1.012-2
12	19	3.529+01	1.586-2	1.228-2	1.016-2	8.798-3	7.801-3	7.225-3	6.385-3	5.868-3	5.481-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
12	20	8.287-00	3.725-3	2.828-3	2.356-3	2.102-3	1.926-3	1.833-3	1.712-3	1.643-3	1.603-3
12	21	1.293+02	1.718-3	1.685-3	1.684-3	1.694-3	1.703-3	1.723-3	1.773-3	1.841-3	1.929-3
12	22	7.514+01	3.578-3	2.321-3	1.685-3	1.332-3	1.102-3	9.457-4	7.477-4	6.230-4	5.389-4
12	23	6.621+01	7.987-3	7.270-3	6.915-3	6.747-3	6.635-3	6.578-3	6.520-3	6.523-3	6.567-3
12	24	1.634+02	2.351-2	2.163-2	2.051-2	1.997-2	1.958-2	1.938-2	1.916-2	1.917-2	1.932-2
12	25	1.307+02	3.300-2	2.931-2	2.718-2	2.577-2	2.480-2	2.425-2	2.360-2	2.331-2	2.329-2
12	26	8.903-00	6.890-3	4.254-3	2.903-3	2.165-3	1.725-3	1.445-3	1.124-3	9.536-4	8.566-4
12	27	4.246+08	2.774-1	3.073-1	3.319-1	3.525-1	3.689-1	3.858-1	4.169-1	4.465-1	4.751-1
12	28	4.567+01	7.655-3	4.576-3	2.921-3	2.012-3	1.461-3	1.105-3	6.990-4	4.833-4	3.611-4
12	29	8.676+08	2.762-1	3.143-1	3.434-1	3.689-1	3.880-1	4.071-1	4.412-1	4.727-1	5.028-1
12	30	6.197-00	2.644-3	1.690-3	1.135-3	8.126-4	6.116-4	4.783-4	3.205-4	2.320-4	1.783-4
12	31	2.416+06	1.583-3	1.331-3	1.212-3	1.168-3	1.147-3	1.151-3	1.185-3	1.235-3	1.292-3
12	32	9.498+06	1.378-2	1.278-2	1.240-2	1.239-2	1.247-2	1.273-2	1.336-2	1.407-2	1.482-2
12	33	1.017+08	6.402-2	6.173-2	6.118-2	6.195-2	6.295-2	6.457-2	6.821-2	7.210-2	7.608-2
12	34	1.190+06	5.630-3	3.802-3	2.833-3	2.298-3	1.992-3	1.807-3	1.626-3	1.560-3	1.551-3
12	35	1.715-03	1.068-2	6.475-3	4.200-3	2.952-3	2.195-3	1.708-3	1.152-3	8.538-4	6.808-4
12	36	0.000-00	2.444-2	1.462-2	9.343-3	6.463-3	4.714-3	3.592-3	2.315-3	1.628-3	1.230-3
12	37	1.077-00	1.284-3	7.912-4	5.161-4	3.613-4	2.655-4	2.029-4	1.299-4	8.978-5	6.590-5
12	38	3.049+07	1.189-2	1.086-2	1.046-2	1.045-2	1.052-2	1.072-2	1.124-2	1.181-2	1.241-2
12	39	3.793+06	1.525-2	1.027-2	7.400-3	5.814-3	4.844-3	4.242-3	3.589-3	3.288-3	3.159-3
12	40	1.549+06	2.979-2	1.923-2	1.308-2	9.583-3	7.416-3	6.033-3	4.437-3	3.596-3	3.124-3
12	41	9.137-00	5.386-2	3.417-2	2.257-2	1.595-2	1.185-2	9.169-3	6.025-3	4.300-3	3.272-3
12	42	1.466+06	9.719-3	6.320-3	4.369-3	3.273-3	2.593-3	2.156-3	1.662-3	1.407-3	1.270-3
12	43	4.097+03	8.584-3	5.395-3	3.640-3	2.664-3	2.068-3	1.683-3	1.243-3	1.008-3	8.709-4
12	44	7.713-00	1.845-2	1.269-2	9.805-3	8.367-3	7.575-3	7.123-3	6.714-3	6.579-3	6.540-3
12	45	1.561+07	1.453-2	1.097-2	9.214-3	8.373-3	7.934-3	7.757-3	7.743-3	7.921-3	8.190-3
12	46	7.318+07	2.057-2	1.960-2	1.955-2	2.007-2	2.058-2	2.126-2	2.262-2	2.395-2	2.524-2
12	47	6.210+07	1.086-2	9.984-3	9.819-3	1.002-2	1.025-2	1.058-2	1.126-2	1.192-2	1.256-2
12	48	6.974+01	1.224-2	7.728-3	5.028-3	3.507-3	2.577-3	1.974-3	1.275-3	8.934-4	6.641-4
12	49	4.401+09	6.030-1	7.025-1	7.770-1	8.381-1	8.839-1	9.291-1	1.006-0	1.074-0	1.136-0
12	50	8.534+09	6.542-1	7.625-1	8.446-1	9.168-1	9.685-1	1.019-0	1.105-0	1.179-0	1.246-0
12	51	1.602-00	1.805-3	1.036-3	6.384-4	4.398-4	3.246-4	2.519-4	1.708-4	1.258-4	9.927-5
12	52	1.806+07	1.307-2	1.122-2	1.058-2	1.040-2	1.042-2	1.056-2	1.095-2	1.138-2	1.178-2
12	53	4.299-01	1.577-2	1.359-2	1.290-2	1.279-2	1.293-2	1.313-2	1.360-2	1.406-2	1.441-2
12	54	0.000-00	2.315-2	2.120-2	2.095-2	2.128-2	2.181-2	2.236-2	2.338-2	2.429-2	2.496-2
12	55	3.393+08	3.739-2	4.136-2	4.467-2	4.785-2	5.034-2	5.265-2	5.656-2	5.987-2	6.273-2
12	56	4.923+08	7.821-2	8.406-2	8.916-2	9.450-2	9.875-2	1.030-1	1.105-1	1.171-1	1.230-1
12	57	2.704+08	6.887-2	6.885-2	7.035-2	7.203-2	7.404-2	7.629-2	8.059-2	8.466-2	8.844-2
12	58	3.026-01	1.638-2	1.175-2	9.335-3	8.068-3	7.342-3	6.908-3	6.470-3	6.293-3	6.209-3
12	59	4.151+09	5.351-1	6.293-1	7.016-1	7.551-1	7.972-1	8.386-1	9.087-1	9.702-1	1.026-0
12	60	9.303+06	8.442-3	7.976-3	7.919-3	7.994-3	8.111-3	8.245-3	8.494-3	8.718-3	8.891-3
12	61	1.827+09	2.144-1	2.513-1	2.796-1	3.011-1	3.178-1	3.342-1	3.618-1	3.858-1	4.073-1
12	62	1.475+08	1.026-2	9.991-3	1.008-2	1.049-2	1.082-2	1.122-2	1.196-2	1.265-2	1.329-2
12	63	2.157+09	1.664-1	1.951-1	2.161-1	2.340-1	2.475-1	2.608-1	2.829-1	3.018-1	3.188-1
12	64	5.412-01	2.920-2	2.560-2	2.402-2	2.340-2	2.314-2	2.314-2	2.331-2	2.355-2	2.372-2
12	65	6.973-00	1.483-3	8.519-4	5.179-4	3.450-4	2.452-4	1.833-4	1.150-4	7.930-5	5.888-5
12	66	2.402+10	2.370-0	2.823-0	3.166-0	3.420-0	3.618-0	3.812-0	4.137-0	4.419-0	4.672-0
12	67	1.881+10	7.927-1	9.381-1	1.045-0	1.140-0	1.208-0	1.274-0	1.384-0	1.477-0	1.560-0

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
12	68	4.173+10	2.818-0	3.367-0	3.754-0	4.082-0	4.324-0	4.561-0	4.956-0	5.292-0	5.594-0
12	69	4.874+09	2.032-1	2.387-1	2.653-1	2.891-1	3.062-1	3.229-1	3.507-1	3.742-1	3.954-1
12	70	3.164+10	1.133-0	1.345-0	1.500-0	1.639-0	1.738-0	1.834-0	1.994-0	2.128-0	2.249-0
12	71	1.027+09	4.750-2	5.225-2	5.637-2	6.044-2	6.344-2	6.653-2	7.181-2	7.635-2	8.045-2
12	72	5.084+09	3.038-1	3.557-1	3.937-1	4.265-1	4.508-1	4.752-1	5.156-1	5.501-1	5.811-1
12	73	2.228+10	1.695-0	2.024-0	2.270-0	2.455-0	2.602-0	2.743-0	2.979-0	3.183-0	3.365-0
12	74	5.612+07	1.022-2	9.228-3	8.854-3	8.823-3	8.887-3	9.038-3	9.381-3	9.736-3	1.007-2
12	75	1.891+09	1.497-1	1.782-1	1.996-1	2.158-1	2.283-1	2.407-1	2.611-1	2.787-1	2.944-1
12	76	1.027-01	1.360-2	1.386-2	1.446-2	1.515-2	1.579-2	1.634-2	1.722-2	1.793-2	1.843-2
12	77	1.119+08	1.106-2	9.625-3	9.111-3	9.133-3	9.257-3	9.515-3	1.007-2	1.063-2	1.116-2
12	78	2.488+10	1.402-0	1.701-0	1.921-0	2.087-0	2.217-0	2.343-0	2.550-0	2.727-0	2.883-0
12	79	9.076+09	3.657-1	4.406-1	4.929-1	5.378-1	5.715-1	6.042-1	6.580-1	7.032-1	7.432-1
12	80	9.781+08	2.572-2	2.927-2	3.213-2	3.480-2	3.679-2	3.876-2	4.207-2	4.487-2	4.736-2
12	81	2.468+07	1.228-2	7.702-3	5.208-3	3.853-3	3.037-3	2.516-3	1.934-3	1.630-3	1.470-3
12	82	1.488+08	6.007-3	5.793-3	5.825-3	6.009-3	6.176-3	6.388-3	6.783-3	7.140-3	7.470-3
12	83	2.030-00	8.731-4	4.571-4	2.711-4	1.889-4	1.426-4	1.135-4	8.165-5	6.211-5	5.094-5
12	84	3.519+08	1.315-2	1.449-2	1.553-2	1.659-2	1.741-2	1.828-2	1.975-2	2.099-2	2.210-2
12	85	1.714+08	4.879-3	4.726-3	4.749-3	4.929-3	5.083-3	5.276-3	5.627-3	5.939-3	6.228-3
12	86	9.360-03	5.935-4	3.331-4	2.019-4	1.378-4	1.006-4	7.717-5	5.128-5	3.689-5	2.877-5
12	87	9.193+08	3.466-2	4.084-2	4.569-2	4.962-2	5.273-2	5.580-2	6.087-2	6.516-2	6.892-2
12	88	8.091+06	7.245-4	6.269-4	5.947-4	5.935-4	5.987-4	6.098-4	6.337-4	6.570-4	6.781-4
12	89	1.229+08	4.693-3	5.457-3	6.072-3	6.570-3	6.970-3	7.361-3	8.004-3	8.544-3	9.014-3
12	90	2.766-01	1.859-3	1.441-3	1.246-3	1.150-3	1.093-3	1.069-3	1.044-3	1.032-3	1.023-3
12	91	9.035+07	7.216-3	5.555-3	4.797-3	4.473-3	4.334-3	4.315-3	4.391-3	4.526-3	4.680-3
12	92	2.804-01	5.478-4	3.333-4	2.528-4	2.229-4	2.116-4	2.076-4	2.085-4	2.131-4	2.176-4
12	93	1.692-00	3.201-5	1.808-5	1.104-5	7.759-6	5.868-6	4.710-6	3.400-6	2.667-6	2.214-6
12	94	2.067+05	1.503-4	9.535-5	6.703-5	5.325-5	4.553-5	4.078-5	3.556-5	3.283-5	3.130-5
12	95	5.969+05	6.253-4	4.090-4	2.927-4	2.319-4	1.964-4	1.726-4	1.445-4	1.283-4	1.182-4
12	96	4.269+05	8.012-4	4.620-4	2.885-4	2.008-4	1.511-4	1.199-4	8.507-5	6.635-5	5.561-5
12	97	5.180-00	1.683-4	8.995-5	4.877-5	2.973-5	1.962-5	1.377-5	7.854-6	5.069-6	3.576-6
13	14	2.146+01	2.543-2	1.548-2	1.064-2	8.084-3	6.553-3	5.613-3	4.576-3	4.106-3	3.916-3
13	15	1.613+01	2.917-1	2.905-1	2.931-1	2.986-1	3.033-1	3.090-1	3.211-1	3.357-1	3.525-1
13	16	3.855+01	3.151-2	1.796-2	1.130-2	7.750-3	5.625-3	4.268-3	2.705-3	1.870-3	1.386-3
13	17	9.890-02	3.915-2	2.289-2	1.492-2	1.068-2	8.158-3	6.563-3	4.759-3	3.844-3	3.363-3
13	18	4.619+01	2.583-1	2.544-1	2.547-1	2.580-1	2.608-1	2.647-1	2.730-1	2.834-1	2.952-1
13	19	1.364+01	1.595-2	1.009-2	7.358-3	5.929-3	5.064-3	4.545-3	3.924-3	3.607-3	3.414-3
13	20	2.390+01	6.646-3	3.651-3	2.292-3	1.609-3	1.233-3	1.017-3	8.173-4	7.696-4	8.047-4
13	21	1.631-01	2.386-3	1.570-3	1.222-3	1.058-3	9.686-4	9.193-4	8.688-4	8.466-4	8.358-4
13	22	1.794+01	5.204-2	4.039-2	3.385-2	2.969-2	2.673-2	2.496-2	2.241-2	2.090-2	1.980-2
13	23	1.310+01	7.563-3	4.397-3	2.883-3	2.113-3	1.665-3	1.398-3	1.125-3	1.026-3	1.020-3
13	24	1.020+01	1.701-2	1.084-2	7.740-3	6.039-3	4.965-3	4.289-3	3.439-3	2.955-3	2.639-3
13	25	9.527-00	1.978-2	1.124-2	7.104-3	4.944-3	3.667-3	2.871-3	1.968-3	1.502-3	1.243-3
13	26	1.418+02	4.313-2	3.612-2	3.247-2	3.037-2	2.900-2	2.821-2	2.726-2	2.675-2	2.655-2
13	27	1.829+08	2.022-1	2.283-1	2.495-1	2.665-1	2.804-1	2.945-1	3.205-1	3.454-1	3.697-1
13	28	2.781+02	6.316-3	4.317-3	3.541-3	3.151-3	2.939-3	2.852-3	2.808-3	2.876-3	3.010-3
13	29	2.695+07	2.603-2	2.409-2	2.323-2	2.324-2	2.343-2	2.394-2	2.523-2	2.669-2	2.824-2
13	30	2.642-00	4.361-3	2.750-3	1.797-3	1.261-3	9.351-4	7.208-4	4.714-4	3.323-4	2.484-4
13	31	5.156+04	1.651-4	1.163-4	8.812-5	7.322-5	6.447-5	5.930-5	5.441-5	5.284-5	5.296-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition		Energy (Ryd)									
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
13	32	1.592+08	2.738-1	3.179-1	3.520-1	3.787-1	3.997-1	4.204-1	4.575-1	4.921-1	5.254-1
13	33	3.996+09	2.525-0	2.932-0	3.247-0	3.493-0	3.687-0	3.878-0	4.220-0	4.539-0	4.846-0
13	34	9.131+04	3.198-4	2.434-4	2.045-4	1.836-4	1.737-4	1.689-4	1.677-4	1.716-4	1.780-4
13	35	7.911-03	3.418-4	2.097-4	1.360-4	9.506-5	7.005-5	5.387-5	3.528-5	2.522-5	1.932-5
13	36	0.000-00	4.491-4	2.715-4	1.739-4	1.203-4	8.742-5	6.628-5	4.220-5	2.921-5	2.168-5
13	37	6.183-03	2.797-5	1.646-5	1.046-5	7.237-6	5.282-6	4.017-6	2.561-6	1.768-6	1.300-6
13	38	3.451+05	2.766-4	2.366-4	2.178-4	2.111-4	2.086-4	2.101-4	2.172-4	2.269-4	2.380-4
13	39	3.908+06	2.360-3	2.554-3	2.724-3	2.879-3	3.003-3	3.135-3	3.380-3	3.614-3	3.842-3
13	40	1.583+04	5.105-4	3.305-4	2.240-4	1.640-4	1.267-4	1.027-4	7.506-5	6.041-5	5.213-5
13	41	3.489-02	2.482-4	1.555-4	1.018-4	7.204-5	5.370-5	4.169-5	2.777-5	1.994-5	1.524-5
13	42	1.146+07	3.139-2	2.223-2	1.678-2	1.377-2	1.192-2	1.082-2	9.687-3	9.251-3	9.153-3
13	43	7.902+06	4.610-2	3.172-2	2.310-2	1.824-2	1.520-2	1.336-2	1.135-2	1.043-2	1.004-2
13	44	1.357+01	6.175-2	3.952-2	2.611-2	1.840-2	1.360-2	1.045-2	6.746-3	4.704-3	3.478-3
13	45	7.189+03	4.089-4	2.538-4	1.652-4	1.157-4	8.580-5	6.674-5	4.500-5	3.341-5	2.680-5
13	46	9.074+05	3.952-4	3.715-4	3.661-4	3.732-4	3.806-4	3.920-4	4.158-4	4.400-4	4.640-4
13	47	4.502+05	1.412-4	1.224-4	1.161-4	1.162-4	1.177-4	1.207-4	1.277-4	1.350-4	1.423-4
13	48	7.836-00	2.856-3	2.015-3	1.513-3	1.205-3	9.983-4	8.540-4	6.645-4	5.444-4	4.620-4
13	49	1.752+08	4.501-2	4.795-2	5.056-2	5.320-2	5.531-2	5.761-2	6.179-2	6.567-2	6.935-2
13	50	1.548+05	5.702-3	3.628-3	2.400-3	1.696-3	1.257-3	9.687-4	6.326-4	4.488-4	3.395-4
13	51	3.731-00	1.797-3	1.147-3	7.635-4	5.443-4	4.063-4	3.154-4	2.082-4	1.484-4	1.122-4
13	52	5.480+08	1.305-1	1.493-1	1.646-1	1.761-1	1.852-1	1.943-1	2.102-1	2.245-1	2.376-1
13	53	2.796-02	1.245-2	7.509-3	5.080-3	3.822-3	3.113-3	2.676-3	2.207-3	1.980-3	1.859-3
13	54	0.000-00	1.809-2	1.074-2	7.051-3	5.116-3	3.993-3	3.288-3	2.509-3	2.113-3	1.890-3
13	55	1.590+08	1.579-2	1.766-2	1.915-2	2.061-2	2.167-2	2.273-2	2.457-2	2.619-2	2.767-2
13	56	4.711+07	9.571-3	9.784-3	1.015-2	1.062-2	1.102-2	1.146-2	1.228-2	1.303-2	1.373-2
13	57	1.041+09	2.115-1	2.473-1	2.750-1	2.953-1	3.113-1	3.271-1	3.543-1	3.785-1	4.006-1
13	58	9.531-00	3.343-2	3.367-2	3.539-2	3.717-2	3.889-2	4.041-2	4.287-2	4.484-2	4.625-2
13	59	2.011+10	3.329-0	3.939-0	4.407-0	4.747-0	5.014-0	5.274-0	5.720-0	6.112-0	6.470-0
13	60	4.170+07	1.655-2	1.314-2	1.127-2	1.040-2	9.910-3	9.725-3	9.713-3	9.913-3	1.021-2
13	61	4.246+07	2.096-2	1.640-2	1.399-2	1.278-2	1.208-2	1.181-2	1.171-2	1.190-2	1.221-2
13	62	9.660+07	8.961-3	8.477-3	8.445-3	8.681-3	8.894-3	9.181-3	9.749-3	1.029-2	1.081-2
13	63	5.736+05	6.513-3	3.914-3	2.532-3	1.785-3	1.337-3	1.050-3	7.241-4	5.491-4	4.496-4
13	64	8.688-00	2.105-2	1.489-2	1.142-2	9.535-3	8.431-3	7.757-3	7.049-3	6.726-3	6.565-3
13	65	1.148+01	1.904-3	1.163-3	7.402-4	5.063-4	3.655-4	2.755-4	1.729-4	1.177-4	8.592-5
13	66	3.195+09	4.607-1	5.415-1	6.037-1	6.501-1	6.861-1	7.217-1	7.822-1	8.354-1	8.835-1
13	67	3.576+07	6.704-3	4.916-3	3.939-3	3.470-3	3.203-3	3.080-3	3.004-3	3.025-3	3.093-3
13	68	5.962+08	6.339-2	7.059-2	7.624-2	8.152-2	8.556-2	8.971-2	9.689-2	1.032-1	1.090-1
13	69	4.562+10	2.439-0	2.880-0	3.208-0	3.498-0	3.705-0	3.906-0	4.242-0	4.529-0	4.789-0
13	70	4.715+09	2.333-1	2.751-1	3.061-1	3.337-1	3.536-1	3.728-1	4.050-1	4.323-1	4.570-1
13	71	5.769+09	2.920-1	3.443-1	3.834-1	4.181-1	4.430-1	4.671-1	5.074-1	5.416-1	5.724-1
13	72	4.816+08	4.099-2	4.624-2	5.013-2	5.384-2	5.657-2	5.939-2	6.420-2	6.840-2	7.221-2
13	73	6.350+08	7.411-2	8.393-2	9.178-2	9.799-2	1.029-1	1.080-1	1.167-1	1.244-1	1.313-1
13	74	2.932+09	2.103-1	2.457-1	2.712-1	2.934-1	3.101-1	3.265-1	3.542-1	3.779-1	3.992-1
13	75	2.717+08	4.645-2	4.455-2	4.441-2	4.481-2	4.584-2	4.714-2	4.985-2	5.254-2	5.513-2
13	76	2.304+01	2.636-2	1.659-2	1.091-2	7.697-3	5.721-3	4.437-3	2.950-3	2.144-3	1.668-3
13	77	3.723+10	2.327-0	2.795-0	3.123-0	3.401-0	3.608-0	3.809-0	4.142-0	4.425-0	4.678-0
13	78	2.334+08	2.816-2	2.785-2	2.827-2	2.898-2	2.980-2	3.081-2	3.277-2	3.463-2	3.639-2
13	79	8.562+08	6.077-2	6.886-2	7.486-2	8.032-2	8.469-2	8.901-2	9.632-2	1.026-1	1.083-1

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
13	80	6.445+07	6.907-3	5.543-3	4.817-3	4.507-3	4.334-3	4.288-3	4.322-3	4.429-3	4.567-3
13	81	2.139+10	1.065-0	1.286-0	1.440-0	1.571-0	1.668-0	1.763-0	1.919-0	2.050-0	2.167-0
13	82	2.839+09	1.015-1	1.147-1	1.249-1	1.344-1	1.413-1	1.480-1	1.592-1	1.686-1	1.769-1
13	83	4.758+01	4.247-3	2.839-3	2.015-3	1.620-3	1.351-3	1.169-3	9.226-4	7.623-4	6.494-4
13	84	5.968+08	3.275-2	3.372-2	3.515-2	3.691-2	3.841-2	4.012-2	4.314-2	4.582-2	4.827-2
13	85	6.525+07	8.053-3	5.903-3	4.795-3	4.290-3	4.010-3	3.879-3	3.801-3	3.827-3	3.896-3
13	86	9.699-01	2.151-3	1.277-3	8.117-4	5.615-4	4.120-4	3.163-4	2.063-4	1.461-4	1.104-4
13	87	4.365+10	1.853-0	2.284-0	2.597-0	2.837-0	3.023-0	3.203-0	3.496-0	3.744-0	3.961-0
13	88	2.497+08	1.088-2	1.134-2	1.188-2	1.249-2	1.303-2	1.362-2	1.465-2	1.555-2	1.636-2
13	89	5.885+05	4.452-3	2.752-3	1.826-3	1.316-3	1.010-3	8.120-4	5.871-4	4.669-4	3.983-4
13	90	1.445+01	5.491-3	3.328-3	2.140-3	1.483-3	1.084-3	8.259-4	5.290-4	3.672-4	2.735-4
13	91	2.962+09	8.535-2	1.026-1	1.153-1	1.261-1	1.343-1	1.421-1	1.547-1	1.651-1	1.741-1
13	92	1.002+01	6.173-3	6.162-3	6.605-3	7.104-3	7.573-3	7.963-3	8.585-3	9.068-3	9.419-3
13	93	5.183-01	3.207-4	1.864-4	1.140-4	7.605-5	5.358-5	3.945-5	2.380-5	1.563-5	1.108-5
13	94	1.227+07	1.059-3	7.312-4	5.634-4	4.865-4	4.454-4	4.264-4	4.153-4	4.185-4	4.281-4
13	95	1.867+08	5.731-3	6.176-3	6.595-3	7.050-3	7.421-3	7.807-3	8.466-3	9.025-3	9.523-3
13	96	1.443+09	3.403-2	3.991-2	4.382-2	4.735-2	5.003-2	5.270-2	5.709-2	6.074-2	6.397-2
13	97	9.365-00	1.337-4	6.547-5	3.551-5	2.288-5	1.653-5	1.298-5	9.704-6	8.189-6	7.368-6
14	15	1.470-07	5.272-3	4.332-3	3.881-3	3.675-3	3.545-3	3.467-3	3.374-3	3.325-3	3.293-3
14	16	7.849-00	3.647-1	2.926-1	2.713-1	2.737-1	2.905-1	3.186-1	3.999-1	5.114-1	6.507-1
14	17	2.068-04	3.120-2	2.146-2	1.721-2	1.530-2	1.451-2	1.443-2	1.535-2	1.726-2	1.988-2
14	18	1.418-04	2.880-3	1.900-3	1.430-3	1.199-3	1.067-3	9.955-4	9.342-4	9.334-4	9.664-4
14	19	6.506-01	5.719-2	3.753-2	2.919-2	2.538-2	2.349-2	2.262-2	2.209-2	2.237-2	2.302-2
14	20	1.929+01	7.925-2	6.759-2	6.270-2	6.084-2	6.017-2	6.036-2	6.192-2	6.471-2	6.835-2
14	21	5.641+01	9.627-2	9.448-2	9.526-2	9.668-2	9.820-2	1.002-1	1.047-1	1.104-1	1.170-1
14	22	7.224+01	2.211-2	1.413-2	1.028-2	8.338-3	7.202-3	6.528-3	5.831-3	5.541-3	5.457-3
14	23	6.627+01	7.888-2	7.337-2	7.169-2	7.189-2	7.241-2	7.334-2	7.598-2	7.957-2	8.395-2
14	24	3.619+01	3.323-2	2.914-2	2.762-2	2.729-2	2.725-2	2.744-2	2.824-2	2.946-2	3.098-2
14	25	1.401+01	2.438-2	1.529-2	1.136-2	9.509-3	8.535-3	8.015-3	7.586-3	7.535-3	7.670-3
14	26	1.391+02	2.261-2	1.193-2	7.198-3	4.845-3	3.495-3	2.658-3	1.745-3	1.264-3	1.001-3
14	27	1.476+05	6.739-4	7.119-4	7.528-4	7.842-4	8.028-4	8.162-4	8.268-4	8.236-4	8.145-4
14	28	6.250-00	1.398-2	8.189-3	5.359-3	3.849-3	2.957-3	2.391-3	1.747-3	1.412-3	1.227-3
14	29	2.823+05	6.008-4	6.494-4	6.974-4	7.357-4	7.623-4	7.816-4	8.046-4	8.127-4	8.129-4
14	30	3.018-03	6.996-5	3.951-5	2.523-5	1.780-5	1.338-5	1.051-5	7.215-6	5.345-6	4.224-6
14	31	6.545+06	2.175-2	1.831-2	1.640-2	1.561-2	1.527-2	1.529-2	1.580-2	1.660-2	1.756-2
14	32	2.676+06	2.082-2	1.730-2	1.547-2	1.449-2	1.395-2	1.362-2	1.323-2	1.291-2	1.260-2
14	33	7.735+06	1.528-2	1.665-2	1.786-2	1.895-2	1.988-2	2.086-2	2.275-2	2.464-2	2.653-2
14	34	2.536+05	9.905-3	6.639-3	4.705-3	3.625-3	2.992-3	2.589-3	2.157-3	1.957-3	1.873-3
14	35	5.812-02	2.707-3	1.720-3	1.126-3	7.922-4	5.894-4	4.555-4	2.998-4	2.122-4	1.593-4
14	36	0.000-00	1.442-5	6.279-6	3.225-6	1.922-6	1.303-6	9.518-7	5.887-7	4.110-7	3.125-7
14	37	9.465-01	3.647-3	2.311-3	1.510-3	1.061-3	7.877-4	6.078-4	3.986-4	2.817-4	2.110-4
14	38	5.516+05	9.614-3	6.350-3	4.394-3	3.310-3	2.653-3	2.237-3	1.777-3	1.545-3	1.429-3
14	39	3.571+06	1.516-2	1.227-2	1.061-2	9.845-3	9.454-3	9.335-3	9.455-3	9.804-3	1.027-2
14	40	1.737+06	9.504-3	7.806-3	6.870-3	6.359-3	6.081-3	5.921-3	5.749-3	5.612-3	5.498-3
14	41	2.129-02	7.395-4	4.704-4	3.103-4	2.197-4	1.643-4	1.279-4	8.544-5	6.187-5	4.766-5
14	42	4.231+08	3.616-1	4.164-1	4.593-1	4.931-1	5.199-1	5.466-1	5.950-1	6.408-1	6.851-1
14	43	5.556+07	7.336-2	7.988-2	8.577-2	9.024-2	9.421-2	9.839-2	1.063-1	1.141-1	1.217-1
14	44	5.807-02	1.835-3	1.180-3	8.051-4	5.949-4	4.661-4	3.826-4	2.874-4	2.367-4	2.070-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
14	45	7.593+04	1.163-4	1.068-4	1.065-4	1.085-4	1.114-4	1.152-4	1.232-4	1.315-4	1.397-4
14	46	1.671+05	1.657-4	1.600-4	1.624-4	1.674-4	1.724-4	1.786-4	1.909-4	2.033-4	2.154-4
14	47	5.030+04	4.902-5	4.419-5	4.331-5	4.427-5	4.542-5	4.683-5	4.972-5	5.256-5	5.521-5
14	48	2.248-02	1.702-4	1.025-4	6.933-5	5.123-5	4.009-5	3.265-5	2.366-5	1.838-5	1.502-5
14	49	2.224+06	2.421-3	2.242-3	2.222-3	2.254-3	2.303-3	2.368-3	2.504-3	2.638-3	2.766-3
14	50	5.010+06	2.499-3	2.605-3	2.749-3	2.915-3	3.052-3	3.187-3	3.422-3	3.631-3	3.814-3
14	51	1.417-01	3.553-4	2.289-4	1.571-4	1.178-4	9.261-5	7.574-5	5.485-5	4.242-5	3.439-5
14	52	9.763+09	3.997-0	4.705-0	5.252-0	5.644-0	5.953-0	6.256-0	6.788-0	7.273-0	7.727-0
14	53	4.593-00	1.813-2	1.183-2	7.986-3	5.743-3	4.332-3	3.411-3	2.312-3	1.688-3	1.302-3
14	54	0.000-00	6.229-4	2.932-4	1.682-4	1.124-4	8.235-5	6.641-5	4.863-5	3.970-5	3.457-5
14	55	4.391+08	7.471-2	8.689-2	9.598-2	1.039-1	1.097-1	1.153-1	1.252-1	1.339-1	1.421-1
14	56	3.522+08	1.043-1	1.205-1	1.327-1	1.426-1	1.501-1	1.577-1	1.709-1	1.828-1	1.939-1
14	57	9.165+07	3.747-2	4.377-2	4.868-2	5.221-2	5.501-2	5.778-2	6.264-2	6.706-2	7.119-2
14	58	8.839-00	2.885-2	1.851-2	1.230-2	8.745-3	6.547-3	5.124-3	3.467-3	2.566-3	2.029-3
14	59	1.265+08	4.638-2	5.183-2	5.645-2	5.995-2	6.283-2	6.577-2	7.103-2	7.586-2	8.038-2
14	60	5.413+09	1.095-0	1.290-0	1.433-0	1.549-0	1.636-0	1.721-0	1.868-0	1.997-0	2.117-0
14	61	3.919+08	1.072-1	1.254-1	1.398-1	1.501-1	1.583-1	1.663-1	1.802-1	1.928-1	2.043-1
14	62	1.319+09	1.517-1	1.775-1	1.969-1	2.139-1	2.261-1	2.381-1	2.585-1	2.763-1	2.929-1
14	63	2.031+08	4.713-2	5.249-2	5.676-2	6.047-2	6.333-2	6.628-2	7.146-2	7.615-2	8.052-2
14	64	5.022-02	1.484-3	9.564-4	6.753-4	5.249-4	4.344-4	3.775-4	3.157-4	2.855-4	2.692-4
14	65	1.006-00	1.102-3	6.729-4	4.367-4	3.046-4	2.233-4	1.702-4	1.088-4	7.507-5	5.503-5
14	66	8.055+07	2.193-2	2.532-2	2.806-2	3.008-2	3.166-2	3.324-2	3.599-2	3.846-2	4.073-2
14	67	1.064+08	1.613-2	1.834-2	2.025-2	2.191-2	2.317-2	2.436-2	2.638-2	2.812-2	2.965-2
14	68	1.277+07	6.323-3	5.870-3	5.792-3	5.874-3	5.992-3	6.153-3	6.482-3	6.805-3	7.100-3
14	69	2.220+09	2.283-1	2.683-1	2.981-1	3.244-1	3.432-1	3.614-1	3.925-1	4.195-1	4.443-1
14	70	8.991+08	9.034-2	1.061-1	1.179-1	1.283-1	1.358-1	1.430-1	1.552-1	1.658-1	1.755-1
14	71	2.829+10	2.205-0	2.605-0	2.902-0	3.162-0	3.349-0	3.528-0	3.833-0	4.095-0	4.335-0
14	72	7.100+09	9.483-1	1.125-0	1.253-0	1.359-0	1.437-0	1.513-0	1.643-0	1.756-0	1.859-0
14	73	7.206+08	1.319-1	1.561-1	1.745-1	1.881-1	1.987-1	2.090-1	2.267-1	2.423-1	2.566-1
14	74	2.576+10	2.968-0	3.527-0	3.928-0	4.258-0	4.504-0	4.743-0	5.149-0	5.500-0	5.819-0
14	75	2.394+09	3.737-1	4.412-1	4.924-1	5.306-1	5.602-1	5.892-1	6.388-1	6.825-1	7.221-1
14	76	7.676-01	3.410-3	1.984-3	1.298-3	9.469-4	7.450-4	6.208-4	4.822-4	4.105-4	3.687-4
14	77	2.757+09	2.976-1	3.525-1	3.917-1	4.246-1	4.490-1	4.728-1	5.131-1	5.480-1	5.797-1
14	78	3.390+08	4.496-2	5.248-2	5.840-2	6.290-2	6.642-2	6.989-2	7.577-2	8.092-2	8.557-2
14	79	3.749+09	3.274-1	3.881-1	4.315-1	4.680-1	4.952-1	5.218-1	5.665-1	6.048-1	6.393-1
14	80	7.675+09	3.824-1	4.519-1	5.033-1	5.491-1	5.819-1	6.136-1	6.666-1	7.115-1	7.522-1
14	81	2.394+07	5.605-3	5.176-3	5.057-3	5.141-3	5.227-3	5.375-3	5.678-3	5.977-3	6.268-3
14	82	1.207+08	6.251-3	7.036-3	7.690-3	8.319-3	8.774-3	9.226-3	9.986-3	1.063-2	1.122-2
14	83	1.588-02	1.247-3	7.691-4	4.987-4	3.481-4	2.548-4	1.939-4	1.234-4	8.493-5	6.205-5
14	84	2.144+04	1.614-3	1.190-3	9.834-4	8.857-4	8.316-4	8.015-4	7.709-4	7.579-4	7.506-4
14	85	7.489+06	2.293-3	1.937-3	1.771-3	1.719-3	1.692-3	1.690-3	1.703-3	1.726-3	1.750-3
14	86	8.823-01	6.719-4	4.491-4	3.213-4	2.581-4	2.153-4	1.858-4	1.461-4	1.203-4	1.024-4
14	87	6.961+08	4.877-2	5.920-2	6.698-2	7.291-2	7.752-2	8.196-2	8.932-2	9.562-2	1.012-1
14	88	3.443+10	1.505-0	1.823-0	2.044-0	2.231-0	2.371-0	2.506-0	2.730-0	2.917-0	3.083-0
14	89	1.541+09	1.199-1	1.340-1	1.457-1	1.557-1	1.637-1	1.718-1	1.854-1	1.973-1	2.078-1
14	90	3.018-01	9.311-3	6.601-3	5.244-3	4.554-3	4.185-3	3.970-3	3.773-3	3.710-3	3.692-3
14	91	6.168+08	2.501-2	2.971-2	3.309-2	3.604-2	3.830-2	4.050-2	4.412-2	4.717-2	4.985-2
14	92	5.368+01	2.670-2	1.623-2	1.047-2	7.249-3	5.285-3	4.010-3	2.548-3	1.749-3	1.291-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition		Energy (Ryd)									
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
14	93	7.157-00	3.826-3	2.355-3	1.546-3	1.102-3	8.269-4	6.462-4	4.331-4	3.138-4	2.411-4
14	94	1.253+08	1.670-2	1.651-2	1.684-2	1.743-2	1.800-2	1.854-2	1.948-2	2.026-2	2.089-2
14	95	8.180+06	1.434-2	1.181-2	1.063-2	1.013-2	9.929-3	9.860-3	9.911-3	1.005-2	1.019-2
14	96	1.992+08	1.429-2	1.236-2	1.157-2	1.140-2	1.145-2	1.168-2	1.224-2	1.284-2	1.343-2
14	97	2.291-01	2.202-3	1.324-3	8.515-4	5.888-4	4.282-4	3.238-4	2.037-4	1.386-4	1.005-4
15	16	3.235-09	3.200-3	2.000-3	1.399-3	1.088-3	9.022-4	7.800-4	6.339-4	5.509-4	4.987-4
15	17	0.000-00	3.691-3	2.092-3	1.322-3	9.225-4	6.856-4	5.341-4	3.572-4	2.603-4	2.018-4
15	18	7.843+01	3.687-2	2.453-2	1.775-2	1.378-2	1.113-2	9.478-3	7.548-3	6.566-3	6.153-3
15	19	3.301-01	3.880-2	3.078-2	2.594-2	2.355-2	2.187-2	2.108-2	2.022-2	1.996-2	2.006-2
15	20	1.531+01	9.486-3	6.633-3	4.977-3	4.022-3	3.339-3	2.947-3	2.443-3	2.161-3	2.013-3
15	21	2.039-02	2.840-3	1.928-3	1.339-3	1.036-3	8.072-4	6.774-4	5.005-4	3.863-4	3.098-4
15	22	4.755-00	8.303-2	7.981-2	7.761-2	7.754-2	7.739-2	7.752-2	7.818-2	7.941-2	8.112-2
15	23	2.111-00	8.661-3	6.221-3	4.823-3	4.111-3	3.570-3	3.173-3	2.622-3	2.258-3	1.996-3
15	24	6.543-01	1.388-2	1.071-2	9.173-3	8.478-3	8.017-3	7.711-3	7.376-3	7.257-3	7.234-3
15	25	3.790-01	2.430-2	1.869-2	1.527-2	1.323-2	1.192-2	1.083-2	9.302-3	8.319-3	7.655-3
15	26	3.745+01	3.725-2	3.730-2	3.713-2	3.715-2	3.726-2	3.736-2	3.763-2	3.815-2	3.894-2
15	27	1.986+08	6.972-1	8.127-1	8.983-1	9.497-1	9.806-1	1.002-0	1.018-0	1.017-0	1.005-0
15	28	1.445+02	2.228-2	1.755-2	1.517-2	1.369-2	1.267-2	1.213-2	1.151-2	1.131-2	1.134-2
15	29	2.134+08	3.476-1	4.065-1	4.477-1	4.765-1	4.944-1	5.062-1	5.192-1	5.202-1	5.170-1
15	30	3.456+08	1.760-1	2.065-1	2.274-1	2.426-1	2.519-1	2.580-1	2.652-1	2.685-1	2.660-1
15	31	4.098+05	9.531-4	8.937-4	8.789-4	8.761-4	8.752-4	8.784-4	8.786-4	8.736-4	8.603-4
15	32	2.282+06	1.040-2	1.161-2	1.263-2	1.326-2	1.369-2	1.403-2	1.437-2	1.444-2	1.437-2
15	33	3.258+07	6.251-2	7.117-2	7.828-2	8.357-2	8.813-2	9.275-2	1.014-1	1.099-1	1.184-1
15	34	7.174-06	1.101-3	6.767-4	4.420-4	3.108-4	2.291-4	1.757-4	1.134-4	7.941-5	5.924-5
15	35	0.000-00	1.655-3	1.014-3	6.642-4	4.672-4	3.444-4	2.642-4	1.708-4	1.198-4	8.950-5
15	36	0.000-00	2.520-3	1.541-3	1.005-3	7.020-4	5.141-4	3.913-4	2.482-4	1.699-4	1.234-4
15	37	7.477+06	2.317-3	2.690-3	2.955-3	3.164-3	3.300-3	3.404-3	3.547-3	3.589-3	3.589-3
15	38	2.516+06	2.423-3	2.733-3	2.976-3	3.161-3	3.289-3	3.389-3	3.512-3	3.566-3	3.562-3
15	39	3.747+05	8.935-4	8.375-4	8.347-4	8.431-4	8.539-4	8.674-4	8.847-4	8.907-4	8.874-4
15	40	3.382-05	5.967-4	3.323-4	1.992-4	1.313-4	9.295-5	6.935-5	4.452-5	3.182-5	2.509-5
15	41	0.000-00	1.007-3	5.602-4	3.363-4	2.213-4	1.568-4	1.172-4	7.555-5	5.426-5	4.298-5
15	42	1.330+06	3.366-3	2.756-3	2.477-3	2.345-3	2.286-3	2.279-3	2.328-3	2.419-3	2.529-3
15	43	8.167-07	3.081-3	2.133-3	1.643-3	1.378-3	1.222-3	1.126-3	1.022-3	9.707-4	9.422-4
15	44	0.000-00	2.513-3	1.843-3	1.523-3	1.357-3	1.263-3	1.210-3	1.158-3	1.137-3	1.127-3
15	45	2.633-01	2.505-3	1.611-3	1.082-3	7.685-4	5.681-4	4.377-4	2.839-4	1.983-4	1.475-4
15	46	1.143+06	2.870-3	2.196-3	1.801-3	1.587-3	1.458-3	1.392-3	1.344-3	1.350-3	1.384-3
15	47	9.228+05	1.661-3	1.244-3	9.890-4	8.483-4	7.649-4	7.178-4	6.771-4	6.701-4	6.802-4
15	48	5.787+09	5.714-1	6.744-1	7.461-1	8.077-1	8.541-1	8.988-1	9.781-1	1.051-0	1.120-0
15	49	5.514+08	2.479-1	2.786-1	3.050-1	3.243-1	3.402-1	3.566-1	3.860-1	4.136-1	4.399-1
15	50	8.010+08	1.819-1	2.109-1	2.320-1	2.501-1	2.638-1	2.772-1	3.009-1	3.225-1	3.430-1
15	51	1.475+08	1.050-2	1.232-2	1.360-2	1.475-2	1.561-2	1.644-2	1.788-2	1.918-2	2.040-2
15	52	1.496-02	3.750-3	2.278-3	1.485-3	1.043-3	7.712-4	5.929-4	3.851-4	2.712-4	2.034-4
15	53	0.000-00	4.640-3	2.873-3	1.933-3	1.415-3	1.099-3	8.954-4	6.629-4	5.396-4	4.677-4
15	54	0.000-00	5.489-3	3.311-3	2.142-3	1.490-3	1.090-3	8.289-4	5.260-4	3.606-4	2.624-4
15	55	1.664+07	7.106-3	6.106-3	5.602-3	5.431-3	5.367-3	5.403-3	5.574-3	5.807-3	6.068-3
15	56	3.330+06	7.830-3	5.512-3	4.231-3	3.543-3	3.118-3	2.874-3	2.629-3	2.540-3	2.526-3
15	57	3.755-00	1.062-2	6.706-3	4.486-3	3.233-3	2.453-3	1.943-3	1.342-3	1.007-3	8.038-4
15	58	0.000-00	1.618-2	1.794-2	1.986-2	2.135-2	2.260-2	2.364-2	2.522-2	2.644-2	2.729-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
15	59	7.431-01	5.931-3	3.976-3	2.877-3	2.250-3	1.838-3	1.555-3	1.196-3	9.756-4	8.304-4
15	60	1.599+07	1.330-2	1.255-2	1.251-2	1.274-2	1.302-2	1.336-2	1.403-2	1.466-2	1.520-2
15	61	1.268-02	9.816-3	8.327-3	7.777-3	7.613-3	7.615-3	7.680-3	7.868-3	8.072-3	8.231-3
15	62	1.522+07	2.629-3	2.601-3	2.652-3	2.761-3	2.857-3	2.966-3	3.175-3	3.371-3	3.559-3
15	63	1.212+07	4.098-3	3.882-3	3.875-3	3.956-3	4.056-3	4.184-3	4.439-3	4.685-3	4.919-3
15	64	0.000-00	6.339-3	5.753-3	5.640-3	5.681-3	5.781-3	5.893-3	6.108-3	6.298-3	6.435-3
15	65	4.293+08	1.760-2	1.938-2	2.081-2	2.215-2	2.316-2	2.423-2	2.614-2	2.786-2	2.949-2
15	66	2.518-01	3.206-3	2.301-3	1.876-3	1.691-3	1.606-3	1.567-3	1.552-3	1.566-3	1.584-3
15	67	4.771+08	5.512-2	6.220-2	6.763-2	7.246-2	7.611-2	7.982-2	8.633-2	9.218-2	9.762-2
15	68	4.061+08	7.173-2	8.321-2	9.258-2	9.941-2	1.049-1	1.103-1	1.197-1	1.281-1	1.358-1
15	69	3.483+07	1.868-2	1.398-2	1.139-2	1.003-2	9.230-3	8.821-3	8.485-3	8.451-3	8.568-3
15	70	1.053+07	2.955-3	2.403-3	2.147-3	2.059-3	2.027-3	2.037-3	2.101-3	2.186-3	2.280-3
15	71	1.119+08	1.451-2	1.401-2	1.401-2	1.442-2	1.483-2	1.533-2	1.635-2	1.732-2	1.826-2
15	72	1.292+08	3.230-2	2.984-2	2.907-2	2.941-2	2.971-2	3.046-2	3.212-2	3.385-2	3.556-2
15	73	2.984-00	1.740-2	1.149-2	8.219-3	6.430-3	5.366-3	4.701-3	3.968-3	3.600-3	3.397-3
15	74	1.349+08	4.213-2	3.966-2	3.940-2	4.016-2	4.101-2	4.217-2	4.448-2	4.671-2	4.875-2
15	75	7.719-01	2.785-2	2.046-2	1.676-2	1.495-2	1.401-2	1.350-2	1.312-2	1.308-2	1.313-2
15	76	0.000-00	2.033-2	1.708-2	1.591-2	1.558-2	1.561-2	1.577-2	1.623-2	1.672-2	1.711-2
15	77	3.242+08	4.209-2	4.665-2	5.073-2	5.396-2	5.652-2	5.919-2	6.381-2	6.792-2	7.169-2
15	78	8.119-01	1.393-2	8.403-3	5.384-3	3.743-3	2.767-3	2.148-3	1.451-3	1.082-3	8.709-4
15	79	1.307+09	1.366-1	1.585-1	1.759-1	1.896-1	1.999-1	2.104-1	2.281-1	2.437-1	2.576-1
15	80	4.206+08	2.874-2	3.073-2	3.261-2	3.452-2	3.603-2	3.767-2	4.056-2	4.313-2	4.551-2
15	81	2.174+10	1.775-0	2.131-0	2.401-0	2.602-0	2.756-0	2.908-0	3.161-0	3.380-0	3.575-0
15	82	5.718+10	2.456-0	2.966-0	3.319-0	3.626-0	3.851-0	4.066-0	4.425-0	4.730-0	5.003-0
15	83	6.759+10	9.599-1	1.162-0	1.297-0	1.421-0	1.511-0	1.596-0	1.738-0	1.858-0	1.965-0
15	84	4.846+10	2.805-0	3.405-0	3.854-0	4.195-0	4.454-0	4.709-0	5.129-0	5.488-0	5.807-0
15	85	3.589+10	1.180-0	1.437-0	1.614-0	1.769-0	1.883-0	1.991-0	2.171-0	2.322-0	2.456-0
15	86	3.169+10	3.421-1	4.166-1	4.661-1	5.120-1	5.455-1	5.770-1	6.292-1	6.727-1	7.117-1
15	87	2.517-00	3.354-2	2.929-2	2.766-2	2.711-2	2.705-2	2.715-2	2.755-2	2.802-2	2.837-2
15	88	2.026+08	9.996-3	1.186-2	1.330-2	1.443-2	1.530-2	1.616-2	1.758-2	1.880-2	1.987-2
15	89	1.923-02	6.738-4	4.281-4	3.056-4	2.437-4	2.059-4	1.822-4	1.557-4	1.421-4	1.343-4
15	90	0.000-00	5.114-4	2.975-4	1.910-4	1.391-4	1.082-4	8.908-5	6.739-5	5.586-5	4.903-5
15	91	2.839+10	9.891-1	1.216-0	1.382-0	1.511-0	1.610-0	1.706-0	1.863-0	1.995-0	2.111-0
15	92	0.000-00	1.082-3	8.817-4	8.136-4	8.054-4	8.134-4	8.242-4	8.478-4	8.701-4	8.865-4
15	93	1.779+09	1.219-2	1.469-2	1.637-2	1.796-2	1.913-2	2.025-2	2.208-2	2.360-2	2.494-2
15	94	2.011+09	4.078-2	4.924-2	5.513-2	6.044-2	6.435-2	6.813-2	7.431-2	7.946-2	8.400-2
15	95	5.437+08	2.079-2	2.411-2	2.676-2	2.891-2	3.057-2	3.228-2	3.510-2	3.749-2	3.959-2
15	96	6.201+08	1.790-2	2.181-2	2.477-2	2.711-2	2.895-2	3.070-2	3.356-2	3.598-2	3.810-2
15	97	2.004+09	7.510-3	9.422-3	1.078-2	1.197-2	1.288-2	1.372-2	1.509-2	1.621-2	1.720-2
16	17	2.072+01	3.881-1	3.104-1	2.832-1	2.791-1	2.882-1	3.071-1	3.651-1	4.468-1	5.495-1
16	18	1.482-05	3.525-3	2.220-3	1.602-3	1.315-3	1.171-3	1.113-3	1.137-3	1.278-3	1.500-3
16	19	6.746-00	1.255-1	1.014-1	9.148-2	8.732-2	8.573-2	8.572-2	8.791-2	9.215-2	9.783-2
16	20	1.400+01	1.788-1	1.697-1	1.697-1	1.717-1	1.747-1	1.788-1	1.882-1	1.998-1	2.134-1
16	21	0.000-00	1.091-2	6.330-3	4.038-3	2.788-3	2.034-3	1.548-3	9.804-4	6.729-4	4.926-4
16	22	4.573+01	4.248-2	2.651-2	1.893-2	1.497-2	1.266-2	1.130-2	9.888-3	9.351-3	9.253-3
16	23	5.165-00	4.261-2	3.624-2	3.398-2	3.302-2	3.273-2	3.290-2	3.376-2	3.519-2	3.702-2
16	24	1.578+01	8.743-2	7.523-2	7.074-2	6.941-2	6.910-2	6.951-2	7.150-2	7.463-2	7.863-2
16	25	4.771+01	5.070-2	3.690-2	3.139-2	2.909-2	2.815-2	2.782-2	2.812-2	2.907-2	3.040-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition		Energy (Ryd)									
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
16	26	2.226+01	3.614-2	1.901-2	1.146-2	7.733-3	5.597-3	4.290-3	2.869-3	2.138-3	1.748-3
16	27	2.791+05	1.305-3	1.406-3	1.498-3	1.572-3	1.618-3	1.647-3	1.673-3	1.668-3	1.649-3
16	28	1.506+01	2.516-2	1.550-2	1.086-2	8.369-3	6.913-3	6.008-3	5.014-3	4.547-3	4.342-3
16	29	1.982-03	1.794-4	1.157-4	8.796-5	7.419-5	6.646-5	6.189-5	5.724-5	5.514-5	5.405-5
16	30	0.000-00	9.396-5	8.807-5	9.052-5	9.462-5	9.893-5	1.028-4	1.093-4	1.147-4	1.185-4
16	31	6.772-02	1.738-3	1.095-3	7.154-4	5.028-4	3.732-4	2.881-4	1.890-4	1.336-4	1.000-4
16	32	3.387+06	1.691-2	1.482-2	1.366-2	1.316-2	1.289-2	1.274-2	1.253-2	1.230-2	1.206-2
16	33	1.721+04	1.306-3	8.377-4	5.991-4	4.921-4	4.195-4	3.750-4	3.360-4	3.120-4	2.998-4
16	34	1.184+06	2.418-2	1.738-2	1.327-2	1.104-2	9.678-3	8.809-3	7.768-3	7.145-3	6.698-3
16	35	2.227+06	2.939-2	2.282-2	1.907-2	1.702-2	1.581-2	1.504-2	1.412-2	1.350-2	1.302-2
16	36	8.823-02	5.090-3	3.238-3	2.122-3	1.493-3	1.110-3	8.585-4	5.656-4	4.007-4	3.010-4
16	37	0.000-00	1.371-5	8.723-6	6.721-6	6.047-6	5.729-6	5.583-6	5.550-6	5.646-6	5.748-6
16	38	1.336-01	1.840-3	1.162-3	7.589-4	5.329-4	3.954-4	3.051-4	2.002-4	1.416-4	1.062-4
16	39	4.089+05	8.063-3	5.435-3	3.869-3	3.005-3	2.484-3	2.146-3	1.756-3	1.530-3	1.389-3
16	40	1.027+07	3.586-2	3.408-2	3.355-2	3.360-2	3.379-2	3.405-2	3.433-2	3.429-2	3.409-2
16	41	3.035+06	1.769-2	1.547-2	1.431-2	1.376-2	1.344-2	1.329-2	1.312-2	1.294-2	1.276-2
16	42	2.148+07	3.364-2	3.195-2	3.135-2	3.172-2	3.231-2	3.315-2	3.512-2	3.726-2	3.950-2
16	43	3.566+08	4.387-1	5.064-1	5.584-1	5.998-1	6.332-1	6.658-1	7.254-1	7.817-1	8.363-1
16	44	4.105+07	6.937-2	7.586-2	8.143-2	8.612-2	8.990-2	9.386-2	1.015-1	1.090-1	1.163-1
16	45	6.007+05	7.052-4	7.637-4	8.194-4	8.692-4	9.117-4	9.546-4	1.035-3	1.111-3	1.185-3
16	46	1.572+05	2.266-4	2.035-4	1.970-4	1.978-4	2.010-4	2.060-4	2.177-4	2.300-4	2.424-4
16	47	2.531-04	5.495-5	3.311-5	2.171-5	1.562-5	1.198-5	9.658-6	7.004-6	5.580-6	4.734-6
16	48	0.000-00	1.996-4	1.128-4	7.515-5	5.565-5	4.460-5	3.776-5	3.051-5	2.694-5	2.506-5
16	49	3.071+05	2.397-3	2.078-3	1.996-3	1.995-3	2.026-3	2.070-3	2.161-3	2.249-3	2.319-3
16	50	2.147-01	1.380-3	8.993-4	6.321-4	4.878-4	3.954-4	3.357-4	2.636-4	2.226-4	1.968-4
16	51	0.000-00	7.154-4	7.286-4	7.808-4	8.368-4	8.865-4	9.292-4	9.988-4	1.055-3	1.096-3
16	52	5.292+08	2.459-1	2.807-1	3.076-1	3.293-1	3.464-1	3.634-1	3.935-1	4.210-1	4.469-1
16	53	9.531+09	5.297-0	6.251-0	6.968-0	7.516-0	7.921-0	8.318-0	9.025-0	9.675-0	1.029+1
16	54	3.237-00	1.740-2	1.134-2	7.662-3	5.516-3	4.163-3	3.286-3	2.242-3	1.651-3	1.286-3
16	55	2.636-00	3.829-3	2.423-3	1.580-3	1.107-3	8.203-4	6.329-4	4.158-4	2.955-4	2.228-4
16	56	9.690+07	2.858-2	3.267-2	3.595-2	3.874-2	4.092-2	4.300-2	4.664-2	4.989-2	5.294-2
16	57	1.449+08	6.316-2	7.252-2	7.965-2	8.539-2	8.988-2	9.436-2	1.022-1	1.093-1	1.160-1
16	58	1.852+08	1.396-1	1.421-1	1.463-1	1.509-1	1.553-1	1.606-1	1.710-1	1.815-1	1.918-1
16	59	3.878+08	1.427-1	1.637-1	1.798-1	1.929-1	2.031-1	2.132-1	2.310-1	2.470-1	2.619-1
16	60	7.130+08	1.582-1	1.839-1	2.034-1	2.202-1	2.329-1	2.450-1	2.658-1	2.841-1	3.011-1
16	61	3.630+09	1.036-0	1.220-0	1.357-0	1.466-0	1.548-0	1.629-0	1.768-0	1.892-0	2.006-0
16	62	4.937-00	4.369-3	2.811-3	1.891-3	1.369-3	1.045-3	8.331-4	5.808-4	4.367-4	3.467-4
16	63	1.156+09	2.315-1	2.701-1	3.001-1	3.253-1	3.446-1	3.629-1	3.942-1	4.215-1	4.468-1
16	64	2.148+08	7.755-2	8.951-2	9.901-2	1.064-1	1.117-1	1.172-1	1.268-1	1.355-1	1.436-1
16	65	0.000-00	2.226-3	2.630-3	3.019-3	3.330-3	3.590-3	3.801-3	4.129-3	4.381-3	4.560-3
16	66	2.974+08	8.721-2	9.964-2	1.092-1	1.170-1	1.231-1	1.291-1	1.396-1	1.491-1	1.578-1
16	67	6.985-01	3.768-3	2.520-3	1.846-3	1.486-3	1.273-3	1.140-3	9.968-4	9.282-4	8.911-4
16	68	4.581+07	1.549-2	1.629-2	1.740-2	1.845-2	1.936-2	2.023-2	2.176-2	2.309-2	2.426-2
16	69	5.359-04	1.111-3	5.326-4	3.115-4	2.146-4	1.605-4	1.288-4	9.335-5	7.413-5	6.214-5
16	70	1.909-03	1.113-3	7.017-4	5.064-4	4.119-4	3.434-4	2.984-4	2.377-4	1.987-4	1.718-4
16	71	3.190-02	2.826-3	1.637-3	1.155-3	9.068-4	7.466-4	6.392-4	4.994-4	4.111-4	3.498-4
16	72	2.280+10	3.155-0	3.720-0	4.153-0	4.515-0	4.789-0	5.048-0	5.486-0	5.862-0	6.207-0
16	73	1.081+10	2.054-0	2.440-0	2.723-0	2.948-0	3.120-0	3.286-0	3.568-0	3.814-0	4.039-0

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a \pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
16	74	6.782+09	8.563-1	1.006-0	1.120-0	1.216-0	1.289-0	1.358-0	1.475-0	1.575-0	1.666-0
16	75	2.126+10	3.438-0	4.088-0	4.561-0	4.936-0	5.223-0	5.501-0	5.972-0	6.381-0	6.754-0
16	76	2.945+09	6.163-1	7.302-1	8.161-1	8.820-1	9.302-1	9.777-1	1.060-0	1.133-0	1.199-0
16	77	3.163+09	3.647-1	4.266-1	4.740-1	5.141-1	5.447-1	5.738-1	6.230-1	6.651-1	7.035-1
16	78	4.920+09	6.575-1	7.809-1	8.711-1	9.434-1	9.988-1	1.053-0	1.143-0	1.221-0	1.291-0
16	79	5.404+09	4.736-1	5.580-1	6.229-1	6.779-1	7.194-1	7.587-1	8.246-1	8.804-1	9.308-1
16	80	4.489-00	2.765-3	1.701-3	1.143-3	8.463-4	6.625-4	5.456-4	4.016-4	3.164-4	2.607-4
16	81	1.026+09	1.030-1	1.193-1	1.320-1	1.431-1	1.515-1	1.596-1	1.732-1	1.848-1	1.953-1
16	82	3.131-02	4.399-4	2.042-4	1.079-4	6.778-5	4.682-5	3.520-5	2.371-5	1.848-5	1.577-5
16	83	0.000-00	1.444-3	8.939-4	5.826-4	4.093-4	3.024-4	2.326-4	1.520-4	1.081-4	8.198-5
16	84	1.886+07	4.680-3	4.125-3	3.955-3	3.924-3	3.941-3	4.000-3	4.131-3	4.261-3	4.383-3
16	85	7.071-01	1.728-3	1.134-3	8.073-4	6.478-4	5.388-4	4.686-4	3.782-4	3.225-4	2.850-4
16	86	0.000-00	6.037-4	5.377-4	5.164-4	5.185-4	5.235-4	5.295-4	5.415-4	5.526-4	5.606-4
16	87	5.548+07	5.151-3	5.121-3	5.388-3	5.724-3	6.019-3	6.326-3	6.853-3	7.310-3	7.721-3
16	88	4.587+09	2.317-1	2.695-1	2.998-1	3.249-1	3.447-1	3.637-1	3.952-1	4.214-1	4.447-1
16	89	3.272+10	2.071-0	2.509-0	2.824-0	3.075-0	3.269-0	3.456-0	3.765-0	4.024-0	4.254-0
16	90	7.160+08	9.438-2	9.819-2	1.032-1	1.082-1	1.126-1	1.171-1	1.253-1	1.326-1	1.391-1
16	91	2.454+07	3.028-3	2.433-3	2.248-3	2.233-3	2.262-3	2.317-3	2.436-3	2.550-3	2.654-3
16	92	3.707+08	6.215-2	5.289-2	4.881-2	4.747-2	4.682-2	4.726-2	4.899-2	5.108-2	5.325-2
16	93	0.000-00	7.098-3	7.595-3	8.129-3	8.604-3	9.008-3	9.336-3	9.848-3	1.024-2	1.052-2
16	94	5.740-00	1.145-2	7.349-3	5.124-3	3.915-3	3.171-3	2.691-3	2.139-3	1.842-3	1.666-3
16	95	2.144+08	3.168-2	3.048-2	3.059-2	3.137-2	3.222-2	3.313-2	3.479-2	3.626-2	3.750-2
16	96	1.957+07	1.476-2	9.428-3	6.597-3	5.077-3	4.186-3	3.639-3	3.059-3	2.787-3	2.658-3
16	97	0.000-00	3.254-3	1.974-3	1.294-3	9.157-4	6.853-4	5.365-4	3.669-4	2.763-4	2.238-4
17	18	0.000-00	3.508-3	1.992-3	1.245-3	8.694-4	6.479-4	5.103-4	3.531-4	2.693-4	2.194-4
17	19	4.355-00	3.495-1	3.371-1	3.383-1	3.431-1	3.498-1	3.597-1	3.830-1	4.125-1	4.479-1
17	20	0.000-00	2.215-2	1.310-2	8.793-3	6.554-3	5.258-3	4.464-3	3.589-3	3.159-3	2.935-3
17	21	0.000-00	1.016-2	6.282-3	4.772-3	4.157-3	3.897-3	3.808-3	3.802-3	3.877-3	3.973-3
17	22	1.719-00	9.825-2	6.804-2	5.418-2	4.733-2	4.359-2	4.167-2	4.037-2	4.094-2	4.260-2
17	23	0.000-00	2.603-2	1.543-2	1.115-2	9.279-3	8.393-3	7.986-3	7.717-3	7.728-3	7.839-3
17	24	3.426-00	9.966-2	7.832-2	7.001-2	6.667-2	6.534-2	6.537-2	6.685-2	6.959-2	7.318-2
17	25	4.948+01	7.265-2	4.879-2	3.886-2	3.442-2	3.240-2	3.141-2	3.108-2	3.188-2	3.335-2
17	26	8.319+01	5.776-2	3.040-2	1.834-2	1.237-2	8.996-3	6.934-3	4.700-3	3.579-3	2.990-3
17	27	9.120-04	4.576-4	3.118-4	2.536-4	2.296-4	2.185-4	2.138-4	2.123-4	2.147-4	2.175-4
17	28	0.000-00	3.626-2	2.050-2	1.279-2	8.678-3	6.236-3	4.683-3	2.903-3	1.957-3	1.414-3
17	29	0.000-00	1.406-4	1.067-4	9.630-5	9.374-5	9.415-5	9.551-5	9.903-5	1.026-4	1.054-4
17	30	0.000-00	1.166-5	6.426-6	4.142-6	2.970-6	2.298-6	1.869-6	1.370-6	1.084-6	9.028-7
17	31	0.000-00	4.350-6	1.789-6	9.542-7	6.217-7	4.670-7	3.852-7	3.095-7	2.779-7	2.627-7
17	32	1.105-02	5.856-4	3.558-4	2.266-4	1.569-4	1.152-4	8.823-5	5.745-5	4.039-5	3.023-5
17	33	3.606-03	7.699-4	4.345-4	2.650-4	1.809-4	1.307-4	9.877-5	6.326-5	4.428-5	3.349-5
17	34	1.238+06	1.018-2	8.872-3	8.188-3	7.896-3	7.707-3	7.611-3	7.460-3	7.326-3	7.144-3
17	35	7.958+05	2.522-2	1.795-2	1.358-2	1.124-2	9.779-3	8.841-3	7.720-3	7.030-3	6.570-3
17	36	9.278+06	9.514-2	8.339-2	7.715-2	7.426-2	7.247-2	7.143-2	6.992-2	6.853-2	6.708-2
17	37	0.000-00	2.314-6	9.357-7	4.685-7	2.879-7	1.985-7	1.484-7	9.577-8	6.882-8	5.315-8
17	38	0.000-00	1.333-5	7.751-6	5.889-6	5.302-6	5.067-6	4.989-6	5.023-6	5.141-6	5.249-6
17	39	2.571-02	7.777-4	4.910-4	3.221-4	2.280-4	1.708-4	1.334-4	9.015-5	6.614-5	5.167-5
17	40	2.707+05	5.990-3	4.142-3	3.063-3	2.472-3	2.111-3	1.881-3	1.616-3	1.458-3	1.354-3
17	41	1.616+07	7.152-2	7.134-2	7.201-2	7.344-2	7.450-2	7.544-2	7.651-2	7.659-2	7.595-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a \pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
17	42	5.133-02	1.384-3	9.156-4	6.472-4	5.004-4	4.115-4	3.547-4	2.917-4	2.596-4	2.415-4
17	43	1.020+07	2.750-2	2.517-2	2.408-2	2.396-2	2.419-2	2.468-2	2.597-2	2.746-2	2.906-2
17	44	3.016+08	5.219-1	5.930-1	6.462-1	6.925-1	7.295-1	7.660-1	8.335-1	8.981-1	9.610-1
17	45	1.034+05	3.414-4	2.687-4	2.304-4	2.132-4	2.054-4	2.032-4	2.059-4	2.132-4	2.227-4
17	46	7.142-04	9.283-5	6.801-5	5.776-5	5.380-5	5.248-5	5.218-5	5.295-5	5.429-5	5.545-5
17	47	0.000-00	2.703-5	2.033-5	1.818-5	1.783-5	1.803-5	1.841-5	1.925-5	2.005-5	2.066-5
17	48	0.000-00	2.495-4	1.229-4	7.605-5	4.955-5	3.455-5	2.518-5	1.508-5	9.769-6	6.896-6
17	49	8.601-02	3.416-3	2.788-3	2.528-3	2.433-3	2.401-3	2.406-3	2.445-3	2.498-3	2.543-3
17	50	0.000-00	1.503-3	1.340-3	1.312-3	1.337-3	1.374-3	1.414-3	1.488-3	1.554-3	1.604-3
17	51	0.000-00	3.113-4	1.895-4	1.236-4	8.752-5	6.510-5	5.036-5	3.304-5	2.339-5	1.753-5
17	52	3.884+06	2.767-3	2.730-3	2.788-3	2.883-3	2.972-3	3.081-3	3.288-3	3.488-3	3.686-3
17	53	3.678+08	2.425-1	2.773-1	3.038-1	3.257-1	3.426-1	3.595-1	3.895-1	4.170-1	4.432-1
17	54	9.186+09	6.856-0	8.079-0	8.992-0	9.709-0	1.025+1	1.075+1	1.165+1	1.251+1	1.331+1
17	55	0.000-00	2.007-4	1.543-4	1.417-4	1.403-4	1.424-4	1.456-4	1.525-4	1.589-4	1.638-4
17	56	9.326-01	3.169-3	2.053-3	1.405-3	1.050-3	8.391-4	7.041-4	5.525-4	4.722-4	4.251-4
17	57	4.376+07	2.430-2	2.509-2	2.606-2	2.723-2	2.827-2	2.943-2	3.157-2	3.358-2	3.554-2
17	58	1.893+08	1.665-1	1.644-1	1.654-1	1.691-1	1.727-1	1.780-1	1.890-1	2.001-1	2.111-1
17	59	5.116+06	1.204-2	8.647-3	6.735-3	5.722-3	5.141-3	4.824-3	4.540-3	4.473-3	4.509-3
17	60	7.482-02	9.367-4	6.209-4	4.718-4	4.039-4	3.670-4	3.464-4	3.284-4	3.230-4	3.217-4
17	61	3.427+08	1.149-1	1.322-1	1.456-1	1.570-1	1.657-1	1.743-1	1.890-1	2.019-1	2.139-1
17	62	0.000-00	2.766-4	1.373-4	8.593-5	6.250-5	4.905-5	4.110-5	3.156-5	2.598-5	2.232-5
17	63	1.912-00	3.953-3	2.545-3	1.750-3	1.300-3	1.022-3	8.417-4	6.271-4	5.052-4	4.291-4
17	64	3.254+09	1.234-0	1.452-0	1.614-0	1.743-0	1.840-0	1.936-0	2.102-0	2.249-0	2.386-0
17	65	0.000-00	1.080-3	6.720-4	4.383-4	3.086-4	2.279-4	1.747-4	1.126-4	7.820-5	5.754-5
17	66	7.035+08	2.157-1	2.460-1	2.705-1	2.909-1	3.070-1	3.231-1	3.504-1	3.744-1	3.966-1
17	67	0.000-00	5.042-3	4.787-3	4.857-3	5.030-3	5.227-3	5.412-3	5.736-3	6.012-3	6.216-3
17	68	9.831-01	1.046-2	9.286-3	8.989-3	9.050-3	9.247-3	9.468-3	9.912-3	1.032-2	1.063-2
17	69	0.000-00	5.036-4	2.208-4	1.175-4	7.597-5	5.575-5	4.475-5	3.481-5	3.072-5	2.875-5
17	70	0.000-00	1.563-3	1.030-3	7.684-4	6.496-4	5.590-4	4.958-4	4.097-4	3.534-4	3.141-4
17	71	0.000-00	5.249-4	2.170-4	1.037-4	5.783-5	3.567-5	2.395-5	1.316-5	8.567-6	6.263-6
17	72	9.562-01	3.851-3	2.281-3	1.561-3	1.192-3	9.586-4	8.004-4	6.018-4	4.818-4	4.018-4
17	73	1.468+10	2.837-0	3.350-0	3.745-0	4.066-0	4.310-0	4.549-0	4.947-0	5.288-0	5.600-0
17	74	1.743-01	1.301-3	7.553-4	5.500-4	4.561-4	4.074-4	3.764-4	3.424-4	3.248-4	3.140-4
17	75	1.578+10	2.952-0	3.485-0	3.893-0	4.227-0	4.479-0	4.726-0	5.138-0	5.489-0	5.809-0
17	76	3.911+10	8.807-0	1.047+1	1.170+1	1.265+1	1.338+1	1.410+1	1.531+1	1.636+1	1.732+1
17	77	1.260+01	1.581-2	9.867-3	6.354-3	4.392-3	3.211-3	2.443-3	1.562-3	1.085-3	8.017-4
17	78	8.946+09	1.258-0	1.483-0	1.657-0	1.800-0	1.909-0	2.015-0	2.191-0	2.340-0	2.475-0
17	79	1.714-00	3.268-3	1.880-3	1.256-3	9.383-4	7.476-4	6.280-4	4.779-4	3.869-4	3.258-4
17	80	0.000-00	7.867-4	3.009-4	1.543-4	9.781-5	7.170-5	5.800-5	4.386-5	3.631-5	3.163-5
17	81	4.534-00	8.162-3	4.870-3	3.076-3	2.134-3	1.576-3	1.219-3	8.185-4	6.027-4	4.758-4
17	82	0.000-00	5.175-4	2.575-4	1.625-4	1.266-4	1.107-4	1.034-4	9.830-5	9.765-5	9.804-5
17	83	0.000-00	1.522-3	9.348-4	6.044-4	4.205-4	3.073-4	2.334-4	1.483-4	1.019-4	7.436-5
17	84	7.670-01	4.956-3	3.779-3	3.205-3	2.939-3	2.782-3	2.697-3	2.599-3	2.550-3	2.517-3
17	85	0.000-00	1.649-3	1.256-3	1.088-3	1.023-3	9.897-4	9.732-4	9.606-4	9.595-4	9.601-4
17	86	0.000-00	6.118-4	3.668-4	2.327-4	1.626-4	1.202-4	9.300-5	6.150-5	4.422-5	3.377-5
17	87	5.467+06	2.647-3	1.525-3	1.131-3	9.954-4	9.427-4	9.306-4	9.445-4	9.757-4	1.012-3
17	88	3.474-01	8.442-3	5.862-3	4.551-3	3.871-3	3.498-3	3.276-3	3.060-3	2.977-3	2.942-3
17	89	3.203+09	2.480-1	2.852-1	3.157-1	3.412-1	3.608-1	3.806-1	4.133-1	4.405-1	4.646-1

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
17	90	3.375+10	2.956-0	3.560-0	4.014-0	4.360-0	4.628-0	4.891-0	5.325-0	5.692-0	6.018-0
17	91	3.529-01	2.513-3	1.408-3	9.457-4	7.366-4	6.366-4	5.818-4	5.335-4	5.148-4	5.080-4
17	92	3.968+02	4.914-2	2.976-2	1.911-2	1.322-2	9.591-3	7.253-3	4.584-3	3.127-3	2.295-3
17	93	0.000-00	2.971-3	1.821-3	1.188-3	8.285-4	6.063-4	4.608-4	2.920-4	1.998-4	1.454-4
17	94	0.000-00	1.696-2	1.545-2	1.504-2	1.507-2	1.526-2	1.548-2	1.595-2	1.637-2	1.670-2
17	95	5.166-00	3.305-2	2.830-2	2.643-2	2.575-2	2.565-2	2.574-2	2.615-2	2.665-2	2.704-2
17	96	8.039-01	2.062-2	1.237-2	7.918-3	5.466-3	3.988-3	3.037-3	1.958-3	1.384-3	1.051-3
17	97	0.000-00	4.332-3	2.594-3	1.671-3	1.154-3	8.367-4	6.311-4	3.951-4	2.675-4	1.929-4
18	19	3.527-00	1.802-2	1.544-2	1.403-2	1.320-2	1.266-2	1.236-2	1.206-2	1.201-2	1.215-2
18	20	4.410-01	1.054-2	7.371-3	5.546-3	4.480-3	3.739-3	3.297-3	2.707-3	2.349-3	2.130-3
18	21	3.349+01	3.487-3	2.282-3	1.581-3	1.208-3	9.338-4	7.786-4	5.713-4	4.387-4	3.510-4
18	22	1.881-00	7.127-2	6.258-2	5.797-2	5.633-2	5.532-2	5.517-2	5.566-2	5.697-2	5.882-2
18	23	6.055-01	1.076-2	7.963-3	6.371-3	5.513-3	4.873-3	4.405-3	3.755-3	3.333-3	3.049-3
18	24	1.695-00	2.803-2	2.287-2	1.935-2	1.758-2	1.622-2	1.521-2	1.381-2	1.292-2	1.237-2
18	25	2.312-02	2.137-2	1.586-2	1.276-2	1.093-2	9.770-3	8.868-3	7.601-3	6.781-3	6.190-3
18	26	1.979+01	4.367-2	4.328-2	4.278-2	4.257-2	4.255-2	4.257-2	4.276-2	4.331-2	4.425-2
18	27	9.062+07	4.625-1	5.426-1	6.065-1	6.453-1	6.540-1	6.644-1	6.965-1	7.134-1	7.287-1
18	28	6.578+01	2.296-2	1.785-2	1.528-2	1.369-2	1.255-2	1.192-2	1.103-2	1.052-2	1.014-2
18	29	1.564+08	3.670-1	4.288-1	4.718-1	5.001-1	5.162-1	5.275-1	5.347-1	5.331-1	5.269-1
18	30	1.057+08	7.578-2	8.817-2	9.676-2	1.026-1	1.059-1	1.083-1	1.101-1	1.098-1	1.085-1
18	31	2.779+05	9.779-4	8.940-4	8.640-4	8.497-4	8.406-4	8.368-4	8.279-4	8.131-4	7.964-4
18	32	4.272+06	3.579-2	4.137-2	4.555-2	4.813-2	4.970-2	5.088-2	5.186-2	5.188-2	5.143-2
18	33	1.339+08	3.696-1	4.313-1	4.773-1	5.050-1	5.225-1	5.358-1	5.460-1	5.471-1	5.420-1
18	34	1.407-05	1.040-3	6.392-4	4.171-4	2.930-4	2.157-4	1.652-4	1.064-4	7.438-5	5.540-5
18	35	0.000-00	1.389-3	8.507-4	5.566-4	3.911-4	2.877-4	2.202-4	1.417-4	9.879-5	7.339-5
18	36	0.000-00	1.899-3	1.164-3	7.592-4	5.318-4	3.887-4	2.958-4	1.875-4	1.283-4	9.310-5
18	37	1.467+06	6.514-4	7.245-4	7.825-4	8.270-4	8.558-4	8.779-4	9.043-4	9.115-4	9.067-4
18	38	2.026+06	2.592-3	2.938-3	3.207-3	3.397-3	3.530-3	3.625-3	3.733-3	3.758-3	3.750-3
18	39	9.729+05	2.086-3	2.292-3	2.482-3	2.606-3	2.692-3	2.765-3	2.853-3	2.860-3	2.866-3
18	40	2.717-04	3.138-4	1.689-4	9.712-5	6.160-5	4.231-5	3.061-5	1.877-5	1.282-5	9.808-6
18	41	0.000-00	3.606-4	2.002-4	1.208-4	8.062-5	5.811-5	4.441-5	3.013-5	2.285-5	1.900-5
18	42	7.336+05	1.847-3	1.772-3	1.786-3	1.821-3	1.867-3	1.923-3	2.038-3	2.156-3	2.272-3
18	43	4.174-05	1.851-3	1.237-3	9.188-4	7.473-4	6.466-4	5.834-4	5.130-4	4.767-4	4.555-4
18	44	0.000-00	4.235-3	2.742-3	1.960-3	1.529-3	1.268-3	1.103-3	9.162-4	8.179-4	7.607-4
18	45	1.651-01	2.127-3	1.380-3	9.306-4	6.622-4	4.904-4	3.783-4	2.458-4	1.720-4	1.280-4
18	46	9.595+05	1.775-3	1.504-3	1.355-3	1.282-3	1.244-3	1.238-3	1.263-3	1.313-3	1.375-3
18	47	1.094+06	1.116-3	9.740-4	8.933-4	8.580-4	8.426-4	8.446-4	8.695-4	9.079-4	9.535-4
18	48	3.505+09	4.512-1	5.332-1	5.901-1	6.385-1	6.754-1	7.110-1	7.747-1	8.333-1	8.897-1
18	49	5.015+08	2.544-1	2.962-1	3.301-1	3.540-1	3.734-1	3.928-1	4.272-1	4.592-1	4.896-1
18	50	6.927+08	1.972-1	2.256-1	2.471-1	2.649-1	2.787-1	2.926-1	3.174-1	3.404-1	3.623-1
18	51	1.943+09	1.677-1	1.945-1	2.138-1	2.304-1	2.428-1	2.551-1	2.770-1	2.970-1	3.160-1
18	52	4.695-03	1.671-3	1.002-3	6.493-4	4.549-4	3.368-4	2.602-4	1.715-4	1.235-4	9.495-5
18	53	0.000-00	3.218-3	2.033-3	1.420-3	1.084-3	8.836-4	7.561-4	6.135-4	5.409-4	4.997-4
18	54	0.000-00	4.772-3	2.871-3	1.855-3	1.290-3	9.425-4	7.164-4	4.541-4	3.111-4	2.262-4
18	55	4.222+06	4.858-3	3.563-3	2.846-3	2.457-3	2.224-3	2.099-3	1.990-3	1.972-3	1.999-3
18	56	4.050+06	7.727-3	5.722-3	4.637-3	4.012-3	3.680-3	3.495-3	3.345-3	3.334-3	3.388-3
18	57	1.008-00	7.164-3	4.549-3	3.040-3	2.177-3	1.643-3	1.295-3	8.840-4	6.554-4	5.169-4
18	58	0.000-00	6.978-3	7.591-3	8.341-3	8.932-3	9.435-3	9.856-3	1.051-2	1.101-2	1.136-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
18	59	3.076-01	8.307-3	5.520-3	4.023-3	3.185-3	2.670-3	2.337-3	1.947-3	1.738-3	1.613-3
18	60	9.188+06	6.672-3	7.170-3	7.716-3	8.164-3	8.552-3	8.914-3	9.518-3	1.003-2	1.046-2
18	61	1.022-01	7.367-3	7.057-3	7.138-3	7.314-3	7.527-3	7.725-3	8.062-3	8.341-3	8.540-3
18	62	2.168+06	9.635-4	7.305-4	6.137-4	5.654-4	5.427-4	5.354-4	5.412-4	5.570-4	5.782-4
18	63	9.772+06	4.238-3	4.189-3	4.304-3	4.442-3	4.585-3	4.751-3	5.059-3	5.348-3	5.616-3
18	64	0.000-00	1.652-2	1.580-2	1.604-2	1.648-2	1.696-2	1.744-2	1.824-2	1.892-2	1.940-2
18	65	2.040+08	8.343-3	9.866-3	1.093-2	1.190-2	1.261-2	1.328-2	1.444-2	1.547-2	1.642-2
18	66	2.706-01	4.384-3	3.191-3	2.594-3	2.307-3	2.147-3	2.052-3	1.960-3	1.921-3	1.902-3
18	67	1.633+08	2.177-2	2.426-2	2.621-2	2.805-2	2.946-2	3.086-2	3.337-2	3.564-2	3.777-2
18	68	2.148+08	5.186-2	5.536-2	5.895-2	6.186-2	6.444-2	6.719-2	7.225-2	7.701-2	8.150-2
18	69	3.823+06	8.101-3	5.466-3	3.900-3	3.052-3	2.523-3	2.177-3	1.776-3	1.559-3	1.439-3
18	70	6.992+06	2.309-3	1.768-3	1.514-3	1.398-3	1.342-3	1.326-3	1.341-3	1.381-3	1.435-3
18	71	1.616+06	1.100-2	6.956-3	4.605-3	3.291-3	2.487-3	1.966-3	1.364-3	1.037-3	8.479-4
18	72	3.300+07	1.547-2	1.283-2	1.156-2	1.097-2	1.078-2	1.078-2	1.106-2	1.147-2	1.193-2
18	73	1.212+01	1.501-2	9.460-3	6.467-3	4.879-3	3.954-3	3.380-3	2.758-3	2.446-3	2.277-3
18	74	8.552+07	1.886-2	2.000-2	2.127-2	2.241-2	2.334-2	2.434-2	2.611-2	2.771-2	2.916-2
18	75	4.141-00	2.072-2	1.628-2	1.424-2	1.334-2	1.295-2	1.281-2	1.284-2	1.304-2	1.323-2
18	76	0.000-00	4.510-2	3.404-2	2.878-2	2.622-2	2.497-2	2.433-2	2.394-2	2.405-2	2.424-2
18	77	9.287+07	2.240-2	2.252-2	2.340-2	2.430-2	2.515-2	2.610-2	2.780-2	2.934-2	3.073-2
18	78	1.484+01	1.947-2	1.176-2	7.584-3	5.381-3	4.079-3	3.260-3	2.356-3	1.890-3	1.628-3
18	79	6.574+08	8.824-2	9.869-2	1.078-1	1.150-1	1.209-1	1.268-1	1.371-1	1.462-1	1.544-1
18	80	2.395+08	2.105-2	2.164-2	2.253-2	2.365-2	2.457-2	2.562-2	2.752-2	2.924-2	3.083-2
18	81	8.613+09	8.284-1	9.898-1	1.113-0	1.205-0	1.275-0	1.345-0	1.461-0	1.561-0	1.652-0
18	82	2.009+10	1.001-0	1.200-0	1.337-0	1.458-0	1.547-0	1.632-0	1.774-0	1.895-0	2.005-0
18	83	1.997+10	3.281-1	3.959-1	4.415-1	4.831-1	5.133-1	5.420-1	5.900-1	6.305-1	6.672-1
18	84	6.018+10	3.902-0	4.732-0	5.354-0	5.823-0	6.180-0	6.530-0	7.109-0	7.606-0	8.048-0
18	85	7.208+10	2.708-0	3.293-0	3.693-0	4.046-0	4.303-0	4.548-0	4.955-0	5.299-0	5.606-0
18	86	7.736+10	9.505-1	1.155-0	1.292-0	1.418-0	1.510-0	1.597-0	1.740-0	1.860-0	1.968-0
18	87	1.891-00	3.646-2	3.025-2	2.743-2	2.624-2	2.577-2	2.560-2	2.567-2	2.595-2	2.619-2
18	88	2.238+08	1.247-2	1.494-2	1.683-2	1.830-2	1.943-2	2.055-2	2.238-2	2.395-2	2.533-2
18	89	1.097-03	6.313-4	3.612-4	2.268-4	1.575-4	1.157-4	8.919-5	5.856-5	4.184-5	3.186-5
18	90	0.000-00	1.085-3	6.804-4	4.742-4	3.657-4	2.996-4	2.581-4	2.110-4	1.863-4	1.720-4
18	91	2.480+10	1.007-0	1.237-0	1.406-0	1.536-0	1.636-0	1.733-0	1.892-0	2.026-0	2.143-0
18	92	0.000-00	1.240-3	1.035-3	9.751-4	9.769-4	9.942-4	1.012-3	1.047-3	1.078-3	1.101-3
18	93	3.745+09	2.810-2	3.403-2	3.800-2	4.173-2	4.447-2	4.708-2	5.133-2	5.487-2	5.801-2
18	94	2.665+09	5.947-2	7.186-2	8.040-2	8.811-2	9.376-2	9.923-2	1.082-1	1.157-1	1.223-1
18	95	4.263+09	1.527-1	1.863-1	2.112-1	2.304-1	2.452-1	2.596-1	2.833-1	3.032-1	3.207-1
18	96	6.721+08	2.034-2	2.502-2	2.858-2	3.135-2	3.352-2	3.557-2	3.893-2	4.178-2	4.426-2
18	97	1.205+09	5.087-3	6.395-3	7.330-3	8.145-3	8.763-3	9.338-3	1.027-2	1.104-2	1.171-2
19	20	5.349-00	1.135-1	9.055-2	8.388-2	8.560-2	9.219-2	1.028-1	1.331-1	1.745-1	2.262-1
19	21	2.113-05	6.605-3	4.744-3	3.792-3	3.297-3	2.976-3	2.761-3	2.529-3	2.471-3	2.517-3
19	22	1.439+01	8.091-2	7.539-2	7.317-2	7.375-2	7.561-2	7.865-2	8.748-2	9.977-2	1.154-1
19	23	5.207-01	2.706-2	2.063-2	1.731-2	1.549-2	1.437-2	1.370-2	1.307-2	1.305-2	1.346-2
19	24	3.596+01	5.249-2	4.232-2	3.729-2	3.483-2	3.359-2	3.337-2	3.456-2	3.726-2	4.123-2
19	25	2.277+01	2.492-1	2.387-1	2.403-1	2.466-1	2.566-1	2.698-1	3.034-1	3.469-1	4.003-1
19	26	7.420-00	5.885-2	3.842-2	2.883-2	2.381-2	2.093-2	1.921-2	1.751-2	1.701-2	1.714-2
19	27	2.230+06	5.371-2	6.262-2	6.806-2	7.046-2	7.079-2	7.072-2	6.921-2	6.754-2	6.559-2
19	28	1.444+02	5.164-2	4.526-2	4.324-2	4.288-2	4.297-2	4.341-2	4.470-2	4.643-2	4.850-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
19	29	2.079+05	2.565-3	2.773-3	2.920-3	2.988-3	3.001-3	2.988-3	2.934-3	2.879-3	2.809-3
19	30	2.662-05	1.847-4	1.251-4	9.544-5	7.739-5	6.539-5	5.676-5	4.570-5	3.866-5	3.374-5
19	31	1.563+04	6.585-4	4.548-4	3.480-4	2.905-4	2.548-4	2.307-4	2.014-4	1.835-4	1.715-4
19	32	2.730+05	7.621-3	8.326-3	8.875-3	9.163-3	9.282-3	9.315-3	9.214-3	9.060-3	8.843-3
19	33	6.041+06	5.616-2	6.569-2	7.215-2	7.576-2	7.739-2	7.809-2	7.791-2	7.669-2	7.507-2
19	34	3.391+05	6.566-3	6.468-3	6.455-3	6.460-3	6.437-3	6.377-3	6.238-3	6.086-3	5.911-3
19	35	3.447-03	3.316-3	2.010-3	1.281-3	8.882-4	6.541-4	5.008-4	3.272-4	2.298-4	1.728-4
19	36	0.000-00	1.256-3	7.402-4	4.718-4	3.233-4	2.337-4	1.763-4	1.112-4	7.617-5	5.590-5
19	37	2.002-04	3.816-4	2.289-4	1.472-4	1.020-4	7.448-5	5.651-5	3.578-5	2.451-5	1.785-5
19	38	1.629+05	1.674-3	1.320-3	1.142-3	1.050-3	9.892-4	9.495-4	8.953-4	8.535-4	8.238-4
19	39	2.094+04	2.394-3	1.542-3	1.060-3	7.985-4	6.388-4	5.339-4	4.114-4	3.416-4	2.982-4
19	40	6.961+05	1.024-2	9.169-3	8.590-3	8.318-3	8.129-3	8.000-3	7.762-3	7.559-3	7.349-3
19	41	4.841-02	1.155-2	7.192-3	4.647-3	3.263-3	2.441-3	1.898-3	1.280-3	9.263-4	7.158-4
19	42	3.184+06	1.026-2	1.159-2	1.266-2	1.339-2	1.385-2	1.419-2	1.451-2	1.457-2	1.447-2
19	43	7.835+06	2.962-2	3.416-2	3.772-2	3.987-2	4.134-2	4.229-2	4.333-2	4.352-2	4.334-2
19	44	2.987-03	1.448-3	1.277-3	1.239-3	1.239-3	1.256-3	1.281-3	1.329-3	1.373-3	1.406-3
19	45	6.720+05	2.224-2	1.498-2	1.073-2	8.325-3	6.884-3	5.951-3	4.851-3	4.232-3	3.838-3
19	46	5.538+05	5.543-3	3.978-3	3.094-3	2.601-3	2.313-3	2.132-3	1.921-3	1.797-3	1.710-3
19	47	8.149+03	5.710-4	3.432-4	2.163-4	1.498-4	1.108-4	8.630-5	5.900-5	4.432-5	3.574-5
19	48	8.770-05	3.399-4	2.261-4	1.748-4	1.435-4	1.225-4	1.077-4	8.781-5	7.462-5	6.520-5
19	49	2.282+08	2.431-1	2.775-1	3.051-1	3.267-1	3.443-1	3.619-1	3.972-1	4.056-1	4.137-1
19	50	1.879+08	1.023-1	1.182-1	1.301-1	1.403-1	1.481-1	1.558-1	1.699-1	1.787-1	1.820-1
19	51	3.758-06	1.605-4	1.005-4	6.757-5	4.966-5	3.844-5	3.119-5	2.223-5	1.693-5	1.355-5
19	52	2.028+06	4.272-3	3.704-3	3.602-3	3.615-3	3.679-3	3.777-3	4.003-3	4.247-3	4.498-3
19	53	5.534-03	3.788-3	2.233-3	1.490-3	1.103-3	8.648-4	7.130-4	5.357-4	4.370-4	3.768-4
19	54	0.000-00	7.863-3	5.837-3	5.023-3	4.620-3	4.449-3	4.401-3	4.401-3	4.466-3	4.531-3
19	55	1.460+06	2.731-3	2.880-3	3.056-3	3.224-3	3.370-3	3.499-3	3.712-3	3.891-3	4.034-3
19	56	5.480+06	1.203-2	9.777-3	8.573-3	8.030-3	7.765-3	7.682-3	7.763-3	7.994-3	8.282-3
19	57	1.852+07	3.925-2	3.570-2	3.403-2	3.334-2	3.340-2	3.384-2	3.526-2	3.703-2	3.892-2
19	58	1.074-02	2.542-3	1.976-3	1.680-3	1.518-3	1.411-3	1.342-3	1.256-3	1.206-3	1.170-3
19	59	7.591+08	5.466-1	6.455-1	7.208-1	7.749-1	8.181-1	8.601-1	9.351-1	1.005-0	1.071-0
19	60	1.279+08	6.513-2	7.314-2	7.951-2	8.477-2	8.893-2	9.318-2	1.008-1	1.079-1	1.147-1
19	61	3.341+08	2.004-1	2.345-1	2.610-1	2.795-1	2.944-1	3.090-1	3.352-1	3.594-1	3.822-1
19	62	1.360+08	3.425-2	3.930-2	4.327-2	4.668-2	4.920-2	5.169-2	5.607-2	6.005-2	6.382-2
19	63	7.879+08	3.018-1	3.543-1	3.937-1	4.250-1	4.487-1	4.720-1	5.129-1	5.501-1	5.852-1
19	64	1.495-02	3.087-3	1.995-3	1.409-3	1.090-3	8.840-4	7.487-4	5.804-4	4.805-4	4.161-4
19	65	5.860-00	2.658-3	1.722-3	1.134-3	7.947-4	5.863-4	4.503-4	2.922-4	2.055-4	1.534-4
19	66	1.372+09	6.731-1	7.957-1	8.893-1	9.566-1	1.010-0	1.061-0	1.153-0	1.237-0	1.316-0
19	67	1.413+09	2.967-1	3.476-1	3.860-1	4.186-1	4.427-1	4.660-1	5.068-1	5.434-1	5.779-1
19	68	7.112+08	2.405-1	2.848-1	3.178-1	3.439-1	3.636-1	3.830-1	4.167-1	4.471-1	4.757-1
19	69	9.932+08	2.146-1	2.492-1	2.753-1	2.981-1	3.148-1	3.310-1	3.595-1	3.850-1	4.091-1
19	70	1.199+09	2.058-1	2.374-1	2.617-1	2.831-1	2.988-1	3.141-1	3.409-1	3.649-1	3.874-1
19	71	3.648+06	4.531-3	3.010-3	2.183-3	1.757-3	1.510-3	1.362-3	1.213-3	1.153-3	1.136-3
19	72	6.950+07	2.904-2	2.848-2	2.871-2	2.940-2	3.016-2	3.113-2	3.307-2	3.498-2	3.686-2
19	73	9.126+08	3.332-1	3.965-1	4.445-1	4.798-1	5.071-1	5.336-1	5.800-1	6.219-1	6.608-1
19	74	6.084+08	1.438-1	1.678-1	1.859-1	2.007-1	2.119-1	2.229-1	2.419-1	2.587-1	2.745-1
19	75	4.259+09	1.279-0	1.527-0	1.713-0	1.846-0	1.951-0	2.053-0	2.228-0	2.387-0	2.532-0
19	76	4.670-02	1.174-2	7.787-3	5.771-3	4.490-3	3.651-3	3.177-3	2.547-3	2.122-3	1.821-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
19	77	6.447+08	1.404-1	1.628-1	1.793-1	1.933-1	2.037-1	2.141-1	2.321-1	2.482-1	2.632-1
19	78	2.467+10	5.290-0	6.360-0	7.158-0	7.737-0	8.186-0	8.618-0	9.363-0	1.002+1	1.063+1
19	79	3.735+09	5.762-1	6.907-1	7.727-1	8.391-1	8.883-1	9.363-1	1.018-0	1.089-0	1.153-0
19	80	1.192+08	1.072-2	1.246-2	1.382-2	1.501-2	1.588-2	1.672-2	1.815-2	1.939-2	2.053-2
19	81	2.959+09	4.403-1	5.283-1	5.915-1	6.432-1	6.813-1	7.184-1	7.813-1	8.362-1	8.863-1
19	82	1.347+09	1.082-1	1.284-1	1.431-1	1.560-1	1.653-1	1.743-1	1.894-1	2.024-1	2.143-1
19	83	3.714+01	5.796-3	3.799-3	2.524-3	1.801-3	1.349-3	1.052-3	7.013-4	5.056-4	3.856-4
19	84	1.633+10	1.575-0	1.897-0	2.123-0	2.311-0	2.450-0	2.585-0	2.811-0	3.005-0	3.181-0
19	85	1.132+07	2.799-3	1.803-3	1.282-3	1.018-3	8.580-4	7.566-4	6.435-4	5.860-4	5.555-4
19	86	3.059-00	5.848-4	3.485-4	2.194-4	1.510-4	1.102-4	8.429-5	5.478-5	3.886-5	2.943-5
19	87	6.475+09	7.312-1	8.944-1	1.014-0	1.102-0	1.170-0	1.235-0	1.345-0	1.439-0	1.524-0
19	88	1.853+09	1.407-1	1.659-1	1.840-1	1.996-1	2.112-1	2.227-1	2.419-1	2.583-1	2.731-1
19	89	8.384+09	8.376-1	1.013-0	1.142-0	1.238-0	1.313-0	1.385-0	1.506-0	1.611-0	1.704-0
19	90	8.745-02	4.698-2	3.639-2	3.149-2	2.942-2	2.859-2	2.824-2	2.823-2	2.855-2	2.887-2
19	91	9.562+09	5.460-1	6.642-1	7.465-1	8.154-1	8.665-1	9.162-1	9.982-1	1.067-0	1.129-0
19	92	3.319-00	3.722-2	2.471-2	1.850-2	1.536-2	1.358-2	1.251-2	1.143-2	1.097-2	1.075-2
19	93	1.949+01	3.835-3	2.246-3	1.404-3	9.817-4	7.285-4	5.688-4	3.850-4	2.827-4	2.216-4
19	94	6.696+10	2.075-0	2.523-0	2.843-0	3.124-0	3.326-0	3.519-0	3.838-0	4.102-0	4.339-0
19	95	4.225+10	2.186-0	2.671-0	3.003-0	3.284-0	3.491-0	3.693-0	4.025-0	4.304-0	4.553-0
19	96	1.348+10	6.592-1	8.030-1	9.024-1	9.871-1	1.050-0	1.112-0	1.212-0	1.297-0	1.372-0
19	97	1.292+01	4.501-3	2.636-3	1.642-3	1.144-3	8.492-4	6.633-4	4.507-4	3.323-4	2.619-4
20	21	7.274-00	2.455-2	1.510-2	1.015-2	7.284-3	5.497-3	4.308-3	2.870-3	2.055-3	1.554-3
20	22	4.288-00	2.031-2	1.246-2	8.834-3	7.219-3	6.563-3	6.482-3	7.419-3	9.315-3	1.197-2
20	23	2.092+01	7.084-2	6.084-2	5.687-2	5.626-2	5.742-2	6.009-2	6.849-2	8.047-2	9.574-2
20	24	2.509-00	8.750-2	7.854-2	7.730-2	7.938-2	8.308-2	8.836-2	1.024-1	1.208-1	1.433-1
20	25	2.540-03	1.480-1	1.434-1	1.462-1	1.517-1	1.595-1	1.694-1	1.941-1	2.258-1	2.646-1
20	26	2.688-02	2.987-2	1.702-2	1.088-2	7.660-3	5.773-3	4.590-3	3.277-3	2.624-3	2.297-3
20	27	1.183+05	4.518-3	5.000-3	5.278-3	5.369-3	5.348-3	5.325-3	5.184-3	5.076-3	4.930-3
20	28	2.096-00	1.088-2	5.569-3	3.259-3	2.142-3	1.528-3	1.158-3	7.675-4	5.720-4	4.677-4
20	29	2.264+06	2.639-2	3.095-2	3.374-2	3.495-2	3.531-2	3.548-2	3.487-2	3.382-2	3.308-2
20	30	5.390+05	2.158-3	2.481-3	2.690-3	2.786-3	2.810-3	2.815-3	2.768-3	2.718-3	2.636-3
20	31	1.244+04	1.674-3	1.078-3	7.465-4	5.672-4	4.589-4	3.875-4	3.050-4	2.565-4	2.267-4
20	32	2.620+05	4.777-3	4.451-3	4.337-3	4.262-3	4.189-3	4.118-3	3.977-3	3.850-3	3.719-3
20	33	9.131+04	2.169-3	2.267-3	2.357-3	2.397-3	2.397-3	2.379-3	2.323-3	2.288-3	2.241-3
20	34	1.429-03	1.950-3	1.183-3	7.508-4	5.203-4	3.833-4	2.934-4	1.918-4	1.349-4	1.016-4
20	35	0.000-00	2.422-4	1.451-4	9.497-5	6.706-5	5.033-5	3.952-5	2.717-5	2.055-5	1.671-5
20	36	0.000-00	7.875-4	4.788-4	3.099-4	2.163-4	1.576-4	1.197-4	7.578-5	5.181-5	3.763-5
20	37	5.886+05	9.933-4	1.056-3	1.100-3	1.134-3	1.150-3	1.157-3	1.150-3	1.133-3	1.109-3
20	38	1.343+04	1.407-3	9.085-4	6.174-4	4.567-4	3.595-4	2.950-4	2.202-4	1.766-4	1.498-4
20	39	6.462+05	7.452-3	6.826-3	6.565-3	6.411-3	6.311-3	6.217-3	6.057-3	5.895-3	5.730-3
20	40	1.214-02	4.153-3	2.566-3	1.637-3	1.141-3	8.463-4	6.514-4	4.297-4	3.040-4	2.296-4
20	41	0.000-00	2.955-4	1.768-4	1.219-4	9.382-5	7.819-5	6.876-5	5.904-5	5.457-5	5.231-5
20	42	1.563+07	5.229-2	6.121-2	6.777-2	7.177-2	7.422-2	7.606-2	7.759-2	7.751-2	7.674-2
20	43	4.596-04	2.097-4	1.360-4	9.657-5	7.445-5	6.052-5	5.211-5	4.141-5	3.480-5	3.042-5
20	44	0.000-00	8.803-4	8.092-4	8.247-4	8.497-4	8.797-4	9.088-4	9.585-4	1.001-3	1.031-3
20	45	1.184-01	6.585-3	4.118-3	2.674-3	1.862-3	1.377-3	1.059-3	6.911-4	4.887-4	3.671-4
20	46	1.061+05	9.295-3	5.975-3	4.000-3	2.893-3	2.226-3	1.793-3	1.300-3	1.040-3	8.931-4
20	47	8.747+05	4.036-3	3.067-3	2.508-3	2.214-3	2.054-3	1.977-3	1.941-3	1.979-3	2.054-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a{\pm}b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
20	48	3.134+07	9.605-3	1.121-2	1.241-2	1.338-2	1.416-2	1.493-2	1.635-2	1.772-2	1.906-2
20	49	1.053+08	1.228-1	1.421-1	1.577-1	1.687-1	1.780-1	1.873-1	2.044-1	2.208-1	2.369-1
20	50	9.078+07	5.580-2	6.431-2	7.063-2	7.577-2	7.988-2	8.397-2	9.147-2	9.861-2	1.056-1
20	51	3.620+08	6.317-2	7.428-2	8.212-2	8.870-2	9.378-2	9.876-2	1.078-1	1.162-1	1.244-1
20	52	3.505-03	2.468-3	1.440-3	9.490-4	6.821-4	5.208-4	4.170-4	2.939-4	2.240-4	1.807-4
20	53	0.000-00	3.453-3	2.786-3	2.639-3	2.620-3	2.664-3	2.726-3	2.846-3	2.961-3	3.048-3
20	54	0.000-00	7.138-4	3.575-4	2.115-4	1.422-4	1.023-4	7.757-5	5.014-5	3.540-5	2.672-5
20	55	8.958+07	4.265-2	4.781-2	5.171-2	5.521-2	5.801-2	6.080-2	6.594-2	7.083-2	7.558-2
20	56	7.054+06	1.054-2	1.054-2	1.072-2	1.091-2	1.115-2	1.147-2	1.212-2	1.279-2	1.345-2
20	57	4.774-01	5.536-3	3.879-3	2.937-3	2.433-3	2.146-3	1.971-3	1.790-3	1.713-3	1.675-3
20	58	0.000-00	5.235-4	3.220-4	2.216-4	1.672-4	1.350-4	1.147-4	9.241-5	8.120-5	7.500-5
20	59	4.675-02	1.485-3	8.476-4	5.302-4	3.604-4	2.620-4	1.998-4	1.289-4	9.070-5	6.813-5
20	60	6.011+07	3.663-2	4.009-2	4.315-2	4.523-2	4.706-2	4.903-2	5.264-2	5.607-2	5.938-2
20	61	4.135-01	6.677-3	4.384-3	3.067-3	2.338-3	1.901-3	1.623-3	1.308-3	1.146-3	1.052-3
20	62	1.064+09	2.765-1	3.250-1	3.596-1	3.886-1	4.105-1	4.318-1	4.694-1	5.037-1	5.362-1
20	63	6.927+08	2.805-1	3.300-1	3.687-1	3.964-1	4.180-1	4.397-1	4.778-1	5.129-1	5.459-1
20	64	0.000-00	1.379-3	9.343-4	6.867-4	5.478-4	4.532-4	3.897-4	3.076-4	2.566-4	2.223-4
20	65	2.989+09	2.313-1	2.752-1	3.053-1	3.314-1	3.506-1	3.693-1	4.019-1	4.313-1	4.592-1
20	66	1.002-01	1.616-3	1.136-3	8.855-4	7.439-4	6.568-4	6.001-4	5.300-4	4.880-4	4.597-4
20	67	4.878+06	4.868-3	3.649-3	2.888-3	2.455-3	2.196-3	2.054-3	1.930-3	1.908-3	1.934-3
20	68	3.697+08	1.323-1	1.565-1	1.754-1	1.889-1	1.994-1	2.099-1	2.283-1	2.450-1	2.607-1
20	69	2.376+07	1.146-2	9.931-3	9.126-3	8.810-3	8.681-3	8.734-3	9.022-3	9.419-3	9.866-3
20	70	1.269+09	2.347-1	2.754-1	3.048-1	3.293-1	3.477-1	3.658-1	3.972-1	4.256-1	4.521-1
20	71	2.031+08	3.547-2	4.077-2	4.453-2	4.779-2	5.025-2	5.271-2	5.702-2	6.093-2	6.459-2
20	72	3.160+05	2.339-3	1.592-3	1.216-3	9.893-4	8.444-4	7.470-4	6.198-4	5.409-4	4.887-4
20	73	2.188-00	6.184-3	4.125-3	2.945-3	2.282-3	1.883-3	1.633-3	1.347-3	1.194-3	1.102-3
20	74	5.322+09	1.305-0	1.557-0	1.752-0	1.891-0	1.998-0	2.103-0	2.286-0	2.449-0	2.600-0
20	75	3.881-01	3.975-3	2.411-3	1.673-3	1.266-3	1.016-3	8.760-4	6.898-4	5.715-4	4.897-4
20	76	0.000-00	1.626-3	9.673-4	6.787-4	5.195-4	4.261-4	3.701-4	3.018-4	2.631-4	2.388-4
20	77	3.107+08	7.868-2	8.813-2	9.579-2	1.018-1	1.064-1	1.114-1	1.201-1	1.282-1	1.357-1
20	78	2.661-02	4.625-3	2.861-3	2.072-3	1.601-3	1.305-3	1.142-3	9.190-4	7.708-4	6.648-4
20	79	1.892+10	2.942-0	3.527-0	3.973-0	4.296-0	4.544-0	4.787-0	5.202-0	5.569-0	5.903-0
20	80	3.245+09	2.870-1	3.435-1	3.826-1	4.160-1	4.404-1	4.639-1	5.040-1	5.390-1	5.710-1
20	81	2.115+09	3.701-1	4.414-1	4.960-1	5.362-1	5.667-1	5.968-1	6.483-1	6.938-1	7.353-1
20	82	2.399+08	2.364-2	2.709-2	2.960-2	3.186-2	3.354-2	3.522-2	3.812-2	4.068-2	4.304-2
20	83	2.375+08	1.103-2	1.111-2	1.129-2	1.164-2	1.195-2	1.236-2	1.316-2	1.393-2	1.467-2
20	84	4.272+09	4.391-1	5.257-1	5.915-1	6.403-1	6.776-1	7.143-1	7.760-1	8.299-1	8.784-1
20	85	1.577+10	9.414-1	1.136-0	1.269-0	1.385-0	1.470-0	1.551-0	1.687-0	1.804-0	1.909-0
20	86	1.179+08	1.725-3	1.584-3	1.545-3	1.576-3	1.610-3	1.652-3	1.742-3	1.832-3	1.920-3
20	87	1.731-00	2.226-3	1.376-3	9.583-4	7.509-4	6.366-4	5.687-4	4.963-4	4.612-4	4.414-4
20	88	1.784+10	1.374-0	1.665-0	1.882-0	2.044-0	2.168-0	2.290-0	2.491-0	2.665-0	2.819-0
20	89	4.892-01	1.712-2	1.276-2	1.086-2	1.010-2	9.819-3	9.727-3	9.801-3	9.985-3	1.016-2
20	90	0.000-00	1.762-2	1.475-2	1.363-2	1.325-2	1.321-2	1.326-2	1.348-2	1.375-2	1.395-2
20	91	5.819+07	6.139-3	5.510-3	5.335-3	5.343-3	5.431-3	5.578-3	5.882-3	6.182-3	6.466-3
20	92	0.000-00	2.101-2	1.232-2	7.888-3	5.528-3	4.131-3	3.236-3	2.227-3	1.694-3	1.385-3
20	93	1.627+11	1.779-0	2.174-0	2.433-0	2.673-0	2.847-0	3.013-0	3.284-0	3.511-0	3.714-0
20	94	4.863+09	1.593-1	1.874-1	2.068-1	2.251-1	2.386-1	2.517-1	2.735-1	2.920-1	3.086-1
20	95	1.544+10	8.220-1	9.984-1	1.129-0	1.229-0	1.305-0	1.379-0	1.502-0	1.607-0	1.700-0

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
20	96	5.880+07	9.361-3	6.673-3	5.464-3	4.942-3	4.700-3	4.630-3	4.673-3	4.810-3	4.983-3
20	97	1.880+09	1.430-2	1.617-2	1.751-2	1.903-2	2.019-2	2.131-2	2.320-2	2.477-2	2.618-2
21	22	7.526-07	1.656-2	1.476-2	1.441-2	1.475-2	1.544-2	1.643-2	1.913-2	2.273-2	2.721-2
21	23	1.587-00	1.866-2	1.106-2	7.418-3	5.247-3	3.906-3	3.071-3	2.060-3	1.489-3	1.137-3
21	24	3.543-04	1.215-1	1.254-1	1.332-1	1.439-1	1.563-1	1.715-1	2.090-1	2.569-1	3.152-1
21	25	0.000-00	9.812-3	5.325-3	3.239-3	2.159-3	1.534-3	1.143-3	7.046-4	4.756-4	3.450-4
21	26	0.000-00	9.807-3	5.449-3	3.366-3	2.264-3	1.617-3	1.208-3	7.432-4	4.980-4	3.586-4
21	27	8.992-06	1.566-4	1.167-4	9.619-5	8.038-5	7.020-5	6.252-5	5.229-5	4.541-5	4.037-5
21	28	1.983+01	4.807-3	2.434-3	1.398-3	8.906-4	6.095-4	4.399-4	2.574-4	1.659-4	1.155-4
21	29	2.972+05	4.266-3	4.991-3	5.383-3	5.560-3	5.588-3	5.555-3	5.438-3	5.288-3	5.150-3
21	30	0.000-00	4.343-5	2.731-5	1.789-5	1.262-5	9.459-6	7.336-6	4.923-6	3.510-6	2.674-6
21	31	1.746+04	2.298-4	2.293-4	2.308-4	2.311-4	2.295-4	2.263-4	2.217-4	2.157-4	2.088-4
21	32	7.658-05	2.728-4	1.657-4	1.063-4	7.366-5	5.381-5	4.088-5	2.600-5	1.788-5	1.308-5
21	33	5.884-05	7.651-5	4.306-5	2.793-5	1.991-5	1.537-5	1.244-5	9.165-6	7.290-6	6.145-6
21	34	0.000-00	5.063-4	3.077-4	2.008-4	1.407-4	1.044-4	8.078-5	5.366-5	3.904-5	3.049-5
21	35	0.000-00	7.570-4	4.603-4	2.989-4	2.081-4	1.521-4	1.154-4	7.300-5	4.984-5	3.615-5
21	36	0.000-00	4.599-6	2.043-6	1.059-6	6.310-7	4.153-7	2.971-7	1.797-7	1.244-7	9.533-8
21	37	0.000-00	9.255-4	5.767-4	3.743-4	2.632-4	1.961-4	1.516-4	1.008-4	7.170-5	5.429-5
21	38	6.388+05	4.717-3	4.582-3	4.537-3	4.508-3	4.472-3	4.442-3	4.352-3	4.244-3	4.139-3
21	39	3.595-03	9.679-4	5.919-4	3.774-4	2.633-4	1.959-4	1.512-4	1.008-4	7.172-5	5.453-5
21	40	0.000-00	7.004-5	4.310-5	2.971-5	2.290-5	1.913-5	1.685-5	1.452-5	1.344-5	1.290-5
21	41	0.000-00	2.810-4	1.653-4	1.051-4	7.219-5	5.229-5	3.941-5	2.466-5	1.672-5	1.206-5
21	42	3.961-05	1.319-4	9.137-5	6.619-5	5.187-5	4.206-5	3.616-5	2.823-5	2.309-5	1.958-5
21	43	0.000-00	7.893-4	7.824-4	8.156-4	8.524-4	8.889-4	9.217-4	9.751-4	1.019-3	1.050-3
21	44	0.000-00	2.068-5	8.215-6	4.144-6	2.575-6	1.839-6	1.426-6	1.002-6	7.748-7	6.378-7
21	45	0.000-00	1.409-4	7.234-5	3.946-5	2.422-5	1.636-5	1.186-5	7.606-6	5.672-6	4.780-6
21	46	9.554-02	3.748-3	2.363-3	1.537-3	1.076-3	7.948-4	6.113-4	3.976-4	2.795-4	2.081-4
21	47	2.138+06	4.423-3	4.273-3	4.237-3	4.226-3	4.235-3	4.264-3	4.276-3	4.268-3	4.206-3
21	48	0.000-00	1.062-4	6.283-5	3.987-5	2.772-5	2.032-5	1.554-5	1.002-5	6.957-6	5.164-6
21	49	3.094-02	8.557-4	5.557-4	3.689-4	2.644-4	1.993-4	1.569-4	1.065-4	7.779-5	6.000-5
21	50	1.468+08	9.522-2	1.116-1	1.236-1	1.319-1	1.377-1	1.427-1	1.487-1	1.515-1	1.519-1
21	51	0.000-00	7.136-4	4.664-4	3.098-4	2.184-4	1.619-4	1.246-4	8.109-5	5.703-5	4.248-5
21	52	0.000-00	1.569-3	1.252-3	1.129-3	1.084-3	1.069-3	1.071-3	1.087-3	1.112-3	1.133-3
21	53	0.000-00	4.372-4	2.358-4	1.459-4	9.936-5	7.169-5	5.412-5	3.425-5	2.350-5	1.719-5
21	54	0.000-00	2.028-4	7.777-5	4.060-5	2.770-5	2.144-5	1.809-5	1.447-5	1.232-5	1.088-5
21	55	1.564+07	8.004-3	8.903-3	9.625-3	1.021-2	1.065-2	1.101-2	1.151-2	1.178-2	1.187-2
21	56	4.495-01	3.771-3	2.421-3	1.593-3	1.121-3	8.285-4	6.368-4	4.123-4	2.888-4	2.144-4
21	57	0.000-00	8.191-4	8.975-4	9.797-4	1.046-3	1.103-3	1.149-3	1.220-3	1.274-3	1.312-3
21	58	0.000-00	1.299-4	7.670-5	4.919-5	3.392-5	2.462-5	1.860-5	1.173-5	8.003-6	5.818-6
21	59	0.000-00	2.729-4	1.722-4	1.327-4	1.148-4	1.066-4	1.027-4	1.004-4	1.010-4	1.020-4
21	60	2.440-01	1.193-3	8.113-4	5.905-4	4.580-4	3.711-4	3.135-4	2.394-4	1.938-4	1.633-4
21	61	0.000-00	8.540-4	6.638-4	5.522-4	4.885-4	4.404-4	4.037-4	3.496-4	3.115-4	2.832-4
21	62	7.514+08	2.067-1	2.438-1	2.710-1	2.921-1	3.086-1	3.247-1	3.531-1	3.791-1	4.037-1
21	63	1.611-01	6.796-4	4.426-4	3.040-4	2.242-4	1.750-4	1.423-4	1.028-4	7.982-5	6.508-5
21	64	0.000-00	5.588-4	3.353-4	2.165-4	1.503-4	1.097-4	8.328-5	5.287-5	3.636-5	2.661-5
21	65	0.000-00	5.066-4	3.395-4	2.275-4	1.603-4	1.181-4	9.029-5	5.789-5	4.017-5	2.963-5
21	66	0.000-00	3.490-4	2.515-4	2.204-4	2.115-4	2.104-4	2.123-4	2.181-4	2.241-4	2.288-4
21	67	4.226+08	1.028-1	1.220-1	1.363-1	1.471-1	1.555-1	1.638-1	1.782-1	1.914-1	2.038-1

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
21	68	4.664-01	8.709-4	5.614-4	3.728-4	2.637-4	1.960-4	1.520-4	1.006-4	7.221-5	5.517-5
21	69	8.166+07	2.436-2	2.664-2	2.852-2	3.001-2	3.124-2	3.262-2	3.512-2	3.748-2	3.974-2
21	70	4.034+08	7.628-2	8.954-2	9.969-2	1.075-1	1.135-1	1.195-1	1.298-1	1.392-1	1.480-1
21	71	3.187+08	6.180-2	7.244-2	8.016-2	8.622-2	9.085-2	9.545-2	1.034-1	1.106-1	1.173-1
21	72	9.819-01	2.008-3	1.305-3	8.856-4	6.498-4	5.023-4	4.070-4	2.917-4	2.243-4	1.813-4
21	73	0.000-00	8.372-4	5.218-4	3.830-4	3.184-4	2.839-4	2.651-4	2.482-4	2.437-4	2.432-4
21	74	7.775-04	1.885-3	1.274-3	9.405-4	7.534-4	6.267-4	5.512-4	4.449-4	3.741-4	3.233-4
21	75	0.000-00	8.049-4	5.273-4	4.132-4	3.557-4	3.243-4	3.077-4	2.912-4	2.845-4	2.813-4
21	76	0.000-00	1.516-4	6.562-5	3.666-5	2.490-5	1.884-5	1.562-5	1.202-5	1.000-5	8.699-6
21	77	3.762-00	5.951-3	3.780-3	2.471-3	1.724-3	1.268-3	9.724-4	6.289-4	4.412-4	3.286-4
21	78	0.000-00	5.439-4	2.705-4	1.611-4	1.101-4	8.290-5	6.785-5	5.256-5	4.584-5	4.252-5
21	79	5.226-02	2.089-3	1.280-3	9.161-4	7.106-4	5.809-4	5.085-4	4.080-4	3.422-4	2.954-4
21	80	1.766+10	1.746-0	2.092-0	2.345-0	2.545-0	2.695-0	2.840-0	3.086-0	3.303-0	3.501-0
21	81	1.476-02	6.374-4	3.062-4	1.655-4	1.003-4	6.587-5	4.625-5	2.635-5	1.690-5	1.200-5
21	82	6.479+08	5.897-2	7.041-2	7.885-2	8.553-2	9.053-2	9.538-2	1.036-1	1.108-1	1.174-1
21	83	0.000-00	1.737-3	1.127-3	7.403-4	5.168-4	3.797-4	2.903-4	1.867-4	1.302-4	9.628-5
21	84	1.780-00	1.088-3	6.682-4	4.267-4	3.000-4	2.234-4	1.748-4	1.188-4	8.789-5	6.905-5
21	85	6.176+09	3.802-1	4.561-1	5.117-1	5.570-1	5.906-1	6.228-1	6.771-1	7.240-1	7.663-1
21	86	0.000-00	7.636-5	4.076-5	2.299-5	1.485-5	1.047-5	7.801-6	5.010-6	3.504-6	2.649-6
21	87	0.000-00	2.762-4	1.227-4	6.384-5	3.878-5	2.601-5	1.895-5	1.206-5	8.913-6	7.319-6
21	88	5.244-00	4.114-3	2.292-3	1.369-3	8.921-4	6.203-4	4.520-4	2.708-4	1.782-4	1.270-4
21	89	0.000-00	8.149-3	7.364-3	7.137-3	7.161-3	7.251-3	7.348-3	7.539-3	7.708-3	7.828-3
21	90	0.000-00	2.264-3	1.287-3	7.927-4	5.361-4	3.849-4	2.890-4	1.807-4	1.230-4	8.931-5
21	91	1.567-00	9.327-4	5.124-4	3.093-4	2.078-4	1.502-4	1.140-4	7.412-5	5.247-5	3.973-5
21	92	0.000-00	7.062-3	4.135-3	2.629-3	1.811-3	1.316-3	9.954-4	6.276-4	4.287-4	3.114-4
21	93	0.000-00	2.198-3	1.284-3	7.932-4	5.351-4	3.821-4	2.855-4	1.776-4	1.196-4	8.711-5
21	94	3.282+10	1.116-0	1.356-0	1.532-0	1.676-0	1.783-0	1.885-0	2.054-0	2.197-0	2.323-0
21	95	1.111+01	4.753-3	2.885-3	1.867-3	1.362-3	1.045-3	8.455-4	6.051-4	4.646-4	3.767-4
21	96	1.431-00	1.843-3	9.912-4	5.750-4	3.680-4	2.530-4	1.832-4	1.094-4	7.135-5	5.108-5
21	97	0.000-00	8.203-4	4.612-4	2.751-4	1.798-4	1.255-4	9.205-5	5.584-5	3.686-5	2.655-5
22	23	3.314-03	2.766-2	1.685-2	1.143-2	8.415-3	6.581-3	5.375-3	3.932-3	3.105-3	2.595-3
22	24	5.837-05	4.272-2	2.628-2	1.803-2	1.354-2	1.077-2	8.968-3	6.793-3	5.549-3	4.769-3
22	25	2.289-01	9.421-2	6.521-2	5.152-2	4.443-2	4.028-2	3.766-2	3.470-2	3.319-2	3.231-2
22	26	3.005-00	9.848-2	6.842-2	5.401-2	4.623-2	4.122-2	3.826-2	3.484-2	3.317-2	3.254-2
22	27	2.296+05	1.225-2	1.409-2	1.508-2	1.536-2	1.532-2	1.515-2	1.475-2	1.435-2	1.398-2
22	28	6.207+01	2.610-1	2.643-1	2.712-1	2.791-1	2.859-1	2.931-1	3.077-1	3.244-1	3.434-1
22	29	5.261+05	1.014-2	1.178-2	1.270-2	1.307-2	1.313-2	1.307-2	1.277-2	1.242-2	1.210-2
22	30	1.265-06	5.995-5	3.148-5	1.944-5	1.359-5	1.026-5	8.148-6	5.869-6	4.577-6	3.821-6
22	31	1.588+04	4.281-4	3.718-4	3.423-4	3.270-4	3.134-4	3.029-4	2.875-4	2.752-4	2.621-4
22	32	1.292+06	5.195-2	6.082-2	6.655-2	6.924-2	7.019-2	7.022-2	6.934-2	6.760-2	6.615-2
22	33	2.854+07	4.314-1	5.107-1	5.773-1	6.125-1	6.212-1	6.305-1	6.583-1	6.732-1	6.867-1
22	34	9.207+04	3.026-3	3.070-3	3.099-3	3.106-3	3.093-3	3.040-3	2.946-3	2.861-3	2.787-3
22	35	6.171-04	1.076-3	6.506-4	4.119-4	2.852-4	2.109-4	1.619-4	1.072-4	7.582-5	5.763-5
22	36	0.000-00	1.908-5	9.755-6	6.326-6	4.680-6	3.809-6	3.333-6	2.854-6	2.617-6	2.492-6
22	37	4.185-08	9.337-5	5.618-5	3.607-5	2.498-5	1.820-5	1.377-5	8.669-6	5.906-6	4.279-6
22	38	1.461+04	3.216-4	2.394-4	1.970-4	1.739-4	1.590-4	1.488-4	1.357-4	1.268-4	1.204-4
22	39	8.911+03	3.353-4	2.382-4	1.880-4	1.603-4	1.429-4	1.316-4	1.173-4	1.084-4	1.020-4
22	40	4.091+04	6.940-4	7.224-4	7.506-4	7.672-4	7.730-4	7.738-4	7.650-4	7.493-4	7.317-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a{\pm}b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
22	41	6.021-04	4.913-4	2.986-4	1.918-4	1.334-4	9.827-5	7.523-5	4.881-5	3.414-5	2.542-5
22	42	2.271+05	5.155-3	3.848-3	3.036-3	2.603-3	2.345-3	2.175-3	1.974-3	1.844-3	1.753-3
22	43	1.702+07	9.654-2	1.112-1	1.215-1	1.280-1	1.318-1	1.343-1	1.361-1	1.353-1	1.338-1
22	44	2.764-02	4.727-3	2.900-3	1.860-3	1.297-3	9.619-4	7.427-4	4.933-4	3.512-4	2.670-4
22	45	7.989+04	3.631-3	2.448-3	1.758-3	1.372-3	1.140-3	9.890-4	8.100-4	7.090-4	6.422-4
22	46	1.161+05	1.857-3	1.333-3	1.027-3	8.635-4	7.637-4	6.999-4	6.248-4	5.800-4	5.466-4
22	47	9.105+04	4.978-4	3.867-4	3.238-4	2.921-4	2.728-4	2.613-4	2.474-4	2.381-4	2.290-4
22	48	3.347-02	8.317-4	6.875-4	6.087-4	5.408-4	4.874-4	4.455-4	3.822-4	3.361-4	3.000-4
22	49	2.905+07	5.620-2	5.785-2	6.002-2	6.191-2	6.329-2	6.459-2	6.616-2	6.652-2	6.634-2
22	50	1.080+06	1.041-2	6.904-3	4.875-3	3.759-3	3.098-3	2.666-3	2.172-3	1.894-3	1.717-3
22	51	1.215-00	3.365-3	2.118-3	1.384-3	9.732-4	7.239-4	5.602-4	3.700-4	2.640-4	1.995-4
22	52	1.381+07	2.497-2	2.575-2	2.686-2	2.780-2	2.855-2	2.930-2	3.027-2	3.061-2	3.072-2
22	53	2.459-02	7.194-3	4.280-3	2.731-3	1.878-3	1.361-3	1.027-3	6.484-4	4.431-4	3.239-4
22	54	0.000-00	7.759-3	4.908-3	3.465-3	2.681-3	2.223-3	1.938-3	1.630-3	1.481-3	1.402-3
22	55	1.046+05	9.818-3	6.421-3	4.315-3	3.110-3	2.373-3	1.891-3	1.334-3	1.030-3	8.484-4
22	56	3.714+07	4.292-2	4.418-2	4.592-2	4.763-2	4.931-2	5.121-2	5.500-2	5.882-2	6.263-2
22	57	2.629+07	3.863-2	4.033-2	4.210-2	4.368-2	4.523-2	4.697-2	5.044-2	5.393-2	5.740-2
22	58	6.512-02	5.267-3	4.919-3	4.820-3	4.770-3	4.734-3	4.721-3	4.699-3	4.682-3	4.658-3
22	59	1.428+09	1.227-0	1.449-0	1.617-0	1.738-0	1.835-0	1.929-0	2.098-0	2.257-0	2.409-0
22	60	1.499+07	1.435-2	1.444-2	1.484-2	1.529-2	1.576-2	1.632-2	1.742-2	1.852-2	1.960-2
22	61	2.016+07	1.857-2	1.909-2	1.992-2	2.072-2	2.151-2	2.233-2	2.394-2	2.554-2	2.710-2
22	62	2.989+03	1.040-2	6.869-3	4.729-3	3.503-3	2.759-3	2.278-3	1.728-3	1.435-3	1.263-3
22	63	8.149+07	4.890-2	5.294-2	5.668-2	5.983-2	6.248-2	6.526-2	7.044-2	7.536-2	8.013-2
22	64	1.324-00	1.478-2	9.286-3	6.064-3	4.244-3	3.127-3	2.402-3	1.558-3	1.096-3	8.199-4
22	65	4.402-02	1.261-4	6.100-5	3.397-5	2.216-5	1.587-5	1.198-5	7.728-6	5.417-6	4.066-6
22	66	4.369+08	2.854-1	3.366-1	3.757-1	4.037-1	4.262-1	4.480-1	4.870-1	5.231-1	5.572-1
22	67	5.478+08	1.529-1	1.797-1	1.996-1	2.164-1	2.288-1	2.409-1	2.622-1	2.814-1	2.997-1
22	68	3.296+06	8.444-3	6.191-3	4.901-3	4.230-3	3.848-3	3.646-3	3.485-3	3.471-3	3.530-3
22	69	1.913+09	4.554-1	5.334-1	5.911-1	6.407-1	6.771-1	7.125-1	7.746-1	8.306-1	8.836-1
22	70	2.025+08	4.393-2	5.013-2	5.496-2	5.929-2	6.252-2	6.569-2	7.126-2	7.630-2	8.108-2
22	71	6.993+08	1.446-1	1.690-1	1.873-1	2.031-1	2.146-1	2.259-1	2.454-1	2.629-1	2.794-1
22	72	3.690+07	1.507-2	1.550-2	1.619-2	1.698-2	1.764-2	1.838-2	1.978-2	2.110-2	2.238-2
22	73	8.595+07	4.905-2	5.421-2	5.876-2	6.237-2	6.506-2	6.766-2	7.154-2	7.419-2	7.583-2
22	74	2.529+08	7.604-2	8.690-2	9.540-2	1.025-1	1.079-1	1.133-1	1.228-1	1.314-1	1.395-1
22	75	1.572+09	6.016-1	7.142-1	7.996-1	8.621-1	9.099-1	9.571-1	1.040-0	1.114-0	1.183-0
22	76	1.397-00	1.926-2	1.055-2	6.418-3	4.304-3	3.097-3	2.360-3	1.542-3	1.106-3	8.609-4
22	77	3.752+08	8.527-2	1.006-1	1.121-1	1.213-1	1.284-1	1.353-1	1.472-1	1.579-1	1.677-1
22	78	1.603+09	4.309-1	5.102-1	5.707-1	6.149-1	6.495-1	6.830-1	7.414-1	7.937-1	8.418-1
22	79	1.644+09	3.444-1	4.092-1	4.566-1	4.951-1	5.241-1	5.523-1	6.004-1	6.427-1	6.817-1
22	80	1.274+08	1.911-2	1.996-2	2.106-2	2.234-2	2.334-2	2.438-2	2.627-2	2.797-2	2.959-2
22	81	1.470+10	2.432-0	2.929-0	3.285-0	3.572-0	3.784-0	3.991-0	4.341-0	4.648-0	4.931-0
22	82	8.775+09	7.745-1	9.280-1	1.040-0	1.136-0	1.205-0	1.271-0	1.382-0	1.478-0	1.567-0
22	83	3.152-00	2.915-3	2.016-3	1.454-3	1.157-3	9.572-4	8.227-4	6.400-4	5.217-4	4.394-4
22	84	5.534+09	6.645-1	7.952-1	8.888-1	9.658-1	1.023-0	1.079-0	1.173-0	1.254-0	1.327-0
22	85	1.226+09	9.431-2	1.087-1	1.197-1	1.299-1	1.372-1	1.444-1	1.567-1	1.673-1	1.769-1
22	86	1.225-01	2.118-3	1.212-3	7.574-4	5.210-4	3.803-4	2.909-4	1.886-4	1.329-4	9.969-5
22	87	4.925+10	6.009-0	7.347-0	8.324-0	9.044-0	9.598-0	1.013+1	1.102+1	1.180+1	1.250+1
22	88	8.856+08	1.084-1	1.140-1	1.196-1	1.259-1	1.312-1	1.369-1	1.471-1	1.562-1	1.646-1

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
22	89	8.614+09	1.050-0	1.264-0	1.421-0	1.538-0	1.629-0	1.718-0	1.867-0	1.996-0	2.113-0
22	90	1.323+01	3.266-2	2.231-2	1.688-2	1.405-2	1.244-2	1.146-2	1.047-2	1.004-2	9.834-3
22	91	2.038+10	1.291-0	1.568-0	1.762-0	1.924-0	2.044-0	2.160-0	2.353-0	2.515-0	2.660-0
22	92	1.899+01	4.145-2	3.904-2	3.943-2	4.057-2	4.191-2	4.314-2	4.531-2	4.711-2	4.845-2
22	93	1.788+01	4.544-3	2.641-3	1.610-3	1.069-3	7.538-4	5.571-4	3.403-4	2.266-4	1.632-4
22	94	1.699+10	6.351-1	7.666-1	8.610-1	9.446-1	1.004-0	1.062-0	1.158-0	1.237-0	1.309-0
22	95	7.136+08	3.973-2	4.201-2	4.444-2	4.704-2	4.921-2	5.153-2	5.555-2	5.906-2	6.223-2
22	96	9.806+10	5.172-0	6.359-0	7.169-0	7.852-0	8.357-0	8.845-0	9.646-0	1.032+1	1.092+1
22	97	9.181+01	5.490-3	3.625-3	2.559-3	2.047-3	1.702-3	1.468-3	1.154-3	9.513-4	8.087-4
23	24	6.883-01	9.003-2	5.443-2	3.649-2	2.616-2	1.981-2	1.569-2	1.071-2	7.882-3	6.135-3
23	25	2.198-07	5.455-2	4.900-2	4.691-2	4.598-2	4.550-2	4.529-2	4.495-2	4.472-2	4.455-2
23	26	2.121-02	4.251-2	2.456-2	1.613-2	1.171-2	9.151-3	7.572-3	5.861-3	5.069-3	4.739-3
23	27	1.835+04	2.268-3	2.341-3	2.410-3	2.429-3	2.432-3	2.430-3	2.418-3	2.405-3	2.391-3
23	28	6.579+01	1.245-2	6.623-3	4.108-3	2.916-3	2.275-3	1.910-3	1.570-3	1.467-3	1.483-3
23	29	8.195+05	1.483-2	1.727-2	1.868-2	1.918-2	1.920-2	1.908-2	1.862-2	1.811-2	1.760-2
23	30	7.656+06	4.046-2	4.768-2	5.192-2	5.362-2	5.398-2	5.363-2	5.239-2	5.117-2	4.976-2
23	31	1.192+05	2.872-3	2.573-3	2.394-3	2.290-3	2.207-3	2.139-3	2.032-3	1.944-3	1.874-3
23	32	9.375+04	2.822-3	2.457-3	2.284-3	2.174-3	2.090-3	2.023-3	1.918-3	1.836-3	1.766-3
23	33	7.269+04	1.935-3	2.128-3	2.271-3	2.333-3	2.352-3	2.347-3	2.305-3	2.257-3	2.203-3
23	34	4.044-04	1.273-3	7.524-4	4.679-4	3.192-4	2.328-4	1.763-4	1.137-4	7.867-5	5.871-5
23	35	0.000-00	1.206-3	7.071-4	4.472-4	3.041-4	2.192-4	1.643-4	1.022-4	6.885-5	4.959-5
23	36	0.000-00	7.857-4	4.737-4	3.061-4	2.131-4	1.551-4	1.176-4	7.430-5	5.072-5	3.678-5
23	37	1.610+04	6.024-4	3.854-4	2.640-4	2.005-4	1.628-4	1.372-4	1.082-4	9.094-5	7.995-5
23	38	3.126+03	1.629-3	1.008-3	6.550-4	4.642-4	3.510-4	2.763-4	1.917-4	1.428-4	1.137-4
23	39	6.041+05	7.391-3	7.667-3	7.933-3	8.076-3	8.102-3	8.089-3	7.984-3	7.810-3	7.608-3
23	40	1.634-03	1.342-3	8.162-4	5.223-4	3.630-4	2.682-4	2.059-4	1.349-4	9.512-5	7.164-5
23	41	0.000-00	1.169-3	7.111-4	4.673-4	3.321-4	2.498-4	1.966-4	1.356-4	1.030-4	8.390-5
23	42	2.429+07	9.807-2	1.153-1	1.275-1	1.349-1	1.391-1	1.419-1	1.437-1	1.431-1	1.411-1
23	43	1.936-03	1.252-3	9.885-4	8.204-4	7.251-4	6.662-4	6.297-4	5.878-4	5.648-4	5.500-4
23	44	0.000-00	6.285-4	5.794-4	5.887-4	6.053-4	6.239-4	6.422-4	6.731-4	6.990-4	7.174-4
23	45	4.814-03	1.678-3	1.023-3	6.575-4	4.507-4	3.269-4	2.466-4	1.547-4	1.053-4	7.633-5
23	46	1.058+06	4.824-3	4.463-3	4.325-3	4.260-3	4.239-3	4.237-3	4.216-3	4.163-3	4.099-3
23	47	3.499+06	2.000-2	1.542-2	1.268-2	1.128-2	1.046-2	9.925-3	9.278-3	8.858-3	8.520-3
23	48	3.400+06	1.544-3	1.743-3	1.898-3	2.013-3	2.086-3	2.144-3	2.209-3	2.221-3	2.218-3
23	49	1.577+07	2.363-2	2.748-2	3.052-2	3.245-2	3.383-2	3.491-2	3.616-2	3.673-2	3.662-2
23	50	1.335+07	1.087-2	1.203-2	1.296-2	1.366-2	1.414-2	1.457-2	1.509-2	1.532-2	1.534-2
23	51	4.437+07	1.105-2	1.267-2	1.383-2	1.476-2	1.537-2	1.589-2	1.653-2	1.682-2	1.687-2
23	52	9.843-03	3.743-3	3.041-3	2.842-3	2.811-3	2.847-3	2.905-3	3.034-3	3.160-3	3.258-3
23	53	0.000-00	2.165-3	1.269-3	8.288-4	5.960-4	4.567-4	3.680-4	2.667-4	2.111-4	1.779-4
23	54	0.000-00	5.093-4	2.004-4	1.045-4	6.846-5	5.182-5	4.255-5	3.264-5	2.710-5	2.352-5
23	55	3.670+08	1.839-1	2.151-1	2.376-1	2.558-1	2.701-1	2.843-1	3.098-1	3.337-1	3.569-1
23	56	1.468+08	1.224-1	1.424-1	1.586-1	1.700-1	1.793-1	1.887-1	2.056-1	2.216-1	2.370-1
23	57	5.187-02	2.481-3	2.078-3	1.900-3	1.819-3	1.787-3	1.777-3	1.781-3	1.800-3	1.815-3
23	58	0.000-00	2.592-4	1.519-4	9.974-5	7.204-5	5.503-5	4.422-5	3.185-5	2.512-5	2.115-5
23	59	3.725-01	4.913-3	3.056-3	1.987-3	1.389-3	1.026-3	7.897-4	5.148-4	3.646-4	2.746-4
23	60	4.551+07	3.053-2	3.335-2	3.597-2	3.815-2	3.989-2	4.175-2	4.519-2	4.851-2	5.171-2
23	61	3.119-00	1.951-2	1.335-2	9.546-3	7.360-3	6.033-3	5.168-3	4.166-3	3.625-3	3.297-3
23	62	2.259+07	8.876-3	8.908-3	9.096-3	9.416-3	9.720-3	1.007-2	1.078-2	1.149-2	1.219-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
23	63	4.660+08	2.400-1	2.798-1	3.116-1	3.339-1	3.518-1	3.698-1	4.016-1	4.312-1	4.592-1
23	64	0.000-00	9.957-4	8.581-4	8.046-4	7.820-4	7.688-4	7.615-4	7.524-4	7.476-4	7.428-4
23	65	3.473+08	3.020-2	3.534-2	3.880-2	4.192-2	4.425-2	4.652-2	5.054-2	5.420-2	5.769-2
23	66	6.638-02	1.087-3	7.890-4	6.646-4	6.075-4	5.791-4	5.646-4	5.532-4	5.520-4	5.526-4
23	67	4.694+08	1.223-1	1.449-1	1.610-1	1.741-1	1.841-1	1.939-1	2.111-1	2.267-1	2.415-1
23	68	1.952+08	8.841-2	1.028-1	1.143-1	1.224-1	1.289-1	1.355-1	1.471-1	1.578-1	1.680-1
23	69	1.746+07	7.454-3	7.327-3	7.320-3	7.491-3	7.668-3	7.904-3	8.394-3	8.893-3	9.394-3
23	70	4.343+08	9.896-2	1.154-1	1.274-1	1.374-1	1.449-1	1.524-1	1.654-1	1.773-1	1.885-1
23	71	1.241+06	2.819-3	2.078-3	1.616-3	1.355-3	1.183-3	1.075-3	9.443-4	8.734-4	8.332-4
23	72	2.443+08	8.525-2	9.920-2	1.101-1	1.178-1	1.239-1	1.301-1	1.410-1	1.509-1	1.602-1
23	73	8.042-02	1.489-3	9.087-4	6.211-4	4.698-4	3.764-4	3.176-4	2.452-4	2.016-4	1.726-4
23	74	5.878+09	1.532-0	1.829-0	2.057-0	2.220-0	2.345-0	2.470-0	2.684-0	2.878-0	3.058-0
23	75	7.558-01	2.799-3	2.205-3	2.112-3	2.149-3	2.236-3	2.325-3	2.487-3	2.625-3	2.726-3
23	76	0.000-00	1.276-3	7.130-4	5.059-4	4.182-4	3.756-4	3.535-4	3.334-4	3.259-4	3.227-4
23	77	3.247+08	8.063-2	9.307-2	1.032-1	1.103-1	1.161-1	1.220-1	1.322-1	1.415-1	1.501-1
23	78	4.908-02	1.639-3	9.409-4	6.314-4	4.854-4	4.004-4	3.484-4	2.867-4	2.519-4	2.299-4
23	79	3.219+09	6.269-1	7.484-1	8.416-1	9.090-1	9.604-1	1.011-0	1.098-0	1.176-0	1.247-0
23	80	1.643+10	1.745-0	2.098-0	2.342-0	2.550-0	2.701-0	2.847-0	3.095-0	3.312-0	3.513-0
23	81	1.220+08	3.498-2	3.834-2	4.137-2	4.369-2	4.565-2	4.774-2	5.145-2	5.485-2	5.801-2
23	82	7.846+08	7.716-2	9.083-2	1.003-1	1.088-1	1.149-1	1.210-1	1.313-1	1.403-1	1.486-1
23	83	2.907+09	9.097-2	1.086-1	1.204-1	1.311-1	1.389-1	1.464-1	1.591-1	1.701-1	1.802-1
23	84	1.494+08	2.112-2	2.413-2	2.662-2	2.856-2	3.006-2	3.155-2	3.412-2	3.641-2	3.849-2
23	85	2.983+09	1.882-1	2.239-1	2.488-1	2.707-1	2.866-1	3.021-1	3.283-1	3.509-1	3.714-1
23	86	6.796+10	1.455-0	1.754-0	1.954-0	2.136-0	2.267-0	2.392-0	2.602-0	2.781-0	2.944-0
23	87	4.755-00	4.224-3	2.493-3	1.547-3	1.052-3	7.640-4	5.802-4	3.721-4	2.604-4	1.937-4
23	88	4.944+10	3.927-0	4.770-0	5.398-0	5.863-0	6.219-0	6.566-0	7.145-0	7.643-0	8.088-0
23	89	1.839+01	2.700-2	1.858-2	1.461-2	1.278-2	1.187-2	1.139-2	1.105-2	1.103-2	1.109-2
23	90	0.000-00	5.970-3	3.518-3	2.301-3	1.671-3	1.292-3	1.046-3	7.567-4	5.927-4	4.920-4
23	91	6.912+06	4.375-3	2.615-3	1.710-3	1.249-3	9.835-4	8.211-4	6.474-4	5.632-4	5.202-4
23	92	0.000-00	2.056-2	1.168-2	7.250-3	4.939-3	3.606-3	2.763-3	1.829-3	1.342-3	1.064-3
23	93	2.113+09	2.248-2	2.507-2	2.697-2	2.911-2	3.070-2	3.232-2	3.506-2	3.740-2	3.954-2
23	94	3.471+10	1.250-0	1.523-0	1.708-0	1.873-0	1.992-0	2.106-0	2.295-0	2.454-0	2.596-0
23	95	1.007+10	6.213-1	7.513-1	8.482-1	9.225-1	9.789-1	1.034-0	1.126-0	1.204-0	1.274-0
23	96	3.510+08	2.857-2	2.987-2	3.177-2	3.345-2	3.497-2	3.662-2	3.950-2	4.207-2	4.438-2
23	97	5.832+08	5.573-3	5.717-3	5.927-3	6.295-3	6.597-3	6.921-3	7.486-3	7.971-3	8.413-3
24	25	2.587-06	1.438-1	1.046-1	8.484-2	7.310-2	6.561-2	6.085-2	5.478-2	5.104-2	4.864-2
24	26	1.425+01	7.609-2	4.349-2	2.795-2	1.953-2	1.461-2	1.145-2	7.790-3	5.784-3	4.591-3
24	27	4.979+05	3.269-2	3.760-2	4.024-2	4.085-2	4.032-2	3.976-2	3.848-2	3.776-2	3.632-2
24	28	7.756+01	4.658-2	3.769-2	3.443-2	3.336-2	3.306-2	3.326-2	3.432-2	3.598-2	3.808-2
24	29	3.693+06	7.753-2	9.085-2	9.806-2	1.009-1	1.010-1	1.002-1	9.778-2	9.499-2	9.259-2
24	30	1.247-04	1.600-4	1.114-4	8.518-5	6.867-5	5.749-5	4.988-5	3.991-5	3.343-5	2.895-5
24	31	7.222+04	1.332-3	1.354-3	1.371-3	1.375-3	1.363-3	1.344-3	1.303-3	1.261-3	1.224-3
24	32	4.748+03	1.852-3	1.602-3	1.472-3	1.394-3	1.336-3	1.291-3	1.220-3	1.164-3	1.120-3
24	33	1.231+06	2.483-2	2.897-2	3.153-2	3.270-2	3.308-2	3.303-2	3.249-2	3.184-2	3.073-2
24	34	1.897+05	6.861-3	6.880-3	6.872-3	6.842-3	6.751-3	6.666-3	6.436-3	6.236-3	6.052-3
24	35	1.181-03	2.730-3	1.627-3	1.022-3	7.034-4	5.177-4	3.960-4	2.609-4	1.835-4	1.390-4
24	36	0.000-00	2.272-3	1.332-3	8.444-4	5.765-4	4.154-4	3.123-4	1.957-4	1.332-4	9.706-5
24	37	3.233-04	1.504-4	8.683-5	5.353-5	3.607-5	2.594-5	1.940-5	1.225-5	8.332-6	6.132-6

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
24	38	8.061+02	7.977-4	4.801-4	3.049-4	2.113-4	1.565-4	1.205-4	8.036-5	5.766-5	4.444-5
24	39	9.557+04	3.165-3	2.460-3	2.080-3	1.876-3	1.748-3	1.654-3	1.533-3	1.443-3	1.378-3
24	40	1.064+06	1.720-2	1.852-2	1.940-2	1.991-2	2.008-2	2.010-2	1.985-2	1.945-2	1.898-2
24	41	2.571-03	3.615-3	2.209-3	1.441-3	1.021-3	7.686-4	6.040-4	4.162-4	3.125-4	2.514-4
24	42	4.363+06	1.946-2	2.270-2	2.501-2	2.644-2	2.730-2	2.777-2	2.812-2	2.809-2	2.737-2
24	43	2.638+07	1.450-1	1.703-1	1.883-1	1.991-1	2.054-1	2.095-1	2.116-1	2.091-1	2.086-1
24	44	1.072-02	4.383-3	3.242-3	2.584-3	2.228-3	2.022-3	1.896-3	1.765-3	1.702-3	1.667-3
24	45	2.822+05	3.308-3	2.645-3	2.297-3	2.114-3	2.005-3	1.937-3	1.850-3	1.785-3	1.731-3
24	46	4.650+06	3.217-2	2.698-2	2.413-2	2.270-2	2.184-2	2.134-2	2.066-2	2.011-2	1.958-2
24	47	1.316+06	8.702-3	6.566-3	5.318-3	4.660-3	4.255-3	4.007-3	3.700-3	3.520-3	3.350-3
24	48	6.552-03	1.816-4	1.192-4	9.023-5	7.339-5	6.227-5	5.438-5	4.430-5	3.766-5	3.305-5
24	49	2.873+07	4.412-2	5.119-2	5.663-2	6.039-2	6.294-2	6.501-2	6.734-2	6.807-2	6.821-2
24	50	6.258+05	2.946-3	2.274-3	1.916-3	1.737-3	1.638-3	1.580-3	1.516-3	1.481-3	1.454-3
24	51	2.668-01	1.199-3	7.435-4	4.849-4	3.394-4	2.524-4	1.956-4	1.292-4	9.207-5	6.940-5
24	52	6.469+03	2.191-3	1.749-3	1.613-3	1.585-3	1.600-3	1.630-3	1.700-3	1.770-3	1.825-3
24	53	2.683-02	4.265-3	3.361-3	3.118-3	3.070-3	3.109-3	3.172-3	3.312-3	3.447-3	3.553-3
24	54	0.000-00	5.428-3	3.084-3	1.951-3	1.355-3	1.000-3	7.743-4	5.160-4	3.738-4	2.891-4
24	55	8.628+07	4.564-2	5.302-2	5.853-2	6.319-2	6.677-2	7.026-2	7.659-2	8.252-2	8.827-2
24	56	3.162+08	2.709-1	3.165-1	3.514-1	3.785-1	3.999-1	4.209-1	4.591-1	4.950-1	5.298-1
24	57	1.517+08	1.865-1	2.155-1	2.383-1	2.549-1	2.685-1	2.822-1	3.071-1	3.310-1	3.541-1
24	58	9.397-03	8.123-4	5.135-4	3.533-4	2.658-4	2.108-4	1.755-4	1.347-4	1.117-4	9.763-5
24	59	2.385+07	3.394-2	3.428-2	3.523-2	3.628-2	3.749-2	3.879-2	4.147-2	4.420-2	4.690-2
24	60	7.487+07	6.533-2	6.646-2	6.824-2	7.033-2	7.244-2	7.498-2	8.010-2	8.524-2	9.036-2
24	61	1.117+08	9.255-2	1.056-1	1.161-1	1.242-1	1.308-1	1.373-1	1.492-1	1.605-1	1.712-1
24	62	2.963+07	1.210-2	1.260-2	1.323-2	1.393-2	1.450-2	1.511-2	1.626-2	1.736-2	1.843-2
24	63	5.288+06	4.626-3	3.967-3	3.710-3	3.648-3	3.649-3	3.702-3	3.865-3	4.065-3	4.280-3
24	64	1.752-00	1.312-2	9.690-3	7.579-3	6.370-3	5.625-3	5.146-3	4.585-3	4.278-3	4.085-3
24	65	1.651-01	1.156-3	7.302-4	4.829-4	3.458-4	2.624-4	2.073-4	1.427-4	1.060-4	8.332-5
24	66	4.912+08	3.509-1	4.090-1	4.537-1	4.859-1	5.118-1	5.373-1	5.832-1	6.259-1	6.665-1
24	67	3.472+08	9.404-2	1.092-1	1.206-1	1.303-1	1.376-1	1.447-1	1.573-1	1.687-1	1.796-1
24	68	4.879+08	2.179-1	2.555-1	2.838-1	3.060-1	3.232-1	3.401-1	3.700-1	3.973-1	4.232-1
24	69	1.086+08	3.041-2	3.497-2	3.844-2	4.148-2	4.374-2	4.598-2	4.993-2	5.352-2	5.695-2
24	70	3.779+08	8.807-2	1.011-1	1.111-1	1.200-1	1.266-1	1.331-1	1.445-1	1.548-1	1.646-1
24	71	1.040+08	3.154-2	3.380-2	3.568-2	3.768-2	3.921-2	4.087-2	4.391-2	4.673-2	4.946-2
24	72	3.651+07	1.878-2	1.969-2	2.056-2	2.143-2	2.216-2	2.301-2	2.459-2	2.610-2	2.756-2
24	73	8.660+08	3.892-1	4.618-1	5.167-1	5.559-1	5.867-1	6.169-1	6.698-1	7.180-1	7.631-1
24	74	6.882+08	1.871-1	2.217-1	2.472-1	2.675-1	2.827-1	2.976-1	3.233-1	3.464-1	3.679-1
24	75	5.671+09	2.018-0	2.418-0	2.719-0	2.934-0	3.102-0	3.265-0	3.549-0	3.806-0	4.045-0
24	76	6.162-01	4.504-3	3.109-3	2.661-3	2.504-3	2.470-3	2.483-3	2.544-3	2.608-3	2.657-3
24	77	3.527+08	9.478-2	1.092-1	1.201-1	1.292-1	1.361-1	1.431-1	1.552-1	1.661-1	1.764-1
24	78	3.895+09	1.119-0	1.341-0	1.508-0	1.628-0	1.722-0	1.812-0	1.968-0	2.108-0	2.236-0
24	79	1.026+10	1.867-0	2.241-0	2.510-0	2.727-0	2.886-0	3.042-0	3.308-0	3.541-0	3.756-0
24	80	2.752+09	3.014-1	3.581-1	4.000-1	4.359-1	4.615-1	4.864-1	5.288-1	5.656-1	5.997-1
24	81	3.382+09	6.758-1	8.073-1	9.019-1	9.790-1	1.036-0	1.091-0	1.187-0	1.270-0	1.347-0
24	82	2.550+07	8.062-3	6.869-3	6.211-3	5.981-3	5.874-3	5.899-3	6.056-3	6.273-3	6.510-3
24	83	4.378-00	1.275-3	8.297-4	5.542-4	3.962-4	2.985-4	2.348-4	1.592-4	1.167-4	9.059-5
24	84	2.621+08	3.114-2	3.376-2	3.614-2	3.845-2	4.027-2	4.218-2	4.550-2	4.846-2	5.119-2
24	85	4.263+10	2.875-0	3.445-0	3.860-0	4.220-0	4.476-0	4.723-0	5.139-0	5.493-0	5.815-0

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
24	86	2.865+01	3.633-3	2.266-3	1.458-3	1.013-3	7.486-4	5.795-4	3.850-4	2.784-4	2.136-4
24	87	2.392+09	3.360-1	4.068-1	4.590-1	4.978-1	5.276-1	5.564-1	6.052-1	6.478-1	6.861-1
24	88	9.109+09	7.665-1	9.250-1	1.035-0	1.128-0	1.196-0	1.263-0	1.374-0	1.468-0	1.553-0
24	89	5.344+10	6.026-0	7.356-0	8.325-0	9.037-0	9.588-0	1.012+1	1.101+1	1.178+1	1.247+1
24	90	2.680+01	4.195-2	2.577-2	1.741-2	1.314-2	1.065-2	9.111-3	7.454-3	6.637-3	6.206-3
24	91	2.613+07	1.107-2	9.233-3	8.483-3	8.239-3	8.195-3	8.280-3	8.536-3	8.824-3	9.099-3
24	92	1.137-00	3.529-2	2.106-2	1.408-2	1.054-2	8.523-3	7.293-3	5.983-3	5.351-3	5.012-3
24	93	2.369+01	3.165-3	1.856-3	1.179-3	8.520-4	6.570-4	5.334-4	3.882-4	3.050-4	2.521-4
24	94	8.791+09	3.088-1	3.676-1	4.111-1	4.501-1	4.782-1	5.054-1	5.504-1	5.881-1	6.220-1
24	95	3.997+10	2.413-0	2.946-0	3.310-0	3.620-0	3.848-0	4.068-0	4.433-0	4.741-0	5.016-0
24	96	9.415+09	5.879-1	7.136-1	8.005-1	8.745-1	9.295-1	9.829-1	1.071-0	1.145-0	1.212-0
24	97	2.583+01	3.066-3	1.662-3	9.638-4	6.242-4	4.384-4	3.273-4	2.087-4	1.477-4	1.133-4
25	26	3.878+01	1.127-1	6.667-2	4.510-2	3.395-2	2.761-2	2.373-2	1.976-2	1.823-2	1.797-2
25	27	2.513+06	1.569-1	1.827-1	1.943-1	1.977-1	1.964-1	1.938-1	1.877-1	1.820-1	1.768-1
25	28	3.586-01	2.463-2	1.247-2	7.368-3	4.962-3	3.707-3	3.006-3	2.415-3	2.306-3	2.451-3
25	29	2.462-05	1.991-3	1.890-3	1.885-3	1.905-3	1.927-3	1.955-3	2.003-3	2.046-3	2.074-3
25	30	0.000-00	9.011-4	8.839-4	9.007-4	9.199-4	9.370-4	9.547-4	9.834-4	1.008-3	1.024-3
25	31	2.132-05	9.501-5	5.526-5	3.597-5	2.589-5	1.997-5	1.622-5	1.201-5	9.766-6	8.469-6
25	32	8.617-00	5.894-4	4.610-4	3.963-4	3.632-4	3.422-4	3.239-4	3.011-4	2.847-4	2.707-4
25	33	7.476+05	1.514-2	1.758-2	1.904-2	1.982-2	2.003-2	2.001-2	1.969-2	1.923-2	1.875-2
25	34	7.480+03	1.541-3	1.047-3	7.726-4	6.244-4	5.341-4	4.732-4	4.000-4	3.549-4	3.258-4
25	35	3.385+05	1.315-2	1.328-2	1.336-2	1.342-2	1.332-2	1.314-2	1.274-2	1.235-2	1.200-2
25	36	6.014-03	1.057-2	6.379-3	4.061-3	2.798-3	2.074-3	1.598-3	1.068-3	7.634-4	5.866-4
25	37	0.000-00	1.688-4	1.002-4	6.461-5	4.527-5	3.346-5	2.579-5	1.699-5	1.223-5	9.430-6
25	38	2.986-05	5.802-4	3.451-4	2.200-4	1.527-4	1.117-4	8.522-5	5.497-5	3.859-5	2.904-5
25	39	1.509+04	1.513-3	9.826-4	6.960-4	5.433-4	4.506-4	3.890-4	3.164-4	2.741-4	2.474-4
25	40	2.240+05	6.231-3	5.456-3	5.043-3	4.849-3	4.702-3	4.583-3	4.393-3	4.256-3	4.112-3
25	41	2.116+06	3.797-2	4.191-2	4.456-2	4.620-2	4.678-2	4.695-2	4.647-2	4.561-2	4.483-2
25	42	5.729+04	5.670-4	5.129-4	4.881-4	4.808-4	4.758-4	4.725-4	4.661-4	4.558-4	4.471-4
25	43	3.195+06	1.888-2	2.170-2	2.366-2	2.497-2	2.574-2	2.612-2	2.649-2	2.651-2	2.598-2
25	44	6.568+07	4.142-1	4.872-1	5.376-1	5.705-1	5.895-1	6.019-1	6.094-1	6.073-1	6.001-1
25	45	4.722+06	5.234-2	4.331-2	3.826-2	3.569-2	3.416-2	3.321-2	3.194-2	3.075-2	3.012-2
25	46	1.621+06	1.241-2	1.007-2	8.762-3	8.126-3	7.748-3	7.515-3	7.230-3	7.013-3	6.819-3
25	47	1.219-02	2.422-3	1.475-3	9.500-4	6.563-4	4.767-4	3.602-4	2.263-4	1.543-4	1.120-4
25	48	0.000-00	1.051-4	5.955-5	4.227-5	3.429-5	3.045-5	2.837-5	2.686-5	2.648-5	2.652-5
25	49	7.003+06	9.680-3	1.139-2	1.268-2	1.366-2	1.432-2	1.484-2	1.548-2	1.574-2	1.578-2
25	50	7.374-05	7.253-4	6.923-4	7.243-4	7.669-4	8.066-4	8.414-4	8.986-4	9.450-4	9.785-4
25	51	0.000-00	3.699-4	3.904-4	4.280-4	4.619-4	4.908-4	5.153-4	5.538-4	5.840-4	6.056-4
25	52	1.456+06	4.480-3	3.955-3	3.786-3	3.761-3	3.773-3	3.815-3	3.878-3	3.905-3	3.895-3
25	53	1.062+06	5.883-3	5.026-3	4.820-3	4.861-3	4.978-3	5.125-3	5.443-3	5.768-3	6.076-3
25	54	4.850-02	7.933-3	5.939-3	5.261-3	5.076-3	5.078-3	5.145-3	5.341-3	5.547-3	5.712-3
25	55	1.402-02	1.072-3	7.423-4	5.692-4	4.774-4	4.219-4	3.866-4	3.464-4	3.250-4	3.119-4
25	56	3.240+07	3.154-2	3.460-2	3.708-2	3.946-2	4.142-2	4.335-2	4.696-2	5.040-2	5.379-2
25	57	4.269+08	5.061-1	5.878-1	6.495-1	6.983-1	7.377-1	7.760-1	8.457-1	9.115-1	9.753-1
25	58	5.126+06	9.015-3	1.001-2	1.081-2	1.144-2	1.194-2	1.247-2	1.346-2	1.444-2	1.539-2
25	59	1.130+07	3.501-2	2.778-2	2.374-2	2.177-2	2.077-2	2.036-2	2.042-2	2.103-2	2.189-2
25	60	9.091+06	5.921-3	6.570-3	7.122-3	7.627-3	8.029-3	8.421-3	9.127-3	9.782-3	1.041-2
25	61	1.336+08	1.239-1	1.363-1	1.463-1	1.548-1	1.618-1	1.691-1	1.827-1	1.955-1	2.080-1

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
25	62	3.378-01	2.122-3	1.540-3	1.270-3	1.139-3	1.075-3	1.043-3	1.022-3	1.026-3	1.034-3
25	63	2.348+07	2.237-2	2.084-2	2.046-2	2.067-2	2.105-2	2.159-2	2.278-2	2.404-2	2.531-2
25	64	6.884+07	9.823-2	9.672-2	9.720-2	9.951-2	1.019-1	1.049-1	1.115-1	1.186-1	1.256-1
25	65	0.000-00	5.391-4	4.909-4	4.698-4	4.610-4	4.551-4	4.517-4	4.477-4	4.459-4	4.439-4
25	66	7.815+07	6.794-2	7.108-2	7.458-2	7.819-2	8.137-2	8.472-2	9.105-2	9.714-2	1.031-1
25	67	3.369-01	3.559-3	2.646-3	2.122-3	1.833-3	1.655-3	1.539-3	1.406-3	1.333-3	1.288-3
25	68	1.142+09	5.073-1	5.925-1	6.566-1	7.105-1	7.522-1	7.919-1	8.617-1	9.246-1	9.846-1
25	69	6.356-02	9.550-4	4.979-4	2.984-4	2.018-4	1.493-4	1.180-4	8.523-5	6.915-5	6.046-5
25	70	5.086-01	1.171-3	6.477-4	3.961-4	2.728-4	2.024-4	1.595-4	1.128-4	8.825-5	7.428-5
25	71	2.158-01	1.347-3	7.352-4	4.627-4	3.265-4	2.495-4	2.015-4	1.472-4	1.176-4	9.938-5
25	72	5.659+02	3.330-3	2.137-3	1.470-3	1.101-3	8.760-4	7.249-4	5.424-4	4.352-4	3.657-4
25	73	1.622+06	8.345-3	5.650-3	4.100-3	3.234-3	2.702-3	2.361-3	1.972-3	1.767-3	1.655-3
25	74	2.267+07	8.106-3	8.525-3	9.099-3	9.677-3	1.014-2	1.062-2	1.146-2	1.222-2	1.294-2
25	75	9.514+08	3.512-1	4.178-1	4.667-1	5.050-1	5.343-1	5.626-1	6.115-1	6.553-1	6.962-1
25	76	1.258+10	5.733-0	6.888-0	7.735-0	8.376-0	8.845-0	9.301-0	1.011+1	1.084+1	1.152+1
25	77	8.931+06	9.869-3	7.420-3	5.986-3	5.253-3	4.831-3	4.607-3	4.442-3	4.451-3	4.543-3
25	78	9.479+09	2.569-0	3.080-0	3.453-0	3.744-0	3.967-0	4.181-0	4.546-0	4.869-0	5.166-0
25	79	1.444+09	2.761-1	3.268-1	3.655-1	3.973-1	4.216-1	4.445-1	4.833-1	5.170-1	5.481-1
25	80	1.223-00	2.491-3	1.662-3	1.284-3	1.084-3	9.627-4	8.875-4	7.961-4	7.430-4	7.079-4
25	81	2.060+08	5.617-2	5.604-2	5.696-2	5.880-2	6.059-2	6.273-2	6.686-2	7.078-2	7.460-2
25	82	8.002-00	5.681-3	3.545-3	2.279-3	1.573-3	1.150-3	8.782-4	5.667-4	3.983-4	2.980-4
25	83	0.000-00	1.543-4	1.053-4	7.718-5	6.092-5	5.132-5	4.513-5	3.830-5	3.456-5	3.233-5
25	84	3.900+10	4.625-0	5.521-0	6.195-0	6.755-0	7.176-0	7.573-0	8.241-0	8.809-0	9.326-0
25	85	1.042+01	6.213-3	3.854-3	2.569-3	1.866-3	1.434-3	1.153-3	8.191-4	6.283-4	5.086-4
25	86	0.000-00	1.032-3	6.400-4	4.600-4	3.638-4	2.999-4	2.562-4	2.005-4	1.662-4	1.435-4
25	87	3.564+08	5.987-2	6.528-2	6.994-2	7.440-2	7.799-2	8.170-2	8.818-2	9.393-2	9.921-2
25	88	2.640+08	3.942-2	3.864-2	3.942-2	4.100-2	4.244-2	4.405-2	4.701-2	4.967-2	5.213-2
25	89	7.534+09	9.028-1	1.080-0	1.207-0	1.311-0	1.389-0	1.466-0	1.594-0	1.704-0	1.803-0
25	90	7.735+10	1.129+1	1.379+1	1.562+1	1.699+1	1.799+1	1.896+1	2.062+1	2.207+1	2.337+1
25	91	1.380+09	9.256-2	1.081-1	1.204-1	1.310-1	1.391-1	1.469-1	1.599-1	1.708-1	1.806-1
25	92	5.557+08	1.114-1	1.048-1	1.049-1	1.077-1	1.104-1	1.142-1	1.217-1	1.289-1	1.357-1
25	93	0.000-00	5.953-3	4.916-3	4.518-3	4.409-3	4.405-3	4.434-3	4.534-3	4.642-3	4.727-3
25	94	7.897-01	1.782-2	1.269-2	1.030-2	9.245-3	8.728-3	8.463-3	8.284-3	8.284-3	8.325-3
25	95	5.155+10	3.098-0	3.746-0	4.229-0	4.630-0	4.933-0	5.220-0	5.693-0	6.086-0	6.438-0
25	96	8.263+04	2.538-2	1.456-2	9.110-3	6.360-3	4.783-3	3.801-3	2.738-3	2.190-3	1.895-3
25	97	0.000-00	3.607-3	1.893-3	1.056-3	6.714-4	4.730-4	3.619-4	2.564-4	2.115-4	1.907-4
26	27	1.380+03	1.596-2	1.512-2	1.545-2	1.601-2	1.620-2	1.637-2	1.692-2	1.722-2	1.749-2
26	28	3.158-02	2.868-1	2.774-1	2.885-1	3.039-1	3.237-1	3.474-1	4.049-1	4.772-1	5.643-1
26	29	4.453-09	2.727-4	1.633-4	1.091-4	7.958-5	6.174-5	5.032-5	3.737-5	3.054-5	2.654-5
26	30	0.000-00	8.710-5	5.377-5	3.717-5	2.823-5	2.292-5	1.954-5	1.576-5	1.380-5	1.266-5
26	31	4.182-08	4.580-6	2.430-6	1.507-6	1.050-6	7.805-7	6.125-7	4.224-7	3.156-7	2.510-7
26	32	4.755+03	3.591-3	4.045-3	4.112-3	4.059-3	3.978-3	3.905-3	3.743-3	3.637-3	3.524-3
26	33	1.108+05	3.100-2	3.502-2	3.563-2	3.528-2	3.450-2	3.376-2	3.252-2	3.164-2	3.079-2
26	34	1.228+01	1.410-5	1.022-5	8.288-6	7.207-6	6.466-6	5.999-6	5.387-6	4.983-6	4.740-6
26	35	2.488+01	2.314-5	1.688-5	1.373-5	1.214-5	1.106-5	1.028-5	9.319-6	8.674-6	8.269-6
26	36	1.416-07	4.275-5	2.231-5	1.300-5	8.535-6	6.130-6	4.626-6	3.038-6	2.139-6	1.662-6
26	37	0.000-00	1.886-6	1.209-6	9.348-7	7.961-7	7.212-7	6.790-7	6.377-7	6.224-7	6.153-7
26	38	1.844-07	5.902-6	3.247-6	2.014-6	1.382-6	1.005-6	7.679-7	5.010-7	3.566-7	2.720-7

