

Intra-night flickering of T CrB.

Appendixes A, B and C by Ts. B. Georgiev et al.

Appendix A. 6 tables, pages 1 – 6.

Appendix B. Light curves #01–#40, pages 7 – 16.

Appendix C. Light curves #01a–#27b, pages 17 – 24.

Table 1. Observing circumstances and photometric behavior of the flickering source over the years: 1 – Group of monitorings: I – photoelectric observations, II and III – CCD observations; 2 – Years of monitorings; 3 – Year AV and SD; 4 – Number of monitorings and photometric error, mag; 5 – Duration of monitoring, min; 6 – Duration of monitoring AV and SD; 7 – Number of exposures in the monitoring; 8 – Number of exposures, AV and SD; 9 – monitoring time resolution, min; 10 – U magnitude, AV and SD for the group; 11 – u flux AV and SD for the group; 12 – flickering SD of u flux, AV and SD in the group, flux; 13 – flickering RD of u flux – AV and SD in the group, flux; 14 – flickering SD of u flux, AV and SD in the group, mag; 15 – flickering RD of u flux – AV and SD in the group, mag.

1	Observations	Group I (el.phot.)		Group II (CCD)		Group III (CCD)	
2	Years range	1993.2	1999.0	2009.1	2011.1	2016.1	2018.5
3	Years AV, SD	1997.1	1.4	2009.7	0.4	2017.2	0.9
4	Num. LCs, mag. error	27	0.03	4	0.01	9	0.01
5	T_M range, min	20	189	87	158	66	185
6	T_M AV, SD, min	85	45	113	31	85	456
7	Num. exposures	96	674	24	76	24	191
8	Num. exposures AV, SD	386	144	39	25	85	54
9	Time resolution, min	0.08	0.33	2	4	1	4
10	U_{AV} , U_{SD} , mag	10.25	0.52	11.01	0.59	8.48	0.33
11	u_{AV} , u_{SD} , flux	8.78	4.10	4.37	2.11	42.5	13.25
12	Flick. u_{SD} AV, SD, flux	0.52	0.24	0.37	0.23	1.02	0.46
13	Flick. u_{RD} AV, SD, flux	1.47	0.64	0.70	0.45	2.67	1.55
14	Flick. U_{SD} AV, SD, mag	0.06	0.02	0.08	0.03	0.03	0.01
15	Flick. U_{RD} AV, SD, mag	0.18	0.05	0.16	0.06	0.06	0.02

Table 2. Data about the observations and parameters of 40+32 light curves (LCs): 1 – designation of the LC, 2 – year of the monitoring LC, 3 – duration of the LC, (min), 4 – number of data in the LC, 5 – average time resolution the LC (min), 6 – polynomial degree for the LC flattening, 7 – flux average of the LC, 8 – flux standard deviation of the flatten LC (%), 9 – flux range deviation of the flatten LC, 8 – standard deviation in the MLC (Eqs. 4) (%), 9 – half-range (half-amplitude) deviation in the MLC, 10 – deceleration of the LC standard error after flattening.

