

Table 6. Comparison of calculated Fe XX wavelengths λ and line strengths S with values presented by NIST. BPRM – data from Nahar (2004), GRASP and CITRO – our values. Indexes of levels in the first two columns are taken from Table 1.

k	i	Type	λ (Å)				S			
			NIST	BPRM	CITRO	GRASP	NIST	BPRM	CITRO	GRASP
1	6		132.85	132.03	133.27	132.69	9.03E-02	8.24E-02	8.41E-02	8.45E-02
1	7		121.829	121.34	122.29	121.74	6.64E-02	4.88E-02	6.09E-02	6.11E-02
1	8		118.661	118.16	119.13	118.55	3.45E-02	2.12E-02	3.14E-02	3.16E-02
1	9		95.917	95.18	96.22	95.15	3.30E-03	5.01E-03	2.64E-03	2.58E-03
1	11		83.664	82.97	83.88	82.95	1.10E-03	8.58E-03	9.44E-04	9.50E-04
1	12		80.487	79.79	80.70	79.63	4.70E-03	9.02E-03	4.16E-03	4.14E-03
1	16		13.9	13.96	13.92	13.98	3.20E-03	9.59E-04	3.42E-03	3.49E-03
1	17		13.784	13.83	13.80	13.85	5.20E-03	4.51E-03	5.46E-03	5.67E-03
1	19		13.701	13.75	13.72	13.77	8.40E-03	8.82E-03	8.17E-03	8.54E-03
1	23		13.46	13.49	13.47	13.51	2.82E-04	3.01E-04	2.79E-04	3.10E-04
1	39		13.034	13.08	13.05	13.09	2.93E-03	1.78E-04	3.41E-03	3.39E-03
1	47		12.9	12.94	12.91	12.95	1.31E-03	1.05E-03	1.41E-03	1.41E-03
1	58		12.817	12.81	12.79	12.82	8.70E-02	5.73E-02	8.40E-02	8.53E-02
1	62		12.724	12.73	12.72	12.75	8.54E-04	2.44E-03	1.04E-03	1.05E-03
1	69		12.628	12.62	12.60	12.63	5.17E-04	7.63E-03	7.28E-04	9.06E-04
1	70		12.637	12.61	12.60	12.63	7.20E-03	7.42E-04	5.82E-04	7.60E-04
1	79		12.508	12.53	12.52	12.55	3.86E-04	1.42E-02	7.24E-04	5.88E-04
1	82		12.552	12.53	12.52	12.54	4.69E-04	1.65E-02	5.52E-04	4.64E-04
2	6		162.837	162.21	163.53	163.42	8.20E-03	6.63E-03	6.95E-03	6.74E-03
2	7		146.585	146.37	147.31	147.12	8.10E-04	1.13E-02	4.62E-04	5.14E-04
2	8		142.021	141.77	142.74	142.49	9.60E-04	4.31E-03	7.86E-04	7.71E-04
2	9		110.626	109.92	111.06	109.99	1.15E-01	6.57E-02	1.05E-01	1.04E-01
2	10		108.726	107.86	109.10	108.17	1.00E-04	4.14E-05	4.98E-05	5.20E-05
2	11		94.64	93.96	94.94	94.01	3.77E-02	2.85E-02	3.53E-02	3.50E-02
2	12		90.595	89.90	90.88	89.76	2.16E-02	2.12E-02	2.05E-02	2.10E-02
2	13		83.235	82.62	83.51	82.60	1.66E-02	1.80E-02	1.55E-02	1.59E-02
2	16		14.174	14.24	14.20	14.26	4.78E-04	2.57E-03	5.63E-04	6.02E-04
2	17		14.052	14.11	14.07	14.12	4.82E-04	2.73E-04	5.93E-04	5.77E-04
2	18		13.989	14.05	14.01	14.06	5.90E-03	5.29E-03	6.68E-03	6.91E-03