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
26	39	5.913-00	1.873-5	1.143-5	7.814-6	5.945-6	4.870-6	4.190-6	3.436-6	3.025-6	2.783-6
26	40	1.401+02	5.283-5	3.854-5	3.123-5	2.695-5	2.412-5	2.220-5	1.975-5	1.818-5	1.715-5
26	41	2.943+01	4.989-5	3.084-5	2.102-5	1.572-5	1.251-5	1.038-5	7.946-6	6.525-6	5.679-6
26	42	2.060+04	1.882-3	1.376-3	1.097-3	9.509-4	8.582-4	7.916-4	7.123-4	6.584-4	6.240-4
26	43	3.624+01	2.187-3	1.309-3	8.249-4	5.675-4	4.155-4	3.161-4	2.048-4	1.430-4	1.073-4
26	44	1.693+04	3.536-3	2.366-3	1.731-3	1.389-3	1.180-3	1.040-3	8.723-4	7.729-4	7.093-4
26	45	5.771+03	2.918-4	2.300-4	1.939-4	1.739-4	1.607-4	1.516-4	1.394-4	1.309-4	1.245-4
26	46	2.809+03	6.939-5	5.693-5	5.016-5	4.668-5	4.440-5	4.278-5	4.049-5	3.874-5	3.712-5
26	47	1.499-05	1.227-5	7.184-6	4.515-6	3.084-6	2.236-6	1.693-6	1.077-6	7.452-7	5.502-7
26	48	0.000-00	1.663-3	1.686-3	1.767-3	1.842-3	1.907-3	1.963-3	2.050-3	2.119-3	2.166-3
26	49	1.076+04	1.050-3	6.278-4	4.119-4	3.008-4	2.348-4	1.930-4	1.458-4	1.200-4	1.045-4
26	50	3.195-04	7.459-4	4.328-4	2.679-4	1.834-4	1.325-4	1.000-4	6.369-5	4.434-5	3.321-5
26	51	0.000-00	3.344-4	2.225-4	1.664-4	1.389-4	1.233-4	1.139-4	1.045-4	1.005-4	9.856-5
26	52	2.404+06	2.324-2	1.925-2	1.687-2	1.562-2	1.489-2	1.444-2	1.388-2	1.345-2	1.309-2
26	53	9.641+06	5.997-2	6.033-2	6.117-2	6.231-2	6.302-2	6.351-2	6.388-2	6.358-2	6.275-2
26	54	2.465-01	2.256-2	1.428-2	9.286-3	6.409-3	4.709-3	3.608-3	2.338-3	1.646-3	1.230-3
26	55	7.161-02	1.727-3	1.076-3	6.978-4	4.873-4	3.606-4	2.776-4	1.814-4	1.282-4	9.599-5
26	56	6.866+05	4.666-3	3.708-3	3.167-3	2.899-3	2.745-3	2.653-3	2.544-3	2.467-3	2.397-3
26	57	3.823+05	5.929-3	4.347-3	3.440-3	2.952-3	2.660-3	2.479-3	2.264-3	2.131-3	2.035-3
26	58	2.532+08	7.971-1	9.439-1	1.049-0	1.121-0	1.166-0	1.200-0	1.236-0	1.247-0	1.242-0
26	59	3.986+07	8.179-2	9.525-2	1.048-1	1.116-1	1.161-1	1.197-1	1.238-1	1.253-1	1.249-1
26	60	6.458+06	2.215-2	1.834-2	1.621-2	1.519-2	1.465-2	1.437-2	1.409-2	1.387-2	1.364-2
26	61	9.889+05	2.102-2	1.411-2	1.001-2	7.695-3	6.311-3	5.416-3	4.388-3	3.827-3	3.439-3
26	62	1.792-04	2.451-4	1.137-4	6.261-5	3.971-5	2.743-5	2.027-5	1.310-5	9.949-6	8.427-6
26	63	1.265+04	2.970-3	1.822-3	1.172-3	8.132-4	5.991-4	4.600-4	3.003-4	2.136-4	1.618-4
26	64	7.744+06	4.988-2	3.952-2	3.360-2	3.049-2	2.869-2	2.763-2	2.642-2	2.577-2	2.519-2
26	65	0.000-00	7.221-4	4.264-4	2.684-4	1.846-4	1.340-4	1.016-4	6.568-5	4.678-5	3.608-5
26	66	2.579+06	9.954-3	8.230-3	7.337-3	6.886-3	6.653-3	6.539-3	6.430-3	6.339-3	6.244-3
26	67	6.828-03	2.288-3	1.354-3	8.498-4	5.796-4	4.160-4	3.113-4	1.944-4	1.327-4	9.754-5
26	68	1.131+06	5.166-3	3.681-3	2.917-3	2.530-3	2.309-3	2.179-3	2.045-3	1.972-3	1.922-3
26	69	2.492-02	8.931-4	6.369-4	5.050-4	4.335-4	3.842-4	3.457-4	2.903-4	2.512-4	2.218-4
26	70	6.185-03	3.694-4	1.738-4	1.029-4	6.737-5	4.744-5	3.518-5	2.191-5	1.526-5	1.156-5
26	71	4.373-01	2.032-3	1.276-3	8.354-4	5.930-4	4.456-4	3.492-4	2.368-4	1.738-4	1.350-4
26	72	1.714+07	1.462-2	1.519-2	1.580-2	1.649-2	1.705-2	1.757-2	1.833-2	1.876-2	1.895-2
26	73	1.284+07	2.154-2	1.972-2	1.884-2	1.864-2	1.874-2	1.910-2	2.006-2	2.115-2	2.232-2
26	74	8.197+04	1.702-2	1.094-2	7.311-3	5.312-3	4.122-3	3.353-3	2.477-3	2.009-3	1.732-3
26	75	3.675+06	2.129-2	1.470-2	1.086-2	8.848-3	7.682-3	6.999-3	6.338-3	6.114-3	6.097-3
26	76	8.276+07	9.339-2	9.924-2	1.048-1	1.099-1	1.142-1	1.188-1	1.278-1	1.367-1	1.453-1
26	77	3.142+08	1.499-1	1.763-1	1.958-1	2.123-1	2.251-1	2.371-1	2.581-1	2.768-1	2.945-1
26	78	4.665+06	2.056-2	1.384-2	1.004-2	8.086-3	6.983-3	6.335-3	5.705-3	5.474-3	5.431-3
26	79	1.381+07	1.901-2	1.436-2	1.182-2	1.064-2	1.003-2	9.758-3	9.672-3	9.844-3	1.014-2
26	80	5.099-00	9.075-3	5.531-3	3.500-3	2.401-3	1.752-3	1.336-3	8.618-4	6.049-4	4.506-4
26	81	9.784+07	3.469-2	3.991-2	4.436-2	4.790-2	5.081-2	5.346-2	5.804-2	6.204-2	6.575-2
26	82	1.675-01	5.654-3	3.968-3	3.015-3	2.501-3	2.123-3	1.867-3	1.504-3	1.260-3	1.087-3
26	83	0.000-00	1.988-3	2.353-3	2.704-3	2.977-3	3.197-3	3.371-3	3.633-3	3.829-3	3.966-3
26	84	2.817+07	7.113-3	7.365-3	7.852-3	8.357-3	8.785-3	9.214-3	9.971-3	1.064-2	1.126-2
26	85	1.076-01	1.120-3	5.748-4	3.330-4	2.261-4	1.664-4	1.320-4	9.383-5	7.295-5	6.018-5
26	86	0.000-00	3.903-4	2.787-4	2.425-4	2.382-4	2.405-4	2.454-4	2.561-4	2.657-4	2.728-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
26	87	4.213+10	8.502-0	1.027+1	1.154+1	1.254+1	1.330+1	1.402+1	1.526+1	1.633+1	1.731+1
26	88	2.295+08	5.251-2	4.930-2	4.947-2	5.108-2	5.271-2	5.470-2	5.847-2	6.197-2	6.534-2
26	89	3.196+08	8.542-2	8.373-2	8.584-2	8.898-2	9.232-2	9.599-2	1.029-1	1.094-1	1.154-1
26	90	2.542+08	9.615-2	9.117-2	9.185-2	9.433-2	9.693-2	1.002-1	1.069-1	1.135-1	1.197-1
26	91	6.130+10	6.047-0	7.280-0	8.204-0	8.965-0	9.537-0	1.008+1	1.098+1	1.174+1	1.243+1
26	92	7.826+10	1.290+1	1.583+1	1.795+1	1.955+1	2.070+1	2.182+1	2.374+1	2.542+1	2.693+1
26	93	0.000-00	5.744-3	3.288-3	2.021-3	1.365-3	9.776-4	7.321-4	4.565-4	3.105-4	2.257-4
26	94	2.208-02	1.771-2	1.016-2	6.259-3	4.240-3	3.049-3	2.294-3	1.445-3	9.955-4	7.339-4
26	95	2.311+09	2.212-1	2.486-1	2.712-1	2.923-1	3.086-1	3.247-1	3.520-1	3.754-1	3.968-1
26	96	5.038+09	4.486-1	5.401-1	6.107-1	6.675-1	7.108-1	7.517-1	8.192-1	8.753-1	9.256-1
26	97	0.000-00	1.193-2	1.354-2	1.516-2	1.654-2	1.765-2	1.854-2	1.990-2	2.093-2	2.166-2
27	28	3.520+01	4.817-3	3.570-3	3.644-3	3.764-3	3.804-3	3.843-3	3.961-3	4.025-3	4.083-3
27	29	3.586+01	1.075-1	9.006-2	8.394-2	8.307-2	8.506-2	8.930-2	1.028-1	1.219-1	1.462-1
27	30	9.947-05	3.151-2	3.065-2	3.072-2	3.085-2	3.102-2	3.125-2	3.162-2	3.198-2	3.236-2
27	31	2.505-04	6.322-3	3.449-3	2.114-3	1.431-3	1.043-3	8.125-4	5.752-4	4.865-4	4.726-4
27	32	1.425-00	2.235-2	1.636-2	1.375-2	1.261-2	1.218-2	1.217-2	1.292-2	1.436-2	1.635-2
27	33	5.807+01	9.859-2	8.036-2	7.287-2	7.002-2	6.968-2	7.095-2	7.690-2	8.629-2	9.863-2
27	34	5.620-01	1.153-2	6.176-3	3.700-3	2.438-3	1.716-3	1.274-3	7.802-4	5.319-4	3.962-4
27	35	5.465-06	1.095-2	6.034-3	3.787-3	2.651-3	2.007-3	1.614-3	1.177-3	9.562-4	8.335-4
27	36	0.000-00	7.057-3	3.700-3	2.179-3	1.415-3	9.847-4	7.228-4	4.336-4	2.875-4	2.063-4
27	37	2.156-03	1.391-3	8.368-4	5.967-4	4.825-4	4.201-4	3.846-4	3.494-4	3.358-4	3.323-4
27	38	1.277-02	4.759-3	2.632-3	1.668-3	1.191-3	9.249-4	7.659-4	6.018-4	5.341-4	5.128-4
27	39	4.915-02	1.064-2	5.863-3	3.637-3	2.496-3	1.846-3	1.450-3	1.017-3	8.121-4	7.145-4
27	40	5.464-00	1.783-2	9.736-3	5.917-3	3.951-3	2.821-3	2.121-3	1.343-3	9.527-4	7.430-4
27	41	2.361-02	2.708-2	1.719-2	1.255-2	1.021-2	8.890-3	8.127-3	7.377-3	7.142-3	7.174-3
27	42	1.222-01	6.192-3	4.568-3	3.933-3	3.688-3	3.591-3	3.563-3	3.589-3	3.654-3	3.736-3
27	43	2.784-00	2.443-2	2.143-2	2.028-2	1.992-2	1.985-2	1.998-2	2.050-2	2.129-2	2.230-2
27	44	6.591-00	8.563-2	8.204-2	8.099-2	8.133-2	8.195-2	8.319-2	8.605-2	8.958-2	9.384-2
27	45	2.781-02	1.081-2	5.637-3	3.335-3	2.190-3	1.551-3	1.152-3	7.116-4	4.851-4	3.584-4
27	46	8.354-01	7.719-3	4.102-3	2.448-3	1.628-3	1.165-3	8.839-4	5.842-4	4.435-4	3.781-4
27	47	3.285-01	4.483-3	2.447-3	1.502-3	1.019-3	7.437-4	5.759-4	3.910-4	2.971-4	2.448-4
27	48	1.023+01	2.279-2	2.152-2	2.124-2	2.120-2	2.125-2	2.137-2	2.159-2	2.181-2	2.204-2
27	49	3.088+01	3.952-2	3.477-2	3.219-2	3.077-2	2.980-2	2.923-2	2.853-2	2.838-2	2.851-2
27	50	1.040+02	2.921-2	2.851-2	2.852-2	2.861-2	2.878-2	2.904-2	2.967-2	3.048-2	3.148-2
27	51	1.651+01	8.452-3	8.281-3	8.302-3	8.304-3	8.330-3	8.365-3	8.429-3	8.491-3	8.557-3
27	52	6.471-01	4.780-4	3.170-4	2.438-4	2.078-4	1.875-4	1.759-4	1.669-4	1.667-4	1.720-4
27	53	5.811-01	1.371-3	8.195-4	5.757-4	4.600-4	3.991-4	3.664-4	3.382-4	3.322-4	3.368-4
27	54	0.000-00	2.555-3	1.449-3	9.407-4	6.878-4	5.453-4	4.590-4	3.649-4	3.184-4	2.937-4
27	55	3.450+01	5.109-3	4.528-3	4.364-3	4.309-3	4.295-3	4.312-3	4.369-3	4.444-3	4.540-3
27	56	8.461+01	1.183-2	1.024-2	9.714-3	9.548-3	9.471-3	9.468-3	9.535-3	9.660-3	9.840-3
27	57	6.864+01	1.250-2	9.589-3	8.158-3	7.483-3	7.031-3	6.771-3	6.499-3	6.401-3	6.438-3
27	58	1.502-01	1.985-3	1.264-3	9.756-4	8.604-4	8.118-4	7.939-4	7.895-4	7.999-4	8.149-4
27	59	4.881+01	2.389-2	1.712-2	1.364-2	1.177-2	1.064-2	9.922-3	9.182-3	8.897-3	8.868-3
27	60	7.275-00	6.903-3	4.476-3	3.433-3	2.946-3	2.692-3	2.553-3	2.428-3	2.383-3	2.374-3
27	61	7.494+01	1.739-2	1.303-2	1.101-2	1.002-2	9.406-3	9.036-3	8.681-3	8.588-3	8.647-3
27	62	3.001+01	2.829-3	1.993-3	1.633-3	1.463-3	1.375-3	1.330-3	1.298-3	1.303-3	1.328-3
27	63	6.389+01	6.452-3	5.893-3	5.727-3	5.719-3	5.764-3	5.827-3	5.960-3	6.106-3	6.264-3
27	64	2.057+02	6.148-2	5.698-2	5.484-2	5.397-2	5.341-2	5.314-2	5.300-2	5.321-2	5.369-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
27	65	1.470+02	4.164-4	2.779-4	2.254-4	2.021-4	1.923-4	1.930-4	2.109-4	2.446-4	2.919-4
27	66	2.593+02	1.978-2	1.976-2	1.990-2	2.019-2	2.047-2	2.076-2	2.134-2	2.199-2	2.273-2
27	67	1.769+01	1.161-3	6.891-4	4.741-4	3.630-4	2.948-4	2.532-4	2.028-4	1.733-4	1.551-4
27	68	4.368-00	5.593-3	4.051-3	3.213-3	2.698-3	2.352-3	2.142-3	1.844-3	1.661-3	1.527-3
27	69	8.951+01	2.734-3	1.831-3	1.411-3	1.189-3	1.051-3	9.620-4	8.622-4	8.104-4	7.890-4
27	70	2.111+01	1.537-3	9.468-4	6.685-4	5.268-4	4.403-4	3.861-4	3.203-4	2.809-4	2.550-4
27	71	6.181+01	7.621-4	5.084-4	4.075-4	3.600-4	3.349-4	3.239-4	3.209-4	3.316-4	3.525-4
27	72	2.528+01	1.750-3	1.008-3	6.884-4	5.252-4	4.281-4	3.682-4	2.992-4	2.613-4	2.392-4
27	73	1.559+01	3.381-3	2.157-3	1.580-3	1.281-3	1.097-3	9.866-4	8.556-4	7.822-4	7.412-4
27	74	1.689+01	1.451-3	8.928-4	6.498-4	5.349-4	4.730-4	4.364-4	3.984-4	3.807-4	3.728-4
27	75	1.045+01	1.570-3	9.376-4	6.498-4	4.959-4	4.012-4	3.389-4	2.663-4	2.272-4	2.051-4
27	76	2.468+01	3.058-3	2.344-3	1.980-3	1.812-3	1.717-3	1.660-3	1.598-3	1.576-3	1.572-3
27	77	3.698+02	6.354-3	5.568-3	5.256-3	5.057-3	4.942-3	4.889-3	4.859-3	4.898-3	4.987-3
27	78	5.977+01	3.926-3	2.794-3	2.232-3	1.932-3	1.733-3	1.607-3	1.450-3	1.358-3	1.303-3
27	79	7.328-00	1.992-3	1.371-3	1.102-3	9.569-4	8.700-4	8.152-4	7.493-4	7.118-4	6.874-4
27	80	4.605-00	7.018-4	4.140-4	2.933-4	2.354-4	2.038-4	1.848-4	1.644-4	1.542-4	1.485-4
27	81	1.314+02	4.518-3	3.276-3	2.555-3	2.112-3	1.816-3	1.630-3	1.384-3	1.243-3	1.154-3
27	82	2.222+01	1.328-3	8.208-4	5.653-4	4.225-4	3.344-4	2.762-4	2.063-4	1.647-4	1.379-4
27	83	5.921+03	1.317-3	1.278-3	1.259-3	1.259-3	1.268-3	1.285-3	1.355-3	1.467-3	1.624-3
27	84	2.726+02	2.090-2	1.772-2	1.572-2	1.426-2	1.319-2	1.251-2	1.150-2	1.080-2	1.028-2
27	85	3.091+03	1.140-2	1.063-2	1.030-2	9.883-3	9.603-3	9.423-3	9.198-3	9.082-3	9.055-3
27	86	4.659-01	3.873-3	3.529-3	3.396-3	3.230-3	3.126-3	3.057-3	2.958-3	2.887-3	2.836-3
27	87	3.410+02	2.758-3	2.111-3	1.791-3	1.608-3	1.475-3	1.390-3	1.290-3	1.236-3	1.210-3
27	88	1.556+01	1.861-4	1.254-4	1.010-4	8.853-5	8.140-5	7.740-5	7.359-5	7.189-5	7.158-5
27	89	9.571-00	4.019-4	2.739-4	2.159-4	1.811-4	1.561-4	1.399-4	1.199-4	1.077-4	9.979-5
27	90	1.052+02	7.756-4	5.645-4	4.560-4	3.965-4	3.470-4	3.131-4	2.722-4	2.488-4	2.355-4
27	91	1.903+02	1.023-3	6.636-4	4.907-4	3.995-4	3.418-4	3.056-4	2.636-4	2.412-4	2.294-4
27	92	3.639-00	9.954-5	9.520-5	9.259-5	9.174-5	9.186-5	9.236-5	9.302-5	9.371-5	9.438-5
27	93	4.275+02	1.823-4	1.697-4	1.656-4	1.570-4	1.510-4	1.471-4	1.417-4	1.382-4	1.364-4
27	94	2.271+02	4.030-4	3.730-4	3.583-4	3.400-4	3.271-4	3.184-4	3.062-4	2.979-4	2.932-4
27	95	5.693-00	8.153-4	6.112-4	5.054-4	4.442-4	3.979-4	3.660-4	3.229-4	2.941-4	2.740-4
27	96	3.675+01	3.834-4	2.998-4	2.607-4	2.322-4	2.133-4	2.014-4	1.845-4	1.734-4	1.654-4
27	97	1.907+04	6.764-5	1.190-4	1.478-4	1.662-4	1.790-4	1.889-4	2.071-4	2.282-4	2.547-4
28	29	9.866-01	1.343-4	8.425-5	7.187-5	6.684-5	6.384-5	6.233-5	6.209-5	6.205-5	6.244-5
28	30	3.538+02	2.052-3	1.789-3	1.858-3	1.923-3	1.947-3	1.969-3	2.037-3	2.073-3	2.107-3
28	31	2.416-00	1.511-5	1.094-5	8.841-6	7.891-6	7.265-6	6.886-6	6.583-6	6.396-6	6.317-6
28	32	1.811+03	9.156-3	9.676-3	9.428-3	9.129-3	8.845-3	8.634-3	8.278-3	8.022-3	7.785-3
28	33	3.997+04	7.456-2	8.247-2	8.569-2	8.935-2	9.074-2	9.201-2	9.544-2	9.734-2	9.903-2
28	34	4.513-09	9.935-6	5.659-6	3.496-6	2.395-6	1.757-6	1.341-6	8.804-7	6.200-7	4.698-7
28	35	0.000-00	2.143-6	1.085-6	6.587-7	4.471-7	3.282-7	2.577-7	1.806-7	1.390-7	1.152-7
28	36	0.000-00	5.043-6	2.309-6	1.275-6	8.068-7	5.536-7	4.019-7	2.419-7	1.604-7	1.148-7
28	37	1.282+03	6.409-5	6.943-5	7.143-5	7.424-5	7.510-5	7.600-5	7.900-5	8.056-5	8.203-5
28	38	5.089-01	2.509-6	1.349-6	8.238-7	5.674-7	4.244-7	3.342-7	2.359-7	1.826-7	1.516-7
28	39	2.810+02	6.192-5	6.878-5	7.016-5	6.904-5	6.721-5	6.532-5	6.293-5	6.053-5	5.863-5
28	40	7.648-09	9.858-6	5.293-6	3.192-6	2.136-6	1.534-6	1.156-6	7.377-7	5.102-7	3.799-7
28	41	0.000-00	4.309-6	2.024-6	1.142-6	7.285-7	4.984-7	3.596-7	2.137-7	1.391-7	9.931-8
28	42	1.577+04	6.970-4	7.911-4	8.433-4	8.573-4	8.539-4	8.454-4	8.190-4	7.958-4	7.716-4
28	43	2.320-06	6.645-5	3.231-5	1.876-5	1.242-5	8.979-6	6.926-6	4.666-6	3.449-6	2.740-6

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
28	44	0.000-00	7.147-5	3.107-5	1.639-5	9.886-6	6.576-6	4.635-6	2.675-6	1.728-6	1.250-6
28	45	6.988-06	1.472-5	8.368-6	5.146-6	3.468-6	2.536-6	1.930-6	1.258-6	8.890-7	6.718-7
28	46	1.147+02	2.273-5	1.365-5	9.195-6	6.964-6	5.682-6	4.839-6	3.867-6	3.292-6	2.931-6
28	47	1.210+02	1.870-5	1.143-5	7.717-6	5.796-6	4.683-6	3.947-6	3.088-6	2.582-6	2.262-6
28	48	8.367+07	1.608-1	1.918-1	2.117-1	2.230-1	2.282-1	2.306-1	2.278-1	2.264-1	2.214-1
28	49	1.321+05	1.980-3	1.677-3	1.537-3	1.465-3	1.419-3	1.386-3	1.334-3	1.290-3	1.250-3
28	50	4.668+04	1.011-3	6.892-4	5.213-4	4.312-4	3.775-4	3.428-4	3.025-4	2.757-4	2.571-4
28	51	5.477+06	4.731-3	5.459-3	5.973-3	6.311-3	6.503-3	6.639-3	6.735-3	6.698-3	6.615-3
28	52	9.105-06	1.177-3	6.769-4	4.320-4	2.990-4	2.189-4	1.676-4	1.087-4	7.642-5	5.723-5
28	53	0.000-00	1.767-3	1.011-3	6.403-4	4.440-4	3.256-4	2.500-4	1.645-4	1.185-4	9.169-5
28	54	0.000-00	2.609-3	1.483-3	9.275-4	6.358-4	4.586-4	3.457-4	2.175-4	1.482-4	1.075-4
28	55	5.787+03	1.464-3	9.102-4	5.900-4	4.155-4	3.115-4	2.433-4	1.656-4	1.219-4	9.565-5
28	56	1.875+06	7.496-3	7.742-3	8.062-3	8.271-3	8.415-3	8.528-3	8.614-3	8.572-3	8.457-3
28	57	5.424-03	2.267-3	1.378-3	8.796-4	6.127-4	4.551-4	3.512-4	2.331-4	1.662-4	1.267-4
28	58	0.000-00	1.183-3	9.106-4	8.607-4	8.469-4	8.566-4	8.741-4	9.088-4	9.423-4	9.678-4
28	59	1.386-02	2.253-3	1.426-3	1.024-3	7.981-4	6.544-4	5.663-4	4.556-4	3.875-4	3.421-4
28	60	2.187+06	4.825-3	5.051-3	5.346-3	5.541-3	5.695-3	5.821-3	5.973-3	6.006-3	5.992-3
28	61	4.481-02	2.545-3	1.562-3	1.001-3	6.911-4	5.063-4	3.875-4	2.523-4	1.795-4	1.366-4
28	62	3.334+06	1.118-2	8.864-3	7.455-3	6.709-3	6.280-3	6.032-3	5.733-3	5.565-3	5.399-3
28	63	1.065+07	2.807-2	2.616-2	2.549-2	2.516-2	2.512-2	2.525-2	2.536-2	2.530-2	2.501-2
28	64	0.000-00	8.167-4	4.250-4	2.437-4	1.541-4	1.054-4	7.585-5	4.573-5	3.137-5	2.415-5
28	65	2.580+07	1.110-2	1.086-2	1.072-2	1.088-2	1.102-2	1.117-2	1.136-2	1.141-2	1.136-2
28	66	6.884-01	1.733-2	1.104-2	7.174-3	4.996-3	3.678-3	2.816-3	1.821-3	1.278-3	9.500-4
28	67	5.448+06	1.679-2	1.308-2	1.086-2	9.648-3	8.930-3	8.515-3	8.055-3	7.757-3	7.543-3
28	68	2.102+06	2.143-2	1.518-2	1.132-2	9.161-3	7.865-3	7.052-3	6.108-3	5.578-3	5.212-3
28	69	1.573+06	3.039-3	2.547-3	2.324-3	2.227-3	2.168-3	2.139-3	2.103-3	2.071-3	2.035-3
28	70	2.534+06	1.110-2	7.995-3	5.995-3	4.912-3	4.261-3	3.845-3	3.370-3	3.102-3	2.945-3
28	71	3.365+04	2.229-3	1.337-3	8.589-4	6.023-4	4.488-4	3.504-4	2.397-4	1.806-4	1.476-4
28	72	1.908+07	1.769-2	1.962-2	2.141-2	2.271-2	2.386-2	2.503-2	2.719-2	2.927-2	3.128-2
28	73	1.059-01	3.237-3	1.881-3	1.177-3	7.974-4	5.746-4	4.335-4	2.749-4	1.890-4	1.402-4
28	74	2.833+07	2.104-2	2.351-2	2.572-2	2.735-2	2.871-2	3.010-2	3.263-2	3.504-2	3.734-2
28	75	9.799-06	3.785-3	2.086-3	1.277-3	8.680-4	6.311-4	4.823-4	3.176-4	2.303-4	1.803-4
28	76	0.000-00	6.386-3	3.538-3	2.156-3	1.449-3	1.036-3	7.744-4	4.813-4	3.260-4	2.357-4
28	77	9.167+08	5.197-1	6.196-1	6.964-1	7.504-1	7.931-1	8.352-1	9.099-1	9.793-1	1.045-0
28	78	2.886-01	5.987-3	3.413-3	2.119-3	1.444-3	1.055-3	8.049-4	5.233-4	3.703-4	2.803-4
28	79	1.336+06	5.500-3	4.028-3	3.323-3	2.969-3	2.769-3	2.664-3	2.563-3	2.515-3	2.480-3
28	80	5.558+07	1.620-2	1.784-2	1.915-2	2.042-2	2.142-2	2.243-2	2.426-2	2.595-2	2.758-2
28	81	1.460+09	5.619-1	6.694-1	7.516-1	8.092-1	8.539-1	8.983-1	9.761-1	1.047-0	1.113-0
28	82	3.584+09	6.887-1	8.147-1	9.037-1	9.781-1	1.034-0	1.088-0	1.181-0	1.266-0	1.345-0
28	83	4.850+09	2.910-1	3.522-1	3.932-1	4.285-1	4.543-1	4.792-1	5.221-1	5.601-1	5.959-1
28	84	1.104+08	2.997-2	3.391-2	3.726-2	3.974-2	4.173-2	4.377-2	4.738-2	5.065-2	5.370-2
28	85	3.389+08	5.027-2	5.870-2	6.484-2	7.004-2	7.390-2	7.774-2	8.433-2	9.019-2	9.565-2
28	86	9.681+08	4.210-2	5.074-2	5.652-2	6.164-2	6.537-2	6.894-2	7.504-2	8.036-2	8.532-2
28	87	8.419-03	1.601-2	1.414-2	1.341-2	1.296-2	1.267-2	1.267-2	1.265-2	1.265-2	1.263-2
28	88	1.397+06	6.142-3	3.321-3	1.964-3	1.292-3	9.187-4	6.939-4	4.594-4	3.452-4	2.860-4
28	89	9.223-03	1.015-2	5.575-3	3.371-3	2.271-3	1.665-3	1.297-3	9.134-4	7.261-4	6.264-4
28	90	0.000-00	1.511-2	8.225-3	4.852-3	3.141-3	2.184-3	1.595-3	9.627-4	6.423-4	4.654-4
28	91	3.923+10	4.504-0	5.485-0	6.216-0	6.753-0	7.161-0	7.557-0	8.226-0	8.809-0	9.334-0

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a{\pm}b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
28	92	0.000-00	4.039-2	4.586-2	5.106-2	5.526-2	5.875-2	6.151-2	6.570-2	6.887-2	7.109-2
28	93	6.093+08	1.534-2	1.706-2	1.841-2	1.975-2	2.077-2	2.180-2	2.360-2	2.516-2	2.661-2
28	94	6.445+06	8.198-3	4.903-3	3.199-3	2.349-3	1.869-3	1.580-3	1.287-3	1.152-3	1.097-3
28	95	1.539+09	1.794-1	2.109-1	2.355-1	2.543-1	2.688-1	2.832-1	3.077-1	3.291-1	3.484-1
28	96	3.849+10	3.558-0	4.350-0	4.936-0	5.369-0	5.697-0	6.016-0	6.550-0	7.013-0	7.426-0
28	97	2.022+11	2.162-0	2.666-0	2.999-0	3.303-0	3.523-0	3.732-0	4.074-0	4.358-0	4.612-0
29	30	1.828-00	3.179-2	1.946-2	1.303-2	9.382-3	7.085-3	5.520-3	3.657-3	2.580-3	1.933-3
29	31	1.853-01	3.110-3	2.473-3	2.302-3	2.363-3	2.535-3	2.801-3	3.551-3	4.563-3	5.824-3
29	32	6.297-01	7.073-3	4.339-3	2.999-3	2.297-3	1.902-3	1.679-3	1.515-3	1.557-3	1.726-3
29	33	3.321-00	3.644-2	2.333-2	1.652-2	1.278-2	1.052-2	9.070-3	7.532-3	6.874-3	6.711-3
29	34	7.526-05	6.275-3	4.098-3	3.131-3	2.690-3	2.499-3	2.451-3	2.587-3	2.922-3	3.403-3
29	35	0.000-00	7.505-3	4.085-3	2.474-3	1.643-3	1.162-3	8.655-4	5.303-4	3.582-4	2.608-4
29	36	0.000-00	1.028-2	5.530-3	3.322-3	2.193-3	1.542-3	1.144-3	6.947-4	4.650-4	3.351-4
29	37	3.712-00	3.001-3	1.704-3	1.063-3	7.230-4	5.213-4	3.930-4	2.453-4	1.668-4	1.211-4
29	38	4.637-02	7.185-3	4.042-3	2.532-3	1.736-3	1.269-3	9.755-4	6.386-4	4.617-4	3.581-4
29	39	6.011-00	7.984-3	4.315-3	2.598-3	1.721-3	1.216-3	9.028-4	5.547-4	3.779-4	2.804-4
29	40	2.581-03	1.095-2	7.449-3	5.918-3	5.197-3	4.814-3	4.617-3	4.473-3	4.500-3	4.624-3
29	41	0.000-00	9.043-3	4.775-3	2.843-3	1.882-3	1.340-3	1.013-3	6.536-4	4.743-4	3.750-4
29	42	7.050-01	2.584-2	2.339-2	2.240-2	2.213-2	2.209-2	2.222-2	2.274-2	2.354-2	2.457-2
29	43	1.808-00	5.099-2	4.929-2	4.916-2	4.979-2	5.060-2	5.168-2	5.417-2	5.724-2	6.093-2
29	44	0.000-00	7.118-3	4.314-3	3.045-3	2.435-3	2.105-3	1.913-3	1.726-3	1.648-3	1.621-3
29	45	8.725-03	9.221-3	4.882-3	2.870-3	1.865-3	1.295-3	9.474-4	5.681-4	3.787-4	2.752-4
29	46	7.769-01	5.617-3	3.024-3	1.853-3	1.263-3	9.204-4	7.061-4	4.699-4	3.521-4	2.929-4
29	47	1.065-00	3.584-3	1.888-3	1.140-3	7.771-4	5.742-4	4.508-4	3.177-4	2.509-4	2.142-4
29	48	1.013+03	3.502-3	1.791-3	1.045-3	6.834-4	4.816-4	3.523-4	2.147-4	1.400-4	9.971-5
29	49	2.712+01	3.408-2	3.317-2	3.287-2	3.309-2	3.331-2	3.364-2	3.450-2	3.561-2	3.699-2
29	50	3.123+01	2.318-2	2.142-2	2.035-2	1.981-2	1.937-2	1.919-2	1.902-2	1.916-2	1.949-2
29	51	7.120+01	5.433-4	3.129-4	2.041-4	1.467-4	1.121-4	8.812-5	6.079-5	4.482-5	3.513-5
29	52	4.284-01	9.422-4	5.912-4	4.281-4	3.496-4	3.055-4	2.806-4	2.587-4	2.537-4	2.579-4
29	53	0.000-00	8.209-4	4.655-4	2.951-4	2.070-4	1.547-4	1.219-4	8.348-5	6.273-5	5.035-5
29	54	0.000-00	4.854-4	2.919-4	2.146-4	1.828-4	1.688-4	1.630-4	1.612-4	1.637-4	1.678-4
29	55	9.067+01	5.678-3	5.053-3	4.825-3	4.753-3	4.712-3	4.708-3	4.724-3	4.760-3	4.818-3
29	56	4.318-00	2.896-3	1.980-3	1.513-3	1.263-3	1.096-3	9.919-4	8.667-4	7.981-4	7.689-4
29	57	9.085-00	1.016-2	9.306-3	9.052-3	9.008-3	9.006-3	9.049-3	9.160-3	9.294-3	9.462-3
29	58	0.000-00	7.259-4	4.117-4	2.639-4	1.903-4	1.488-4	1.240-4	9.786-5	8.553-5	7.946-5
29	59	7.955-01	9.982-3	6.129-3	4.108-3	2.993-3	2.313-3	1.864-3	1.342-3	1.056-3	8.894-4
29	60	2.882+01	1.169-2	1.025-2	9.586-3	9.260-3	9.036-3	8.900-3	8.769-3	8.736-3	8.767-3
29	61	1.250+02	3.024-2	2.878-2	2.823-2	2.813-2	2.810-2	2.818-2	2.849-2	2.894-2	2.954-2
29	62	7.198+01	5.522-3	5.073-3	4.923-3	4.898-3	4.908-3	4.946-3	5.042-3	5.166-3	5.311-3
29	63	2.852+01	8.131-3	6.085-3	5.096-3	4.604-3	4.315-3	4.144-3	3.978-3	3.928-3	3.942-3
29	64	0.000-00	3.869-3	2.440-3	1.917-3	1.729-3	1.665-3	1.653-3	1.683-3	1.727-3	1.777-3
29	65	5.500-00	3.850-4	2.611-4	1.985-4	1.640-4	1.403-4	1.233-4	1.001-4	8.401-5	7.267-5
29	66	2.984-00	6.054-3	3.584-3	2.430-3	1.819-3	1.453-3	1.216-3	9.436-4	7.990-4	7.162-4
29	67	2.299-00	2.063-3	1.583-3	1.310-3	1.165-3	1.059-3	9.952-4	8.976-4	8.399-4	7.959-4
29	68	4.543-00	1.420-3	9.863-4	7.777-4	6.626-4	5.843-4	5.369-4	4.738-4	4.321-4	4.056-4
29	69	3.169+01	1.237-3	7.503-4	5.373-4	4.292-4	3.631-4	3.187-4	2.691-4	2.422-4	2.282-4
29	70	5.735-00	8.985-4	5.398-4	3.766-4	2.985-4	2.502-4	2.199-4	1.833-4	1.620-4	1.482-4
29	71	5.625+01	5.426-4	4.038-4	3.527-4	3.333-4	3.231-4	3.214-4	3.251-4	3.348-4	3.501-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
29	72	1.438-00	1.179-3	8.168-4	6.409-4	5.482-4	4.925-4	4.573-4	4.167-4	3.938-4	3.806-4
29	73	1.379-00	1.737-3	1.054-3	7.534-4	6.039-4	5.220-4	4.721-4	4.187-4	3.926-4	3.787-4
29	74	1.156+01	1.292-3	8.077-4	5.826-4	4.585-4	3.777-4	3.247-4	2.593-4	2.216-4	1.979-4
29	75	5.212+01	1.338-3	9.775-4	7.962-4	7.025-4	6.413-4	6.044-4	5.712-4	5.707-4	5.917-4
29	76	0.000-00	1.186-3	6.486-4	4.052-4	2.820-4	2.101-4	1.651-4	1.136-4	8.594-5	6.965-5
29	77	2.016+02	1.719-3	1.033-3	7.324-4	5.930-4	5.220-4	4.880-4	4.843-4	5.279-4	6.065-4
29	78	2.607-00	1.464-3	8.713-4	6.220-4	4.918-4	4.151-4	3.663-4	3.109-4	2.804-4	2.614-4
29	79	1.369-00	1.858-3	1.244-3	9.248-4	7.502-4	6.349-4	5.620-4	4.657-4	4.029-4	3.594-4
29	80	1.143+01	1.203-3	8.877-4	7.308-4	6.441-4	5.856-4	5.484-4	4.990-4	4.670-4	4.446-4
29	81	3.321+02	2.042-3	1.387-3	1.053-3	8.530-4	7.370-4	6.685-4	6.165-4	6.268-4	6.799-4
29	82	1.867+01	8.418-4	5.514-4	3.957-4	3.125-4	2.584-4	2.238-4	1.803-4	1.549-4	1.381-4
29	83	1.961+02	1.036-4	6.801-5	5.012-5	4.024-5	3.373-5	2.899-5	2.315-5	1.916-5	1.649-5
29	84	1.564+03	1.156-2	1.062-2	9.996-3	9.623-3	9.276-3	9.050-3	8.783-3	8.654-3	8.627-3
29	85	3.509+02	1.048-2	8.789-3	7.601-3	6.931-3	6.360-3	6.002-3	5.461-3	5.110-3	4.851-3
29	86	3.990+01	1.079-3	8.801-4	7.322-4	6.393-4	5.685-4	5.181-4	4.432-4	3.866-4	3.437-4
29	87	4.524-01	7.741-4	4.128-4	2.418-4	1.598-4	1.126-4	8.377-5	5.273-5	3.714-5	2.861-5
29	88	1.141+01	3.422-4	2.386-4	1.853-4	1.520-4	1.273-4	1.108-4	8.939-5	7.603-5	6.700-5
29	89	1.871+01	3.965-4	2.946-4	2.411-4	2.083-4	1.835-4	1.664-4	1.447-4	1.308-4	1.216-4
29	90	0.000-00	1.678-4	1.050-4	7.839-5	6.622-5	5.978-5	5.622-5	5.303-5	5.167-5	5.137-5
29	91	2.706+02	4.958-4	2.892-4	1.927-4	1.465-4	1.203-4	1.050-4	9.084-5	8.772-5	9.085-5
29	92	0.000-00	7.673-6	4.239-6	2.491-6	1.738-6	1.235-6	9.130-7	5.470-7	3.597-7	2.553-7
29	93	8.785-01	2.272-5	1.440-5	1.007-5	7.545-6	5.998-6	4.989-6	3.741-6	2.960-6	2.451-6
29	94	8.104+01	4.486-4	3.458-4	2.909-4	2.580-4	2.323-4	2.156-4	1.931-4	1.785-4	1.689-4
29	95	1.353+02	4.683-4	4.319-4	4.066-4	3.893-4	3.728-4	3.619-4	3.478-4	3.385-4	3.332-4
29	96	2.396+01	3.541-5	1.760-5	1.090-5	7.954-6	6.408-6	5.525-6	4.731-6	4.555-6	4.728-6
29	97	6.440-00	3.490-6	1.765-6	1.061-6	7.095-7	5.166-7	3.931-7	2.648-7	1.951-7	1.548-7
30	31	6.164-03	2.172-4	1.174-4	7.080-5	4.732-5	3.369-5	2.510-5	1.562-5	1.057-5	7.729-6
30	32	8.653-06	3.077-3	2.538-3	2.322-3	2.262-3	2.281-3	2.350-3	2.592-3	2.944-3	3.393-3
30	33	3.019-05	1.078-2	6.757-3	4.770-3	3.863-3	3.507-3	3.513-3	4.259-3	5.679-3	7.638-3
30	34	0.000-00	8.900-4	4.767-4	2.855-4	1.869-4	1.307-4	9.607-5	5.753-5	3.792-5	2.689-5
30	35	0.000-00	2.146-3	1.168-3	7.117-4	4.777-4	3.431-4	2.606-4	1.679-4	1.207-4	9.431-5
30	36	0.000-00	4.833-3	2.637-3	1.598-3	1.062-3	7.503-4	5.580-4	3.394-4	2.266-4	1.624-4
30	37	0.000-00	5.893-4	3.266-4	2.017-4	1.451-4	1.124-4	9.262-5	7.029-5	5.920-5	5.255-5
30	38	3.872-00	2.342-3	1.292-3	7.890-4	5.285-4	3.766-4	2.809-4	1.726-4	1.159-4	8.320-5
30	39	8.360-04	4.532-3	2.939-3	2.172-3	1.778-3	1.562-3	1.438-3	1.333-3	1.327-3	1.378-3
30	40	0.000-00	2.857-3	1.545-3	9.308-4	6.164-4	4.354-4	3.233-4	1.971-4	1.320-4	9.464-5
30	41	0.000-00	1.764-3	8.331-4	4.553-4	2.885-4	2.037-4	1.570-4	1.129-4	9.482-5	8.715-5
30	42	5.197-01	2.487-2	2.400-2	2.379-2	2.402-2	2.435-2	2.475-2	2.573-2	2.696-2	2.845-2
30	43	0.000-00	2.980-3	1.743-3	1.116-3	7.775-4	5.723-4	4.376-4	2.814-4	1.956-4	1.449-4
30	44	0.000-00	6.734-4	4.710-4	4.533-4	4.847-4	5.249-4	5.639-4	6.283-4	6.766-4	7.150-4
30	45	0.000-00	3.240-3	1.767-3	1.066-3	7.069-4	4.984-4	3.694-4	2.248-4	1.501-4	1.077-4
30	46	1.142-05	2.469-3	1.277-3	7.386-4	4.789-4	3.351-4	2.492-4	1.580-4	1.136-4	8.959-5
30	47	1.092-00	1.024-3	5.270-4	3.218-4	2.202-4	1.606-4	1.213-4	7.643-5	5.150-5	3.688-5
30	48	0.000-00	1.322-3	7.061-4	4.402-4	3.032-4	2.257-4	1.765-4	1.213-4	9.012-5	7.171-5
30	49	6.419-01	1.453-2	1.437-2	1.442-2	1.448-2	1.454-2	1.461-2	1.473-2	1.482-2	1.491-2
30	50	4.101-00	7.390-4	4.438-4	2.991-4	2.206-4	1.727-4	1.401-4	1.014-4	7.860-5	6.413-5
30	51	0.000-00	2.795-3	2.370-3	1.992-3	1.802-3	1.644-3	1.539-3	1.368-3	1.261-3	1.172-3
30	52	0.000-00	6.538-4	3.735-4	2.362-4	1.639-4	1.209-4	9.349-5	6.164-5	4.437-5	3.411-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
30	53	0.000-00	1.082-4	7.399-5	6.693-5	6.831-5	7.167-5	7.563-5	8.288-5	8.866-5	9.352-5
30	54	0.000-00	1.363-4	7.494-5	4.570-5	3.059-5	2.171-5	1.618-5	9.868-6	6.590-6	4.730-6
30	55	2.662+01	1.040-3	7.448-4	5.730-4	4.786-4	4.136-4	3.680-4	3.067-4	2.637-4	2.329-4
30	56	3.493-00	4.862-3	4.704-3	4.690-3	4.729-3	4.762-3	4.802-3	4.873-3	4.939-3	5.012-3
30	57	0.000-00	6.994-4	3.600-4	2.101-4	1.364-4	9.534-5	6.991-5	4.253-5	2.852-5	2.069-5
30	58	0.000-00	2.171-4	1.368-4	1.067-4	9.590-5	9.187-5	9.105-5	9.244-5	9.492-5	9.762-5
30	59	0.000-00	2.734-3	1.616-3	1.038-3	7.230-4	5.313-4	4.050-4	2.589-4	1.787-4	1.313-4
30	60	5.236+01	1.446-2	1.396-2	1.374-2	1.371-2	1.369-2	1.370-2	1.380-2	1.396-2	1.418-2
30	61	0.000-00	9.079-4	5.022-4	3.107-4	2.095-4	1.505-4	1.129-4	7.055-5	4.804-5	3.508-5
30	62	4.610-00	1.934-3	1.146-3	7.488-4	5.347-4	4.044-4	3.201-4	2.210-4	1.655-4	1.316-4
30	63	4.397-01	7.374-4	5.704-4	5.081-4	4.870-4	4.786-4	4.740-4	4.691-4	4.687-4	4.690-4
30	64	0.000-00	9.712-4	7.066-4	6.586-4	6.774-4	7.118-4	7.476-4	8.106-4	8.586-4	8.985-4
30	65	0.000-00	5.040-4	4.067-4	3.375-4	3.027-4	2.758-4	2.584-4	2.303-4	2.137-4	1.998-4
30	66	0.000-00	2.514-3	1.401-3	8.606-4	5.779-4	4.136-4	3.095-4	1.926-4	1.308-4	9.533-5
30	67	4.121-02	5.496-4	3.848-4	2.971-4	2.484-4	2.146-4	1.907-4	1.577-4	1.343-4	1.175-4
30	68	2.544+01	4.479-4	3.807-4	3.509-4	3.461-4	3.468-4	3.555-4	3.855-4	4.300-4	4.896-4
30	69	3.321+01	4.179-4	2.319-4	1.483-4	1.048-4	7.843-5	5.999-5	3.897-5	2.698-5	1.992-5
30	70	1.827+01	2.441-4	1.416-4	9.416-5	7.095-5	5.695-5	4.786-5	3.693-5	3.020-5	2.575-5
30	71	2.028+01	2.623-4	1.559-4	1.023-4	7.421-5	5.745-5	4.625-5	3.336-5	2.578-5	2.116-5
30	72	8.878-00	1.471-4	8.576-5	6.417-5	5.701-5	5.435-5	5.501-5	6.002-5	6.823-5	7.915-5
30	73	0.000-00	5.230-4	2.786-4	1.680-4	1.105-4	7.827-5	5.825-5	3.590-5	2.428-5	1.763-5
30	74	2.007+01	4.229-4	3.558-4	3.179-4	2.986-4	2.840-4	2.750-4	2.667-4	2.678-4	2.751-4
30	75	0.000-00	3.692-4	2.045-4	1.287-4	9.085-5	6.857-5	5.446-5	3.793-5	2.874-5	2.310-5
30	76	0.000-00	3.656-4	1.946-4	1.190-4	8.165-5	6.029-5	4.737-5	3.311-5	2.579-5	2.173-5
30	77	2.213+02	9.663-4	7.551-4	6.567-4	6.253-4	6.142-4	6.191-4	6.699-4	7.604-4	8.868-4
30	78	0.000-00	3.555-4	1.723-4	9.444-5	5.809-5	3.868-5	2.735-5	1.555-5	9.895-6	6.877-6
30	79	5.785-00	9.751-4	7.515-4	6.513-4	5.922-4	5.515-4	5.266-4	4.956-4	4.773-4	4.655-4
30	80	7.635-00	6.089-4	4.552-4	3.598-4	3.033-4	2.638-4	2.367-4	1.981-4	1.706-4	1.504-4
30	81	4.547+01	1.415-3	1.188-3	1.059-3	9.888-4	9.449-4	9.173-4	8.903-4	8.812-4	8.833-4
30	82	1.504+01	3.166-4	2.204-4	1.661-4	1.353-4	1.147-4	1.006-4	8.205-5	6.955-5	6.077-5
30	83	0.000-00	3.718-4	2.870-4	2.226-4	1.928-4	1.681-4	1.511-4	1.263-4	1.103-4	9.834-5
30	84	1.392+02	3.821-3	3.370-3	3.177-3	3.009-3	2.872-3	2.790-3	2.684-3	2.617-3	2.575-3
30	85	7.857-00	1.021-3	8.273-4	6.848-4	5.962-4	5.294-4	4.820-4	4.116-4	3.587-4	3.187-4
30	86	0.000-00	1.872-3	1.525-3	1.225-3	1.096-3	9.816-4	9.026-4	7.818-4	7.048-4	6.451-4
30	87	0.000-00	2.840-4	1.508-4	8.756-5	5.723-5	3.975-5	2.898-5	1.732-5	1.141-5	8.138-6
30	88	3.556+01	1.934-4	1.495-4	1.250-4	1.081-4	9.381-5	8.467-5	7.254-5	6.508-5	6.047-5
30	89	0.000-00	6.194-5	3.435-5	2.143-5	1.476-5	1.079-5	8.275-6	5.377-6	3.810-6	2.886-6
30	90	0.000-00	4.749-5	3.207-5	2.653-5	2.471-5	2.404-5	2.391-5	2.426-5	2.466-5	2.517-5
30	91	8.513+01	2.298-4	1.534-4	1.139-4	9.455-5	8.184-5	7.412-5	6.579-5	6.226-5	6.151-5
30	92	0.000-00	2.792-6	1.683-6	1.130-6	9.194-7	7.722-7	6.753-7	5.575-7	4.925-7	4.520-7
30	93	0.000-00	8.501-5	5.868-5	4.223-5	3.451-5	2.864-5	2.474-5	1.950-5	1.611-5	1.379-5
30	94	1.079-00	2.563-5	1.529-5	1.021-5	7.324-6	5.596-6	4.476-6	3.155-6	2.369-6	1.880-6
30	95	3.247+01	1.627-4	1.525-4	1.462-4	1.411-4	1.356-4	1.320-4	1.272-4	1.239-4	1.220-4
30	96	3.041+02	3.319-5	3.776-5	4.105-5	4.333-5	4.495-5	4.654-5	5.037-5	5.555-5	6.237-5
30	97	0.000-00	1.983-5	1.491-5	1.135-5	9.615-6	8.187-6	7.186-6	5.798-6	4.886-6	4.236-6
31	32	6.199-01	2.095-1	1.313-1	9.156-2	6.958-2	5.598-2	4.707-2	3.646-2	3.053-2	2.697-2
31	33	4.088-02	2.201-2	1.363-2	9.336-3	6.947-3	5.463-3	4.480-3	3.309-3	2.649-3	2.253-3
31	34	6.247-07	1.772-2	9.873-3	7.072-3	6.296-3	6.450-3	7.162-3	9.615-3	1.309-2	1.744-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
31	35	0.000-00	5.568-3	3.039-3	1.959-3	1.450-3	1.180-3	1.030-3	8.846-4	8.260-4	8.054-4
31	36	0.000-00	2.192-4	1.227-4	7.921-5	5.715-5	4.454-5	3.693-5	2.850-5	2.418-5	2.179-5
31	37	2.098+01	6.182-3	3.647-3	2.347-3	1.637-3	1.203-3	9.176-4	5.860-4	4.035-4	2.962-4
31	38	1.738+01	1.304-1	1.281-1	1.293-1	1.333-1	1.380-1	1.438-1	1.580-1	1.762-1	1.983-1
31	39	5.288-00	1.376-1	1.299-1	1.289-1	1.308-1	1.340-1	1.384-1	1.496-1	1.642-1	1.821-1
31	40	2.512-03	3.881-2	3.093-2	2.793-2	2.680-2	2.643-2	2.655-2	2.737-2	2.870-2	3.042-2
31	41	0.000-00	3.476-3	1.994-3	1.304-3	9.535-4	7.552-4	6.358-4	5.069-4	4.448-4	4.134-4
31	42	5.233-00	3.226-2	1.827-2	1.153-2	8.013-3	5.988-3	4.735-3	3.428-3	2.898-3	2.772-3
31	43	1.620-03	1.122-2	6.374-3	4.000-3	2.745-3	2.002-3	1.530-3	9.954-4	7.166-4	5.616-4
31	44	0.000-00	4.200-4	2.370-4	1.476-4	1.002-4	7.213-5	5.426-5	3.392-5	2.314-5	1.692-5
31	45	1.532-03	1.422-2	8.924-3	6.808-3	5.910-3	5.501-3	5.327-3	5.244-3	5.279-3	5.366-3
31	46	1.066-00	1.978-2	1.763-2	1.672-2	1.635-2	1.619-2	1.614-2	1.620-2	1.640-2	1.669-2
31	47	6.729-00	6.514-2	6.346-2	6.291-2	6.320-2	6.357-2	6.413-2	6.548-2	6.721-2	6.930-2
31	48	2.020-00	2.438-5	1.386-5	8.709-6	5.934-6	4.296-6	3.241-6	2.038-6	1.388-6	1.014-6
31	49	1.824-00	5.920-3	3.277-3	2.030-3	1.379-3	1.001-3	7.703-4	5.171-4	3.977-4	3.432-4
31	50	4.649-00	1.883-3	1.255-3	9.633-4	8.126-4	7.287-4	6.801-4	6.329-4	6.177-4	6.193-4
31	51	7.681-01	1.365-4	8.468-5	5.523-5	3.815-5	2.783-5	2.123-5	1.357-5	9.505-6	7.119-6
31	52	1.419+01	2.038-2	1.288-2	9.041-3	7.031-3	5.833-3	5.113-3	4.465-3	4.350-3	4.565-3
31	53	0.000-00	3.189-3	1.936-3	1.264-3	8.866-4	6.549-4	5.003-4	3.209-4	2.216-4	1.630-4
31	54	0.000-00	5.421-6	2.486-6	1.398-6	9.500-7	7.189-7	5.951-7	4.793-7	4.299-7	4.089-7
31	55	1.622+02	8.357-3	4.447-3	2.684-3	1.817-3	1.336-3	1.047-3	7.608-4	6.520-4	6.370-4
31	56	4.011+01	1.129-2	6.032-3	3.651-3	2.476-3	1.831-3	1.453-3	1.092-3	9.858-4	1.013-3
31	57	5.273-01	3.849-3	2.055-3	1.241-3	8.328-4	6.006-4	4.606-4	3.096-4	2.391-4	2.067-4
31	58	0.000-00	3.635-5	1.960-5	1.189-5	7.882-6	5.595-6	4.171-6	2.598-6	1.784-6	1.330-6
31	59	5.116-00	8.307-4	5.110-4	3.632-4	2.941-4	2.576-4	2.432-4	2.491-4	2.837-4	3.390-4
31	60	2.440+01	9.189-3	4.750-3	2.877-3	1.971-3	1.471-3	1.175-3	8.898-4	7.956-4	8.003-4
31	61	9.803-00	5.455-3	2.927-3	1.813-3	1.271-3	9.765-4	8.068-4	6.471-4	6.022-4	6.174-4
31	62	1.655+01	2.784-3	1.745-3	1.211-3	9.177-4	7.440-4	6.330-4	5.225-4	4.833-4	4.857-4
31	63	1.425+01	2.883-3	1.741-3	1.193-3	9.050-4	7.370-4	6.325-4	5.242-4	4.815-4	4.742-4
31	64	0.000-00	6.199-4	3.211-4	1.880-4	1.224-4	8.565-5	6.350-5	3.937-5	2.732-5	2.076-5
31	65	1.135-00	1.407-3	8.246-4	5.286-4	3.680-4	2.708-4	2.064-4	1.323-4	9.126-5	6.721-5
31	66	1.493-00	3.329-4	1.895-4	1.224-4	8.901-5	6.996-5	5.906-5	4.967-5	4.889-5	5.305-5
31	67	4.009-00	1.117-3	6.384-4	4.086-4	2.879-4	2.177-4	1.733-4	1.259-4	1.041-4	9.595-5
31	68	1.533-01	2.780-3	1.502-3	9.081-4	6.024-4	4.254-4	3.158-4	1.921-4	1.280-4	9.207-5
31	69	1.397+01	7.080-4	4.123-4	2.677-4	1.900-4	1.439-4	1.140-4	8.006-5	6.167-5	5.114-5
31	70	2.214+01	1.872-4	1.313-4	1.070-4	9.431-5	8.864-5	8.697-5	9.130-5	1.022-4	1.186-4
31	71	1.459+02	2.209-3	1.196-3	7.405-4	5.126-4	3.817-4	2.977-4	2.078-4	1.619-4	1.401-4
31	72	8.422+01	3.231-3	1.786-3	1.111-3	7.664-4	5.662-4	4.440-4	3.156-4	2.602-4	2.429-4
31	73	2.026+01	1.754-3	9.925-4	6.392-4	4.573-4	3.572-4	2.991-4	2.468-4	2.378-4	2.533-4
31	74	1.574+02	2.915-3	1.541-3	9.307-4	6.306-4	4.621-4	3.566-4	2.497-4	1.999-4	1.813-4
31	75	8.608+01	9.634-4	6.579-4	5.229-4	4.581-4	4.307-4	4.253-4	4.555-4	5.232-4	6.211-4
31	76	0.000-00	9.082-5	4.552-5	2.631-5	1.706-5	1.188-5	8.710-6	5.225-6	3.449-6	2.462-6
31	77	3.750-00	1.448-4	7.754-5	4.634-5	3.085-5	2.214-5	1.664-5	1.078-5	7.733-6	6.070-6
31	78	5.333+01	8.900-4	5.313-4	3.678-4	2.861-4	2.411-4	2.166-4	2.000-4	2.072-4	2.296-4
31	79	2.658+01	1.956-3	1.100-3	7.014-4	4.986-4	3.831-4	3.123-4	2.369-4	2.025-4	1.887-4
31	80	1.428+01	5.433-4	3.148-4	2.093-4	1.553-4	1.241-4	1.036-4	8.137-5	6.952-5	6.289-5
31	81	9.086-01	1.086-4	6.060-5	3.809-5	2.651-5	1.985-5	1.567-5	1.103-5	8.629-6	7.293-6
31	82	1.772+01	3.912-5	2.758-5	2.129-5	1.810-5	1.630-5	1.534-5	1.509-5	1.614-5	1.819-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
31	83	2.725-01	1.524-5	9.246-6	6.082-6	4.321-6	3.251-6	2.523-6	1.687-6	1.205-6	9.152-7
31	84	3.836+01	8.678-4	4.948-4	3.156-4	2.221-4	1.678-4	1.345-4	9.847-5	8.213-5	7.583-5
31	85	5.244+01	2.067-4	1.271-4	8.765-5	6.708-5	5.497-5	4.730-5	3.982-5	3.733-5	3.788-5
31	86	4.318-01	1.247-4	7.736-5	5.200-5	3.755-5	2.875-5	2.275-5	1.583-5	1.175-5	9.247-6
31	87	5.027+02	1.542-4	2.055-4	2.324-4	2.483-4	2.607-4	2.739-4	3.071-4	3.517-4	4.093-4
31	88	3.694+02	1.096-3	7.499-4	5.685-4	4.665-4	4.057-4	3.654-4	3.259-4	3.128-4	3.158-4
31	89	2.304+02	5.539-4	3.963-4	3.122-4	2.695-4	2.434-4	2.280-4	2.168-4	2.199-4	2.328-4
31	90	0.000-00	3.935-5	1.931-5	1.121-5	7.317-6	5.158-6	3.816-6	2.341-6	1.573-6	1.138-6
31	91	3.926+02	5.466-5	6.686-5	7.425-5	7.875-5	8.215-5	8.553-5	9.407-5	1.056-4	1.208-4
31	92	0.000-00	1.962-6	1.143-6	7.159-7	4.799-7	3.406-7	2.525-7	1.531-7	1.013-7	7.215-8
31	93	9.024-01	1.450-4	8.337-5	5.273-5	3.643-5	2.684-5	2.040-5	1.325-5	9.226-6	6.884-6
31	94	2.738+02	2.016-4	1.413-4	1.134-4	9.817-5	8.939-5	8.400-5	7.966-5	7.956-5	8.244-5
31	95	8.272+01	9.501-5	6.219-5	4.812-5	4.165-5	3.804-5	3.600-5	3.451-5	3.488-5	3.652-5
31	96	1.803-00	1.212-6	7.424-7	5.318-7	4.335-7	3.801-7	3.509-7	3.307-7	3.383-7	3.644-7
31	97	2.413-02	9.203-7	5.464-7	3.503-7	2.413-7	1.754-7	1.326-7	8.283-8	5.639-8	4.077-8
32	33	1.616-07	5.178-2	4.926-2	4.907-2	4.901-2	4.908-2	4.922-2	4.937-2	4.949-2	4.953-2
32	34	2.880-00	3.061-1	1.896-1	1.304-1	9.760-2	7.738-2	6.401-2	4.814-2	3.926-2	3.394-2
32	35	1.554-06	1.583-2	9.400-3	6.818-3	5.742-3	5.328-3	5.246-3	5.613-3	6.379-3	7.406-3
32	36	0.000-00	1.751-3	9.515-4	5.987-4	4.250-4	3.287-4	2.712-4	2.105-4	1.811-4	1.663-4
32	37	5.526-02	8.764-2	8.819-2	9.097-2	9.489-2	9.953-2	1.050-1	1.182-1	1.349-1	1.552-1
32	38	3.360-00	2.172-2	1.319-2	9.034-3	6.863-3	5.607-3	4.844-3	4.100-3	3.877-3	3.944-3
32	39	1.336+01	1.645-1	1.574-1	1.587-1	1.630-1	1.689-1	1.765-1	1.953-1	2.195-1	2.489-1
32	40	4.207-00	1.750-1	1.606-1	1.580-1	1.593-1	1.627-1	1.679-1	1.814-1	1.991-1	2.209-1
32	41	1.294-03	2.789-2	2.357-2	2.183-2	2.114-2	2.088-2	2.093-2	2.136-2	2.210-2	2.308-2
32	42	9.917-02	4.402-2	2.544-2	1.661-2	1.205-2	9.437-3	7.849-3	6.247-3	5.675-3	5.649-3
32	43	5.582-00	2.082-2	1.251-2	8.406-3	6.220-3	4.917-3	4.097-3	3.186-3	2.737-3	2.517-3
32	44	8.871-03	6.110-3	3.669-3	2.524-3	1.942-3	1.614-3	1.424-3	1.243-3	1.195-3	1.219-3
32	45	9.852-01	2.808-2	2.012-2	1.694-2	1.561-2	1.502-2	1.479-2	1.473-2	1.488-2	1.513-2
32	46	3.663-00	5.811-2	5.354-2	5.203-2	5.157-2	5.159-2	5.187-2	5.287-2	5.433-2	5.617-2
32	47	6.888-00	5.763-2	5.558-2	5.519-2	5.538-2	5.578-2	5.640-2	5.797-2	6.003-2	6.255-2
32	48	5.857-00	2.677-2	2.705-2	2.759-2	2.802-2	2.846-2	2.891-2	2.980-2	3.080-2	3.196-2
32	49	3.543-00	9.963-3	5.643-3	3.611-3	2.556-3	1.947-3	1.569-3	1.146-3	9.282-4	8.064-4
32	50	1.198+01	2.796-3	1.650-3	1.072-3	7.560-4	5.679-4	4.480-4	3.115-4	2.396-4	1.984-4
32	51	1.874+01	1.700-3	1.575-3	1.538-3	1.549-3	1.581-3	1.632-3	1.786-3	2.001-3	2.274-3
32	52	5.265+01	2.132-2	1.249-2	7.998-3	5.561-3	4.108-3	3.151-3	2.078-3	1.514-3	1.216-3
32	53	1.343+01	1.328-2	8.931-3	6.710-3	5.582-3	4.924-3	4.576-3	4.403-3	4.607-3	5.072-3
32	54	0.000-00	3.809-3	2.208-3	1.400-3	9.596-4	6.973-4	5.277-4	3.323-4	2.273-4	1.660-4
32	55	2.837+02	1.028-2	5.497-3	3.356-3	2.297-3	1.715-3	1.375-3	1.057-3	9.661-4	1.000-3
32	56	2.056+01	1.759-2	9.421-3	5.709-3	3.849-3	2.793-3	2.147-3	1.438-3	1.082-3	8.903-4
32	57	1.377+01	8.631-3	5.085-3	3.524-3	2.773-3	2.356-3	2.140-3	1.994-3	2.052-3	2.234-3
32	58	1.358-00	3.680-3	3.593-3	3.640-3	3.720-3	3.802-3	3.893-3	4.057-3	4.216-3	4.389-3
32	59	1.129+01	9.969-3	8.911-3	8.524-3	8.365-3	8.305-3	8.302-3	8.394-3	8.578-3	8.831-3
32	60	3.201-01	1.286-2	6.571-3	3.851-3	2.520-3	1.772-3	1.309-3	8.041-4	5.475-4	4.037-4
32	61	9.214-00	1.099-2	5.641-3	3.302-3	2.170-3	1.552-3	1.183-3	8.060-4	6.483-4	5.959-4
32	62	3.150+01	5.675-3	3.828-3	2.899-3	2.388-3	2.086-3	1.896-3	1.706-3	1.637-3	1.639-3
32	63	2.113+01	3.613-3	2.191-3	1.528-3	1.194-3	1.010-3	9.033-4	8.168-4	8.160-4	8.670-4
32	64	1.076+01	2.560-3	1.500-3	1.015-3	7.698-4	6.386-4	5.676-4	5.244-4	5.520-4	6.240-4
32	65	6.346-00	9.539-4	6.361-4	4.782-4	3.937-4	3.427-4	3.088-4	2.712-4	2.515-4	2.420-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
32	66	8.360-00	2.876-3	1.690-3	1.144-3	8.691-4	7.113-4	6.133-4	5.076-4	4.588-4	4.384-4
32	67	1.124+01	4.832-3	2.775-3	1.761-3	1.229-3	9.154-4	7.145-4	4.934-4	3.847-4	3.333-4
32	68	1.010+01	4.902-3	2.639-3	1.607-3	1.082-3	7.833-4	6.016-4	4.077-4	3.213-4	2.882-4
32	69	4.429+01	1.519-3	1.011-3	7.568-4	6.164-4	5.270-4	4.694-4	3.999-4	3.594-4	3.358-4
32	70	4.600+01	6.289-4	3.891-4	2.772-4	2.220-4	1.928-4	1.788-4	1.757-4	1.921-4	2.223-4
32	71	4.196+02	3.118-3	1.763-3	1.147-3	8.400-4	6.667-4	5.622-4	4.661-4	4.415-4	4.605-4
32	72	4.026+01	6.465-3	3.683-3	2.365-3	1.680-3	1.282-3	1.032-3	7.599-4	6.288-4	5.707-4
32	73	7.659+01	3.472-3	1.860-3	1.119-3	7.452-4	5.301-4	3.967-4	2.495-4	1.732-4	1.313-4
32	74	7.088+01	4.400-3	2.437-3	1.554-3	1.121-3	8.788-4	7.286-4	5.761-4	5.093-4	4.878-4
32	75	8.496+01	1.570-3	8.668-4	5.465-4	3.947-4	3.095-4	2.594-4	2.156-4	2.060-4	2.169-4
32	76	8.748+01	7.896-4	6.033-4	5.186-4	4.792-4	4.652-4	4.693-4	5.137-4	5.955-4	7.085-4
32	77	1.395+01	5.223-3	4.697-3	4.486-3	4.328-3	4.229-3	4.174-3	4.101-3	4.063-3	4.044-3
32	78	3.858-01	1.825-3	1.000-3	6.150-4	4.151-4	2.995-4	2.270-4	1.457-4	1.034-4	7.945-5
32	79	5.859+01	2.565-3	1.471-3	9.620-4	7.054-4	5.578-4	4.688-4	3.768-4	3.413-4	3.366-4
32	80	9.432+01	1.387-3	8.259-4	5.681-4	4.358-4	3.611-4	3.161-4	2.705-4	2.529-4	2.501-4
32	81	5.777+01	2.075-3	1.753-3	1.553-3	1.414-3	1.313-3	1.255-3	1.174-3	1.140-3	1.129-3
32	82	1.623+02	3.173-4	2.932-4	2.863-4	2.868-4	2.882-4	2.930-4	3.069-4	3.266-4	3.529-4
32	83	9.848-01	2.407-4	1.919-4	1.730-4	1.600-4	1.528-4	1.480-4	1.418-4	1.380-4	1.352-4
32	84	5.765+01	1.469-3	8.776-4	5.860-4	4.313-4	3.394-4	2.835-4	2.212-4	1.928-4	1.821-4
32	85	2.514+02	4.770-4	3.206-4	2.443-4	2.048-4	1.825-4	1.700-4	1.636-4	1.713-4	1.894-4
32	86	1.818+02	2.796-4	2.155-4	1.850-4	1.658-4	1.547-4	1.473-4	1.396-4	1.363-4	1.357-4
32	87	2.036+02	2.117-3	1.766-3	1.599-3	1.467-3	1.364-3	1.297-3	1.209-3	1.152-3	1.116-3
32	88	1.844+02	1.272-3	8.040-4	5.703-4	4.374-4	3.577-4	3.050-4	2.485-4	2.221-4	2.123-4
32	89	1.547+02	8.619-4	5.646-4	4.075-4	3.222-4	2.698-4	2.358-4	2.002-4	1.857-4	1.831-4
32	90	1.221+02	2.758-4	1.990-4	1.627-4	1.446-4	1.344-4	1.291-4	1.270-4	1.314-4	1.405-4
32	91	1.050+03	8.533-4	8.184-4	8.037-4	7.841-4	7.633-4	7.519-4	7.449-4	7.535-4	7.768-4
32	92	2.893+01	7.541-5	8.685-5	9.202-5	9.522-5	9.816-5	1.008-4	1.052-4	1.099-4	1.154-4
32	93	6.289+02	2.805-4	2.038-4	1.664-4	1.447-4	1.320-4	1.240-4	1.163-4	1.137-4	1.146-4
32	94	1.447+02	2.929-4	1.752-4	1.175-4	8.782-5	7.037-5	5.899-5	4.716-5	4.187-5	4.039-5
32	95	1.195+02	1.518-4	9.176-5	6.631-5	5.362-5	4.664-5	4.266-5	3.935-5	3.930-5	4.142-5
32	96	1.694+01	4.447-4	3.656-4	3.193-4	2.844-4	2.593-4	2.438-4	2.206-4	2.054-4	1.946-4
32	97	6.963+02	2.485-5	2.778-5	2.899-5	2.971-5	3.033-5	3.074-5	3.184-5	3.352-5	3.601-5
33	34	8.524-02	3.433-2	2.128-2	1.465-2	1.099-2	8.743-3	7.261-3	5.501-3	4.520-3	3.933-3
33	35	2.759-07	4.765-3	2.533-3	1.593-3	1.184-3	1.013-3	9.703-4	1.094-3	1.386-3	1.797-3
33	36	0.000-00	1.666-4	9.576-5	6.602-5	5.261-5	4.569-5	4.196-5	3.889-5	3.790-5	3.792-5
33	37	2.579-03	1.299-2	1.294-2	1.326-2	1.376-2	1.437-2	1.508-2	1.681-2	1.898-2	2.161-2
33	38	4.163-02	4.052-3	2.361-3	1.549-3	1.128-3	8.852-4	7.356-4	5.801-4	5.168-4	5.018-4
33	39	1.455-01	1.860-2	1.725-2	1.708-2	1.740-2	1.795-2	1.872-2	2.072-2	2.334-2	2.657-2
33	40	1.365-00	1.699-2	1.606-2	1.607-2	1.637-2	1.683-2	1.744-2	1.897-2	2.092-2	2.329-2
33	41	2.627-05	4.592-3	2.716-3	1.801-3	1.322-3	1.040-3	8.633-4	6.658-4	5.647-4	5.093-4
33	42	1.699-00	7.721-3	5.137-3	3.954-3	3.357-3	3.023-3	2.825-3	2.620-3	2.536-3	2.509-3
33	43	6.905-01	1.403-2	8.563-3	6.145-3	5.013-3	4.437-3	4.170-3	4.104-3	4.391-3	4.904-3
33	44	8.662-02	1.648-2	1.366-2	1.248-2	1.198-2	1.176-2	1.173-2	1.187-2	1.218-2	1.261-2
33	45	1.310-02	4.001-3	2.659-3	2.092-3	1.832-3	1.705-3	1.640-3	1.593-3	1.591-3	1.612-3
33	46	2.239-01	7.147-3	6.566-3	6.384-3	6.346-3	6.364-3	6.414-3	6.569-3	6.787-3	7.060-3
33	47	2.601-01	6.488-3	5.981-3	5.790-3	5.731-3	5.725-3	5.758-3	5.889-3	6.086-3	6.340-3
33	48	1.733+02	2.289-1	2.313-1	2.359-1	2.397-1	2.437-1	2.479-1	2.566-1	2.666-1	2.784-1
33	49	2.574+01	8.384-3	5.144-3	3.522-3	2.658-3	2.138-3	1.804-3	1.411-3	1.200-3	1.071-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
33	50	2.687+01	8.499-3	6.098-3	4.974-3	4.410-3	4.095-3	3.916-3	3.781-3	3.794-3	3.899-3
33	51	7.554+01	1.605-2	1.534-2	1.520-2	1.518-2	1.526-2	1.540-2	1.580-2	1.634-2	1.701-2
33	52	4.512-00	1.058-2	6.371-3	4.451-3	3.480-3	2.931-3	2.601-3	2.261-3	2.122-3	2.087-3
33	53	4.767-02	1.450-2	8.031-3	4.934-3	3.317-3	2.373-3	1.785-3	1.127-3	7.919-4	6.105-4
33	54	0.000-00	1.028-2	5.444-3	3.236-3	2.118-3	1.487-3	1.102-3	6.736-4	4.567-4	3.350-4
33	55	4.115+01	5.307-3	3.818-3	3.166-3	2.837-3	2.663-3	2.583-3	2.560-3	2.645-3	2.805-3
33	56	8.934-00	4.421-3	2.776-3	2.070-3	1.728-3	1.536-3	1.421-3	1.305-3	1.257-3	1.244-3
33	57	2.271+01	1.281-2	1.038-2	9.324-3	8.866-3	8.639-3	8.541-3	8.551-3	8.724-3	9.013-3
33	58	6.019+01	3.584-2	3.580-2	3.658-2	3.756-2	3.847-2	3.949-2	4.136-2	4.328-2	4.540-2
33	59	1.086+02	7.534-2	7.047-2	6.913-2	6.860-2	6.842-2	6.851-2	6.909-2	7.006-2	7.135-2
33	60	3.287+01	7.848-3	4.320-3	2.689-3	1.885-3	1.430-3	1.164-3	9.043-4	8.181-4	8.231-4
33	61	2.721+01	8.487-3	4.874-3	3.191-3	2.349-3	1.866-3	1.564-3	1.234-3	1.065-3	9.738-4
33	62	1.016+01	2.406-3	1.257-3	7.838-4	5.641-4	4.441-4	3.724-4	2.985-4	2.648-4	2.500-4
33	63	4.022-00	7.607-3	4.531-3	3.160-3	2.474-3	2.091-3	1.854-3	1.594-3	1.463-3	1.391-3
33	64	9.874-00	1.781-2	1.028-2	6.709-3	4.857-3	3.797-3	3.134-3	2.415-3	2.068-3	1.902-3
33	65	1.338+01	3.275-3	1.906-3	1.238-3	8.887-4	6.854-4	5.586-4	4.199-4	3.532-4	3.219-4
33	66	3.417+01	6.089-3	3.380-3	2.205-3	1.631-3	1.325-3	1.142-3	9.677-4	9.077-4	9.064-4
33	67	7.501-00	4.644-3	2.502-3	1.498-3	9.928-4	7.053-4	5.301-4	3.402-4	2.493-4	2.044-4
33	68	5.977-00	9.270-3	4.981-3	2.994-3	1.990-3	1.419-3	1.072-3	6.961-4	5.166-4	4.293-4
33	69	1.752+01	6.433-3	5.478-3	4.967-3	4.630-3	4.364-3	4.195-3	3.955-3	3.783-3	3.670-3
33	70	2.618-00	5.742-3	3.208-3	2.006-3	1.385-3	1.024-3	8.013-4	5.481-4	4.148-4	3.374-4
33	71	7.783-01	4.120-3	2.507-3	1.698-3	1.257-3	9.866-4	8.117-4	6.045-4	4.855-4	4.121-4
33	72	2.548+01	6.019-3	4.246-3	3.407-3	2.961-3	2.705-3	2.550-3	2.385-3	2.319-3	2.306-3
33	73	1.580+01	6.350-3	3.609-3	2.282-3	1.589-3	1.182-3	9.264-4	6.400-4	4.920-4	4.105-4
33	74	3.495+01	4.313-3	3.294-3	2.866-3	2.636-3	2.506-3	2.429-3	2.349-3	2.317-3	2.311-3
33	75	1.768-00	2.124-3	1.205-3	7.715-4	5.530-4	4.266-4	3.481-4	2.607-4	2.155-4	1.905-4
33	76	1.765+01	1.164-3	7.039-4	4.883-4	3.826-4	3.241-4	2.896-4	2.650-4	2.725-4	3.008-4
33	77	3.856+02	4.404-2	4.018-2	3.869-2	3.751-2	3.676-2	3.635-2	3.583-2	3.561-2	3.555-2
33	78	4.708-00	1.056-3	5.879-4	3.853-4	2.861-4	2.307-4	1.970-4	1.609-4	1.430-4	1.341-4
33	79	5.468+01	2.805-3	1.926-3	1.480-3	1.226-3	1.069-3	9.723-4	8.496-4	7.846-4	7.476-4
33	80	1.022+01	9.849-4	5.014-4	2.958-4	1.993-4	1.466-4	1.154-4	8.339-5	6.908-5	6.320-5
33	81	7.717+02	1.752-2	1.502-2	1.333-2	1.215-2	1.126-2	1.075-2	9.983-3	9.589-3	9.380-3
33	82	2.681+01	1.938-3	1.759-3	1.714-3	1.722-3	1.737-3	1.759-3	1.788-3	1.808-3	1.824-3
33	83	6.465-00	2.484-3	2.038-3	1.876-3	1.755-3	1.688-3	1.645-3	1.588-3	1.553-3	1.526-3
33	84	1.961+02	2.530-3	1.970-3	1.640-3	1.417-3	1.264-3	1.174-3	1.045-3	9.693-4	9.223-4
33	85	4.128+02	1.293-3	1.064-3	9.478-4	8.602-4	8.018-4	7.637-4	7.190-4	6.984-4	6.949-4
33	86	2.426+02	7.722-4	6.927-4	6.660-4	6.351-4	6.166-4	6.055-4	5.920-4	5.854-4	5.836-4
33	87	4.218+02	1.850-2	1.557-2	1.402-2	1.290-2	1.197-2	1.134-2	1.047-2	9.885-3	9.471-3
33	88	7.683-00	2.533-4	1.833-4	1.480-4	1.269-4	1.128-4	1.038-4	9.254-5	8.587-5	8.185-5
33	89	5.019-00	2.245-4	1.343-4	9.367-5	7.312-5	6.137-5	5.388-5	4.602-5	4.229-5	4.076-5
33	90	6.671+01	1.146-4	9.305-5	8.315-5	7.856-5	7.539-5	7.366-5	7.441-5	7.920-5	8.719-5
33	91	3.155+01	5.697-3	4.937-3	4.588-3	4.285-3	4.042-3	3.881-3	3.652-3	3.483-3	3.363-3
33	92	6.843+02	5.963-4	7.046-4	7.532-4	7.820-4	8.083-4	8.310-4	8.698-4	9.112-4	9.593-4
33	93	6.382-00	3.308-5	1.842-5	1.196-5	8.904-6	7.105-6	5.937-6	4.595-6	3.848-6	3.406-6
33	94	8.314-00	1.120-4	8.083-5	6.692-5	5.896-5	5.422-5	5.091-5	4.695-5	4.438-5	4.274-5
33	95	1.496-00	3.614-4	2.730-4	2.317-4	2.070-4	1.902-4	1.795-4	1.652-4	1.557-4	1.491-4
33	96	1.327+03	4.001-3	3.339-3	2.951-3	2.652-3	2.435-3	2.304-3	2.110-3	1.990-3	1.912-3
33	97	1.194+04	2.104-4	2.295-4	2.351-4	2.381-4	2.414-4	2.431-4	2.493-4	2.599-4	2.766-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
34	35	6.670-00	3.472-1	2.087-1	1.384-1	9.968-2	7.587-2	6.016-2	4.158-2	3.123-2	2.505-2
34	36	8.985-07	1.770-2	1.343-2	1.165-2	1.083-2	1.042-2	1.020-2	1.005-2	1.006-2	1.014-2
34	37	0.000-00	1.064-2	5.908-3	3.631-3	2.438-3	1.738-3	1.297-3	7.970-4	5.346-4	3.846-4
34	38	1.749-02	2.007-1	1.971-1	2.023-1	2.108-1	2.216-1	2.351-1	2.682-1	3.102-1	3.614-1
34	39	1.900-03	3.693-2	2.369-2	1.791-2	1.525-2	1.399-2	1.345-2	1.345-2	1.423-2	1.550-2
34	40	7.998-00	3.231-1	3.095-1	3.122-1	3.214-1	3.347-1	3.519-1	3.952-1	4.509-1	5.193-1
34	41	1.921-00	1.733-1	1.574-1	1.532-1	1.540-1	1.570-1	1.621-1	1.756-1	1.936-1	2.159-1
34	42	2.314-01	4.140-2	2.308-2	1.426-2	9.624-3	6.901-3	5.175-3	3.216-3	2.181-3	1.585-3
34	43	6.615-01	5.738-2	3.662-2	2.672-2	2.171-2	1.889-2	1.731-2	1.601-2	1.604-2	1.685-2
34	44	2.967-00	1.618-2	1.027-2	7.405-3	5.901-3	5.044-3	4.516-3	3.989-3	3.806-3	3.801-3
34	45	1.811-00	6.828-2	5.552-2	5.062-2	4.872-2	4.812-2	4.814-2	4.905-2	5.064-2	5.274-2
34	46	6.200-00	1.075-1	9.915-2	9.696-2	9.646-2	9.688-2	9.802-2	1.012-1	1.056-1	1.111-1
34	47	3.416-00	3.556-2	3.277-2	3.181-2	3.156-2	3.162-2	3.194-2	3.291-2	3.426-2	3.597-2
34	48	0.000-00	2.730-5	1.432-5	8.412-6	5.429-6	3.747-6	2.722-6	1.600-6	1.038-6	7.270-7
34	49	1.859+01	1.228-2	6.755-3	4.138-3	2.773-3	1.976-3	1.483-3	9.307-4	6.498-4	4.968-4
34	50	7.536-01	4.173-3	2.322-3	1.440-3	9.774-4	7.119-4	5.520-4	3.843-4	3.155-4	2.969-4
34	51	0.000-00	2.771-4	1.435-4	8.265-5	5.262-5	3.571-5	2.556-5	1.466-5	9.297-6	6.407-6
34	52	5.768+01	1.373-2	8.161-3	5.321-3	3.777-3	2.841-3	2.222-3	1.517-3	1.129-3	9.068-4
34	53	8.928+01	2.827-2	1.684-2	1.099-2	7.804-3	5.886-3	4.630-3	3.227-3	2.501-3	2.133-3
34	54	9.119-00	1.130-2	7.570-3	5.612-3	4.577-3	4.004-3	3.685-3	3.527-3	3.716-3	4.138-3
34	55	9.382-00	1.308-2	7.028-3	4.265-3	2.879-3	2.108-3	1.650-3	1.193-3	1.027-3	1.012-3
34	56	2.809+02	2.213-2	1.209-2	7.552-3	5.293-3	4.027-3	3.261-3	2.473-3	2.141-3	2.043-3
34	57	5.173-00	1.686-2	8.874-3	5.260-3	3.456-3	2.437-3	1.816-3	1.140-3	8.052-4	6.300-4
34	58	5.754-01	3.586-4	1.973-4	1.225-4	8.422-5	6.192-5	4.785-5	3.272-5	2.540-5	2.201-5
34	59	8.010-01	1.136-3	5.868-4	3.507-4	2.362-4	1.740-4	1.367-4	1.007-4	8.869-5	8.905-5
34	60	8.716-00	1.490-2	7.670-3	4.504-3	2.966-3	2.106-3	1.585-3	1.022-3	7.458-4	5.989-4
34	61	9.391-02	1.675-2	8.479-3	4.925-3	3.210-3	2.250-3	1.666-3	1.031-3	7.131-4	5.362-4
34	62	1.380-00	5.916-3	3.435-3	2.189-3	1.512-3	1.108-3	8.454-4	5.487-4	3.913-4	3.028-4
34	63	4.514+01	7.287-3	4.478-3	3.142-3	2.450-3	2.051-3	1.803-3	1.551-3	1.449-3	1.429-3
34	64	5.567-00	5.834-3	2.949-3	1.707-3	1.105-3	7.688-4	5.690-4	3.564-4	2.560-4	2.074-4
34	65	0.000-00	1.450-3	8.251-4	5.175-4	3.552-4	2.583-4	1.951-4	1.233-4	8.415-5	6.150-5
34	66	2.526+01	3.663-3	2.164-3	1.479-3	1.137-3	9.496-4	8.466-4	7.814-4	8.185-4	9.212-4
34	67	2.561+01	7.115-3	4.434-3	3.115-3	2.421-3	2.011-3	1.755-3	1.483-3	1.367-3	1.336-3
34	68	1.803+01	7.477-3	4.144-3	2.605-3	1.810-3	1.352-3	1.077-3	7.870-4	6.665-4	6.330-4
34	69	6.594-00	9.117-4	5.280-4	3.411-4	2.416-4	1.839-4	1.482-4	1.118-4	9.791-5	9.647-5
34	70	7.597-00	4.664-4	2.759-4	1.823-4	1.329-4	1.046-4	8.735-5	7.093-5	6.656-5	6.903-5
34	71	1.829+02	3.874-3	2.329-3	1.623-3	1.275-3	1.086-3	9.867-4	9.407-4	1.009-3	1.157-3
34	72	4.785+02	6.904-3	3.735-3	2.279-3	1.541-3	1.115-3	8.439-4	5.459-4	3.898-4	3.063-4
34	73	2.929+01	7.231-3	3.940-3	2.441-3	1.686-3	1.252-3	9.873-4	7.124-4	5.938-4	5.578-4
34	74	6.870-00	4.135-3	2.197-3	1.312-3	8.706-4	6.218-4	4.676-4	3.023-4	2.199-4	1.784-4
34	75	7.392+01	2.990-3	1.607-3	9.690-4	6.634-4	4.899-4	3.820-4	2.740-4	2.244-4	2.068-4
34	76	7.631+01	1.689-3	1.002-3	6.793-4	5.188-4	4.300-4	3.785-4	3.416-4	3.493-4	3.854-4
34	77	1.883+01	4.478-4	2.417-4	1.478-4	1.014-4	7.522-5	5.916-5	4.286-5	3.603-5	3.428-5
34	78	9.213+01	3.532-3	2.037-3	1.334-3	9.700-4	7.623-4	6.363-4	5.157-4	4.819-4	4.974-4
34	79	5.616+01	2.796-3	1.594-3	1.046-3	7.648-4	6.045-4	5.049-4	3.983-4	3.480-4	3.257-4
34	80	7.096+02	3.185-3	2.012-3	1.487-3	1.236-3	1.101-3	1.035-3	1.018-3	1.093-3	1.234-3
34	81	9.919-00	2.106-4	1.311-4	9.149-5	7.064-5	5.863-5	5.117-5	4.398-5	4.189-5	4.274-5
34	82	2.443+02	2.117-4	1.929-4	1.826-4	1.790-4	1.787-4	1.822-4	1.983-4	2.253-4	2.627-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
34	83	0.000-00	1.439-5	7.960-6	4.856-6	3.273-6	2.355-6	1.762-6	1.106-6	7.522-7	5.494-7
34	84	9.497+01	1.880-3	1.070-3	6.848-4	4.841-4	3.676-4	2.953-4	2.184-4	1.845-4	1.733-4
34	85	4.493-00	9.497-4	5.668-4	3.765-4	2.756-4	2.163-4	1.778-4	1.345-4	1.112-4	9.804-5
34	86	0.000-00	1.351-4	7.375-5	4.461-5	2.981-5	2.130-5	1.584-5	9.844-6	6.633-6	4.814-6
34	87	5.957+01	3.345-5	3.372-5	3.428-5	3.511-5	3.597-5	3.719-5	4.095-5	4.649-5	5.390-5
34	88	1.012+01	1.188-3	6.933-4	4.444-4	3.077-4	2.258-4	1.714-4	1.100-4	7.686-5	5.773-5
34	89	1.053+02	1.700-3	1.089-3	7.722-4	5.944-4	4.869-4	4.143-4	3.341-4	2.934-4	2.742-4
34	90	8.629+01	8.053-4	5.217-4	3.754-4	2.973-4	2.496-4	2.191-4	1.875-4	1.748-4	1.726-4
34	91	2.838+02	5.526-5	5.987-5	6.217-5	6.454-5	6.644-5	6.849-5	7.448-5	8.322-5	9.504-5
34	92	7.107-03	5.806-6	2.954-6	1.707-6	1.099-6	7.661-7	5.666-7	3.510-7	2.439-7	1.855-7
34	93	0.000-00	1.922-4	1.120-4	7.057-5	4.874-5	3.575-5	2.704-5	1.734-5	1.194-5	8.798-6
34	94	2.297+02	6.233-4	4.063-4	2.991-4	2.426-4	2.090-4	1.873-4	1.645-4	1.536-4	1.499-4
34	95	3.870+02	3.106-4	2.033-4	1.569-4	1.333-4	1.205-4	1.135-4	1.096-4	1.133-4	1.227-4
34	96	5.994-01	3.772-6	2.003-6	1.215-6	8.330-7	6.163-7	4.825-7	3.366-7	2.648-7	2.289-7
34	97	0.000-00	9.492-7	5.267-7	3.299-7	2.233-7	1.600-7	1.197-7	7.376-8	4.972-8	3.571-8
35	36	8.318-00	2.647-1	1.624-1	1.115-1	8.475-2	6.951-2	6.080-2	5.436-2	5.602-2	6.281-2
35	37	0.000-00	6.062-3	3.772-3	3.011-3	2.783-3	2.740-3	2.774-3	2.900-3	3.028-3	3.149-3
35	38	0.000-00	2.606-2	1.516-2	1.047-2	8.293-3	7.165-3	6.555-3	6.010-3	5.826-3	5.801-3
35	39	4.501-03	3.120-1	3.015-1	3.073-1	3.210-1	3.385-1	3.618-1	4.201-1	4.948-1	5.861-1
35	40	1.508-00	1.431-1	1.329-1	1.331-1	1.379-1	1.450-1	1.548-1	1.799-1	2.127-1	2.531-1
35	41	3.129-00	5.027-1	4.724-1	4.712-1	4.865-1	5.087-1	5.395-1	6.183-1	7.207-1	8.469-1
35	42	1.752-02	2.520-2	1.496-2	1.005-2	7.545-3	6.110-3	5.278-3	4.511-3	4.351-3	4.532-3
35	43	2.847-00	6.956-2	3.997-2	2.577-2	1.834-2	1.402-2	1.131-2	8.341-3	6.917-3	6.262-3
35	44	1.494-00	6.947-2	4.955-2	4.014-2	3.555-2	3.310-2	3.189-2	3.134-2	3.221-2	3.401-2
35	45	6.901-00	1.305-1	1.134-1	1.073-1	1.055-1	1.053-1	1.065-1	1.106-1	1.166-1	1.243-1
35	46	3.454-00	1.082-1	9.730-2	9.351-2	9.277-2	9.284-2	9.400-2	9.736-2	1.018-1	1.073-1
35	47	0.000-00	1.140-2	6.694-3	4.710-3	3.785-3	3.308-3	3.052-3	2.823-3	2.745-3	2.735-3
35	48	0.000-00	9.205-5	4.921-5	2.960-5	1.961-5	1.391-5	1.043-5	6.567-6	4.618-6	3.543-6
35	49	1.565-01	1.238-2	6.828-3	4.172-3	2.799-3	1.994-3	1.499-3	9.523-4	6.838-4	5.487-4
35	50	0.000-00	5.576-3	3.053-3	1.863-3	1.236-3	8.722-4	6.466-4	3.915-4	2.600-4	1.860-4
35	51	0.000-00	9.328-4	5.035-4	3.034-4	2.005-4	1.411-4	1.047-4	6.410-5	4.350-5	3.208-5
35	52	9.890-00	5.727-3	3.578-3	2.447-3	1.817-3	1.435-3	1.180-3	8.911-4	7.374-4	6.545-4
35	53	1.533+02	2.939-2	1.781-2	1.195-2	8.806-3	6.917-3	5.673-3	4.283-3	3.549-3	3.161-3
35	54	9.034+01	3.355-2	2.015-2	1.318-2	9.357-3	7.038-3	5.495-3	3.728-3	2.762-3	2.208-3
35	55	0.000-00	1.307-2	6.914-3	4.105-3	2.682-3	1.871-3	1.374-3	8.217-4	5.405-4	3.832-4
35	56	1.364+01	1.878-2	1.028-2	6.400-3	4.474-3	3.421-3	2.806-3	2.267-3	2.184-3	2.362-3
35	57	1.870+02	3.262-2	1.754-2	1.072-2	7.325-3	5.399-3	4.225-3	2.952-3	2.322-3	1.997-3
35	58	3.746-01	9.494-4	5.304-4	3.441-4	2.512-4	1.986-4	1.658-4	1.306-4	1.137-4	1.055-4
35	59	1.800-00	1.377-3	7.249-4	4.380-4	2.954-4	2.145-4	1.637-4	1.085-4	8.034-5	6.514-5
35	60	3.224-01	9.498-3	4.929-3	2.883-3	1.868-3	1.295-3	9.478-4	5.668-4	3.760-4	2.719-4
35	61	4.429-00	2.313-2	1.187-2	7.045-3	4.703-3	3.398-3	2.606-3	1.751-3	1.331-3	1.106-3
35	62	0.000-00	5.902-3	3.272-3	2.009-3	1.349-3	9.618-4	7.165-4	4.403-4	2.951-4	2.124-4
35	63	1.646+01	8.978-3	5.173-3	3.329-3	2.364-3	1.806-3	1.455-3	1.100-3	9.610-4	9.394-4
35	64	1.010-00	1.679-2	8.524-3	4.999-3	3.291-3	2.343-3	1.766-3	1.143-3	8.334-4	6.653-4
35	65	0.000-00	1.379-3	7.300-4	4.357-4	2.859-4	2.000-4	1.475-4	8.873-5	5.872-5	4.199-5
35	66	7.183+01	9.465-3	5.237-3	3.320-3	2.362-3	1.817-3	1.477-3	1.109-3	9.246-4	8.280-4
35	67	0.000-00	9.827-3	5.546-3	3.465-3	2.361-3	1.707-3	1.286-3	8.060-4	5.481-4	3.994-4
35	68	2.793+01	1.290-2	7.596-3	5.102-3	3.829-3	3.085-3	2.640-3	2.178-3	1.994-3	1.959-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
35	69	0.000-00	4.635-4	2.503-4	1.503-4	9.906-5	6.944-5	5.120-5	3.077-5	2.030-5	1.443-5
35	70	0.000-00	8.669-4	4.956-4	3.098-4	2.102-4	1.512-4	1.133-4	7.042-5	4.764-5	3.451-5
35	71	0.000-00	3.546-3	1.913-3	1.149-3	7.575-4	5.316-4	3.921-4	2.362-4	1.561-4	1.111-4
35	72	2.821+02	7.027-3	4.547-3	3.398-3	2.854-3	2.575-3	2.456-3	2.511-3	2.807-3	3.288-3
35	73	4.671+02	1.227-2	6.542-3	3.932-3	2.623-3	1.867-3	1.391-3	8.645-4	5.854-4	4.287-4
35	74	4.079+01	2.452-3	1.408-3	9.154-4	6.652-4	5.235-4	4.403-4	3.649-4	3.517-4	3.746-4
35	75	3.811-00	5.092-3	2.704-3	1.611-3	1.074-3	7.690-4	5.757-4	3.697-4	2.609-4	2.006-4
35	76	4.797+01	4.863-3	2.661-3	1.626-3	1.098-3	7.943-4	5.984-4	3.853-4	2.709-4	2.066-4
35	77	2.981+01	6.619-4	3.957-4	2.738-4	2.142-4	1.818-4	1.646-4	1.553-4	1.645-4	1.862-4
35	78	1.836+01	6.176-3	3.516-3	2.263-3	1.617-3	1.240-3	1.001-3	7.379-4	6.023-4	5.286-4
35	79	8.636+02	3.580-3	2.636-3	2.211-3	2.022-3	1.931-3	1.919-3	2.042-3	2.309-3	2.698-3
35	80	0.000-00	4.306-3	2.261-3	1.341-3	8.758-4	6.112-4	4.486-4	2.684-4	1.762-4	1.249-4
35	81	4.922+01	2.077-4	1.594-4	1.349-4	1.224-4	1.166-4	1.149-4	1.210-4	1.362-4	1.589-4
35	82	0.000-00	1.447-4	7.854-5	4.762-5	3.161-5	2.234-5	1.657-5	1.008-5	6.696-6	4.794-6
35	83	0.000-00	2.196-5	1.178-5	7.092-6	4.661-6	3.258-6	2.394-6	1.432-6	9.399-7	6.669-7
35	84	3.383+02	2.545-3	1.595-3	1.140-3	9.058-4	7.647-4	6.829-4	6.082-4	5.943-4	6.183-4
35	85	0.000-00	1.445-3	8.035-4	4.948-4	3.323-4	2.371-4	1.767-4	1.087-4	7.284-5	5.248-5
35	86	0.000-00	2.988-4	1.608-4	9.730-5	6.424-5	4.508-5	3.324-5	1.998-5	1.316-5	9.356-6
35	87	9.368-01	1.920-5	1.010-5	6.122-6	4.155-6	3.055-6	2.353-6	1.611-6	1.246-6	1.074-6
35	88	4.242+01	8.209-4	4.751-4	3.059-4	2.142-4	1.604-4	1.257-4	8.752-5	6.860-5	5.938-5
35	89	2.114+01	1.827-3	1.084-3	7.074-4	4.981-4	3.724-4	2.875-4	1.916-4	1.389-4	1.081-4
35	90	6.781-00	2.079-3	1.274-3	8.527-4	6.205-4	4.772-4	3.820-4	2.724-4	2.117-4	1.759-4
35	91	7.427+02	1.088-4	1.416-4	1.591-4	1.697-4	1.773-4	1.847-4	2.027-4	2.271-4	2.593-4
35	92	6.172-04	1.014-5	4.918-6	2.738-6	1.712-6	1.149-6	8.260-7	4.756-7	3.039-7	2.095-7
35	93	0.000-00	1.933-5	9.488-6	5.582-6	3.783-6	2.806-6	2.225-6	1.604-6	1.296-6	1.137-6
35	94	0.000-00	7.586-4	4.309-4	2.696-4	1.848-4	1.350-4	1.019-4	6.512-5	4.477-5	3.297-5
35	95	2.397+01	6.031-4	3.558-4	2.383-4	1.782-4	1.425-4	1.195-4	9.407-5	8.032-5	7.285-5
35	96	7.065-00	5.612-6	3.545-6	2.665-6	2.239-6	1.994-6	1.865-6	1.779-6	1.827-6	1.970-6
35	97	0.000-00	8.802-7	4.494-7	2.579-7	1.656-7	1.145-7	8.365-8	4.999-8	3.294-8	2.345-8
36	37	0.000-00	1.745-3	9.642-4	5.888-4	3.931-4	2.782-4	2.069-4	1.257-4	8.373-5	5.990-5
36	38	0.000-00	6.813-3	3.911-3	2.677-3	2.109-3	1.817-3	1.663-3	1.526-3	1.482-3	1.478-3
36	39	0.000-00	2.611-2	1.507-2	1.029-2	8.044-3	6.873-3	6.228-3	5.632-3	5.414-3	5.362-3
36	40	4.065-04	3.779-1	3.540-1	3.557-1	3.711-1	3.932-1	4.240-1	5.028-1	6.045-1	7.296-1
36	41	2.832-00	8.954-1	8.581-1	8.760-1	9.280-1	9.952-1	1.085-0	1.313-0	1.608-0	1.971-0
36	42	0.000-00	2.259-3	1.241-3	7.590-4	5.092-4	3.643-4	2.741-4	1.727-4	1.203-4	9.075-5
36	43	3.862-02	4.049-2	2.695-2	2.059-2	1.754-2	1.593-2	1.524-2	1.521-2	1.624-2	1.800-2
36	44	1.393+01	1.854-1	1.241-1	9.509-2	8.073-2	7.259-2	6.830-2	6.525-2	6.621-2	6.965-2
36	45	1.732-00	2.078-1	1.895-1	1.825-1	1.808-1	1.804-1	1.823-1	1.881-1	1.958-1	2.056-1
36	46	0.000-00	3.526-2	2.068-2	1.479-2	1.218-2	1.091-2	1.030-2	9.847-3	9.778-3	9.877-3
36	47	0.000-00	2.746-2	1.677-2	1.268-2	1.099-2	1.028-2	1.001-2	9.964-3	1.012-2	1.036-2
36	48	0.000-00	3.390-4	1.847-4	1.129-4	7.507-5	5.303-5	3.938-5	2.389-5	1.588-5	1.135-5
36	49	0.000-00	6.096-3	3.401-3	2.081-3	1.396-3	9.870-4	7.333-4	4.489-4	3.028-4	2.205-4
36	50	0.000-00	6.062-3	3.292-3	1.994-3	1.319-3	9.286-4	6.876-4	4.170-4	2.784-4	2.010-4
36	51	0.000-00	3.140-3	1.728-3	1.059-3	7.053-4	4.987-4	3.703-4	2.245-4	1.490-4	1.064-4
36	52	9.861-04	7.673-4	4.701-4	3.151-4	2.303-4	1.788-4	1.448-4	1.059-4	8.463-5	7.224-5
36	53	2.482+01	1.117-2	7.276-3	5.205-3	4.067-3	3.367-3	2.907-3	2.397-3	2.139-3	2.019-3
36	54	2.958+02	8.116-2	5.133-2	3.607-2	2.785-2	2.292-2	1.970-2	1.615-2	1.437-2	1.354-2
36	55	0.000-00	5.557-3	2.966-3	1.775-3	1.167-3	8.174-4	6.032-4	3.629-4	2.399-4	1.709-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
36	56	0.000-00	1.743-2	9.184-3	5.428-3	3.541-3	2.463-3	1.806-3	1.078-3	7.083-4	5.023-4
36	57	2.603+01	5.598-2	3.085-2	1.938-2	1.371-2	1.061-2	8.833-3	7.348-3	7.253-3	7.942-3
36	58	3.957-02	2.203-3	1.118-3	6.588-4	4.343-4	3.123-4	2.369-4	1.560-4	1.166-4	9.551-5
36	59	5.683-00	1.305-3	9.236-4	7.255-4	6.221-4	5.740-4	5.525-4	5.743-4	6.520-4	7.707-4
36	60	0.000-00	8.758-4	4.753-4	2.869-4	1.903-4	1.342-4	9.935-5	6.036-5	4.018-5	2.875-5
36	61	9.196-01	7.448-3	4.080-3	2.513-3	1.716-3	1.257-3	9.728-4	6.600-4	5.040-4	4.226-4
36	62	0.000-00	2.078-3	1.108-3	6.623-4	4.351-4	3.044-4	2.243-4	1.347-4	8.883-5	6.315-5
36	63	0.000-00	9.561-3	5.206-3	3.159-3	2.101-3	1.487-3	1.102-3	6.711-4	4.468-4	3.198-4
36	64	1.638+01	4.751-2	2.400-2	1.402-2	9.151-3	6.473-3	4.835-3	3.064-3	2.185-3	1.704-3
36	65	0.000-00	4.396-3	2.371-3	1.440-3	9.546-4	6.733-4	4.994-4	3.027-4	2.009-4	1.435-4
36	66	9.518+01	2.701-2	1.592-2	1.087-2	8.427-3	7.065-3	6.349-3	5.881-3	6.080-3	6.696-3
36	67	0.000-00	9.858-3	5.250-3	3.146-3	2.070-3	1.450-3	1.070-3	6.437-4	4.248-4	3.023-4
36	68	0.000-00	2.149-2	1.196-2	7.383-3	4.990-3	3.588-3	2.691-3	1.676-3	1.134-3	8.228-4
36	69	0.000-00	2.306-5	1.230-5	7.219-6	4.660-6	3.203-6	2.320-6	1.356-6	8.781-7	6.159-7
36	70	0.000-00	1.204-4	6.226-5	3.553-5	2.237-5	1.519-5	1.091-5	6.417-6	4.231-6	3.045-6
36	71	0.000-00	9.984-4	5.378-4	3.235-4	2.129-4	1.490-4	1.096-4	6.559-5	4.308-5	3.051-5
36	72	0.000-00	5.307-3	2.892-3	1.750-3	1.163-3	8.212-4	6.084-4	3.700-4	2.464-4	1.765-4
36	73	6.903+02	1.983-2	1.327-2	1.030-2	8.953-3	8.290-3	8.077-3	8.480-3	9.606-3	1.131-2
36	74	0.000-00	2.200-4	1.202-4	7.416-5	5.062-5	3.676-5	2.774-5	1.755-5	1.204-5	8.813-6
36	75	5.454+02	1.092-2	7.734-3	6.153-3	5.393-3	5.004-3	4.868-3	5.080-3	5.728-3	6.720-3
36	76	1.021+02	1.203-2	6.547-3	3.989-3	2.669-3	1.919-3	1.437-3	9.113-4	6.292-4	4.695-4
36	77	0.000-00	6.845-4	3.636-4	2.164-4	1.421-4	9.943-5	7.317-5	4.398-5	2.901-5	2.064-5
36	78	1.997+02	9.547-3	5.394-3	3.476-3	2.507-3	1.967-3	1.639-3	1.335-3	1.262-3	1.319-3
36	79	0.000-00	6.787-3	3.565-3	2.113-3	1.383-3	9.654-4	7.083-4	4.241-4	2.785-4	1.974-4
36	80	0.000-00	2.073-3	1.093-3	6.525-4	4.284-4	2.998-4	2.209-4	1.327-4	8.732-5	6.203-5
36	81	0.000-00	1.355-4	6.884-5	3.973-5	2.560-5	1.766-5	1.288-5	7.653-6	5.006-6	3.544-6
36	82	0.000-00	7.234-5	3.917-5	2.373-5	1.564-5	1.096-5	8.067-6	4.829-6	3.169-6	2.244-6
36	83	0.000-00	7.099-5	3.891-5	2.390-5	1.587-5	1.118-5	8.266-6	4.978-6	3.280-6	2.329-6
36	84	0.000-00	2.697-3	1.521-3	9.473-4	6.416-4	4.632-4	3.471-4	2.173-4	1.474-4	1.072-4
36	85	0.000-00	2.089-3	1.127-3	6.833-4	4.513-4	3.165-4	2.333-4	1.399-4	9.183-5	6.504-5
36	86	0.000-00	9.774-4	5.341-4	3.281-4	2.180-4	1.537-4	1.138-4	6.867-5	4.530-5	3.220-5
36	87	7.733+02	3.191-4	4.265-4	4.801-4	5.129-4	5.380-4	5.638-4	6.281-4	7.175-4	8.345-4
36	88	0.000-00	1.463-4	7.395-5	4.353-5	2.868-5	2.026-5	1.503-5	9.253-6	6.253-6	4.557-6
36	89	5.002+01	1.320-3	7.796-4	5.077-4	3.623-4	2.763-4	2.201-4	1.584-4	1.279-4	1.131-4
36	90	7.642+01	4.765-3	2.941-3	1.986-3	1.464-3	1.143-3	9.275-4	6.833-4	5.498-4	4.723-4
36	91	0.000-00	3.392-5	1.873-5	1.149-5	7.707-6	5.565-6	4.163-6	2.628-6	1.798-6	1.327-6
36	92	1.456-03	2.738-5	1.332-5	7.478-6	4.717-6	3.165-6	2.288-6	1.332-6	8.570-7	5.926-7
36	93	0.000-00	9.587-5	4.729-5	2.733-5	1.773-5	1.240-5	9.177-6	5.573-6	3.702-6	2.650-6
36	94	0.000-00	1.585-4	7.747-5	4.466-5	2.928-5	2.086-5	1.582-5	1.030-5	7.502-6	5.975-6
36	95	0.000-00	1.411-3	8.014-4	5.034-4	3.438-4	2.521-4	1.909-4	1.231-4	8.560-5	6.389-5
36	96	0.000-00	9.017-6	4.758-6	2.857-6	1.896-6	1.355-6	1.010-6	6.270-7	4.266-7	3.126-7
36	97	0.000-00	3.277-6	1.720-6	1.006-6	6.550-7	4.577-7	3.370-7	2.034-7	1.350-7	9.652-8
37	38	1.112-02	1.024-1	6.196-2	4.095-2	2.922-2	2.191-2	1.702-2	1.117-2	7.870-3	5.868-3
37	39	6.863-08	1.325-1	1.301-1	1.304-1	1.317-1	1.327-1	1.336-1	1.347-1	1.354-1	1.358-1
37	40	0.000-00	6.239-3	3.598-3	2.273-3	1.559-3	1.131-3	8.552-4	5.370-4	3.658-4	2.660-4
37	41	0.000-00	3.788-3	2.220-3	1.583-3	1.304-3	1.171-3	1.108-3	1.066-3	1.064-3	1.080-3
37	42	4.414-04	4.221-3	2.593-3	1.900-3	1.587-3	1.432-3	1.354-3	1.316-3	1.354-3	1.439-3
37	43	0.000-00	2.904-3	1.521-3	8.912-4	5.763-4	3.982-4	2.901-4	1.712-4	1.115-4	7.845-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
37	44	0.000-00	5.493-4	2.986-4	1.871-4	1.330-4	1.036-4	8.649-5	6.898-5	6.112-5	5.753-5
37	45	0.000-00	2.859-3	1.337-3	7.088-4	4.192-4	2.674-4	1.806-4	9.385-5	5.437-5	3.468-5
37	46	1.101-02	1.619-3	1.009-3	7.790-4	6.924-4	6.563-4	6.496-4	6.674-4	7.087-4	7.675-4
37	47	3.269+01	6.866-4	3.942-4	2.541-4	1.803-4	1.353-4	1.041-4	6.872-5	4.781-5	3.569-5
37	48	0.000-00	6.751-5	3.468-5	2.075-5	1.367-5	9.771-6	7.358-6	4.744-6	3.341-6	2.550-6
37	49	4.171-03	1.824-3	1.003-3	6.128-4	4.103-4	2.934-4	2.199-4	1.384-4	9.661-5	7.391-5
37	50	2.235+01	3.362-3	1.892-3	1.176-3	7.982-4	5.751-4	4.327-4	2.706-4	1.840-4	1.338-4
37	51	0.000-00	3.286-4	1.790-4	1.122-4	7.791-5	5.823-5	4.598-5	3.201-5	2.433-5	1.965-5
37	52	0.000-00	6.601-3	4.002-3	2.608-3	1.829-3	1.350-3	1.030-3	6.599-4	4.553-4	3.346-4
37	53	0.000-00	1.948-5	9.845-6	5.709-6	3.748-6	2.684-6	2.064-6	1.419-6	1.114-6	9.562-7
37	54	0.000-00	1.334-6	4.814-7	2.344-7	1.413-7	9.574-8	6.988-8	4.231-8	2.800-8	1.998-8
37	55	2.663-00	2.168-3	1.118-3	6.615-4	4.357-4	3.074-4	2.268-4	1.381-4	9.206-5	6.581-5
37	56	6.412-02	1.157-3	7.905-4	6.261-4	5.445-4	4.988-4	4.715-4	4.439-4	4.318-4	4.273-4
37	57	0.000-00	2.686-3	1.469-3	8.934-4	5.943-4	4.202-4	3.119-4	1.895-4	1.260-4	9.013-5
37	58	0.000-00	5.146-5	2.755-5	1.671-5	1.129-5	8.211-6	6.345-6	4.285-6	3.250-6	2.687-6
37	59	0.000-00	2.682-4	1.433-4	8.584-5	5.661-5	3.982-5	2.940-5	1.777-5	1.177-5	8.396-6
37	60	1.278-01	7.823-4	4.211-4	2.684-4	1.970-4	1.579-4	1.342-4	1.100-4	9.859-5	9.355-5
37	61	0.000-00	3.904-3	2.047-3	1.208-3	7.870-4	5.477-4	4.016-4	2.397-4	1.573-4	1.115-4
37	62	1.352+02	3.250-3	1.697-3	9.983-4	6.502-4	4.548-4	3.331-4	2.001-4	1.314-4	9.298-5
37	63	1.666-00	3.935-3	2.251-3	1.437-3	1.015-3	7.736-4	6.227-4	4.590-4	3.812-4	3.461-4
37	64	0.000-00	1.469-3	7.821-4	4.677-4	3.084-4	2.170-4	1.610-4	9.849-5	6.657-5	4.880-5
37	65	0.000-00	1.033-4	5.389-5	3.227-5	2.192-5	1.613-5	1.270-5	8.923-6	7.057-6	5.951-6
37	66	0.000-00	9.177-4	4.979-4	3.010-4	1.998-4	1.413-4	1.050-4	6.431-5	4.311-5	3.103-5
37	67	9.720-02	1.690-4	9.263-5	5.765-5	3.995-5	2.970-5	2.276-5	1.516-5	1.086-5	8.321-6
37	68	8.106-01	5.736-4	3.362-4	2.392-4	1.971-4	1.761-4	1.645-4	1.555-4	1.544-4	1.573-4
37	69	6.139-00	1.795-4	1.001-4	6.272-5	4.310-5	3.134-5	2.363-5	1.479-5	1.002-5	7.237-6
37	70	4.213-00	1.375-3	8.482-4	5.584-4	3.942-4	2.929-4	2.246-4	1.450-4	1.007-4	7.446-5
37	71	7.072+01	6.699-4	3.446-4	2.124-4	1.475-4	1.085-4	8.192-5	5.154-5	3.478-5	2.490-5
37	72	1.324+01	4.629-4	3.076-4	2.345-4	2.018-4	1.839-4	1.768-4	1.820-4	2.036-4	2.380-4
37	73	0.000-00	1.203-3	6.502-4	3.922-4	2.593-4	1.825-4	1.351-4	8.168-5	5.411-5	3.862-5
37	74	6.304-00	3.898-4	2.727-4	2.114-4	1.809-4	1.650-4	1.557-4	1.502-4	1.535-4	1.625-4
37	75	0.000-00	3.832-4	1.999-4	1.182-4	7.742-5	5.430-5	3.996-5	2.416-5	1.599-5	1.141-5
37	76	0.000-00	2.228-4	1.161-4	6.870-5	4.498-5	3.151-5	2.327-5	1.411-5	9.400-6	6.782-6
37	77	2.829-02	4.853-5	2.459-5	1.399-5	8.894-6	6.085-6	4.366-6	2.578-6	1.708-6	1.251-6
37	78	0.000-00	6.998-4	3.726-4	2.226-4	1.464-4	1.027-4	7.576-5	4.563-5	3.011-5	2.143-5
37	79	5.105+01	2.494-4	2.074-4	1.849-4	1.742-4	1.711-4	1.721-4	1.851-4	2.084-4	2.413-4
37	80	1.285+02	3.786-4	2.098-4	1.322-4	9.258-5	6.954-5	5.266-5	3.493-5	2.419-5	1.810-5
37	81	4.398-00	7.945-5	7.041-5	6.462-5	6.190-5	6.037-5	5.957-5	5.970-5	6.120-5	6.380-5
37	82	2.880-00	1.168-5	7.322-6	5.108-6	3.966-6	3.244-6	2.729-6	2.116-6	1.722-6	1.465-6
37	83	0.000-00	6.383-6	5.041-6	4.075-6	3.589-6	3.199-6	2.941-6	2.550-6	2.305-6	2.115-6
37	84	1.548+01	1.778-4	1.136-4	8.900-5	7.559-5	6.836-5	6.463-5	6.175-5	6.183-5	6.379-5
37	85	8.309-00	5.498-5	3.535-5	2.397-5	1.746-5	1.344-5	1.070-5	7.502-6	5.679-6	4.549-6
37	86	0.000-00	2.802-5	2.117-5	1.747-5	1.572-5	1.444-5	1.355-5	1.230-5	1.154-5	1.099-5
37	87	0.000-00	4.882-6	2.761-6	1.692-6	1.136-6	8.116-7	6.037-7	3.739-7	2.534-7	1.846-7
37	88	1.684-00	8.211-5	4.093-5	2.395-5	1.616-5	1.187-5	9.011-6	6.100-6	4.579-6	3.842-6
37	89	0.000-00	1.014-4	4.990-5	2.836-5	1.808-5	1.243-5	9.019-6	5.313-6	3.437-6	2.410-6
37	90	0.000-00	6.987-5	3.577-5	2.106-5	1.381-5	9.694-6	7.165-6	4.334-6	2.865-6	2.045-6
37	91	2.983+01	8.459-6	8.361-6	8.526-6	8.701-6	8.895-6	9.175-6	1.002-5	1.123-5	1.286-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a{\pm}b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
37	92	0.000-00	9.845-7	4.939-7	2.824-7	1.857-7	1.321-7	1.000-7	6.487-8	4.713-8	3.720-8
37	93	0.000-00	8.956-6	6.114-6	4.414-6	3.585-6	2.985-6	2.558-6	1.997-6	1.637-6	1.389-6
37	94	2.828-00	2.382-4	1.441-4	9.355-5	6.539-5	4.840-5	3.691-5	2.388-5	1.661-5	1.233-5
37	95	6.376-00	9.434-5	5.950-5	4.145-5	3.160-5	2.579-5	2.191-5	1.768-5	1.548-5	1.438-5
37	96	7.008-00	1.740-6	1.665-6	1.668-6	1.723-6	1.765-6	1.819-6	1.968-6	2.180-6	2.461-6
37	97	0.000-00	7.935-7	5.744-7	4.257-7	3.567-7	3.013-7	2.624-7	2.094-7	1.748-7	1.504-7
38	39	8.475-02	2.388-1	1.633-1	1.251-1	1.040-1	9.087-2	8.230-2	7.210-2	6.639-2	6.296-2
38	40	7.764-07	1.769-1	1.701-1	1.695-1	1.701-1	1.707-1	1.717-1	1.728-1	1.735-1	1.740-1
38	41	0.000-00	1.478-2	8.712-3	6.101-3	4.885-3	4.258-3	3.922-3	3.628-3	3.534-3	3.530-3
38	42	7.440-00	8.945-3	4.667-3	2.770-3	1.841-3	1.326-3	1.011-3	6.754-4	5.084-4	4.221-4
38	43	2.983-03	1.365-2	8.966-3	6.942-3	6.014-3	5.547-3	5.342-3	5.304-3	5.543-3	5.961-3
38	44	0.000-00	2.961-3	1.597-3	9.790-4	6.714-4	4.992-4	3.963-4	2.856-4	2.321-4	2.043-4
38	45	3.965-03	8.536-3	4.096-3	2.280-3	1.453-3	1.022-3	7.843-4	5.653-4	4.905-4	4.816-4
38	46	2.954+01	7.033-3	4.979-3	4.201-3	3.935-3	3.839-3	3.851-3	4.013-3	4.290-3	4.664-3
38	47	3.228+01	2.116-3	1.231-3	8.397-4	6.570-4	5.577-4	5.020-4	4.738-4	5.009-4	5.671-4
38	48	1.974+01	2.397-4	1.273-4	7.606-5	5.036-5	3.569-5	2.639-5	1.616-5	1.072-5	7.684-6
38	49	1.179+01	6.394-3	3.565-3	2.213-3	1.514-3	1.107-3	8.516-4	5.681-4	4.241-4	3.478-4
38	50	1.664-01	8.439-3	4.858-3	3.104-3	2.189-3	1.649-3	1.307-3	9.252-4	7.321-4	6.332-4
38	51	1.029+02	1.531-3	8.345-4	5.067-4	3.381-4	2.405-4	1.787-4	1.098-4	7.333-5	5.270-5
38	52	5.752-01	1.697-2	1.038-2	6.847-3	4.895-3	3.691-3	2.897-3	2.000-3	1.536-3	1.300-3
38	53	0.000-00	3.239-3	1.960-3	1.277-3	8.949-4	6.607-4	5.043-4	3.232-4	2.232-4	1.642-4
38	54	0.000-00	9.339-6	4.436-6	2.599-6	1.824-6	1.424-6	1.203-6	9.884-7	8.973-7	8.579-7
38	55	1.592+01	6.306-3	3.423-3	2.182-3	1.573-3	1.234-3	1.025-3	8.005-4	6.888-4	6.289-4
38	56	7.058-01	3.627-3	1.952-3	1.181-3	7.888-4	5.629-4	4.194-4	2.608-4	1.779-4	1.310-4
38	57	3.624-02	8.034-3	4.523-3	2.878-3	2.021-3	1.525-3	1.218-3	8.723-4	6.949-4	5.962-4
38	58	0.000-00	2.461-4	1.328-4	8.011-5	5.307-5	3.745-5	2.778-5	1.694-5	1.133-5	8.160-6
38	59	2.806-01	9.689-4	5.486-4	3.499-4	2.463-4	1.870-4	1.506-4	1.128-4	9.743-5	9.359-5
38	60	2.281+01	3.683-3	1.973-3	1.216-3	8.410-4	6.290-4	4.990-4	3.570-4	2.843-4	2.441-4
38	61	5.474-01	9.514-3	5.003-3	2.975-3	1.961-3	1.384-3	1.033-3	6.477-4	4.561-4	3.549-4
38	62	1.330+02	8.807-3	4.713-3	2.880-3	1.966-3	1.456-3	1.143-3	8.184-4	6.743-4	6.212-4
38	63	8.917+01	9.997-3	5.458-3	3.326-3	2.230-3	1.598-3	1.204-3	7.701-4	5.508-4	4.348-4
38	64	0.000-00	5.480-3	2.888-3	1.713-3	1.121-3	7.834-4	5.772-4	3.481-4	2.313-4	1.664-4
38	65	7.670-01	2.335-4	1.174-4	6.639-5	4.204-5	2.863-5	2.053-5	1.201-5	7.796-6	5.489-6
38	66	2.094-00	4.720-3	2.665-3	1.699-3	1.206-3	9.188-4	7.434-4	5.541-4	4.676-4	4.324-4
38	67	6.684-00	8.864-4	5.699-4	4.325-4	3.704-4	3.370-4	3.194-4	3.106-4	3.196-4	3.403-4
38	68	5.854-01	1.486-3	7.611-4	4.621-4	3.230-4	2.491-4	2.050-4	1.603-4	1.387-4	1.275-4
38	69	1.170+01	4.702-4	2.653-4	1.677-4	1.162-4	8.523-5	6.486-5	4.149-5	2.879-5	2.138-5
38	70	1.377+01	4.725-3	3.021-3	2.109-3	1.593-3	1.277-3	1.069-3	8.374-4	7.249-4	6.766-4
38	71	1.359+02	1.903-3	1.092-3	7.434-4	5.780-4	4.829-4	4.269-4	3.863-4	3.969-4	4.416-4
38	72	7.267+01	1.259-3	6.876-4	4.330-4	3.053-4	2.314-4	1.835-4	1.322-4	1.080-4	9.842-5
38	73	8.809-00	3.479-3	1.919-3	1.188-3	8.156-4	6.021-4	4.730-4	3.383-4	2.836-4	2.699-4
38	74	9.096-00	1.133-3	6.692-4	4.479-4	3.335-4	2.683-4	2.281-4	1.898-4	1.781-4	1.812-4
38	75	3.047-01	1.210-3	6.922-4	4.574-4	3.401-4	2.737-4	2.329-4	1.885-4	1.664-4	1.549-4
38	76	0.000-00	7.292-4	3.824-4	2.274-4	1.495-4	1.050-4	7.759-5	4.703-5	3.125-5	2.241-5
38	77	1.216-00	1.576-4	8.612-5	5.397-5	3.820-5	2.930-5	2.374-5	1.805-5	1.561-5	1.481-5
38	78	4.713-03	2.154-3	1.163-3	7.077-4	4.758-4	3.425-4	2.600-4	1.678-4	1.203-4	9.365-5
38	79	1.399+02	8.513-4	5.371-4	3.883-4	3.152-4	2.743-4	2.498-4	2.365-4	2.467-4	2.745-4
38	80	6.386+02	1.406-3	1.104-3	9.819-4	9.223-4	8.968-4	8.954-4	9.574-4	1.076-3	1.249-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
38	81	1.085+01	9.771-5	6.254-5	4.461-5	3.477-5	2.902-5	2.542-5	2.249-5	2.238-5	2.418-5
38	82	8.707-00	2.752-5	1.939-5	1.565-5	1.393-5	1.308-5	1.267-5	1.283-5	1.375-5	1.530-5
38	83	5.333-01	4.048-6	2.406-6	1.580-6	1.127-6	8.511-7	6.681-7	4.563-7	3.383-7	2.664-7
38	84	1.499+01	4.387-4	2.613-4	1.851-4	1.494-4	1.293-4	1.175-4	1.059-4	1.013-4	1.004-4
38	85	1.295-01	2.434-4	1.695-4	1.328-4	1.127-4	1.002-4	9.196-5	8.209-5	7.655-5	7.296-5
38	86	1.040+02	6.790-5	4.221-5	2.912-5	2.192-5	1.738-5	1.412-5	1.030-5	7.946-6	6.472-6
38	87	6.433+01	3.992-5	4.461-5	4.714-5	4.853-5	5.007-5	5.220-5	5.826-5	6.691-5	7.826-5
38	88	4.202+01	2.640-4	1.388-4	8.633-5	6.153-5	4.779-5	3.915-5	3.089-5	2.769-5	2.751-5
38	89	6.102-00	3.198-4	1.626-4	9.598-5	6.376-5	4.588-5	3.480-5	2.302-5	1.729-5	1.458-5
38	90	0.000-00	2.223-4	1.120-4	6.529-5	4.253-5	2.970-5	2.186-5	1.315-5	8.647-6	6.143-6
38	91	8.362-01	9.450-6	4.936-6	2.983-6	2.104-6	1.636-6	1.354-6	1.084-6	9.744-7	9.456-7
38	92	0.000-00	2.552-6	1.261-6	7.068-7	4.493-7	3.076-7	2.231-7	1.314-7	8.571-8	6.042-8
38	93	2.825+01	6.642-5	3.953-5	2.550-5	1.775-5	1.308-5	9.905-6	6.337-6	4.353-6	3.194-6
38	94	8.173+01	6.067-4	3.899-4	2.744-4	2.102-4	1.713-4	1.450-4	1.158-4	1.005-4	9.263-5
38	95	4.020-00	3.704-4	2.211-4	1.429-4	1.000-4	7.423-5	5.688-5	3.730-5	2.651-5	2.025-5
38	96	1.585-01	3.231-6	1.717-6	1.052-6	7.312-7	5.549-7	4.461-7	3.318-7	2.770-7	2.502-7
38	97	4.678-01	1.992-7	1.040-7	6.235-8	4.192-8	3.013-8	2.210-8	1.358-8	8.963-9	6.342-9
39	40	2.651-01	3.852-1	2.953-1	2.526-1	2.295-1	2.155-1	2.066-1	1.961-1	1.903-1	1.869-1
39	41	3.378-06	1.379-1	1.254-1	1.214-1	1.204-1	1.199-1	1.203-1	1.209-1	1.214-1	1.218-1
39	42	1.262+01	1.231-2	7.005-3	4.605-3	3.418-3	2.753-3	2.352-3	1.938-3	1.763-3	1.707-3
39	43	1.353+01	1.944-2	1.123-2	7.541-3	5.703-3	4.671-3	4.044-3	3.363-3	3.022-3	2.839-3
39	44	4.502-03	1.450-2	9.882-3	7.845-3	6.895-3	6.402-3	6.178-3	6.084-3	6.248-3	6.570-3
39	45	1.908+01	1.637-2	9.394-3	6.619-3	5.409-3	4.813-3	4.554-3	4.473-3	4.684-3	5.076-3
39	46	2.374+01	1.585-2	1.208-2	1.075-2	1.035-2	1.030-2	1.047-2	1.118-2	1.223-2	1.359-2
39	47	6.201-01	3.781-3	1.931-3	1.176-3	8.354-4	6.618-4	5.711-4	5.086-4	5.212-4	5.789-4
39	48	1.956-01	6.107-4	4.666-4	4.075-4	3.863-4	3.816-4	3.878-4	4.220-4	4.774-4	5.512-4
39	49	1.791-01	1.386-2	8.099-3	5.339-3	3.923-3	3.096-3	2.582-3	2.032-3	1.784-3	1.688-3
39	50	7.295+01	9.836-3	5.781-3	3.826-3	2.803-3	2.206-3	1.829-3	1.418-3	1.217-3	1.123-3
39	51	1.574-00	3.490-3	1.996-3	1.272-3	8.965-4	6.776-4	5.433-4	4.094-4	3.637-4	3.670-4
39	52	2.619-00	2.045-2	1.285-2	8.819-3	6.592-3	5.225-3	4.340-3	3.361-3	2.889-3	2.688-3
39	53	1.414-00	1.385-2	8.588-3	5.775-3	4.229-3	3.279-3	2.674-3	2.049-3	1.804-3	1.771-3
39	54	0.000-00	1.321-3	7.945-4	5.162-4	3.613-4	2.665-4	2.033-4	1.302-4	8.988-5	6.610-5
39	55	2.183+01	8.349-3	4.678-3	3.097-3	2.344-3	1.946-3	1.731-3	1.571-3	1.592-3	1.718-3
39	56	1.412+01	1.199-2	7.345-3	5.284-3	4.250-3	3.664-3	3.302-3	2.911-3	2.721-3	2.626-3
39	57	1.628-01	1.201-2	6.554-3	3.996-3	2.674-3	1.907-3	1.430-3	8.949-4	6.198-4	4.671-4
39	58	1.454-01	1.036-3	5.884-4	3.810-4	2.770-4	2.175-4	1.829-4	1.486-4	1.370-4	1.372-4
39	59	1.688-00	2.111-3	1.210-3	7.679-4	5.362-4	3.993-4	3.153-4	2.268-4	1.895-4	1.790-4
39	60	2.422+01	9.978-3	5.462-3	3.386-3	2.330-3	1.724-3	1.351-3	9.365-4	7.235-4	6.048-4
39	61	3.292+01	9.720-3	5.106-3	3.035-3	2.000-3	1.413-3	1.054-3	6.636-4	4.692-4	3.674-4
39	62	1.385+01	1.039-2	5.598-3	3.444-3	2.369-3	1.772-3	1.415-3	1.059-3	9.241-4	9.060-4
39	63	7.738+01	1.384-2	7.432-3	4.519-3	3.055-3	2.230-3	1.721-3	1.187-3	9.477-4	8.571-4
39	64	7.824-01	1.226-2	6.438-3	3.824-3	2.519-3	1.781-3	1.334-3	8.456-4	6.043-4	4.779-4
39	65	7.619-01	4.221-4	2.312-4	1.469-4	1.064-4	8.397-5	7.016-5	5.621-5	4.982-5	4.710-5
39	66	3.594+01	1.217-2	6.641-3	4.051-3	2.718-3	1.954-3	1.480-3	9.610-4	7.085-4	5.850-4
39	67	3.498-00	1.999-3	1.231-3	9.130-4	7.676-4	6.919-4	6.507-4	6.162-4	6.093-4	6.169-4
39	68	6.836-00	2.587-3	1.368-3	8.455-4	5.936-4	4.586-4	3.805-4	3.148-4	3.045-4	3.260-4
39	69	3.071-00	7.616-4	4.683-4	3.262-4	2.496-4	2.042-4	1.755-4	1.450-4	1.319-4	1.283-4
39	70	2.085+01	8.861-3	5.696-3	4.023-3	3.068-3	2.487-3	2.106-3	1.676-3	1.456-3	1.347-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a \pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
39	71	1.177+02	2.547-3	1.682-3	1.309-3	1.130-3	1.038-3	9.998-4	1.026-3	1.140-3	1.321-3
39	72	1.174+02	2.657-3	1.481-3	9.813-4	7.424-4	6.080-4	5.273-4	4.634-4	4.662-4	5.119-4
39	73	4.504+01	5.047-3	2.748-3	1.687-3	1.142-3	8.286-4	6.340-4	4.186-4	3.104-4	2.540-4
39	74	3.107-00	2.279-3	1.245-3	7.583-4	5.065-4	3.610-4	2.687-4	1.663-4	1.126-4	8.222-5
39	75	2.389-00	1.746-3	9.616-4	5.974-4	4.107-4	3.037-4	2.363-4	1.623-4	1.244-4	1.038-4
39	76	1.660+01	1.780-3	1.066-3	7.386-4	5.708-4	4.809-4	4.290-4	3.883-4	3.915-4	4.205-4
39	77	9.994-01	2.987-4	1.666-4	1.068-4	7.573-5	5.748-5	4.552-5	3.201-5	2.474-5	2.050-5
39	78	4.322+01	3.691-3	2.009-3	1.231-3	8.333-4	6.044-4	4.613-4	3.047-4	2.272-4	1.888-4
39	79	1.278+02	2.124-3	1.215-3	7.983-4	5.887-4	4.692-4	3.894-4	3.074-4	2.662-4	2.490-4
39	80	1.341+03	2.316-3	2.161-3	2.094-3	2.079-3	2.098-3	2.160-3	2.403-3	2.781-3	3.295-3
39	81	7.132-00	1.638-4	1.006-4	6.902-5	5.197-5	4.191-5	3.524-5	2.830-5	2.511-5	2.416-5
39	82	8.713-00	4.276-5	2.644-5	1.960-5	1.621-5	1.440-5	1.339-5	1.269-5	1.284-5	1.354-5
39	83	1.196-00	1.744-5	9.269-6	5.668-6	3.877-6	2.890-6	2.297-6	1.706-6	1.467-6	1.399-6
39	84	1.930+01	5.859-4	3.149-4	1.964-4	1.400-4	1.089-4	9.062-5	7.260-5	6.592-5	6.475-5
39	85	1.003+02	3.765-4	2.224-4	1.570-4	1.228-4	1.033-4	9.115-5	7.861-5	7.289-5	7.096-5
39	86	1.243+02	1.792-4	1.377-4	1.191-4	1.052-4	9.715-5	9.223-5	8.781-5	8.729-5	8.942-5
39	87	1.359+02	8.890-5	1.014-4	1.071-4	1.112-4	1.146-4	1.191-4	1.318-4	1.503-4	1.747-4
39	88	2.984+01	4.857-4	2.595-4	1.609-4	1.114-4	8.300-5	6.534-5	4.576-5	3.548-5	2.993-5
39	89	6.098+01	5.539-4	3.058-4	1.978-4	1.453-4	1.156-4	9.699-5	7.842-5	7.094-5	6.972-5
39	90	2.757+01	4.716-4	2.469-4	1.525-4	1.070-4	8.195-5	6.694-5	5.193-5	4.645-5	4.608-5
39	91	4.888+02	9.939-5	1.184-4	1.289-4	1.360-4	1.416-4	1.475-4	1.629-4	1.842-4	2.123-4
39	92	1.329-00	9.274-6	5.057-6	3.325-6	2.517-6	2.094-6	1.851-6	1.636-6	1.593-6	1.646-6
39	93	5.973+01	2.608-4	1.662-4	1.168-4	8.863-5	7.181-5	6.060-5	4.813-5	4.144-5	3.784-5
39	94	7.458+01	5.522-4	3.644-4	2.672-4	2.119-4	1.790-4	1.569-4	1.326-4	1.197-4	1.131-4
39	95	5.532+01	9.860-4	6.210-4	4.281-4	3.203-4	2.547-4	2.110-4	1.618-4	1.355-4	1.213-4
39	96	1.639+01	1.108-5	8.554-6	7.348-6	6.679-6	6.300-6	6.111-6	6.077-6	6.350-6	6.864-6
39	97	5.840-00	8.229-7	5.089-7	3.814-7	3.224-7	2.921-7	2.733-7	2.568-7	2.539-7	2.603-7
40	41	6.673-01	4.571-1	3.767-1	3.410-1	3.233-1	3.124-1	3.064-1	2.994-1	2.958-1	2.937-1
40	42	1.455-00	1.105-2	6.012-3	3.678-3	2.495-3	1.829-3	1.432-3	1.036-3	8.957-4	8.868-4
40	43	3.254+01	2.049-2	1.145-2	7.334-3	5.269-3	4.091-3	3.359-3	2.559-3	2.152-3	1.936-3
40	44	1.313+01	3.166-2	1.995-2	1.467-2	1.204-2	1.057-2	9.687-3	8.738-3	8.277-3	8.037-3
40	45	1.138+01	3.432-2	2.645-2	2.376-2	2.292-2	2.284-2	2.322-2	2.467-2	2.680-2	2.953-2
40	46	3.635-00	1.912-2	1.272-2	1.019-2	9.172-3	8.817-3	8.811-3	9.385-3	1.045-2	1.190-2
40	47	3.649-02	8.774-3	5.149-3	3.759-3	3.196-3	2.937-3	2.838-3	2.811-3	2.890-3	3.030-3
40	48	0.000-00	2.856-4	1.613-4	1.007-4	6.860-5	4.953-5	3.735-5	2.339-5	1.593-5	1.160-5
40	49	5.499+01	2.710-2	1.700-2	1.218-2	9.671-3	8.235-3	7.368-3	6.510-3	6.226-3	6.258-3
40	50	1.324-01	8.124-3	4.738-3	3.115-3	2.271-3	1.784-3	1.477-3	1.142-3	9.748-4	8.915-4
40	51	0.000-00	4.199-3	2.400-3	1.510-3	1.033-3	7.490-4	5.659-4	3.562-4	2.433-4	1.775-4
40	52	4.747-00	1.427-2	9.075-3	6.383-3	4.901-3	4.006-3	3.427-3	2.788-3	2.480-3	2.346-3
40	53	4.469-00	3.049-2	2.000-2	1.446-2	1.141-2	9.565-3	8.383-3	7.151-3	6.657-3	6.577-3
40	54	2.565-00	1.055-2	6.651-3	4.602-3	3.499-3	2.879-3	2.500-3	2.234-3	2.310-3	2.599-3
40	55	7.173-00	7.469-3	4.612-3	3.374-3	2.800-3	2.512-3	2.382-3	2.353-3	2.494-3	2.748-3
40	56	2.468+01	2.533-2	1.634-2	1.248-2	1.060-2	9.639-3	9.157-3	8.932-3	9.255-3	9.926-3
40	57	7.111-00	2.029-2	1.290-2	9.542-3	7.844-3	6.887-3	6.305-3	5.685-3	5.403-3	5.287-3
40	58	2.446-02	2.981-3	1.586-3	9.462-4	6.241-4	4.411-4	3.286-4	2.042-4	1.412-4	1.063-4
40	59	9.514-01	3.933-3	2.408-3	1.652-3	1.251-3	1.013-3	8.654-4	7.095-4	6.438-4	6.263-4
40	60	2.605-01	1.640-2	8.896-3	5.386-3	3.580-3	2.537-3	1.893-3	1.172-3	8.010-4	5.937-4
40	61	4.258+01	8.091-3	4.571-3	2.954-3	2.140-3	1.681-3	1.397-3	1.097-3	9.595-4	9.038-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
40	62	5.108-00	7.592-3	4.125-3	2.534-3	1.727-3	1.272-3	9.955-4	7.043-4	5.738-4	5.236-4
40	63	5.663+01	1.512-2	8.048-3	4.961-3	3.476-3	2.666-3	2.188-3	1.751-3	1.636-3	1.700-3
40	64	1.291+01	2.227-2	1.151-2	6.749-3	4.398-3	3.078-3	2.279-3	1.412-3	9.853-4	7.612-4
40	65	0.000-00	8.883-4	4.407-4	2.486-4	1.574-4	1.073-4	7.659-5	4.465-5	2.860-5	1.987-5
40	66	3.546+01	2.393-2	1.305-2	8.005-3	5.442-3	3.962-3	3.061-3	2.108-3	1.687-3	1.533-3
40	67	3.547-00	3.062-3	1.675-3	1.102-3	8.395-4	7.019-4	6.260-4	5.563-4	5.341-4	5.353-4
40	68	1.059+01	4.837-3	3.126-3	2.388-3	2.030-3	1.836-3	1.726-3	1.638-3	1.634-3	1.680-3
40	69	1.210-00	1.283-3	7.802-4	5.236-4	3.817-4	2.965-4	2.412-4	1.796-4	1.485-4	1.331-4
40	70	6.215+01	1.339-2	8.788-3	6.317-3	4.953-3	4.130-3	3.603-3	3.050-3	2.824-3	2.783-3
40	71	4.235+01	1.673-3	1.057-3	7.776-4	6.360-4	5.589-4	5.192-4	5.024-4	5.327-4	5.965-4
40	72	1.440+02	5.432-3	3.573-3	2.770-3	2.403-3	2.220-3	2.154-3	2.236-3	2.504-3	2.917-3
40	73	9.415+01	6.014-3	3.346-3	2.160-3	1.562-3	1.221-3	1.012-3	8.030-4	7.264-4	7.235-4
40	74	1.387+01	3.800-3	2.167-3	1.410-3	1.013-3	7.863-4	6.467-4	5.002-4	4.371-4	4.173-4
40	75	1.513+01	2.105-3	1.194-3	7.777-4	5.649-4	4.460-4	3.745-4	3.096-4	2.957-4	3.109-4
40	76	1.616+01	3.739-3	2.160-3	1.405-3	1.010-3	7.809-4	6.402-4	4.994-4	4.482-4	4.461-4
40	77	1.308+01	5.118-4	3.199-4	2.308-4	1.839-4	1.573-4	1.421-4	1.314-4	1.354-4	1.490-4
40	78	8.871+01	5.423-3	3.055-3	1.965-3	1.410-3	1.094-3	8.954-4	6.881-4	5.932-4	5.590-4
40	79	5.033+02	4.905-3	3.266-3	2.483-3	2.124-3	1.935-3	1.847-3	1.873-3	2.060-3	2.374-3
40	80	7.559+02	1.754-3	1.456-3	1.315-3	1.261-3	1.245-3	1.265-3	1.390-3	1.606-3	1.906-3
40	81	6.932+01	2.871-4	2.323-4	2.021-4	1.904-4	1.860-4	1.870-4	2.033-4	2.336-4	2.767-4
40	82	2.880-00	1.046-4	5.832-5	3.810-5	2.809-5	2.258-5	1.920-5	1.582-5	1.444-5	1.409-5
40	83	0.000-00	5.939-5	2.785-5	1.480-5	8.759-6	5.607-6	3.797-6	1.990-6	1.166-6	7.498-7
40	84	7.225+01	7.772-4	4.101-4	2.484-4	1.691-4	1.249-4	9.775-5	6.998-5	5.742-5	5.246-5
40	85	2.515+02	6.157-4	4.010-4	3.064-4	2.615-4	2.369-4	2.245-4	2.210-4	2.338-4	2.587-4
40	86	0.000-00	1.475-4	7.707-5	4.536-5	2.885-5	1.965-5	1.401-5	8.014-6	5.089-6	3.487-6
40	87	2.554+01	5.605-5	3.950-5	3.211-5	2.876-5	2.712-5	2.651-5	2.737-5	3.011-5	3.441-5
40	88	2.708+01	6.728-4	3.587-4	2.181-4	1.487-4	1.093-4	8.542-5	5.977-5	4.775-5	4.252-5
40	89	6.147+01	7.560-4	4.504-4	3.115-4	2.364-4	1.929-4	1.648-4	1.315-4	1.125-4	1.013-4
40	90	7.392+01	1.048-3	5.926-4	3.966-4	3.004-4	2.464-4	2.132-4	1.799-4	1.670-4	1.655-4
40	91	1.422+03	2.995-4	3.590-4	3.897-4	4.109-4	4.275-4	4.446-4	4.896-4	5.527-4	6.365-4
40	92	2.405-01	3.464-5	1.696-5	9.627-6	6.209-6	4.363-6	3.244-6	2.050-6	1.448-6	1.114-6
40	93	0.000-00	3.386-4	2.025-4	1.296-4	8.990-5	6.604-5	4.997-5	3.196-5	2.200-5	1.618-5
40	94	9.325-00	2.666-4	1.560-4	9.999-5	7.024-5	5.255-5	4.055-5	2.733-5	2.012-5	1.609-5
40	95	5.424+02	2.025-3	1.407-3	1.082-3	8.987-4	7.878-4	7.155-4	6.409-4	6.104-4	6.063-4
40	96	5.790-00	1.471-5	8.546-6	5.566-6	4.083-6	3.245-6	2.722-6	2.197-6	1.996-6	1.973-6
40	97	0.000-00	2.137-6	9.391-7	4.732-7	2.774-7	1.766-7	1.199-7	6.358-8	3.799-8	2.479-8
41	42	1.387-04	7.342-3	4.143-3	2.650-3	1.897-3	1.474-3	1.231-3	1.007-3	9.631-4	1.016-3
41	43	1.389-00	1.779-2	1.034-2	6.944-3	5.268-3	4.371-3	3.896-3	3.588-3	3.740-3	4.167-3
41	44	5.901+01	4.718-2	2.516-2	1.515-2	1.013-2	7.292-3	5.532-3	3.611-3	2.645-3	2.137-3
41	45	4.014+01	6.300-2	5.540-2	5.362-2	5.396-2	5.504-2	5.691-2	6.183-2	6.826-2	7.625-2
41	46	6.521-02	2.243-2	1.336-2	9.888-3	8.467-3	7.811-3	7.604-3	7.706-3	8.164-3	8.859-3
41	47	0.000-00	1.448-2	6.944-3	3.812-3	2.358-3	1.590-3	1.149-3	7.050-4	5.019-4	4.012-4
41	48	0.000-00	2.306-5	1.145-5	6.787-6	4.570-6	3.392-6	2.720-6	2.049-6	1.750-6	1.613-6
41	49	5.029-01	4.373-2	2.855-2	2.116-2	1.733-2	1.507-2	1.371-2	1.230-2	1.173-2	1.161-2
41	50	0.000-00	9.758-3	5.477-3	3.403-3	2.311-3	1.670-3	1.262-3	8.003-4	5.551-4	4.141-4
41	51	0.000-00	7.439-4	3.566-4	1.975-4	1.257-4	8.855-5	6.781-5	4.796-5	3.952-5	3.581-5
41	52	1.298-00	2.961-3	1.783-3	1.186-3	8.637-4	6.709-4	5.454-4	4.034-4	3.286-4	2.873-4
41	53	9.811-00	2.431-2	1.562-2	1.115-2	8.734-3	7.287-3	6.359-3	5.343-3	4.862-3	4.663-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
41	54	2.110-00	5.315-2	3.608-2	2.701-2	2.205-2	1.905-2	1.712-2	1.505-2	1.413-2	1.385-2
41	55	0.000-00	7.892-3	4.277-3	2.596-3	1.732-3	1.233-3	9.262-4	5.815-4	4.048-4	3.060-4
41	56	8.227-00	1.849-2	1.106-2	7.745-3	6.162-3	5.313-3	4.895-3	4.664-3	4.870-3	5.350-3
41	57	3.124+01	5.043-2	3.855-2	3.360-2	3.161-2	3.063-2	3.051-2	3.148-2	3.353-2	3.643-2
41	58	1.941-01	6.762-3	3.562-3	2.105-3	1.376-3	9.613-4	7.085-4	4.289-4	2.869-4	2.075-4
41	59	1.922+01	4.633-3	3.146-3	2.447-3	2.098-3	1.903-3	1.804-3	1.761-3	1.833-3	1.984-3
41	60	5.835-01	5.581-3	3.100-3	1.917-3	1.307-3	9.525-4	7.341-4	4.938-4	3.757-4	3.163-4
41	61	1.470+01	2.757-2	1.513-2	9.255-3	6.230-3	4.475-3	3.377-3	2.150-3	1.511-3	1.150-3
41	62	0.000-00	4.833-3	2.603-3	1.571-3	1.043-3	7.369-4	5.481-4	3.350-4	2.245-4	1.620-4
41	63	5.121-00	1.614-2	8.756-3	5.349-3	3.619-3	2.630-3	2.026-3	1.378-3	1.076-3	9.458-4
41	64	3.566+01	3.382-2	1.765-2	1.052-2	7.018-3	5.056-3	3.873-3	2.590-3	1.954-3	1.614-3
41	65	0.000-00	1.859-3	8.657-4	4.596-4	2.742-4	1.768-4	1.211-4	6.501-5	3.911-5	2.594-5
41	66	2.135+02	3.433-2	1.849-2	1.143-2	7.987-3	6.038-3	4.869-3	3.701-3	3.251-3	3.179-3
41	67	0.000-00	4.009-3	1.966-3	1.100-3	6.892-4	4.662-4	3.315-4	1.916-4	1.225-4	8.539-5
41	68	3.040+01	9.826-3	7.862-3	7.031-3	6.686-3	6.491-3	6.434-3	6.480-3	6.641-3	6.897-3
41	69	0.000-00	3.683-3	2.196-3	1.416-3	9.820-4	7.191-4	5.460-4	3.467-4	2.380-4	1.743-4
41	70	0.000-00	1.288-2	7.756-3	5.032-3	3.508-3	2.579-3	1.962-3	1.250-3	8.594-4	6.296-4
41	71	0.000-00	2.429-3	1.345-3	8.266-4	5.540-4	3.946-4	2.947-4	1.818-4	1.228-4	8.928-5
41	72	1.223+02	6.679-3	4.506-3	3.492-3	3.014-3	2.749-3	2.641-3	2.673-3	2.909-3	3.299-3
41	73	3.555+02	9.000-3	6.166-3	5.024-3	4.525-3	4.273-3	4.198-3	4.378-3	4.854-3	5.565-3
41	74	1.573+01	9.136-4	5.967-4	4.402-4	3.580-4	3.103-4	2.839-4	2.665-4	2.749-4	3.007-4
41	75	1.982+02	7.963-3	5.751-3	4.697-3	4.173-3	3.879-3	3.756-3	3.799-3	4.084-3	4.552-3
41	76	1.571+01	7.597-3	4.590-3	3.140-3	2.392-3	1.950-3	1.667-3	1.355-3	1.196-3	1.113-3
41	77	4.363+01	5.996-4	4.479-4	3.765-4	3.462-4	3.324-4	3.322-4	3.575-4	4.075-4	4.789-4
41	78	1.011+02	6.862-3	3.774-3	2.359-3	1.654-3	1.258-3	1.005-3	7.487-4	6.339-4	5.978-4
41	79	2.917+02	5.636-3	3.370-3	2.343-3	1.836-3	1.558-3	1.409-3	1.319-3	1.388-3	1.561-3
41	80	0.000-00	3.186-3	1.693-3	1.013-3	6.683-4	4.708-4	3.495-4	2.143-4	1.449-4	1.063-4
41	81	1.821-00	2.485-4	1.453-4	9.609-5	7.017-5	5.548-5	4.603-5	3.589-5	3.134-5	2.972-5
41	82	0.000-00	1.942-4	9.791-5	5.582-5	3.530-5	2.400-5	1.713-5	9.865-6	6.292-6	4.353-6
41	83	0.000-00	1.556-4	7.161-5	3.723-5	2.178-5	1.381-5	9.304-6	4.874-6	2.890-6	1.912-6
41	84	7.506+01	1.056-3	6.287-4	4.362-4	3.411-4	2.839-4	2.498-4	2.183-4	2.098-4	2.158-4
41	85	0.000-00	6.348-4	3.188-4	1.809-4	1.137-4	7.698-5	5.500-5	3.212-5	2.116-5	1.535-5
41	86	0.000-00	2.139-4	1.015-4	5.525-5	3.374-5	2.234-5	1.575-5	9.099-6	6.010-6	4.454-6
41	87	1.898+02	2.020-4	1.828-4	1.746-4	1.730-4	1.740-4	1.779-4	1.939-4	2.199-4	2.558-4
41	88	1.039+01	5.379-4	2.772-4	1.648-4	1.098-4	7.876-5	5.987-5	3.922-5	2.910-5	2.409-5
41	89	2.713+01	1.006-3	5.240-4	3.158-4	2.146-4	1.579-4	1.234-4	8.650-5	6.910-5	6.141-5
41	90	7.815+01	1.944-3	1.206-3	8.730-4	6.938-4	5.799-4	5.112-4	4.265-4	3.762-4	3.434-4
41	91	5.042+02	2.406-4	2.214-4	2.114-4	2.072-4	2.051-4	2.065-4	2.175-4	2.376-4	2.669-4
41	92	8.797-01	9.863-5	4.843-5	2.781-5	1.826-5	1.308-5	9.966-6	6.654-6	4.995-6	4.084-6
41	93	0.000-00	1.329-5	5.914-6	3.561-6	2.758-6	2.448-6	2.331-6	2.314-6	2.365-6	2.444-6
41	94	0.000-00	7.979-4	4.743-4	3.041-4	2.110-4	1.553-4	1.181-4	7.644-5	5.363-5	4.032-5
41	95	1.934+02	2.391-3	1.608-3	1.193-3	9.655-4	8.244-4	7.318-4	6.301-4	5.772-4	5.517-4
41	96	7.507+01	2.626-5	2.165-5	2.036-5	2.015-5	2.030-5	2.072-5	2.223-5	2.456-5	2.775-5
41	97	0.000-00	5.850-6	2.521-6	1.244-6	7.164-7	4.494-7	3.014-7	1.567-7	9.238-8	6.009-8
42	43	2.069-00	1.359-1	8.683-2	6.207-2	4.841-2	4.004-2	3.448-2	2.790-2	2.421-2	2.200-2
42	44	1.312-05	8.940-3	5.439-3	4.074-3	3.649-3	3.693-3	4.053-3	5.390-3	7.371-3	9.908-3
42	45	1.038-01	1.395-2	7.620-3	4.658-3	3.130-3	2.246-3	1.701-3	1.087-3	7.694-4	5.907-4
42	46	1.376-01	5.473-3	3.376-3	2.407-3	1.918-3	1.645-3	1.485-3	1.333-3	1.293-3	1.314-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
42	47	2.146-02	3.026-3	2.104-3	1.606-3	1.335-3	1.174-3	1.073-3	9.790-4	9.568-4	9.784-4
42	48	7.151-03	1.860-3	1.567-3	1.453-3	1.414-3	1.405-3	1.412-3	1.451-3	1.514-3	1.596-3
42	49	9.606-02	1.003-2	6.790-3	5.580-3	5.124-3	4.961-3	4.932-3	5.028-3	5.188-3	5.388-3
42	50	1.391-00	4.053-2	3.449-2	3.179-2	3.063-2	3.013-2	3.007-2	3.064-2	3.184-2	3.354-2
42	51	1.093+01	5.544-2	5.413-2	5.416-2	5.472-2	5.547-2	5.636-2	5.847-2	6.106-2	6.421-2
42	52	1.113+01	5.231-2	3.632-2	2.951-2	2.628-2	2.455-2	2.367-2	2.315-2	2.352-2	2.445-2
42	53	8.930-02	3.208-2	1.868-2	1.259-2	9.611-3	7.941-3	6.955-3	5.941-3	5.493-3	5.314-3
42	54	0.000-00	6.894-3	3.747-3	2.313-3	1.595-3	1.189-3	9.438-4	6.782-4	5.474-4	4.784-4
42	55	5.360+01	2.407-1	2.403-1	2.437-1	2.474-1	2.510-1	2.550-1	2.636-1	2.737-1	2.856-1
42	56	2.400+01	1.512-1	1.496-1	1.514-1	1.536-1	1.560-1	1.586-1	1.642-1	1.708-1	1.787-1
42	57	8.316-00	1.838-2	1.721-2	1.708-2	1.725-2	1.750-2	1.779-2	1.844-2	1.917-2	2.002-2
42	58	8.311-01	6.140-2	3.380-2	2.089-2	1.431-2	1.055-2	8.250-3	5.799-3	4.686-3	4.234-3
42	59	5.279+01	3.884-2	2.181-2	1.384-2	9.802-3	7.477-3	6.050-3	4.539-3	3.866-3	3.610-3
42	60	2.807-00	1.808-2	1.153-2	8.485-3	6.988-3	6.142-3	5.622-3	5.070-3	4.821-3	4.718-3
42	61	8.315-00	1.304-2	7.943-3	5.747-3	4.713-3	4.172-3	3.858-3	3.558-3	3.436-3	3.401-3
42	62	2.163+01	2.055-2	1.921-2	1.899-2	1.907-2	1.921-2	1.946-2	1.997-2	2.054-2	2.122-2
42	63	1.016+01	2.446-2	2.181-2	2.092-2	2.068-2	2.066-2	2.075-2	2.106-2	2.145-2	2.193-2
42	64	1.740-00	4.040-3	2.435-3	1.801-3	1.537-3	1.421-3	1.380-3	1.400-3	1.480-3	1.597-3
42	65	5.385+01	1.288-2	1.340-2	1.389-2	1.423-2	1.451-2	1.476-2	1.518-2	1.557-2	1.600-2
42	66	1.192+01	1.037-2	7.120-3	5.723-3	5.058-3	4.711-3	4.519-3	4.336-3	4.261-3	4.238-3
42	67	3.124+01	1.310-2	1.081-2	1.003-2	9.746-3	9.652-3	9.694-3	9.941-3	1.033-2	1.085-2
42	68	2.371-00	8.110-3	4.234-3	2.520-3	1.679-3	1.213-3	9.383-4	6.573-4	5.425-4	5.095-4
42	69	7.175-00	1.353-2	7.749-3	4.943-3	3.455-3	2.582-3	2.029-3	1.402-3	1.070-3	8.792-4
42	70	2.946-00	3.061-3	1.620-3	1.027-3	7.549-4	6.116-4	5.293-4	4.462-4	4.073-4	3.872-4
42	71	1.355+02	1.395-2	1.231-2	1.159-2	1.121-2	1.100-2	1.090-2	1.084-2	1.088-2	1.099-2
42	72	1.895+02	1.466-2	1.191-2	1.085-2	1.040-2	1.018-2	1.009-2	1.010-2	1.021-2	1.041-2
42	73	1.410+01	2.533-3	1.893-3	1.635-3	1.551-3	1.523-3	1.525-3	1.580-3	1.670-3	1.788-3
42	74	1.408+01	6.397-3	3.823-3	2.720-3	2.156-3	1.825-3	1.620-3	1.393-3	1.279-3	1.220-3
42	75	2.258+01	3.836-3	2.394-3	1.766-3	1.466-3	1.305-3	1.211-3	1.127-3	1.095-3	1.093-3
42	76	1.061+01	1.426-3	9.374-4	7.142-4	6.096-4	5.605-4	5.403-4	5.494-4	5.948-4	6.658-4
42	77	7.625-00	8.154-3	4.270-3	2.511-3	1.636-3	1.145-3	8.465-4	5.209-4	3.578-4	2.687-4
42	78	4.487-00	9.703-4	5.332-4	3.520-4	2.682-4	2.239-4	1.995-4	1.781-4	1.736-4	1.784-4
42	79	2.275+01	1.303-3	7.996-4	6.093-4	5.257-4	4.845-4	4.670-4	4.597-4	4.683-4	4.882-4
42	80	1.046+02	9.914-4	7.229-4	6.015-4	5.395-4	5.035-4	4.919-4	5.016-4	5.441-4	6.147-4
42	81	6.959+01	2.405-3	1.343-3	8.700-4	6.313-4	4.951-4	4.113-4	3.255-4	2.907-4	2.834-4
42	82	2.959+01	2.731-3	1.504-3	9.490-4	6.723-4	5.164-4	4.206-4	3.205-4	2.762-4	2.598-4
42	83	1.774-02	1.283-3	5.872-4	3.060-4	1.803-4	1.157-4	7.937-5	4.374-5	2.779-5	1.993-5
42	84	3.282+01	6.069-4	3.749-4	2.863-4	2.475-4	2.288-4	2.200-4	2.167-4	2.221-4	2.338-4
42	85	9.973-00	3.520-4	2.505-4	2.018-4	1.719-4	1.534-4	1.406-4	1.254-4	1.167-4	1.120-4
42	86	2.331+01	2.146-4	1.792-4	1.596-4	1.443-4	1.339-4	1.262-4	1.165-4	1.104-4	1.068-4
42	87	6.246+01	2.407-3	1.285-3	7.893-4	5.364-4	3.909-4	2.974-4	1.936-4	1.379-4	1.066-4
42	88	3.673+01	5.663-3	4.698-3	4.062-3	3.637-3	3.329-3	3.143-3	2.847-3	2.658-3	2.511-3
42	89	3.121+01	1.272-3	8.663-4	6.917-4	6.114-4	5.667-4	5.402-4	5.130-4	5.024-4	5.003-4
42	90	1.103+01	5.482-4	2.955-4	1.889-4	1.381-4	1.101-4	9.363-5	7.697-5	7.038-5	6.874-5
42	91	9.227+01	8.441-4	5.167-4	3.628-4	2.851-4	2.412-4	2.137-4	1.855-4	1.740-4	1.722-4
42	92	3.540+01	1.200-3	6.723-4	4.451-4	3.347-4	2.730-4	2.344-4	1.943-4	1.759-4	1.688-4
42	93	6.358+03	1.095-3	1.204-3	1.283-3	1.303-3	1.315-3	1.334-3	1.382-3	1.451-3	1.546-3
42	94	2.619+02	9.735-4	9.117-4	8.936-4	8.748-4	8.646-4	8.590-4	8.553-4	8.569-4	8.638-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
42	95	1.778+01	2.998-4	2.306-4	2.087-4	2.021-4	2.005-4	2.009-4	2.041-4	2.075-4	2.113-4
42	96	2.554+02	7.446-4	4.940-4	3.692-4	3.016-4	2.624-4	2.387-4	2.169-4	2.124-4	2.184-4
42	97	2.521+03	7.213-5	6.082-5	5.883-5	5.955-5	6.086-5	6.258-5	6.744-5	7.448-5	8.406-5
43	44	5.404-00	1.538-1	9.968-2	7.420-2	6.228-2	5.704-2	5.604-2	6.189-2	7.479-2	9.318-2
43	45	3.133-01	1.790-2	1.084-2	7.608-3	6.014-3	5.173-3	4.739-3	4.507-3	4.744-3	5.276-3
43	46	1.888-02	1.417-2	9.152-3	6.853-3	5.741-3	5.194-3	4.972-3	5.071-3	5.607-3	6.453-3
43	47	1.020-04	4.498-3	2.612-3	1.735-3	1.290-3	1.036-3	8.827-4	7.313-4	6.789-4	6.794-4
43	48	0.000-00	1.280-3	6.548-4	3.766-4	2.409-4	1.656-4	1.198-4	7.058-5	4.589-5	3.225-5
43	49	7.128-01	4.454-2	3.655-2	3.321-2	3.181-2	3.128-2	3.130-2	3.218-2	3.379-2	3.598-2
43	50	5.060-00	1.417-1	1.380-1	1.387-1	1.407-1	1.432-1	1.466-1	1.544-1	1.640-1	1.757-1
43	51	0.000-00	8.503-3	4.945-3	3.144-3	2.163-3	1.575-3	1.194-3	7.549-4	5.181-4	3.797-4
43	52	1.616+01	4.417-2	2.906-2	2.240-2	1.921-2	1.749-2	1.657-2	1.587-2	1.594-2	1.645-2
43	53	1.310-00	5.298-2	3.715-2	3.007-2	2.677-2	2.501-2	2.410-2	2.358-2	2.401-2	2.503-2
43	54	1.070-02	4.285-2	2.395-2	1.534-2	1.106-2	8.655-3	7.201-3	5.646-3	4.889-3	4.501-3
43	55	1.259+01	6.588-2	6.402-2	6.431-2	6.501-2	6.589-2	6.709-2	6.974-2	7.290-2	7.671-2
43	56	2.398+01	2.737-1	2.718-1	2.757-1	2.794-1	2.832-1	2.875-1	2.963-1	3.064-1	3.183-1
43	57	1.316+01	1.305-1	1.276-1	1.284-1	1.301-1	1.320-1	1.343-1	1.392-1	1.450-1	1.519-1
43	58	3.148+01	7.528-2	4.076-2	2.465-2	1.641-2	1.171-2	8.772-3	5.499-3	3.811-3	2.863-3
43	59	1.316+01	4.197-2	2.473-2	1.665-2	1.250-2	1.010-2	8.597-3	6.967-3	6.189-3	5.831-3
43	60	1.047+01	1.524-2	8.766-3	5.979-3	4.653-3	3.950-3	3.540-3	3.140-3	2.963-3	2.896-3
43	61	1.533-00	1.889-2	1.083-2	7.125-3	5.260-3	4.195-3	3.552-3	2.858-3	2.545-3	2.414-3
43	62	1.551+01	1.580-2	1.446-2	1.415-2	1.412-2	1.420-2	1.439-2	1.481-2	1.531-2	1.590-2
43	63	1.378+01	3.978-2	3.304-2	3.063-2	2.962-2	2.918-2	2.914-2	2.939-2	2.990-2	3.063-2
43	64	1.951+01	2.432-2	1.486-2	1.086-2	9.041-3	8.098-3	7.598-3	7.182-3	7.086-3	7.158-3
43	65	0.000-00	3.049-3	1.490-3	8.276-4	5.130-4	3.431-4	2.424-4	1.369-4	8.583-5	5.864-5
43	66	1.507+01	3.948-2	3.503-2	3.334-2	3.273-2	3.255-2	3.261-2	3.299-2	3.361-2	3.442-2
43	67	7.176+01	4.137-2	4.117-2	4.181-2	4.241-2	4.297-2	4.365-2	4.498-2	4.641-2	4.810-2
43	68	1.813+01	1.733-2	1.194-2	9.760-3	8.767-3	8.270-3	8.064-3	8.034-3	8.279-3	8.716-3
43	69	4.901-03	1.774-2	1.013-2	6.361-3	4.341-3	3.146-3	2.381-3	1.512-3	1.049-3	7.813-4
43	70	2.314-00	6.190-3	3.149-3	1.882-3	1.292-3	9.810-4	8.038-4	6.304-4	5.591-4	5.348-4
43	71	3.389+01	1.538-2	1.297-2	1.193-2	1.143-2	1.118-2	1.107-2	1.104-2	1.112-2	1.130-2
43	72	9.311-00	1.937-2	1.792-2	1.736-2	1.711-2	1.699-2	1.695-2	1.693-2	1.692-2	1.694-2
43	73	9.045+01	1.480-2	1.249-2	1.162-2	1.126-2	1.109-2	1.101-2	1.098-2	1.102-2	1.110-2
43	74	2.182-01	9.109-3	6.634-3	5.639-3	5.165-3	4.920-3	4.778-3	4.648-3	4.593-3	4.577-3
43	75	1.237+01	5.092-3	3.126-3	2.173-3	1.669-3	1.365-3	1.169-3	9.437-4	8.289-4	7.679-4
43	76	1.965+01	5.714-3	3.492-3	2.487-3	1.989-3	1.712-3	1.543-3	1.380-3	1.308-3	1.284-3
43	77	8.111+01	1.384-2	7.307-3	4.399-3	2.963-3	2.161-3	1.680-3	1.169-3	9.305-4	8.208-4
43	78	4.759-00	2.329-3	1.479-3	1.155-3	1.007-3	9.338-4	8.980-4	8.696-4	8.617-4	8.659-4
43	79	1.426+02	2.049-3	1.533-3	1.301-3	1.181-3	1.113-3	1.100-3	1.149-3	1.276-3	1.471-3
43	80	2.176-02	1.097-3	6.857-4	5.483-4	5.040-4	4.916-4	4.916-4	5.038-4	5.170-4	5.307-4
43	81	2.353+02	4.108-3	2.494-3	1.773-3	1.419-3	1.224-3	1.123-3	1.075-3	1.140-3	1.284-3
43	82	2.068-00	3.982-3	2.282-3	1.520-3	1.137-3	9.203-4	7.859-4	6.393-4	5.644-4	5.236-4
43	83	0.000-00	1.721-3	7.859-4	4.057-4	2.362-4	1.488-4	9.945-5	5.099-5	2.929-5	1.854-5
43	84	2.284+02	1.329-3	9.999-4	8.728-4	8.065-4	7.728-4	7.627-4	7.851-4	8.469-4	9.423-4
43	85	3.450+01	1.083-3	8.148-4	6.991-4	6.321-4	5.919-4	5.671-4	5.389-4	5.243-4	5.192-4
43	86	0.000-00	2.347-4	1.313-4	8.206-5	5.574-5	4.040-5	3.042-5	1.927-5	1.328-5	9.793-6
43	87	1.156+01	3.631-3	1.936-3	1.177-3	7.935-4	5.701-4	4.289-4	2.712-4	1.865-4	1.382-4
43	88	1.597-00	8.928-4	5.352-4	3.808-4	3.087-4	2.683-4	2.436-4	2.153-4	1.998-4	1.904-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
43	89	3.452+01	8.351-3	6.840-3	5.905-3	5.226-3	4.753-3	4.482-3	4.050-3	3.772-3	3.556-3
43	90	3.346+01	1.670-3	1.112-3	8.732-4	7.591-4	6.974-4	6.606-4	6.233-4	6.092-4	6.071-4
43	91	2.149+01	1.079-3	6.268-4	4.190-4	3.137-4	2.533-4	2.145-4	1.721-4	1.500-4	1.385-4
43	92	1.665+01	1.607-3	8.263-4	4.898-4	3.257-4	2.336-4	1.754-4	1.119-4	7.866-5	5.976-5
43	93	0.000-00	6.110-5	3.100-5	1.758-5	1.130-5	7.864-6	5.846-6	3.703-6	2.638-6	2.039-6
43	94	3.153+02	2.033-3	1.917-3	1.883-3	1.846-3	1.825-3	1.814-3	1.804-3	1.800-3	1.805-3
43	95	2.747+02	1.196-3	1.085-3	1.050-3	1.031-3	1.021-3	1.018-3	1.022-3	1.034-3	1.053-3
43	96	2.124+01	9.517-4	5.609-4	3.644-4	2.601-4	1.988-4	1.590-4	1.145-4	9.034-5	7.639-5
43	97	0.000-00	6.814-5	2.918-5	1.437-5	8.203-6	5.153-6	3.466-6	1.814-6	1.073-6	6.949-7
44	45	8.657-02	2.892-2	2.201-2	1.999-2	2.038-2	2.215-2	2.507-2	3.359-2	4.528-2	5.993-2
44	46	5.693-06	1.509-2	8.361-3	5.223-3	3.607-3	2.679-3	2.111-3	1.497-3	1.214-3	1.092-3
44	47	0.000-00	1.129-2	6.011-3	3.599-3	2.363-3	1.655-3	1.221-3	7.352-4	4.864-4	3.471-4
44	48	0.000-00	1.641-3	7.677-4	4.139-4	2.600-4	1.823-4	1.399-4	1.003-4	8.420-5	7.741-5
44	49	1.140-00	2.623-1	2.495-1	2.474-1	2.502-1	2.542-1	2.610-1	2.780-1	2.997-1	3.265-1
44	50	0.000-00	1.572-2	9.294-3	6.263-3	4.724-3	3.853-3	3.321-3	2.757-3	2.483-3	2.349-3
44	51	0.000-00	1.158-3	7.658-4	7.068-4	7.398-4	7.916-4	8.449-4	9.362-4	1.004-3	1.059-3
44	52	3.072-00	1.120-2	6.169-3	3.861-3	2.701-3	2.047-3	1.648-3	1.221-3	1.018-3	9.211-4
44	53	1.509+01	5.470-2	3.391-2	2.455-2	2.003-2	1.758-2	1.618-2	1.493-2	1.469-2	1.499-2
44	54	1.805+01	1.188-1	7.397-2	5.332-2	4.327-2	3.773-2	3.453-2	3.153-2	3.075-2	3.117-2
44	55	0.000-00	3.520-3	2.155-3	1.721-3	1.596-3	1.575-3	1.595-3	1.666-3	1.734-3	1.798-3
44	56	2.793-00	5.525-2	5.223-2	5.178-2	5.225-2	5.276-2	5.358-2	5.535-2	5.731-2	5.960-2
44	57	2.484+01	4.304-1	4.239-1	4.265-1	4.320-1	4.368-1	4.431-1	4.560-1	4.706-1	4.878-1
44	58	4.401+01	8.061-2	4.374-2	2.666-2	1.801-2	1.307-2	1.002-2	6.642-3	4.928-3	3.993-3
44	59	2.873+01	4.297-2	2.939-2	2.322-2	2.011-2	1.833-2	1.725-2	1.611-2	1.561-2	1.543-2
44	60	4.973-01	1.134-2	6.470-3	4.362-3	3.373-3	2.854-3	2.570-3	2.319-3	2.246-3	2.260-3
44	61	8.931-00	2.707-2	1.700-2	1.280-2	1.090-2	9.931-3	9.433-3	9.041-3	8.974-3	9.076-3
44	62	0.000-00	6.627-3	3.614-3	2.232-3	1.524-3	1.117-3	8.679-4	5.902-4	4.483-4	3.703-4
44	63	6.040-00	1.769-2	1.483-2	1.378-2	1.338-2	1.319-2	1.320-2	1.339-2	1.370-2	1.414-2
44	64	5.821-00	6.135-2	3.808-2	2.780-2	2.283-2	2.016-2	1.863-2	1.718-2	1.671-2	1.674-2
44	65	0.000-00	2.326-3	1.229-3	7.364-4	4.871-4	3.456-4	2.594-4	1.640-4	1.155-4	8.860-5
44	66	2.360+01	1.068-1	9.170-2	8.621-2	8.412-2	8.318-2	8.308-2	8.357-2	8.451-2	8.585-2
44	67	0.000-00	8.803-3	4.481-3	2.593-3	1.670-3	1.158-3	8.520-4	5.217-4	3.580-4	2.692-4
44	68	7.335+01	9.473-2	9.151-2	9.154-2	9.262-2	9.336-2	9.470-2	9.737-2	1.002-1	1.036-1
44	69	0.000-00	2.219-2	1.293-2	8.210-3	5.640-3	4.102-3	3.105-3	1.964-3	1.349-3	9.911-4
44	70	0.000-00	1.078-2	5.379-3	3.040-3	1.915-3	1.299-3	9.281-4	5.375-4	3.449-4	2.409-4
44	71	0.000-00	4.228-3	2.288-3	1.395-3	9.432-4	6.869-4	5.293-4	3.565-4	2.684-4	2.197-4
44	72	1.837+01	1.334-2	1.281-2	1.271-2	1.278-2	1.282-2	1.293-2	1.317-2	1.342-2	1.371-2
44	73	8.497+01	3.525-2	3.167-2	3.030-2	2.970-2	2.947-2	2.939-2	2.940-2	2.948-2	2.960-2
44	74	4.663-01	2.944-3	1.799-3	1.287-3	1.038-3	9.017-4	8.206-4	7.391-4	7.021-4	6.874-4
44	75	1.237+01	2.186-2	1.901-2	1.791-2	1.744-2	1.723-2	1.712-2	1.709-2	1.713-2	1.724-2
44	76	5.124-00	1.664-2	1.095-2	8.201-3	6.802-3	5.942-3	5.383-3	4.755-3	4.434-3	4.272-3
44	77	1.493+02	2.398-2	1.380-2	9.264-3	7.085-3	5.908-3	5.302-3	4.906-3	5.088-3	5.628-3
44	78	1.170+02	5.572-3	3.802-3	3.075-3	2.745-3	2.565-3	2.505-3	2.521-3	2.637-3	2.838-3
44	79	2.365-02	2.205-3	1.402-3	1.120-3	1.019-3	9.834-4	9.754-4	9.892-4	1.009-3	1.033-3
44	80	0.000-00	3.001-4	1.915-4	1.716-4	1.760-4	1.862-4	1.973-4	2.174-4	2.322-4	2.447-4
44	81	1.492+02	6.241-3	3.778-3	2.690-3	2.170-3	1.878-3	1.732-3	1.666-3	1.770-3	1.993-3
44	82	0.000-00	4.306-3	2.248-3	1.325-3	8.643-4	6.041-4	4.429-4	2.670-4	1.776-4	1.279-4
44	83	0.000-00	2.038-3	9.320-4	4.841-4	2.856-4	1.837-4	1.265-4	7.084-5	4.623-5	3.427-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
44	84	1.090+01	3.428-3	2.728-3	2.389-3	2.226-3	2.111-3	2.034-3	1.939-3	1.880-3	1.845-3
44	85	0.000-00	1.319-3	7.385-4	4.833-4	3.571-4	2.870-4	2.438-4	1.977-4	1.743-4	1.618-4
44	86	0.000-00	5.469-4	2.717-4	1.645-4	1.181-4	9.490-5	8.230-5	7.064-5	6.573-5	6.375-5
44	87	2.883+02	5.370-3	3.041-3	2.011-3	1.488-3	1.193-3	1.016-3	8.533-4	8.178-4	8.576-4
44	88	3.568+01	6.034-4	3.198-4	1.997-4	1.428-4	1.122-4	9.457-5	7.776-5	7.303-5	7.478-5
44	89	6.672-00	1.306-3	7.412-4	5.017-4	3.856-4	3.203-4	2.817-4	2.383-4	2.160-4	2.038-4
44	90	5.575+01	1.286-2	1.032-2	8.862-3	7.839-3	7.095-3	6.687-3	6.073-3	5.681-3	5.382-3
44	91	3.860+02	1.546-3	1.043-3	8.123-4	6.984-4	6.291-4	5.912-4	5.620-4	5.658-4	5.930-4
44	92	2.899+01	2.245-3	1.186-3	7.325-4	5.133-4	3.899-4	3.128-4	2.287-4	1.851-4	1.608-4
44	93	0.000-00	8.458-5	4.818-5	3.733-5	3.487-5	3.485-5	3.584-5	3.859-5	4.097-5	4.317-5
44	94	0.000-00	2.109-4	1.146-4	8.011-5	6.771-5	6.305-5	6.175-5	6.292-5	6.507-5	6.760-5
44	95	1.393+03	4.635-3	4.463-3	4.372-3	4.358-3	4.295-3	4.287-3	4.306-3	4.361-3	4.460-3
44	96	7.408+02	1.310-3	8.632-4	6.434-4	5.293-4	4.681-4	4.325-4	4.106-4	4.252-4	4.655-4
44	97	0.000-00	9.263-5	3.923-5	1.912-5	1.087-5	6.842-6	4.639-6	2.517-6	1.587-6	1.127-6
45	46	1.167-00	1.592-1	1.118-1	8.903-2	7.580-2	6.728-2	6.165-2	5.466-2	5.047-2	4.779-2
45	47	1.106-05	5.942-2	5.200-2	5.176-2	5.457-2	5.962-2	6.684-2	8.655-2	1.130-1	1.461-1
45	48	0.000-00	3.142-4	1.818-4	1.151-4	7.858-5	5.679-5	4.284-5	2.679-5	1.821-5	1.323-5
45	49	2.829-00	1.185-2	6.760-3	4.261-3	2.937-3	2.140-3	1.629-3	1.046-3	7.376-4	5.617-4
45	50	3.240-03	1.173-2	6.731-3	4.244-3	2.920-3	2.138-3	1.644-3	1.102-3	8.429-4	7.265-4
45	51	0.000-00	4.298-3	2.499-3	1.589-3	1.091-3	7.919-4	5.992-4	3.769-4	2.573-4	1.874-4
45	52	8.282-03	1.690-4	9.149-5	5.715-5	4.086-5	3.230-5	2.799-5	2.569-5	2.788-5	3.279-5
45	53	8.088-03	2.806-4	1.735-4	1.251-4	1.049-4	9.810-5	9.997-5	1.197-4	1.545-4	2.013-4
45	54	4.819-02	1.027-3	7.832-4	6.774-4	6.415-4	6.492-4	6.865-4	8.317-4	1.052-3	1.333-3
45	55	3.472-02	7.169-3	3.632-3	2.086-3	1.348-3	9.445-4	7.062-4	4.675-4	3.706-4	3.422-4
45	56	2.060-00	2.320-2	1.286-2	8.097-3	5.697-3	4.361-3	3.600-3	2.955-3	2.909-3	3.210-3
45	57	5.036+01	4.048-2	2.380-2	1.587-2	1.186-2	9.597-3	8.306-3	7.268-3	7.317-3	8.019-3
45	58	2.181-02	2.057-3	1.189-3	7.682-4	5.469-4	4.178-4	3.375-4	2.517-4	2.135-4	1.997-4
45	59	2.632-00	4.784-3	3.052-3	2.194-3	1.760-3	1.523-3	1.406-3	1.371-3	1.493-3	1.721-3
45	60	1.672-00	1.469-2	8.074-3	4.926-3	3.288-3	2.343-3	1.765-3	1.124-3	8.051-4	6.370-4
45	61	2.068+01	1.857-2	9.984-3	6.013-3	3.992-3	2.838-3	2.133-3	1.362-3	9.769-4	7.731-4
45	62	4.067-02	3.325-3	1.837-3	1.154-3	8.135-4	6.237-4	5.064-4	3.822-4	3.210-4	2.895-4
45	63	6.488-00	9.010-3	5.642-3	3.995-3	3.123-3	2.615-3	2.292-3	1.947-3	1.784-3	1.716-3
45	64	4.570-01	3.822-2	2.185-2	1.387-2	9.644-3	7.151-3	5.577-3	3.823-3	2.935-3	2.473-3
45	65	0.000-00	4.118-4	2.248-4	1.380-4	9.126-5	6.475-5	4.759-5	2.897-5	1.931-5	1.375-5
45	66	2.147+01	1.380-2	8.269-3	5.619-3	4.245-3	3.451-3	2.948-3	2.403-3	2.131-3	1.994-3
45	67	6.574-02	7.500-3	3.724-3	2.090-3	1.307-3	8.849-4	6.289-4	3.640-4	2.348-4	1.681-4
45	68	1.256+02	1.557-2	7.857-3	4.567-3	3.024-3	2.192-3	1.699-3	1.246-3	1.105-3	1.134-3
45	69	5.486-01	6.005-4	3.142-4	1.942-4	1.397-4	1.117-4	9.680-5	8.839-5	9.364-5	1.077-4
45	70	2.969-02	1.922-3	1.119-3	7.860-4	6.301-4	5.468-4	4.934-4	4.394-4	4.112-4	3.973-4
45	71	3.758-00	1.456-3	7.620-4	4.634-4	3.256-4	2.565-4	2.221-4	2.051-4	2.230-4	2.624-4
45	72	2.425+01	4.620-3	2.572-3	1.658-3	1.238-3	1.023-3	9.187-4	8.894-4	9.909-4	1.180-3
45	73	1.019+02	1.922-2	1.037-2	6.340-3	4.364-3	3.270-3	2.624-3	2.018-3	1.847-3	1.912-3
45	74	6.121-00	5.177-3	2.964-3	1.884-3	1.315-3	9.848-4	7.837-4	5.775-4	4.986-4	4.871-4
45	75	2.098+01	1.005-2	6.275-3	4.341-3	3.309-3	2.700-3	2.345-3	2.039-3	2.022-3	2.178-3
45	76	1.788-00	2.272-2	1.365-2	8.973-3	6.399-3	4.843-3	3.818-3	2.643-3	2.008-3	1.640-3
45	77	2.556-00	3.421-4	2.089-4	1.464-4	1.158-4	9.971-5	9.190-5	8.994-5	9.841-5	1.140-4
45	78	3.656+02	1.886-2	9.862-3	5.954-3	4.131-3	3.150-3	2.585-3	2.094-3	1.991-3	2.107-3
45	79	1.125+02	7.399-3	3.993-3	2.481-3	1.761-3	1.369-3	1.143-3	9.479-4	9.174-4	9.815-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
45	80	9.175-00	2.719-3	1.384-3	8.030-4	5.238-4	3.733-4	2.854-4	1.982-4	1.632-4	1.537-4
45	81	9.017-01	6.297-4	3.370-4	2.003-4	1.342-4	9.600-5	7.248-5	4.701-5	3.440-5	2.783-5
45	82	1.956+01	2.076-4	1.396-4	1.063-4	9.010-5	8.179-5	7.851-5	8.101-5	9.144-5	1.080-4
45	83	0.000-00	3.002-5	1.703-5	1.068-5	7.138-6	5.052-6	3.758-6	2.290-6	1.527-6	1.092-6
45	84	8.210+01	3.691-3	1.938-3	1.148-3	8.154-4	6.334-4	5.224-4	4.169-4	3.888-4	3.996-4
45	85	1.254+01	9.011-4	5.210-4	3.317-4	2.288-4	1.681-4	1.303-4	8.896-5	6.960-5	6.121-5
45	86	0.000-00	3.702-4	2.127-4	1.338-4	9.004-5	6.414-5	4.792-5	2.937-5	1.967-5	1.411-5
45	87	1.318+02	1.936-4	2.278-4	2.433-4	2.548-4	2.654-4	2.794-4	3.184-4	3.735-4	4.457-4
45	88	1.590+01	1.215-3	7.358-4	4.826-4	3.412-4	2.568-4	2.034-4	1.445-4	1.158-4	1.019-4
45	89	7.042+01	4.628-3	2.897-3	1.985-3	1.477-3	1.171-3	9.741-4	7.584-4	6.556-4	6.111-4
45	90	5.968+01	1.465-2	9.118-3	6.198-3	4.577-3	3.594-3	2.952-3	2.226-3	1.848-3	1.643-3
45	91	4.261-00	5.638-5	3.132-5	1.988-5	1.415-5	1.092-5	8.892-6	6.805-6	5.929-6	5.676-6
45	92	3.575-02	3.310-5	1.809-5	1.117-5	7.654-6	5.607-6	4.334-6	2.909-6	2.168-6	1.749-6
45	93	0.000-00	6.611-4	4.058-4	2.674-4	1.850-4	1.348-4	1.019-4	6.408-5	4.378-5	3.182-5
45	94	2.709+01	1.953-3	1.129-3	7.207-4	4.956-4	3.631-4	2.781-4	1.831-4	1.340-4	1.067-4
45	95	2.181+02	2.472-3	1.359-3	8.608-4	6.046-4	4.613-4	3.721-4	2.796-4	2.380-4	2.225-4
45	96	5.420-01	1.487-5	7.593-6	4.426-6	2.912-6	2.058-6	1.529-6	9.586-7	6.605-7	4.922-7
45	97	0.000-00	4.713-6	2.456-6	1.463-6	9.569-7	6.689-7	4.925-7	2.967-7	1.971-7	1.401-7
46	47	4.045-01	1.088-1	7.066-2	5.105-2	4.016-2	3.318-2	2.849-2	2.272-2	1.930-2	1.713-2
46	48	2.244-07	1.649-4	9.226-5	5.854-5	4.164-5	3.224-5	2.677-5	2.175-5	2.059-5	2.148-5
46	49	5.092-01	8.924-3	5.161-3	3.316-3	2.346-3	1.790-3	1.454-3	1.135-3	1.054-3	1.105-3
46	50	3.800-01	4.604-3	2.722-3	1.791-3	1.289-3	9.916-4	8.053-4	6.092-4	5.285-4	5.102-4
46	51	2.355-04	1.677-3	9.642-4	6.220-4	4.424-4	3.382-4	2.730-4	2.005-4	1.634-4	1.427-4
46	52	2.145-03	7.373-5	4.235-5	2.908-5	2.310-5	2.050-5	1.978-5	2.166-5	2.629-5	3.296-5
46	53	4.233-03	2.777-4	1.693-4	1.213-4	9.948-5	9.072-5	8.957-5	1.015-4	1.261-4	1.603-4
46	54	0.000-00	1.132-4	6.191-5	3.937-5	2.797-5	2.150-5	1.745-5	1.302-5	1.073-5	9.480-6
46	55	4.780-00	1.674-2	9.586-3	6.116-3	4.319-3	3.296-3	2.685-3	2.117-3	1.992-3	2.120-3
46	56	3.103+01	1.131-2	6.371-3	4.116-3	3.016-3	2.436-3	2.141-3	2.027-3	2.263-3	2.731-3
46	57	4.229-00	2.443-2	1.368-2	8.615-3	6.004-3	4.483-3	3.527-3	2.453-3	1.893-3	1.578-3
46	58	3.508-04	1.709-3	9.573-4	6.044-4	4.218-4	3.159-4	2.505-4	1.777-4	1.406-4	1.204-4
46	59	2.064-01	1.154-3	6.702-4	4.332-4	3.102-4	2.394-4	1.987-4	1.637-4	1.611-4	1.774-4
46	60	9.485-00	5.656-3	3.155-3	1.968-3	1.353-3	9.969-4	7.729-4	5.240-4	3.953-4	3.243-4
46	61	2.713-00	2.221-2	1.344-2	9.129-3	6.810-3	5.441-3	4.585-3	3.661-3	3.241-3	3.083-3
46	62	6.551-00	3.782-3	2.270-3	1.491-3	1.061-3	8.021-4	6.278-4	4.317-4	3.246-4	2.626-4
46	63	2.010+01	6.528-3	3.430-3	2.025-3	1.327-3	9.392-4	7.014-4	4.569-4	3.470-4	3.033-4
46	64	7.999-02	2.758-2	1.553-2	9.853-3	6.893-3	5.173-3	4.110-3	2.928-3	2.326-3	2.000-3
46	65	4.523-01	4.792-3	2.516-3	1.547-3	1.089-3	8.476-4	7.055-4	5.643-4	5.018-4	4.764-4
46	66	3.635-00	7.342-3	4.060-3	2.585-3	1.868-3	1.483-3	1.267-3	1.093-3	1.088-3	1.179-3
46	67	1.706-01	4.909-3	2.769-3	1.868-3	1.435-3	1.200-3	1.055-3	9.034-4	8.272-4	7.871-4
46	68	5.861+01	9.210-3	4.890-3	3.028-3	2.142-3	1.663-3	1.376-3	1.078-3	9.337-4	8.594-4
46	69	6.947-00	3.338-4	1.792-4	1.086-4	7.328-5	5.322-5	4.072-5	2.719-5	2.044-5	1.703-5
46	70	2.078+02	2.930-3	1.537-3	9.382-4	6.545-4	4.988-4	4.000-4	2.972-4	2.439-4	2.171-4
46	71	1.426+01	1.854-3	1.199-3	9.100-4	7.838-4	7.297-4	7.244-4	7.956-4	9.414-4	1.147-3
46	72	3.359+01	4.733-3	2.853-3	2.042-3	1.688-3	1.531-3	1.486-3	1.592-3	1.860-3	2.252-3
46	73	1.612+01	5.711-3	3.116-3	1.970-3	1.424-3	1.145-3	9.970-4	9.081-4	9.610-4	1.101-3
46	74	1.083+01	8.624-3	5.226-3	3.472-3	2.511-3	1.943-3	1.579-3	1.194-3	1.032-3	9.907-4
46	75	8.416-00	1.309-2	8.069-3	5.472-3	4.061-3	3.209-3	2.673-3	2.104-3	1.866-3	1.806-3
46	76	3.565-01	6.434-3	3.728-3	2.393-3	1.671-3	1.247-3	9.743-4	6.668-4	5.057-4	4.163-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
46	77	5.153-00	7.406-4	4.678-4	3.341-4	2.643-4	2.260-4	2.043-4	1.905-4	1.984-4	2.204-4
46	78	4.396+01	1.056-2	5.599-3	3.345-3	2.227-3	1.599-3	1.213-3	8.017-4	6.045-4	5.117-4
46	79	2.612+02	1.062-2	5.856-3	3.819-3	2.875-3	2.397-3	2.150-3	2.037-3	2.184-3	2.502-3
46	80	1.702+02	6.497-3	3.769-3	2.535-3	1.929-3	1.603-3	1.429-3	1.322-3	1.386-3	1.564-3
46	81	1.608+01	4.997-4	2.893-4	1.980-4	1.551-4	1.332-4	1.219-4	1.180-4	1.273-4	1.459-4
46	82	1.297+01	2.040-4	1.184-4	8.407-5	6.915-5	6.170-5	5.843-5	5.959-5	6.710-5	7.922-5
46	83	1.503-00	4.283-5	2.241-5	1.331-5	9.063-6	6.725-6	5.372-6	4.118-6	3.763-6	3.872-6
46	84	3.783+01	1.624-3	9.171-4	5.923-4	4.335-4	3.428-4	2.887-4	2.377-4	2.258-4	2.351-4
46	85	2.425+01	1.942-3	9.676-4	5.803-4	3.994-4	2.990-4	2.355-4	1.686-4	1.398-4	1.280-4
46	86	1.704-00	1.501-4	8.445-5	5.417-5	3.894-5	3.005-5	2.441-5	1.820-5	1.496-5	1.321-5
46	87	4.244+01	8.062-5	8.559-5	8.797-5	9.025-5	9.293-5	9.734-5	1.105-4	1.297-4	1.549-4
46	88	4.467+01	3.966-3	2.431-3	1.620-3	1.168-3	8.969-4	7.205-4	5.234-4	4.235-4	3.729-4
46	89	3.023+01	8.134-3	4.987-3	3.313-3	2.389-3	1.828-3	1.463-3	1.048-3	8.294-4	7.089-4
46	90	2.113-01	3.119-3	1.856-3	1.195-3	8.269-4	6.065-4	4.633-4	3.001-4	2.128-4	1.623-4
46	91	3.832+01	1.235-4	8.485-5	6.397-5	5.315-5	4.672-5	4.319-5	4.105-5	4.280-5	4.727-5
46	92	6.170-01	3.870-5	2.043-5	1.225-5	8.238-6	5.965-6	4.606-6	3.160-6	2.503-6	2.229-6
46	93	1.619+01	5.250-4	2.748-4	1.637-4	1.094-4	7.948-5	6.073-5	4.098-5	3.115-5	2.602-5
46	94	3.187-01	1.064-3	6.198-4	3.999-4	2.813-4	2.120-4	1.672-4	1.172-4	9.084-5	7.569-5
46	95	6.827+01	2.092-3	1.225-3	8.018-4	5.726-4	4.376-4	3.510-4	2.532-4	2.014-4	1.717-4
46	96	3.900-01	2.986-5	1.598-5	9.786-6	6.750-6	5.063-6	4.016-6	2.888-6	2.309-6	1.983-6
46	97	1.148+01	3.861-6	2.035-6	1.273-6	9.586-7	7.894-7	6.974-7	6.253-7	6.265-7	6.704-7
47	48	1.048-03	4.489-5	2.452-5	1.559-5	1.093-5	8.116-6	6.200-6	4.019-6	2.760-6	2.026-6
47	49	1.159-01	5.484-3	3.176-3	2.023-3	1.398-3	1.024-3	7.847-4	5.088-4	3.609-4	2.746-4
47	50	2.949-00	1.940-3	1.078-3	6.673-4	4.560-4	3.331-4	2.547-4	1.712-4	1.309-4	1.136-4
47	51	5.331-00	4.443-4	2.507-4	1.628-4	1.158-4	8.669-5	6.619-5	4.322-5	2.967-5	2.191-5
47	52	2.417-04	4.488-5	2.611-5	1.765-5	1.359-5	1.155-5	1.051-5	1.023-5	1.127-5	1.321-5
47	53	0.000-00	1.133-4	5.994-5	3.622-5	2.421-5	1.732-5	1.308-5	8.321-6	5.831-6	4.418-6
47	54	0.000-00	1.951-5	8.615-6	4.943-6	3.434-6	2.642-6	2.205-6	1.774-6	1.584-6	1.498-6
47	55	1.403+01	5.647-3	3.367-3	2.268-3	1.711-3	1.410-3	1.247-3	1.156-3	1.236-3	1.428-3
47	56	4.295-00	1.643-2	9.434-3	6.042-3	4.263-3	3.215-3	2.553-3	1.816-3	1.448-3	1.263-3
47	57	1.785-03	8.518-3	4.484-3	2.658-3	1.754-3	1.247-3	9.360-4	5.976-4	4.278-4	3.361-4
47	58	0.000-00	9.255-4	5.018-4	3.035-4	2.001-4	1.403-4	1.035-4	6.216-5	4.099-5	2.916-5
47	59	5.282-03	2.117-4	1.175-4	7.306-5	5.046-5	3.800-5	3.081-5	2.450-5	2.364-5	2.583-5
47	60	1.493-00	1.039-2	6.472-3	4.462-3	3.360-3	2.702-3	2.272-3	1.793-3	1.553-3	1.436-3
47	61	8.281-02	7.268-3	4.447-3	3.044-3	2.293-3	1.846-3	1.563-3	1.249-3	1.095-3	1.022-3
47	62	1.369+01	3.618-3	2.274-3	1.669-3	1.377-3	1.223-3	1.142-3	1.103-3	1.150-3	1.254-3
47	63	3.525-00	3.002-3	1.931-3	1.448-3	1.219-3	1.101-3	1.041-3	1.021-3	1.072-3	1.170-3
47	64	0.000-00	1.850-2	1.005-2	6.095-3	4.019-3	2.817-3	2.076-3	1.247-3	8.211-4	5.837-4
47	65	1.034+02	1.690-3	8.611-4	5.017-4	3.260-4	2.279-4	1.669-4	1.006-4	6.622-5	4.681-5
47	66	8.403-02	4.003-3	1.955-3	1.082-3	6.784-4	4.647-4	3.431-4	2.250-4	1.779-4	1.629-4
47	67	8.726+01	6.552-3	3.346-3	1.962-3	1.304-3	9.513-4	7.452-4	5.437-4	4.655-4	4.475-4
47	68	1.536+01	3.239-3	1.904-3	1.328-3	1.066-3	9.291-4	8.563-4	8.083-4	8.235-4	8.757-4
47	69	9.630-01	1.773-4	1.057-4	7.435-5	5.970-5	5.161-5	4.674-5	4.187-5	3.983-5	3.926-5
47	70	7.298+01	1.689-3	8.873-4	5.475-4	3.857-4	2.987-4	2.459-4	1.955-4	1.758-4	1.734-4
47	71	3.272+01	2.483-3	1.655-3	1.299-3	1.169-3	1.126-3	1.145-3	1.301-3	1.569-3	1.933-3
47	72	9.440-00	2.342-3	1.455-3	1.055-3	8.721-4	7.886-4	7.639-4	8.113-4	9.402-4	1.131-3
47	73	5.541-01	1.742-3	8.428-4	4.673-4	2.940-4	2.041-4	1.544-4	1.102-4	9.816-5	1.016-4
47	74	3.220-00	8.912-3	5.465-3	3.615-3	2.583-3	1.963-3	1.555-3	1.099-3	8.687-4	7.562-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
47	75	5.657-01	3.928-3	2.332-3	1.514-3	1.071-3	8.037-4	6.309-4	4.364-4	3.363-4	2.839-4
47	76	0.000-00	2.355-3	1.280-3	7.774-4	5.129-4	3.599-4	2.652-4	1.595-4	1.051-4	7.471-5
47	77	1.405-00	1.060-3	6.271-4	4.070-4	2.896-4	2.210-4	1.778-4	1.322-4	1.129-4	1.078-4
47	78	3.370-01	3.717-3	1.914-3	1.112-3	7.211-4	5.043-4	3.737-4	2.339-4	1.648-4	1.279-4
47	79	6.310+01	7.956-3	4.492-3	2.880-3	2.070-3	1.627-3	1.369-3	1.138-3	1.096-3	1.162-3
47	80	3.292+02	8.103-3	4.937-3	3.579-3	2.957-3	2.649-3	2.522-3	2.588-3	2.907-3	3.418-3
47	81	4.289-00	2.152-4	1.260-4	8.609-5	6.715-5	5.759-5	5.272-5	5.105-5	5.519-5	6.341-5
47	82	1.274+01	9.085-5	6.269-5	5.244-5	4.856-5	4.735-5	4.805-5	5.358-5	6.324-5	7.659-5
47	83	3.580-02	6.873-5	3.104-5	1.692-5	1.081-5	7.450-6	5.319-6	3.040-6	1.938-6	1.297-6
47	84	1.041+01	8.177-4	4.782-4	3.113-4	2.195-4	1.663-4	1.338-4	9.943-5	8.541-5	8.197-5
47	85	2.129+01	8.039-4	3.901-4	2.292-4	1.567-4	1.165-4	9.163-5	6.675-5	5.744-5	5.548-5
47	86	6.981-00	6.921-4	3.042-4	1.664-4	1.079-4	7.573-5	5.477-5	3.200-5	2.083-5	1.411-5
47	87	3.963-00	1.386-5	1.156-5	1.045-5	1.003-5	9.918-6	1.013-5	1.119-5	1.295-5	1.536-5
47	88	1.700+01	6.056-3	3.664-3	2.382-3	1.670-3	1.242-3	9.618-4	6.426-4	4.725-4	3.759-4
47	89	5.193-01	2.458-3	1.470-3	9.500-4	6.606-4	4.862-4	3.722-4	2.421-4	1.721-4	1.314-4
47	90	0.000-00	8.182-4	4.693-4	2.932-4	1.959-4	1.383-4	1.021-4	6.153-5	4.058-5	2.890-5
47	91	4.100+01	5.209-5	4.385-5	3.937-5	3.705-5	3.584-5	3.577-5	3.783-5	4.221-5	4.864-5
47	92	0.000-00	1.541-5	7.958-6	4.619-6	2.996-6	2.078-6	1.523-6	9.111-7	5.999-7	4.267-7
47	93	8.941+01	1.688-4	8.191-5	4.514-5	2.852-5	1.955-5	1.406-5	8.395-6	5.549-6	3.998-6
47	94	1.006+02	8.457-4	4.472-4	2.683-4	1.826-4	1.341-4	1.034-4	7.015-5	5.268-5	4.282-5
47	95	2.144+01	1.158-3	7.149-4	4.747-4	3.393-4	2.575-4	2.039-4	1.427-4	1.104-4	9.178-5
47	96	4.066-01	1.277-5	6.992-6	4.298-6	2.966-6	2.209-6	1.737-6	1.233-6	9.881-7	8.669-7
47	97	1.142-01	1.564-6	6.981-7	3.639-7	2.247-7	1.509-7	1.074-7	6.195-8	3.971-8	2.717-8
48	49	6.631-04	1.798-3	1.708-3	2.014-3	2.614-3	3.460-3	4.552-3	7.445-3	1.126-2	1.598-2
48	50	9.850-00	1.297-3	7.647-4	4.975-4	3.513-4	2.615-4	2.015-4	1.311-4	9.159-5	6.795-5
48	51	0.000-00	1.883-4	1.328-4	1.060-4	9.105-5	8.165-5	7.608-5	6.849-5	6.491-5	6.229-5
48	52	0.000-00	1.332-3	7.126-4	4.260-4	2.812-4	1.977-4	1.465-4	8.889-5	5.930-5	4.257-5
48	53	0.000-00	2.514-3	1.365-3	8.347-4	5.723-4	4.229-4	3.327-4	2.336-4	1.844-4	1.579-4
48	54	0.000-00	4.405-3	2.377-3	1.418-3	9.373-4	6.585-4	4.874-4	2.949-4	1.960-4	1.401-4
48	55	1.576-00	5.942-4	3.827-4	2.646-4	1.941-4	1.494-4	1.186-4	8.161-5	6.034-5	4.718-5
48	56	2.293-02	1.196-3	8.751-4	7.193-4	6.529-4	6.292-4	6.379-4	7.254-4	8.809-4	1.093-3
48	57	0.000-00	5.087-4	3.095-4	2.057-4	1.426-4	1.052-4	7.954-5	5.016-5	3.417-5	2.475-5
48	58	0.000-00	9.035-4	7.419-4	8.210-4	9.434-4	1.052-3	1.144-3	1.279-3	1.372-3	1.443-3
48	59	0.000-00	7.838-4	3.702-4	2.047-4	1.269-4	8.607-5	6.202-5	3.689-5	2.446-5	1.762-5
48	60	3.373-01	2.721-3	2.391-3	2.269-3	2.250-3	2.264-3	2.300-3	2.420-3	2.590-3	2.807-3
48	61	0.000-00	1.953-3	1.038-3	6.159-4	4.040-4	2.831-4	2.087-4	1.264-4	8.419-5	6.030-5
48	62	7.879-02	1.556-3	8.685-4	5.339-4	3.586-4	2.559-4	1.916-4	1.185-4	8.015-5	5.799-5
48	63	5.265-03	3.545-3	2.020-3	1.257-3	8.598-4	6.248-4	4.760-4	3.064-4	2.174-4	1.665-4
48	64	0.000-00	8.353-4	4.440-4	2.945-4	2.357-4	2.094-4	1.977-4	1.912-4	1.918-4	1.952-4
48	65	0.000-00	2.966-4	1.453-4	8.209-5	5.166-5	3.529-5	2.571-5	1.562-5	1.066-5	7.903-6
48	66	0.000-00	8.857-3	5.040-3	3.144-3	2.139-3	1.542-3	1.161-3	7.260-4	4.943-4	3.595-4
48	67	6.915-00	9.965-4	4.894-4	2.701-4	1.688-4	1.143-4	8.216-5	4.877-5	3.256-5	2.374-5
48	68	8.961-02	4.248-3	3.075-3	2.610-3	2.408-3	2.312-3	2.266-3	2.234-3	2.234-3	2.249-3
48	69	2.542-00	3.027-4	1.435-4	8.303-5	5.633-5	4.135-5	3.129-5	2.040-5	1.415-5	1.046-5
48	70	3.703-00	9.462-4	4.743-4	3.018-4	2.165-4	1.639-4	1.269-4	8.225-5	5.724-5	4.169-5
48	71	3.931-01	3.242-4	1.811-4	1.129-4	7.811-5	5.760-5	4.334-5	2.774-5	1.892-5	1.380-5
48	72	2.684-00	4.838-3	4.781-3	4.761-3	4.816-3	4.872-3	4.925-3	5.037-3	5.159-3	5.302-3
48	73	0.000-00	7.365-4	4.261-4	2.665-4	1.823-4	1.324-4	9.863-5	6.215-5	4.204-5	3.063-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
48	74	1.256+01	9.862-3	1.020-2	1.040-2	1.064-2	1.085-2	1.103-2	1.136-2	1.169-2	1.207-2
48	75	0.000-00	2.377-4	1.216-4	6.949-5	4.445-5	3.060-5	2.198-5	1.311-5	8.571-6	6.092-6
48	76	0.000-00	1.569-4	7.527-5	4.273-5	2.918-5	2.270-5	1.954-5	1.727-5	1.674-5	1.687-5
48	77	8.121+01	3.619-2	3.847-2	3.959-2	4.085-2	4.181-2	4.261-2	4.403-2	4.542-2	4.697-2
48	78	0.000-00	2.836-4	1.700-4	1.107-4	7.860-5	5.899-5	4.581-5	3.007-5	2.125-5	1.584-5
48	79	8.237-00	2.604-3	2.580-3	2.576-3	2.592-3	2.605-3	2.621-3	2.659-3	2.704-3	2.761-3
48	80	1.489-01	1.084-4	7.251-5	5.348-5	4.183-5	3.410-5	2.881-5	2.205-5	1.789-5	1.509-5
48	81	1.682+02	7.753-2	7.700-2	7.717-2	7.776-2	7.826-2	7.874-2	7.969-2	8.063-2	8.168-2
48	82	4.193-01	4.401-3	3.743-3	3.188-3	2.842-3	2.554-3	2.344-3	2.025-3	1.779-3	1.590-3
48	83	0.000-00	6.971-3	5.554-3	4.456-3	3.928-3	3.490-3	3.197-3	2.752-3	2.465-3	2.245-3
48	84	9.496+01	8.931-4	9.913-4	1.020-3	1.058-3	1.088-3	1.118-3	1.190-3	1.282-3	1.396-3
48	85	4.290-00	1.613-4	1.292-4	1.063-4	9.244-5	8.190-5	7.447-5	6.348-5	5.524-5	4.906-5
48	86	0.000-00	4.560-4	3.548-4	2.797-4	2.457-4	2.174-4	1.983-4	1.700-4	1.518-4	1.382-4
48	87	0.000-00	2.568-4	1.374-4	9.007-5	6.626-5	5.448-5	4.733-5	3.879-5	3.354-5	2.980-5
48	88	2.020-00	1.366-4	1.046-4	9.183-5	8.567-5	8.124-5	7.838-5	7.500-5	7.310-5	7.215-5
48	89	0.000-00	4.928-5	1.961-5	9.390-6	5.416-6	3.503-6	2.435-6	1.375-6	8.711-7	6.036-7
48	90	0.000-00	4.087-5	1.646-5	9.109-6	7.084-6	6.432-6	6.249-6	6.354-6	6.554-6	6.789-6
48	91	9.083+01	7.360-3	6.364-3	5.784-3	5.386-3	5.021-3	4.771-3	4.436-3	4.210-3	4.055-3
48	92	0.000-00	2.853-5	2.399-5	2.392-5	2.425-5	2.469-5	2.471-5	2.432-5	2.380-5	2.324-5
48	93	0.000-00	3.620-5	2.250-5	1.609-5	1.358-5	1.188-5	1.082-5	9.352-6	8.486-6	7.846-6
48	94	2.964-01	5.953-5	2.834-5	1.664-5	1.191-5	9.313-6	7.765-6	5.951-6	4.870-6	4.160-6
48	95	1.088+02	4.308-4	3.802-4	3.535-4	3.408-4	3.278-4	3.205-4	3.151-4	3.177-4	3.270-4
48	96	5.710+02	6.848-4	6.724-4	6.604-4	6.515-4	6.336-4	6.288-4	6.372-4	6.689-4	7.236-4
48	97	0.000-00	1.568-3	1.164-3	8.765-4	7.440-4	6.359-4	5.616-4	4.569-4	3.880-4	3.387-4
49	50	1.745+01	4.715-2	2.872-2	1.941-2	1.437-2	1.133-2	9.406-3	7.416-3	6.703-3	6.727-3
49	51	1.014-04	1.198-3	7.247-4	5.218-4	4.363-4	4.135-4	4.293-4	5.369-4	7.166-4	9.564-4
49	52	3.532-03	7.349-3	4.186-3	2.849-3	2.238-3	1.928-3	1.769-3	1.657-3	1.664-3	1.734-3
49	53	3.321-04	7.751-3	4.507-3	3.234-3	2.715-3	2.500-3	2.432-3	2.488-3	2.655-3	2.894-3
49	54	0.000-00	1.023-2	5.702-3	3.811-3	2.936-3	2.484-3	2.240-3	2.018-3	1.934-3	1.914-3
49	55	7.723-01	7.340-3	6.897-3	6.835-3	6.923-3	7.046-3	7.202-3	7.554-3	7.972-3	8.473-3
49	56	1.275+01	1.886-2	1.742-2	1.708-2	1.712-2	1.730-2	1.759-2	1.830-2	1.919-2	2.031-2
49	57	1.302+01	2.227-2	1.840-2	1.675-2	1.613-2	1.588-2	1.600-2	1.677-2	1.811-2	1.997-2
49	58	4.088-04	1.954-2	1.117-2	7.374-3	5.467-3	4.371-3	3.708-3	2.978-3	2.617-3	2.433-3
49	59	1.797-00	2.694-2	1.702-2	1.228-2	9.822-3	8.415-3	7.599-3	6.852-3	6.704-3	6.903-3
49	60	2.572-01	1.418-2	9.622-3	7.625-3	6.587-3	5.992-3	5.643-3	5.349-3	5.344-3	5.521-3
49	61	1.042-01	2.758-2	1.893-2	1.495-2	1.284-2	1.154-2	1.067-2	9.697-3	9.228-3	9.048-3
49	62	7.126-01	1.770-2	1.406-2	1.257-2	1.183-2	1.145-2	1.129-2	1.131-2	1.162-2	1.214-2
49	63	1.322-00	3.339-2	2.713-2	2.468-2	2.345-2	2.281-2	2.250-2	2.250-2	2.299-2	2.385-2
49	64	7.478-01	3.244-2	2.614-2	2.329-2	2.199-2	2.116-2	2.074-2	2.055-2	2.092-2	2.175-2
49	65	1.403+01	4.454-2	4.638-2	4.800-2	4.938-2	5.060-2	5.175-2	5.395-2	5.625-2	5.888-2
49	66	1.835-00	1.825-2	1.098-2	7.650-3	5.970-3	4.994-3	4.385-3	3.767-3	3.544-3	3.537-3
49	67	2.038+01	1.018-1	1.050-1	1.085-1	1.118-1	1.147-1	1.178-1	1.241-1	1.313-1	1.397-1
49	68	9.789-00	6.985-2	7.023-2	7.153-2	7.323-2	7.478-2	7.648-2	8.010-2	8.436-2	8.941-2
49	69	4.067+01	7.293-3	3.630-3	2.056-3	1.302-3	8.926-4	6.445-4	3.845-4	2.578-4	1.914-4
49	70	3.872+01	9.923-3	6.190-3	4.418-3	3.485-3	2.890-3	2.511-3	2.039-3	1.746-3	1.556-3
49	71	1.525+01	3.455-3	2.586-3	2.202-3	2.033-3	1.945-3	1.895-3	1.847-3	1.828-3	1.821-3
49	72	7.704-00	1.621-2	1.476-2	1.417-2	1.402-2	1.400-2	1.407-2	1.430-2	1.461-2	1.500-2
49	73	2.602+01	4.523-2	4.468-2	4.457-2	4.506-2	4.563-2	4.632-2	4.782-2	4.958-2	5.169-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
49	74	5.149-00	4.992-3	2.787-3	1.959-3	1.640-3	1.510-3	1.464-3	1.476-3	1.534-3	1.618-3
49	75	6.929-01	5.653-3	3.245-3	2.332-3	1.947-3	1.756-3	1.669-3	1.616-3	1.623-3	1.664-3
49	76	7.852-00	1.482-2	1.290-2	1.220-2	1.199-2	1.203-2	1.218-2	1.259-2	1.309-2	1.368-2
49	77	7.080-01	1.191-2	6.776-3	4.366-3	3.133-3	2.419-3	1.969-3	1.465-3	1.201-3	1.053-3
49	78	1.067+01	8.992-3	5.696-3	4.179-3	3.413-3	2.965-3	2.685-3	2.395-3	2.278-3	2.250-3
49	79	2.510+01	5.439-3	3.395-3	2.517-3	2.074-3	1.818-3	1.663-3	1.498-3	1.422-3	1.386-3
49	80	9.214-00	2.848-3	1.683-3	1.170-3	9.115-4	7.676-4	6.794-4	5.871-4	5.453-4	5.279-4
49	81	7.886+01	1.152-2	6.943-3	4.704-3	3.518-3	2.824-3	2.376-3	1.883-3	1.634-3	1.509-3
49	82	5.029+01	5.865-3	3.089-3	1.892-3	1.301-3	9.683-4	7.588-4	5.289-4	4.075-4	3.380-4
49	83	2.790+02	5.781-3	3.136-3	1.989-3	1.485-3	1.228-3	1.101-3	1.057-3	1.161-3	1.362-3
49	84	3.105+01	1.757-2	1.213-2	9.521-3	7.973-3	6.981-3	6.350-3	5.578-3	5.143-3	4.880-3
49	85	3.938+01	1.417-2	1.044-2	8.721-3	7.648-3	6.982-3	6.539-3	6.006-3	5.698-3	5.513-3
49	86	1.596+02	5.550-3	4.233-3	3.662-3	3.275-3	3.038-3	2.888-3	2.716-3	2.633-3	2.603-3
49	87	5.310-01	1.074-2	6.042-3	3.788-3	2.607-3	1.916-3	1.481-3	9.912-4	7.354-4	5.903-4
49	88	1.127+01	5.541-4	3.985-4	3.424-4	3.215-4	3.146-4	3.143-4	3.223-4	3.329-4	3.461-4
49	89	1.867-00	3.994-4	2.648-4	2.212-4	2.093-4	2.080-4	2.104-4	2.194-4	2.279-4	2.368-4
49	90	1.300+02	1.927-3	1.688-3	1.581-3	1.545-3	1.533-3	1.540-3	1.594-3	1.687-3	1.816-3
49	91	2.728+01	4.355-3	2.166-3	1.231-3	7.898-4	5.509-4	4.097-4	2.616-4	1.911-4	1.547-4
49	92	4.784-00	1.373-3	7.103-4	4.252-4	2.889-4	2.142-4	1.695-4	1.219-4	9.902-5	8.771-5
49	93	2.002+03	1.563-3	1.627-3	1.688-3	1.700-3	1.711-3	1.730-3	1.780-3	1.848-3	1.942-3
49	94	3.240+02	3.150-3	3.019-3	2.972-3	2.924-3	2.891-3	2.877-3	2.868-3	2.875-3	2.900-3
49	95	5.811+01	7.130-3	5.755-3	4.928-3	4.386-3	4.007-3	3.775-3	3.431-3	3.210-3	3.050-3
49	96	8.576+01	3.504-3	2.191-3	1.529-3	1.162-3	9.438-4	8.014-4	6.427-4	5.611-4	5.187-4
49	97	2.073+01	8.065-5	4.227-5	2.732-5	1.987-5	1.567-5	1.269-5	9.500-6	7.760-6	6.828-6
50	51	1.222+01	3.342-2	2.003-2	1.318-2	9.398-3	7.045-3	5.474-3	3.606-3	2.550-3	1.911-3
50	52	3.684-05	4.686-3	3.040-3	2.477-3	2.309-3	2.294-3	2.356-3	2.593-3	2.909-3	3.298-3
50	53	0.000-00	7.180-3	3.857-3	2.327-3	1.544-3	1.093-3	8.156-4	5.039-4	3.429-4	2.520-4
50	54	0.000-00	4.496-3	2.652-3	1.951-3	1.668-3	1.546-3	1.500-3	1.490-3	1.513-3	1.551-3
50	55	1.506+01	8.626-3	7.044-3	6.361-3	6.032-3	5.836-3	5.731-3	5.629-3	5.608-3	5.649-3
50	56	6.041-01	6.556-3	4.620-3	3.563-3	2.999-3	2.609-3	2.352-3	2.029-3	1.841-3	1.745-3
50	57	2.747-05	7.245-3	6.294-3	5.944-3	5.849-3	5.835-3	5.851-3	5.902-3	5.957-3	6.019-3
50	58	0.000-00	8.826-3	4.611-3	2.712-3	1.760-3	1.221-3	8.932-4	5.315-4	3.484-4	2.468-4
50	59	1.489-02	1.604-2	1.018-2	7.493-3	6.118-3	5.333-3	4.898-3	4.579-3	4.660-3	4.991-3
50	60	7.200-01	1.842-2	1.419-2	1.235-2	1.143-2	1.089-2	1.061-2	1.049-2	1.072-2	1.121-2
50	61	1.412-01	1.404-2	1.174-2	1.084-2	1.049-2	1.034-2	1.035-2	1.063-2	1.114-2	1.187-2
50	62	1.981-00	2.655-2	2.352-2	2.224-2	2.175-2	2.151-2	2.149-2	2.186-2	2.262-2	2.372-2
50	63	1.585-01	1.113-2	7.418-3	5.722-3	4.915-3	4.477-3	4.238-3	4.053-3	4.066-3	4.198-3
50	64	0.000-00	8.904-3	4.755-3	2.859-3	1.891-3	1.338-3	9.995-4	6.235-4	4.310-4	3.234-4
50	65	1.070+01	1.062-3	6.327-4	4.323-4	3.292-4	2.648-4	2.206-4	1.669-4	1.337-4	1.120-4
50	66	3.596-02	2.008-2	1.438-2	1.170-2	1.024-2	9.353-3	8.759-3	8.066-3	7.687-3	7.487-3
50	67	5.032-00	4.072-2	4.132-2	4.204-2	4.310-2	4.399-2	4.501-2	4.717-2	4.969-2	5.270-2
50	68	1.273+01	9.750-2	1.002-1	1.029-1	1.062-1	1.090-1	1.120-1	1.182-1	1.252-1	1.334-1
50	69	2.019+01	5.997-3	4.735-3	4.201-3	3.993-3	3.886-3	3.854-3	3.889-3	4.005-3	4.187-3
50	70	4.313-00	6.372-3	4.081-3	3.071-3	2.570-3	2.271-3	2.091-3	1.892-3	1.794-3	1.752-3
50	71	3.682-00	1.387-2	1.346-2	1.337-2	1.349-2	1.361-2	1.374-2	1.401-2	1.427-2	1.457-2
50	72	5.609-00	1.315-2	1.183-2	1.124-2	1.111-2	1.109-2	1.117-2	1.151-2	1.201-2	1.267-2
50	73	2.245-01	1.250-2	1.180-2	1.161-2	1.162-2	1.169-2	1.177-2	1.192-2	1.204-2	1.215-2
50	74	3.136-00	4.051-3	2.507-3	1.817-3	1.493-3	1.320-3	1.216-3	1.116-3	1.084-3	1.085-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
50	75	3.066-01	1.067-2	1.003-2	9.854-3	9.916-3	1.004-2	1.016-2	1.037-2	1.054-2	1.069-2
50	76	0.000-00	3.119-3	1.717-3	1.232-3	1.064-3	1.009-3	9.992-4	1.028-3	1.067-3	1.109-3
50	77	5.507-01	8.251-3	4.540-3	2.811-3	1.927-3	1.416-3	1.097-3	7.475-4	5.755-4	4.896-4
50	78	1.279-03	6.308-3	3.744-3	2.643-3	2.108-3	1.816-3	1.643-3	1.462-3	1.378-3	1.334-3
50	79	4.505-00	5.431-3	3.422-3	2.492-3	2.024-3	1.751-3	1.581-3	1.403-3	1.328-3	1.307-3
50	80	1.723+01	3.589-3	2.709-3	2.329-3	2.134-3	2.035-3	1.978-3	1.933-3	1.930-3	1.951-3
50	81	3.168+01	5.037-3	2.905-3	1.866-3	1.322-3	1.003-3	7.969-4	5.743-4	4.671-4	4.199-4
50	82	9.671-00	3.401-3	1.924-3	1.285-3	9.838-4	8.172-4	7.184-4	6.212-4	5.860-4	5.831-4
50	83	4.460+02	2.963-3	1.448-3	7.998-4	4.958-4	3.327-4	2.349-4	1.334-4	8.386-5	5.745-5
50	84	9.205-00	1.359-2	9.106-3	6.904-3	5.677-3	4.881-3	4.349-3	3.708-3	3.336-3	3.103-3
50	85	3.373+01	7.249-3	5.064-3	3.939-3	3.318-3	2.914-3	2.659-3	2.346-3	2.180-3	2.088-3
50	86	1.472+01	1.916-3	1.209-3	8.497-4	6.553-4	5.307-4	4.485-4	3.466-4	2.838-4	2.420-4
50	87	1.443+01	7.233-3	4.096-3	2.582-3	1.800-3	1.339-3	1.052-3	7.365-4	5.830-4	5.092-4
50	88	1.047-00	3.443-4	1.968-4	1.294-4	9.558-5	7.644-5	6.439-5	5.139-5	4.495-5	4.173-5
50	89	2.016+01	9.465-4	7.819-4	7.156-4	6.906-4	6.772-4	6.713-4	6.733-4	6.846-4	7.036-4
50	90	0.000-00	3.435-4	2.213-4	1.845-4	1.788-4	1.820-4	1.878-4	2.013-4	2.123-4	2.223-4
50	91	5.138-00	3.311-3	1.678-3	9.616-4	6.228-4	4.367-4	3.259-4	2.077-4	1.495-4	1.177-4
50	92	0.000-00	9.142-4	4.594-4	2.622-4	1.688-4	1.169-4	8.573-5	5.183-5	3.471-5	2.526-5
50	93	4.725-00	3.821-4	3.017-4	2.491-4	2.170-4	1.922-4	1.747-4	1.487-4	1.294-4	1.149-4
50	94	9.051+01	4.239-3	3.626-3	3.180-3	2.953-3	2.767-3	2.648-3	2.469-3	2.360-3	2.284-3
50	95	1.083+02	2.376-3	2.220-3	2.136-3	2.107-3	2.083-3	2.071-3	2.065-3	2.072-3	2.091-3
50	96	1.185+01	2.208-3	1.328-3	8.771-4	6.316-4	4.851-4	3.889-4	2.795-4	2.205-4	1.862-4
50	97	1.273+02	5.159-5	2.535-5	1.509-5	1.018-5	7.438-6	5.498-6	3.416-6	2.263-6	1.589-6
51	52	0.000-00	3.156-3	1.681-3	1.008-3	6.654-4	4.694-4	3.491-4	2.147-4	1.457-4	1.069-4
51	53	0.000-00	1.003-3	6.955-4	6.521-4	6.814-4	7.271-4	7.739-4	8.557-4	9.163-4	9.667-4
51	54	0.000-00	1.242-3	6.706-4	4.065-4	2.691-4	1.894-4	1.402-4	8.464-5	5.597-5	3.987-5
51	55	2.073-00	3.047-3	2.136-3	1.624-3	1.343-3	1.150-3	1.014-3	8.303-4	7.052-4	6.154-4
51	56	2.790-05	1.058-3	9.983-4	1.023-3	1.070-3	1.124-3	1.175-3	1.283-3	1.404-3	1.544-3
51	57	0.000-00	2.038-3	1.201-3	7.748-4	5.417-4	4.008-4	3.078-4	2.001-4	1.408-4	1.055-4
51	58	0.000-00	2.737-3	1.446-3	8.774-4	5.990-4	4.451-4	3.538-4	2.561-4	2.087-4	1.840-4
51	59	0.000-00	3.858-3	2.079-3	1.247-3	8.223-4	5.780-4	4.266-4	2.589-4	1.723-4	1.234-4
51	60	1.748-02	6.550-3	6.088-3	5.951-3	5.919-3	5.910-3	5.933-3	6.041-3	6.209-3	6.444-3
51	61	0.000-00	1.959-3	1.065-3	6.442-4	4.274-4	3.021-4	2.242-4	1.368-4	9.143-5	6.571-5
51	62	5.145-01	3.129-3	1.783-3	1.120-3	7.812-4	5.794-4	4.487-4	2.975-4	2.146-4	1.649-4
51	63	4.674-02	1.280-2	1.061-2	9.677-3	9.178-3	8.857-3	8.657-3	8.481-3	8.470-3	8.579-3
51	64	0.000-00	3.539-3	1.910-3	1.162-3	7.735-4	5.496-4	4.118-4	2.575-4	1.778-4	1.330-4
51	65	0.000-00	9.748-4	7.564-4	6.239-4	5.550-4	5.066-4	4.770-4	4.293-4	4.000-4	3.759-4
51	66	0.000-00	2.295-3	1.224-3	7.388-4	4.913-4	3.495-4	2.612-4	1.628-4	1.113-4	8.178-5
51	67	2.841-00	1.571-3	9.751-4	6.829-4	5.326-4	4.370-4	3.731-4	2.927-4	2.422-4	2.076-4
51	68	1.259-00	4.807-2	4.981-2	5.126-2	5.278-2	5.411-2	5.532-2	5.765-2	6.009-2	6.286-2
51	69	1.153+01	5.487-4	2.739-4	1.595-4	1.081-4	7.829-5	5.876-5	3.724-5	2.571-5	1.896-5
51	70	1.703+01	2.070-3	1.260-3	8.671-4	6.675-4	5.444-4	4.641-4	3.653-4	3.037-4	2.625-4
51	71	1.759-00	1.665-3	9.680-4	6.348-4	4.590-4	3.526-4	2.846-4	2.043-4	1.586-4	1.299-4
51	72	2.997-01	1.047-2	1.077-2	1.099-2	1.122-2	1.141-2	1.156-2	1.180-2	1.199-2	1.217-2
51	73	0.000-00	7.464-4	3.674-4	2.030-4	1.260-4	8.414-5	5.950-5	3.373-5	2.133-5	1.469-5
51	74	5.227-02	1.306-3	8.425-4	6.282-4	5.228-4	4.617-4	4.204-4	3.735-4	3.501-4	3.378-4
51	75	0.000-00	6.691-4	3.581-4	2.154-4	1.441-4	1.034-4	7.778-5	4.931-5	3.443-5	2.583-5
51	76	0.000-00	1.005-3	6.135-4	5.070-4	4.939-4	5.073-4	5.290-4	5.748-4	6.119-4	6.447-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
51	77	2.429-00	9.244-3	8.050-3	7.505-3	7.326-3	7.273-3	7.268-3	7.342-3	7.474-3	7.654-3
51	78	0.000-00	2.126-3	1.063-3	6.058-4	3.864-4	2.653-4	1.927-4	1.150-4	7.624-5	5.483-5
51	79	8.301-02	3.592-3	2.890-3	2.614-3	2.472-3	2.404-3	2.367-3	2.337-3	2.329-3	2.329-3
51	80	2.904-00	1.255-3	7.246-4	4.575-4	3.199-4	2.373-4	1.830-4	1.203-4	8.593-5	6.543-5
51	81	1.928+01	3.410-3	3.084-3	2.916-3	2.900-3	2.911-3	2.952-3	3.109-3	3.341-3	3.646-3
51	82	1.517+01	9.584-4	4.949-4	2.974-4	2.024-4	1.488-4	1.156-4	7.838-5	5.822-5	4.607-5
51	83	0.000-00	1.060-3	5.665-4	3.404-4	2.414-4	1.850-4	1.508-4	1.130-4	9.356-5	8.210-5
51	84	1.606+01	5.666-3	3.867-3	2.995-3	2.518-3	2.205-3	1.999-3	1.765-3	1.649-3	1.598-3
51	85	4.916-01	1.980-3	1.263-3	8.957-4	6.919-4	5.603-4	4.727-4	3.634-4	2.961-4	2.513-4
51	86	0.000-00	9.908-4	7.145-4	5.480-4	4.686-4	4.131-4	3.781-4	3.286-4	2.996-4	2.781-4
51	87	0.000-00	2.491-3	1.379-3	8.446-4	5.656-4	4.024-4	2.993-4	1.835-4	1.229-4	8.838-5
51	88	1.355+02	4.149-4	4.308-4	4.329-4	4.424-4	4.541-4	4.734-4	5.342-4	6.240-4	7.429-4
51	89	0.000-00	9.316-5	5.134-5	3.185-5	2.158-5	1.556-5	1.163-5	7.249-6	4.939-6	3.589-6
51	90	0.000-00	1.250-4	8.644-5	7.875-5	8.141-5	8.644-5	9.160-5	1.010-4	1.079-4	1.138-4
51	91	4.215-00	1.760-3	1.111-3	8.276-4	6.864-4	6.022-4	5.505-4	4.930-4	4.623-4	4.448-4
51	92	0.000-00	3.354-4	1.680-4	9.537-5	6.120-5	4.222-5	3.084-5	1.847-5	1.220-5	8.731-6
51	93	0.000-00	1.048-3	8.641-4	7.112-4	6.385-4	5.769-4	5.352-4	4.708-4	4.297-4	3.980-4
51	94	2.533-00	3.102-4	2.228-4	1.752-4	1.483-4	1.289-4	1.156-4	9.676-5	8.340-5	7.356-5
51	95	2.342+02	1.068-3	1.141-3	1.162-3	1.195-3	1.214-3	1.234-3	1.281-3	1.342-3	1.420-3
51	96	3.823-00	7.374-4	4.360-4	2.849-4	2.013-4	1.517-4	1.191-4	8.245-5	6.307-5	5.233-5
51	97	0.000-00	4.510-5	2.964-5	2.139-5	1.769-5	1.501-5	1.319-5	1.079-5	9.289-6	8.253-6
52	53	1.115-01	4.776-1	3.769-1	3.328-1	3.112-1	2.979-1	2.904-1	2.815-1	2.767-1	2.739-1
52	54	7.054-08	1.148-2	8.884-3	7.813-3	7.354-3	7.076-3	6.962-3	6.843-3	6.781-3	6.755-3
52	55	2.625-06	2.769-2	2.391-2	2.278-2	2.262-2	2.297-2	2.369-2	2.586-2	2.886-2	3.264-2
52	56	5.829-03	1.833-2	1.404-2	1.248-2	1.192-2	1.187-2	1.214-2	1.324-2	1.492-2	1.709-2
52	57	1.047-01	7.067-3	5.573-3	5.081-3	4.991-3	5.103-3	5.348-3	6.117-3	7.190-3	8.546-3
52	58	3.826-01	5.847-2	3.018-2	1.781-2	1.173-2	8.353-3	6.303-3	4.118-3	3.107-3	2.629-3
52	59	4.169-00	6.850-2	3.998-2	2.724-2	2.107-2	1.779-2	1.603-2	1.474-2	1.497-2	1.609-2
52	60	5.218-02	3.856-2	3.122-2	2.873-2	2.763-2	2.730-2	2.751-2	2.890-2	3.128-2	3.451-2
52	61	4.333-01	6.136-3	5.042-3	4.642-3	4.489-3	4.452-3	4.485-3	4.688-3	5.026-3	5.481-3
52	62	1.426-00	2.382-1	2.298-1	2.310-1	2.351-1	2.404-1	2.474-1	2.639-1	2.843-1	3.094-1
52	63	3.338-01	7.092-2	6.325-2	6.185-2	6.223-2	6.335-2	6.497-2	6.892-2	7.375-2	7.959-2
52	64	3.881-01	5.312-3	3.175-3	2.280-3	1.866-3	1.649-3	1.535-3	1.454-3	1.470-3	1.543-3
52	65	0.000-00	3.951-3	2.092-3	1.248-3	8.223-4	5.786-4	4.287-4	2.613-4	1.748-4	1.263-4
52	66	2.005-01	9.950-3	5.689-3	3.958-3	3.193-3	2.813-3	2.621-3	2.472-3	2.446-3	2.481-3
52	67	5.939-02	9.590-3	6.238-3	5.097-3	4.728-3	4.644-3	4.700-3	4.972-3	5.327-3	5.758-3
52	68	4.548-02	9.599-3	5.309-3	3.500-3	2.655-3	2.212-3	1.967-3	1.741-3	1.657-3	1.642-3
52	69	1.582-00	6.574-2	5.701-2	5.397-2	5.281-2	5.260-2	5.310-2	5.510-2	5.813-2	6.217-2
52	70	5.875-01	2.022-2	1.563-2	1.397-2	1.330-2	1.303-2	1.299-2	1.318-2	1.355-2	1.407-2
52	71	1.139+01	1.419-1	1.367-1	1.365-1	1.367-1	1.373-1	1.385-1	1.413-1	1.448-1	1.493-1
52	72	4.202-00	5.665-2	5.291-2	5.239-2	5.214-2	5.219-2	5.246-2	5.335-2	5.459-2	5.623-2
52	73	8.815-00	5.360-3	4.202-3	3.696-3	3.423-3	3.262-3	3.161-3	3.065-3	3.038-3	3.057-3
52	74	7.419+01	2.131-2	1.461-2	1.095-2	8.744-3	7.314-3	6.381-3	5.170-3	4.393-3	3.863-3
52	75	7.996+01	1.600-2	1.225-2	1.038-2	9.401-3	8.852-3	8.535-3	8.260-3	8.228-3	8.350-3
52	76	7.138-00	2.504-3	1.778-3	1.432-3	1.252-3	1.148-3	1.087-3	1.030-3	1.015-3	1.026-3
52	77	7.033-00	1.330-2	9.672-3	8.035-3	7.245-3	6.827-3	6.598-3	6.403-3	6.373-3	6.440-3
52	78	1.343+01	9.612-3	7.636-3	6.655-3	6.144-3	5.866-3	5.705-3	5.576-3	5.578-3	5.664-3
52	79	3.211+01	4.787-2	4.430-2	4.262-2	4.193-2	4.168-2	4.167-2	4.197-2	4.252-2	4.330-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
52	80	6.295+01	9.959-2	1.003-1	1.012-1	1.024-1	1.034-1	1.044-1	1.061-1	1.077-1	1.093-1
52	81	1.875-00	2.292-3	1.401-3	1.018-3	8.249-4	7.186-4	6.585-4	6.026-4	5.882-4	5.968-4
52	82	7.969-01	9.541-3	5.118-3	3.124-3	2.130-3	1.566-3	1.224-3	8.483-4	6.603-4	5.601-4
52	83	0.000-00	3.137-3	1.687-3	1.014-3	6.676-4	4.676-4	3.442-4	2.065-4	1.358-4	9.639-5
52	84	3.427-00	5.118-4	3.434-4	2.580-4	2.135-4	1.869-4	1.711-4	1.577-4	1.573-4	1.653-4
52	85	7.923-00	2.387-4	1.745-4	1.443-4	1.299-4	1.223-4	1.195-4	1.217-4	1.307-4	1.453-4
52	86	0.000-00	2.732-5	1.731-5	1.208-5	9.205-6	7.338-6	6.068-6	4.538-6	3.654-6	3.088-6
52	87	1.227+02	9.455-3	5.606-3	3.837-3	2.912-3	2.375-3	2.033-3	1.664-3	1.482-3	1.393-3
52	88	9.864+01	2.060-2	1.530-2	1.310-2	1.179-2	1.097-2	1.045-2	9.821-3	9.464-3	9.270-3
52	89	2.687+01	9.244-3	5.846-3	4.470-3	3.837-3	3.508-3	3.321-3	3.147-3	3.088-3	3.084-3
52	90	1.132-00	2.942-3	1.529-3	9.403-4	6.674-4	5.236-4	4.416-4	3.599-4	3.242-4	3.090-4
52	91	8.122+01	5.925-3	3.821-3	2.753-3	2.167-3	1.819-3	1.593-3	1.352-3	1.240-3	1.201-3
52	92	3.455-00	1.101-2	5.528-3	3.190-3	2.066-3	1.446-3	1.074-3	6.694-4	4.685-4	3.566-4
52	93	0.000-00	1.939-3	9.809-4	5.648-4	3.636-4	2.514-4	1.837-4	1.095-4	7.195-5	5.112-5
52	94	3.004-00	3.038-3	1.669-3	1.182-3	1.006-3	9.395-4	9.203-4	9.332-4	9.612-4	9.960-4
52	95	1.414-01	4.490-3	2.385-3	1.524-3	1.137-3	9.388-4	8.301-4	7.298-4	6.908-4	6.803-4
52	96	1.133-00	7.576-3	3.893-3	2.307-3	1.528-3	1.093-3	8.294-4	5.394-4	3.904-4	3.066-4
52	97	0.000-00	1.269-3	6.718-4	3.987-4	2.613-4	1.827-4	1.345-4	8.097-5	5.346-5	3.812-5
53	54	2.030-01	5.193-1	4.062-1	3.547-1	3.306-1	3.155-1	3.071-1	2.974-1	2.920-1	2.889-1
53	55	0.000-00	6.950-3	4.015-3	2.722-3	2.107-3	1.781-3	1.596-3	1.421-3	1.349-3	1.326-3
53	56	1.372-07	2.736-2	2.215-2	2.005-2	1.914-2	1.873-2	1.861-2	1.876-2	1.922-2	1.992-2
53	57	3.517-02	1.935-2	1.141-2	7.964-3	6.339-3	5.497-3	5.041-3	4.691-3	4.678-3	4.845-3
53	58	6.543-03	6.742-2	3.443-2	2.005-2	1.297-2	9.026-3	6.597-3	3.943-3	2.612-3	1.866-3
53	59	7.138-00	6.701-2	3.683-2	2.300-2	1.601-2	1.202-2	9.565-3	6.886-3	5.571-3	4.908-3
53	60	1.712-02	1.655-2	1.313-2	1.209-2	1.194-2	1.212-2	1.256-2	1.382-2	1.545-2	1.748-2
53	61	7.685-02	4.874-2	3.904-2	3.518-2	3.373-2	3.314-2	3.322-2	3.449-2	3.682-2	4.005-2
53	62	0.000-00	1.103-2	6.224-3	4.526-3	3.916-3	3.698-3	3.646-3	3.711-3	3.822-3	3.949-3
53	63	1.310-00	3.436-1	3.292-1	3.292-1	3.348-1	3.409-1	3.503-1	3.726-1	4.000-1	4.337-1
53	64	2.204-00	1.691-2	1.100-2	8.520-3	7.420-3	6.883-3	6.632-3	6.560-3	6.798-3	7.237-3
53	65	0.000-00	1.097-3	8.912-4	9.832-4	1.131-3	1.270-3	1.390-3	1.580-3	1.711-3	1.814-3
53	66	6.412-01	6.059-2	5.388-2	5.238-2	5.258-2	5.328-2	5.444-2	5.720-2	6.049-2	6.444-2
53	67	0.000-00	1.122-2	5.990-3	3.657-3	2.491-3	1.832-3	1.433-3	9.963-4	7.772-4	6.594-4
53	68	2.891-02	1.340-2	7.680-3	5.417-3	4.453-3	4.004-3	3.815-3	3.771-3	3.905-3	4.148-3
53	69	0.000-00	1.174-2	6.242-3	3.775-3	2.551-3	1.863-3	1.449-3	9.991-4	7.754-4	6.558-4
53	70	0.000-00	1.786-2	1.018-2	7.019-3	5.608-3	4.897-3	4.527-3	4.213-3	4.116-3	4.120-3
53	71	0.000-00	3.736-3	2.165-3	1.421-3	1.037-3	8.142-4	6.748-4	5.216-4	4.427-4	3.996-4
53	72	1.319+01	2.993-1	2.890-1	2.877-1	2.898-1	2.911-1	2.941-1	3.009-1	3.089-1	3.190-1
53	73	3.735-00	8.549-2	8.088-2	7.976-2	7.984-2	7.985-2	8.025-2	8.148-2	8.318-2	8.546-2
53	74	1.541-00	1.152-2	7.663-3	5.758-3	4.735-3	4.183-3	3.863-3	3.634-3	3.697-3	3.955-3
53	75	1.832-01	2.516-2	2.004-2	1.710-2	1.529-2	1.409-2	1.338-2	1.247-2	1.188-2	1.150-2
53	76	7.356+01	1.998-2	1.439-2	1.158-2	1.004-2	9.103-3	8.549-3	7.997-3	7.824-3	7.876-3
53	77	1.525-00	2.847-2	2.240-2	1.986-2	1.873-2	1.803-2	1.768-2	1.736-2	1.730-2	1.740-2
53	78	1.430+01	3.668-2	3.299-2	3.114-2	3.027-2	2.985-2	2.974-2	2.992-2	3.040-2	3.113-2
53	79	3.240+01	9.395-2	9.461-2	9.549-2	9.655-2	9.743-2	9.842-2	1.001-1	1.017-1	1.033-1
53	80	0.000-00	8.972-3	5.389-3	3.509-3	2.463-3	1.824-3	1.396-3	8.994-4	6.252-4	4.628-4
53	81	1.295-00	6.837-3	5.301-3	4.630-3	4.313-3	4.154-3	4.072-3	4.010-3	4.005-3	4.036-3
53	82	0.000-00	1.172-2	6.159-3	3.646-3	2.384-3	1.666-3	1.229-3	7.449-4	4.982-4	3.614-4
53	83	0.000-00	3.888-3	2.096-3	1.269-3	8.415-4	5.946-4	4.427-4	2.736-4	1.871-4	1.394-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
53	84	9.539-00	2.088-4	1.707-4	1.571-4	1.521-4	1.538-4	1.584-4	1.781-4	2.094-4	2.512-4
53	85	0.000-00	3.383-4	1.745-4	1.043-4	7.069-5	5.167-5	4.002-5	2.710-5	2.037-5	1.654-5
53	86	0.000-00	1.103-4	5.932-5	3.777-5	2.701-5	2.090-5	1.722-5	1.320-5	1.116-5	1.006-5
53	87	1.618+02	1.188-2	7.115-3	4.879-3	3.729-3	3.055-3	2.618-3	2.132-3	1.873-3	1.725-3
53	88	2.495+01	7.269-3	4.073-3	2.748-3	2.147-3	1.827-3	1.650-3	1.478-3	1.413-3	1.400-3
53	89	8.132+01	2.424-2	1.851-2	1.579-2	1.437-2	1.335-2	1.272-2	1.193-2	1.146-2	1.120-2
53	90	2.128+01	1.002-2	6.113-3	4.523-3	3.826-3	3.461-3	3.260-3	3.080-3	3.024-3	3.028-3
53	91	1.509+01	8.349-3	5.577-3	4.165-3	3.416-3	2.971-3	2.673-3	2.343-3	2.167-3	2.070-3
53	92	9.194-01	1.438-2	7.209-3	4.154-3	2.683-3	1.868-3	1.379-3	8.436-4	5.769-4	4.270-4
53	93	0.000-00	6.499-4	4.070-4	3.789-4	4.048-4	4.407-4	4.764-4	5.385-4	5.843-4	6.224-4
53	94	0.000-00	4.908-3	2.492-3	1.444-3	9.395-4	6.599-4	4.921-4	3.096-4	2.178-4	1.678-4
53	95	1.673+01	6.076-3	3.386-3	2.340-3	1.902-3	1.694-3	1.596-3	1.532-3	1.530-3	1.556-3
53	96	1.358+01	1.051-2	5.299-3	3.049-3	1.961-3	1.359-3	9.969-4	6.057-4	4.118-4	3.084-4
53	97	0.000-00	1.714-3	9.066-4	5.377-4	3.520-4	2.460-4	1.811-4	1.090-4	7.199-5	5.134-5
54	55	0.000-00	4.544-3	2.499-3	1.620-3	1.202-3	9.792-4	8.530-4	7.296-4	6.770-4	6.572-4
54	56	0.000-00	1.385-2	7.884-3	5.333-3	4.140-3	3.520-3	3.176-3	2.862-3	2.741-3	2.711-3
54	57	6.783-07	4.397-2	2.770-2	2.052-2	1.702-2	1.516-2	1.399-2	1.280-2	1.225-2	1.201-2
54	58	1.527-01	7.683-2	3.947-2	2.321-2	1.517-2	1.071-2	7.950-3	4.958-3	3.489-3	2.717-3
54	59	2.719-03	6.384-2	3.852-2	2.744-2	2.250-2	2.024-2	1.967-2	2.113-2	2.477-2	3.002-2
54	60	0.000-00	1.119-2	6.024-3	3.844-3	2.835-3	2.304-3	2.007-3	1.723-3	1.605-3	1.562-3
54	61	6.011-02	6.367-2	5.284-2	4.942-2	4.891-2	4.933-2	5.066-2	5.437-2	5.913-2	6.504-2
54	62	0.000-00	1.048-2	5.626-3	3.482-3	2.433-3	1.854-3	1.511-3	1.150-3	9.774-4	8.915-4
54	63	0.000-00	1.307-2	7.154-3	4.827-3	3.837-3	3.369-3	3.140-3	2.977-3	2.950-3	2.981-3
54	64	6.618-01	3.564-2	2.477-2	2.001-2	1.797-2	1.689-2	1.641-2	1.630-2	1.686-2	1.788-2
54	65	0.000-00	3.103-3	1.654-3	9.961-4	6.569-4	4.612-4	3.408-4	2.056-4	1.359-4	9.689-5
54	66	1.538-00	4.772-1	4.557-1	4.528-1	4.587-1	4.648-1	4.758-1	5.014-1	5.320-1	5.694-1
54	67	0.000-00	5.925-3	3.411-3	2.448-3	2.042-3	1.857-3	1.774-3	1.731-3	1.737-3	1.767-3
54	68	0.000-00	1.953-2	1.084-2	7.317-3	5.721-3	4.912-3	4.483-3	4.112-3	3.983-3	3.969-3
54	69	0.000-00	6.476-3	3.402-3	2.026-3	1.345-3	9.627-4	7.327-4	4.822-4	3.576-4	2.903-4
54	70	0.000-00	2.646-2	1.509-2	1.042-2	8.345-3	7.301-3	6.760-3	6.306-3	6.167-3	6.176-3
54	71	0.000-00	4.516-3	2.385-3	1.421-3	9.397-4	6.680-4	5.039-4	3.240-4	2.337-4	1.844-4
54	72	0.000-00	2.242-3	1.303-3	8.529-4	6.211-4	4.836-4	3.971-4	3.012-4	2.507-4	2.223-4
54	73	2.121+01	5.258-1	5.148-1	5.139-1	5.187-1	5.212-1	5.272-1	5.400-1	5.539-1	5.711-1
54	74	0.000-00	3.151-3	1.897-3	1.241-3	8.802-4	6.614-4	5.175-4	3.528-4	2.638-4	2.120-4
54	75	2.289-02	6.054-2	5.185-2	4.783-2	4.596-2	4.462-2	4.378-2	4.276-2	4.212-2	4.177-2
54	76	9.981+01	4.966-2	3.412-2	2.558-2	2.069-2	1.715-2	1.491-2	1.199-2	1.012-2	8.834-3
54	77	0.000-00	1.350-2	6.970-3	4.065-3	2.626-3	1.808-3	1.314-3	7.729-4	5.011-4	3.518-4
54	78	3.015+01	9.604-2	9.099-2	8.856-2	8.765-2	8.735-2	8.768-2	8.889-2	9.044-2	9.248-2
54	79	0.000-00	6.390-3	3.832-3	2.496-3	1.757-3	1.303-3	1.000-3	6.477-4	4.528-4	3.371-4
54	80	0.000-00	2.728-4	1.070-4	5.399-5	3.406-5	2.470-5	1.951-5	1.400-5	1.103-5	9.250-6
54	81	0.000-00	8.625-3	4.765-3	2.937-3	1.986-3	1.427-3	1.069-3	6.649-4	4.493-4	3.258-4
54	82	0.000-00	1.417-2	7.435-3	4.394-3	2.862-3	1.991-3	1.461-3	8.730-4	5.733-4	4.068-4
54	83	0.000-00	4.670-3	2.516-3	1.523-3	1.004-3	7.032-4	5.179-4	3.105-4	2.040-4	1.448-4
54	84	0.000-00	1.067-4	6.393-5	4.641-5	3.760-5	3.187-5	2.782-5	2.261-5	1.928-5	1.696-5
54	85	0.000-00	6.240-4	3.152-4	1.834-4	1.194-4	8.328-5	6.143-5	3.738-5	2.511-5	1.829-5
54	86	0.000-00	2.508-4	1.258-4	7.377-5	4.770-5	3.309-5	2.423-5	1.447-5	9.492-6	6.735-6
54	87	1.274+01	1.354-2	8.053-3	5.484-3	4.150-3	3.392-3	2.895-3	2.359-3	2.093-3	1.963-3
54	88	0.000-00	2.298-3	1.180-3	7.017-4	4.744-4	3.516-4	2.795-4	2.044-4	1.688-4	1.510-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
54	89	2.429+01	8.696-3	4.856-3	3.277-3	2.558-3	2.169-3	1.961-3	1.764-3	1.694-3	1.688-3
54	90	9.934+01	3.784-2	2.733-2	2.238-2	2.007-2	1.850-2	1.756-2	1.646-2	1.586-2	1.557-2
54	91	0.000-00	8.118-3	4.771-3	3.046-3	2.106-3	1.549-3	1.177-3	7.573-4	5.277-4	3.930-4
54	92	2.605-00	1.738-2	8.627-3	4.912-3	3.127-3	2.136-3	1.545-3	9.032-4	5.836-4	4.047-4
54	93	0.000-00	1.245-3	6.456-4	3.779-4	2.463-4	1.720-4	1.268-4	7.654-5	5.068-5	3.621-5
54	94	0.000-00	3.341-3	1.852-3	1.304-3	1.095-3	1.009-3	9.779-4	9.773-4	9.981-4	1.029-3
54	95	0.000-00	7.851-3	4.172-3	2.736-3	2.127-3	1.837-3	1.693-3	1.588-3	1.567-3	1.584-3
54	96	0.000-00	1.460-2	7.352-3	4.215-3	2.697-3	1.856-3	1.350-3	7.995-4	5.231-4	3.714-4
54	97	0.000-00	2.223-3	1.175-3	6.964-4	4.554-4	3.181-4	2.341-4	1.408-4	9.286-5	6.615-5
55	56	1.920-02	8.101-2	4.944-2	3.347-2	2.454-2	1.896-2	1.525-2	1.082-2	8.288-3	6.753-3
55	57	5.899-09	7.743-3	4.335-3	2.773-3	1.988-3	1.534-3	1.258-3	9.455-4	7.838-4	6.923-4
55	58	0.000-00	1.516-2	8.649-3	5.435-3	3.723-3	2.703-3	2.044-3	1.290-3	8.846-4	6.488-4
55	59	1.320-08	5.786-3	3.828-3	2.982-3	2.564-3	2.332-3	2.189-3	2.035-3	1.956-3	1.915-3
55	60	8.606-00	1.175-2	7.899-3	5.881-3	4.787-3	4.058-3	3.582-3	2.959-3	2.559-3	2.284-3
55	61	1.333-02	1.205-2	9.695-3	9.019-3	8.933-3	9.084-3	9.429-3	1.047-2	1.188-2	1.368-2
55	62	2.001-01	6.630-2	6.408-2	6.406-2	6.540-2	6.689-2	6.889-2	7.388-2	8.023-2	8.809-2
55	63	6.220-00	1.454-1	1.415-1	1.429-1	1.463-1	1.502-1	1.551-1	1.670-1	1.820-1	2.004-1
55	64	0.000-00	5.153-3	2.806-3	1.760-3	1.239-3	9.499-4	7.781-4	5.954-4	5.067-4	4.615-4
55	65	3.145+01	2.093-3	1.181-3	7.461-4	5.168-4	3.818-4	2.956-4	1.964-4	1.423-4	1.100-4
55	66	1.417-01	4.246-2	3.837-2	3.730-2	3.738-2	3.790-2	3.888-2	4.163-2	4.531-2	4.998-2
55	67	3.834+01	6.474-3	3.607-3	2.311-3	1.664-3	1.299-3	1.073-3	8.293-4	7.099-4	6.514-4
55	68	6.427-00	2.368-2	2.091-2	1.995-2	1.981-2	1.994-2	2.028-2	2.137-2	2.291-2	2.488-2
55	69	3.660-00	4.642-3	2.744-3	1.813-3	1.310-3	1.006-3	8.094-4	5.844-4	4.646-4	3.988-4
55	70	3.174-00	1.314-2	1.324-2	1.348-2	1.390-2	1.430-2	1.478-2	1.587-2	1.720-2	1.882-2
55	71	1.716-00	1.288-2	1.040-2	9.370-3	8.945-3	8.738-3	8.639-3	8.589-3	8.631-3	8.726-3
55	72	1.618+01	1.424-2	9.060-3	6.875-3	5.847-3	5.306-3	4.988-3	4.661-3	4.507-3	4.429-3
55	73	8.431-02	8.432-3	4.908-3	3.811-3	3.510-3	3.473-3	3.542-3	3.773-3	4.007-3	4.249-3
55	74	5.296+01	4.596-3	2.639-3	1.715-3	1.235-3	9.569-4	7.810-4	5.863-4	4.873-4	4.363-4
55	75	7.939-01	2.835-3	1.783-3	1.303-3	1.081-3	9.782-4	9.458-4	1.015-3	1.198-3	1.470-3
55	76	0.000-00	1.167-3	6.345-4	3.896-4	2.665-4	1.971-4	1.551-4	1.102-4	8.826-5	7.697-5
55	77	5.173+01	1.206-2	7.298-3	5.174-3	4.171-3	3.643-3	3.364-3	3.189-3	3.283-3	3.544-3
55	78	3.726-00	4.542-3	3.530-3	3.237-3	3.232-3	3.300-3	3.410-3	3.676-3	3.973-3	4.317-3
55	79	1.099+01	1.774-2	1.503-2	1.383-2	1.337-2	1.314-2	1.307-2	1.317-2	1.345-2	1.388-2
55	80	4.778-00	1.465-2	1.270-2	1.192-2	1.160-2	1.144-2	1.137-2	1.135-2	1.140-2	1.150-2
55	81	3.667+01	1.215-2	6.442-3	3.965-3	2.766-3	2.112-3	1.722-3	1.321-3	1.149-3	1.086-3
55	82	1.196+02	5.876-3	3.136-3	1.883-3	1.259-3	9.070-4	6.874-4	4.528-4	3.389-4	2.847-4
55	83	1.130-00	4.228-4	2.502-4	1.628-4	1.149-4	8.580-5	6.614-5	4.344-5	3.068-5	2.294-5
55	84	8.169-00	1.998-3	1.300-3	9.531-4	7.656-4	6.586-4	5.947-4	5.358-4	5.232-4	5.371-4
55	85	1.271-00	1.289-3	8.581-4	6.272-4	4.988-4	4.179-4	3.663-4	3.040-4	2.691-4	2.482-4
55	86	3.965-00	8.675-4	5.884-4	4.276-4	3.358-4	2.762-4	2.368-4	1.858-4	1.531-4	1.310-4
55	87	4.634+01	6.851-3	4.205-3	2.874-3	2.178-3	1.769-3	1.527-3	1.299-3	1.249-3	1.302-3
55	88	3.914+01	8.454-3	7.276-3	6.775-3	6.520-3	6.356-3	6.252-3	6.150-3	6.111-3	6.115-3
55	89	2.140-00	3.400-3	2.737-3	2.462-3	2.328-3	2.254-3	2.209-3	2.166-3	2.146-3	2.140-3
55	90	0.000-00	9.875-4	5.133-4	3.029-4	1.983-4	1.389-4	1.025-4	6.211-5	4.133-5	2.966-5
55	91	1.350+01	2.024-3	1.066-3	6.384-4	4.280-4	3.095-4	2.380-4	1.630-4	1.293-4	1.157-4
55	92	0.000-00	2.727-3	1.537-3	9.535-4	6.445-4	4.629-4	3.467-4	2.152-4	1.455-4	1.053-4
55	93	1.211+01	7.884-4	4.821-4	3.292-4	2.488-4	1.985-4	1.657-4	1.255-4	1.013-4	8.553-5
55	94	2.244+01	1.992-3	1.497-3	1.254-3	1.131-3	1.049-3	1.000-3	9.380-4	8.987-4	8.739-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
55	95	1.718+01	1.893-3	1.401-3	1.190-3	1.088-3	1.031-3	9.969-4	9.624-4	9.469-4	9.430-4
55	96	2.604+01	2.090-3	1.213-3	7.851-4	5.549-4	4.177-4	3.289-4	2.273-4	1.724-4	1.401-4
55	97	5.122-01	8.097-5	4.296-5	2.665-5	1.849-5	1.388-5	1.071-5	7.237-6	5.291-6	4.060-6
56	57	1.063-01	8.834-2	5.365-2	3.617-2	2.655-2	2.060-2	1.665-2	1.196-2	9.309-3	7.712-3
56	58	3.272-06	3.488-2	2.402-2	1.999-2	1.937-2	2.058-2	2.324-2	3.169-2	4.367-2	5.884-2
56	59	4.897-00	1.987-2	1.482-2	1.304-2	1.265-2	1.299-2	1.386-2	1.677-2	2.099-2	2.640-2
56	60	1.404+01	6.031-2	5.477-2	5.402-2	5.448-2	5.555-2	5.714-2	6.149-2	6.723-2	7.444-2
56	61	2.699-00	1.954-2	1.399-2	1.118-2	9.696-3	8.790-3	8.249-3	7.659-3	7.416-3	7.391-3
56	62	2.160-00	9.699-2	9.357-2	9.445-2	9.656-2	9.915-2	1.025-1	1.107-1	1.212-1	1.341-1
56	63	3.594-00	5.595-2	5.202-2	5.123-2	5.133-2	5.187-2	5.270-2	5.487-2	5.765-2	6.109-2
56	64	2.797-02	4.005-2	3.410-2	3.197-2	3.128-2	3.100-2	3.115-2	3.195-2	3.322-2	3.497-2
56	65	1.788-02	4.094-3	2.902-3	2.447-3	2.269-3	2.202-3	2.188-3	2.231-3	2.319-3	2.439-3
56	66	1.169+01	1.712-1	1.637-1	1.643-1	1.667-1	1.697-1	1.735-1	1.826-1	1.941-1	2.081-1
56	67	3.281-01	8.256-3	4.870-3	3.388-3	2.730-3	2.438-3	2.361-3	2.579-3	3.112-3	3.885-3
56	68	2.329+01	3.148-2	2.578-2	2.345-2	2.244-2	2.199-2	2.183-2	2.197-2	2.247-2	2.324-2
56	69	1.507+01	9.366-3	5.370-3	3.412-3	2.361-3	1.735-3	1.329-3	8.673-4	6.220-4	4.847-4
56	70	3.311-00	2.331-2	2.294-2	2.339-2	2.409-2	2.485-2	2.582-2	2.815-2	3.108-2	3.467-2
56	71	4.265-00	1.672-2	1.314-2	1.170-2	1.108-2	1.079-2	1.065-2	1.058-2	1.065-2	1.080-2
56	72	2.312-00	3.413-2	2.863-2	2.697-2	2.653-2	2.658-2	2.684-2	2.770-2	2.884-2	3.023-2
56	73	6.874-00	2.078-2	1.412-2	1.167-2	1.072-2	1.032-2	1.016-2	1.011-2	1.016-2	1.026-2
56	74	3.747+01	8.798-3	5.143-3	3.506-3	2.683-3	2.198-3	1.912-3	1.632-3	1.542-3	1.556-3
56	75	7.917-01	4.023-3	2.372-3	1.618-3	1.259-3	1.085-3	1.014-3	1.048-3	1.221-3	1.493-3
56	76	2.983-00	5.101-3	3.569-3	2.925-3	2.711-3	2.683-3	2.817-3	3.396-3	4.301-3	5.488-3
56	77	5.052-00	1.660-2	9.213-3	5.925-3	4.340-3	3.529-3	3.110-3	2.894-3	3.113-3	3.608-3
56	78	9.204-00	2.138-2	1.768-2	1.624-2	1.575-2	1.559-2	1.563-2	1.597-2	1.651-2	1.723-2
56	79	4.000-00	1.921-2	1.570-2	1.442-2	1.386-2	1.362-2	1.351-2	1.346-2	1.348-2	1.354-2
56	80	9.340-00	2.295-2	1.944-2	1.813-2	1.750-2	1.720-2	1.706-2	1.701-2	1.710-2	1.728-2
56	81	1.498+01	1.757-2	9.917-3	6.618-3	5.072-3	4.257-3	3.820-3	3.518-3	3.610-3	3.936-3
56	82	2.712+02	1.173-2	7.213-3	5.183-3	4.168-3	3.620-3	3.327-3	3.134-3	3.218-3	3.479-3
56	83	1.564+01	1.715-3	1.507-3	1.414-3	1.367-3	1.344-3	1.335-3	1.345-3	1.374-3	1.422-3
56	84	5.475-00	3.711-3	2.549-3	1.982-3	1.677-3	1.500-3	1.388-3	1.272-3	1.223-3	1.208-3
56	85	3.614-00	3.050-3	1.984-3	1.410-3	1.084-3	8.735-4	7.383-4	5.707-4	4.705-4	4.071-4
56	86	1.295+01	6.776-4	4.945-4	4.188-4	3.651-4	3.321-4	3.113-4	2.896-4	2.810-4	2.818-4
56	87	8.059-00	1.064-2	6.102-3	3.851-3	2.646-3	1.937-3	1.483-3	9.756-4	7.164-4	5.793-4
56	88	1.536+01	7.321-3	6.002-3	5.491-3	5.198-3	5.017-3	4.899-3	4.769-3	4.701-3	4.669-3
56	89	3.712+01	1.032-2	8.536-3	7.816-3	7.451-3	7.225-3	7.083-3	6.946-3	6.899-3	6.910-3
56	90	1.150-00	4.185-3	2.954-3	2.424-3	2.171-3	2.030-3	1.941-3	1.852-3	1.810-3	1.790-3
56	91	3.179-00	3.914-3	2.121-3	1.300-3	8.897-4	6.582-4	5.157-4	3.592-4	2.795-4	2.357-4
56	92	6.131+01	5.555-3	3.460-3	2.431-3	1.899-3	1.582-3	1.392-3	1.201-3	1.131-3	1.129-3
56	93	1.049+02	4.833-4	3.026-4	2.250-4	1.908-4	1.730-4	1.632-4	1.570-4	1.591-4	1.675-4
56	94	1.274+01	2.513-3	1.511-3	1.028-3	7.766-4	6.203-4	5.219-4	4.035-4	3.347-4	2.924-4
56	95	2.722+01	4.430-3	3.309-3	2.813-3	2.546-3	2.384-3	2.287-3	2.172-3	2.103-3	2.063-3
56	96	5.724+01	3.531-3	2.069-3	1.373-3	9.985-4	7.771-4	6.378-4	4.850-4	4.128-4	3.813-4
56	97	4.515+02	2.252-4	1.638-4	1.386-4	1.246-4	1.169-4	1.126-4	1.100-4	1.119-4	1.173-4
57	58	6.863-04	3.432-2	1.958-2	1.250-2	8.765-3	6.571-3	5.172-3	3.579-3	2.729-3	2.237-3
57	59	6.366-00	2.992-2	2.360-2	2.101-2	1.983-2	1.933-2	1.921-2	1.967-2	2.071-2	2.224-2
57	60	1.212-00	3.336-2	2.846-2	2.680-2	2.618-2	2.609-2	2.633-2	2.744-2	2.914-2	3.138-2
57	61	7.852-00	1.740-1	1.614-1	1.599-1	1.616-1	1.650-1	1.700-1	1.832-1	2.006-1	2.225-1