#LC	year	T_M	n_M	τ_M	m	u_{AV}	u_{SD}	u_{RD}	SD_0/SD
1	2	3	4	5	6	7	8	9	10
01	1993.162	121	448	0.270	4	3.164	7.31	18.18	1.52
02	1994.279	49	266	0.186	2	2.079	7.16	20.90	1.58
03	1995.454	35	203	0.174	3	5.579	8.78	19.24	1.68
04	1995.473	102	520	0.197	2	4.92	9.92	28.87	1.16
05	1996.028	31	150	0.210	2	5.150	8.73	21.24	1.22
06	1996.162	141	385	0.367	3	10.413	10.75	28.31	1.12
07	1996.167	189	618	0.306	2	7.177	8.61	27.79	1.25
08	1996.233	62	578	0.108	4	4.555	4.10	12.19	1.33
09	1996.964	39	444	0.088	2	11.475	6.92	19.24	1.21
10	1996.970	24	276	0.085	1	11.609	5.11	13.66	1.37
11	1997.077	129	674	0.191	2	9.829	6.69	19.85	1.58
12	1997.080	98	522	0.188	3	9.700	5.94	15.77	1.22
13	1997.083	81	425	0.190	3	9.788	4.30	11.25	1.62
14	1997.085	137	352	0.391	1	9.526	4.75	12.70	1.28
15	1997.088	151	561	0.269	5	8.002	5.61	17.10	1.72
16	1997.561	119	547	0.217	4	10.804	4.19	14.60	1.61
17	1997.563	20	96	0.216	4	21.025	4.06	9.93	1.65
18	1997.662	46	207	0.223	3	19.516	4.75	14.72	1.80
19	1998.140	168	417	0.405	7	8.079	4.94	14.05	1.52
20	1998.151	81	407	0.200	2	8.951	6.27	18.29	1.57
21	1998.539	52	256	0.205	5	7.637	4.22	10.93	1.60
21	1998.539	52	256	0.205	5	7.637	4.22	10.93	1.60
22	1998.542	74	362	0.204	3	7.561	5.52	18.83	1.53
23	1998.558	64	304	0.211	4	9.359	5.66	15.81	1.34
25	1998.594	69	344	0.201	4	8.394	5.22	19.22	1.59
26	1998.596	60	298	0.204	2	8.241	3.99	10.92	1.11
27	1999.019	76	406	0.187	2	6.423	6.25	19.21	1.48
28	2009.055	107	28	3.959	3	6.862	7.05	12.12	1.89
29	2009.156	87	24	3.781	2	3.615	7.52	13.47	1.49
30	2010.334	99	27	3.791	2	5.102	12.20	24.62	1.15
31	2011.115	158	76	2.104	2	1.917	4.82	11.72	1.07
32	2016.104	185	50	3.779	3	31.763	2.85	5.00	1.26
33	2016.249	120	132	0.918	5	49.547	2.63	7.62	1.96
34	2016.252	120	95	1.277	5	54.309	3.35	9.95	1.45
35	2016.257	142	150	0.950	4	66.805	2.46	7.05	1.61
36	2017.244	181	191	0.953	3	32.407	2.21	6.30	1.49
37	2017.323	130	140	0.934	3	32.221	2.12	5.97	1.94
38	2018.066	92	90	1.031	3	48.640	1.85	4.13	1.77
39	2018.2847	122	64	1.943	3	28.352	2.26	4.87	1.27
40	2018.519	81	52	1.583	3	34.294	1.83	3.96	2.08

Table 3. Data about observations and 40+32 light curves (LCs). Continuation of the previous table:

#LC	year	T_M	n_M	τ_M	m	u_{AV}	u_{SD}	u_{RD}	SD_0/SD
1	2	3	4	5	6	7	8	9	10
01a	1993.162	56	216	0.261	2	3.335	5.52	13.86	1.29
01b	1993.162	34	163	0.208	3	2.889	4.85	12.61	2.05
01c	1993.162	27	131	0.204	4	3.219	6.10	15.95	1.63
02a	1994.279	21	123	0.172	2	1.911	5.30	13.82	1.29
02b	1994.279	25	143	0.175	3	2.224	6.89	20.78	1.36
03a	1995.454	7	39	0.175	0	5.852	3.92	8.58	1.00
04a	1995.473	35	189	0.187	2	4.598	8.52	21.87	1.14
06a	1996.162	21	51	0.423	2	9.083	6.43	16.44	1.51
07a	1996.167	98	359	0.273	2	7.521	8.47	23.62	1.17
07b	1996.167	65	256	0.255	3	6.699	6.18	15.00	1.22
08a	1996.233	37	362	0.102	3	4.563	3.77	10.55	1.55
08b	1996.233	39	351	0.112	3	4.499	4.30	12.05	1.12
09a	1996.964	18	215	0.086	2	11.150	3.01	7.73	1.53
11a	1997.077	23	130	0.177	2	11.153	4.25	12.59	1.98
12a	1997.080	35	205	0.171	2	10.207	5.64	11.88	1.05
13a	1997.082	33	196	0.171	0	10.346	3.93	8.50	1.00
14a	1997.085	41	233	0.175	2	9.275	3.50	8.28	1.23
15a	1997.088	42	150	0.280	5	9.010	3.43	11.00	1.49
15b	1997.088	27	106	0.258	5	7.733	2.34	5.39	1.46
16a	1998.561	33	183	0.180	3	10.927	2.47	7.02	2.06
18a	1997.662	19	96	0.198	3	20.041	3.77	10.36	2.08
19a	1998.140	36	97	0.370	2	8.580	3.03	7.42	1.14
20a	1998.151	22	125	0.179	3	8.142	3.08	9.32	3.23
20b	1998.151	32	185	0.172	3	9.459	4.21	11.81	1.70
21a	1998.539	52	256	0.205	5	7.637	4.22	10.93	1.60
22a	1997.542	31	176	0.175	3	7.775	3.93	10.83	1.44
23a	1998.558	23	131	0.181	4	9.603	4.52	11.94	1.42
24a	1998.561	35	175	0.200	3	7.955	3.57	10.46	1.29
25a	1998.594	26	134	0.194	4	7.846	3.23	10.08	1.99
26a	1998.596	21	115	0.183	2	8.086	3.10	7.42	1.43
27a	1999.019	28	157	0.178	0	6.681	5.94	14.10	1.00
27b	1999.020	44	249	0.175	1	6.260	5.83	15.72	1.75