2	20		13.904	13.96	13.93	13.98	1.75E-03	2.39E-03	1.90E-03	1.99E-03
2	23		13.71	13.75	13.73	13.78	3.82E-03	4.09E-03	3.70E-03	3.92E-03
2	24		13.7	13.74	13.71	13.76	2.18E-03	5.13E-03	2.13E-03	2.21E-03
2	39		13.274	13.32	13.29	13.34	2.82E-03	5.29E-03	3.38E-03	3.44E-03
2	47		13.135	13.18	13.15	13.20	5.37E-04	1.72E-05	6.06E-04	5.94E-04
2	69		12.853	12.85	12.83	12.86	4.60E-02	1.89E-02	4.87E-02	4.89E-02
2	70		12.863	12.84	12.82	12.86	1.00E-01	5.69E-02	5.95E-02	6.10E-02
2	71		12.779	12.81	12.80	12.83	1.40E-02	8.69E-03	1.40E-02	1.40E-02
2	79		12.729	12.76	12.74	12.78	8.10E-03	2.41E-03	8.61E-03	8.99E-03
2	82		12.774	12.75	12.74	12.77	1.36E-03	3.05E-04	1.21E-03	1.35E-03
2	85		12.645	12.62	12.60	12.64	2.51E-04	2.99E-04	3.20E-04	1.89E-04
2	86		12.622	12.60	12.59	12.62	4.37E-04	1.54E-02	6.08E-04	6.74E-04
3	6		173.43	173.67	174.09	174.18	4.20E-03	3.69E-03	3.72E-03	3.50E-03
3	7		155.113	155.64	155.83	155.79	3.40E-04	3.43E-04	3.74E-04	3.31E-04
3	9		115.415	115.07	115.84	114.76	1.30E-04	7.50E-05	9.66E-05	1.48E-04
3	10		113.349	112.81	113.70	112.78	1.42E-01	1.26E-01	1.29E-01	1.29E-01
3	12		93.782	93.31	94.05	92.92	1.63E-01	1.51E-01	1.55E-01	1.54E-01
3	17		14.127	14.19	14.14	14.20	4.45E-04	5.25E-04	4.94E-04	5.11E-04
3	19		14.039	14.10	14.06	14.12	1.89E-03	2.33E-03	2.29E-03	2.36E-03
3	20		13.976	14.04	14.00	14.05	8.60E-03	1.03E-02	9.83E-03	1.02E-02
3	23		13.79	13.83	13.80	13.85	9.30E-03	1.01E-02	9.42E-03	9.81E-03
3	24		13.77	13.81	13.78	13.83	7.73E-04	9.04E-04	7.61E-04	8.45E-04
3	46		13.22	13.26	13.23	13.27	2.83E-03	3.08E-03	2.86E-03	2.85E-03

Table 6. continued.

k	i	Type	λ (Å)				S			
			NIST	BPRM	CITRO	GRASP	NIST	BPRM	CITRO	GRASP
3	58		13.113	13.11	13.08	13.13	3.65E-03	3.64E-03	3.82E-03	3.86E-03
3	62		13.016	13.04	13.01	13.05	4.80E-03	4.74E-03	4.64E-03	4.68E-03
3	69		12.915	12.91	12.89	12.93	1.10E-02	1.20E-02	1.20E-02	1.20E-02
3	70		12.925	12.91	12.88	12.92	3.30E-02	6.93E-02	6.82E-02	6.79E-02
3	82		12.836	12.82	12.80	12.83	7.10E-03	6.45E-03	6.49E-03	6.76E-03
3	85		12.705	12.68	12.66	12.70	6.10E-03	5.11E-03	5.28E-03	5.97E-03
3	86		12.683	12.67	12.65	12.68	3.79E-04	3.26E-04	3.44E-04	3.72E-04
4	8		171.683	171.91	172.73	172.32	1.20E-03	1.08E-03	1.09E-03	1.03E-03
4	9		127.828	127.22	128.41	126.95	1.23E-02	1.09E-02	1.13E-02	1.13E-02