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a{\pm}b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
57	62	3.328-02	1.998-2	1.822-2	1.800-2	1.822-2	1.866-2	1.929-2	2.091-2	2.298-2	2.555-2
57	63	7.367-00	9.173-2	8.682-2	8.714-2	8.862-2	9.066-2	9.336-2	1.000-1	1.085-1	1.190-1
57	64	7.786-00	1.081-1	9.205-2	8.652-2	8.481-2	8.453-2	8.580-2	9.094-2	9.883-2	1.093-1
57	65	0.000-00	1.992-3	1.047-3	6.411-4	4.378-4	3.224-4	2.512-4	1.706-4	1.271-4	1.010-4
57	66	1.138+01	1.820-1	1.754-1	1.758-1	1.783-1	1.816-1	1.857-1	1.956-1	2.077-1	2.224-1
57	67	1.452-02	8.807-3	4.922-3	3.232-3	2.433-3	2.015-3	1.792-3	1.641-3	1.689-3	1.855-3
57	68	2.573+01	2.242-2	1.272-2	8.350-3	6.222-3	5.112-3	4.510-3	4.142-3	4.349-3	4.915-3
57	69	9.416-02	1.627-2	1.016-2	7.311-3	5.890-3	5.121-3	4.708-3	4.469-3	4.654-3	5.117-3
57	70	4.646-00	6.397-2	6.304-2	6.413-2	6.564-2	6.736-2	6.962-2	7.491-2	8.144-2	8.945-2
57	71	1.410-00	1.449-2	1.136-2	1.043-2	1.021-2	1.028-2	1.055-2	1.139-2	1.252-2	1.394-2
57	72	7.568-01	2.188-2	1.578-2	1.354-2	1.265-2	1.228-2	1.213-2	1.209-2	1.215-2	1.225-2
57	73	1.002+01	7.285-2	6.150-2	5.750-2	5.633-2	5.630-2	5.695-2	5.932-2	6.279-2	6.725-2
57	74	1.916-00	1.143-2	5.948-3	3.541-3	2.376-3	1.732-3	1.360-3	1.006-3	8.996-4	9.207-4
57	75	9.554-00	5.687-3	3.256-3	2.091-3	1.488-3	1.128-3	8.968-4	6.364-4	4.979-4	4.198-4
57	76	3.366+01	1.179-2	6.995-3	4.638-3	3.418-3	2.743-3	2.364-3	2.091-3	2.161-3	2.447-3
57	77	1.062+02	2.010-2	1.085-2	6.781-3	4.833-3	3.802-3	3.237-3	2.847-3	2.960-3	3.379-3
57	78	1.538+01	5.298-2	4.536-2	4.244-2	4.122-2	4.067-2	4.043-2	4.035-2	4.045-2	4.068-2
57	79	9.840-00	2.948-2	2.323-2	2.086-2	1.988-2	1.943-2	1.923-2	1.918-2	1.928-2	1.949-2
57	80	2.882-00	6.742-3	4.769-3	4.053-3	3.789-3	3.699-3	3.688-3	3.760-3	3.863-3	3.993-3
57	81	1.019+02	3.711-2	2.928-2	2.618-2	2.488-2	2.435-2	2.433-2	2.507-2	2.653-2	2.856-2
57	82	3.343-03	1.477-2	9.131-3	6.647-3	5.461-3	4.818-3	4.427-3	4.021-3	3.821-3	3.721-3
57	83	0.000-00	3.646-4	2.037-4	1.283-4	8.915-5	6.553-5	4.951-5	3.163-5	2.184-5	1.595-5
57	84	1.651+01	7.538-3	4.854-3	3.422-3	2.630-3	2.127-3	1.805-3	1.433-3	1.240-3	1.148-3
57	85	3.163+01	1.872-3	1.300-3	1.020-3	8.716-4	7.889-4	7.452-4	7.241-4	7.551-4	8.250-4
57	86	0.000-00	2.969-4	1.704-4	1.082-4	7.506-5	5.523-5	4.220-5	2.733-5	1.921-5	1.439-5
57	87	2.470+01	1.595-2	9.243-3	5.933-3	4.179-3	3.148-3	2.497-3	1.790-3	1.455-3	1.311-3
57	88	1.898-00	2.147-3	1.504-3	1.242-3	1.102-3	1.020-3	9.693-4	9.109-4	8.796-4	8.623-4
57	89	7.554-00	8.602-3	6.675-3	5.863-3	5.448-3	5.204-3	5.046-3	4.873-3	4.783-3	4.737-3
57	90	4.742+01	2.282-2	1.824-2	1.614-2	1.516-2	1.458-2	1.421-2	1.383-2	1.367-2	1.364-2
57	91	3.364+01	6.288-3	3.495-3	2.215-3	1.568-3	1.203-3	9.815-4	7.446-4	6.333-4	5.836-4
57	92	1.090+01	7.755-3	4.590-3	3.078-3	2.286-3	1.828-3	1.539-3	1.219-3	1.058-3	9.732-4
57	93	0.000-00	8.002-4	4.202-4	2.517-4	1.657-4	1.170-4	8.709-5	5.387-5	3.662-5	2.676-5
57	94	1.804-00	2.303-3	1.275-3	8.329-4	6.159-4	4.952-4	4.215-4	3.414-4	2.997-4	2.769-4
57	95	3.984+01	6.059-3	3.985-3	3.008-3	2.506-3	2.193-3	2.002-3	1.770-3	1.630-3	1.546-3
57	96	3.688+01	6.152-3	3.692-3	2.544-3	1.923-3	1.553-3	1.317-3	1.044-3	8.961-4	8.101-4
57	97	0.000-00	2.334-4	1.184-4	6.886-5	4.533-5	3.238-5	2.390-5	1.480-5	1.006-5	7.196-6
58	59	4.164-02	5.313-2	4.150-2	3.826-2	3.846-2	4.022-2	4.319-2	5.165-2	6.305-2	7.726-2
58	60	3.631-03	2.505-2	1.829-2	1.566-2	1.486-2	1.492-2	1.563-2	1.830-2	2.228-2	2.743-2
58	61	1.449+01	2.546-2	1.424-2	8.927-3	6.155-3	4.535-3	3.489-3	2.327-3	1.716-3	1.379-3
58	62	0.000-00	1.237-2	6.381-3	3.724-3	2.410-3	1.673-3	1.225-3	7.386-4	4.943-4	3.603-4
58	63	2.593-03	2.186-2	1.242-2	8.212-3	6.162-3	5.044-3	4.416-3	3.885-3	3.828-3	4.037-3
58	64	4.396+01	7.001-2	5.501-2	4.863-2	4.620-2	4.535-2	4.561-2	4.794-2	5.194-2	5.736-2
58	65	0.000-00	6.989-3	3.661-3	2.158-3	1.408-3	9.838-4	7.265-4	4.433-4	3.000-4	2.208-4
58	66	6.387-00	3.832-2	2.590-2	2.036-2	1.782-2	1.657-2	1.607-2	1.624-2	1.734-2	1.910-2
58	67	0.000-00	2.060-2	1.089-2	6.482-3	4.281-3	3.034-3	2.279-3	1.448-3	1.029-3	7.994-4
58	68	1.713-02	3.927-2	2.425-2	1.755-2	1.430-2	1.252-2	1.154-2	1.068-2	1.053-2	1.078-2
58	69	0.000-00	4.864-3	3.335-3	2.988-3	3.003-3	3.114-3	3.248-3	3.500-3	3.692-3	3.857-3
58	70	0.000-00	1.918-2	1.030-2	6.193-3	4.087-3	2.872-3	2.124-3	1.289-3	8.603-4	6.210-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
58	71	0.000-00	1.078-2	6.429-3	4.210-3	3.005-3	2.287-3	1.821-3	1.295-3	1.015-3	8.559-4
58	72	2.854-00	9.847-2	9.118-2	8.877-2	8.857-2	8.881-2	9.007-2	9.367-2	9.843-2	1.045-1
58	73	2.922-00	2.912-2	2.249-2	1.919-2	1.754-2	1.658-2	1.609-2	1.576-2	1.590-2	1.636-2
58	74	5.054-00	7.362-2	6.901-2	6.778-2	6.795-2	6.829-2	6.923-2	7.153-2	7.435-2	7.787-2
58	75	4.743-00	2.416-2	1.444-2	9.833-3	7.494-3	6.133-3	5.285-3	4.364-3	3.915-3	3.701-3
58	76	3.193+01	3.754-2	2.201-2	1.460-2	1.084-2	8.649-3	7.290-3	5.826-3	5.136-3	4.834-3
58	77	5.463+01	4.704-1	4.712-1	4.780-1	4.869-1	4.934-1	5.018-1	5.179-1	5.345-1	5.539-1
58	78	3.870-01	2.386-3	1.648-3	1.287-3	1.103-3	9.909-4	9.258-4	8.646-4	8.506-4	8.654-4
58	79	2.430-01	1.338-3	9.599-4	8.245-4	7.747-4	7.532-4	7.483-4	7.560-4	7.723-4	7.958-4
58	80	0.000-00	2.634-4	1.362-4	8.784-5	6.765-5	5.772-5	5.249-5	4.795-5	4.623-5	4.585-5
58	81	5.117+01	1.345-1	1.310-1	1.309-1	1.320-1	1.330-1	1.345-1	1.374-1	1.403-1	1.436-1
58	82	0.000-00	3.778-3	2.893-3	2.920-3	3.165-3	3.429-3	3.669-3	4.061-3	4.330-3	4.549-3
58	83	0.000-00	2.470-3	2.081-3	2.315-3	2.662-3	2.973-3	3.235-3	3.635-3	3.903-3	4.114-3
58	84	1.469+01	7.688-4	5.220-4	4.092-4	3.579-4	3.362-4	3.325-4	3.625-4	4.278-4	5.219-4
58	85	0.000-00	6.138-4	3.109-4	1.836-4	1.226-4	8.858-5	6.765-5	4.447-5	3.248-5	2.577-5
58	86	0.000-00	2.138-4	1.095-4	7.322-5	5.976-5	5.416-5	5.175-5	5.050-5	5.063-5	5.145-5
58	87	5.358+01	2.042-2	1.641-2	1.475-2	1.404-2	1.356-2	1.330-2	1.305-2	1.298-2	1.303-2
58	88	1.244+01	4.570-3	2.449-3	1.486-3	1.014-3	7.562-4	6.033-4	4.457-4	3.773-4	3.523-4
58	89	3.064-00	7.160-3	3.695-3	2.133-3	1.373-3	9.540-4	7.019-4	4.301-4	2.941-4	2.193-4
58	90	3.058-00	1.079-2	5.632-3	3.304-3	2.164-3	1.528-3	1.148-3	7.310-4	5.198-4	4.001-4
58	91	2.599+01	1.206-2	1.110-2	1.064-2	1.046-2	1.025-2	1.012-2	9.942-3	9.803-3	9.723-3
58	92	1.765+02	3.389-2	2.885-2	2.602-2	2.432-2	2.301-2	2.231-2	2.130-2	2.074-2	2.039-2
58	93	0.000-00	4.522-4	2.425-4	1.450-4	9.677-5	6.980-5	5.372-5	3.664-5	2.834-5	2.403-5
58	94	0.000-00	1.668-3	8.891-4	5.253-4	3.427-4	2.391-4	1.765-4	1.083-4	7.414-5	5.554-5
58	95	1.451+02	4.190-3	2.655-3	1.928-3	1.571-3	1.362-3	1.251-3	1.154-3	1.144-3	1.186-3
58	96	5.552+02	3.776-3	3.752-3	3.744-3	3.785-3	3.777-3	3.819-3	3.939-3	4.113-3	4.355-3
58	97	0.000-00	1.859-4	1.117-4	1.158-4	1.355-4	1.557-4	1.741-4	2.046-4	2.266-4	2.447-4
59	60	6.986-01	2.266-2	1.347-2	9.307-3	7.480-3	6.814-3	6.854-3	8.276-3	1.093-2	1.458-2
59	61	1.389-01	2.302-2	1.334-2	8.765-3	6.431-3	5.082-3	4.270-3	3.457-3	3.168-3	3.165-3
59	62	4.988-04	2.650-2	1.830-2	1.502-2	1.373-2	1.330-2	1.338-2	1.436-2	1.608-2	1.840-2
59	63	8.724-00	2.974-2	1.587-2	9.568-3	6.423-3	4.673-3	3.636-3	2.623-3	2.295-3	2.322-3
59	64	9.613-00	3.455-2	2.150-2	1.522-2	1.196-2	1.009-2	8.977-3	7.934-3	7.687-3	7.907-3
59	65	0.000-00	1.734-3	8.522-4	4.767-4	2.976-4	2.003-4	1.423-4	8.126-5	5.153-5	3.550-5
59	66	9.793-00	4.302-2	2.962-2	2.396-2	2.146-2	2.040-2	2.016-2	2.100-2	2.298-2	2.580-2
59	67	2.188-03	7.515-3	4.604-3	3.459-3	3.014-3	2.855-3	2.859-3	3.119-3	3.590-3	4.226-3
59	68	6.034-03	1.125-2	6.889-3	4.989-3	4.049-3	3.526-3	3.213-3	2.884-3	2.732-3	2.669-3
59	69	4.170-01	2.801-1	2.658-1	2.666-1	2.707-1	2.771-1	2.862-1	3.093-1	3.394-1	3.770-1
59	70	3.409-02	9.521-3	5.598-3	4.081-3	3.469-3	3.202-3	3.119-3	3.202-3	3.462-3	3.845-3
59	71	1.512-01	2.913-2	2.642-2	2.574-2	2.549-2	2.545-2	2.557-2	2.598-2	2.655-2	2.731-2
59	72	9.656-00	3.706-2	3.350-2	3.268-2	3.251-2	3.266-2	3.306-2	3.426-2	3.589-2	3.799-2
59	73	5.457-00	3.392-2	2.912-2	2.735-2	2.663-2	2.640-2	2.641-2	2.684-2	2.759-2	2.864-2
59	74	9.491-00	4.399-2	3.622-2	3.315-2	3.171-2	3.103-2	3.082-2	3.112-2	3.199-2	3.332-2
59	75	1.099+01	2.878-2	1.602-2	1.001-2	6.838-3	4.995-3	3.837-3	2.562-3	1.938-3	1.633-3
59	76	4.103-00	5.623-2	3.279-2	2.162-2	1.583-2	1.246-2	1.034-2	7.979-3	6.765-3	6.107-3
59	77	1.664-00	6.433-2	6.022-2	5.975-2	5.958-2	5.964-2	5.989-2	6.056-2	6.130-2	6.229-2
59	78	4.957+01	2.265-2	1.572-2	1.276-2	1.136-2	1.063-2	1.019-2	9.762-3	9.578-3	9.516-3
59	79	5.441+01	2.591-2	2.186-2	2.035-2	1.977-2	1.958-2	1.964-2	2.013-2	2.097-2	2.211-2
59	80	2.827-00	4.087-3	2.216-3	1.405-3	1.032-3	8.379-4	7.415-4	7.006-4	7.681-4	9.047-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
59	81	6.266+01	2.468-1	2.467-1	2.505-1	2.539-1	2.572-1	2.603-1	2.664-1	2.726-1	2.798-1
59	82	1.552+02	6.743-2	7.081-2	7.341-2	7.568-2	7.747-2	7.937-2	8.294-2	8.666-2	9.098-2
59	83	0.000-00	1.493-3	7.362-4	4.107-4	2.541-4	1.693-4	1.193-4	6.736-5	4.234-5	2.911-5
59	84	9.621-00	1.920-2	1.402-2	1.145-2	1.011-2	9.343-3	8.863-3	8.357-3	8.125-3	8.041-3
59	85	4.250+01	1.495-2	1.159-2	9.988-3	9.174-3	8.718-3	8.472-3	8.284-3	8.301-3	8.458-3
59	86	0.000-00	2.368-3	1.323-3	8.192-4	5.537-4	3.972-4	2.975-4	1.845-4	1.246-4	9.021-5
59	87	1.089+01	2.155-2	1.610-2	1.424-2	1.352-2	1.323-2	1.316-2	1.324-2	1.337-2	1.354-2
59	88	7.535-01	5.293-3	2.780-3	1.654-3	1.098-3	7.826-4	5.884-4	3.718-4	2.596-4	1.956-4
59	89	1.798-01	8.891-3	5.026-3	3.280-3	2.412-3	1.915-3	1.606-3	1.254-3	1.068-3	9.576-4
59	90	1.206-00	1.138-2	6.126-3	3.868-3	2.775-3	2.169-3	1.797-3	1.391-3	1.189-3	1.079-3
59	91	8.876+01	7.178-3	5.277-3	4.768-3	4.625-3	4.592-3	4.613-3	4.712-3	4.816-3	4.949-3
59	92	7.374+01	1.037-2	7.958-3	7.082-3	6.736-3	6.620-3	6.601-3	6.662-3	6.783-3	6.942-3
59	93	0.000-00	7.524-4	3.546-4	1.919-4	1.177-4	7.839-5	5.556-5	3.180-5	2.031-5	1.416-5
59	94	1.827+01	3.103-3	1.629-3	1.014-3	7.220-4	5.636-4	4.714-4	3.754-4	3.317-4	3.129-4
59	95	3.221-00	7.557-3	4.100-3	2.550-3	1.784-3	1.347-3	1.082-3	7.840-4	6.237-4	5.296-4
59	96	1.362+02	1.993-2	1.615-2	1.451-2	1.342-2	1.265-2	1.214-2	1.145-2	1.100-2	1.071-2
59	97	0.000-00	7.163-4	3.319-4	1.772-4	1.067-4	6.994-5	4.879-5	2.733-5	1.724-5	1.194-5
60	61	3.190-00	1.266-1	7.571-2	5.034-2	3.635-2	2.775-2	2.204-2	1.525-2	1.140-2	9.055-3
60	62	1.104-00	4.601-2	4.201-2	4.277-2	4.652-2	5.209-2	5.940-2	7.875-2	1.042-1	1.358-1
60	63	2.637-00	2.430-2	1.630-2	1.274-2	1.115-2	1.046-2	1.026-2	1.072-2	1.190-2	1.360-2
60	64	7.009-05	8.345-3	4.931-3	3.853-3	3.843-3	4.441-3	5.484-3	8.619-3	1.297-2	1.842-2
60	65	2.842-03	4.654-2	4.598-2	4.720-2	4.927-2	5.180-2	5.480-2	6.223-2	7.161-2	8.311-2
60	66	1.667-00	8.321-3	5.364-3	4.186-3	3.714-3	3.538-3	3.512-3	3.728-3	4.139-3	4.704-3
60	67	4.742-03	6.166-2	5.955-2	6.093-2	6.400-2	6.791-2	7.280-2	8.517-2	1.010-1	1.206-1
60	68	2.394-01	2.234-2	1.878-2	1.784-2	1.786-2	1.831-2	1.902-2	2.096-2	2.351-2	2.665-2
60	69	3.116-02	4.105-2	3.804-2	3.808-2	3.932-2	4.117-2	4.368-2	5.027-2	5.890-2	6.963-2
60	70	1.728-01	1.817-2	1.588-2	1.524-2	1.523-2	1.547-2	1.591-2	1.720-2	1.896-2	2.119-2
60	71	1.600+01	1.788-1	1.757-1	1.776-1	1.809-1	1.843-1	1.884-1	1.978-1	2.091-1	2.229-1
60	72	1.178+01	9.986-2	9.331-2	9.261-2	9.322-2	9.447-2	9.623-2	1.009-1	1.069-1	1.145-1
60	73	3.101-00	7.787-3	5.762-3	4.926-3	4.494-3	4.243-3	4.088-3	3.914-3	3.817-3	3.764-3
60	74	1.222-00	1.931-2	1.097-2	7.282-3	5.347-3	4.174-3	3.436-3	2.573-3	2.094-3	1.796-3
60	75	1.206+01	2.748-2	1.503-2	9.362-3	6.579-3	5.004-3	4.055-3	3.044-3	2.565-3	2.335-3
60	76	3.859-03	4.801-3	2.738-3	1.822-3	1.371-3	1.121-3	9.722-4	8.186-4	7.487-4	7.199-4
60	77	3.547-00	1.227-2	6.826-3	4.261-3	2.958-3	2.198-3	1.725-3	1.196-3	9.213-4	7.663-4
60	78	2.679-00	6.815-3	4.606-3	3.665-3	3.206-3	2.948-3	2.795-3	2.640-3	2.574-3	2.557-3
60	79	3.162-00	3.962-3	2.143-3	1.321-3	9.115-4	6.761-4	5.300-4	3.685-4	2.858-4	2.405-4
60	80	4.613-00	2.734-2	2.478-2	2.390-2	2.358-2	2.350-2	2.351-2	2.367-2	2.389-2	2.418-2
60	81	7.530+01	1.471-2	7.871-3	4.762-3	3.199-3	2.324-3	1.798-3	1.258-3	1.035-3	9.747-4
60	82	6.390-00	9.779-3	6.679-3	5.223-3	4.463-3	4.024-3	3.757-3	3.501-3	3.430-3	3.466-3
60	83	1.759+01	3.646-3	2.936-3	2.621-3	2.496-3	2.450-3	2.451-3	2.536-3	2.692-3	2.911-3
60	84	7.807-00	8.672-3	6.139-3	5.273-3	4.944-3	4.818-3	4.773-3	4.785-3	4.821-3	4.875-3
60	85	6.942-00	1.764-2	1.471-2	1.332-2	1.254-2	1.210-2	1.181-2	1.152-2	1.138-2	1.133-2
60	86	4.534+01	8.409-3	8.168-3	8.054-3	8.021-3	8.028-3	8.043-3	8.106-3	8.190-3	8.309-3
60	87	2.536+01	9.367-3	5.519-3	3.762-3	2.861-3	2.346-3	2.021-3	1.689-3	1.564-3	1.549-3
60	88	4.245-00	8.385-3	6.101-3	4.978-3	4.383-3	3.990-3	3.759-3	3.444-3	3.270-3	3.151-3
60	89	2.450-00	8.334-3	4.944-3	3.494-3	2.805-3	2.412-3	2.174-3	1.923-3	1.802-3	1.744-3
60	90	4.279-00	1.331-3	8.740-4	6.726-4	5.783-4	5.266-4	4.987-4	4.764-4	4.775-4	4.933-4
60	91	9.323+01	7.550-3	3.934-3	2.334-3	1.542-3	1.094-3	8.188-4	5.157-4	3.599-4	2.733-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a\pm b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
60	92	6.888+01	1.550-2	9.252-3	6.308-3	4.835-3	3.994-3	3.493-3	2.990-3	2.803-3	2.785-3
60	93	1.009+03	1.994-3	1.862-3	1.823-3	1.825-3	1.840-3	1.882-3	2.006-3	2.181-3	2.409-3
60	94	4.939+01	3.355-3	2.382-3	1.959-3	1.749-3	1.629-3	1.562-3	1.496-3	1.477-3	1.482-3
60	95	1.311+01	2.504-3	1.498-3	1.071-3	8.693-4	7.567-4	6.920-4	6.279-4	6.028-4	5.974-4
60	96	1.243+02	3.259-3	2.345-3	1.917-3	1.684-3	1.550-3	1.471-3	1.409-3	1.417-3	1.471-3
60	97	9.814-00	5.707-4	2.767-4	1.574-4	1.009-4	7.062-5	5.287-5	3.421-5	2.513-5	2.031-5
61	62	4.751-09	1.379-2	1.158-2	1.085-2	1.067-2	1.063-2	1.067-2	1.077-2	1.085-2	1.093-2
61	63	7.423-03	3.527-2	3.311-2	3.273-2	3.287-2	3.304-2	3.326-2	3.354-2	3.371-2	3.383-2
61	64	6.201-00	1.297-1	8.121-2	5.760-2	4.555-2	3.906-2	3.573-2	3.462-2	3.786-2	4.410-2
61	65	0.000-00	1.367-3	7.124-4	4.187-4	2.755-4	1.945-4	1.454-4	9.121-5	6.340-5	4.755-5
61	66	2.299-00	4.079-2	2.969-2	2.528-2	2.381-2	2.379-2	2.466-2	2.814-2	3.339-2	4.020-2
61	67	5.033-04	6.949-2	6.742-2	6.986-2	7.440-2	8.031-2	8.779-2	1.067-1	1.309-1	1.608-1
61	68	1.785-03	8.282-2	7.715-2	7.847-2	8.267-2	8.864-2	9.635-2	1.161-1	1.417-1	1.731-1
61	69	1.356-05	3.543-3	1.919-3	1.280-3	1.013-3	8.863-4	8.245-4	7.852-4	7.914-4	8.215-4
61	70	1.565-01	1.368-1	1.320-1	1.336-1	1.369-1	1.412-1	1.467-1	1.604-1	1.776-1	1.990-1
61	71	1.944-01	7.270-2	6.950-2	6.971-2	7.076-2	7.220-2	7.409-2	7.857-2	8.407-2	9.081-2
61	72	4.405-01	1.816-1	1.777-1	1.803-1	1.839-1	1.881-1	1.931-1	2.049-1	2.192-1	2.367-1
61	73	6.506-00	6.094-2	5.456-2	5.288-2	5.265-2	5.314-2	5.424-2	5.771-2	6.263-2	6.896-2
61	74	2.829+01	3.130-2	1.706-2	1.050-2	7.215-3	5.325-3	4.156-3	2.880-3	2.248-3	1.926-3
61	75	7.203-01	1.958-2	1.237-2	9.116-3	7.647-3	6.826-3	6.417-3	6.152-3	6.294-3	6.690-3
61	76	1.777+01	1.930-2	1.125-2	7.637-3	5.841-3	4.822-3	4.199-3	3.556-3	3.278-3	3.188-3
61	77	3.727+01	4.057-2	3.180-2	2.805-2	2.620-2	2.520-2	2.463-2	2.413-2	2.400-2	2.411-2
61	78	4.900-00	1.812-2	1.272-2	1.037-2	9.243-3	8.613-3	8.260-3	7.982-3	7.990-3	8.178-3
61	79	4.849-00	4.440-2	4.061-2	3.962-2	3.926-2	3.923-2	3.936-2	3.984-2	4.046-2	4.127-2
61	80	1.344-01	1.438-2	1.153-2	1.037-2	9.847-3	9.593-3	9.457-3	9.345-3	9.312-3	9.324-3
61	81	1.791+02	1.737-2	9.581-3	6.093-3	4.345-3	3.377-3	2.778-3	2.139-3	1.833-3	1.689-3
61	82	2.597-00	1.004-2	6.496-3	4.804-3	3.939-3	3.441-3	3.143-3	2.854-3	2.766-3	2.791-3
61	83	0.000-00	3.642-3	1.999-3	1.216-3	8.082-4	5.726-4	4.248-4	2.603-4	1.745-4	1.256-4
61	84	2.511+01	2.108-2	1.639-2	1.446-2	1.355-2	1.310-2	1.288-2	1.280-2	1.296-2	1.328-2
61	85	3.584+01	1.277-2	1.123-2	1.054-2	1.026-2	1.014-2	1.014-2	1.027-2	1.051-2	1.086-2
61	86	0.000-00	3.706-3	2.217-3	1.445-3	1.007-3	7.417-4	5.656-4	3.621-4	2.508-4	1.849-4
61	87	2.442-00	1.315-2	7.196-3	4.471-3	3.052-3	2.232-3	1.699-3	1.099-3	7.820-4	5.966-4
61	88	1.598-01	9.360-3	5.115-3	3.323-3	2.500-3	2.068-3	1.820-3	1.581-3	1.479-3	1.439-3
61	89	3.670-00	1.041-2	7.725-3	6.384-3	5.583-3	5.059-3	4.752-3	4.319-3	4.068-3	3.891-3
61	90	6.414-00	8.116-3	5.237-3	3.961-3	3.353-3	3.008-3	2.791-3	2.566-3	2.470-3	2.442-3
61	91	1.858+02	1.071-2	5.829-3	3.679-3	2.608-3	2.003-3	1.646-3	1.293-3	1.173-3	1.178-3
61	92	3.233+01	1.903-2	1.027-2	6.177-3	4.102-3	2.917-3	2.179-3	1.364-3	9.419-4	7.040-4
61	93	0.000-00	1.036-3	5.105-4	2.860-4	1.783-4	1.203-4	8.609-5	5.018-5	3.262-5	2.315-5
61	94	4.276+01	3.627-3	2.495-3	2.047-3	1.856-3	1.767-3	1.730-3	1.718-3	1.741-3	1.781-3
61	95	1.871+01	6.551-3	4.562-3	3.692-3	3.214-3	2.914-3	2.734-3	2.519-3	2.399-3	2.331-3
61	96	9.431-00	3.690-3	2.063-3	1.303-3	9.083-4	6.782-4	5.296-4	3.630-4	2.766-4	2.283-4
61	97	0.000-00	1.075-3	5.353-4	3.045-4	1.929-4	1.319-4	9.544-5	5.634-5	3.680-5	2.599-5
62	63	3.771-01	1.045-1	7.131-2	5.513-2	4.635-2	4.098-2	3.746-2	3.331-2	3.098-2	2.958-2
62	64	0.000-00	2.617-3	1.601-3	1.225-3	1.083-3	1.028-3	1.012-3	1.021-3	1.040-3	1.066-3
62	65	4.689-04	1.347-3	7.983-4	5.372-4	4.011-4	3.166-4	2.590-4	1.905-4	1.494-4	1.229-4
62	66	4.849-06	1.184-2	9.785-3	9.443-3	9.845-3	1.064-2	1.177-2	1.478-2	1.876-2	2.368-2
62	67	9.007-05	5.168-3	3.505-3	2.764-3	2.437-3	2.290-3	2.235-3	2.298-3	2.506-3	2.816-3
62	68	1.396-01	9.228-3	7.534-3	6.940-3	6.841-3	6.972-3	7.247-3	8.117-3	9.335-3	1.087-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
62	69	2.468-01	9.275-3	6.635-3	5.544-3	5.134-3	5.001-3	5.048-3	5.473-3	6.203-3	7.190-3
62	70	2.134-01	2.282-1	2.235-1	2.254-1	2.322-1	2.398-1	2.492-1	2.727-1	3.025-1	3.393-1
62	71	2.827-01	5.750-3	4.830-3	4.327-3	4.054-3	3.847-3	3.720-3	3.540-3	3.416-3	3.333-3
62	72	5.643-00	3.013-2	2.821-2	2.778-2	2.805-2	2.850-2	2.911-2	3.061-2	3.247-2	3.473-2
62	73	1.216-02	4.923-3	4.189-3	4.078-3	4.164-3	4.302-3	4.477-3	4.862-3	5.291-3	5.787-3
62	74	7.610-00	7.558-3	4.827-3	3.510-3	2.830-3	2.445-3	2.232-3	2.085-3	2.143-3	2.333-3
62	75	2.881-03	9.984-3	6.065-3	4.098-3	3.046-3	2.423-3	2.022-3	1.574-3	1.343-3	1.222-3
62	76	0.000-00	2.580-3	1.494-3	9.520-4	6.608-4	4.886-4	3.780-4	2.528-4	1.859-4	1.475-4
62	77	2.370+01	8.887-3	4.744-3	2.889-3	1.970-3	1.461-3	1.158-3	8.689-4	7.882-4	8.169-4
62	78	1.891-02	1.976-3	1.645-3	1.533-3	1.494-3	1.483-3	1.481-3	1.492-3	1.507-3	1.526-3
62	79	2.898+01	1.675-2	1.622-2	1.617-2	1.628-2	1.640-2	1.652-2	1.676-2	1.699-2	1.725-2
62	80	8.970-01	1.474-2	1.455-2	1.459-2	1.474-2	1.488-2	1.501-2	1.524-2	1.546-2	1.569-2
62	81	1.981+01	5.208-3	3.548-3	2.837-3	2.508-3	2.340-3	2.254-3	2.211-3	2.255-3	2.354-3
62	82	1.218-00	4.633-3	2.847-3	2.036-3	1.633-3	1.411-3	1.277-3	1.142-3	1.085-3	1.068-3
62	83	4.977-01	2.087-3	1.174-3	7.263-4	4.903-4	3.513-4	2.633-4	1.635-4	1.106-4	8.019-5
62	84	2.212-00	2.487-3	1.599-3	1.145-3	8.996-4	7.534-4	6.590-4	5.531-4	4.995-4	4.730-4
62	85	3.760+01	8.788-4	5.963-4	4.589-4	3.814-4	3.309-4	2.943-4	2.475-4	2.182-4	1.986-4
62	86	3.550+01	7.799-4	4.534-4	2.891-4	1.989-4	1.451-4	1.100-4	6.977-5	4.792-5	3.511-5
62	87	4.061-01	8.946-3	4.961-3	3.059-3	2.077-3	1.510-3	1.155-3	7.609-4	5.583-4	4.465-4
62	88	1.440+01	5.221-3	3.512-3	2.690-3	2.268-3	2.007-3	1.845-3	1.662-3	1.577-3	1.549-3
62	89	5.358-00	4.389-3	2.542-3	1.779-3	1.440-3	1.270-3	1.180-3	1.111-3	1.103-3	1.127-3
62	90	0.000-00	2.429-3	1.299-3	8.322-4	6.203-4	5.100-4	4.486-4	3.906-4	3.669-4	3.592-4
62	91	6.626+01	4.920-3	2.931-3	1.917-3	1.367-3	1.039-3	8.249-4	5.805-4	4.496-4	3.736-4
62	92	0.000-00	2.520-3	1.267-3	7.254-4	4.643-4	3.197-4	2.324-4	1.380-4	9.085-5	6.487-5
62	93	2.698-01	1.287-3	1.002-3	8.174-4	7.099-4	6.268-4	5.682-4	4.832-4	4.206-4	3.740-4
62	94	3.383+01	4.888-3	3.790-3	3.280-3	3.012-3	2.840-3	2.730-3	2.599-3	2.524-3	2.485-3
62	95	1.115+01	2.799-3	1.681-3	1.239-3	1.042-3	9.373-4	8.753-4	8.126-4	7.843-4	7.730-4
62	96	1.795+01	2.995-3	1.476-3	8.662-4	5.836-4	4.291-4	3.356-4	2.346-4	1.845-4	1.563-4
62	97	2.457-01	1.302-3	7.075-4	4.255-4	2.807-4	1.978-4	1.464-4	8.958-5	6.007-5	4.332-5
63	64	2.038-07	3.008-2	2.691-2	2.619-2	2.622-2	2.632-2	2.659-2	2.701-2	2.729-2	2.751-2
63	65	6.259-06	1.545-2	1.430-2	1.382-2	1.377-2	1.379-2	1.382-2	1.388-2	1.393-2	1.397-2
63	66	2.510-00	1.551-1	1.153-1	9.944-2	9.435-2	9.518-2	9.995-2	1.181-1	1.452-1	1.805-1
63	67	2.476-02	3.079-2	2.848-2	2.943-2	3.205-2	3.579-2	4.065-2	5.348-2	7.031-2	9.115-2
63	68	1.133-01	1.182-2	8.804-3	7.532-3	7.032-3	6.883-3	6.910-3	7.292-3	7.967-3	8.872-3
63	69	1.900-01	2.225-2	1.911-2	1.839-2	1.872-2	1.954-2	2.076-2	2.414-2	2.866-2	3.430-2
63	70	1.771-01	2.837-1	2.736-1	2.770-1	2.849-1	2.947-1	3.071-1	3.385-1	3.788-1	4.285-1
63	71	4.032-00	4.996-3	3.770-3	3.241-3	3.024-3	2.923-3	2.880-3	2.878-3	2.933-3	3.028-3
63	72	8.355-01	5.450-2	5.190-2	5.167-2	5.213-2	5.288-2	5.385-2	5.620-2	5.906-2	6.258-2
63	73	3.393-01	5.174-2	4.900-2	4.887-2	4.949-2	5.036-2	5.139-2	5.374-2	5.647-2	5.975-2
63	74	3.227-00	1.178-2	7.117-3	4.844-3	3.631-3	2.911-3	2.461-3	1.977-3	1.755-3	1.676-3
63	75	4.673-00	9.517-3	6.577-3	5.205-3	4.525-3	4.147-3	3.921-3	3.686-3	3.577-3	3.536-3
63	76	5.499-03	1.519-2	9.066-3	6.028-3	4.418-3	3.466-3	2.861-3	2.191-3	1.855-3	1.687-3
63	77	8.010-00	2.041-2	1.286-2	9.648-3	8.224-3	7.553-3	7.297-3	7.481-3	8.224-3	9.369-3
63	78	3.706+01	2.038-2	1.895-2	1.863-2	1.863-2	1.871-2	1.886-2	1.928-2	1.980-2	2.046-2
63	79	2.119-00	1.977-2	1.914-2	1.920-2	1.949-2	1.981-2	2.011-2	2.078-2	2.151-2	2.238-2
63	80	5.250+01	1.463-2	1.392-2	1.383-2	1.387-2	1.395-2	1.404-2	1.423-2	1.440-2	1.460-2
63	81	2.857+01	9.556-3	5.243-3	3.341-3	2.431-3	1.980-3	1.770-3	1.729-3	1.972-3	2.403-3
63	82	1.586-00	6.985-3	4.158-3	2.863-3	2.191-3	1.810-3	1.574-3	1.334-3	1.236-3	1.209-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
63	83	9.750-01	4.120-3	2.574-3	1.822-3	1.438-3	1.216-3	1.079-3	9.338-4	8.679-4	8.432-4
63	84	2.966+01	3.984-3	2.780-3	2.212-3	1.939-3	1.787-3	1.692-3	1.597-3	1.557-3	1.550-3
63	85	4.055-00	3.628-3	2.886-3	2.525-3	2.347-3	2.247-3	2.190-3	2.142-3	2.137-3	2.163-3
63	86	6.907-00	3.984-3	3.109-3	2.732-3	2.491-3	2.348-3	2.254-3	2.150-3	2.099-3	2.080-3
63	87	2.732+01	1.251-2	6.952-3	4.307-3	2.942-3	2.150-3	1.665-3	1.150-3	9.237-4	8.432-4
63	88	6.094-00	5.212-3	3.128-3	2.225-3	1.787-3	1.540-3	1.395-3	1.240-3	1.170-3	1.140-3
63	89	6.427-00	5.345-3	3.313-3	2.378-3	1.898-3	1.605-3	1.424-3	1.218-3	1.113-3	1.066-3
63	90	4.171-00	6.648-3	3.741-3	2.552-3	2.027-3	1.770-3	1.639-3	1.541-3	1.530-3	1.562-3
63	91	6.947-00	8.289-3	4.724-3	2.981-3	2.054-3	1.504-3	1.153-3	7.583-4	5.551-4	4.450-4
63	92	2.081-00	5.692-3	3.045-3	1.867-3	1.288-3	9.646-4	7.678-4	5.554-4	4.508-4	3.962-4
63	93	2.580+02	3.654-3	3.042-3	2.813-3	2.667-3	2.589-3	2.546-3	2.518-3	2.534-3	2.583-3
63	94	1.246-01	3.563-3	2.499-3	1.948-3	1.644-3	1.420-3	1.274-3	1.070-3	9.264-4	8.217-4
63	95	2.027+01	7.811-3	5.546-3	4.631-3	4.141-3	3.845-3	3.654-3	3.434-3	3.310-3	3.240-3
63	96	9.296-01	4.654-3	2.294-3	1.330-3	8.815-4	6.352-4	4.853-4	3.233-4	2.421-4	1.963-4
63	97	2.422+02	2.244-3	1.271-3	8.160-4	5.770-4	4.401-4	3.563-4	2.653-4	2.215-4	2.014-4
64	65	0.000-00	1.778-3	1.119-3	9.521-4	9.445-4	9.737-4	1.014-3	1.090-3	1.147-3	1.195-3
64	66	2.758-02	1.475-1	1.320-1	1.276-1	1.265-1	1.259-1	1.262-1	1.267-1	1.270-1	1.274-1
64	67	0.000-00	6.623-3	3.870-3	2.907-3	2.588-3	2.479-3	2.459-3	2.506-3	2.566-3	2.635-3
64	68	9.347-05	2.272-1	2.213-1	2.319-1	2.518-1	2.775-1	3.105-1	3.945-1	5.027-1	6.363-1
64	69	0.000-00	1.773-3	8.548-4	4.839-4	3.180-4	2.322-4	1.836-4	1.358-4	1.143-4	1.041-4
64	70	0.000-00	4.914-3	2.408-3	1.352-3	8.545-4	5.874-4	4.310-4	2.685-4	1.902-4	1.486-4
64	71	0.000-00	2.203-3	1.261-3	9.325-4	8.157-4	7.712-4	7.572-4	7.612-4	7.743-4	7.917-4
64	72	3.267-02	7.955-2	7.694-2	7.739-2	7.883-2	8.031-2	8.232-2	8.693-2	9.242-2	9.911-2
64	73	2.115-00	3.990-1	3.877-1	3.919-1	4.013-1	4.114-1	4.247-1	4.562-1	4.952-1	5.431-1
64	74	5.235-03	1.350-2	8.705-3	6.520-3	5.446-3	4.857-3	4.519-3	4.198-3	4.094-3	4.107-3
64	75	2.000+01	6.057-2	4.991-2	4.575-2	4.405-2	4.318-2	4.298-2	4.358-2	4.500-2	4.712-2
64	76	1.496-01	4.262-2	2.485-2	1.675-2	1.267-2	1.022-2	8.628-3	6.805-3	5.822-3	5.241-3
64	77	4.214-04	6.895-2	5.779-2	5.310-2	5.090-2	4.981-2	4.919-2	4.865-2	4.842-2	4.840-2
64	78	2.275+01	5.245-2	3.923-2	3.373-2	3.133-2	3.002-2	2.945-2	2.929-2	2.981-2	3.083-2
64	79	4.324-03	2.773-2	1.928-2	1.565-2	1.395-2	1.304-2	1.250-2	1.196-2	1.170-2	1.158-2
64	80	0.000-00	3.534-3	1.831-3	1.071-3	6.988-4	4.896-4	3.629-4	2.245-4	1.543-4	1.153-4
64	81	6.251-00	2.404-2	1.553-2	1.192-2	1.032-2	9.760-3	9.647-3	1.042-2	1.205-2	1.431-2
64	82	0.000-00	6.871-3	3.745-3	2.288-3	1.536-3	1.100-3	8.270-4	5.206-4	3.610-4	2.709-4
64	83	0.000-00	1.347-3	6.258-4	3.322-4	2.041-4	1.396-4	1.043-4	7.129-5	5.750-5	5.147-5
64	84	4.036-00	3.242-2	2.497-2	2.130-2	1.937-2	1.828-2	1.760-2	1.689-2	1.657-2	1.647-2
64	85	0.000-00	9.134-3	5.640-3	4.129-3	3.423-3	3.053-3	2.841-3	2.651-3	2.573-3	2.555-3
64	86	0.000-00	1.335-3	8.967-4	8.342-4	8.745-4	9.317-4	9.876-4	1.082-3	1.149-3	1.204-3
64	87	1.312+01	1.539-2	8.628-3	5.547-3	3.949-3	3.017-3	2.404-3	1.712-3	1.345-3	1.129-3
64	88	3.626-00	3.003-3	1.623-3	1.044-3	7.740-4	6.339-4	5.554-4	4.849-4	4.646-4	4.702-4
64	89	1.247-00	8.258-3	4.497-3	2.933-3	2.212-3	1.835-3	1.621-3	1.415-3	1.327-3	1.294-3
64	90	9.264-02	2.432-2	1.644-2	1.267-2	1.050-2	9.134-3	8.341-3	7.299-3	6.700-3	6.279-3
64	91	1.069+02	1.416-2	8.140-3	5.507-3	4.235-3	3.557-3	3.147-3	2.783-3	2.713-3	2.808-3
64	92	5.741+01	3.057-2	1.669-2	1.018-2	6.866-3	4.966-3	3.785-3	2.470-3	1.788-3	1.398-3
64	93	0.000-00	8.310-4	4.436-4	2.790-4	2.004-4	1.578-4	1.331-4	1.082-4	9.692-5	9.203-5
64	94	0.000-00	3.217-3	1.703-3	1.031-3	7.022-4	5.201-4	4.117-4	2.971-4	2.414-4	2.130-4
64	95	2.995+02	1.109-2	8.479-3	7.307-3	6.797-3	6.483-3	6.391-3	6.443-3	6.693-3	7.091-3
64	96	2.907+01	3.670-3	2.204-3	1.465-3	1.060-3	8.179-4	6.607-4	4.918-4	4.173-4	3.927-4
64	97	0.000-00	7.321-4	3.087-4	1.531-4	8.862-5	5.755-5	4.086-5	2.533-5	1.891-5	1.604-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a \pm b \equiv 10^{a \pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
65	66	0.000-00	1.494-3	8.014-4	4.802-4	3.171-4	2.243-4	1.660-4	1.019-4	6.854-5	4.963-5
65	67	1.058-01	4.082-2	2.446-2	1.615-2	1.159-2	8.772-3	6.899-3	4.655-3	3.381-3	2.598-3
65	68	2.823-06	4.072-2	3.774-2	3.832-2	4.079-2	4.462-2	4.962-2	6.290-2	8.035-2	1.020-1
65	69	5.456-02	1.015-3	5.391-4	3.255-4	2.186-4	1.571-4	1.188-4	7.498-5	5.205-5	3.830-5
65	70	2.402-00	1.796-3	1.125-3	8.003-4	6.308-4	5.219-4	4.492-4	3.570-4	2.982-4	2.576-4
65	71	5.957-02	3.038-4	2.288-4	1.837-4	1.589-4	1.397-4	1.258-4	1.062-4	9.236-5	8.212-5
65	72	1.536-02	3.145-2	2.963-2	2.930-2	2.969-2	3.036-2	3.127-2	3.374-2	3.702-2	4.114-2
65	73	0.000-00	3.864-4	1.975-4	1.155-4	7.545-5	5.337-5	3.994-5	2.532-5	1.782-5	1.353-5
65	74	7.739-02	2.702-2	2.640-2	2.660-2	2.707-2	2.760-2	2.821-2	2.966-2	3.142-2	3.358-2
65	75	0.000-00	7.238-4	4.297-4	2.789-4	1.960-4	1.453-4	1.120-4	7.345-5	5.257-5	4.007-5
65	76	0.000-00	1.037-3	6.515-4	5.561-4	5.537-4	5.745-4	6.017-4	6.545-4	6.945-4	7.292-4
65	77	1.158-02	2.418-3	1.595-3	1.241-3	1.086-3	1.017-3	9.878-4	9.926-4	1.040-3	1.114-3
65	78	0.000-00	1.627-3	9.361-4	5.901-4	4.057-4	2.954-4	2.234-4	1.411-4	9.670-5	7.063-5
65	79	5.257-01	9.636-3	8.404-3	7.889-3	7.643-3	7.473-3	7.380-3	7.350-3	7.441-3	7.645-3
65	80	5.737-01	2.303-3	1.491-3	1.067-3	8.286-4	6.732-4	5.678-4	4.354-4	3.538-4	2.993-4
65	81	4.472-01	2.683-3	1.496-3	1.001-3	7.927-4	6.979-4	6.648-4	7.034-4	8.242-4	1.005-3
65	82	1.839+01	2.647-3	1.414-3	8.594-4	5.761-4	4.124-4	3.093-4	1.924-4	1.309-4	9.507-5
65	83	0.000-00	7.908-4	3.840-4	2.098-4	1.287-4	8.493-5	5.918-5	3.250-5	1.988-5	1.316-5
65	84	1.365-01	1.478-3	1.266-3	1.189-3	1.164-3	1.153-3	1.149-3	1.149-3	1.153-3	1.160-3
65	85	7.677-00	1.535-3	1.193-3	9.715-4	8.390-4	7.392-4	6.701-4	5.690-4	4.947-4	4.390-4
65	86	0.000-00	3.551-4	2.086-4	1.519-4	1.221-4	1.064-4	9.833-5	8.948-5	8.607-5	8.442-5
65	87	0.000-00	7.166-4	3.471-4	1.924-4	1.185-4	7.896-5	5.585-5	3.176-5	2.013-5	1.389-5
65	88	8.484+01	3.350-3	2.856-3	2.565-3	2.447-3	2.405-3	2.425-3	2.607-3	2.940-3	3.405-3
65	89	0.000-00	2.294-3	1.234-3	7.351-4	4.834-4	3.393-4	2.504-4	1.524-4	1.021-4	7.376-5
65	90	0.000-00	7.199-4	3.687-4	2.198-4	1.483-4	1.094-4	8.637-5	6.266-5	5.162-5	4.623-5
65	91	5.530-00	2.424-3	1.526-3	1.088-3	8.585-4	7.264-4	6.410-4	5.490-4	5.049-4	4.864-4
65	92	0.000-00	1.884-3	9.717-4	5.632-4	3.641-4	2.516-4	1.836-4	1.092-4	7.153-5	5.079-5
65	93	0.000-00	2.794-3	2.292-3	1.888-3	1.687-3	1.519-3	1.406-3	1.231-3	1.118-3	1.031-3
65	94	4.308-00	4.114-4	2.018-4	1.231-4	8.576-5	6.324-5	4.819-5	3.039-5	2.077-5	1.482-5
65	95	1.282+02	1.617-3	1.266-3	1.102-3	1.039-3	1.010-3	1.011-3	1.078-3	1.210-3	1.398-3
65	96	4.397-00	1.612-3	9.548-4	6.275-4	4.562-4	3.572-4	2.948-4	2.267-4	1.937-4	1.782-4
65	97	0.000-00	3.777-4	1.737-4	9.128-5	5.452-5	3.572-5	2.501-5	1.417-5	9.113-6	6.407-6
66	67	4.252-08	6.953-2	6.542-2	6.445-2	6.451-2	6.464-2	6.495-2	6.536-2	6.560-2	6.581-2
66	68	2.354-02	1.875-2	1.352-2	1.157-2	1.061-2	1.001-2	9.669-3	9.270-3	9.025-3	8.885-3
66	69	1.168-05	8.080-3	6.340-3	6.123-3	6.678-3	7.671-3	9.058-3	1.280-2	1.777-2	2.394-2
66	70	5.682-02	3.138-1	3.014-1	3.058-1	3.152-1	3.274-1	3.435-1	3.838-1	4.354-1	4.994-1
66	71	2.409-02	4.862-2	4.607-2	4.615-2	4.684-2	4.787-2	4.926-2	5.269-2	5.699-2	6.232-2
66	72	7.000-02	7.052-3	4.262-3	3.187-3	2.768-3	2.605-3	2.571-3	2.693-3	2.947-3	3.298-3
66	73	7.177-01	1.459-1	1.414-1	1.421-1	1.442-1	1.467-1	1.497-1	1.561-1	1.635-1	1.724-1
66	74	9.343-01	2.088-3	1.637-3	1.455-3	1.387-3	1.361-3	1.353-3	1.356-3	1.367-3	1.382-3
66	75	2.140-00	2.747-2	1.814-2	1.370-2	1.143-2	1.009-2	9.284-3	8.409-3	7.983-3	7.791-3
66	76	1.036-01	3.608-2	2.188-2	1.493-2	1.132-2	9.293-3	8.120-3	7.186-3	7.234-3	7.877-3
66	77	2.021+01	4.061-2	2.710-2	2.145-2	1.874-2	1.728-2	1.642-2	1.561-2	1.533-2	1.533-2
66	78	4.304-00	5.296-2	5.037-2	5.015-2	5.076-2	5.165-2	5.281-2	5.570-2	5.938-2	6.396-2
66	79	2.332+01	7.546-3	5.871-3	5.301-3	5.087-3	5.004-3	4.972-3	4.991-3	5.045-3	5.129-3
66	80	8.991-02	3.473-3	1.877-3	1.278-3	1.035-3	9.278-4	8.815-4	8.642-4	8.826-4	9.195-4
66	81	1.118+01	4.159-2	3.340-2	3.004-2	2.860-2	2.798-2	2.763-2	2.744-2	2.748-2	2.767-2
66	82	4.406-00	9.989-3	6.904-3	5.470-3	4.750-3	4.365-3	4.178-3	4.113-3	4.276-3	4.596-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
66	83	0.000-00	5.775-3	3.245-3	2.010-3	1.357-3	9.733-4	7.298-4	4.537-4	3.073-4	2.230-4
66	84	2.278+01	6.376-3	4.360-3	3.437-3	2.957-3	2.687-3	2.545-3	2.445-3	2.478-3	2.605-3
66	85	3.529-01	6.626-3	4.572-3	3.626-3	3.105-3	2.802-3	2.605-3	2.380-3	2.258-3	2.187-3
66	86	0.000-00	1.263-3	7.156-4	4.509-4	3.087-4	2.251-4	1.713-4	1.104-4	7.759-5	5.832-5
66	87	1.168+01	1.340-2	7.376-3	4.586-3	3.177-3	2.366-3	1.862-3	1.310-3	1.027-3	8.729-4
66	88	1.891-00	1.013-3	5.200-4	3.261-4	2.374-4	1.886-4	1.589-4	1.271-4	1.115-4	1.032-4
66	89	3.069-00	7.158-3	4.245-3	2.963-3	2.330-3	1.973-3	1.769-3	1.545-3	1.442-3	1.392-3
66	90	4.772-00	1.129-2	6.291-3	4.137-3	3.139-3	2.598-3	2.293-3	1.995-3	1.868-3	1.828-3
66	91	1.529+02	1.139-2	6.489-3	4.205-3	3.018-3	2.330-3	1.901-3	1.427-3	1.190-3	1.069-3
66	92	5.857-00	8.705-3	4.647-3	2.810-3	1.888-3	1.368-3	1.047-3	6.947-4	5.153-4	4.161-4
66	93	0.000-00	4.848-4	2.294-4	1.256-4	7.780-5	5.234-5	3.744-5	2.173-5	1.406-5	9.858-6
66	94	5.420+01	7.371-3	5.870-3	5.281-3	4.943-3	4.752-3	4.637-3	4.512-3	4.457-3	4.449-3
66	95	1.594+01	1.162-2	8.507-3	7.109-3	6.258-3	5.701-3	5.333-3	4.852-3	4.534-3	4.317-3
66	96	4.145+01	6.660-3	3.569-3	2.292-3	1.668-3	1.311-3	1.089-3	8.354-4	6.954-4	6.091-4
66	97	0.000-00	2.782-3	1.504-3	9.036-4	5.953-4	4.195-4	3.104-4	1.901-4	1.276-4	9.207-5
67	68	5.586-01	1.365-1	1.065-1	9.288-2	8.603-2	8.182-2	7.913-2	7.598-2	7.417-2	7.311-2
67	69	5.867-02	9.636-3	7.784-3	7.284-3	7.523-3	8.140-3	9.077-3	1.174-2	1.535-2	1.988-2
67	70	3.476-01	4.143-3	2.622-3	1.913-3	1.574-3	1.355-3	1.213-3	1.036-3	9.265-4	8.538-4
67	71	2.034-00	1.631-2	1.483-2	1.427-2	1.421-2	1.429-2	1.453-2	1.533-2	1.650-2	1.804-2
67	72	2.040-01	8.211-3	7.372-3	7.030-3	6.863-3	6.774-3	6.732-3	6.719-3	6.758-3	6.844-3
67	73	6.989-02	9.496-2	9.038-2	9.023-2	9.158-2	9.349-2	9.613-2	1.028-1	1.115-1	1.223-1
67	74	5.775-02	1.896-2	1.763-2	1.737-2	1.753-2	1.782-2	1.824-2	1.932-2	2.070-2	2.241-2
67	75	8.642-02	2.317-2	2.185-2	2.190-2	2.226-2	2.274-2	2.337-2	2.490-2	2.675-2	2.902-2
67	76	0.000-00	2.110-3	1.329-3	1.101-3	1.057-3	1.068-3	1.098-3	1.168-3	1.226-3	1.278-3
67	77	1.903-00	1.306-2	9.623-3	8.262-3	7.765-3	7.597-3	7.632-3	8.067-3	8.824-3	9.847-3
67	78	1.888-01	1.112-2	8.222-3	6.783-3	6.004-3	5.526-3	5.213-3	4.896-3	4.793-3	4.836-3
67	79	1.681-00	1.321-2	1.028-2	8.898-3	8.166-3	7.700-3	7.403-3	7.076-3	6.915-3	6.866-3
67	80	4.650-00	2.386-2	2.145-2	2.034-2	1.981-2	1.946-2	1.927-2	1.919-2	1.929-2	1.959-2
67	81	2.013+01	7.922-3	4.338-3	2.799-3	2.101-3	1.759-3	1.599-3	1.556-3	1.707-3	1.985-3
67	82	1.282+01	1.023-2	6.582-3	4.968-3	4.159-3	3.700-3	3.428-3	3.159-3	3.066-3	3.072-3
67	83	3.549+01	2.125-3	1.053-3	5.911-4	3.726-4	2.535-4	1.829-4	1.082-4	7.178-5	5.158-5
67	84	2.829+01	5.349-3	4.057-3	3.435-3	3.108-3	2.892-3	2.755-3	2.576-3	2.455-3	2.371-3
67	85	1.065-00	3.436-3	2.184-3	1.610-3	1.317-3	1.133-3	1.024-3	8.920-4	8.169-4	7.713-4
67	86	5.810+01	1.121-3	8.585-4	6.994-4	6.017-4	5.280-4	4.764-4	4.018-4	3.474-4	3.071-4
67	87	7.973-01	2.303-3	1.150-3	6.691-4	4.346-4	3.111-4	2.400-4	1.702-4	1.426-4	1.349-4
67	88	3.874-00	5.155-3	3.228-3	2.334-3	1.875-3	1.600-3	1.424-3	1.228-3	1.129-3	1.080-3
67	89	2.605-00	6.415-3	4.204-3	3.196-3	2.680-3	2.368-3	2.162-3	1.925-3	1.800-3	1.731-3
67	90	0.000-00	4.926-3	2.589-3	1.535-3	1.014-3	7.217-4	5.448-4	3.543-4	2.595-4	2.081-4
67	91	2.196+01	5.678-3	3.186-3	1.982-3	1.350-3	9.814-4	7.403-4	4.690-4	3.229-4	2.381-4
67	92	0.000-00	5.845-3	3.019-3	1.752-3	1.135-3	7.864-4	5.756-4	3.448-4	2.280-4	1.636-4
67	93	1.137+01	4.174-4	2.060-4	1.267-4	8.923-5	6.640-5	5.111-5	3.271-5	2.273-5	1.643-5
67	94	7.216-01	9.287-3	7.318-3	6.071-3	5.388-3	4.832-3	4.469-3	3.916-3	3.563-3	3.295-3
67	95	2.688+01	3.399-3	2.159-3	1.636-3	1.378-3	1.227-3	1.133-3	1.032-3	9.869-4	9.690-4
67	96	7.097-00	4.715-3	2.670-3	1.675-3	1.155-3	8.498-4	6.561-4	4.375-4	3.220-4	2.553-4
67	97	9.798+01	1.102-3	5.046-4	2.594-4	1.533-4	9.899-5	6.813-5	3.724-5	2.307-5	1.564-5
68	69	1.128-03	3.602-3	1.969-3	1.277-3	9.408-4	7.457-4	6.193-4	4.770-4	3.989-4	3.531-4
68	70	1.099-00	1.071-2	6.668-3	4.725-3	3.769-3	3.148-3	2.741-3	2.228-3	1.905-3	1.687-3
68	71	6.367-01	5.371-3	4.500-3	4.215-3	4.160-3	4.203-3	4.318-3	4.709-3	5.274-3	6.004-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
68	72	5.584-01	4.234-2	3.971-2	3.940-2	3.961-2	4.012-2	4.083-2	4.281-2	4.544-2	4.877-2
68	73	6.427-01	8.276-2	7.705-2	7.594-2	7.573-2	7.606-2	7.675-2	7.891-2	8.191-2	8.584-2
68	74	1.228-01	4.975-3	3.573-3	3.167-3	3.085-3	3.110-3	3.175-3	3.341-3	3.507-3	3.684-3
68	75	2.997-01	3.875-2	3.659-2	3.641-2	3.662-2	3.698-2	3.738-2	3.823-2	3.912-2	4.014-2
68	76	1.421-01	6.670-2	6.415-2	6.432-2	6.538-2	6.646-2	6.792-2	7.124-2	7.514-2	7.991-2
68	77	7.586-01	1.358-2	7.172-3	4.474-3	3.236-3	2.619-3	2.314-3	2.168-3	2.333-3	2.683-3
68	78	2.826-00	5.301-2	4.480-2	4.162-2	3.980-2	3.868-2	3.803-2	3.757-2	3.771-2	3.837-2
68	79	1.390-00	4.033-2	3.554-2	3.409-2	3.329-2	3.287-2	3.270-2	3.293-2	3.358-2	3.463-2
68	80	3.559-00	1.138-2	9.685-3	9.031-3	8.655-3	8.438-3	8.309-3	8.210-3	8.206-3	8.285-3
68	81	5.709+01	1.346-2	7.248-3	4.591-3	3.328-3	2.653-3	2.268-3	1.914-3	1.807-3	1.831-3
68	82	1.250+01	1.588-2	8.934-3	5.706-3	4.015-3	3.031-3	2.405-3	1.696-3	1.321-3	1.107-3
68	83	6.610-02	3.317-3	1.971-3	1.410-3	1.150-3	1.011-3	9.292-4	8.476-4	8.106-4	7.941-4
68	84	6.801-00	1.202-2	8.212-3	6.456-3	5.499-3	4.871-3	4.508-3	4.105-3	3.942-3	3.934-3
68	85	9.545+01	4.891-3	3.388-3	2.736-3	2.401-3	2.197-3	2.068-3	1.916-3	1.828-3	1.779-3
68	86	2.309-01	1.440-3	8.311-4	5.780-4	4.621-4	4.019-4	3.673-4	3.335-4	3.182-4	3.119-4
68	87	1.349-01	3.882-3	1.953-3	1.124-3	7.301-4	5.176-4	3.928-4	2.618-4	1.983-4	1.645-4
68	88	1.431-00	4.535-3	2.494-3	1.577-3	1.118-3	8.588-4	7.000-4	5.293-4	4.461-4	4.042-4
68	89	1.567-00	7.977-3	4.576-3	3.056-3	2.292-3	1.847-3	1.567-3	1.259-3	1.104-3	1.020-3
68	90	3.696+01	1.672-2	1.075-2	7.931-3	6.597-3	5.829-3	5.381-3	5.001-3	5.003-3	5.241-3
68	91	4.073+01	8.698-3	5.199-3	3.474-3	2.572-3	2.039-3	1.689-3	1.290-3	1.072-3	9.437-4
68	92	2.187+01	1.046-2	5.538-3	3.344-3	2.265-3	1.667-3	1.317-3	9.615-4	8.249-4	7.993-4
68	93	5.288+02	1.629-3	1.352-3	1.241-3	1.177-3	1.149-3	1.152-3	1.219-3	1.350-3	1.539-3
68	94	2.323+01	3.007-3	1.878-3	1.424-3	1.183-3	1.043-3	9.533-4	8.499-4	7.963-4	7.660-4
68	95	1.733+01	1.636-2	1.277-2	1.071-2	9.432-3	8.523-3	7.935-3	7.049-3	6.502-3	6.100-3
68	96	2.399+01	8.500-3	4.876-3	3.120-3	2.199-3	1.663-3	1.324-3	9.453-4	7.512-4	6.457-4
68	97	1.249+03	2.010-3	1.030-3	6.308-4	4.670-4	3.853-4	3.449-4	3.236-4	3.426-4	3.868-4
69	70	6.607-00	1.878-2	1.238-2	9.590-3	8.449-3	7.990-3	7.941-3	8.572-3	9.840-3	1.161-2
69	71	6.455-00	3.940-2	3.058-2	2.705-2	2.589-2	2.572-2	2.626-2	2.867-2	3.240-2	3.730-2
69	72	2.104+01	5.292-2	3.860-2	3.248-2	2.984-2	2.872-2	2.844-2	2.930-2	3.133-2	3.427-2
69	73	3.310-03	1.370-2	8.361-3	6.058-3	5.039-3	4.633-3	4.580-3	5.090-3	6.144-3	7.624-3
69	74	4.253-01	4.410-2	3.460-2	3.070-2	2.917-2	2.857-2	2.863-2	2.983-2	3.204-2	3.509-2
69	75	1.314-02	2.188-2	1.247-2	8.299-3	6.293-3	5.223-3	4.677-3	4.364-3	4.612-3	5.212-3
69	76	0.000-00	1.217-2	6.493-3	3.915-3	2.615-3	1.874-3	1.420-3	9.192-4	6.641-4	5.238-4
69	77	1.149+01	5.266-2	4.832-2	4.680-2	4.649-2	4.648-2	4.675-2	4.784-2	4.948-2	5.169-2
69	78	4.424-02	1.357-2	7.211-3	4.426-3	3.084-3	2.349-3	1.918-3	1.490-3	1.326-3	1.292-3
69	79	1.391+01	1.271-2	7.269-3	4.783-3	3.526-3	2.819-3	2.382-3	1.904-3	1.658-3	1.523-3
69	80	4.103-00	1.023-2	6.796-3	5.177-3	4.404-3	3.976-3	3.729-3	3.518-3	3.489-3	3.565-3
69	81	8.522-00	2.697-2	2.748-2	2.805-2	2.873-2	2.930-2	2.985-2	3.091-2	3.197-2	3.317-2
69	82	4.591+01	1.133-1	1.178-1	1.207-1	1.243-1	1.270-1	1.297-1	1.353-1	1.415-1	1.488-1
69	83	1.171-00	6.316-4	3.593-4	2.319-4	1.642-4	1.232-4	9.487-5	6.205-5	4.346-5	3.221-5
69	84	2.671+01	1.815-2	9.859-3	6.052-3	4.116-3	3.002-3	2.306-3	1.530-3	1.125-3	8.938-4
69	85	1.373+01	1.319-2	9.202-3	7.340-3	6.396-3	5.860-3	5.543-3	5.249-3	5.176-3	5.229-3
69	86	2.703-00	2.571-3	1.440-3	8.927-4	6.019-4	4.319-4	3.239-4	2.020-4	1.375-4	1.002-4
69	87	4.558-01	7.694-3	4.549-3	3.587-3	3.316-3	3.274-3	3.314-3	3.468-3	3.613-3	3.753-3
69	88	2.172-00	4.169-3	2.702-3	2.035-3	1.715-3	1.525-3	1.411-3	1.283-3	1.218-3	1.187-3
69	89	9.086-01	3.522-3	2.096-3	1.474-3	1.174-3	1.005-3	9.032-4	7.952-4	7.441-4	7.218-4
69	90	0.000-00	2.938-3	1.532-3	9.018-4	5.915-4	4.168-4	3.094-4	1.914-4	1.307-4	9.647-5
69	91	2.956+01	1.292-2	9.176-3	7.658-3	6.988-3	6.646-3	6.443-3	6.252-3	6.189-3	6.183-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
69	92	0.000-00	1.059-3	6.710-4	5.775-4	5.638-4	5.741-4	5.899-4	6.238-4	6.509-4	6.753-4
69	93	3.961-00	2.779-4	1.346-4	8.136-5	5.747-5	4.379-5	3.505-5	2.490-5	1.913-5	1.544-5
69	94	2.137+01	1.841-3	1.465-3	1.340-3	1.299-3	1.279-3	1.272-3	1.276-3	1.292-3	1.318-3
69	95	7.326-00	1.183-3	7.129-4	5.431-4	4.695-4	4.269-4	4.001-4	3.700-4	3.553-4	3.497-4
69	96	3.631+01	7.709-3	6.392-3	5.537-3	5.059-3	4.688-3	4.437-3	4.079-3	3.838-3	3.678-3
69	97	5.921-01	2.081-4	1.026-4	6.185-5	4.254-5	3.156-5	2.406-5	1.552-5	1.081-5	7.884-6
70	71	8.616-01	5.090-2	4.857-2	4.957-2	5.278-2	5.718-2	6.280-2	7.734-2	9.628-2	1.197-1
70	72	3.864-01	3.294-2	3.022-2	2.974-2	3.053-2	3.189-2	3.370-2	3.851-2	4.482-2	5.263-2
70	73	7.974-04	8.540-2	8.626-2	8.940-2	9.382-2	9.880-2	1.046-1	1.186-1	1.358-1	1.568-1
70	74	2.547-02	7.404-3	5.957-3	5.361-3	5.143-3	5.069-3	5.094-3	5.312-3	5.681-3	6.186-3
70	75	8.225-05	1.070-2	9.642-3	9.242-3	9.143-3	9.139-3	9.167-3	9.259-3	9.362-3	9.483-3
70	76	0.000-00	1.059-3	5.805-4	3.870-4	3.029-4	2.606-4	2.383-4	2.188-4	2.118-4	2.104-4
70	77	1.434-00	7.887-3	4.515-3	2.902-3	2.062-3	1.573-3	1.267-3	9.321-4	7.702-4	6.955-4
70	78	4.781-04	1.645-2	1.031-2	7.179-3	5.478-3	4.463-3	3.805-3	3.063-3	2.670-3	2.446-3
70	79	8.184-01	2.234-2	1.898-2	1.748-2	1.677-2	1.641-2	1.625-2	1.626-2	1.649-2	1.690-2
70	80	1.097-01	1.635-2	1.500-2	1.445-2	1.422-2	1.412-2	1.409-2	1.416-2	1.429-2	1.448-2
70	81	1.297-00	5.600-3	5.062-3	4.878-3	4.817-3	4.802-3	4.813-3	4.879-3	4.973-3	5.102-3
70	82	8.939-00	7.909-3	6.208-3	5.538-3	5.318-3	5.242-3	5.258-3	5.425-3	5.699-3	6.070-3
70	83	8.798-02	1.061-3	5.117-4	3.245-4	2.377-4	1.824-4	1.434-4	9.532-5	6.865-5	5.141-5
70	84	1.828-00	1.986-3	1.364-3	1.077-3	9.350-4	8.416-4	7.831-4	7.094-4	6.624-4	6.334-4
70	85	5.456-00	2.405-3	1.644-3	1.279-3	1.088-3	9.568-4	8.758-4	7.702-4	7.023-4	6.571-4
70	86	8.673+01	8.913-4	6.042-4	4.609-4	3.813-4	3.272-4	2.897-4	2.387-4	2.036-4	1.783-4
70	87	5.576-02	2.993-3	1.423-3	7.898-4	5.074-4	3.653-4	2.867-4	2.128-4	1.823-4	1.694-4
70	88	6.320-01	2.288-3	1.223-3	8.062-4	6.248-4	5.278-4	4.733-4	4.191-4	3.957-4	3.877-4
70	89	3.500-02	2.879-3	1.446-3	9.070-4	6.783-4	5.651-4	5.022-4	4.423-4	4.163-4	4.045-4
70	90	0.000-00	3.032-3	1.299-3	6.468-4	3.698-4	2.317-4	1.552-4	8.077-5	4.768-5	3.118-5
70	91	6.938-00	1.129-2	6.788-3	4.384-3	3.049-3	2.238-3	1.708-3	1.102-3	7.815-4	6.012-4
70	92	0.000-00	3.872-3	2.028-3	1.193-3	7.843-4	5.517-4	4.102-4	2.539-4	1.743-4	1.301-4
70	93	1.082-00	1.198-3	8.428-4	6.449-4	5.419-4	4.695-4	4.203-4	3.522-4	3.045-4	2.696-4
70	94	3.342-00	3.573-3	2.541-3	2.042-3	1.781-3	1.598-3	1.483-3	1.330-3	1.228-3	1.158-3
70	95	1.074-00	5.744-3	3.759-3	2.792-3	2.298-3	1.960-3	1.746-3	1.465-3	1.279-3	1.150-3
70	96	7.718-01	6.852-3	3.742-3	2.291-3	1.559-3	1.139-3	8.814-4	5.933-4	4.422-4	3.557-4
70	97	4.233-00	6.962-4	2.911-4	1.658-4	1.139-4	8.412-5	6.444-5	4.075-5	2.796-5	1.977-5
71	72	5.182-03	3.064-1	2.617-1	2.446-1	2.371-1	2.325-1	2.301-1	2.275-1	2.259-1	2.252-1
71	73	2.168-05	6.054-2	4.213-2	3.690-2	3.761-2	4.174-2	4.853-2	6.830-2	9.539-2	1.294-1
71	74	1.331-01	2.902-2	2.119-2	1.801-2	1.705-2	1.705-2	1.787-2	2.102-2	2.581-2	3.209-2
71	75	1.020-03	9.781-3	8.359-3	8.343-3	8.886-3	9.754-3	1.094-2	1.403-2	1.807-2	2.307-2
71	76	0.000-00	1.992-2	1.050-2	6.305-3	4.244-3	3.090-3	2.394-3	1.641-3	1.266-3	1.066-3
71	77	1.923+01	1.582-2	1.094-2	8.616-3	7.361-3	6.556-3	6.022-3	5.366-3	4.967-3	4.714-3
71	78	7.117-02	3.105-2	1.920-2	1.406-2	1.171-2	1.056-2	1.006-2	1.000-2	1.063-2	1.172-2
71	79	2.473-00	1.855-2	1.181-2	8.867-3	7.521-3	6.832-3	6.520-3	6.474-3	6.871-3	7.572-3
71	80	3.471-01	3.356-3	1.953-3	1.377-3	1.090-3	9.152-4	8.061-4	6.790-4	6.089-4	5.698-4
71	81	8.979-00	1.840-2	1.366-2	1.171-2	1.085-2	1.041-2	1.017-2	9.957-3	9.876-3	9.876-3
71	82	9.950-00	2.514-2	2.420-2	2.401-2	2.438-2	2.477-2	2.528-2	2.658-2	2.820-2	3.021-2
71	83	2.012-00	7.825-4	5.128-4	3.481-4	2.475-4	1.846-4	1.421-4	9.240-5	6.506-5	4.873-5
71	84	1.810+01	5.957-3	2.978-3	1.703-3	1.090-3	7.556-4	5.551-4	3.429-4	2.386-4	1.822-4
71	85	1.295+02	4.631-3	2.871-3	2.202-3	1.925-3	1.784-3	1.709-3	1.641-3	1.615-3	1.617-3
71	86	1.392+02	1.872-3	9.750-4	5.872-4	3.956-4	2.854-4	2.158-4	1.376-4	9.573-5	7.129-5