Table 4. Data about the processing of 40+32 light curves (LCs): 1 – designation of the LC, 2 – average magnitude of the LC 3 – magnitude standard deviation of the LC, 4 – magnitude range deviation of the LC, 5 – skewness of the LC, 6 – kurtosis of the LC, 7 – structure gradient of the LC, 8 – Hurst gradient of the LC, 9 – breakdown point of the median asymmetry function, 10 – auto-correlation time (min).

#LC	U_{AV}	U_{SD}	U_{RD}	A'	E'	SG	HG	BT	τ_{ACF}
1	2	3	4	5	6	7	8	9	10
01	11.251	0.077	0.182	-0.019	-0.546	0.374	0.114	0.57	6.71
02	11.706	0.075	0.206	0.241	-0.122	0.491	0.146	0.58	4.50
03	10.633	0.091	0.191	0.050	-0.767	0.477	0.121	0.66	3.02
04	10.770	0.103	0.275	0.492	0.092	0.461	0.164	0.65	4.53
05	10.723	0.091	0.210	0.364	0.064	0.249	0.216	0.58	1.61
06	9.956	0.111	0.271	-0.053	-0.338	0.324	0.134	0.63	9.97
07	10.360	0.090	0.266	0.334	0.776	0.420	0.149	1.13	7.29
08	10.854	0.044	0.125	-0.312	0.294	0.198	0.139	0.58	3.21
09	9.850	0.073	0.191	0.743	0.418	0.417	0.102	0.48	2.59
10	9.839	0.054	0.139	0.601	0.175	0.593	0.147	0.62	1.42
11	10.019	0.070	0.197	0.237	0.040	0.380	0.125	0.63	9.38
12	10.033	0.063	0.159	0.666	0.150	0.332	0.139	0.63	6.97
13	10.023	0.046	0.116	0.387	0.049	0.281	0.161	0.67	6.84
14	10.052	0.050	0.130	0.364	-0.152	0.227	0.137	1.28	8.89
15	10.243	0.059	0.172	0.697	1.006	0.432	0.161	0.89	5.98
16	9.916	0.045	0.148	-0.353	1.316	0.442	0.171	0.63	2.85
17	9.193	0.043	0.103	0.792	0.266	0.324	0.214	0.56	1.79
18	9.274	0.050	0.149	0.703	1.081	0.318	0.204	0.67	4.06
19	10.231	0.052	0.143	0.162	-0.193	0.342	0.160	1.27	6.80
20	10.120	0.066	0.182	0.134	-0.088	0.254	0.164	0.63	6.94
21	10.293	0.045	0.113	0.163	-0.158	0.277	0.163	0.63	4.98
22	10.303	0.058	0.187	0.163	-0.158	0.298	0.208	0.78	6.56
23	10.071	0.060	0.159	0.428	1.594	0.409	0.145	0.59	4.07
24	10.227	0.058	0.176	0.315	-0.095	0.442	0.203	0.63	3.58
25	10.189	0.055	0.191	0.723	1.871	0.361	0.214	0.68	1.82
26	10.210	0.043	0.112	0.054	0.070	0.213	0.182	0.65	4.97
27	10.481	0.066	0.191	0.149	-0.153	0.443	0.175	0.58	2.00
28	10.406	0.074	0.124	0.613	-0.255	-0.252	0.323	13.40	5.36
29	11.106	0.079	0.137	0.126	-0.517	0.341	0.242	13.49	9.33
30	10.733	0.125	0.239	-0.266	0.363	0.576	0.344	12.60	9.82
31	11.795	0.051	0.120	0.090	-0.012	0.410	0.221	7.11	14.51
32	8.745	0.030	0.053	0.281	-1.085	0.293	0.136	12.01	9.80
33	8.262	0.028	0.080	-0.060	-0.004	0.370	0.232	3.90	5.52
34	8.163	0.036	0.103	0.121	0.578	0.343	0.294	5.37	3.72
35	7.938	0.026	0.074	0.276	0.286	0.132	0.254	3.63	8.28
36	8.723	0.024	0.066	0.415	0.241	0.504	0.190	3.55	8.60
37	8.730	0.023	0.063	0.304	0.092	0.174	0.234	3.03	11.41
38	8.282	0.020	0.044	0.447	-0.201	0.446	0.173	4.00	6.36
39	8.869	0.024	0.052	0.321	-0.362	0.174	0.282	5.70	12.07
40	8.663	0.020	0.042	0.538	-0.104	0.041	0.263	5.75	3.69

