

New Short Periodic Eclipsing Binaries IV

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#	Name	Other	Coord (J2000)	Type	Max	Min	System	Period	Epoch (JD)	type	Sp	Comment	L.Curve	Find.Chart	Data
1		GSC 1755-01166	01 31 41.31, +29 41 52.5	EW	13.4	13.7	R	0.3882	2451469.957	min		Comm. 1	1.PNG	chart1.PNG	NSVS 6421627 NSVS 6451911 NSVS 6461318
2		GSC 2818-00245	01 34 28.59, +39 50 25.7	EW	14.2	14.6	R	0.6415	2451467.724	min		Comm. 2	2.PNG	chart2.PNG	NSVS 3833756
3		TYC 2293 01529 1	01 35 51.18, +30 19 28.8	EW	11.9	12.1	R	0.7078	2451480.747	min		Comm. 3	3.PNG	chart3.PNG	NSVS 6424068 NSVS 6455099 NSVS 6464237
4		GSC 4520-00967	02 56 18.19, +82 18 23.5	EW	13.8	14.2	R	0.41947	2451501.722	min		Comm. 4	4.PNG	chart4.PNG	NSVS 75540 NSVS 421874 NSVS 477391
5		TYC 4351 00048 1	05 21 33.91, +71 45 45.7	EW	12.3	12.75	R	0.50808	2451456.594	min		Comm. 5	5.PNG	chart5.PNG	NSVS 547957 NSVS 641308
6		USNO-A2.0 1725-00305343	07 32 10.38, +84 33 52.3	EW	14.5	15.5	R	0.319855	2451438.788	min		Comm. 6	6.PNG	chart6.PNG	NSVS 101586
7		GSC 4618-01398	07 35 40.24, +83 42 36.3	EW	12.95	13.35	R	0.38225	2451461.888	min		Comm. 7	7.PNG	chart7.PNG	NSVS 104015
8		GSC 4544-01378	08 57 10.72, +79 12 21.3	EW	13.8	14.1	R	0.45438	2451490.934	min		Comm. 8	8.PNG	chart8.PNG	NSVS 722330 NSVS 756185 NSVS 837592
9		GSC 4548-01797	10 05 54.58, +81 59 00.0	EW	12.6	12.85	R	0.404615	2451470.670	min		Comm. 9	9.PNG	chart9.PNG	NSVS 97713 NSVS 814501 NSVS 850217
10		TYC 3463 01008 1	13 36 09.27, +45 59 40.7	EW	12.15	12.45	R	0.61071	2451479.871	min		Comm. 10	10.PNG	chart10.PNG	NSVS 5071532 NSVS 5086346
11		GSC 4408-01480	13 51 16.88, +74 42 43.4	EW	12.85	13.15	R	0.64137	2451429.526	min		Comm. 11	11.PNG	chart11.PNG	NSVS 901325 NSVS 927499 NSVS 971384
12		GSC 3855-01432	14 09 14.61, +55 39 23.8	EW	13.75	14.05	R	0.37909	2451420.741	min		Comm. 12	12.PNG	chart12.PNG	NSVS 2734330
13		GSC 4172-00719	14 09 54.22, +61 36 31.0	EW	13.4	13.95	R	0.36698	2451419.867	min		Comm. 13	13.PNG	chart13.PNG	NSVS 2718607
14		TYC 3855 01112 1	14 11 27.41, +55 10 05.1	EW	12.85	13.15	R	0.38119	2451413.875	min		Comm. 14	14.PNG	chart14.PNG	NSVS 2734899
15		GSC 4172-01213	14 13 44.45, +60 18 45.5	EW	13.6	14.2	R	0.45731	2451403.675	min		Comm. 15	15.PNG	chart15.PNG	NSVS 2719455 NSVS 2735897
16		GSC 3859-00353	14 20 53.80, +54 28 53.4	EW	14.05	14.7	R	0.35866	2451425.818	min		Comm. 16	16.PNG	chart16.PNG	NSVS 2737463
17		GSC 3862-01007	14 30 33.86, +55 33 13.5	EB	13.9	14.5	R	0.320947	2451393.779	min		Comm. 17	17.PNG	chart17.PNG	NSVS 2740311
18		GSC 3860-00159	14 32 34.39, +54 27 38.6	EW	12.65	13.1	R	0.353515	2451397.801	min		Comm. 18	18.PNG	chart18.PNG	NSVS 2740959
19		GSC 3866-00099	14 35 10.62, +59 30 34.6	EW	13.3	13.6	R	0.37476	2451341.649	min		Comm. 19	19.PNG	chart19.PNG	NSVS 2741315
20		GSC 4176-00938	14 48 03.43, +62 44 41.7	EW	13.05	13.35	R	0.43747	2451414.584	min		Comm. 20	20.PNG	chart20.PNG	NSVS 2764186
21		GSC 3861-00738	14 52 17.89, +54 15 50.9	EW	13.7	14.4	R	0.47337	2451387.900	min		Comm. 21	21.PNG	chart21.PNG	NSVS 2747146 NSVS 5136832
22		TYC 3486 01026 1	15 35 10.99, +49 47 44.0	EW	11.65	11.8	R	0.319065	2451402.537	min		Comm. 22	22.PNG	chart22.PNG	NSVS 5187837 NSVS 5198622
23		GSC 3077-01247	17 17 52.10, +40 53 09.9	EW	14.5	15.0	R	0.39148	2451380.712	min		Comm. 23	23.PNG	chart23.PNG	NSVS 5334357
24		TYC 2609 01606 1	17 27 15.60, +33 30 06.1	EB	12.35	12.7	R	0.81474	2451400.797	min		Comm. 24	24.PNG	chart24.PNG	NSVS 7964645 NSVS 8037968
25		GSC 3091-01312	17 31 09.42, +40 41 18.4	EW	14.2	14.7	R	0.31962	2451382.750	min		Comm. 25	25.PNG	chart25.PNG	NSVS 5343657
26		GSC 2622-00742	18 14 43.08, +30 09 42.0	EW	14.1	14.6	R	0.59428	2451380.557	min		Comm. 26	26.PNG	chart26.PNG	NSVS 8098724 NSVS 8143697
27		USNO-A2.0 1200-09109877	18 17 34.95, +33 45 19.5	EW	13.8	14.2	R	0.3739	2451390.801	min		Comm. 27	27.PNG	chart27.PNG	NSVS 8102794
28		TYC 2637 00433 1	18 39 23.88, +31 00 02.4	EW	12.25	12.7	R	0.5035	2451393.764	min		Comm. 28	28.PNG	chart28.PNG	NSVS 8175726 NSVS 8229223