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
71	87	7.026-00	8.881-3	4.722-3	3.049-3	2.293-3	1.931-3	1.769-3	1.738-3	1.908-3	2.211-3
71	88	8.659-00	1.495-2	1.381-2	1.329-2	1.308-2	1.288-2	1.276-2	1.264-2	1.258-2	1.262-2
71	89	1.894-00	6.097-3	5.724-3	5.621-3	5.605-3	5.612-3	5.627-3	5.674-3	5.721-3	5.784-3
71	90	0.000-00	1.022-3	5.186-4	3.011-4	1.960-4	1.372-4	1.014-4	6.204-5	4.187-5	3.053-5
71	91	1.160+02	8.779-3	4.572-3	2.887-3	2.094-3	1.668-3	1.417-3	1.172-3	1.087-3	1.084-3
71	92	0.000-00	1.809-3	1.042-3	6.796-4	4.955-4	3.907-4	3.243-4	2.523-4	2.155-4	1.956-4
71	93	7.310-00	2.179-4	1.449-4	1.091-4	8.901-5	7.539-5	6.605-5	5.345-5	4.502-5	3.902-5
71	94	9.422+01	1.043-2	1.090-2	1.122-2	1.154-2	1.176-2	1.196-2	1.229-2	1.260-2	1.292-2
71	95	1.242+01	3.944-3	3.742-3	3.697-3	3.727-3	3.767-3	3.803-3	3.875-3	3.945-3	4.021-3
71	96	1.821+01	3.195-3	2.099-3	1.538-3	1.236-3	1.044-3	9.190-4	7.678-4	6.814-4	6.311-4
71	97	1.370-00	9.589-4	5.720-4	3.699-4	2.564-4	1.873-4	1.419-4	8.915-5	6.082-5	4.416-5
72	73	4.704-00	3.380-1	2.842-1	2.746-1	2.844-1	3.061-1	3.381-1	4.268-1	5.460-1	6.951-1
72	74	7.116-01	5.363-2	4.198-2	3.884-2	3.893-2	4.081-2	4.413-2	5.399-2	6.759-2	8.480-2
72	75	5.164-00	3.747-2	2.417-2	1.759-2	1.416-2	1.193-2	1.050-2	8.702-3	7.582-3	6.840-3
72	76	6.509-03	4.600-2	3.312-2	2.910-2	2.896-2	3.058-2	3.377-2	4.321-2	5.622-2	7.260-2
72	77	5.582-00	1.236-2	7.121-3	4.809-3	3.688-3	3.086-3	2.770-3	2.636-3	2.870-3	3.356-3
72	78	3.750+01	4.351-2	2.780-2	2.120-2	1.833-2	1.692-2	1.630-2	1.616-2	1.679-2	1.794-2
72	79	1.717-00	2.094-2	1.244-2	8.829-3	7.129-3	6.221-3	5.742-3	5.396-3	5.449-3	5.746-3
72	80	2.399+01	9.820-3	5.846-3	4.112-3	3.292-3	2.865-3	2.659-3	2.592-3	2.790-3	3.163-3
72	81	2.229-00	3.258-2	2.060-2	1.561-2	1.336-2	1.228-2	1.186-2	1.208-2	1.312-2	1.477-2
72	82	8.356-00	5.531-3	3.547-3	2.739-3	2.363-3	2.163-3	2.041-3	1.915-3	1.851-3	1.817-3
72	83	2.068-00	1.043-2	1.041-2	1.050-2	1.066-2	1.083-2	1.100-2	1.140-2	1.184-2	1.238-2
72	84	7.016+01	7.101-3	3.842-3	2.594-3	2.067-3	1.799-3	1.656-3	1.537-3	1.502-3	1.520-3
72	85	9.430-00	5.694-3	3.775-3	3.025-3	2.730-3	2.604-3	2.582-3	2.700-3	2.948-3	3.305-3
72	86	1.383+01	4.114-3	2.880-3	2.390-3	2.156-3	2.047-3	2.008-3	2.053-3	2.206-3	2.442-3
72	87	5.285+01	1.470-2	7.970-3	5.176-3	3.876-3	3.174-3	2.820-3	2.618-3	2.776-3	3.162-3
72	88	8.869-00	1.271-2	1.165-2	1.136-2	1.121-2	1.110-2	1.103-2	1.099-2	1.102-2	1.111-2
72	89	1.097+01	2.330-2	2.161-2	2.076-2	2.045-2	2.020-2	2.004-2	1.990-2	1.988-2	1.999-2
72	90	3.770-00	8.646-3	8.118-3	7.969-3	7.970-3	7.998-3	8.051-3	8.172-3	8.298-3	8.455-3
72	91	1.058+02	1.238-2	6.613-3	4.319-3	3.284-3	2.732-3	2.454-3	2.314-3	2.480-3	2.847-3
72	92	1.137+01	5.091-3	3.755-3	3.104-3	2.788-3	2.606-3	2.506-3	2.425-3	2.427-3	2.485-3
72	93	2.617+02	9.566-3	9.788-3	1.002-2	1.019-2	1.034-2	1.047-2	1.073-2	1.099-2	1.128-2
72	94	1.194+01	3.283-3	3.187-3	3.179-3	3.199-3	3.221-3	3.244-3	3.290-3	3.332-3	3.380-3
72	95	9.292+01	1.551-2	1.597-2	1.637-2	1.677-2	1.710-2	1.738-2	1.788-2	1.836-2	1.886-2
72	96	6.114-00	4.887-3	3.448-3	2.757-3	2.401-3	2.188-3	2.057-3	1.912-3	1.844-3	1.815-3
72	97	3.471+02	1.705-3	1.169-3	8.945-4	7.258-4	6.252-4	5.620-4	4.960-4	4.728-4	4.744-4
73	74	1.095-00	2.017-2	1.245-2	9.133-3	7.858-3	7.638-3	8.154-3	1.065-2	1.466-2	1.995-2
73	75	2.838-00	8.970-2	6.938-2	6.096-2	5.743-2	5.615-2	5.644-2	5.987-2	6.600-2	7.447-2
73	76	8.178-00	1.091-1	8.273-2	7.086-2	6.561-2	6.262-2	6.119-2	6.046-2	6.122-2	6.316-2
73	77	1.642-00	3.541-2	2.449-2	1.994-2	1.781-2	1.665-2	1.597-2	1.527-2	1.493-2	1.477-2
73	78	7.054-00	7.540-2	5.381-2	4.577-2	4.280-2	4.207-2	4.302-2	4.775-2	5.529-2	6.530-2
73	79	3.264+01	3.863-2	2.516-2	1.963-2	1.733-2	1.637-2	1.617-2	1.695-2	1.871-2	2.122-2
73	80	4.345-02	2.160-2	1.459-2	1.164-2	1.028-2	9.608-3	9.285-3	9.119-3	9.256-3	9.586-3
73	81	3.985-00	5.054-2	2.844-2	1.860-2	1.374-2	1.100-2	9.321-3	7.494-3	6.574-3	6.082-3
73	82	4.009-01	5.581-3	3.104-3	2.025-3	1.535-3	1.313-3	1.234-3	1.323-3	1.612-3	2.047-3
73	83	0.000-00	1.969-3	1.193-3	7.763-4	5.345-4	3.887-4	2.932-4	1.833-4	1.245-4	9.022-5
73	84	8.681+01	2.039-2	1.721-2	1.639-2	1.625-2	1.641-2	1.685-2	1.820-2	2.009-2	2.254-2
73	85	5.372-00	1.196-2	7.495-3	5.757-3	4.976-3	4.608-3	4.464-3	4.501-3	4.796-3	5.274-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
73	86	0.000-00	2.572-3	1.247-3	6.973-4	4.366-4	2.961-4	2.121-4	1.241-4	8.088-5	5.728-5
73	87	1.116+02	2.238-2	1.174-2	7.134-3	4.939-3	3.715-3	3.009-3	2.330-3	2.114-3	2.143-3
73	88	2.101-00	4.506-3	3.601-3	3.247-3	3.029-3	2.891-3	2.799-3	2.700-3	2.659-3	2.659-3
73	89	8.271-00	2.319-2	2.026-2	1.903-2	1.833-2	1.785-2	1.749-2	1.710-2	1.689-2	1.685-2
73	90	2.931+01	5.943-2	5.784-2	5.740-2	5.769-2	5.799-2	5.838-2	5.928-2	6.032-2	6.169-2
73	91	3.468+02	2.242-2	1.383-2	1.043-2	8.893-3	8.111-3	7.824-3	7.976-3	8.742-3	9.957-3
73	92	7.033-01	4.233-3	2.430-3	1.554-3	1.084-3	8.108-4	6.327-4	4.291-4	3.185-4	2.524-4
73	93	0.000-00	2.862-4	1.546-4	9.811-5	7.028-5	5.422-5	4.416-5	3.237-5	2.564-5	2.136-5
73	94	8.347+01	1.742-2	1.655-2	1.636-2	1.622-2	1.616-2	1.618-2	1.629-2	1.644-2	1.669-2
73	95	4.382+01	2.844-2	2.854-2	2.908-2	2.956-2	2.998-2	3.033-2	3.093-2	3.140-2	3.188-2
73	96	2.827+01	5.078-3	3.107-3	2.175-3	1.689-3	1.408-3	1.237-3	1.059-3	9.860-4	9.690-4
73	97	0.000-00	1.880-3	1.141-3	7.474-4	5.186-4	3.784-4	2.863-4	1.794-4	1.221-4	8.841-5
74	75	1.881-00	1.441-1	8.283-2	5.335-2	3.778-2	2.844-2	2.245-2	1.548-2	1.167-2	9.407-3
74	76	9.738-06	6.559-3	5.100-3	5.138-3	5.974-3	7.325-3	9.187-3	1.421-2	2.089-2	2.919-2
74	77	1.344-00	1.915-2	1.320-2	1.062-2	9.263-3	8.494-3	8.039-3	7.549-3	7.321-3	7.231-3
74	78	4.686-00	6.179-2	5.031-2	4.638-2	4.513-2	4.504-2	4.576-2	4.865-2	5.300-2	5.868-2
74	79	5.771+01	1.929-1	1.800-1	1.792-1	1.809-1	1.839-1	1.877-1	1.975-1	2.100-1	2.256-1
74	80	6.686+01	1.503-1	1.432-1	1.433-1	1.450-1	1.473-1	1.502-1	1.575-1	1.666-1	1.778-1
74	81	2.269-00	3.189-3	1.926-3	1.366-3	1.088-3	9.300-4	8.375-4	7.383-4	6.891-4	6.654-4
74	82	2.825-00	3.407-2	2.747-2	2.487-2	2.370-2	2.319-2	2.303-2	2.337-2	2.421-2	2.547-2
74	83	1.473-00	2.615-2	2.580-2	2.608-2	2.645-2	2.685-2	2.728-2	2.822-2	2.931-2	3.064-2
74	84	1.430-00	3.257-2	2.050-2	1.556-2	1.330-2	1.215-2	1.156-2	1.120-2	1.130-2	1.168-2
74	85	7.976-00	2.760-2	2.308-2	2.144-2	2.054-2	2.009-2	1.991-2	2.004-2	2.058-2	2.147-2
74	86	1.519+01	1.731-2	1.577-2	1.534-2	1.503-2	1.490-2	1.488-2	1.506-2	1.543-2	1.599-2
74	87	4.926+01	3.682-2	1.974-2	1.185-2	7.849-3	5.562-3	4.136-3	2.560-3	1.742-3	1.281-3
74	88	1.031-00	3.425-2	2.486-2	2.000-2	1.678-2	1.454-2	1.311-2	1.110-2	9.747-3	8.763-3
74	89	4.886-00	1.116-2	6.851-3	4.978-3	4.080-3	3.602-3	3.311-3	3.016-3	2.893-3	2.859-3
74	90	6.383-01	2.503-3	1.459-3	1.041-3	8.564-4	7.663-4	7.218-4	6.947-4	7.043-4	7.356-4
74	91	5.591+01	1.835-2	8.942-3	5.045-3	3.234-3	2.263-3	1.692-3	1.097-3	8.092-4	6.570-4
74	92	5.973-00	1.032-2	7.328-3	6.111-3	5.587-3	5.338-3	5.217-3	5.139-3	5.154-3	5.226-3
74	93	8.883+01	2.624-3	1.958-3	1.601-3	1.401-3	1.276-3	1.190-3	1.111-3	1.112-3	1.169-3
74	94	1.574-00	5.024-3	2.932-3	1.982-3	1.491-3	1.195-3	1.001-3	7.705-4	6.415-4	5.632-4
74	95	1.714-00	2.955-3	1.637-3	1.037-3	7.307-4	5.550-4	4.474-4	3.289-4	2.693-4	2.382-4
74	96	9.006-00	6.088-3	4.670-3	4.079-3	3.784-3	3.615-3	3.516-3	3.416-3	3.378-3	3.377-3
74	97	4.844+02	5.935-4	4.742-4	4.271-4	3.975-4	3.830-4	3.786-4	3.881-4	4.163-4	4.610-4
75	76	1.051-00	2.134-1	1.416-1	1.065-1	8.804-2	7.665-2	6.924-2	6.036-2	5.527-2	5.210-2
75	77	8.406-01	3.465-2	1.954-2	1.270-2	9.309-3	7.479-3	6.518-3	5.929-3	6.328-3	7.345-3
75	78	2.095+01	2.604-1	2.390-1	2.347-1	2.356-1	2.387-1	2.432-1	2.559-1	2.725-1	2.936-1
75	79	2.028-00	2.013-1	1.866-1	1.868-1	1.905-1	1.960-1	2.035-1	2.228-1	2.478-1	2.789-1
75	80	3.436-02	1.044-1	9.508-2	9.323-2	9.317-2	9.379-2	9.465-2	9.661-2	9.857-2	1.009-1
75	81	1.855+01	3.274-2	2.279-2	1.866-2	1.666-2	1.562-2	1.511-2	1.490-2	1.528-2	1.606-2
75	82	7.985-03	1.748-2	9.195-3	5.482-3	3.619-3	2.566-3	1.922-3	1.225-3	8.847-4	7.144-4
75	83	0.000-00	1.203-3	6.221-4	3.591-4	2.274-4	1.546-4	1.109-4	6.461-5	4.186-5	2.950-5
75	84	3.348-00	5.917-2	3.967-2	3.168-2	2.787-2	2.578-2	2.454-2	2.331-2	2.277-2	2.260-2
75	85	6.069-00	6.706-2	5.959-2	5.746-2	5.636-2	5.592-2	5.587-2	5.630-2	5.707-2	5.828-2
75	86	0.000-00	4.070-3	2.190-3	1.328-3	8.903-4	6.385-4	4.825-4	3.070-4	2.149-4	1.624-4
75	87	2.425-00	5.799-2	3.086-2	1.853-2	1.237-2	8.873-3	6.714-3	4.368-3	3.196-3	2.576-3
75	88	3.464-00	1.188-2	7.382-3	5.430-3	4.395-3	3.777-3	3.379-3	2.906-3	2.628-3	2.455-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
75	89	1.179-00	3.499-2	2.670-2	2.210-2	1.899-2	1.667-2	1.523-2	1.317-2	1.173-2	1.066-2
75	90	2.104-00	1.511-2	9.769-3	7.313-3	6.105-3	5.352-3	4.809-3	4.145-3	3.747-3	3.491-3
75	91	3.960+01	3.196-2	1.597-2	9.277-3	6.145-3	4.465-3	3.464-3	2.427-3	1.945-3	1.715-3
75	92	1.289-00	6.739-3	3.322-3	1.868-3	1.177-3	8.043-4	5.795-4	3.410-4	2.232-4	1.588-4
75	93	0.000-00	2.129-3	1.191-3	7.482-4	5.179-4	3.816-4	2.945-4	1.939-4	1.393-4	1.067-4
75	94	9.610-00	5.539-3	4.788-3	4.318-3	4.152-3	4.047-3	3.971-3	3.884-3	3.851-3	3.857-3
75	95	4.635-00	9.047-3	6.045-3	4.784-3	4.166-3	3.804-3	3.571-3	3.307-3	3.160-3	3.072-3
75	96	5.257-02	4.885-3	2.557-3	1.525-3	1.011-3	7.215-4	5.422-4	3.440-4	2.417-4	1.841-4
75	97	0.000-00	4.361-4	2.258-4	1.299-4	8.362-5	5.786-5	4.210-5	2.513-5	1.656-5	1.176-5
76	77	1.574-09	9.989-3	7.051-3	5.776-3	5.157-3	4.838-3	4.638-3	4.441-3	4.349-3	4.309-3
76	78	2.084+01	7.384-1	6.876-1	6.880-1	7.086-1	7.352-1	7.714-1	8.648-1	9.856-1	1.136-0
76	79	3.223-02	1.535-1	1.390-1	1.355-1	1.360-1	1.373-1	1.397-1	1.461-1	1.539-1	1.637-1
76	80	0.000-00	1.047-2	5.787-3	3.814-3	2.912-3	2.443-3	2.183-3	1.942-3	1.845-3	1.816-3
76	81	5.563-03	1.778-2	1.081-2	7.767-3	6.354-3	5.668-3	5.320-3	5.211-3	5.507-3	6.063-3
76	82	0.000-00	2.719-2	1.453-2	8.747-3	5.835-3	4.177-3	3.151-3	2.017-3	1.434-3	1.107-3
76	83	0.000-00	1.413-3	6.997-4	4.099-4	2.797-4	2.145-4	1.794-4	1.477-4	1.355-4	1.314-4
76	84	4.829-00	1.560-1	1.334-1	1.249-1	1.218-1	1.196-1	1.190-1	1.194-1	1.210-1	1.238-1
76	85	0.000-00	3.265-2	1.814-2	1.205-2	9.261-3	7.810-3	7.007-3	6.261-3	5.959-3	5.872-3
76	86	0.000-00	9.956-3	5.687-3	4.003-3	3.292-3	2.960-3	2.801-3	2.700-3	2.690-3	2.727-3
76	87	3.746+01	8.829-2	4.747-2	2.893-2	1.970-2	1.447-2	1.127-2	7.865-3	6.275-3	5.562-3
76	88	1.030-00	3.084-3	1.711-3	1.160-3	9.141-4	7.942-4	7.320-4	6.935-4	7.061-4	7.497-4
76	89	7.587-00	1.608-2	1.012-2	7.434-3	6.068-3	5.216-3	4.662-3	4.006-3	3.627-3	3.400-3
76	90	3.077-02	6.260-2	4.561-2	3.631-2	3.108-2	2.684-2	2.410-2	2.037-2	1.788-2	1.605-2
76	91	2.680-00	5.030-2	2.518-2	1.457-2	9.551-3	6.813-3	5.189-3	3.479-3	2.657-3	2.235-3
76	92	3.788-00	7.406-3	3.588-3	1.996-3	1.255-3	8.553-4	6.180-4	3.687-4	2.473-4	1.818-4
76	93	0.000-00	1.520-4	7.124-5	3.885-5	2.522-5	1.842-5	1.471-5	1.139-5	1.010-5	9.631-6
76	94	0.000-00	3.239-3	1.761-3	1.094-3	7.592-4	5.640-4	4.409-4	2.996-4	2.224-4	1.758-4
76	95	2.081-00	1.410-2	8.690-3	6.119-3	4.907-3	4.103-3	3.556-3	2.861-3	2.446-3	2.180-3
76	96	1.217+01	7.693-3	4.154-3	2.565-3	1.768-3	1.326-3	1.057-3	7.845-4	6.793-4	6.605-4
76	97	0.000-00	2.950-4	1.338-4	6.425-5	3.635-5	2.224-5	1.451-5	7.330-6	4.236-6	2.764-6
77	78	3.855-01	1.260-2	8.809-3	7.243-3	6.513-3	6.134-3	5.929-3	5.773-3	5.771-3	5.862-3
77	79	8.229-01	1.711-2	8.970-3	5.496-3	3.880-3	3.078-3	2.696-3	2.569-3	2.900-3	3.521-3
77	80	3.651-02	3.587-2	2.736-2	2.409-2	2.270-2	2.211-2	2.195-2	2.234-2	2.325-2	2.458-2
77	81	3.540-01	3.560-1	3.426-1	3.478-1	3.561-1	3.662-1	3.780-1	4.066-1	4.421-1	4.858-1
77	82	2.727-01	3.674-2	3.430-2	3.375-2	3.381-2	3.413-2	3.460-2	3.588-2	3.753-2	3.958-2
77	83	4.878-00	2.200-1	2.211-1	2.256-1	2.306-1	2.357-1	2.407-1	2.517-1	2.641-1	2.791-1
77	84	5.138-00	1.402-2	8.794-3	6.436-3	5.291-3	4.682-3	4.370-3	4.214-3	4.391-3	4.788-3
77	85	9.118-01	1.346-2	1.067-2	9.384-3	8.662-3	8.259-3	7.996-3	7.730-3	7.611-3	7.581-3
77	86	2.272-00	2.362-2	2.324-2	2.342-2	2.359-2	2.378-2	2.394-2	2.427-2	2.454-2	2.488-2
77	87	5.865-01	1.947-2	1.426-2	1.193-2	1.056-2	9.660-3	9.050-3	8.305-3	7.843-3	7.567-3
77	88	1.387-01	8.701-3	4.859-3	3.123-3	2.250-3	1.741-3	1.437-3	1.088-3	8.982-4	7.839-4
77	89	2.064-01	1.462-2	8.159-3	5.294-3	3.858-3	3.045-3	2.541-3	1.982-3	1.691-3	1.527-3
77	90	6.827-00	2.192-2	1.199-2	7.587-3	5.430-3	4.293-3	3.678-3	3.252-3	3.379-3	3.829-3
77	91	1.295+01	1.839-2	1.605-2	1.508-2	1.477-2	1.460-2	1.455-2	1.453-2	1.453-2	1.461-2
77	92	1.794+01	2.409-2	1.994-2	1.874-2	1.861-2	1.873-2	1.896-2	1.951-2	2.006-2	2.068-2
77	93	7.780-03	2.459-3	1.549-3	1.155-3	9.830-4	8.956-4	8.454-4	7.985-4	7.798-4	7.734-4
77	94	1.147-00	5.834-3	2.978-3	1.718-3	1.117-3	7.861-4	5.876-4	3.744-4	2.676-4	2.076-4
77	95	5.516-00	8.107-3	4.194-3	2.527-3	1.752-3	1.335-3	1.093-3	8.416-4	7.222-4	6.598-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
77	96	7.667-01	1.882-2	1.629-2	1.463-2	1.357-2	1.279-2	1.233-2	1.160-2	1.112-2	1.076-2
77	97	1.528+03	2.868-3	2.302-3	2.108-3	1.967-3	1.891-3	1.856-3	1.871-3	1.972-3	2.147-3
78	79	8.421-01	3.174-1	2.595-1	2.374-1	2.260-1	2.192-1	2.151-1	2.103-1	2.075-1	2.060-1
78	80	2.258-06	4.674-2	4.149-2	4.018-2	4.018-2	4.088-2	4.203-2	4.536-2	4.979-2	5.538-2
78	81	3.707-01	4.274-2	3.527-2	3.315-2	3.290-2	3.357-2	3.484-2	3.875-2	4.410-2	5.088-2
78	82	2.218-04	1.513-2	7.812-3	4.635-3	3.091-3	2.243-3	1.741-3	1.239-3	1.042-3	9.976-4
78	83	0.000-00	3.331-4	1.637-4	9.041-5	5.607-5	3.683-5	2.568-5	1.424-5	8.858-6	6.052-6
78	84	2.525-01	4.682-2	3.536-2	2.966-2	2.671-2	2.470-2	2.368-2	2.254-2	2.209-2	2.221-2
78	85	3.719-02	1.467-2	7.037-3	3.996-3	2.649-3	1.952-3	1.562-3	1.194-3	1.068-3	1.054-3
78	86	0.000-00	4.686-3	2.146-3	1.130-3	6.713-4	4.332-4	2.971-4	1.603-4	9.705-5	6.445-5
78	87	6.098+01	4.570-2	2.365-2	1.426-2	9.832-3	7.505-3	6.210-3	5.162-3	5.111-3	5.614-3
78	88	1.383-00	2.195-3	1.713-3	1.528-3	1.450-3	1.417-3	1.409-3	1.428-3	1.473-3	1.540-3
78	89	1.879+01	1.732-2	1.579-2	1.544-2	1.537-2	1.543-2	1.555-2	1.587-2	1.624-2	1.670-2
78	90	2.528+01	9.067-2	7.987-2	7.525-2	7.295-2	7.131-2	7.054-2	7.016-2	7.068-2	7.210-2
78	91	4.244-00	4.311-2	2.313-2	1.425-2	9.861-3	7.410-3	5.919-3	4.340-3	3.602-3	3.269-3
78	92	1.417-03	2.067-3	1.030-3	5.962-4	3.939-4	2.835-4	2.165-4	1.432-4	1.053-4	8.356-5
78	93	0.000-00	4.227-4	2.299-4	1.466-4	1.047-4	8.024-5	6.411-5	4.531-5	3.470-5	2.799-5
78	94	9.280-00	1.545-2	1.257-2	1.120-2	1.030-2	9.715-3	9.295-3	8.777-3	8.480-3	8.353-3
78	95	6.536-00	3.257-2	2.431-2	2.055-2	1.802-2	1.628-2	1.498-2	1.326-2	1.213-2	1.137-2
78	96	8.971-01	1.616-3	9.152-4	5.930-4	4.261-4	3.305-4	2.720-4	2.072-4	1.738-4	1.552-4
78	97	0.000-00	1.695-4	8.363-5	4.677-5	2.899-5	1.943-5	1.379-5	7.890-6	5.023-6	3.455-6
79	80	7.042-01	2.860-1	2.419-1	2.240-1	2.150-1	2.096-1	2.063-1	2.026-1	2.003-1	1.992-1
79	81	1.328-02	3.360-2	2.340-2	1.922-2	1.719-2	1.607-2	1.539-2	1.465-2	1.426-2	1.405-2
79	82	2.221-00	1.062-2	6.259-3	4.228-3	3.228-3	2.636-3	2.273-3	1.851-3	1.615-3	1.476-3
79	83	4.186-04	5.614-3	5.235-3	5.171-3	5.153-3	5.177-3	5.217-3	5.343-3	5.507-3	5.719-3
79	84	2.582-00	2.022-2	1.251-2	9.316-3	7.829-3	6.992-3	6.562-3	6.178-3	6.096-3	6.208-3
79	85	3.022-00	2.158-2	1.518-2	1.190-2	1.018-2	8.973-3	8.211-3	7.167-3	6.449-3	5.938-3
79	86	3.626-01	2.912-3	1.635-3	1.145-3	9.870-4	9.340-4	9.532-4	1.104-3	1.360-3	1.705-3
79	87	2.609+01	2.961-2	1.573-2	9.645-3	6.789-3	5.292-3	4.472-3	3.882-3	4.009-3	4.561-3
79	88	2.531+01	2.485-2	2.232-2	2.171-2	2.151-2	2.153-2	2.163-2	2.197-2	2.241-2	2.296-2
79	89	3.208-00	5.431-2	4.831-2	4.613-2	4.482-2	4.390-2	4.345-2	4.314-2	4.327-2	4.386-2
79	90	7.484-01	1.824-2	1.641-2	1.582-2	1.570-2	1.565-2	1.568-2	1.585-2	1.609-2	1.645-2
79	91	1.928-00	2.751-2	1.464-2	8.852-3	6.008-3	4.408-3	3.430-3	2.387-3	1.890-3	1.654-3
79	92	9.528-01	5.033-3	4.522-3	4.415-3	4.437-3	4.489-3	4.553-3	4.681-3	4.796-3	4.925-3
79	93	5.812-00	1.224-2	1.022-2	9.420-3	8.815-3	8.397-3	8.087-3	7.689-3	7.422-3	7.259-3
79	94	2.397-02	5.793-3	4.066-3	3.263-3	2.778-3	2.448-3	2.217-3	1.910-3	1.705-3	1.560-3
79	95	5.892-00	2.397-2	1.866-2	1.649-2	1.503-2	1.400-2	1.323-2	1.228-2	1.168-2	1.132-2
79	96	4.559-00	6.266-3	5.559-3	5.267-3	5.100-3	5.003-3	4.950-3	4.909-3	4.922-3	4.977-3
79	97	4.754+01	3.141-4	2.453-4	2.129-4	2.010-4	1.957-4	1.936-4	1.979-4	2.077-4	2.235-4
80	81	1.738-03	2.280-2	1.299-2	8.526-3	6.287-3	5.010-3	4.225-3	3.350-3	2.900-3	2.643-3
80	82	5.563-01	7.872-3	5.434-3	4.410-3	3.956-3	3.742-3	3.662-3	3.718-3	3.942-3	4.293-3
80	83	1.073-03	5.832-4	4.548-4	3.734-4	3.241-4	2.863-4	2.600-4	2.214-4	1.931-4	1.717-4
80	84	2.895-01	9.992-3	4.912-3	2.871-3	1.963-3	1.499-3	1.253-3	1.048-3	1.014-3	1.070-3
80	85	7.396-02	8.971-3	6.477-3	5.333-3	4.819-3	4.480-3	4.328-3	4.231-3	4.310-3	4.535-3
80	86	5.453-01	6.932-3	5.190-3	4.163-3	3.580-3	3.138-3	2.831-3	2.390-3	2.071-3	1.835-3
80	87	1.734-01	1.816-2	1.025-2	6.898-3	5.331-3	4.513-3	4.044-3	3.652-3	3.585-3	3.693-3
80	88	1.507+01	4.599-2	4.236-2	4.094-2	4.031-2	3.989-2	3.970-2	3.966-2	3.984-2	4.030-2
80	89	3.751-01	1.852-2	1.718-2	1.687-2	1.679-2	1.679-2	1.681-2	1.693-2	1.707-2	1.727-2

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
80	90	0.000-00	2.724-4	1.390-4	9.260-5	7.366-5	6.378-5	5.816-5	5.226-5	4.904-5	4.724-5
80	91	2.364-00	1.628-2	8.495-3	4.979-3	3.241-3	2.265-3	1.671-3	1.031-3	7.172-4	5.550-4
80	92	0.000-00	2.813-4	1.324-4	7.515-5	4.905-5	3.568-5	2.799-5	2.057-5	1.737-5	1.593-5
80	93	2.851-00	1.328-3	9.028-4	6.816-4	5.600-4	4.748-4	4.166-4	3.386-4	2.865-4	2.496-4
80	94	6.251-00	1.893-2	1.546-2	1.372-2	1.262-2	1.184-2	1.126-2	1.052-2	1.004-2	9.732-3
80	95	1.493-00	6.855-3	5.264-3	4.534-3	4.101-3	3.796-3	3.570-3	3.286-3	3.103-3	2.984-3
80	96	1.040-01	2.851-4	1.683-4	1.089-4	7.839-5	6.083-5	5.008-5	3.877-5	3.358-5	3.127-5
80	97	5.524-02	1.067-4	6.962-5	4.903-5	3.748-5	3.018-5	2.542-5	1.942-5	1.579-5	1.338-5
81	82	2.211-01	6.328-2	5.346-2	4.927-2	4.695-2	4.550-2	4.475-2	4.458-2	4.552-2	4.746-2
81	83	4.064-03	4.857-2	4.659-2	4.707-2	4.792-2	4.907-2	5.046-2	5.400-2	5.844-2	6.397-2
81	84	3.913+01	2.069-2	1.181-2	7.747-3	5.720-3	4.626-3	4.030-3	3.675-3	3.922-3	4.559-3
81	85	2.879+01	1.492-2	9.157-3	6.428-3	5.045-3	4.275-3	3.863-3	3.617-3	3.807-3	4.293-3
81	86	3.263-01	4.334-3	2.551-3	1.772-3	1.408-3	1.233-3	1.176-3	1.267-3	1.534-3	1.933-3
81	87	1.772-00	3.973-2	2.975-2	2.424-2	2.076-2	1.820-2	1.649-2	1.406-2	1.236-2	1.112-2
81	88	1.169-01	7.938-3	4.206-3	2.556-3	1.753-3	1.298-3	1.022-3	7.155-4	5.555-4	4.635-4
81	89	1.349-00	1.527-2	9.038-3	6.312-3	4.991-3	4.243-3	3.800-3	3.335-3	3.126-3	3.050-3
81	90	4.855-01	1.715-2	8.912-3	5.330-3	3.639-3	2.750-3	2.250-3	1.822-3	1.759-3	1.888-3
81	91	8.973-00	2.284-2	2.069-2	2.004-2	2.032-2	2.072-2	2.107-2	2.176-2	2.240-2	2.307-2
81	92	1.547+01	9.024-2	9.038-2	9.235-2	9.460-2	9.645-2	9.813-2	1.010-1	1.032-1	1.056-1
81	93	8.122-02	2.291-3	1.395-3	1.012-3	8.153-4	6.981-4	6.205-4	5.278-4	4.723-4	4.362-4
81	94	5.129-01	4.760-3	2.542-3	1.642-3	1.226-3	1.003-3	8.734-4	7.396-4	6.769-4	6.476-4
81	95	1.052-00	8.512-3	4.751-3	3.221-3	2.565-3	2.230-3	2.043-3	1.869-3	1.807-3	1.798-3
81	96	8.641+01	1.430-1	1.304-1	1.263-1	1.239-1	1.224-1	1.215-1	1.209-1	1.212-1	1.223-1
81	97	3.668+02	3.598-3	3.380-3	3.365-3	3.381-3	3.397-3	3.411-3	3.481-3	3.560-3	3.684-3
82	83	8.538-07	7.001-3	5.543-3	4.566-3	4.033-3	3.602-3	3.291-3	2.829-3	2.485-3	2.221-3
82	84	9.461-00	2.057-2	1.096-2	7.000-3	5.215-3	4.356-3	3.980-3	3.966-3	4.502-3	5.403-3
82	85	1.457+01	1.149-2	5.872-3	3.485-3	2.369-3	1.765-3	1.408-3	1.057-3	9.198-4	8.914-4
82	86	7.247+01	4.451-3	2.258-3	1.316-3	8.636-4	6.113-4	4.531-4	2.816-4	1.919-4	1.410-4
82	87	1.788-00	2.090-1	2.001-1	2.008-1	2.042-1	2.080-1	2.127-1	2.236-1	2.364-1	2.522-1
82	88	1.376-01	1.209-3	6.467-4	4.442-4	3.665-4	3.292-4	3.101-4	2.938-4	2.892-4	2.904-4
82	89	3.269-02	1.784-3	1.067-3	8.118-4	7.245-4	6.913-4	6.839-4	7.024-4	7.442-4	8.035-4
82	90	0.000-00	2.240-3	9.905-4	5.067-4	2.979-4	1.921-4	1.324-4	7.259-5	4.483-5	3.030-5
82	91	1.395+01	5.435-2	5.130-2	5.069-2	5.117-2	5.165-2	5.229-2	5.391-2	5.582-2	5.826-2
82	92	0.000-00	6.690-4	5.236-4	5.372-4	5.848-4	6.330-4	6.762-4	7.445-4	7.908-4	8.281-4
82	93	9.258-00	1.084-3	5.413-4	3.180-4	2.118-4	1.526-4	1.166-4	7.626-5	5.486-5	4.223-5
82	94	2.176-00	3.980-3	2.207-3	1.450-3	1.082-3	8.695-4	7.380-4	5.888-4	5.114-4	4.703-4
82	95	1.640-01	5.738-3	2.922-3	1.734-3	1.167-3	8.495-4	6.543-4	4.352-4	3.197-4	2.520-4
82	96	2.695-00	1.059-2	7.563-3	6.221-3	5.486-3	4.954-3	4.577-3	4.091-3	3.795-3	3.612-3
82	97	5.182-00	2.303-3	1.934-3	1.621-3	1.433-3	1.275-3	1.163-3	9.935-4	8.658-4	7.694-4
83	84	1.634-03	2.593-3	1.527-3	1.102-3	9.513-4	9.178-4	9.561-4	1.186-3	1.560-3	2.060-3
83	85	3.022+01	3.609-3	1.921-3	1.159-3	7.747-4	5.561-4	4.168-4	2.605-4	1.773-4	1.290-4
83	86	0.000-00	8.829-4	4.729-4	2.953-4	2.082-4	1.571-4	1.256-4	8.911-5	6.849-5	5.583-5
83	87	0.000-00	1.553-3	9.454-4	6.612-4	5.105-4	4.166-4	3.535-4	2.743-4	2.253-4	1.924-4
83	88	1.672-01	1.899-3	1.196-3	8.923-4	7.630-4	7.106-4	7.033-4	7.779-4	9.354-4	1.159-3
83	89	0.000-00	1.312-3	6.024-4	3.098-4	1.803-4	1.138-4	7.628-5	3.954-5	2.310-5	1.487-5
83	90	0.000-00	1.321-3	5.915-4	2.963-4	1.688-4	1.045-4	6.888-5	3.472-5	1.987-5	1.263-5
83	91	2.356-02	8.444-3	6.206-3	5.070-3	4.398-3	3.882-3	3.488-3	2.960-3	2.608-3	2.358-3
83	92	0.000-00	8.315-4	5.829-4	6.625-4	8.043-4	9.386-4	1.053-3	1.235-3	1.360-3	1.461-3

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
83	93	0.000-00	4.389-4	2.292-4	1.361-4	9.249-5	6.843-5	5.429-5	3.858-5	3.048-5	2.559-5
83	94	3.846-02	1.304-3	6.552-4	3.762-4	2.484-4	1.780-4	1.367-4	9.218-5	6.938-5	5.595-5
83	95	1.304-00	2.430-3	1.228-3	7.213-4	5.054-4	3.982-4	3.498-4	3.379-4	3.857-4	4.709-4
83	96	3.915+01	2.009-2	1.857-2	1.793-2	1.784-2	1.791-2	1.815-2	1.906-2	2.044-2	2.230-2
83	97	0.000-00	6.260-3	5.125-3	4.228-3	3.777-3	3.400-3	3.146-3	2.759-3	2.504-3	2.312-3
84	85	3.190-00	1.563-1	1.175-1	1.003-1	9.056-2	8.433-2	8.006-2	7.476-2	7.138-2	6.920-2
84	86	1.159-04	4.233-2	3.671-2	3.597-2	3.704-2	3.932-2	4.264-2	5.216-2	6.517-2	8.165-2
84	87	4.172-03	7.082-2	4.073-2	2.689-2	1.986-2	1.591-2	1.360-2	1.149-2	1.105-2	1.157-2
84	88	8.239-01	4.245-3	2.272-3	1.402-3	9.760-4	7.335-4	5.819-4	4.140-4	3.267-4	2.763-4
84	89	9.572-02	6.704-3	4.588-3	3.562-3	3.054-3	2.743-3	2.533-3	2.309-3	2.222-3	2.214-3
84	90	2.952-03	1.901-2	1.386-2	1.097-2	9.465-3	8.480-3	7.718-3	6.722-3	6.135-3	5.784-3
84	91	5.428+01	4.163-2	2.177-2	1.349-2	9.645-3	7.603-3	6.395-3	5.155-3	4.570-3	4.287-3
84	92	2.615-02	4.051-3	3.004-3	2.571-3	2.378-3	2.287-3	2.246-3	2.233-3	2.253-3	2.298-3
84	93	5.205-01	6.703-3	5.578-3	5.118-3	4.820-3	4.628-3	4.492-3	4.335-3	4.249-3	4.224-3
84	94	5.523-00	1.972-2	1.617-2	1.464-2	1.375-2	1.314-2	1.275-2	1.239-2	1.234-2	1.256-2
84	95	3.451-00	3.078-2	2.429-2	2.139-2	1.964-2	1.831-2	1.739-2	1.621-2	1.556-2	1.530-2
84	96	4.293+01	1.106-2	6.210-3	4.073-3	2.997-3	2.382-3	1.984-3	1.545-3	1.319-3	1.197-3
84	97	5.030-00	6.270-4	4.683-4	4.096-4	3.811-4	3.645-4	3.528-4	3.426-4	3.388-4	3.410-4
85	86	8.425-01	5.102-2	3.139-2	2.141-2	1.604-2	1.269-2	1.044-2	7.669-3	6.024-3	4.959-3
85	87	3.935-04	4.567-2	2.704-2	1.849-2	1.421-2	1.188-2	1.055-2	9.440-3	9.351-3	9.862-3
85	88	9.090-02	5.828-3	4.009-3	3.101-3	2.592-3	2.248-3	1.991-3	1.663-3	1.464-3	1.334-3
85	89	1.638-03	9.629-3	7.061-3	5.613-3	4.839-3	4.312-3	3.908-3	3.403-3	3.131-3	2.999-3
85	90	0.000-00	1.593-3	8.636-4	5.342-4	3.680-4	2.710-4	2.088-4	1.389-4	1.016-4	7.981-5
85	91	1.254+01	2.635-2	1.367-2	8.361-3	5.893-3	4.598-3	3.841-3	3.091-3	2.771-3	2.655-3
85	92	0.000-00	9.621-4	5.266-4	3.261-4	2.256-4	1.678-4	1.332-4	9.692-5	7.945-5	7.071-5
85	93	2.085-00	2.555-3	2.025-3	1.662-3	1.462-3	1.298-3	1.183-3	1.010-3	8.822-4	7.854-4
85	94	2.932-01	9.581-3	7.478-3	6.375-3	5.756-3	5.303-3	5.005-3	4.630-3	4.428-3	4.349-3
85	95	6.139-00	2.311-2	1.879-2	1.689-2	1.591-2	1.521-2	1.475-2	1.429-2	1.415-2	1.427-2
85	96	1.156+01	6.321-3	3.450-3	2.164-3	1.515-3	1.139-3	8.954-4	6.228-4	4.809-4	4.027-4
85	97	1.128+02	2.344-4	1.316-4	8.779-5	6.636-5	5.323-5	4.429-5	3.355-5	2.695-5	2.261-5
86	87	0.000-00	1.346-2	7.311-3	4.440-3	2.953-3	2.096-3	1.558-3	9.557-4	6.412-4	4.625-4
86	88	1.934-04	3.566-3	2.715-3	2.244-3	1.989-3	1.797-3	1.643-3	1.439-3	1.314-3	1.235-3
86	89	0.000-00	1.070-3	5.942-4	3.689-4	2.538-4	1.860-4	1.423-4	9.254-5	6.558-5	4.962-5
86	90	0.000-00	4.966-4	2.343-4	1.245-4	7.411-5	4.752-5	3.243-5	1.760-5	1.104-5	7.850-6
86	91	9.435-02	9.413-3	4.925-3	3.008-3	2.114-3	1.660-3	1.417-3	1.257-3	1.318-3	1.514-3
86	92	0.000-00	3.115-4	1.781-4	1.306-4	1.145-4	1.089-4	1.080-4	1.115-4	1.159-4	1.208-4
86	93	0.000-00	1.050-3	6.964-4	5.054-4	4.101-4	3.437-4	3.001-4	2.407-4	2.025-4	1.756-4
86	94	8.339-01	2.885-3	2.199-3	1.772-3	1.540-3	1.358-3	1.232-3	1.047-3	9.118-4	8.105-4
86	95	7.327-02	7.681-3	6.360-3	5.768-3	5.444-3	5.217-3	5.050-3	4.859-3	4.754-3	4.719-3
86	96	5.963-01	2.541-3	1.561-3	1.152-3	9.744-4	8.894-4	8.635-4	9.225-4	1.078-3	1.308-3
86	97	0.000-00	5.141-4	4.072-4	3.340-4	2.998-4	2.717-4	2.530-4	2.249-4	2.068-4	1.932-4
87	88	7.469-02	1.173-2	8.776-3	7.712-3	7.361-3	7.330-3	7.500-3	8.238-3	9.365-3	1.085-2
87	89	3.051-03	7.481-3	4.083-3	2.557-3	1.809-3	1.380-3	1.111-3	8.261-4	6.990-4	6.521-4
87	90	6.924-02	8.188-3	4.505-3	2.862-3	2.047-3	1.577-3	1.275-3	9.384-4	7.606-4	6.591-4
87	91	2.293-00	8.056-1	7.540-1	7.546-1	7.632-1	7.752-1	7.912-1	8.328-1	8.854-1	9.521-1
87	92	1.150-02	7.751-2	5.903-2	4.873-2	4.244-2	3.750-2	3.418-2	2.941-2	2.605-2	2.361-2
87	93	0.000-00	7.451-4	3.372-4	1.780-4	1.064-4	6.958-5	4.855-5	2.704-5	1.688-5	1.150-5
87	94	2.707-03	3.036-3	1.702-3	1.192-3	9.553-4	8.314-4	7.604-4	6.900-4	6.595-4	6.495-4

Table 2. Radiative rates (A) and collision strengths (Ω) for transitions in Fe XIII. ($a{\pm}b \equiv 10^{a\pm b}$).

Transition			Energy (Ryd)								
i	j	A (s^{-1})	10.5	20.0	30.0	40.0	50.0	60.0	80.0	100.0	120.0
87	95	1.277-01	1.938-2	1.649-2	1.566-2	1.545-2	1.546-2	1.558-2	1.601-2	1.658-2	1.734-2
87	96	2.864-01	2.964-2	2.476-2	2.172-2	2.010-2	1.902-2	1.830-2	1.739-2	1.696-2	1.685-2
87	97	0.000-00	2.856-4	1.459-4	9.701-5	7.671-5	6.591-5	5.944-5	5.141-5	4.595-5	4.178-5
88	89	3.430-02	2.597-1	1.546-1	1.073-1	8.360-2	6.987-2	6.146-2	5.212-2	4.722-2	4.452-2
88	90	8.213-09	6.359-2	3.449-2	2.228-2	1.655-2	1.346-2	1.171-2	9.963-3	9.158-3	8.813-3
88	91	3.272-00	1.201-2	7.634-3	5.795-3	4.941-3	4.512-3	4.321-3	4.311-3	4.580-3	5.045-3
88	92	2.135-03	1.418-1	7.121-2	4.037-2	2.572-2	1.761-2	1.282-2	7.802-3	5.463-3	4.353-3
88	93	4.521-02	1.023-1	9.492-2	9.370-2	9.357-2	9.381-2	9.405-2	9.485-2	9.541-2	9.625-2
88	94	4.955-01	1.558-1	1.285-1	1.201-1	1.178-1	1.178-1	1.195-1	1.261-1	1.356-1	1.481-1
88	95	7.010-02	6.529-2	3.927-2	2.937-2	2.515-2	2.320-2	2.234-2	2.216-2	2.289-2	2.425-2
88	96	1.759-00	7.791-2	3.987-2	2.308-2	1.485-2	1.026-2	7.492-3	4.482-3	2.967-3	2.133-3
88	97	2.823+01	9.097-3	4.210-3	2.305-3	1.506-3	1.134-3	9.623-4	8.914-4	9.951-4	1.202-3
89	90	1.914-02	3.060-1	1.799-1	1.238-1	9.609-2	8.010-2	7.041-2	5.980-2	5.431-2	5.135-2
89	91	5.542-00	9.990-3	5.726-3	3.943-3	3.136-3	2.747-3	2.588-3	2.626-3	2.932-3	3.427-3
89	92	2.308-01	2.018-1	1.012-1	5.726-2	3.627-2	2.467-2	1.776-2	1.037-2	6.699-3	4.700-3
89	93	0.000-00	2.379-2	1.174-2	6.634-3	4.201-3	2.873-3	2.080-3	1.232-3	8.086-4	5.759-4
89	94	8.050-01	2.552-1	2.259-1	2.203-1	2.210-1	2.242-1	2.299-1	2.456-1	2.660-1	2.921-1
89	95	5.140-01	1.943-1	1.471-1	1.315-1	1.256-1	1.239-1	1.246-1	1.299-1	1.385-1	1.503-1
89	96	3.141-00	1.212-1	6.226-2	3.637-2	2.371-2	1.667-2	1.242-2	7.842-3	5.587-3	4.401-3
89	97	0.000-00	1.278-2	5.509-3	2.706-3	1.514-3	9.279-4	6.060-4	3.001-4	1.680-4	1.038-4
90	91	1.096-03	1.151-2	9.067-3	8.203-3	7.900-3	7.791-3	7.817-3	8.063-3	8.451-3	8.987-3
90	92	3.631-01	2.638-1	1.323-1	7.499-2	4.754-2	3.244-2	2.341-2	1.378-2	9.026-3	6.453-3
90	93	0.000-00	1.430-2	7.275-3	4.615-3	3.536-3	3.032-3	2.785-3	2.608-3	2.565-3	2.585-3
90	94	0.000-00	6.191-2	3.088-2	1.838-2	1.278-2	9.883-3	8.257-3	6.683-3	5.983-3	5.683-3
90	95	4.408-01	4.929-1	4.253-1	4.055-1	4.019-1	4.013-1	4.050-1	4.177-1	4.343-1	4.568-1
90	96	2.994-01	1.750-1	9.096-2	5.421-2	3.646-2	2.693-2	2.154-2	1.688-2	1.617-2	1.762-2
90	97	0.000-00	1.717-2	7.384-3	3.624-3	2.027-3	1.242-3	8.108-4	4.015-4	2.249-4	1.392-4
91	92	2.018-06	5.661-2	4.230-2	3.546-2	3.231-2	3.023-2	2.886-2	2.774-2	2.798-2	2.930-2
91	93	1.217-05	7.354-3	6.281-3	5.965-3	5.872-3	5.880-3	5.928-3	6.128-3	6.400-3	6.761-3
91	94	5.443-01	8.736-3	4.943-3	3.358-3	2.608-3	2.217-3	1.999-3	1.840-3	1.862-3	1.994-3
91	95	1.404-00	3.758-2	2.946-2	2.727-2	2.711-2	2.799-2	2.963-2	3.476-2	4.194-2	5.111-2
91	96	5.268-02	3.824-2	2.835-2	2.326-2	2.005-2	1.764-2	1.598-2	1.364-2	1.204-2	1.089-2
91	97	1.060-02	7.220-3	5.591-3	4.802-3	4.444-3	4.194-3	3.978-3	3.687-3	3.492-3	3.354-3
92	93	0.000-00	3.036-2	1.547-2	8.927-3	5.714-3	3.922-3	2.843-3	1.675-3	1.088-3	7.671-4
92	94	0.000-00	9.148-2	4.663-2	2.690-2	1.722-2	1.182-2	8.568-3	5.046-3	3.273-3	2.305-3
92	95	1.225-06	1.511-1	7.772-2	4.541-2	2.951-2	2.063-2	1.529-2	9.485-3	6.548-3	4.941-3
92	96	1.719-03	1.795-1	1.557-1	1.547-1	1.601-1	1.664-1	1.740-1	1.917-1	2.118-1	2.360-1
92	97	0.000-00	8.474-3	6.116-3	6.739-3	7.953-3	9.074-3	1.002-2	1.150-2	1.247-2	1.325-2
93	94	1.015-02	5.378-2	3.052-2	1.933-2	1.340-2	9.868-3	7.602-3	4.941-3	3.487-3	2.609-3
93	95	2.398-08	8.408-2	7.764-2	7.630-2	7.631-2	7.663-2	7.691-2	7.760-2	7.796-2	7.845-2
93	96	1.859-06	1.442-2	7.027-3	3.991-3	2.611-3	1.890-3	1.477-3	1.077-3	9.172-4	8.682-4
93	97	0.000-00	5.007-3	2.291-3	1.190-3	7.049-4	4.546-4	3.110-4	1.661-4	9.955-5	6.479-5
94	95	5.467-02	2.852-1	2.347-1	2.167-1	2.093-1	2.051-1	2.028-1	2.006-1	1.992-1	1.988-1
94	96	1.277-01	4.523-2	2.195-2	1.236-2	7.990-3	5.719-3	4.439-3	3.249-3	2.864-3	2.868-3
94	97	1.774+01	1.529-2	6.982-3	3.639-3	2.150-3	1.384-3	9.460-4	5.037-4	3.005-4	1.944-4
95	96	2.411-01	7.760-2	3.742-2	2.074-2	1.300-2	8.874-3	6.460-3	3.962-3	2.797-3	2.224-3
95	97	1.156+01	2.855-2	1.446-2	8.881-3	6.506-3	5.377-3	4.889-3	4.863-3	5.527-3	6.646-3
96	97	1.541+01	2.342-1	2.323-1	2.367-1	2.400-1	2.430-1	2.453-1	2.501-1	2.543-1	2.596-1

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
1	2	8.355-1	7.694-1	6.883-1	5.824-1	4.620-1	4.023-1	3.460-1	2.482-1	1.728-1	1.179-1	7.927-2
1	3	6.753-1	7.010-1	6.928-1	6.290-1	5.269-1	4.713-1	4.173-1	3.220-1	2.489-1	1.972-1	1.604-1
1	4	3.489-1	3.403-1	3.128-1	2.665-1	2.105-1	1.826-1	1.564-1	1.115-1	7.750-2	5.342-2	3.699-2
1	5	7.343-2	7.085-2	6.414-2	5.367-2	4.163-2	3.579-2	3.036-2	2.117-2	1.430-2	9.465-3	6.177-3
1	6	8.571-2	7.779-2	6.615-2	5.320-2	4.097-2	3.553-2	3.063-2	2.248-2	1.630-2	1.169-2	8.276-3
1	7	5.387-1	4.772-1	4.191-1	3.713-1	3.398-1	3.307-1	3.259-1	3.274-1	3.407-1	3.605-1	3.719-1
1	8	1.885-1	1.655-1	1.378-1	1.091-1	8.264-2	7.102-2	6.064-2	4.356-2	3.086-2	2.164-2	1.500-2
1	9	1.212-1	1.062-1	8.677-2	6.658-2	4.856-2	4.087-2	3.416-2	2.353-2	1.611-2	1.112-2	7.798-3
1	10	1.920-2	1.600-2	1.254-2	9.363-3	6.756-3	5.689-3	4.771-3	3.331-3	2.311-3	1.596-3	1.094-3
1	11	4.568-1	4.023-1	3.403-1	2.866-1	2.489-1	2.364-1	2.277-1	2.200-1	2.226-1	2.312-1	2.357-1
1	12	1.256-1	1.066-1	8.413-2	6.278-2	4.503-2	3.775-2	3.149-2	2.170-2	1.482-2	1.006-2	6.793-3
1	13	1.599-1	1.269-1	9.559-2	6.957-2	4.961-2	4.171-2	3.503-2	2.464-2	1.730-2	1.211-2	8.407-3
1	14	9.850-2	8.412-2	6.889-2	5.424-2	4.133-2	3.575-2	3.077-2	2.256-2	1.636-2	1.173-2	8.292-3
1	15	2.900-1	2.769-1	2.662-1	2.610-1	2.630-1	2.668-1	2.722-1	2.877-1	3.088-1	3.325-1	3.457-1
1	16	8.915-2	7.489-2	6.146-2	4.973-2	4.021-2	3.633-2	3.304-2	2.805-2	2.489-2	2.303-2	2.150-2
1	17	2.734-2	2.192-2	1.708-2	1.301-2	9.738-3	8.391-3	7.216-3	5.312-3	3.886-3	2.816-3	2.012-3
1	18	2.605-1	2.473-1	2.363-1	2.305-1	2.311-1	2.337-1	2.379-1	2.504-1	2.682-1	2.884-1	2.996-1
1	19	3.326-2	2.813-2	2.384-2	2.005-2	1.665-2	1.510-2	1.364-2	1.098-2	8.664-3	6.673-3	4.998-3
1	20	1.333-0	1.336-0	1.347-0	1.374-0	1.423-0	1.456-0	1.495-0	1.594-0	1.719-0	1.856-0	1.931-0
1	21	2.152-3	1.917-3	1.655-3	1.380-3	1.117-3	9.961-4	8.836-4	6.857-4	5.222-4	3.895-4	2.836-4
1	22	1.176-2	1.039-2	8.906-3	7.380-3	5.935-3	5.275-3	4.667-3	3.611-3	2.752-3	2.062-3	1.514-3
1	23	3.354-1	3.385-1	3.412-1	3.461-1	3.553-1	3.620-1	3.701-1	3.914-1	4.195-1	4.510-1	4.680-1
1	24	1.482-2	1.352-2	1.185-2	9.979-3	8.127-3	7.266-3	6.463-3	5.050-3	3.883-3	2.933-3	2.169-3
1	25	1.946-2	1.900-2	1.791-2	1.627-2	1.440-2	1.348-2	1.261-2	1.110-2	9.903-3	8.978-3	8.102-3
1	26	9.802-3	9.485-3	8.898-3	8.085-3	7.142-3	6.648-3	6.152-3	5.170-3	4.232-3	3.371-3	2.604-3
1	27	3.668-2	3.652-2	3.659-2	3.695-2	3.763-2	3.807-2	3.857-2	3.976-2	4.111-2	4.228-2	4.196-2
1	28	1.354-2	1.334-2	1.305-2	1.276-2	1.257-2	1.254-2	1.257-2	1.281-2	1.331-2	1.398-2	1.427-2
1	29	1.716-3	1.310-3	9.805-4	7.269-4	5.386-4	4.644-4	4.009-4	2.997-4	2.238-4	1.657-4	1.206-4
1	30	3.167-3	2.558-3	2.021-3	1.588-3	1.258-3	1.127-3	1.016-3	8.385-4	7.055-4	5.986-4	5.021-4
1	31	8.716-3	8.113-3	7.550-3	6.998-3	6.420-3	6.110-3	5.783-3	5.072-3	4.303-3	3.513-3	2.750-3
1	32	1.072-2	9.919-3	9.185-3	8.483-3	7.769-3	7.393-3	7.001-3	6.158-3	5.256-3	4.333-3	3.438-3
1	33	1.979-3	1.779-3	1.594-3	1.433-3	1.298-3	1.239-3	1.184-3	1.083-3	9.931-4	9.080-4	8.140-4
1	34	9.210-3	8.363-3	7.621-3	6.945-3	6.290-3	5.956-3	5.613-3	4.891-3	4.130-3	3.362-3	2.626-3
1	35	9.475-4	7.283-4	5.345-4	3.781-4	2.606-4	2.149-4	1.768-4	1.188-4	7.944-5	5.288-5	3.502-5
1	36	9.559-4	7.538-4	5.696-4	4.166-4	2.986-4	2.518-4	2.120-4	1.499-4	1.056-4	7.402-5	5.133-5
1	37	9.970-5	7.989-5	6.157-5	4.631-5	3.456-5	2.991-5	2.597-5	1.984-5	1.545-5	1.223-5	9.683-6
1	38	8.405-4	7.778-4	7.121-4	6.470-4	5.825-4	5.499-4	5.167-4	4.480-4	3.768-4	3.058-4	2.383-4
1	39	3.644-3	3.458-3	3.258-3	3.045-3	2.816-3	2.692-3	2.562-3	2.279-3	1.973-3	1.659-3	1.348-3
1	40	7.041-3	6.691-3	6.306-3	5.889-3	5.425-3	5.170-3	4.898-3	4.302-3	3.652-3	2.982-3	2.335-3
1	41	6.218-4	5.014-4	3.805-4	2.759-4	1.940-4	1.615-4	1.341-4	9.173-5	6.240-5	4.225-5	2.844-5
1	42	3.396-2	3.377-2	3.377-2	3.408-2	3.473-2	3.518-2	3.573-2	3.706-2	3.866-2	4.013-2	4.015-2
1	43	3.564-3	2.891-3	2.251-3	1.719-3	1.308-3	1.143-3	1.000-3	7.679-4	5.879-4	4.451-4	3.305-4
1	44	1.150-3	8.992-4	6.665-4	4.773-4	3.361-4	2.816-4	2.363-4	1.678-4	1.214-4	8.954-5	6.682-5
1	45	5.277-3	5.036-3	4.773-3	4.483-3	4.152-3	3.966-3	3.765-3	3.316-3	2.818-3	2.301-3	1.799-3
1	46	1.026-3	9.503-4	8.729-4	7.967-4	7.209-4	6.821-4	6.423-4	5.588-4	4.712-4	3.832-4	2.994-4
1	47	7.017-4	5.557-4	4.235-4	3.165-4	2.352-4	2.027-4	1.748-4	1.299-4	9.614-5	7.033-5	5.054-5
1	48	2.615-4	2.220-4	1.820-4	1.467-4	1.183-4	1.066-4	9.648-5	8.006-5	6.747-5	5.725-5	4.800-5
1	49	7.381-3	7.253-3	7.172-3	7.148-3	7.182-3	7.219-3	7.268-3	7.400-3	7.566-3	7.702-3	7.576-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a \pm b \equiv a \times 10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
1	50	8.239-4	7.210-4	6.294-4	5.503-4	4.810-4	4.489-4	4.178-4	3.574-4	2.983-4	2.413-4	1.880-4
1	51	5.938-4	5.283-4	4.673-4	4.144-4	3.707-4	3.520-4	3.350-4	3.049-4	2.782-4	2.517-4	2.216-4
1	52	7.849-4	6.360-4	5.038-4	3.943-4	3.068-4	2.700-4	2.372-4	1.814-4	1.364-4	1.003-4	7.196-5
1	53	1.241-3	9.834-4	7.507-4	5.634-4	4.228-4	3.676-4	3.210-4	2.483-4	1.964-4	1.584-4	1.285-4
1	54	3.975-4	3.144-4	2.420-4	1.838-4	1.389-4	1.208-4	1.049-4	7.901-5	5.893-5	4.329-5	3.115-5
1	55	7.723-4	7.152-4	6.591-4	6.041-4	5.484-4	5.195-4	4.897-4	4.266-4	3.599-4	2.926-4	2.283-4
1	56	4.574-2	4.606-2	4.663-2	4.754-2	4.886-2	4.969-2	5.064-2	5.289-2	5.554-2	5.799-2	5.824-2
1	57	5.778-4	4.700-4	3.794-4	3.068-4	2.491-4	2.246-4	2.022-4	1.626-4	1.285-4	9.922-5	7.465-5
1	58	8.275-4	6.457-4	4.864-4	3.600-4	2.658-4	2.290-4	1.978-4	1.490-4	1.135-4	8.693-5	6.629-5
1	59	1.162-3	1.047-3	9.376-4	8.371-4	7.437-4	6.984-4	6.533-4	5.627-4	4.715-4	3.821-4	2.981-4
1	60	7.875-2	7.943-2	8.053-2	8.219-2	8.453-2	8.599-2	8.766-2	9.161-2	9.625-2	1.005-1	1.010-1
1	61	8.994-4	7.420-4	6.090-4	5.006-4	4.116-4	3.725-4	3.361-4	2.695-4	2.104-4	1.591-4	1.163-4
1	62	2.448-4	2.150-4	1.878-4	1.635-4	1.417-4	1.316-4	1.219-4	1.033-4	8.570-5	6.912-5	5.388-5
1	63	2.987-3	2.955-3	2.948-3	2.968-3	3.018-3	3.055-3	3.099-3	3.211-3	3.348-3	3.477-3	3.478-3
1	64	4.878-4	3.697-4	2.763-4	2.072-4	1.584-4	1.402-4	1.251-4	1.024-4	8.658-5	7.450-5	6.359-5
1	65	1.341-3	1.261-3	1.183-3	1.112-3	1.050-3	1.022-3	9.957-4	9.455-4	8.945-4	8.348-4	7.531-4
1	66	1.980-4	1.624-4	1.327-4	1.087-4	8.958-5	8.136-5	7.383-5	6.039-5	4.862-5	3.831-5	2.936-5
1	67	2.854-4	2.612-4	2.381-4	2.164-4	1.954-4	1.849-4	1.743-4	1.521-4	1.289-4	1.055-4	8.296-5
1	68	3.494-3	3.473-3	3.466-3	3.468-3	3.469-3	3.467-3	3.463-3	3.444-3	3.412-3	3.348-3	3.180-3
1	69	1.128-3	1.056-3	9.855-4	9.163-4	8.438-4	8.049-4	7.638-4	6.740-4	5.755-4	4.727-4	3.720-4
1	70	1.410-4	1.246-4	1.103-4	9.769-5	8.631-5	8.087-5	7.552-5	6.488-5	5.430-5	4.397-5	3.427-5
1	71	4.223-4	3.983-4	3.738-4	3.481-4	3.202-4	3.050-4	2.888-4	2.537-4	2.156-4	1.764-4	1.383-4
1	72	2.273-2	2.292-2	2.321-2	2.364-2	2.426-2	2.465-2	2.509-2	2.614-2	2.737-2	2.848-2	2.851-2
1	73	1.141-3	1.093-3	1.042-3	9.863-4	9.208-4	8.832-4	8.419-4	7.484-4	6.428-4	5.313-4	4.210-4
1	74	2.362-2	2.367-2	2.378-2	2.389-2	2.392-2	2.388-2	2.382-2	2.357-2	2.319-2	2.258-2	2.129-2
1	75	4.417-3	4.279-3	4.118-3	3.923-3	3.680-3	3.537-3	3.378-3	3.012-3	2.593-3	2.146-3	1.701-3
1	76	5.542-4	4.409-4	3.493-4	2.795-4	2.272-4	2.060-4	1.874-4	1.560-4	1.303-4	1.085-4	8.913-5
1	77	3.167-3	3.162-3	3.176-3	3.213-3	3.276-3	3.318-3	3.367-3	3.486-3	3.629-3	3.758-3	3.748-3
1	78	1.506-3	1.455-3	1.396-3	1.326-3	1.240-3	1.190-3	1.135-3	1.007-3	8.630-4	7.103-4	5.598-4
1	79	7.854-3	7.833-3	7.818-3	7.762-3	7.620-3	7.506-3	7.362-3	6.976-3	6.469-3	5.854-3	5.113-3
1	80	9.661-4	9.394-4	9.055-4	8.633-4	8.102-4	7.788-4	7.439-4	6.635-4	5.714-4	4.728-4	3.744-4
1	81	1.715-3	1.698-3	1.683-3	1.662-3	1.625-3	1.599-3	1.568-3	1.488-3	1.386-3	1.264-3	1.115-3
1	82	4.199-4	3.998-4	3.787-4	3.561-4	3.304-4	3.160-4	3.003-4	2.651-4	2.258-4	1.846-4	1.444-4
1	83	3.156-4	3.071-4	2.958-4	2.840-4	2.721-4	2.660-4	2.596-4	2.464-4	2.321-4	2.155-4	1.935-4
1	84	2.406-2	2.420-2	2.435-2	2.446-2	2.452-2	2.452-2	2.451-2	2.443-2	2.426-2	2.386-2	2.271-2
1	85	2.088-4	1.982-4	1.875-4	1.762-4	1.637-4	1.567-4	1.492-4	1.322-4	1.131-4	9.302-5	7.320-5
1	86	1.872-3	1.809-3	1.744-3	1.686-3	1.631-3	1.602-3	1.573-3	1.509-3	1.439-3	1.352-3	1.226-3
1	87	1.336-3	1.299-3	1.255-3	1.201-3	1.131-3	1.089-3	1.041-3	9.296-4	8.004-4	6.616-4	5.232-4
1	88	1.335-2	1.336-2	1.329-2	1.308-2	1.270-2	1.243-2	1.210-2	1.126-2	1.020-2	8.956-3	7.558-3
1	89	4.154-4	3.989-4	3.812-4	3.611-4	3.369-4	3.231-4	3.080-4	2.742-4	2.372-4	1.990-4	1.611-4
1	90	2.129-4	2.002-4	1.885-4	1.772-4	1.653-4	1.589-4	1.521-4	1.376-4	1.219-4	1.056-4	8.875-5
1	91	9.558-4	9.377-4	9.142-4	8.825-4	8.395-4	8.127-4	7.820-4	7.083-4	6.203-4	5.232-4	4.230-4
1	92	2.882-4	2.780-4	2.649-4	2.478-4	2.260-4	2.133-4	1.996-4	1.698-4	1.390-4	1.095-4	8.329-5
1	93	2.901-3	2.839-3	2.800-3	2.770-3	2.732-3	2.708-3	2.680-3	2.612-3	2.527-3	2.408-3	2.211-3
1	94	1.263-4	1.230-4	1.194-4	1.147-4	1.082-4	1.041-4	9.943-5	8.821-5	7.506-5	6.104-5	4.739-5
1	95	5.828-4	5.786-4	5.706-4	5.572-4	5.368-4	5.235-4	5.080-4	4.703-4	4.244-4	3.720-4	3.140-4
1	96	3.157-4	3.110-4	3.047-4	2.960-4	2.838-4	2.761-4	2.674-4	2.464-4	2.216-4	1.938-4	1.635-4
1	97	1.031-4	1.037-4	1.042-4	1.040-4	1.026-4	1.015-4	1.000-4	9.646-5	9.213-5	8.667-5	7.873-5

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a\pm b \equiv a\times10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
2	3	3.965-0	3.834-0	3.611-0	3.180-0	2.595-0	2.288-0	1.992-0	1.471-0	1.072-0	7.945-1	6.086-1
2	4	1.862-0	1.875-0	1.763-0	1.526-0	1.219-0	1.062-0	9.122-1	6.511-1	4.509-1	3.072-1	2.078-1
2	5	1.804-1	1.795-1	1.657-1	1.402-1	1.094-1	9.428-2	8.019-2	5.622-2	3.824-2	2.549-2	1.676-2
2	6	3.567-1	3.193-1	2.688-1	2.138-1	1.628-1	1.404-1	1.204-1	8.795-2	6.414-2	4.711-2	3.486-2
2	7	6.790-1	5.783-1	4.723-1	3.740-1	2.933-1	2.608-1	2.335-1	1.929-1	1.678-1	1.536-1	1.430-1
2	8	2.448-0	2.206-0	1.884-0	1.551-0	1.272-0	1.163-0	1.075-0	9.557-1	8.997-1	8.858-1	8.730-1
2	9	6.216-1	5.266-1	4.242-1	3.252-1	2.389-1	2.021-1	1.698-1	1.182-1	8.141-2	5.591-2	3.843-2
2	10	3.943-1	3.788-1	3.440-1	3.068-1	2.791-1	2.702-1	2.647-1	2.627-1	2.707-1	2.845-1	2.921-1
2	11	6.716-1	5.900-1	5.071-1	4.358-1	3.852-1	3.685-1	3.570-1	3.477-1	3.532-1	3.675-1	3.748-1
2	12	1.026-0	9.315-1	7.725-1	6.048-1	4.627-1	4.054-1	3.574-1	2.864-1	2.428-1	2.181-1	2.008-1
2	13	6.555-1	5.229-1	3.978-1	2.927-1	2.113-1	1.792-1	1.520-1	1.101-1	8.111-2	6.121-2	4.708-2
2	14	2.891-1	2.412-1	1.947-1	1.535-1	1.198-1	1.060-1	9.425-2	7.618-2	6.424-2	5.673-2	5.108-2
2	15	8.294-1	7.703-1	7.216-1	6.926-1	6.870-1	6.925-1	7.030-1	7.375-1	7.881-1	8.463-1	8.784-1
2	16	2.803-1	2.325-1	1.859-1	1.438-1	1.083-1	9.325-2	8.005-2	5.864-2	4.281-2	3.125-2	2.276-2
2	17	2.350-1	1.922-1	1.522-1	1.184-1	9.160-2	8.081-2	7.161-2	5.739-2	4.772-2	4.129-2	3.636-2
2	18	9.263-1	8.637-1	8.155-1	7.894-1	7.881-1	7.962-1	8.097-1	8.515-1	9.114-1	9.801-1	1.018-0
2	19	1.628-0	1.611-0	1.607-0	1.627-0	1.675-0	1.711-0	1.755-0	1.866-0	2.009-0	2.166-0	2.252-0
2	20	9.322-2	7.381-2	5.855-2	4.607-2	3.580-2	3.144-2	2.754-2	2.104-2	1.600-2	1.212-2	9.118-3
2	21	5.045-1	5.028-1	5.046-1	5.125-1	5.284-1	5.397-1	5.533-1	5.879-1	6.329-1	6.829-1	7.107-1
2	22	7.232-1	7.210-1	7.224-1	7.316-1	7.522-1	7.672-1	7.856-1	8.328-1	8.946-1	9.630-1	1.000-0
2	23	1.261-0	1.265-0	1.275-0	1.298-0	1.341-0	1.370-0	1.405-0	1.492-0	1.606-0	1.731-0	1.800-0
2	24	1.141-0	1.152-0	1.163-0	1.182-0	1.215-0	1.239-0	1.268-0	1.343-0	1.441-0	1.549-0	1.608-0
2	25	7.658-2	7.333-2	6.783-2	6.046-2	5.238-2	4.845-2	4.472-2	3.805-2	3.255-2	2.809-2	2.415-2
2	26	3.192-2	3.114-2	2.941-2	2.687-2	2.381-2	2.219-2	2.053-2	1.723-2	1.403-2	1.107-2	8.439-3
2	27	7.308-2	7.232-2	7.211-2	7.262-2	7.384-2	7.470-2	7.570-2	7.808-2	8.084-2	8.325-2	8.273-2
2	28	1.258-2	1.212-2	1.136-2	1.037-2	9.312-3	8.787-3	8.279-3	7.343-3	6.545-3	5.888-3	5.267-3
2	29	3.370-2	3.280-2	3.213-2	3.181-2	3.185-2	3.200-2	3.223-2	3.289-2	3.374-2	3.449-2	3.407-2
2	30	1.270-3	1.007-3	7.779-4	5.928-4	4.504-4	3.929-4	3.431-4	2.618-4	1.989-4	1.493-4	1.099-4
2	31	9.107-3	8.128-3	7.279-3	6.531-3	5.841-3	5.503-3	5.164-3	4.470-3	3.758-3	3.050-3	2.379-3
2	32	1.530-2	1.393-2	1.271-2	1.159-2	1.053-2	1.000-2	9.457-3	8.327-3	7.149-3	5.961-3	4.805-3
2	33	1.133-2	1.084-2	1.043-2	1.012-2	9.947-3	9.905-3	9.889-3	9.926-3	1.003-2	1.013-2	9.908-3
2	34	2.597-2	2.356-2	2.146-2	1.957-2	1.773-2	1.680-2	1.584-2	1.383-2	1.171-2	9.561-3	7.505-3
2	35	2.941-2	2.730-2	2.524-2	2.324-2	2.119-2	2.012-2	1.900-2	1.661-2	1.406-2	1.146-2	8.961-3
2	36	4.124-3	3.120-3	2.272-3	1.606-3	1.112-3	9.212-4	7.615-4	5.185-4	3.520-4	2.380-4	1.600-4
2	37	3.553-3	3.416-3	3.246-3	3.048-3	2.817-3	2.689-3	2.549-3	2.242-3	1.905-3	1.557-3	1.220-3
2	38	9.282-3	8.875-3	8.397-3	7.860-3	7.253-3	6.917-3	6.558-3	5.771-3	4.913-3	4.028-3	3.169-3
2	39	1.032-2	9.744-3	9.121-3	8.462-3	7.755-3	7.374-3	6.974-3	6.109-3	5.178-3	4.226-3	3.310-3
2	40	7.265-3	6.710-3	6.158-3	5.639-3	5.150-3	4.911-3	4.673-3	4.191-3	3.705-3	3.220-3	2.729-3
2	41	1.218-2	1.108-2	1.002-2	9.028-3	8.088-3	7.622-3	7.153-3	6.191-3	5.202-3	4.219-3	3.289-3
2	42	3.748-2	3.650-2	3.574-2	3.537-2	3.543-2	3.563-2	3.592-2	3.677-2	3.791-2	3.896-2	3.868-2
2	43	6.773-2	6.714-2	6.693-2	6.731-2	6.836-2	6.913-2	7.006-2	7.239-2	7.521-2	7.779-2	7.759-2
2	44	7.233-3	5.685-3	4.272-3	3.132-3	2.276-3	1.942-3	1.659-3	1.218-3	8.985-4	6.632-4	4.855-4
2	45	1.330-2	1.273-2	1.209-2	1.137-2	1.053-2	1.006-2	9.552-3	8.414-3	7.152-3	5.840-3	4.567-3
2	46	6.969-3	6.466-3	5.951-3	5.446-3	4.939-3	4.678-3	4.408-3	3.838-3	3.237-3	2.629-3	2.050-3
2	47	2.075-3	1.862-3	1.653-3	1.462-3	1.288-3	1.205-3	1.124-3	9.633-4	8.043-4	6.500-4	5.060-4
2	48	3.296-4	2.674-4	2.090-4	1.597-4	1.210-4	1.053-4	9.155-5	6.909-5	5.175-5	3.821-5	2.764-5
2	49	1.204-2	1.159-2	1.121-2	1.091-2	1.069-2	1.060-2	1.053-2	1.040-2	1.029-2	1.013-2	9.684-3
2	50	8.018-3	7.656-3	7.344-3	7.104-3	6.940-3	6.884-3	6.843-3	6.801-3	6.794-3	6.767-3	6.534-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
2	51	5.239-4	4.435-4	3.707-4	3.091-4	2.582-4	2.361-4	2.157-4	1.788-4	1.458-4	1.160-4	8.926-5
2	52	3.699-3	2.914-3	2.234-3	1.695-3	1.292-3	1.133-3	9.972-4	7.831-4	6.259-4	5.079-4	4.129-4
2	53	3.061-3	2.398-3	1.826-3	1.370-3	1.024-3	8.847-4	7.644-4	5.694-4	4.212-4	3.079-4	2.214-4
2	54	2.809-3	2.173-3	1.639-3	1.223-3	9.144-4	7.931-4	6.899-4	5.266-4	4.068-4	3.173-4	2.477-4
2	55	4.089-2	4.096-2	4.128-2	4.192-2	4.294-2	4.360-2	4.437-2	4.622-2	4.842-2	5.046-2	5.062-2
2	56	4.395-3	4.033-3	3.735-3	3.505-3	3.333-3	3.266-3	3.208-3	3.117-3	3.051-3	2.988-3	2.850-3
2	57	6.199-2	6.193-2	6.231-2	6.322-2	6.472-2	6.571-2	6.687-2	6.967-2	7.300-2	7.610-2	7.635-2
2	58	1.758-3	1.372-3	1.039-3	7.736-4	5.724-4	4.923-4	4.236-4	3.137-4	2.316-4	1.693-4	1.218-4
2	59	9.027-3	8.657-3	8.348-3	8.119-3	7.970-3	7.923-3	7.893-3	7.877-3	7.911-3	7.929-3	7.706-3
2	60	5.647-2	5.651-2	5.692-2	5.779-2	5.920-2	6.013-2	6.121-2	6.382-2	6.692-2	6.980-2	7.005-2
2	61	1.600-1	1.612-1	1.632-1	1.664-1	1.710-1	1.739-1	1.772-1	1.852-1	1.945-1	2.032-1	2.041-1
2	62	1.849-2	1.857-2	1.875-2	1.907-2	1.955-2	1.986-2	2.022-2	2.109-2	2.213-2	2.309-2	2.319-2
2	63	2.542-2	2.552-2	2.577-2	2.620-2	2.686-2	2.728-2	2.777-2	2.893-2	3.031-2	3.159-2	3.167-2
2	64	1.986-3	1.647-3	1.362-3	1.133-3	9.506-4	8.731-4	8.024-4	6.762-4	5.641-4	4.628-4	3.702-4
2	65	3.334-4	2.941-4	2.603-4	2.311-4	2.050-4	1.926-4	1.803-4	1.556-4	1.308-4	1.063-4	8.310-5
2	66	2.501-3	2.287-3	2.119-3	1.992-3	1.894-3	1.852-3	1.813-3	1.742-3	1.678-3	1.610-3	1.506-3
2	67	5.959-3	5.728-3	5.493-3	5.266-3	5.054-3	4.952-3	4.851-3	4.645-3	4.422-3	4.154-3	3.777-3
2	68	1.151-2	1.145-2	1.144-2	1.148-2	1.156-2	1.161-2	1.166-2	1.179-2	1.192-2	1.197-2	1.162-2
2	69	8.865-3	8.704-3	8.582-3	8.511-3	8.492-3	8.501-3	8.522-3	8.597-3	8.706-3	8.780-3	8.569-3
2	70	3.309-3	3.267-3	3.251-3	3.268-3	3.318-3	3.356-3	3.403-3	3.521-3	3.667-3	3.802-3	3.797-3
2	71	4.137-2	4.172-2	4.228-2	4.312-2	4.434-2	4.512-2	4.600-2	4.811-2	5.059-2	5.290-2	5.316-2
2	72	1.882-2	1.886-2	1.901-2	1.928-2	1.971-2	1.999-2	2.032-2	2.111-2	2.204-2	2.291-2	2.292-2
2	73	1.526-2	1.522-2	1.523-2	1.526-2	1.530-2	1.532-2	1.534-2	1.535-2	1.532-2	1.515-2	1.449-2
2	74	2.356-2	2.328-2	2.300-2	2.268-2	2.224-2	2.195-2	2.162-2	2.081-2	1.982-2	1.865-2	1.704-2
2	75	6.590-2	6.592-2	6.618-2	6.661-2	6.711-2	6.738-2	6.765-2	6.821-2	6.875-2	6.883-2	6.663-2
2	76	7.019-3	6.535-3	6.082-3	5.646-3	5.199-3	4.962-3	4.713-3	4.171-3	3.581-3	2.967-3	2.361-3
2	77	1.880-3	1.786-3	1.697-3	1.610-3	1.515-3	1.462-3	1.405-3	1.274-3	1.124-3	9.601-4	7.898-4
2	78	1.406-2	1.391-2	1.373-2	1.347-2	1.304-2	1.276-2	1.242-2	1.159-2	1.055-2	9.352-3	8.003-3
2	79	9.118-3	8.989-3	8.848-3	8.662-3	8.395-3	8.222-3	8.021-3	7.533-3	6.941-3	6.264-3	5.477-3
2	80	1.757-2	1.751-2	1.745-2	1.729-2	1.692-2	1.663-2	1.627-2	1.531-2	1.409-2	1.265-2	1.095-2
2	81	2.215-3	2.152-3	2.093-3	2.036-3	1.974-3	1.941-3	1.905-3	1.828-3	1.745-3	1.652-3	1.521-3
2	82	2.646-3	2.569-3	2.491-3	2.405-3	2.303-3	2.242-3	2.175-3	2.019-3	1.839-3	1.638-3	1.413-3
2	83	7.180-5	6.428-5	5.726-5	5.085-5	4.482-5	4.186-5	3.889-5	3.296-5	2.708-5	2.148-5	1.640-5
2	84	6.066-2	6.100-2	6.138-2	6.173-2	6.200-2	6.211-2	6.218-2	6.225-2	6.216-2	6.153-2	5.888-2
2	85	2.515-2	2.501-2	2.487-2	2.475-2	2.461-2	2.452-2	2.443-2	2.419-2	2.387-2	2.334-2	2.207-2
2	86	3.171-4	3.050-4	2.913-4	2.758-4	2.574-4	2.468-4	2.353-4	2.090-4	1.791-4	1.474-4	1.161-4
2	87	5.150-3	5.020-3	4.862-3	4.661-3	4.398-3	4.238-3	4.057-3	3.634-3	3.141-3	2.608-3	2.073-3
2	88	1.564-2	1.562-2	1.550-2	1.524-2	1.477-2	1.444-2	1.404-2	1.305-2	1.180-2	1.035-2	8.722-3
2	89	2.707-2	2.702-2	2.682-2	2.635-2	2.554-2	2.498-2	2.430-2	2.261-2	2.048-2	1.798-2	1.517-2
2	90	1.036-3	9.898-4	9.434-4	8.929-4	8.345-4	8.014-4	7.655-4	6.861-4	5.991-4	5.089-4	4.181-4
2	91	3.255-3	3.192-3	3.109-3	2.998-3	2.847-3	2.753-3	2.646-3	2.390-3	2.087-3	1.755-3	1.416-3
2	92	8.504-4	8.222-4	7.838-4	7.321-4	6.654-4	6.264-4	5.840-4	4.920-4	3.966-4	3.061-4	2.266-4
2	93	1.254-4	1.217-4	1.178-4	1.130-4	1.065-4	1.024-4	9.772-5	8.665-5	7.371-5	5.995-5	4.656-5
2	94	9.653-3	9.428-3	9.268-3	9.141-3	9.003-3	8.921-3	8.829-3	8.606-3	8.319-3	7.911-3	7.247-3
2	95	1.311-3	1.298-3	1.277-3	1.244-3	1.196-3	1.164-3	1.127-3	1.039-3	9.310-4	8.097-4	6.780-4
2	96	2.635-4	2.573-4	2.490-4	2.376-4	2.224-4	2.132-4	2.030-4	1.799-4	1.546-4	1.289-4	1.040-4
2	97	5.915-5	5.823-5	5.674-5	5.434-5	5.077-5	4.850-5	4.593-5	3.997-5	3.328-5	2.645-5	2.007-5
3	4	3.519-0	3.746-0	3.698-0	3.324-0	2.728-0	2.403-0	2.085-0	1.518-0	1.077-0	7.578-1	5.354-1

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
3	5	2.758-1	2.669-1	2.439-1	2.070-1	1.646-1	1.441-1	1.252-1	9.363-2	7.059-2	5.510-2	4.487-2
3	6	5.756-1	4.967-1	4.126-1	3.281-1	2.508-1	2.169-1	1.866-1	1.372-1	1.010-1	7.506-2	5.642-2
3	7	4.351-1	3.654-1	2.901-1	2.185-1	1.576-1	1.322-1	1.103-1	7.599-2	5.232-2	3.653-2	2.605-2
3	8	9.780-1	8.298-1	6.658-1	5.085-1	3.744-1	3.186-1	2.703-1	1.947-1	1.425-1	1.076-1	8.375-2
3	9	5.058-0	4.700-0	4.058-0	3.308-0	2.620-0	2.331-0	2.084-0	1.715-0	1.489-0	1.364-0	1.276-0
3	10	1.116-1	9.463-2	7.520-2	5.671-2	4.109-2	3.459-2	2.896-2	2.006-2	1.375-2	9.356-3	6.321-3
3	11	6.794-1	6.186-1	5.290-1	4.380-1	3.633-1	3.343-1	3.108-1	2.793-1	2.648-1	2.615-1	2.578-1
3	12	2.948-0	2.703-0	2.321-0	1.935-0	1.627-0	1.513-0	1.424-0	1.315-0	1.280-0	1.293-0	1.294-0
3	13	9.143-1	7.433-1	5.763-1	4.322-1	3.183-1	2.725-1	2.336-1	1.730-1	1.307-1	1.013-1	8.005-2
3	14	2.423-1	2.025-1	1.637-1	1.295-1	1.017-1	9.034-2	8.051-2	6.500-2	5.404-2	4.638-2	4.035-2
3	15	2.035-0	1.916-0	1.823-0	1.779-0	1.791-0	1.817-0	1.855-0	1.965-0	2.114-0	2.281-0	2.376-0
3	16	5.072-1	4.200-1	3.391-1	2.694-1	2.135-1	1.910-1	1.718-1	1.426-1	1.234-1	1.114-1	1.020-1
3	17	6.235-1	5.244-1	4.235-1	3.305-1	2.521-1	2.192-1	1.905-1	1.451-1	1.129-1	9.073-2	7.450-2
3	18	1.049-0	9.140-1	8.126-1	7.454-1	7.103-1	7.034-1	7.028-1	7.182-1	7.533-1	7.993-1	8.237-1
3	19	1.290-0	1.242-0	1.210-0	1.201-0	1.218-0	1.236-0	1.260-0	1.328-0	1.422-0	1.527-0	1.584-0
3	20	3.962-1	3.779-1	3.650-1	3.587-1	3.596-1	3.629-1	3.681-1	3.842-1	4.081-1	4.360-1	4.507-1
3	21	1.744-2	1.519-2	1.295-2	1.073-2	8.651-3	7.699-3	6.819-3	5.286-3	4.038-3	3.038-3	2.243-3
3	22	3.970-1	3.790-1	3.641-1	3.540-1	3.504-1	3.514-1	3.542-1	3.655-1	3.846-1	4.079-1	4.196-1
3	23	4.439-1	4.380-1	4.345-1	4.354-1	4.426-1	4.490-1	4.572-1	4.800-1	5.117-1	5.479-1	5.671-1
3	24	1.624-0	1.628-0	1.638-0	1.662-0	1.710-0	1.745-0	1.786-0	1.893-0	2.032-0	2.186-0	2.270-0
3	25	6.763-0	6.407-0	6.094-0	5.882-0	5.809-0	5.828-0	5.885-0	6.110-0	6.474-0	6.911-0	7.142-0
3	26	2.458-1	2.448-1	2.400-1	2.338-1	2.286-1	2.271-1	2.264-1	2.281-1	2.343-1	2.432-1	2.459-1
3	27	7.916-2	7.627-2	7.389-2	7.236-2	7.183-2	7.192-2	7.222-2	7.337-2	7.506-2	7.659-2	7.560-2
3	28	2.364-2	2.307-2	2.157-2	1.929-2	1.662-2	1.527-2	1.396-2	1.153-2	9.423-3	7.658-3	6.165-3
3	29	7.115-2	7.085-2	7.101-2	7.177-2	7.318-2	7.410-2	7.516-2	7.764-2	8.047-2	8.294-2	8.248-2
3	30	3.307-2	3.305-2	3.323-2	3.367-2	3.438-2	3.483-2	3.533-2	3.650-2	3.782-2	3.895-2	3.871-2
3	31	3.677-3	2.887-3	2.251-3	1.761-3	1.395-3	1.249-3	1.123-3	9.186-4	7.604-4	6.336-4	5.244-4
3	32	8.228-3	6.705-3	5.447-3	4.454-3	3.693-3	3.382-3	3.109-3	2.648-3	2.272-3	1.955-3	1.661-3
3	33	1.072-2	9.267-3	7.798-3	6.516-3	5.504-3	5.098-3	4.752-3	4.211-3	3.823-3	3.525-3	3.214-3
3	34	1.521-2	1.259-2	1.047-2	8.775-3	7.408-3	6.811-3	6.257-3	5.235-3	4.295-3	3.427-3	2.643-3
3	35	3.082-2	2.729-2	2.399-2	2.103-2	1.840-2	1.717-2	1.597-2	1.364-2	1.135-2	9.160-3	7.120-3
3	36	6.908-2	6.266-2	5.676-2	5.131-2	4.612-2	4.353-2	4.090-2	3.548-2	2.987-2	2.426-2	1.893-2
3	37	1.540-3	1.440-3	1.334-3	1.229-3	1.128-3	1.078-3	1.028-3	9.259-4	8.220-4	7.180-4	6.114-4
3	38	5.411-3	5.024-3	4.629-3	4.241-3	3.859-3	3.666-3	3.469-3	3.063-3	2.643-3	2.222-3	1.810-3
3	39	1.223-2	1.140-2	1.053-2	9.665-3	8.785-3	8.330-3	7.861-3	6.875-3	5.839-3	4.794-3	3.789-3
3	40	2.400-2	2.254-2	2.099-2	1.942-2	1.780-2	1.694-2	1.605-2	1.416-2	1.215-2	1.010-2	8.103-3
3	41	3.833-2	3.666-2	3.476-2	3.272-2	3.052-2	2.933-2	2.807-2	2.534-2	2.240-2	1.936-2	1.625-2
3	42	1.400-2	1.231-2	1.068-2	9.322-3	8.269-3	7.844-3	7.473-3	6.866-3	6.391-3	5.984-3	5.506-3
3	43	4.176-2	3.948-2	3.751-2	3.614-2	3.540-2	3.526-2	3.525-2	3.557-2	3.626-2	3.693-2	3.643-2
3	44	1.570-1	1.458-1	1.366-1	1.305-1	1.275-1	1.271-1	1.273-1	1.292-1	1.328-1	1.365-1	1.356-1
3	45	1.679-2	1.568-2	1.451-2	1.333-2	1.212-2	1.149-2	1.084-2	9.470-3	8.017-3	6.547-3	5.139-3
3	46	1.689-2	1.613-2	1.526-2	1.430-2	1.321-2	1.260-2	1.195-2	1.051-2	8.934-3	7.298-3	5.714-3
3	47	1.216-2	1.167-2	1.110-2	1.044-2	9.679-3	9.248-3	8.779-3	7.733-3	6.573-3	5.367-3	4.198-3
3	48	1.161-3	1.040-3	9.300-4	8.411-4	7.731-4	7.455-4	7.213-4	6.799-4	6.452-4	6.125-4	5.684-4
3	49	1.260-2	1.144-2	1.035-2	9.395-3	8.563-3	8.182-3	7.818-3	7.117-3	6.434-3	5.749-3	5.007-3
3	50	7.340-3	6.831-3	6.392-3	6.041-3	5.766-3	5.648-3	5.540-3	5.343-3	5.159-3	4.959-3	4.639-3
3	51	3.638-3	3.499-3	3.388-3	3.314-3	3.278-3	3.272-3	3.275-3	3.300-3	3.343-3	3.376-3	3.300-3
3	52	7.685-3	6.999-3	6.389-3	5.868-3	5.420-3	5.215-3	5.019-3	4.644-3	4.286-3	3.934-3	3.531-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
3	53	9.251-3	7.728-3	6.407-3	5.329-3	4.462-3	4.089-3	3.747-3	3.131-3	2.579-3	2.080-3	1.629-3
3	54	1.345-2	1.049-2	8.051-3	6.165-3	4.751-3	4.186-3	3.695-3	2.889-3	2.256-3	1.744-3	1.325-3
3	55	1.591-2	1.563-2	1.551-2	1.556-2	1.580-2	1.599-2	1.623-2	1.684-2	1.759-2	1.829-2	1.832-2
3	56	5.148-2	5.089-2	5.072-2	5.106-2	5.195-2	5.261-2	5.341-2	5.540-2	5.783-2	6.008-2	6.012-2
3	57	8.236-2	8.179-2	8.180-2	8.250-2	8.400-2	8.505-2	8.632-2	8.943-2	9.319-2	9.664-2	9.655-2
3	58	6.369-2	6.348-2	6.371-2	6.451-2	6.597-2	6.696-2	6.813-2	7.100-2	7.446-2	7.770-2	7.802-2
3	59	4.092-2	4.050-2	4.032-2	4.049-2	4.104-2	4.146-2	4.199-2	4.333-2	4.500-2	4.654-2	4.640-2
3	60	5.297-3	4.858-3	4.511-3	4.264-3	4.112-3	4.068-3	4.041-3	4.035-3	4.075-3	4.117-3	4.030-3
3	61	1.828-2	1.764-2	1.722-2	1.703-2	1.707-2	1.717-2	1.732-2	1.775-2	1.832-2	1.885-2	1.872-2
3	62	7.575-3	7.478-3	7.421-3	7.408-3	7.442-3	7.477-3	7.523-3	7.650-3	7.815-3	7.953-3	7.824-3
3	63	3.697-2	3.685-2	3.701-2	3.747-2	3.828-2	3.882-2	3.946-2	4.101-2	4.286-2	4.458-2	4.464-2
3	64	2.080-1	2.091-1	2.113-1	2.150-1	2.206-1	2.241-1	2.282-1	2.378-1	2.492-1	2.598-1	2.605-1
3	65	6.369-3	6.321-3	6.301-3	6.306-3	6.333-3	6.353-3	6.377-3	6.435-3	6.502-3	6.532-3	6.346-3
3	66	9.140-2	9.199-2	9.304-2	9.475-2	9.726-2	9.886-2	1.007-1	1.051-1	1.103-1	1.151-1	1.156-1
3	67	1.934-2	1.931-2	1.936-2	1.950-2	1.975-2	1.991-2	2.010-2	2.054-2	2.107-2	2.149-2	2.115-2
3	68	2.936-2	2.908-2	2.893-2	2.894-2	2.916-2	2.935-2	2.960-2	3.024-2	3.101-2	3.163-2	3.112-2
3	69	1.285-2	1.261-2	1.243-2	1.233-2	1.231-2	1.234-2	1.239-2	1.254-2	1.276-2	1.292-2	1.266-2
3	70	1.102-3	9.903-4	8.935-4	8.114-4	7.401-4	7.070-4	6.749-4	6.121-4	5.504-4	4.891-4	4.242-4
3	71	8.040-3	7.917-3	7.835-3	7.803-3	7.822-3	7.850-3	7.890-3	8.003-3	8.154-3	8.273-3	8.115-3
3	72	4.947-2	4.969-2	5.018-2	5.103-2	5.234-2	5.318-2	5.415-2	5.649-2	5.925-2	6.180-2	6.200-2
3	73	8.561-2	8.618-2	8.717-2	8.878-2	9.116-2	9.268-2	9.444-2	9.865-2	1.036-1	1.082-1	1.087-1
3	74	3.144-3	2.753-3	2.415-3	2.136-3	1.906-3	1.803-3	1.706-3	1.524-3	1.352-3	1.186-3	1.018-3
3	75	1.264-2	1.197-2	1.135-2	1.072-2	1.004-2	9.669-3	9.263-3	8.351-3	7.319-3	6.208-3	5.067-3
3	76	1.064-1	1.057-1	1.053-1	1.052-1	1.050-1	1.048-1	1.046-1	1.041-1	1.034-1	1.020-1	9.744-2
3	77	2.097-3	1.730-3	1.423-3	1.185-3	1.004-3	9.302-4	8.656-4	7.569-4	6.683-4	5.923-4	5.173-4
3	78	5.178-2	5.157-2	5.130-2	5.074-2	4.968-2	4.891-2	4.796-2	4.552-2	4.241-2	3.869-2	3.416-2
3	79	2.872-2	2.853-2	2.831-2	2.791-2	2.715-2	2.660-2	2.592-2	2.419-2	2.199-2	1.943-2	1.654-2
3	80	8.128-3	8.022-3	7.906-3	7.733-3	7.459-3	7.273-3	7.051-3	6.499-3	5.822-3	5.054-3	4.221-3
3	81	7.183-3	7.032-3	6.908-3	6.811-3	6.735-3	6.702-3	6.673-3	6.621-3	6.577-3	6.499-3	6.224-3
3	82	1.603-2	1.597-2	1.596-2	1.600-2	1.609-2	1.614-2	1.621-2	1.637-2	1.655-2	1.663-2	1.614-2
3	83	6.092-3	6.113-3	6.154-3	6.215-3	6.296-3	6.344-3	6.399-3	6.524-3	6.663-3	6.762-3	6.619-3
3	84	6.154-2	6.130-2	6.112-2	6.103-2	6.102-2	6.104-2	6.106-2	6.112-2	6.112-2	6.063-2	5.812-2
3	85	5.495-2	5.524-2	5.556-2	5.587-2	5.612-2	5.622-2	5.631-2	5.643-2	5.647-2	5.604-2	5.377-2
3	86	2.320-2	2.334-2	2.348-2	2.362-2	2.373-2	2.378-2	2.383-2	2.390-2	2.395-2	2.382-2	2.289-2
3	87	1.716-2	1.691-2	1.660-2	1.615-2	1.552-2	1.512-2	1.467-2	1.358-2	1.228-2	1.081-2	9.198-3
3	88	3.214-3	3.152-3	3.082-3	2.991-3	2.868-3	2.791-3	2.701-3	2.488-3	2.232-3	1.945-3	1.633-3
3	89	1.510-2	1.500-2	1.482-2	1.451-2	1.402-2	1.369-2	1.331-2	1.235-2	1.116-2	9.777-3	8.237-3
3	90	5.134-2	5.113-2	5.063-2	4.963-2	4.800-2	4.691-2	4.561-2	4.240-2	3.837-2	3.366-2	2.837-2
3	91	8.526-3	8.293-3	8.053-3	7.784-3	7.455-3	7.257-3	7.033-3	6.501-3	5.865-3	5.144-3	4.347-3
3	92	9.139-3	9.117-3	9.072-3	8.998-3	8.894-3	8.829-3	8.758-3	8.598-3	8.421-3	8.189-3	7.726-3
3	93	7.208-4	7.133-4	7.007-4	6.814-4	6.533-4	6.353-4	6.144-4	5.642-4	5.042-4	4.371-4	3.646-4
3	94	1.652-3	1.632-3	1.602-3	1.557-3	1.492-3	1.450-3	1.401-3	1.284-3	1.143-3	9.857-4	8.179-4
3	95	1.538-2	1.502-2	1.473-2	1.450-2	1.427-2	1.414-2	1.399-2	1.362-2	1.312-2	1.243-2	1.134-2
3	96	3.757-3	3.756-3	3.756-3	3.760-3	3.767-3	3.771-3	3.775-3	3.785-3	3.796-3	3.781-3	3.639-3
3	97	2.792-4	2.804-4	2.819-4	2.835-4	2.849-4	2.855-4	2.861-4	2.873-4	2.884-4	2.874-4	2.766-4
4	5	6.956-1	7.661-1	7.796-1	7.308-1	6.460-1	6.002-1	5.561-1	4.795-1	4.226-1	3.830-1	3.492-1
4	6	1.467-1	1.325-1	1.115-1	8.759-2	6.486-2	5.485-2	4.596-2	3.162-2	2.139-2	1.434-2	9.593-3
4	7	5.453-1	4.502-1	3.542-1	2.681-1	1.976-1	1.688-1	1.440-1	1.052-1	7.785-2	5.893-2	4.546-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
4	8	8.968-1	7.571-1	6.013-1	4.550-1	3.323-1	2.814-1	2.374-1	1.679-1	1.186-1	8.421-2	6.012-2
4	9	2.196-0	1.824-0	1.433-0	1.079-0	7.909-1	6.738-1	5.739-1	4.202-1	3.160-1	2.474-1	2.003-1
4	10	9.372-2	7.974-2	6.344-2	4.779-2	3.446-2	2.888-2	2.404-2	1.639-2	1.101-2	7.315-3	4.824-3
4	11	3.459-1	3.035-1	2.473-1	1.904-1	1.414-1	1.209-1	1.033-1	7.586-2	5.706-2	4.460-2	3.602-2
4	12	8.689-1	7.119-1	5.542-1	4.124-1	2.959-1	2.481-1	2.069-1	1.421-1	9.673-2	6.547-2	4.412-2
4	13	5.556-0	4.657-0	3.777-0	3.043-0	2.506-0	2.311-0	2.160-0	1.972-0	1.903-0	1.910-0	1.905-0
4	14	2.841-1	2.513-1	2.135-1	1.762-1	1.439-1	1.303-1	1.183-1	9.942-2	8.612-2	7.698-2	6.939-2
4	15	1.446-0	1.224-0	1.045-0	9.142-1	8.323-1	8.079-1	7.932-1	7.892-1	8.134-1	8.539-1	8.750-1
4	16	4.753-1	4.223-1	3.521-1	2.785-1	2.126-1	1.842-1	1.591-1	1.180-1	8.743-2	6.481-2	4.796-2
4	17	7.584-1	6.535-1	5.293-1	4.095-1	3.078-1	2.651-1	2.278-1	1.673-1	1.223-1	8.894-2	6.404-2
4	18	1.973-0	1.844-0	1.748-0	1.701-0	1.711-0	1.736-0	1.772-0	1.877-0	2.020-0	2.180-0	2.270-0
4	19	6.320-1	5.638-1	5.053-1	4.620-1	4.357-1	4.287-1	4.255-1	4.293-1	4.452-1	4.681-1	4.791-1
4	20	1.746-1	1.503-1	1.278-1	1.096-1	9.635-2	9.146-2	8.761-2	8.272-2	8.098-2	8.129-2	8.052-2
4	21	2.434-2	2.105-2	1.775-2	1.468-2	1.196-2	1.074-2	9.625-3	7.651-3	5.981-3	4.576-3	3.409-3
4	22	3.720-0	3.590-0	3.505-0	3.486-0	3.546-0	3.604-0	3.682-0	3.894-0	4.179-0	4.498-0	4.674-0
4	23	1.701-1	1.440-1	1.206-1	1.019-1	8.806-2	8.282-2	7.857-2	7.272-2	6.986-2	6.900-2	6.751-2
4	24	1.028-0	9.783-1	9.423-1	9.265-1	9.329-1	9.442-1	9.607-1	1.009-0	1.076-0	1.153-0	1.193-0
4	25	7.459-1	6.028-1	4.899-1	4.083-1	3.538-1	3.350-1	3.209-1	3.044-1	3.006-1	3.046-1	3.040-1
4	26	4.768-0	4.789-0	4.816-0	4.879-0	5.004-0	5.095-0	5.207-0	5.503-0	5.898-0	6.339-0	6.574-0
4	27	1.277-2	1.090-2	9.162-3	7.679-3	6.516-3	6.051-3	5.656-3	5.040-3	4.602-3	4.266-3	3.908-3
4	28	1.121-1	1.141-1	1.120-1	1.057-1	9.731-2	9.314-2	8.936-2	8.359-2	8.055-2	7.959-2	7.779-2
4	29	8.561-3	7.918-3	7.341-3	6.888-3	6.579-3	6.474-3	6.398-3	6.320-3	6.316-3	6.324-3	6.156-3
4	30	2.096-3	1.865-3	1.657-3	1.486-3	1.357-3	1.306-3	1.264-3	1.200-3	1.157-3	1.122-3	1.064-3
4	31	1.261-3	9.777-4	7.245-4	5.186-4	3.634-4	3.032-4	2.528-4	1.767-4	1.254-4	9.103-5	6.745-5
4	32	2.021-2	1.915-2	1.822-2	1.756-2	1.722-2	1.716-2	1.717-2	1.735-2	1.770-2	1.804-2	1.780-2
4	33	1.629-1	1.587-1	1.551-1	1.530-1	1.529-1	1.535-1	1.545-1	1.577-1	1.619-1	1.656-1	1.638-1
4	34	4.436-3	3.481-3	2.611-3	1.898-3	1.357-3	1.144-3	9.639-4	6.849-4	4.871-4	3.458-4	2.437-4
4	35	5.990-3	4.748-3	3.647-3	2.750-3	2.063-3	1.788-3	1.551-3	1.169-3	8.803-4	6.566-4	4.815-4
4	36	9.721-3	7.814-3	6.183-3	4.862-3	3.832-3	3.408-3	3.034-3	2.402-3	1.885-3	1.454-3	1.093-3
4	37	3.581-4	2.955-4	2.336-4	1.797-4	1.367-4	1.191-4	1.038-4	7.888-5	5.975-5	4.480-5	3.300-5
4	38	1.662-3	1.324-3	1.020-3	7.711-4	5.805-4	5.045-4	4.393-4	3.354-4	2.577-4	1.985-4	1.518-4
4	39	3.842-3	3.084-3	2.388-3	1.816-3	1.379-3	1.206-3	1.059-3	8.262-4	6.565-4	5.295-4	4.279-4
4	40	4.674-3	3.782-3	2.921-3	2.191-3	1.625-3	1.399-3	1.205-3	8.985-4	6.733-4	5.053-4	3.770-4
4	41	5.261-3	4.238-3	3.234-3	2.386-3	1.739-3	1.485-3	1.273-3	9.507-4	7.313-4	5.815-4	4.715-4
4	42	2.481-2	2.125-2	1.782-2	1.490-2	1.252-2	1.151-2	1.058-2	8.915-3	7.446-3	6.124-3	4.919-3
4	43	3.082-2	2.693-2	2.326-2	2.008-2	1.739-2	1.617-2	1.501-2	1.282-2	1.075-2	8.785-3	6.960-3
4	44	4.386-2	3.958-2	3.561-2	3.211-2	2.899-2	2.752-2	2.608-2	2.322-2	2.039-2	1.760-2	1.481-2
4	45	3.160-3	2.475-3	1.883-3	1.416-3	1.065-3	9.261-4	8.065-4	6.134-4	4.657-4	3.500-4	2.582-4
4	46	2.200-3	1.789-3	1.429-3	1.138-3	9.110-4	8.170-4	7.332-4	5.895-4	4.687-4	3.653-4	2.768-4
4	47	1.222-3	1.050-3	8.868-4	7.460-4	6.284-4	5.766-4	5.283-4	4.397-4	3.587-4	2.845-4	2.181-4
4	48	3.401-2	3.388-2	3.398-2	3.433-2	3.494-2	3.533-2	3.578-2	3.681-2	3.800-2	3.901-2	3.864-2
4	49	8.590-3	7.394-3	6.342-3	5.455-3	4.704-3	4.365-3	4.042-3	3.430-3	2.849-3	2.298-3	1.791-3
4	50	6.465-3	5.788-3	5.192-3	4.665-3	4.178-3	3.939-3	3.699-3	3.208-3	2.702-3	2.198-3	1.719-3
4	51	3.139-3	2.944-3	2.766-3	2.601-3	2.441-3	2.360-3	2.275-3	2.098-3	1.909-3	1.712-3	1.496-3
4	52	3.168-2	3.022-2	2.876-2	2.723-2	2.555-2	2.463-2	2.365-2	2.151-2	1.916-2	1.670-2	1.414-2
4	53	3.926-2	3.742-2	3.555-2	3.356-2	3.132-2	3.007-2	2.872-2	2.575-2	2.248-2	1.906-2	1.561-2
4	54	4.694-2	4.474-2	4.240-2	3.983-2	3.690-2	3.526-2	3.349-2	2.956-2	2.522-2	2.070-2	1.629-2
4	55	6.254-3	5.781-3	5.362-3	4.992-3	4.652-3	4.487-3	4.322-3	3.984-3	3.638-3	3.285-3	2.894-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
4	56	1.082-2	9.884-3	9.076-3	8.388-3	7.783-3	7.498-3	7.219-3	6.663-3	6.107-3	5.544-3	4.915-3
4	57	1.319-2	1.216-2	1.123-2	1.039-2	9.626-3	9.251-3	8.875-3	8.109-3	7.322-3	6.519-3	5.660-3
4	58	2.963-1	2.976-1	3.005-1	3.055-1	3.131-1	3.181-1	3.238-1	3.375-1	3.538-1	3.689-1	3.701-1
4	59	2.521-1	2.533-1	2.557-1	2.599-1	2.662-1	2.702-1	2.748-1	2.858-1	2.987-1	3.105-1	3.106-1
4	60	9.158-3	8.619-3	8.092-3	7.573-3	7.044-3	6.767-3	6.478-3	5.863-3	5.209-3	4.536-3	3.843-3
4	61	2.067-2	2.010-2	1.955-2	1.904-2	1.856-2	1.832-2	1.808-2	1.761-2	1.712-2	1.657-2	1.560-2
4	62	7.672-3	7.363-3	7.017-3	6.621-3	6.155-3	5.890-3	5.600-3	4.949-3	4.222-3	3.462-3	2.719-3
4	63	1.357-2	1.304-2	1.247-2	1.186-2	1.116-2	1.077-2	1.034-2	9.397-3	8.350-3	7.248-3	6.103-3
4	64	6.713-2	6.710-2	6.730-2	6.786-2	6.887-2	6.956-2	7.039-2	7.241-2	7.487-2	7.706-2	7.649-2
4	65	1.280-3	1.218-3	1.152-3	1.081-3	1.005-3	9.634-4	9.196-4	8.244-4	7.215-4	6.152-4	5.080-4
4	66	5.621-2	5.602-2	5.597-2	5.613-2	5.653-2	5.682-2	5.718-2	5.809-2	5.921-2	6.009-2	5.894-2
4	67	4.370-3	4.157-3	3.925-3	3.672-3	3.389-3	3.233-3	3.065-3	2.696-3	2.291-3	1.872-3	1.467-3
4	68	1.009-2	9.739-3	9.326-3	8.850-3	8.296-3	7.983-3	7.643-3	6.889-3	6.054-3	5.179-3	4.290-3
4	69	5.717-2	5.720-2	5.754-2	5.831-2	5.962-2	6.050-2	6.152-2	6.400-2	6.693-2	6.962-2	6.968-2
4	70	1.060-2	1.037-2	1.009-2	9.722-3	9.264-3	8.993-3	8.693-3	8.006-3	7.225-3	6.383-3	5.473-3
4	71	1.829-2	1.827-2	1.836-2	1.858-2	1.898-2	1.924-2	1.955-2	2.032-2	2.122-2	2.206-2	2.206-2
4	72	2.280-3	2.063-3	1.852-3	1.661-3	1.489-3	1.409-3	1.331-3	1.179-3	1.030-3	8.833-4	7.370-4
4	73	1.259-2	1.236-2	1.220-2	1.213-2	1.218-2	1.224-2	1.233-2	1.260-2	1.295-2	1.326-2	1.312-2
4	74	9.246-3	8.844-3	8.482-3	8.196-3	7.997-3	7.929-3	7.880-3	7.834-3	7.845-3	7.848-3	7.617-3
4	75	5.726-3	5.252-3	4.737-3	4.246-3	3.794-3	3.579-3	3.370-3	2.959-3	2.556-3	2.163-3	1.780-3
4	76	1.838-2	1.751-2	1.663-2	1.587-2	1.527-2	1.503-2	1.482-2	1.447-2	1.422-2	1.394-2	1.330-2
4	77	7.585-2	7.552-2	7.565-2	7.638-2	7.780-2	7.878-2	7.994-2	8.279-2	8.618-2	8.921-2	8.890-2
4	78	8.910-3	8.662-3	8.422-3	8.192-3	7.962-3	7.842-3	7.718-3	7.456-3	7.176-3	6.858-3	6.376-3
4	79	4.595-3	4.420-3	4.259-3	4.123-3	4.014-3	3.968-3	3.929-3	3.865-3	3.819-3	3.767-3	3.609-3
4	80	2.295-3	2.213-3	2.143-3	2.085-3	2.040-3	2.021-3	2.004-3	1.977-3	1.959-3	1.938-3	1.863-3
4	81	4.673-2	4.603-2	4.538-2	4.463-2	4.363-2	4.299-2	4.223-2	4.036-2	3.801-2	3.515-2	3.145-2
4	82	6.996-2	6.991-2	7.026-2	7.102-2	7.221-2	7.297-2	7.385-2	7.594-2	7.837-2	8.038-2	7.944-2
4	83	2.116-2	2.123-2	2.139-2	2.166-2	2.204-2	2.228-2	2.255-2	2.319-2	2.393-2	2.453-2	2.421-2
4	84	7.106-3	6.992-3	6.903-3	6.831-3	6.766-3	6.731-3	6.695-3	6.610-3	6.506-3	6.344-3	5.989-3
4	85	1.583-2	1.587-2	1.595-2	1.607-2	1.624-2	1.634-2	1.646-2	1.672-2	1.701-2	1.720-2	1.678-2
4	86	6.351-3	6.376-3	6.413-3	6.462-3	6.522-3	6.558-3	6.597-3	6.686-3	6.785-3	6.839-3	6.655-3
4	87	1.215-1	1.217-1	1.216-1	1.208-1	1.192-1	1.180-1	1.165-1	1.126-1	1.076-1	1.012-1	9.208-2
4	88	3.814-3	3.479-3	3.201-3	2.957-3	2.724-3	2.603-3	2.478-3	2.211-3	1.922-3	1.623-3	1.323-3
4	89	6.800-3	6.367-3	5.988-3	5.626-3	5.246-3	5.038-3	4.814-3	4.314-3	3.752-3	3.154-3	2.547-3
4	90	9.342-3	8.888-3	8.459-3	8.021-3	7.533-3	7.259-3	6.959-3	6.282-3	5.511-3	4.678-3	3.818-3
4	91	2.494-2	2.399-2	2.325-2	2.266-2	2.215-2	2.189-2	2.161-2	2.098-2	2.020-2	1.914-2	1.748-2
4	92	1.161-1	1.166-1	1.170-1	1.173-1	1.174-1	1.175-1	1.176-1	1.177-1	1.177-1	1.168-1	1.121-1
4	93	5.230-4	5.090-4	4.934-4	4.740-4	4.486-4	4.332-4	4.158-4	3.748-4	3.269-4	2.748-4	2.217-4
4	94	1.658-3	1.613-3	1.562-3	1.499-3	1.417-3	1.367-3	1.310-3	1.176-3	1.019-3	8.473-4	6.742-4
4	95	6.003-3	5.873-3	5.748-3	5.611-3	5.444-3	5.343-3	5.228-3	4.953-3	4.620-3	4.225-3	3.736-3
4	96	6.914-2	6.930-2	6.958-2	7.001-2	7.062-2	7.098-2	7.139-2	7.230-2	7.327-2	7.371-2	7.153-2
4	97	3.596-3	3.643-3	3.710-3	3.808-3	3.944-3	4.028-3	4.123-3	4.345-3	4.599-3	4.830-3	4.857-3
5	6	5.320-3	4.918-3	4.243-3	3.404-3	2.556-3	2.170-3	1.821-3	1.248-3	8.327-4	5.458-4	3.536-4
5	7	6.289-2	5.580-2	4.578-2	3.529-2	2.612-2	2.228-2	1.899-2	1.389-2	1.046-2	8.238-3	6.715-3
5	8	5.658-2	4.956-2	4.040-2	3.092-2	2.245-2	1.883-2	1.566-2	1.061-2	7.043-3	4.614-3	2.995-3
5	9	5.788-2	5.107-2	4.210-2	3.254-2	2.379-2	2.001-2	1.667-2	1.133-2	7.540-3	4.954-3	3.228-3
5	10	2.198-2	1.988-2	1.722-2	1.440-2	1.176-2	1.057-2	9.476-3	7.549-3	5.934-3	4.576-3	3.441-3
5	11	9.224-2	8.236-2	7.065-2	5.885-2	4.839-2	4.390-2	3.992-2	3.337-2	2.843-2	2.465-2	2.138-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
5	12	1.197-1	1.027-1	8.479-2	6.785-2	5.313-2	4.677-2	4.109-2	3.152-2	2.396-2	1.798-2	1.323-2
5	13	1.999-1	1.710-1	1.396-1	1.085-1	8.047-2	6.824-2	5.738-2	3.975-2	2.700-2	1.811-2	1.203-2
5	14	4.149-2	3.711-2	3.155-2	2.546-2	1.967-2	1.709-2	1.474-2	1.083-2	7.838-3	5.603-3	3.948-3
5	15	3.193-1	2.859-1	2.501-1	2.178-1	1.937-1	1.852-1	1.790-1	1.730-1	1.743-1	1.801-1	1.828-1
5	16	5.465-2	5.007-2	4.335-2	3.563-2	2.810-2	2.468-2	2.155-2	1.624-2	1.209-2	8.911-3	6.484-3
5	17	5.797-2	5.266-2	4.542-2	3.773-2	3.060-2	2.739-2	2.444-2	1.927-2	1.496-2	1.139-2	8.459-3
5	18	3.069-1	2.964-1	2.759-1	2.559-1	2.431-1	2.401-1	2.393-1	2.439-1	2.557-1	2.713-1	2.796-1
5	19	7.225-2	6.039-2	4.765-2	3.605-2	2.649-2	2.253-2	1.910-2	1.362-2	9.638-3	6.779-3	4.727-3
5	20	4.371-2	3.701-2	3.047-2	2.458-2	1.966-2	1.762-2	1.584-2	1.305-2	1.112-2	9.826-3	8.797-3
5	21	1.081-2	8.996-3	7.275-3	5.776-3	4.538-3	4.012-3	3.541-3	2.742-3	2.098-3	1.578-3	1.160-3
5	22	1.858-1	1.507-1	1.157-1	8.536-2	6.105-2	5.118-2	4.272-2	2.949-2	2.025-2	1.388-2	9.517-3
5	23	3.338-2	2.680-2	2.100-2	1.611-2	1.218-2	1.056-2	9.142-3	6.862-3	5.180-3	3.948-3	3.027-3
5	24	5.582-2	4.597-2	3.629-2	2.771-2	2.063-2	1.767-2	1.508-2	1.089-2	7.792-3	5.519-3	3.862-3
5	25	3.780-2	3.000-2	2.310-2	1.739-2	1.288-2	1.103-2	9.422-3	6.818-3	4.875-3	3.435-3	2.381-3
5	26	6.178-2	5.360-2	4.657-2	4.027-2	3.483-2	3.253-2	3.055-2	2.755-2	2.574-2	2.476-2	2.368-2
5	27	1.030-3	8.559-4	6.975-4	5.596-4	4.485-4	4.036-4	3.654-4	3.066-4	2.667-4	2.392-4	2.152-4
5	28	2.057-0	2.057-0	2.072-0	2.113-0	2.186-0	2.236-0	2.295-0	2.442-0	2.630-0	2.836-0	2.947-0
5	29	3.626-4	2.950-4	2.300-4	1.718-4	1.241-4	1.045-4	8.759-5	6.092-5	4.193-5	2.862-5	1.935-5
5	30	1.810-4	1.521-4	1.222-4	9.412-5	7.023-5	6.021-5	5.149-5	3.755-5	2.746-5	2.019-5	1.484-5
5	31	2.359-4	2.040-4	1.714-4	1.410-4	1.149-4	1.034-4	9.305-5	7.486-5	5.942-5	4.619-5	3.492-5
5	32	2.757-3	2.691-3	2.628-3	2.585-3	2.568-3	2.570-3	2.578-3	2.610-3	2.659-3	2.700-3	2.654-3
5	33	2.095-2	2.083-2	2.076-2	2.080-2	2.101-2	2.117-2	2.138-2	2.189-2	2.250-2	2.302-2	2.275-2
5	34	4.211-4	3.470-4	2.762-4	2.143-4	1.642-4	1.434-4	1.252-4	9.534-5	7.222-5	5.408-5	3.974-5
5	35	1.519-4	1.279-4	1.005-4	7.411-5	5.207-5	4.306-5	3.535-5	2.345-5	1.532-5	9.905-6	6.362-6
5	36	2.236-4	1.851-4	1.435-4	1.050-4	7.351-5	6.076-5	4.991-5	3.320-5	2.179-5	1.417-5	9.164-6
5	37	3.863-5	3.194-5	2.472-5	1.809-5	1.270-5	1.053-5	8.692-6	5.864-6	3.937-6	2.646-6	1.783-6
5	38	1.258-4	1.030-4	7.963-5	5.882-5	4.213-5	3.541-5	2.967-5	2.072-5	1.441-5	9.982-6	6.862-6
5	39	2.695-4	2.293-4	1.875-4	1.499-4	1.196-4	1.073-4	9.672-5	7.997-5	6.782-5	5.877-5	5.097-5
5	40	3.979-4	3.357-4	2.695-4	2.090-4	1.591-4	1.385-4	1.204-4	9.087-5	6.824-5	5.069-5	3.699-5
5	41	1.702-4	1.419-4	1.101-4	8.032-5	5.602-5	4.620-5	3.786-5	2.506-5	1.636-5	1.058-5	6.805-6
5	42	1.554-3	1.376-3	1.194-3	1.038-3	9.212-4	8.780-4	8.440-4	7.998-4	7.802-4	7.725-4	7.493-4
5	43	1.262-3	1.028-3	7.838-4	5.678-4	3.970-4	3.290-4	2.714-4	1.830-4	1.223-4	8.115-5	5.347-5
5	44	1.396-3	1.134-3	8.652-4	6.279-4	4.398-4	3.647-4	3.010-4	2.031-4	1.357-4	9.002-5	5.927-5
5	45	2.882-4	2.294-4	1.727-4	1.249-4	8.795-5	7.337-5	6.106-5	4.210-5	2.891-5	1.976-5	1.340-5
5	46	1.945-4	1.578-4	1.198-4	8.617-5	5.965-5	4.912-5	4.026-5	2.676-5	1.765-5	1.162-5	7.657-6
5	47	1.108-4	9.059-5	6.908-5	4.976-5	3.437-5	2.823-5	2.306-5	1.518-5	9.873-6	6.370-6	4.088-6
5	48	5.545-3	5.055-3	4.399-3	3.729-3	3.141-3	2.891-3	2.669-3	2.301-3	2.007-3	1.753-3	1.502-3
5	49	5.824-4	4.768-4	3.729-4	2.836-4	2.134-4	1.851-4	1.607-4	1.217-4	9.266-5	7.060-5	5.341-5
5	50	3.734-4	3.004-4	2.316-4	1.739-4	1.290-4	1.110-4	9.552-5	7.065-5	5.206-5	3.799-5	2.729-5
5	51	4.409-4	3.606-4	2.862-4	2.243-4	1.766-4	1.576-4	1.414-4	1.159-4	9.688-5	8.188-5	6.853-5
5	52	9.289-4	7.585-4	5.909-4	4.447-4	3.276-4	2.798-4	2.383-4	1.719-4	1.229-4	8.687-5	6.046-5
5	53	1.544-3	1.248-3	9.584-4	7.104-4	5.152-4	4.365-4	3.690-4	2.622-4	1.850-4	1.293-4	8.931-5
5	54	1.750-3	1.385-3	1.053-3	7.806-4	5.700-4	4.853-4	4.125-4	2.962-4	2.106-4	1.477-4	1.019-4
5	55	3.137-3	2.982-3	2.804-3	2.612-3	2.400-3	2.284-3	2.162-3	1.896-3	1.608-3	1.312-3	1.027-3
5	56	4.842-3	4.610-3	4.350-3	4.065-3	3.748-3	3.574-3	3.387-3	2.977-3	2.531-3	2.071-3	1.625-3
5	57	6.340-3	6.036-3	5.690-3	5.310-3	4.888-3	4.657-3	4.410-3	3.870-3	3.282-3	2.679-3	2.096-3
5	58	7.703-3	6.071-3	4.521-3	3.250-3	2.301-3	1.937-3	1.635-3	1.182-3	8.799-4	6.754-4	5.274-4
5	59	4.294-3	3.486-3	2.686-3	2.006-3	1.477-3	1.265-3	1.084-3	7.947-4	5.814-4	4.221-4	3.022-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
5	60	8.630-4	6.723-4	5.092-4	3.813-4	2.859-4	2.483-4	2.162-4	1.648-4	1.262-4	9.644-5	7.297-5
5	61	1.213-3	9.215-4	6.754-4	4.849-4	3.453-4	2.912-4	2.455-4	1.745-4	1.236-4	8.674-5	6.008-5
5	62	8.039-4	7.193-4	6.396-4	5.666-4	4.987-4	4.658-4	4.332-4	3.684-4	3.046-4	2.436-4	1.877-4
5	63	1.890-3	1.738-3	1.601-3	1.478-3	1.365-3	1.310-3	1.256-3	1.147-3	1.039-3	9.327-4	8.188-4
5	64	1.672-3	1.233-3	8.820-4	6.200-4	4.339-4	3.635-4	3.051-4	2.166-4	1.555-4	1.126-4	8.179-5
5	65	2.826-4	2.343-4	1.938-4	1.618-4	1.371-4	1.269-4	1.179-4	1.022-4	8.866-5	7.634-5	6.425-5
5	66	3.346-3	3.000-3	2.690-3	2.412-3	2.151-3	2.023-3	1.894-3	1.632-3	1.365-3	1.103-3	8.568-4
5	67	4.848-4	3.880-4	3.081-4	2.455-4	1.970-4	1.769-4	1.588-4	1.273-4	1.006-4	7.754-5	5.799-5
5	68	7.766-4	6.586-4	5.584-4	4.782-4	4.142-4	3.866-4	3.612-4	3.151-4	2.738-4	2.365-4	2.009-4
5	69	6.493-4	5.255-4	4.232-4	3.428-4	2.803-4	2.542-4	2.306-4	1.891-4	1.529-4	1.207-4	9.233-5
5	70	7.288-4	6.352-4	5.532-4	4.821-4	4.187-4	3.887-4	3.594-4	3.018-4	2.459-4	1.933-4	1.462-4
5	71	3.972-3	3.841-3	3.689-3	3.507-3	3.281-3	3.148-3	3.001-3	2.663-3	2.279-3	1.872-3	1.471-3
5	72	1.058-2	1.033-2	1.004-2	9.702-3	9.291-3	9.050-3	8.784-3	8.177-3	7.490-3	6.745-3	5.907-3
5	73	1.341-2	1.300-2	1.251-2	1.192-2	1.118-2	1.073-2	1.024-2	9.100-3	7.799-3	6.417-3	5.052-3
5	74	9.538-3	9.478-3	9.497-3	9.606-3	9.814-3	9.957-3	1.013-2	1.055-2	1.105-2	1.152-2	1.156-2
5	75	2.762-3	2.575-3	2.393-3	2.213-3	2.027-3	1.929-3	1.826-3	1.603-3	1.362-3	1.113-3	8.727-4
5	76	7.618-4	6.177-4	4.906-4	3.854-4	3.012-4	2.657-4	2.339-4	1.794-4	1.351-4	9.926-5	7.102-5
5	77	8.122-2	8.141-2	8.216-2	8.353-2	8.561-2	8.694-2	8.846-2	9.212-2	9.645-2	1.004-1	1.006-1
5	78	3.265-3	3.109-3	2.950-3	2.779-3	2.581-3	2.469-3	2.347-3	2.073-3	1.768-3	1.449-3	1.138-3
5	79	8.657-3	8.540-3	8.423-3	8.294-3	8.140-3	8.051-3	7.954-3	7.732-3	7.482-3	7.183-3	6.701-3
5	80	3.775-3	3.696-3	3.585-3	3.434-3	3.231-3	3.107-3	2.967-3	2.642-3	2.267-3	1.869-3	1.474-3
5	81	1.123-1	1.133-1	1.148-1	1.171-1	1.203-1	1.222-1	1.245-1	1.298-1	1.361-1	1.418-1	1.422-1
5	82	2.328-4	2.093-4	1.850-4	1.633-4	1.453-4	1.376-4	1.305-4	1.176-4	1.052-4	9.223-5	7.819-5
5	83	1.680-3	1.628-3	1.563-3	1.494-3	1.423-3	1.386-3	1.348-3	1.267-3	1.180-3	1.082-3	9.601-4
5	84	2.854-3	2.867-3	2.893-3	2.936-3	3.001-3	3.043-3	3.091-3	3.208-3	3.347-3	3.474-3	3.469-3
5	85	5.913-5	5.232-5	4.624-5	4.104-5	3.651-5	3.438-5	3.230-5	2.814-5	2.391-5	1.966-5	1.555-5
5	86	2.804-4	2.691-4	2.576-4	2.470-4	2.367-4	2.314-4	2.259-4	2.141-4	2.011-4	1.860-4	1.662-4
5	87	1.398-3	1.132-3	9.259-4	7.728-4	6.583-4	6.110-4	5.684-4	4.923-4	4.234-4	3.581-4	2.945-4
5	88	4.250-4	3.657-4	3.212-4	2.893-4	2.672-4	2.591-4	2.527-4	2.438-4	2.395-4	2.372-4	2.293-4
5	89	3.885-4	3.077-4	2.445-4	1.964-4	1.591-4	1.434-4	1.292-4	1.039-4	8.195-5	6.301-5	4.701-5
5	90	4.368-4	3.521-4	2.822-4	2.273-4	1.842-4	1.659-4	1.492-4	1.195-4	9.359-5	7.122-5	5.247-5
5	91	3.574-2	3.604-2	3.612-2	3.595-2	3.550-2	3.516-2	3.473-2	3.361-2	3.212-2	3.021-2	2.748-2
5	92	5.301-4	5.093-4	4.923-4	4.772-4	4.622-4	4.542-4	4.458-4	4.276-4	4.073-4	3.837-4	3.506-4
5	93	1.153-4	1.101-4	1.058-4	1.020-4	9.834-5	9.638-5	9.432-5	8.981-5	8.471-5	7.860-5	7.044-5
5	94	9.791-5	8.755-5	7.854-5	7.066-5	6.336-5	5.974-5	5.605-5	4.834-5	4.025-5	3.217-5	2.460-5
5	95	1.145-3	1.132-3	1.115-3	1.093-3	1.063-3	1.044-3	1.022-3	9.686-4	9.036-4	8.270-4	7.326-4
5	96	1.784-2	1.762-2	1.733-2	1.689-2	1.628-2	1.588-2	1.542-2	1.430-2	1.293-2	1.136-2	9.597-3
5	97	4.107-3	4.138-3	4.165-3	4.173-3	4.147-3	4.122-3	4.088-3	4.002-3	3.887-3	3.717-3	3.421-3
6	7	1.958-1	1.816-1	1.621-1	1.367-1	1.089-1	9.554-2	8.307-2	6.157-2	4.481-2	3.218-2	2.283-2
6	8	3.648-1	3.363-1	2.957-1	2.458-1	1.939-1	1.695-1	1.471-1	1.089-1	7.943-2	5.751-2	4.134-2
6	9	6.697-1	5.892-1	5.011-1	4.071-1	3.159-1	2.745-1	2.367-1	1.733-1	1.253-1	9.004-2	6.433-2
6	10	4.023-2	3.742-2	3.254-2	2.656-2	2.068-2	1.804-2	1.568-2	1.182-2	9.026-3	7.134-3	5.861-3
6	11	1.443-1	1.358-1	1.191-1	9.739-2	7.506-2	6.481-2	5.550-2	4.002-2	2.856-2	2.045-2	1.482-2
6	12	2.752-1	2.540-1	2.191-1	1.768-1	1.345-1	1.153-1	9.795-2	6.916-2	4.781-2	3.255-2	2.189-2
6	13	6.007-2	5.276-2	4.376-2	3.398-2	2.488-2	2.090-2	1.739-2	1.177-2	7.785-3	5.074-3	3.275-3
6	14	2.469-2	2.212-2	1.852-2	1.444-2	1.059-2	8.896-3	7.402-3	5.005-3	3.308-3	2.154-3	1.389-3
6	15	6.531-2	5.633-2	4.524-2	3.411-2	2.451-2	2.051-2	1.706-2	1.168-2	7.958-3	5.461-3	3.802-3
6	16	4.327-2	3.868-2	3.220-2	2.497-2	1.822-2	1.529-2	1.270-2	8.572-3	5.662-3	3.688-3	2.381-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
6	17	4.158-2	3.766-2	3.155-2	2.454-2	1.795-2	1.508-2	1.254-2	8.493-3	5.639-3	3.707-3	2.427-3
6	18	5.844-2	4.987-2	3.956-2	2.951-2	2.102-2	1.753-2	1.453-2	9.876-3	6.668-3	4.516-3	3.088-3
6	19	7.153-2	6.236-2	5.033-2	3.810-2	2.751-2	2.308-2	1.925-2	1.320-2	8.936-3	5.997-3	3.993-3
6	20	5.031-2	4.272-2	3.395-2	2.551-2	1.840-2	1.546-2	1.293-2	8.950-3	6.144-3	4.197-3	2.855-3
6	21	1.457-2	1.224-2	9.623-3	7.165-3	5.141-3	4.317-3	3.613-3	2.525-3	1.775-3	1.271-3	9.298-4
6	22	2.956-2	2.466-2	1.930-2	1.432-2	1.022-2	8.553-3	7.123-3	4.893-3	3.336-3	2.264-3	1.528-3
6	23	4.710-2	4.014-2	3.202-2	2.426-2	1.774-2	1.505-2	1.272-2	9.042-3	6.405-3	4.530-3	3.192-3
6	24	9.000-2	7.570-2	5.969-2	4.470-2	3.233-2	2.726-2	2.291-2	1.607-2	1.122-2	7.808-3	5.407-3
6	25	1.241-1	1.033-1	8.128-2	6.108-2	4.448-2	3.768-2	3.183-2	2.260-2	1.599-2	1.129-2	7.918-3
6	26	4.518-3	3.743-3	2.892-3	2.109-3	1.472-3	1.215-3	9.969-4	6.619-4	4.339-4	2.822-4	1.825-4
6	27	1.067-1	9.871-2	9.084-2	8.331-2	7.585-2	7.201-2	6.803-2	5.962-2	5.071-2	4.172-2	3.309-2
6	28	3.984-3	3.147-3	2.347-3	1.681-3	1.179-3	9.858-4	8.264-4	5.915-4	4.415-4	3.494-4	2.896-4
6	29	6.332-2	5.788-2	5.277-2	4.802-2	4.342-2	4.109-2	3.869-2	3.364-2	2.834-2	2.300-2	1.793-2
6	30	2.149-2	1.949-2	1.764-2	1.596-2	1.436-2	1.356-2	1.274-2	1.105-2	9.282-3	7.515-3	5.844-3
6	31	8.944-2	7.094-2	5.572-2	4.417-2	3.586-2	3.270-2	3.008-2	2.615-2	2.358-2	2.191-2	2.035-2
6	32	1.088-1	8.960-2	7.264-2	5.928-2	4.946-2	4.568-2	4.253-2	3.779-2	3.471-2	3.272-2	3.070-2
6	33	1.928-2	1.629-2	1.364-2	1.149-2	9.813-3	9.116-3	8.492-3	7.422-3	6.536-3	5.786-3	5.069-3
6	34	1.727-1	1.399-1	1.123-1	9.127-2	7.613-2	7.037-2	6.561-2	5.854-2	5.405-2	5.124-2	4.833-2
6	35	1.900-1	1.550-1	1.254-1	1.028-1	8.645-2	8.022-2	7.504-2	6.730-2	6.232-2	5.914-2	5.576-2
6	36	2.203-1	1.785-1	1.447-1	1.195-1	1.016-1	9.488-2	8.932-2	8.111-2	7.599-2	7.287-2	6.927-2
6	37	5.693-3	4.737-3	3.917-3	3.247-3	2.698-3	2.455-3	2.228-3	1.810-3	1.434-3	1.100-3	8.142-4
6	38	2.732-2	2.375-2	2.087-2	1.874-2	1.722-2	1.664-2	1.615-2	1.541-2	1.497-2	1.474-2	1.428-2
6	39	6.678-2	6.102-2	5.671-2	5.401-2	5.268-2	5.242-2	5.240-2	5.300-2	5.443-2	5.631-2	5.669-2
6	40	1.160-1	1.069-1	1.003-1	9.664-2	9.534-2	9.544-2	9.596-2	9.820-2	1.020-1	1.065-1	1.079-1
6	41	7.086-2	5.625-2	4.453-2	3.556-2	2.870-2	2.585-2	2.329-2	1.883-2	1.506-2	1.188-2	9.191-3
6	42	1.898-2	1.642-2	1.440-2	1.277-2	1.135-2	1.068-2	1.002-2	8.704-3	7.395-3	6.125-3	4.923-3
6	43	3.008-2	2.666-2	2.407-2	2.210-2	2.050-2	1.979-2	1.911-2	1.783-2	1.665-2	1.556-2	1.428-2
6	44	2.458-2	2.156-2	1.913-2	1.708-2	1.524-2	1.434-2	1.344-2	1.160-2	9.735-3	7.903-3	6.182-3
6	45	5.276-0	5.312-0	5.398-0	5.551-0	5.776-0	5.916-0	6.076-0	6.460-0	6.937-0	7.447-0	7.701-0
6	46	3.763-0	3.791-0	3.854-0	3.962-0	4.120-0	4.218-0	4.330-0	4.599-0	4.935-0	5.297-0	5.478-0
6	47	2.274-0	2.291-0	2.328-0	2.393-0	2.486-0	2.544-0	2.610-0	2.769-0	2.971-0	3.189-0	3.299-0
6	48	1.948-4	1.721-4	1.504-4	1.310-4	1.136-4	1.054-4	9.750-5	8.220-5	6.752-5	5.374-5	4.127-5
6	49	3.419-2	3.404-2	3.406-2	3.435-2	3.492-2	3.533-2	3.584-2	3.716-2	3.899-2	4.106-2	4.186-2
6	50	1.034-2	1.021-2	1.011-2	1.007-2	1.009-2	1.012-2	1.017-2	1.036-2	1.067-2	1.106-2	1.113-2
6	51	8.247-4	7.721-4	7.179-4	6.598-4	5.951-4	5.597-4	5.225-4	4.438-4	3.634-4	2.866-4	2.177-4
6	52	4.432-4	3.394-4	2.569-4	1.954-4	1.519-4	1.354-4	1.219-4	1.018-4	8.882-5	8.059-5	7.379-5
6	53	6.623-4	5.175-4	3.979-4	3.054-4	2.359-4	2.080-4	1.837-4	1.433-4	1.113-4	8.543-5	6.440-5
6	54	9.865-4	7.246-4	5.115-4	3.516-4	2.380-4	1.952-4	1.598-4	1.070-4	7.158-5	4.781-5	3.185-5
6	55	4.551-3	4.397-3	4.218-3	4.001-3	3.734-3	3.580-3	3.413-3	3.051-3	2.675-3	2.313-3	1.964-3
6	56	1.275-2	1.247-2	1.218-2	1.188-2	1.156-2	1.140-2	1.123-2	1.093-2	1.070-2	1.053-2	1.016-2
6	57	3.379-2	3.348-2	3.329-2	3.327-2	3.346-2	3.364-2	3.390-2	3.468-2	3.591-2	3.737-2	3.774-2
6	58	1.436-3	1.325-3	1.223-3	1.125-3	1.023-3	9.698-4	9.137-4	7.941-4	6.675-4	5.406-4	4.207-4
6	59	1.537-3	1.456-3	1.378-3	1.300-3	1.217-3	1.173-3	1.126-3	1.028-3	9.258-4	8.250-4	7.203-4
6	60	1.289-2	1.257-2	1.214-2	1.155-2	1.077-2	1.030-2	9.784-3	8.607-3	7.301-3	5.956-3	4.664-3
6	61	1.801-2	1.756-2	1.696-2	1.618-2	1.517-2	1.456-2	1.390-2	1.239-2	1.073-2	9.038-3	7.374-3
6	62	1.522-3	1.470-3	1.405-3	1.322-3	1.217-3	1.156-3	1.089-3	9.422-4	7.876-4	6.376-4	5.004-4
6	63	4.272-3	4.145-3	3.990-3	3.794-3	3.546-3	3.401-3	3.243-3	2.896-3	2.528-3	2.166-3	1.814-3
6	64	2.671-2	2.610-2	2.523-2	2.403-2	2.243-2	2.146-2	2.038-2	1.792-2	1.519-2	1.237-2	9.665-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
6	65	1.791-3	1.745-3	1.682-3	1.595-3	1.479-3	1.410-3	1.333-3	1.161-3	9.719-4	7.812-4	6.022-4
6	66	8.694-3	8.531-3	8.319-3	8.047-3	7.707-3	7.511-3	7.300-3	6.848-3	6.392-3	5.955-3	5.450-3
6	67	5.341-3	5.221-3	5.056-3	4.831-3	4.535-3	4.359-3	4.165-3	3.733-3	3.270-3	2.808-3	2.352-3
6	68	9.515-3	9.340-3	9.105-3	8.797-3	8.404-3	8.176-3	7.929-3	7.395-3	6.851-3	6.327-3	5.740-3
6	69	1.608-4	1.427-4	1.271-4	1.133-4	1.004-4	9.393-5	8.746-5	7.443-5	6.161-5	4.962-5	3.885-5
6	70	3.198-4	3.072-4	2.970-4	2.892-4	2.840-4	2.823-4	2.814-4	2.820-4	2.868-4	2.941-4	2.939-4
6	71	8.676-4	8.397-4	8.039-4	7.571-4	6.967-4	6.611-4	6.221-4	5.359-4	4.444-4	3.552-4	2.741-4
6	72	1.713-3	1.658-3	1.592-3	1.508-3	1.404-3	1.344-3	1.279-3	1.137-3	9.906-4	8.500-4	7.161-4
6	73	6.834-3	6.745-3	6.637-3	6.511-3	6.375-3	6.306-3	6.239-3	6.127-3	6.068-3	6.052-3	5.906-3
6	74	2.970-3	2.884-3	2.773-3	2.628-3	2.442-3	2.333-3	2.212-3	1.942-3	1.647-3	1.348-3	1.063-3
6	75	3.077-3	2.987-3	2.871-3	2.720-3	2.525-3	2.411-3	2.284-3	2.000-3	1.689-3	1.371-3	1.069-3
6	76	3.664-3	3.544-3	3.396-3	3.210-3	2.975-3	2.838-3	2.688-3	2.352-3	1.984-3	1.611-3	1.256-3
6	77	2.632-4	2.519-4	2.390-4	2.240-4	2.062-4	1.962-4	1.853-4	1.617-4	1.368-4	1.121-4	8.907-5
6	78	4.973-3	4.892-3	4.777-3	4.628-3	4.447-3	4.346-3	4.240-3	4.026-3	3.832-3	3.666-3	3.451-3
6	79	2.729-3	2.665-3	2.573-3	2.447-3	2.284-3	2.188-3	2.084-3	1.857-3	1.624-3	1.402-3	1.190-3
6	80	1.471-3	1.432-3	1.375-3	1.295-3	1.190-3	1.127-3	1.058-3	9.066-4	7.462-4	5.909-4	4.511-4
6	81	1.029-4	9.779-5	9.186-5	8.500-5	7.701-5	7.255-5	6.779-5	5.757-5	4.695-5	3.673-5	2.759-5
6	82	2.985-5	2.847-5	2.690-5	2.509-5	2.297-5	2.179-5	2.054-5	1.790-5	1.522-5	1.267-5	1.030-5
6	83	1.699-5	1.620-5	1.529-5	1.419-5	1.286-5	1.211-5	1.131-5	9.610-6	7.871-6	6.220-6	4.745-6
6	84	1.053-3	1.027-3	9.935-4	9.518-4	9.022-4	8.748-4	8.459-4	7.866-4	7.305-4	6.806-4	6.249-4
6	85	5.223-4	5.082-4	4.889-4	4.635-4	4.313-4	4.128-4	3.931-4	3.512-4	3.092-4	2.699-4	2.318-4
6	86	1.466-4	1.426-4	1.366-4	1.282-4	1.172-4	1.108-4	1.038-4	8.869-5	7.303-5	5.797-5	4.435-5
6	87	7.128-6	6.262-6	5.562-6	4.954-6	4.373-6	4.080-6	3.783-6	3.176-6	2.577-6	2.017-6	1.524-6
6	88	7.729-4	7.525-4	7.251-4	6.882-4	6.393-4	6.099-4	5.774-4	5.039-4	4.232-4	3.412-4	2.638-4
6	89	1.025-3	9.980-4	9.618-4	9.131-4	8.486-4	8.099-4	7.669-4	6.700-4	5.634-4	4.550-4	3.524-4
6	90	1.254-3	1.224-3	1.181-3	1.122-3	1.044-3	9.966-4	9.441-4	8.253-4	6.942-4	5.608-4	4.344-4
6	91	1.421-5	1.395-5	1.361-5	1.313-5	1.250-5	1.211-5	1.168-5	1.076-5	9.801-6	8.881-6	7.908-6
6	92	1.556-6	1.401-6	1.278-6	1.166-6	1.053-6	9.923-7	9.291-7	7.950-7	6.559-7	5.210-7	3.982-7
6	93	5.133-5	4.996-5	4.815-5	4.565-5	4.220-5	4.008-5	3.771-5	3.236-5	2.658-5	2.089-5	1.573-5
6	94	1.540-4	1.502-4	1.452-4	1.383-4	1.288-4	1.230-4	1.166-4	1.021-4	8.677-5	7.175-5	5.778-5
6	95	2.475-4	2.418-4	2.343-4	2.238-4	2.094-4	2.006-4	1.908-4	1.689-4	1.458-4	1.233-4	1.020-4
6	96	3.538-6	3.462-6	3.353-6	3.199-6	2.987-6	2.858-6	2.715-6	2.388-6	2.027-6	1.657-6	1.304-6
6	97	8.826-7	8.671-7	8.430-7	8.078-7	7.582-7	7.271-7	6.919-7	6.099-7	5.176-7	4.227-7	3.317-7
7	8	2.611-0	2.273-0	1.926-0	1.562-0	1.202-0	1.036-0	8.822-1	6.239-1	4.302-1	2.916-1	1.952-1
7	9	8.119-1	6.910-1	5.645-1	4.402-1	3.279-1	2.788-1	2.352-1	1.647-1	1.140-1	7.885-2	5.487-2
7	10	2.134-1	1.964-1	1.737-1	1.442-1	1.118-1	9.612-2	8.158-2	5.692-2	3.848-2	2.546-2	1.661-2
7	11	1.223-0	1.151-0	1.048-0	9.138-1	7.674-1	6.977-1	6.334-1	5.259-1	4.479-1	3.945-1	3.524-1
7	12	6.240-1	5.756-1	5.071-1	4.275-1	3.492-1	3.138-1	2.820-1	2.303-1	1.938-1	1.696-1	1.514-1
7	13	4.353-1	3.711-1	3.010-1	2.328-1	1.723-1	1.462-1	1.231-1	8.582-2	5.881-2	3.985-2	2.675-2
7	14	4.937-1	4.735-1	4.230-1	3.481-1	2.657-1	2.268-1	1.912-1	1.319-1	8.845-2	5.824-2	3.792-2
7	15	2.209-1	1.967-1	1.640-1	1.283-1	9.518-2	8.075-2	6.798-2	4.741-2	3.265-2	2.238-2	1.533-2
7	16	2.461-1	2.300-1	2.012-1	1.635-1	1.241-1	1.059-1	8.944-2	6.229-2	4.258-2	2.896-2	1.976-2
7	17	7.707-2	6.895-2	5.761-2	4.500-2	3.320-2	2.803-2	2.346-2	1.609-2	1.083-2	7.199-3	4.750-3
7	18	2.435-1	2.110-1	1.722-1	1.323-1	9.651-2	8.122-2	6.783-2	4.653-2	3.148-2	2.117-2	1.421-2
7	19	1.519-1	1.344-1	1.122-1	8.789-2	6.522-2	5.534-2	4.660-2	3.257-2	2.257-2	1.567-2	1.095-2
7	20	4.524-1	3.916-1	3.243-1	2.539-1	1.891-1	1.610-1	1.361-1	9.614-2	6.772-2	4.809-2	3.453-2
7	21	5.569-2	5.040-2	4.230-2	3.297-2	2.419-2	2.036-2	1.699-2	1.158-2	7.751-3	5.125-3	3.361-3
7	22	9.251-2	8.299-2	6.979-2	5.512-2	4.141-2	3.542-2	3.009-2	2.141-2	1.505-2	1.049-2	7.240-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
7	23	2.650-1	2.558-1	2.257-1	1.826-1	1.379-1	1.174-1	9.910-2	6.909-2	4.735-2	3.221-2	2.184-2
7	24	1.171-1	1.057-1	8.869-2	6.920-2	5.085-2	4.284-2	3.578-2	2.446-2	1.643-2	1.092-2	7.206-3
7	25	4.955-2	4.318-2	3.548-2	2.748-2	2.028-2	1.719-2	1.448-2	1.013-2	7.025-3	4.864-3	3.373-3
7	26	4.545-2	4.174-2	3.563-2	2.861-2	2.203-2	1.913-2	1.653-2	1.222-2	8.944-3	6.484-3	4.644-3
7	27	6.900-2	6.270-2	5.732-2	5.352-2	5.136-2	5.080-2	5.054-2	5.077-2	5.186-2	5.337-2	5.350-2
7	28	2.746-2	2.437-2	1.993-2	1.520-2	1.101-2	9.237-3	7.699-3	5.271-3	3.571-3	2.413-3	1.633-3
7	29	2.367-1	2.367-1	2.409-1	2.514-1	2.677-1	2.775-1	2.882-1	3.120-1	3.390-1	3.666-1	3.809-1
7	30	2.598-1	2.614-1	2.679-1	2.815-1	3.014-1	3.132-1	3.259-1	3.540-1	3.857-1	4.180-1	4.350-1
7	31	4.873-2	4.489-2	4.110-2	3.764-2	3.452-2	3.306-2	3.163-2	2.884-2	2.616-2	2.363-2	2.098-2
7	32	5.271-2	4.711-2	4.149-2	3.622-2	3.142-2	2.916-2	2.697-2	2.274-2	1.869-2	1.488-2	1.142-2
7	33	4.625-2	4.185-2	3.701-2	3.238-2	2.818-2	2.623-2	2.436-2	2.077-2	1.737-2	1.418-2	1.125-2
7	34	5.421-2	4.694-2	4.005-2	3.391-2	2.861-2	2.623-2	2.399-2	1.986-2	1.608-2	1.265-2	9.628-3
7	35	2.692-2	2.224-2	1.757-2	1.347-2	1.017-2	8.822-3	7.645-3	5.729-3	4.268-3	3.145-3	2.277-3
7	36	9.425-3	7.463-3	5.552-3	3.930-3	2.685-3	2.199-3	1.791-3	1.176-3	7.645-4	4.935-4	3.169-4
7	37	1.274-2	1.200-2	1.139-2	1.107-2	1.105-2	1.114-2	1.129-2	1.175-2	1.239-2	1.313-2	1.345-2
7	38	1.725-2	1.522-2	1.306-2	1.116-2	9.667-3	9.076-3	8.575-3	7.805-3	7.291-3	6.949-3	6.567-3
7	39	2.594-2	2.231-2	1.845-2	1.493-2	1.199-2	1.073-2	9.590-3	7.621-3	5.975-3	4.588-3	3.430-3
7	40	3.718-2	3.213-2	2.698-2	2.235-2	1.843-2	1.672-2	1.516-2	1.237-2	9.938-3	7.820-3	5.991-3
7	41	1.655-2	1.347-2	1.035-2	7.637-3	5.513-3	4.666-3	3.945-3	2.818-3	2.016-3	1.442-3	1.029-3
7	42	1.397-1	1.181-1	9.831-2	8.276-2	7.165-2	6.754-2	6.425-2	5.973-2	5.741-2	5.645-2	5.482-2
7	43	1.126-1	9.334-2	7.595-2	6.196-2	5.136-2	4.714-2	4.351-2	3.770-2	3.337-2	3.008-2	2.700-2
7	44	2.561-2	2.052-2	1.586-2	1.211-2	9.290-3	8.185-3	7.250-3	5.792-3	4.751-3	3.999-3	3.393-3
7	45	2.704-2	2.298-2	1.933-2	1.626-2	1.371-2	1.258-2	1.151-2	9.549-3	7.749-3	6.112-3	4.663-3
7	46	1.339-2	1.063-2	8.243-3	6.360-3	4.936-3	4.364-3	3.866-3	3.048-3	2.407-3	1.895-3	1.478-3
7	47	9.208-3	7.280-3	5.586-3	4.241-3	3.232-3	2.833-3	2.490-3	1.939-3	1.522-3	1.199-3	9.398-4
7	48	1.691-2	1.646-2	1.628-2	1.644-2	1.690-2	1.724-2	1.764-2	1.863-2	1.991-2	2.130-2	2.196-2
7	49	1.523-1	1.506-1	1.513-1	1.545-1	1.600-1	1.636-1	1.677-1	1.776-1	1.899-1	2.032-1	2.094-1
7	50	8.502-1	8.595-1	8.789-1	9.098-1	9.516-1	9.765-1	1.004-0	1.069-0	1.148-0	1.233-0	1.275-0
7	51	5.325-1	5.389-1	5.514-1	5.708-1	5.970-1	6.126-1	6.300-1	6.708-1	7.208-1	7.744-1	8.009-1
7	52	4.897-2	4.030-2	3.351-2	2.842-2	2.461-2	2.306-2	2.169-2	1.939-2	1.758-2	1.611-2	1.462-2
7	53	3.569-2	2.966-2	2.505-2	2.169-2	1.927-2	1.833-2	1.754-2	1.632-2	1.551-2	1.497-2	1.425-2
7	54	8.382-3	6.861-3	5.672-3	4.754-3	4.023-3	3.703-3	3.404-3	2.847-3	2.329-3	1.851-3	1.421-3
7	55	8.174-1	8.249-1	8.410-1	8.672-1	9.037-1	9.259-1	9.510-1	1.011-0	1.085-0	1.165-0	1.205-0
7	56	5.678-1	5.711-1	5.807-1	5.976-1	6.218-1	6.367-1	6.538-1	6.947-1	7.458-1	8.005-1	8.272-1
7	57	1.334-2	1.075-2	8.737-3	7.211-3	6.023-3	5.515-3	5.045-3	4.187-3	3.407-3	2.697-3	2.065-3
7	58	2.073-2	1.798-2	1.561-2	1.362-2	1.187-2	1.105-2	1.025-2	8.692-3	7.173-3	5.736-3	4.428-3
7	59	2.595-2	2.360-2	2.158-2	1.975-2	1.797-2	1.705-2	1.610-2	1.410-2	1.200-2	9.901-3	7.889-3
7	60	1.802-0	1.819-0	1.852-0	1.903-0	1.976-0	2.021-0	2.073-0	2.200-0	2.359-0	2.531-0	2.615-0
7	61	8.327-3	7.191-3	6.262-3	5.489-3	4.810-3	4.487-3	4.170-3	3.545-3	2.936-3	2.364-3	1.844-3
7	62	7.007-1	7.071-1	7.191-1	7.380-1	7.649-1	7.817-1	8.009-1	8.478-1	9.076-1	9.727-1	1.004-0
7	63	4.854-1	4.894-1	4.971-1	5.096-1	5.275-1	5.387-1	5.517-1	5.836-1	6.242-1	6.681-1	6.890-1
7	64	8.364-3	7.765-3	7.229-3	6.714-3	6.174-3	5.885-3	5.580-3	4.925-3	4.231-3	3.532-3	2.855-3
7	65	8.472-3	8.264-3	8.155-3	8.152-3	8.247-3	8.330-3	8.437-3	8.735-3	9.159-3	9.643-3	9.824-3
7	66	6.531-3	6.312-3	6.114-3	5.928-3	5.744-3	5.653-3	5.562-3	5.389-3	5.245-3	5.116-3	4.877-3
7	67	1.045-2	1.020-2	9.988-3	9.800-3	9.617-3	9.524-3	9.431-3	9.256-3	9.128-3	9.026-3	8.718-3
7	68	3.049-2	3.052-2	3.072-2	3.115-2	3.182-2	3.228-2	3.282-2	3.420-2	3.604-2	3.804-2	3.878-2
7	69	4.005-2	3.978-2	3.984-2	4.029-2	4.113-2	4.171-2	4.240-2	4.420-2	4.663-2	4.934-2	5.046-2
7	70	7.701-3	7.617-3	7.558-3	7.512-3	7.469-3	7.448-3	7.428-3	7.407-3	7.433-3	7.482-3	7.337-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a \pm b \equiv a \times 10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
7	71	3.359-3	3.237-3	3.148-3	3.083-3	3.036-3	3.017-3	3.002-3	2.985-3	2.996-3	3.023-3	2.975-3
7	72	6.480-2	6.500-2	6.568-2	6.695-2	6.892-2	7.021-2	7.173-2	7.555-2	8.054-2	8.600-2	8.852-2
7	73	3.959-3	3.836-3	3.706-3	3.556-3	3.373-3	3.267-3	3.150-3	2.890-3	2.605-3	2.309-3	1.993-3
7	74	8.353-1	8.415-1	8.530-1	8.721-1	9.008-1	9.196-1	9.416-1	9.969-1	1.068-0	1.147-0	1.185-0
7	75	5.493-3	5.331-3	5.132-3	4.882-3	4.565-3	4.378-3	4.171-3	3.707-3	3.197-3	2.676-3	2.169-3
7	76	6.433-4	5.734-4	5.112-4	4.552-4	4.024-4	3.763-4	3.502-4	2.981-4	2.472-4	1.994-4	1.562-4
7	77	9.905-3	9.814-3	9.740-3	9.694-3	9.684-3	9.696-3	9.723-3	9.834-3	1.005-2	1.032-2	1.030-2
7	78	3.086-3	3.072-3	3.061-3	3.054-3	3.053-3	3.057-3	3.064-3	3.093-3	3.146-3	3.204-3	3.163-3
7	79	7.644-3	7.631-3	7.630-3	7.648-3	7.692-3	7.728-3	7.775-3	7.916-3	8.132-3	8.366-3	8.337-3
7	80	5.634-3	5.647-3	5.681-3	5.756-3	5.885-3	5.974-3	6.082-3	6.365-3	6.752-3	7.186-3	7.380-3
7	81	5.368-3	5.352-3	5.344-3	5.359-3	5.407-3	5.447-3	5.501-3	5.659-3	5.897-3	6.173-3	6.260-3
7	82	4.235-3	4.192-3	4.141-3	4.087-3	4.032-3	4.007-3	3.984-3	3.956-3	3.964-3	3.997-3	3.932-3
7	83	2.409-3	2.407-3	2.408-3	2.419-3	2.445-3	2.464-3	2.490-3	2.564-3	2.676-3	2.811-3	2.860-3
7	84	2.683-3	2.623-3	2.542-3	2.434-3	2.292-3	2.206-3	2.110-3	1.895-3	1.656-3	1.411-3	1.166-3
7	85	1.081-3	1.057-3	1.028-3	9.921-4	9.478-4	9.221-4	8.942-4	8.340-4	7.721-4	7.118-4	6.440-4
7	86	3.535-4	3.494-4	3.463-4	3.448-4	3.456-4	3.470-4	3.494-4	3.576-4	3.717-4	3.894-4	3.958-4
7	87	4.512-3	4.399-3	4.246-3	4.039-3	3.763-3	3.597-3	3.412-3	2.993-3	2.527-3	2.050-3	1.595-3
7	88	1.443-2	1.444-2	1.455-2	1.483-2	1.530-2	1.563-2	1.602-2	1.705-2	1.843-2	1.996-2	2.078-2
7	89	5.416-4	5.247-4	5.039-4	4.776-4	4.440-4	4.243-4	4.026-4	3.544-4	3.026-4	2.508-4	2.015-4
7	90	1.398-4	1.318-4	1.233-4	1.138-4	1.028-4	9.674-5	9.027-5	7.656-5	6.255-5	4.921-5	3.728-5
7	91	1.296-3	1.271-3	1.239-3	1.198-3	1.144-3	1.112-3	1.076-3	9.981-4	9.165-4	8.366-4	7.493-4
7	92	3.035-4	2.932-4	2.783-4	2.578-4	2.313-4	2.160-4	1.996-4	1.649-4	1.302-4	9.843-5	7.160-5
7	93	1.007-4	9.861-5	9.599-5	9.254-5	8.794-5	8.516-5	8.207-5	7.514-5	6.769-5	6.015-5	5.223-5
7	94	1.760-4	1.714-4	1.657-4	1.584-4	1.486-4	1.428-4	1.363-4	1.218-4	1.062-4	9.063-5	7.534-5
7	95	2.208-4	2.185-4	2.158-4	2.125-4	2.084-4	2.061-4	2.038-4	1.993-4	1.958-4	1.927-4	1.850-4
7	96	4.403-4	4.333-4	4.233-4	4.098-4	3.920-4	3.815-4	3.702-4	3.457-4	3.211-4	2.976-4	2.709-4
7	97	8.741-5	8.808-5	8.902-5	9.034-5	9.222-5	9.349-5	9.506-5	9.933-5	1.055-4	1.126-4	1.159-4
8	9	3.416-0	3.174-0	2.800-0	2.321-0	1.808-0	1.563-0	1.337-0	9.536-1	6.659-1	4.606-1	3.176-1
8	10	4.789-1	4.425-1	4.010-1	3.580-1	3.184-1	3.011-1	2.859-1	2.619-1	2.457-1	2.347-1	2.219-1
8	11	7.968-1	7.275-1	6.372-1	5.286-1	4.164-1	3.642-1	3.164-1	2.372-1	1.795-1	1.397-1	1.119-1
8	12	2.720-0	2.478-0	2.158-0	1.790-0	1.429-0	1.265-0	1.117-0	8.751-1	7.024-1	5.861-1	5.025-1
8	13	7.233-1	6.702-1	5.833-1	4.760-1	3.664-1	3.159-1	2.700-1	1.937-1	1.374-1	9.752-2	6.969-2
8	14	5.511-1	5.153-1	4.512-1	3.658-1	2.763-1	2.350-1	1.975-1	1.358-1	9.093-2	5.995-2	3.918-2
8	15	2.740-1	2.438-1	2.032-1	1.590-1	1.182-1	1.003-1	8.458-2	5.914-2	4.078-2	2.790-2	1.897-2
8	16	7.293-1	6.916-1	6.137-1	5.033-1	3.835-1	3.272-1	2.757-1	1.902-1	1.275-1	8.395-2	5.463-2
8	17	4.235-1	3.983-1	3.494-1	2.842-1	2.160-1	1.845-1	1.558-1	1.086-1	7.433-2	5.060-2	3.456-2
8	18	2.690-1	2.276-1	1.830-1	1.395-1	1.017-1	8.570-2	7.174-2	4.956-2	3.383-2	2.294-2	1.549-2
8	19	5.338-1	4.785-1	4.041-1	3.195-1	2.385-1	2.028-1	1.710-1	1.197-1	8.291-2	5.749-2	4.007-2
8	20	1.804-1	1.576-1	1.297-1	1.003-1	7.350-2	6.196-2	5.183-2	3.562-2	2.410-2	1.614-2	1.074-2
8	21	5.087-2	4.556-2	3.852-2	3.092-2	2.400-2	2.103-2	1.842-2	1.428-2	1.136-2	9.342-3	7.815-3
8	22	2.977-1	2.558-1	2.100-1	1.633-1	1.211-1	1.029-1	8.688-2	6.121-2	4.281-2	2.995-2	2.100-2
8	23	1.854-1	1.645-1	1.364-1	1.062-1	7.881-2	6.707-2	5.678-2	4.040-2	2.878-2	2.073-2	1.510-2
8	24	3.631-1	3.419-1	2.984-1	2.408-1	1.821-1	1.554-1	1.315-1	9.233-2	6.388-2	4.395-2	3.017-2
8	25	2.159-1	1.925-1	1.605-1	1.249-1	9.193-2	7.760-2	6.496-2	4.470-2	3.027-2	2.031-2	1.355-2
8	26	7.861-2	7.226-2	6.146-2	4.903-2	3.739-2	3.228-2	2.772-2	2.020-2	1.453-2	1.032-2	7.228-3
8	27	3.568-1	3.502-1	3.499-1	3.592-1	3.777-1	3.895-1	4.027-1	4.326-1	4.672-1	5.027-1	5.206-1
8	28	3.302-2	2.877-2	2.328-2	1.766-2	1.277-2	1.072-2	8.930-3	6.111-3	4.123-3	2.753-3	1.822-3
8	29	5.807-1	5.838-1	5.970-1	6.256-1	6.684-1	6.938-1	7.214-1	7.825-1	8.519-1	9.232-1	9.608-1