Table 5. Data about the processing of 40+32 light curves (LCs). Continuation of the previous table:

#LC	U_{AV}	U_{SD}	U_{RD}	A'	E'	SG	HG	BT	τ_{ACF}
1	2	3	4	5	6	7	8	9	10
01a	11.194	0.058	0.141	-0.328	-0.300	0.362	0.138	0.63	4.33
01b	11.349	0.051	0.129	0.168	0.349	0.306	0.136	0.61	1.86
01c	11.232	0.064	0.161	0.052	-0.374	0.446	0.196	0.57	2.61
02a	11.798	0.056	0.141	0.697	0.610	0.359	0.204	0.58	1.41
02b	11.633	0.072	0.205	-0.143	0.588	0.453	0.202	0.58	1.41
03a	10.582	0.042	0.089	0.041	-0.064	0.253	0.308	0.55	0.63
04a	10.843	0.089	0.215	-0.169	-0.033	0.554	0.134	0.64	2.69
06a	10.100	0.067	0.165	0.213	0.002	0.462	0.239	0.63	1.64
07a	10.309	0.088	0.230	0.585	0.641	0.393	0.175	1.37	5.30
07b	10.435	0.065	0.152	0.243	-0.221	0.377	0.157	1.37	5.30
08a	10.852	0.040	0.109	-0.208	0.238	0.235	0.164	0.56	2.33
08b	10.867	0.046	0.124	-0.270	0.055	0.201	0.133	0.56	2.42
09a	9.881	0.032	0.081	0.141	-0.139	0.075	0.161	0.60	1.36
11a	9.881	0.045	0.129	0.421	0.966	0.431	0.277	0.64	1.51
12a	9.979	0.060	0.122	0.161	-0.780	0.467	0.102	0.63	3.88
13a	9.964	0.042	0.089	0.305	-0.524	0.208	0.143	0.63	4.02
14a	10.082	0.037	0.086	0.319	-0.348	0.329	0.126	0.64	2.40
15a	10.113	0.037	0.113	0.258	0.631	0.346	0.269	0.94	1.21
15b	10.279	0.025	0.057	0.047	-0.195	0.217	0.202	0.89	5.98
16a	9.904	0.027	0.074	0.288	0.517	0.369	0.210	0.64	1.40
18a	9.245	0.040	0.107	0.632	1.750	0.239	0.202	0.62	1.94
19a	10.165	0.032	0.078	0.337	-0.197	0.226	0.251	1.66	2.92
20a	10.222	0.033	0.097	0.674	1.041	0.232	0.275	0.63	1.85
20b	10.060	0.045	0.121	0.031	-0.177	0.502	0.170	0.67	1.15
21a	10.293	0.045	0.113	0.163	-0.158	0.277	0.163	0.63	4.98
22a	10.273	0.042	0.112	-0.315	0.224	0.327	0.191	0.64	3.36
23a	10.045	0.048	0.123	-0.095	0.126	0.404	0.244	0.63	1.47
24a	10.248	0.038	0.108	-0.207	0.327	0.431	0.184	0.64	0.98
25a	10.264	0.035	0.104	0.516	1.622	0.272	0.186	0.64	1.45
26a	10.231	0.033	0.078	-0.164	-0.000	0.272	0.224	0.64	1.10
27a	10.438	0.063	0.143	0.050	-0.427	0.470	0.163	0.64	2.01
27b	10.508	0.061	0.158	0.345	-0.081	0.448	0.198	0.60	1.35

Table 6. Data about 48+36 Quasi-periods (QPs) in the monitoring light curves (LCs) and their relative "energies" on the density functions: 1,6 – designation of the LC, 2,7 – QP duration (min), 3,8 – lg QP, 4,9 – logarithmic level of the density function $\log u_{QP}$, corresponding to the QP, 5,10 – relative level of the density function $u_{QP}\%$, corresponding to the QP.