29	GSC 4465-01085	21 35 01.03, +70 31 04.4	EW	13.65	14.05	R	0.36986	2451461.856	min	Comm. 29	29.PNG	chart29.PNG	NSVS 1357489
30	GSC 2749-02504	22 49 27.54, +30 54 42.6	EB	12.9	13.7	R	0.67815	2451444.668	min	Comm. 30	30.PNG	chart30.PNG	NSVS 8922301 NSVS 8959813
31	GSC 2761-01120	22 50 47.75, +35 40 56.3	EW	13.55	14.0	R	0.44563	2451434.793	min	Comm. 31	31.PNG	chart31.PNG	NSVS 8924023
32	GSC 2757-01660	22 51 34.20, +34 57 53.0	EW	12.1	12.35	R	0.38162	2451433.548	min	Comm. 32	32.PNG	chart32.PNG	NSVS 8924736
33	TYC 2761 01486 1	22 52 50.69, +35 58 56.5	EW	12.2	12.9	R	0.34575	2451433.941	min	Comm. 33	33.PNG	chart33.PNG	NSVS 8926059 NSVS 8996441
34	GSC 3219-02563	22 55 51.40, +39 45 46.0	EW	13.15	13.75	R	0.39828	2451431.599	min	Comm. 34	34.PNG	chart34.PNG	NSVS 6134694
35	GSC 2762-01024	22 59 11.09, +36 21 17.8	EW	12.5	12.8	R	0.338134	2451448.643	min	Comm. 35	35.PNG	chart35.PNG	NSVS 9002440
36	GSC 2246-00773	22 59 57.05, +29 15 28.9	EW	13.8	14.6	R	0.41117	2451423.897	min	Comm. 36	36.PNG	chart36.PNG	NSVS 8969511
37	GSC 2758-00669	23 01 58.45, +35 04 19.4	EW	13.15	13.4	R	0.7623	2451450.725	min	Comm. 37	37.PNG	chart37.PNG	NSVS 9005334
38	GSC 2750-00208	23 02 00.22, +31 02 17.7	EW	13.6	13.9	R	0.40113	2451485.904	min	Comm. 38	38.PNG	chart38.PNG	NSVS 9005632
39	GSC 2762-01124	23 03 44.07, +36 15 22.9	EW	12.8	13.1	R	0.37216	2451450.750	min	Comm. 39	39.PNG	chart39.PNG	NSVS 9007026
40	GSC 2755-00504	23 08 13.01, +33 03 03.8	EW	12.9	13.35	R	0.247074	2451455.514	min	Comm. 40	40.PNG	chart40.PNG	NSVS 9011981
41	GSC 2755-00101	23 09 04.16, +31 53 20.2	EW	13.9	14.5	R	0.35813	2451455.679	min	Comm. 41	41.PNG	chart41.PNG	NSVS 9013029
42	GSC 2759-00534	23 13 21.72, +34 20 25.4	EB	13.85	14.4	R	0.45460	2451451.695	min	Comm. 42	42.PNG	chart42.PNG	NSVS 9017099
43	TYC 2755 00998 1	23 13 59.31, +32 17 07.1	EW	13.0	13.65	R	0.38690	2451455.728	min	Comm. 43	43.PNG	chart43.PNG	NSVS 9018121
44	GSC 2756-00622	23 15 06.77, +32 14 23.8	EW	13.9	14.4	R	0.3630	2451456.520	min	Comm. 44	44.PNG	chart44.PNG	NSVS 9019292
45	GSC 2764-01260	23 15 40.32, +36 08 52.9	EW	14.2	14.8	R	0.24958	2451447.900	min	Comm. 45	45.PNG	chart45.PNG	NSVS 9019061
46	GSC 2756-00399	23 17 13.22, +32 29 17.1	EW	14.25	14.7	R	0.39235	2451456.637	min	Comm. 46	46.PNG	chart46.PNG	NSVS 9021376
47	GSC 3221-02506	23 19 18.70, +39 47 34.9	EW	14.2	14.8	R	0.29689	2451447.738	min	Comm. 47	47.PNG	chart47.PNG	NSVS 3596207 NSVS 6160385
48	GSC 2764-01639	23 19 22.34, +36 49 09.3	EB	14.4	15.4	R	0.5774	2451453.946	min	Comm. 48	48.PNG	chart48.PNG	NSVS 6162215 NSVS 9022452 NSVS 6221314
49	GSC 3234-00508	23 21 23.99, +40 21 58.9	EB	13.4	13.85	R	0.69491	2451449.741	min	Comm. 49	49.PNG	chart49.PNG	NSVS 3598524 NSVS 6162203
50	GSC 2756-01582	23 22 58.46, +32 43 48.6	EW	13.8	14.35	R	0.3771	2451508.881	min	Comm. 50	50.PNG	chart50.PNG	NSVS 6222763 NSVS 9026889
51	GSC 3234-01038	23 23 51.91, +39 32 33.7	EB	13.45	14.1	R	0.53210	2451455.876	min	Comm. 51	51.PNG	chart51.PNG	NSVS 3600362 NSVS 6165180