4	11		106.953	106.31	107.34	106.13	4.47E-02	4.14E-02	4.23E-02	4.19E-02
4	12		101.816	101.14	102.17	100.75	1.90E-02	1.75E-02	1.78E-02	1.74E-02
4	13		92.612	92.02	92.96	91.81	3.50E-03	2.74E-03	2.99E-03	3.17E-03
4	18		14.231	14.30	14.25	14.31	1.79E-03	2.27E-03	2.16E-03	2.17E-03
4	20		14.143	14.20	14.17	14.22	3.07E-03	3.74E-03	3.64E-03	3.69E-03
4	24		13.93	13.97	13.94	13.99	4.96E-04	5.41E-04	5.24E-04	5.22E-04
4	33		13.71	13.74	13.71	13.76	2.52E-03	2.78E-03	2.56E-03	2.72E-03
4	39		13.492	13.55	13.51	13.56	1.16E-04	1.89E-04	1.68E-04	1.62E-04
4	47		13.348	13.40	13.36	13.41	1.06E-03	1.20E-03	1.29E-03	1.27E-03
4	62		13.16	13.18	13.15	13.19	4.00E-02	4.32E-02	4.42E-02	4.38E-02
4	69		13.057	13.05	13.03	13.07	1.30E-02	1.21E-02	1.21E-02	1.27E-02
4	71		12.981	13.02	13.00	13.03	1.40E-02	1.47E-02	1.51E-02	1.56E-02
4	79		12.929	12.96	12.94	12.98	2.60E-03	2.27E-03	2.19E-03	2.03E-03
4	82		12.976	12.95	12.94	12.97	7.30E-03	6.51E-03	6.26E-03	6.76E-03
4	86		12.819	12.80	12.78	12.82	5.80E-02	5.49E-02	5.61E-02	5.70E-02
5	6		232.89	233.18	233.64	233.82	1.00E-03	8.25E-04	8.44E-04	8.64E-04
5	7		201.01	201.79	201.89	201.84	2.90E-03	1.80E-03	2.51E-03	2.49E-03
5	9		139.038	138.49	139.50	137.94	3.70E-03	2.48E-02	2.68E-03	2.91E-03
5	10		136.051	135.22	136.41	135.09	4.50E-02	4.02E-02	4.13E-02	4.09E-02
5	11		114.689	114.07	114.98	113.70	4.50E-03	1.72E-03	3.26E-03	3.73E-03
5	12		108.803	108.14	109.07	107.55	2.40E-02	2.90E-02	2.36E-02	2.30E-02
5	13		98.357	97.78	98.63	97.43	9.02E-02	7.77E-02	8.44E-02	8.40E-02
5	20		14.27	14.33	14.29	14.35	1.43E-03	3.62E-03	1.75E-03	1.74E-03
5	23		14.07	14.12	14.08	14.14	2.06E-03	2.57E-03	2.47E-03	2.49E-03
5	24		14.05	14.10	14.07	14.12	9.30E-03	4.12E-03	1.04E-02	1.06E-02
5	33		13.83	13.86	13.82	13.88	2.56E-03	2.24E-03	2.64E-03	2.75E-03
5	47		13.461	13.52	13.48	13.52	4.82E-04	1.47E-03	5.54E-04	5.53E-04
5	62		13.27	13.29	13.26	13.30	5.50E-03	4.82E-03	5.72E-03	5.64E-03
5	69		13.165	13.16	13.14	13.18	1.94E-03	2.50E-02	1.86E-03	1.89E-03
5	70		13.176	13.16	13.13	13.17	1.08E-03	6.35E-03	6.97E-03	7.45E-03
5	79		13.035	13.07	13.05	13.08	1.90E-02	1.14E-02	1.94E-02	1.95E-02
5	82		13.083	13.06	13.04	13.08	6.20E-02	4.27E-02	6.59E-02	6.59E-02
5	85		12.947	12.92	12.90	12.94	9.00E-02	7.94E-02	8.12E-02	8.64E-02