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
8	30	1.372-2	1.171-2	9.446-3	7.354-3	5.621-3	4.898-3	4.263-3	3.217-3	2.409-3	1.781-3	1.293-3
8	31	2.997-2	2.510-2	2.052-2	1.657-2	1.332-2	1.194-2	1.069-2	8.526-3	6.705-3	5.162-3	3.867-3
8	32	6.521-2	5.811-2	5.105-2	4.461-2	3.891-2	3.630-2	3.381-2	2.911-2	2.471-2	2.063-2	1.686-2
8	33	6.499-2	5.999-2	5.475-2	4.999-2	4.596-2	4.419-2	4.255-2	3.958-2	3.699-2	3.469-2	3.202-2
8	34	9.443-2	8.242-2	7.124-2	6.135-2	5.271-2	4.876-2	4.499-2	3.784-2	3.112-2	2.488-2	1.925-2
8	35	1.058-1	9.410-2	8.269-2	7.219-2	6.270-2	5.823-2	5.390-2	4.551-2	3.743-2	2.981-2	2.289-2
8	36	3.828-2	3.045-2	2.296-2	1.662-2	1.172-2	9.788-3	8.153-3	5.632-3	3.875-3	2.655-3	1.806-3
8	37	1.017-2	9.026-3	7.773-3	6.589-3	5.543-3	5.070-3	4.626-3	3.809-3	3.070-3	2.406-3	1.824-3
8	38	4.276-2	3.976-2	3.677-2	3.435-2	3.264-2	3.203-2	3.155-2	3.096-2	3.082-2	3.095-2	3.041-2
8	39	3.930-2	3.411-2	2.869-2	2.376-2	1.958-2	1.776-2	1.610-2	1.317-2	1.065-2	8.469-3	6.587-3
8	40	4.067-2	3.399-2	2.724-2	2.132-2	1.653-2	1.455-2	1.280-2	9.902-3	7.609-3	5.775-3	4.301-3
8	41	5.826-2	5.012-2	4.161-2	3.392-2	2.750-2	2.475-2	2.226-2	1.795-2	1.433-2	1.126-2	8.661-3
8	42	1.433-1	1.209-1	1.001-1	8.329-2	7.056-2	6.555-2	6.130-2	5.469-2	5.009-2	4.683-2	4.350-2
8	43	1.659-1	1.345-1	1.074-1	8.649-2	7.172-2	6.628-2	6.191-2	5.585-2	5.257-2	5.103-2	4.924-2
8	44	1.305-1	1.084-1	8.838-2	7.213-2	5.970-2	5.469-2	5.035-2	4.328-2	3.790-2	3.369-2	2.981-2
8	45	4.862-2	4.251-2	3.704-2	3.256-2	2.898-2	2.746-2	2.608-2	2.366-2	2.164-2	1.992-2	1.812-2
8	46	2.921-2	2.436-2	1.998-2	1.635-2	1.343-2	1.219-2	1.106-2	9.045-3	7.294-3	5.760-3	4.428-3
8	47	1.391-2	1.124-2	8.890-3	7.023-3	5.619-3	5.059-3	4.577-3	3.799-3	3.209-3	2.753-3	2.362-3
8	48	4.740-3	3.893-3	3.142-3	2.530-3	2.047-3	1.844-3	1.661-3	1.340-3	1.064-3	8.247-4	6.198-4
8	49	1.155-0	1.165-0	1.190-0	1.231-0	1.288-0	1.322-0	1.360-0	1.448-0	1.556-0	1.671-0	1.728-0
8	50	1.012-0	1.023-0	1.045-0	1.081-0	1.130-0	1.160-0	1.192-0	1.269-0	1.364-0	1.466-0	1.517-0
8	51	7.187-3	6.230-3	5.424-3	4.750-3	4.163-3	3.885-3	3.613-3	3.074-3	2.542-3	2.030-3	1.561-3
8	52	4.155-2	3.543-2	3.073-2	2.726-2	2.470-2	2.368-2	2.279-2	2.135-2	2.033-2	1.957-2	1.856-2
8	53	4.894-2	4.060-2	3.405-2	2.912-2	2.542-2	2.391-2	2.258-2	2.035-2	1.859-2	1.718-2	1.570-2
8	54	7.169-2	5.897-2	4.857-2	4.064-2	3.477-2	3.245-2	3.046-2	2.728-2	2.497-2	2.326-2	2.149-2
8	55	5.410-1	5.446-1	5.540-1	5.700-1	5.928-1	6.068-1	6.227-1	6.611-1	7.096-1	7.621-1	7.882-1
8	56	1.237-0	1.249-0	1.273-0	1.311-0	1.365-0	1.399-0	1.436-0	1.526-0	1.638-0	1.759-0	1.818-0
8	57	5.782-1	5.761-1	5.814-1	5.946-1	6.158-1	6.294-1	6.452-1	6.838-1	7.325-1	7.849-1	8.101-1
8	58	3.316-2	2.926-2	2.592-2	2.302-2	2.038-2	1.909-2	1.780-2	1.520-2	1.259-2	1.007-2	7.750-3
8	59	2.740-1	2.741-1	2.766-1	2.819-1	2.903-1	2.956-1	3.018-1	3.172-1	3.370-1	3.583-1	3.676-1
8	60	1.189-0	1.200-0	1.220-0	1.253-0	1.299-0	1.328-0	1.361-0	1.443-0	1.546-0	1.658-0	1.713-0
8	61	2.883-0	2.909-0	2.959-0	3.038-0	3.151-0	3.223-0	3.304-0	3.505-0	3.759-0	4.033-0	4.166-0
8	62	2.476-1	2.490-1	2.523-1	2.580-1	2.662-1	2.714-1	2.775-1	2.925-1	3.120-1	3.334-1	3.434-1
8	63	4.605-1	4.635-1	4.702-1	4.814-1	4.978-1	5.082-1	5.202-1	5.499-1	5.879-1	6.293-1	6.490-1
8	64	2.341-2	2.033-2	1.785-2	1.581-2	1.404-2	1.321-2	1.240-2	1.080-2	9.237-3	7.756-3	6.356-3
8	65	1.909-3	1.785-3	1.672-3	1.559-3	1.435-3	1.366-3	1.291-3	1.128-3	9.515-4	7.738-4	6.054-4
8	66	6.113-1	6.155-1	6.243-1	6.390-1	6.608-1	6.748-1	6.910-1	7.311-1	7.823-1	8.377-1	8.642-1
8	67	1.651-2	1.567-2	1.503-2	1.458-2	1.426-2	1.414-2	1.405-2	1.396-2	1.401-2	1.412-2	1.387-2
8	68	9.191-2	9.176-2	9.225-2	9.352-2	9.565-2	9.708-2	9.879-2	1.032-1	1.090-1	1.154-1	1.180-1
8	69	8.041-3	7.502-3	7.033-3	6.602-3	6.173-3	5.950-3	5.718-3	5.230-3	4.726-3	4.226-3	3.700-3
8	70	4.599-2	4.591-2	4.615-2	4.676-2	4.776-2	4.844-2	4.924-2	5.134-2	5.418-2	5.737-2	5.869-2
8	71	4.814-3	4.622-3	4.462-3	4.312-3	4.151-3	4.063-3	3.968-3	3.763-3	3.548-3	3.326-3	3.047-3
8	72	2.142-2	2.080-2	2.042-2	2.025-2	2.027-2	2.035-2	2.047-2	2.089-2	2.156-2	2.237-2	2.252-2
8	73	3.876-1	3.899-1	3.948-1	4.033-1	4.162-1	4.247-1	4.348-1	4.600-1	4.926-1	5.283-1	5.456-1
8	74	1.302-1	1.307-1	1.319-1	1.341-1	1.377-1	1.401-1	1.430-1	1.503-1	1.599-1	1.706-1	1.754-1
8	75	7.248-1	7.304-1	7.403-1	7.566-1	7.815-1	7.979-1	8.173-1	8.660-1	9.291-1	9.980-1	1.032-0
8	76	6.490-3	6.243-3	5.961-3	5.627-3	5.217-3	4.979-3	4.718-3	4.132-3	3.488-3	2.830-3	2.203-3
8	77	1.726-2	1.717-2	1.709-2	1.704-2	1.703-2	1.705-2	1.710-2	1.729-2	1.767-2	1.815-2	1.812-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
8	78	9.964-3	9.953-3	9.957-3	9.984-3	1.005-2	1.010-2	1.017-2	1.037-2	1.068-2	1.102-2	1.101-2
8	79	1.088-2	1.088-2	1.093-2	1.106-2	1.131-2	1.148-2	1.169-2	1.224-2	1.300-2	1.385-2	1.423-2
8	80	8.000-3	7.993-3	7.997-3	8.020-3	8.076-3	8.121-3	8.181-3	8.358-3	8.621-3	8.906-3	8.905-3
8	81	3.394-3	3.316-3	3.217-3	3.094-3	2.943-3	2.857-3	2.764-3	2.566-3	2.365-3	2.171-3	1.958-3
8	82	2.963-3	2.868-3	2.746-3	2.587-3	2.384-3	2.264-3	2.132-3	1.840-3	1.525-3	1.213-3	9.252-4
8	83	9.637-4	9.367-4	8.983-4	8.454-4	7.754-4	7.337-4	6.879-4	5.865-4	4.787-4	3.736-4	2.793-4
8	84	3.472-3	3.385-3	3.273-3	3.123-3	2.928-3	2.810-3	2.680-3	2.385-3	2.058-3	1.723-3	1.394-3
8	85	2.011-3	1.977-3	1.938-3	1.894-3	1.842-3	1.812-3	1.782-3	1.719-3	1.663-3	1.613-3	1.531-3
8	86	5.510-4	5.361-4	5.166-4	4.909-4	4.571-4	4.369-4	4.144-4	3.634-4	3.070-4	2.492-4	1.940-4
8	87	7.089-3	6.915-3	6.677-3	6.353-3	5.922-3	5.663-3	5.374-3	4.720-3	3.996-3	3.253-3	2.543-3
8	88	2.770-3	2.745-3	2.732-3	2.735-3	2.760-3	2.782-3	2.812-3	2.901-3	3.036-3	3.195-3	3.254-3
8	89	2.005-2	2.007-2	2.023-2	2.062-2	2.129-2	2.176-2	2.232-2	2.379-2	2.573-2	2.790-2	2.906-2
8	90	5.965-4	5.736-4	5.470-4	5.146-4	4.744-4	4.512-4	4.259-4	3.705-4	3.114-4	2.530-4	1.983-4
8	91	1.680-3	1.638-3	1.583-3	1.508-3	1.407-3	1.346-3	1.277-3	1.123-3	9.541-4	7.836-4	6.216-4
8	92	4.899-4	4.729-4	4.487-4	4.154-4	3.724-4	3.477-4	3.212-4	2.651-4	2.092-4	1.582-4	1.151-4
8	93	7.323-5	7.091-5	6.797-5	6.412-5	5.906-5	5.604-5	5.269-5	4.521-5	3.715-5	2.923-5	2.204-5
8	94	3.518-4	3.454-4	3.370-4	3.257-4	3.107-4	3.018-4	2.920-4	2.701-4	2.467-4	2.226-4	1.960-4
8	95	3.825-4	3.770-4	3.704-4	3.621-4	3.517-4	3.458-4	3.396-4	3.267-4	3.148-4	3.036-4	2.864-4
8	96	5.357-4	5.234-4	5.051-4	4.791-4	4.439-4	4.226-4	3.990-4	3.460-4	2.886-4	2.312-4	1.779-4
8	97	2.528-5	2.462-5	2.365-5	2.226-5	2.039-5	1.927-5	1.803-5	1.531-5	1.243-5	9.660-6	7.197-6
9	10	5.927-2	5.293-2	4.507-2	3.611-2	2.719-2	2.312-2	1.943-2	1.335-2	8.915-3	5.843-3	3.782-3
9	11	1.121-0	1.050-0	9.305-1	7.913-1	6.600-1	6.026-1	5.520-1	4.716-1	4.161-1	3.786-1	3.460-1
9	12	2.983-0	2.739-0	2.375-0	1.974-0	1.607-0	1.448-0	1.309-0	1.090-0	9.411-1	8.468-1	7.747-1
9	13	1.034-0	9.226-1	7.765-1	6.177-1	4.684-1	4.025-1	3.436-1	2.476-1	1.779-1	1.290-1	9.460-2
9	14	2.346-1	2.142-1	1.841-1	1.473-1	1.104-1	9.363-2	7.858-2	5.397-2	3.619-2	2.391-2	1.564-2
9	15	3.259-1	2.836-1	2.315-1	1.785-1	1.316-1	1.116-1	9.416-2	6.625-2	4.635-2	3.252-2	2.298-2
9	16	6.931-1	6.535-1	5.750-1	4.678-1	3.542-1	3.015-1	2.536-1	1.744-1	1.169-1	7.707-2	5.033-2
9	17	1.394-0	1.301-0	1.141-0	9.290-1	7.051-1	6.009-1	5.061-1	3.491-1	2.347-1	1.554-1	1.021-1
9	18	3.451-1	2.846-1	2.248-1	1.700-1	1.240-1	1.049-1	8.840-2	6.228-2	4.381-2	3.101-2	2.215-2
9	19	4.322-1	3.747-1	3.061-1	2.359-1	1.735-1	1.469-1	1.235-1	8.648-2	6.028-2	4.225-2	2.988-2
9	20	1.286-1	1.104-1	8.961-2	6.889-2	5.081-2	4.319-2	3.657-2	2.611-2	1.879-2	1.379-2	1.031-2
9	21	2.194-2	1.898-2	1.546-2	1.190-2	8.753-3	7.408-3	6.229-3	4.337-3	2.976-3	2.019-3	1.356-3
9	22	2.863-1	2.381-1	1.893-1	1.432-1	1.037-1	8.716-2	7.278-2	5.007-2	3.407-2	2.307-2	1.558-2
9	23	1.053-1	8.968-2	7.265-2	5.606-2	4.170-2	3.565-2	3.039-2	2.203-2	1.608-2	1.193-2	8.972-3
9	24	3.025-1	2.755-1	2.330-1	1.842-1	1.385-1	1.186-1	1.010-1	7.272-2	5.249-2	3.834-2	2.833-2
9	25	1.155-0	1.013-0	8.468-1	6.662-1	4.970-1	4.228-1	3.569-1	2.504-1	1.738-1	1.203-1	8.328-2
9	26	1.849-1	1.676-1	1.398-1	1.090-1	8.102-2	6.901-2	5.845-2	4.142-2	2.902-2	2.015-2	1.384-2
9	27	1.297-0	1.305-0	1.335-0	1.401-0	1.499-0	1.558-0	1.621-0	1.761-0	1.919-0	2.081-0	2.168-0
9	28	3.024-2	2.700-2	2.238-2	1.741-2	1.294-2	1.103-2	9.364-3	6.699-3	4.802-3	3.490-3	2.581-3
9	29	4.003-2	3.493-2	2.907-2	2.355-2	1.895-2	1.704-2	1.536-2	1.265-2	1.063-2	9.122-3	7.861-3
9	30	1.142-2	9.684-3	7.878-3	6.294-3	5.054-3	4.566-3	4.158-3	3.547-3	3.160-3	2.923-3	2.719-3
9	31	1.476-2	1.148-2	8.534-3	6.119-3	4.285-3	3.567-3	2.962-3	2.036-3	1.396-3	9.552-4	6.510-4
9	32	3.892-2	3.284-2	2.726-2	2.276-2	1.946-2	1.822-2	1.721-2	1.577-2	1.497-2	1.457-2	1.405-2
9	33	1.758-1	1.691-1	1.627-1	1.582-1	1.558-1	1.552-1	1.549-1	1.552-1	1.567-1	1.588-1	1.568-1
9	34	6.227-2	5.073-2	4.054-2	3.222-2	2.580-2	2.321-2	2.097-2	1.733-2	1.455-2	1.240-2	1.056-2
9	35	1.220-1	1.041-1	8.647-2	7.098-2	5.815-2	5.264-2	4.764-2	3.889-2	3.142-2	2.499-2	1.946-2
9	36	2.216-1	1.968-1	1.719-1	1.490-1	1.285-1	1.190-1	1.098-1	9.230-2	7.566-2	6.012-2	4.610-2
9	37	5.989-3	5.073-3	4.125-3	3.272-3	2.568-3	2.272-3	2.008-3	1.564-3	1.206-3	9.150-4	6.779-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a \pm b \equiv a \times 10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
9	38	2.038-2	1.727-2	1.414-2	1.134-2	9.032-3	8.051-3	7.170-3	5.661-3	4.416-3	3.378-3	2.518-3
9	39	5.654-2	5.130-2	4.615-2	4.190-2	3.878-2	3.761-2	3.666-2	3.535-2	3.473-2	3.455-2	3.373-2
9	40	7.441-2	6.536-2	5.580-2	4.705-2	3.958-2	3.630-2	3.329-2	2.790-2	2.320-2	1.909-2	1.545-2
9	41	1.260-1	1.090-1	9.215-2	7.712-2	6.440-2	5.882-2	5.367-2	4.438-2	3.619-2	2.895-2	2.261-2
9	42	6.234-2	4.983-2	3.848-2	2.940-2	2.270-2	2.012-2	1.798-2	1.478-2	1.266-2	1.128-2	1.016-2
9	43	1.770-1	1.484-1	1.226-1	1.020-1	8.640-2	8.026-2	7.502-2	6.679-2	6.095-2	5.671-2	5.241-2
9	44	3.102-1	2.611-1	2.160-1	1.796-1	1.522-1	1.414-1	1.322-1	1.178-1	1.077-1	1.005-1	9.308-2
9	45	8.554-2	7.544-2	6.623-2	5.898-2	5.378-2	5.184-2	5.027-2	4.811-2	4.706-2	4.668-2	4.549-2
9	46	6.518-2	5.715-2	4.990-2	4.401-2	3.945-2	3.757-2	3.591-2	3.316-2	3.103-2	2.936-2	2.743-2
9	47	3.516-2	3.037-2	2.582-2	2.187-2	1.850-2	1.700-2	1.558-2	1.294-2	1.051-2	8.286-3	6.316-3
9	48	3.953-3	3.204-3	2.554-3	2.034-3	1.635-3	1.473-3	1.330-3	1.091-3	8.991-4	7.437-4	6.113-4
9	49	2.553-0	2.584-0	2.646-0	2.743-0	2.872-0	2.949-0	3.034-0	3.232-0	3.476-0	3.736-0	3.866-0
9	50	2.237-2	1.900-2	1.618-2	1.394-2	1.216-2	1.139-2	1.068-2	9.414-3	8.296-3	7.299-3	6.328-3
9	51	5.337-3	4.352-3	3.573-3	2.998-3	2.591-3	2.436-3	2.309-3	2.118-3	1.995-3	1.913-3	1.810-3
9	52	1.594-2	1.327-2	1.120-2	9.623-3	8.411-3	7.900-3	7.435-3	6.611-3	5.904-3	5.287-3	4.675-3
9	53	6.095-2	5.457-2	4.966-2	4.603-2	4.334-2	4.226-2	4.132-2	3.984-2	3.888-2	3.825-2	3.688-2
9	54	9.169-2	8.111-2	7.253-2	6.579-2	6.042-2	5.813-2	5.604-2	5.243-2	4.956-2	4.724-2	4.433-2
9	55	1.276-2	1.051-2	8.769-3	7.442-3	6.394-3	5.939-3	5.516-3	4.737-3	4.029-3	3.384-3	2.786-3
9	56	6.298-1	6.315-1	6.406-1	6.576-1	6.825-1	6.980-1	7.157-1	7.588-1	8.136-1	8.731-1	9.026-1
9	57	3.099-0	3.125-0	3.183-0	3.279-0	3.413-0	3.495-0	3.589-0	3.814-0	4.095-0	4.397-0	4.546-0
9	58	2.230-1	2.186-1	2.169-1	2.179-1	2.215-1	2.242-1	2.276-1	2.365-1	2.485-1	2.616-1	2.664-1
9	59	1.627-1	1.601-1	1.592-1	1.603-1	1.631-1	1.652-1	1.678-1	1.745-1	1.835-1	1.935-1	1.973-1
9	60	1.190-1	1.186-1	1.194-1	1.212-1	1.243-1	1.263-1	1.287-1	1.347-1	1.427-1	1.516-1	1.555-1
9	61	1.539-0	1.549-0	1.573-0	1.612-0	1.669-0	1.705-0	1.747-0	1.849-0	1.980-0	2.122-0	2.191-0
9	62	9.690-3	9.321-3	9.011-3	8.737-3	8.479-3	8.355-3	8.234-3	8.015-3	7.843-3	7.695-3	7.375-3
9	63	1.527-1	1.530-1	1.544-1	1.571-1	1.613-1	1.640-1	1.672-1	1.752-1	1.857-1	1.974-1	2.025-1
9	64	5.998-0	6.056-0	6.158-0	6.319-0	6.550-0	6.697-0	6.867-0	7.286-0	7.818-0	8.390-0	8.669-0
9	65	6.739-3	6.692-3	6.661-3	6.651-3	6.672-3	6.698-3	6.736-3	6.859-3	7.055-3	7.270-3	7.258-3
9	66	2.928-1	2.940-1	2.971-1	3.025-1	3.106-1	3.158-1	3.219-1	3.371-1	3.570-1	3.787-1	3.879-1
9	67	1.535-2	1.511-2	1.493-2	1.479-2	1.471-2	1.469-2	1.469-2	1.478-2	1.500-2	1.526-2	1.507-2
9	68	3.807-2	3.709-2	3.624-2	3.547-2	3.476-2	3.441-2	3.408-2	3.350-2	3.312-2	3.283-2	3.175-2
9	69	5.063-3	4.689-3	4.344-3	4.015-3	3.678-3	3.500-3	3.314-3	2.917-3	2.498-3	2.077-3	1.673-3
9	70	9.535-3	9.322-3	9.059-3	8.699-3	8.195-3	7.880-3	7.524-3	6.706-3	5.794-3	4.857-3	3.938-3
9	71	4.484-3	4.192-3	3.930-3	3.675-3	3.400-3	3.250-3	3.089-3	2.738-3	2.355-3	1.960-3	1.572-3
9	72	1.305-2	1.260-2	1.228-2	1.208-2	1.195-2	1.191-2	1.189-2	1.190-2	1.203-2	1.220-2	1.204-2
9	73	6.203-2	6.167-2	6.176-2	6.234-2	6.349-2	6.432-2	6.532-2	6.798-2	7.160-2	7.562-2	7.718-2
9	74	4.158-3	3.958-3	3.818-3	3.732-3	3.695-3	3.693-3	3.703-3	3.760-3	3.874-3	4.017-3	4.044-3
9	75	1.564-1	1.571-1	1.587-1	1.614-1	1.658-1	1.688-1	1.723-1	1.813-1	1.932-1	2.064-1	2.125-1
9	76	1.059-0	1.067-0	1.081-0	1.104-0	1.139-0	1.163-0	1.190-0	1.261-0	1.352-0	1.452-0	1.500-0
9	77	1.246-2	1.216-2	1.179-2	1.135-2	1.082-2	1.052-2	1.019-2	9.502-3	8.802-3	8.124-3	7.360-3
9	78	4.404-2	4.419-2	4.452-2	4.515-2	4.622-2	4.695-2	4.785-2	5.019-2	5.334-2	5.682-2	5.837-2
9	79	1.196-2	1.195-2	1.195-2	1.198-2	1.206-2	1.213-2	1.222-2	1.249-2	1.289-2	1.333-2	1.335-2
9	80	2.912-3	2.902-3	2.893-3	2.889-3	2.896-3	2.906-3	2.920-3	2.969-3	3.046-3	3.130-3	3.114-3
9	81	7.130-3	7.014-3	6.866-3	6.683-3	6.466-3	6.346-3	6.221-3	5.967-3	5.731-3	5.515-3	5.199-3
9	82	4.006-3	3.876-3	3.709-3	3.495-3	3.220-3	3.059-3	2.882-3	2.491-3	2.072-3	1.657-3	1.276-3
9	83	1.453-3	1.413-3	1.356-3	1.278-3	1.175-3	1.113-3	1.045-3	8.948-4	7.347-4	5.785-4	4.375-4
9	84	3.710-3	3.618-3	3.511-3	3.382-3	3.224-3	3.132-3	3.033-3	2.817-3	2.595-3	2.378-3	2.137-3
9	85	2.966-3	2.892-3	2.794-3	2.663-3	2.490-3	2.385-3	2.269-3	2.004-3	1.708-3	1.401-3	1.103-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
9	86	1.025-3	1.002-3	9.699-4	9.263-4	8.679-4	8.325-4	7.930-4	7.025-4	6.008-4	4.948-4	3.911-4
9	87	1.050-2	1.025-2	9.916-3	9.462-3	8.864-3	8.506-3	8.108-3	7.210-3	6.222-3	5.211-3	4.225-3
9	88	4.156-4	3.985-4	3.805-4	3.602-4	3.367-4	3.236-4	3.098-4	2.805-4	2.511-4	2.232-4	1.950-4
9	89	3.128-3	3.099-3	3.080-3	3.079-3	3.101-3	3.123-3	3.153-3	3.247-3	3.393-3	3.567-3	3.630-3
9	90	3.348-2	3.351-2	3.375-2	3.434-2	3.541-2	3.616-2	3.707-2	3.944-2	4.260-2	4.611-2	4.796-2
9	91	2.311-3	2.252-3	2.172-3	2.063-3	1.916-3	1.827-3	1.729-3	1.504-3	1.258-3	1.008-3	7.739-4
9	92	7.006-4	6.765-4	6.422-4	5.950-4	5.345-4	4.996-4	4.624-4	3.840-4	3.060-4	2.349-4	1.746-4
9	93	9.795-5	9.751-5	9.706-5	9.665-5	9.641-5	9.639-5	9.648-5	9.711-5	9.852-5	1.001-4	9.851-5
9	94	2.830-4	2.792-4	2.747-4	2.691-4	2.623-4	2.586-4	2.547-4	2.469-4	2.400-4	2.337-4	2.221-4
9	95	7.422-4	7.261-4	7.050-4	6.770-4	6.405-4	6.187-4	5.948-4	5.412-4	4.828-4	4.229-4	3.607-4
9	96	8.366-4	8.197-4	7.946-4	7.591-4	7.117-4	6.834-4	6.522-4	5.830-4	5.092-4	4.364-4	3.652-4
9	97	2.817-5	2.740-5	2.627-5	2.467-5	2.253-5	2.125-5	1.985-5	1.679-5	1.358-5	1.052-5	7.811-6
10	11	6.367-1	5.766-1	4.988-1	4.088-1	3.171-1	2.742-1	2.347-1	1.680-1	1.174-1	8.085-2	5.496-2
10	12	4.228-1	3.755-1	3.163-1	2.532-1	1.933-1	1.665-1	1.425-1	1.030-1	7.429-2	5.426-2	4.025-2
10	13	2.139-1	1.779-1	1.455-1	1.143-1	8.554-2	7.277-2	6.133-2	4.262-2	2.914-2	1.995-2	1.389-2
10	14	2.441-1	2.352-1	2.124-1	1.777-1	1.390-1	1.205-1	1.035-1	7.518-2	5.442-2	4.001-2	3.003-2
10	15	9.839-2	8.259-2	6.689-2	5.170-2	3.816-2	3.232-2	2.716-2	1.884-2	1.285-2	8.672-3	5.799-3
10	16	8.899-2	8.239-2	7.085-2	5.648-2	4.217-2	3.573-2	2.995-2	2.054-2	1.376-2	9.080-3	5.927-3
10	17	3.372-2	3.058-2	2.615-2	2.094-2	1.580-2	1.347-2	1.138-2	7.950-3	5.455-3	3.718-3	2.533-3
10	18	6.632-2	5.667-2	4.611-2	3.560-2	2.623-2	2.221-2	1.866-2	1.296-2	8.873-3	6.014-3	4.044-3
10	19	6.532-2	6.116-2	5.330-2	4.336-2	3.352-2	2.913-2	2.523-2	1.893-2	1.447-2	1.140-2	9.196-3
10	20	6.265-2	5.711-2	4.852-2	3.829-2	2.833-2	2.390-2	1.995-2	1.356-2	9.000-3	5.881-3	3.803-3
10	21	2.061-1	1.974-1	1.751-1	1.429-1	1.085-1	9.245-2	7.790-2	5.387-2	3.639-2	2.426-2	1.606-2
10	22	6.386-2	5.714-2	4.770-2	3.726-2	2.762-2	2.345-2	1.978-2	1.393-2	9.815-3	7.013-3	5.108-3
10	23	1.116-1	1.051-1	9.217-2	7.475-2	5.660-2	4.824-2	4.067-2	2.819-2	1.910-2	1.276-2	8.455-3
10	24	5.672-2	5.074-2	4.278-2	3.396-2	2.564-2	2.199-2	1.875-2	1.353-2	9.801-3	7.223-3	5.416-3
10	25	2.394-2	2.011-2	1.615-2	1.238-2	9.122-3	7.737-3	6.522-3	4.570-3	3.158-3	2.158-3	1.459-3
10	26	1.465-2	1.360-2	1.163-2	9.254-3	6.980-3	5.976-3	5.079-3	3.612-3	2.530-3	1.751-3	1.197-3
10	27	7.938-3	6.516-3	5.192-3	4.054-3	3.138-3	2.759-3	2.425-3	1.872-3	1.436-3	1.088-3	8.088-4
10	28	1.704-2	1.556-2	1.319-2	1.051-2	8.021-3	6.934-3	5.965-3	4.367-3	3.161-3	2.260-3	1.592-3
10	29	5.414-2	5.418-2	5.521-2	5.776-2	6.164-2	6.394-2	6.642-2	7.181-2	7.780-2	8.382-2	8.682-2
10	30	4.934-3	4.719-3	4.464-3	4.174-3	3.844-3	3.661-3	3.465-3	3.035-3	2.567-3	2.087-3	1.628-3
10	31	3.975-3	3.251-3	2.591-3	2.039-3	1.604-3	1.426-3	1.272-3	1.020-3	8.289-4	6.844-4	5.682-4
10	32	8.160-3	7.058-3	5.943-3	4.921-3	4.040-3	3.652-3	3.295-3	2.657-3	2.104-3	1.626-3	1.218-3
10	33	1.445-2	1.347-2	1.229-2	1.105-2	9.827-3	9.221-3	8.616-3	7.396-3	6.169-3	4.973-3	3.857-3
10	34	1.282-2	1.094-2	9.214-3	7.696-3	6.404-3	5.832-3	5.301-3	4.338-3	3.483-3	2.725-3	2.068-3
10	35	1.437-2	1.274-2	1.112-2	9.611-3	8.239-3	7.601-3	6.990-3	5.832-3	4.750-3	3.754-3	2.866-3
10	36	1.568-3	1.243-3	9.349-4	6.698-4	4.616-4	3.790-4	3.094-4	2.034-4	1.320-4	8.492-5	5.432-5
10	37	4.707-3	4.405-3	4.051-3	3.679-3	3.301-3	3.109-3	2.914-3	2.510-3	2.096-3	1.689-3	1.307-3
10	38	1.422-2	1.347-2	1.259-2	1.171-2	1.087-2	1.046-2	1.005-2	9.220-3	8.400-3	7.603-3	6.753-3
10	39	1.318-2	1.211-2	1.087-2	9.622-3	8.433-3	7.859-3	7.296-3	6.188-3	5.106-3	4.076-3	3.134-3
10	40	5.726-3	4.777-3	3.786-3	2.894-3	2.168-3	1.869-3	1.607-3	1.183-3	8.621-4	6.197-4	4.375-4
10	41	7.291-3	6.512-3	5.621-3	4.756-3	3.983-3	3.634-3	3.307-3	2.710-3	2.177-3	1.703-3	1.291-3
10	42	1.518-2	1.267-2	1.018-2	8.022-3	6.272-3	5.541-3	4.891-3	3.795-3	2.910-3	2.189-3	1.607-3
10	43	1.542-2	1.248-2	9.506-3	6.962-3	5.013-3	4.253-3	3.620-3	2.669-3	2.043-3	1.638-3	1.354-3
10	44	6.618-3	5.507-3	4.344-3	3.320-3	2.504-3	2.172-3	1.883-3	1.415-3	1.060-3	7.852-4	5.718-4
10	45	5.093-3	4.298-3	3.541-3	2.884-3	2.338-3	2.100-3	1.882-3	1.494-3	1.161-3	8.796-4	6.475-4
10	46	4.668-3	3.963-3	3.264-3	2.649-3	2.138-3	1.919-3	1.719-3	1.369-3	1.071-3	8.188-4	6.081-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
10	47	2.106-3	1.803-3	1.510-3	1.263-3	1.074-3	9.992-4	9.354-4	8.363-4	7.686-4	7.226-4	6.757-4
10	48	2.834-3	2.610-3	2.388-3	2.174-3	1.962-3	1.853-3	1.740-3	1.505-3	1.259-3	1.014-3	7.847-4
10	49	1.329-2	1.036-2	7.821-3	5.825-3	4.340-3	3.754-3	3.254-3	2.452-3	1.847-3	1.383-3	1.020-3
10	50	2.118-1	2.144-1	2.199-1	2.287-1	2.403-1	2.471-1	2.546-1	2.718-1	2.923-1	3.140-1	3.245-1
10	51	1.207-3	9.848-4	7.933-4	6.397-4	5.189-4	4.681-4	4.222-4	3.414-4	2.718-4	2.111-4	1.591-4
10	52	3.488-2	2.790-2	2.195-2	1.739-2	1.413-2	1.292-2	1.194-2	1.057-2	9.807-3	9.432-3	9.041-3
10	53	8.847-3	7.174-3	5.808-3	4.738-3	3.898-3	3.541-3	3.215-3	2.633-3	2.119-3	1.662-3	1.264-3
10	54	1.630-3	1.197-3	8.401-4	5.717-4	3.816-4	3.103-4	2.517-4	1.650-4	1.077-4	7.022-5	4.570-5
10	55	8.846-3	7.367-3	6.153-3	5.207-3	4.473-3	4.165-3	3.884-3	3.389-3	2.958-3	2.577-3	2.214-3
10	56	1.292-2	1.078-2	9.002-3	7.590-3	6.454-3	5.957-3	5.492-3	4.628-3	3.823-3	3.074-3	2.392-3
10	57	1.068-2	9.507-3	8.595-3	7.978-3	7.639-3	7.563-3	7.546-3	7.673-3	7.994-3	8.406-3	8.563-3
10	58	8.546-3	7.224-3	6.138-3	5.263-3	4.535-3	4.205-3	3.890-3	3.284-3	2.704-3	2.158-3	1.659-3
10	59	9.202-3	7.382-3	5.994-3	4.980-3	4.250-3	3.965-3	3.721-3	3.332-3	3.046-3	2.829-3	2.601-3
10	60	1.478-2	1.096-2	8.048-3	5.943-3	4.457-3	3.886-3	3.401-3	2.629-3	2.043-3	1.582-3	1.209-3
10	61	1.308-2	1.105-2	9.566-3	8.541-3	7.875-3	7.649-3	7.483-3	7.300-3	7.281-3	7.336-3	7.207-3
10	62	5.861-1	5.947-1	6.090-1	6.295-1	6.567-1	6.730-1	6.912-1	7.347-1	7.889-1	8.470-1	8.753-1
10	63	3.261-3	2.488-3	1.905-3	1.477-3	1.162-3	1.034-3	9.212-4	7.302-4	5.740-4	4.450-4	3.381-4
10	64	6.637-4	4.795-4	3.369-4	2.332-4	1.606-4	1.333-4	1.107-4	7.650-5	5.295-5	3.657-5	2.508-5
10	65	1.670-3	1.549-3	1.443-3	1.338-3	1.226-3	1.164-3	1.098-3	9.545-4	7.999-4	6.441-4	4.975-4
10	66	6.057-3	4.910-3	4.056-3	3.421-3	2.924-3	2.708-3	2.506-3	2.129-3	1.780-3	1.459-3	1.164-3
10	67	7.024-1	7.117-1	7.276-1	7.510-1	7.824-1	8.014-1	8.229-1	8.744-1	9.390-1	1.008-0	1.043-0
10	68	3.816-3	3.523-3	3.253-3	2.994-3	2.724-3	2.580-3	2.428-3	2.102-3	1.757-3	1.412-3	1.090-3
10	69	1.044-1	1.051-1	1.069-1	1.098-1	1.140-1	1.165-1	1.194-1	1.265-1	1.355-1	1.452-1	1.498-1
10	70	4.623-2	4.652-2	4.724-2	4.842-2	5.012-2	5.118-2	5.240-2	5.542-2	5.928-2	6.349-2	6.550-2
10	71	4.444-1	4.494-1	4.579-1	4.706-1	4.882-1	4.990-1	5.115-1	5.419-1	5.808-1	6.229-1	6.433-1
10	72	4.052-3	3.861-3	3.660-3	3.434-3	3.168-3	3.016-3	2.851-3	2.486-3	2.090-3	1.689-3	1.311-3
10	73	5.389-3	5.129-3	4.867-3	4.589-3	4.275-3	4.101-3	3.913-3	3.503-3	3.063-3	2.618-3	2.177-3
10	74	3.380-3	2.450-3	1.752-3	1.253-3	9.032-4	7.695-4	6.569-4	4.799-4	3.494-4	2.515-4	1.780-4
10	75	8.548-3	7.962-3	7.553-3	7.309-3	7.212-3	7.216-3	7.253-3	7.430-3	7.740-3	8.102-3	8.204-3
10	76	7.052-4	5.641-4	4.579-4	3.785-4	3.173-4	2.911-4	2.669-4	2.226-4	1.821-4	1.450-4	1.116-4
10	77	3.028-3	2.779-3	2.559-3	2.351-3	2.134-3	2.019-3	1.898-3	1.638-3	1.364-3	1.092-3	8.388-4
10	78	1.046-3	9.552-4	8.799-4	8.107-4	7.400-4	7.025-4	6.632-4	5.790-4	4.902-4	4.014-4	3.170-4
10	79	4.107-3	3.731-3	3.431-3	3.159-3	2.879-3	2.728-3	2.569-3	2.226-3	1.860-3	1.495-3	1.154-3
10	80	3.768-1	3.803-1	3.862-1	3.953-1	4.086-1	4.171-1	4.272-1	4.525-1	4.855-1	5.217-1	5.395-1
10	81	3.898-3	3.819-3	3.700-3	3.531-3	3.299-3	3.158-3	2.999-3	2.637-3	2.231-3	1.813-3	1.411-3
10	82	5.675-4	5.518-4	5.306-4	5.020-4	4.645-4	4.421-4	4.174-4	3.620-4	3.017-4	2.412-4	1.851-4
10	83	2.290-4	2.224-4	2.130-4	1.998-4	1.825-4	1.724-4	1.614-4	1.375-4	1.126-4	8.855-5	6.699-5
10	84	6.167-4	5.992-4	5.764-4	5.461-4	5.064-4	4.827-4	4.564-4	3.972-4	3.327-4	2.677-4	2.068-4
10	85	2.972-3	2.986-3	3.012-3	3.058-3	3.127-3	3.173-3	3.227-3	3.367-3	3.556-3	3.763-3	3.843-3
10	86	4.782-5	4.545-5	4.286-5	3.994-5	3.653-5	3.461-5	3.253-5	2.799-5	2.316-5	1.837-5	1.398-5
10	87	6.522-4	6.270-4	5.972-4	5.603-4	5.140-4	4.870-4	4.574-4	3.922-4	3.226-4	2.541-4	1.918-4
10	88	1.866-4	1.840-4	1.802-4	1.743-4	1.657-4	1.602-4	1.541-4	1.397-4	1.234-4	1.061-4	8.811-5
10	89	3.704-4	3.668-4	3.626-4	3.578-4	3.526-4	3.500-4	3.475-4	3.434-4	3.409-4	3.383-4	3.262-4
10	90	5.145-5	4.870-5	4.570-5	4.230-5	3.834-5	3.613-5	3.377-5	2.874-5	2.355-5	1.856-5	1.407-5
10	91	1.244-3	1.217-3	1.177-3	1.121-3	1.044-3	9.977-4	9.455-4	8.269-4	6.959-4	5.621-4	4.351-4
10	92	7.503-5	7.247-5	6.912-5	6.466-5	5.887-5	5.549-5	5.182-5	4.387-5	3.563-5	2.774-5	2.073-5
10	93	9.895-6	9.553-6	9.123-6	8.566-6	7.850-6	7.430-6	6.972-6	5.962-6	4.890-6	3.843-6	2.896-6
10	94	9.146-5	9.049-5	8.925-5	8.771-5	8.591-5	8.494-5	8.397-5	8.219-5	8.094-5	8.004-5	7.731-5

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
10	95	5.266-5	5.116-5	4.919-5	4.657-5	4.311-5	4.104-5	3.876-5	3.368-5	2.819-5	2.272-5	1.760-5
10	96	1.608-4	1.568-4	1.511-4	1.431-4	1.323-4	1.259-4	1.188-4	1.029-4	8.581-5	6.870-5	5.278-5
10	97	3.750-5	3.674-5	3.549-5	3.365-5	3.111-5	2.957-5	2.785-5	2.398-5	1.979-5	1.562-5	1.181-5
11	12	1.793-0	1.636-0	1.419-0	1.163-0	8.992-1	7.750-1	6.606-1	4.671-1	3.217-1	2.178-1	1.457-1
11	13	5.233-1	4.451-1	3.651-1	2.862-1	2.139-1	1.819-1	1.533-1	1.067-1	7.316-2	5.030-2	3.526-2
11	14	5.008-1	4.503-1	3.889-1	3.163-1	2.420-1	2.077-1	1.765-1	1.248-1	8.718-2	6.106-2	4.324-2
11	15	3.334-1	2.752-1	2.201-1	1.688-1	1.241-1	1.050-1	8.815-2	6.111-2	4.175-2	2.835-2	1.922-2
11	16	5.105-1	4.787-1	4.245-1	3.512-1	2.726-1	2.358-1	2.022-1	1.465-1	1.059-1	7.773-2	5.830-2
11	17	1.519-1	1.342-1	1.119-1	8.796-2	6.551-2	5.561-2	4.679-2	3.248-2	2.214-2	1.496-2	1.006-2
11	18	2.499-1	2.146-1	1.756-1	1.365-1	1.015-1	8.639-2	7.308-2	5.170-2	3.642-2	2.585-2	1.860-2
11	19	2.797-1	2.650-1	2.321-1	1.877-1	1.423-1	1.216-1	1.030-1	7.270-2	5.097-2	3.601-2	2.578-2
11	20	6.112-1	5.846-1	5.170-1	4.214-1	3.201-1	2.732-1	2.307-1	1.607-1	1.099-1	7.474-2	5.089-2
11	21	1.191-1	1.118-1	9.737-2	7.837-2	5.886-2	4.996-2	4.195-2	2.882-2	1.934-2	1.279-2	8.376-3
11	22	1.658-1	1.478-1	1.235-1	9.677-2	7.198-2	6.120-2	5.171-2	3.653-2	2.583-2	1.858-2	1.369-2
11	23	3.995-1	3.690-1	3.189-1	2.561-1	1.929-1	1.643-1	1.386-1	9.661-2	6.637-2	4.546-2	3.123-2
11	24	2.361-1	2.203-1	1.927-1	1.562-1	1.184-1	1.010-1	8.524-2	5.927-2	4.033-2	2.708-2	1.804-2
11	25	1.530-1	1.323-1	1.092-1	8.582-2	6.476-2	5.569-2	4.770-2	3.490-2	2.577-2	1.942-2	1.489-2
11	26	5.120-2	4.738-2	4.028-2	3.191-2	2.400-2	2.052-2	1.743-2	1.240-2	8.711-3	6.061-3	4.180-3
11	27	9.689-2	9.427-2	9.350-2	9.559-2	1.003-1	1.035-1	1.070-1	1.149-1	1.239-1	1.332-1	1.377-1
11	28	6.948-2	6.298-2	5.307-2	4.193-2	3.162-2	2.713-2	2.315-2	1.668-2	1.190-2	8.436-3	5.932-3
11	29	3.220-2	2.994-2	2.769-2	2.568-2	2.396-2	2.318-2	2.244-2	2.103-2	1.973-2	1.851-2	1.708-2
11	30	9.231-2	9.276-2	9.517-2	1.004-1	1.079-1	1.123-1	1.170-1	1.271-1	1.384-1	1.497-1	1.555-1
11	31	1.518-2	1.302-2	1.096-2	9.122-3	7.567-3	6.890-3	6.269-3	5.172-3	4.231-3	3.422-3	2.721-3
11	32	2.436-2	2.122-2	1.812-2	1.535-2	1.302-2	1.202-2	1.111-2	9.518-3	8.187-3	7.060-3	6.032-3
11	33	5.158-2	4.757-2	4.290-2	3.824-2	3.390-2	3.185-2	2.988-2	2.608-2	2.247-2	1.906-2	1.582-2
11	34	2.847-2	2.391-2	1.961-2	1.584-2	1.270-2	1.135-2	1.013-2	8.020-3	6.257-3	4.781-3	3.557-3
11	35	2.923-2	2.467-2	2.029-2	1.641-2	1.317-2	1.177-2	1.051-2	8.313-3	6.478-3	4.940-3	3.666-3
11	36	3.675-2	3.118-2	2.591-2	2.124-2	1.732-2	1.561-2	1.405-2	1.131-2	8.958-3	6.934-3	5.215-3
11	37	1.079-2	1.029-2	9.775-3	9.345-3	9.020-3	8.887-3	8.769-3	8.570-3	8.429-3	8.320-3	8.036-3
11	38	2.088-2	1.929-2	1.740-2	1.549-2	1.367-2	1.279-2	1.193-2	1.023-2	8.586-3	7.018-3	5.566-3
11	39	3.523-2	3.249-2	2.936-2	2.627-2	2.337-2	2.199-2	2.065-2	1.803-2	1.551-2	1.313-2	1.087-2
11	40	4.217-2	3.861-2	3.454-2	3.047-2	2.662-2	2.478-2	2.298-2	1.945-2	1.603-2	1.279-2	9.837-3
11	41	2.730-2	2.415-2	2.052-2	1.703-2	1.397-2	1.262-2	1.137-2	9.166-3	7.267-3	5.632-3	4.244-3
11	42	4.233-2	3.426-2	2.641-2	1.976-2	1.460-2	1.253-2	1.076-2	7.948-3	5.881-3	4.347-3	3.192-3
11	43	5.069-2	4.270-2	3.457-2	2.743-2	2.164-2	1.922-2	1.708-2	1.347-2	1.056-2	8.201-3	6.265-3
11	44	3.590-2	2.915-2	2.251-2	1.686-2	1.250-2	1.078-2	9.326-3	7.078-3	5.510-3	4.415-3	3.595-3
11	45	1.718-2	1.451-2	1.184-2	9.484-3	7.531-3	6.697-3	5.944-3	4.645-3	3.569-3	2.684-3	1.967-3
11	46	1.623-2	1.385-2	1.152-2	9.505-3	7.865-3	7.173-3	6.553-3	5.492-3	4.628-3	3.921-3	3.304-3
11	47	1.105-2	9.392-3	7.754-3	6.318-3	5.133-3	4.626-3	4.167-3	3.368-3	2.698-3	2.133-3	1.657-3
11	48	1.730-2	1.648-2	1.579-2	1.529-2	1.494-2	1.481-2	1.469-2	1.452-2	1.446-2	1.444-2	1.409-2
11	49	2.747-1	2.698-1	2.693-1	2.743-1	2.840-1	2.905-1	2.980-1	3.162-1	3.387-1	3.627-1	3.741-1
11	50	8.635-2	8.293-2	8.110-2	8.107-2	8.261-2	8.389-2	8.549-2	8.964-2	9.509-2	1.011-1	1.037-1
11	51	3.120-1	3.155-1	3.234-1	3.359-1	3.526-1	3.623-1	3.729-1	3.975-1	4.271-1	4.583-1	4.734-1
11	52	5.319-2	4.332-2	3.495-2	2.844-2	2.364-2	2.177-2	2.019-2	1.777-2	1.612-2	1.498-2	1.387-2
11	53	7.677-2	6.005-2	4.594-2	3.515-2	2.742-2	2.451-2	2.211-2	1.861-2	1.641-2	1.507-2	1.392-2
11	54	1.646-2	1.275-2	9.711-3	7.389-3	5.666-3	4.978-3	4.381-3	3.396-3	2.617-3	1.987-3	1.474-3
11	55	5.729-2	5.181-2	4.784-2	4.535-2	4.405-2	4.375-2	4.364-2	4.397-2	4.500-2	4.638-2	4.650-2
11	56	4.053-2	3.486-2	3.040-2	2.719-2	2.501-2	2.424-2	2.365-2	2.291-2	2.266-2	2.268-2	2.220-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
11	57	4.455-2	3.861-2	3.378-2	3.016-2	2.759-2	2.663-2	2.584-2	2.475-2	2.420-2	2.395-2	2.324-2
11	58	3.489-2	2.836-2	2.289-2	1.857-2	1.520-2	1.378-2	1.249-2	1.021-2	8.210-3	6.446-3	4.910-3
11	59	1.862-2	1.511-2	1.224-2	1.000-2	8.248-3	7.502-3	6.820-3	5.603-3	4.531-3	3.584-3	2.758-3
11	60	6.193-2	5.749-2	5.466-2	5.332-2	5.322-2	5.357-2	5.418-2	5.612-2	5.901-2	6.228-2	6.355-2
11	61	2.954-2	2.224-2	1.672-2	1.276-2	9.993-3	8.936-3	8.047-3	6.650-3	5.619-3	4.825-3	4.133-3
11	62	2.760-1	2.755-1	2.786-1	2.855-1	2.961-1	3.027-1	3.103-1	3.289-1	3.523-1	3.776-1	3.898-1
11	63	1.618-0	1.637-0	1.672-0	1.726-0	1.798-0	1.842-0	1.891-0	2.010-0	2.157-0	2.315-0	2.391-0
11	64	2.560-2	2.175-2	1.891-2	1.688-2	1.547-2	1.493-2	1.450-2	1.385-2	1.345-2	1.317-2	1.261-2
11	65	7.007-1	7.098-1	7.256-1	7.491-1	7.807-1	7.997-1	8.210-1	8.720-1	9.359-1	1.005-0	1.038-0
11	66	2.124-2	1.588-2	1.210-2	9.499-3	7.717-3	7.043-3	6.480-3	5.609-3	4.999-3	4.565-3	4.161-3
11	67	6.428-1	6.507-1	6.645-1	6.854-1	7.135-1	7.305-1	7.497-1	7.958-1	8.534-1	9.156-1	9.459-1
11	68	6.872-1	6.951-1	7.095-1	7.313-1	7.610-1	7.791-1	7.997-1	8.494-1	9.115-1	9.782-1	1.010-0
11	69	1.893-2	1.753-2	1.657-2	1.600-2	1.572-2	1.568-2	1.569-2	1.587-2	1.628-2	1.681-2	1.687-2
11	70	5.922-1	5.985-1	6.098-1	6.270-1	6.507-1	6.654-1	6.821-1	7.228-1	7.745-1	8.307-1	8.579-1
11	71	1.889-1	1.903-1	1.934-1	1.982-1	2.050-1	2.092-1	2.141-1	2.260-1	2.414-1	2.581-1	2.660-1
11	72	8.216-1	8.303-1	8.455-1	8.686-1	9.007-1	9.207-1	9.436-1	9.996-1	1.071-0	1.147-0	1.184-0
11	73	1.836-2	1.728-2	1.628-2	1.529-2	1.422-2	1.364-2	1.303-2	1.171-2	1.032-2	8.929-3	7.537-3
11	74	1.562-2	1.330-2	1.160-2	1.044-2	9.698-3	9.450-3	9.271-3	9.097-3	9.132-3	9.268-3	9.168-3
11	75	1.187-2	9.689-3	8.098-3	6.970-3	6.173-3	5.865-3	5.602-3	5.192-3	4.908-3	4.704-3	4.442-3
11	76	1.142-2	9.966-3	8.965-3	8.315-3	7.931-3	7.819-3	7.753-3	7.749-3	7.897-3	8.112-3	8.095-3
11	77	1.019-1	1.022-1	1.033-1	1.053-1	1.083-1	1.102-1	1.125-1	1.183-1	1.258-1	1.340-1	1.377-1
11	78	6.825-3	6.489-3	6.163-3	5.807-3	5.389-3	5.151-3	4.892-3	4.321-3	3.704-3	3.082-3	2.482-3
11	79	8.134-1	8.206-1	8.331-1	8.528-1	8.817-1	9.004-1	9.223-1	9.772-1	1.048-0	1.126-0	1.163-0
11	80	3.023-1	3.050-1	3.095-1	3.165-1	3.269-1	3.335-1	3.413-1	3.610-1	3.867-1	4.148-1	4.286-1
11	81	1.691-2	1.675-2	1.654-2	1.625-2	1.588-2	1.566-2	1.543-2	1.495-2	1.449-2	1.406-2	1.334-2
11	82	7.487-3	7.496-3	7.522-3	7.579-3	7.678-3	7.747-3	7.833-3	8.068-3	8.410-3	8.802-3	8.922-3
11	83	4.196-3	4.208-3	4.231-3	4.273-3	4.342-3	4.389-3	4.447-3	4.603-3	4.825-3	5.079-3	5.171-3
11	84	1.545-3	1.506-3	1.456-3	1.390-3	1.302-3	1.249-3	1.191-3	1.060-3	9.162-4	7.707-4	6.289-4
11	85	5.479-3	5.483-3	5.508-3	5.565-3	5.663-3	5.731-3	5.813-3	6.034-3	6.342-3	6.690-3	6.820-3
11	86	4.825-3	4.846-3	4.889-3	4.965-3	5.085-3	5.164-3	5.258-3	5.499-3	5.823-3	6.183-3	6.333-3
11	87	2.110-3	2.031-3	1.938-3	1.821-3	1.674-3	1.588-3	1.494-3	1.285-3	1.061-3	8.388-4	6.358-4
11	88	2.349-3	2.347-3	2.356-3	2.381-3	2.425-3	2.457-3	2.496-3	2.600-3	2.744-3	2.902-3	2.962-3
11	89	5.498-4	5.376-4	5.225-4	5.024-4	4.758-4	4.597-4	4.419-4	4.015-4	3.567-4	3.099-4	2.613-4
11	90	6.215-4	6.102-4	5.978-4	5.839-4	5.684-4	5.602-4	5.519-4	5.358-4	5.218-4	5.082-4	4.825-4
11	91	3.762-3	3.682-3	3.568-3	3.407-3	3.187-3	3.053-3	2.904-3	2.566-3	2.195-3	1.815-3	1.450-3
11	92	2.393-4	2.311-4	2.203-4	2.060-4	1.875-4	1.767-4	1.650-4	1.397-4	1.134-4	8.829-5	6.598-5
11	93	1.300-4	1.298-4	1.299-4	1.307-4	1.324-4	1.336-4	1.353-4	1.401-4	1.473-4	1.559-4	1.596-4
11	94	2.527-4	2.517-4	2.511-4	2.512-4	2.524-4	2.537-4	2.555-4	2.617-4	2.721-4	2.851-4	2.896-4
11	95	3.952-4	3.880-4	3.791-4	3.676-4	3.526-4	3.436-4	3.338-4	3.118-4	2.882-4	2.636-4	2.355-4
11	96	4.930-4	4.814-4	4.646-4	4.410-4	4.092-4	3.901-4	3.690-4	3.219-4	2.711-4	2.204-4	1.729-4
11	97	1.077-4	1.055-4	1.019-4	9.670-5	8.947-5	8.507-5	8.017-5	6.914-5	5.720-5	4.537-5	3.454-5
12	13	1.290-0	1.163-0	1.010-0	8.252-1	6.320-1	5.413-1	4.581-1	3.186-1	2.154-1	1.430-1	9.375-2
12	14	4.135-1	3.732-1	3.226-1	2.618-1	1.993-1	1.703-1	1.439-1	1.000-1	6.782-2	4.533-2	3.007-2
12	15	3.980-1	3.369-1	2.735-1	2.122-1	1.583-1	1.353-1	1.150-1	8.244-2	5.910-2	4.276-2	3.126-2
12	16	7.685-1	7.435-1	6.739-1	5.642-1	4.384-1	3.776-1	3.212-1	2.263-1	1.559-1	1.066-1	7.294-2
12	17	8.218-1	7.685-1	6.753-1	5.550-1	4.297-1	3.716-1	3.188-1	2.316-1	1.682-1	1.244-1	9.398-2
12	18	3.214-1	2.709-1	2.193-1	1.702-1	1.274-1	1.091-1	9.310-2	6.736-2	4.887-2	3.591-2	2.671-2
12	19	1.155-0	1.112-0	9.930-1	8.151-1	6.213-1	5.305-1	4.477-1	3.104-1	2.101-1	1.403-1	9.307-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
12	20	2.231-1	2.123-1	1.880-1	1.535-1	1.165-1	9.939-2	8.382-2	5.814-2	3.946-2	2.650-2	1.772-2
12	21	5.316-2	4.944-2	4.267-2	3.412-2	2.566-2	2.187-2	1.850-2	1.306-2	9.198-3	6.564-3	4.773-3
12	22	4.246-1	3.817-1	3.222-1	2.537-1	1.877-1	1.584-1	1.324-1	9.030-2	6.025-2	3.965-2	2.588-2
12	23	1.492-1	1.405-1	1.231-1	1.000-1	7.643-2	6.571-2	5.610-2	4.041-2	2.911-2	2.129-2	1.583-2
12	24	6.944-1	6.395-1	5.506-1	4.416-1	3.334-1	2.848-1	2.413-1	1.706-1	1.199-1	8.490-2	6.093-2
12	25	6.177-1	5.603-1	4.805-1	3.868-1	2.949-1	2.536-1	2.167-1	1.564-1	1.128-1	8.242-2	6.107-2
12	26	9.750-2	9.175-2	7.964-2	6.423-2	4.892-2	4.203-2	3.583-2	2.561-2	1.804-2	1.260-2	8.739-3
12	27	2.318-1	2.272-1	2.264-1	2.316-1	2.425-1	2.494-1	2.571-1	2.742-1	2.936-1	3.134-1	3.224-1
12	28	7.174-2	6.506-2	5.503-2	4.382-2	3.341-2	2.886-2	2.480-2	1.811-2	1.306-2	9.314-3	6.547-3
12	29	2.077-1	2.072-1	2.108-1	2.204-1	2.354-1	2.442-1	2.538-1	2.746-1	2.979-1	3.216-1	3.337-1
12	30	8.326-3	7.260-3	6.172-3	5.172-3	4.307-3	3.924-3	3.569-3	2.928-3	2.362-3	1.859-3	1.419-3
12	31	1.176-2	9.391-3	7.300-3	5.584-3	4.270-3	3.750-3	3.309-3	2.625-3	2.145-3	1.808-3	1.544-3
12	32	3.224-2	2.799-2	2.409-2	2.087-2	1.840-2	1.742-2	1.659-2	1.529-2	1.438-2	1.373-2	1.296-2
12	33	8.553-2	8.068-2	7.560-2	7.135-2	6.825-2	6.707-2	6.609-2	6.464-2	6.383-2	6.336-2	6.155-2
12	34	3.664-2	2.955-2	2.326-2	1.802-2	1.389-2	1.221-2	1.074-2	8.351-3	6.521-3	5.104-3	3.977-3
12	35	4.870-2	4.103-2	3.363-2	2.705-2	2.156-2	1.921-2	1.710-2	1.347-2	1.048-2	8.006-3	5.970-3
12	36	7.512-2	6.550-2	5.584-2	4.689-2	3.903-2	3.550-2	3.221-2	2.623-2	2.093-2	1.626-2	1.225-2
12	37	5.170-3	4.448-3	3.697-3	3.007-3	2.423-3	2.171-3	1.943-3	1.547-3	1.215-3	9.340-4	6.990-4
12	38	2.165-2	1.971-2	1.768-2	1.589-2	1.445-2	1.387-2	1.335-2	1.252-2	1.190-2	1.144-2	1.084-2
12	39	3.630-2	3.261-2	2.861-2	2.478-2	2.135-2	1.978-2	1.829-2	1.553-2	1.299-2	1.068-2	8.582-3
12	40	6.260-2	5.730-2	5.120-2	4.511-2	3.939-2	3.668-2	3.404-2	2.892-2	2.402-2	1.940-2	1.517-2
12	41	9.990-2	9.298-2	8.460-2	7.586-2	6.726-2	6.301-2	5.877-2	5.025-2	4.175-2	3.353-2	2.594-2
12	42	4.262-2	3.565-2	2.888-2	2.306-2	1.839-2	1.644-2	1.471-2	1.176-2	9.339-3	7.322-3	5.627-3
12	43	7.025-2	5.718-2	4.443-2	3.362-2	2.517-2	2.177-2	1.884-2	1.413-2	1.058-2	7.884-3	5.799-3
12	44	1.187-1	9.903-2	7.867-2	6.084-2	4.665-2	4.088-2	3.588-2	2.782-2	2.179-2	1.724-2	1.366-2
12	45	3.808-2	3.340-2	2.862-2	2.436-2	2.082-2	1.929-2	1.791-2	1.551-2	1.352-2	1.185-2	1.031-2
12	46	3.492-2	3.166-2	2.852-2	2.594-2	2.398-2	2.322-2	2.258-2	2.162-2	2.108-2	2.080-2	2.017-2
12	47	1.900-2	1.712-2	1.534-2	1.388-2	1.275-2	1.229-2	1.190-2	1.128-2	1.088-2	1.064-2	1.024-2
12	48	2.072-2	1.902-2	1.729-2	1.563-2	1.402-2	1.321-2	1.239-2	1.069-2	8.935-3	7.200-3	5.575-3
12	49	5.359-1	5.330-1	5.385-1	5.534-1	5.767-1	5.911-1	6.074-1	6.457-1	6.924-1	7.419-1	7.656-1
12	50	5.721-1	5.723-1	5.810-1	5.993-1	6.258-1	6.419-1	6.599-1	7.022-1	7.540-1	8.092-1	8.363-1
12	51	1.880-2	1.422-2	1.045-2	7.588-3	5.512-3	4.707-3	4.025-3	2.952-3	2.163-3	1.573-3	1.128-3
12	52	3.638-2	3.021-2	2.507-2	2.109-2	1.812-2	1.694-2	1.593-2	1.430-2	1.311-2	1.221-2	1.128-2
12	53	6.327-2	5.124-2	4.088-2	3.277-2	2.676-2	2.441-2	2.243-2	1.936-2	1.721-2	1.570-2	1.431-2
12	54	1.577-1	1.225-1	9.292-2	7.030-2	5.403-2	4.787-2	4.279-2	3.522-2	3.028-2	2.708-2	2.446-2
12	55	5.127-2	4.666-2	4.331-2	4.124-2	4.026-2	4.012-2	4.019-2	4.092-2	4.241-2	4.426-2	4.482-2
12	56	1.044-1	9.583-2	8.945-2	8.540-2	8.334-2	8.293-2	8.289-2	8.383-2	8.611-2	8.905-2	8.949-2
12	57	1.146-1	1.015-1	9.099-2	8.337-2	7.819-2	7.634-2	7.488-2	7.301-2	7.235-2	7.231-2	7.067-2
12	58	4.457-2	3.685-2	3.055-2	2.566-2	2.186-2	2.025-2	1.880-2	1.623-2	1.400-2	1.203-2	1.018-2
12	59	4.821-1	4.843-1	4.922-1	5.063-1	5.263-1	5.386-1	5.526-1	5.860-1	6.274-1	6.715-1	6.922-1
12	60	2.244-2	1.811-2	1.492-2	1.266-2	1.110-2	1.052-2	1.004-2	9.323-3	8.861-3	8.541-3	8.100-3
12	61	2.205-1	2.139-1	2.113-1	2.127-1	2.175-1	2.212-1	2.258-1	2.375-1	2.528-1	2.695-1	2.770-1
12	62	3.145-2	2.472-2	1.982-2	1.645-2	1.419-2	1.337-2	1.271-2	1.178-2	1.127-2	1.101-2	1.063-2
12	63	1.768-1	1.698-1	1.666-1	1.668-1	1.700-1	1.727-1	1.760-1	1.848-1	1.966-1	2.096-1	2.157-1
12	64	7.126-2	5.826-2	4.864-2	4.174-2	3.678-2	3.483-2	3.315-2	3.041-2	2.831-2	2.658-2	2.455-2
12	65	4.624-3	3.614-3	2.892-3	2.365-3	1.962-3	1.789-3	1.629-3	1.338-3	1.074-3	8.365-4	6.301-4
12	66	2.139-0	2.160-0	2.202-0	2.268-0	2.360-0	2.416-0	2.480-0	2.635-0	2.828-0	3.034-0	3.133-0
12	67	7.176-1	7.243-1	7.381-1	7.597-1	7.894-1	8.076-1	8.282-1	8.783-1	9.418-1	1.011-0	1.044-0

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
12	68	2.534-0	2.566-0	2.621-0	2.702-0	2.812-0	2.880-0	2.956-0	3.140-0	3.370-0	3.618-0	3.740-0
12	69	1.885-1	1.893-1	1.919-1	1.967-1	2.035-1	2.078-1	2.127-1	2.248-1	2.404-1	2.574-1	2.655-1
12	70	1.039-0	1.050-0	1.070-0	1.099-0	1.140-0	1.165-0	1.194-0	1.265-0	1.356-0	1.455-0	1.503-0
12	71	4.775-2	4.725-2	4.714-2	4.743-2	4.811-2	4.861-2	4.922-2	5.086-2	5.317-2	5.578-2	5.662-2
12	72	2.893-1	2.898-1	2.929-1	2.988-1	3.078-1	3.136-1	3.203-1	3.372-1	3.591-1	3.829-1	3.937-1
12	73	1.578-0	1.593-0	1.620-0	1.662-0	1.721-0	1.759-0	1.802-0	1.908-0	2.043-0	2.189-0	2.258-0
12	74	1.631-2	1.444-2	1.303-2	1.199-2	1.120-2	1.088-2	1.059-2	1.011-2	9.746-3	9.450-3	8.980-3
12	75	1.513-1	1.493-1	1.491-1	1.509-1	1.548-1	1.576-1	1.609-1	1.695-1	1.808-1	1.932-1	1.989-1
12	76	3.540-2	2.835-2	2.334-2	1.993-2	1.770-2	1.691-2	1.630-2	1.553-2	1.522-2	1.518-2	1.483-2
12	77	1.272-2	1.225-2	1.183-2	1.146-2	1.108-2	1.089-2	1.070-2	1.034-2	1.004-2	9.803-3	9.382-3
12	78	1.343-0	1.355-0	1.375-0	1.408-0	1.455-0	1.486-0	1.523-0	1.614-0	1.731-0	1.859-0	1.921-0
12	79	3.521-1	3.550-1	3.598-1	3.677-1	3.794-1	3.871-1	3.961-1	4.186-1	4.481-1	4.805-1	4.960-1
12	80	2.519-2	2.530-2	2.551-2	2.586-2	2.641-2	2.677-2	2.722-2	2.837-2	2.995-2	3.172-2	3.245-2
12	81	1.362-2	1.332-2	1.290-2	1.231-2	1.153-2	1.105-2	1.052-2	9.326-3	7.999-3	6.635-3	5.310-3
12	82	6.345-3	6.257-3	6.173-3	6.097-3	6.028-3	5.997-3	5.970-3	5.941-3	5.958-3	5.998-3	5.883-3
12	83	9.522-4	9.267-4	8.913-4	8.417-4	7.751-4	7.355-4	6.920-4	5.965-4	4.955-4	3.971-4	3.070-4
12	84	1.325-2	1.323-2	1.325-2	1.334-2	1.351-2	1.364-2	1.379-2	1.422-2	1.482-2	1.549-2	1.567-2
12	85	5.030-3	4.988-3	4.946-3	4.904-3	4.865-3	4.847-3	4.833-3	4.822-3	4.851-3	4.901-3	4.822-3
12	86	6.571-4	6.374-4	6.117-4	5.778-4	5.339-4	5.078-4	4.792-4	4.155-4	3.469-4	2.786-4	2.150-4
12	87	3.525-2	3.522-2	3.538-2	3.581-2	3.662-2	3.719-2	3.788-2	3.972-2	4.223-2	4.502-2	4.628-2
12	88	7.729-4	7.567-4	7.399-4	7.220-4	7.025-4	6.923-4	6.818-4	6.616-4	6.445-4	6.291-4	5.998-4
12	89	4.768-3	4.765-3	4.785-3	4.838-3	4.938-3	5.009-3	5.096-3	5.328-3	5.644-3	5.994-3	6.140-3
12	90	1.909-3	1.883-3	1.847-3	1.798-3	1.733-3	1.694-3	1.652-3	1.557-3	1.456-3	1.350-3	1.221-3
12	91	7.428-3	7.316-3	7.166-3	6.965-3	6.702-3	6.548-3	6.380-3	6.014-3	5.638-3	5.268-3	4.823-3
12	92	5.732-4	5.581-4	5.381-4	5.115-4	4.778-4	4.584-4	4.377-4	3.941-4	3.509-4	3.109-4	2.715-4
12	93	3.444-5	3.323-5	3.176-5	2.993-5	2.762-5	2.628-5	2.481-5	2.157-5	1.811-5	1.467-5	1.146-5
12	94	1.589-4	1.546-4	1.492-4	1.422-4	1.333-4	1.280-4	1.222-4	1.092-4	9.525-5	8.117-5	6.728-5
12	95	6.516-4	6.368-4	6.173-4	5.913-4	5.569-4	5.363-4	5.133-4	4.614-4	4.041-4	3.449-4	2.853-4
12	96	8.232-4	8.043-4	7.769-4	7.385-4	6.867-4	6.555-4	6.208-4	5.428-4	4.576-4	3.719-4	2.910-4
12	97	1.633-4	1.597-4	1.541-4	1.460-4	1.349-4	1.281-4	1.205-4	1.035-4	8.508-5	6.689-5	5.037-5
13	14	7.410-1	7.388-1	6.781-1	5.705-1	4.446-1	3.835-1	3.267-1	2.305-1	1.584-1	1.071-1	7.171-2
13	15	1.277-0	1.059-0	8.831-1	7.348-1	6.111-1	5.590-1	5.135-1	4.414-1	3.918-1	3.586-1	3.295-1
13	16	5.851-1	5.519-1	4.895-1	4.043-1	3.131-1	2.702-1	2.307-1	1.642-1	1.142-1	7.807-2	5.268-2
13	17	3.898-1	3.603-1	3.111-1	2.529-1	1.958-1	1.700-1	1.465-1	1.072-1	7.719-2	5.491-2	3.859-2
13	18	7.473-1	6.799-1	6.018-1	5.218-1	4.494-1	4.180-1	3.905-1	3.466-1	3.161-1	2.952-1	2.746-1
13	19	1.146-0	9.568-1	7.747-1	5.990-1	4.412-1	3.728-1	3.121-1	2.144-1	1.444-1	9.621-2	6.369-2
13	20	2.301-1	2.013-1	1.690-1	1.342-1	1.008-1	8.581-2	7.238-2	5.038-2	3.433-2	2.307-2	1.537-2
13	21	4.771-2	4.275-2	3.627-2	2.892-2	2.186-2	1.871-2	1.589-2	1.128-2	7.917-3	5.555-3	3.909-3
13	22	1.999-0	1.873-0	1.666-0	1.383-0	1.071-0	9.226-1	7.854-1	5.544-1	3.827-1	2.613-1	1.777-1
13	23	1.967-1	1.665-1	1.368-1	1.071-1	8.000-2	6.812-2	5.755-2	4.033-2	2.780-2	1.897-2	1.285-2
13	24	3.781-1	3.512-1	3.093-1	2.541-1	1.957-1	1.684-1	1.435-1	1.017-1	7.065-2	4.851-2	3.306-2
13	25	2.546-1	2.198-1	1.830-1	1.455-1	1.108-1	9.549-2	8.174-2	5.898-2	4.190-2	2.940-2	2.038-2
13	26	8.019-1	8.154-1	7.624-1	6.521-1	5.159-1	4.485-1	3.854-1	2.780-1	1.974-1	1.400-1	9.992-2
13	27	1.639-1	1.591-1	1.580-1	1.625-1	1.719-1	1.779-1	1.846-1	1.994-1	2.161-1	2.332-1	2.421-1
13	28	2.553-1	2.364-1	2.046-1	1.644-1	1.238-1	1.054-1	8.883-2	6.176-2	4.219-2	2.864-2	1.945-2
13	29	4.155-2	3.729-2	3.369-2	3.092-2	2.889-2	2.809-2	2.740-2	2.628-2	2.545-2	2.481-2	2.375-2
13	30	1.123-2	9.852-3	8.531-3	7.333-3	6.272-3	5.786-3	5.322-3	4.446-3	3.628-3	2.873-3	2.199-3
13	31	5.155-3	4.122-3	3.126-3	2.271-3	1.603-3	1.337-3	1.113-3	7.679-4	5.306-4	3.689-4	2.582-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a \pm b \equiv a \times 10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
13	32	1.926-1	1.928-1	1.980-1	2.100-1	2.278-1	2.381-1	2.491-1	2.730-1	2.994-1	3.261-1	3.406-1
13	33	1.694-0	1.713-0	1.778-0	1.904-0	2.078-0	2.178-0	2.283-0	2.509-0	2.756-0	3.004-0	3.139-0
13	34	1.175-2	9.259-3	6.925-3	4.973-3	3.476-3	2.889-3	2.396-3	1.647-3	1.139-3	7.993-4	5.695-4
13	35	1.278-2	1.001-2	7.470-3	5.357-3	3.737-3	3.101-3	2.565-3	1.745-3	1.182-3	7.971-4	5.350-4
13	36	1.362-2	1.064-2	7.938-3	5.704-3	3.997-3	3.326-3	2.761-3	1.893-3	1.293-3	8.797-4	5.948-4
13	37	1.421-3	1.158-3	8.856-4	6.424-4	4.491-4	3.719-4	3.066-4	2.063-4	1.377-4	9.139-5	6.033-5
13	38	4.864-3	3.955-3	3.040-3	2.242-3	1.617-3	1.368-3	1.159-3	8.398-4	6.226-4	4.768-4	3.748-4
13	39	1.016-2	8.444-3	6.809-3	5.454-3	4.451-3	4.075-3	3.772-3	3.352-3	3.129-3	3.032-3	2.933-3
13	40	1.274-2	1.030-2	7.852-3	5.726-3	4.057-3	3.393-3	2.830-3	1.961-3	1.356-3	9.366-4	6.444-4
13	41	1.446-2	1.173-2	8.929-3	6.451-3	4.494-3	3.715-3	3.058-3	2.052-3	1.367-3	9.059-4	5.977-4
13	42	6.985-2	6.253-2	5.486-2	4.780-2	4.163-2	3.884-2	3.620-2	3.128-2	2.673-2	2.254-2	1.862-2
13	43	9.905-2	8.885-2	7.828-2	6.853-2	5.990-2	5.593-2	5.213-2	4.490-2	3.807-2	3.166-2	2.569-2
13	44	1.312-1	1.180-1	1.042-1	9.135-2	7.964-2	7.413-2	6.877-2	5.836-2	4.825-2	3.862-2	2.979-2
13	45	6.731-3	5.307-3	3.981-3	2.890-3	2.063-3	1.738-3	1.463-3	1.037-3	7.347-4	5.187-4	3.633-4
13	46	5.238-3	4.170-3	3.159-3	2.322-3	1.692-3	1.447-3	1.244-3	9.395-4	7.384-4	6.082-4	5.154-4
13	47	2.856-3	2.294-3	1.737-3	1.264-3	9.004-4	7.582-4	6.392-4	4.593-4	3.389-4	2.597-4	2.054-4
13	48	2.504-2	2.133-2	1.708-2	1.310-2	9.836-3	8.495-3	7.336-3	5.484-3	4.119-3	3.098-3	2.315-3
13	49	5.958-2	5.525-2	5.165-2	4.921-2	4.789-2	4.759-2	4.750-2	4.789-2	4.900-2	5.048-2	5.058-2
13	50	2.012-2	1.688-2	1.386-2	1.131-2	9.231-3	8.346-3	7.543-3	6.128-3	4.906-3	3.839-3	2.916-3
13	51	8.099-3	6.649-3	5.327-3	4.225-3	3.352-3	2.990-3	2.667-3	2.119-3	1.668-3	1.290-3	9.719-4
13	52	1.459-1	1.375-1	1.324-1	1.307-1	1.320-1	1.336-1	1.357-1	1.417-1	1.499-1	1.589-1	1.627-1
13	53	4.896-2	3.935-2	3.139-2	2.510-2	2.021-2	1.817-2	1.634-2	1.318-2	1.055-2	8.330-3	6.462-3
13	54	5.851-2	4.763-2	3.876-2	3.174-2	2.617-2	2.378-2	2.160-2	1.769-2	1.426-2	1.127-2	8.688-3
13	55	2.569-2	2.275-2	2.044-2	1.888-2	1.799-2	1.776-2	1.766-2	1.780-2	1.835-2	1.912-2	1.938-2
13	56	2.948-2	2.408-2	1.967-2	1.637-2	1.407-2	1.322-2	1.255-2	1.162-2	1.115-2	1.097-2	1.067-2
13	57	1.992-1	1.961-1	1.963-1	2.002-1	2.072-1	2.118-1	2.171-1	2.299-1	2.458-1	2.628-1	2.707-1
13	58	1.715-1	1.400-1	1.105-1	8.664-2	6.904-2	6.236-2	5.689-2	4.901-2	4.432-2	4.172-2	3.935-2
13	59	2.826-0	2.870-0	2.949-0	3.066-0	3.218-0	3.307-0	3.405-0	3.634-0	3.908-0	4.198-0	4.337-0
13	60	3.493-2	2.975-2	2.562-2	2.243-2	1.993-2	1.887-2	1.789-2	1.614-2	1.460-2	1.322-2	1.181-2
13	61	4.132-2	3.591-2	3.138-2	2.774-2	2.480-2	2.351-2	2.232-2	2.014-2	1.818-2	1.641-2	1.459-2
13	62	1.705-2	1.468-2	1.285-2	1.150-2	1.054-2	1.018-2	9.870-3	9.418-3	9.157-3	9.019-3	8.726-3
13	63	1.990-2	1.619-2	1.321-2	1.087-2	9.019-3	8.221-3	7.486-3	6.159-3	4.976-3	3.922-3	2.999-3
13	64	4.546-2	3.909-2	3.368-2	2.927-2	2.562-2	2.400-2	2.247-2	1.962-2	1.697-2	1.451-2	1.216-2
13	65	3.710-3	3.251-3	2.850-3	2.504-3	2.197-3	2.051-3	1.907-3	1.622-3	1.339-3	1.068-3	8.191-4
13	66	4.164-1	4.188-1	4.261-1	4.384-1	4.556-1	4.661-1	4.780-1	5.065-1	5.419-1	5.795-1	5.969-1
13	67	1.283-2	1.117-2	9.794-3	8.677-3	7.747-3	7.327-3	6.928-3	6.173-3	5.471-3	4.825-3	4.186-3
13	68	6.312-2	6.228-2	6.207-2	6.256-2	6.368-2	6.448-2	6.544-2	6.791-2	7.123-2	7.490-2	7.618-2
13	69	2.145-0	2.177-0	2.231-0	2.308-0	2.408-0	2.467-0	2.533-0	2.691-0	2.888-0	3.100-0	3.203-0
13	70	2.102-1	2.127-1	2.172-1	2.238-1	2.326-1	2.379-1	2.439-1	2.585-1	2.768-1	2.968-1	3.063-1
13	71	2.673-1	2.697-1	2.746-1	2.823-1	2.928-1	2.992-1	3.065-1	3.244-1	3.473-1	3.721-1	3.840-1
13	72	4.342-2	4.228-2	4.168-2	4.163-2	4.212-2	4.256-2	4.313-2	4.470-2	4.690-2	4.938-2	5.027-2
13	73	7.734-2	7.557-2	7.476-2	7.492-2	7.602-2	7.690-2	7.803-2	8.106-2	8.519-2	8.976-2	9.141-2
13	74	2.020-1	2.021-1	2.040-1	2.078-1	2.138-1	2.177-1	2.222-1	2.335-1	2.483-1	2.643-1	2.714-1
13	75	5.647-2	5.408-2	5.186-2	4.999-2	4.850-2	4.788-2	4.733-2	4.650-2	4.606-2	4.583-2	4.454-2
13	76	4.482-2	4.093-2	3.684-2	3.294-2	2.926-2	2.746-2	2.566-2	2.203-2	1.839-2	1.484-2	1.153-2
13	77	2.159-0	2.181-0	2.221-0	2.283-0	2.368-0	2.421-0	2.483-0	2.632-0	2.822-0	3.027-0	3.127-0
13	78	3.268-2	3.148-2	3.047-2	2.968-2	2.911-2	2.889-2	2.873-2	2.857-2	2.866-2	2.889-2	2.837-2
13	79	6.124-2	6.093-2	6.099-2	6.152-2	6.259-2	6.335-2	6.429-2	6.675-2	7.012-2	7.389-2	7.525-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
13	80	8.764-3	8.297-3	7.852-3	7.437-3	7.033-3	6.828-3	6.619-3	6.193-3	5.772-3	5.362-3	4.884-3
13	81	1.010-0	1.020-0	1.038-0	1.064-0	1.100-0	1.124-0	1.151-0	1.219-0	1.306-0	1.401-0	1.447-0
13	82	1.089-1	1.065-1	1.052-1	1.050-1	1.060-1	1.070-1	1.084-1	1.121-1	1.175-1	1.235-1	1.254-1
13	83	4.450-3	4.341-3	4.231-3	4.086-3	3.882-3	3.752-3	3.604-3	3.256-3	2.858-3	2.434-3	2.001-3
13	84	3.590-2	3.496-2	3.428-2	3.384-2	3.363-2	3.362-2	3.367-2	3.401-2	3.474-2	3.565-2	3.556-2
13	85	1.014-2	9.483-3	8.919-3	8.400-3	7.877-3	7.602-3	7.316-3	6.718-3	6.110-3	5.513-3	4.876-3
13	86	2.802-3	2.589-3	2.403-3	2.223-3	2.032-3	1.928-3	1.818-3	1.580-3	1.326-3	1.071-3	8.314-4
13	87	1.840-0	1.851-0	1.873-0	1.913-0	1.975-0	2.017-0	2.066-0	2.192-0	2.355-0	2.533-0	2.620-0
13	88	1.127-2	1.118-2	1.111-2	1.108-2	1.110-2	1.114-2	1.119-2	1.136-2	1.166-2	1.201-2	1.200-2
13	89	5.055-3	4.850-3	4.627-3	4.370-3	4.059-3	3.880-3	3.684-3	3.247-3	2.769-3	2.278-3	1.805-3
13	90	6.338-3	6.054-3	5.751-3	5.410-3	5.005-3	4.774-3	4.522-3	3.960-3	3.345-3	2.715-3	2.114-3
13	91	8.576-2	8.604-2	8.687-2	8.840-2	9.087-2	9.252-2	9.451-2	9.961-2	1.064-1	1.138-1	1.172-1
13	92	6.299-3	6.245-3	6.198-3	6.162-3	6.149-3	6.156-3	6.179-3	6.283-3	6.488-3	6.746-3	6.801-3
13	93	3.460-4	3.339-4	3.200-4	3.027-4	2.805-4	2.674-4	2.529-4	2.203-4	1.845-4	1.481-4	1.139-4
13	94	1.128-3	1.097-3	1.061-3	1.018-3	9.632-4	9.312-4	8.962-4	8.188-4	7.368-4	6.554-4	5.710-4
13	95	5.828-3	5.810-3	5.812-3	5.837-3	5.893-3	5.935-3	5.990-3	6.147-3	6.384-3	6.659-3	6.725-3
13	96	3.390-2	3.416-2	3.455-2	3.514-2	3.601-2	3.657-2	3.723-2	3.889-2	4.109-2	4.347-2	4.434-2
13	97	1.304-4	1.269-4	1.218-4	1.146-4	1.050-4	9.922-5	9.292-5	7.917-5	6.488-5	5.127-5	3.915-5
14	15	1.783-1	1.552-1	1.300-1	1.035-1	7.817-2	6.685-2	5.669-2	4.004-2	2.795-2	1.954-2	1.375-2
14	16	2.429-0	2.230-0	1.950-0	1.623-0	1.298-0	1.149-0	1.014-0	7.893-1	6.261-1	5.188-1	4.491-1
14	17	3.233-1	3.002-1	2.611-1	2.137-1	1.665-1	1.449-1	1.253-1	9.252-2	6.801-2	5.042-2	3.788-2
14	18	1.457-1	1.242-1	1.017-1	7.923-2	5.882-2	4.989-2	4.195-2	2.907-2	1.979-2	1.335-2	8.979-3
14	19	4.990-1	4.509-1	3.940-1	3.278-1	2.598-1	2.280-1	1.986-1	1.485-1	1.101-1	8.179-2	6.108-2
14	20	9.710-1	8.382-1	7.143-1	5.861-1	4.603-1	4.024-1	3.496-1	2.615-1	1.962-1	1.500-1	1.168-1
14	21	1.881-1	1.823-1	1.716-1	1.572-1	1.419-1	1.349-1	1.285-1	1.180-1	1.108-1	1.059-1	1.003-1
14	22	4.056-1	3.658-1	3.162-1	2.577-1	1.985-1	1.712-1	1.463-1	1.046-1	7.356-2	5.132-2	3.568-2
14	23	1.227-0	1.097-0	9.725-1	8.211-1	6.537-1	5.724-1	4.967-1	3.677-1	2.712-1	2.031-1	1.550-1
14	24	6.586-1	6.032-1	5.378-1	4.517-1	3.557-1	3.094-1	2.663-1	1.935-1	1.391-1	1.008-1	7.414-2
14	25	2.667-1	2.270-1	1.896-1	1.524-1	1.178-1	1.024-1	8.839-2	6.509-2	4.755-2	3.475-2	2.544-2
14	26	1.864-1	1.822-1	1.650-1	1.387-1	1.096-1	9.571-2	8.277-2	6.055-2	4.332-2	3.046-2	2.108-2
14	27	1.558-2	1.247-2	9.520-3	6.992-3	5.016-3	4.235-3	3.580-3	2.592-3	1.938-3	1.513-3	1.219-3
14	28	1.008-1	9.492-2	8.338-2	6.878-2	5.402-2	4.723-2	4.101-2	3.046-2	2.229-2	1.611-2	1.149-2
14	29	1.385-2	1.119-2	8.558-3	6.274-3	4.492-3	3.790-3	3.203-3	2.321-3	1.743-3	1.372-3	1.118-3
14	30	4.987-3	4.046-3	3.093-3	2.246-3	1.570-3	1.298-3	1.068-3	7.152-4	4.737-4	3.117-4	2.040-4
14	31	5.160-2	4.466-2	3.829-2	3.303-2	2.892-2	2.723-2	2.572-2	2.316-2	2.108-2	1.936-2	1.761-2
14	32	5.622-2	4.798-2	4.054-2	3.439-2	2.957-2	2.759-2	2.584-2	2.289-2	2.049-2	1.845-2	1.639-2
14	33	3.389-2	2.987-2	2.581-2	2.243-2	2.005-2	1.922-2	1.861-2	1.795-2	1.792-2	1.828-2	1.832-2
14	34	4.129-2	3.478-2	2.856-2	2.312-2	1.866-2	1.677-2	1.508-2	1.217-2	9.764-3	7.752-3	6.052-3
14	35	2.639-2	2.130-2	1.656-2	1.252-2	9.332-3	8.036-3	6.917-3	5.118-3	3.773-3	2.758-3	1.986-3
14	36	5.138-3	4.265-3	3.315-3	2.428-3	1.698-3	1.401-3	1.148-3	7.589-4	4.941-4	3.185-4	2.039-4
14	37	1.168-2	1.002-2	8.403-3	6.985-3	5.795-3	5.275-3	4.796-3	3.931-3	3.164-3	2.483-3	1.888-3
14	38	3.111-2	2.662-2	2.228-2	1.849-2	1.534-2	1.398-2	1.274-2	1.051-2	8.571-3	6.864-3	5.368-3
14	39	4.086-2	3.530-2	2.994-2	2.538-2	2.175-2	2.023-2	1.888-2	1.658-2	1.470-2	1.314-2	1.165-2
14	40	3.009-2	2.575-2	2.153-2	1.790-2	1.501-2	1.383-2	1.278-2	1.105-2	9.678-3	8.548-3	7.477-3
14	41	1.324-2	1.089-2	8.465-3	6.291-3	4.541-3	3.832-3	3.226-3	2.275-3	1.598-3	1.118-3	7.755-4
14	42	2.826-1	2.785-1	2.824-1	2.954-1	3.155-1	3.273-1	3.400-1	3.678-1	3.993-1	4.315-1	4.481-1
14	43	9.274-2	8.552-2	7.953-2	7.592-2	7.463-2	7.469-2	7.513-2	7.700-2	8.005-2	8.361-2	8.476-2
14	44	2.440-2	1.979-2	1.518-2	1.122-2	8.139-3	6.910-3	5.864-3	4.224-3	3.046-3	2.194-3	1.570-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
14	45	9.452-3	7.491-3	5.590-3	3.981-3	2.745-3	2.261-3	1.857-3	1.248-3	8.430-4	5.788-4	4.061-4
14	46	1.124-2	9.132-3	6.965-3	5.044-3	3.523-3	2.918-3	2.408-3	1.633-3	1.114-3	7.748-4	5.517-4
14	47	7.542-3	6.241-3	4.823-3	3.518-3	2.458-3	2.031-3	1.668-3	1.113-3	7.369-4	4.891-4	3.273-4
14	48	6.597-3	5.257-3	3.946-3	2.830-3	1.968-3	1.630-3	1.346-3	9.114-4	6.150-4	4.143-4	2.783-4
14	49	1.614-2	1.281-2	9.859-3	7.520-3	5.798-3	5.138-3	4.590-3	3.772-3	3.237-3	2.892-3	2.614-3
14	50	1.595-2	1.259-2	9.666-3	7.393-3	5.759-3	5.148-3	4.652-3	3.944-3	3.530-3	3.306-3	3.118-3
14	51	4.356-3	3.391-3	2.533-3	1.847-3	1.335-3	1.135-3	9.662-4	7.030-4	5.136-4	3.750-4	2.717-4
14	52	2.969-0	3.063-0	3.213-0	3.417-0	3.660-0	3.793-0	3.934-0	4.244-0	4.596-0	4.956-0	5.134-0
14	53	5.848-2	4.921-2	4.060-2	3.338-2	2.755-2	2.506-2	2.280-2	1.876-2	1.521-2	1.205-2	9.258-3
14	54	1.573-2	1.202-2	8.772-3	6.202-3	4.302-3	3.568-3	2.953-3	2.016-3	1.370-3	9.282-4	6.255-4
14	55	7.079-2	6.914-2	6.887-2	7.008-2	7.255-2	7.417-2	7.605-2	8.059-2	8.625-2	9.233-2	9.524-2
14	56	1.002-1	9.750-2	9.680-2	9.825-2	1.015-1	1.036-1	1.061-1	1.121-1	1.195-1	1.275-1	1.311-1
14	57	4.525-2	4.178-2	3.949-2	3.850-2	3.863-2	3.904-2	3.966-2	4.147-2	4.400-2	4.682-2	4.810-2
14	58	7.374-2	6.311-2	5.339-2	4.521-2	3.842-2	3.541-2	3.259-2	2.733-2	2.245-2	1.793-2	1.385-2
14	59	6.398-2	5.787-2	5.343-2	5.081-2	4.971-2	4.963-2	4.982-2	5.094-2	5.297-2	5.541-2	5.621-2
14	60	9.061-1	9.207-1	9.497-1	9.924-1	1.046-0	1.077-0	1.110-0	1.186-0	1.276-0	1.371-0	1.416-0
14	61	1.167-1	1.103-1	1.070-1	1.066-1	1.086-1	1.103-1	1.125-1	1.184-1	1.260-1	1.344-1	1.382-1
14	62	1.306-1	1.317-1	1.348-1	1.399-1	1.465-1	1.504-1	1.547-1	1.646-1	1.768-1	1.896-1	1.959-1
14	63	5.088-2	4.865-2	4.742-2	4.714-2	4.764-2	4.813-2	4.878-2	5.052-2	5.293-2	5.558-2	5.647-2
14	64	1.467-2	1.089-2	7.947-3	5.774-3	4.222-3	3.625-3	3.122-3	2.335-3	1.760-3	1.331-3	1.002-3
14	65	6.374-3	4.909-3	3.739-3	2.852-3	2.193-3	1.930-3	1.701-3	1.323-3	1.022-3	7.778-4	5.781-4
14	66	2.989-2	2.668-2	2.466-2	2.364-2	2.338-2	2.348-2	2.371-2	2.453-2	2.582-2	2.729-2	2.790-2
14	67	2.305-2	2.077-2	1.915-2	1.816-2	1.771-2	1.767-2	1.773-2	1.816-2	1.898-2	2.000-2	2.042-2
14	68	1.304-2	1.116-2	9.670-3	8.539-3	7.710-3	7.387-3	7.114-3	6.696-3	6.427-3	6.253-3	5.986-3
14	69	2.024-1	2.029-1	2.067-1	2.137-1	2.232-1	2.288-1	2.351-1	2.499-1	2.682-1	2.878-1	2.972-1
14	70	8.034-2	8.092-2	8.261-2	8.535-2	8.900-2	9.116-2	9.358-2	9.931-2	1.064-1	1.141-1	1.177-1
14	71	1.878-0	1.920-0	1.982-0	2.064-0	2.164-0	2.221-0	2.284-0	2.431-0	2.612-0	2.805-0	2.898-0
14	72	8.131-1	8.301-1	8.558-1	8.904-1	9.331-1	9.577-1	9.849-1	1.048-0	1.125-0	1.207-0	1.246-0
14	73	1.180-1	1.192-1	1.219-1	1.259-1	1.312-1	1.344-1	1.379-1	1.463-1	1.567-1	1.678-1	1.728-1
14	74	2.611-0	2.654-0	2.726-0	2.825-0	2.951-0	3.025-0	3.108-0	3.301-0	3.539-0	3.793-0	3.911-0
14	75	3.405-1	3.431-1	3.497-1	3.601-1	3.743-1	3.828-1	3.924-1	4.155-1	4.442-1	4.747-1	4.884-1
14	76	8.258-3	6.921-3	5.818-3	4.921-3	4.176-3	3.843-3	3.529-3	2.945-3	2.411-3	1.929-3	1.503-3
14	77	2.700-1	2.728-1	2.785-1	2.872-1	2.987-1	3.056-1	3.133-1	3.318-1	3.549-1	3.796-1	3.909-1
14	78	4.264-2	4.281-2	4.338-2	4.435-2	4.574-2	4.661-2	4.762-2	5.011-2	5.330-2	5.674-2	5.822-2
14	79	3.047-1	3.076-1	3.133-1	3.218-1	3.333-1	3.404-1	3.485-1	3.681-1	3.930-1	4.199-1	4.320-1
14	80	3.563-1	3.597-1	3.664-1	3.762-1	3.895-1	3.977-1	4.070-1	4.299-1	4.594-1	4.914-1	5.062-1
14	81	7.912-3	7.357-3	6.841-3	6.408-3	6.063-3	5.918-3	5.791-3	5.588-3	5.455-3	5.367-3	5.172-3
14	82	6.555-3	6.445-3	6.394-3	6.407-3	6.486-3	6.553-3	6.640-3	6.884-3	7.233-3	7.628-3	7.775-3
14	83	1.662-3	1.565-3	1.459-3	1.349-3	1.231-3	1.167-3	1.101-3	9.584-4	8.065-4	6.533-4	5.078-4
14	84	2.564-3	2.284-3	2.051-3	1.858-3	1.692-3	1.615-3	1.540-3	1.398-3	1.263-3	1.135-3	9.998-4
14	85	3.038-3	2.808-3	2.620-3	2.466-3	2.334-3	2.273-3	2.215-3	2.103-3	2.002-3	1.904-3	1.770-3
14	86	9.672-4	8.704-4	7.922-4	7.258-4	6.637-4	6.324-4	6.003-4	5.330-4	4.627-4	3.914-4	3.202-4
14	87	4.833-2	4.850-2	4.905-2	5.004-2	5.160-2	5.263-2	5.385-2	5.695-2	6.099-2	6.540-2	6.747-2
14	88	1.474-0	1.488-0	1.510-0	1.544-0	1.593-0	1.625-0	1.662-0	1.755-0	1.876-0	2.007-0	2.068-0
14	89	1.193-1	1.197-1	1.204-1	1.218-1	1.239-1	1.253-1	1.270-1	1.315-1	1.377-1	1.445-1	1.465-1
14	90	1.039-2	1.002-2	9.633-3	9.199-3	8.691-3	8.405-3	8.096-3	7.423-3	6.710-3	5.989-3	5.224-3
14	91	2.499-2	2.511-2	2.537-2	2.581-2	2.650-2	2.695-2	2.749-2	2.888-2	3.072-2	3.274-2	3.363-2
14	92	2.758-2	2.701-2	2.617-2	2.499-2	2.338-2	2.239-2	2.129-2	1.875-2	1.590-2	1.295-2	1.010-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
14	93	3.938-3	3.859-3	3.744-3	3.580-3	3.355-3	3.217-3	3.062-3	2.707-3	2.309-3	1.894-3	1.491-3
14	94	1.676-2	1.672-2	1.668-2	1.663-2	1.659-2	1.658-2	1.659-2	1.667-2	1.687-2	1.709-2	1.680-2
14	95	1.456-2	1.441-2	1.420-2	1.390-2	1.351-2	1.328-2	1.302-2	1.247-2	1.189-2	1.130-2	1.047-2
14	96	1.455-2	1.441-2	1.423-2	1.399-2	1.368-2	1.350-2	1.331-2	1.292-2	1.256-2	1.223-2	1.165-2
14	97	2.164-3	2.121-3	2.058-3	1.966-3	1.839-3	1.762-3	1.675-3	1.475-3	1.252-3	1.019-3	7.952-4
15	16	1.884-1	1.655-1	1.402-1	1.124-1	8.505-2	7.257-2	6.126-2	4.258-2	2.889-2	1.931-2	1.279-2
15	17	2.080-1	1.828-1	1.534-1	1.215-1	9.095-2	7.727-2	6.500-2	4.492-2	3.034-2	2.017-2	1.327-2
15	18	4.716-0	4.058-0	3.417-0	2.757-0	2.106-0	1.805-0	1.528-0	1.064-0	7.204-1	4.782-1	3.135-1
15	19	4.654-1	4.703-1	4.417-1	3.831-1	3.088-1	2.711-1	2.355-1	1.735-1	1.259-1	9.123-2	6.639-2
15	20	3.476-1	3.604-1	3.442-1	2.993-1	2.387-1	2.075-1	1.778-1	1.262-1	8.690-2	5.871-2	3.922-2
15	21	1.156-1	1.132-1	1.032-1	8.696-2	6.800-2	5.872-2	5.006-2	3.530-2	2.419-2	1.628-2	1.082-2
15	22	1.031-0	9.800-1	8.786-1	7.381-1	5.844-1	5.114-1	4.441-1	3.311-1	2.476-1	1.887-1	1.467-1
15	23	2.638-1	2.757-1	2.639-1	2.295-1	1.829-1	1.590-1	1.363-1	9.700-2	6.706-2	4.560-2	3.071-2
15	24	3.978-1	4.022-1	3.756-1	3.211-1	2.533-1	2.195-1	1.879-1	1.338-1	9.302-2	6.409-2	4.410-2
15	25	4.137-1	4.364-1	4.211-1	3.688-1	2.964-1	2.590-1	2.234-1	1.615-1	1.140-1	7.969-2	5.544-2
15	26	2.310-1	2.595-1	2.629-1	2.397-1	2.007-1	1.795-1	1.589-1	1.228-1	9.517-2	7.527-2	6.055-2
15	27	3.865-1	3.952-1	4.184-1	4.620-1	5.221-1	5.559-1	5.911-1	6.631-1	7.340-1	7.939-1	8.143-1
15	28	6.126-1	6.499-1	6.214-1	5.358-1	4.234-1	3.669-1	3.138-1	2.230-1	1.548-1	1.064-1	7.299-2
15	29	2.006-1	2.048-1	2.164-1	2.376-1	2.667-1	2.830-1	3.000-1	3.349-1	3.698-1	4.000-1	4.108-1
15	30	1.017-1	1.039-1	1.099-1	1.208-1	1.356-1	1.439-1	1.525-1	1.703-1	1.881-1	2.035-1	2.093-1
15	31	3.257-3	2.800-3	2.342-3	1.940-3	1.622-3	1.494-3	1.385-3	1.218-3	1.101-3	1.017-3	9.317-4
15	32	1.596-2	1.419-2	1.266-2	1.161-2	1.109-2	1.099-2	1.098-2	1.118-2	1.158-2	1.199-2	1.199-2
15	33	8.929-2	7.938-2	7.114-2	6.603-2	6.404-2	6.401-2	6.451-2	6.679-2	7.053-2	7.500-2	7.729-2
15	34	6.957-3	5.763-3	4.632-3	3.638-3	2.817-3	2.473-3	2.168-3	1.659-3	1.259-3	9.414-4	6.899-4
15	35	7.219-3	6.226-3	5.198-3	4.235-3	3.400-3	3.036-3	2.705-3	2.133-3	1.659-3	1.266-3	9.421-4
15	36	8.748-3	7.654-3	6.518-3	5.435-3	4.471-3	4.040-3	3.641-3	2.929-3	2.316-3	1.788-3	1.342-3
15	37	2.192-3	2.061-3	1.991-3	2.001-3	2.082-3	2.142-3	2.212-3	2.375-3	2.559-3	2.731-3	2.791-3
15	38	3.591-3	3.217-3	2.895-3	2.680-3	2.578-3	2.562-3	2.567-3	2.624-3	2.730-3	2.846-3	2.864-3
15	39	4.067-3	3.404-3	2.756-3	2.204-3	1.776-3	1.607-3	1.466-3	1.251-3	1.107-3	1.010-3	9.216-4
15	40	4.890-3	4.077-3	3.242-3	2.493-3	1.878-3	1.623-3	1.400-3	1.035-3	7.581-4	5.480-4	3.894-4
15	41	5.862-3	4.962-3	4.028-3	3.176-3	2.463-3	2.161-3	1.891-3	1.439-3	1.080-3	7.970-4	5.757-4
15	42	1.254-2	1.079-2	8.989-3	7.377-3	6.057-3	5.509-3	5.031-3	4.252-3	3.668-3	3.225-3	2.838-3
15	43	1.769-2	1.485-2	1.199-2	9.443-3	7.360-3	6.495-3	5.737-3	4.496-3	3.545-3	2.810-3	2.219-3
15	44	1.844-2	1.531-2	1.220-2	9.451-3	7.223-3	6.311-3	5.521-3	4.259-3	3.333-3	2.652-3	2.123-3
15	45	7.091-3	6.323-3	5.465-3	4.634-3	3.890-3	3.555-3	3.241-3	2.670-3	2.159-3	1.701-3	1.298-3
15	46	6.273-3	5.654-3	4.993-3	4.372-3	3.829-3	3.587-3	3.361-3	2.951-3	2.587-3	2.261-3	1.948-3
15	47	4.074-3	3.627-3	3.159-3	2.725-3	2.349-3	2.183-3	2.029-3	1.752-3	1.508-3	1.293-3	1.092-3
15	48	4.033-1	4.129-1	4.335-1	4.644-1	5.028-1	5.239-1	5.462-1	5.942-1	6.479-1	7.028-1	7.315-1
15	49	1.978-1	2.007-1	2.067-1	2.159-1	2.275-1	2.339-1	2.408-1	2.558-1	2.732-1	2.910-1	2.987-1
15	50	1.405-1	1.434-1	1.488-1	1.567-1	1.666-1	1.721-1	1.780-1	1.909-1	2.057-1	2.211-1	2.285-1
15	51	1.141-2	1.101-2	1.070-2	1.060-2	1.072-2	1.086-2	1.105-2	1.158-2	1.233-2	1.316-2	1.357-2
15	52	1.510-2	1.303-2	1.080-2	8.730-3	6.983-3	6.234-3	5.559-3	4.396-3	3.434-3	2.633-3	1.968-3
15	53	1.867-2	1.621-2	1.347-2	1.091-2	8.729-3	7.794-3	6.953-3	5.511-3	4.329-3	3.351-3	2.541-3
15	54	2.079-2	1.819-2	1.522-2	1.239-2	9.964-3	8.913-3	7.961-3	6.311-3	4.936-3	3.783-3	2.823-3
15	55	1.379-2	1.244-2	1.106-2	9.830-3	8.817-3	8.386-3	7.998-3	7.333-3	6.798-3	6.357-3	5.869-3
15	56	2.037-2	1.798-2	1.545-2	1.314-2	1.115-2	1.028-2	9.483-3	8.055-3	6.815-3	5.729-3	4.742-3
15	57	2.777-2	2.458-2	2.116-2	1.795-2	1.513-2	1.386-2	1.268-2	1.051-2	8.553-3	6.790-3	5.228-3
15	58	4.525-2	3.902-2	3.302-2	2.807-2	2.444-2	2.312-2	2.210-2	2.087-2	2.054-2	2.074-2	2.059-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
15	59	5.601-2	4.710-2	3.711-2	2.806-2	2.079-2	1.785-2	1.533-2	1.132-2	8.401-3	6.239-3	4.605-3
15	60	2.667-2	2.387-2	2.110-2	1.873-2	1.686-2	1.611-2	1.548-2	1.451-2	1.390-2	1.351-2	1.293-2
15	61	2.617-2	2.275-2	1.937-2	1.644-2	1.409-2	1.312-2	1.228-2	1.091-2	9.895-3	9.124-3	8.346-3
15	62	7.260-3	6.277-3	5.311-3	4.500-3	3.886-3	3.648-3	3.453-3	3.171-3	3.010-3	2.929-3	2.822-3
15	63	1.261-2	1.079-2	9.023-3	7.529-3	6.382-3	5.932-3	5.554-3	4.987-3	4.626-3	4.402-3	4.163-3
15	64	2.276-2	1.916-2	1.575-2	1.289-2	1.068-2	9.803-3	9.064-3	7.929-3	7.165-3	6.644-3	6.140-3
15	65	1.771-2	1.742-2	1.729-2	1.737-2	1.764-2	1.783-2	1.807-2	1.870-2	1.954-2	2.047-2	2.076-2
15	66	1.827-2	1.487-2	1.169-2	9.051-3	7.007-3	6.187-3	5.481-3	4.353-3	3.519-3	2.896-3	2.396-3
15	67	5.398-2	5.337-2	5.328-2	5.387-2	5.509-2	5.591-2	5.689-2	5.935-2	6.256-2	6.606-2	6.741-2
15	68	7.171-2	7.050-2	7.008-2	7.073-2	7.243-2	7.366-2	7.515-2	7.896-2	8.394-2	8.939-2	9.183-2
15	69	5.284-2	4.558-2	3.833-2	3.207-2	2.701-2	2.487-2	2.296-2	1.967-2	1.693-2	1.461-2	1.248-2
15	70	7.864-3	6.762-3	5.712-3	4.827-3	4.127-3	3.838-3	3.584-3	3.162-3	2.837-3	2.582-3	2.334-3
15	71	2.375-2	2.135-2	1.928-2	1.768-2	1.651-2	1.606-2	1.569-2	1.516-2	1.489-2	1.479-2	1.439-2
15	72	4.247-2	3.974-2	3.738-2	3.549-2	3.399-2	3.335-2	3.278-2	3.182-2	3.116-2	3.066-2	2.953-2
15	73	3.121-2	2.787-2	2.479-2	2.205-2	1.959-2	1.843-2	1.728-2	1.503-2	1.282-2	1.071-2	8.714-3
15	74	6.617-2	5.986-2	5.444-2	5.019-2	4.701-2	4.575-2	4.468-2	4.307-2	4.211-2	4.155-2	4.015-2
15	75	5.349-2	4.721-2	4.149-2	3.662-2	3.250-2	3.066-2	2.893-2	2.573-2	2.285-2	2.024-2	1.765-2
15	76	5.304-2	4.500-2	3.783-2	3.203-2	2.758-2	2.578-2	2.422-2	2.170-2	1.983-2	1.841-2	1.692-2
15	77	1.129-1	9.211-2	7.608-2	6.483-2	5.756-2	5.512-2	5.334-2	5.145-2	5.136-2	5.227-2	5.209-2
15	78	2.730-2	2.373-2	2.063-2	1.799-2	1.568-2	1.460-2	1.355-2	1.149-2	9.483-3	7.583-3	5.852-3
15	79	1.333-1	1.328-1	1.337-1	1.360-1	1.397-1	1.421-1	1.449-1	1.521-1	1.614-1	1.715-1	1.758-1
15	80	3.134-2	3.040-2	2.981-2	2.954-2	2.957-2	2.969-2	2.987-2	3.049-2	3.148-2	3.264-2	3.281-2
15	81	1.634-0	1.653-0	1.689-0	1.740-0	1.810-0	1.852-0	1.900-0	2.017-0	2.163-0	2.320-0	2.394-0
15	82	2.274-0	2.307-0	2.358-0	2.431-0	2.526-0	2.584-0	2.650-0	2.811-0	3.015-0	3.235-0	3.340-0
15	83	8.875-1	9.002-1	9.206-1	9.492-1	9.869-1	1.010-0	1.036-0	1.099-0	1.180-0	1.267-0	1.309-0
15	84	2.646-0	2.684-0	2.740-0	2.818-0	2.923-0	2.989-0	3.064-0	3.251-0	3.489-0	3.746-0	3.868-0
15	85	1.121-0	1.136-0	1.159-0	1.191-0	1.235-0	1.262-0	1.293-0	1.371-0	1.471-0	1.580-0	1.633-0
15	86	3.249-1	3.293-1	3.359-1	3.452-1	3.579-1	3.657-1	3.748-1	3.972-1	4.261-1	4.576-1	4.728-1
15	87	5.173-2	4.610-2	4.171-2	3.837-2	3.579-2	3.471-2	3.372-2	3.203-2	3.064-2	2.940-2	2.758-2
15	88	1.067-2	1.048-2	1.042-2	1.048-2	1.068-2	1.084-2	1.103-2	1.156-2	1.228-2	1.308-2	1.343-2
15	89	1.978-3	1.573-3	1.263-3	1.031-3	8.557-4	7.826-4	7.165-4	6.003-4	4.997-4	4.114-4	3.322-4
15	90	1.641-3	1.292-3	1.023-3	8.218-4	6.692-4	6.056-4	5.481-4	4.472-4	3.602-4	2.849-4	2.199-4
15	91	9.774-1	9.860-1	1.001-0	1.025-0	1.060-0	1.082-0	1.109-0	1.175-0	1.261-0	1.355-0	1.400-0
15	92	1.168-3	1.131-3	1.096-3	1.060-3	1.022-3	1.002-3	9.823-4	9.429-4	9.080-4	8.761-4	8.266-4
15	93	1.206-2	1.216-2	1.233-2	1.259-2	1.298-2	1.322-2	1.351-2	1.423-2	1.519-2	1.624-2	1.672-2
15	94	4.035-2	4.071-2	4.130-2	4.219-2	4.348-2	4.431-2	4.529-2	4.776-2	5.102-2	5.459-2	5.622-2
15	95	2.062-2	2.076-2	2.098-2	2.133-2	2.184-2	2.217-2	2.258-2	2.360-2	2.498-2	2.648-2	2.708-2
15	96	1.803-2	1.814-2	1.836-2	1.872-2	1.929-2	1.966-2	2.011-2	2.125-2	2.277-2	2.443-2	2.523-2
15	97	7.551-3	7.645-3	7.783-3	7.985-3	8.272-3	8.457-3	8.675-3	9.226-3	9.952-3	1.075-2	1.116-2
16	17	2.800-0	2.790-0	2.574-0	2.204-0	1.777-0	1.570-0	1.378-0	1.050-0	8.055-1	6.361-1	5.196-1
16	18	1.707-1	1.475-1	1.224-1	9.647-2	7.220-2	6.142-2	5.175-2	3.595-2	2.448-2	1.651-2	1.109-2
16	19	1.253-0	1.133-0	9.854-1	8.151-1	6.427-1	5.630-1	4.902-1	3.683-1	2.777-1	2.130-1	1.663-1
16	20	5.918-1	5.308-1	4.682-1	4.039-1	3.437-1	3.169-1	2.930-1	2.542-1	2.267-1	2.081-1	1.916-1
16	21	5.409-2	5.010-2	4.460-2	3.792-2	3.091-2	2.754-2	2.437-2	1.874-2	1.412-2	1.043-2	7.529-3
16	22	7.258-1	6.272-1	5.320-1	4.319-1	3.335-1	2.882-1	2.470-1	1.777-1	1.257-1	8.809-2	6.146-2
16	23	4.675-1	4.107-1	3.524-1	2.891-1	2.266-1	1.981-1	1.723-1	1.294-1	9.788-2	7.565-2	5.963-2
16	24	1.901-0	1.672-0	1.453-0	1.204-0	9.409-1	8.165-1	7.017-1	5.084-1	3.648-1	2.636-1	1.932-1
16	25	1.448-0	1.228-0	1.025-0	8.188-1	6.219-1	5.331-1	4.531-1	3.212-1	2.249-1	1.575-1	1.111-1

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
16	26	3.233-1	3.140-1	2.807-1	2.329-1	1.821-1	1.583-1	1.364-1	9.926-2	7.073-2	4.959-2	3.426-2
16	27	2.587-2	2.084-2	1.603-2	1.186-2	8.579-3	7.280-3	6.189-3	4.544-3	3.461-3	2.761-3	2.272-3
16	28	1.305-1	1.221-1	1.071-1	8.910-2	7.123-2	6.303-2	5.550-2	4.259-2	3.235-2	2.439-2	1.821-2
16	29	1.293-2	1.074-2	8.339-3	6.121-3	4.307-3	3.572-3	2.946-3	1.980-3	1.319-3	8.765-4	5.829-4
16	30	3.637-3	2.942-3	2.251-3	1.644-3	1.163-3	9.709-4	8.087-4	5.618-4	3.963-4	2.883-4	2.165-4
16	31	1.604-2	1.307-2	1.026-2	7.828-3	5.872-3	5.070-3	4.373-3	3.246-3	2.398-3	1.755-3	1.264-3
16	32	4.965-2	4.397-2	3.757-2	3.164-2	2.678-2	2.478-2	2.304-2	2.020-2	1.805-2	1.634-2	1.464-2
16	33	3.361-2	2.850-2	2.256-2	1.687-2	1.213-2	1.018-2	8.509-3	5.897-3	4.071-3	2.813-3	1.949-3
16	34	7.248-2	6.278-2	5.328-2	4.480-2	3.768-2	3.460-2	3.178-2	2.680-2	2.250-2	1.874-2	1.534-2
16	35	8.790-2	7.616-2	6.436-2	5.397-2	4.548-2	4.189-2	3.869-2	3.319-2	2.864-2	2.474-2	2.111-2
16	36	4.861-2	4.011-2	3.165-2	2.414-2	1.805-2	1.555-2	1.338-2	9.885-3	7.270-3	5.301-3	3.810-3
16	37	1.845-3	1.530-3	1.184-3	8.647-4	6.042-4	4.990-4	4.096-4	2.724-4	1.792-4	1.174-4	7.691-5
16	38	1.127-2	9.445-3	7.600-3	5.954-3	4.605-3	4.042-3	3.546-3	2.722-3	2.073-3	1.557-3	1.146-3
16	39	2.915-2	2.511-2	2.097-2	1.724-2	1.411-2	1.276-2	1.155-2	9.428-3	7.641-3	6.117-3	4.802-3
16	40	6.809-2	6.031-2	5.304-2	4.721-2	4.296-2	4.134-2	3.998-2	3.792-2	3.649-2	3.534-2	3.348-2
16	41	6.426-2	5.320-2	4.332-2	3.531-2	2.924-2	2.684-2	2.478-2	2.152-2	1.909-2	1.720-2	1.538-2
16	42	7.504-2	6.515-2	5.596-2	4.861-2	4.322-2	4.115-2	3.943-2	3.683-2	3.516-2	3.408-2	3.261-2
16	43	3.521-1	3.451-1	3.479-1	3.623-1	3.856-1	3.995-1	4.147-1	4.481-1	4.862-1	5.253-1	5.457-1
16	44	1.575-1	1.337-1	1.129-1	9.762-2	8.782-2	8.464-2	8.240-2	8.027-2	8.064-2	8.244-2	8.253-2
16	45	2.184-2	1.793-2	1.380-2	1.011-2	7.187-3	6.026-3	5.050-3	3.575-3	2.602-3	1.980-3	1.566-3
16	46	1.724-2	1.415-2	1.088-2	7.926-3	5.550-3	4.598-3	3.792-3	2.560-3	1.729-3	1.181-3	8.210-4
16	47	7.769-3	6.394-3	4.916-3	3.572-3	2.487-3	2.051-3	1.682-3	1.116-3	7.310-4	4.755-4	3.077-4
16	48	8.291-3	6.747-3	5.151-3	3.737-3	2.616-3	2.169-3	1.791-3	1.210-3	8.127-4	5.440-4	3.635-4
16	49	2.989-2	2.344-2	1.760-2	1.290-2	9.396-3	8.045-3	6.920-3	5.226-3	4.096-3	3.350-3	2.811-3
16	50	1.764-2	1.374-2	1.028-2	7.504-3	5.420-3	4.605-3	3.916-3	2.844-3	2.077-3	1.520-3	1.108-3
16	51	6.234-3	4.999-3	3.833-3	2.879-3	2.170-3	1.899-3	1.676-3	1.352-3	1.153-3	1.039-3	9.537-4
16	52	2.225-1	2.193-1	2.203-1	2.257-1	2.346-1	2.400-1	2.461-1	2.602-1	2.774-1	2.954-1	3.034-1
16	53	3.918-0	4.040-0	4.241-0	4.514-0	4.841-0	5.020-0	5.210-0	5.626-0	6.099-0	6.582-0	6.822-0
16	54	1.217-1	9.637-2	7.389-2	5.590-2	4.230-2	3.688-2	3.221-2	2.466-2	1.885-2	1.427-2	1.061-2
16	55	1.920-2	1.536-2	1.207-2	9.429-3	7.393-3	6.561-3	5.827-3	4.591-3	3.585-3	2.751-3	2.060-3
16	56	4.779-2	4.227-2	3.779-2	3.472-2	3.300-2	3.258-2	3.241-2	3.278-2	3.398-2	3.562-2	3.628-2
16	57	8.138-2	7.475-2	6.993-2	6.729-2	6.661-2	6.689-2	6.753-2	6.983-2	7.340-2	7.755-2	7.928-2
16	58	1.795-1	1.671-1	1.571-1	1.503-1	1.462-1	1.450-1	1.443-1	1.441-1	1.455-1	1.476-1	1.460-1
16	59	1.472-1	1.424-1	1.398-1	1.400-1	1.428-1	1.450-1	1.477-1	1.547-1	1.640-1	1.741-1	1.784-1
16	60	1.527-1	1.491-1	1.485-1	1.509-1	1.558-1	1.590-1	1.628-1	1.721-1	1.838-1	1.965-1	2.024-1
16	61	8.640-1	8.768-1	9.034-1	9.430-1	9.930-1	1.022-0	1.053-0	1.124-0	1.209-0	1.298-0	1.341-0
16	62	1.564-2	1.266-2	1.019-2	8.237-3	6.719-3	6.083-3	5.509-3	4.503-3	3.634-3	2.872-3	2.207-3
16	63	2.037-1	2.039-1	2.076-1	2.146-1	2.242-1	2.299-1	2.363-1	2.512-1	2.695-1	2.890-1	2.985-1
16	64	1.183-1	1.037-1	9.373-2	8.795-2	8.550-2	8.528-2	8.563-2	8.787-2	9.194-2	9.685-2	9.879-2
16	65	1.004-2	7.731-3	5.982-3	4.746-3	3.929-3	3.647-3	3.436-3	3.192-3	3.137-3	3.196-3	3.212-3
16	66	9.443-2	9.001-2	8.764-2	8.726-2	8.850-2	8.965-2	9.112-2	9.505-2	1.003-1	1.062-1	1.085-1
16	67	1.971-2	1.517-2	1.161-2	8.948-3	6.987-3	6.208-3	5.533-3	4.424-3	3.552-3	2.848-3	2.260-3
16	68	3.740-2	3.075-2	2.577-2	2.229-2	2.001-2	1.922-2	1.863-2	1.795-2	1.784-2	1.807-2	1.794-2
16	69	1.658-2	1.201-2	8.527-3	6.004-3	4.221-3	3.542-3	2.973-3	2.099-3	1.481-3	1.041-3	7.260-4
16	70	9.461-3	6.880-3	4.990-3	3.642-3	2.694-3	2.331-3	2.024-3	1.541-3	1.183-3	9.110-4	6.956-4
16	71	9.171-3	7.430-3	6.013-3	4.891-3	4.003-3	3.626-3	3.285-3	2.689-3	2.182-3	1.748-3	1.370-3
16	72	2.683-0	2.743-0	2.832-0	2.950-0	3.092-0	3.174-0	3.264-0	3.474-0	3.732-0	4.008-0	4.142-0
16	73	1.776-0	1.810-0	1.864-0	1.937-0	2.028-0	2.081-0	2.140-0	2.277-0	2.444-0	2.622-0	2.706-0

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
16	74	7.590-1	7.692-1	7.882-1	8.153-1	8.497-1	8.700-1	8.925-1	9.462-1	1.013-0	1.085-0	1.119-0
16	75	3.032-0	3.080-0	3.163-0	3.278-0	3.423-0	3.509-0	3.604-0	3.829-0	4.105-0	4.399-0	4.537-0
16	76	5.612-1	5.652-1	5.763-1	5.940-1	6.177-1	6.321-1	6.484-1	6.872-1	7.354-1	7.865-1	8.097-1
16	77	3.334-1	3.360-1	3.423-1	3.522-1	3.654-1	3.733-1	3.822-1	4.037-1	4.311-1	4.607-1	4.743-1
16	78	5.986-1	6.073-1	6.213-1	6.406-1	6.656-1	6.806-1	6.975-1	7.384-1	7.897-1	8.447-1	8.699-1
16	79	4.404-1	4.449-1	4.531-1	4.652-1	4.815-1	4.915-1	5.030-1	5.312-1	5.675-1	6.071-1	6.256-1
16	80	7.423-3	6.351-3	5.322-3	4.436-3	3.703-3	3.383-3	3.088-3	2.556-3	2.084-3	1.664-3	1.293-3
16	81	9.969-2	9.976-2	1.007-1	1.025-1	1.053-1	1.071-1	1.092-1	1.145-1	1.216-1	1.294-1	1.328-1
16	82	1.126-3	9.481-4	7.893-4	6.545-4	5.402-4	4.888-4	4.406-4	3.524-4	2.746-4	2.079-4	1.530-4
16	83	2.035-3	1.878-3	1.728-3	1.584-3	1.438-3	1.362-3	1.283-3	1.116-3	9.393-4	7.620-4	5.939-4
16	84	5.918-3	5.542-3	5.232-3	4.978-3	4.763-3	4.666-3	4.575-3	4.413-3	4.283-3	4.166-3	3.961-3
16	85	2.851-3	2.496-3	2.213-3	1.981-3	1.778-3	1.680-3	1.584-3	1.391-3	1.197-3	1.007-3	8.222-4
16	86	8.450-4	7.688-4	7.098-4	6.645-4	6.290-4	6.140-4	6.004-4	5.776-4	5.603-4	5.453-4	5.184-4
16	87	5.996-3	5.719-3	5.517-3	5.375-3	5.283-3	5.256-3	5.244-3	5.269-3	5.378-3	5.535-3	5.544-3
16	88	2.296-1	2.307-1	2.330-1	2.367-1	2.424-1	2.462-1	2.508-1	2.625-1	2.784-1	2.958-1	3.031-1
16	89	2.024-0	2.044-0	2.075-0	2.122-0	2.190-0	2.234-0	2.286-0	2.415-0	2.583-0	2.766-0	2.850-0
16	90	9.577-2	9.540-2	9.521-2	9.527-2	9.567-2	9.604-2	9.656-2	9.817-2	1.007-1	1.037-1	1.035-1
16	91	3.237-3	3.155-3	3.069-3	2.975-3	2.867-3	2.809-3	2.750-3	2.633-3	2.532-3	2.448-3	2.321-3
16	92	6.327-2	6.264-2	6.180-2	6.068-2	5.923-2	5.838-2	5.746-2	5.550-2	5.356-2	5.163-2	4.863-2
16	93	7.086-3	7.097-3	7.116-3	7.154-3	7.225-3	7.279-3	7.347-3	7.535-3	7.803-3	8.081-3	8.083-3
16	94	1.176-2	1.155-2	1.123-2	1.078-2	1.015-2	9.767-3	9.337-3	8.351-3	7.249-3	6.103-3	4.964-3
16	95	3.187-2	3.176-2	3.162-2	3.145-2	3.126-2	3.116-2	3.108-2	3.101-2	3.112-2	3.128-2	3.056-2
16	96	1.524-2	1.492-2	1.447-2	1.386-2	1.302-2	1.252-2	1.197-2	1.070-2	9.304-3	7.872-3	6.456-3
16	97	3.199-3	3.140-3	3.050-3	2.919-3	2.735-3	2.622-3	2.495-3	2.204-3	1.879-3	1.542-3	1.215-3
17	18	2.418-1	2.094-1	1.737-1	1.365-1	1.017-1	8.621-2	7.238-2	4.985-2	3.356-2	2.224-2	1.459-2
17	19	1.203-0	1.101-0	9.838-1	8.526-1	7.236-1	6.651-1	6.124-1	5.262-1	4.652-1	4.243-1	3.898-1
17	20	1.787-1	1.522-1	1.273-1	1.034-1	8.117-2	7.118-2	6.205-2	4.652-2	3.441-2	2.518-2	1.822-2
17	21	3.616-2	3.363-2	3.052-2	2.669-2	2.246-2	2.036-2	1.834-2	1.470-2	1.168-2	9.290-3	7.394-3
17	22	5.517-1	4.776-1	4.074-1	3.376-1	2.719-1	2.421-1	2.149-1	1.683-1	1.319-1	1.040-1	8.223-2
17	23	1.927-1	1.559-1	1.267-1	1.016-1	7.980-2	7.021-2	6.154-2	4.688-2	3.551-2	2.691-2	2.041-2
17	24	7.983-1	7.281-1	6.424-1	5.377-1	4.285-1	3.774-1	3.305-1	2.516-1	1.924-1	1.499-1	1.187-1
17	25	6.147-0	5.138-0	4.262-0	3.388-0	2.552-0	2.173-0	1.832-0	1.269-0	8.591-1	5.743-1	3.817-1
17	26	3.370-1	3.264-1	2.934-1	2.465-1	1.965-1	1.728-1	1.508-1	1.127-1	8.252-2	5.936-2	4.196-2
17	27	3.354-2	2.704-2	2.068-2	1.507-2	1.057-2	8.763-3	7.226-3	4.863-3	3.252-3	2.177-3	1.465-3
17	28	1.253-1	1.191-1	1.074-1	9.248-2	7.664-2	6.899-2	6.171-2	4.856-2	3.737-2	2.808-2	2.056-2
17	29	7.161-3	5.951-3	4.658-3	3.453-3	2.455-3	2.047-3	1.699-3	1.159-3	7.895-4	5.428-4	3.786-4
17	30	1.367-3	1.179-3	9.437-4	7.073-4	5.035-4	4.186-4	3.455-4	2.314-4	1.525-4	9.952-5	6.452-5
17	31	1.545-3	1.296-3	1.018-3	7.525-4	5.298-4	4.383-4	3.600-4	2.387-4	1.558-4	1.005-4	6.444-5
17	32	1.448-2	1.158-2	8.810-3	6.439-3	4.576-3	3.832-3	3.200-3	2.218-3	1.529-3	1.049-3	7.147-4
17	33	2.490-2	2.049-2	1.586-2	1.166-2	8.269-3	6.898-3	5.728-3	3.913-3	2.650-3	1.782-3	1.191-3
17	34	5.557-2	4.494-2	3.534-2	2.755-2	2.170-2	1.940-2	1.747-2	1.446-2	1.232-2	1.073-2	9.365-3
17	35	8.962-2	7.720-2	6.453-2	5.316-2	4.371-2	3.968-2	3.605-2	2.980-2	2.458-2	2.016-2	1.628-2
17	36	3.790-1	3.069-1	2.443-1	1.956-1	1.600-1	1.463-1	1.346-1	1.164-1	1.031-1	9.275-2	8.277-2
17	37	8.034-4	6.489-4	4.973-4	3.617-4	2.520-4	2.077-4	1.701-4	1.123-4	7.310-5	4.711-5	3.016-5
17	38	3.701-3	3.005-3	2.306-3	1.677-3	1.169-3	9.633-4	7.892-4	5.220-4	3.408-4	2.209-4	1.427-4
17	39	1.241-2	1.027-2	8.047-3	6.027-3	4.383-3	3.712-3	3.136-3	2.227-3	1.574-3	1.107-3	7.717-4
17	40	5.065-2	4.023-2	3.095-2	2.337-2	1.755-2	1.523-2	1.324-2	1.006-2	7.695-3	5.906-3	4.513-3
17	41	3.111-1	2.369-1	1.814-1	1.425-1	1.167-1	1.074-1	1.001-1	8.960-2	8.326-2	7.915-2	7.440-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
17	42	1.835-2	1.480-2	1.131-2	8.348-3	6.056-3	5.146-3	4.372-3	3.162-3	2.296-3	1.672-3	1.215-3
17	43	8.471-2	7.119-2	5.880-2	4.882-2	4.137-2	3.847-2	3.602-2	3.222-2	2.959-2	2.775-2	2.587-2
17	44	4.820-1	4.608-1	4.521-1	4.585-1	4.770-1	4.895-1	5.037-1	5.364-1	5.752-1	6.159-1	6.358-1
17	45	3.655-2	3.038-2	2.358-2	1.727-2	1.211-2	1.002-2	8.246-3	5.517-3	3.663-3	2.432-3	1.622-3
17	46	1.341-2	1.130-2	8.802-3	6.436-3	4.496-3	3.712-3	3.046-3	2.025-3	1.334-3	8.763-4	5.768-4
17	47	4.047-3	3.395-3	2.633-3	1.919-3	1.338-3	1.104-3	9.053-4	6.016-4	3.963-4	2.609-4	1.725-4
17	48	4.199-3	3.261-3	2.424-3	1.749-3	1.241-3	1.042-3	8.730-4	6.115-4	4.264-4	2.954-4	2.025-4
17	49	3.332-2	2.673-2	2.049-2	1.531-2	1.136-2	9.809-3	8.506-3	6.507-3	5.130-3	4.181-3	3.469-3
17	50	1.433-2	1.133-2	8.604-3	6.405-3	4.767-3	4.135-3	3.609-3	2.819-3	2.297-3	1.957-3	1.704-3
17	51	2.896-3	2.269-3	1.716-3	1.274-3	9.392-4	8.068-4	6.937-4	5.139-4	3.803-4	2.794-4	2.022-4
17	52	1.555-2	1.260-2	9.913-3	7.729-3	6.099-3	5.472-3	4.953-3	4.188-3	3.707-3	3.417-3	3.172-3
17	53	2.377-1	2.294-1	2.263-1	2.287-1	2.353-1	2.400-1	2.454-1	2.585-1	2.750-1	2.926-1	3.004-1
17	54	5.023-0	5.182-0	5.446-0	5.808-0	6.239-0	6.475-0	6.723-0	7.264-0	7.877-0	8.502-0	8.812-0
17	55	6.721-3	5.088-3	3.682-3	2.584-3	1.783-3	1.478-3	1.225-3	8.473-4	5.972-4	4.335-4	3.238-4
17	56	2.253-2	1.785-2	1.372-2	1.040-2	7.868-3	6.856-3	5.983-3	4.573-3	3.497-3	2.661-3	2.000-3
17	57	7.309-2	6.087-2	5.035-2	4.218-2	3.630-2	3.411-2	3.236-2	2.994-2	2.870-2	2.821-2	2.743-2
17	58	1.829-1	1.757-1	1.706-1	1.676-1	1.660-1	1.656-1	1.654-1	1.655-1	1.665-1	1.679-1	1.649-1
17	59	5.425-2	4.385-2	3.471-2	2.739-2	2.181-2	1.956-2	1.760-2	1.435-2	1.180-2	9.750-3	8.006-3
17	60	1.217-2	9.335-3	6.906-3	5.005-3	3.603-3	3.059-3	2.602-3	1.898-3	1.403-3	1.054-3	7.988-4
17	61	1.168-1	1.127-1	1.111-1	1.119-1	1.145-1	1.165-1	1.189-1	1.248-1	1.326-1	1.412-1	1.450-1
17	62	4.980-3	3.740-3	2.712-3	1.923-3	1.348-3	1.126-3	9.409-4	6.562-4	4.577-4	3.190-4	2.216-4
17	63	2.191-2	1.702-2	1.305-2	1.001-2	7.750-3	6.848-3	6.065-3	4.772-3	3.746-3	2.910-3	2.218-3
17	64	1.056-0	1.065-0	1.091-0	1.135-0	1.191-0	1.224-0	1.260-0	1.343-0	1.442-0	1.547-0	1.597-0
17	65	2.303-3	2.001-3	1.735-3	1.504-3	1.303-3	1.210-3	1.121-3	9.482-4	7.826-4	6.258-4	4.825-4
17	66	2.138-1	2.081-1	2.065-1	2.088-1	2.141-1	2.178-1	2.222-1	2.331-1	2.473-1	2.628-1	2.696-1
17	67	1.974-2	1.549-2	1.220-2	9.792-3	8.109-3	7.481-3	6.968-3	6.224-3	5.777-3	5.522-3	5.248-3
17	68	5.479-2	4.194-2	3.204-2	2.479-2	1.967-2	1.774-2	1.613-2	1.372-2	1.213-2	1.106-2	1.012-2
17	69	7.842-3	5.795-3	4.166-3	2.947-3	2.070-3	1.733-3	1.450-3	1.013-3	7.048-4	4.877-4	3.351-4
17	70	9.135-3	6.797-3	5.077-3	3.843-3	2.962-3	2.618-3	2.324-3	1.848-3	1.480-3	1.187-3	9.406-4
17	71	7.119-3	5.087-3	3.594-3	2.529-3	1.781-3	1.495-3	1.255-3	8.827-4	6.163-4	4.254-4	2.895-4
17	72	2.287-2	1.705-2	1.274-2	9.617-3	7.361-3	6.471-3	5.703-3	4.448-3	3.466-3	2.681-3	2.040-3
17	73	2.449-0	2.496-0	2.570-0	2.671-0	2.795-0	2.867-0	2.947-0	3.134-0	3.366-0	3.614-0	3.735-0
17	74	7.858-3	5.933-3	4.461-3	3.368-3	2.568-3	2.252-3	1.979-3	1.539-3	1.205-3	9.496-4	7.461-4
17	75	2.602-0	2.641-0	2.711-0	2.809-0	2.931-0	3.003-0	3.084-0	3.274-0	3.511-0	3.765-0	3.887-0
17	76	7.778-0	7.893-0	8.103-0	8.397-0	8.771-0	8.991-0	9.235-0	9.812-0	1.052+1	1.128+1	1.163+1
17	77	2.295-2	2.145-2	1.983-2	1.817-2	1.647-2	1.558-2	1.465-2	1.269-2	1.063-2	8.581-3	6.649-3
17	78	1.160-0	1.172-0	1.196-0	1.229-0	1.274-0	1.302-0	1.333-0	1.409-0	1.506-0	1.612-0	1.661-0
17	79	9.163-3	7.818-3	6.508-3	5.375-3	4.436-3	4.028-3	3.655-3	2.990-3	2.415-3	1.917-3	1.485-3
17	80	1.700-3	1.498-3	1.288-3	1.088-3	9.032-4	8.167-4	7.341-4	5.816-4	4.483-4	3.366-4	2.465-4
17	81	1.314-2	1.197-2	1.081-2	9.699-3	8.630-3	8.097-3	7.559-3	6.465-3	5.364-3	4.301-3	3.323-3
17	82	1.311-3	1.099-3	9.148-4	7.604-4	6.311-4	5.737-4	5.203-4	4.241-4	3.417-4	2.730-4	2.158-4
17	83	2.028-3	1.892-3	1.759-3	1.625-3	1.484-3	1.408-3	1.329-3	1.158-3	9.748-4	7.898-4	6.139-4
17	84	7.125-3	6.440-3	5.889-3	5.434-3	5.035-3	4.846-3	4.660-3	4.295-3	3.941-3	3.595-3	3.208-3
17	85	2.167-3	2.013-3	1.877-3	1.756-3	1.642-3	1.586-3	1.530-3	1.421-3	1.317-3	1.217-3	1.103-3
17	86	7.669-4	7.212-4	6.755-4	6.278-4	5.753-4	5.464-4	5.157-4	4.490-4	3.777-4	3.060-4	2.382-4
17	87	3.698-3	3.348-3	3.048-3	2.772-3	2.501-3	2.365-3	2.228-3	1.957-3	1.706-3	1.486-3	1.281-3
17	88	1.018-2	9.570-3	9.037-3	8.521-3	7.972-3	7.675-3	7.362-3	6.690-3	5.984-3	5.276-3	4.543-3
17	89	2.466-1	2.474-1	2.495-1	2.530-1	2.585-1	2.622-1	2.667-1	2.785-1	2.944-1	3.119-1	3.189-1

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
17	90	2.884-0	2.914-0	2.959-0	3.025-0	3.120-0	3.181-0	3.253-0	3.435-0	3.671-0	3.927-0	4.043-0
17	91	2.815-3	2.690-3	2.553-3	2.392-3	2.199-3	2.091-3	1.975-3	1.729-3	1.477-3	1.239-3	1.017-3
17	92	5.075-2	4.969-2	4.816-2	4.599-2	4.300-2	4.118-2	3.913-2	3.444-2	2.918-2	2.373-2	1.849-2
17	93	3.076-3	3.012-3	2.923-3	2.797-3	2.621-3	2.512-3	2.390-3	2.108-3	1.790-3	1.460-3	1.140-3
17	94	1.714-2	1.703-2	1.688-2	1.668-2	1.644-2	1.631-2	1.617-2	1.591-2	1.571-2	1.549-2	1.486-2
17	95	3.343-2	3.315-2	3.274-2	3.218-2	3.144-2	3.102-2	3.056-2	2.960-2	2.865-2	2.767-2	2.604-2
17	96	2.127-2	2.080-2	2.013-2	1.919-2	1.791-2	1.714-2	1.627-2	1.430-2	1.211-2	9.843-3	7.672-3
17	97	4.258-3	4.183-3	4.068-3	3.894-3	3.645-3	3.491-3	3.318-3	2.919-3	2.473-3	2.012-3	1.567-3
18	19	4.842-1	5.019-1	4.794-1	4.186-1	3.361-1	2.934-1	2.526-1	1.817-1	1.275-1	8.862-2	6.159-2
18	20	4.172-1	4.545-1	4.497-1	4.008-1	3.246-1	2.836-1	2.439-1	1.739-1	1.198-1	8.077-2	5.374-2
18	21	1.209-1	1.270-1	1.222-1	1.068-1	8.553-2	7.447-2	6.389-2	4.543-2	3.126-2	2.106-2	1.400-2
18	22	8.397-1	7.784-1	6.852-1	5.701-1	4.498-1	3.934-1	3.417-1	2.548-1	1.902-1	1.443-1	1.113-1
18	23	3.911-1	4.346-1	4.342-1	3.880-1	3.144-1	2.747-1	2.363-1	1.685-1	1.163-1	7.872-2	5.269-2
18	24	5.425-1	5.864-1	5.755-1	5.098-1	4.124-1	3.610-1	3.116-1	2.252-1	1.587-1	1.107-1	7.698-2
18	25	5.399-1	5.754-1	5.582-1	4.897-1	3.927-1	3.423-1	2.941-1	2.104-1	1.463-1	1.002-1	6.810-2
18	26	2.355-1	2.648-1	2.685-1	2.456-1	2.067-1	1.855-1	1.650-1	1.289-1	1.011-1	8.102-2	6.597-2
18	27	2.554-1	2.598-1	2.744-1	3.033-1	3.438-1	3.669-1	3.910-1	4.409-1	4.906-1	5.338-1	5.508-1
18	28	4.622-1	4.988-1	4.852-1	4.248-1	3.401-1	2.964-1	2.548-1	1.830-1	1.283-1	8.914-2	6.180-2
18	29	2.069-1	2.114-1	2.239-1	2.469-1	2.784-1	2.959-1	3.142-1	3.515-1	3.882-1	4.190-1	4.291-1
18	30	4.661-2	4.698-2	4.901-2	5.322-2	5.915-2	6.251-2	6.602-2	7.326-2	8.045-2	8.655-2	8.847-2
18	31	3.009-3	2.645-3	2.258-3	1.902-3	1.608-3	1.488-3	1.384-3	1.218-3	1.098-3	1.006-3	9.138-4
18	32	2.788-2	2.690-2	2.675-2	2.777-2	2.978-2	3.104-2	3.242-2	3.538-2	3.846-2	4.113-2	4.191-2
18	33	2.464-1	2.427-1	2.485-1	2.662-1	2.933-1	3.091-1	3.259-1	3.608-1	3.962-1	4.266-1	4.367-1
18	34	5.775-3	4.973-3	4.118-3	3.303-3	2.595-3	2.289-3	2.015-3	1.550-3	1.180-3	8.843-4	6.487-4
18	35	6.386-3	5.624-3	4.754-3	3.888-3	3.110-3	2.767-3	2.455-3	1.917-3	1.477-3	1.117-3	8.255-4
18	36	7.919-3	7.062-3	6.045-3	5.000-3	4.040-3	3.610-3	3.215-3	2.527-3	1.957-3	1.486-3	1.100-3
18	37	1.216-3	1.068-3	9.332-4	8.321-4	7.691-4	7.503-4	7.386-4	7.333-4	7.457-4	7.641-4	7.594-4
18	38	3.772-3	3.393-3	3.062-3	2.843-3	2.742-3	2.729-3	2.738-3	2.806-3	2.923-3	3.047-3	3.062-3
18	39	4.731-3	4.113-3	3.524-3	3.055-3	2.732-3	2.622-3	2.542-3	2.457-3	2.449-3	2.473-3	2.435-3
18	40	4.604-3	3.811-3	2.986-3	2.241-3	1.634-3	1.386-3	1.171-3	8.289-4	5.813-4	4.034-4	2.765-4
18	41	4.847-3	4.037-3	3.186-3	2.409-3	1.769-3	1.505-3	1.276-3	9.098-4	6.433-4	4.507-4	3.123-4
18	42	1.121-2	9.133-3	7.197-3	5.593-3	4.373-3	3.898-3	3.501-3	2.907-3	2.520-3	2.274-3	2.074-3
18	43	1.385-2	1.132-2	8.914-3	6.846-3	5.200-3	4.529-3	3.947-3	3.008-3	2.305-3	1.773-3	1.360-3
18	44	1.745-2	1.478-2	1.220-2	9.903-3	7.983-3	7.161-3	6.421-3	5.153-3	4.113-3	3.254-3	2.534-3
18	45	6.944-3	6.179-3	5.304-3	4.441-3	3.669-3	3.325-3	3.007-3	2.441-3	1.950-3	1.523-3	1.155-3
18	46	5.360-3	4.737-3	4.059-3	3.424-3	2.890-3	2.664-3	2.465-3	2.134-3	1.880-3	1.681-3	1.496-3
18	47	3.337-3	2.961-3	2.545-3	2.153-3	1.823-3	1.683-3	1.561-3	1.360-3	1.208-3	1.091-3	9.824-4
18	48	3.074-1	3.157-1	3.334-1	3.597-1	3.920-1	4.095-1	4.279-1	4.671-1	5.105-1	5.546-1	5.780-1
18	49	1.891-1	1.935-1	2.018-1	2.140-1	2.291-1	2.375-1	2.464-1	2.659-1	2.882-1	3.109-1	3.224-1
18	50	1.513-1	1.545-1	1.605-1	1.692-1	1.798-1	1.856-1	1.917-1	2.050-1	2.201-1	2.357-1	2.430-1
18	51	1.231-1	1.271-1	1.334-1	1.419-1	1.519-1	1.574-1	1.631-1	1.754-1	1.893-1	2.035-1	2.104-1
18	52	8.517-3	7.253-3	5.912-3	4.684-3	3.660-3	3.227-3	2.842-3	2.195-3	1.680-3	1.267-3	9.351-4
18	53	1.178-2	1.024-2	8.573-3	7.014-3	5.683-3	5.107-3	4.587-3	3.687-3	2.942-3	2.321-3	1.799-3
18	54	1.391-2	1.229-2	1.051-2	8.806-3	7.307-3	6.637-3	6.015-3	4.892-3	3.905-3	3.039-3	2.294-3
18	55	9.936-3	8.997-3	7.984-3	7.027-3	6.177-3	5.792-3	5.428-3	4.755-3	4.145-3	3.591-3	3.062-3
18	56	1.647-2	1.483-2	1.309-2	1.146-2	1.003-2	9.382-3	8.781-3	7.682-3	6.701-3	5.823-3	4.985-3
18	57	1.830-2	1.626-2	1.405-2	1.197-2	1.013-2	9.297-3	8.515-3	7.073-3	5.763-3	4.577-3	3.522-3
18	58	2.228-2	1.911-2	1.599-2	1.336-2	1.139-2	1.065-2	1.007-2	9.297-3	8.973-3	8.925-3	8.767-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
18	59	3.876-2	3.352-2	2.752-2	2.193-2	1.728-2	1.532-2	1.360-2	1.073-2	8.472-3	6.663-3	5.180-3
18	60	2.057-2	1.805-2	1.532-2	1.289-2	1.100-2	1.027-2	9.689-3	8.888-3	8.496-3	8.364-3	8.148-3
18	61	2.317-2	2.004-2	1.687-2	1.409-2	1.191-2	1.104-2	1.032-2	9.224-3	8.531-3	8.097-3	7.630-3
18	62	4.686-3	3.938-3	3.184-3	2.524-3	1.995-3	1.778-3	1.591-3	1.288-3	1.063-3	8.947-4	7.570-4
18	63	1.122-2	9.780-3	8.351-3	7.131-3	6.193-3	5.828-3	5.526-3	5.088-3	4.836-3	4.705-3	4.528-3
18	64	3.263-2	2.934-2	2.605-2	2.320-2	2.096-2	2.006-2	1.931-2	1.819-2	1.754-2	1.717-2	1.652-2
18	65	8.919-3	8.646-3	8.479-3	8.465-3	8.608-3	8.735-3	8.900-3	9.347-3	9.956-3	1.064-2	1.096-2
18	66	1.527-2	1.295-2	1.070-2	8.747-3	7.168-3	6.509-3	5.925-3	4.946-3	4.167-3	3.535-3	2.979-3
18	67	2.424-2	2.341-2	2.278-2	2.249-2	2.254-2	2.268-2	2.291-2	2.361-2	2.466-2	2.587-2	2.629-2
18	68	5.480-2	5.353-2	5.264-2	5.232-2	5.252-2	5.281-2	5.322-2	5.443-2	5.625-2	5.832-2	5.866-2
18	69	2.913-2	2.487-2	2.050-2	1.665-2	1.351-2	1.218-2	1.100-2	8.960-3	7.267-3	5.834-3	4.599-3
18	70	6.154-3	5.337-3	4.530-3	3.828-3	3.255-3	3.013-3	2.796-3	2.428-3	2.131-3	1.890-3	1.664-3
18	71	1.928-2	1.745-2	1.563-2	1.394-2	1.237-2	1.160-2	1.084-2	9.318-3	7.790-3	6.306-3	4.923-3
18	72	2.438-2	2.232-2	2.037-2	1.867-2	1.721-2	1.655-2	1.593-2	1.479-2	1.379-2	1.290-2	1.187-2
18	73	2.864-2	2.555-2	2.255-2	1.984-2	1.740-2	1.625-2	1.513-2	1.295-2	1.086-2	8.900-3	7.097-3
18	74	4.124-2	3.566-2	3.078-2	2.704-2	2.444-2	2.353-2	2.283-2	2.201-2	2.185-2	2.206-2	2.181-2
18	75	5.415-2	4.612-2	3.881-2	3.279-2	2.805-2	2.609-2	2.435-2	2.141-2	1.907-2	1.714-2	1.527-2
18	76	8.783-2	7.769-2	6.823-2	6.012-2	5.334-2	5.035-2	4.757-2	4.253-2	3.811-2	3.417-2	3.019-2
18	77	5.850-2	4.837-2	4.025-2	3.430-2	3.018-2	2.869-2	2.750-2	2.590-2	2.513-2	2.487-2	2.421-2
18	78	3.610-2	3.183-2	2.796-2	2.458-2	2.155-2	2.011-2	1.870-2	1.592-2	1.320-2	1.063-2	8.269-3
18	79	9.138-2	8.971-2	8.902-2	8.933-2	9.058-2	9.156-2	9.280-2	9.617-2	1.008-1	1.060-1	1.078-1
18	80	2.591-2	2.445-2	2.334-2	2.258-2	2.213-2	2.200-2	2.194-2	2.201-2	2.238-2	2.291-2	2.281-2
18	81	7.604-1	7.688-1	7.855-1	8.098-1	8.421-1	8.616-1	8.838-1	9.372-1	1.004-0	1.076-0	1.109-0
18	82	9.264-1	9.383-1	9.589-1	9.879-1	1.026-0	1.049-0	1.075-0	1.138-0	1.218-0	1.305-0	1.345-0
18	83	3.018-1	3.061-1	3.133-1	3.233-1	3.363-1	3.442-1	3.531-1	3.745-1	4.017-1	4.311-1	4.451-1
18	84	3.647-0	3.706-0	3.790-0	3.904-0	4.055-0	4.147-0	4.254-0	4.514-0	4.844-0	5.200-0	5.369-0
18	85	2.547-0	2.587-0	2.644-0	2.721-0	2.825-0	2.888-0	2.961-0	3.139-0	3.367-0	3.615-0	3.733-0
18	86	8.946-1	9.084-1	9.283-1	9.554-1	9.914-1	1.013-0	1.039-0	1.101-0	1.181-0	1.268-0	1.310-0
18	87	5.532-2	4.949-2	4.487-2	4.125-2	3.832-2	3.702-2	3.581-2	3.358-2	3.161-2	2.976-2	2.744-2
18	88	1.403-2	1.357-2	1.333-2	1.331-2	1.350-2	1.369-2	1.393-2	1.459-2	1.552-2	1.656-2	1.702-2
18	89	3.452-3	2.584-3	1.926-3	1.449-3	1.106-3	9.712-4	8.545-4	6.626-4	5.108-4	3.881-4	2.884-4
18	90	4.544-3	3.476-3	2.665-3	2.073-3	1.643-3	1.471-3	1.320-3	1.068-3	8.615-4	6.891-4	5.416-4
18	91	9.895-1	9.998-1	1.016-0	1.041-0	1.077-0	1.100-0	1.127-0	1.195-0	1.283-0	1.378-0	1.423-0
18	92	1.418-3	1.346-3	1.289-3	1.239-3	1.191-3	1.169-3	1.146-3	1.105-3	1.072-3	1.043-3	9.919-4
18	93	2.767-2	2.795-2	2.838-2	2.902-2	2.994-2	3.053-2	3.121-2	3.293-2	3.519-2	3.767-2	3.881-2
18	94	5.866-2	5.924-2	6.014-2	6.148-2	6.340-2	6.462-2	6.605-2	6.966-2	7.440-2	7.959-2	8.195-2
18	95	1.505-1	1.521-1	1.546-1	1.582-1	1.634-1	1.668-1	1.707-1	1.806-1	1.935-1	2.074-1	2.139-1
18	96	2.032-2	2.050-2	2.080-2	2.128-2	2.197-2	2.243-2	2.297-2	2.435-2	2.616-2	2.814-2	2.912-2
18	97	5.113-3	5.178-3	5.273-3	5.412-3	5.609-3	5.735-3	5.884-3	6.261-3	6.758-3	7.308-3	7.588-3
19	20	9.341-1	8.829-1	7.918-1	6.710-1	5.396-1	4.766-1	4.180-1	3.185-1	2.448-1	1.956-1	1.638-1
19	21	3.316-1	3.189-1	2.881-1	2.434-1	1.916-1	1.661-1	1.420-1	1.007-1	6.926-2	4.683-2	3.138-2
19	22	2.274-0	2.109-0	1.878-0	1.580-0	1.248-0	1.087-0	9.349-1	6.755-1	4.803-1	3.428-1	2.484-1
19	23	7.972-1	7.493-1	6.788-1	5.799-1	4.627-1	4.038-1	3.477-1	2.502-1	1.752-1	1.212-1	8.347-2
19	24	2.478-0	2.247-0	1.983-0	1.657-0	1.297-0	1.122-0	9.589-1	6.803-1	4.707-1	3.222-1	2.203-1
19	25	2.456-0	2.303-0	2.068-0	1.754-0	1.408-0	1.242-0	1.087-0	8.280-1	6.372-1	5.070-1	4.166-1
19	26	5.768-1	6.079-1	5.894-1	5.205-1	4.230-1	3.721-1	3.233-1	2.373-1	1.704-1	1.211-1	8.574-2
19	27	4.066-2	3.908-2	3.860-2	4.000-2	4.316-2	4.519-2	4.740-2	5.204-2	5.647-2	5.976-2	6.000-2
19	28	3.228-1	3.676-1	3.775-1	3.476-1	2.921-1	2.611-1	2.306-1	1.762-1	1.339-1	1.032-1	8.093-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
19	29	1.086-2	9.437-3	7.904-3	6.476-3	5.312-3	4.847-3	4.459-3	3.884-3	3.519-3	3.276-3	3.029-3
19	30	3.162-3	2.686-3	2.166-3	1.663-3	1.230-3	1.047-3	8.877-4	6.330-4	4.498-4	3.197-4	2.270-4
19	31	5.830-3	4.713-3	3.702-3	2.837-3	2.143-3	1.859-3	1.613-3	1.218-3	9.251-4	7.070-4	5.397-4
19	32	1.452-2	1.266-2	1.101-2	9.776-3	8.996-3	8.755-3	8.597-3	8.475-3	8.521-3	8.585-3	8.374-3
19	33	4.318-2	4.198-2	4.177-2	4.334-2	4.656-2	4.860-2	5.083-2	5.561-2	6.040-2	6.429-2	6.504-2
19	34	1.881-2	1.601-2	1.344-2	1.132-2	9.728-3	9.115-3	8.607-3	7.848-3	7.339-3	6.950-3	6.468-3
19	35	2.239-2	1.863-2	1.501-2	1.178-2	9.086-3	7.949-3	6.941-3	5.265-3	3.956-3	2.931-3	2.130-3
19	36	2.045-2	1.724-2	1.375-2	1.046-2	7.671-3	6.510-3	5.501-3	3.892-3	2.728-3	1.897-3	1.305-3
19	37	2.188-3	1.942-3	1.628-3	1.306-3	1.020-3	8.957-4	7.842-4	5.968-4	4.492-4	3.330-4	2.420-4
19	38	6.748-3	6.018-3	5.110-3	4.203-3	3.413-3	3.076-3	2.777-3	2.284-3	1.905-3	1.609-3	1.354-3
19	39	1.128-2	9.964-3	8.383-3	6.809-3	5.418-3	4.814-3	4.269-3	3.343-3	2.599-3	1.999-3	1.512-3
19	40	2.153-2	1.951-2	1.728-2	1.523-2	1.352-2	1.281-2	1.219-2	1.114-2	1.030-2	9.569-3	8.731-3
19	41	3.147-2	2.850-2	2.497-2	2.139-2	1.805-2	1.651-2	1.506-2	1.237-2	9.952-3	7.798-3	5.925-3
19	42	2.282-2	1.952-2	1.660-2	1.443-2	1.304-2	1.260-2	1.231-2	1.207-2	1.218-2	1.242-2	1.230-2
19	43	4.354-2	3.886-2	3.501-2	3.258-2	3.155-2	3.147-2	3.164-2	3.257-2	3.405-2	3.556-2	3.575-2
19	44	3.553-2	2.876-2	2.201-2	1.613-2	1.151-2	9.673-3	8.125-3	5.768-3	4.180-3	3.129-3	2.412-3
19	45	3.937-2	3.712-2	3.413-2	3.083-2	2.750-2	2.585-2	2.421-2	2.096-2	1.778-2	1.473-2	1.186-2
19	46	1.682-2	1.510-2	1.305-2	1.101-2	9.203-3	8.404-3	7.674-3	6.397-3	5.326-3	4.418-3	3.617-3
19	47	6.261-3	5.364-3	4.325-3	3.325-3	2.475-3	2.119-3	1.809-3	1.308-3	9.391-4	6.684-4	4.704-4
19	48	6.138-3	5.210-3	4.142-3	3.123-3	2.271-3	1.920-3	1.618-3	1.143-3	8.080-4	5.731-4	4.070-4
19	49	1.784-1	1.817-1	1.894-1	2.012-1	2.157-1	2.236-1	2.318-1	2.494-1	2.690-1	2.885-1	2.970-1
19	50	8.176-2	8.212-2	8.422-2	8.815-2	9.344-2	9.646-2	9.971-2	1.069-1	1.152-1	1.237-1	1.277-1
19	51	5.117-3	4.064-3	3.070-3	2.225-3	1.566-3	1.304-3	1.083-3	7.415-4	5.056-4	3.440-4	2.331-4
19	52	2.505-2	2.062-2	1.646-2	1.290-2	1.010-2	8.983-3	8.030-3	6.560-3	5.559-3	4.892-3	4.363-3
19	53	4.206-2	3.412-2	2.647-2	1.986-2	1.459-2	1.246-2	1.062-2	7.704-3	5.578-3	4.026-3	2.885-3
19	54	7.260-2	5.843-2	4.507-2	3.388-2	2.523-2	2.180-2	1.888-2	1.434-2	1.113-2	8.869-3	7.170-3
19	55	1.375-2	1.119-2	8.933-3	7.093-3	5.712-3	5.182-3	4.746-3	4.120-3	3.753-3	3.555-3	3.371-3
19	56	3.197-2	2.764-2	2.357-2	2.006-2	1.720-2	1.600-2	1.493-2	1.311-2	1.165-2	1.045-2	9.304-3
19	57	7.294-2	6.515-2	5.799-2	5.204-2	4.736-2	4.543-2	4.373-2	4.092-2	3.877-2	3.706-2	3.487-2
19	58	2.632-2	2.123-2	1.638-2	1.227-2	9.087-3	7.821-3	6.745-3	5.073-3	3.890-3	3.045-3	2.406-3
19	59	4.140-1	4.266-1	4.467-1	4.739-1	5.065-1	5.244-1	5.434-1	5.853-1	6.334-1	6.828-1	7.072-1
19	60	6.225-2	6.134-2	6.129-2	6.218-2	6.386-2	6.495-2	6.621-2	6.925-2	7.310-2	7.724-2	7.884-2
19	61	1.685-1	1.702-1	1.747-1	1.820-1	1.914-1	1.969-1	2.028-1	2.163-1	2.322-1	2.487-1	2.563-1
19	62	3.549-2	3.439-2	3.384-2	3.391-2	3.454-2	3.505-2	3.568-2	3.736-2	3.959-2	4.207-2	4.316-2
19	63	2.409-1	2.463-1	2.559-1	2.692-1	2.852-1	2.942-1	3.037-1	3.252-1	3.503-1	3.764-1	3.891-1
19	64	3.883-2	3.052-2	2.303-2	1.691-2	1.225-2	1.041-2	8.854-3	6.419-3	4.674-3	3.412-3	2.480-3
19	65	5.868-3	5.198-3	4.543-3	3.942-3	3.406-3	3.158-3	2.920-3	2.464-3	2.030-3	1.621-3	1.249-3
19	66	5.283-1	5.433-1	5.670-1	5.986-1	6.362-1	6.570-1	6.793-1	7.289-1	7.865-1	8.460-1	8.748-1
19	67	2.415-1	2.460-1	2.547-1	2.670-1	2.821-1	2.906-1	2.997-1	3.204-1	3.449-1	3.708-1	3.834-1
19	68	2.079-1	2.087-1	2.133-1	2.216-1	2.327-1	2.393-1	2.465-1	2.632-1	2.833-1	3.046-1	3.150-1
19	69	1.806-1	1.831-1	1.884-1	1.962-1	2.060-1	2.116-1	2.176-1	2.315-1	2.481-1	2.657-1	2.739-1
19	70	1.717-1	1.756-1	1.815-1	1.892-1	1.984-1	2.035-1	2.091-1	2.218-1	2.371-1	2.534-1	2.608-1
19	71	1.687-2	1.426-2	1.173-2	9.515-3	7.695-3	6.925-3	6.237-3	5.062-3	4.104-3	3.314-3	2.645-3
19	72	4.329-2	3.969-2	3.658-2	3.413-2	3.232-2	3.163-2	3.107-2	3.028-2	2.993-2	2.984-2	2.911-2
19	73	2.982-1	3.002-1	3.063-1	3.165-1	3.304-1	3.388-1	3.482-1	3.704-1	3.977-1	4.266-1	4.404-1
19	74	1.426-1	1.396-1	1.391-1	1.411-1	1.452-1	1.479-1	1.511-1	1.591-1	1.693-1	1.805-1	1.854-1
19	75	1.116-0	1.128-0	1.159-0	1.205-0	1.263-0	1.298-0	1.336-0	1.424-0	1.530-0	1.642-0	1.694-0
19	76	9.437-2	6.974-2	5.107-2	3.752-2	2.791-2	2.421-2	2.110-2	1.618-2	1.251-2	9.683-3	7.418-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
19	77	1.364-1	1.349-1	1.355-1	1.379-1	1.418-1	1.444-1	1.474-1	1.549-1	1.644-1	1.747-1	1.790-1
19	78	4.581-0	4.685-0	4.843-0	5.046-0	5.294-0	5.437-0	5.594-0	5.963-0	6.411-0	6.882-0	7.105-0
19	79	5.129-1	5.215-1	5.360-1	5.557-1	5.805-1	5.951-1	6.113-1	6.498-1	6.973-1	7.479-1	7.716-1
19	80	2.022-2	1.810-2	1.614-2	1.462-2	1.363-2	1.333-2	1.314-2	1.309-2	1.344-2	1.400-2	1.419-2
19	81	4.021-1	4.067-1	4.159-1	4.293-1	4.470-1	4.577-1	4.697-1	4.986-1	5.347-1	5.735-1	5.918-1
19	82	1.061-1	1.056-1	1.064-1	1.085-1	1.117-1	1.139-1	1.164-1	1.227-1	1.310-1	1.400-1	1.441-1
19	83	8.788-3	8.078-3	7.375-3	6.708-3	6.062-3	5.736-3	5.402-3	4.705-3	3.976-3	3.242-3	2.541-3
19	84	1.449-0	1.477-0	1.515-0	1.564-0	1.626-0	1.663-0	1.705-0	1.806-0	1.934-0	2.071-0	2.134-0
19	85	1.091-2	8.758-3	6.922-3	5.479-3	4.380-3	3.931-3	3.536-3	2.869-3	2.326-3	1.875-3	1.489-3
19	86	2.986-3	2.334-3	1.792-3	1.372-3	1.059-3	9.331-4	8.233-4	6.410-4	4.954-4	3.767-4	2.799-4
19	87	6.999-1	7.084-1	7.221-1	7.419-1	7.693-1	7.866-1	8.065-1	8.557-1	9.182-1	9.854-1	1.017-0
19	88	1.599-1	1.541-1	1.509-1	1.501-1	1.517-1	1.534-1	1.557-1	1.623-1	1.716-1	1.820-1	1.863-1
19	89	8.486-1	8.461-1	8.515-1	8.659-1	8.905-1	9.071-1	9.271-1	9.778-1	1.044-0	1.115-0	1.147-0
19	90	9.828-2	8.245-2	7.017-2	6.092-2	5.384-2	5.088-2	4.820-2	4.351-2	3.957-2	3.615-2	3.253-2
19	91	5.315-1	5.384-1	5.480-1	5.615-1	5.803-1	5.923-1	6.062-1	6.408-1	6.856-1	7.341-1	7.562-1
19	92	4.299-2	4.062-2	3.850-2	3.634-2	3.395-2	3.263-2	3.122-2	2.817-2	2.495-2	2.171-2	1.843-2
19	93	4.291-3	4.085-3	3.880-3	3.650-3	3.373-3	3.214-3	3.040-3	2.654-3	2.236-3	1.814-3	1.414-3
19	94	2.032-0	2.057-0	2.092-0	2.143-0	2.213-0	2.258-0	2.311-0	2.444-0	2.618-0	2.807-0	2.895-0
19	95	2.146-0	2.171-0	2.208-0	2.261-0	2.337-0	2.385-0	2.441-0	2.580-0	2.761-0	2.958-0	3.047-0
19	96	6.507-1	6.577-1	6.681-1	6.835-1	7.056-1	7.197-1	7.363-1	7.778-1	8.319-1	8.908-1	9.176-1
19	97	4.420-3	4.330-3	4.194-3	3.998-3	3.729-3	3.564-3	3.381-3	2.964-3	2.505-3	2.038-3	1.593-3
20	21	2.832-1	2.646-1	2.337-1	1.945-1	1.531-1	1.335-1	1.153-1	8.413-2	6.013-2	4.233-2	2.939-2
20	22	4.097-1	3.731-1	3.230-1	2.638-1	2.035-1	1.755-1	1.498-1	1.068-1	7.479-2	5.204-2	3.635-2
20	23	1.881-0	1.671-0	1.456-0	1.208-0	9.450-1	8.194-1	7.031-1	5.064-1	3.598-1	2.572-1	1.871-1
20	24	1.226-0	1.144-0	1.025-0	8.643-1	6.863-1	6.004-1	5.207-1	3.857-1	2.857-1	2.169-1	1.700-1
20	25	6.272-1	5.897-1	5.347-1	4.651-1	3.908-1	3.555-1	3.230-1	2.687-1	2.303-1	2.061-1	1.892-1
20	26	1.432-1	1.470-1	1.385-1	1.205-1	9.848-2	8.744-2	7.693-2	5.831-2	4.326-2	3.153-2	2.259-2
20	27	1.180-2	1.029-2	8.845-3	7.606-3	6.665-3	6.313-3	6.033-3	5.657-3	5.455-3	5.317-3	5.062-3
20	28	1.188-1	1.205-1	1.131-1	9.731-2	7.762-2	6.775-2	5.842-2	4.222-2	2.966-2	2.043-2	1.385-2
20	29	1.854-2	1.804-2	1.814-2	1.913-2	2.091-2	2.200-2	2.316-2	2.556-2	2.786-2	2.960-2	2.982-2
20	30	3.452-3	3.080-3	2.744-3	2.502-3	2.373-3	2.346-3	2.340-3	2.374-3	2.444-3	2.504-3	2.469-3
20	31	7.131-3	6.164-3	5.169-3	4.233-3	3.417-3	3.061-3	2.738-3	2.179-3	1.719-3	1.339-3	1.025-3
20	32	1.193-2	1.044-2	8.995-3	7.742-3	6.754-3	6.356-3	6.016-3	5.478-3	5.080-3	4.752-3	4.364-3
20	33	1.007-2	8.796-3	7.332-3	5.942-3	4.801-3	4.343-3	3.958-3	3.380-3	3.003-3	2.747-3	2.504-3
20	34	1.189-2	9.944-3	8.071-3	6.388-3	4.974-3	4.372-3	3.835-3	2.935-3	2.222-3	1.657-3	1.210-3
20	35	7.902-3	6.413-3	4.966-3	3.676-3	2.626-3	2.198-3	1.831-3	1.258-3	8.561-4	5.791-4	3.894-4
20	36	7.858-3	6.641-3	5.384-3	4.191-3	3.164-3	2.728-3	2.344-3	1.716-3	1.245-3	8.940-4	6.329-4
20	37	1.877-3	1.682-3	1.482-3	1.318-3	1.206-3	1.168-3	1.139-3	1.108-3	1.098-3	1.094-3	1.060-3
20	38	5.318-3	4.701-3	3.985-3	3.286-3	2.673-3	2.404-3	2.159-3	1.732-3	1.373-3	1.072-3	8.178-4
20	39	1.256-2	1.155-2	1.048-2	9.529-3	8.769-3	8.455-3	8.179-3	7.713-3	7.332-3	6.970-3	6.469-3
20	40	1.272-2	1.150-2	1.001-2	8.486-3	7.065-3	6.416-3	5.808-3	4.705-3	3.739-3	2.898-3	2.182-3
20	41	7.531-3	6.448-3	5.157-3	3.894-3	2.818-3	2.371-3	1.984-3	1.374-3	9.445-4	6.472-4	4.428-4
20	42	4.287-2	4.149-2	4.138-2	4.287-2	4.565-2	4.738-2	4.927-2	5.342-2	5.779-2	6.162-2	6.265-2
20	43	1.278-2	1.019-2	7.664-3	5.500-3	3.817-3	3.153-3	2.593-3	1.740-3	1.161-3	7.733-4	5.144-4
20	44	1.183-2	9.567-3	7.392-3	5.524-3	4.060-3	3.480-3	2.990-3	2.246-3	1.751-3	1.430-3	1.203-3
20	45	1.403-2	1.310-2	1.183-2	1.043-2	9.049-3	8.379-3	7.725-3	6.467-3	5.278-3	4.177-3	3.194-3
20	46	1.797-2	1.676-2	1.524-2	1.360-2	1.197-2	1.117-2	1.038-2	8.825-3	7.319-3	5.897-3	4.597-3
20	47	1.031-2	9.376-3	8.248-3	7.110-3	6.085-3	5.629-3	5.208-3	4.467-3	3.842-3	3.313-3	2.832-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
20	48	1.056-2	9.986-3	9.566-3	9.412-3	9.526-3	9.670-3	9.864-3	1.039-2	1.111-2	1.190-2	1.232-2
20	49	8.995-2	9.152-2	9.533-2	1.013-1	1.089-1	1.131-1	1.175-1	1.270-1	1.377-1	1.486-1	1.542-1
20	50	4.419-2	4.438-2	4.556-2	4.775-2	5.069-2	5.236-2	5.415-2	5.807-2	6.257-2	6.722-2	6.951-2
20	51	4.438-2	4.577-2	4.831-2	5.188-2	5.613-2	5.844-2	6.085-2	6.602-2	7.181-2	7.773-2	8.082-2
20	52	3.296-2	2.657-2	2.045-2	1.519-2	1.104-2	9.362-3	7.928-3	5.669-3	4.043-3	2.872-3	2.024-3
20	53	3.118-2	2.586-2	2.034-2	1.546-2	1.159-2	1.003-2	8.718-3	6.688-3	5.299-3	4.364-3	3.676-3
20	54	1.035-2	8.419-3	6.534-3	4.877-3	3.540-3	2.994-3	2.523-3	1.779-3	1.243-3	8.617-4	5.913-4
20	55	4.055-2	3.963-2	3.941-2	3.995-2	4.112-2	4.188-2	4.275-2	4.483-2	4.742-2	5.020-2	5.134-2
20	56	2.240-2	1.965-2	1.715-2	1.511-2	1.361-2	1.303-2	1.256-2	1.189-2	1.151-2	1.131-2	1.093-2
20	57	2.065-2	1.753-2	1.448-2	1.180-2	9.596-3	8.667-3	7.837-3	6.425-3	5.273-3	4.322-3	3.505-3
20	58	1.605-2	1.263-2	9.400-3	6.725-3	4.690-3	3.894-3	3.226-3	2.206-3	1.508-3	1.031-3	7.056-4
20	59	1.898-2	1.560-2	1.208-2	8.988-3	6.525-3	5.532-3	4.681-3	3.338-3	2.370-3	1.672-3	1.167-3
20	60	3.963-2	3.830-2	3.739-2	3.704-2	3.722-2	3.749-2	3.787-2	3.895-2	4.047-2	4.215-2	4.253-2
20	61	2.434-2	2.045-2	1.677-2	1.362-2	1.106-2	9.976-3	9.001-3	7.316-3	5.904-3	4.706-3	3.678-3
20	62	2.109-1	2.179-1	2.284-1	2.422-1	2.582-1	2.669-1	2.761-1	2.964-1	3.197-1	3.439-1	3.557-1
20	63	2.183-1	2.247-1	2.347-1	2.480-1	2.637-1	2.724-1	2.816-1	3.022-1	3.260-1	3.507-1	3.625-1
20	64	1.538-2	1.216-2	9.236-3	6.837-3	5.002-3	4.275-3	3.657-3	2.689-3	1.990-3	1.479-3	1.095-3
20	65	1.759-1	1.823-1	1.917-1	2.035-1	2.173-1	2.248-1	2.328-1	2.504-1	2.709-1	2.921-1	3.027-1
20	66	1.232-2	9.561-3	7.277-3	5.484-3	4.137-3	3.604-3	3.149-3	2.427-3	1.894-3	1.491-3	1.171-3
20	67	1.186-2	1.025-2	8.783-3	7.530-3	6.497-3	6.048-3	5.635-3	4.891-3	4.233-3	3.641-3	3.083-3
20	68	1.114-1	1.126-1	1.158-1	1.208-1	1.273-1	1.310-1	1.351-1	1.444-1	1.556-1	1.673-1	1.729-1
20	69	1.929-2	1.728-2	1.554-2	1.413-2	1.300-2	1.252-2	1.208-2	1.129-2	1.063-2	1.005-2	9.344-3
20	70	1.883-1	1.941-1	2.023-1	2.127-1	2.248-1	2.315-1	2.386-1	2.546-1	2.735-1	2.932-1	3.025-1
20	71	3.563-2	3.491-2	3.468-2	3.500-2	3.580-2	3.637-2	3.705-2	3.877-2	4.099-2	4.340-2	4.436-2
20	72	1.780-2	1.501-2	1.201-2	9.260-3	6.997-3	6.066-3	5.260-3	3.968-3	3.013-3	2.299-3	1.748-3
20	73	1.844-2	1.551-2	1.288-2	1.068-2	8.887-3	8.119-3	7.419-3	6.178-3	5.099-3	4.149-3	3.305-3
20	74	1.096-0	1.118-0	1.157-0	1.211-0	1.276-0	1.313-0	1.354-0	1.447-0	1.559-0	1.676-0	1.732-0
20	75	3.107-2	2.350-2	1.747-2	1.293-2	9.615-3	8.320-3	7.217-3	5.462-3	4.150-3	3.148-3	2.364-3
20	76	2.105-2	1.546-2	1.112-2	7.929-3	5.654-3	4.785-3	4.059-3	2.940-3	2.145-3	1.573-3	1.151-3
20	77	7.965-2	7.798-2	7.750-2	7.807-2	7.952-2	8.056-2	8.181-2	8.499-2	8.917-2	9.369-2	9.514-2
20	78	1.161-2	9.874-3	8.316-3	6.999-3	5.905-3	5.426-3	4.983-3	4.181-3	3.470-3	2.833-3	2.258-3
20	79	2.560-0	2.614-0	2.699-0	2.810-0	2.946-0	3.024-0	3.111-0	3.314-0	3.562-0	3.823-0	3.947-0
20	80	2.567-1	2.605-1	2.674-1	2.771-1	2.893-1	2.965-1	3.045-1	3.233-1	3.466-1	3.714-1	3.829-1
20	81	3.287-1	3.341-1	3.435-1	3.563-1	3.722-1	3.815-1	3.919-1	4.164-1	4.466-1	4.785-1	4.933-1
20	82	2.345-2	2.329-2	2.338-2	2.371-2	2.426-2	2.462-2	2.505-2	2.613-2	2.757-2	2.913-2	2.971-2
20	83	1.139-2	1.122-2	1.112-2	1.108-2	1.107-2	1.107-2	1.109-2	1.115-2	1.129-2	1.145-2	1.129-2
20	84	4.066-1	4.134-1	4.232-1	4.361-1	4.527-1	4.628-1	4.742-1	5.020-1	5.370-1	5.744-1	5.913-1
20	85	8.640-1	8.813-1	9.050-1	9.350-1	9.727-1	9.951-1	1.020-0	1.081-0	1.158-0	1.241-0	1.279-0
20	86	3.242-3	2.819-3	2.474-3	2.211-3	2.018-3	1.942-3	1.877-3	1.777-3	1.712-3	1.670-3	1.601-3
20	87	4.503-3	3.810-3	3.251-3	2.805-3	2.435-3	2.268-3	2.109-3	1.807-3	1.525-3	1.267-3	1.030-3
20	88	1.335-0	1.347-0	1.369-0	1.403-0	1.450-0	1.480-0	1.515-0	1.603-0	1.715-0	1.836-0	1.891-0
20	89	3.416-2	2.887-2	2.474-2	2.159-2	1.912-2	1.807-2	1.710-2	1.539-2	1.393-2	1.267-2	1.137-2
20	90	3.671-2	3.078-2	2.626-2	2.292-2	2.045-2	1.945-2	1.858-2	1.712-2	1.599-2	1.505-2	1.394-2
20	91	7.168-3	6.786-3	6.503-3	6.280-3	6.089-3	6.002-3	5.919-3	5.774-3	5.669-3	5.587-3	5.380-3
20	92	2.342-2	2.233-2	2.123-2	1.999-2	1.849-2	1.763-2	1.668-2	1.459-2	1.232-2	1.003-2	7.849-3
20	93	1.732-0	1.756-0	1.789-0	1.834-0	1.898-0	1.937-0	1.983-0	2.097-0	2.245-0	2.406-0	2.480-0
20	94	1.564-1	1.580-1	1.603-1	1.635-1	1.680-1	1.708-1	1.741-1	1.824-1	1.934-1	2.054-1	2.103-1
20	95	8.031-1	8.133-1	8.278-1	8.482-1	8.765-1	8.944-1	9.154-1	9.676-1	1.035-0	1.108-0	1.140-0