Comments:

1. MinII = 13.7. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
2. MinII = 14.6. Type RRC (with twice shorter period) is possible. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
3. MinII = 12.08. A twice shorter period and type RRC are not excluded.
4. MinII = 14.2. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
5. MinII = 12.7. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
6. MinII = 15.3. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
7. MinII = 13.25. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
8. MinII = 14.05.
9. MinII = 12.85.
10. MinII = 12.4. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.

11. MinII = 13.1.
12. MinII = 14.0.
13. MinII = 13.95.
14. MinII = 13.10. Total eclipses are probable. There is a faint close companion.
15. MinII = 14.2.
16. MinII = 14.6. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
17. MinII = 14.05.
18. MinII = 13.1.
19. MinII = 13.55.
20. MinII = 13.3.
21. MinII = 14.2. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
22. MinII = 11.75. 1RXS J153511.8+494750.
23. MinII = 15.0.
24. MinII = 12.45. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
25. MinII = 14.55.
26. MinII = 14.5.
27. MinII = 14.15. Period $P = 0.4599$ days (type EW) is possible.
28. MinII = 12.7. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
29. MinII = 14.0. There is a faint close companion. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
30. MinII = 13.2. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
31. MinII = 13.85.
32. MinII = 12.35. There is a faint close companion.
33. MinII = 12.85. There is a faint close companion. The ROTSE data with photometric correction flags (usually rejected) were kept for the analysis.
34. MinII = 13.67.
35. MinII = 12.8.
36. MinII = 14.5.
37. MinII = 13.4. A twice shorter period and type RRC are possible. $P = 0.5518$ days (type EW) is not excluded.
38. MinII = 13.85.
39. MinII = 13.05. Perhaps a blend of two stars, GSC 2762-01124 and GSC 2762-000522, in the NSVS. The variability amplitude can be underestimated.
40. MinII = 13.3.

41. MinII = 14.5.

42. MinII = 14.1.

43. MinII = 13.6.

44. MinII = 14.3. P = 0.3072 days (type EW) is not excluded.

45. MinII = 14.7.

46. MinII = 14.5.

47. MinII = 14.7.

48. MinII = 14.9.

49. MinII = 13.55.

50. MinII = 14.35.

51. MinII = 13.7.

Remarks:

I present the discovery of 51 new short-period eclipsing binaries (mostly EW). A search for variables was carried out in the publicly available data of the Northern Sky Variability Survey (NSVS, Wozniak et al., 2004, also see <http://skydot.lanl.gov/nsvs>). These observations were analyzed using the period-search software developed by Dr. V.P. Goranskij for Windows environment. The coordinates were drawn either from the Tycho-2 or 2MASS catalogs.

References:

Wozniak, P.R., Vestrand, W.T., Akerlof, C.W. et al., 2004, *Astron. J.*, 127, 2436