5	86		12.924	12.91	12.89	12.92	1.90E-02	3.39E-03	1.66E-02	1.79E-02
6	14		83.209	82.69	83.47	82.09	3.40E-03	3.25E-03	3.14E-03	3.05E-03
7	14		88.207	87.52	88.44	86.93	2.20E-03	4.88E-04	2.04E-03	1.92E-03
7	15		80.56	79.88	80.78	79.51	1.40E-04	1.50E-04	1.37E-04	1.28E-04
8	14		89.946	89.25	90.17	88.63	7.80E-04	6.44E-04	6.77E-04	6.53E-04
8	15		82.035	81.31	82.22	80.93	5.20E-04	4.64E-04	4.59E-04	4.53E-04
9	14		109.655	109.16	109.99	108.59	4.58E-02	1.36E-04	4.06E-02	4.01E-02
9	15		98.07	97.52	98.39	97.25	4.30E-02	3.79E-02	3.90E-02	3.94E-02
10	14		111.587	111.28	111.99	110.43	1.18E-01	1.06E-01	1.08E-01	1.08E-01
11	14		131.707	131.33	132.22	130.50	4.10E-02	3.75E-02	3.80E-02	3.72E-02
11	15		115.35	114.83	115.81	114.46	3.50E-03	3.93E-03	3.68E-03	3.38E-03

Table 6. continued.

<i>k</i>	<i>i</i>	Type	λ (Å)				<i>S</i>			
			NIST	BPRM	CITRO	GRASP	NIST	BPRM	CITRO	GRASP
12	14		140.432	140.18	141.00	139.66	1.69E-01	1.89E-01	1.51E-01	1.51E-01
12	15		121.99	121.54	122.49	121.45	6.63E-02	5.77E-02	5.85E-02	5.82E-02
13	14		162.739	162.50	163.35	161.45	1.52E-02	1.16E-02	1.22E-02	1.28E-02
13	15		138.47	137.97	139.01	137.59	8.39E-02	7.32E-02	7.50E-02	7.53E-02
1	2	M1	723.22	702.37	720.17	705.64	8.90E-01	7.98E-01	8.51E-01	8.26E-01
1	3	M1	567.76	555.46	568.34	556.99	5.29E-02	4.55E-02	5.05E-02	4.72E-02
1	4	M1	384.22	382.80	383.92	379.93	1.40E-01	1.25E-01	1.29E-01	1.27E-01
1	5	M1	309.27	309.95	310.20	306.78	1.30E-01	1.28E-01	1.29E-01	1.28E-01
2	3	M1	2665.1	2655.59	2695.71	2644.00	1.76E+00	1.78E+00	1.79E+00	1.79E+00
2	4	M1	820.88	841.34	822.27	823.09	2.51E-01	2.50E-01	2.39E-01	2.43E-01
2	5	M1	541.36	554.77	544.92	542.75	1.10E+00	1.02E+00	1.02E+00	1.01E+00
3	5	M1	679.3	701.27	682.99	682.94	6.00E-01	5.74E-01	5.60E-01	5.65E-01
4	5	M1	1585.5	1628.75	1615.59	1593.50	9.46E-01	9.59E-01	9.64E-01	9.58E-01
14	15	M1	929.54	947.07	932.83	931.15	1.33E+00	1.33E+00	1.33E+00	1.33E+00
2	3	E2	2665.1	2655.59	2695.71	2644.00	1.90E-03	1.37E-03	1.97E-03	1.97E-03
2	4	E2	820.88	841.34	822.27	823.09	3.50E-03	2.41E-03	3.62E-03	3.60E-03
3	4	E2	1188.5	1231.51	1183.17	1195.10	3.20E-03	2.13E-03	3.20E-03	3.18E-03
3	5	E2	679.3	701.27	682.99	682.94	7.70E-03	5.30E-03	7.95E-03	7.85E-03
14	15	E2	929.54	947.07	932.83	931.15	2.70E-03	1.77E-03	2.62E-03	2.60E-03