#LC	QP	lg QP	ld u	u %	#	QP	lg QP	ldu	u %
1	2	3	4	5	6	7	8	9	10
01	11.5	1.06	-1.251	5.61	36	35.6	1.55	-1.665	2.16
012	58.0	1.76	-1.136	7.31	37	74.0	1.87	-1.683	2.07
013	88.0	1.94	-1.133	7.37	38	25.5	1.41	-1.737	1.83
02	17.6	1.25	-1.150	7.08	39	46.0	1.66	-1.678	2.10
03	15.2	1.18	-1.044	9.04	40	22.1	1.34	-1.747	1.79
04	50.8	1.71	-1.019	9.56	402	34.6	1.54	-1.761	1.74
05	17.4	1.24	-1.097	8.00	01a	17.5	1.24	-1.253	5.59
052	6.7	0.83	-1.166	6.83	01b	23.6	1.37	-1.298	5.03
06	39.0	1.59	-1.002	9.96	01c	11.4	1.06	-1.181	6.59
07	20.5	1.31	-1.154	7.02	02a	11.5	1.06	-1.280	5.25
08	21.5	1.33	-1.366	4.31	02a2	15.4	1.19	-1.168	6.78
09	17.8	1.25	-1.231	5.87	02b	11.3	1.05	-1.174	6.70
092	28.6	1.46	-1.194	6.40	03a	4.7	0.67	-1.395	4.03
10	5.5	0.74	-1.289	5.14	04a	10.3	1.01	-1.063	8.65
11	47.0	1.67	-1.203	6.26	06a	11.7	1.07	-1.196	6.37
112	82.0	1.91	-1.188	6.49	07a	25.2	1.40	-1.094	8.06
12	49.6	1.70	-1.219	6.05	07a2	59.6	1.78	-1.062	8.68
13	39.3	1.59	-1.393	4.05	07b	25.0	1.40	-1.218	6.06
14	45.2	1.66	-1.312	4.87	08a	10.1	1.00	-1.414	3.86
15	22.0	1.34	-1.292	5.11	08b	13.8	1.14	-1.347	4.50
16	41.5	1.62	-1.415	3.85	00a	13.0	1.11	-1.532	2.94
17	8.8	0.94	-1.412	3.87	09a2	10.0	1.00	-1.543	2.87
18	18.2	1.26	-1.300	5.02	11a	5.6	0.75	-1.374	4.23
19	21.5	1.33	-1.376	4.20	12a	19.2	1.28	-1.248	5.65
20	27.5	1.44	-1.185	6.53	13a	18.7	1.27	-1.407	3.92
21	17.8	1.25	-1.377	4.19	14a	12.2	1.09	-1.429	3.72
212	27.4	1.44	-1.373	4.23	15a	22.0	1.34	-1.417	3.83
22	44.0	1.64	-1.254	5.57	15b	4.8	0.68	-1.645	2.26
23	23.0	1.36	-1.234	5.83	16a	17.3	1.24	-1.552	2.80
24	23.0	1.36	-1.276	5.30	18a	10.5	1.02	-1.400	3.98
25	16.8	1.23	-1.356	4.41	19a	19.3	1.29	-1.492	3.22
252	4.5	0.65	-1.441	3.62	20a	12.7	1.10	-1.520	3.02
26	20.6	1.31	-1.386	4.11	20b	8.6	0.93	-1.362	4.35
27	40.9	1.61	-1.179	6.62	21a	17.8	1.25	-1.377	4.19
28	30.9	1.49	-1.190	6.46	22a	19.3	1.29	-1.360	4.36
29	38.0	1.58	-1.084	8.25	22a2	15.6	1.19	-1.346	4.50
30	42.0	1.62	-0.867	13.58	23a	6.3	0.80	-1.332	4.66
31	85.0	1.93	-1.273	5.33	24a	3.9	0.59	-1.467	3.41
32	79.0	1.90	-1.529	2.96	25a	9.8	0.99	-1.521	3.01
33	18.9	1.28	-1.596	2.53	26a	5.0	0.70	-1.516	3.05
34	21.0	1.32	-1.477	3.33	27a	8.0	0.90	-1.252	5.60
35	47.8	1.68	-1.613	2.44	27b	7.1	0.85	-1.249	5.63



