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
20	96	1.013-2	9.827-3	9.476-3	9.068-3	8.587-3	8.318-3	8.030-3	7.420-3	6.802-3	6.208-3	5.564-3
20	97	1.431-2	1.440-2	1.453-2	1.473-2	1.502-2	1.520-2	1.543-2	1.600-2	1.681-2	1.772-2	1.804-2
21	22	1.495-1	1.394-1	1.246-1	1.061-1	8.588-2	7.607-2	6.690-2	5.122-2	3.951-2	3.147-2	2.593-2
21	23	5.631-1	5.273-1	4.715-1	3.969-1	3.126-1	2.712-1	2.324-1	1.653-1	1.142-1	7.728-2	5.156-2
21	24	3.100-1	2.996-1	2.817-1	2.564-1	2.271-1	2.129-1	1.998-1	1.787-1	1.663-1	1.630-1	1.628-1
21	25	8.670-2	7.802-2	6.676-2	5.442-2	4.247-2	3.702-2	3.203-2	2.357-2	1.701-2	1.207-2	8.415-3
21	26	4.285-2	4.453-2	4.219-2	3.682-2	3.016-2	2.682-2	2.364-2	1.797-2	1.335-2	9.708-3	6.913-3
21	27	2.578-3	2.197-3	1.783-3	1.380-3	1.028-3	8.789-4	7.482-4	5.387-4	3.875-4	2.799-4	2.025-4
21	28	3.301-2	3.254-2	2.965-2	2.503-2	1.987-2	1.739-2	1.508-2	1.110-2	7.980-3	5.625-3	3.892-3
21	29	4.433-3	4.145-3	3.935-3	3.863-3	3.939-3	4.021-3	4.126-3	4.378-3	4.643-3	4.842-3	4.816-3
21	30	5.290-4	4.355-4	3.438-4	2.617-4	1.941-4	1.661-4	1.419-4	1.029-4	7.421-5	5.312-5	3.758-5
21	31	1.669-3	1.350-3	1.056-3	8.109-4	6.240-4	5.512-4	4.904-4	3.991-4	3.383-4	2.965-4	2.613-4
21	32	2.547-3	2.122-3	1.696-3	1.309-3	9.859-4	8.510-4	7.327-4	5.401-4	3.952-4	2.861-4	2.039-4
21	33	2.110-3	1.780-3	1.413-3	1.062-3	7.665-4	6.438-4	5.378-4	3.710-4	2.532-4	1.717-4	1.157-4
21	34	4.349-3	3.528-3	2.791-3	2.154-3	1.633-3	1.416-3	1.226-3	9.138-4	6.765-4	4.954-4	3.572-4
21	35	3.992-3	3.476-3	2.918-3	2.366-3	1.873-3	1.657-3	1.460-3	1.126-3	8.566-4	6.409-4	4.691-4
21	36	9.678-4	8.046-4	6.323-4	4.696-4	3.326-4	2.760-4	2.273-4	1.515-4	9.925-5	6.429-5	4.132-5
21	37	1.699-3	1.600-3	1.470-3	1.324-3	1.174-3	1.098-3	1.023-3	8.705-4	7.196-4	5.752-4	4.431-4
21	38	5.320-3	5.088-3	4.867-3	4.714-3	4.632-3	4.608-3	4.593-3	4.572-3	4.551-3	4.492-3	4.290-3
21	39	3.215-3	2.902-3	2.507-3	2.102-3	1.731-3	1.564-3	1.409-3	1.132-3	8.929-4	6.885-4	5.164-4
21	40	2.048-3	1.748-3	1.391-3	1.044-3	7.514-4	6.303-4	5.259-4	3.623-4	2.477-4	1.689-4	1.150-4
21	41	2.871-3	2.549-3	2.113-3	1.656-3	1.247-3	1.072-3	9.177-4	6.654-4	4.775-4	3.390-4	2.375-4
21	42	4.133-3	3.328-3	2.526-3	1.833-3	1.291-3	1.076-3	8.946-4	6.156-4	4.231-4	2.912-4	2.004-4
21	43	6.120-3	5.043-3	3.977-3	3.059-3	2.343-3	2.061-3	1.825-3	1.471-3	1.244-3	1.103-3	9.952-4
21	44	2.436-3	1.936-3	1.454-3	1.041-3	7.180-4	5.903-4	4.828-4	3.189-4	2.081-4	1.348-4	8.676-5
21	45	1.679-3	1.448-3	1.172-3	9.007-4	6.676-4	5.693-4	4.832-4	3.442-4	2.420-4	1.680-4	1.150-4
21	46	6.610-3	6.229-3	5.723-3	5.163-3	4.589-3	4.301-3	4.011-3	3.425-3	2.840-3	2.275-3	1.755-3
21	47	4.932-3	4.786-3	4.634-3	4.516-3	4.436-3	4.407-3	4.382-3	4.342-3	4.310-3	4.260-3	4.084-3
21	48	5.846-4	4.842-4	3.874-4	3.036-4	2.358-4	2.075-4	1.825-4	1.406-4	1.073-4	8.066-5	5.930-5
21	49	5.024-3	4.234-3	3.435-3	2.711-3	2.108-3	1.854-3	1.628-3	1.253-3	9.574-4	7.224-4	5.347-4
21	50	6.240-2	6.517-2	6.969-2	7.573-2	8.271-2	8.642-2	9.025-2	9.824-2	1.066-1	1.142-1	1.169-1
21	51	1.490-3	1.347-3	1.194-3	1.047-3	9.125-4	8.493-4	7.880-4	6.690-4	5.539-4	4.441-4	3.433-4
21	52	2.580-2	2.045-2	1.544-2	1.128-2	8.100-3	6.855-3	5.809-3	4.217-3	3.136-3	2.407-3	1.891-3
21	53	5.614-3	4.537-3	3.509-3	2.620-3	1.910-3	1.622-3	1.374-3	9.801-4	6.948-4	4.886-4	3.398-4
21	54	2.770-3	2.198-3	1.687-3	1.254-3	9.086-4	7.676-4	6.458-4	4.526-4	3.138-4	2.156-4	1.471-4
21	55	1.002-2	9.383-3	8.864-3	8.542-3	8.421-3	8.427-3	8.474-3	8.677-3	9.007-3	9.359-3	9.393-3
21	56	1.040-2	9.085-3	7.748-3	6.533-3	5.486-3	5.020-3	4.586-3	3.792-3	3.075-3	2.428-3	1.856-3
21	57	4.734-3	3.849-3	3.048-3	2.391-3	1.897-3	1.708-3	1.554-3	1.335-3	1.210-3	1.147-3	1.090-3
21	58	2.441-3	1.891-3	1.410-3	1.021-3	7.261-4	6.097-4	5.113-4	3.586-4	2.508-4	1.747-4	1.206-4
21	59	3.932-3	3.212-3	2.488-3	1.850-3	1.341-3	1.136-3	9.614-4	6.885-4	4.969-4	3.636-4	2.693-4
21	60	8.734-3	7.023-3	5.437-3	4.125-3	3.114-3	2.709-3	2.361-3	1.804-3	1.384-3	1.060-3	8.023-4
21	61	6.197-3	5.017-3	3.909-3	2.984-3	2.269-3	1.984-3	1.741-3	1.357-3	1.076-3	8.634-4	6.913-4
21	62	1.524-1	1.588-1	1.677-1	1.788-1	1.915-1	1.984-1	2.056-1	2.214-1	2.394-1	2.580-1	2.671-1
21	63	4.861-3	3.847-3	2.961-3	2.246-3	1.699-3	1.480-3	1.290-3	9.843-4	7.508-4	5.687-4	4.244-4
21	64	3.021-3	2.520-3	2.027-3	1.591-3	1.234-3	1.085-3	9.528-4	7.326-4	5.586-4	4.195-4	3.084-4
21	65	1.117-3	9.754-4	8.460-4	7.336-4	6.366-4	5.923-4	5.497-4	4.679-4	3.886-4	3.125-4	2.420-4
21	66	3.489-3	2.778-3	2.140-3	1.608-3	1.193-3	1.027-3	8.859-4	6.667-4	5.140-4	4.088-4	3.318-4
21	67	8.064-2	8.290-2	8.649-2	9.132-2	9.711-2	1.003-1	1.038-1	1.115-1	1.205-1	1.299-1	1.345-1

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
21	68	3.725-3	3.095-3	2.504-3	1.999-3	1.592-3	1.421-3	1.269-3	1.009-3	7.946-4	6.144-4	4.630-4
21	69	2.281-2	2.264-2	2.275-2	2.314-2	2.374-2	2.410-2	2.450-2	2.545-2	2.662-2	2.784-2	2.817-2
21	70	6.140-2	6.316-2	6.575-2	6.908-2	7.300-2	7.518-2	7.753-2	8.281-2	8.906-2	9.558-2	9.867-2
21	71	5.148-2	5.272-2	5.457-2	5.699-2	5.989-2	6.152-2	6.329-2	6.731-2	7.209-2	7.706-2	7.929-2
21	72	4.463-3	3.924-3	3.399-3	2.931-3	2.524-3	2.339-3	2.164-3	1.832-3	1.520-3	1.228-3	9.611-4
21	73	6.207-3	5.080-3	3.987-3	3.043-3	2.291-3	1.985-3	1.720-3	1.298-3	9.864-4	7.568-4	5.826-4
21	74	1.498-2	1.117-2	8.212-3	6.044-3	4.502-3	3.909-3	3.408-3	2.619-3	2.031-3	1.580-3	1.217-3
21	75	1.156-2	8.541-3	6.144-3	4.364-3	3.098-3	2.617-3	2.217-3	1.609-3	1.188-3	8.934-4	6.795-4
21	76	3.410-3	2.572-3	1.865-3	1.314-3	9.105-4	7.549-4	6.247-4	4.264-4	2.899-4	1.966-4	1.327-4
21	77	1.034-2	9.256-3	8.264-3	7.376-3	6.558-3	6.161-3	5.763-3	4.958-3	4.141-3	3.339-3	2.590-3
21	78	3.975-3	3.160-3	2.430-3	1.828-3	1.360-3	1.171-3	1.008-3	7.440-4	5.461-4	3.977-4	2.863-4
21	79	6.498-3	5.094-3	4.068-3	3.312-3	2.740-3	2.500-3	2.283-3	1.900-3	1.568-3	1.275-3	1.013-3
21	80	1.518-0	1.550-0	1.601-0	1.667-0	1.747-0	1.793-0	1.845-0	1.964-0	2.111-0	2.266-0	2.339-0
21	81	2.192-3	1.842-3	1.504-3	1.209-3	9.641-4	8.585-4	7.625-4	5.946-4	4.541-4	3.380-4	2.444-4
21	82	5.302-2	5.390-2	5.537-2	5.732-2	5.976-2	6.120-2	6.281-2	6.664-2	7.141-2	7.648-2	7.881-2
21	83	2.144-3	2.048-3	1.942-3	1.825-3	1.691-3	1.616-3	1.534-3	1.351-3	1.148-3	9.371-4	7.329-4
21	84	3.848-3	3.104-3	2.479-3	1.985-3	1.603-3	1.444-3	1.301-3	1.051-3	8.385-4	6.548-4	4.974-4
21	85	3.476-1	3.547-1	3.644-1	3.764-1	3.915-1	4.004-1	4.106-1	4.350-1	4.659-1	4.990-1	5.142-1
21	86	2.223-4	1.822-4	1.481-4	1.206-4	9.853-5	8.904-5	8.032-5	6.466-5	5.095-5	3.906-5	2.904-5
21	87	7.555-4	6.124-4	4.959-4	4.033-4	3.283-4	2.955-4	2.651-4	2.103-4	1.627-4	1.224-4	8.934-5
21	88	1.357-2	1.063-2	8.378-3	6.696-3	5.419-3	4.885-3	4.402-3	3.547-3	2.805-3	2.159-3	1.610-3
21	89	2.239-2	1.795-2	1.464-2	1.229-2	1.065-2	1.003-2	9.519-3	8.738-3	8.213-3	7.833-3	7.356-3
21	90	6.352-3	5.038-3	4.049-3	3.311-3	2.741-3	2.497-3	2.273-3	1.866-3	1.501-3	1.173-3	8.878-4
21	91	1.136-3	1.054-3	9.803-4	9.066-4	8.256-4	7.811-4	7.338-4	6.321-4	5.251-4	4.199-4	3.228-4
21	92	7.523-3	7.282-3	6.996-3	6.630-3	6.159-3	5.879-3	5.570-3	4.875-3	4.110-3	3.329-3	2.585-3
21	93	2.307-3	2.244-3	2.163-3	2.055-3	1.911-3	1.824-3	1.727-3	1.508-3	1.267-3	1.021-3	7.882-4
21	94	1.085-0	1.100-0	1.121-0	1.149-0	1.189-0	1.213-0	1.242-0	1.314-0	1.407-0	1.507-0	1.554-0
21	95	4.841-3	4.754-3	4.616-3	4.412-3	4.130-3	3.958-3	3.764-3	3.324-3	2.835-3	2.333-3	1.847-3
21	96	1.924-3	1.871-3	1.797-3	1.696-3	1.564-3	1.484-3	1.397-3	1.203-3	9.946-4	7.882-4	5.990-4
21	97	8.045-4	7.873-4	7.613-4	7.236-4	6.719-4	6.404-4	6.053-4	5.259-4	4.389-4	3.511-4	2.692-4
22	23	4.416-1	3.978-1	3.476-1	2.895-1	2.281-1	1.987-1	1.712-1	1.240-1	8.762-2	6.093-2	4.186-2
22	24	1.918-0	1.745-0	1.546-0	1.295-0	1.015-0	8.785-1	7.505-1	5.309-1	3.643-1	2.451-1	1.628-1
22	25	8.147-1	7.439-1	6.560-1	5.503-1	4.389-1	3.860-1	3.369-1	2.526-1	1.877-1	1.394-1	1.037-1
22	26	2.510-0	2.538-0	2.387-0	2.056-0	1.631-0	1.416-0	1.214-0	8.654-1	6.010-1	4.118-1	2.805-1
22	27	2.039-2	1.838-2	1.639-2	1.483-2	1.391-2	1.367-2	1.356-2	1.361-2	1.386-2	1.405-2	1.371-2
22	28	1.245-0	1.465-0	1.538-0	1.442-0	1.234-0	1.114-0	9.957-1	7.841-1	6.213-1	5.055-1	4.201-1
22	29	1.320-2	1.187-2	1.077-2	1.013-2	9.975-3	1.005-2	1.019-2	1.063-2	1.115-2	1.154-2	1.142-2
22	30	2.900-3	2.403-3	1.895-3	1.420-3	1.019-3	8.523-4	7.082-4	4.815-4	3.227-4	2.142-4	1.412-4
22	31	3.643-3	2.948-3	2.307-3	1.765-3	1.339-3	1.170-3	1.025-3	7.999-4	6.412-4	5.273-4	4.372-4
22	32	3.345-2	3.276-2	3.347-2	3.604-2	4.011-2	4.247-2	4.495-2	4.998-2	5.472-2	5.833-2	5.889-2
22	33	2.342-1	2.373-1	2.517-1	2.805-1	3.207-1	3.433-1	3.668-1	4.153-1	4.635-1	5.049-1	5.211-1
22	34	1.082-2	8.918-3	7.244-3	5.912-3	4.940-3	4.574-3	4.275-3	3.840-3	3.557-3	3.350-3	3.105-3
22	35	1.121-2	9.013-3	7.006-3	5.299-3	3.940-3	3.386-3	2.905-3	2.131-3	1.554-3	1.123-3	8.003-4
22	36	5.644-3	4.730-3	3.710-3	2.740-3	1.928-3	1.596-3	1.311-3	8.700-4	5.685-4	3.678-4	2.364-4
22	37	9.213-4	7.838-4	6.307-4	4.861-4	3.642-4	3.132-4	2.686-4	1.964-4	1.425-4	1.024-4	7.252-5
22	38	2.983-3	2.500-3	1.992-3	1.530-3	1.151-3	9.957-4	8.616-4	6.487-4	4.946-4	3.824-4	2.973-4
22	39	4.957-3	4.108-3	3.220-3	2.417-3	1.766-3	1.502-3	1.275-3	9.197-4	6.677-4	4.897-4	3.613-4
22	40	6.924-3	5.757-3	4.532-3	3.443-3	2.583-3	2.243-3	1.959-3	1.532-3	1.251-3	1.066-3	9.225-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T$_e$, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
22	41	8.755-3	7.283-3	5.708-3	4.268-3	3.091-3	2.610-3	2.197-3	1.547-3	1.082-3	7.521-4	5.183-4
22	42	2.314-2	1.963-2	1.608-2	1.293-2	1.037-2	9.298-3	8.354-3	6.783-3	5.544-3	4.547-3	3.701-3
22	43	7.947-2	7.687-2	7.664-2	7.930-2	8.425-2	8.728-2	9.056-2	9.762-2	1.049-1	1.111-1	1.123-1
22	44	3.425-2	2.843-2	2.265-2	1.754-2	1.336-2	1.163-2	1.011-2	7.615-3	5.696-3	4.210-3	3.058-3
22	45	1.018-2	9.052-3	7.827-3	6.651-3	5.605-3	5.137-3	4.701-3	3.914-3	3.223-3	2.614-3	2.074-3
22	46	7.446-3	6.534-3	5.520-3	4.537-3	3.680-3	3.309-3	2.976-3	2.410-3	1.956-3	1.587-3	1.276-3
22	47	3.254-3	2.799-3	2.290-3	1.807-3	1.400-3	1.231-3	1.083-3	8.447-4	6.687-4	5.379-4	4.346-4
22	48	1.783-2	1.539-2	1.238-2	9.380-3	6.828-3	5.772-3	4.864-3	3.444-3	2.452-3	1.766-3	1.282-3
22	49	6.228-2	6.010-2	5.827-2	5.713-2	5.668-2	5.667-2	5.678-2	5.734-2	5.829-2	5.912-2	5.804-2
22	50	2.510-2	2.265-2	1.993-2	1.723-2	1.475-2	1.361-2	1.253-2	1.053-2	8.720-3	7.093-3	5.632-3
22	51	8.141-3	7.334-3	6.447-3	5.567-3	4.751-3	4.372-3	4.010-3	3.332-3	2.708-3	2.140-3	1.637-3
22	52	4.408-2	3.964-2	3.564-2	3.241-2	3.007-2	2.921-2	2.854-2	2.770-2	2.743-2	2.739-2	2.668-2
22	53	3.851-2	3.235-2	2.635-2	2.092-2	1.636-2	1.441-2	1.267-2	9.742-3	7.409-3	5.544-3	4.059-3
22	54	4.653-2	3.850-2	3.092-2	2.426-2	1.879-2	1.650-2	1.448-2	1.115-2	8.576-3	6.574-3	4.995-3
22	55	2.203-2	1.978-2	1.743-2	1.517-2	1.310-2	1.213-2	1.121-2	9.449-3	7.795-3	6.256-3	4.860-3
22	56	5.194-2	4.932-2	4.714-2	4.562-2	4.473-2	4.450-2	4.440-2	4.456-2	4.526-2	4.623-2	4.600-2
22	57	5.797-2	5.346-2	4.935-2	4.609-2	4.381-2	4.303-2	4.247-2	4.194-2	4.216-2	4.279-2	4.242-2
22	58	5.020-2	4.164-2	3.279-2	2.495-2	1.874-2	1.627-2	1.418-2	1.098-2	8.810-3	7.332-3	6.200-3
22	59	9.143-1	9.452-1	9.927-1	1.056-0	1.132-0	1.173-0	1.216-0	1.311-0	1.420-0	1.531-0	1.586-0
22	60	2.862-2	2.556-2	2.265-2	2.019-2	1.833-2	1.761-2	1.703-2	1.621-2	1.581-2	1.566-2	1.526-2
22	61	3.561-2	3.190-2	2.838-2	2.547-2	2.330-2	2.249-2	2.185-2	2.103-2	2.073-2	2.077-2	2.042-2
22	62	2.098-2	1.915-2	1.710-2	1.505-2	1.314-2	1.224-2	1.136-2	9.678-3	8.073-3	6.564-3	5.177-3
22	63	5.310-2	5.154-2	5.040-2	4.987-2	4.995-2	5.021-2	5.062-2	5.188-2	5.379-2	5.600-2	5.655-2
22	64	4.004-2	3.465-2	2.945-2	2.482-2	2.084-2	1.907-2	1.742-2	1.439-2	1.166-2	9.194-3	7.017-3
22	65	3.458-3	2.836-3	2.196-3	1.618-3	1.149-3	9.590-4	7.964-4	5.433-4	3.667-4	2.456-4	1.633-4
22	66	2.323-1	2.369-1	2.452-1	2.571-1	2.719-1	2.802-1	2.892-1	3.095-1	3.333-1	3.580-1	3.700-1
22	67	1.269-1	1.286-1	1.326-1	1.385-1	1.461-1	1.504-1	1.550-1	1.656-1	1.783-1	1.917-1	1.983-1
22	68	2.650-2	2.276-2	1.913-2	1.591-2	1.324-2	1.210-2	1.107-2	9.309-3	7.856-3	6.644-3	5.569-3
22	69	3.765-1	3.834-1	3.959-1	4.138-1	4.360-1	4.485-1	4.621-1	4.930-1	5.300-1	5.688-1	5.876-1
22	70	4.509-2	4.424-2	4.384-2	4.400-2	4.475-2	4.534-2	4.609-2	4.807-2	5.078-2	5.381-2	5.508-2
22	71	1.267-1	1.281-1	1.311-1	1.357-1	1.417-1	1.452-1	1.490-1	1.581-1	1.693-1	1.812-1	1.868-1
22	72	2.745-2	2.480-2	2.224-2	2.011-2	1.853-2	1.795-2	1.749-2	1.692-2	1.678-2	1.689-2	1.667-2
22	73	6.245-2	5.896-2	5.603-2	5.404-2	5.308-2	5.297-2	5.310-2	5.405-2	5.584-2	5.791-2	5.812-2
22	74	9.173-2	8.700-2	8.345-2	8.150-2	8.116-2	8.156-2	8.233-2	8.496-2	8.908-2	9.386-2	9.572-2
22	75	5.336-1	5.382-1	5.506-1	5.702-1	5.960-1	6.113-1	6.283-1	6.683-1	7.168-1	7.681-1	7.920-1
22	76	7.028-2	5.897-2	4.806-2	3.864-2	3.091-2	2.761-2	2.464-2	1.946-2	1.514-2	1.153-2	8.555-3
22	77	1.194-1	1.085-1	1.009-1	9.641-2	9.481-2	9.494-2	9.566-2	9.876-2	1.040-1	1.102-1	1.129-1
22	78	3.887-1	3.932-1	4.023-1	4.156-1	4.329-1	4.431-1	4.546-1	4.818-1	5.153-1	5.509-1	5.669-1
22	79	3.132-1	3.162-1	3.232-1	3.336-1	3.473-1	3.554-1	3.646-1	3.864-1	4.137-1	4.429-1	4.565-1
22	80	2.702-2	2.491-2	2.316-2	2.188-2	2.105-2	2.080-2	2.064-2	2.060-2	2.095-2	2.149-2	2.148-2
22	81	2.178-0	2.210-0	2.269-0	2.351-0	2.457-0	2.519-0	2.589-0	2.755-0	2.960-0	3.178-0	3.283-0
22	82	7.279-1	7.302-1	7.425-1	7.634-1	7.925-1	8.104-1	8.309-1	8.809-1	9.443-1	1.013-0	1.046-0
22	83	1.298-2	1.065-2	8.494-3	6.703-3	5.301-3	4.728-3	4.226-3	3.390-3	2.720-3	2.168-3	1.698-3
22	84	6.166-1	6.262-1	6.407-1	6.600-1	6.849-1	6.999-1	7.170-1	7.584-1	8.108-1	8.672-1	8.927-1
22	85	9.648-2	9.529-2	9.519-2	9.611-2	9.805-2	9.943-2	1.011-1	1.056-1	1.116-1	1.183-1	1.210-1
22	86	5.321-3	4.376-3	3.616-3	3.015-3	2.531-3	2.319-3	2.120-3	1.753-3	1.419-3	1.117-3	8.501-4
22	87	5.607-0	5.716-0	5.861-0	6.047-0	6.289-0	6.437-0	6.606-0	7.016-0	7.533-0	8.085-0	8.344-0
22	88	1.298-1	1.235-1	1.188-1	1.158-1	1.143-1	1.140-1	1.141-1	1.152-1	1.178-1	1.211-1	1.209-1

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
22	89	1.032-0	1.038-0	1.052-0	1.075-0	1.108-0	1.130-0	1.155-0	1.219-0	1.300-0	1.388-0	1.426-0
22	90	7.250-2	6.074-2	5.119-2	4.372-2	3.779-2	3.521-2	3.283-2	2.847-2	2.454-2	2.096-2	1.756-2
22	91	1.248-0	1.267-0	1.291-0	1.324-0	1.369-0	1.398-0	1.431-0	1.512-0	1.618-0	1.732-0	1.784-0
22	92	6.044-2	5.386-2	4.925-2	4.604-2	4.380-2	4.295-2	4.227-2	4.135-2	4.101-2	4.095-2	3.986-2
22	93	5.955-3	5.418-3	4.976-3	4.571-3	4.154-3	3.932-3	3.696-3	3.191-3	2.656-3	2.124-3	1.629-3
22	94	6.228-1	6.298-1	6.400-1	6.547-1	6.754-1	6.887-1	7.042-1	7.433-1	7.947-1	8.507-1	8.762-1
22	95	4.451-2	4.287-2	4.188-2	4.136-2	4.124-2	4.132-2	4.150-2	4.221-2	4.346-2	4.494-2	4.506-2
22	96	5.095-0	5.154-0	5.243-0	5.372-0	5.555-0	5.671-0	5.808-0	6.148-0	6.588-0	7.064-0	7.285-0
22	97	5.405-3	5.311-3	5.172-3	4.974-3	4.704-3	4.539-3	4.353-3	3.926-3	3.446-3	2.938-3	2.418-3
23	24	1.307-0	1.177-0	1.035-0	8.654-1	6.834-1	5.957-1	5.138-1	3.728-1	2.641-1	1.839-1	1.264-1
23	25	4.344-1	3.885-1	3.392-1	2.847-1	2.294-1	2.034-1	1.796-1	1.393-1	1.091-1	8.734-2	7.095-2
23	26	1.524-1	1.566-1	1.496-1	1.328-1	1.110-1	9.978-2	8.887-2	6.906-2	5.252-2	3.925-2	2.883-2
23	27	1.024-2	8.864-3	7.478-3	6.169-3	5.054-3	4.591-3	4.192-3	3.577-3	3.160-3	2.873-3	2.609-3
23	28	1.433-1	1.453-1	1.357-1	1.162-1	9.217-2	8.026-2	6.907-2	4.978-2	3.499-2	2.419-2	1.655-2
23	29	1.223-2	1.150-2	1.116-2	1.141-2	1.218-2	1.270-2	1.326-2	1.447-2	1.561-2	1.643-2	1.641-2
23	30	2.153-2	2.177-2	2.306-2	2.575-2	2.953-2	3.164-2	3.382-2	3.811-2	4.200-2	4.485-2	4.524-2
23	31	7.697-3	6.715-3	5.761-3	4.924-3	4.247-3	3.968-3	3.724-3	3.323-3	3.009-3	2.742-3	2.457-3
23	32	1.018-2	8.765-3	7.352-3	6.084-3	5.045-3	4.615-3	4.240-3	3.634-3	3.175-3	2.810-3	2.466-3
23	33	7.994-3	7.016-3	5.890-3	4.825-3	3.960-3	3.617-3	3.334-3	2.921-3	2.668-3	2.504-3	2.330-3
23	34	1.155-2	9.544-3	7.616-3	5.888-3	4.450-3	3.847-3	3.316-3	2.449-3	1.791-3	1.295-3	9.215-4
23	35	1.090-2	9.142-3	7.374-3	5.736-3	4.344-3	3.755-3	3.236-3	2.384-3	1.740-3	1.254-3	8.897-4
23	36	7.311-3	6.146-3	4.967-3	3.866-3	2.927-3	2.528-3	2.177-3	1.603-3	1.170-3	8.442-4	6.001-4
23	37	1.635-3	1.477-3	1.295-3	1.111-3	9.406-4	8.619-4	7.877-4	6.517-4	5.306-4	4.239-4	3.306-4
23	38	4.791-3	4.293-3	3.734-3	3.175-3	2.660-3	2.424-3	2.203-3	1.798-3	1.439-3	1.124-3	8.537-4
23	39	1.011-2	9.269-3	8.535-3	8.017-3	7.726-3	7.651-3	7.612-3	7.614-3	7.674-3	7.696-3	7.457-3
23	40	7.976-3	6.857-3	5.646-3	4.493-3	3.500-3	3.074-3	2.694-3	2.056-3	1.552-3	1.155-3	8.429-4
23	41	7.496-3	6.550-3	5.435-3	4.328-3	3.356-3	2.937-3	2.563-3	1.938-3	1.453-3	1.076-3	7.837-4
23	42	7.014-2	6.909-2	7.062-2	7.514-2	8.189-2	8.580-2	8.994-2	9.863-2	1.074-1	1.149-1	1.168-1
23	43	1.751-2	1.414-2	1.087-2	8.078-3	5.894-3	5.024-3	4.286-3	3.139-3	2.334-3	1.766-3	1.351-3
23	44	9.842-3	8.019-3	6.207-3	4.626-3	3.376-3	2.877-3	2.457-3	1.816-3	1.387-3	1.108-3	9.117-4
23	45	7.892-3	7.047-3	5.977-3	4.872-3	3.872-3	3.430-3	3.030-3	2.345-3	1.791-3	1.344-3	9.852-4
23	46	1.251-2	1.128-2	9.875-3	8.521-3	7.370-3	6.888-3	6.467-3	5.791-3	5.297-3	4.915-3	4.506-3
23	47	2.964-2	2.834-2	2.662-2	2.473-2	2.281-2	2.184-2	2.088-2	1.894-2	1.703-2	1.514-2	1.317-2
23	48	4.295-3	3.714-3	3.144-3	2.667-3	2.321-3	2.196-3	2.100-3	1.983-3	1.944-3	1.943-3	1.901-3
23	49	2.571-2	2.454-2	2.371-2	2.343-2	2.372-2	2.405-2	2.450-2	2.569-2	2.721-2	2.870-2	2.907-2
23	50	1.474-2	1.373-2	1.282-2	1.217-2	1.182-2	1.175-2	1.174-2	1.190-2	1.224-2	1.262-2	1.258-2
23	51	1.029-2	1.002-2	9.962-3	1.014-2	1.051-2	1.075-2	1.102-2	1.166-2	1.239-2	1.308-2	1.326-2
23	52	4.446-2	3.648-2	2.846-2	2.140-2	1.578-2	1.353-2	1.162-2	8.677-3	6.664-3	5.312-3	4.344-3
23	53	2.276-2	1.872-2	1.468-2	1.110-2	8.199-3	7.014-3	5.989-3	4.351-3	3.149-3	2.267-3	1.617-3
23	54	8.052-3	6.555-3	5.096-3	3.800-3	2.745-3	2.312-3	1.938-3	1.347-3	9.254-4	6.298-4	4.251-4
23	55	1.331-1	1.374-1	1.446-1	1.545-1	1.661-1	1.724-1	1.789-1	1.932-1	2.092-1	2.256-1	2.339-1
23	56	9.464-2	9.635-2	9.996-2	1.054-1	1.123-1	1.161-1	1.202-1	1.292-1	1.396-1	1.503-1	1.556-1
23	57	1.318-2	1.085-2	8.684-3	6.850-3	5.410-3	4.831-3	4.334-3	3.551-3	2.989-3	2.580-3	2.237-3
23	58	1.509-2	1.180-2	8.736-3	6.200-3	4.271-3	3.518-3	2.887-3	1.930-3	1.283-3	8.498-4	5.613-4
23	59	1.814-2	1.567-2	1.307-2	1.068-2	8.632-3	7.747-3	6.944-3	5.545-3	4.368-3	3.370-3	2.532-3
23	60	4.048-2	3.798-2	3.571-2	3.408-2	3.318-2	3.300-2	3.297-2	3.340-2	3.443-2	3.577-2	3.613-2
23	61	3.713-2	3.360-2	3.000-2	2.662-2	2.352-2	2.206-2	2.064-2	1.787-2	1.517-2	1.259-2	1.014-2
23	62	1.602-2	1.436-2	1.284-2	1.161-2	1.070-2	1.036-2	1.009-2	9.720-3	9.564-3	9.541-3	9.339-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
23	63	1.860-1	1.916-1	2.002-1	2.115-1	2.247-1	2.320-1	2.397-1	2.567-1	2.764-1	2.966-1	3.061-1
23	64	1.007-2	8.024-3	6.167-3	4.626-3	3.444-3	2.977-3	2.584-3	1.982-3	1.569-3	1.284-3	1.067-3
23	65	2.630-2	2.635-2	2.685-2	2.780-2	2.911-2	2.988-2	3.072-2	3.266-2	3.498-2	3.743-2	3.857-2
23	66	9.786-3	7.809-3	6.042-3	4.567-3	3.417-3	2.956-3	2.562-3	1.944-3	1.504-3	1.191-3	9.542-4
23	67	9.979-2	1.016-1	1.050-1	1.102-1	1.165-1	1.201-1	1.240-1	1.329-1	1.433-1	1.541-1	1.595-1
23	68	7.613-2	7.668-2	7.844-2	8.137-2	8.523-2	8.747-2	8.992-2	9.557-2	1.023-1	1.094-1	1.126-1
23	69	1.608-2	1.394-2	1.207-2	1.060-2	9.524-3	9.113-3	8.775-3	8.283-3	7.998-3	7.842-3	7.567-3
23	70	8.204-2	8.379-2	8.666-2	9.056-2	9.526-2	9.789-2	1.007-1	1.071-1	1.148-1	1.228-1	1.265-1
23	71	1.232-2	1.050-2	8.608-3	6.905-3	5.510-3	4.929-3	4.418-3	3.570-3	2.902-3	2.362-3	1.905-3
23	72	7.857-2	7.863-2	7.962-2	8.163-2	8.459-2	8.642-2	8.848-2	9.341-2	9.951-2	1.060-1	1.087-1
23	73	1.337-2	1.095-2	8.561-3	6.473-3	4.805-3	4.127-3	3.543-3	2.611-3	1.926-3	1.418-3	1.037-3
23	74	1.281-0	1.307-0	1.354-0	1.417-0	1.495-0	1.539-0	1.587-0	1.697-0	1.829-0	1.967-0	2.033-0
23	75	2.318-2	1.780-2	1.335-2	9.923-3	7.425-3	6.466-3	5.667-3	4.461-3	3.662-3	3.143-3	2.756-3
23	76	1.308-2	1.007-2	7.503-3	5.487-3	3.985-3	3.396-3	2.898-3	2.120-3	1.565-3	1.168-3	8.775-4
23	77	8.952-2	8.562-2	8.339-2	8.286-2	8.382-2	8.481-2	8.613-2	8.978-2	9.480-2	1.004-1	1.026-1
23	78	1.025-2	8.218-3	6.380-3	4.862-3	3.684-3	3.208-3	2.795-3	2.125-3	1.617-3	1.227-3	9.240-4
23	79	5.509-1	5.603-1	5.770-1	5.996-1	6.276-1	6.439-1	6.619-1	7.042-1	7.559-1	8.104-1	8.357-1
23	80	1.523-0	1.553-0	1.603-0	1.669-0	1.750-0	1.796-0	1.847-0	1.967-0	2.114-0	2.269-0	2.343-0
23	81	3.823-2	3.708-2	3.635-2	3.608-2	3.622-2	3.645-2	3.678-2	3.776-2	3.923-2	4.088-2	4.127-2
23	82	7.151-2	7.205-2	7.346-2	7.557-2	7.835-2	8.001-2	8.187-2	8.636-2	9.200-2	9.805-2	1.007-1
23	83	8.186-2	8.314-2	8.539-2	8.841-2	9.218-2	9.437-2	9.681-2	1.026-1	1.098-1	1.175-1	1.210-1
23	84	2.606-2	2.457-2	2.356-2	2.301-2	2.290-2	2.300-2	2.320-2	2.391-2	2.503-2	2.631-2	2.676-2
23	85	1.752-1	1.778-1	1.818-1	1.871-1	1.940-1	1.981-1	2.027-1	2.140-1	2.283-1	2.438-1	2.506-1
23	86	1.327-0	1.355-0	1.394-0	1.441-0	1.501-0	1.535-0	1.574-0	1.668-0	1.787-0	1.914-0	1.973-0
23	87	6.716-3	5.930-3	5.280-3	4.724-3	4.209-3	3.954-3	3.696-3	3.166-3	2.627-3	2.102-3	1.618-3
23	88	3.712-0	3.777-0	3.864-0	3.977-0	4.126-0	4.218-0	4.323-0	4.581-0	4.908-0	5.259-0	5.420-0
23	89	5.218-2	4.430-2	3.809-2	3.325-2	2.933-2	2.760-2	2.596-2	2.294-2	2.021-2	1.774-2	1.534-2
23	90	2.153-2	1.669-2	1.300-2	1.028-2	8.260-3	7.433-3	6.696-3	5.424-3	4.349-3	3.425-3	2.631-3
23	91	5.014-3	4.751-3	4.498-3	4.224-3	3.905-3	3.724-3	3.527-3	3.097-3	2.636-3	2.174-3	1.735-3
23	92	2.192-2	2.121-2	2.034-2	1.923-2	1.781-2	1.696-2	1.603-2	1.396-2	1.171-2	9.446-3	7.322-3
23	93	2.212-2	2.227-2	2.248-2	2.278-2	2.320-2	2.347-2	2.379-2	2.462-2	2.579-2	2.709-2	2.751-2
23	94	1.216-0	1.234-0	1.257-0	1.289-0	1.333-0	1.360-0	1.392-0	1.472-0	1.575-0	1.686-0	1.737-0
23	95	6.058-1	6.137-1	6.247-1	6.399-1	6.610-1	6.743-1	6.898-1	7.286-1	7.786-1	8.326-1	8.566-1
23	96	2.862-2	2.863-2	2.869-2	2.880-2	2.900-2	2.915-2	2.936-2	2.996-2	3.089-2	3.197-2	3.206-2
23	97	5.558-3	5.566-3	5.576-3	5.592-3	5.619-3	5.638-3	5.664-3	5.751-3	5.903-3	6.088-3	6.089-3
24	25	2.194-0	1.936-0	1.681-0	1.397-0	1.101-0	9.608-1	8.303-1	6.073-1	4.374-1	3.136-1	2.248-1
24	26	4.102-1	4.159-1	3.949-1	3.476-1	2.857-1	2.538-1	2.231-1	1.682-1	1.238-1	8.935-2	6.337-2
24	27	2.928-2	2.760-2	2.664-2	2.681-2	2.805-2	2.897-2	3.000-2	3.220-2	3.425-2	3.560-2	3.521-2
24	28	2.480-1	2.714-1	2.733-1	2.501-1	2.105-1	1.887-1	1.674-1	1.292-1	9.919-2	7.721-2	6.102-2
24	29	4.470-2	4.467-2	4.658-2	5.114-2	5.782-2	6.161-2	6.552-2	7.326-2	8.022-2	8.518-2	8.554-2
24	30	3.235-3	2.656-3	2.093-3	1.583-3	1.158-3	9.824-4	8.298-4	5.881-4	4.157-4	2.941-4	2.078-4
24	31	5.920-3	4.941-3	4.029-3	3.253-3	2.650-3	2.413-3	2.214-3	1.915-3	1.716-3	1.573-3	1.431-3
24	32	1.045-2	8.787-3	7.152-3	5.693-3	4.499-3	4.009-3	3.585-3	2.910-3	2.418-3	2.050-3	1.739-3
24	33	2.256-2	2.159-2	2.094-2	2.104-2	2.192-2	2.259-2	2.337-2	2.510-2	2.687-2	2.822-2	2.822-2
24	34	1.813-2	1.549-2	1.312-2	1.118-2	9.742-3	9.191-3	8.738-3	8.064-3	7.609-3	7.242-3	6.750-3
24	35	1.951-2	1.627-2	1.313-2	1.030-2	7.921-3	6.913-3	6.019-3	4.533-3	3.380-3	2.486-3	1.795-3
24	36	1.981-2	1.681-2	1.364-2	1.065-2	8.081-3	6.991-3	6.028-3	4.446-3	3.248-3	2.343-3	1.664-3
24	37	1.370-3	1.173-3	9.544-4	7.435-4	5.619-4	4.848-4	4.168-4	3.055-4	2.216-4	1.589-4	1.121-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a\pm b \equiv a\times10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
24	38	4.835-3	4.168-3	3.443-3	2.745-3	2.138-3	1.876-3	1.643-3	1.250-3	9.403-4	6.973-4	5.073-4
24	39	1.008-2	8.863-3	7.579-3	6.370-3	5.331-3	4.883-3	4.480-3	3.793-3	3.235-3	2.770-3	2.347-3
24	40	2.112-2	1.953-2	1.821-2	1.742-2	1.715-2	1.717-2	1.727-2	1.763-2	1.809-2	1.841-2	1.803-2
24	41	1.789-2	1.556-2	1.300-2	1.051-2	8.335-3	7.386-3	6.529-3	5.067-3	3.888-3	2.937-3	2.173-3
24	42	2.741-2	2.451-2	2.214-2	2.071-2	2.022-2	2.027-2	2.047-2	2.123-2	2.231-2	2.332-2	2.341-2
24	43	1.050-1	1.031-1	1.053-1	1.119-1	1.217-1	1.275-1	1.335-1	1.462-1	1.591-1	1.699-1	1.727-1
24	44	3.457-2	2.896-2	2.312-2	1.787-2	1.358-2	1.182-2	1.030-2	7.867-3	6.075-3	4.748-3	3.725-3
24	45	1.543-2	1.369-2	1.157-2	9.444-3	7.573-3	6.773-3	6.066-3	4.906-3	4.032-3	3.365-3	2.811-3
24	46	4.535-2	4.315-2	4.064-2	3.810-2	3.567-2	3.450-2	3.336-2	3.112-2	2.897-2	2.682-2	2.428-2
24	47	1.704-2	1.577-2	1.427-2	1.274-2	1.130-2	1.063-2	9.989-3	8.794-3	7.700-3	6.693-3	5.710-3
24	48	6.528-3	5.563-3	4.406-3	3.284-3	2.344-3	1.958-3	1.627-3	1.113-3	7.569-4	5.142-4	3.493-4
24	49	4.561-2	4.407-2	4.305-2	4.292-2	4.372-2	4.443-2	4.534-2	4.766-2	5.055-2	5.335-2	5.405-2
24	50	1.494-2	1.279-2	1.050-2	8.399-3	6.647-3	5.916-3	5.278-3	4.239-3	3.458-3	2.865-3	2.377-3
24	51	5.435-3	4.623-3	3.797-3	3.047-3	2.417-3	2.149-3	1.908-3	1.497-3	1.162-3	8.863-4	6.603-4
24	52	2.958-2	2.496-2	1.985-2	1.505-2	1.109-2	9.475-3	8.088-3	5.933-3	4.446-3	3.443-3	2.736-3
24	53	4.162-2	3.554-2	2.857-2	2.197-2	1.648-2	1.422-2	1.229-2	9.262-3	7.164-3	5.740-3	4.710-3
24	54	4.826-2	3.897-2	3.023-2	2.282-2	1.696-2	1.459-2	1.253-2	9.223-3	6.754-3	4.903-3	3.510-3
24	55	4.078-2	4.057-2	4.090-2	4.197-2	4.370-2	4.479-2	4.601-2	4.889-2	5.243-2	5.621-2	5.808-2
24	56	1.968-1	2.030-1	2.135-1	2.279-1	2.450-1	2.542-1	2.639-1	2.850-1	3.088-1	3.334-1	3.458-1
24	57	1.499-1	1.514-1	1.558-1	1.631-1	1.727-1	1.781-1	1.838-1	1.967-1	2.115-1	2.268-1	2.342-1
24	58	2.718-2	2.189-2	1.660-2	1.202-2	8.438-3	7.016-3	5.813-3	3.968-3	2.699-3	1.834-3	1.244-3
24	59	6.212-2	5.691-2	5.124-2	4.622-2	4.234-2	4.085-2	3.963-2	3.796-2	3.718-2	3.698-2	3.612-2
24	60	7.530-2	7.301-2	7.062-2	6.879-2	6.764-2	6.730-2	6.712-2	6.719-2	6.792-2	6.897-2	6.821-2
24	61	9.535-2	9.299-2	9.157-2	9.165-2	9.323-2	9.454-2	9.618-2	1.005-1	1.063-1	1.127-1	1.154-1
24	62	1.978-2	1.804-2	1.641-2	1.510-2	1.417-2	1.384-2	1.360-2	1.335-2	1.339-2	1.360-2	1.351-2
24	63	1.985-2	1.663-2	1.353-2	1.088-2	8.791-3	7.950-3	7.230-3	6.099-3	5.302-3	4.740-3	4.255-3
24	64	5.082-2	4.155-2	3.354-2	2.706-2	2.200-2	1.993-2	1.809-2	1.501-2	1.249-2	1.039-2	8.524-3
24	65	5.642-3	4.724-3	3.821-3	3.025-3	2.375-3	2.102-3	1.860-3	1.453-3	1.126-3	8.608-4	6.441-4
24	66	2.822-1	2.883-1	2.991-1	3.140-1	3.321-1	3.421-1	3.528-1	3.767-1	4.044-1	4.331-1	4.464-1
24	67	9.675-2	9.229-2	9.051-2	9.110-2	9.351-2	9.527-2	9.737-2	1.027-1	1.094-1	1.168-1	1.202-1
24	68	1.901-1	1.901-1	1.937-1	2.008-1	2.104-1	2.161-1	2.223-1	2.368-1	2.541-1	2.725-1	2.812-1
24	69	3.963-2	3.684-2	3.465-2	3.333-2	3.287-2	3.293-2	3.317-2	3.416-2	3.583-2	3.782-2	3.866-2
24	70	7.819-2	7.873-2	8.021-2	8.266-2	8.594-2	8.787-2	9.000-2	9.503-2	1.013-1	1.079-1	1.109-1
24	71	3.762-2	3.589-2	3.449-2	3.358-2	3.317-2	3.313-2	3.320-2	3.367-2	3.459-2	3.572-2	3.583-2
24	72	3.805-2	3.378-2	2.978-2	2.652-2	2.414-2	2.327-2	2.258-2	2.170-2	2.140-2	2.143-2	2.104-2
24	73	3.418-1	3.451-1	3.532-1	3.662-1	3.834-1	3.934-1	4.046-1	4.306-1	4.621-1	4.952-1	5.106-1
24	74	1.963-1	1.889-1	1.857-1	1.868-1	1.914-1	1.948-1	1.991-1	2.099-1	2.240-1	2.393-1	2.465-1
24	75	1.738-0	1.759-0	1.810-0	1.887-0	1.985-0	2.041-0	2.104-0	2.248-0	2.421-0	2.602-0	2.689-0
24	76	4.986-2	3.742-2	2.743-2	1.988-2	1.443-2	1.234-2	1.059-2	7.933-3	6.105-3	4.848-3	3.927-3
24	77	1.066-1	1.015-1	9.853-2	9.770-2	9.867-2	9.975-2	1.012-1	1.054-1	1.111-1	1.176-1	1.203-1
24	78	9.692-1	9.897-1	1.022-0	1.065-0	1.117-0	1.147-0	1.181-0	1.258-0	1.352-0	1.450-0	1.496-0
24	79	1.627-0	1.659-0	1.712-0	1.783-0	1.869-0	1.919-0	1.974-0	2.102-0	2.259-0	2.426-0	2.505-0
24	80	2.718-1	2.749-1	2.814-1	2.910-1	3.033-1	3.106-1	3.188-1	3.382-1	3.626-1	3.887-1	4.010-1
24	81	6.047-1	6.133-1	6.294-1	6.520-1	6.806-1	6.974-1	7.162-1	7.606-1	8.155-1	8.739-1	9.012-1
24	82	1.453-2	1.275-2	1.127-2	1.011-2	9.205-3	8.821-3	8.471-3	7.857-3	7.342-3	6.897-3	6.373-3
24	83	4.190-3	3.457-3	2.813-3	2.287-3	1.871-3	1.695-3	1.537-3	1.259-3	1.017-3	8.040-4	6.172-4
24	84	3.972-2	3.697-2	3.507-2	3.391-2	3.338-2	3.332-2	3.339-2	3.392-2	3.499-2	3.631-2	3.656-2
24	85	2.613-0	2.671-0	2.747-0	2.841-0	2.956-0	3.024-0	3.101-0	3.286-0	3.521-0	3.774-0	3.892-0

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
24	86	5.511-3	4.978-3	4.503-3	4.077-3	3.671-3	3.467-3	3.257-3	2.820-3	2.365-3	1.913-3	1.488-3
24	87	3.169-1	3.219-1	3.290-1	3.386-1	3.512-1	3.589-1	3.678-1	3.896-1	4.172-1	4.467-1	4.601-1
24	88	7.366-1	7.457-1	7.595-1	7.788-1	8.053-1	8.219-1	8.410-1	8.884-1	9.492-1	1.015-0	1.045-0
24	89	5.707-0	5.806-0	5.939-0	6.114-0	6.345-0	6.488-0	6.652-0	7.053-0	7.560-0	8.103-0	8.351-0
24	90	8.910-2	7.446-2	6.285-2	5.376-2	4.633-2	4.302-2	3.987-2	3.393-2	2.837-2	2.323-2	1.853-2
24	91	1.271-2	1.210-2	1.160-2	1.115-2	1.072-2	1.050-2	1.028-2	9.845-3	9.444-3	9.065-3	8.513-3
24	92	4.050-2	3.829-2	3.619-2	3.395-2	3.137-2	2.992-2	2.835-2	2.494-2	2.132-2	1.772-2	1.429-2
24	93	3.473-3	3.327-3	3.173-3	2.992-3	2.771-3	2.642-3	2.502-3	2.191-3	1.855-3	1.518-3	1.197-3
24	94	3.016-1	3.052-1	3.101-1	3.169-1	3.263-1	3.323-1	3.394-1	3.574-1	3.810-1	4.070-1	4.185-1
24	95	2.359-0	2.389-0	2.432-0	2.492-0	2.576-0	2.629-0	2.691-0	2.845-0	3.045-0	3.260-0	3.358-0
24	96	5.796-1	5.858-1	5.951-1	6.088-1	6.282-1	6.406-1	6.551-1	6.914-1	7.387-1	7.900-1	8.130-1
24	97	3.002-3	2.933-3	2.829-3	2.680-3	2.478-3	2.356-3	2.221-3	1.919-3	1.593-3	1.270-3	9.715-4
25	26	4.659-1	4.940-1	4.847-1	4.372-1	3.666-1	3.287-1	2.915-1	2.237-1	1.678-1	1.240-1	9.053-2
25	27	8.863-2	8.793-2	9.119-2	1.002-1	1.139-1	1.218-1	1.298-1	1.455-1	1.591-1	1.682-1	1.680-1
25	28	1.601-1	1.605-1	1.503-1	1.303-1	1.054-1	9.292-2	8.100-2	5.996-2	4.326-2	3.064-2	2.139-2
25	29	1.230-2	1.079-2	9.146-3	7.473-3	5.957-3	5.302-3	4.724-3	3.803-3	3.156-3	2.712-3	2.364-3
25	30	3.747-3	3.369-3	2.933-3	2.472-3	2.046-3	1.860-3	1.696-3	1.435-3	1.256-3	1.134-3	1.030-3
25	31	3.488-3	2.874-3	2.243-3	1.667-3	1.192-3	9.968-4	8.294-4	5.674-4	3.841-4	2.583-4	1.729-4
25	32	8.054-3	6.739-3	5.352-3	4.071-3	3.010-3	2.575-3	2.200-3	1.610-3	1.193-3	8.997-4	6.865-4
25	33	1.786-2	1.697-2	1.587-2	1.514-2	1.498-2	1.510-2	1.532-2	1.598-2	1.678-2	1.742-2	1.730-2
25	34	1.601-2	1.317-2	1.042-2	7.973-3	5.972-3	5.146-3	4.428-3	3.278-3	2.433-3	1.810-3	1.344-3
25	35	4.042-2	3.413-2	2.833-2	2.361-2	2.012-2	1.880-2	1.771-2	1.612-2	1.508-2	1.429-2	1.330-2
25	36	7.079-2	5.793-2	4.616-2	3.603-2	2.777-2	2.431-2	2.126-2	1.617-2	1.220-2	9.065-3	6.609-3
25	37	1.276-3	1.089-3	8.892-4	6.991-4	5.353-4	4.654-4	4.035-4	3.011-4	2.227-4	1.628-4	1.171-4
25	38	4.171-3	3.578-3	2.937-3	2.320-3	1.785-3	1.555-3	1.351-3	1.012-3	7.504-4	5.492-4	3.951-4
25	39	8.691-3	7.516-3	6.235-3	4.999-3	3.921-3	3.456-3	3.041-3	2.347-3	1.805-3	1.380-3	1.044-3
25	40	1.947-2	1.692-2	1.438-2	1.209-2	1.020-2	9.416-3	8.728-3	7.604-3	6.746-3	6.054-3	5.376-3
25	41	5.354-2	4.687-2	4.210-2	3.938-2	3.839-2	3.839-2	3.862-2	3.959-2	4.090-2	4.195-2	4.137-2
25	42	9.678-3	7.884-3	6.081-3	4.508-3	3.269-3	2.776-3	2.359-3	1.722-3	1.289-3	9.974-4	7.893-4
25	43	3.599-2	3.140-2	2.730-2	2.431-2	2.252-2	2.202-2	2.174-2	2.172-2	2.219-2	2.277-2	2.259-2
25	44	2.754-1	2.766-1	2.884-1	3.117-1	3.430-1	3.604-1	3.786-1	4.162-1	4.538-1	4.857-1	4.944-1
25	45	8.574-2	8.047-2	7.432-2	6.811-2	6.233-2	5.964-2	5.708-2	5.229-2	4.790-2	4.375-2	3.915-2
25	46	2.630-2	2.417-2	2.163-2	1.909-2	1.681-2	1.579-2	1.486-2	1.320-2	1.179-2	1.054-2	9.290-3
25	47	8.249-3	7.471-3	6.462-3	5.404-3	4.425-3	3.984-3	3.575-3	2.852-3	2.237-3	1.716-3	1.279-3
25	48	2.995-3	2.470-3	1.923-3	1.425-3	1.017-3	8.508-4	7.086-4	4.873-4	3.334-4	2.284-4	1.570-4
25	49	3.095-2	2.666-2	2.241-2	1.880-2	1.611-2	1.512-2	1.436-2	1.342-2	1.311-2	1.315-2	1.295-2
25	50	1.665-2	1.362-2	1.052-2	7.768-3	5.579-3	4.705-3	3.968-3	2.849-3	2.106-3	1.627-3	1.303-3
25	51	6.338-3	5.191-3	4.020-3	2.988-3	2.174-3	1.852-3	1.582-3	1.177-3	9.141-4	7.509-4	6.396-4
25	52	1.646-2	1.425-2	1.196-2	9.874-3	8.151-3	7.441-3	6.827-3	5.854-3	5.164-3	4.668-3	4.213-3
25	53	3.559-2	3.050-2	2.496-2	1.977-2	1.545-2	1.367-2	1.214-2	9.745-3	8.096-3	6.991-3	6.142-3
25	54	7.264-2	6.212-2	5.027-2	3.895-2	2.939-2	2.542-2	2.199-2	1.656-2	1.273-2	1.009-2	8.169-3
25	55	7.991-3	6.592-3	5.229-3	4.032-3	3.065-3	2.669-3	2.325-3	1.773-3	1.363-3	1.056-3	8.186-4
25	56	3.922-2	3.689-2	3.498-2	3.376-2	3.324-2	3.322-2	3.334-2	3.401-2	3.525-2	3.678-2	3.727-2
25	57	3.726-1	3.842-1	4.033-1	4.292-1	4.598-1	4.764-1	4.937-1	5.313-1	5.740-1	6.180-1	6.399-1
25	58	3.392-2	2.867-2	2.362-2	1.938-2	1.619-2	1.499-2	1.402-2	1.271-2	1.205-2	1.182-2	1.151-2
25	59	6.938-2	6.259-2	5.560-2	4.922-2	4.372-2	4.129-2	3.903-2	3.495-2	3.140-2	2.828-2	2.515-2
25	60	1.445-2	1.266-2	1.093-2	9.481-3	8.424-3	8.041-3	7.748-3	7.402-3	7.334-3	7.438-3	7.415-3
25	61	1.206-1	1.189-1	1.185-1	1.196-1	1.221-1	1.238-1	1.257-1	1.304-1	1.365-1	1.431-1	1.452-1

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
25	62	8.541-3	7.390-3	6.147-3	4.993-3	4.024-3	3.615-3	3.254-3	2.656-3	2.196-3	1.839-3	1.540-3
25	63	3.662-2	3.359-2	3.065-2	2.809-2	2.603-2	2.518-2	2.444-2	2.325-2	2.246-2	2.193-2	2.103-2
25	64	1.367-1	1.275-1	1.190-1	1.122-1	1.072-1	1.053-1	1.038-1	1.016-1	1.008-1	1.006-1	9.829-2
25	65	3.497-3	2.887-3	2.298-3	1.789-3	1.387-3	1.227-3	1.091-3	8.820-4	7.376-4	6.362-4	5.525-4
25	66	8.357-2	7.929-2	7.567-2	7.312-2	7.166-2	7.130-2	7.118-2	7.164-2	7.309-2	7.506-2	7.500-2
25	67	1.828-2	1.485-2	1.179-2	9.258-3	7.283-3	6.482-3	5.787-3	4.657-3	3.790-3	3.109-3	2.537-3
25	68	4.154-1	4.227-1	4.370-1	4.576-1	4.829-1	4.971-1	5.124-1	5.469-1	5.881-1	6.315-1	6.526-1
25	69	1.517-2	1.191-2	8.926-3	6.473-3	4.604-3	3.866-3	3.242-3	2.273-3	1.588-3	1.105-3	7.629-4
25	70	8.196-3	6.809-3	5.393-3	4.136-3	3.117-3	2.697-3	2.331-3	1.734-3	1.282-3	9.380-4	6.764-4
25	71	1.058-2	8.329-3	6.360-3	4.767-3	3.546-3	3.055-3	2.633-3	1.954-3	1.446-3	1.062-3	7.705-4
25	72	2.322-2	1.908-2	1.505-2	1.156-2	8.763-3	7.621-3	6.629-3	5.021-3	3.801-3	2.864-3	2.132-3
25	73	6.562-2	5.365-2	4.199-2	3.194-2	2.399-2	2.078-2	1.801-2	1.359-2	1.031-2	7.837-3	5.929-3
25	74	2.561-2	2.094-2	1.709-2	1.420-2	1.219-2	1.146-2	1.088-2	1.014-2	9.825-3	9.783-3	9.614-3
25	75	3.343-1	3.299-1	3.319-1	3.398-1	3.525-1	3.606-1	3.698-1	3.922-1	4.202-1	4.503-1	4.645-1
25	76	4.856-0	4.940-0	5.107-0	5.341-0	5.631-0	5.796-0	5.977-0	6.393-0	6.890-0	7.410-0	7.659-0
25	77	3.062-2	2.604-2	2.164-2	1.789-2	1.488-2	1.363-2	1.251-2	1.061-2	9.066-3	7.775-3	6.609-3
25	78	2.236-0	2.281-0	2.353-0	2.449-0	2.568-0	2.636-0	2.711-0	2.888-0	3.104-0	3.333-0	3.442-0
25	79	2.580-1	2.589-1	2.630-1	2.700-1	2.799-1	2.860-1	2.930-1	3.100-1	3.318-1	3.553-1	3.664-1
25	80	7.620-3	6.455-3	5.342-3	4.390-3	3.619-3	3.295-3	3.003-3	2.504-3	2.092-3	1.744-3	1.435-3
25	81	6.897-2	6.544-2	6.252-2	6.035-2	5.886-2	5.833-2	5.793-2	5.756-2	5.780-2	5.836-2	5.744-2
25	82	1.120-2	9.722-3	8.439-3	7.356-3	6.418-3	5.981-3	5.556-3	4.723-3	3.908-3	3.127-3	2.411-3
25	83	2.067-3	1.543-3	1.120-3	8.003-4	5.713-4	4.839-4	4.109-4	2.991-4	2.202-4	1.635-4	1.216-4
25	84	4.168-0	4.268-0	4.395-0	4.549-0	4.735-0	4.844-0	4.967-0	5.265-0	5.641-0	6.047-0	6.237-0
25	85	1.175-2	1.025-2	8.932-3	7.805-3	6.824-3	6.367-3	5.924-3	5.060-3	4.221-3	3.421-3	2.680-3
25	86	2.813-3	2.326-3	1.912-3	1.580-3	1.317-3	1.205-3	1.102-3	9.214-4	7.635-4	6.232-4	4.966-4
25	87	6.469-2	6.307-2	6.215-2	6.185-2	6.215-2	6.252-2	6.305-2	6.467-2	6.713-2	6.994-2	7.057-2
25	88	5.095-2	4.722-2	4.449-2	4.257-2	4.125-2	4.078-2	4.042-2	4.007-2	4.023-2	4.067-2	4.006-2
25	89	8.851-1	8.904-1	9.021-1	9.210-1	9.489-1	9.669-1	9.880-1	1.041-0	1.110-0	1.184-0	1.217-0
25	90	1.073+1	1.091+1	1.115+1	1.147+1	1.190+1	1.217+1	1.247+1	1.323+1	1.418+1	1.520+1	1.566+1
25	91	9.141-2	9.200-2	9.306-2	9.471-2	9.713-2	9.872-2	1.006-1	1.055-1	1.120-1	1.192-1	1.223-1
25	92	1.140-1	1.128-1	1.117-1	1.106-1	1.094-1	1.088-1	1.083-1	1.076-1	1.077-1	1.083-1	1.060-1
25	93	6.185-3	6.069-3	5.943-3	5.795-3	5.619-3	5.522-3	5.419-3	5.209-3	5.010-3	4.816-3	4.522-3
25	94	1.844-2	1.807-2	1.759-2	1.696-2	1.614-2	1.567-2	1.515-2	1.401-2	1.283-2	1.164-2	1.034-2
25	95	3.028-0	3.067-0	3.119-0	3.193-0	3.296-0	3.362-0	3.439-0	3.634-0	3.889-0	4.168-0	4.298-0
25	96	2.610-2	2.549-2	2.460-2	2.336-2	2.170-2	2.070-2	1.960-2	1.713-2	1.444-2	1.175-2	9.200-3
25	97	3.530-3	3.443-3	3.313-3	3.130-3	2.883-3	2.735-3	2.572-3	2.210-3	1.824-3	1.448-3	1.107-3
26	27	1.441-2	1.441-2	1.386-2	1.344-2	1.340-2	1.351-2	1.366-2	1.408-2	1.454-2	1.492-2	1.477-2
26	28	1.081-0	1.221-0	1.266-0	1.186-0	1.023-0	9.307-1	8.395-1	6.780-1	5.576-1	4.786-1	4.246-1
26	29	3.940-3	3.380-3	2.748-3	2.129-3	1.588-3	1.358-3	1.155-3	8.260-4	5.851-4	4.115-4	2.872-4
26	30	1.363-3	1.170-3	9.525-4	7.385-4	5.506-4	4.702-4	3.994-4	2.851-4	2.016-4	1.419-4	9.944-5
26	31	9.876-4	8.139-4	6.306-4	4.622-4	3.241-4	2.679-4	2.200-4	1.461-4	9.557-5	6.192-5	3.985-5
26	32	8.262-3	7.193-3	6.177-3	5.356-3	4.788-3	4.591-3	4.443-3	4.254-3	4.148-3	4.045-3	3.829-3
26	33	4.666-2	4.267-2	3.880-2	3.589-2	3.424-2	3.383-2	3.364-2	3.367-2	3.386-2	3.370-2	3.232-2
26	34	3.452-3	2.791-3	2.127-3	1.539-3	1.069-3	8.805-4	7.211-4	4.772-4	3.122-4	2.030-4	1.317-4
26	35	4.621-3	3.690-3	2.790-3	2.009-3	1.392-3	1.146-3	9.383-4	6.214-4	4.073-4	2.658-4	1.731-4
26	36	4.779-3	3.885-3	2.977-3	2.167-3	1.514-3	1.251-3	1.028-3	6.843-4	4.495-4	2.927-4	1.894-4
26	37	2.508-4	2.084-4	1.615-4	1.180-4	8.261-5	6.828-5	5.609-5	3.735-5	2.459-5	1.610-5	1.053-5
26	38	9.211-4	7.563-4	5.807-4	4.217-4	2.936-4	2.421-4	1.985-4	1.316-4	8.609-5	5.586-5	3.603-5

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
26	39	2.240-3	1.825-3	1.392-3	1.007-3	7.003-4	5.776-4	4.738-4	3.149-4	2.070-4	1.352-4	8.803-5
26	40	4.293-3	3.505-3	2.677-3	1.939-3	1.352-3	1.118-3	9.196-4	6.164-4	4.106-4	2.734-4	1.824-4
26	41	4.844-3	4.000-3	3.085-3	2.251-3	1.576-3	1.304-3	1.072-3	7.160-4	4.727-4	3.100-4	2.024-4
26	42	1.774-2	1.457-2	1.149-2	8.787-3	6.610-3	5.720-3	4.950-3	3.724-3	2.830-3	2.175-3	1.677-3
26	43	2.652-2	2.159-2	1.682-2	1.267-2	9.334-3	7.971-3	6.791-3	4.906-3	3.523-3	2.508-3	1.764-3
26	44	3.252-2	2.664-2	2.099-2	1.606-2	1.208-2	1.044-2	9.018-3	6.733-3	5.041-3	3.783-3	2.829-3
26	45	3.781-3	3.097-3	2.417-3	1.818-3	1.339-3	1.145-3	9.801-4	7.216-4	5.388-4	4.095-4	3.142-4
26	46	2.422-3	1.996-3	1.550-3	1.145-3	8.162-4	6.831-4	5.696-4	3.945-4	2.742-4	1.930-4	1.376-4
26	47	1.103-3	9.178-4	7.149-4	5.264-4	3.710-4	3.076-4	2.534-4	1.696-4	1.120-4	7.332-5	4.769-5
26	48	8.558-3	7.596-3	6.485-3	5.338-3	4.312-3	3.876-3	3.498-3	2.911-3	2.523-3	2.276-3	2.073-3
26	49	1.355-2	1.180-2	9.686-3	7.527-3	5.614-3	4.797-3	4.078-3	2.917-3	2.068-3	1.458-3	1.020-3
26	50	8.916-3	7.621-3	6.198-3	4.802-3	3.583-3	3.065-3	2.609-3	1.872-3	1.329-3	9.347-4	6.493-4
26	51	3.621-3	3.082-3	2.506-3	1.947-3	1.462-3	1.257-3	1.078-3	7.883-4	5.774-4	4.258-4	3.153-4
26	52	5.482-2	4.909-2	4.335-2	3.787-2	3.303-2	3.090-2	2.895-2	2.554-2	2.271-2	2.026-2	1.782-2
26	53	8.856-2	8.213-2	7.642-2	7.163-2	6.796-2	6.655-2	6.539-2	6.377-2	6.290-2	6.215-2	5.974-2
26	54	7.307-2	6.416-2	5.503-2	4.615-2	3.813-2	3.452-2	3.117-2	2.517-2	1.998-2	1.549-2	1.166-2
26	55	1.209-2	1.047-2	8.653-3	6.853-3	5.269-3	4.588-3	3.984-3	2.983-3	2.214-3	1.625-3	1.173-3
26	56	2.145-2	1.903-2	1.614-2	1.321-2	1.060-2	9.477-3	8.483-3	6.851-3	5.615-3	4.674-3	3.893-3
26	57	2.887-2	2.610-2	2.230-2	1.821-2	1.448-2	1.285-2	1.140-2	8.987-3	7.128-3	5.692-3	4.536-3
26	58	5.307-1	5.602-1	6.011-1	6.523-1	7.101-1	7.407-1	7.723-1	8.383-1	9.074-1	9.688-1	9.868-1
26	59	8.958-2	8.818-2	8.643-2	8.548-2	8.589-2	8.665-2	8.779-2	9.111-2	9.561-2	1.001-1	1.007-1
26	60	4.475-2	4.193-2	3.796-2	3.371-2	2.978-2	2.802-2	2.640-2	2.355-2	2.118-2	1.913-2	1.704-2
26	61	5.691-2	5.116-2	4.450-2	3.784-2	3.182-2	2.912-2	2.660-2	2.207-2	1.811-2	1.463-2	1.156-2
26	62	1.266-2	1.059-2	8.306-3	6.141-3	4.342-3	3.606-3	2.976-3	1.999-3	1.325-3	8.699-4	5.672-4
26	63	2.375-2	2.022-2	1.635-2	1.268-2	9.577-3	8.276-3	7.136-3	5.280-3	3.881-3	2.825-3	2.026-3
26	64	9.202-2	8.511-2	7.707-2	6.905-2	6.175-2	5.842-2	5.528-2	4.953-2	4.437-2	3.965-2	3.481-2
26	65	5.002-3	4.285-3	3.496-3	2.737-3	2.087-3	1.812-3	1.569-3	1.170-3	8.653-4	6.323-4	4.545-4
26	66	3.478-2	3.049-2	2.579-2	2.137-2	1.764-2	1.607-2	1.469-2	1.244-2	1.072-2	9.383-3	8.178-3
26	67	1.418-2	1.224-2	1.005-2	7.917-3	6.085-3	5.305-3	4.615-3	3.472-3	2.587-3	1.902-3	1.372-3
26	68	2.367-2	2.089-2	1.751-2	1.415-2	1.123-2	9.988-3	8.888-3	7.071-3	5.675-3	4.596-3	3.717-3
26	69	1.554-2	1.346-2	1.079-2	8.148-3	5.922-3	5.006-3	4.219-3	2.987-3	2.122-3	1.519-3	1.093-3
26	70	1.249-2	1.067-2	8.445-3	6.276-3	4.459-3	3.713-3	3.075-3	2.082-3	1.393-3	9.240-4	6.087-4
26	71	1.396-2	1.186-2	9.534-3	7.381-3	5.603-3	4.866-3	4.222-3	3.172-3	2.373-3	1.758-3	1.283-3
26	72	3.211-2	2.898-2	2.556-2	2.248-2	2.010-2	1.918-2	1.843-2	1.741-2	1.691-2	1.671-2	1.619-2
26	73	4.759-2	4.257-2	3.732-2	3.263-2	2.884-2	2.728-2	2.593-2	2.376-2	2.219-2	2.105-2	1.974-2
26	74	5.279-2	4.582-2	3.855-2	3.189-2	2.625-2	2.379-2	2.155-2	1.757-2	1.415-2	1.118-2	8.608-3
26	75	6.031-2	5.333-2	4.542-2	3.802-2	3.170-2	2.896-2	2.647-2	2.208-2	1.836-2	1.517-2	1.237-2
26	76	1.358-1	1.265-1	1.175-1	1.104-1	1.057-1	1.041-1	1.031-1	1.026-1	1.039-1	1.062-1	1.059-1
26	77	1.632-1	1.588-1	1.559-1	1.553-1	1.573-1	1.593-1	1.620-1	1.694-1	1.797-1	1.914-1	1.969-1
26	78	5.609-2	4.832-2	4.063-2	3.395-2	2.844-2	2.607-2	2.390-2	2.005-2	1.673-2	1.384-2	1.127-2
26	79	4.552-2	3.952-2	3.376-2	2.883-2	2.482-2	2.311-2	2.155-2	1.884-2	1.654-2	1.459-2	1.273-2
26	80	2.331-2	1.992-2	1.676-2	1.407-2	1.182-2	1.082-2	9.894-3	8.183-3	6.624-3	5.213-3	3.968-3
26	81	1.348-1	1.146-1	9.409-2	7.686-2	6.409-2	5.936-2	5.562-2	5.075-2	4.870-2	4.844-2	4.773-2
26	82	8.504-2	6.313-2	4.537-2	3.212-2	2.271-2	1.915-2	1.620-2	1.173-2	8.610-3	6.393-3	4.752-3
26	83	1.143-2	8.904-3	6.840-3	5.300-3	4.238-3	3.857-3	3.562-3	3.182-3	3.023-3	2.997-3	2.952-3
26	84	2.814-2	2.224-2	1.753-2	1.408-2	1.171-2	1.086-2	1.018-2	9.268-3	8.828-3	8.685-3	8.466-3
26	85	1.407-2	1.026-2	7.315-3	5.168-3	3.653-3	3.077-3	2.595-3	1.851-3	1.320-3	9.380-4	6.606-4
26	86	4.325-3	3.172-3	2.279-3	1.630-3	1.176-3	1.006-3	8.653-4	6.538-4	5.115-4	4.160-4	3.459-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
26	87	7.839-0	8.003-0	8.219-0	8.489-0	8.827-0	9.029-0	9.259-0	9.812-0	1.051+1	1.125+1	1.159+1
26	88	7.842-2	6.986-2	6.368-2	5.929-2	5.618-2	5.498-2	5.399-2	5.261-2	5.204-2	5.199-2	5.080-2
26	89	1.150-1	1.054-1	9.838-2	9.352-2	9.022-2	8.905-2	8.816-2	8.724-2	8.754-2	8.853-2	8.731-2
26	90	1.358-1	1.229-1	1.134-1	1.067-1	1.018-1	9.997-2	9.846-2	9.638-2	9.562-2	9.561-2	9.339-2
26	91	5.714-0	5.840-0	5.981-0	6.151-0	6.368-0	6.502-0	6.655-0	7.037-0	7.530-0	8.066-0	8.312-0
26	92	1.240+1	1.262+1	1.289+1	1.325+1	1.374+1	1.404+1	1.440+1	1.526+1	1.636+1	1.753+1	1.805+1
26	93	6.008-3	5.848-3	5.628-3	5.331-3	4.942-3	4.711-3	4.456-3	3.883-3	3.256-3	2.621-3	2.023-3
26	94	1.850-2	1.801-2	1.734-2	1.643-2	1.523-2	1.452-2	1.374-2	1.198-2	1.005-2	8.101-3	6.260-3
26	95	2.161-1	2.183-1	2.209-1	2.243-1	2.289-1	2.319-1	2.354-1	2.444-1	2.568-1	2.705-1	2.752-1
26	96	4.417-1	4.462-1	4.531-1	4.631-1	4.775-1	4.867-1	4.977-1	5.255-1	5.620-1	6.018-1	6.199-1
26	97	1.195-2	1.200-2	1.207-2	1.221-2	1.246-2	1.263-2	1.285-2	1.343-2	1.423-2	1.509-2	1.539-2
27	28	5.713-3	5.146-3	4.578-3	4.166-3	3.926-3	3.851-3	3.797-3	3.733-3	3.714-3	3.707-3	3.602-3
27	29	1.186-1	1.162-1	1.138-1	1.112-1	1.082-1	1.064-1	1.045-1	1.004-1	9.680-2	9.463-2	9.200-2
27	30	3.386-2	3.332-2	3.285-2	3.244-2	3.207-2	3.190-2	3.174-2	3.145-2	3.125-2	3.097-2	2.983-2
27	31	1.199-2	1.076-2	9.669-3	8.661-3	7.670-3	7.166-3	6.654-3	5.614-3	4.583-3	3.615-3	2.756-3
27	32	3.149-2	2.935-2	2.749-2	2.579-2	2.410-2	2.322-2	2.231-2	2.042-2	1.857-2	1.689-2	1.523-2
27	33	1.115-1	1.085-1	1.056-1	1.027-1	9.939-2	9.747-2	9.537-2	9.078-2	8.620-2	8.215-2	7.735-2
27	34	2.323-2	2.052-2	1.823-2	1.617-2	1.421-2	1.324-2	1.225-2	1.027-2	8.323-3	6.503-3	4.893-3
27	35	2.124-2	1.895-2	1.695-2	1.512-2	1.335-2	1.246-2	1.157-2	9.762-3	7.991-3	6.337-3	4.863-3
27	36	1.661-2	1.428-2	1.235-2	1.069-2	9.202-3	8.492-3	7.798-3	6.447-3	5.167-3	3.999-3	2.985-3
27	37	2.086-3	1.984-3	1.865-3	1.729-3	1.575-3	1.491-3	1.404-3	1.222-3	1.040-3	8.680-4	7.093-4
27	38	7.332-3	6.925-3	6.475-3	5.971-3	5.400-3	5.088-3	4.760-3	4.070-3	3.368-3	2.701-3	2.099-3
27	39	1.627-2	1.536-2	1.437-2	1.326-2	1.201-2	1.132-2	1.059-2	9.046-3	7.458-3	5.931-3	4.550-3
27	40	2.654-2	2.522-2	2.372-2	2.198-2	1.995-2	1.882-2	1.761-2	1.503-2	1.236-2	9.767-3	7.424-3
27	41	3.617-2	3.492-2	3.337-2	3.148-2	2.918-2	2.788-2	2.647-2	2.343-2	2.026-2	1.717-2	1.421-2
27	42	1.029-2	9.455-3	8.632-3	7.866-3	7.156-3	6.817-3	6.488-3	5.863-3	5.297-3	4.795-3	4.286-3
27	43	2.908-2	2.786-2	2.677-2	2.583-2	2.496-2	2.453-2	2.410-2	2.324-2	2.243-2	2.165-2	2.045-2
27	44	8.445-2	8.359-2	8.312-2	8.301-2	8.303-2	8.300-2	8.294-2	8.275-2	8.258-2	8.220-2	7.961-2
27	45	1.543-2	1.473-2	1.388-2	1.286-2	1.165-2	1.097-2	1.025-2	8.706-3	7.116-3	5.591-3	4.224-3
27	46	1.092-2	1.041-2	9.819-3	9.115-3	8.278-3	7.806-3	7.303-3	6.225-3	5.108-3	4.033-3	3.066-3
27	47	6.219-3	5.958-3	5.639-3	5.253-3	4.788-3	4.525-3	4.243-3	3.635-3	3.001-3	2.386-3	1.827-3
27	48	2.458-2	2.437-2	2.408-2	2.371-2	2.330-2	2.308-2	2.286-2	2.246-2	2.211-2	2.172-2	2.076-2
27	49	3.948-2	3.914-2	3.889-2	3.862-2	3.817-2	3.785-2	3.744-2	3.640-2	3.512-2	3.354-2	3.114-2
27	50	2.792-2	2.792-2	2.802-2	2.819-2	2.835-2	2.841-2	2.846-2	2.852-2	2.857-2	2.850-2	2.759-2
27	51	8.580-3	8.542-3	8.508-3	8.477-3	8.445-3	8.428-3	8.410-3	8.379-3	8.355-3	8.290-3	7.977-3
27	52	1.162-3	9.780-4	8.263-4	7.049-4	6.065-4	5.633-4	5.232-4	4.501-4	3.852-4	3.278-4	2.752-4
27	53	2.584-3	2.287-3	2.025-3	1.793-3	1.581-3	1.479-3	1.378-3	1.183-3	9.972-4	8.284-4	6.756-4
27	54	4.585-3	4.099-3	3.661-3	3.263-3	2.883-3	2.696-3	2.508-3	2.133-3	1.767-3	1.425-3	1.116-3
27	55	5.602-3	5.463-3	5.341-3	5.224-3	5.101-3	5.035-3	4.966-3	4.827-3	4.696-3	4.560-3	4.319-3
27	56	1.307-2	1.270-2	1.239-2	1.209-2	1.177-2	1.160-2	1.141-2	1.103-2	1.066-2	1.027-2	9.662-3
27	57	1.452-2	1.399-2	1.350-2	1.300-2	1.242-2	1.209-2	1.174-2	1.096-2	1.012-2	9.243-3	8.248-3
27	58	3.512-3	3.161-3	2.835-3	2.536-3	2.257-3	2.123-3	1.992-3	1.741-3	1.512-3	1.309-3	1.122-3
27	59	2.679-2	2.628-2	2.561-2	2.471-2	2.351-2	2.279-2	2.198-2	2.016-2	1.815-2	1.607-2	1.388-2
27	60	8.360-3	8.108-3	7.790-3	7.388-3	6.892-3	6.609-3	6.305-3	5.656-3	4.990-3	4.346-3	3.711-3
27	61	1.895-2	1.861-2	1.819-2	1.765-2	1.692-2	1.648-2	1.599-2	1.490-2	1.372-2	1.249-2	1.112-2
27	62	3.315-3	3.225-3	3.116-3	2.981-3	2.814-3	2.718-3	2.615-3	2.393-3	2.165-3	1.943-3	1.710-3
27	63	6.960-3	6.839-3	6.721-3	6.598-3	6.466-3	6.397-3	6.326-3	6.189-3	6.070-3	5.951-3	5.687-3
27	64	6.012-2	6.014-2	6.016-2	6.007-2	5.976-2	5.950-2	5.917-2	5.833-2	5.732-2	5.594-2	5.300-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
27	65	4.624-4	4.487-4	4.348-4	4.182-4	3.966-4	3.836-4	3.693-4	3.381-4	3.063-4	2.776-4	2.499-4
27	66	1.887-2	1.894-2	1.906-2	1.921-2	1.936-2	1.942-2	1.949-2	1.962-2	1.978-2	1.987-2	1.935-2
27	67	1.458-3	1.398-3	1.329-3	1.248-3	1.151-3	1.095-3	1.036-3	9.084-4	7.740-4	6.411-4	5.145-4
27	68	5.988-3	5.897-3	5.777-3	5.608-3	5.369-3	5.218-3	5.047-3	4.646-3	4.182-3	3.676-3	3.130-3
27	69	3.249-3	3.141-3	3.016-3	2.868-3	2.688-3	2.586-3	2.475-3	2.234-3	1.977-3	1.717-3	1.453-3
27	70	1.770-3	1.722-3	1.661-3	1.581-3	1.476-3	1.414-3	1.346-3	1.194-3	1.031-3	8.668-4	7.068-4
27	71	9.328-4	8.912-4	8.483-4	8.018-4	7.489-4	7.197-4	6.888-4	6.238-4	5.585-4	4.963-4	4.340-4
27	72	2.124-3	2.046-3	1.951-3	1.835-3	1.693-3	1.611-3	1.523-3	1.332-3	1.133-3	9.363-4	7.509-4
27	73	3.950-3	3.829-3	3.682-3	3.497-3	3.267-3	3.133-3	2.988-3	2.669-3	2.329-3	1.986-3	1.647-3
27	74	1.941-3	1.826-3	1.707-3	1.583-3	1.449-3	1.378-3	1.304-3	1.150-3	9.952-4	8.474-4	7.061-4
27	75	2.273-3	2.092-3	1.922-3	1.759-3	1.593-3	1.507-3	1.418-3	1.235-3	1.048-3	8.651-4	6.926-4
27	76	3.841-3	3.663-3	3.480-3	3.292-3	3.097-3	2.996-3	2.891-3	2.676-3	2.459-3	2.242-3	1.999-3
27	77	6.531-3	6.434-3	6.356-3	6.274-3	6.167-3	6.101-3	6.025-3	5.853-3	5.662-3	5.440-3	5.086-3
27	78	4.145-3	4.073-3	3.985-3	3.862-3	3.689-3	3.582-3	3.462-3	3.186-3	2.879-3	2.554-3	2.203-3
27	79	2.203-3	2.150-3	2.084-3	1.998-3	1.889-3	1.825-3	1.756-3	1.604-3	1.443-3	1.279-3	1.105-3
27	80	8.233-4	7.938-4	7.581-4	7.142-4	6.604-4	6.297-4	5.968-4	5.263-4	4.536-4	3.831-4	3.158-4
27	81	4.681-3	4.612-3	4.525-3	4.398-3	4.214-3	4.098-3	3.965-3	3.650-3	3.281-3	2.874-3	2.435-3
27	82	1.508-3	1.458-3	1.399-3	1.326-3	1.235-3	1.182-3	1.124-3	9.949-4	8.538-4	7.089-4	5.674-4
27	83	1.193-3	1.202-3	1.219-3	1.237-3	1.251-3	1.256-3	1.259-3	1.264-3	1.268-3	1.269-3	1.237-3
27	84	1.974-2	1.990-2	1.998-2	1.990-2	1.961-2	1.938-2	1.909-2	1.833-2	1.735-2	1.613-2	1.450-2
27	85	1.099-2	1.106-2	1.111-2	1.112-2	1.108-2	1.103-2	1.097-2	1.080-2	1.058-2	1.025-2	9.610-3
27	86	3.874-3	3.870-3	3.856-3	3.827-3	3.781-3	3.750-3	3.715-3	3.632-3	3.530-3	3.395-3	3.161-3
27	87	2.766-3	2.746-3	2.711-3	2.652-3	2.562-3	2.505-3	2.440-3	2.291-3	2.120-3	1.932-3	1.712-3
27	88	2.071-4	1.995-4	1.913-4	1.821-4	1.711-4	1.651-4	1.586-4	1.448-4	1.305-4	1.164-4	1.015-4
27	89	4.284-4	4.172-4	4.043-4	3.879-4	3.670-4	3.548-4	3.413-4	3.114-4	2.783-4	2.432-4	2.060-4
27	90	8.063-4	7.904-4	7.708-4	7.451-4	7.115-4	6.915-4	6.693-4	6.190-4	5.620-4	4.995-4	4.299-4
27	91	1.031-3	1.019-3	9.948-4	9.574-4	9.046-4	8.723-4	8.364-4	7.554-4	6.664-4	5.743-4	4.805-4
27	92	1.026-4	1.013-4	1.002-4	9.922-5	9.823-5	9.772-5	9.720-5	9.614-5	9.509-5	9.358-5	8.931-5
27	93	1.813-4	1.816-4	1.813-4	1.804-4	1.787-4	1.776-4	1.763-4	1.731-4	1.689-4	1.628-4	1.517-4
27	94	3.990-4	3.994-4	3.986-4	3.963-4	3.923-4	3.897-4	3.867-4	3.790-4	3.689-4	3.548-4	3.299-4
27	95	7.919-4	7.905-4	7.809-4	7.623-4	7.345-4	7.171-4	6.975-4	6.518-4	5.987-4	5.391-4	4.700-4
27	96	3.851-4	3.804-4	3.738-4	3.644-4	3.520-4	3.446-4	3.364-4	3.176-4	2.960-4	2.713-4	2.412-4
27	97	6.978-5	7.225-5	7.601-5	8.145-5	8.894-5	9.353-5	9.873-5	1.109-4	1.253-4	1.403-4	1.492-4
28	29	2.332-3	1.984-3	1.594-3	1.217-3	8.948-4	7.597-4	6.424-4	4.567-4	3.255-4	2.351-4	1.723-4
28	30	1.509-3	1.386-3	1.311-3	1.320-3	1.392-3	1.440-3	1.490-3	1.588-3	1.678-3	1.748-3	1.746-3
28	31	9.272-4	7.625-4	5.890-4	4.315-4	3.039-4	2.523-4	2.085-4	1.410-4	9.480-5	6.387-5	4.326-5
28	32	6.783-3	6.270-3	6.033-3	6.227-3	6.760-3	7.085-3	7.413-3	7.994-3	8.392-3	8.531-3	8.250-3
28	33	4.288-2	4.129-2	4.187-2	4.566-2	5.195-2	5.554-2	5.919-2	6.625-2	7.259-2	7.756-2	7.880-2
28	34	1.866-3	1.509-3	1.151-3	8.329-4	5.790-4	4.772-4	3.909-4	2.588-4	1.691-4	1.096-4	7.062-5
28	35	8.888-4	7.523-4	5.955-4	4.431-4	3.137-4	2.601-4	2.140-4	1.423-4	9.301-5	6.011-5	3.857-5
28	36	1.379-3	1.123-3	8.660-4	6.335-4	4.439-4	3.668-4	3.011-4	1.997-4	1.304-4	8.425-5	5.406-5
28	37	4.048-4	3.268-4	2.552-4	1.967-4	1.535-4	1.371-4	1.237-4	1.044-4	9.257-5	8.525-5	7.876-5
28	38	6.857-4	5.547-4	4.228-4	3.058-4	2.123-4	1.748-4	1.430-4	9.446-5	6.154-5	3.975-5	2.552-5
28	39	1.981-3	1.557-3	1.167-3	8.420-4	5.938-4	4.970-4	4.162-4	2.948-4	2.140-4	1.605-4	1.233-4
28	40	1.913-3	1.536-3	1.166-3	8.427-4	5.852-4	4.822-4	3.950-4	2.614-4	1.707-4	1.105-4	7.113-5
28	41	1.406-3	1.158-3	8.998-4	6.620-4	4.656-4	3.853-4	3.166-4	2.102-4	1.373-4	8.873-5	5.692-5
28	42	6.510-3	5.303-3	4.157-3	3.176-3	2.413-3	2.113-3	1.864-3	1.493-3	1.252-3	1.092-3	9.612-4
28	43	6.363-3	5.324-3	4.176-3	3.093-3	2.189-3	1.817-3	1.499-3	1.003-3	6.612-4	4.314-4	2.795-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
28	44	7.569-3	6.315-3	4.957-3	3.678-3	2.606-3	2.164-3	1.784-3	1.193-3	7.850-4	5.107-4	3.297-4
28	45	1.413-3	1.163-3	9.008-4	6.612-4	4.652-4	3.855-4	3.175-4	2.123-4	1.401-4	9.156-5	5.948-5
28	46	1.428-3	1.201-3	9.460-4	7.033-4	5.000-4	4.162-4	3.443-4	2.324-4	1.549-4	1.025-4	6.759-5
28	47	9.096-4	7.683-4	6.035-4	4.472-4	3.174-4	2.643-4	2.188-4	1.482-4	9.933-5	6.622-5	4.399-5
28	48	9.388-2	9.728-2	1.053-1	1.173-1	1.316-1	1.392-1	1.470-1	1.625-1	1.774-1	1.892-1	1.915-1
28	49	1.069-2	9.260-3	7.676-3	6.167-3	4.886-3	4.350-3	3.882-3	3.134-3	2.590-3	2.188-3	1.855-3
28	50	6.762-3	5.711-3	4.638-3	3.650-3	2.818-3	2.468-3	2.159-3	1.655-3	1.274-3	9.846-4	7.587-4
28	51	5.572-3	5.180-3	4.924-3	4.813-3	4.829-3	4.877-3	4.948-3	5.147-3	5.400-3	5.631-3	5.637-3
28	52	1.304-2	1.112-2	9.055-3	7.040-3	5.278-3	4.527-3	3.864-3	2.788-3	1.991-3	1.408-3	9.839-4
28	53	1.702-2	1.468-2	1.205-2	9.436-3	7.128-3	6.136-3	5.259-3	3.824-3	2.752-3	1.959-3	1.378-3
28	54	1.941-2	1.696-2	1.412-2	1.123-2	8.620-3	7.484-3	6.468-3	4.782-3	3.494-3	2.520-3	1.788-3
28	55	6.835-3	5.794-3	4.759-3	3.819-3	3.025-3	2.686-3	2.381-3	1.862-3	1.441-3	1.097-3	8.163-4
28	56	1.379-2	1.246-2	1.119-2	1.012-2	9.312-3	9.009-3	8.768-3	8.449-3	8.298-3	8.207-3	7.911-3
28	57	1.382-2	1.177-2	9.619-3	7.602-3	5.879-3	5.146-3	4.494-3	3.409-3	2.563-3	1.902-3	1.386-3
28	58	3.142-2	2.523-2	1.914-2	1.391-2	9.836-3	8.228-3	6.874-3	4.814-3	3.426-3	2.507-3	1.885-3
28	59	3.012-2	2.561-2	2.046-2	1.554-2	1.141-2	9.707-3	8.231-3	5.892-3	4.213-3	3.015-3	2.153-3
28	60	1.139-2	1.029-2	9.063-3	7.928-3	7.015-3	6.657-3	6.363-3	5.952-3	5.736-3	5.623-3	5.409-3
28	61	1.347-2	1.157-2	9.530-3	7.598-3	5.939-3	5.228-3	4.593-3	3.526-3	2.680-3	2.006-3	1.471-3
28	62	1.670-2	1.588-2	1.487-2	1.378-2	1.269-2	1.216-2	1.163-2	1.060-2	9.598-3	8.629-3	7.595-3
28	63	3.376-2	3.281-2	3.170-2	3.059-2	2.956-2	2.908-2	2.863-2	2.780-2	2.708-2	2.634-2	2.494-2
28	64	1.236-2	1.016-2	7.953-3	5.960-3	4.328-3	3.658-3	3.080-3	2.163-3	1.505-3	1.036-3	7.060-4
28	65	1.164-2	1.150-2	1.136-2	1.123-2	1.114-2	1.110-2	1.106-2	1.099-2	1.096-2	1.089-2	1.051-2
28	66	3.272-2	3.026-2	2.738-2	2.436-2	2.139-2	1.993-2	1.850-2	1.568-2	1.294-2	1.033-2	7.950-3
28	67	2.300-2	2.201-2	2.080-2	1.949-2	1.815-2	1.747-2	1.678-2	1.536-2	1.393-2	1.250-2	1.096-2
28	68	3.255-2	3.096-2	2.887-2	2.655-2	2.415-2	2.293-2	2.170-2	1.919-2	1.667-2	1.419-2	1.176-2
28	69	1.857-2	1.540-2	1.226-2	9.538-3	7.397-3	6.539-3	5.807-3	4.665-3	3.855-3	3.271-3	2.792-3
28	70	1.876-2	1.751-2	1.603-2	1.450-2	1.302-2	1.230-2	1.159-2	1.020-2	8.838-3	7.532-3	6.263-3
28	71	9.571-3	8.195-3	6.758-3	5.430-3	4.305-3	3.822-3	3.389-3	2.651-3	2.051-3	1.561-3	1.163-3
28	72	2.409-2	2.277-2	2.149-2	2.049-2	1.988-2	1.973-2	1.968-2	1.989-2	2.050-2	2.133-2	2.158-2
28	73	1.670-2	1.421-2	1.160-2	9.182-3	7.141-3	6.275-3	5.504-3	4.211-3	3.188-3	2.376-3	1.733-3
28	74	3.148-2	2.907-2	2.686-2	2.520-2	2.418-2	2.390-2	2.378-2	2.396-2	2.467-2	2.565-2	2.593-2
28	75	1.746-2	1.502-2	1.230-2	9.766-3	7.622-3	6.711-3	5.899-3	4.530-3	3.440-3	2.570-3	1.880-3
28	76	2.669-2	2.292-2	1.883-2	1.505-2	1.187-2	1.051-2	9.290-3	7.209-3	5.520-3	4.147-3	3.042-3
28	77	4.556-1	4.566-1	4.675-1	4.861-1	5.106-1	5.249-1	5.407-1	5.772-1	6.211-1	6.673-1	6.897-1
28	78	2.110-2	1.797-2	1.477-2	1.192-2	9.563-3	8.555-3	7.644-3	6.064-3	4.742-3	3.631-3	2.709-3
28	79	1.777-2	1.512-2	1.253-2	1.029-2	8.480-3	7.728-3	7.064-3	5.950-3	5.065-3	4.343-3	3.697-3
28	80	1.973-2	1.874-2	1.797-2	1.749-2	1.729-2	1.730-2	1.738-2	1.773-2	1.837-2	1.914-2	1.934-2
28	81	5.365-1	5.339-1	5.395-1	5.525-1	5.723-1	5.849-1	5.993-1	6.343-1	6.783-1	7.251-1	7.463-1
28	82	6.072-1	6.174-1	6.360-1	6.606-1	6.903-1	7.072-1	7.258-1	7.692-1	8.224-1	8.787-1	9.038-1
28	83	2.774-1	2.753-1	2.788-1	2.866-1	2.979-1	3.049-1	3.129-1	3.322-1	3.564-1	3.825-1	3.950-1
28	84	3.567-2	3.413-2	3.298-2	3.235-2	3.224-2	3.239-2	3.266-2	3.362-2	3.511-2	3.682-2	3.737-2
28	85	5.034-2	5.001-2	5.022-2	5.096-2	5.223-2	5.309-2	5.410-2	5.666-2	6.003-2	6.370-2	6.519-2
28	86	3.905-2	3.962-2	4.055-2	4.183-2	4.348-2	4.446-2	4.558-2	4.827-2	5.166-2	5.531-2	5.699-2
28	87	9.373-2	7.019-2	5.239-2	3.971-2	3.099-2	2.774-2	2.507-2	2.105-2	1.831-2	1.633-2	1.453-2
28	88	2.579-2	2.045-2	1.595-2	1.242-2	9.716-3	8.605-3	7.621-3	5.952-3	4.591-3	3.473-3	2.565-3
28	89	3.944-2	3.136-2	2.462-2	1.934-2	1.528-2	1.361-2	1.211-2	9.561-3	7.451-3	5.699-3	4.256-3
28	90	5.519-2	4.409-2	3.483-2	2.755-2	2.191-2	1.957-2	1.746-2	1.382-2	1.076-2	8.184-3	6.047-3
28	91	4.221-0	4.325-0	4.442-0	4.581-0	4.757-0	4.865-0	4.987-0	5.286-0	5.664-0	6.068-0	6.250-0

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
28	92	5.279-2	4.901-2	4.641-2	4.489-2	4.435-2	4.443-2	4.474-2	4.605-2	4.823-2	5.073-2	5.149-2
28	93	1.767-2	1.707-2	1.665-2	1.643-2	1.641-2	1.649-2	1.661-2	1.704-2	1.772-2	1.851-2	1.872-2
28	94	1.694-2	1.441-2	1.227-2	1.050-2	9.016-3	8.345-3	7.706-3	6.503-3	5.385-3	4.364-3	3.447-3
28	95	1.862-1	1.853-1	1.856-1	1.875-1	1.914-1	1.942-1	1.976-1	2.067-1	2.189-1	2.323-1	2.376-1
28	96	3.576-0	3.595-0	3.639-0	3.714-0	3.830-0	3.907-0	3.997-0	4.225-0	4.519-0	4.837-0	4.979-0
28	97	2.171-0	2.197-0	2.233-0	2.287-0	2.362-0	2.410-0	2.466-0	2.606-0	2.789-0	2.989-0	3.079-0
29	30	4.415-2	4.241-2	4.043-2	3.806-2	3.515-2	3.348-2	3.167-2	2.766-2	2.334-2	1.896-2	1.479-2
29	31	6.627-3	5.597-3	4.807-3	4.214-3	3.761-3	3.571-3	3.401-3	3.118-3	2.930-3	2.867-3	2.853-3
29	32	1.281-2	1.154-2	1.041-2	9.393-3	8.409-3	7.916-3	7.417-3	6.404-3	5.399-3	4.452-3	3.589-3
29	33	4.852-2	4.697-2	4.504-2	4.263-2	3.963-2	3.789-2	3.600-2	3.182-2	2.733-2	2.281-2	1.846-2
29	34	1.221-2	1.076-2	9.540-3	8.499-3	7.567-3	7.124-3	6.689-3	5.846-3	5.060-3	4.368-3	3.749-3
29	35	1.400-2	1.263-2	1.139-2	1.021-2	9.050-3	8.456-3	7.852-3	6.618-3	5.390-3	4.230-3	3.195-3
29	36	1.694-2	1.569-2	1.448-2	1.323-2	1.187-2	1.115-2	1.039-2	8.808-3	7.195-3	5.653-3	4.270-3
29	37	4.286-3	4.112-3	3.898-3	3.638-3	3.325-3	3.147-3	2.956-3	2.543-3	2.107-3	1.678-3	1.283-3
29	38	1.056-2	1.006-2	9.485-3	8.811-3	8.021-3	7.580-3	7.110-3	6.102-3	5.050-3	4.024-3	3.084-3
29	39	1.230-2	1.161-2	1.085-2	1.001-2	9.040-3	8.510-3	7.950-3	6.761-3	5.538-3	4.362-3	3.302-3
29	40	1.493-2	1.424-2	1.352-2	1.273-2	1.183-2	1.135-2	1.083-2	9.739-3	8.635-3	7.578-3	6.535-3
29	41	1.377-2	1.304-2	1.222-2	1.128-2	1.019-2	9.588-3	8.948-3	7.591-3	6.202-3	4.876-3	3.690-3
29	42	2.775-2	2.719-2	2.667-2	2.621-2	2.575-2	2.549-2	2.521-2	2.463-2	2.404-2	2.343-2	2.229-2
29	43	4.900-2	4.859-2	4.847-2	4.863-2	4.889-2	4.901-2	4.910-2	4.927-2	4.952-2	4.972-2	4.860-2
29	44	1.135-2	1.057-2	9.756-3	8.921-3	8.053-3	7.602-3	7.140-3	6.196-3	5.262-3	4.384-3	3.573-3
29	45	1.258-2	1.211-2	1.151-2	1.075-2	9.804-3	9.259-3	8.671-3	7.395-3	6.060-3	4.766-3	3.598-3
29	46	7.875-3	7.525-3	7.108-3	6.609-3	6.012-3	5.675-3	5.315-3	4.544-3	3.744-3	2.972-3	2.271-3
29	47	4.992-3	4.777-3	4.518-3	4.202-3	3.819-3	3.603-3	3.371-3	2.875-3	2.363-3	1.873-3	1.432-3
29	48	4.862-3	4.680-3	4.437-3	4.126-3	3.740-3	3.521-3	3.286-3	2.785-3	2.270-3	1.778-3	1.339-3
29	49	3.219-2	3.221-2	3.237-2	3.261-2	3.283-2	3.292-2	3.298-2	3.306-2	3.312-2	3.304-2	3.200-2
29	50	2.185-2	2.186-2	2.195-2	2.206-2	2.209-2	2.206-2	2.198-2	2.171-2	2.131-2	2.072-2	1.955-2
29	51	8.121-4	7.550-4	6.981-4	6.401-4	5.788-4	5.462-4	5.124-4	4.415-4	3.685-4	2.972-4	2.311-4
29	52	1.675-3	1.491-3	1.331-3	1.191-3	1.062-3	9.994-4	9.374-4	8.149-4	6.968-4	5.870-4	4.849-4
29	53	1.544-3	1.369-3	1.214-3	1.074-3	9.437-4	8.802-4	8.170-4	6.914-4	5.685-4	4.526-4	3.481-4
29	54	1.119-3	9.602-4	8.225-4	7.063-4	6.069-4	5.619-4	5.193-4	4.410-4	3.720-4	3.128-4	2.608-4
29	55	6.064-3	5.947-3	5.844-3	5.743-3	5.629-3	5.565-3	5.495-3	5.348-3	5.200-3	5.037-3	4.753-3
29	56	3.762-3	3.561-3	3.369-3	3.172-3	2.957-3	2.840-3	2.715-3	2.444-3	2.156-3	1.862-3	1.564-3
29	57	1.080-2	1.058-2	1.040-2	1.024-2	1.008-2	9.987-3	9.894-3	9.705-3	9.529-3	9.329-3	8.891-3
29	58	1.292-3	1.159-3	1.037-3	9.244-4	8.169-4	7.636-4	7.103-4	6.035-4	4.990-4	4.012-4	3.132-4
29	59	1.198-2	1.165-2	1.122-2	1.065-2	9.911-3	9.474-3	8.992-3	7.914-3	6.732-3	5.525-3	4.366-3
29	60	1.194-2	1.186-2	1.177-2	1.163-2	1.143-2	1.130-2	1.116-2	1.082-2	1.044-2	1.000-2	9.319-3
29	61	2.906-2	2.915-2	2.927-2	2.936-2	2.938-2	2.935-2	2.929-2	2.911-2	2.890-2	2.853-2	2.734-2
29	62	5.747-3	5.694-3	5.637-3	5.570-3	5.487-3	5.441-3	5.391-3	5.288-3	5.193-3	5.089-3	4.857-3
29	63	8.918-3	8.776-3	8.583-3	8.318-3	7.962-3	7.748-3	7.510-3	6.979-3	6.406-3	5.815-3	5.158-3
29	64	4.749-3	4.594-3	4.398-3	4.153-3	3.854-3	3.687-3	3.511-3	3.146-3	2.792-3	2.472-3	2.164-3
29	65	4.403-4	4.265-4	4.118-4	3.946-4	3.729-4	3.600-4	3.457-4	3.132-4	2.769-4	2.384-4	1.984-4
29	66	7.212-3	7.020-3	6.755-3	6.396-3	5.931-3	5.657-3	5.358-3	4.701-3	3.998-3	3.295-3	2.626-3
29	67	2.178-3	2.146-3	2.108-3	2.058-3	1.988-3	1.943-3	1.890-3	1.767-3	1.623-3	1.464-3	1.282-3
29	68	1.644-3	1.597-3	1.541-3	1.474-3	1.392-3	1.344-3	1.291-3	1.176-3	1.050-3	9.194-4	7.824-4
29	69	1.556-3	1.491-3	1.415-3	1.327-3	1.224-3	1.167-3	1.106-3	9.749-4	8.391-4	7.053-4	5.764-4
29	70	1.033-3	1.004-3	9.674-4	9.194-4	8.566-4	8.194-4	7.787-4	6.889-4	5.930-4	4.974-4	4.050-4
29	71	6.422-4	6.170-4	5.913-4	5.642-4	5.342-4	5.181-4	5.013-4	4.669-4	4.334-4	4.018-4	3.660-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
29	72	1.378-3	1.336-3	1.287-3	1.227-3	1.155-3	1.113-3	1.069-3	9.713-4	8.674-4	7.617-4	6.520-4
29	73	2.111-3	2.036-3	1.944-3	1.831-3	1.693-3	1.615-3	1.532-3	1.353-3	1.167-3	9.865-4	8.132-4
29	74	1.650-3	1.566-3	1.478-3	1.382-3	1.274-3	1.215-3	1.153-3	1.019-3	8.791-4	7.380-4	6.001-4
29	75	1.794-3	1.671-3	1.560-3	1.457-3	1.356-3	1.305-3	1.252-3	1.143-3	1.032-3	9.219-4	8.052-4
29	76	1.591-3	1.493-3	1.393-3	1.285-3	1.165-3	1.100-3	1.031-3	8.852-4	7.346-4	5.885-4	4.545-4
29	77	1.954-3	1.886-3	1.812-3	1.722-3	1.607-3	1.538-3	1.464-3	1.300-3	1.129-3	9.662-4	8.134-4
29	78	1.681-3	1.630-3	1.565-3	1.481-3	1.375-3	1.313-3	1.247-3	1.102-3	9.499-4	7.993-4	6.538-4
29	79	1.993-3	1.951-3	1.899-3	1.829-3	1.732-3	1.673-3	1.606-3	1.453-3	1.281-3	1.100-3	9.145-4
29	80	1.275-3	1.253-3	1.225-3	1.188-3	1.137-3	1.107-3	1.072-3	9.947-4	9.082-4	8.154-4	7.117-4
29	81	2.163-3	2.125-3	2.075-3	2.004-3	1.903-3	1.841-3	1.770-3	1.609-3	1.428-3	1.241-3	1.053-3
29	82	9.151-4	8.907-4	8.623-4	8.257-4	7.777-4	7.489-4	7.168-4	6.440-4	5.628-4	4.779-4	3.922-4
29	83	1.154-4	1.118-4	1.078-4	1.030-4	9.682-5	9.319-5	8.919-5	8.020-5	7.027-5	5.986-5	4.927-5
29	84	1.109-2	1.116-2	1.121-2	1.121-2	1.114-2	1.108-2	1.099-2	1.078-2	1.050-2	1.010-2	9.414-3
29	85	9.902-3	9.977-3	1.001-2	9.966-3	9.806-3	9.680-3	9.521-3	9.107-3	8.575-3	7.925-3	7.083-3
29	86	1.019-3	1.026-3	1.030-3	1.025-3	1.007-3	9.915-4	9.720-4	9.200-4	8.522-4	7.697-4	6.699-4
29	87	8.477-4	8.209-4	7.858-4	7.396-4	6.799-4	6.448-4	6.064-4	5.218-4	4.318-4	3.432-4	2.620-4
29	88	3.584-4	3.511-4	3.419-4	3.294-4	3.128-4	3.029-4	2.919-4	2.667-4	2.378-4	2.062-4	1.725-4
29	89	4.187-4	4.093-4	3.985-4	3.851-4	3.681-4	3.581-4	3.470-4	3.219-4	2.931-4	2.612-4	2.253-4
29	90	1.952-4	1.858-4	1.761-4	1.655-4	1.535-4	1.469-4	1.400-4	1.253-4	1.104-4	9.596-5	8.170-5
29	91	5.051-4	4.963-4	4.815-4	4.592-4	4.284-4	4.097-4	3.891-4	3.434-4	2.944-4	2.460-4	2.001-4
29	92	9.198-6	8.547-6	7.958-6	7.360-6	6.703-6	6.344-6	5.964-6	5.144-6	4.278-6	3.421-6	2.624-6
29	93	2.271-5	2.244-5	2.191-5	2.107-5	1.986-5	1.911-5	1.827-5	1.633-5	1.415-5	1.185-5	9.559-6
29	94	4.359-4	4.357-4	4.309-4	4.213-4	4.071-4	3.983-4	3.884-4	3.652-4	3.379-4	3.068-4	2.696-4
29	95	4.645-4	4.642-4	4.622-4	4.587-4	4.534-4	4.501-4	4.463-4	4.368-4	4.245-4	4.073-4	3.780-4
29	96	3.672-5	3.555-5	3.393-5	3.176-5	2.902-5	2.745-5	2.577-5	2.220-5	1.857-5	1.513-5	1.202-5
29	97	3.403-6	3.299-6	3.151-6	2.955-6	2.708-6	2.566-6	2.412-6	2.079-6	1.728-6	1.384-6	1.066-6
30	31	1.802-3	1.334-3	9.841-4	7.291-4	5.447-4	4.722-4	4.098-4	3.084-4	2.304-4	1.697-4	1.224-4
30	32	4.872-3	4.402-3	4.017-3	3.706-3	3.443-3	3.324-3	3.209-3	2.997-3	2.816-3	2.678-3	2.531-3
30	33	1.442-2	1.392-2	1.332-2	1.259-2	1.168-2	1.116-2	1.059-2	9.361-3	8.109-3	6.994-3	6.048-3
30	34	2.715-3	2.237-3	1.854-3	1.547-3	1.293-3	1.179-3	1.072-3	8.737-4	6.938-4	5.341-4	3.975-4
30	35	3.900-3	3.541-3	3.209-3	2.890-3	2.568-3	2.402-3	2.232-3	1.885-3	1.538-3	1.210-3	9.176-4
30	36	7.376-3	6.952-3	6.509-3	6.018-3	5.453-3	5.141-3	4.809-3	4.101-3	3.367-3	2.657-3	2.014-3
30	37	9.453-4	8.852-4	8.215-4	7.530-4	6.779-4	6.376-4	5.955-4	5.076-4	4.188-4	3.346-4	2.588-4
30	38	3.386-3	3.244-3	3.071-3	2.859-3	2.605-3	2.461-3	2.307-3	1.974-3	1.626-3	1.288-3	9.790-4
30	39	6.060-3	5.824-3	5.559-3	5.248-3	4.877-3	4.666-3	4.439-3	3.947-3	3.430-3	2.925-3	2.440-3
30	40	4.381-3	4.131-3	3.863-3	3.564-3	3.223-3	3.034-3	2.836-3	2.413-3	1.977-3	1.558-3	1.179-3
30	41	2.891-3	2.714-3	2.518-3	2.296-3	2.044-3	1.907-3	1.764-3	1.468-3	1.176-3	9.077-4	6.771-4
30	42	2.399-2	2.388-2	2.387-2	2.395-2	2.403-2	2.406-2	2.408-2	2.409-2	2.412-2	2.411-2	2.346-2
30	43	4.464-3	4.215-3	3.938-3	3.637-3	3.303-3	3.122-3	2.931-3	2.525-3	2.101-3	1.684-3	1.297-3
30	44	1.438-3	1.276-3	1.121-3	9.820-4	8.603-4	8.059-4	7.562-4	6.729-4	6.149-4	5.810-4	5.519-4
30	45	4.372-3	4.215-3	4.014-3	3.758-3	3.438-3	3.254-3	3.054-3	2.618-3	2.157-3	1.707-3	1.297-3
30	46	3.334-3	3.216-3	3.062-3	2.861-3	2.608-3	2.461-3	2.303-3	1.959-3	1.601-3	1.257-3	9.483-4
30	47	1.509-3	1.429-3	1.337-3	1.231-3	1.109-3	1.042-3	9.717-4	8.240-4	6.742-4	5.316-4	4.036-4
30	48	1.815-3	1.741-3	1.649-3	1.534-3	1.396-3	1.317-3	1.233-3	1.055-3	8.709-4	6.934-4	5.321-4
30	49	1.473-2	1.467-2	1.462-2	1.458-2	1.453-2	1.451-2	1.450-2	1.447-2	1.446-2	1.438-2	1.386-2
30	50	1.098-3	1.020-3	9.442-4	8.681-4	7.885-4	7.463-4	7.024-4	6.099-4	5.140-4	4.194-4	3.303-4
30	51	2.716-3	2.701-3	2.695-3	2.686-3	2.657-3	2.630-3	2.592-3	2.483-3	2.331-3	2.140-3	1.897-3
30	52	9.997-4	9.241-4	8.510-4	7.779-4	7.013-4	6.608-4	6.188-4	5.307-4	4.402-4	3.522-4	2.712-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
30	53	2.681-4	2.288-4	1.945-4	1.658-4	1.422-4	1.320-4	1.228-4	1.073-4	9.575-5	8.784-5	8.096-5
30	54	3.276-4	2.784-4	2.365-4	2.016-4	1.716-4	1.578-4	1.447-4	1.198-4	9.647-5	7.527-5	5.670-5
30	55	1.262-3	1.213-3	1.164-3	1.110-3	1.048-3	1.012-3	9.729-4	8.853-4	7.875-4	6.832-4	5.734-4
30	56	4.960-3	4.907-3	4.869-3	4.842-3	4.817-3	4.805-3	4.792-3	4.770-3	4.756-3	4.726-3	4.558-3
30	57	1.065-3	9.868-4	9.095-4	8.292-4	7.423-4	6.957-4	6.473-4	5.463-4	4.444-4	3.478-4	2.618-4
30	58	4.013-4	3.580-4	3.184-4	2.829-4	2.504-4	2.350-4	2.201-4	1.919-4	1.667-4	1.449-4	1.250-4
30	59	3.361-3	3.258-3	3.124-3	2.950-3	2.728-3	2.598-3	2.456-3	2.141-3	1.799-3	1.453-3	1.126-3
30	60	1.388-2	1.394-2	1.401-2	1.408-2	1.411-2	1.410-2	1.409-2	1.404-2	1.397-2	1.381-2	1.324-2
30	61	1.152-3	1.110-3	1.056-3	9.885-4	9.052-4	8.575-4	8.060-4	6.940-4	5.756-4	4.590-4	3.514-4
30	62	2.285-3	2.228-3	2.149-3	2.040-3	1.895-3	1.809-3	1.713-3	1.500-3	1.266-3	1.031-3	8.064-4
30	63	9.421-4	9.042-4	8.625-4	8.175-4	7.694-4	7.445-4	7.191-4	6.688-4	6.215-4	5.771-4	5.259-4
30	64	1.170-3	1.135-3	1.091-3	1.038-3	9.774-4	9.452-4	9.129-4	8.526-4	8.059-4	7.743-4	7.371-4
30	65	5.072-4	5.041-4	5.002-4	4.938-4	4.824-4	4.742-4	4.642-4	4.387-4	4.069-4	3.698-4	3.254-4
30	66	3.038-3	2.953-3	2.834-3	2.672-3	2.461-3	2.337-3	2.202-3	1.902-3	1.581-3	1.261-3	9.661-4
30	67	6.058-4	5.917-4	5.756-4	5.555-4	5.288-4	5.124-4	4.939-4	4.510-4	4.022-4	3.494-4	2.935-4
30	68	4.375-4	4.319-4	4.285-4	4.254-4	4.202-4	4.164-4	4.117-4	4.006-4	3.896-4	3.802-4	3.648-4
30	69	5.378-4	5.140-4	4.859-4	4.525-4	4.132-4	3.911-4	3.676-4	3.172-4	2.644-4	2.125-4	1.643-4
30	70	2.917-4	2.817-4	2.695-4	2.543-4	2.352-4	2.241-4	2.120-4	1.855-4	1.573-4	1.294-4	1.029-4
30	71	3.258-4	3.124-4	2.970-4	2.787-4	2.568-4	2.444-4	2.310-4	2.018-4	1.706-4	1.392-4	1.095-4
30	72	1.951-4	1.830-4	1.709-4	1.582-4	1.444-4	1.371-4	1.296-4	1.143-4	9.999-5	8.768-5	7.671-5
30	73	6.490-4	6.236-4	5.922-4	5.530-4	5.048-4	4.773-4	4.477-4	3.835-4	3.163-4	2.506-4	1.908-4
30	74	5.202-4	4.960-4	4.737-4	4.530-4	4.328-4	4.225-4	4.119-4	3.898-4	3.668-4	3.424-4	3.119-4
30	75	4.823-4	4.552-4	4.268-4	3.956-4	3.601-4	3.406-4	3.198-4	2.756-4	2.296-4	1.847-4	1.433-4
30	76	4.959-4	4.647-4	4.324-4	3.979-4	3.596-4	3.387-4	3.168-4	2.706-4	2.234-4	1.780-4	1.368-4
30	77	9.537-4	9.325-4	9.202-4	9.081-4	8.882-4	8.742-4	8.574-4	8.177-4	7.755-4	7.366-4	6.904-4
30	78	4.305-4	4.132-4	3.914-4	3.640-4	3.299-4	3.104-4	2.894-4	2.444-4	1.981-4	1.540-4	1.149-4
30	79	1.041-3	1.024-3	1.002-3	9.740-4	9.364-4	9.140-4	8.893-4	8.340-4	7.735-4	7.085-4	6.318-4
30	80	6.111-4	6.047-4	5.975-4	5.858-4	5.664-4	5.532-4	5.376-4	4.990-4	4.521-4	3.989-4	3.397-4
30	81	1.457-3	1.444-3	1.427-3	1.402-3	1.367-3	1.344-3	1.320-3	1.261-3	1.196-3	1.122-3	1.024-3
30	82	3.383-4	3.302-4	3.215-4	3.103-4	2.951-4	2.857-4	2.752-4	2.506-4	2.224-4	1.920-4	1.601-4
30	83	3.555-4	3.545-4	3.531-4	3.487-4	3.394-4	3.326-4	3.243-4	3.031-4	2.766-4	2.457-4	2.105-4
30	84	3.844-3	3.834-3	3.809-3	3.763-3	3.696-3	3.654-3	3.608-3	3.501-3	3.375-3	3.216-3	2.970-3
30	85	9.637-4	9.702-4	9.738-4	9.687-4	9.507-4	9.358-4	9.169-4	8.667-4	8.014-4	7.225-4	6.278-4
30	86	1.746-3	1.763-3	1.773-3	1.766-3	1.734-3	1.707-3	1.673-3	1.581-3	1.464-3	1.323-3	1.155-3
30	87	3.119-4	3.018-4	2.887-4	2.715-4	2.494-4	2.364-4	2.222-4	1.910-4	1.577-4	1.249-4	9.496-5
30	88	2.012-4	1.982-4	1.942-4	1.889-4	1.817-4	1.773-4	1.725-4	1.611-4	1.476-4	1.321-4	1.141-4
30	89	7.035-5	6.736-5	6.393-5	5.987-5	5.496-5	5.217-5	4.915-5	4.258-5	3.559-5	2.864-5	2.215-5
30	90	5.641-5	5.339-5	5.049-5	4.753-5	4.437-5	4.269-5	4.098-5	3.752-5	3.424-5	3.124-5	2.807-5
30	91	2.307-4	2.282-4	2.232-4	2.152-4	2.040-4	1.971-4	1.894-4	1.718-4	1.525-4	1.326-4	1.121-4
30	92	3.211-6	3.031-6	2.856-6	2.671-6	2.465-6	2.352-6	2.232-6	1.975-6	1.705-6	1.437-6	1.175-6
30	93	8.183-5	8.181-5	8.057-5	7.810-5	7.441-5	7.209-5	6.945-5	6.324-5	5.604-5	4.820-5	3.996-5
30	94	2.588-5	2.546-5	2.474-5	2.364-5	2.210-5	2.117-5	2.013-5	1.778-5	1.517-5	1.248-5	9.870-6
30	95	1.627-4	1.625-4	1.617-4	1.606-4	1.590-4	1.580-4	1.569-4	1.542-4	1.506-4	1.454-4	1.356-4
30	96	3.343-5	3.339-5	3.359-5	3.402-5	3.469-5	3.514-5	3.566-5	3.697-5	3.864-5	4.045-5	4.096-5
30	97	1.973-5	1.938-5	1.889-5	1.827-5	1.750-5	1.704-5	1.652-5	1.529-5	1.383-5	1.216-5	1.029-5
31	32	2.864-1	2.745-1	2.616-1	2.466-1	2.285-1	2.181-1	2.068-1	1.820-1	1.553-1	1.285-1	1.027-1
31	33	3.140-2	2.986-2	2.824-2	2.644-2	2.435-2	2.318-2	2.192-2	1.919-2	1.627-2	1.335-2	1.056-2
31	34	4.226-2	3.607-2	3.103-2	2.683-2	2.314-2	2.142-2	1.976-2	1.668-2	1.406-2	1.212-2	1.075-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
31	35	1.436-2	1.212-2	1.031-2	8.813-3	7.520-3	6.923-3	6.350-3	5.268-3	4.277-3	3.399-3	2.643-3
31	36	2.903-3	2.099-3	1.500-3	1.070-3	7.669-4	6.509-4	5.535-4	4.019-4	2.923-4	2.120-4	1.526-4
31	37	8.619-3	8.276-3	7.870-3	7.379-3	6.781-3	6.440-3	6.071-3	5.263-3	4.399-3	3.536-3	2.729-3
31	38	1.230-1	1.223-1	1.224-1	1.232-1	1.244-1	1.250-1	1.256-1	1.269-1	1.290-1	1.319-1	1.318-1
31	39	1.364-1	1.349-1	1.341-1	1.338-1	1.335-1	1.333-1	1.331-1	1.325-1	1.325-1	1.331-1	1.310-1
31	40	4.617-2	4.492-2	4.355-2	4.201-2	4.022-2	3.922-2	3.815-2	3.591-2	3.372-2	3.167-2	2.927-2
31	41	5.870-3	5.428-3	4.980-3	4.527-3	4.056-3	3.812-3	3.560-3	3.045-3	2.529-3	2.041-3	1.598-3
31	42	4.493-2	4.312-2	4.089-2	3.819-2	3.493-2	3.308-2	3.109-2	2.679-2	2.228-2	1.787-2	1.384-2
31	43	1.710-2	1.609-2	1.499-2	1.380-2	1.249-2	1.178-2	1.103-2	9.457-3	7.825-3	6.236-3	4.782-3
31	44	1.623-3	1.357-3	1.106-3	8.919-4	7.178-4	6.436-4	5.763-4	4.586-4	3.590-4	2.746-4	2.041-4
31	45	1.859-2	1.800-2	1.723-2	1.626-2	1.505-2	1.437-2	1.365-2	1.212-2	1.060-2	9.176-3	7.828-3
31	46	2.107-2	2.081-2	2.053-2	2.021-2	1.981-2	1.958-2	1.932-2	1.876-2	1.818-2	1.755-2	1.651-2
31	47	6.308-2	6.306-2	6.320-2	6.342-2	6.362-2	6.367-2	6.369-2	6.366-2	6.362-2	6.331-2	6.118-2
31	48	9.867-5	8.186-5	6.636-5	5.326-5	4.263-5	3.812-5	3.405-5	2.699-5	2.107-5	1.609-5	1.196-5
31	49	7.916-3	7.602-3	7.220-3	6.751-3	6.176-3	5.848-3	5.493-3	4.724-3	3.915-3	3.122-3	2.397-3
31	50	2.549-3	2.420-3	2.286-3	2.141-3	1.982-3	1.895-3	1.804-3	1.613-3	1.416-3	1.225-3	1.037-3
31	51	2.660-4	2.361-4	2.087-4	1.844-4	1.623-4	1.518-4	1.413-4	1.205-4	9.984-5	7.991-5	6.156-5
31	52	2.395-2	2.336-2	2.260-2	2.158-2	2.022-2	1.940-2	1.849-2	1.644-2	1.421-2	1.196-2	9.787-3
31	53	4.155-3	3.975-3	3.775-3	3.544-3	3.270-3	3.114-3	2.945-3	2.571-3	2.166-3	1.755-3	1.364-3
31	54	2.073-4	1.512-4	1.064-4	7.304-5	4.947-5	4.059-5	3.326-5	2.229-5	1.491-5	9.951-6	6.629-6
31	55	1.058-2	1.025-2	9.797-3	9.197-3	8.425-3	7.974-3	7.484-3	6.418-3	5.301-3	4.220-3	3.243-3
31	56	1.419-2	1.374-2	1.315-2	1.235-2	1.133-2	1.073-2	1.008-2	8.651-3	7.155-3	5.710-3	4.403-3
31	57	5.014-3	4.821-3	4.582-3	4.282-3	3.911-3	3.697-3	3.467-3	2.969-3	2.448-3	1.943-3	1.485-3
31	58	2.571-4	1.987-4	1.500-4	1.124-4	8.430-5	7.313-5	6.348-5	4.780-5	3.574-5	2.634-5	1.904-5
31	59	1.056-3	1.001-3	9.467-4	8.897-4	8.245-4	7.878-4	7.483-4	6.630-4	5.748-4	4.916-4	4.148-4
31	60	1.145-2	1.107-2	1.057-2	9.904-3	9.050-3	8.554-3	8.018-3	6.860-3	5.660-3	4.511-3	3.478-3
31	61	6.706-3	6.485-3	6.199-3	5.824-3	5.344-3	5.064-3	4.760-3	4.100-3	3.411-3	2.746-3	2.143-3
31	62	3.243-3	3.162-3	3.056-3	2.914-3	2.726-3	2.614-3	2.489-3	2.207-3	1.899-3	1.585-3	1.283-3
31	63	3.412-3	3.320-3	3.199-3	3.036-3	2.825-3	2.700-3	2.562-3	2.258-3	1.931-3	1.604-3	1.293-3
31	64	8.431-4	7.946-4	7.439-4	6.875-4	6.222-4	5.859-4	5.474-4	4.652-4	3.806-4	2.993-4	2.263-4
31	65	1.699-3	1.647-3	1.581-3	1.494-3	1.383-3	1.317-3	1.245-3	1.085-3	9.116-4	7.361-4	5.704-4
31	66	4.364-4	4.126-4	3.884-4	3.620-4	3.316-4	3.145-4	2.963-4	2.570-4	2.159-4	1.763-4	1.398-4
31	67	1.369-3	1.323-3	1.265-3	1.191-3	1.099-3	1.045-3	9.859-4	8.565-4	7.183-4	5.813-4	4.537-4
31	68	3.376-3	3.277-3	3.139-3	2.953-3	2.712-3	2.571-3	2.416-3	2.078-3	1.718-3	1.364-3	1.039-3
31	69	8.865-4	8.496-4	8.080-4	7.587-4	6.988-4	6.645-4	6.274-4	5.461-4	4.592-4	3.725-4	2.910-4
31	70	2.217-4	2.109-4	2.013-4	1.919-4	1.813-4	1.754-4	1.689-4	1.550-4	1.407-4	1.271-4	1.135-4
31	71	2.626-3	2.549-3	2.443-3	2.301-3	2.115-3	2.006-3	1.888-3	1.628-3	1.354-3	1.086-3	8.388-4
31	72	3.798-3	3.693-3	3.548-3	3.349-3	3.089-3	2.935-3	2.766-3	2.394-3	1.997-3	1.606-3	1.244-3
31	73	2.025-3	1.971-3	1.897-3	1.796-3	1.662-3	1.583-3	1.496-3	1.303-3	1.098-3	8.970-4	7.108-4
31	74	3.497-3	3.380-3	3.227-3	3.026-3	2.771-3	2.623-3	2.463-3	2.114-3	1.748-3	1.394-3	1.071-3
31	75	1.022-3	9.933-4	9.663-4	9.344-4	8.911-4	8.643-4	8.342-4	7.665-4	6.951-4	6.282-4	5.619-4
31	76	1.601-4	1.405-4	1.240-4	1.094-4	9.557-5	8.875-5	8.193-5	6.833-5	5.514-5	4.292-5	3.219-5
31	77	1.854-4	1.760-4	1.656-4	1.536-4	1.397-4	1.319-4	1.235-4	1.057-4	8.718-5	6.917-5	5.279-5
31	78	9.757-4	9.535-4	9.232-4	8.806-4	8.226-4	7.876-4	7.489-4	6.630-4	5.715-4	4.819-4	3.972-4
31	79	2.219-3	2.161-3	2.078-3	1.964-3	1.815-3	1.727-3	1.631-3	1.419-3	1.193-3	9.694-4	7.613-4
31	80	6.256-4	6.072-4	5.827-4	5.504-4	5.092-4	4.852-4	4.590-4	4.017-4	3.408-4	2.803-4	2.231-4
31	81	1.295-4	1.247-4	1.187-4	1.113-4	1.022-4	9.694-5	9.129-5	7.900-5	6.602-5	5.321-5	4.134-5
31	82	4.294-5	4.160-5	4.022-5	3.863-5	3.665-5	3.548-5	3.419-5	3.129-5	2.814-5	2.497-5	2.174-5

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
31	83	1.773-5	1.712-5	1.637-5	1.545-5	1.431-5	1.366-5	1.294-5	1.136-5	9.627-6	7.855-6	6.155-6
31	84	9.465-4	9.236-4	8.905-4	8.441-4	7.825-4	7.458-4	7.054-4	6.154-4	5.184-4	4.216-4	3.306-4
31	85	2.202-4	2.155-4	2.088-4	1.993-4	1.865-4	1.789-4	1.704-4	1.514-4	1.307-4	1.097-4	8.943-5
31	86	1.342-4	1.312-4	1.271-4	1.213-4	1.135-4	1.088-4	1.036-4	9.172-5	7.842-5	6.459-5	5.110-5
31	87	8.860-5	1.038-4	1.201-4	1.362-4	1.520-4	1.599-4	1.679-4	1.845-4	2.023-4	2.207-4	2.313-4
31	88	1.137-3	1.118-3	1.090-3	1.050-3	9.963-4	9.635-4	9.269-4	8.435-4	7.508-4	6.540-4	5.541-4
31	89	5.642-4	5.570-4	5.459-4	5.292-4	5.057-4	4.912-4	4.750-4	4.378-4	3.967-4	3.542-4	3.089-4
31	90	4.721-5	4.445-5	4.154-5	3.828-5	3.454-5	3.248-5	3.030-5	2.571-5	2.102-5	1.654-5	1.252-5
31	91	4.140-5	4.553-5	4.922-5	5.263-5	5.596-5	5.766-5	5.942-5	6.320-5	6.749-5	7.193-5	7.396-5
31	92	2.424-6	2.236-6	2.078-6	1.927-6	1.764-6	1.674-6	1.578-6	1.370-6	1.146-6	9.210-7	7.094-7
31	93	1.501-4	1.466-4	1.415-4	1.344-4	1.249-4	1.192-4	1.129-4	9.870-5	8.315-5	6.734-5	5.234-5
31	94	2.036-4	2.011-4	1.970-4	1.907-4	1.818-4	1.764-4	1.704-4	1.570-4	1.424-4	1.273-4	1.113-4
31	95	9.646-5	9.488-5	9.236-5	8.870-5	8.378-5	8.087-5	7.768-5	7.072-5	6.342-5	5.622-5	4.881-5
31	96	1.284-6	1.245-6	1.196-6	1.134-6	1.057-6	1.013-6	9.658-7	8.627-7	7.552-7	6.506-7	5.490-7
31	97	9.052-7	8.847-7	8.554-7	8.147-7	7.605-7	7.279-7	6.915-7	6.086-7	5.160-7	4.199-7	3.273-7
32	33	5.860-2	5.570-2	5.358-2	5.224-2	5.142-2	5.111-2	5.085-2	5.039-2	5.000-2	4.940-2	4.739-2
32	34	4.171-1	4.013-1	3.830-1	3.610-1	3.341-1	3.187-1	3.019-1	2.649-1	2.252-1	1.852-1	1.470-1
32	35	3.563-2	3.086-2	2.686-2	2.345-2	2.041-2	1.897-2	1.759-2	1.496-2	1.259-2	1.058-2	8.860-3
32	36	1.278-2	9.378-3	6.921-3	5.167-3	3.907-3	3.410-3	2.981-3	2.278-3	1.732-3	1.301-3	9.628-4
32	37	7.965-2	7.936-2	7.984-2	8.099-2	8.251-2	8.331-2	8.415-2	8.602-2	8.864-2	9.214-2	9.374-2
32	38	2.990-2	2.875-2	2.737-2	2.571-2	2.370-2	2.255-2	2.132-2	1.865-2	1.583-2	1.307-2	1.049-2
32	39	1.591-1	1.575-1	1.569-1	1.572-1	1.578-1	1.581-1	1.583-1	1.589-1	1.606-1	1.635-1	1.632-1
32	40	1.781-1	1.756-1	1.738-1	1.725-1	1.711-1	1.702-1	1.692-1	1.671-1	1.657-1	1.652-1	1.615-1
32	41	3.329-2	3.218-2	3.110-2	3.002-2	2.889-2	2.828-2	2.765-2	2.636-2	2.510-2	2.388-2	2.227-2
32	42	6.063-2	5.824-2	5.530-2	5.175-2	4.746-2	4.502-2	4.240-2	3.674-2	3.080-2	2.502-2	1.969-2
32	43	3.069-2	2.902-2	2.719-2	2.518-2	2.296-2	2.175-2	2.048-2	1.777-2	1.497-2	1.222-2	9.662-3
32	44	1.009-2	9.336-3	8.551-3	7.767-3	6.975-3	6.570-3	6.157-3	5.316-3	4.480-3	3.691-3	2.967-3
32	45	3.473-2	3.376-2	3.256-2	3.108-2	2.927-2	2.825-2	2.716-2	2.488-2	2.261-2	2.045-2	1.820-2
32	46	5.842-2	5.810-2	5.783-2	5.753-2	5.706-2	5.674-2	5.637-2	5.551-2	5.461-2	5.356-2	5.117-2
32	47	5.533-2	5.529-2	5.543-2	5.568-2	5.589-2	5.594-2	5.596-2	5.592-2	5.587-2	5.564-2	5.386-2
32	48	2.484-2	2.495-2	2.518-2	2.551-2	2.587-2	2.605-2	2.622-2	2.657-2	2.696-2	2.724-2	2.668-2
32	49	1.338-2	1.283-2	1.218-2	1.138-2	1.042-2	9.878-3	9.292-3	8.026-3	6.699-3	5.400-3	4.201-3
32	50	3.990-3	3.759-3	3.518-3	3.259-3	2.972-3	2.814-3	2.648-3	2.292-3	1.919-3	1.549-3	1.205-3
32	51	1.521-3	1.509-3	1.518-3	1.541-3	1.563-3	1.571-3	1.576-3	1.580-3	1.584-3	1.593-3	1.568-3
32	52	2.662-2	2.579-2	2.472-2	2.334-2	2.158-2	2.054-2	1.941-2	1.689-2	1.417-2	1.144-2	8.863-3
32	53	1.526-2	1.484-2	1.438-2	1.380-2	1.305-2	1.259-2	1.209-2	1.094-2	9.681-3	8.420-3	7.171-3
32	54	5.245-3	4.960-3	4.659-3	4.329-3	3.955-3	3.747-3	3.525-3	3.046-3	2.539-3	2.035-3	1.567-3
32	55	1.306-2	1.262-2	1.205-2	1.131-2	1.036-2	9.810-3	9.211-3	7.909-3	6.547-3	5.233-3	4.047-3
32	56	2.249-2	2.174-2	2.074-2	1.945-2	1.780-2	1.684-2	1.581-2	1.355-2	1.119-2	8.894-3	6.803-3
32	57	1.062-2	1.025-2	9.817-3	9.276-3	8.595-3	8.199-3	7.768-3	6.830-3	5.849-3	4.905-3	4.025-3
32	58	4.285-3	4.099-3	3.947-3	3.837-3	3.760-3	3.732-3	3.710-3	3.685-3	3.688-3	3.699-3	3.612-3
32	59	1.005-2	9.970-3	9.898-3	9.818-3	9.700-3	9.622-3	9.531-3	9.321-3	9.097-3	8.842-3	8.370-3
32	60	1.635-2	1.577-2	1.500-2	1.402-2	1.276-2	1.204-2	1.127-2	9.593-3	7.854-3	6.178-3	4.671-3
32	61	1.374-2	1.327-2	1.265-2	1.184-2	1.081-2	1.021-2	9.557-3	8.151-3	6.687-3	5.279-3	4.016-3
32	62	6.464-3	6.326-3	6.141-3	5.891-3	5.558-3	5.359-3	5.138-3	4.643-3	4.101-3	3.548-3	2.989-3
32	63	4.296-3	4.162-3	4.000-3	3.793-3	3.530-3	3.375-3	3.205-3	2.832-3	2.437-3	2.049-3	1.681-3
32	64	3.175-3	3.038-3	2.891-3	2.720-3	2.512-3	2.393-3	2.265-3	1.984-3	1.691-3	1.408-3	1.145-3
32	65	1.151-3	1.111-3	1.066-3	1.013-3	9.478-4	9.106-4	8.704-4	7.821-4	6.873-4	5.913-4	4.948-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
32	66	3.514-3	3.392-3	3.243-3	3.057-3	2.824-3	2.691-3	2.546-3	2.230-3	1.897-3	1.570-3	1.261-3
32	67	5.806-3	5.640-3	5.417-3	5.119-3	4.732-3	4.503-3	4.253-3	3.697-3	3.099-3	2.502-3	1.944-3
32	68	5.927-3	5.754-3	5.514-3	5.189-3	4.767-3	4.518-3	4.248-3	3.655-3	3.027-3	2.414-3	1.853-3
32	69	1.826-3	1.758-3	1.684-3	1.599-3	1.498-3	1.440-3	1.377-3	1.237-3	1.085-3	9.300-4	7.735-4
32	70	7.368-4	7.098-4	6.807-4	6.462-4	6.031-4	5.779-4	5.503-4	4.894-4	4.253-4	3.634-4	3.051-4
32	71	3.636-3	3.537-3	3.402-3	3.218-3	2.976-3	2.833-3	2.677-3	2.333-3	1.969-3	1.613-3	1.282-3
32	72	7.541-3	7.342-3	7.066-3	6.688-3	6.189-3	5.894-3	5.569-3	4.849-3	4.077-3	3.310-3	2.592-3
32	73	4.162-3	4.031-3	3.854-3	3.620-3	3.320-3	3.145-3	2.955-3	2.539-3	2.099-3	1.667-3	1.272-3
32	74	5.229-3	5.059-3	4.839-3	4.553-3	4.189-3	3.978-3	3.749-3	3.250-3	2.727-3	2.216-3	1.745-3
32	75	1.930-3	1.845-3	1.750-3	1.637-3	1.500-3	1.423-3	1.339-3	1.158-3	9.704-4	7.890-4	6.231-4
32	76	8.610-4	8.231-4	7.954-4	7.711-4	7.434-4	7.269-4	7.086-4	6.678-4	6.257-4	5.876-4	5.460-4
32	77	5.286-3	5.246-3	5.209-3	5.162-3	5.093-3	5.049-3	4.999-3	4.881-3	4.746-3	4.576-3	4.283-3
32	78	2.107-3	2.045-3	1.960-3	1.847-3	1.700-3	1.614-3	1.520-3	1.313-3	1.092-3	8.734-4	6.709-4
32	79	2.874-3	2.800-3	2.697-3	2.555-3	2.369-3	2.258-3	2.137-3	1.870-3	1.584-3	1.301-3	1.036-3
32	80	1.566-3	1.525-3	1.469-3	1.394-3	1.296-3	1.238-3	1.175-3	1.036-3	8.884-4	7.424-4	6.032-4
32	81	1.992-3	1.989-3	1.989-3	1.982-3	1.957-3	1.935-3	1.907-3	1.832-3	1.735-3	1.616-3	1.458-3
32	82	3.440-4	3.332-4	3.254-4	3.195-4	3.140-4	3.114-4	3.087-4	3.037-4	2.998-4	2.962-4	2.857-4
32	83	2.588-4	2.546-4	2.492-4	2.422-4	2.335-4	2.284-4	2.229-4	2.109-4	1.980-4	1.843-4	1.670-4
32	84	1.573-3	1.539-3	1.490-3	1.419-3	1.324-3	1.267-3	1.204-3	1.062-3	9.068-4	7.500-4	5.997-4
32	85	4.914-4	4.843-4	4.742-4	4.585-4	4.357-4	4.215-4	4.055-4	3.691-4	3.294-4	2.895-4	2.492-4
32	86	2.921-4	2.880-4	2.822-4	2.742-4	2.636-4	2.573-4	2.504-4	2.349-4	2.179-4	1.995-4	1.779-4
32	87	2.097-3	2.090-3	2.075-3	2.046-3	2.000-3	1.971-3	1.936-3	1.855-3	1.757-3	1.639-3	1.480-3
32	88	1.344-3	1.315-3	1.274-3	1.217-3	1.142-3	1.097-3	1.048-3	9.357-4	8.121-4	6.849-4	5.591-4
32	89	9.086-4	8.889-4	8.623-4	8.262-4	7.784-4	7.497-4	7.179-4	6.459-4	5.660-4	4.832-4	4.002-4
32	90	2.913-4	2.846-4	2.768-4	2.670-4	2.545-4	2.471-4	2.391-4	2.213-4	2.025-4	1.835-4	1.630-4
32	91	7.905-4	8.087-4	8.221-4	8.301-4	8.329-4	8.324-4	8.309-4	8.248-4	8.147-4	7.967-4	7.542-4
32	92	7.558-5	7.577-5	7.646-5	7.764-5	7.932-5	8.035-5	8.148-5	8.410-5	8.711-5	8.981-5	8.932-5
32	93	2.844-4	2.809-4	2.752-4	2.669-4	2.553-4	2.483-4	2.405-4	2.229-4	2.034-4	1.829-4	1.603-4
32	94	3.008-4	2.947-4	2.855-4	2.723-4	2.544-4	2.436-4	2.317-4	2.049-4	1.756-4	1.461-4	1.176-4
32	95	1.552-4	1.521-4	1.474-4	1.406-4	1.316-4	1.262-4	1.203-4	1.075-4	9.399-5	8.072-5	6.778-5
32	96	4.433-4	4.397-4	4.345-4	4.266-4	4.154-4	4.082-4	4.000-4	3.803-4	3.563-4	3.275-4	2.912-4
32	97	2.516-5	2.522-5	2.536-5	2.560-5	2.597-5	2.622-5	2.649-5	2.711-5	2.782-5	2.840-5	2.800-5
33	34	4.912-2	4.678-2	4.424-2	4.138-2	3.808-2	3.623-2	3.425-2	2.998-2	2.544-2	2.091-2	1.660-2
33	35	1.042-2	9.205-3	8.099-3	7.092-3	6.150-3	5.693-3	5.244-3	4.373-3	3.569-3	2.877-3	2.308-3
33	36	3.382-3	2.535-3	1.844-3	1.314-3	9.247-4	7.744-4	6.484-4	4.552-4	3.209-4	2.276-4	1.622-4
33	37	1.229-2	1.218-2	1.218-2	1.227-2	1.241-2	1.249-2	1.257-2	1.276-2	1.306-2	1.347-2	1.360-2
33	38	6.301-3	5.940-3	5.541-3	5.104-3	4.623-3	4.363-3	4.092-3	3.522-3	2.940-3	2.380-3	1.867-3
33	39	2.002-2	1.943-2	1.897-2	1.865-2	1.839-2	1.827-2	1.815-2	1.795-2	1.787-2	1.797-2	1.776-2
33	40	1.881-2	1.815-2	1.762-2	1.724-2	1.697-2	1.686-2	1.675-2	1.660-2	1.657-2	1.666-2	1.642-2
33	41	7.992-3	7.387-3	6.752-3	6.111-3	5.459-3	5.126-3	4.787-3	4.097-3	3.410-3	2.756-3	2.159-3
33	42	1.438-2	1.302-2	1.168-2	1.044-2	9.298-3	8.751-3	8.217-3	7.181-3	6.202-3	5.298-3	4.444-3
33	43	2.190-2	2.039-2	1.883-2	1.725-2	1.563-2	1.479-2	1.392-2	1.214-2	1.039-2	8.774-3	7.299-3
33	44	2.253-2	2.121-2	1.993-2	1.876-2	1.768-2	1.716-2	1.665-2	1.566-2	1.473-2	1.386-2	1.280-2
33	45	6.007-3	5.633-3	5.241-3	4.840-3	4.424-3	4.210-3	3.992-3	3.550-3	3.120-3	2.721-3	2.335-3
33	46	7.814-3	7.610-3	7.435-3	7.289-3	7.155-3	7.087-3	7.017-3	6.877-3	6.748-3	6.614-3	6.322-3
33	47	6.779-3	6.672-3	6.582-3	6.505-3	6.424-3	6.378-3	6.328-3	6.217-3	6.105-3	5.980-3	5.710-3
33	48	2.093-1	2.105-1	2.129-1	2.163-1	2.199-1	2.216-1	2.233-1	2.266-1	2.302-1	2.329-1	2.285-1
33	49	1.194-2	1.125-2	1.053-2	9.765-3	8.934-3	8.483-3	8.008-3	6.996-3	5.938-3	4.892-3	3.902-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
33	50	1.046-2	1.005-2	9.632-3	9.175-3	8.650-3	8.355-3	8.040-3	7.358-3	6.646-3	5.938-3	5.198-3
33	51	1.540-2	1.540-2	1.545-2	1.552-2	1.557-2	1.557-2	1.556-2	1.551-2	1.546-2	1.534-2	1.481-2
33	52	1.401-2	1.335-2	1.264-2	1.183-2	1.088-2	1.036-2	9.794-3	8.590-3	7.341-3	6.126-3	4.980-3
33	53	1.939-2	1.853-2	1.753-2	1.634-2	1.492-2	1.412-2	1.326-2	1.139-2	9.429-3	7.502-3	5.735-3
33	54	1.437-2	1.361-2	1.276-2	1.180-2	1.069-2	1.007-2	9.414-3	8.014-3	6.567-3	5.173-3	3.915-3
33	55	6.424-3	6.159-3	5.900-3	5.629-3	5.320-3	5.146-3	4.961-3	4.560-3	4.145-3	3.738-3	3.311-3
33	56	6.347-3	5.914-3	5.499-3	5.083-3	4.647-3	4.418-3	4.180-3	3.690-3	3.200-3	2.732-3	2.284-3
33	57	1.472-2	1.420-2	1.373-2	1.326-2	1.276-2	1.248-2	1.218-2	1.155-2	1.090-2	1.024-2	9.422-3
33	58	3.687-2	3.615-2	3.567-2	3.545-2	3.542-2	3.546-2	3.553-2	3.578-2	3.623-2	3.670-2	3.611-2
33	59	7.374-2	7.370-2	7.371-2	7.367-2	7.341-2	7.318-2	7.288-2	7.214-2	7.131-2	7.012-2	6.698-2
33	60	9.972-3	9.562-3	9.085-3	8.507-3	7.798-3	7.391-3	6.951-3	5.996-3	4.994-3	4.023-3	3.135-3
33	61	1.119-2	1.063-2	1.003-2	9.344-3	8.551-3	8.109-3	7.637-3	6.627-3	5.575-3	4.549-3	3.596-3
33	62	3.284-3	3.098-3	2.901-3	2.679-3	2.425-3	2.285-3	2.137-3	1.826-3	1.511-3	1.214-3	9.467-4
33	63	9.535-3	9.164-3	8.730-3	8.205-3	7.569-3	7.209-3	6.822-3	5.990-3	5.125-3	4.281-3	3.481-3
33	64	2.174-2	2.102-2	2.012-2	1.897-2	1.751-2	1.666-2	1.574-2	1.371-2	1.156-2	9.430-3	7.437-3
33	65	3.916-3	3.803-3	3.655-3	3.458-3	3.203-3	3.051-3	2.886-3	2.518-3	2.124-3	1.731-3	1.361-3
33	66	7.896-3	7.524-3	7.107-3	6.623-3	6.052-3	5.732-3	5.391-3	4.664-3	3.916-3	3.200-3	2.545-3
33	67	5.713-3	5.519-3	5.271-3	4.950-3	4.541-3	4.302-3	4.041-3	3.472-3	2.868-3	2.277-3	1.737-3
33	68	1.118-2	1.085-2	1.041-2	9.798-3	9.001-3	8.533-3	8.021-3	6.895-3	5.701-3	4.530-3	3.461-3
33	69	6.872-3	6.727-3	6.597-3	6.463-3	6.303-3	6.206-3	6.098-3	5.846-3	5.549-3	5.198-3	4.723-3
33	70	6.773-3	6.588-3	6.332-3	5.981-3	5.521-3	5.248-3	4.950-3	4.289-3	3.582-3	2.881-3	2.229-3
33	71	4.821-3	4.680-3	4.501-3	4.270-3	3.973-3	3.798-3	3.606-3	3.177-3	2.710-3	2.235-3	1.777-3
33	72	6.728-3	6.572-3	6.383-3	6.142-3	5.828-3	5.642-3	5.438-3	4.983-3	4.492-3	3.991-3	3.462-3
33	73	7.609-3	7.351-3	7.031-3	6.623-3	6.107-3	5.806-3	5.478-3	4.755-3	3.982-3	3.212-3	2.495-3
33	74	4.827-3	4.699-3	4.561-3	4.401-3	4.208-3	4.098-3	3.980-3	3.723-3	3.454-3	3.177-3	2.855-3
33	75	2.739-3	2.606-3	2.454-3	2.281-3	2.082-3	1.971-3	1.854-3	1.604-3	1.343-3	1.089-3	8.531-4
33	76	1.698-3	1.579-3	1.453-3	1.326-3	1.198-3	1.132-3	1.064-3	9.267-4	7.897-4	6.605-4	5.411-4
33	77	4.397-2	4.374-2	4.356-2	4.331-2	4.289-2	4.260-2	4.226-2	4.145-2	4.049-2	3.923-2	3.688-2
33	78	1.317-3	1.254-3	1.182-3	1.101-3	1.006-3	9.531-4	8.971-4	7.776-4	6.546-4	5.360-4	4.261-4
33	79	3.016-3	2.952-3	2.875-3	2.773-3	2.633-3	2.548-3	2.452-3	2.233-3	1.989-3	1.732-3	1.465-3
33	80	1.162-3	1.119-3	1.065-3	9.951-4	9.079-4	8.576-4	8.034-4	6.864-4	5.653-4	4.492-4	3.446-4
33	81	1.665-2	1.665-2	1.670-2	1.667-2	1.650-2	1.634-2	1.613-2	1.555-2	1.476-2	1.376-2	1.242-2
33	82	2.373-3	2.257-3	2.154-3	2.066-3	1.989-3	1.955-3	1.923-3	1.868-3	1.826-3	1.787-3	1.704-3
33	83	2.637-3	2.601-3	2.554-3	2.491-3	2.412-3	2.366-3	2.317-3	2.209-3	2.094-3	1.968-3	1.800-3
33	84	2.469-3	2.463-3	2.447-3	2.410-3	2.343-3	2.296-3	2.241-3	2.105-3	1.940-3	1.750-3	1.528-3
33	85	1.309-3	1.297-3	1.283-3	1.262-3	1.230-3	1.210-3	1.186-3	1.130-3	1.064-3	9.873-4	8.894-4
33	86	7.847-4	7.797-4	7.740-4	7.659-4	7.542-4	7.470-4	7.388-4	7.202-4	6.987-4	6.718-4	6.266-4
33	87	1.818-2	1.817-2	1.809-2	1.789-2	1.753-2	1.729-2	1.701-2	1.630-2	1.544-2	1.439-2	1.297-2
33	88	2.913-4	2.782-4	2.658-4	2.531-4	2.390-4	2.312-4	2.229-4	2.047-4	1.850-4	1.641-4	1.414-4
33	89	2.878-4	2.672-4	2.478-4	2.288-4	2.088-4	1.983-4	1.874-4	1.646-4	1.413-4	1.185-4	9.678-5
33	90	1.657-4	1.493-4	1.364-4	1.262-4	1.178-4	1.139-4	1.102-4	1.032-4	9.672-5	9.054-5	8.316-5
33	91	5.554-3	5.577-3	5.563-3	5.510-3	5.416-3	5.353-3	5.281-3	5.108-3	4.895-3	4.625-3	4.228-3
33	92	5.900-4	5.946-4	6.030-4	6.154-4	6.321-4	6.420-4	6.530-4	6.778-4	7.060-4	7.317-4	7.307-4
33	93	3.483-5	3.378-5	3.241-5	3.060-5	2.828-5	2.693-5	2.546-5	2.226-5	1.887-5	1.552-5	1.236-5
33	94	1.156-4	1.134-4	1.104-4	1.065-4	1.016-4	9.868-5	9.553-5	8.858-5	8.104-5	7.308-5	6.412-5
33	95	3.635-4	3.596-4	3.532-4	3.436-4	3.305-4	3.226-4	3.138-4	2.940-4	2.719-4	2.476-4	2.190-4
33	96	3.984-3	3.955-3	3.913-3	3.850-3	3.756-3	3.697-3	3.629-3	3.463-3	3.260-3	3.015-3	2.698-3
33	97	2.132-4	2.133-4	2.139-4	2.153-4	2.176-4	2.190-4	2.206-4	2.242-4	2.281-4	2.306-4	2.254-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
34	35	4.874-1	4.663-1	4.428-1	4.153-1	3.823-1	3.635-1	3.432-1	2.988-1	2.514-1	2.039-1	1.592-1
34	36	5.483-2	4.374-2	3.559-2	2.962-2	2.515-2	2.331-2	2.168-2	1.889-2	1.661-2	1.470-2	1.290-2
34	37	1.514-2	1.452-2	1.377-2	1.287-2	1.175-2	1.112-2	1.044-2	8.951-3	7.390-3	5.861-3	4.463-3
34	38	1.865-1	1.854-1	1.857-1	1.874-1	1.897-1	1.910-1	1.922-1	1.952-1	2.001-1	2.076-1	2.114-1
34	39	5.141-2	4.905-2	4.648-2	4.361-2	4.029-2	3.845-2	3.650-2	3.240-2	2.827-2	2.440-2	2.077-2
34	40	3.112-1	3.076-1	3.064-1	3.072-1	3.087-1	3.094-1	3.101-1	3.117-1	3.157-1	3.228-1	3.242-1
34	41	1.815-1	1.778-1	1.749-1	1.727-1	1.705-1	1.692-1	1.679-1	1.651-1	1.630-1	1.617-1	1.576-1
34	42	5.895-2	5.638-2	5.329-2	4.960-2	4.520-2	4.273-2	4.008-2	3.438-2	2.841-2	2.256-2	1.722-2
34	43	7.590-2	7.294-2	6.952-2	6.552-2	6.078-2	5.810-2	5.521-2	4.897-2	4.245-2	3.607-2	2.999-2
34	44	2.486-2	2.330-2	2.164-2	1.992-2	1.812-2	1.717-2	1.620-2	1.419-2	1.215-2	1.019-2	8.340-3
34	45	7.595-2	7.461-2	7.304-2	7.113-2	6.872-2	6.731-2	6.578-2	6.249-2	5.919-2	5.599-2	5.194-2
34	46	1.050-1	1.047-1	1.046-1	1.045-1	1.042-1	1.038-1	1.034-1	1.022-1	1.010-1	9.962-2	9.578-2
34	47	3.531-2	3.511-2	3.498-2	3.486-2	3.465-2	3.449-2	3.430-2	3.383-2	3.335-2	3.280-2	3.144-2
34	48	1.763-4	1.403-4	1.086-4	8.292-5	6.303-5	5.493-5	4.784-5	3.613-5	2.700-5	1.982-5	1.424-5
34	49	1.657-2	1.589-2	1.506-2	1.406-2	1.285-2	1.215-2	1.141-2	9.790-3	8.090-3	6.426-3	4.903-3
34	50	5.831-3	5.528-3	5.196-3	4.821-3	4.388-3	4.147-3	3.890-3	3.340-3	2.766-3	2.208-3	1.698-3
34	51	5.158-4	4.645-4	4.148-4	3.676-4	3.215-4	2.986-4	2.756-4	2.295-4	1.848-4	1.432-4	1.069-4
34	52	1.766-2	1.697-2	1.617-2	1.520-2	1.402-2	1.335-2	1.261-2	1.099-2	9.251-3	7.501-3	5.849-3
34	53	3.496-2	3.390-2	3.254-2	3.078-2	2.852-2	2.719-2	2.574-2	2.249-2	1.897-2	1.541-2	1.205-2
34	54	1.361-2	1.307-2	1.252-2	1.193-2	1.121-2	1.080-2	1.034-2	9.318-3	8.207-3	7.094-3	6.003-3
34	55	1.659-2	1.605-2	1.533-2	1.439-2	1.319-2	1.248-2	1.172-2	1.007-2	8.325-3	6.635-3	5.103-3
34	56	2.794-2	2.704-2	2.585-2	2.429-2	2.230-2	2.114-2	1.988-2	1.714-2	1.426-2	1.146-2	8.910-3
34	57	2.181-2	2.102-2	2.001-2	1.871-2	1.708-2	1.614-2	1.512-2	1.292-2	1.061-2	8.376-3	6.354-3
34	58	9.841-4	8.208-4	6.829-4	5.702-4	4.769-4	4.356-4	3.968-4	3.254-4	2.610-4	2.037-4	1.543-4
34	59	1.797-3	1.646-3	1.501-3	1.357-3	1.208-3	1.131-3	1.051-3	8.867-4	7.237-4	5.712-4	4.364-4
34	60	1.892-2	1.824-2	1.736-2	1.622-2	1.479-2	1.396-2	1.307-2	1.114-2	9.132-3	7.201-3	5.463-3
34	61	2.112-2	2.039-2	1.942-2	1.815-2	1.653-2	1.559-2	1.458-2	1.240-2	1.014-2	7.966-3	6.017-3
34	62	7.133-3	6.934-3	6.664-3	6.302-3	5.830-3	5.551-3	5.245-3	4.564-3	3.826-3	3.084-3	2.387-3
34	63	8.640-3	8.399-3	8.089-3	7.681-3	7.154-3	6.844-3	6.505-3	5.756-3	4.955-3	4.158-3	3.392-3
34	64	7.476-3	7.170-3	6.797-3	6.330-3	5.753-3	5.422-3	5.067-3	4.305-3	3.517-3	2.761-3	2.084-3
34	65	1.799-3	1.734-3	1.655-3	1.556-3	1.433-3	1.361-3	1.283-3	1.112-3	9.278-4	7.441-4	5.729-4
34	66	4.329-3	4.190-3	4.025-3	3.814-3	3.544-3	3.384-3	3.209-3	2.825-3	2.418-3	2.022-3	1.654-3
34	67	8.306-3	8.098-3	7.819-3	7.445-3	6.954-3	6.663-3	6.341-3	5.625-3	4.851-3	4.072-3	3.319-3
34	68	9.021-3	8.756-3	8.396-3	7.913-3	7.288-3	6.920-3	6.520-3	5.641-3	4.708-3	3.792-3	2.947-3
34	69	1.182-3	1.120-3	1.057-3	9.868-4	9.052-4	8.595-4	8.104-4	7.038-4	5.911-4	4.799-4	3.765-4
34	70	5.918-4	5.628-4	5.324-4	4.984-4	4.587-4	4.364-4	4.124-4	3.602-4	3.048-4	2.503-4	1.992-4
34	71	4.294-3	4.208-3	4.083-3	3.903-3	3.653-3	3.501-3	3.331-3	2.953-3	2.550-3	2.158-3	1.790-3
34	72	8.223-3	7.984-3	7.652-3	7.203-3	6.619-3	6.276-3	5.903-3	5.084-3	4.216-3	3.362-3	2.577-3
34	73	8.492-3	8.256-3	7.925-3	7.472-3	6.880-3	6.531-3	6.150-3	5.312-3	4.425-3	3.555-3	2.754-3
34	74	5.017-3	4.837-3	4.608-3	4.315-3	3.947-3	3.735-3	3.505-3	3.005-3	2.480-3	1.968-3	1.502-3
34	75	3.665-3	3.515-3	3.338-3	3.120-3	2.853-3	2.700-3	2.536-3	2.179-3	1.805-3	1.443-3	1.112-3
34	76	2.004-3	1.922-3	1.834-3	1.731-3	1.604-3	1.531-3	1.452-3	1.277-3	1.093-3	9.124-4	7.437-4
34	77	5.595-4	5.338-4	5.046-4	4.700-4	4.288-4	4.055-4	3.806-4	3.270-4	2.712-4	2.171-4	1.678-4
34	78	3.951-3	3.854-3	3.718-3	3.528-3	3.275-3	3.125-3	2.959-3	2.590-3	2.195-3	1.803-3	1.435-3
34	79	3.182-3	3.096-3	2.976-3	2.814-3	2.603-3	2.479-3	2.344-3	2.047-3	1.731-3	1.419-3	1.126-3
34	80	3.381-3	3.319-3	3.234-3	3.109-3	2.932-3	2.823-3	2.702-3	2.431-3	2.142-3	1.862-3	1.591-3
34	81	2.474-4	2.383-4	2.277-4	2.150-4	1.997-4	1.909-4	1.815-4	1.607-4	1.386-4	1.165-4	9.528-5
34	82	1.843-4	1.863-4	1.902-4	1.940-4	1.961-4	1.964-4	1.961-4	1.945-4	1.922-4	1.902-4	1.845-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T$_e$, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
34	83	1.794-5	1.707-5	1.607-5	1.494-5	1.363-5	1.290-5	1.211-5	1.042-5	8.643-6	6.893-6	5.281-6
34	84	2.045-3	1.995-3	1.924-3	1.825-3	1.693-3	1.614-3	1.526-3	1.332-3	1.123-3	9.143-4	7.182-4
34	85	1.030-3	1.006-3	9.718-4	9.241-4	8.607-4	8.229-4	7.812-4	6.878-4	5.861-4	4.831-4	3.843-4
34	86	1.492-4	1.451-4	1.392-4	1.313-4	1.211-4	1.150-4	1.083-4	9.357-5	7.777-5	6.208-5	4.756-5
34	87	3.051-5	3.067-5	3.117-5	3.175-5	3.229-5	3.253-5	3.277-5	3.327-5	3.393-5	3.474-5	3.470-5
34	88	1.272-3	1.239-3	1.194-3	1.133-3	1.052-3	1.005-3	9.517-4	8.330-4	7.027-4	5.697-4	4.430-4
34	89	1.791-3	1.753-3	1.700-3	1.626-3	1.529-3	1.470-3	1.405-3	1.257-3	1.093-3	9.232-4	7.539-4
34	90	8.518-4	8.323-4	8.065-4	7.718-4	7.261-4	6.987-4	6.685-4	6.003-4	5.253-4	4.482-4	3.712-4
34	91	4.570-5	4.852-5	5.086-5	5.283-5	5.458-5	5.541-5	5.624-5	5.795-5	5.993-5	6.200-5	6.228-5
34	92	7.405-6	6.745-6	6.189-6	5.655-6	5.088-6	4.783-6	4.464-6	3.791-6	3.103-6	2.444-6	1.852-6
34	93	1.991-4	1.945-4	1.879-4	1.787-4	1.664-4	1.589-4	1.506-4	1.318-4	1.111-4	8.996-5	6.988-5
34	94	6.375-4	6.266-4	6.101-4	5.861-4	5.533-4	5.334-4	5.112-4	4.613-4	4.067-4	3.507-4	2.939-4
34	95	3.136-4	3.089-4	3.012-4	2.897-4	2.739-4	2.644-4	2.540-4	2.310-4	2.067-4	1.827-4	1.583-4
34	96	3.917-6	3.806-6	3.649-6	3.437-6	3.162-6	3.002-6	2.827-6	2.443-6	2.037-6	1.638-6	1.269-6
34	97	9.289-7	9.071-7	8.743-7	8.283-7	7.677-7	7.317-7	6.922-7	6.040-7	5.075-7	4.095-7	3.167-7
35	36	4.196-1	3.872-1	3.578-1	3.292-1	2.993-1	2.835-1	2.670-1	2.324-1	1.969-1	1.628-1	1.313-1
35	37	8.793-3	8.388-3	7.929-3	7.395-3	6.777-3	6.442-3	6.094-3	5.392-3	4.734-3	4.166-3	3.644-3
35	38	3.735-2	3.572-2	3.384-2	3.159-2	2.890-2	2.740-2	2.579-2	2.240-2	1.897-2	1.573-2	1.276-2
35	39	2.976-1	2.946-1	2.940-1	2.952-1	2.973-1	2.984-1	2.995-1	3.026-1	3.091-1	3.205-1	3.274-1
35	40	1.475-1	1.437-1	1.412-1	1.398-1	1.388-1	1.383-1	1.379-1	1.373-1	1.383-1	1.416-1	1.433-1
35	41	5.060-1	4.946-1	4.881-1	4.854-1	4.842-1	4.836-1	4.829-1	4.824-1	4.864-1	4.970-1	5.006-1
35	42	3.631-2	3.447-2	3.241-2	3.012-2	2.752-2	2.609-2	2.458-2	2.135-2	1.802-2	1.480-2	1.182-2
35	43	9.673-2	9.275-2	8.792-2	8.212-2	7.518-2	7.125-2	6.704-2	5.794-2	4.840-2	3.906-2	3.043-2
35	44	9.029-2	8.639-2	8.225-2	7.785-2	7.296-2	7.029-2	6.746-2	6.144-2	5.523-2	4.919-2	4.304-2
35	45	1.337-1	1.324-1	1.312-1	1.297-1	1.276-1	1.263-1	1.248-1	1.213-1	1.177-1	1.142-1	1.085-1
35	46	1.085-1	1.079-1	1.073-1	1.067-1	1.056-1	1.048-1	1.039-1	1.019-1	9.989-2	9.779-2	9.349-2
35	47	1.517-2	1.467-2	1.400-2	1.314-2	1.209-2	1.148-2	1.084-2	9.473-3	8.083-3	6.766-3	5.545-3
35	48	2.614-4	2.210-4	1.852-4	1.550-4	1.293-4	1.178-4	1.070-4	8.702-5	6.909-5	5.327-5	3.978-5
35	49	1.693-2	1.618-2	1.530-2	1.426-2	1.300-2	1.230-2	1.154-2	9.897-3	8.175-3	6.493-3	4.956-3
35	50	7.734-3	7.359-3	6.932-3	6.437-3	5.857-3	5.531-3	5.184-3	4.438-3	3.659-3	2.898-3	2.204-3
35	51	1.333-3	1.262-3	1.182-3	1.091-3	9.874-4	9.303-4	8.699-4	7.416-4	6.090-4	4.808-4	3.648-4
35	52	8.074-3	7.567-3	7.069-3	6.562-3	6.014-3	5.718-3	5.406-3	4.735-3	4.025-3	3.314-3	2.635-3
35	53	3.661-2	3.543-2	3.396-2	3.210-2	2.975-2	2.838-2	2.689-2	2.359-2	2.003-2	1.645-2	1.304-2
35	54	4.305-2	4.132-2	3.935-2	3.701-2	3.418-2	3.255-2	3.078-2	2.688-2	2.266-2	1.840-2	1.436-2
35	55	1.681-2	1.624-2	1.548-2	1.450-2	1.325-2	1.253-2	1.174-2	1.004-2	8.248-3	6.506-3	4.926-3
35	56	2.386-2	2.302-2	2.197-2	2.062-2	1.892-2	1.794-2	1.687-2	1.455-2	1.211-2	9.754-3	7.617-3
35	57	4.162-2	4.022-2	3.839-2	3.600-2	3.296-2	3.120-2	2.929-2	2.514-2	2.080-2	1.658-2	1.275-2
35	58	1.928-3	1.683-3	1.468-3	1.282-3	1.114-3	1.034-3	9.564-4	8.053-4	6.621-4	5.307-4	4.137-4
35	59	2.226-3	2.032-3	1.848-3	1.667-3	1.481-3	1.386-3	1.288-3	1.088-3	8.882-4	7.002-4	5.325-4
35	60	1.218-2	1.171-2	1.112-2	1.038-2	9.460-3	8.931-3	8.360-3	7.126-3	5.838-3	4.592-3	3.468-3
35	61	2.902-2	2.803-2	2.673-2	2.500-2	2.281-2	2.153-2	2.016-2	1.720-2	1.413-2	1.117-2	8.508-3
35	62	7.228-3	7.007-3	6.711-3	6.320-3	5.815-3	5.519-3	5.195-3	4.483-3	3.722-3	2.967-3	2.270-3
35	63	1.082-2	1.049-2	1.007-2	9.517-3	8.801-3	8.380-3	7.918-3	6.896-3	5.801-3	4.713-3	3.698-3
35	64	2.118-2	2.040-2	1.940-2	1.812-2	1.649-2	1.556-2	1.455-2	1.239-2	1.015-2	7.993-3	6.060-3
35	65	1.725-3	1.662-3	1.583-3	1.482-3	1.355-3	1.282-3	1.203-3	1.030-3	8.477-4	6.701-4	5.085-4
35	66	1.162-2	1.125-2	1.076-2	1.011-2	9.293-3	8.817-3	8.302-3	7.180-3	6.000-3	4.847-3	3.784-3
35	67	1.186-2	1.152-2	1.106-2	1.043-2	9.621-3	9.144-3	8.622-3	7.467-3	6.227-3	4.989-3	3.836-3
35	68	1.523-2	1.483-2	1.428-2	1.353-2	1.255-2	1.197-2	1.134-2	9.950-3	8.463-3	6.992-3	5.604-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
35	69	7.016-4	6.432-4	5.887-4	5.353-4	4.798-4	4.506-4	4.204-4	3.572-4	2.929-4	2.310-4	1.752-4
35	70	1.086-3	1.039-3	9.870-4	9.249-4	8.499-4	8.070-4	7.605-4	6.585-4	5.492-4	4.401-4	3.383-4
35	71	4.211-3	4.091-3	3.924-3	3.696-3	3.397-3	3.221-3	3.029-3	2.605-3	2.154-3	1.709-3	1.301-3
35	72	7.451-3	7.336-3	7.172-3	6.924-3	6.561-3	6.333-3	6.076-3	5.495-3	4.873-3	4.271-3	3.691-3
35	73	1.457-2	1.415-2	1.356-2	1.275-2	1.170-2	1.109-2	1.042-2	8.949-3	7.395-3	5.871-3	4.477-3
35	74	2.975-3	2.852-3	2.714-3	2.550-3	2.350-3	2.235-3	2.111-3	1.840-3	1.553-3	1.273-3	1.012-3
35	75	6.206-3	5.971-3	5.680-3	5.314-3	4.858-3	4.595-3	4.312-3	3.696-3	3.049-3	2.419-3	1.845-3
35	76	5.875-3	5.655-3	5.386-3	5.051-3	4.633-3	4.392-3	4.130-3	3.559-3	2.953-3	2.357-3	1.807-3
35	77	7.836-4	7.519-4	7.176-4	6.773-4	6.280-4	5.997-4	5.689-4	5.020-4	4.320-4	3.643-4	3.010-4
35	78	7.027-3	6.843-3	6.583-3	6.226-3	5.759-3	5.483-3	5.182-3	4.516-3	3.803-3	3.094-3	2.429-3
35	79	3.483-3	3.461-3	3.434-3	3.378-3	3.275-3	3.204-3	3.121-3	2.928-3	2.721-3	2.523-3	2.309-3
35	80	4.919-3	4.784-3	4.589-3	4.319-3	3.964-3	3.754-3	3.526-3	3.026-3	2.495-3	1.975-3	1.500-3
35	81	2.219-4	2.153-4	2.096-4	2.036-4	1.961-4	1.916-4	1.866-4	1.752-4	1.631-4	1.513-4	1.384-4
35	82	1.676-4	1.618-4	1.545-4	1.451-4	1.332-4	1.263-4	1.188-4	1.024-4	8.486-5	6.757-5	5.162-5
35	83	2.692-5	2.568-5	2.424-5	2.256-5	2.056-5	1.943-5	1.823-5	1.563-5	1.290-5	1.023-5	7.781-6
35	84	2.690-3	2.641-3	2.568-3	2.460-3	2.312-3	2.222-3	2.121-3	1.897-3	1.654-3	1.409-3	1.169-3
35	85	1.580-3	1.540-3	1.482-3	1.401-3	1.295-3	1.232-3	1.163-3	1.008-3	8.411-4	6.738-4	5.176-4
35	86	3.268-4	3.183-4	3.059-4	2.887-4	2.660-4	2.525-4	2.378-4	2.052-4	1.702-4	1.356-4	1.035-4
35	87	2.645-5	2.407-5	2.195-5	1.993-5	1.786-5	1.678-5	1.566-5	1.334-5	1.099-5	8.752-6	6.722-6
35	88	8.812-4	8.573-4	8.252-4	7.821-4	7.259-4	6.925-4	6.558-4	5.738-4	4.846-4	3.943-4	3.088-4
35	89	1.962-3	1.909-3	1.839-3	1.745-3	1.623-3	1.551-3	1.471-3	1.292-3	1.095-3	8.927-4	6.989-4
35	90	2.216-3	2.160-3	2.086-3	1.987-3	1.856-3	1.777-3	1.691-3	1.495-3	1.278-3	1.054-3	8.360-4
35	91	8.043-5	8.958-5	9.789-5	1.058-4	1.138-4	1.180-4	1.223-4	1.316-4	1.419-4	1.525-4	1.576-4
35	92	1.174-5	1.101-5	1.030-5	9.514-6	8.600-6	8.090-6	7.548-6	6.392-6	5.203-6	4.066-6	3.052-6
35	93	2.033-5	1.969-5	1.880-5	1.761-5	1.608-5	1.519-5	1.423-5	1.217-5	1.004-5	8.000-6	6.158-6
35	94	7.846-4	7.663-4	7.394-4	7.016-4	6.510-4	6.208-4	5.873-4	5.123-4	4.305-4	3.476-4	2.693-4
35	95	6.214-4	6.077-4	5.875-4	5.590-4	5.211-4	4.984-4	4.735-4	4.179-4	3.577-4	2.969-4	2.384-4
35	96	5.742-6	5.619-6	5.447-6	5.209-6	4.896-6	4.711-6	4.510-6	4.071-6	3.611-6	3.159-6	2.709-6
35	97	8.589-7	8.362-7	8.029-7	7.563-7	6.949-7	6.585-7	6.188-7	5.314-7	4.384-7	3.472-7	2.638-7
36	37	3.065-3	2.768-3	2.513-3	2.275-3	2.034-3	1.908-3	1.778-3	1.509-3	1.236-3	9.746-4	7.387-4
36	38	1.131-2	1.039-2	9.552-3	8.722-3	7.851-3	7.394-3	6.923-3	5.957-3	5.005-3	4.123-3	3.327-3
36	39	4.109-2	3.826-2	3.553-2	3.270-2	2.962-2	2.796-2	2.623-2	2.264-2	1.906-2	1.570-2	1.265-2
36	40	3.865-1	3.796-1	3.750-1	3.720-1	3.696-1	3.684-1	3.672-1	3.660-1	3.699-1	3.814-1	3.895-1
36	41	8.714-1	8.562-1	8.497-1	8.503-1	8.539-1	8.560-1	8.585-1	8.672-1	8.898-1	9.344-1	9.717-1
36	42	6.206-3	5.355-3	4.545-3	3.832-3	3.216-3	2.937-3	2.674-3	2.185-3	1.743-3	1.350-3	1.012-3
36	43	5.592-2	5.296-2	4.991-2	4.673-2	4.327-2	4.140-2	3.942-2	3.525-2	3.101-2	2.697-2	2.311-2
36	44	2.424-1	2.325-1	2.217-1	2.094-1	1.952-1	1.872-1	1.787-1	1.603-1	1.412-1	1.226-1	1.044-1
36	45	2.092-1	2.079-1	2.068-1	2.055-1	2.036-1	2.023-1	2.008-1	1.972-1	1.936-1	1.896-1	1.813-1
36	46	4.647-2	4.504-2	4.309-2	4.053-2	3.731-2	3.547-2	3.350-2	2.933-2	2.513-2	2.119-2	1.756-2
36	47	3.545-2	3.446-2	3.307-2	3.122-2	2.889-2	2.755-2	2.613-2	2.312-2	2.014-2	1.740-2	1.482-2
36	48	6.074-4	5.507-4	4.961-4	4.439-4	3.924-4	3.664-4	3.400-4	2.867-4	2.338-4	1.838-4	1.390-4
36	49	9.173-3	8.603-3	7.991-3	7.337-3	6.622-3	6.237-3	5.833-3	4.981-3	4.102-3	3.250-3	2.474-3
36	50	8.346-3	7.959-3	7.510-3	6.980-3	6.352-3	5.998-3	5.620-3	4.807-3	3.958-3	3.131-3	2.379-3
36	51	4.168-3	4.004-3	3.802-3	3.552-3	3.247-3	3.073-3	2.886-3	2.478-3	2.048-3	1.626-3	1.239-3
36	52	1.693-3	1.471-3	1.273-3	1.102-3	9.531-4	8.845-4	8.185-4	6.922-4	5.725-4	4.609-4	3.595-4
36	53	1.543-2	1.449-2	1.358-2	1.266-2	1.167-2	1.113-2	1.057-2	9.355-3	8.069-3	6.776-3	5.517-3
36	54	1.005-1	9.706-2	9.302-2	8.811-2	8.202-2	7.850-2	7.465-2	6.613-2	5.692-2	4.762-2	3.860-2
36	55	7.344-3	7.043-3	6.678-3	6.229-3	5.679-3	5.366-3	5.028-3	4.298-3	3.535-3	2.791-3	2.117-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a \pm b \equiv a \times 10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
36	56	2.279-2	2.193-2	2.084-2	1.946-2	1.775-2	1.676-2	1.570-2	1.340-2	1.099-2	8.661-3	6.550-3
36	57	6.983-2	6.766-2	6.479-2	6.099-2	5.609-2	5.322-2	5.011-2	4.330-2	3.615-2	2.924-2	2.297-2
36	58	3.868-3	3.479-3	3.119-3	2.778-3	2.443-3	2.273-3	2.102-3	1.757-3	1.422-3	1.111-3	8.380-4
36	59	1.969-3	1.797-3	1.645-3	1.511-3	1.386-3	1.325-3	1.262-3	1.136-3	1.012-3	8.962-4	7.851-4
36	60	1.473-3	1.322-3	1.189-3	1.067-3	9.471-4	8.860-4	8.239-4	6.969-4	5.697-4	4.487-4	3.400-4
36	61	9.667-3	9.226-3	8.731-3	8.146-3	7.443-3	7.044-3	6.616-3	5.689-3	4.716-3	3.767-3	2.897-3
36	62	2.606-3	2.515-3	2.397-3	2.246-3	2.055-3	1.944-3	1.825-3	1.563-3	1.288-3	1.018-3	7.730-4
36	63	1.180-2	1.142-2	1.092-2	1.026-2	9.416-3	8.925-3	8.390-3	7.217-3	5.971-3	4.743-3	3.616-3
36	64	5.940-2	5.739-2	5.469-2	5.111-2	4.656-2	4.392-2	4.108-2	3.495-2	2.860-2	2.250-2	1.702-2
36	65	5.348-3	5.188-3	4.971-3	4.678-3	4.297-3	4.073-3	3.829-3	3.293-3	2.723-3	2.162-3	1.647-3
36	66	3.115-2	3.041-2	2.938-2	2.795-2	2.602-2	2.486-2	2.359-2	2.078-2	1.780-2	1.491-2	1.221-2
36	67	1.201-2	1.166-2	1.116-2	1.050-2	9.627-3	9.117-3	8.562-3	7.345-3	6.058-3	4.796-3	3.644-3
36	68	2.589-2	2.516-2	2.415-2	2.277-2	2.097-2	1.991-2	1.876-2	1.621-2	1.348-2	1.077-2	8.260-3
36	69	1.316-4	1.024-4	7.837-5	5.975-5	4.570-5	4.002-5	3.505-5	2.680-5	2.027-5	1.504-5	1.090-5
36	70	2.218-4	1.953-4	1.722-4	1.516-4	1.323-4	1.228-4	1.133-4	9.440-5	7.603-5	5.900-5	4.408-5
36	71	1.232-3	1.186-3	1.128-3	1.056-3	9.667-4	9.152-4	8.594-4	7.377-4	6.090-4	4.827-4	3.671-4
36	72	6.343-3	6.147-3	5.887-3	5.541-3	5.094-3	4.832-3	4.546-3	3.916-3	3.244-3	2.579-3	1.968-3
36	73	2.047-2	2.021-2	1.985-2	1.927-2	1.839-2	1.782-2	1.717-2	1.570-2	1.412-2	1.262-2	1.114-2
36	74	5.692-4	4.655-4	3.847-4	3.214-4	2.701-4	2.473-4	2.259-4	1.862-4	1.499-4	1.172-4	8.862-5
36	75	1.119-2	1.101-2	1.082-2	1.055-2	1.014-2	9.868-3	9.558-3	8.834-3	8.042-3	7.267-3	6.475-3
36	76	1.447-2	1.395-2	1.330-2	1.248-2	1.145-2	1.085-2	1.020-2	8.783-3	7.279-3	5.799-3	4.438-3
36	77	8.792-4	8.332-4	7.832-4	7.264-4	6.602-4	6.232-4	5.837-4	4.989-4	4.105-4	3.245-4	2.463-4
36	78	1.076-2	1.048-2	1.009-2	9.556-3	8.844-3	8.422-3	7.960-3	6.940-3	5.856-3	4.790-3	3.799-3
36	79	7.776-3	7.562-3	7.253-3	6.824-3	6.262-3	5.931-3	5.570-3	4.779-3	3.942-3	3.120-3	2.370-3
36	80	2.370-3	2.305-3	2.210-3	2.080-3	1.910-3	1.810-3	1.700-3	1.460-3	1.206-3	9.556-4	7.268-4
36	81	1.882-4	1.754-4	1.619-4	1.475-4	1.320-4	1.237-4	1.151-4	9.718-5	7.909-5	6.193-5	4.662-5
36	82	9.220-5	8.661-5	8.099-5	7.497-5	6.815-5	6.439-5	6.038-5	5.179-5	4.278-5	3.396-5	2.587-5
36	83	8.174-5	7.905-5	7.559-5	7.112-5	6.543-5	6.211-5	5.849-5	5.051-5	4.196-5	3.346-5	2.559-5
36	84	2.973-3	2.894-3	2.783-3	2.632-3	2.435-3	2.318-3	2.189-3	1.902-3	1.591-3	1.278-3	9.853-4
36	85	2.282-3	2.224-3	2.139-3	2.020-3	1.862-3	1.768-3	1.666-3	1.438-3	1.194-3	9.510-4	7.264-4
36	86	1.064-3	1.037-3	9.986-4	9.443-4	8.719-4	8.288-4	7.814-4	6.762-4	5.628-4	4.496-4	3.444-4
36	87	1.965-4	2.247-4	2.556-4	2.869-4	3.182-4	3.341-4	3.502-4	3.836-4	4.196-4	4.563-4	4.771-4
36	88	1.733-4	1.638-4	1.537-4	1.422-4	1.289-4	1.215-4	1.136-4	9.684-5	7.956-5	6.288-5	4.778-5
36	89	1.423-3	1.382-3	1.330-3	1.261-3	1.172-3	1.119-3	1.061-3	9.319-4	7.906-4	6.472-4	5.103-4
36	90	5.084-3	4.957-3	4.787-3	4.559-3	4.261-3	4.084-3	3.887-3	3.444-3	2.953-3	2.446-3	1.952-3
36	91	3.650-5	3.527-5	3.375-5	3.180-5	2.933-5	2.788-5	2.629-5	2.279-5	1.902-5	1.526-5	1.174-5
36	92	2.927-5	2.818-5	2.682-5	2.506-5	2.283-5	2.154-5	2.014-5	1.712-5	1.398-5	1.096-5	8.241-6
36	93	9.986-5	9.704-5	9.291-5	8.719-5	7.971-5	7.533-5	7.059-5	6.029-5	4.953-5	3.909-5	2.964-5
36	94	1.650-4	1.603-4	1.535-4	1.439-4	1.314-4	1.242-4	1.163-4	9.925-5	8.153-5	6.447-5	4.907-5
36	95	1.459-3	1.425-3	1.374-3	1.304-3	1.210-3	1.154-3	1.092-3	9.526-4	8.006-4	6.467-4	5.013-4
36	96	9.400-6	9.122-6	8.740-6	8.226-6	7.563-6	7.175-6	6.751-6	5.821-6	4.832-6	3.854-6	2.952-6
36	97	3.201-6	3.118-6	2.996-6	2.826-6	2.603-6	2.472-6	2.327-6	2.007-6	1.664-6	1.325-6	1.011-6
37	38	1.329-1	1.295-1	1.248-1	1.183-1	1.098-1	1.047-1	9.915-2	8.671-2	7.313-2	5.933-2	4.622-2
37	39	1.197-1	1.191-1	1.197-1	1.214-1	1.236-1	1.246-1	1.256-1	1.272-1	1.285-1	1.288-1	1.250-1
37	40	8.608-3	8.304-3	7.918-3	7.430-3	6.823-3	6.474-3	6.095-3	5.266-3	4.382-3	3.505-3	2.691-3
37	41	5.336-3	5.138-3	4.885-3	4.568-3	4.184-3	3.968-3	3.740-3	3.260-3	2.781-3	2.336-3	1.929-3
37	42	5.998-3	5.721-3	5.397-3	5.028-3	4.608-3	4.378-3	4.138-3	3.635-3	3.133-3	2.665-3	2.232-3
37	43	4.551-3	4.283-3	3.981-3	3.645-3	3.271-3	3.069-3	2.857-3	2.413-3	1.962-3	1.534-3	1.152-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a\pm b \equiv a\times 10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
37	44	1.205-3	1.077-3	9.461-4	8.229-4	7.086-4	6.541-4	6.012-4	4.995-4	4.048-4	3.197-4	2.459-4
37	45	4.149-3	3.971-3	3.744-3	3.458-3	3.107-3	2.909-3	2.699-3	2.253-3	1.802-3	1.381-3	1.016-3
37	46	2.274-3	2.161-3	2.036-3	1.896-3	1.740-3	1.655-3	1.568-3	1.388-3	1.215-3	1.060-3	9.169-4
37	47	1.074-3	1.004-3	9.286-4	8.499-4	7.659-4	7.214-4	6.752-4	5.788-4	4.803-4	3.847-4	2.967-4
37	48	1.547-4	1.357-4	1.176-4	1.011-4	8.628-5	7.929-5	7.252-5	5.962-5	4.765-5	3.689-5	2.763-5
37	49	2.536-3	2.410-3	2.271-3	2.111-3	1.922-3	1.816-3	1.703-3	1.459-3	1.204-3	9.558-4	7.289-4
37	50	4.395-3	4.234-3	4.034-3	3.783-3	3.472-3	3.293-3	3.098-3	2.673-3	2.220-3	1.772-3	1.358-3
37	51	4.786-4	4.452-4	4.130-4	3.799-4	3.436-4	3.240-4	3.034-4	2.598-4	2.150-4	1.718-4	1.324-4
37	52	8.158-3	7.907-3	7.592-3	7.188-3	6.671-3	6.367-3	6.032-3	5.280-3	4.455-3	3.613-3	2.809-3
37	53	2.206-4	1.633-4	1.182-4	8.486-5	6.100-5	5.180-5	4.403-5	3.183-5	2.294-5	1.640-5	1.158-5
37	54	9.476-5	6.887-5	4.809-5	3.267-5	2.181-5	1.773-5	1.439-5	9.432-6	6.149-6	3.991-6	2.580-6
37	55	2.886-3	2.764-3	2.617-3	2.436-3	2.213-3	2.087-3	1.951-3	1.660-3	1.359-3	1.070-3	8.089-4
37	56	1.521-3	1.444-3	1.367-3	1.286-3	1.196-3	1.147-3	1.096-3	9.884-4	8.786-4	7.714-4	6.631-4
37	57	3.486-3	3.347-3	3.182-3	2.978-3	2.726-3	2.581-3	2.424-3	2.082-3	1.721-3	1.366-3	1.041-3
37	58	1.394-4	1.151-4	9.554-5	7.986-5	6.695-5	6.118-5	5.576-5	4.570-5	3.656-5	2.844-5	2.144-5
37	59	3.855-4	3.602-4	3.347-4	3.076-4	2.777-4	2.614-4	2.442-4	2.079-4	1.705-4	1.345-4	1.020-4
37	60	1.027-3	9.782-4	9.241-4	8.604-4	7.843-4	7.414-4	6.958-4	5.986-4	4.992-4	4.044-4	3.183-4
37	61	4.824-3	4.675-3	4.471-3	4.196-3	3.841-3	3.633-3	3.407-3	2.914-3	2.395-3	1.889-3	1.430-3
37	62	4.011-3	3.890-3	3.721-3	3.492-3	3.195-3	3.022-3	2.833-3	2.421-3	1.988-3	1.567-3	1.186-3
37	63	4.688-3	4.565-3	4.394-3	4.158-3	3.847-3	3.663-3	3.460-3	3.010-3	2.528-3	2.049-3	1.602-3
37	64	1.802-3	1.746-3	1.671-3	1.570-3	1.439-3	1.363-3	1.279-3	1.097-3	9.048-4	7.164-4	5.446-4
37	65	1.290-4	1.242-4	1.182-4	1.107-4	1.011-4	9.561-5	8.965-5	7.672-5	6.326-5	5.028-5	3.854-5
37	66	1.141-3	1.100-3	1.049-3	9.840-4	9.022-4	8.547-4	8.031-4	6.902-4	5.706-4	4.530-4	3.452-4
37	67	2.283-4	2.160-4	2.028-4	1.879-4	1.708-4	1.614-4	1.513-4	1.299-4	1.076-4	8.598-5	6.611-5
37	68	7.002-4	6.766-4	6.470-4	6.096-4	5.630-4	5.363-4	5.078-4	4.469-4	3.852-4	3.268-4	2.720-4
37	69	2.312-4	2.201-4	2.079-4	1.940-4	1.774-4	1.681-4	1.580-4	1.364-4	1.134-4	9.077-5	6.976-5
37	70	1.581-3	1.546-3	1.496-3	1.425-3	1.330-3	1.273-3	1.209-3	1.064-3	9.032-4	7.365-4	5.756-4
37	71	8.048-4	7.788-4	7.435-4	6.966-4	6.367-4	6.020-4	5.646-4	4.839-4	3.999-4	3.183-4	2.437-4
37	72	4.864-4	4.785-4	4.685-4	4.538-4	4.319-4	4.180-4	4.023-4	3.663-4	3.277-4	2.903-4	2.536-4
37	73	1.415-3	1.377-3	1.322-3	1.246-3	1.146-3	1.087-3	1.022-3	8.803-4	7.285-4	5.787-4	4.411-4
37	74	4.407-4	4.280-4	4.138-4	3.967-4	3.753-4	3.628-4	3.490-4	3.184-4	2.855-4	2.525-4	2.188-4
37	75	4.708-4	4.519-4	4.291-4	4.007-4	3.656-4	3.455-4	3.237-4	2.767-4	2.275-4	1.796-4	1.362-4
37	76	2.769-4	2.648-4	2.507-4	2.337-4	2.130-4	2.011-4	1.884-4	1.609-4	1.322-4	1.044-4	7.915-5
37	77	6.271-5	5.949-5	5.585-5	5.164-5	4.670-5	4.394-5	4.101-5	3.477-5	2.834-5	2.218-5	1.667-5
37	78	8.018-4	7.800-4	7.485-4	7.051-4	6.479-4	6.142-4	5.774-4	4.964-4	4.102-4	3.254-4	2.477-4
37	79	2.295-4	2.301-4	2.315-4	2.319-4	2.298-4	2.277-4	2.247-4	2.170-4	2.081-4	1.995-4	1.881-4
37	80	4.347-4	4.223-4	4.050-4	3.817-4	3.517-4	3.341-4	3.150-4	2.730-4	2.282-4	1.837-4	1.421-4
37	81	7.918-5	7.875-5	7.835-5	7.773-5	7.666-5	7.592-5	7.503-5	7.286-5	7.033-5	6.741-5	6.294-5
37	82	1.389-5	1.330-5	1.265-5	1.190-5	1.103-5	1.054-5	1.002-5	8.879-6	7.652-6	6.403-6	5.176-6
37	83	6.632-6	6.509-6	6.394-6	6.252-6	6.052-6	5.923-6	5.773-6	5.406-6	4.963-6	4.456-6	3.869-6
37	84	1.898-4	1.861-4	1.806-4	1.728-4	1.624-4	1.563-4	1.497-4	1.354-4	1.205-4	1.059-4	9.114-5
37	85	6.028-5	5.875-5	5.673-5	5.408-5	5.066-5	4.862-5	4.636-5	4.121-5	3.540-5	2.930-5	2.329-5
37	86	2.924-5	2.886-5	2.833-5	2.759-5	2.653-5	2.588-5	2.513-5	2.341-5	2.148-5	1.940-5	1.703-5
37	87	5.775-6	5.484-6	5.177-6	4.834-6	4.434-6	4.207-6	3.963-6	3.429-6	2.858-6	2.288-6	1.758-6
37	88	9.250-5	8.872-5	8.416-5	7.850-5	7.149-5	6.747-5	6.316-5	5.389-5	4.432-5	3.514-5	2.686-5
37	89	1.137-4	1.091-4	1.035-4	9.649-5	8.776-5	8.275-5	7.737-5	6.577-5	5.374-5	4.217-5	3.179-5
37	90	7.891-5	7.561-5	7.170-5	6.692-5	6.105-5	5.768-5	5.406-5	4.624-5	3.807-5	3.012-5	2.289-5
37	91	7.484-6	7.750-6	7.944-6	8.079-6	8.173-6	8.212-6	8.250-6	8.336-6	8.467-6	8.631-6	8.579-6

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
37	92	1.601-6	1.364-6	1.189-6	1.046-6	9.164-7	8.527-7	7.890-7	6.616-7	5.372-7	4.214-7	3.191-7
37	93	8.997-6	8.863-6	8.633-6	8.298-6	7.858-6	7.595-6	7.302-6	6.630-6	5.862-6	5.031-6	4.162-6
37	94	2.444-4	2.395-4	2.320-4	2.214-4	2.070-4	1.983-4	1.885-4	1.661-4	1.411-4	1.152-4	9.009-5
37	95	9.656-5	9.473-5	9.198-5	8.806-5	8.274-5	7.953-5	7.594-5	6.781-5	5.880-5	4.950-5	4.030-5
37	96	1.756-6	1.741-6	1.728-6	1.716-6	1.705-6	1.700-6	1.696-6	1.694-6	1.705-6	1.725-6	1.704-6
37	97	7.880-7	7.718-7	7.495-7	7.217-7	6.878-7	6.677-7	6.454-7	5.932-7	5.322-7	4.641-7	3.898-7
38	39	2.915-1	2.851-1	2.765-1	2.650-1	2.499-1	2.408-1	2.308-1	2.083-1	1.837-1	1.584-1	1.328-1
38	40	1.643-1	1.630-1	1.632-1	1.646-1	1.664-1	1.672-1	1.678-1	1.688-1	1.694-1	1.687-1	1.629-1
38	41	2.069-2	1.994-2	1.897-2	1.776-2	1.629-2	1.546-2	1.457-2	1.270-2	1.080-2	9.000-3	7.346-3
38	42	1.418-2	1.335-2	1.240-2	1.134-2	1.016-2	9.523-3	8.860-3	7.479-3	6.089-3	4.779-3	3.616-3
38	43	1.861-2	1.778-2	1.684-2	1.580-2	1.463-2	1.398-2	1.331-2	1.189-2	1.046-2	9.119-3	7.834-3
38	44	5.366-3	4.938-3	4.474-3	4.004-3	3.530-3	3.290-3	3.048-3	2.562-3	2.087-3	1.646-3	1.256-3
38	45	1.230-2	1.178-2	1.111-2	1.028-2	9.256-3	8.679-3	8.066-3	6.769-3	5.462-3	4.245-3	3.186-3
38	46	8.929-3	8.585-3	8.207-3	7.786-3	7.306-3	7.043-3	6.766-3	6.194-3	5.641-3	5.144-3	4.640-3
38	47	3.168-3	2.968-3	2.758-3	2.537-3	2.300-3	2.174-3	2.042-3	1.769-3	1.496-3	1.240-3	1.009-3
38	48	4.606-4	4.145-4	3.695-4	3.269-4	2.858-4	2.655-4	2.452-4	2.048-4	1.657-4	1.294-4	9.735-5
38	49	8.670-3	8.284-3	7.841-3	7.316-3	6.686-3	6.330-3	5.946-3	5.116-3	4.243-3	3.388-3	2.603-3
38	50	1.095-2	1.054-2	1.005-2	9.441-3	8.689-3	8.254-3	7.783-3	6.750-3	5.650-3	4.561-3	3.547-3
38	51	2.101-3	1.997-3	1.882-3	1.750-3	1.593-3	1.505-3	1.411-3	1.208-3	9.963-4	7.895-4	6.008-4
38	52	2.096-2	2.029-2	1.947-2	1.844-2	1.713-2	1.636-2	1.551-2	1.362-2	1.153-2	9.406-3	7.375-3
38	53	4.470-3	4.210-3	3.949-3	3.674-3	3.368-3	3.199-3	3.019-3	2.628-3	2.208-3	1.786-3	1.386-3
38	54	4.743-4	3.436-4	2.397-4	1.631-4	1.095-4	8.940-5	7.292-5	4.841-5	3.210-5	2.127-5	1.408-5
38	55	8.268-3	7.937-3	7.536-3	7.039-3	6.430-3	6.083-3	5.711-3	4.915-3	4.093-3	3.303-3	2.582-3
38	56	4.998-3	4.731-3	4.445-3	4.120-3	3.742-3	3.531-3	3.307-3	2.826-3	2.326-3	1.842-3	1.401-3
38	57	1.036-2	9.956-3	9.477-3	8.886-3	8.156-3	7.737-3	7.284-3	6.298-3	5.259-3	4.237-3	3.291-3
38	58	5.187-4	4.470-4	3.868-4	3.357-4	2.903-4	2.687-4	2.476-4	2.065-4	1.671-4	1.307-4	9.850-5
38	59	1.331-3	1.253-3	1.173-3	1.088-3	9.914-4	9.381-4	8.816-4	7.607-4	6.348-4	5.122-4	3.994-4
38	60	4.711-3	4.522-3	4.296-3	4.016-3	3.670-3	3.471-3	3.258-3	2.797-3	2.317-3	1.852-3	1.428-3
38	61	1.180-2	1.142-2	1.091-2	1.024-2	9.371-3	8.865-3	8.315-3	7.117-3	5.858-3	4.632-3	3.519-3
38	62	1.075-2	1.044-2	9.999-3	9.407-3	8.636-3	8.183-3	7.690-3	6.613-3	5.480-3	4.377-3	3.373-3
38	63	1.218-2	1.181-2	1.132-2	1.066-2	9.804-3	9.300-3	8.749-3	7.537-3	6.247-3	4.976-3	3.808-3
38	64	6.735-3	6.526-3	6.241-3	5.860-3	5.367-3	5.078-3	4.764-3	4.079-3	3.356-3	2.651-3	2.010-3
38	65	3.011-4	2.883-4	2.730-4	2.539-4	2.305-4	2.171-4	2.028-4	1.719-4	1.399-4	1.093-4	8.199-5
38	66	5.679-3	5.509-3	5.285-3	4.989-3	4.605-3	4.379-3	4.132-3	3.589-3	3.010-3	2.438-3	1.906-3
38	67	1.062-3	1.023-3	9.808-4	9.306-4	8.695-4	8.344-4	7.966-4	7.151-4	6.309-4	5.499-4	4.709-4
38	68	1.906-3	1.829-3	1.734-3	1.614-3	1.467-3	1.383-3	1.294-3	1.104-3	9.104-4	7.267-4	5.622-4
38	69	6.152-4	5.831-4	5.494-4	5.116-4	4.676-4	4.430-4	4.167-4	3.599-4	2.999-4	2.406-4	1.855-4
38	70	5.331-3	5.226-3	5.072-3	4.854-3	4.556-3	4.376-3	4.174-3	3.716-3	3.207-3	2.679-3	2.162-3
38	71	2.175-3	2.118-3	2.040-3	1.934-3	1.795-3	1.712-3	1.622-3	1.424-3	1.217-3	1.016-3	8.294-4
38	72	1.519-3	1.469-3	1.404-3	1.319-3	1.211-3	1.149-3	1.081-3	9.335-4	7.786-4	6.271-4	4.875-4
38	73	4.054-3	3.948-3	3.797-3	3.587-3	3.310-3	3.145-3	2.965-3	2.565-3	2.139-3	1.719-3	1.332-3
38	74	1.340-3	1.294-3	1.240-3	1.171-3	1.085-3	1.035-3	9.804-4	8.601-4	7.318-4	6.049-4	4.852-4
38	75	1.473-3	1.416-3	1.349-3	1.266-3	1.165-3	1.108-3	1.046-3	9.109-4	7.700-4	6.322-4	5.034-4
38	76	9.000-4	8.620-4	8.173-4	7.627-4	6.957-4	6.574-4	6.162-4	5.270-4	4.337-4	3.428-4	2.603-4
38	77	1.943-4	1.861-4	1.764-4	1.648-4	1.507-4	1.427-4	1.342-4	1.158-4	9.658-5	7.795-5	6.085-5
38	78	2.462-3	2.396-3	2.301-3	2.170-3	1.997-3	1.895-3	1.784-3	1.538-3	1.277-3	1.019-3	7.813-4
38	79	9.194-4	9.007-4	8.749-4	8.385-4	7.885-4	7.581-4	7.244-4	6.490-4	5.682-4	4.882-4	4.108-4
38	80	1.322-3	1.321-3	1.323-3	1.317-3	1.295-3	1.276-3	1.253-3	1.197-3	1.136-3	1.078-3	1.006-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
38	81	1.101-4	1.069-4	1.030-4	9.812-5	9.187-5	8.820-5	8.416-5	7.515-5	6.534-5	5.544-5	4.580-5
38	82	3.164-5	3.037-5	2.906-5	2.764-5	2.603-5	2.515-5	2.421-5	2.222-5	2.019-5	1.825-5	1.623-5
38	83	5.394-6	5.056-6	4.704-6	4.339-6	3.949-6	3.741-6	3.523-6	3.060-6	2.575-6	2.092-6	1.636-6
38	84	4.754-4	4.641-4	4.480-4	4.257-4	3.964-4	3.793-4	3.606-4	3.200-4	2.775-4	2.359-4	1.957-4
38	85	2.600-4	2.548-4	2.476-4	2.380-4	2.255-4	2.181-4	2.101-4	1.921-4	1.724-4	1.518-4	1.299-4
38	86	7.326-5	7.157-5	6.923-5	6.603-5	6.179-5	5.926-5	5.645-5	5.013-5	4.313-5	3.586-5	2.870-5
38	87	2.951-5	3.173-5	3.410-5	3.635-5	3.841-5	3.938-5	4.031-5	4.217-5	4.417-5	4.630-5	4.713-5
38	88	2.933-4	2.823-4	2.688-4	2.519-4	2.309-4	2.188-4	2.057-4	1.775-4	1.483-4	1.200-4	9.423-5
38	89	3.590-4	3.444-4	3.269-4	3.052-4	2.783-4	2.630-4	2.465-4	2.108-4	1.737-4	1.379-4	1.054-4
38	90	2.537-4	2.422-4	2.290-4	2.132-4	1.939-4	1.830-4	1.713-4	1.461-4	1.199-4	9.461-5	7.171-5
38	91	1.029-5	9.889-6	9.411-6	8.816-6	8.075-6	7.648-6	7.189-6	6.196-6	5.166-6	4.175-6	3.273-6
38	92	3.833-6	3.333-6	2.951-6	2.626-6	2.316-6	2.160-6	2.002-6	1.680-6	1.361-6	1.062-6	7.971-7
38	93	6.894-5	6.732-5	6.505-5	6.192-5	5.774-5	5.522-5	5.241-5	4.606-5	3.900-5	3.173-5	2.475-5
38	94	6.199-4	6.092-4	5.929-4	5.691-4	5.363-4	5.162-4	4.937-4	4.422-4	3.845-4	3.245-4	2.645-4
38	95	3.809-4	3.729-4	3.610-4	3.441-4	3.212-4	3.074-4	2.919-4	2.568-4	2.178-4	1.776-4	1.389-4
38	96	3.332-6	3.242-6	3.114-6	2.937-6	2.706-6	2.569-6	2.421-6	2.095-6	1.752-6	1.415-6	1.105-6
38	97	1.946-7	1.892-7	1.813-7	1.707-7	1.571-7	1.491-7	1.404-7	1.213-7	1.010-7	8.074-8	6.197-8
39	40	4.386-1	4.303-1	4.204-1	4.080-1	3.917-1	3.818-1	3.708-1	3.459-1	3.185-1	2.897-1	2.571-1
39	41	1.387-1	1.368-1	1.356-1	1.348-1	1.338-1	1.331-1	1.323-1	1.303-1	1.280-1	1.252-1	1.190-1
39	42	1.991-2	1.859-2	1.716-2	1.566-2	1.406-2	1.322-2	1.236-2	1.058-2	8.810-3	7.138-3	5.623-3
39	43	2.965-2	2.796-2	2.608-2	2.401-2	2.174-2	2.052-2	1.924-2	1.658-2	1.390-2	1.135-2	9.016-3
39	44	2.001-2	1.907-2	1.801-2	1.687-2	1.562-2	1.495-2	1.425-2	1.280-2	1.136-2	9.993-3	8.653-3
39	45	2.218-2	2.131-2	2.025-2	1.894-2	1.736-2	1.648-2	1.553-2	1.354-2	1.155-2	9.710-3	8.038-3
39	46	1.852-2	1.797-2	1.738-2	1.674-2	1.599-2	1.556-2	1.511-2	1.416-2	1.326-2	1.247-2	1.159-2
39	47	5.790-3	5.454-3	5.073-3	4.645-3	4.165-3	3.906-3	3.635-3	3.074-3	2.519-3	2.009-3	1.564-3
39	48	7.648-4	7.217-4	6.843-4	6.511-4	6.180-4	6.006-4	5.823-4	5.442-4	5.075-4	4.756-4	4.417-4
39	49	1.803-2	1.735-2	1.654-2	1.554-2	1.432-2	1.362-2	1.286-2	1.120-2	9.443-3	7.713-3	6.098-3
39	50	1.283-2	1.233-2	1.173-2	1.102-2	1.015-2	9.653-3	9.115-3	7.942-3	6.699-3	5.472-3	4.323-3
39	51	4.444-3	4.287-3	4.096-3	3.856-3	3.553-3	3.377-3	3.185-3	2.763-3	2.314-3	1.872-3	1.462-3
39	52	2.517-2	2.433-2	2.334-2	2.213-2	2.062-2	1.973-2	1.875-2	1.657-2	1.419-2	1.176-2	9.407-3
39	53	1.728-2	1.663-2	1.590-2	1.504-2	1.397-2	1.335-2	1.268-2	1.116-2	9.509-3	7.829-3	6.223-3
39	54	2.995-3	2.561-3	2.192-3	1.886-3	1.626-3	1.507-3	1.393-3	1.174-3	9.643-4	7.674-4	5.891-4
39	55	1.062-2	1.021-2	9.730-3	9.136-3	8.399-3	7.975-3	7.518-3	6.531-3	5.513-3	4.542-3	3.656-3
39	56	1.515-2	1.460-2	1.395-2	1.315-2	1.217-2	1.161-2	1.101-2	9.724-3	8.384-3	7.073-3	5.818-3
39	57	1.565-2	1.503-2	1.427-2	1.335-2	1.221-2	1.156-2	1.085-2	9.316-3	7.700-3	6.117-3	4.668-3
39	58	1.612-3	1.474-3	1.347-3	1.226-3	1.103-3	1.038-3	9.722-4	8.350-4	6.966-4	5.646-4	4.445-4
39	59	2.817-3	2.668-3	2.513-3	2.341-3	2.142-3	2.031-3	1.912-3	1.654-3	1.382-3	1.114-3	8.663-4
39	60	1.241-2	1.199-2	1.146-2	1.077-2	9.887-3	9.374-3	8.816-3	7.599-3	6.314-3	5.056-3	3.899-3
39	61	1.230-2	1.184-2	1.126-2	1.053-2	9.619-3	9.091-3	8.521-3	7.285-3	5.991-3	4.735-3	3.597-3
39	62	1.268-2	1.230-2	1.178-2	1.108-2	1.018-2	9.647-3	9.071-3	7.811-3	6.486-3	5.199-3	4.026-3
39	63	1.702-2	1.647-2	1.574-2	1.480-2	1.358-2	1.286-2	1.209-2	1.039-2	8.602-3	6.857-3	5.266-3
39	64	1.505-2	1.459-2	1.395-2	1.310-2	1.199-2	1.135-2	1.064-2	9.111-3	7.500-3	5.932-3	4.510-3
39	65	5.419-4	5.190-4	4.920-4	4.593-4	4.198-4	3.973-4	3.733-4	3.219-4	2.688-4	2.176-4	1.709-4
39	66	1.474-2	1.430-2	1.371-2	1.292-2	1.188-2	1.127-2	1.061-2	9.139-3	7.578-3	6.041-3	4.628-3
39	67	2.435-3	2.351-3	2.250-3	2.126-3	1.973-3	1.886-3	1.793-3	1.593-3	1.389-3	1.194-3	1.007-3
39	68	3.239-3	3.114-3	2.962-3	2.771-3	2.534-3	2.397-3	2.250-3	1.933-3	1.604-3	1.291-3	1.008-3
39	69	9.650-4	9.182-4	8.704-4	8.175-4	7.559-4	7.212-4	6.839-4	6.026-4	5.163-4	4.304-4	3.481-4
39	70	1.000-2	9.806-3	9.518-3	9.110-3	8.556-3	8.220-3	7.845-3	6.995-3	6.051-3	5.075-3	4.113-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
39	71	2.696-3	2.652-3	2.594-3	2.509-3	2.385-3	2.307-3	2.219-3	2.020-3	1.810-3	1.607-3	1.407-3
39	72	3.134-3	3.039-3	2.914-3	2.746-3	2.532-3	2.407-3	2.271-3	1.979-3	1.674-3	1.382-3	1.112-3
39	73	5.961-3	5.794-3	5.558-3	5.237-3	4.818-3	4.571-3	4.302-3	3.711-3	3.082-3	2.462-3	1.892-3
39	74	2.737-3	2.643-3	2.524-3	2.371-3	2.177-3	2.065-3	1.942-3	1.673-3	1.387-3	1.105-3	8.446-4
39	75	2.129-3	2.045-3	1.946-3	1.823-3	1.672-3	1.585-3	1.492-3	1.288-3	1.072-3	8.598-4	6.641-4
39	76	2.091-3	2.018-3	1.932-3	1.826-3	1.694-3	1.617-3	1.534-3	1.353-3	1.162-3	9.760-4	8.003-4
39	77	3.682-4	3.529-4	3.348-4	3.131-4	2.869-4	2.720-4	2.560-4	2.216-4	1.854-4	1.498-4	1.166-4
39	78	4.200-3	4.091-3	3.932-3	3.711-3	3.420-3	3.247-3	3.059-3	2.642-3	2.197-3	1.758-3	1.352-3
39	79	2.414-3	2.351-3	2.260-3	2.137-3	1.976-3	1.882-3	1.779-3	1.554-3	1.316-3	1.080-3	8.578-4
39	80	1.867-3	1.911-3	1.981-3	2.052-3	2.106-3	2.123-3	2.134-3	2.143-3	2.148-3	2.159-3	2.128-3
39	81	1.877-4	1.818-4	1.746-4	1.654-4	1.539-4	1.472-4	1.398-4	1.236-4	1.060-4	8.822-5	7.109-5
39	82	5.023-5	4.823-5	4.599-5	4.339-5	4.029-5	3.854-5	3.667-5	3.268-5	2.858-5	2.463-5	2.081-5
39	83	2.093-5	2.006-5	1.900-5	1.771-5	1.616-5	1.528-5	1.433-5	1.231-5	1.021-5	8.182-6	6.336-6
39	84	6.506-4	6.314-4	6.051-4	5.696-4	5.239-4	4.972-4	4.683-4	4.053-4	3.394-4	2.755-4	2.167-4
39	85	4.094-4	3.992-4	3.852-4	3.660-4	3.408-4	3.259-4	3.096-4	2.739-4	2.362-4	1.988-4	1.629-4
39	86	1.830-4	1.813-4	1.785-4	1.742-4	1.680-4	1.642-4	1.599-4	1.501-4	1.390-4	1.271-4	1.133-4
39	87	6.549-5	7.052-5	7.602-5	8.137-5	8.633-5	8.867-5	9.095-5	9.545-5	1.002-4	1.052-4	1.070-4
39	88	5.392-4	5.191-4	4.947-4	4.641-4	4.259-4	4.038-4	3.800-4	3.282-4	2.737-4	2.202-4	1.708-4
39	89	6.179-4	5.936-4	5.653-4	5.305-4	4.879-4	4.636-4	4.374-4	3.807-4	3.215-4	2.636-4	2.098-4
39	90	5.379-4	5.134-4	4.857-4	4.529-4	4.135-4	3.912-4	3.674-4	3.163-4	2.636-4	2.127-4	1.664-4
39	91	7.656-5	8.354-5	8.966-5	9.522-5	1.006-4	1.033-4	1.061-4	1.120-4	1.188-4	1.259-4	1.291-4
39	92	1.071-5	1.007-5	9.457-6	8.804-6	8.056-6	7.641-6	7.201-6	6.267-6	5.315-6	4.407-6	3.568-6
39	93	2.682-4	2.630-4	2.554-4	2.445-4	2.299-4	2.211-4	2.112-4	1.889-4	1.639-4	1.380-4	1.122-4
39	94	5.655-4	5.558-4	5.413-4	5.204-4	4.917-4	4.742-4	4.548-4	4.104-4	3.610-4	3.094-4	2.570-4
39	95	1.011-3	9.914-4	9.628-4	9.219-4	8.661-4	8.321-4	7.942-4	7.078-4	6.113-4	5.110-4	4.120-4
39	96	1.111-5	1.099-5	1.082-5	1.057-5	1.021-5	9.988-6	9.739-6	9.176-6	8.565-6	7.933-6	7.188-6
39	97	8.104-7	7.917-7	7.652-7	7.297-7	6.844-7	6.583-7	6.301-7	5.692-7	5.060-7	4.441-7	3.814-7
40	41	4.952-1	4.868-1	4.782-1	4.684-1	4.557-1	4.479-1	4.390-1	4.188-1	3.964-1	3.721-1	3.407-1
40	42	1.978-2	1.816-2	1.648-2	1.479-2	1.309-2	1.222-2	1.134-2	9.556-3	7.799-3	6.157-3	4.702-3
40	43	3.502-2	3.232-2	2.952-2	2.670-2	2.379-2	2.230-2	2.077-2	1.766-2	1.457-2	1.167-2	9.053-3
40	44	4.626-2	4.385-2	4.114-2	3.817-2	3.490-2	3.315-2	3.133-2	2.753-2	2.371-2	2.005-2	1.658-2
40	45	3.984-2	3.871-2	3.750-2	3.617-2	3.461-2	3.373-2	3.279-2	3.082-2	2.894-2	2.729-2	2.542-2
40	46	2.393-2	2.308-2	2.211-2	2.099-2	1.964-2	1.888-2	1.807-2	1.634-2	1.462-2	1.308-2	1.161-2
40	47	1.214-2	1.165-2	1.103-2	1.029-2	9.414-3	8.929-3	8.420-3	7.364-3	6.330-3	5.386-3	4.524-3
40	48	5.360-4	4.826-4	4.314-4	3.835-4	3.376-4	3.150-4	2.923-4	2.468-4	2.020-4	1.596-4	1.215-4
40	49	3.365-2	3.262-2	3.134-2	2.972-2	2.768-2	2.649-2	2.519-2	2.234-2	1.930-2	1.628-2	1.339-2
40	50	1.087-2	1.040-2	9.861-3	9.224-3	8.463-3	8.034-3	7.573-3	6.577-3	5.532-3	4.506-3	3.550-3
40	51	5.346-3	5.171-3	4.947-3	4.659-3	4.292-3	4.078-3	3.845-3	3.330-3	2.777-3	2.225-3	1.711-3
40	52	1.812-2	1.736-2	1.655-2	1.563-2	1.452-2	1.389-2	1.321-2	1.170-2	1.006-2	8.409-3	6.806-3
40	53	3.660-2	3.548-2	3.419-2	3.258-2	3.056-2	2.936-2	2.804-2	2.507-2	2.182-2	1.849-2	1.521-2
40	54	1.467-2	1.369-2	1.277-2	1.187-2	1.091-2	1.039-2	9.847-3	8.670-3	7.429-3	6.209-3	5.059-3
40	55	9.125-3	8.798-3	8.429-3	7.986-3	7.435-3	7.116-3	6.771-3	6.021-3	5.245-3	4.508-3	3.812-3
40	56	2.962-2	2.884-2	2.788-2	2.664-2	2.502-2	2.406-2	2.300-2	2.069-2	1.826-2	1.592-2	1.363-2
40	57	2.518-2	2.434-2	2.332-2	2.207-2	2.053-2	1.965-2	1.870-2	1.665-2	1.450-2	1.239-2	1.033-2
40	58	4.309-3	4.029-3	3.745-3	3.443-3	3.107-3	2.924-3	2.731-3	2.324-3	1.905-3	1.502-3	1.139-3
40	59	5.053-3	4.820-3	4.573-3	4.296-3	3.969-3	3.785-3	3.586-3	3.152-3	2.691-3	2.232-3	1.795-3
40	60	2.023-2	1.961-2	1.877-2	1.766-2	1.622-2	1.537-2	1.445-2	1.242-2	1.027-2	8.160-3	6.222-3
40	61	1.039-2	9.911-3	9.392-3	8.786-3	8.059-3	7.646-3	7.202-3	6.243-3	5.239-3	4.260-3	3.354-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
40	62	9.379-3	9.066-3	8.664-3	8.141-3	7.474-3	7.085-3	6.662-3	5.737-3	4.760-3	3.807-3	2.935-3
40	63	1.865-2	1.801-2	1.720-2	1.615-2	1.481-2	1.402-2	1.318-2	1.133-2	9.412-3	7.566-3	5.896-3
40	64	2.745-2	2.659-2	2.542-2	2.383-2	2.179-2	2.059-2	1.929-2	1.647-2	1.352-2	1.065-2	8.067-3
40	65	1.164-3	1.112-3	1.051-3	9.756-4	8.835-4	8.313-4	7.753-4	6.556-4	5.324-4	4.150-4	3.108-4
40	66	2.885-2	2.803-2	2.689-2	2.534-2	2.332-2	2.212-2	2.082-2	1.795-2	1.491-2	1.192-2	9.179-3
40	67	3.802-3	3.668-3	3.497-3	3.279-3	3.007-3	2.850-3	2.683-3	2.324-3	1.958-3	1.610-3	1.293-3
40	68	5.688-3	5.519-3	5.314-3	5.057-3	4.733-3	4.545-3	4.343-3	3.903-3	3.445-3	2.998-3	2.557-3
40	69	1.596-3	1.529-3	1.456-3	1.371-3	1.268-3	1.210-3	1.146-3	1.005-3	8.540-4	7.011-4	5.553-4
40	70	1.490-2	1.464-2	1.424-2	1.368-2	1.290-2	1.242-2	1.188-2	1.065-2	9.292-3	7.884-3	6.487-3
40	71	1.872-3	1.826-3	1.769-3	1.692-3	1.590-3	1.528-3	1.460-3	1.308-3	1.147-3	9.889-4	8.366-4
40	72	5.743-3	5.647-3	5.519-3	5.330-3	5.059-3	4.890-3	4.702-3	4.280-3	3.837-3	3.414-3	3.000-3
40	73	7.093-3	6.886-3	6.604-3	6.226-3	5.737-3	5.452-3	5.142-3	4.465-3	3.752-3	3.055-3	2.411-3
40	74	4.496-3	4.347-3	4.163-3	3.927-3	3.627-3	3.451-3	3.260-3	2.841-3	2.394-3	1.952-3	1.539-3
40	75	2.543-3	2.439-3	2.322-3	2.181-3	2.009-3	1.910-3	1.803-3	1.569-3	1.323-3	1.083-3	8.607-4
40	76	4.411-3	4.257-3	4.074-3	3.843-3	3.552-3	3.383-3	3.198-3	2.791-3	2.356-3	1.925-3	1.521-3
40	77	5.937-4	5.725-4	5.490-4	5.207-4	4.857-4	4.654-4	4.434-4	3.950-4	3.436-4	2.930-4	2.443-4
40	78	6.146-3	5.989-3	5.762-3	5.449-3	5.038-3	4.794-3	4.529-3	3.944-3	3.321-3	2.706-3	2.131-3
40	79	5.062-3	4.992-3	4.892-3	4.735-3	4.502-3	4.356-3	4.191-3	3.817-3	3.415-3	3.024-3	2.636-3
40	80	1.568-3	1.578-3	1.597-3	1.609-3	1.602-3	1.590-3	1.572-3	1.525-3	1.473-3	1.426-3	1.360-3
40	81	2.741-4	2.719-4	2.710-4	2.693-4	2.649-4	2.614-4	2.571-4	2.463-4	2.344-4	2.232-4	2.097-4
40	82	1.207-4	1.165-4	1.113-4	1.046-4	9.635-5	9.156-5	8.639-5	7.520-5	6.349-5	5.210-5	4.151-5
40	83	6.982-5	6.729-5	6.388-5	5.941-5	5.377-5	5.052-5	4.704-5	3.956-5	3.187-5	2.459-5	1.820-5
40	84	8.708-4	8.437-4	8.070-4	7.582-4	6.957-4	6.592-4	6.196-4	5.334-4	4.428-4	3.545-4	2.738-4
40	85	6.345-4	6.256-4	6.118-4	5.902-4	5.589-4	5.396-4	5.181-4	4.702-4	4.193-4	3.695-4	3.199-4
40	86	1.643-4	1.592-4	1.522-4	1.429-4	1.309-4	1.240-4	1.164-4	9.978-5	8.216-5	6.486-5	4.908-5
40	87	6.331-5	6.055-5	5.795-5	5.523-5	5.216-5	5.045-5	4.864-5	4.477-5	4.086-5	3.717-5	3.334-5
40	88	7.466-4	7.190-4	6.853-4	6.430-4	5.899-4	5.593-4	5.260-4	4.536-4	3.772-4	3.025-4	2.338-4
40	89	8.353-4	8.041-4	7.688-4	7.262-4	6.740-4	6.440-4	6.114-4	5.402-4	4.641-4	3.874-4	3.131-4
40	90	1.183-3	1.133-3	1.077-3	1.011-3	9.306-4	8.854-4	8.369-4	7.324-4	6.236-4	5.175-4	4.177-4
40	91	2.297-4	2.511-4	2.698-4	2.867-4	3.032-4	3.115-4	3.201-4	3.383-4	3.588-4	3.802-4	3.894-4
40	92	3.802-5	3.629-5	3.434-5	3.198-5	2.907-5	2.742-5	2.564-5	2.181-5	1.785-5	1.405-5	1.064-5
40	93	3.499-4	3.424-4	3.314-4	3.159-4	2.949-4	2.822-4	2.679-4	2.354-4	1.993-4	1.620-4	1.262-4
40	94	2.753-4	2.692-4	2.602-4	2.475-4	2.305-4	2.202-4	2.089-4	1.832-4	1.550-4	1.262-4	9.874-5
40	95	2.056-3	2.027-3	1.982-3	1.915-3	1.822-3	1.765-3	1.702-3	1.556-3	1.393-3	1.221-3	1.041-3
40	96	1.510-5	1.474-5	1.423-5	1.352-5	1.258-5	1.202-5	1.140-5	1.002-5	8.538-6	7.058-6	5.653-6
40	97	2.080-6	2.015-6	1.919-6	1.789-6	1.619-6	1.520-6	1.414-6	1.185-6	9.525-7	7.332-7	5.418-7
41	42	1.351-2	1.237-2	1.116-2	9.980-3	8.813-3	8.229-3	7.643-3	6.469-3	5.325-3	4.265-3	3.322-3
41	43	3.187-2	2.910-2	2.630-2	2.360-2	2.096-2	1.963-2	1.830-2	1.564-2	1.305-2	1.067-2	8.551-3
41	44	8.203-2	7.535-2	6.855-2	6.175-2	5.478-2	5.118-2	4.751-2	4.002-2	3.258-2	2.559-2	1.938-2
41	45	6.411-2	6.320-2	6.249-2	6.186-2	6.107-2	6.057-2	6.000-2	5.879-2	5.781-2	5.721-2	5.563-2
41	46	2.982-2	2.872-2	2.736-2	2.569-2	2.366-2	2.252-2	2.130-2	1.875-2	1.623-2	1.392-2	1.180-2
41	47	2.037-2	1.960-2	1.857-2	1.722-2	1.555-2	1.459-2	1.356-2	1.139-2	9.172-3	7.093-3	5.277-3
41	48	2.224-4	1.742-4	1.316-4	9.735-5	7.137-5	6.102-5	5.214-5	3.798-5	2.752-5	1.977-5	1.404-5
41	49	5.337-2	5.193-2	5.007-2	4.767-2	4.461-2	4.282-2	4.087-2	3.655-2	3.194-2	2.733-2	2.279-2
41	50	1.302-2	1.248-2	1.184-2	1.107-2	1.013-2	9.600-3	9.025-3	7.774-3	6.451-3	5.147-3	3.945-3
41	51	1.203-3	1.113-3	1.019-3	9.209-4	8.153-4	7.596-4	7.022-4	5.849-4	4.697-4	3.639-4	2.724-4
41	52	4.844-3	4.397-3	3.993-3	3.617-3	3.249-3	3.061-3	2.870-3	2.476-3	2.076-3	1.687-3	1.325-3
41	53	3.021-2	2.913-2	2.789-2	2.642-2	2.462-2	2.358-2	2.245-2	1.996-2	1.726-2	1.453-2	1.187-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
41	54	6.391-2	6.188-2	5.958-2	5.683-2	5.342-2	5.143-2	4.925-2	4.437-2	3.904-2	3.357-2	2.807-2
41	55	1.046-2	1.001-2	9.483-3	8.845-3	8.071-3	7.631-3	7.158-3	6.135-3	5.062-3	4.015-3	3.060-3
41	56	2.253-2	2.179-2	2.091-2	1.980-2	1.839-2	1.756-2	1.666-2	1.470-2	1.264-2	1.067-2	8.827-3
41	57	5.347-2	5.260-2	5.165-2	5.044-2	4.873-2	4.766-2	4.646-2	4.376-2	4.092-2	3.816-2	3.499-2
41	58	9.306-3	8.813-3	8.275-3	7.662-3	6.947-3	6.548-3	6.123-3	5.213-3	4.272-3	3.363-3	2.544-3
41	59	5.711-3	5.447-3	5.192-3	4.925-3	4.619-3	4.446-3	4.261-3	3.857-3	3.434-3	3.020-3	2.607-3
41	60	7.182-3	6.872-3	6.519-3	6.096-3	5.584-3	5.290-3	4.974-3	4.287-3	3.561-3	2.847-3	2.191-3
41	61	3.416-2	3.299-2	3.152-2	2.963-2	2.721-2	2.581-2	2.427-2	2.091-2	1.734-2	1.382-2	1.058-2
41	62	6.160-3	5.911-3	5.614-3	5.249-3	4.799-3	4.540-3	4.261-3	3.655-3	3.016-3	2.391-3	1.820-3
41	63	1.984-2	1.920-2	1.836-2	1.726-2	1.585-2	1.503-2	1.413-2	1.216-2	1.008-2	8.043-3	6.178-3
41	64	4.159-2	4.031-2	3.855-2	3.617-2	3.309-2	3.129-2	2.935-2	2.511-2	2.068-2	1.639-2	1.250-2
41	65	2.415-3	2.315-3	2.189-3	2.029-3	1.830-3	1.717-3	1.595-3	1.337-3	1.074-3	8.263-4	6.104-4
41	66	4.150-2	4.030-2	3.863-2	3.637-2	3.342-2	3.169-2	2.980-2	2.568-2	2.136-2	1.716-2	1.334-2
41	67	5.149-3	4.947-3	4.688-3	4.359-3	3.949-3	3.715-3	3.464-3	2.927-3	2.374-3	1.847-3	1.381-3
41	68	1.052-2	1.036-2	1.016-2	9.915-3	9.590-3	9.395-3	9.181-3	8.711-3	8.222-3	7.728-3	7.111-3
41	69	4.457-3	4.306-3	4.126-3	3.899-3	3.612-3	3.444-3	3.260-3	2.848-3	2.397-3	1.939-3	1.504-3
41	70	1.486-2	1.452-2	1.403-2	1.335-2	1.243-2	1.188-2	1.126-2	9.877-3	8.343-3	6.769-3	5.264-3
41	71	2.911-3	2.819-3	2.699-3	2.541-3	2.339-3	2.221-3	2.091-3	1.806-3	1.500-3	1.197-3	9.167-4
41	72	7.067-3	6.960-3	6.813-3	6.597-3	6.280-3	6.081-3	5.856-3	5.344-3	4.794-3	4.255-3	3.717-3
41	73	9.377-3	9.232-3	9.049-3	8.780-3	8.386-3	8.139-3	7.861-3	7.242-3	6.595-3	5.984-3	5.360-3
41	74	1.195-3	1.114-3	1.043-3	9.750-4	9.030-4	8.641-4	8.230-4	7.349-4	6.428-4	5.524-4	4.646-4
41	75	8.311-3	8.161-3	8.004-3	7.794-3	7.488-3	7.293-3	7.071-3	6.558-3	5.998-3	5.438-3	4.843-3
41	76	8.858-3	8.580-3	8.237-3	7.800-3	7.246-3	6.923-3	6.570-3	5.793-3	4.960-3	4.126-3	3.326-3
41	77	6.412-4	6.202-4	6.033-4	5.860-4	5.641-4	5.507-4	5.356-4	5.016-4	4.660-4	4.329-4	3.974-4
41	78	7.823-3	7.615-3	7.316-3	6.903-3	6.364-3	6.046-3	5.699-3	4.936-3	4.128-3	3.334-3	2.601-3
41	79	6.114-3	5.986-3	5.804-3	5.541-3	5.180-3	4.962-3	4.721-3	4.185-3	3.615-3	3.059-3	2.533-3
41	80	3.630-3	3.532-3	3.390-3	3.194-3	2.935-3	2.782-3	2.616-3	2.249-3	1.859-3	1.476-3	1.125-3
41	81	2.978-4	2.860-4	2.719-4	2.552-4	2.351-4	2.237-4	2.114-4	1.846-4	1.564-4	1.284-4	1.019-4
41	82	2.294-4	2.206-4	2.095-4	1.953-4	1.778-4	1.677-4	1.568-4	1.334-4	1.090-4	8.541-5	6.425-5
41	83	1.802-4	1.743-4	1.659-4	1.545-4	1.399-4	1.314-4	1.222-4	1.026-4	8.244-5	6.342-5	4.681-5
41	84	1.144-3	1.116-3	1.078-3	1.025-3	9.544-4	9.130-4	8.676-4	7.679-4	6.618-4	5.568-4	4.562-4
41	85	7.086-4	6.866-4	6.560-4	6.148-4	5.615-4	5.304-4	4.966-4	4.232-4	3.461-4	2.715-4	2.044-4
41	86	2.390-4	2.314-4	2.206-4	2.061-4	1.873-4	1.764-4	1.645-4	1.390-4	1.127-4	8.760-5	6.539-5
41	87	1.852-4	1.871-4	1.892-4	1.904-4	1.902-4	1.896-4	1.886-4	1.862-4	1.841-4	1.826-4	1.776-4
41	88	6.022-4	5.782-4	5.492-4	5.133-4	4.688-4	4.433-4	4.158-4	3.565-4	2.944-4	2.341-4	1.791-4
41	89	1.139-3	1.090-3	1.033-3	9.643-4	8.807-4	8.331-4	7.819-4	6.715-4	5.565-4	4.449-4	3.430-4
41	90	2.121-3	2.050-3	1.967-3	1.867-3	1.742-3	1.670-3	1.592-3	1.421-3	1.237-3	1.051-3	8.659-4
41	91	2.210-4	2.262-4	2.295-4	2.309-4	2.305-4	2.296-4	2.283-4	2.250-4	2.214-4	2.175-4	2.087-4
41	92	1.060-4	1.019-4	9.692-5	9.054-5	8.251-5	7.789-5	7.290-5	6.216-5	5.104-5	4.035-5	3.074-5
41	93	1.432-5	1.373-5	1.298-5	1.202-5	1.084-5	1.018-5	9.488-6	8.065-6	6.697-6	5.484-6	4.433-6
41	94	8.223-4	8.048-4	7.789-4	7.421-4	6.923-4	6.622-4	6.286-4	5.522-4	4.674-4	3.801-4	2.964-4
41	95	2.444-3	2.404-3	2.342-3	2.255-3	2.135-3	2.062-3	1.981-3	1.796-3	1.589-3	1.372-3	1.149-3
41	96	2.628-5	2.601-5	2.566-5	2.518-5	2.454-5	2.416-5	2.377-5	2.299-5	2.232-5	2.180-5	2.091-5
41	97	5.689-6	5.506-6	5.243-6	4.880-6	4.408-6	4.134-6	3.840-6	3.209-6	2.569-6	1.969-6	1.450-6
42	43	2.046-1	1.913-1	1.778-1	1.642-1	1.499-1	1.425-1	1.347-1	1.182-1	1.012-1	8.436-2	6.818-2
42	44	2.127-2	1.840-2	1.579-2	1.355-2	1.164-2	1.077-2	9.961-3	8.484-3	7.258-3	6.378-3	5.763-3
42	45	2.153-2	2.015-2	1.869-2	1.714-2	1.544-2	1.453-2	1.357-2	1.155-2	9.488-3	7.505-3	5.712-3
42	46	9.855-3	8.905-3	8.003-3	7.171-3	6.385-3	5.999-3	5.615-3	4.852-3	4.113-3	3.424-3	2.790-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
42	47	5.298-3	4.783-3	4.306-3	3.882-3	3.497-3	3.313-3	3.130-3	2.767-3	2.409-3	2.066-3	1.733-3
42	48	2.580-3	2.417-3	2.265-3	2.128-3	2.005-3	1.946-3	1.890-3	1.783-3	1.688-3	1.603-3	1.496-3
42	49	1.555-2	1.430-2	1.314-2	1.206-2	1.100-2	1.047-2	9.944-3	8.905-3	7.941-3	7.086-3	6.256-3
42	50	4.368-2	4.282-2	4.202-2	4.117-2	4.014-2	3.953-2	3.885-2	3.735-2	3.578-2	3.418-2	3.194-2
42	51	5.222-2	5.244-2	5.283-2	5.329-2	5.368-2	5.383-2	5.394-2	5.413-2	5.437-2	5.449-2	5.307-2
42	52	6.205-2	6.005-2	5.788-2	5.534-2	5.223-2	5.044-2	4.850-2	4.430-2	3.993-2	3.566-2	3.127-2
42	53	4.176-2	4.005-2	3.807-2	3.569-2	3.280-2	3.117-2	2.942-2	2.565-2	2.174-2	1.794-2	1.441-2
42	54	9.868-3	9.276-3	8.655-3	7.980-3	7.221-3	6.807-3	6.370-3	5.445-3	4.498-3	3.588-3	2.763-3
42	55	2.209-1	2.230-1	2.259-1	2.290-1	2.321-1	2.335-1	2.348-1	2.373-1	2.401-1	2.421-1	2.367-1
42	56	1.396-1	1.407-1	1.422-1	1.440-1	1.457-1	1.464-1	1.471-1	1.484-1	1.499-1	1.510-1	1.476-1
42	57	1.875-2	1.848-2	1.830-2	1.816-2	1.802-2	1.794-2	1.786-2	1.770-2	1.760-2	1.749-2	1.693-2
42	58	7.674-2	7.437-2	7.119-2	6.697-2	6.155-2	5.838-2	5.493-2	4.737-2	3.936-2	3.151-2	2.430-2
42	59	4.798-2	4.648-2	4.452-2	4.194-2	3.862-2	3.668-2	3.458-2	2.996-2	2.506-2	2.026-2	1.582-2
42	60	2.222-2	2.144-2	2.052-2	1.941-2	1.806-2	1.729-2	1.646-2	1.466-2	1.279-2	1.094-2	9.130-3
42	61	1.626-2	1.565-2	1.493-2	1.407-2	1.301-2	1.241-2	1.177-2	1.040-2	9.002-3	7.653-3	6.368-3
42	62	2.068-2	2.058-2	2.049-2	2.038-2	2.022-2	2.012-2	2.001-2	1.979-2	1.962-2	1.941-2	1.869-2
42	63	2.545-2	2.522-2	2.495-2	2.461-2	2.416-2	2.390-2	2.361-2	2.302-2	2.244-2	2.183-2	2.070-2
42	64	5.138-3	4.907-3	4.654-3	4.364-3	4.024-3	3.835-3	3.635-3	3.216-3	2.801-3	2.421-3	2.067-3
42	65	1.220-2	1.228-2	1.240-2	1.255-2	1.272-2	1.282-2	1.292-2	1.314-2	1.341-2	1.362-2	1.339-2
42	66	1.225-2	1.191-2	1.149-2	1.096-2	1.030-2	9.922-3	9.519-3	8.657-3	7.770-3	6.902-3	6.009-3
42	67	1.357-2	1.343-2	1.327-2	1.304-2	1.271-2	1.251-2	1.228-2	1.179-2	1.130-2	1.082-2	1.014-2
42	68	9.980-3	9.658-3	9.225-3	8.650-3	7.912-3	7.482-3	7.016-3	6.003-3	4.945-3	3.923-3	3.001-3
42	69	1.619-2	1.573-2	1.511-2	1.427-2	1.319-2	1.255-2	1.185-2	1.030-2	8.641-3	6.981-3	5.427-3
42	70	3.767-3	3.638-3	3.468-3	3.246-3	2.967-3	2.807-3	2.635-3	2.268-3	1.893-3	1.537-3	1.213-3
42	71	1.418-2	1.412-2	1.402-2	1.387-2	1.364-2	1.349-2	1.333-2	1.294-2	1.252-2	1.204-2	1.127-2
42	72	1.535-2	1.520-2	1.498-2	1.467-2	1.423-2	1.397-2	1.368-2	1.305-2	1.240-2	1.173-2	1.085-2
42	73	2.753-3	2.691-3	2.624-3	2.540-3	2.433-3	2.371-3	2.302-3	2.156-3	2.010-3	1.874-3	1.720-3
42	74	7.419-3	7.205-3	6.925-3	6.557-3	6.088-3	5.816-3	5.521-3	4.880-3	4.206-3	3.541-3	2.901-3
42	75	4.535-3	4.395-3	4.214-3	3.986-3	3.705-3	3.545-3	3.373-3	3.005-3	2.625-3	2.255-3	1.896-3
42	76	1.648-3	1.591-3	1.528-3	1.454-3	1.364-3	1.312-3	1.256-3	1.134-3	1.008-3	8.878-4	7.709-4
42	77	9.708-3	9.387-3	8.963-3	8.407-3	7.695-3	7.280-3	6.830-3	5.847-3	4.811-3	3.802-3	2.885-3
42	78	1.135-3	1.097-3	1.048-3	9.843-4	9.047-4	8.590-4	8.099-4	7.044-4	5.961-4	4.928-4	3.979-4
42	79	1.496-3	1.449-3	1.391-3	1.317-3	1.226-3	1.173-3	1.118-3	9.997-4	8.813-4	7.701-4	6.623-4
42	80	1.021-3	1.003-3	9.837-4	9.581-4	9.212-4	8.980-4	8.717-4	8.119-4	7.474-4	6.834-4	6.143-4
42	81	2.779-3	2.690-3	2.574-3	2.425-3	2.235-3	2.125-3	2.005-3	1.744-3	1.469-3	1.199-3	9.482-4
42	82	3.116-3	3.021-3	2.893-3	2.724-3	2.508-3	2.382-3	2.245-3	1.947-3	1.631-3	1.322-3	1.036-3
42	83	1.481-3	1.433-3	1.365-3	1.271-3	1.151-3	1.081-3	1.005-3	8.437-4	6.781-4	5.221-4	3.860-4
42	84	6.755-4	6.543-4	6.285-4	5.961-4	5.558-4	5.328-4	5.083-4	4.563-4	4.040-4	3.547-4	3.064-4
42	85	3.860-4	3.754-4	3.632-4	3.486-4	3.305-4	3.201-4	3.087-4	2.833-4	2.555-4	2.261-4	1.945-4
42	86	2.247-4	2.215-4	2.179-4	2.135-4	2.075-4	2.039-4	1.998-4	1.901-4	1.787-4	1.653-4	1.481-4
42	87	2.650-3	2.566-3	2.455-3	2.308-3	2.121-3	2.012-3	1.894-3	1.635-3	1.360-3	1.089-3	8.379-4
42	88	5.565-3	5.559-3	5.528-3	5.455-3	5.330-3	5.246-3	5.146-3	4.898-3	4.590-3	4.221-3	3.756-3
42	89	1.374-3	1.335-3	1.289-3	1.233-3	1.164-3	1.124-3	1.081-3	9.895-4	8.940-4	7.989-4	6.984-4
42	90	6.100-4	5.866-4	5.585-4	5.236-4	4.806-4	4.560-4	4.295-4	3.725-4	3.135-4	2.564-4	2.037-4
42	91	8.715-4	8.541-4	8.278-4	7.904-4	7.400-4	7.099-4	6.768-4	6.030-4	5.238-4	4.442-4	3.665-4
42	92	1.245-3	1.214-3	1.169-3	1.107-3	1.026-3	9.783-4	9.262-4	8.121-4	6.918-4	5.734-4	4.616-4
42	93	1.036-3	1.060-3	1.084-3	1.108-3	1.132-3	1.145-3	1.158-3	1.186-3	1.216-3	1.240-3	1.221-3
42	94	9.692-4	9.689-4	9.664-4	9.611-4	9.528-4	9.477-4	9.420-4	9.293-4	9.151-4	8.949-4	8.481-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
42	95	3.050-4	3.009-4	2.948-4	2.865-4	2.759-4	2.699-4	2.636-4	2.505-4	2.381-4	2.263-4	2.104-4
42	96	7.577-4	7.444-4	7.248-4	6.970-4	6.591-4	6.363-4	6.108-4	5.536-4	4.909-4	4.268-4	3.617-4
42	97	7.138-5	7.073-5	6.980-5	6.855-5	6.701-5	6.618-5	6.535-5	6.385-5	6.287-5	6.238-5	6.066-5
43	44	2.366-1	2.192-1	2.026-1	1.864-1	1.700-1	1.616-1	1.529-1	1.351-1	1.176-1	1.020-1	8.819-2
43	45	2.748-2	2.559-2	2.368-2	2.175-2	1.973-2	1.867-2	1.757-2	1.530-2	1.302-2	1.089-2	8.943-3
43	46	2.025-2	1.905-2	1.783-2	1.658-2	1.524-2	1.452-2	1.377-2	1.221-2	1.065-2	9.197-3	7.843-3
43	47	7.565-3	6.946-3	6.327-3	5.723-3	5.117-3	4.808-3	4.493-3	3.851-3	3.214-3	2.613-3	2.066-3
43	48	2.498-3	2.255-3	2.012-3	1.777-3	1.547-3	1.432-3	1.319-3	1.093-3	8.763-4	6.775-4	5.048-4
43	49	5.120-2	4.959-2	4.806-2	4.653-2	4.483-2	4.389-2	4.289-2	4.076-2	3.864-2	3.658-2	3.399-2
43	50	1.310-1	1.315-1	1.327-1	1.342-1	1.356-1	1.362-1	1.367-1	1.376-1	1.387-1	1.397-1	1.370-1
43	51	1.112-2	1.068-2	1.016-2	9.531-3	8.767-3	8.328-3	7.853-3	6.809-3	5.689-3	4.570-3	3.523-3
43	52	5.500-2	5.283-2	5.052-2	4.786-2	4.470-2	4.290-2	4.098-2	3.683-2	3.254-2	2.839-2	2.429-2
43	53	6.299-2	6.084-2	5.859-2	5.601-2	5.290-2	5.111-2	4.918-2	4.497-2	4.058-2	3.627-2	3.182-2
43	54	5.754-2	5.484-2	5.181-2	4.827-2	4.409-2	4.174-2	3.923-2	3.385-2	2.827-2	2.288-2	1.793-2
43	55	6.202-2	6.217-2	6.257-2	6.309-2	6.354-2	6.371-2	6.385-2	6.410-2	6.443-2	6.463-2	6.301-2
43	56	2.555-1	2.571-1	2.595-1	2.624-1	2.651-1	2.663-1	2.675-1	2.698-1	2.724-1	2.741-1	2.675-1
43	57	1.237-1	1.238-1	1.245-1	1.255-1	1.263-1	1.267-1	1.270-1	1.276-1	1.284-1	1.289-1	1.257-1
43	58	9.567-2	9.249-2	8.828-2	8.281-2	7.586-2	7.183-2	6.746-2	5.791-2	4.783-2	3.795-2	2.893-2
43	59	5.195-2	5.022-2	4.806-2	4.533-2	4.190-2	3.991-2	3.775-2	3.304-2	2.804-2	2.311-2	1.846-2
43	60	1.974-2	1.887-2	1.788-2	1.671-2	1.532-2	1.455-2	1.372-2	1.196-2	1.015-2	8.431-3	6.832-3
43	61	2.396-2	2.296-2	2.182-2	2.046-2	1.881-2	1.786-2	1.685-2	1.466-2	1.236-2	1.011-2	8.021-3
43	62	1.607-2	1.593-2	1.581-2	1.568-2	1.551-2	1.540-2	1.528-2	1.504-2	1.482-2	1.459-2	1.400-2
43	63	4.233-2	4.180-2	4.114-2	4.027-2	3.912-2	3.844-2	3.770-2	3.612-2	3.453-2	3.292-2	3.068-2
43	64	2.935-2	2.846-2	2.731-2	2.583-2	2.397-2	2.290-2	2.176-2	1.929-2	1.677-2	1.436-2	1.205-2
43	65	3.909-3	3.756-3	3.561-3	3.313-3	3.003-3	2.825-3	2.634-3	2.224-3	1.802-3	1.400-3	1.045-3
43	66	4.077-2	4.043-2	4.003-2	3.952-2	3.882-2	3.840-2	3.793-2	3.693-2	3.591-2	3.482-2	3.290-2
43	67	3.914-2	3.938-2	3.970-2	4.007-2	4.040-2	4.055-2	4.070-2	4.100-2	4.137-2	4.162-2	4.059-2
43	68	1.924-2	1.887-2	1.837-2	1.769-2	1.677-2	1.623-2	1.563-2	1.432-2	1.297-2	1.167-2	1.032-2
43	69	2.134-2	2.071-2	1.987-2	1.876-2	1.732-2	1.647-2	1.555-2	1.349-2	1.127-2	9.050-3	6.974-3
43	70	7.591-3	7.340-3	6.999-3	6.546-3	5.968-3	5.635-3	5.275-3	4.503-3	3.710-3	2.957-3	2.283-3
43	71	1.593-2	1.581-2	1.563-2	1.537-2	1.500-2	1.477-2	1.451-2	1.394-2	1.333-2	1.269-2	1.177-2
43	72	1.994-2	1.982-2	1.966-2	1.945-2	1.919-2	1.904-2	1.887-2	1.852-2	1.816-2	1.772-2	1.679-2
43	73	1.556-2	1.539-2	1.516-2	1.486-2	1.447-2	1.424-2	1.399-2	1.345-2	1.290-2	1.233-2	1.149-2
43	74	1.020-2	9.970-3	9.680-3	9.309-3	8.845-3	8.579-3	8.294-3	7.683-3	7.056-3	6.433-3	5.742-3
43	75	5.991-3	5.796-3	5.557-3	5.258-3	4.886-3	4.670-3	4.436-3	3.921-3	3.369-3	2.813-3	2.275-3
43	76	6.825-3	6.595-3	6.307-3	5.950-3	5.514-3	5.265-3	4.998-3	4.422-3	3.821-3	3.233-3	2.668-3
43	77	1.633-2	1.582-2	1.513-2	1.421-2	1.303-2	1.234-2	1.159-2	9.954-3	8.233-3	6.560-3	5.038-3
43	78	2.677-3	2.597-3	2.495-3	2.367-3	2.210-3	2.120-3	2.024-3	1.822-3	1.618-3	1.424-3	1.230-3
43	79	2.047-3	2.020-3	1.994-3	1.955-3	1.893-3	1.852-3	1.805-3	1.696-3	1.577-3	1.460-3	1.331-3
43	80	1.279-3	1.238-3	1.185-3	1.119-3	1.040-3	9.957-4	9.497-4	8.556-4	7.663-4	6.868-4	6.085-4
43	81	4.541-3	4.421-3	4.269-3	4.066-3	3.798-3	3.640-3	3.465-3	3.082-3	2.677-3	2.284-3	1.911-3
43	82	4.530-3	4.393-3	4.212-3	3.977-3	3.677-3	3.503-3	3.313-3	2.899-3	2.462-3	2.032-3	1.626-3
43	83	1.988-3	1.924-3	1.831-3	1.705-3	1.543-3	1.449-3	1.348-3	1.130-3	9.069-4	6.968-4	5.135-4
43	84	1.320-3	1.310-3	1.297-3	1.272-3	1.231-3	1.204-3	1.174-3	1.106-3	1.034-3	9.639-4	8.828-4
43	85	1.135-3	1.117-3	1.093-3	1.060-3	1.017-3	9.916-4	9.634-4	9.011-4	8.338-4	7.629-4	6.804-4
43	86	2.638-4	2.551-4	2.441-4	2.300-4	2.121-4	2.016-4	1.902-4	1.650-4	1.379-4	1.107-4	8.538-5
43	87	3.980-3	3.857-3	3.692-3	3.473-3	3.192-3	3.027-3	2.849-3	2.457-3	2.042-3	1.631-3	1.251-3
43	88	1.002-3	9.613-4	9.163-4	8.633-4	8.000-4	7.643-4	7.261-4	6.442-4	5.592-4	4.760-4	3.951-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
43	89	8.246-3	8.225-3	8.164-3	8.041-3	7.839-3	7.706-3	7.549-3	7.165-3	6.692-3	6.132-3	5.436-3
43	90	1.827-3	1.768-3	1.702-3	1.622-3	1.524-3	1.469-3	1.410-3	1.283-3	1.151-3	1.020-3	8.843-4
43	91	1.127-3	1.100-3	1.062-3	1.009-3	9.386-4	8.967-4	8.508-4	7.489-4	6.398-4	5.307-4	4.264-4
43	92	1.678-3	1.630-3	1.563-3	1.471-3	1.350-3	1.279-3	1.201-3	1.032-3	8.542-4	6.796-4	5.198-4
43	93	6.426-5	6.229-5	5.960-5	5.596-5	5.124-5	4.847-5	4.546-5	3.887-5	3.194-5	2.521-5	1.913-5
43	94	2.026-3	2.025-3	2.020-3	2.010-3	1.995-3	1.985-3	1.974-3	1.950-3	1.923-3	1.882-3	1.785-3
43	95	1.191-3	1.189-3	1.183-3	1.173-3	1.158-3	1.149-3	1.139-3	1.117-3	1.095-3	1.068-3	1.011-3
43	96	9.753-4	9.541-4	9.231-4	8.791-4	8.197-4	7.838-4	7.440-4	6.543-4	5.558-4	4.556-4	3.595-4
43	97	6.626-5	6.414-5	6.106-5	5.681-5	5.130-5	4.810-5	4.466-5	3.731-5	2.984-5	2.285-5	1.681-5
44	45	3.597-2	3.421-2	3.256-2	3.101-2	2.943-2	2.860-2	2.775-2	2.614-2	2.506-2	2.506-2	2.555-2
44	46	2.313-2	2.166-2	2.011-2	1.846-2	1.665-2	1.567-2	1.465-2	1.252-2	1.033-2	8.238-3	6.339-3
44	47	1.627-2	1.548-2	1.456-2	1.347-2	1.221-2	1.150-2	1.075-2	9.148-3	7.495-3	5.900-3	4.462-3
44	48	3.190-3	2.902-3	2.599-3	2.293-3	1.986-3	1.832-3	1.678-3	1.375-3	1.090-3	8.343-4	6.188-4
44	49	2.458-1	2.462-1	2.476-1	2.495-1	2.509-1	2.513-1	2.515-1	2.516-1	2.522-1	2.530-1	2.476-1
44	50	2.248-2	2.118-2	1.982-2	1.835-2	1.672-2	1.584-2	1.491-2	1.294-2	1.093-2	8.979-3	7.167-3
44	51	2.307-3	2.043-3	1.800-3	1.584-3	1.393-3	1.306-3	1.226-3	1.088-3	9.859-4	9.198-4	8.617-4
44	52	1.663-2	1.548-2	1.434-2	1.316-2	1.187-2	1.118-2	1.046-2	8.951-3	7.409-3	5.931-3	4.591-3
44	53	6.990-2	6.701-2	6.381-2	6.009-2	5.565-2	5.313-2	5.044-2	4.465-2	3.866-2	3.286-2	2.732-2
44	54	1.496-1	1.439-1	1.373-1	1.296-1	1.202-1	1.149-1	1.092-1	9.673-2	8.376-2	7.111-2	5.900-2
44	55	5.830-3	5.284-3	4.786-3	4.323-3	3.876-3	3.656-3	3.438-3	3.020-3	2.648-3	2.334-3	2.047-3
44	56	5.708-2	5.613-2	5.546-2	5.496-2	5.450-2	5.426-2	5.401-2	5.356-2	5.324-2	5.288-2	5.113-2
44	57	4.085-1	4.100-1	4.127-1	4.158-1	4.187-1	4.198-1	4.209-1	4.230-1	4.256-1	4.267-1	4.152-1
44	58	1.040-1	1.002-1	9.535-2	8.923-2	8.161-2	7.723-2	7.250-2	6.224-2	5.147-2	4.095-2	3.136-2
44	59	5.223-2	5.047-2	4.845-2	4.607-2	4.320-2	4.158-2	3.984-2	3.609-2	3.217-2	2.828-2	2.431-2
44	60	1.460-2	1.397-2	1.325-2	1.239-2	1.137-2	1.079-2	1.017-2	8.856-3	7.508-3	6.225-3	5.041-3
44	61	3.370-2	3.239-2	3.091-2	2.914-2	2.703-2	2.585-2	2.458-2	2.190-2	1.919-2	1.660-2	1.410-2
44	62	8.430-3	8.087-3	7.684-3	7.190-3	6.581-3	6.232-3	5.855-3	5.037-3	4.178-3	3.338-3	2.568-3
44	63	1.936-2	1.890-2	1.847-2	1.801-2	1.748-2	1.718-2	1.685-2	1.616-2	1.548-2	1.480-2	1.383-2
44	64	7.368-2	7.139-2	6.854-2	6.494-2	6.041-2	5.779-2	5.497-2	4.885-2	4.248-2	3.629-2	3.032-2
44	65	2.959-3	2.834-3	2.690-3	2.513-3	2.294-3	2.169-3	2.033-3	1.740-3	1.433-3	1.134-3	8.631-4
44	66	1.124-1	1.113-1	1.099-1	1.079-1	1.053-1	1.038-1	1.021-1	9.856-2	9.499-2	9.126-2	8.555-2
44	67	1.126-2	1.079-2	1.023-2	9.534-3	8.671-3	8.176-3	7.645-3	6.499-3	5.311-3	4.169-3	3.145-3
44	68	9.149-2	9.175-2	9.211-2	9.243-2	9.257-2	9.257-2	9.254-2	9.246-2	9.254-2	9.235-2	8.949-2
44	69	2.640-2	2.568-2	2.470-2	2.337-2	2.165-2	2.062-2	1.949-2	1.698-2	1.424-2	1.147-2	8.863-3
44	70	1.319-2	1.277-2	1.219-2	1.140-2	1.038-2	9.788-3	9.148-3	7.763-3	6.323-3	4.940-3	3.705-3
44	71	5.136-3	4.964-3	4.739-3	4.448-3	4.079-3	3.865-3	3.633-3	3.125-3	2.591-3	2.067-3	1.587-3
44	72	1.329-2	1.324-2	1.321-2	1.318-2	1.314-2	1.311-2	1.307-2	1.300-2	1.295-2	1.284-2	1.236-2
44	73	3.739-2	3.698-2	3.646-2	3.581-2	3.504-2	3.462-2	3.418-2	3.326-2	3.236-2	3.135-2	2.956-2
44	74	3.642-3	3.485-3	3.311-3	3.109-3	2.872-3	2.740-3	2.598-3	2.296-3	1.985-3	1.682-3	1.392-3
44	75	2.324-2	2.294-2	2.257-2	2.211-2	2.154-2	2.123-2	2.090-2	2.020-2	1.950-2	1.875-2	1.756-2
44	76	1.899-2	1.848-2	1.783-2	1.701-2	1.596-2	1.535-2	1.469-2	1.323-2	1.165-2	1.005-2	8.440-3
44	77	2.714-2	2.642-2	2.546-2	2.416-2	2.244-2	2.141-2	2.028-2	1.781-2	1.520-2	1.268-2	1.035-2
44	78	6.016-3	5.887-3	5.725-3	5.509-3	5.223-3	5.053-3	4.868-3	4.463-3	4.045-3	3.641-3	3.223-3
44	79	2.556-3	2.478-3	2.377-3	2.250-3	2.096-3	2.010-3	1.920-3	1.733-3	1.553-3	1.389-3	1.226-3
44	80	3.739-4	3.569-4	3.372-4	3.150-4	2.907-4	2.782-4	2.658-4	2.429-4	2.249-4	2.126-4	2.003-4
44	81	6.881-3	6.704-3	6.477-3	6.172-3	5.767-3	5.526-3	5.262-3	4.680-3	4.067-3	3.475-3	2.913-3
44	82	5.038-3	4.849-3	4.614-3	4.317-3	3.946-3	3.731-3	3.500-3	2.996-3	2.467-3	1.951-3	1.481-3
44	83	2.353-3	2.277-3	2.168-3	2.019-3	1.827-3	1.716-3	1.596-3	1.339-3	1.076-3	8.287-4	6.129-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
44	84	3.568-3	3.518-3	3.453-3	3.366-3	3.251-3	3.183-3	3.109-3	2.943-3	2.762-3	2.565-3	2.318-3
44	85	1.471-3	1.426-3	1.366-3	1.288-3	1.188-3	1.130-3	1.067-3	9.310-4	7.879-4	6.476-4	5.162-4
44	86	6.105-4	5.912-4	5.643-4	5.280-4	4.817-4	4.549-4	4.262-4	3.650-4	3.029-4	2.446-4	1.924-4
44	87	5.766-3	5.616-3	5.408-3	5.124-3	4.750-3	4.529-3	4.287-3	3.755-3	3.192-3	2.638-3	2.119-3
44	88	6.782-4	6.502-4	6.175-4	5.777-4	5.289-4	5.011-4	4.712-4	4.070-4	3.406-4	2.769-4	2.187-4
44	89	1.487-3	1.421-3	1.348-3	1.263-3	1.163-3	1.106-3	1.045-3	9.158-4	7.817-4	6.512-4	5.276-4
44	90	1.291-2	1.281-2	1.265-2	1.240-2	1.204-2	1.181-2	1.154-2	1.091-2	1.015-2	9.272-3	8.203-3
44	91	1.571-3	1.550-3	1.514-3	1.460-3	1.385-3	1.339-3	1.289-3	1.178-3	1.058-3	9.376-4	8.127-4
44	92	2.337-3	2.274-3	2.184-3	2.059-3	1.895-3	1.799-3	1.695-3	1.466-3	1.226-3	9.902-4	7.722-4
44	93	8.775-5	8.550-5	8.225-5	7.783-5	7.223-5	6.907-5	6.575-5	5.904-5	5.289-5	4.774-5	4.283-5
44	94	2.197-4	2.137-4	2.051-4	1.934-4	1.784-4	1.699-4	1.608-4	1.417-4	1.230-4	1.061-4	9.039-5
44	95	4.574-3	4.589-3	4.595-3	4.591-3	4.575-3	4.563-3	4.547-3	4.511-3	4.468-3	4.395-3	4.191-3
44	96	1.329-3	1.306-3	1.271-3	1.222-3	1.155-3	1.114-3	1.070-3	9.694-4	8.611-4	7.526-4	6.437-4
44	97	9.004-5	8.712-5	8.289-5	7.706-5	6.950-5	6.513-5	6.042-5	5.039-5	4.023-5	3.079-5	2.264-5
45	46	1.834-1	1.799-1	1.753-1	1.690-1	1.605-1	1.553-1	1.496-1	1.365-1	1.221-1	1.069-1	9.107-2
45	47	5.865-2	5.821-2	5.792-2	5.762-2	5.708-2	5.670-2	5.629-2	5.565-2	5.617-2	5.883-2	6.188-2
45	48	5.679-4	5.159-4	4.647-4	4.156-4	3.678-4	3.440-4	3.200-4	2.716-4	2.234-4	1.773-4	1.354-4
45	49	1.681-2	1.595-2	1.498-2	1.389-2	1.264-2	1.195-2	1.122-2	9.652-3	8.016-3	6.409-3	4.926-3
45	50	1.523-2	1.467-2	1.398-2	1.313-2	1.208-2	1.147-2	1.080-2	9.356-3	7.807-3	6.270-3	4.842-3
45	51	5.531-3	5.331-3	5.086-3	4.781-3	4.404-3	4.186-3	3.949-3	3.426-3	2.865-3	2.302-3	1.774-3
45	52	1.162-3	9.057-4	6.907-4	5.216-4	3.935-4	3.421-4	2.975-4	2.248-4	1.693-4	1.268-4	9.442-5
45	53	1.951-3	1.525-3	1.162-3	8.771-4	6.630-4	5.780-4	5.049-4	3.880-4	3.017-4	2.398-4	1.950-4
45	54	5.118-3	4.021-3	3.120-3	2.430-3	1.922-3	1.722-3	1.551-3	1.281-3	1.089-3	9.624-4	8.728-4
45	55	9.623-3	9.208-3	8.706-3	8.088-3	7.335-3	6.908-3	6.450-3	5.468-3	4.459-3	3.496-3	2.641-3
45	56	2.963-2	2.854-2	2.719-2	2.551-2	2.342-2	2.221-2	2.090-2	1.805-2	1.507-2	1.218-2	9.545-3
45	57	4.959-2	4.802-2	4.607-2	4.357-2	4.037-2	3.850-2	3.644-2	3.191-2	2.710-2	2.239-2	1.801-2
45	58	3.391-3	3.070-3	2.779-3	2.508-3	2.243-3	2.108-3	1.970-3	1.688-3	1.403-3	1.131-3	8.815-4
45	59	6.029-3	5.752-3	5.466-3	5.153-3	4.790-3	4.585-3	4.365-3	3.883-3	3.376-3	2.885-3	2.420-3
45	60	1.815-2	1.757-2	1.682-2	1.583-2	1.455-2	1.380-2	1.299-2	1.119-2	9.273-3	7.384-3	5.648-3
45	61	2.347-2	2.256-2	2.147-2	2.010-2	1.840-2	1.741-2	1.635-2	1.402-2	1.158-2	9.186-3	7.005-3
45	62	4.201-3	4.043-3	3.849-3	3.605-3	3.304-3	3.131-3	2.944-3	2.540-3	2.118-3	1.707-3	1.329-3
45	63	1.082-2	1.049-2	1.008-2	9.556-3	8.898-3	8.515-3	8.098-3	7.179-3	6.195-3	5.209-3	4.255-3
45	64	4.597-2	4.462-2	4.284-2	4.048-2	3.741-2	3.560-2	3.361-2	2.921-2	2.447-2	1.974-2	1.532-2
45	65	5.701-4	5.359-4	5.006-4	4.621-4	4.188-4	3.950-4	3.699-4	3.164-4	2.608-4	2.067-4	1.573-4
45	66	1.661-2	1.611-2	1.546-2	1.463-2	1.356-2	1.294-2	1.226-2	1.078-2	9.187-3	7.608-3	6.106-3
45	67	9.349-3	9.042-3	8.621-3	8.055-3	7.329-3	6.907-3	6.452-3	5.467-3	4.445-3	3.466-3	2.594-3
45	68	1.939-2	1.872-2	1.783-2	1.666-2	1.518-2	1.432-2	1.339-2	1.140-2	9.338-3	7.376-3	5.629-3
45	69	8.803-4	8.121-4	7.471-4	6.815-4	6.117-4	5.745-4	5.360-4	4.564-4	3.773-4	3.043-4	2.400-4
45	70	2.379-3	2.293-3	2.185-3	2.050-3	1.887-3	1.794-3	1.695-3	1.486-3	1.273-3	1.068-3	8.752-4
45	71	1.769-3	1.705-3	1.625-3	1.522-3	1.392-3	1.317-3	1.236-3	1.062-3	8.819-4	7.128-4	5.628-4
45	72	5.474-3	5.288-3	5.061-3	4.772-3	4.402-3	4.186-3	3.950-3	3.438-3	2.905-3	2.401-3	1.946-3
45	73	2.257-2	2.193-2	2.105-2	1.984-2	1.825-2	1.732-2	1.630-2	1.405-2	1.169-2	9.389-3	7.295-3
45	74	6.198-3	5.976-3	5.710-3	5.379-3	4.964-3	4.722-3	4.458-3	3.876-3	3.252-3	2.633-3	2.057-3
45	75	1.139-2	1.108-2	1.070-2	1.020-2	9.545-3	9.154-3	8.720-3	7.744-3	6.677-3	5.604-3	4.573-3
45	76	2.638-2	2.560-2	2.461-2	2.333-2	2.167-2	2.070-2	1.962-2	1.722-2	1.459-2	1.190-2	9.343-3
45	77	4.879-4	4.513-4	4.161-4	3.817-4	3.467-4	3.284-4	3.097-4	2.711-4	2.325-4	1.965-4	1.634-4
45	78	2.149-2	2.091-2	2.006-2	1.889-2	1.734-2	1.643-2	1.544-2	1.328-2	1.103-2	8.862-3	6.908-3
45	79	8.396-3	8.170-3	7.848-3	7.405-3	6.820-3	6.476-3	6.100-3	5.277-3	4.413-3	3.578-3	2.817-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
45	80	3.137-3	3.044-3	2.911-3	2.731-3	2.497-3	2.361-3	2.212-3	1.889-3	1.552-3	1.227-3	9.355-4
45	81	7.773-4	7.436-4	7.025-4	6.533-4	5.947-4	5.618-4	5.267-4	4.511-4	3.723-4	2.957-4	2.259-4
45	82	2.209-4	2.156-4	2.097-4	2.020-4	1.916-4	1.852-4	1.781-4	1.621-4	1.451-4	1.286-4	1.124-4
45	83	3.791-5	3.593-5	3.376-5	3.135-5	2.862-5	2.710-5	2.549-5	2.201-5	1.832-5	1.465-5	1.124-5
45	84	4.106-3	3.980-3	3.802-3	3.563-3	3.261-3	3.087-3	2.899-3	2.494-3	2.075-3	1.674-3	1.309-3
45	85	9.912-4	9.640-4	9.273-4	8.783-4	8.143-4	7.764-4	7.346-4	6.414-4	5.398-4	4.374-4	3.407-4
45	86	4.069-4	3.958-4	3.808-4	3.605-4	3.341-4	3.184-4	3.010-4	2.622-4	2.199-4	1.769-4	1.364-4
45	87	1.453-4	1.543-4	1.658-4	1.777-4	1.895-4	1.952-4	2.009-4	2.126-4	2.255-4	2.400-4	2.479-4
45	88	1.375-3	1.319-3	1.258-3	1.188-3	1.102-3	1.052-3	9.978-4	8.765-4	7.439-4	6.088-4	4.795-4
45	89	4.950-3	4.821-3	4.658-3	4.443-3	4.161-3	3.992-3	3.804-3	3.380-3	2.910-3	2.427-3	1.954-3
45	90	1.534-2	1.503-2	1.459-2	1.395-2	1.308-2	1.256-2	1.197-2	1.063-2	9.133-3	7.589-3	6.079-3
45	91	6.042-5	5.835-5	5.582-5	5.259-5	4.852-5	4.616-5	4.360-5	3.798-5	3.201-5	2.611-5	2.059-5
45	92	3.999-5	3.710-5	3.455-5	3.197-5	2.912-5	2.755-5	2.589-5	2.233-5	1.861-5	1.495-5	1.156-5
45	93	6.783-4	6.653-4	6.453-4	6.165-4	5.773-4	5.534-4	5.266-4	4.652-4	3.957-4	3.231-4	2.525-4
45	94	2.005-3	1.963-3	1.897-3	1.803-3	1.677-3	1.602-3	1.518-3	1.329-3	1.121-3	9.098-4	7.086-4
45	95	2.537-3	2.479-3	2.389-3	2.262-3	2.092-3	1.992-3	1.882-3	1.640-3	1.380-3	1.123-3	8.828-4
45	96	1.552-5	1.504-5	1.439-5	1.351-5	1.237-5	1.171-5	1.099-5	9.429-6	7.782-6	6.172-6	4.705-6
45	97	4.612-6	4.497-6	4.327-6	4.086-6	3.764-6	3.573-6	3.364-6	2.900-6	2.405-6	1.915-6	1.463-6
46	47	1.318-1	1.288-1	1.246-1	1.190-1	1.116-1	1.071-1	1.022-1	9.114-2	7.899-2	6.646-2	5.408-2
46	48	4.276-4	3.702-4	3.160-4	2.681-4	2.263-4	2.073-4	1.892-4	1.558-4	1.256-4	9.902-5	7.621-5
46	49	1.251-2	1.186-2	1.114-2	1.035-2	9.441-3	8.940-3	8.408-3	7.267-3	6.076-3	4.916-3	3.850-3
46	50	6.572-3	6.196-3	5.797-3	5.368-3	4.891-3	4.632-3	4.359-3	3.777-3	3.171-3	2.576-3	2.024-3
46	51	2.350-3	2.226-3	2.090-3	1.938-3	1.766-3	1.672-3	1.571-3	1.357-3	1.134-3	9.154-4	7.138-4
46	52	1.128-3	8.607-4	6.338-4	4.562-4	3.247-4	2.736-4	2.306-4	1.643-4	1.178-4	8.550-5	6.299-5
46	53	1.497-3	1.198-3	9.355-4	7.243-4	5.618-4	4.958-4	4.382-4	3.437-4	2.714-4	2.173-4	1.763-4
46	54	1.561-3	1.177-3	8.594-4	6.164-4	4.393-4	3.709-4	3.132-4	2.239-4	1.601-4	1.143-4	8.100-5
46	55	2.064-2	2.003-2	1.922-2	1.816-2	1.678-2	1.596-2	1.507-2	1.310-2	1.100-2	8.921-3	7.004-3
46	56	1.457-2	1.398-2	1.328-2	1.245-2	1.143-2	1.085-2	1.022-2	8.866-3	7.457-3	6.118-3	4.913-3
46	57	3.130-2	3.015-2	2.873-2	2.695-2	2.474-2	2.347-2	2.209-2	1.908-2	1.591-2	1.278-2	9.889-3
46	58	2.743-3	2.508-3	2.286-3	2.070-3	1.851-3	1.739-3	1.623-3	1.384-3	1.144-3	9.148-4	7.062-4
46	59	1.849-3	1.693-3	1.542-3	1.396-3	1.250-3	1.175-3	1.099-3	9.422-4	7.851-4	6.359-4	5.006-4
46	60	7.307-3	6.992-3	6.630-3	6.197-3	5.673-3	5.376-3	5.055-3	4.359-3	3.625-3	2.904-3	2.239-3
46	61	2.637-2	2.564-2	2.469-2	2.344-2	2.180-2	2.084-2	1.977-2	1.741-2	1.485-2	1.228-2	9.831-3
46	62	4.670-3	4.507-3	4.309-3	4.064-3	3.759-3	3.583-3	3.391-3	2.965-3	2.504-3	2.038-3	1.594-3
46	63	8.296-3	7.969-3	7.570-3	7.072-3	6.453-3	6.097-3	5.713-3	4.881-3	4.012-3	3.170-3	2.410-3
46	64	3.304-2	3.215-2	3.090-2	2.919-2	2.696-2	2.563-2	2.418-2	2.098-2	1.756-2	1.417-2	1.102-2
46	65	5.906-3	5.718-3	5.463-3	5.123-3	4.686-3	4.433-3	4.160-3	3.570-3	2.960-3	2.378-3	1.851-3
46	66	8.942-3	8.646-3	8.271-3	7.786-3	7.167-3	6.806-3	6.413-3	5.557-3	4.660-3	3.797-3	3.010-3
46	67	6.128-3	5.911-3	5.636-3	5.286-3	4.854-3	4.607-3	4.343-3	3.779-3	3.199-3	2.641-3	2.123-3
46	68	1.138-2	1.101-2	1.051-2	9.849-3	9.010-3	8.526-3	8.004-3	6.877-3	5.712-3	4.593-3	3.577-3
46	69	6.514-4	5.677-4	4.959-4	4.336-4	3.769-4	3.497-4	3.229-4	2.701-4	2.194-4	1.726-4	1.311-4
46	70	3.665-3	3.526-3	3.350-3	3.127-3	2.851-3	2.693-3	2.524-3	2.162-3	1.788-3	1.430-3	1.105-3
46	71	2.023-3	1.969-3	1.910-3	1.836-3	1.736-3	1.675-3	1.608-3	1.456-3	1.300-3	1.156-3	1.022-3
46	72	5.267-3	5.127-3	4.960-3	4.738-3	4.438-3	4.257-3	4.057-3	3.615-3	3.158-3	2.735-3	2.348-3
46	73	6.783-3	6.554-3	6.267-3	5.899-3	5.428-3	5.153-3	4.855-3	4.204-3	3.528-3	2.883-3	2.300-3
46	74	1.006-2	9.741-3	9.357-3	8.870-3	8.249-3	7.883-3	7.480-3	6.578-3	5.594-3	4.597-3	3.646-3
46	75	1.488-2	1.449-2	1.399-2	1.332-2	1.244-2	1.191-2	1.133-2	1.002-2	8.576-3	7.111-3	5.699-3
46	76	7.655-3	7.383-3	7.059-3	6.654-3	6.148-3	5.852-3	5.530-3	4.817-3	4.049-3	3.278-3	2.553-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
46	77	9.298-4	8.817-4	8.331-4	7.814-4	7.231-4	6.909-4	6.565-4	5.824-4	5.048-4	4.291-4	3.569-4
46	78	1.207-2	1.174-2	1.127-2	1.061-2	9.754-3	9.245-3	8.690-3	7.472-3	6.181-3	4.918-3	3.764-3
46	79	1.177-2	1.149-2	1.108-2	1.050-2	9.725-3	9.260-3	8.751-3	7.635-3	6.472-3	5.366-3	4.359-3
46	80	7.117-3	6.956-3	6.727-3	6.402-3	5.960-3	5.694-3	5.402-3	4.753-3	4.067-3	3.400-3	2.779-3
46	81	6.123-4	5.840-4	5.525-4	5.165-4	4.746-4	4.512-4	4.263-4	3.733-4	3.194-4	2.686-4	2.220-4
46	82	2.301-4	2.219-4	2.126-4	2.009-4	1.863-4	1.779-4	1.688-4	1.493-4	1.296-4	1.113-4	9.437-5
46	83	5.776-5	5.380-5	4.975-5	4.553-5	4.095-5	3.849-5	3.593-5	3.057-5	2.516-5	2.003-5	1.545-5
46	84	1.776-3	1.728-3	1.663-3	1.574-3	1.457-3	1.388-3	1.312-3	1.146-3	9.703-4	7.971-4	6.357-4
46	85	2.172-3	2.102-3	2.004-3	1.875-3	1.709-3	1.614-3	1.512-3	1.293-3	1.067-3	8.514-4	6.561-4
46	86	1.712-4	1.649-4	1.573-4	1.478-4	1.361-4	1.294-4	1.221-4	1.062-4	8.941-5	7.280-5	5.725-5
46	87	7.682-5	7.570-5	7.636-5	7.784-5	7.958-5	8.049-5	8.140-5	8.335-5	8.584-5	8.900-5	9.018-5
46	88	4.219-3	4.116-3	3.977-3	3.790-3	3.541-3	3.392-3	3.227-3	2.852-3	2.437-3	2.009-3	1.595-3
46	89	8.582-3	8.393-3	8.125-3	7.751-3	7.249-3	6.946-3	6.609-3	5.843-3	4.991-3	4.111-3	3.258-3
46	90	3.346-3	3.256-3	3.138-3	2.982-3	2.776-3	2.653-3	2.516-3	2.208-3	1.867-3	1.517-3	1.182-3
46	91	1.238-4	1.224-4	1.198-4	1.158-4	1.101-4	1.066-4	1.027-4	9.381-5	8.392-5	7.381-5	6.347-5
46	92	4.442-5	4.185-5	3.935-5	3.661-5	3.340-5	3.160-5	2.966-5	2.549-5	2.113-5	1.689-5	1.300-5
46	93	5.422-4	5.288-4	5.084-4	4.795-4	4.413-4	4.186-4	3.939-4	3.394-4	2.817-4	2.250-4	1.730-4
46	94	1.093-3	1.069-3	1.034-3	9.827-4	9.145-4	8.738-4	8.286-4	7.273-4	6.161-4	5.031-4	3.951-4
46	95	2.139-3	2.096-3	2.027-3	1.929-3	1.797-3	1.718-3	1.630-3	1.434-3	1.219-3	1.000-3	7.902-4
46	96	3.082-5	2.998-5	2.878-5	2.715-5	2.501-5	2.376-5	2.239-5	1.939-5	1.621-5	1.308-5	1.017-5
46	97	3.771-6	3.671-6	3.525-6	3.325-6	3.065-6	2.914-6	2.749-6	2.394-6	2.028-6	1.679-6	1.359-6
47	48	2.444-4	2.009-4	1.598-4	1.247-4	9.656-5	8.486-5	7.451-5	5.722-5	4.351-5	3.259-5	2.389-5
47	49	7.692-3	7.286-3	6.845-3	6.357-3	5.800-3	5.493-3	5.165-3	4.460-3	3.718-3	2.983-3	2.300-3
47	50	3.198-3	2.936-3	2.677-3	2.422-3	2.161-3	2.026-3	1.888-3	1.604-3	1.318-3	1.046-3	8.001-4
47	51	8.428-4	7.564-4	6.738-4	5.965-4	5.230-4	4.871-4	4.515-4	3.812-4	3.129-4	2.489-4	1.909-4
47	52	8.892-4	6.720-4	4.898-4	3.483-4	2.446-4	2.045-4	1.710-4	1.198-4	8.420-5	5.963-5	4.252-5
47	53	7.218-4	5.740-4	4.439-4	3.385-4	2.570-4	2.239-4	1.950-4	1.474-4	1.104-4	8.148-5	5.894-5
47	54	5.240-4	3.897-4	2.787-4	1.943-4	1.335-4	1.104-4	9.108-5	6.189-5	4.196-5	2.839-5	1.915-5
47	55	7.211-3	6.936-3	6.609-3	6.214-3	5.734-3	5.460-3	5.163-3	4.520-3	3.846-3	3.194-3	2.594-3
47	56	2.067-2	1.999-2	1.912-2	1.801-2	1.660-2	1.578-2	1.488-2	1.292-2	1.083-2	8.750-3	6.814-3
47	57	1.130-2	1.082-2	1.025-2	9.549-3	8.692-3	8.204-3	7.680-3	6.552-3	5.379-3	4.246-3	3.224-3
47	58	1.550-3	1.409-3	1.275-3	1.146-3	1.017-3	9.518-4	8.848-4	7.478-4	6.108-4	4.804-4	3.634-4
47	59	5.644-4	4.784-4	4.019-4	3.371-4	2.824-4	2.580-4	2.350-4	1.928-4	1.549-4	1.215-4	9.302-5
47	60	1.240-2	1.205-2	1.161-2	1.102-2	1.027-2	9.832-3	9.346-3	8.262-3	7.082-3	5.884-3	4.726-3
47	61	8.787-3	8.514-3	8.173-3	7.737-3	7.186-3	6.864-3	6.514-3	5.739-3	4.904-3	4.066-3	3.263-3
47	62	4.196-3	4.086-3	3.946-3	3.762-3	3.521-3	3.379-3	3.223-3	2.879-3	2.518-3	2.167-3	1.830-3
47	63	3.547-3	3.425-3	3.292-3	3.131-3	2.932-3	2.816-3	2.689-3	2.414-3	2.126-3	1.848-3	1.579-3
47	64	2.233-2	2.171-2	2.084-2	1.965-2	1.808-2	1.715-2	1.614-2	1.389-2	1.150-2	9.127-3	6.950-3
47	65	2.177-3	2.088-3	1.978-3	1.841-3	1.673-3	1.577-3	1.474-3	1.252-3	1.024-3	8.040-4	6.067-4
47	66	5.084-3	4.897-3	4.651-3	4.332-3	3.930-3	3.699-3	3.450-3	2.914-3	2.364-3	1.843-3	1.383-3
47	67	8.100-3	7.837-3	7.480-3	7.003-3	6.391-3	6.036-3	5.651-3	4.819-3	3.957-3	3.132-3	2.394-3
47	68	3.906-3	3.777-3	3.617-3	3.414-3	3.159-3	3.011-3	2.852-3	2.510-3	2.157-3	1.820-3	1.505-3
47	69	3.472-4	3.032-4	2.651-4	2.322-4	2.030-4	1.893-4	1.760-4	1.506-4	1.268-4	1.052-4	8.555-5
47	70	2.137-3	2.047-3	1.939-3	1.808-3	1.647-3	1.556-3	1.458-3	1.250-3	1.036-3	8.318-4	6.477-4
47	71	2.521-3	2.489-3	2.448-3	2.383-3	2.279-3	2.212-3	2.134-3	1.959-3	1.780-3	1.622-3	1.475-3
47	72	2.611-3	2.540-3	2.457-3	2.349-3	2.205-3	2.119-3	2.023-3	1.811-3	1.589-3	1.382-3	1.190-3
47	73	2.225-3	2.125-3	2.004-3	1.857-3	1.678-3	1.577-3	1.469-3	1.239-3	1.005-3	7.848-4	5.916-4
47	74	1.044-2	1.011-2	9.712-3	9.208-3	8.567-3	8.190-3	7.773-3	6.838-3	5.809-3	4.757-3	3.747-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
47	75	4.701-3	4.527-3	4.325-3	4.078-3	3.772-3	3.595-3	3.402-3	2.974-3	2.510-3	2.041-3	1.597-3
47	76	2.903-3	2.776-3	2.633-3	2.463-3	2.256-3	2.137-3	2.008-3	1.726-3	1.428-3	1.134-3	8.644-4
47	77	1.274-3	1.225-3	1.169-3	1.101-3	1.017-3	9.693-4	9.168-4	8.010-4	6.764-4	5.517-4	4.342-4
47	78	4.310-3	4.181-3	4.000-3	3.754-3	3.436-3	3.249-3	3.046-3	2.604-3	2.139-3	1.688-3	1.280-3
47	79	8.869-3	8.655-3	8.348-3	7.916-3	7.336-3	6.990-3	6.609-3	5.764-3	4.863-3	3.980-3	3.161-3
47	80	8.578-3	8.420-3	8.199-3	7.868-3	7.395-3	7.105-3	6.783-3	6.068-3	5.321-3	4.612-3	3.946-3
47	81	2.604-4	2.488-4	2.359-4	2.211-4	2.037-4	1.939-4	1.834-4	1.610-4	1.379-4	1.161-4	9.600-5
47	82	9.642-5	9.323-5	9.034-5	8.702-5	8.283-5	8.037-5	7.771-5	7.203-5	6.652-5	6.184-5	5.717-5
47	83	8.194-5	7.823-5	7.362-5	6.792-5	6.105-5	5.721-5	5.316-5	4.464-5	3.605-5	2.798-5	2.089-5
47	84	8.980-4	8.741-4	8.419-4	7.985-4	7.415-4	7.077-4	6.706-4	5.875-4	4.972-4	4.063-4	3.203-4
47	85	8.892-4	8.591-4	8.186-4	7.647-4	6.963-4	6.569-4	6.147-4	5.243-4	4.316-4	3.432-4	2.639-4
47	86	7.544-4	7.285-4	6.922-4	6.430-4	5.805-4	5.449-4	5.069-4	4.266-4	3.453-4	2.688-4	2.014-4
47	87	1.951-5	1.745-5	1.600-5	1.493-5	1.407-5	1.369-5	1.331-5	1.260-5	1.199-5	1.151-5	1.093-5
47	88	6.400-3	6.258-3	6.054-3	5.770-3	5.388-3	5.157-3	4.899-3	4.314-3	3.663-3	2.991-3	2.344-3
47	89	2.623-3	2.557-3	2.466-3	2.344-3	2.184-3	2.088-3	1.981-3	1.740-3	1.474-3	1.200-3	9.362-4
47	90	9.002-4	8.697-4	8.333-4	7.876-4	7.291-4	6.945-4	6.564-4	5.713-4	4.782-4	3.841-4	2.955-4
47	91	4.947-5	4.996-5	5.009-5	4.975-5	4.890-5	4.828-5	4.753-5	4.575-5	4.381-5	4.187-5	3.928-5
47	92	1.779-5	1.673-5	1.570-5	1.457-5	1.326-5	1.252-5	1.173-5	1.002-5	8.247-6	6.517-6	4.945-6
47	93	1.749-4	1.700-4	1.628-4	1.527-4	1.394-4	1.316-4	1.232-4	1.047-4	8.552-5	6.702-5	5.044-5
47	94	8.689-4	8.485-4	8.167-4	7.713-4	7.107-4	6.748-4	6.355-4	5.489-4	4.569-4	3.662-4	2.825-4
47	95	1.186-3	1.163-3	1.127-3	1.077-3	1.009-3	9.673-4	9.212-4	8.159-4	6.979-4	5.750-4	4.551-4
47	96	1.316-5	1.282-5	1.233-5	1.165-5	1.076-5	1.024-5	9.662-6	8.391-6	7.030-6	5.679-6	4.421-6
47	97	1.516-6	1.468-6	1.397-6	1.302-6	1.179-6	1.108-6	1.032-6	8.692-7	7.028-7	5.456-7	4.073-7
48	49	1.434-3	1.380-3	1.379-3	1.423-3	1.489-3	1.528-3	1.574-3	1.722-3	2.055-3	2.720-3	3.563-3
48	50	2.034-3	1.884-3	1.733-3	1.581-3	1.424-3	1.342-3	1.258-3	1.082-3	9.011-4	7.243-4	5.602-4
48	51	6.418-4	5.320-4	4.350-4	3.558-4	2.937-4	2.678-4	2.448-4	2.053-4	1.727-4	1.450-4	1.202-4
48	52	2.092-3	1.944-3	1.788-3	1.625-3	1.452-3	1.360-3	1.266-3	1.071-3	8.745-4	6.874-4	5.197-4
48	53	3.795-3	3.560-3	3.298-3	3.015-3	2.707-3	2.543-3	2.372-3	2.017-3	1.658-3	1.317-3	1.010-3
48	54	6.090-3	5.795-3	5.451-3	5.051-3	4.582-3	4.321-3	4.043-3	3.450-3	2.835-3	2.238-3	1.697-3
48	55	1.085-3	9.730-4	8.679-4	7.731-4	6.864-4	6.447-4	6.035-4	5.211-4	4.385-4	3.576-4	2.811-4
48	56	1.724-3	1.582-3	1.456-3	1.348-3	1.248-3	1.199-3	1.150-3	1.051-3	9.572-4	8.780-4	8.042-4
48	57	1.322-3	1.136-3	9.621-4	8.116-4	6.840-4	6.272-4	5.742-4	4.765-4	3.875-4	3.063-4	2.341-4
48	58	4.569-3	3.758-3	2.984-3	2.339-3	1.844-3	1.651-3	1.490-3	1.256-3	1.125-3	1.070-3	1.034-3
48	59	3.624-3	3.059-3	2.470-3	1.946-3	1.513-3	1.330-3	1.166-3	8.882-4	6.654-4	4.882-4	3.497-4
48	60	2.931-3	2.847-3	2.781-3	2.724-3	2.667-3	2.635-3	2.601-3	2.531-3	2.467-3	2.409-3	2.305-3
48	61	2.872-3	2.673-3	2.470-3	2.257-3	2.027-3	1.904-3	1.776-3	1.507-3	1.233-3	9.707-4	7.344-4
48	62	2.025-3	1.932-3	1.828-3	1.705-3	1.559-3	1.477-3	1.388-3	1.195-3	9.909-4	7.896-4	6.040-4
48	63	4.467-3	4.293-3	4.086-3	3.833-3	3.523-3	3.345-3	3.151-3	2.726-3	2.273-3	1.822-3	1.403-3
48	64	1.587-3	1.400-3	1.232-3	1.081-3	9.412-4	8.738-4	8.078-4	6.810-4	5.646-4	4.627-4	3.743-4
48	65	5.153-4	4.598-4	4.101-4	3.642-4	3.193-4	2.966-4	2.738-4	2.278-4	1.830-4	1.416-4	1.056-4
48	66	1.099-2	1.060-2	1.011-2	9.502-3	8.743-3	8.303-3	7.826-3	6.775-3	5.648-3	4.525-3	3.478-3
48	67	1.423-3	1.331-3	1.234-3	1.129-3	1.011-3	9.473-4	8.802-4	7.395-4	5.974-4	4.636-4	3.460-4
48	68	5.066-3	4.907-3	4.721-3	4.502-3	4.246-3	4.104-3	3.955-3	3.644-3	3.335-3	3.037-3	2.715-3
48	69	7.101-4	6.089-4	5.177-4	4.382-4	3.682-4	3.360-4	3.053-4	2.479-4	1.962-4	1.510-4	1.126-4
48	70	1.285-3	1.212-3	1.130-3	1.037-3	9.320-4	8.752-4	8.160-4	6.937-4	5.713-4	4.551-4	3.497-4
48	71	5.249-4	4.758-4	4.296-4	3.857-4	3.425-4	3.208-4	2.988-4	2.540-4	2.093-4	1.665-4	1.276-4
48	72	4.977-3	4.909-3	4.863-3	4.834-3	4.816-3	4.808-3	4.803-3	4.797-3	4.801-3	4.791-3	4.640-3
48	73	1.235-3	1.104-3	9.888-4	8.852-4	7.867-4	7.375-4	6.878-4	5.864-4	4.842-4	3.856-4	2.954-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
48	74	9.489-3	9.503-3	9.560-3	9.646-3	9.750-3	9.808-3	9.869-3	1.001-2	1.017-2	1.029-2	1.009-2
48	75	5.143-4	4.408-4	3.774-4	3.232-4	2.755-4	2.533-4	2.318-4	1.906-4	1.522-4	1.175-4	8.752-5
48	76	3.681-4	3.147-4	2.672-4	2.259-4	1.898-4	1.731-4	1.572-4	1.277-4	1.013-4	7.860-5	5.974-5
48	77	3.620-2	3.577-2	3.568-2	3.586-2	3.624-2	3.650-2	3.678-2	3.748-2	3.832-2	3.904-2	3.846-2
48	78	5.143-4	4.473-4	3.918-4	3.443-4	3.020-4	2.820-4	2.624-4	2.241-4	1.864-4	1.501-4	1.166-4
48	79	2.633-3	2.607-3	2.594-3	2.587-3	2.583-3	2.582-3	2.581-3	2.581-3	2.583-3	2.573-3	2.483-3
48	80	1.564-4	1.446-4	1.332-4	1.223-4	1.115-4	1.061-4	1.005-4	8.901-5	7.700-5	6.479-5	5.266-5
48	81	7.583-2	7.602-2	7.627-2	7.649-2	7.666-2	7.672-2	7.678-2	7.692-2	7.711-2	7.689-2	7.424-2
48	82	4.306-3	4.295-3	4.286-3	4.256-3	4.187-3	4.133-3	4.064-3	3.878-3	3.628-3	3.312-3	2.913-3
48	83	6.722-3	6.701-3	6.681-3	6.613-3	6.464-3	6.351-3	6.210-3	5.847-3	5.387-3	4.844-3	4.206-3
48	84	7.719-4	7.961-4	8.245-4	8.544-4	8.844-4	8.994-4	9.143-4	9.445-4	9.770-4	1.008-3	1.006-3
48	85	1.618-4	1.604-4	1.587-4	1.560-4	1.517-4	1.487-4	1.453-4	1.366-4	1.258-4	1.131-4	9.798-5
48	86	4.316-4	4.337-4	4.339-4	4.294-4	4.187-4	4.105-4	4.005-4	3.751-4	3.436-4	3.072-4	2.654-4
48	87	4.716-4	4.062-4	3.515-4	3.053-4	2.647-4	2.456-4	2.271-4	1.915-4	1.582-4	1.280-4	1.010-4
48	88	1.609-4	1.531-4	1.458-4	1.386-4	1.312-4	1.274-4	1.235-4	1.157-4	1.077-4	9.955-5	8.973-5
48	89	7.820-5	6.927-5	6.105-5	5.330-5	4.575-5	4.200-5	3.827-5	3.099-5	2.420-5	1.822-5	1.324-5
48	90	7.540-5	6.512-5	5.593-5	4.773-5	4.025-5	3.673-5	3.334-5	2.705-5	2.158-5	1.708-5	1.343-5
48	91	7.339-3	7.328-3	7.272-3	7.171-3	7.023-3	6.930-3	6.824-3	6.572-3	6.262-3	5.875-3	5.331-3
48	92	3.604-5	3.362-5	3.161-5	2.992-5	2.847-5	2.783-5	2.724-5	2.627-5	2.557-5	2.492-5	2.361-5
48	93	3.870-5	3.754-5	3.604-5	3.417-5	3.187-5	3.056-5	2.914-5	2.608-5	2.287-5	1.967-5	1.647-5
48	94	6.813-5	6.466-5	6.059-5	5.583-5	5.030-5	4.726-5	4.407-5	3.743-5	3.081-5	2.463-5	1.910-5
48	95	4.342-4	4.320-4	4.280-4	4.220-4	4.141-4	4.093-4	4.041-4	3.923-4	3.789-4	3.629-4	3.376-4
48	96	7.605-4	7.381-4	7.197-4	7.055-4	6.949-4	6.905-4	6.866-4	6.791-4	6.714-4	6.599-4	6.297-4
48	97	1.558-3	1.533-3	1.497-3	1.449-3	1.388-3	1.350-3	1.307-3	1.206-3	1.087-3	9.537-4	8.066-4
49	50	5.969-2	5.771-2	5.524-2	5.217-2	4.833-2	4.610-2	4.368-2	3.833-2	3.259-2	2.683-2	2.138-2
49	51	2.437-3	2.142-3	1.876-3	1.643-3	1.435-3	1.338-3	1.244-3	1.066-3	9.087-4	7.832-4	6.845-4
49	52	1.175-2	1.077-2	9.845-3	8.935-3	8.008-3	7.531-3	7.045-3	6.060-3	5.100-3	4.218-3	3.424-3
49	53	1.308-2	1.187-2	1.073-2	9.661-3	8.610-3	8.085-3	7.560-3	6.526-3	5.557-3	4.703-3	3.945-3
49	54	1.808-2	1.629-2	1.461-2	1.305-2	1.153-2	1.078-2	1.003-2	8.532-3	7.105-3	5.804-3	4.643-3
49	55	8.941-3	8.496-3	8.132-3	7.841-3	7.603-3	7.500-3	7.407-3	7.255-3	7.162-3	7.100-3	6.879-3
49	56	2.176-2	2.098-2	2.032-2	1.975-2	1.923-2	1.899-2	1.876-2	1.835-2	1.803-2	1.776-2	1.709-2
49	57	2.576-2	2.477-2	2.390-2	2.309-2	2.224-2	2.178-2	2.130-2	2.030-2	1.931-2	1.840-2	1.723-2
49	58	2.683-2	2.541-2	2.387-2	2.215-2	2.020-2	1.913-2	1.799-2	1.557-2	1.308-2	1.068-2	8.450-3
49	59	3.318-2	3.204-2	3.068-2	2.902-2	2.699-2	2.583-2	2.457-2	2.182-2	1.892-2	1.605-2	1.329-2
49	60	1.715-2	1.644-2	1.574-2	1.498-2	1.407-2	1.355-2	1.300-2	1.179-2	1.052-2	9.261-3	7.984-3
49	61	3.215-2	3.116-2	3.007-2	2.877-2	2.715-2	2.621-2	2.517-2	2.289-2	2.043-2	1.793-2	1.534-2
49	62	1.860-2	1.836-2	1.808-2	1.769-2	1.715-2	1.681-2	1.643-2	1.559-2	1.469-2	1.377-2	1.263-2
49	63	3.466-2	3.426-2	3.381-2	3.320-2	3.233-2	3.177-2	3.115-2	2.974-2	2.823-2	2.666-2	2.460-2
49	64	3.408-2	3.348-2	3.291-2	3.224-2	3.133-2	3.077-2	3.014-2	2.868-2	2.709-2	2.540-2	2.327-2
49	65	4.115-2	4.160-2	4.218-2	4.287-2	4.361-2	4.399-2	4.439-2	4.528-2	4.633-2	4.728-2	4.673-2
49	66	2.197-2	2.123-2	2.035-2	1.925-2	1.788-2	1.707-2	1.620-2	1.428-2	1.225-2	1.025-2	8.345-3
49	67	9.138-2	9.269-2	9.441-2	9.635-2	9.833-2	9.930-2	1.003-1	1.024-1	1.049-1	1.073-1	1.064-1
49	68	6.444-2	6.502-2	6.583-2	6.675-2	6.764-2	6.806-2	6.848-2	6.935-2	7.042-2	7.140-2	7.027-2
49	69	9.721-3	9.248-3	8.691-3	8.031-3	7.249-3	6.812-3	6.348-3	5.363-3	4.356-3	3.399-3	2.549-3
49	70	1.145-2	1.116-2	1.078-2	1.026-2	9.588-3	9.189-3	8.750-3	7.777-3	6.725-3	5.658-3	4.610-3
49	71	4.207-3	4.046-3	3.873-3	3.685-3	3.476-3	3.363-3	3.246-3	3.003-3	2.759-3	2.520-3	2.255-3
49	72	1.688-2	1.670-2	1.650-2	1.629-2	1.602-2	1.587-2	1.571-2	1.537-2	1.505-2	1.468-2	1.396-2
49	73	4.366-2	4.377-2	4.397-2	4.419-2	4.437-2	4.444-2	4.450-2	4.461-2	4.478-2	4.483-2	4.357-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
49	74	6.394-3	6.086-3	5.737-3	5.334-3	4.866-3	4.610-3	4.342-3	3.788-3	3.249-3	2.762-3	2.321-3
49	75	7.267-3	6.901-3	6.497-3	6.041-3	5.521-3	5.238-3	4.943-3	4.331-3	3.730-3	3.175-3	2.659-3
49	76	1.651-2	1.610-2	1.568-2	1.525-2	1.479-2	1.455-2	1.430-2	1.381-2	1.337-2	1.295-2	1.227-2
49	77	1.443-2	1.388-2	1.321-2	1.240-2	1.140-2	1.083-2	1.022-2	8.877-3	7.462-3	6.065-3	4.761-3
49	78	1.012-2	9.847-3	9.500-3	9.050-3	8.472-3	8.132-3	7.761-3	6.943-3	6.072-3	5.203-3	4.345-3
49	79	6.224-3	6.042-3	5.808-3	5.508-3	5.132-3	4.916-3	4.684-3	4.182-3	3.657-3	3.139-3	2.629-3
49	80	3.298-3	3.194-3	3.059-3	2.887-3	2.672-3	2.548-3	2.415-3	2.127-3	1.826-3	1.530-3	1.248-3
49	81	1.304-2	1.269-2	1.222-2	1.159-2	1.078-2	1.030-2	9.778-3	8.619-3	7.367-3	6.107-3	4.898-3
49	82	6.875-3	6.614-3	6.292-3	5.887-3	5.384-3	5.095-3	4.784-3	4.112-3	3.410-3	2.728-3	2.105-3
49	83	6.313-3	6.157-3	5.936-3	5.622-3	5.197-3	4.944-3	4.666-3	4.060-3	3.430-3	2.834-3	2.296-3
49	84	1.856-2	1.823-2	1.777-2	1.713-2	1.627-2	1.575-2	1.517-2	1.386-2	1.240-2	1.087-2	9.243-3
49	85	1.467-2	1.448-2	1.420-2	1.378-2	1.320-2	1.285-2	1.246-2	1.158-2	1.060-2	9.552-3	8.370-3
49	86	5.692-3	5.637-3	5.547-3	5.408-3	5.209-3	5.087-3	4.951-3	4.644-3	4.303-3	3.935-3	3.502-3
49	87	1.178-2	1.142-2	1.096-2	1.035-2	9.559-3	9.097-3	8.590-3	7.469-3	6.261-3	5.052-3	3.919-3
49	88	7.177-4	6.645-4	6.184-4	5.768-4	5.369-4	5.171-4	4.974-4	4.589-4	4.234-4	3.914-4	3.562-4
49	89	6.402-4	5.636-4	5.007-4	4.484-4	4.030-4	3.821-4	3.623-4	3.257-4	2.943-4	2.683-4	2.423-4
49	90	2.121-3	2.048-3	1.989-3	1.937-3	1.885-3	1.858-3	1.830-3	1.773-3	1.718-3	1.665-3	1.576-3
49	91	4.549-3	4.427-3	4.246-3	3.991-3	3.654-3	3.455-3	3.238-3	2.765-3	2.269-3	1.789-3	1.357-3
49	92	1.456-3	1.408-3	1.346-3	1.265-3	1.160-3	1.099-3	1.033-3	8.887-4	7.376-4	5.908-4	4.567-4
49	93	1.514-3	1.534-3	1.554-3	1.572-3	1.589-3	1.597-3	1.605-3	1.623-3	1.643-3	1.656-3	1.614-3
49	94	3.116-3	3.123-3	3.124-3	3.117-3	3.103-3	3.093-3	3.081-3	3.053-3	3.020-3	2.964-3	2.818-3
49	95	7.037-3	7.016-3	6.950-3	6.828-3	6.638-3	6.516-3	6.374-3	6.033-3	5.624-3	5.149-3	4.566-3
49	96	3.580-3	3.509-3	3.404-3	3.255-3	3.056-3	2.935-3	2.802-3	2.500-3	2.166-3	1.821-3	1.481-3
49	97	7.872-5	7.647-5	7.327-5	6.898-5	6.352-5	6.037-5	5.698-5	4.964-5	4.193-5	3.433-5	2.716-5
50	51	4.127-2	4.013-2	3.860-2	3.656-2	3.392-2	3.236-2	3.064-2	2.681-2	2.263-2	1.838-2	1.434-2
50	52	8.258-3	7.380-3	6.605-3	5.918-3	5.290-3	4.991-3	4.700-3	4.153-3	3.675-3	3.290-3	2.948-3
50	53	1.096-2	1.019-2	9.401-3	8.581-3	7.701-3	7.231-3	6.744-3	5.725-3	4.689-3	3.697-3	2.804-3
50	54	7.669-3	6.966-3	6.293-3	5.654-3	5.034-3	4.726-3	4.421-3	3.824-3	3.269-3	2.777-3	2.334-3
50	55	1.107-2	1.052-2	9.995-3	9.496-3	9.000-3	8.750-3	8.496-3	7.988-3	7.489-3	6.993-3	6.387-3
50	56	9.202-3	8.547-3	7.954-3	7.405-3	6.858-3	6.574-3	6.280-3	5.657-3	5.001-3	4.330-3	3.644-3
50	57	9.914-3	9.293-3	8.732-3	8.233-3	7.785-3	7.577-3	7.379-3	7.014-3	6.699-3	6.409-3	6.001-3
50	58	1.305-2	1.220-2	1.131-2	1.035-2	9.298-3	8.729-3	8.134-3	6.886-3	5.616-3	4.404-3	3.320-3
50	59	1.956-2	1.888-2	1.810-2	1.715-2	1.599-2	1.532-2	1.459-2	1.301-2	1.134-2	9.706-3	8.132-3
50	60	2.010-2	1.965-2	1.919-2	1.864-2	1.794-2	1.751-2	1.705-2	1.602-2	1.491-2	1.378-2	1.247-2
50	61	1.509-2	1.471-2	1.439-2	1.407-2	1.370-2	1.348-2	1.324-2	1.272-2	1.219-2	1.166-2	1.093-2
50	62	2.602-2	2.598-2	2.595-2	2.584-2	2.558-2	2.538-2	2.513-2	2.455-2	2.391-2	2.319-2	2.193-2
50	63	1.315-2	1.274-2	1.227-2	1.169-2	1.097-2	1.055-2	1.010-2	9.120-3	8.098-3	7.097-3	6.096-3
50	64	1.179-2	1.118-2	1.052-2	9.776-3	8.896-3	8.400-3	7.871-3	6.731-3	5.542-3	4.386-3	3.336-3
50	65	1.477-3	1.376-3	1.282-3	1.186-3	1.082-3	1.026-3	9.674-4	8.433-4	7.149-4	5.883-4	4.681-4
50	66	2.252-2	2.203-2	2.143-2	2.065-2	1.963-2	1.903-2	1.836-2	1.687-2	1.526-2	1.358-2	1.179-2
50	67	3.764-2	3.796-2	3.843-2	3.898-2	3.953-2	3.980-2	4.006-2	4.062-2	4.130-2	4.192-2	4.129-2
50	68	8.787-2	8.908-2	9.065-2	9.239-2	9.415-2	9.502-2	9.590-2	9.779-2	1.001-1	1.023-1	1.014-1
50	69	6.792-3	6.590-3	6.386-3	6.166-3	5.912-3	5.771-3	5.620-3	5.302-3	4.981-3	4.666-3	4.285-3
50	70	7.392-3	7.192-3	6.937-3	6.606-3	6.181-3	5.934-3	5.665-3	5.079-3	4.461-3	3.847-3	3.238-3
50	71	1.404-2	1.398-2	1.392-2	1.386-2	1.379-2	1.375-2	1.371-2	1.364-2	1.360-2	1.351-2	1.304-2
50	72	1.302-2	1.298-2	1.294-2	1.287-2	1.273-2	1.264-2	1.253-2	1.227-2	1.201-2	1.173-2	1.117-2
50	73	1.307-2	1.295-2	1.280-2	1.265-2	1.248-2	1.239-2	1.230-2	1.214-2	1.200-2	1.183-2	1.133-2
50	74	5.233-3	4.978-3	4.697-3	4.382-3	4.028-3	3.836-3	3.634-3	3.211-3	2.782-3	2.370-3	1.977-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
50	75	1.190-2	1.165-2	1.139-2	1.112-2	1.087-2	1.075-2	1.064-2	1.044-2	1.029-2	1.015-2	9.735-3
50	76	4.165-3	3.924-3	3.664-3	3.378-3	3.061-3	2.892-3	2.718-3	2.366-3	2.035-3	1.743-3	1.481-3
50	77	9.897-3	9.542-3	9.099-3	8.541-3	7.843-3	7.439-3	7.002-3	6.045-3	5.033-3	4.035-3	3.115-3
50	78	7.290-3	7.077-3	6.789-3	6.413-3	5.940-3	5.668-3	5.375-3	4.744-3	4.089-3	3.452-3	2.842-3
50	79	6.111-3	5.948-3	5.736-3	5.458-3	5.102-3	4.894-3	4.667-3	4.169-3	3.640-3	3.112-3	2.592-3
50	80	3.954-3	3.872-3	3.764-3	3.627-3	3.459-3	3.364-3	3.262-3	3.044-3	2.818-3	2.590-3	2.328-3
50	81	5.787-3	5.613-3	5.385-3	5.087-3	4.705-3	4.481-3	4.236-3	3.694-3	3.111-3	2.529-3	1.981-3
50	82	3.949-3	3.803-3	3.626-3	3.408-3	3.140-3	2.986-3	2.821-3	2.465-3	2.096-3	1.739-3	1.405-3
50	83	3.375-3	3.273-3	3.128-3	2.929-3	2.669-3	2.518-3	2.353-3	1.995-3	1.623-3	1.265-3	9.469-4
50	84	1.440-2	1.413-2	1.375-2	1.321-2	1.249-2	1.205-2	1.157-2	1.049-2	9.294-3	8.043-3	6.748-3
50	85	7.610-3	7.479-3	7.297-3	7.041-3	6.693-3	6.483-3	6.249-3	5.717-3	5.125-3	4.499-3	3.836-3
50	86	2.072-3	2.021-3	1.955-3	1.867-3	1.750-3	1.680-3	1.603-3	1.429-3	1.237-3	1.038-3	8.409-4
50	87	7.940-3	7.697-3	7.383-3	6.972-3	6.445-3	6.136-3	5.797-3	5.048-3	4.241-3	3.435-3	2.679-3
50	88	4.690-4	4.281-4	3.914-4	3.567-4	3.218-4	3.038-4	2.853-4	2.471-4	2.083-4	1.709-4	1.360-4
50	89	1.107-3	1.053-3	1.006-3	9.636-4	9.228-4	9.024-4	8.818-4	8.410-4	8.018-4	7.627-4	7.085-4
50	90	5.053-4	4.535-4	4.092-4	3.706-4	3.353-4	3.186-4	3.025-4	2.727-4	2.477-4	2.280-4	2.085-4
50	91	3.456-3	3.365-3	3.230-3	3.039-3	2.787-3	2.638-3	2.475-3	2.119-3	1.744-3	1.379-3	1.049-3
50	92	9.672-4	9.358-4	8.944-4	8.392-4	7.678-4	7.260-4	6.805-4	5.815-4	4.774-4	3.765-4	2.851-4
50	93	3.766-4	3.755-4	3.718-4	3.648-4	3.537-4	3.464-4	3.379-4	3.172-4	2.919-4	2.622-4	2.273-4
50	94	4.173-3	4.174-3	4.153-3	4.103-3	4.021-3	3.965-3	3.899-3	3.737-3	3.540-3	3.304-3	2.988-3
50	95	2.364-3	2.361-3	2.353-3	2.338-3	2.316-3	2.303-3	2.288-3	2.254-3	2.216-3	2.165-3	2.050-3
50	96	2.261-3	2.212-3	2.141-3	2.041-3	1.906-3	1.825-3	1.735-3	1.532-3	1.307-3	1.076-3	8.529-4
50	97	5.025-5	4.875-5	4.662-5	4.372-5	4.000-5	3.785-5	3.553-5	3.050-5	2.525-5	2.011-5	1.540-5
51	52	4.705-3	4.394-3	4.073-3	3.732-3	3.357-3	3.155-3	2.943-3	2.500-3	2.046-3	1.612-3	1.221-3
51	53	2.247-3	1.954-3	1.688-3	1.459-3	1.267-3	1.183-3	1.107-3	9.804-4	8.901-4	8.331-4	7.827-4
51	54	1.989-3	1.830-3	1.673-3	1.516-3	1.353-3	1.268-3	1.181-3	1.000-3	8.182-4	6.444-4	4.880-4
51	55	3.896-3	3.710-3	3.523-3	3.329-3	3.115-3	2.996-3	2.870-3	2.591-3	2.287-3	1.968-3	1.639-3
51	56	1.858-3	1.667-3	1.500-3	1.362-3	1.254-3	1.211-3	1.174-3	1.123-3	1.100-3	1.100-3	1.084-3
51	57	2.972-3	2.771-3	2.571-3	2.367-3	2.149-3	2.032-3	1.910-3	1.650-3	1.378-3	1.109-3	8.581-4
51	58	4.502-3	4.134-3	3.759-3	3.384-3	3.001-3	2.805-3	2.604-3	2.196-3	1.794-3	1.418-3	1.085-3
51	59	5.253-3	4.998-3	4.702-3	4.359-3	3.958-3	3.733-3	3.495-3	2.985-3	2.454-3	1.939-3	1.471-3
51	60	6.640-3	6.567-3	6.516-3	6.473-3	6.420-3	6.386-3	6.348-3	6.265-3	6.182-3	6.079-3	5.817-3
51	61	2.820-3	2.623-3	2.431-3	2.232-3	2.015-3	1.898-3	1.775-3	1.515-3	1.246-3	9.859-4	7.495-4
51	62	3.901-3	3.759-3	3.586-3	3.371-3	3.102-3	2.946-3	2.778-3	2.407-3	2.011-3	1.618-3	1.251-3
51	63	1.322-2	1.311-2	1.296-2	1.275-2	1.244-2	1.224-2	1.202-2	1.150-2	1.094-2	1.032-2	9.488-3
51	64	4.718-3	4.460-3	4.193-3	3.894-3	3.544-3	3.348-3	3.139-3	2.689-3	2.218-3	1.760-3	1.341-3
51	65	1.212-3	1.142-3	1.086-3	1.034-3	9.814-4	9.530-4	9.228-4	8.564-4	7.833-4	7.045-4	6.156-4
51	66	2.977-3	2.845-3	2.691-3	2.506-3	2.283-3	2.157-3	2.021-3	1.730-3	1.425-3	1.129-3	8.593-4
51	67	1.959-3	1.875-3	1.785-3	1.681-3	1.557-3	1.487-3	1.412-3	1.247-3	1.071-3	8.939-4	7.217-4
51	68	4.465-2	4.509-2	4.567-2	4.634-2	4.705-2	4.742-2	4.781-2	4.868-2	4.974-2	5.069-2	5.005-2
51	69	8.795-4	8.002-4	7.242-4	6.497-4	5.740-4	5.351-4	4.956-4	4.155-4	3.370-4	2.638-4	1.992-4
51	70	2.442-3	2.370-3	2.279-3	2.160-3	2.007-3	1.918-3	1.821-3	1.607-3	1.377-3	1.145-3	9.212-4
51	71	2.026-3	1.951-3	1.862-3	1.753-3	1.617-3	1.539-3	1.454-3	1.268-3	1.069-3	8.712-4	6.840-4
51	72	1.043-2	1.043-2	1.044-2	1.045-2	1.049-2	1.052-2	1.056-2	1.065-2	1.078-2	1.087-2	1.061-2
51	73	1.010-3	9.529-4	8.896-4	8.174-4	7.345-4	6.889-4	6.407-4	5.393-4	4.362-4	3.387-4	2.526-4
51	74	1.786-3	1.679-3	1.569-3	1.455-3	1.334-3	1.271-3	1.205-3	1.068-3	9.305-4	7.964-4	6.656-4
51	75	9.414-4	8.756-4	8.096-4	7.409-4	6.667-4	6.270-4	5.855-4	4.986-4	4.099-4	3.245-4	2.472-4
51	76	1.375-3	1.286-3	1.196-3	1.102-3	1.004-3	9.542-4	9.041-4	8.083-4	7.260-4	6.613-4	6.011-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
51	77	9.690-3	9.570-3	9.433-3	9.265-3	9.054-3	8.931-3	8.798-3	8.513-3	8.225-3	7.923-3	7.444-3
51	78	2.515-3	2.429-3	2.313-3	2.161-3	1.969-3	1.857-3	1.737-3	1.476-3	1.206-3	9.454-4	7.120-4
51	79	3.886-3	3.824-3	3.739-3	3.629-3	3.494-3	3.418-3	3.337-3	3.166-3	2.992-3	2.813-3	2.582-3
51	80	1.451-3	1.407-3	1.348-3	1.272-3	1.176-3	1.119-3	1.057-3	9.206-4	7.729-4	6.245-4	4.848-4
51	81	3.255-3	3.257-3	3.267-3	3.268-3	3.251-3	3.235-3	3.213-3	3.161-3	3.108-3	3.055-3	2.935-3
51	82	1.148-3	1.098-3	1.039-3	9.679-4	8.815-4	8.324-4	7.799-4	6.674-4	5.509-4	4.384-4	3.362-4
51	83	1.190-3	1.157-3	1.110-3	1.047-3	9.637-4	9.144-4	8.605-4	7.425-4	6.183-4	4.977-4	3.871-4
51	84	5.923-3	5.836-3	5.699-3	5.495-3	5.212-3	5.041-3	4.851-3	4.423-3	3.950-3	3.456-3	2.938-3
51	85	2.155-3	2.100-3	2.030-3	1.938-3	1.818-3	1.747-3	1.667-3	1.489-3	1.291-3	1.085-3	8.799-4
51	86	1.027-3	1.012-3	9.913-4	9.614-4	9.190-4	8.926-4	8.625-4	7.927-4	7.132-4	6.277-4	5.358-4
51	87	2.772-3	2.678-3	2.559-3	2.408-3	2.218-3	2.107-3	1.986-3	1.719-3	1.432-3	1.146-3	8.794-4
51	88	3.628-4	3.719-4	3.836-4	3.950-4	4.050-4	4.093-4	4.133-4	4.209-4	4.303-4	4.424-4	4.449-4
51	89	1.382-4	1.235-4	1.109-4	9.946-5	8.850-5	8.301-5	7.744-5	6.607-5	5.460-5	4.352-5	3.337-5
51	90	1.799-4	1.621-4	1.472-4	1.343-4	1.228-4	1.175-4	1.125-4	1.039-4	9.779-5	9.403-5	8.977-5
51	91	1.810-3	1.777-3	1.726-3	1.651-3	1.552-3	1.493-3	1.428-3	1.286-3	1.135-3	9.826-4	8.288-4
51	92	3.562-4	3.442-4	3.286-4	3.081-4	2.816-4	2.662-4	2.495-4	2.130-4	1.747-4	1.376-4	1.041-4
51	93	1.025-3	1.027-3	1.021-3	1.008-3	9.832-4	9.661-4	9.455-4	8.939-4	8.301-4	7.548-4	6.633-4
51	94	3.089-4	3.061-4	3.006-4	2.919-4	2.793-4	2.715-4	2.626-4	2.420-4	2.183-4	1.921-4	1.634-4
51	95	1.028-3	1.042-3	1.055-3	1.069-3	1.085-3	1.093-3	1.101-3	1.119-3	1.139-3	1.156-3	1.134-3
51	96	7.568-4	7.395-4	7.144-4	6.795-4	6.332-4	6.056-4	5.749-4	5.060-4	4.299-4	3.519-4	2.769-4
51	97	4.455-5	4.377-5	4.265-5	4.105-5	3.882-5	3.746-5	3.594-5	3.249-5	2.866-5	2.465-5	2.052-5
52	53	5.017-1	4.961-1	4.891-1	4.792-1	4.647-1	4.554-1	4.450-1	4.211-1	3.948-1	3.667-1	3.323-1
52	54	1.569-2	1.457-2	1.360-2	1.275-2	1.196-2	1.156-2	1.116-2	1.037-2	9.607-3	8.862-3	8.009-3
52	55	3.243-2	3.118-2	3.007-2	2.906-2	2.805-2	2.755-2	2.704-2	2.606-2	2.526-2	2.470-2	2.382-2
52	56	2.555-2	2.373-2	2.212-2	2.067-2	1.931-2	1.863-2	1.796-2	1.666-2	1.549-2	1.454-2	1.355-2
52	57	1.152-2	1.034-2	9.342-3	8.519-3	7.821-3	7.505-3	7.208-3	6.673-3	6.251-3	5.970-3	5.698-3
52	58	7.807-2	7.483-2	7.080-2	6.581-2	5.973-2	5.628-2	5.260-2	4.473-2	3.662-2	2.885-2	2.189-2
52	59	8.652-2	8.325-2	7.935-2	7.457-2	6.871-2	6.536-2	6.176-2	5.401-2	4.600-2	3.832-2	3.122-2
52	60	4.309-2	4.156-2	4.028-2	3.907-2	3.775-2	3.701-2	3.622-2	3.455-2	3.291-2	3.141-2	2.947-2
52	61	9.904-3	8.831-3	7.959-3	7.271-3	6.712-3	6.466-3	6.237-3	5.822-3	5.470-3	5.174-3	4.825-3
52	62	2.189-1	2.212-1	2.239-1	2.264-1	2.283-1	2.289-1	2.295-1	2.305-1	2.323-1	2.345-1	2.308-1
52	63	7.109-2	7.070-2	7.031-2	6.974-2	6.886-2	6.831-2	6.770-2	6.647-2	6.554-2	6.485-2	6.279-2
52	64	7.851-3	7.258-3	6.686-3	6.121-3	5.541-3	5.240-3	4.933-3	4.307-3	3.692-3	3.121-3	2.593-3
52	65	5.107-3	4.889-3	4.629-3	4.313-3	3.928-3	3.709-3	3.475-3	2.969-3	2.441-3	1.929-3	1.464-3
52	66	1.390-2	1.299-2	1.210-2	1.116-2	1.014-2	9.592-3	9.022-3	7.845-3	6.680-3	5.598-3	4.607-3
52	67	1.192-2	1.144-2	1.089-2	1.027-2	9.549-3	9.154-3	8.743-3	7.903-3	7.111-3	6.422-3	5.755-3
52	68	1.249-2	1.193-2	1.127-2	1.050-2	9.577-3	9.063-3	8.519-3	7.367-3	6.199-3	5.094-3	4.084-3
52	69	6.510-2	6.484-2	6.456-2	6.406-2	6.315-2	6.252-2	6.180-2	6.016-2	5.849-2	5.682-2	5.397-2
52	70	2.178-2	2.143-2	2.099-2	2.040-2	1.963-2	1.917-2	1.867-2	1.762-2	1.656-2	1.553-2	1.429-2
52	71	1.343-1	1.353-1	1.364-1	1.372-1	1.377-1	1.377-1	1.377-1	1.376-1	1.375-1	1.367-1	1.320-1
52	72	5.447-2	5.466-2	5.485-2	5.495-2	5.484-2	5.470-2	5.452-2	5.407-2	5.362-2	5.296-2	5.081-2
52	73	6.460-3	6.162-3	5.888-3	5.623-3	5.347-3	5.200-3	5.048-3	4.728-3	4.400-3	4.065-3	3.668-3
52	74	2.623-2	2.500-2	2.377-2	2.247-2	2.101-2	2.019-2	1.932-2	1.739-2	1.528-2	1.306-2	1.079-2
52	75	1.960-2	1.866-2	1.778-2	1.691-2	1.600-2	1.551-2	1.500-2	1.392-2	1.280-2	1.167-2	1.041-2
52	76	4.065-3	3.618-3	3.252-3	2.946-3	2.675-3	2.547-3	2.421-3	2.174-3	1.937-3	1.710-3	1.480-3
52	77	1.545-2	1.493-2	1.438-2	1.374-2	1.300-2	1.259-2	1.215-2	1.120-2	1.022-2	9.253-3	8.201-3
52	78	1.049-2	1.027-2	1.001-2	9.711-3	9.341-3	9.127-3	8.895-3	8.384-3	7.837-3	7.266-3	6.579-3
52	79	4.910-2	4.874-2	4.833-2	4.784-2	4.723-2	4.686-2	4.647-2	4.561-2	4.472-2	4.364-2	4.140-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
52	80	9.921-2	9.923-2	9.928-2	9.936-2	9.949-2	9.958-2	9.971-2	1.001-1	1.006-1	1.007-1	9.758-2
52	81	3.375-3	3.145-3	2.890-3	2.629-3	2.367-3	2.234-3	2.101-3	1.834-3	1.574-3	1.331-3	1.103-3
52	82	1.083-2	1.051-2	1.008-2	9.484-3	8.717-3	8.268-3	7.778-3	6.707-3	5.574-3	4.464-3	3.444-3
52	83	3.604-3	3.491-3	3.339-3	3.138-3	2.880-3	2.730-3	2.567-3	2.209-3	1.828-3	1.452-3	1.106-3
52	84	6.448-4	6.073-4	5.706-4	5.338-4	4.948-4	4.741-4	4.523-4	4.061-4	3.579-4	3.102-4	2.627-4
52	85	3.188-4	2.950-4	2.741-4	2.554-4	2.376-4	2.287-4	2.196-4	2.013-4	1.834-4	1.666-4	1.491-4
52	86	5.383-5	4.631-5	3.994-5	3.468-5	3.024-5	2.822-5	2.628-5	2.256-5	1.900-5	1.561-5	1.242-5
52	87	1.029-2	9.997-3	9.615-3	9.114-3	8.473-3	8.097-3	7.688-3	6.786-3	5.821-3	4.855-3	3.925-3
52	88	2.148-2	2.110-2	2.062-2	1.997-2	1.913-2	1.863-2	1.809-2	1.689-2	1.560-2	1.423-2	1.264-2
52	89	1.025-2	9.877-3	9.458-3	8.961-3	8.365-3	8.029-3	7.671-3	6.910-3	6.132-3	5.378-3	4.621-3
52	90	3.555-3	3.346-3	3.128-3	2.889-3	2.618-3	2.470-3	2.313-3	1.984-3	1.650-3	1.333-3	1.046-3
52	91	6.114-3	6.000-3	5.832-3	5.592-3	5.267-3	5.071-3	4.853-3	4.360-3	3.815-3	3.253-3	2.691-3
52	92	1.155-2	1.121-2	1.073-2	1.007-2	9.218-3	8.718-3	8.175-3	6.992-3	5.751-3	4.545-3	3.452-3
52	93	2.024-3	1.967-3	1.885-3	1.772-3	1.623-3	1.536-3	1.441-3	1.233-3	1.014-3	8.009-4	6.069-4
52	94	3.180-3	3.090-3	2.964-3	2.796-3	2.582-3	2.460-3	2.330-3	2.058-3	1.792-3	1.550-3	1.325-3
52	95	4.669-3	4.542-3	4.361-3	4.110-3	3.785-3	3.595-3	3.390-3	2.948-3	2.491-3	2.055-3	1.653-3
52	96	7.851-3	7.627-3	7.311-3	6.877-3	6.311-3	5.979-3	5.618-3	4.828-3	3.995-3	3.180-3	2.435-3
52	97	1.241-3	1.210-3	1.164-3	1.100-3	1.015-3	9.643-4	9.085-4	7.848-4	6.518-4	5.196-4	3.973-4
53	54	5.520-1	5.446-1	5.356-1	5.235-1	5.063-1	4.956-1	4.836-1	4.561-1	4.261-1	3.943-1	3.560-1
53	55	1.349-2	1.184-2	1.042-2	9.178-3	8.047-3	7.505-3	6.972-3	5.934-3	4.951-3	4.055-3	3.251-3
53	56	3.529-2	3.341-2	3.167-2	3.004-2	2.844-2	2.764-2	2.683-2	2.522-2	2.369-2	2.222-2	2.046-2
53	57	3.141-2	2.871-2	2.615-2	2.368-2	2.121-2	1.996-2	1.870-2	1.615-2	1.368-2	1.139-2	9.314-3
53	58	9.343-2	8.891-2	8.354-2	7.717-2	6.969-2	6.552-2	6.110-2	5.174-2	4.216-2	3.302-2	2.486-2
53	59	8.622-2	8.295-2	7.886-2	7.376-2	6.750-2	6.391-2	6.006-2	5.171-2	4.298-2	3.448-2	2.669-2
53	60	2.080-2	1.966-2	1.866-2	1.773-2	1.682-2	1.636-2	1.590-2	1.501-2	1.427-2	1.372-2	1.306-2
53	61	5.449-2	5.270-2	5.112-2	4.955-2	4.777-2	4.677-2	4.569-2	4.338-2	4.109-2	3.891-2	3.620-2
53	62	1.529-2	1.438-2	1.344-2	1.241-2	1.127-2	1.066-2	1.002-2	8.740-3	7.519-3	6.436-3	5.457-3
53	63	3.180-1	3.206-1	3.240-1	3.272-1	3.294-1	3.301-1	3.306-1	3.314-1	3.332-1	3.354-1	3.290-1
53	64	2.436-2	2.248-2	2.076-2	1.914-2	1.752-2	1.668-2	1.583-2	1.411-2	1.244-2	1.088-2	9.387-3
53	65	2.020-3	1.768-3	1.563-3	1.395-3	1.260-3	1.205-3	1.159-3	1.099-3	1.090-3	1.124-3	1.148-3
53	66	6.274-2	6.199-2	6.126-2	6.044-2	5.940-2	5.880-2	5.816-2	5.691-2	5.589-2	5.504-2	5.301-2
53	67	1.445-2	1.383-2	1.310-2	1.221-2	1.113-2	1.052-2	9.866-3	8.454-3	6.987-3	5.567-3	4.276-3
53	68	1.760-2	1.672-2	1.576-2	1.467-2	1.341-2	1.271-2	1.199-2	1.047-2	8.975-3	7.598-3	6.340-3
53	69	1.580-2	1.494-2	1.400-2	1.296-2	1.175-2	1.108-2	1.037-2	8.856-3	7.298-3	5.798-3	4.441-3
53	70	2.175-2	2.102-2	2.008-2	1.888-2	1.738-2	1.653-2	1.561-2	1.365-2	1.166-2	9.782-3	8.036-3
53	71	4.844-3	4.602-3	4.337-3	4.040-3	3.698-3	3.508-3	3.306-3	2.873-3	2.420-3	1.975-3	1.560-3
53	72	2.824-1	2.845-1	2.868-1	2.888-1	2.901-1	2.904-1	2.905-1	2.905-1	2.906-1	2.894-1	2.797-1
53	73	8.247-2	8.260-2	8.284-2	8.303-2	8.298-2	8.285-2	8.265-2	8.214-2	8.160-2	8.070-2	7.748-2
53	74	1.516-2	1.422-2	1.334-2	1.246-2	1.153-2	1.103-2	1.051-2	9.398-3	8.254-3	7.135-3	6.039-3
53	75	2.903-2	2.805-2	2.708-2	2.607-2	2.493-2	2.430-2	2.362-2	2.211-2	2.045-2	1.863-2	1.651-2
53	76	2.448-2	2.331-2	2.219-2	2.104-2	1.978-2	1.909-2	1.836-2	1.678-2	1.512-2	1.343-2	1.165-2
53	77	3.103-2	3.037-2	2.963-2	2.875-2	2.766-2	2.703-2	2.635-2	2.488-2	2.335-2	2.177-2	1.984-2
53	78	3.791-2	3.759-2	3.720-2	3.670-2	3.606-2	3.568-2	3.526-2	3.434-2	3.337-2	3.226-2	3.036-2
53	79	9.382-2	9.380-2	9.380-2	9.382-2	9.391-2	9.399-2	9.409-2	9.442-2	9.492-2	9.499-2	9.205-2
53	80	1.019-2	9.926-3	9.558-3	9.065-3	8.425-3	8.046-3	7.628-3	6.689-3	5.656-3	4.598-3	3.585-3
53	81	8.308-3	7.993-3	7.636-3	7.254-3	6.851-3	6.642-3	6.429-3	5.994-3	5.567-3	5.147-3	4.659-3
53	82	1.335-2	1.295-2	1.240-2	1.165-2	1.069-2	1.012-2	9.505-3	8.156-3	6.728-3	5.328-3	4.050-3
53	83	4.443-3	4.309-3	4.126-3	3.882-3	3.568-3	3.383-3	3.182-3	2.741-3	2.272-3	1.809-3	1.382-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
53	84	3.523-4	3.118-4	2.776-4	2.502-4	2.284-4	2.190-4	2.106-4	1.960-4	1.848-4	1.773-4	1.692-4
53	85	4.647-4	4.286-4	3.930-4	3.571-4	3.194-4	2.996-4	2.791-4	2.368-4	1.944-4	1.541-4	1.179-4
53	86	1.464-4	1.361-4	1.258-4	1.151-4	1.038-4	9.774-5	9.149-5	7.850-5	6.537-5	5.282-5	4.135-5
53	87	1.300-2	1.262-2	1.213-2	1.149-2	1.068-2	1.021-2	9.698-3	8.571-3	7.363-3	6.150-3	4.978-3
53	88	8.234-3	7.879-3	7.480-3	7.010-3	6.446-3	6.129-3	5.790-3	5.069-3	4.332-3	3.625-3	2.964-3
53	89	2.524-2	2.480-2	2.426-2	2.355-2	2.263-2	2.209-2	2.149-2	2.015-2	1.868-2	1.710-2	1.523-2
53	90	1.127-2	1.082-2	1.031-2	9.720-3	9.021-3	8.631-3	8.217-3	7.340-3	6.450-3	5.596-3	4.759-3
53	91	8.636-3	8.471-3	8.236-3	7.910-3	7.475-3	7.215-3	6.927-3	6.279-3	5.566-3	4.826-3	4.066-3
53	92	1.507-2	1.463-2	1.400-2	1.314-2	1.203-2	1.138-2	1.067-2	9.121-3	7.498-3	5.921-3	4.492-3
53	93	6.876-4	6.665-4	6.393-4	6.055-4	5.664-4	5.460-4	5.260-4	4.908-4	4.679-4	4.583-4	4.462-4
53	94	5.120-3	4.975-3	4.767-3	4.480-3	4.106-3	3.886-3	3.647-3	3.125-3	2.575-3	2.039-3	1.552-3
53	95	6.314-3	6.148-3	5.911-3	5.587-3	5.170-3	4.929-3	4.670-3	4.118-3	3.559-3	3.032-3	2.538-3
53	96	1.090-2	1.058-2	1.013-2	9.519-3	8.718-3	8.248-3	7.737-3	6.621-3	5.446-3	4.301-3	3.262-3
53	97	1.676-3	1.634-3	1.572-3	1.485-3	1.370-3	1.301-3	1.226-3	1.059-3	8.795-4	7.010-4	5.359-4
54	55	8.264-3	7.401-3	6.601-3	5.862-3	5.158-3	4.811-3	4.465-3	3.779-3	3.122-3	2.520-3	1.985-3
54	56	2.585-2	2.296-2	2.037-2	1.803-2	1.586-2	1.480-2	1.376-2	1.171-2	9.770-3	8.004-3	6.425-3
54	57	6.846-2	6.287-2	5.764-2	5.264-2	4.765-2	4.511-2	4.253-2	3.732-2	3.220-2	2.737-2	2.279-2
54	58	1.040-1	9.939-2	9.380-2	8.699-2	7.880-2	7.419-2	6.929-2	5.882-2	4.807-2	3.777-2	2.855-2
54	59	7.942-2	7.650-2	7.304-2	6.885-2	6.373-2	6.080-2	5.766-2	5.093-2	4.413-2	3.790-2	3.229-2
54	60	1.531-2	1.448-2	1.357-2	1.256-2	1.139-2	1.075-2	1.007-2	8.640-3	7.200-3	5.843-3	4.618-3
54	61	6.939-2	6.781-2	6.627-2	6.459-2	6.261-2	6.150-2	6.033-2	5.794-2	5.582-2	5.411-2	5.161-2
54	62	1.356-2	1.297-2	1.228-2	1.146-2	1.045-2	9.881-3	9.270-3	7.958-3	6.601-3	5.294-3	4.106-3
54	63	2.046-2	1.856-2	1.689-2	1.531-2	1.370-2	1.287-2	1.203-2	1.032-2	8.681-3	7.185-3	5.846-3
54	64	4.821-2	4.485-2	4.186-2	3.908-2	3.628-2	3.482-2	3.332-2	3.024-2	2.719-2	2.431-2	2.139-2
54	65	3.906-3	3.760-3	3.578-3	3.349-3	3.062-3	2.897-3	2.718-3	2.329-3	1.920-3	1.520-3	1.155-3
54	66	4.515-1	4.539-1	4.569-1	4.595-1	4.609-1	4.611-1	4.610-1	4.605-1	4.611-1	4.617-1	4.503-1
54	67	9.120-3	8.332-3	7.609-3	6.916-3	6.216-3	5.859-3	5.496-3	4.769-3	4.075-3	3.447-3	2.874-3
54	68	2.573-2	2.447-2	2.306-2	2.144-2	1.955-2	1.850-2	1.739-2	1.507-2	1.274-2	1.056-2	8.568-3
54	69	8.892-3	8.386-3	7.836-3	7.223-3	6.526-3	6.143-3	5.739-3	4.883-3	4.006-3	3.165-3	2.408-3
54	70	3.220-2	3.108-2	2.970-2	2.793-2	2.572-2	2.446-2	2.311-2	2.022-2	1.729-2	1.451-2	1.193-2
54	71	5.884-3	5.584-3	5.254-3	4.875-3	4.428-3	4.178-3	3.911-3	3.340-3	2.747-3	2.173-3	1.654-3
54	72	4.286-3	3.692-3	3.221-3	2.830-3	2.483-3	2.317-3	2.154-3	1.833-3	1.522-3	1.228-3	9.611-4
54	73	5.001-1	5.032-1	5.068-1	5.101-1	5.125-1	5.134-1	5.140-1	5.150-1	5.163-1	5.153-1	4.989-1
54	74	4.457-3	4.132-3	3.822-3	3.516-3	3.196-3	3.026-3	2.849-3	2.472-3	2.078-3	1.685-3	1.315-3
54	75	6.330-2	6.250-2	6.159-2	6.046-2	5.900-2	5.813-2	5.719-2	5.509-2	5.282-2	5.024-2	4.648-2
54	76	5.679-2	5.504-2	5.308-2	5.074-2	4.785-2	4.615-2	4.428-2	4.005-2	3.530-2	3.025-2	2.502-2
54	77	1.697-2	1.621-2	1.531-2	1.423-2	1.293-2	1.220-2	1.141-2	9.718-3	7.960-3	6.261-3	4.727-3
54	78	9.759-2	9.721-2	9.669-2	9.601-2	9.513-2	9.461-2	9.405-2	9.284-2	9.161-2	8.999-2	8.589-2
54	79	7.455-3	7.232-3	6.932-3	6.546-3	6.062-3	5.781-3	5.474-3	4.792-3	4.047-3	3.289-3	2.564-3
54	80	4.130-4	3.815-4	3.462-4	3.080-4	2.674-4	2.464-4	2.251-4	1.832-4	1.439-4	1.095-4	8.079-5
54	81	1.077-2	1.028-2	9.707-3	9.029-3	8.234-3	7.789-3	7.315-3	6.295-3	5.223-3	4.169-3	3.195-3
54	82	1.615-2	1.566-2	1.499-2	1.409-2	1.292-2	1.224-2	1.149-2	9.856-3	8.126-3	6.430-3	4.883-3
54	83	5.302-3	5.150-3	4.938-3	4.652-3	4.278-3	4.059-3	3.819-3	3.290-3	2.726-3	2.168-3	1.653-3
54	84	3.231-4	2.651-4	2.152-4	1.750-4	1.434-4	1.302-4	1.182-4	9.761-5	8.024-5	6.532-5	5.216-5
54	85	7.654-4	7.249-4	6.795-4	6.277-4	5.675-4	5.342-4	4.990-4	4.241-4	3.472-4	2.733-4	2.069-4
54	86	2.967-4	2.837-4	2.679-4	2.488-4	2.258-4	2.129-4	1.990-4	1.694-4	1.387-4	1.092-4	8.259-5
54	87	1.485-2	1.441-2	1.383-2	1.309-2	1.216-2	1.162-2	1.103-2	9.727-3	8.338-3	6.948-3	5.612-3
54	88	2.746-3	2.591-3	2.428-3	2.246-3	2.037-3	1.920-3	1.797-3	1.536-3	1.267-3	1.011-3	7.788-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
54	89	9.821-3	9.409-3	8.938-3	8.376-3	7.702-3	7.322-3	6.916-3	6.052-3	5.169-3	4.324-3	3.534-3
54	90	3.977-2	3.895-2	3.793-2	3.659-2	3.487-2	3.387-2	3.277-2	3.035-2	2.775-2	2.505-2	2.204-2
54	91	8.501-3	8.295-3	8.006-3	7.609-3	7.082-3	6.766-3	6.415-3	5.624-3	4.750-3	3.855-3	3.001-3
54	92	1.826-2	1.770-2	1.693-2	1.588-2	1.452-2	1.372-2	1.285-2	1.097-2	8.990-3	7.071-3	5.338-3
54	93	1.297-3	1.262-3	1.210-3	1.139-3	1.046-3	9.913-4	9.316-4	8.005-4	6.613-4	5.245-4	3.992-4
54	94	3.491-3	3.393-3	3.257-3	3.074-3	2.842-3	2.708-3	2.566-3	2.267-3	1.971-3	1.699-3	1.444-3
54	95	8.194-3	7.962-3	7.633-3	7.187-3	6.615-3	6.285-3	5.929-3	5.171-3	4.403-3	3.681-3	3.016-3
54	96	1.513-2	1.469-2	1.407-2	1.322-2	1.210-2	1.145-2	1.074-2	9.187-3	7.550-3	5.956-3	4.509-3
54	97	2.173-3	2.118-3	2.038-3	1.924-3	1.775-3	1.686-3	1.588-3	1.372-3	1.139-3	9.078-4	6.939-4
55	56	9.941-2	9.638-2	9.256-2	8.767-2	8.144-2	7.779-2	7.378-2	6.486-2	5.514-2	4.524-2	3.573-2
55	57	1.248-2	1.137-2	1.034-2	9.365-3	8.379-3	7.871-3	7.350-3	6.280-3	5.207-3	4.186-3	3.258-3
55	58	2.118-2	2.001-2	1.875-2	1.735-2	1.578-2	1.492-2	1.401-2	1.206-2	1.002-2	8.011-3	6.153-3
55	59	8.618-3	7.985-3	7.374-3	6.778-3	6.181-3	5.878-3	5.571-3	4.952-3	4.346-3	3.769-3	3.204-3
55	60	1.502-2	1.432-2	1.360-2	1.281-2	1.192-2	1.143-2	1.090-2	9.763-3	8.541-3	7.287-3	6.026-3
55	61	1.309-2	1.273-2	1.241-2	1.208-2	1.169-2	1.147-2	1.124-2	1.076-2	1.035-2	1.006-2	9.668-3
55	62	6.112-2	6.167-2	6.237-2	6.305-2	6.356-2	6.374-2	6.389-2	6.417-2	6.468-2	6.534-2	6.438-2
55	63	1.310-1	1.327-1	1.348-1	1.369-1	1.385-1	1.392-1	1.398-1	1.410-1	1.428-1	1.450-1	1.435-1
55	64	7.043-3	6.629-3	6.204-3	5.738-3	5.209-3	4.918-3	4.610-3	3.956-3	3.285-3	2.640-3	2.053-3
55	65	2.659-3	2.545-3	2.416-3	2.263-3	2.077-3	1.970-3	1.855-3	1.605-3	1.339-3	1.076-3	8.310-4
55	66	4.022-2	4.033-2	4.050-2	4.059-2	4.047-2	4.032-2	4.011-2	3.962-2	3.921-2	3.892-2	3.781-2
55	67	8.151-3	7.838-3	7.456-3	6.983-3	6.402-3	6.070-3	5.713-3	4.942-3	4.137-3	3.354-3	2.631-3
55	68	2.338-2	2.334-2	2.327-2	2.313-2	2.285-2	2.266-2	2.243-2	2.193-2	2.147-2	2.104-2	2.019-2
55	69	5.928-3	5.665-3	5.369-3	5.026-3	4.622-3	4.395-3	4.150-3	3.618-3	3.053-3	2.489-3	1.956-3
55	70	1.185-2	1.201-2	1.221-2	1.243-2	1.264-2	1.274-2	1.284-2	1.304-2	1.329-2	1.358-2	1.349-2
55	71	1.402-2	1.379-2	1.350-2	1.312-2	1.265-2	1.238-2	1.209-2	1.147-2	1.085-2	1.021-2	9.395-3
55	72	1.679-2	1.632-2	1.570-2	1.488-2	1.387-2	1.329-2	1.267-2	1.135-2	9.982-3	8.659-3	7.355-3
55	73	1.027-2	9.911-3	9.451-3	8.873-3	8.171-3	7.781-3	7.374-3	6.548-3	5.779-3	5.123-3	4.520-3
55	74	6.307-3	5.890-3	5.477-3	5.050-3	4.587-3	4.338-3	4.077-3	3.525-3	2.955-3	2.399-3	1.883-3
55	75	3.881-3	3.584-3	3.320-3	3.072-3	2.818-3	2.685-3	2.546-3	2.258-3	1.972-3	1.712-3	1.475-3
55	76	1.845-3	1.661-3	1.498-3	1.348-3	1.201-3	1.125-3	1.048-3	8.905-4	7.329-4	5.832-4	4.484-4
55	77	1.382-2	1.343-2	1.292-2	1.226-2	1.142-2	1.092-2	1.038-2	9.204-3	7.975-3	6.790-3	5.667-3
55	78	4.838-3	4.737-3	4.629-3	4.497-3	4.331-3	4.236-3	4.136-3	3.937-3	3.766-3	3.634-3	3.458-3
55	79	1.811-2	1.795-2	1.775-2	1.748-2	1.708-2	1.684-2	1.657-2	1.596-2	1.534-2	1.467-2	1.370-2
55	80	1.515-2	1.501-2	1.483-2	1.459-2	1.426-2	1.407-2	1.386-2	1.342-2	1.296-2	1.247-2	1.167-2
55	81	1.401-2	1.360-2	1.302-2	1.223-2	1.122-2	1.063-2	9.993-3	8.607-3	7.160-3	5.761-3	4.486-3
55	82	6.656-3	6.461-3	6.193-3	5.830-3	5.358-3	5.081-3	4.778-3	4.113-3	3.408-3	2.716-3	2.082-3
55	83	4.851-4	4.701-4	4.505-4	4.254-4	3.938-4	3.754-4	3.554-4	3.109-4	2.625-4	2.134-4	1.665-4
55	84	2.189-3	2.131-3	2.058-3	1.964-3	1.843-3	1.773-3	1.695-3	1.523-3	1.338-3	1.150-3	9.633-4
55	85	1.420-3	1.379-3	1.331-3	1.270-3	1.194-3	1.150-3	1.101-3	9.914-4	8.698-4	7.432-4	6.148-4
55	86	8.973-4	8.833-4	8.636-4	8.343-4	7.924-4	7.661-4	7.361-4	6.661-4	5.855-4	4.989-4	4.098-4
55	87	7.228-3	7.077-3	6.860-3	6.552-3	6.134-3	5.882-3	5.603-3	4.974-3	4.288-3	3.596-3	2.929-3
55	88	8.550-3	8.488-3	8.395-3	8.260-3	8.079-3	7.973-3	7.856-3	7.601-3	7.325-3	7.009-3	6.519-3
55	89	3.591-3	3.518-3	3.435-3	3.338-3	3.221-3	3.156-3	3.086-3	2.937-3	2.782-3	2.618-3	2.401-3
55	90	1.179-3	1.112-3	1.043-3	9.660-4	8.770-4	8.275-4	7.749-4	6.622-4	5.450-4	4.312-4	3.277-4
55	91	2.116-3	2.060-3	1.980-3	1.867-3	1.718-3	1.630-3	1.534-3	1.323-3	1.098-3	8.786-4	6.768-4
55	92	2.848-3	2.773-3	2.670-3	2.530-3	2.344-3	2.233-3	2.111-3	1.838-3	1.540-3	1.239-3	9.560-4
55	93	8.075-4	7.921-4	7.687-4	7.347-4	6.883-4	6.601-4	6.288-4	5.582-4	4.805-4	4.006-4	3.222-4
55	94	2.010-3	1.988-3	1.951-3	1.898-3	1.824-3	1.779-3	1.729-3	1.617-3	1.494-3	1.363-3	1.210-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
55	95	1.924-3	1.897-3	1.857-3	1.799-3	1.724-3	1.680-3	1.632-3	1.527-3	1.416-3	1.301-3	1.168-3
55	96	2.146-3	2.097-3	2.025-3	1.924-3	1.790-3	1.710-3	1.621-3	1.422-3	1.205-3	9.835-4	7.721-4
55	97	7.901-5	7.703-5	7.409-5	6.998-5	6.457-5	6.139-5	5.791-5	5.025-5	4.210-5	3.400-5	2.643-5
56	57	1.119-1	1.076-1	1.027-1	9.677-2	8.953-2	8.537-2	8.085-2	7.090-2	6.016-2	4.931-2	3.893-2
56	58	4.295-2	4.119-2	3.935-2	3.734-2	3.503-2	3.376-2	3.243-2	2.977-2	2.760-2	2.658-2	2.625-2
56	59	2.300-2	2.214-2	2.131-2	2.047-2	1.952-2	1.899-2	1.843-2	1.727-2	1.627-2	1.565-2	1.512-2
56	60	5.883-2	5.865-2	5.858-2	5.844-2	5.808-2	5.781-2	5.749-2	5.683-2	5.641-2	5.624-2	5.491-2
56	61	2.429-2	2.323-2	2.216-2	2.102-2	1.974-2	1.903-2	1.828-2	1.667-2	1.496-2	1.323-2	1.143-2
56	62	8.807-2	8.909-2	9.034-2	9.156-2	9.251-2	9.287-2	9.317-2	9.377-2	9.479-2	9.614-2	9.516-2
56	63	5.596-2	5.555-2	5.529-2	5.503-2	5.466-2	5.441-2	5.413-2	5.354-2	5.307-2	5.259-2	5.081-2
56	64	4.151-2	4.094-2	4.040-2	3.977-2	3.892-2	3.840-2	3.783-2	3.658-2	3.532-2	3.405-2	3.210-2
56	65	4.756-3	4.617-3	4.459-3	4.268-3	4.034-3	3.902-3	3.760-3	3.463-3	3.170-3	2.897-3	2.608-3
56	66	1.598-1	1.610-1	1.625-1	1.638-1	1.647-1	1.649-1	1.650-1	1.653-1	1.660-1	1.667-1	1.630-1
56	67	9.901-3	9.553-3	9.147-3	8.649-3	8.021-3	7.656-3	7.260-3	6.402-3	5.527-3	4.728-3	4.016-3
56	68	3.371-2	3.325-2	3.266-2	3.190-2	3.090-2	3.031-2	2.967-2	2.829-2	2.687-2	2.543-2	2.355-2
56	69	1.185-2	1.136-2	1.078-2	1.010-2	9.274-3	8.804-3	8.297-3	7.190-3	6.010-3	4.835-3	3.738-3
56	70	2.045-2	2.081-2	2.126-2	2.172-2	2.211-2	2.228-2	2.244-2	2.276-2	2.318-2	2.371-2	2.365-2
56	71	1.838-2	1.805-2	1.763-2	1.708-2	1.640-2	1.602-2	1.560-2	1.471-2	1.381-2	1.291-2	1.181-2
56	72	3.538-2	3.506-2	3.462-2	3.400-2	3.315-2	3.264-2	3.210-2	3.095-2	2.987-2	2.885-2	2.728-2
56	73	2.425-2	2.358-2	2.272-2	2.163-2	2.030-2	1.955-2	1.876-2	1.712-2	1.551-2	1.400-2	1.244-2
56	74	1.129-2	1.068-2	1.005-2	9.367-3	8.592-3	8.164-3	7.709-3	6.737-3	5.731-3	4.753-3	3.836-3
56	75	5.751-3	5.288-3	4.866-3	4.460-3	4.044-3	3.826-3	3.601-3	3.136-3	2.674-3	2.251-3	1.872-3
56	76	6.139-3	5.746-3	5.439-3	5.170-3	4.885-3	4.727-3	4.559-3	4.204-3	3.870-3	3.615-3	3.394-3
56	77	1.970-2	1.903-2	1.818-2	1.710-2	1.573-2	1.494-2	1.408-2	1.223-2	1.030-2	8.472-3	6.814-3
56	78	2.203-2	2.180-2	2.151-2	2.110-2	2.055-2	2.021-2	1.984-2	1.904-2	1.824-2	1.746-2	1.634-2
56	79	2.057-2	2.024-2	1.983-2	1.930-2	1.865-2	1.829-2	1.790-2	1.708-2	1.627-2	1.544-2	1.430-2
56	80	2.371-2	2.349-2	2.320-2	2.279-2	2.223-2	2.189-2	2.153-2	2.075-2	1.994-2	1.907-2	1.778-2
56	81	1.978-2	1.925-2	1.852-2	1.753-2	1.622-2	1.546-2	1.462-2	1.279-2	1.089-2	9.075-3	7.395-3
56	82	1.269-2	1.241-2	1.203-2	1.150-2	1.078-2	1.034-2	9.859-3	8.795-3	7.665-3	6.560-3	5.496-3
56	83	1.744-3	1.731-3	1.717-3	1.696-3	1.665-3	1.646-3	1.625-3	1.577-3	1.526-3	1.470-3	1.380-3
56	84	4.022-3	3.928-3	3.809-3	3.655-3	3.458-3	3.341-3	3.213-3	2.928-3	2.620-3	2.303-3	1.974-3
56	85	3.243-3	3.175-3	3.083-3	2.957-3	2.787-3	2.683-3	2.567-3	2.301-3	2.002-3	1.688-3	1.371-3
56	86	7.228-4	7.082-4	6.901-4	6.665-4	6.358-4	6.178-4	5.982-4	5.546-4	5.072-4	4.570-4	4.011-4
56	87	1.150-2	1.120-2	1.078-2	1.021-2	9.471-3	9.029-3	8.542-3	7.451-3	6.263-3	5.063-3	3.930-3
56	88	7.512-3	7.421-3	7.304-3	7.145-3	6.938-3	6.817-3	6.685-3	6.398-3	6.091-3	5.752-3	5.287-3
56	89	1.056-2	1.044-2	1.028-2	1.007-2	9.794-3	9.631-3	9.453-3	9.065-3	8.653-3	8.202-3	7.568-3
56	90	4.595-3	4.446-3	4.281-3	4.091-3	3.868-3	3.743-3	3.610-3	3.327-3	3.034-3	2.739-3	2.416-3
56	91	4.088-3	3.984-3	3.832-3	3.621-3	3.342-3	3.176-3	2.995-3	2.596-3	2.169-3	1.747-3	1.355-3
56	92	5.728-3	5.607-3	5.435-3	5.195-3	4.873-3	4.680-3	4.466-3	3.988-3	3.468-3	2.941-3	2.424-3
56	93	4.936-4	4.839-4	4.691-4	4.481-4	4.206-4	4.044-4	3.869-4	3.489-4	3.094-4	2.710-4	2.327-4
56	94	2.575-3	2.524-3	2.447-3	2.335-3	2.183-3	2.091-3	1.990-3	1.763-3	1.515-3	1.262-3	1.016-3
56	95	4.479-3	4.424-3	4.337-3	4.211-3	4.043-3	3.942-3	3.833-3	3.589-3	3.326-3	3.047-3	2.719-3
56	96	3.624-3	3.542-3	3.422-3	3.255-3	3.031-3	2.898-3	2.751-3	2.423-3	2.066-3	1.704-3	1.358-3
56	97	2.227-4	2.193-4	2.145-4	2.078-4	1.990-4	1.939-4	1.882-4	1.758-4	1.627-4	1.494-4	1.340-4
57	58	4.863-2	4.582-2	4.281-2	3.954-2	3.591-2	3.393-2	3.185-2	2.742-2	2.284-2	1.835-2	1.422-2
57	59	3.686-2	3.526-2	3.369-2	3.213-2	3.051-2	2.966-2	2.878-2	2.698-2	2.522-2	2.357-2	2.165-2
57	60	3.514-2	3.455-2	3.400-2	3.339-2	3.262-2	3.216-2	3.167-2	3.060-2	2.957-2	2.859-2	2.708-2
57	61	1.637-1	1.644-1	1.655-1	1.663-1	1.665-1	1.664-1	1.660-1	1.652-1	1.649-1	1.652-1	1.619-1

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
57	62	2.008-2	1.981-2	1.964-2	1.951-2	1.934-2	1.923-2	1.912-2	1.890-2	1.879-2	1.879-2	1.841-2
57	63	8.679-2	8.692-2	8.737-2	8.787-2	8.815-2	8.819-2	8.817-2	8.816-2	8.852-2	8.914-2	8.763-2
57	64	1.074-1	1.066-1	1.060-1	1.051-1	1.035-1	1.024-1	1.011-1	9.815-2	9.522-2	9.250-2	8.815-2
57	65	2.628-3	2.503-3	2.360-3	2.191-3	1.990-3	1.877-3	1.757-3	1.501-3	1.238-3	9.839-4	7.539-4
57	66	1.740-1	1.745-1	1.753-1	1.762-1	1.767-1	1.768-1	1.769-1	1.770-1	1.776-1	1.783-1	1.744-1
57	67	1.107-2	1.063-2	1.010-2	9.466-3	8.685-3	8.240-3	7.762-3	6.737-3	5.684-3	4.683-3	3.773-3
57	68	2.771-2	2.675-2	2.553-2	2.398-2	2.206-2	2.095-2	1.976-2	1.718-2	1.451-2	1.197-2	9.644-3
57	69	1.914-2	1.856-2	1.785-2	1.696-2	1.583-2	1.517-2	1.444-2	1.285-2	1.117-2	9.536-3	7.976-3
57	70	5.685-2	5.779-2	5.892-2	6.006-2	6.104-2	6.145-2	6.183-2	6.258-2	6.358-2	6.470-2	6.414-2
57	71	1.482-2	1.468-2	1.449-2	1.422-2	1.380-2	1.354-2	1.325-2	1.264-2	1.208-2	1.161-2	1.101-2
57	72	2.530-2	2.463-2	2.380-2	2.277-2	2.152-2	2.083-2	2.010-2	1.857-2	1.708-2	1.567-2	1.412-2
57	73	7.404-2	7.346-2	7.275-2	7.172-2	7.020-2	6.924-2	6.818-2	6.588-2	6.364-2	6.153-2	5.828-2
57	74	1.452-2	1.381-2	1.303-2	1.211-2	1.101-2	1.039-2	9.727-3	8.306-3	6.840-3	5.437-3	4.176-3
57	75	8.195-3	7.559-3	6.957-3	6.363-3	5.745-3	5.420-3	5.082-3	4.376-3	3.652-3	2.947-3	2.295-3
57	76	1.575-2	1.473-2	1.375-2	1.274-2	1.164-2	1.104-2	1.041-2	9.076-3	7.688-3	6.346-3	5.107-3
57	77	2.398-2	2.313-2	2.206-2	2.071-2	1.901-2	1.803-2	1.696-2	1.465-2	1.224-2	9.947-3	7.875-3
57	78	5.560-2	5.496-2	5.413-2	5.304-2	5.167-2	5.089-2	5.006-2	4.829-2	4.651-2	4.461-2	4.170-2
57	79	3.129-2	3.085-2	3.025-2	2.943-2	2.836-2	2.774-2	2.707-2	2.564-2	2.420-2	2.276-2	2.092-2
57	80	7.363-3	7.213-3	7.012-3	6.743-3	6.398-3	6.200-3	5.989-3	5.544-3	5.108-3	4.702-3	4.259-3
57	81	3.766-2	3.731-2	3.687-2	3.618-2	3.513-2	3.447-2	3.372-2	3.206-2	3.035-2	2.869-2	2.660-2
57	82	1.651-2	1.608-2	1.550-2	1.472-2	1.373-2	1.316-2	1.253-2	1.117-2	9.755-3	8.362-3	6.999-3
57	83	4.525-4	4.322-4	4.086-4	3.814-4	3.493-4	3.310-4	3.114-4	2.689-4	2.240-4	1.796-4	1.384-4
57	84	8.057-3	7.887-3	7.656-3	7.337-3	6.905-3	6.642-3	6.348-3	5.679-3	4.931-3	4.153-3	3.379-3
57	85	1.981-3	1.940-3	1.891-3	1.825-3	1.736-3	1.682-3	1.621-3	1.484-3	1.336-3	1.187-3	1.033-3
57	86	3.443-4	3.300-4	3.138-4	2.947-4	2.716-4	2.583-4	2.439-4	2.122-4	1.781-4	1.438-4	1.115-4
57	87	1.718-2	1.673-2	1.613-2	1.530-2	1.421-2	1.356-2	1.284-2	1.124-2	9.492-3	7.733-3	6.069-3
57	88	2.368-3	2.287-3	2.201-3	2.104-3	1.988-3	1.924-3	1.855-3	1.707-3	1.553-3	1.396-3	1.226-3
57	89	9.001-3	8.835-3	8.635-3	8.382-3	8.063-3	7.879-3	7.680-3	7.248-3	6.790-3	6.308-3	5.712-3
57	90	2.344-2	2.313-2	2.273-2	2.218-2	2.146-2	2.103-2	2.056-2	1.953-2	1.843-2	1.726-2	1.574-2
57	91	6.555-3	6.396-3	6.162-3	5.835-3	5.401-3	5.143-3	4.861-3	4.237-3	3.570-3	2.909-3	2.290-3
57	92	8.078-3	7.878-3	7.604-3	7.230-3	6.736-3	6.443-3	6.120-3	5.400-3	4.622-3	3.837-3	3.081-3
57	93	8.323-4	8.101-4	7.781-4	7.335-4	6.748-4	6.401-4	6.023-4	5.189-4	4.302-4	3.425-4	2.618-4
57	94	2.389-3	2.328-3	2.240-3	2.119-3	1.960-3	1.867-3	1.765-3	1.544-3	1.310-3	1.080-3	8.633-4
57	95	6.177-3	6.069-3	5.904-3	5.669-3	5.354-3	5.166-3	4.959-3	4.498-3	3.996-3	3.480-3	2.946-3
57	96	6.296-3	6.160-3	5.962-3	5.682-3	5.309-3	5.086-3	4.841-3	4.293-3	3.697-3	3.090-3	2.498-3
57	97	2.278-4	2.215-4	2.126-4	2.001-4	1.837-4	1.741-4	1.636-4	1.405-4	1.162-4	9.231-5	7.046-5
58	59	6.760-2	6.420-2	6.085-2	5.762-2	5.441-2	5.280-2	5.121-2	4.824-2	4.603-2	4.503-2	4.415-2
58	60	2.996-2	2.878-2	2.760-2	2.633-2	2.492-2	2.414-2	2.332-2	2.163-2	2.009-2	1.893-2	1.786-2
58	61	3.769-2	3.506-2	3.239-2	2.962-2	2.667-2	2.511-2	2.349-2	2.009-2	1.662-2	1.327-2	1.020-2
58	62	1.677-2	1.590-2	1.492-2	1.380-2	1.248-2	1.175-2	1.097-2	9.315-3	7.610-3	5.974-3	4.506-3
58	63	2.894-2	2.747-2	2.587-2	2.408-2	2.200-2	2.085-2	1.962-2	1.702-2	1.435-2	1.180-2	9.460-3
58	64	8.130-2	7.851-2	7.574-2	7.284-2	6.962-2	6.786-2	6.600-2	6.211-2	5.832-2	5.484-2	5.081-2
58	65	9.033-3	8.627-3	8.161-3	7.601-3	6.921-3	6.534-3	6.119-3	5.222-3	4.286-3	3.379-3	2.559-3
58	66	4.706-2	4.510-2	4.304-2	4.076-2	3.812-2	3.665-2	3.508-2	3.175-2	2.837-2	2.517-2	2.201-2
58	67	2.609-2	2.505-2	2.379-2	2.223-2	2.029-2	1.918-2	1.798-2	1.538-2	1.266-2	1.002-2	7.622-3
58	68	4.645-2	4.513-2	4.343-2	4.122-2	3.838-2	3.673-2	3.494-2	3.104-2	2.696-2	2.298-2	1.916-2
58	69	8.974-3	7.893-3	6.967-3	6.179-3	5.498-3	5.191-3	4.904-3	4.400-3	4.007-3	3.721-3	3.445-3
58	70	2.323-2	2.249-2	2.150-2	2.020-2	1.853-2	1.756-2	1.650-2	1.417-2	1.170-2	9.281-3	7.064-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
58	71	1.330-2	1.276-2	1.214-2	1.142-2	1.055-2	1.004-2	9.499-3	8.300-3	7.010-3	5.712-3	4.481-3
58	72	9.479-2	9.500-2	9.527-2	9.537-2	9.507-2	9.476-2	9.434-2	9.334-2	9.237-2	9.126-2	8.787-2
58	73	3.288-2	3.189-2	3.091-2	2.982-2	2.854-2	2.780-2	2.700-2	2.525-2	2.338-2	2.147-2	1.928-2
58	74	7.231-2	7.216-2	7.211-2	7.198-2	7.166-2	7.142-2	7.113-2	7.050-2	6.995-2	6.928-2	6.677-2
58	75	2.872-2	2.777-2	2.657-2	2.508-2	2.323-2	2.215-2	2.099-2	1.846-2	1.576-2	1.309-2	1.055-2
58	76	4.427-2	4.291-2	4.111-2	3.879-2	3.588-2	3.419-2	3.235-2	2.832-2	2.404-2	1.979-2	1.578-2
58	77	4.537-1	4.545-1	4.568-1	4.596-1	4.626-1	4.640-1	4.655-1	4.690-1	4.737-1	4.769-1	4.654-1
58	78	3.053-3	2.875-3	2.705-3	2.537-3	2.360-3	2.266-3	2.167-3	1.960-3	1.746-3	1.533-3	1.317-3
58	79	1.804-3	1.685-3	1.571-3	1.461-3	1.354-3	1.300-3	1.247-3	1.143-3	1.047-3	9.600-4	8.669-4
58	80	4.204-4	3.876-4	3.505-4	3.125-4	2.745-4	2.555-4	2.366-4	1.997-4	1.651-4	1.342-4	1.072-4
58	81	1.326-1	1.326-1	1.327-1	1.327-1	1.326-1	1.324-1	1.323-1	1.321-1	1.321-1	1.316-1	1.271-1
58	82	4.733-3	4.470-3	4.218-3	3.972-3	3.735-3	3.624-3	3.523-3	3.366-3	3.297-3	3.305-3	3.270-3
58	83	2.716-3	2.659-3	2.586-3	2.500-3	2.413-3	2.375-3	2.346-3	2.332-3	2.399-3	2.533-3	2.616-3
58	84	8.781-4	8.406-4	8.040-4	7.646-4	7.189-4	6.933-4	6.658-4	6.070-4	5.478-4	4.942-4	4.427-4
58	85	7.401-4	7.027-4	6.608-4	6.121-4	5.547-4	5.228-4	4.888-4	4.166-4	3.424-4	2.712-4	2.069-4
58	86	2.545-4	2.422-4	2.281-4	2.116-4	1.921-4	1.814-4	1.702-4	1.472-4	1.249-4	1.047-4	8.654-5
58	87	2.092-2	2.066-2	2.034-2	1.989-2	1.928-2	1.892-2	1.852-2	1.765-2	1.673-2	1.576-2	1.446-2
58	88	5.321-3	5.053-3	4.768-3	4.443-3	4.058-3	3.841-3	3.609-3	3.106-3	2.582-3	2.073-3	1.608-3
58	89	8.179-3	7.814-3	7.396-3	6.895-3	6.286-3	5.939-3	5.565-3	4.754-3	3.907-3	3.083-3	2.337-3
58	90	1.216-2	1.166-2	1.107-2	1.035-2	9.456-3	8.945-3	8.392-3	7.192-3	5.932-3	4.704-3	3.586-3
58	91	1.197-2	1.197-2	1.192-2	1.183-2	1.170-2	1.162-2	1.153-2	1.133-2	1.109-2	1.077-2	1.013-2
58	92	3.363-2	3.354-2	3.328-2	3.280-2	3.210-2	3.165-2	3.114-2	2.994-2	2.853-2	2.686-2	2.453-2
58	93	4.699-4	4.578-4	4.403-4	4.159-4	3.836-4	3.644-4	3.432-4	2.965-4	2.466-4	1.974-4	1.520-4
58	94	1.732-3	1.687-3	1.622-3	1.532-3	1.412-3	1.341-3	1.262-3	1.088-3	9.021-4	7.175-4	5.476-4
58	95	4.274-3	4.198-3	4.081-3	3.910-3	3.678-3	3.539-3	3.386-3	3.044-3	2.678-3	2.312-3	1.949-3
58	96	3.760-3	3.763-3	3.769-3	3.774-3	3.776-3	3.775-3	3.774-3	3.773-3	3.776-3	3.766-3	3.644-3
58	97	1.813-4	1.764-4	1.696-4	1.609-4	1.511-4	1.463-4	1.419-4	1.360-4	1.358-4	1.411-4	1.450-4
59	60	3.044-2	2.878-2	2.705-2	2.517-2	2.306-2	2.190-2	2.068-2	1.812-2	1.560-2	1.342-2	1.160-2
59	61	3.191-2	3.007-2	2.811-2	2.600-2	2.366-2	2.239-2	2.105-2	1.822-2	1.531-2	1.250-2	9.898-3
59	62	3.040-2	2.965-2	2.872-2	2.753-2	2.600-2	2.512-2	2.417-2	2.214-2	2.013-2	1.833-2	1.656-2
59	63	3.787-2	3.637-2	3.454-2	3.228-2	2.948-2	2.788-2	2.615-2	2.241-2	1.850-2	1.473-2	1.131-2
59	64	4.519-2	4.297-2	4.059-2	3.795-2	3.496-2	3.331-2	3.157-2	2.783-2	2.394-2	2.013-2	1.651-2
59	65	2.571-3	2.392-3	2.206-3	2.008-3	1.791-3	1.674-3	1.553-3	1.302-3	1.051-3	8.145-4	6.070-4
59	66	5.092-2	4.925-2	4.737-2	4.515-2	4.249-2	4.097-2	3.935-2	3.589-2	3.242-2	2.920-2	2.600-2
59	67	9.659-3	9.211-3	8.718-3	8.162-3	7.523-3	7.172-3	6.804-3	6.040-3	5.301-3	4.652-3	4.067-3
59	68	1.477-2	1.405-2	1.326-2	1.237-2	1.137-2	1.082-2	1.025-2	9.029-3	7.789-3	6.594-3	5.453-3
59	69	2.564-1	2.589-1	2.620-1	2.649-1	2.668-1	2.673-1	2.677-1	2.683-1	2.699-1	2.725-1	2.687-1
59	70	1.169-2	1.124-2	1.071-2	1.006-2	9.284-3	8.845-3	8.378-3	7.397-3	6.427-3	5.544-3	4.731-3
59	71	2.949-2	2.927-2	2.906-2	2.880-2	2.844-2	2.822-2	2.798-2	2.747-2	2.698-2	2.642-2	2.519-2
59	72	3.710-2	3.681-2	3.658-2	3.632-2	3.593-2	3.569-2	3.541-2	3.482-2	3.429-2	3.374-2	3.239-2
59	73	3.631-2	3.560-2	3.492-2	3.417-2	3.329-2	3.279-2	3.226-2	3.114-2	3.004-2	2.891-2	2.718-2
59	74	4.688-2	4.602-2	4.513-2	4.409-2	4.278-2	4.201-2	4.117-2	3.936-2	3.751-2	3.561-2	3.306-2
59	75	3.585-2	3.429-2	3.250-2	3.038-2	2.782-2	2.637-2	2.481-2	2.141-2	1.783-2	1.429-2	1.102-2
59	76	6.706-2	6.473-2	6.187-2	5.829-2	5.383-2	5.125-2	4.846-2	4.234-2	3.583-2	2.937-2	2.327-2
59	77	7.124-2	6.882-2	6.699-2	6.558-2	6.437-2	6.381-2	6.329-2	6.233-2	6.155-2	6.060-2	5.797-2
59	78	2.585-2	2.506-2	2.415-2	2.305-2	2.173-2	2.098-2	2.017-2	1.846-2	1.669-2	1.494-2	1.310-2
59	79	2.643-2	2.615-2	2.585-2	2.546-2	2.489-2	2.454-2	2.416-2	2.331-2	2.246-2	2.161-2	2.033-2
59	80	4.810-3	4.640-3	4.425-3	4.152-3	3.810-3	3.613-3	3.401-3	2.943-3	2.473-3	2.030-3	1.632-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
59	81	2.396-1	2.404-1	2.415-1	2.428-1	2.439-1	2.444-1	2.450-1	2.464-1	2.482-1	2.492-1	2.423-1
59	82	6.427-2	6.471-2	6.541-2	6.626-2	6.721-2	6.773-2	6.828-2	6.956-2	7.115-2	7.261-2	7.173-2
59	83	1.835-3	1.750-3	1.648-3	1.526-3	1.380-3	1.297-3	1.210-3	1.023-3	8.308-4	6.472-4	4.840-4
59	84	2.051-2	2.013-2	1.962-2	1.894-2	1.806-2	1.754-2	1.696-2	1.569-2	1.431-2	1.289-2	1.132-2
59	85	1.547-2	1.529-2	1.503-2	1.464-2	1.412-2	1.380-2	1.345-2	1.266-2	1.180-2	1.091-2	9.855-3
59	86	2.612-3	2.539-3	2.439-3	2.304-3	2.128-3	2.024-3	1.910-3	1.657-3	1.384-3	1.110-3	8.544-4
59	87	2.272-2	2.228-2	2.171-2	2.098-2	2.008-2	1.956-2	1.902-2	1.788-2	1.677-2	1.570-2	1.440-2
59	88	6.305-3	5.950-3	5.582-3	5.173-3	4.702-3	4.440-3	4.161-3	3.564-3	2.942-3	2.337-3	1.784-3
59	89	1.013-2	9.681-3	9.186-3	8.606-3	7.915-3	7.523-3	7.104-3	6.196-3	5.244-3	4.306-3	3.422-3
59	90	1.286-2	1.232-2	1.169-2	1.094-2	1.002-2	9.495-3	8.937-3	7.733-3	6.483-3	5.268-3	4.145-3
59	91	7.314-3	7.216-3	7.062-3	6.841-3	6.555-3	6.392-3	6.221-3	5.873-3	5.549-3	5.251-3	4.872-3
59	92	1.072-2	1.052-2	1.028-2	9.964-3	9.578-3	9.359-3	9.126-3	8.639-3	8.160-3	7.693-3	7.099-3
59	93	7.965-4	7.696-4	7.332-4	6.844-4	6.219-4	5.857-4	5.466-4	4.623-4	3.752-4	2.920-4	2.183-4
59	94	3.251-3	3.156-3	3.025-3	2.848-3	2.618-3	2.484-3	2.339-3	2.024-3	1.695-3	1.377-3	1.085-3
59	95	7.849-3	7.643-3	7.350-3	6.944-3	6.409-3	6.094-3	5.750-3	4.992-3	4.185-3	3.388-3	2.646-3
59	96	2.006-2	1.987-2	1.958-2	1.917-2	1.861-2	1.828-2	1.791-2	1.707-2	1.613-2	1.505-2	1.363-2
59	97	6.977-4	6.768-4	6.464-4	6.045-4	5.500-4	5.182-4	4.837-4	4.092-4	3.319-4	2.581-4	1.926-4
60	61	1.542-1	1.494-1	1.433-1	1.354-1	1.255-1	1.196-1	1.133-1	9.916-2	8.390-2	6.847-2	5.374-2
60	62	4.594-2	4.570-2	4.548-2	4.519-2	4.478-2	4.454-2	4.434-2	4.431-2	4.560-2	4.909-2	5.300-2
60	63	2.971-2	2.864-2	2.743-2	2.600-2	2.430-2	2.335-2	2.233-2	2.017-2	1.799-2	1.599-2	1.406-2
60	64	1.100-2	1.035-2	9.713-3	9.049-3	8.311-3	7.913-3	7.504-3	6.714-3	6.137-3	6.010-3	6.204-3
60	65	4.324-2	4.361-2	4.409-2	4.458-2	4.502-2	4.522-2	4.543-2	4.600-2	4.707-2	4.874-2	4.947-2
60	66	1.237-2	1.141-2	1.051-2	9.648-3	8.777-3	8.335-3	7.890-3	7.007-3	6.179-3	5.456-3	4.788-3
60	67	5.689-2	5.736-2	5.798-2	5.859-2	5.908-2	5.928-2	5.948-2	6.010-2	6.153-2	6.408-2	6.571-2
60	68	2.373-2	2.336-2	2.296-2	2.248-2	2.188-2	2.153-2	2.117-2	2.045-2	1.987-2	1.951-2	1.890-2
60	69	3.885-2	3.884-2	3.899-2	3.914-2	3.917-2	3.912-2	3.906-2	3.901-2	3.936-2	4.028-2	4.061-2
60	70	1.788-2	1.781-2	1.776-2	1.765-2	1.743-2	1.728-2	1.711-2	1.673-2	1.642-2	1.620-2	1.569-2
60	71	1.674-1	1.690-1	1.707-1	1.723-1	1.736-1	1.741-1	1.745-1	1.756-1	1.771-1	1.787-1	1.752-1
60	72	9.507-2	9.559-2	9.612-2	9.643-2	9.636-2	9.617-2	9.591-2	9.534-2	9.499-2	9.465-2	9.192-2
60	73	9.144-3	8.833-3	8.497-3	8.119-3	7.686-3	7.447-3	7.196-3	6.664-3	6.119-3	5.570-3	4.955-3
60	74	2.442-2	2.332-2	2.205-2	2.057-2	1.882-2	1.784-2	1.681-2	1.459-2	1.228-2	1.002-2	7.900-3
60	75	3.362-2	3.239-2	3.082-2	2.884-2	2.640-2	2.501-2	2.351-2	2.028-2	1.689-2	1.361-2	1.060-2
60	76	6.441-3	6.065-3	5.665-3	5.233-3	4.756-3	4.498-3	4.229-3	3.664-3	3.090-3	2.540-3	2.031-3
60	77	1.520-2	1.456-2	1.380-2	1.289-2	1.180-2	1.118-2	1.052-2	9.083-3	7.571-3	6.085-3	4.712-3
60	78	7.778-3	7.543-3	7.264-3	6.925-3	6.511-3	6.275-3	6.021-3	5.476-3	4.910-3	4.350-3	3.770-3
60	79	5.035-3	4.774-3	4.486-3	4.160-3	3.782-3	3.573-3	3.351-3	2.877-3	2.386-3	1.910-3	1.474-3
60	80	2.795-2	2.777-2	2.753-2	2.721-2	2.678-2	2.654-2	2.628-2	2.573-2	2.519-2	2.456-2	2.329-2
60	81	1.711-2	1.656-2	1.583-2	1.486-2	1.364-2	1.292-2	1.214-2	1.045-2	8.661-3	6.916-3	5.323-3
60	82	1.066-2	1.042-2	1.011-2	9.709-3	9.184-3	8.873-3	8.531-3	7.773-3	6.959-3	6.134-3	5.280-3
60	83	3.702-3	3.669-3	3.626-3	3.560-3	3.461-3	3.399-3	3.329-3	3.174-3	3.014-3	2.858-3	2.659-3
60	84	9.447-3	9.219-3	8.928-3	8.560-3	8.111-3	7.860-3	7.595-3	7.046-3	6.512-3	6.007-3	5.440-3
60	85	1.824-2	1.805-2	1.778-2	1.742-2	1.693-2	1.665-2	1.633-2	1.563-2	1.486-2	1.401-2	1.286-2
60	86	8.438-3	8.424-3	8.405-3	8.378-3	8.341-3	8.319-3	8.294-3	8.240-3	8.186-3	8.088-3	7.746-3
60	87	1.039-2	1.004-2	9.610-3	9.078-3	8.417-3	8.035-3	7.621-3	6.716-3	5.755-3	4.801-3	3.890-3
60	88	9.313-3	8.988-3	8.657-3	8.293-3	7.868-3	7.629-3	7.370-3	6.804-3	6.194-3	5.554-3	4.849-3
60	89	9.237-3	8.902-3	8.510-3	8.033-3	7.448-3	7.115-3	6.757-3	5.985-3	5.182-3	4.395-3	3.635-3
60	90	1.663-3	1.552-3	1.451-3	1.352-3	1.251-3	1.198-3	1.143-3	1.029-3	9.144-4	8.041-4	6.933-4
60	91	7.914-3	7.701-3	7.393-3	6.965-3	6.402-3	6.070-3	5.707-3	4.910-3	4.065-3	3.234-3	2.472-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
60	92	1.591-2	1.559-2	1.510-2	1.440-2	1.345-2	1.288-2	1.226-2	1.086-2	9.360-3	7.860-3	6.415-3
60	93	1.921-3	1.941-3	1.954-3	1.957-3	1.949-3	1.941-3	1.931-3	1.910-3	1.895-3	1.884-3	1.828-3
60	94	3.411-3	3.363-3	3.288-3	3.180-3	3.033-3	2.945-3	2.849-3	2.638-3	2.415-3	2.187-3	1.934-3
60	95	2.579-3	2.522-3	2.437-3	2.320-3	2.165-3	2.075-3	1.976-3	1.762-3	1.537-3	1.316-3	1.100-3
60	96	3.316-3	3.264-3	3.191-3	3.087-3	2.949-3	2.866-3	2.774-3	2.570-3	2.348-3	2.121-3	1.871-3
60	97	5.568-4	5.412-4	5.183-4	4.865-4	4.447-4	4.203-4	3.938-4	3.361-4	2.760-4	2.180-4	1.657-4
61	62	1.663-2	1.574-2	1.503-2	1.442-2	1.384-2	1.355-2	1.327-2	1.270-2	1.218-2	1.167-2	1.093-2
61	63	3.667-2	3.568-2	3.507-2	3.471-2	3.442-2	3.428-2	3.413-2	3.383-2	3.357-2	3.318-2	3.183-2
61	64	1.558-1	1.511-1	1.452-1	1.376-1	1.281-1	1.226-1	1.166-1	1.034-1	8.955-2	7.612-2	6.349-2
61	65	2.271-3	2.043-3	1.840-3	1.649-3	1.460-3	1.363-3	1.265-3	1.064-3	8.651-4	6.779-4	5.118-4
61	66	4.976-2	4.754-2	4.541-2	4.321-2	4.075-2	3.942-2	3.802-2	3.516-2	3.252-2	3.042-2	2.842-2
61	67	6.392-2	6.445-2	6.517-2	6.591-2	6.653-2	6.681-2	6.712-2	6.812-2	7.039-2	7.452-2	7.796-2
61	68	7.817-2	7.846-2	7.889-2	7.924-2	7.931-2	7.927-2	7.922-2	7.946-2	8.102-2	8.458-2	8.739-2
61	69	6.239-3	5.555-3	4.946-3	4.390-3	3.861-3	3.601-3	3.344-3	2.840-3	2.368-3	1.947-3	1.577-3
61	70	1.246-1	1.262-1	1.280-1	1.296-1	1.309-1	1.313-1	1.317-1	1.326-1	1.342-1	1.366-1	1.357-1
61	71	6.894-2	6.937-2	6.983-2	7.020-2	7.036-2	7.036-2	7.034-2	7.033-2	7.059-2	7.096-2	6.952-2
61	72	1.692-1	1.707-1	1.725-1	1.743-1	1.757-1	1.762-1	1.768-1	1.779-1	1.798-1	1.818-1	1.790-1
61	73	5.831-2	5.839-2	5.853-2	5.852-2	5.819-2	5.788-2	5.749-2	5.660-2	5.581-2	5.514-2	5.331-2
61	74	3.872-2	3.717-2	3.529-2	3.299-2	3.017-2	2.856-2	2.683-2	2.310-2	1.918-2	1.536-2	1.185-2
61	75	2.449-2	2.336-2	2.214-2	2.077-2	1.921-2	1.835-2	1.744-2	1.552-2	1.357-2	1.170-2	9.910-3
61	76	2.466-2	2.343-2	2.209-2	2.058-2	1.886-2	1.791-2	1.690-2	1.475-2	1.253-2	1.038-2	8.369-3
61	77	4.412-2	4.329-2	4.228-2	4.102-2	3.943-2	3.851-2	3.752-2	3.535-2	3.309-2	3.076-2	2.793-2
61	78	1.974-2	1.932-2	1.879-2	1.809-2	1.717-2	1.663-2	1.604-2	1.475-2	1.339-2	1.204-2	1.060-2
61	79	4.461-2	4.442-2	4.420-2	4.385-2	4.335-2	4.304-2	4.271-2	4.200-2	4.132-2	4.050-2	3.859-2
61	80	1.538-2	1.515-2	1.484-2	1.443-2	1.391-2	1.362-2	1.330-2	1.262-2	1.193-2	1.121-2	1.030-2
61	81	2.019-2	1.956-2	1.870-2	1.759-2	1.618-2	1.536-2	1.447-2	1.254-2	1.051-2	8.531-3	6.698-3
61	82	1.129-2	1.096-2	1.056-2	1.005-2	9.421-3	9.052-3	8.651-3	7.767-3	6.824-3	5.881-3	4.945-3
61	83	4.099-3	3.987-3	3.830-3	3.615-3	3.333-3	3.166-3	2.983-3	2.577-3	2.142-3	1.709-3	1.308-3
61	84	2.169-2	2.145-2	2.110-2	2.059-2	1.987-2	1.944-2	1.897-2	1.794-2	1.685-2	1.575-2	1.439-2
61	85	1.302-2	1.293-2	1.280-2	1.262-2	1.238-2	1.224-2	1.208-2	1.173-2	1.137-2	1.099-2	1.035-2
61	86	4.029-3	3.932-3	3.796-3	3.610-3	3.363-3	3.215-3	3.050-3	2.679-3	2.267-3	1.844-3	1.438-3
61	87	1.476-2	1.421-2	1.355-2	1.272-2	1.169-2	1.110-2	1.046-2	9.049-3	7.550-3	6.062-3	4.678-3
61	88	1.044-2	1.003-2	9.556-3	8.964-3	8.237-3	7.822-3	7.377-3	6.421-3	5.436-3	4.490-3	3.613-3
61	89	1.135-2	1.102-2	1.066-2	1.026-2	9.772-3	9.494-3	9.192-3	8.523-3	7.786-3	6.997-3	6.112-3
61	90	9.277-3	8.866-3	8.442-3	7.975-3	7.437-3	7.138-3	6.820-3	6.140-3	5.435-3	4.738-3	4.035-3
61	91	1.112-2	1.086-2	1.046-2	9.900-3	9.149-3	8.704-3	8.217-3	7.146-3	6.010-3	4.895-3	3.861-3
61	92	1.974-2	1.925-2	1.853-2	1.752-2	1.617-2	1.537-2	1.449-2	1.253-2	1.042-2	8.325-3	6.384-3
61	93	1.086-3	1.054-3	1.008-3	9.449-4	8.631-4	8.152-4	7.632-4	6.500-4	5.313-4	4.165-4	3.134-4
61	94	3.723-3	3.656-3	3.560-3	3.426-3	3.252-3	3.150-3	3.041-3	2.806-3	2.568-3	2.337-3	2.086-3
61	95	6.666-3	6.565-3	6.409-3	6.186-3	5.885-3	5.706-3	5.510-3	5.074-3	4.603-3	4.113-3	3.579-3
61	96	3.822-3	3.720-3	3.577-3	3.383-3	3.130-3	2.981-3	2.818-3	2.457-3	2.068-3	1.677-3	1.308-3
61	97	1.050-3	1.021-3	9.798-4	9.216-4	8.447-4	7.993-4	7.499-4	6.415-4	5.272-4	4.157-4	3.146-4
62	63	1.208-1	1.175-1	1.136-1	1.088-1	1.026-1	9.894-2	9.495-2	8.606-2	7.642-2	6.651-2	5.633-2
62	64	3.856-3	3.565-3	3.288-3	3.015-3	2.734-3	2.591-3	2.445-3	2.155-3	1.881-3	1.637-3	1.410-3
62	65	1.836-3	1.731-3	1.622-3	1.505-3	1.374-3	1.302-3	1.227-3	1.068-3	9.017-4	7.378-4	5.831-4
62	66	1.649-2	1.498-2	1.386-2	1.299-2	1.225-2	1.192-2	1.161-2	1.111-2	1.087-2	1.104-2	1.128-2
62	67	6.704-3	6.404-3	6.074-3	5.706-3	5.294-3	5.073-3	4.841-3	4.363-3	3.890-3	3.455-3	3.033-3
62	68	1.035-2	1.008-2	9.812-3	9.509-3	9.159-3	8.966-3	8.766-3	8.363-3	8.020-3	7.784-3	7.486-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
62	69	1.069-2	1.034-2	9.983-3	9.569-3	9.070-3	8.785-3	8.479-3	7.828-3	7.190-3	6.625-3	6.056-3
62	70	2.075-1	2.105-1	2.137-1	2.167-1	2.191-1	2.201-1	2.210-1	2.229-1	2.262-1	2.307-1	2.297-1
62	71	6.328-3	6.201-3	6.059-3	5.896-3	5.705-3	5.597-3	5.479-3	5.217-3	4.928-3	4.604-3	4.182-3
62	72	2.973-2	2.973-2	2.971-2	2.962-2	2.944-2	2.931-2	2.918-2	2.891-2	2.874-2	2.861-2	2.779-2
62	73	5.278-3	5.175-3	5.070-3	4.953-3	4.819-3	4.746-3	4.673-3	4.539-3	4.448-3	4.405-3	4.287-3
62	74	9.253-3	8.850-3	8.424-3	7.946-3	7.387-3	7.071-3	6.732-3	5.997-3	5.224-3	4.467-3	3.738-3
62	75	1.209-2	1.163-2	1.109-2	1.045-2	9.669-3	9.224-3	8.741-3	7.683-3	6.547-3	5.408-3	4.318-3
62	76	3.343-3	3.158-3	2.967-3	2.760-3	2.526-3	2.395-3	2.256-3	1.955-3	1.636-3	1.319-3	1.023-3
62	77	1.077-2	1.036-2	9.862-3	9.230-3	8.445-3	7.993-3	7.506-3	6.450-3	5.347-3	4.281-3	3.313-3
62	78	2.273-3	2.197-3	2.121-3	2.042-3	1.961-3	1.919-3	1.877-3	1.793-3	1.716-3	1.640-3	1.532-3
62	79	1.689-2	1.681-2	1.674-2	1.666-2	1.657-2	1.653-2	1.648-2	1.641-2	1.636-2	1.626-2	1.567-2
62	80	1.475-2	1.472-2	1.469-2	1.466-2	1.464-2	1.462-2	1.461-2	1.461-2	1.463-2	1.460-2	1.411-2
62	81	5.852-3	5.693-3	5.496-3	5.249-3	4.944-3	4.770-3	4.582-3	4.180-3	3.767-3	3.366-3	2.953-3
62	82	5.235-3	5.081-3	4.885-3	4.633-3	4.315-3	4.130-3	3.930-3	3.493-3	3.033-3	2.579-3	2.139-3
62	83	2.352-3	2.289-3	2.200-3	2.079-3	1.921-3	1.827-3	1.724-3	1.496-3	1.249-3	1.001-3	7.698-4
62	84	2.771-3	2.690-3	2.590-3	2.465-3	2.307-3	2.215-3	2.114-3	1.889-3	1.645-3	1.396-3	1.148-3
62	85	1.028-3	9.852-4	9.399-4	8.900-4	8.330-4	8.014-4	7.675-4	6.940-4	6.149-4	5.326-4	4.473-4
62	86	8.619-4	8.367-4	8.041-4	7.612-4	7.058-4	6.730-4	6.370-4	5.563-4	4.681-4	3.785-4	2.935-4
62	87	9.741-3	9.459-3	9.082-3	8.578-3	7.922-3	7.534-3	7.108-3	6.165-3	5.151-3	4.140-3	3.197-3
62	88	5.650-3	5.485-3	5.294-3	5.059-3	4.767-3	4.597-3	4.413-3	4.008-3	3.572-3	3.126-3	2.665-3
62	89	4.900-3	4.709-3	4.490-3	4.227-3	3.906-3	3.725-3	3.531-3	3.117-3	2.696-3	2.294-3	1.914-3
62	90	2.782-3	2.655-3	2.511-3	2.343-3	2.141-3	2.028-3	1.908-3	1.653-3	1.392-3	1.144-3	9.165-4
62	91	5.113-3	5.000-3	4.835-3	4.603-3	4.293-3	4.106-3	3.900-3	3.433-3	2.920-3	2.394-3	1.887-3
62	92	2.662-3	2.578-3	2.464-3	2.311-3	2.114-3	1.999-3	1.874-3	1.601-3	1.315-3	1.036-3	7.842-4
62	93	1.290-3	1.281-3	1.264-3	1.236-3	1.194-3	1.168-3	1.137-3	1.062-3	9.730-4	8.704-4	7.515-4
62	94	4.933-3	4.883-3	4.800-3	4.677-3	4.511-3	4.412-3	4.303-3	4.060-3	3.794-3	3.507-3	3.154-3
62	95	2.898-3	2.828-3	2.728-3	2.593-3	2.418-3	2.318-3	2.210-3	1.979-3	1.740-3	1.509-3	1.280-3
62	96	3.137-3	3.036-3	2.898-3	2.713-3	2.477-3	2.340-3	2.193-3	1.875-3	1.546-3	1.231-3	9.448-4
62	97	1.275-3	1.245-3	1.200-3	1.137-3	1.052-3	1.001-3	9.442-4	8.185-4	6.823-4	5.459-4	4.188-4
63	64	3.075-2	3.024-2	2.987-2	2.953-2	2.914-2	2.891-2	2.865-2	2.813-2	2.765-2	2.712-2	2.588-2
63	65	1.543-2	1.536-2	1.530-2	1.522-2	1.510-2	1.501-2	1.492-2	1.470-2	1.447-2	1.418-2	1.351-2
63	66	1.729-1	1.690-1	1.645-1	1.588-1	1.517-1	1.476-1	1.431-1	1.336-1	1.250-1	1.186-1	1.128-1
63	67	2.930-2	2.935-2	2.946-2	2.952-2	2.948-2	2.944-2	2.943-2	2.965-2	3.074-2	3.325-2	3.596-2
63	68	1.466-2	1.405-2	1.341-2	1.273-2	1.199-2	1.159-2	1.118-2	1.034-2	9.537-3	8.817-3	8.060-3
63	69	2.311-2	2.278-2	2.246-2	2.210-2	2.163-2	2.136-2	2.107-2	2.053-2	2.021-2	2.026-2	2.014-2
63	70	2.571-1	2.609-1	2.649-1	2.685-1	2.711-1	2.721-1	2.729-1	2.748-1	2.785-1	2.842-1	2.835-1
63	71	5.925-3	5.733-3	5.517-3	5.271-3	4.991-3	4.839-3	4.679-3	4.347-3	4.018-3	3.702-3	3.347-3
63	72	5.347-2	5.348-2	5.351-2	5.347-2	5.332-2	5.320-2	5.306-2	5.280-2	5.270-2	5.259-2	5.109-2
63	73	5.087-2	5.085-2	5.084-2	5.076-2	5.056-2	5.042-2	5.027-2	5.001-2	4.993-2	4.987-2	4.852-2
63	74	1.456-2	1.392-2	1.322-2	1.242-2	1.146-2	1.093-2	1.035-2	9.089-3	7.750-3	6.415-3	5.144-3
63	75	1.171-2	1.122-2	1.069-2	1.010-2	9.438-3	9.076-3	8.693-3	7.883-3	7.048-3	6.223-3	5.375-3
63	76	1.827-2	1.759-2	1.679-2	1.582-2	1.463-2	1.395-2	1.320-2	1.157-2	9.816-3	8.064-3	6.400-3
63	77	2.318-2	2.251-2	2.171-2	2.068-2	1.936-2	1.858-2	1.774-2	1.592-2	1.405-2	1.231-2	1.064-2
63	78	2.014-2	2.010-2	2.006-2	1.998-2	1.984-2	1.975-2	1.965-2	1.943-2	1.923-2	1.899-2	1.823-2
63	79	1.959-2	1.953-2	1.952-2	1.949-2	1.945-2	1.942-2	1.939-2	1.936-2	1.940-2	1.941-2	1.886-2
63	80	1.483-2	1.477-2	1.469-2	1.458-2	1.445-2	1.439-2	1.432-2	1.420-2	1.410-2	1.396-2	1.341-2
63	81	1.108-2	1.071-2	1.024-2	9.631-3	8.861-3	8.414-3	7.931-3	6.882-3	5.797-3	4.775-3	3.860-3
63	82	7.882-3	7.647-3	7.347-3	6.957-3	6.461-3	6.171-3	5.856-3	5.165-3	4.430-3	3.702-3	3.006-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
63	83	4.554-3	4.449-3	4.300-3	4.098-3	3.832-3	3.674-3	3.501-3	3.118-3	2.705-3	2.291-3	1.886-3
63	84	4.498-3	4.357-3	4.193-3	4.000-3	3.771-3	3.641-3	3.502-3	3.201-3	2.886-3	2.570-3	2.237-3
63	85	3.874-3	3.801-3	3.713-3	3.605-3	3.472-3	3.395-3	3.312-3	3.129-3	2.935-3	2.732-3	2.482-3
63	86	4.094-3	4.051-3	3.986-3	3.889-3	3.754-3	3.672-3	3.582-3	3.380-3	3.158-3	2.918-3	2.625-3
63	87	1.366-2	1.325-2	1.272-2	1.201-2	1.108-2	1.054-2	9.949-3	8.636-3	7.224-3	5.820-3	4.514-3
63	88	5.923-3	5.669-3	5.394-3	5.078-3	4.703-3	4.492-3	4.266-3	3.781-3	3.278-3	2.785-3	2.308-3
63	89	6.073-3	5.812-3	5.533-3	5.216-3	4.845-3	4.636-3	4.412-3	3.928-3	3.416-3	2.903-3	2.398-3
63	90	7.404-3	7.120-3	6.784-3	6.374-3	5.873-3	5.590-3	5.287-3	4.641-3	3.985-3	3.364-3	2.783-3
63	91	8.613-3	8.414-3	8.120-3	7.706-3	7.152-3	6.821-3	6.456-3	5.637-3	4.744-3	3.840-3	2.985-3
63	92	5.964-3	5.795-3	5.562-3	5.245-3	4.832-3	4.589-3	4.324-3	3.742-3	3.125-3	2.520-3	1.960-3
63	93	3.659-3	3.644-3	3.609-3	3.549-3	3.462-3	3.408-3	3.349-3	3.218-3	3.079-3	2.927-3	2.709-3
63	94	3.617-3	3.569-3	3.492-3	3.379-3	3.220-3	3.122-3	3.012-3	2.760-3	2.476-3	2.168-3	1.837-3
63	95	7.969-3	7.846-3	7.660-3	7.398-3	7.053-3	6.849-3	6.629-3	6.147-3	5.634-3	5.103-3	4.506-3
63	96	4.885-3	4.724-3	4.506-3	4.217-3	3.848-3	3.634-3	3.404-3	2.908-3	2.393-3	1.897-3	1.448-3
63	97	2.201-3	2.151-3	2.078-3	1.974-3	1.834-3	1.751-3	1.659-3	1.453-3	1.231-3	1.008-3	7.961-4
64	65	2.608-3	2.406-3	2.220-3	2.038-3	1.854-3	1.761-3	1.669-3	1.496-3	1.349-3	1.235-3	1.127-3
64	66	1.426-1	1.425-1	1.426-1	1.423-1	1.413-1	1.405-1	1.395-1	1.371-1	1.346-1	1.314-1	1.247-1
64	67	9.756-3	9.008-3	8.300-3	7.597-3	6.867-3	6.490-3	6.108-3	5.349-3	4.641-3	4.020-3	3.451-3
64	68	2.116-1	2.130-1	2.150-1	2.169-1	2.187-1	2.195-1	2.207-1	2.247-1	2.346-1	2.533-1	2.715-1
64	69	3.706-3	3.237-3	2.807-3	2.422-3	2.069-3	1.900-3	1.737-3	1.423-3	1.133-3	8.756-4	6.572-4
64	70	6.792-3	6.360-3	5.918-3	5.431-3	4.879-3	4.575-3	4.256-3	3.583-3	2.903-3	2.261-3	1.695-3
64	71	3.207-3	2.963-3	2.728-3	2.493-3	2.248-3	2.122-3	1.994-3	1.740-3	1.502-3	1.292-3	1.100-3
64	72	7.689-2	7.695-2	7.716-2	7.739-2	7.751-2	7.753-2	7.755-2	7.765-2	7.807-2	7.856-2	7.696-2
64	73	3.698-1	3.732-1	3.774-1	3.815-1	3.846-1	3.858-1	3.868-1	3.892-1	3.933-1	3.986-1	3.938-1
64	74	1.656-2	1.583-2	1.506-2	1.420-2	1.320-2	1.264-2	1.205-2	1.078-2	9.463-3	8.176-3	6.910-3
64	75	6.357-2	6.258-2	6.153-2	6.024-2	5.856-2	5.756-2	5.647-2	5.409-2	5.165-2	4.918-2	4.579-2
64	76	5.394-2	5.146-2	4.863-2	4.537-2	4.159-2	3.949-2	3.727-2	3.252-2	2.757-2	2.271-2	1.813-2
64	77	7.386-2	7.286-2	7.152-2	6.979-2	6.765-2	6.643-2	6.513-2	6.235-2	5.949-2	5.647-2	5.226-2
64	78	5.546-2	5.466-2	5.356-2	5.201-2	4.989-2	4.862-2	4.723-2	4.419-2	4.103-2	3.788-2	3.427-2
64	79	3.066-2	3.001-2	2.912-2	2.792-2	2.640-2	2.552-2	2.457-2	2.252-2	2.039-2	1.827-2	1.603-2
64	80	4.178-3	4.032-3	3.841-3	3.593-3	3.280-3	3.100-3	2.906-3	2.483-3	2.041-3	1.612-3	1.223-3
64	81	2.665-2	2.601-2	2.515-2	2.400-2	2.252-2	2.166-2	2.073-2	1.872-2	1.671-2	1.490-2	1.319-2
64	82	8.351-3	7.947-3	7.508-3	7.001-3	6.399-3	6.058-3	5.692-3	4.900-3	4.064-3	3.242-3	2.484-3
64	83	1.583-3	1.525-3	1.448-3	1.347-3	1.218-3	1.144-3	1.065-3	8.952-4	7.226-4	5.608-4	4.197-4
64	84	3.437-2	3.381-2	3.306-2	3.206-2	3.078-2	3.002-2	2.920-2	2.737-2	2.539-2	2.331-2	2.088-2
64	85	1.002-2	9.755-3	9.401-3	8.932-3	8.334-3	7.988-3	7.614-3	6.804-3	5.962-3	5.141-3	4.338-3
64	86	1.497-3	1.450-3	1.391-3	1.319-3	1.236-3	1.194-3	1.151-3	1.075-3	1.020-3	9.884-4	9.488-4
64	87	1.744-2	1.675-2	1.595-2	1.496-2	1.377-2	1.308-2	1.234-2	1.074-2	9.033-3	7.341-3	5.751-3
64	88	3.429-3	3.275-3	3.102-3	2.898-3	2.653-3	2.515-3	2.368-3	2.054-3	1.732-3	1.425-3	1.143-3
64	89	9.630-3	9.151-3	8.631-3	8.038-3	7.347-3	6.963-3	6.556-3	5.692-3	4.812-3	3.973-3	3.199-3
64	90	2.733-2	2.627-2	2.516-2	2.391-2	2.245-2	2.163-2	2.074-2	1.880-2	1.671-2	1.455-2	1.232-2
64	91	1.466-2	1.433-2	1.383-2	1.313-2	1.220-2	1.165-2	1.106-2	9.747-3	8.370-3	7.023-3	5.747-3
64	92	3.165-2	3.089-2	2.976-2	2.816-2	2.603-2	2.476-2	2.336-2	2.025-2	1.691-2	1.357-2	1.047-2
64	93	8.632-4	8.409-4	8.083-4	7.628-4	7.030-4	6.680-4	6.298-4	5.467-4	4.596-4	3.750-4	2.968-4
64	94	3.343-3	3.256-3	3.128-3	2.951-3	2.717-3	2.579-3	2.429-3	2.098-3	1.748-3	1.405-3	1.089-3
64	95	1.109-2	1.101-2	1.084-2	1.058-2	1.020-2	9.976-3	9.723-3	9.165-3	8.579-3	7.990-3	7.288-3
64	96	3.773-3	3.688-3	3.565-3	3.396-3	3.170-3	3.035-3	2.885-3	2.548-3	2.176-3	1.796-3	1.430-3
64	97	7.114-4	6.880-4	6.543-4	6.079-4	5.481-4	5.136-4	4.765-4	3.978-4	3.184-4	2.447-4	1.810-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
65	66	2.103-3	1.967-3	1.832-3	1.686-3	1.524-3	1.435-3	1.342-3	1.143-3	9.389-4	7.415-4	5.628-4
65	67	4.797-2	4.679-2	4.513-2	4.286-2	3.985-2	3.805-2	3.607-2	3.164-2	2.678-2	2.184-2	1.711-2
65	68	3.904-2	3.920-2	3.935-2	3.941-2	3.932-2	3.923-2	3.914-2	3.920-2	4.013-2	4.249-2	4.484-2
65	69	1.553-3	1.430-3	1.309-3	1.187-3	1.060-3	9.933-4	9.248-4	7.835-4	6.415-4	5.063-4	3.848-4
65	70	2.182-3	2.106-3	2.013-3	1.901-3	1.766-3	1.688-3	1.604-3	1.421-3	1.226-3	1.028-3	8.347-4
65	71	4.869-4	4.423-4	4.019-4	3.661-4	3.340-4	3.187-4	3.037-4	2.739-4	2.439-4	2.132-4	1.809-4
65	72	2.935-2	2.961-2	2.989-2	3.010-2	3.018-2	3.017-2	3.014-2	3.005-2	3.008-2	3.021-2	2.967-2
65	73	6.066-4	5.546-4	5.036-4	4.529-4	4.010-4	3.743-4	3.470-4	2.915-4	2.367-4	1.853-4	1.398-4
65	74	2.564-2	2.575-2	2.593-2	2.612-2	2.626-2	2.631-2	2.636-2	2.647-2	2.666-2	2.685-2	2.631-2
65	75	1.064-3	9.784-4	8.986-4	8.214-4	7.426-4	7.014-4	6.587-4	5.689-4	4.758-4	3.838-4	2.977-4
65	76	1.387-3	1.302-3	1.216-3	1.126-3	1.032-3	9.838-4	9.357-4	8.444-4	7.678-4	7.093-4	6.533-4
65	77	2.841-3	2.741-3	2.627-3	2.493-3	2.333-3	2.242-3	2.145-3	1.939-3	1.730-3	1.533-3	1.338-3
65	78	1.896-3	1.836-3	1.758-3	1.658-3	1.531-3	1.457-3	1.376-3	1.196-3	1.002-3	8.070-4	6.236-4
65	79	9.536-3	9.508-3	9.470-3	9.389-3	9.245-3	9.149-3	9.039-3	8.785-3	8.505-3	8.181-3	7.659-3
65	80	2.576-3	2.514-3	2.431-3	2.320-3	2.176-3	2.090-3	1.996-3	1.784-3	1.548-3	1.303-3	1.058-3
65	81	3.033-3	2.941-3	2.823-3	2.667-3	2.465-3	2.346-3	2.218-3	1.942-3	1.662-3	1.406-3	1.178-3
65	82	2.986-3	2.900-3	2.781-3	2.619-3	2.408-3	2.284-3	2.149-3	1.852-3	1.536-3	1.224-3	9.368-4
65	83	9.122-4	8.815-4	8.400-4	7.847-4	7.139-4	6.727-4	6.281-4	5.316-4	4.314-4	3.355-4	2.503-4
65	84	1.537-3	1.518-3	1.494-3	1.464-3	1.427-3	1.406-3	1.384-3	1.339-3	1.294-3	1.246-3	1.169-3
65	85	1.570-3	1.551-3	1.528-3	1.494-3	1.445-3	1.412-3	1.374-3	1.283-3	1.174-3	1.048-3	9.025-4
65	86	3.951-4	3.814-4	3.648-4	3.438-4	3.182-4	3.038-4	2.885-4	2.559-4	2.224-4	1.898-4	1.583-4
65	87	8.974-4	8.391-4	7.796-4	7.152-4	6.428-4	6.031-4	5.613-4	4.731-4	3.833-4	2.982-4	2.228-4
65	88	3.159-3	3.183-3	3.200-3	3.191-3	3.150-3	3.116-3	3.073-3	2.969-3	2.856-3	2.751-3	2.604-3
65	89	2.529-3	2.440-3	2.330-3	2.189-3	2.010-3	1.906-3	1.794-3	1.545-3	1.280-3	1.018-3	7.774-4
65	90	8.731-4	8.203-4	7.662-4	7.072-4	6.402-4	6.034-4	5.644-4	4.818-4	3.974-4	3.166-4	2.437-4
65	91	2.495-3	2.449-3	2.378-3	2.276-3	2.138-3	2.055-3	1.964-3	1.758-3	1.534-3	1.306-3	1.080-3
65	92	1.984-3	1.924-3	1.843-3	1.734-3	1.591-3	1.507-3	1.415-3	1.214-3	1.000-3	7.911-4	6.004-4
65	93	2.745-3	2.744-3	2.725-3	2.683-3	2.614-3	2.567-3	2.511-3	2.372-3	2.201-3	1.998-3	1.753-3
65	94	4.313-4	4.171-4	3.976-4	3.717-4	3.391-4	3.204-4	3.003-4	2.575-4	2.132-4	1.702-4	1.308-4
65	95	1.568-3	1.571-3	1.562-3	1.537-3	1.494-3	1.465-3	1.432-3	1.359-3	1.285-3	1.215-3	1.132-3
65	96	1.663-3	1.624-3	1.568-3	1.492-3	1.390-3	1.330-3	1.262-3	1.112-3	9.483-4	7.826-4	6.239-4
65	97	3.678-4	3.569-4	3.408-4	3.185-4	2.895-4	2.726-4	2.543-4	2.148-4	1.739-4	1.350-4	1.006-4
66	67	6.578-2	6.603-2	6.640-2	6.673-2	6.682-2	6.677-2	6.665-2	6.629-2	6.588-2	6.510-2	6.239-2
66	68	2.097-2	2.036-2	1.973-2	1.902-2	1.813-2	1.761-2	1.704-2	1.581-2	1.452-2	1.321-2	1.175-2
66	69	9.886-3	9.357-3	8.900-3	8.480-3	8.064-3	7.858-3	7.661-3	7.351-3	7.321-3	7.770-3	8.422-3
66	70	2.854-1	2.894-1	2.935-1	2.972-1	2.998-1	3.007-1	3.016-1	3.036-1	3.081-1	3.154-1	3.162-1
66	71	4.606-2	4.632-2	4.661-2	4.682-2	4.689-2	4.687-2	4.682-2	4.676-2	4.691-2	4.718-2	4.631-2
66	72	9.177-3	8.665-3	8.148-3	7.592-3	6.972-3	6.637-3	6.287-3	5.569-3	4.873-3	4.251-3	3.679-3
66	73	1.429-1	1.431-1	1.433-1	1.434-1	1.433-1	1.432-1	1.431-1	1.430-1	1.434-1	1.438-1	1.402-1
66	74	3.213-3	2.930-3	2.678-3	2.457-3	2.261-3	2.170-3	2.084-3	1.922-3	1.779-3	1.650-3	1.504-3
66	75	3.245-2	3.140-2	3.013-2	2.860-2	2.673-2	2.567-2	2.453-2	2.205-2	1.943-2	1.681-2	1.419-2
66	76	4.225-2	4.085-2	3.918-2	3.710-2	3.447-2	3.294-2	3.127-2	2.758-2	2.364-2	1.975-2	1.607-2
66	77	4.719-2	4.577-2	4.402-2	4.185-2	3.921-2	3.772-2	3.613-2	3.273-2	2.924-2	2.584-2	2.236-2
66	78	4.978-2	5.008-2	5.049-2	5.084-2	5.100-2	5.101-2	5.099-2	5.092-2	5.100-2	5.111-2	4.989-2
66	79	8.370-3	8.165-3	7.928-3	7.647-3	7.318-3	7.136-3	6.947-3	6.559-3	6.183-3	5.820-3	5.365-3
66	80	4.126-3	3.981-3	3.789-3	3.544-3	3.243-3	3.074-3	2.894-3	2.518-3	2.146-3	1.805-3	1.495-3
66	81	4.499-2	4.427-2	4.327-2	4.197-2	4.039-2	3.950-2	3.856-2	3.657-2	3.457-2	3.255-2	2.995-2
66	82	1.083-2	1.058-2	1.027-2	9.877-3	9.361-3	9.056-3	8.720-3	7.980-3	7.196-3	6.420-3	5.621-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
66	83	6.471-3	6.303-3	6.065-3	5.735-3	5.301-3	5.044-3	4.761-3	4.131-3	3.450-3	2.766-3	2.128-3
66	84	6.991-3	6.809-3	6.588-3	6.310-3	5.960-3	5.756-3	5.534-3	5.047-3	4.532-3	4.019-3	3.490-3
66	85	7.074-3	6.932-3	6.739-3	6.480-3	6.140-3	5.939-3	5.718-3	5.229-3	4.701-3	4.157-3	3.581-3
66	86	1.412-3	1.368-3	1.310-3	1.236-3	1.142-3	1.087-3	1.026-3	8.924-4	7.478-4	6.025-4	4.661-4
66	87	1.479-2	1.430-2	1.368-2	1.288-2	1.187-2	1.128-2	1.063-2	9.221-3	7.716-3	6.225-3	4.839-3
66	88	1.432-3	1.296-3	1.172-3	1.056-3	9.394-4	8.799-4	8.195-4	6.974-4	5.777-4	4.662-4	3.658-4
66	89	8.127-3	7.783-3	7.403-3	6.962-3	6.439-3	6.143-3	5.827-3	5.147-3	4.439-3	3.744-3	3.076-3
66	90	1.271-2	1.220-2	1.159-2	1.087-2	9.992-3	9.496-3	8.964-3	7.824-3	6.646-3	5.511-3	4.451-3
66	91	1.187-2	1.158-2	1.117-2	1.060-2	9.837-3	9.384-3	8.886-3	7.781-3	6.590-3	5.398-3	4.268-3
66	92	9.123-3	8.864-3	8.507-3	8.022-3	7.389-3	7.015-3	6.606-3	5.707-3	4.748-3	3.802-3	2.928-3
66	93	5.207-4	5.011-4	4.759-4	4.433-4	4.024-4	3.789-4	3.535-4	2.991-4	2.430-4	1.895-4	1.419-4
66	94	7.434-3	7.365-3	7.250-3	7.081-3	6.856-3	6.723-3	6.578-3	6.262-3	5.925-3	5.563-3	5.086-3
66	95	1.178-2	1.163-2	1.139-2	1.104-2	1.057-2	1.029-2	9.979-3	9.285-3	8.515-3	7.682-3	6.733-3
66	96	6.939-3	6.736-3	6.457-3	6.084-3	5.604-3	5.325-3	5.023-3	4.368-3	3.681-3	3.007-3	2.378-3
66	97	2.724-3	2.659-3	2.563-3	2.426-3	2.243-3	2.134-3	2.013-3	1.744-3	1.452-3	1.161-3	8.906-4
67	68	1.405-1	1.395-1	1.379-1	1.352-1	1.310-1	1.283-1	1.252-1	1.182-1	1.104-1	1.021-1	9.200-2
67	69	1.075-2	1.046-2	1.016-2	9.841-3	9.478-3	9.281-3	9.080-3	8.715-3	8.529-3	8.669-3	8.893-3
67	70	5.352-3	5.067-3	4.779-3	4.472-3	4.129-3	3.941-3	3.743-3	3.321-3	2.884-3	2.450-3	2.026-3
67	71	1.601-2	1.599-2	1.596-2	1.589-2	1.576-2	1.566-2	1.555-2	1.530-2	1.507-2	1.486-2	1.433-2
67	72	8.906-3	8.715-3	8.536-3	8.358-3	8.167-3	8.065-3	7.959-3	7.740-3	7.518-3	7.269-3	6.839-3
67	73	8.831-2	8.905-2	8.991-2	9.066-2	9.109-2	9.118-2	9.121-2	9.126-2	9.162-2	9.220-2	9.052-2
67	74	1.907-2	1.887-2	1.873-2	1.861-2	1.846-2	1.837-2	1.828-2	1.810-2	1.799-2	1.793-2	1.744-2
67	75	2.261-2	2.246-2	2.243-2	2.244-2	2.241-2	2.237-2	2.233-2	2.227-2	2.232-2	2.242-2	2.197-2
67	76	3.026-3	2.795-3	2.576-3	2.361-3	2.147-3	2.040-3	1.933-3	1.730-3	1.553-3	1.410-3	1.272-3
67	77	1.402-2	1.371-2	1.338-2	1.295-2	1.240-2	1.208-2	1.172-2	1.096-2	1.019-2	9.501-3	8.740-3
67	78	1.174-2	1.156-2	1.132-2	1.099-2	1.054-2	1.026-2	9.947-3	9.236-3	8.449-3	7.620-3	6.701-3
67	79	1.405-2	1.381-2	1.352-2	1.314-2	1.265-2	1.236-2	1.204-2	1.132-2	1.054-2	9.708-3	8.715-3
67	80	2.364-2	2.358-2	2.350-2	2.334-2	2.305-2	2.286-2	2.264-2	2.214-2	2.157-2	2.088-2	1.964-2
67	81	9.141-3	8.842-3	8.459-3	7.962-3	7.328-3	6.960-3	6.562-3	5.703-3	4.821-3	3.992-3	3.246-3
67	82	1.113-2	1.089-2	1.056-2	1.010-2	9.489-3	9.129-3	8.736-3	7.870-3	6.954-3	6.040-3	5.125-3
67	83	2.428-3	2.352-3	2.246-3	2.104-3	1.919-3	1.811-3	1.694-3	1.440-3	1.175-3	9.197-4	6.913-4
67	84	5.609-3	5.521-3	5.405-3	5.247-3	5.037-3	4.912-3	4.773-3	4.464-3	4.125-3	3.762-3	3.339-3
67	85	3.720-3	3.624-3	3.503-3	3.343-3	3.136-3	3.014-3	2.881-3	2.586-3	2.269-3	1.948-3	1.627-3
67	86	1.165-3	1.146-3	1.125-3	1.096-3	1.056-3	1.031-3	1.002-3	9.322-4	8.499-4	7.562-4	6.494-4
67	87	2.795-3	2.635-3	2.465-3	2.276-3	2.058-3	1.937-3	1.809-3	1.537-3	1.260-3	9.951-4	7.591-4
67	88	5.626-3	5.446-3	5.234-3	4.970-3	4.643-3	4.453-3	4.247-3	3.796-3	3.314-3	2.827-3	2.345-3
67	89	6.981-3	6.760-3	6.504-3	6.194-3	5.815-3	5.597-3	5.362-3	4.848-3	4.301-3	3.745-3	3.175-3
67	90	5.507-3	5.292-3	5.033-3	4.711-3	4.311-3	4.081-3	3.832-3	3.290-3	2.720-3	2.163-3	1.654-3
67	91	5.921-3	5.778-3	5.569-3	5.277-3	4.889-3	4.657-3	4.402-3	3.832-3	3.212-3	2.588-3	2.000-3
67	92	6.131-3	5.953-3	5.707-3	5.371-3	4.931-3	4.672-3	4.388-3	3.765-3	3.105-3	2.457-3	1.866-3
67	93	4.393-4	4.243-4	4.042-4	3.778-4	3.447-4	3.258-4	3.056-4	2.623-4	2.176-4	1.742-4	1.342-4
67	94	9.206-3	9.168-3	9.063-3	8.878-3	8.597-3	8.418-3	8.210-3	7.715-3	7.125-3	6.446-3	5.639-3
67	95	3.499-3	3.426-3	3.320-3	3.174-3	2.982-3	2.871-3	2.749-3	2.484-3	2.203-3	1.922-3	1.637-3
67	96	4.873-3	4.750-3	4.575-3	4.335-3	4.019-3	3.831-3	3.624-3	3.161-3	2.659-3	2.152-3	1.674-3
67	97	1.073-3	1.041-3	9.944-4	9.296-4	8.448-4	7.952-4	7.414-4	6.251-4	5.048-4	3.906-4	2.900-4
68	69	5.511-3	5.095-3	4.670-3	4.237-3	3.788-3	3.554-3	3.316-3	2.830-3	2.349-3	1.896-3	1.484-3
68	70	1.301-2	1.255-2	1.200-2	1.132-2	1.050-2	1.003-2	9.532-3	8.440-3	7.282-3	6.120-3	4.986-3
68	71	5.824-3	5.675-3	5.538-3	5.399-3	5.242-3	5.154-3	5.062-3	4.875-3	4.713-3	4.590-3	4.407-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
68	72	4.146-2	4.143-2	4.142-2	4.137-2	4.120-2	4.106-2	4.092-2	4.061-2	4.043-2	4.026-2	3.908-2
68	73	8.119-2	8.115-2	8.112-2	8.095-2	8.050-2	8.018-2	7.980-2	7.898-2	7.824-2	7.733-2	7.439-2
68	74	7.071-3	6.504-3	6.007-3	5.557-3	5.130-3	4.922-3	4.718-3	4.335-3	4.006-3	3.736-3	3.448-3
68	75	3.969-2	3.929-2	3.895-2	3.862-2	3.825-2	3.805-2	3.786-2	3.751-2	3.727-2	3.696-2	3.562-2
68	76	6.512-2	6.478-2	6.476-2	6.485-2	6.488-2	6.487-2	6.485-2	6.485-2	6.508-2	6.530-2	6.375-2
68	77	1.659-2	1.591-2	1.509-2	1.410-2	1.288-2	1.218-2	1.144-2	9.844-3	8.218-3	6.694-3	5.337-3
68	78	5.288-2	5.266-2	5.234-2	5.175-2	5.077-2	5.011-2	4.936-2	4.762-2	4.570-2	4.355-2	4.041-2
68	79	3.955-2	3.950-2	3.943-2	3.920-2	3.873-2	3.840-2	3.802-2	3.714-2	3.620-2	3.511-2	3.315-2
68	80	1.158-2	1.149-2	1.137-2	1.120-2	1.095-2	1.080-2	1.063-2	1.026-2	9.861-3	9.415-3	8.751-3
68	81	1.589-2	1.534-2	1.461-2	1.368-2	1.253-2	1.187-2	1.116-2	9.645-3	8.076-3	6.574-3	5.205-3
68	82	1.776-2	1.730-2	1.664-2	1.574-2	1.456-2	1.386-2	1.309-2	1.139-2	9.571-3	7.756-3	6.055-3
68	83	3.713-3	3.612-3	3.476-3	3.294-3	3.060-3	2.925-3	2.778-3	2.462-3	2.134-3	1.817-3	1.512-3
68	84	1.251-2	1.231-2	1.203-2	1.162-2	1.104-2	1.069-2	1.030-2	9.416-3	8.448-3	7.444-3	6.390-3
68	85	5.220-3	5.111-3	4.968-3	4.778-3	4.530-3	4.384-3	4.225-3	3.877-3	3.506-3	3.127-3	2.720-3
68	86	1.583-3	1.538-3	1.478-3	1.398-3	1.295-3	1.236-3	1.172-3	1.033-3	8.905-4	7.527-4	6.217-4
68	87	4.682-3	4.421-3	4.142-3	3.829-3	3.465-3	3.263-3	3.049-3	2.592-3	2.123-3	1.674-3	1.272-3
68	88	5.118-3	4.906-3	4.663-3	4.370-3	4.014-3	3.810-3	3.591-3	3.115-3	2.614-3	2.123-3	1.666-3
68	89	8.896-3	8.554-3	8.162-3	7.685-3	7.099-3	6.762-3	6.399-3	5.608-3	4.773-3	3.948-3	3.165-3
68	90	1.767-2	1.724-2	1.668-2	1.595-2	1.499-2	1.443-2	1.381-2	1.245-2	1.100-2	9.557-3	8.116-3
68	91	9.036-3	8.836-3	8.544-3	8.137-3	7.592-3	7.266-3	6.906-3	6.100-3	5.219-3	4.324-3	3.458-3
68	92	1.093-2	1.063-2	1.021-2	9.626-3	8.863-3	8.412-3	7.920-3	6.839-3	5.694-3	4.574-3	3.547-3
68	93	1.576-3	1.587-3	1.587-3	1.574-3	1.542-3	1.520-3	1.495-3	1.436-3	1.376-3	1.319-3	1.241-3
68	94	3.111-3	3.041-3	2.942-3	2.807-3	2.632-3	2.530-3	2.420-3	2.179-3	1.926-3	1.671-3	1.412-3
68	95	1.631-2	1.620-2	1.598-2	1.562-2	1.510-2	1.477-2	1.440-2	1.353-2	1.250-2	1.133-2	9.938-3
68	96	8.774-3	8.557-3	8.247-3	7.822-3	7.261-3	6.928-3	6.562-3	5.744-3	4.857-3	3.962-3	3.112-3
68	97	1.963-3	1.910-3	1.834-3	1.727-3	1.588-3	1.507-3	1.419-3	1.230-3	1.036-3	8.549-4	6.916-4
69	70	2.144-2	2.091-2	2.023-2	1.932-2	1.816-2	1.748-2	1.675-2	1.516-2	1.356-2	1.211-2	1.074-2
69	71	4.177-2	4.118-2	4.042-2	3.937-2	3.796-2	3.711-2	3.618-2	3.420-2	3.229-2	3.066-2	2.880-2
69	72	5.796-2	5.695-2	5.558-2	5.368-2	5.119-2	4.971-2	4.810-2	4.462-2	4.107-2	3.771-2	3.412-2
69	73	1.599-2	1.547-2	1.484-2	1.407-2	1.310-2	1.253-2	1.192-2	1.061-2	9.286-3	8.096-3	7.029-3
69	74	4.687-2	4.605-2	4.512-2	4.395-2	4.241-2	4.149-2	4.049-2	3.833-2	3.616-2	3.410-2	3.163-2
69	75	2.624-2	2.527-2	2.411-2	2.268-2	2.090-2	1.987-2	1.877-2	1.639-2	1.392-2	1.156-2	9.401-3
69	76	1.591-2	1.504-2	1.410-2	1.305-2	1.184-2	1.117-2	1.046-2	8.938-3	7.367-3	5.846-3	4.463-3
69	77	5.345-2	5.287-2	5.242-2	5.197-2	5.138-2	5.103-2	5.064-2	4.981-2	4.902-2	4.812-2	4.600-2
69	78	1.590-2	1.537-2	1.467-2	1.376-2	1.261-2	1.195-2	1.123-2	9.667-3	8.039-3	6.467-3	5.037-3
69	79	1.473-2	1.427-2	1.367-2	1.289-2	1.190-2	1.132-2	1.070-2	9.340-3	7.904-3	6.491-3	5.164-3
69	80	1.129-2	1.103-2	1.069-2	1.023-2	9.639-3	9.289-3	8.905-3	8.061-3	7.165-3	6.276-3	5.378-3
69	81	2.675-2	2.666-2	2.666-2	2.673-2	2.685-2	2.693-2	2.702-2	2.728-2	2.764-2	2.795-2	2.738-2
69	82	1.065-1	1.074-1	1.088-1	1.104-1	1.120-1	1.128-1	1.137-1	1.156-1	1.179-1	1.199-1	1.182-1
69	83	7.638-4	7.313-4	6.931-4	6.479-4	5.942-4	5.639-4	5.315-4	4.613-4	3.870-4	3.128-4	2.431-4
69	84	2.010-2	1.953-2	1.874-2	1.767-2	1.628-2	1.546-2	1.456-2	1.259-2	1.048-2	8.406-3	6.481-3
69	85	1.387-2	1.364-2	1.332-2	1.285-2	1.222-2	1.184-2	1.142-2	1.048-2	9.472-3	8.449-3	7.364-3
69	86	2.807-3	2.734-3	2.632-3	2.490-3	2.303-3	2.192-3	2.070-3	1.797-3	1.502-3	1.206-3	9.282-4
69	87	8.916-3	8.522-3	8.075-3	7.560-3	6.971-3	6.653-3	6.325-3	5.669-3	5.064-3	4.544-3	4.042-3
69	88	4.446-3	4.334-3	4.189-3	3.999-3	3.757-3	3.617-3	3.464-3	3.129-3	2.774-3	2.417-3	2.055-3
69	89	3.834-3	3.713-3	3.562-3	3.370-3	3.130-3	2.993-3	2.844-3	2.520-3	2.182-3	1.849-3	1.527-3
69	90	3.277-3	3.151-3	2.996-3	2.804-3	2.564-3	2.426-3	2.277-3	1.953-3	1.612-3	1.278-3	9.733-4
69	91	1.324-2	1.303-2	1.272-2	1.228-2	1.170-2	1.136-2	1.100-2	1.021-2	9.393-3	8.578-3	7.662-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
69	92	1.151-3	1.107-3	1.058-3	1.002-3	9.361-4	9.009-4	8.651-4	7.953-4	7.348-4	6.856-4	6.328-4
69	93	2.907-4	2.815-4	2.688-4	2.515-4	2.294-4	2.166-4	2.029-4	1.737-4	1.438-4	1.151-4	8.909-5
69	94	1.858-3	1.838-3	1.809-3	1.766-3	1.711-3	1.679-3	1.644-3	1.572-3	1.501-3	1.430-3	1.330-3
69	95	1.232-3	1.200-3	1.155-3	1.097-3	1.024-3	9.817-4	9.370-4	8.421-4	7.457-4	6.521-4	5.580-4
69	96	7.761-3	7.696-3	7.599-3	7.457-3	7.257-3	7.132-3	6.989-3	6.649-3	6.246-3	5.772-3	5.168-3
69	97	2.025-4	1.966-4	1.880-4	1.764-4	1.615-4	1.529-4	1.436-4	1.235-4	1.025-4	8.203-5	6.318-5
70	71	4.945-2	4.958-2	4.969-2	4.971-2	4.963-2	4.958-2	4.956-2	4.983-2	5.113-2	5.394-2	5.643-2
70	72	3.387-2	3.363-2	3.334-2	3.296-2	3.249-2	3.223-2	3.198-2	3.155-2	3.147-2	3.187-2	3.183-2
70	73	8.085-2	8.139-2	8.207-2	8.282-2	8.360-2	8.403-2	8.452-2	8.589-2	8.832-2	9.186-2	9.350-2
70	74	8.500-3	8.186-3	7.897-3	7.608-3	7.296-3	7.128-3	6.952-3	6.589-3	6.239-3	5.916-3	5.514-3
70	75	1.219-2	1.182-2	1.147-2	1.114-2	1.082-2	1.065-2	1.049-2	1.019-2	9.917-3	9.635-3	9.121-3
70	76	1.958-3	1.717-3	1.509-3	1.325-3	1.157-3	1.077-3	9.976-4	8.452-4	7.032-4	5.763-4	4.639-4
70	77	9.432-3	9.099-3	8.689-3	8.176-3	7.536-3	7.166-3	6.764-3	5.884-3	4.947-3	4.017-3	3.148-3
70	78	1.848-2	1.803-2	1.742-2	1.659-2	1.551-2	1.486-2	1.416-2	1.257-2	1.084-2	9.072-3	7.347-3
70	79	2.295-2	2.274-2	2.247-2	2.208-2	2.156-2	2.124-2	2.089-2	2.012-2	1.931-2	1.843-2	1.716-2
70	80	1.654-2	1.647-2	1.636-2	1.621-2	1.600-2	1.587-2	1.574-2	1.544-2	1.514-2	1.477-2	1.400-2
70	81	5.986-3	5.883-3	5.775-3	5.662-3	5.540-3	5.476-3	5.412-3	5.284-3	5.165-3	5.036-3	4.781-3
70	82	8.201-3	8.088-3	7.950-3	7.758-3	7.496-3	7.340-3	7.170-3	6.806-3	6.444-3	6.102-3	5.670-3
70	83	1.287-3	1.230-3	1.158-3	1.070-3	9.650-4	9.074-4	8.471-4	7.218-4	5.962-4	4.768-4	3.682-4
70	84	2.165-3	2.110-3	2.042-3	1.958-3	1.851-3	1.789-3	1.721-3	1.571-3	1.411-3	1.247-3	1.073-3
70	85	2.549-3	2.498-3	2.432-3	2.342-3	2.220-3	2.147-3	2.066-3	1.884-3	1.685-3	1.476-3	1.257-3
70	86	9.449-4	9.259-4	9.006-4	8.659-4	8.197-4	7.918-4	7.610-4	6.913-4	6.137-4	5.312-4	4.447-4
70	87	3.574-3	3.383-3	3.171-3	2.925-3	2.636-3	2.475-3	2.305-3	1.946-3	1.582-3	1.242-3	9.427-4
70	88	2.663-3	2.531-3	2.386-3	2.220-3	2.026-3	1.918-3	1.805-3	1.566-3	1.326-3	1.099-3	8.901-4
70	89	3.345-3	3.179-3	2.991-3	2.771-3	2.513-3	2.370-3	2.219-3	1.905-3	1.592-3	1.300-3	1.037-3
70	90	3.647-3	3.432-3	3.193-3	2.919-3	2.601-3	2.427-3	2.243-3	1.860-3	1.479-3	1.128-3	8.265-4
70	91	1.172-2	1.147-2	1.110-2	1.058-2	9.883-3	9.458-3	8.985-3	7.906-3	6.703-3	5.460-3	4.263-3
70	92	4.091-3	3.962-3	3.793-3	3.567-3	3.276-3	3.105-3	2.919-3	2.511-3	2.077-3	1.651-3	1.260-3
70	93	1.215-3	1.199-3	1.172-3	1.133-3	1.080-3	1.047-3	1.010-3	9.246-4	8.281-4	7.238-4	6.118-4
70	94	3.627-3	3.577-3	3.499-3	3.386-3	3.231-3	3.137-3	3.033-3	2.799-3	2.540-3	2.264-3	1.960-3
70	95	5.865-3	5.763-3	5.610-3	5.389-3	5.089-3	4.908-3	4.707-3	4.255-3	3.758-3	3.240-3	2.707-3
70	96	7.096-3	6.905-3	6.638-3	6.272-3	5.792-3	5.508-3	5.197-3	4.507-3	3.767-3	3.031-3	2.346-3
70	97	6.683-4	6.451-4	6.117-4	5.669-4	5.109-4	4.794-4	4.460-4	3.764-4	3.068-4	2.417-4	1.837-4
71	72	2.964-1	2.972-1	2.972-1	2.955-1	2.914-1	2.884-1	2.848-1	2.763-1	2.668-1	2.558-1	2.387-1
71	73	6.438-2	6.342-2	6.204-2	6.002-2	5.720-2	5.554-2	5.377-2	5.032-2	4.810-2	4.843-2	5.010-2
71	74	3.118-2	3.056-2	2.983-2	2.888-2	2.763-2	2.688-2	2.607-2	2.434-2	2.272-2	2.151-2	2.038-2
71	75	1.014-2	9.872-3	9.683-3	9.517-3	9.333-3	9.234-3	9.138-3	9.007-3	9.099-3	9.550-3	1.004-2
71	76	2.452-2	2.350-2	2.229-2	2.081-2	1.899-2	1.795-2	1.684-2	1.442-2	1.191-2	9.469-3	7.257-3
71	77	1.824-2	1.769-2	1.705-2	1.627-2	1.533-2	1.479-2	1.420-2	1.291-2	1.154-2	1.012-2	8.632-3
71	78	3.408-2	3.336-2	3.231-2	3.084-2	2.887-2	2.770-2	2.642-2	2.362-2	2.073-2	1.797-2	1.533-2
71	79	2.024-2	1.981-2	1.922-2	1.839-2	1.728-2	1.662-2	1.590-2	1.431-2	1.266-2	1.107-2	9.531-3
71	80	4.022-3	3.862-3	3.673-3	3.447-3	3.176-3	3.023-3	2.860-3	2.513-3	2.154-3	1.803-3	1.468-3
71	81	2.014-2	1.974-2	1.921-2	1.851-2	1.764-2	1.715-2	1.661-2	1.548-2	1.432-2	1.317-2	1.185-2
71	82	2.409-2	2.416-2	2.428-2	2.439-2	2.444-2	2.443-2	2.442-2	2.439-2	2.444-2	2.448-2	2.387-2
71	83	8.887-4	8.643-4	8.332-4	7.938-4	7.438-4	7.140-4	6.809-4	6.048-4	5.182-4	4.265-4	3.362-4
71	84	6.744-3	6.516-3	6.210-3	5.807-3	5.295-3	4.998-3	4.678-3	3.985-3	3.262-3	2.565-3	1.939-3
71	85	5.125-3	4.977-3	4.785-3	4.540-3	4.234-3	4.060-3	3.874-3	3.482-3	3.088-3	2.713-3	2.339-3
71	86	2.087-3	2.021-3	1.933-3	1.815-3	1.663-3	1.575-3	1.479-3	1.271-3	1.052-3	8.374-4	6.410-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
71	87	9.758-3	9.436-3	9.020-3	8.477-3	7.787-3	7.390-3	6.962-3	6.046-3	5.115-3	4.247-3	3.467-3
71	88	1.490-2	1.486-2	1.480-2	1.469-2	1.453-2	1.444-2	1.433-2	1.409-2	1.382-2	1.346-2	1.271-2
71	89	6.334-3	6.244-3	6.162-3	6.084-3	6.004-3	5.965-3	5.925-3	5.850-3	5.784-3	5.694-3	5.439-3
71	90	1.327-3	1.226-3	1.129-3	1.030-3	9.240-4	8.675-4	8.087-4	6.857-4	5.608-4	4.414-4	3.342-4
71	91	9.168-3	8.924-3	8.563-3	8.060-3	7.407-3	7.027-3	6.616-3	5.730-3	4.812-3	3.928-3	3.117-3
71	92	1.917-3	1.858-3	1.784-3	1.688-3	1.565-3	1.493-3	1.414-3	1.240-3	1.054-3	8.674-4	6.904-4
71	93	2.238-4	2.195-4	2.134-4	2.050-4	1.938-4	1.870-4	1.796-4	1.627-4	1.439-4	1.240-4	1.033-4
71	94	1.029-2	1.034-2	1.040-2	1.046-2	1.055-2	1.060-2	1.066-2	1.080-2	1.099-2	1.113-2	1.089-2
71	95	3.952-3	3.940-3	3.922-3	3.897-3	3.866-3	3.850-3	3.833-3	3.804-3	3.784-3	3.753-3	3.611-3
71	96	3.309-3	3.235-3	3.135-3	3.002-3	2.829-3	2.726-3	2.613-3	2.357-3	2.075-3	1.781-3	1.480-3
71	97	9.415-4	9.217-4	8.925-4	8.513-4	7.954-4	7.616-4	7.239-4	6.378-4	5.414-4	4.413-4	3.446-4
72	73	3.379-1	3.368-1	3.346-1	3.305-1	3.239-1	3.199-1	3.156-1	3.080-1	3.060-1	3.142-1	3.231-1
72	74	5.530-2	5.453-2	5.370-2	5.257-2	5.097-2	5.001-2	4.896-2	4.687-2	4.536-2	4.502-2	4.477-2
72	75	4.313-2	4.186-2	4.032-2	3.839-2	3.594-2	3.451-2	3.295-2	2.947-2	2.571-2	2.185-2	1.800-2
72	76	4.831-2	4.722-2	4.615-2	4.480-2	4.297-2	4.188-2	4.069-2	3.829-2	3.644-2	3.580-2	3.556-2
72	77	1.599-2	1.510-2	1.417-2	1.317-2	1.204-2	1.142-2	1.076-2	9.378-3	7.972-3	6.644-3	5.434-3
72	78	4.777-2	4.677-2	4.534-2	4.334-2	4.070-2	3.914-2	3.744-2	3.376-2	2.998-2	2.637-2	2.282-2
72	79	2.386-2	2.317-2	2.228-2	2.110-2	1.960-2	1.872-2	1.778-2	1.573-2	1.361-2	1.157-2	9.634-3
72	80	1.101-2	1.072-2	1.033-2	9.805-3	9.125-3	8.725-3	8.288-3	7.338-3	6.350-3	5.406-3	4.523-3
72	81	3.555-2	3.477-2	3.371-2	3.223-2	3.026-2	2.909-2	2.781-2	2.505-2	2.221-2	1.953-2	1.694-2
72	82	6.408-3	6.183-3	5.915-3	5.594-3	5.212-3	4.999-3	4.773-3	4.295-3	3.808-3	3.335-3	2.860-3
72	83	1.020-2	1.022-2	1.025-2	1.029-2	1.033-2	1.034-2	1.036-2	1.040-2	1.048-2	1.052-2	1.026-2
72	84	8.018-3	7.747-3	7.396-3	6.942-3	6.376-3	6.053-3	5.708-3	4.978-3	4.243-3	3.553-3	2.916-3
72	85	5.996-3	5.879-3	5.720-3	5.496-3	5.197-3	5.020-3	4.828-3	4.415-3	4.002-3	3.624-3	3.243-3
72	86	4.151-3	4.112-3	4.045-3	3.929-3	3.757-3	3.650-3	3.531-3	3.270-3	2.999-3	2.739-3	2.463-3
72	87	1.597-2	1.549-2	1.486-2	1.401-2	1.291-2	1.227-2	1.158-2	1.009-2	8.542-3	7.072-3	5.732-3
72	88	1.285-2	1.276-2	1.266-2	1.254-2	1.238-2	1.229-2	1.219-2	1.198-2	1.177-2	1.150-2	1.090-2
72	89	2.326-2	2.319-2	2.309-2	2.293-2	2.270-2	2.256-2	2.239-2	2.203-2	2.162-2	2.107-2	1.992-2
72	90	9.076-3	8.915-3	8.778-3	8.653-3	8.533-3	8.475-3	8.417-3	8.310-3	8.222-3	8.107-3	7.762-3
72	91	1.270-2	1.242-2	1.198-2	1.133-2	1.046-2	9.946-3	9.392-3	8.197-3	6.967-3	5.802-3	4.738-3
72	92	5.185-3	5.108-3	5.000-3	4.849-3	4.646-3	4.524-3	4.390-3	4.091-3	3.768-3	3.435-3	3.059-3
72	93	9.422-3	9.479-3	9.530-3	9.579-3	9.630-3	9.658-3	9.690-3	9.771-3	9.878-3	9.942-3	9.681-3
72	94	3.277-3	3.274-3	3.268-3	3.257-3	3.244-3	3.237-3	3.230-3	3.218-3	3.212-3	3.191-3	3.072-3
72	95	1.535-2	1.541-2	1.547-2	1.554-2	1.562-2	1.568-2	1.574-2	1.590-2	1.612-2	1.629-2	1.592-2
72	96	5.056-3	4.950-3	4.812-3	4.631-3	4.401-3	4.267-3	4.120-3	3.795-3	3.444-3	3.080-3	2.685-3
72	97	1.683-3	1.656-3	1.615-3	1.557-3	1.480-3	1.433-3	1.380-3	1.260-3	1.125-3	9.830-4	8.341-4
73	74	2.474-2	2.360-2	2.241-2	2.109-2	1.955-2	1.869-2	1.777-2	1.584-2	1.402-2	1.261-2	1.153-2
73	75	9.616-2	9.428-2	9.221-2	8.962-2	8.627-2	8.429-2	8.212-2	7.743-2	7.273-2	6.842-2	6.346-2
73	76	1.199-1	1.172-1	1.141-1	1.103-1	1.055-1	1.027-1	9.974-2	9.323-2	8.645-2	7.965-2	7.186-2
73	77	4.056-2	3.942-2	3.803-2	3.631-2	3.421-2	3.301-2	3.173-2	2.901-2	2.622-2	2.346-2	2.055-2
73	78	7.861-2	7.750-2	7.599-2	7.377-2	7.060-2	6.866-2	6.654-2	6.195-2	5.749-2	5.371-2	4.984-2
73	79	4.202-2	4.114-2	3.994-2	3.827-2	3.606-2	3.475-2	3.332-2	3.023-2	2.711-2	2.424-2	2.144-2
73	80	2.362-2	2.314-2	2.247-2	2.155-2	2.034-2	1.964-2	1.887-2	1.722-2	1.551-2	1.386-2	1.215-2
73	81	5.763-2	5.607-2	5.385-2	5.084-2	4.693-2	4.465-2	4.217-2	3.676-2	3.107-2	2.548-2	2.026-2
73	82	6.667-3	6.359-3	6.023-3	5.634-3	5.169-3	4.907-3	4.626-3	4.027-3	3.421-3	2.866-3	2.379-3
73	83	2.231-3	2.168-3	2.086-3	1.978-3	1.839-3	1.757-3	1.666-3	1.462-3	1.235-3	1.002-3	7.791-4
73	84	1.940-2	1.949-2	1.954-2	1.945-2	1.918-2	1.898-2	1.874-2	1.825-2	1.781-2	1.748-2	1.685-2
73	85	1.254-2	1.231-2	1.197-2	1.147-2	1.078-2	1.038-2	9.931-3	8.967-3	7.983-3	7.055-3	6.146-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
73	86	2.911-3	2.810-3	2.673-3	2.494-3	2.267-3	2.136-3	1.995-3	1.691-3	1.377-3	1.075-3	8.068-4
73	87	2.483-2	2.397-2	2.287-2	2.146-2	1.967-2	1.863-2	1.751-2	1.508-2	1.254-2	1.010-2	7.866-3
73	88	4.899-3	4.752-3	4.612-3	4.464-3	4.295-3	4.202-3	4.104-3	3.892-3	3.670-3	3.430-3	3.123-3
73	89	2.367-2	2.342-2	2.313-2	2.278-2	2.232-2	2.204-2	2.175-2	2.109-2	2.038-2	1.953-2	1.817-2
73	90	5.891-2	5.888-2	5.886-2	5.879-2	5.865-2	5.856-2	5.846-2	5.826-2	5.813-2	5.773-2	5.557-2
73	91	2.244-2	2.218-2	2.165-2	2.078-2	1.955-2	1.881-2	1.799-2	1.623-2	1.442-2	1.271-2	1.106-2
73	92	4.488-3	4.349-3	4.176-3	3.953-3	3.665-3	3.495-3	3.308-3	2.893-3	2.441-3	1.984-3	1.550-3
73	93	3.067-4	2.959-4	2.826-4	2.657-4	2.444-4	2.321-4	2.188-4	1.900-4	1.596-4	1.297-4	1.018-4
73	94	1.718-2	1.722-2	1.721-2	1.715-2	1.705-2	1.699-2	1.692-2	1.678-2	1.663-2	1.639-2	1.566-2
73	95	2.823-2	2.828-2	2.831-2	2.833-2	2.837-2	2.840-2	2.845-2	2.860-2	2.882-2	2.893-2	2.809-2
73	96	5.279-3	5.147-3	4.968-3	4.729-3	4.419-3	4.236-3	4.036-3	3.593-3	3.116-3	2.636-3	2.166-3
73	97	1.846-3	1.808-3	1.751-3	1.671-3	1.564-3	1.499-3	1.427-3	1.261-3	1.074-3	8.776-4	6.866-4
74	75	1.719-1	1.659-1	1.586-1	1.494-1	1.379-1	1.311-1	1.239-1	1.078-1	9.063-2	7.345-2	5.729-2
74	76	1.082-2	9.404-3	8.352-3	7.561-3	6.940-3	6.680-3	6.457-3	6.175-3	6.305-3	7.092-3	8.213-3
74	77	2.476-2	2.330-2	2.190-2	2.053-2	1.909-2	1.832-2	1.753-2	1.589-2	1.422-2	1.258-2	1.089-2
74	78	6.239-2	6.189-2	6.126-2	6.026-2	5.875-2	5.780-2	5.675-2	5.449-2	5.232-2	5.040-2	4.772-2
74	79	1.870-1	1.871-1	1.875-1	1.875-1	1.868-1	1.862-1	1.856-1	1.843-1	1.838-1	1.834-1	1.784-1
74	80	1.450-1	1.454-1	1.458-1	1.461-1	1.459-1	1.457-1	1.455-1	1.452-1	1.453-1	1.455-1	1.418-1
74	81	4.634-3	4.271-3	3.917-3	3.570-3	3.222-3	3.045-3	2.865-3	2.500-3	2.139-3	1.796-3	1.472-3
74	82	3.504-2	3.462-2	3.412-2	3.341-2	3.243-2	3.183-2	3.118-2	2.974-2	2.827-2	2.680-2	2.485-2
74	83	2.536-2	2.543-2	2.555-2	2.566-2	2.574-2	2.577-2	2.580-2	2.588-2	2.604-2	2.614-2	2.547-2
74	84	3.488-2	3.415-2	3.311-2	3.165-2	2.970-2	2.855-2	2.730-2	2.459-2	2.179-2	1.908-2	1.641-2
74	85	2.697-2	2.699-2	2.689-2	2.661-2	2.608-2	2.573-2	2.534-2	2.444-2	2.349-2	2.247-2	2.097-2
74	86	1.675-2	1.684-2	1.689-2	1.686-2	1.673-2	1.663-2	1.651-2	1.623-2	1.594-2	1.558-2	1.481-2
74	87	4.043-2	3.917-2	3.750-2	3.529-2	3.245-2	3.078-2	2.897-2	2.497-2	2.071-2	1.650-2	1.261-2
74	88	3.546-2	3.489-2	3.413-2	3.306-2	3.160-2	3.071-2	2.971-2	2.741-2	2.475-2	2.182-2	1.860-2
74	89	1.239-2	1.195-2	1.144-2	1.081-2	1.005-2	9.625-3	9.164-3	8.172-3	7.143-3	6.136-3	5.149-3
74	90	2.894-3	2.756-3	2.608-3	2.441-3	2.248-3	2.142-3	2.029-3	1.794-3	1.557-3	1.334-3	1.124-3
74	91	1.929-2	1.874-2	1.793-2	1.681-2	1.535-2	1.449-2	1.356-2	1.155-2	9.453-3	7.441-3	5.637-3
74	92	1.053-2	1.036-2	1.012-2	9.770-3	9.314-3	9.047-3	8.758-3	8.135-3	7.496-3	6.865-3	6.156-3
74	93	2.693-3	2.651-3	2.595-3	2.518-3	2.415-3	2.352-3	2.282-3	2.122-3	1.943-3	1.752-3	1.540-3
74	94	5.196-3	5.074-3	4.898-3	4.654-3	4.331-3	4.140-3	3.931-3	3.468-3	2.968-3	2.465-3	1.977-3
74	95	3.063-3	2.986-3	2.874-3	2.720-3	2.517-3	2.396-3	2.264-3	1.973-3	1.662-3	1.352-3	1.061-3
74	96	6.181-3	6.098-3	5.979-3	5.814-3	5.598-3	5.471-3	5.333-3	5.033-3	4.716-3	4.383-3	3.973-3
74	97	5.909-4	5.861-4	5.788-4	5.671-4	5.501-4	5.397-4	5.283-4	5.031-4	4.771-4	4.511-4	4.178-4
75	76	2.459-1	2.383-1	2.294-1	2.185-1	2.051-1	1.973-1	1.889-1	1.701-1	1.499-1	1.293-1	1.085-1
75	77	4.189-2	4.027-2	3.834-2	3.598-2	3.308-2	3.142-2	2.964-2	2.577-2	2.175-2	1.789-2	1.438-2
75	78	2.537-1	2.539-1	2.540-1	2.534-1	2.517-1	2.504-1	2.490-1	2.461-1	2.439-1	2.421-1	2.344-1
75	79	1.902-1	1.910-1	1.922-1	1.929-1	1.928-1	1.925-1	1.920-1	1.913-1	1.918-1	1.937-1	1.914-1
75	80	1.056-1	1.051-1	1.044-1	1.033-1	1.019-1	1.011-1	1.002-1	9.857-2	9.718-2	9.565-2	9.159-2
75	81	3.560-2	3.486-2	3.390-2	3.261-2	3.093-2	2.994-2	2.887-2	2.653-2	2.410-2	2.173-2	1.922-2
75	82	2.113-2	2.016-2	1.906-2	1.775-2	1.618-2	1.529-2	1.433-2	1.227-2	1.012-2	8.025-3	6.119-3
75	83	1.471-3	1.404-3	1.326-3	1.232-3	1.119-3	1.056-3	9.878-4	8.413-4	6.886-4	5.408-4	4.077-4
75	84	6.277-2	6.160-2	5.992-2	5.755-2	5.441-2	5.256-2	5.054-2	4.616-2	4.158-2	3.703-2	3.227-2
75	85	6.602-2	6.605-2	6.588-2	6.537-2	6.449-2	6.393-2	6.330-2	6.193-2	6.054-2	5.892-2	5.578-2
75	86	4.494-3	4.365-3	4.186-3	3.944-3	3.629-3	3.444-3	3.242-3	2.798-3	2.324-3	1.856-3	1.423-3
75	87	6.374-2	6.174-2	5.908-2	5.556-2	5.105-2	4.840-2	4.553-2	3.922-2	3.253-2	2.595-2	1.990-2
75	88	1.297-2	1.256-2	1.207-2	1.145-2	1.069-2	1.025-2	9.774-3	8.739-3	7.641-3	6.536-3	5.435-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
75	89	3.616-2	3.563-2	3.493-2	3.396-2	3.266-2	3.186-2	3.096-2	2.885-2	2.638-2	2.358-2	2.037-2
75	90	1.648-2	1.597-2	1.535-2	1.460-2	1.368-2	1.316-2	1.258-2	1.134-2	1.001-2	8.651-3	7.270-3
75	91	3.352-2	3.258-2	3.121-2	2.931-2	2.682-2	2.536-2	2.379-2	2.035-2	1.678-2	1.333-2	1.022-2
75	92	7.072-3	6.858-3	6.559-3	6.150-3	5.619-3	5.308-3	4.970-3	4.235-3	3.465-3	2.720-3	2.050-3
75	93	2.199-3	2.147-3	2.070-3	1.961-3	1.817-3	1.731-3	1.637-3	1.427-3	1.199-3	9.695-4	7.532-4
75	94	5.789-3	5.685-3	5.577-3	5.458-3	5.321-3	5.242-3	5.156-3	4.967-3	4.762-3	4.531-3	4.192-3
75	95	9.233-3	9.069-3	8.821-3	8.473-3	8.016-3	7.747-3	7.455-3	6.818-3	6.144-3	5.459-3	4.733-3
75	96	5.041-3	4.905-3	4.708-3	4.436-3	4.080-3	3.870-3	3.640-3	3.137-3	2.602-3	2.074-3	1.589-3
75	97	4.257-4	4.146-4	3.981-4	3.753-4	3.452-4	3.274-4	3.080-4	2.649-4	2.190-4	1.736-4	1.320-4
76	77	1.335-2	1.253-2	1.173-2	1.094-2	1.014-2	9.726-3	9.307-3	8.456-3	7.616-3	6.806-3	5.961-3
76	78	6.886-1	6.937-1	6.999-1	7.045-1	7.057-1	7.052-1	7.044-1	7.036-1	7.087-1	7.210-1	7.198-1
76	79	1.522-1	1.518-1	1.512-1	1.502-1	1.485-1	1.475-1	1.464-1	1.441-1	1.422-1	1.405-1	1.355-1
76	80	1.229-2	1.188-2	1.133-2	1.064-2	9.773-3	9.278-3	8.746-3	7.608-3	6.441-3	5.327-3	4.299-3
76	81	2.117-2	2.039-2	1.943-2	1.829-2	1.691-2	1.614-2	1.532-2	1.357-2	1.179-2	1.011-2	8.525-3
76	82	3.366-2	3.181-2	2.991-2	2.779-2	2.531-2	2.393-2	2.244-2	1.925-2	1.591-2	1.265-2	9.670-3
76	83	1.732-3	1.653-3	1.558-3	1.443-3	1.305-3	1.228-3	1.146-3	9.741-4	8.000-4	6.370-4	4.926-4
76	84	1.536-1	1.536-1	1.529-1	1.513-1	1.486-1	1.468-1	1.448-1	1.404-1	1.357-1	1.306-1	1.225-1
76	85	3.593-2	3.494-2	3.356-2	3.167-2	2.924-2	2.782-2	2.629-2	2.298-2	1.956-2	1.628-2	1.322-2
76	86	1.088-2	1.060-2	1.019-2	9.641-3	8.928-3	8.516-3	8.072-3	7.126-3	6.168-3	5.266-3	4.417-3
76	87	9.694-2	9.391-2	8.991-2	8.462-2	7.783-2	7.386-2	6.953-2	6.005-2	5.000-2	4.012-2	3.102-2
76	88	3.467-3	3.324-3	3.159-3	2.962-3	2.723-3	2.588-3	2.445-3	2.140-3	1.832-3	1.542-3	1.274-3
76	89	1.740-2	1.689-2	1.626-2	1.546-2	1.446-2	1.388-2	1.325-2	1.188-2	1.041-2	8.920-3	7.431-3
76	90	6.544-2	6.422-2	6.263-2	6.053-2	5.777-2	5.611-2	5.427-2	5.005-2	4.521-2	3.989-2	3.402-2
76	91	5.274-2	5.129-2	4.915-2	4.618-2	4.228-2	3.999-2	3.750-2	3.208-2	2.641-2	2.093-2	1.598-2
76	92	7.803-3	7.554-3	7.212-3	6.750-3	6.153-3	5.806-3	5.430-3	4.616-3	3.768-3	2.953-3	2.223-3
76	93	1.674-4	1.598-4	1.510-4	1.401-4	1.269-4	1.193-4	1.112-4	9.405-5	7.663-5	6.031-5	4.597-5
76	94	3.361-3	3.274-3	3.150-3	2.977-3	2.750-3	2.615-3	2.467-3	2.142-3	1.794-3	1.448-3	1.124-3
76	95	1.464-2	1.429-2	1.381-2	1.316-2	1.231-2	1.181-2	1.126-2	1.005-2	8.744-3	7.406-3	6.073-3
76	96	7.907-3	7.707-3	7.413-3	7.004-3	6.464-3	6.145-3	5.797-3	5.029-3	4.211-3	3.406-3	2.661-3
76	97	2.872-4	2.786-4	2.660-4	2.485-4	2.256-4	2.121-4	1.975-4	1.657-4	1.329-4	1.019-4	7.491-5
77	78	1.504-2	1.436-2	1.370-2	1.299-2	1.220-2	1.177-2	1.131-2	1.036-2	9.394-3	8.457-3	7.467-3
77	79	2.061-2	1.972-2	1.870-2	1.746-2	1.595-2	1.508-2	1.415-2	1.216-2	1.013-2	8.223-3	6.540-3
77	80	3.781-2	3.728-2	3.654-2	3.550-2	3.412-2	3.330-2	3.241-2	3.051-2	2.860-2	2.675-2	2.455-2
77	81	3.405-1	3.413-1	3.431-1	3.447-1	3.455-1	3.457-1	3.459-1	3.469-1	3.500-1	3.546-1	3.503-1
77	82	3.640-2	3.630-2	3.622-2	3.606-2	3.580-2	3.564-2	3.545-2	3.509-2	3.481-2	3.450-2	3.330-2
77	83	2.115-1	2.125-1	2.140-1	2.156-1	2.170-1	2.177-1	2.184-1	2.203-1	2.231-1	2.257-1	2.216-1
77	84	1.509-2	1.475-2	1.428-2	1.363-2	1.278-2	1.227-2	1.172-2	1.050-2	9.225-3	7.982-3	6.775-3
77	85	1.413-2	1.392-2	1.363-2	1.326-2	1.278-2	1.251-2	1.220-2	1.154-2	1.082-2	1.006-2	9.111-3
77	86	2.332-2	2.337-2	2.340-2	2.340-2	2.338-2	2.336-2	2.335-2	2.336-2	2.340-2	2.334-2	2.253-2
77	87	2.115-2	2.059-2	1.994-2	1.917-2	1.824-2	1.771-2	1.714-2	1.589-2	1.454-2	1.310-2	1.149-2
77	88	9.645-3	9.289-3	8.862-3	8.331-3	7.675-3	7.297-3	6.890-3	6.001-3	5.061-3	4.131-3	3.259-3
77	89	1.604-2	1.550-2	1.482-2	1.396-2	1.287-2	1.225-2	1.157-2	1.009-2	8.524-3	6.985-3	5.539-3
77	90	2.378-2	2.304-2	2.207-2	2.080-2	1.917-2	1.822-2	1.719-2	1.494-2	1.258-2	1.031-2	8.240-3
77	91	1.867-2	1.850-2	1.827-2	1.798-2	1.760-2	1.739-2	1.716-2	1.667-2	1.619-2	1.564-2	1.469-2
77	92	2.416-2	2.397-2	2.365-2	2.318-2	2.257-2	2.222-2	2.187-2	2.115-2	2.051-2	1.990-2	1.887-2
77	93	2.550-3	2.491-3	2.410-3	2.301-3	2.159-3	2.076-3	1.986-3	1.791-3	1.588-3	1.389-3	1.190-3
77	94	6.074-3	5.905-3	5.662-3	5.326-3	4.886-3	4.626-3	4.343-3	3.723-3	3.068-3	2.430-3	1.850-3
77	95	8.401-3	8.176-3	7.848-3	7.392-3	6.792-3	6.439-3	6.056-3	5.221-3	4.348-3	3.504-3	2.731-3

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
77	96	1.897-2	1.882-2	1.862-2	1.833-2	1.795-2	1.770-2	1.743-2	1.677-2	1.597-2	1.500-2	1.364-2
77	97	2.861-3	2.840-3	2.808-3	2.756-3	2.677-3	2.628-3	2.573-3	2.455-3	2.331-3	2.204-3	2.037-3
78	79	3.170-1	3.153-1	3.128-1	3.082-1	3.008-1	2.961-1	2.908-1	2.787-1	2.657-1	2.513-1	2.314-1
78	80	4.754-2	4.720-2	4.677-2	4.616-2	4.536-2	4.489-2	4.441-2	4.348-2	4.278-2	4.233-2	4.108-2
78	81	4.461-2	4.403-2	4.332-2	4.236-2	4.113-2	4.043-2	3.970-2	3.824-2	3.706-2	3.632-2	3.514-2
78	82	1.788-2	1.717-2	1.630-2	1.521-2	1.388-2	1.311-2	1.229-2	1.051-2	8.664-3	6.887-3	5.284-3
78	83	5.361-4	4.851-4	4.347-4	3.859-4	3.378-4	3.136-4	2.892-4	2.404-4	1.929-4	1.489-4	1.106-4
78	84	4.833-2	4.772-2	4.685-2	4.559-2	4.383-2	4.275-2	4.156-2	3.885-2	3.586-2	3.270-2	2.906-2
78	85	1.659-2	1.601-2	1.523-2	1.420-2	1.289-2	1.214-2	1.134-2	9.621-3	7.869-3	6.219-3	4.760-3
78	86	5.289-3	5.106-3	4.854-3	4.517-3	4.087-3	3.838-3	3.572-3	3.000-3	2.416-3	1.863-3	1.380-3
78	87	5.013-2	4.852-2	4.639-2	4.357-2	3.993-2	3.782-2	3.553-2	3.056-2	2.540-2	2.047-2	1.602-2
78	88	2.680-3	2.518-3	2.381-3	2.257-3	2.137-3	2.077-3	2.016-3	1.895-3	1.781-3	1.673-3	1.541-3
78	89	1.814-2	1.782-2	1.753-2	1.725-2	1.695-2	1.679-2	1.664-2	1.634-2	1.609-2	1.581-2	1.512-2
78	90	8.978-2	8.954-2	8.908-2	8.822-2	8.684-2	8.597-2	8.498-2	8.276-2	8.031-2	7.742-2	7.254-2
78	91	4.489-2	4.380-2	4.215-2	3.982-2	3.673-2	3.490-2	3.290-2	2.850-2	2.383-2	1.924-2	1.499-2
78	92	2.244-3	2.151-3	2.042-3	1.905-3	1.736-3	1.640-3	1.536-3	1.311-3	1.079-3	8.550-4	6.525-4
78	93	4.450-4	4.315-4	4.137-4	3.901-4	3.598-4	3.421-4	3.229-4	2.808-4	2.362-4	1.919-4	1.503-4
78	94	1.546-2	1.536-2	1.517-2	1.488-2	1.446-2	1.420-2	1.391-2	1.325-2	1.250-2	1.165-2	1.053-2
78	95	3.293-2	3.256-2	3.197-2	3.110-2	2.988-2	2.913-2	2.830-2	2.640-2	2.424-2	2.185-2	1.908-2
78	96	1.672-3	1.629-3	1.569-3	1.486-3	1.378-3	1.314-3	1.244-3	1.089-3	9.222-4	7.561-4	5.988-4
78	97	1.659-4	1.618-4	1.558-4	1.469-4	1.348-4	1.275-4	1.195-4	1.019-4	8.335-5	6.535-5	4.916-5
79	80	2.896-1	2.877-1	2.850-1	2.807-1	2.743-1	2.705-1	2.661-1	2.566-1	2.462-1	2.346-1	2.175-1
79	81	3.637-2	3.563-2	3.466-2	3.336-2	3.164-2	3.064-2	2.955-2	2.717-2	2.468-2	2.219-2	1.951-2
79	82	1.225-2	1.183-2	1.131-2	1.066-2	9.861-3	9.402-3	8.906-3	7.825-3	6.683-3	5.551-3	4.470-3
79	83	5.682-3	5.643-3	5.605-3	5.559-3	5.501-3	5.469-3	5.435-3	5.371-3	5.317-3	5.251-3	5.044-3
79	84	2.210-2	2.152-2	2.075-2	1.973-2	1.843-2	1.768-2	1.687-2	1.511-2	1.330-2	1.153-2	9.788-3
79	85	2.259-2	2.222-2	2.170-2	2.096-2	1.994-2	1.933-2	1.864-2	1.709-2	1.537-2	1.353-2	1.156-2
79	86	3.221-3	3.117-3	2.985-3	2.815-3	2.600-3	2.477-3	2.346-3	2.071-3	1.807-3	1.583-3	1.391-3
79	87	3.252-2	3.147-2	3.009-2	2.829-2	2.598-2	2.464-2	2.319-2	2.003-2	1.675-2	1.360-2	1.076-2
79	88	2.526-2	2.504-2	2.479-2	2.446-2	2.406-2	2.383-2	2.360-2	2.314-2	2.272-2	2.226-2	2.120-2
79	89	5.367-2	5.359-2	5.337-2	5.290-2	5.215-2	5.167-2	5.114-2	4.995-2	4.865-2	4.705-2	4.420-2
79	90	1.890-2	1.859-2	1.831-2	1.802-2	1.769-2	1.752-2	1.734-2	1.699-2	1.666-2	1.627-2	1.546-2
79	91	2.876-2	2.803-2	2.695-2	2.544-2	2.344-2	2.226-2	2.096-2	1.811-2	1.508-2	1.210-2	9.352-3
79	92	5.093-3	5.050-3	4.998-3	4.932-3	4.853-3	4.810-3	4.767-3	4.686-3	4.624-3	4.560-3	4.374-3
79	93	1.228-2	1.221-2	1.207-2	1.185-2	1.154-2	1.136-2	1.117-2	1.072-2	1.022-2	9.638-3	8.812-3
79	94	5.893-3	5.803-3	5.665-3	5.467-3	5.204-3	5.047-3	4.873-3	4.483-3	4.047-3	3.577-3	3.062-3
79	95	2.403-2	2.384-2	2.349-2	2.293-2	2.216-2	2.170-2	2.118-2	2.003-2	1.873-2	1.728-2	1.547-2
79	96	6.291-3	6.254-3	6.201-3	6.125-3	6.021-3	5.959-3	5.891-3	5.741-3	5.578-3	5.384-3	5.047-3
79	97	3.106-4	3.066-4	3.009-4	2.932-4	2.834-4	2.776-4	2.713-4	2.577-4	2.438-4	2.301-4	2.126-4
80	81	2.576-2	2.509-2	2.414-2	2.283-2	2.113-2	2.012-2	1.903-2	1.663-2	1.407-2	1.156-2	9.188-3
80	82	8.707-3	8.470-3	8.190-3	7.842-3	7.408-3	7.160-3	6.893-3	6.322-3	5.742-3	5.191-3	4.622-3
80	83	6.623-4	6.397-4	6.174-4	5.942-4	5.679-4	5.528-4	5.363-4	4.986-4	4.550-4	4.059-4	3.498-4
80	84	1.135-2	1.095-2	1.043-2	9.739-3	8.866-3	8.364-3	7.824-3	6.669-3	5.491-3	4.385-3	3.403-3
80	85	9.430-3	9.258-3	9.037-3	8.736-3	8.338-3	8.100-3	7.840-3	7.267-3	6.660-3	6.050-3	5.381-3
80	86	7.041-3	6.975-3	6.873-3	6.710-3	6.461-3	6.300-3	6.114-3	5.672-3	5.151-3	4.566-3	3.910-3
80	87	2.002-2	1.938-2	1.855-2	1.749-2	1.615-2	1.538-2	1.455-2	1.275-2	1.090-2	9.114-3	7.447-3
80	88	4.543-2	4.542-2	4.528-2	4.497-2	4.449-2	4.421-2	4.389-2	4.320-2	4.246-2	4.148-2	3.931-2
80	89	1.871-2	1.858-2	1.843-2	1.825-2	1.803-2	1.792-2	1.780-2	1.757-2	1.736-2	1.708-2	1.630-2

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
80	90	6.554-4	5.333-4	4.378-4	3.633-4	3.032-4	2.769-4	2.526-4	2.089-4	1.711-4	1.389-4	1.111-4
80	91	1.702-2	1.658-2	1.593-2	1.502-2	1.381-2	1.309-2	1.231-2	1.058-2	8.746-3	6.940-3	5.287-3
80	92	3.246-4	3.048-4	2.849-4	2.627-4	2.368-4	2.225-4	2.073-4	1.754-4	1.431-4	1.128-4	8.601-5
80	93	1.354-3	1.333-3	1.300-3	1.253-3	1.188-3	1.149-3	1.105-3	1.005-3	8.920-4	7.711-4	6.439-4
80	94	1.897-2	1.884-2	1.858-2	1.819-2	1.766-2	1.735-2	1.700-2	1.620-2	1.529-2	1.422-2	1.283-2
80	95	6.909-3	6.837-3	6.714-3	6.535-3	6.294-3	6.151-3	5.994-3	5.640-3	5.244-3	4.804-3	4.271-3
80	96	3.004-4	2.917-4	2.803-4	2.655-4	2.466-4	2.355-4	2.233-4	1.963-4	1.669-4	1.373-4	1.092-4
80	97	1.055-4	1.038-4	1.014-4	9.773-5	9.241-5	8.908-5	8.530-5	7.656-5	6.667-5	5.622-5	4.569-5
81	82	6.407-2	6.351-2	6.287-2	6.193-2	6.055-2	5.969-2	5.873-2	5.657-2	5.421-2	5.163-2	4.794-2
81	83	4.792-2	4.781-2	4.780-2	4.775-2	4.762-2	4.753-2	4.746-2	4.740-2	4.762-2	4.801-2	4.720-2
81	84	2.294-2	2.227-2	2.137-2	2.019-2	1.868-2	1.780-2	1.684-2	1.473-2	1.252-2	1.038-2	8.406-3
81	85	1.619-2	1.578-2	1.524-2	1.451-2	1.356-2	1.299-2	1.237-2	1.100-2	9.544-3	8.115-3	6.751-3
81	86	4.616-3	4.513-3	4.366-3	4.157-3	3.875-3	3.707-3	3.524-3	3.122-3	2.709-3	2.326-3	1.981-3
81	87	4.335-2	4.215-2	4.085-2	3.934-2	3.752-2	3.647-2	3.531-2	3.267-2	2.966-2	2.632-2	2.259-2
81	88	1.009-2	9.362-3	8.670-3	7.965-3	7.200-3	6.786-3	6.353-3	5.439-3	4.502-3	3.600-3	2.777-3
81	89	1.812-2	1.712-2	1.612-2	1.506-2	1.386-2	1.320-2	1.250-2	1.102-2	9.492-3	8.005-3	6.582-3
81	90	2.057-2	1.940-2	1.817-2	1.680-2	1.524-2	1.438-2	1.346-2	1.152-2	9.540-3	7.654-3	5.962-3
81	91	2.372-2	2.337-2	2.300-2	2.261-2	2.219-2	2.198-2	2.177-2	2.138-2	2.111-2	2.087-2	2.008-2
81	92	8.937-2	8.952-2	8.960-2	8.966-2	8.977-2	8.989-2	9.006-2	9.065-2	9.163-2	9.235-2	9.009-2
81	93	2.391-3	2.329-3	2.246-3	2.135-3	1.993-3	1.911-3	1.822-3	1.628-3	1.421-3	1.213-3	1.006-3
81	94	5.019-3	4.862-3	4.653-3	4.378-3	4.028-3	3.826-3	3.608-3	3.139-3	2.655-3	2.188-3	1.754-3
81	95	8.981-3	8.702-3	8.341-3	7.871-3	7.276-3	6.932-3	6.563-3	5.770-3	4.959-3	4.184-3	3.453-3
81	96	1.432-1	1.425-1	1.416-1	1.402-1	1.384-1	1.373-1	1.362-1	1.338-1	1.312-1	1.278-1	1.208-1
81	97	3.585-3	3.562-3	3.530-3	3.495-3	3.463-3	3.448-3	3.436-3	3.417-3	3.407-3	3.384-3	3.257-3
82	83	7.609-3	7.464-3	7.282-3	7.057-3	6.778-3	6.613-3	6.429-3	6.005-3	5.511-3	4.948-3	4.293-3
82	84	2.312-2	2.231-2	2.131-2	2.002-2	1.838-2	1.744-2	1.642-2	1.424-2	1.201-2	9.944-3	8.101-3
82	85	1.311-2	1.259-2	1.197-2	1.119-2	1.022-2	9.659-3	9.057-3	7.757-3	6.410-3	5.117-3	3.951-3
82	86	5.056-3	4.865-3	4.628-3	4.327-3	3.949-3	3.731-3	3.496-3	2.986-3	2.454-3	1.939-3	1.472-3
82	87	1.990-1	2.009-1	2.023-1	2.030-1	2.030-1	2.028-1	2.026-1	2.025-1	2.032-1	2.040-1	1.992-1
82	88	1.578-3	1.456-3	1.339-3	1.223-3	1.101-3	1.038-3	9.734-4	8.439-4	7.197-4	6.068-4	5.034-4
82	89	2.202-3	2.063-3	1.927-3	1.788-3	1.640-3	1.561-3	1.481-3	1.320-3	1.167-3	1.032-3	9.029-4
82	90	2.761-3	2.583-3	2.394-3	2.185-3	1.948-3	1.819-3	1.683-3	1.400-3	1.119-3	8.575-4	6.321-4
82	91	5.245-2	5.289-2	5.306-2	5.300-2	5.276-2	5.259-2	5.241-2	5.207-2	5.187-2	5.156-2	4.979-2
82	92	7.934-4	7.450-4	7.039-4	6.670-4	6.334-4	6.185-4	6.055-4	5.877-4	5.847-4	5.938-4	5.917-4
82	93	1.131-3	1.098-3	1.051-3	9.871-4	9.034-4	8.544-4	8.014-4	6.862-4	5.660-4	4.495-4	3.436-4
82	94	4.113-3	4.013-3	3.866-3	3.660-3	3.389-3	3.229-3	3.055-3	2.674-3	2.271-3	1.874-3	1.499-3
82	95	5.977-3	5.808-3	5.565-3	5.232-3	4.797-3	4.542-3	4.266-3	3.664-3	3.032-3	2.417-3	1.855-3
82	96	1.085-2	1.065-2	1.038-2	1.001-2	9.532-3	9.256-3	8.955-3	8.290-3	7.562-3	6.781-3	5.904-3
82	97	2.291-3	2.276-3	2.252-3	2.215-3	2.159-3	2.122-3	2.079-3	1.969-3	1.830-3	1.660-3	1.450-3
83	84	2.847-3	2.769-3	2.664-3	2.523-3	2.344-3	2.241-3	2.130-3	1.896-3	1.674-3	1.495-3	1.349-3
83	85	3.994-3	3.877-3	3.716-3	3.497-3	3.213-3	3.047-3	2.866-3	2.469-3	2.048-3	1.632-3	1.249-3
83	86	9.605-4	9.333-4	8.958-4	8.443-4	7.771-4	7.378-4	6.950-4	6.017-4	5.032-4	4.063-4	3.163-4
83	87	1.926-3	1.807-3	1.692-3	1.575-3	1.447-3	1.378-3	1.305-3	1.150-3	9.871-4	8.239-4	6.651-4
83	88	2.142-3	2.052-3	1.957-3	1.850-3	1.723-3	1.652-3	1.577-3	1.417-3	1.259-3	1.118-3	9.895-4
83	89	1.714-3	1.582-3	1.451-3	1.316-3	1.170-3	1.092-3	1.010-3	8.413-4	6.726-4	5.158-4	3.798-4
83	90	1.793-3	1.644-3	1.497-3	1.347-3	1.189-3	1.106-3	1.020-3	8.444-4	6.710-4	5.115-4	3.746-4
83	91	8.722-3	8.575-3	8.373-3	8.098-3	7.740-3	7.527-3	7.292-3	6.758-3	6.148-3	5.470-3	4.705-3
83	92	9.640-4	9.095-4	8.573-4	8.056-4	7.567-4	7.357-4	7.189-4	7.049-4	7.266-4	7.806-4	8.240-4

Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	*j*	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
83	93	4.659-4	4.507-4	4.307-4	4.045-4	3.711-4	3.517-4	3.306-4	2.846-4	2.363-4	1.893-4	1.462-4
83	94	1.382-3	1.337-3	1.277-3	1.197-3	1.094-3	1.034-3	9.693-4	8.288-4	6.822-4	5.407-4	4.128-4
83	95	2.537-3	2.464-3	2.359-3	2.217-3	2.030-3	1.922-3	1.804-3	1.549-3	1.289-3	1.047-3	8.333-4
83	96	2.026-2	2.015-2	2.002-2	1.985-2	1.962-2	1.948-2	1.933-2	1.903-2	1.876-2	1.852-2	1.783-2
83	97	6.218-3	6.164-3	6.085-3	5.968-3	5.799-3	5.689-3	5.561-3	5.250-3	4.871-3	4.425-3	3.884-3
84	85	1.593-1	1.577-1	1.552-1	1.511-1	1.453-1	1.418-1	1.379-1	1.291-1	1.194-1	1.090-1	9.686-2
84	86	4.107-2	4.116-2	4.111-2	4.078-2	4.018-2	3.981-2	3.942-2	3.879-2	3.879-2	3.981-2	4.066-2
84	87	7.745-2	7.513-2	7.212-2	6.819-2	6.315-2	6.021-2	5.700-2	4.997-2	4.250-2	3.516-2	2.826-2
84	88	5.220-3	4.892-3	4.562-3	4.210-3	3.820-3	3.606-3	3.382-3	2.906-3	2.416-3	1.941-3	1.506-3
84	89	8.265-3	7.777-3	7.316-3	6.863-3	6.387-3	6.134-3	5.869-3	5.311-3	4.734-3	4.156-3	3.562-3
84	90	2.182-2	2.096-2	2.005-2	1.909-2	1.802-2	1.742-2	1.679-2	1.540-2	1.389-2	1.229-2	1.056-2
84	91	4.348-2	4.234-2	4.067-2	3.832-2	3.524-2	3.344-2	3.148-2	2.723-2	2.280-2	1.853-2	1.460-2
84	92	4.288-3	4.173-3	4.048-3	3.901-3	3.724-3	3.625-3	3.519-3	3.293-3	3.064-3	2.836-3	2.569-3
84	93	6.723-3	6.682-3	6.603-3	6.480-3	6.312-3	6.212-3	6.102-3	5.858-3	5.590-3	5.284-3	4.852-3
84	94	1.959-2	1.951-2	1.931-2	1.895-2	1.845-2	1.814-2	1.780-2	1.704-2	1.619-2	1.526-2	1.399-2
84	95	3.056-2	3.041-2	3.004-2	2.942-2	2.850-2	2.794-2	2.731-2	2.588-2	2.427-2	2.245-2	2.016-2
84	96	1.139-2	1.109-2	1.067-2	1.009-2	9.341-3	8.905-3	8.430-3	7.388-3	6.280-3	5.176-3	4.127-3
84	97	6.185-4	6.086-4	5.945-4	5.760-4	5.533-4	5.405-4	5.269-4	4.978-4	4.675-4	4.356-4	3.956-4
85	86	5.516-2	5.389-2	5.209-2	4.962-2	4.635-2	4.440-2	4.226-2	3.744-2	3.213-2	2.667-2	2.133-2
85	87	4.978-2	4.833-2	4.645-2	4.401-2	4.090-2	3.908-2	3.710-2	3.276-2	2.817-2	2.367-2	1.940-2
85	88	6.775-3	6.471-3	6.163-3	5.835-3	5.468-3	5.266-3	5.050-3	4.579-3	4.070-3	3.537-3	2.977-3
85	89	1.101-2	1.057-2	1.012-2	9.648-3	9.119-3	8.825-3	8.511-3	7.820-3	7.062-3	6.253-3	5.373-3
85	90	2.526-3	2.227-3	1.974-3	1.753-3	1.547-3	1.446-3	1.345-3	1.141-3	9.402-4	7.491-4	5.757-4
85	91	2.753-2	2.680-2	2.573-2	2.422-2	2.226-2	2.110-2	1.985-2	1.714-2	1.431-2	1.159-2	9.105-3
85	92	1.110-3	1.046-3	9.838-4	9.161-4	8.380-4	7.943-4	7.475-4	6.466-4	5.405-4	4.363-4	3.398-4
85	93	2.564-3	2.544-3	2.509-3	2.454-3	2.375-3	2.325-3	2.266-3	2.126-3	1.957-3	1.760-3	1.527-3
85	94	9.559-3	9.489-3	9.347-3	9.123-3	8.812-3	8.624-3	8.413-3	7.930-3	7.379-3	6.763-3	6.018-3
85	95	2.300-2	2.288-2	2.260-2	2.216-2	2.153-2	2.116-2	2.074-2	1.982-2	1.882-2	1.770-2	1.620-2
85	96	6.511-3	6.341-3	6.098-3	5.764-3	5.324-3	5.065-3	4.782-3	4.158-3	3.491-3	2.827-3	2.205-3
85	97	2.293-4	2.236-4	2.154-4	2.041-4	1.895-4	1.809-4	1.716-4	1.511-4	1.292-4	1.072-4	8.587-5
86	87	1.496-2	1.445-2	1.380-2	1.297-2	1.193-2	1.132-2	1.066-2	9.200-3	7.644-3	6.100-3	4.671-3
86	88	4.058-3	3.909-3	3.757-3	3.597-3	3.419-3	3.321-3	3.215-3	2.982-3	2.725-3	2.444-3	2.126-3
86	89	1.348-3	1.254-3	1.164-3	1.072-3	9.725-4	9.192-4	8.631-4	7.440-4	6.199-4	4.977-4	3.843-4
86	90	8.085-4	7.084-4	6.228-4	5.470-4	4.755-4	4.403-4	4.050-4	3.348-4	2.670-4	2.048-4	1.512-4
86	91	9.747-3	9.516-3	9.155-3	8.637-3	7.949-3	7.543-3	7.101-3	6.138-3	5.136-3	4.181-3	3.319-3
86	92	3.608-4	3.397-4	3.193-4	2.976-4	2.733-4	2.603-4	2.466-4	2.189-4	1.923-4	1.686-4	1.463-4
86	93	1.056-3	1.041-3	1.016-3	9.775-4	9.247-4	8.926-4	8.567-4	7.748-4	6.829-4	5.854-4	4.848-4
86	94	2.899-3	2.873-3	2.826-3	2.755-3	2.653-3	2.588-3	2.515-3	2.342-3	2.138-3	1.907-3	1.642-3
86	95	7.686-3	7.635-3	7.537-3	7.389-3	7.191-3	7.074-3	6.946-3	6.661-3	6.346-3	5.987-3	5.486-3
86	96	2.606-3	2.545-3	2.461-3	2.345-3	2.195-3	2.107-3	2.013-3	1.810-3	1.605-3	1.417-3	1.241-3
86	97	5.101-4	5.056-4	4.989-4	4.885-4	4.730-4	4.630-4	4.514-4	4.240-4	3.919-4	3.554-4	3.121-4
87	88	1.295-2	1.249-2	1.204-2	1.155-2	1.100-2	1.070-2	1.039-2	9.767-3	9.194-3	8.728-3	8.205-3
87	89	9.419-3	8.760-3	8.128-3	7.484-3	6.785-3	6.409-3	6.014-3	5.181-3	4.324-3	3.495-3	2.732-3
87	90	1.084-2	9.959-3	9.150-3	8.362-3	7.546-3	7.117-3	6.671-3	5.743-3	4.798-3	3.883-3	3.039-3
87	91	7.683-1	7.775-1	7.820-1	7.822-1	7.790-1	7.767-1	7.742-1	7.701-1	7.694-1	7.695-1	7.492-1
87	92	7.825-2	7.740-2	7.604-2	7.403-2	7.125-2	6.954-2	6.761-2	6.311-2	5.784-2	5.183-2	4.488-2
87	93	7.896-4	7.626-4	7.260-4	6.768-4	6.133-4	5.764-4	5.366-4	4.511-4	3.636-4	2.810-4	2.086-4
87	94	3.165-3	3.081-3	2.965-3	2.806-3	2.599-3	2.479-3	2.350-3	2.073-3	1.788-3	1.515-3	1.255-3

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Table 3. Effective Collision Strengths for Transitions in Fe XIII. ($a{\pm}b \equiv a{\times}10^{\pm b}$).

Transition		Temperature (log T_e, K)										
i	j	5.00	5.20	5.40	5.60	5.80	5.90	6.00	6.20	6.40	6.60	6.80
87	95	1.930-2	1.921-2	1.902-2	1.871-2	1.830-2	1.807-2	1.782-2	1.731-2	1.685-2	1.639-2	1.555-2
87	96	3.015-2	2.986-2	2.942-2	2.881-2	2.802-2	2.754-2	2.700-2	2.575-2	2.433-2	2.271-2	2.060-2
87	97	2.782-4	2.702-4	2.588-4	2.433-4	2.235-4	2.123-4	2.003-4	1.749-4	1.493-4	1.249-4	1.019-4
88	89	2.840-1	2.748-1	2.635-1	2.493-1	2.315-1	2.213-1	2.102-1	1.859-1	1.603-1	1.348-1	1.101-1
88	90	7.219-2	6.905-2	6.548-2	6.123-2	5.612-2	5.323-2	5.014-2	4.353-2	3.673-2	3.019-2	2.415-2
88	91	1.256-2	1.226-2	1.186-2	1.133-2	1.064-2	1.024-2	9.800-3	8.856-3	7.885-3	6.957-3	6.040-3
88	92	1.484-1	1.441-1	1.381-1	1.297-1	1.187-1	1.123-1	1.053-1	8.998-2	7.384-2	5.817-2	4.401-2
88	93	1.020-1	1.018-1	1.013-1	1.004-1	9.933-2	9.875-2	9.815-2	9.703-2	9.607-2	9.471-2	9.054-2
88	94	1.545-1	1.539-1	1.522-1	1.495-1	1.456-1	1.434-1	1.410-1	1.362-1	1.318-1	1.279-1	1.216-1
88	95	6.724-2	6.576-2	6.357-2	6.051-2	5.653-2	5.422-2	5.173-2	4.643-2	4.108-2	3.604-2	3.113-2
88	96	8.041-2	7.822-2	7.504-2	7.063-2	6.482-2	6.139-2	5.765-2	4.944-2	4.073-2	3.221-2	2.444-2
88	97	8.861-3	8.593-3	8.206-3	7.672-3	6.979-3	6.577-3	6.144-3	5.217-3	4.277-3	3.409-3	2.656-3
89	90	3.375-1	3.258-1	3.117-1	2.943-1	2.728-1	2.604-1	2.470-1	2.179-1	1.873-1	1.570-1	1.280-1
89	91	1.082-2	1.043-2	9.965-3	9.394-3	8.689-3	8.287-3	7.855-3	6.930-3	5.989-3	5.112-3	4.306-3
89	92	2.116-1	2.053-1	1.966-1	1.847-1	1.690-1	1.598-1	1.498-1	1.279-1	1.049-1	8.252-2	6.227-2
89	93	2.491-2	2.418-2	2.313-2	2.170-2	1.983-2	1.873-2	1.754-2	1.495-2	1.224-2	9.620-3	7.258-3
89	94	2.504-1	2.507-1	2.497-1	2.472-1	2.435-1	2.413-1	2.391-1	2.348-1	2.318-1	2.298-1	2.228-1
89	95	1.946-1	1.928-1	1.894-1	1.844-1	1.776-1	1.736-1	1.693-1	1.604-1	1.518-1	1.440-1	1.341-1
89	96	1.250-1	1.216-1	1.167-1	1.099-1	1.009-1	9.561-2	8.982-2	7.712-2	6.368-2	5.052-2	3.852-2
89	97	1.243-2	1.203-2	1.146-2	1.067-2	9.636-3	9.038-3	8.395-3	7.015-3	5.608-3	4.290-3	3.148-3
90	91	1.243-2	1.204-2	1.166-2	1.126-2	1.081-2	1.057-2	1.032-2	9.817-3	9.337-3	8.887-3	8.290-3
90	92	2.774-1	2.690-1	2.574-1	2.416-1	2.211-1	2.091-1	1.960-1	1.673-1	1.372-1	1.080-1	8.152-2
90	93	1.504-2	1.457-2	1.393-2	1.307-2	1.197-2	1.134-2	1.066-2	9.228-3	7.786-3	6.445-3	5.230-3
90	94	6.482-2	6.289-2	6.016-2	5.644-2	5.162-2	4.882-2	4.580-2	3.929-2	3.259-2	2.622-2	2.046-2
90	95	4.889-1	4.873-1	4.832-1	4.764-1	4.671-1	4.617-1	4.560-1	4.444-1	4.338-1	4.233-1	4.029-1
90	96	1.802-1	1.754-1	1.684-1	1.587-1	1.459-1	1.384-1	1.302-1	1.121-1	9.320-2	7.487-2	5.826-2
90	97	1.669-2	1.616-2	1.539-2	1.432-2	1.293-2	1.213-2	1.127-2	9.412-3	7.523-3	5.754-3	4.222-3
91	92	5.745-2	5.666-2	5.546-2	5.378-2	5.159-2	5.030-2	4.889-2	4.576-2	4.238-2	3.885-2	3.477-2
91	93	7.372-3	7.329-3	7.247-3	7.124-3	6.964-3	6.873-3	6.778-3	6.585-3	6.410-3	6.241-3	5.931-3
91	94	9.038-3	8.817-3	8.494-3	8.046-3	7.461-3	7.119-3	6.748-3	5.943-3	5.107-3	4.301-3	3.544-3
91	95	3.742-2	3.716-2	3.661-2	3.575-2	3.459-2	3.393-2	3.325-2	3.191-2	3.095-2	3.059-2	3.005-2
91	96	3.907-2	3.844-2	3.756-2	3.637-2	3.482-2	3.390-2	3.288-2	3.054-2	2.784-2	2.482-2	2.138-2
91	97	7.025-3	6.937-3	6.804-3	6.629-3	6.407-3	6.277-3	6.134-3	5.812-3	5.453-3	5.047-3	4.533-3
92	93	3.167-2	3.079-2	2.953-2	2.779-2	2.549-2	2.413-2	2.265-2	1.940-2	1.596-2	1.260-2	9.543-3
92	94	9.533-2	9.269-2	8.890-2	8.365-2	7.674-2	7.266-2	6.820-2	5.843-2	4.808-2	3.795-2	2.874-2
92	95	1.568-1	1.526-1	1.465-1	1.380-1	1.267-1	1.201-1	1.128-1	9.684-2	7.993-2	6.336-2	4.824-2
92	96	1.805-1	1.789-1	1.766-1	1.736-1	1.701-1	1.684-1	1.667-1	1.641-1	1.635-1	1.647-1	1.626-1
92	97	8.313-3	8.139-3	7.902-3	7.611-3	7.307-3	7.174-3	7.072-3	7.020-3	7.251-3	7.721-3	8.036-3
93	94	5.556-2	5.428-2	5.238-2	4.971-2	4.613-2	4.399-2	4.163-2	3.636-2	3.061-2	2.479-2	1.928-2
93	95	8.396-2	8.373-2	8.321-2	8.244-2	8.148-2	8.096-2	8.044-2	7.943-2	7.858-2	7.742-2	7.399-2
93	96	1.508-2	1.460-2	1.393-2	1.303-2	1.188-2	1.122-2	1.050-2	8.947-3	7.346-3	5.818-3	4.452-3
93	97	4.878-3	4.731-3	4.517-3	4.222-3	3.836-3	3.610-3	3.366-3	2.839-3	2.294-3	1.776-3	1.319-3
94	95	2.833-1	2.819-1	2.787-1	2.735-1	2.663-1	2.621-1	2.575-1	2.478-1	2.378-1	2.270-1	2.110-1
94	96	4.731-2	4.579-2	4.368-2	4.086-2	3.724-2	3.514-2	3.288-2	2.799-2	2.294-2	1.814-2	1.385-2
94	97	1.489-2	1.445-2	1.379-2	1.289-2	1.171-2	1.102-2	1.028-2	8.666-3	7.003-3	5.420-3	4.024-3
95	96	8.127-2	7.862-2	7.498-2	7.011-2	6.385-2	6.022-2	5.630-2	4.782-2	3.901-2	3.056-2	2.302-2
95	97	2.791-2	2.716-2	2.607-2	2.454-2	2.253-2	2.136-2	2.010-2	1.739-2	1.464-2	1.210-2	9.851-3
96	97	2.347-1	2.343-1	2.338-1	2.333-1	2.330-1	2.330-1	2.331-1	2.338-1	2.353-1	2.357-1	2.284-1