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New Short-Period Eclipsing Binaries in Camelopardalis

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#	Name	Other	Coord (J2000)	Type	Max	Min	System	Period	Epoch (JD)	type	Sp	Comment	L.Curve	Find.Chart	Data
1		TYC 4070 02215 1	03 33 34.31, +64 16 46.3	EW	10.9	11.4	R	0.43784	2451501.714	min		Comm. 1	1.jpg	chart1.jpg	NSVS 2007339
2		GSC 4066-01140	03 34 47.34, +62 14 53.3	EW	13.0	13.25	R	0.60545	2451496.23	min		Comm. 2	2.jpg	chart2.jpg	NSVS 2009043
3		GSC 4071-01632	03 59 47.75, +63 49 49.8	EW	13.2	13.5	R	0.28589	2451497.704	min		Comm. 3	3.jpg	chart3.jpg	NSVS 2022764 NSVS 2053997
4		TYC 4328 01175 1	04 16 19.99, +68 58 21.4	EB	9.95	10.40	R	0.75678	2451523.466	min		Comm. 4	4.jpg	chart4.jpg	NSVS 520281
5		GSC 4329-00602	04 25 55.35, +69 15 45.5	EW	13.3	13.65	R	0.45159	2451523.934	min		Comm. 5	5.jpg	chart5.jpg	NSVS 524615
6		GSC 4329-00430	04 28 18.82, +68 47 18.3	EW	12.6	12.9	R	0.38896	2451523.525	min		Comm. 6	6.jpg	chart6.jpg	NSVS 525453
7		GSC 4329-01554	04 29 09.87, +68 34 01.3	EW	13.8	14.2	R	0.4025	2451525.843	min		Comm. 7	7.jpg	chart7.jpg	NSVS 525751
8		GSC 4337-00216	04 43 24.25, +72 20 01.3	EW	13.7	14.2	R	0.40891	2451551.756	min		Comm. 8	8.jpg	chart8.jpg	NSVS 532352
9		GSC 3745-01264	04 46 44.03, +59 27 51.1	EW	12.5	13.0:	R	0.3658	2451553.706	min		Comm. 9	9.jpg	chart9.jpg	NSVS 2125822
10		GSC 4515-00641	04 55 35.52, +78 37 55.7	EW	13.6	14.2	R	0.32208	2451497.087	min		Comm. 10	10.jpg	chart10.jpg	NSVS 449951 NSVS 574561 NSVS 614852
11		TYC 4511 00244 1	05 10 39.43, +75 10 34.4	EW	11.65	11.90	R	0.37727	2451526.953	min		Comm. 11	11.jpg	chart11.jpg	NSVS 579222 NSVS 610369
12		GSC 4515-00038	05 19 47.10, +77 36 13.6	EB	13.65	14.20	R	0.61525	2451515.845	min		Comm. 12	12.jpg	chart12.jpg	NSVS 580289 NSVS 617313
13		TYC 4092 00652 1	05 21 46.27, +65 44 54.6	EB	12.5	13.1	R	0.65113	2451520.553	min		Comm. 13	13.jpg	chart13.jpg	NSVS 2189381 NSVS 2222380
14		TYC 4347 00578 1	05 22 54.77, +70 00 14.5	EW	11.8	12.5	R	0.4399	2451496.523	min		Comm. 14	14.jpg	chart14.jpg	NSVS 549496
15		GSC 4351-00664	05 34 50.29, +72 26 45.0	EW	13.2	13.6	R	0.38149	2451518.418	min		Comm. 15	15.jpg	chart15.jpg	NSVS 646212 NSVS 551812
16		GSC 4352-00458	05 36 41.39, +72 19 47.1	EW	13.7	14.1	R	0.3863	2451511.118	min		Comm. 16	16.jpg	chart16.jpg	NSVS 552506 NSVS 646605
17		GSC 4348-01538	05 39 55.29, +69 45 21.5	EW	13.2	13.7	R	0.31582	2451514.170	min		Comm. 17	17.jpg	chart17.jpg	NSVS 555833 NSVS 643339
18		TYC 4093 00800 1	05 39 58.52, +67 20 17.5	EW	11.16	11.38	R	0.38635	2451513.661	min		Comm. 18	18.jpg	chart18.jpg	NSVS 557969 NSVS 2197170 NSVS 2232753
19		TYC 4089 01206 1	05 42 50.73, +64 25 15.2	EW	11.52	11.75	R	0.37475	2451517.885	min		Comm. 19	19.jpg	chart19.jpg	NSVS 2201566 NSVS 2231857
20		GSC 4098-01572	05 43 35.00, +62 46 40.5	EW	12.65	13.0	R	0.29048	2451516.546	min		Comm. 20	20.jpg	chart20.jpg	NSVS 2203618 NSVS 2231023
21		GSC 4536-00076	05 57 38.19, +80 38 18.4	EW	13.7	14.1	R	0.43262	2451514.008	min		Comm. 21	21.jpg	chart21.jpg	NSVS 585032 NSVS 629220
22		GSC 4348-00807	05 59 03.78, +71 02 35.7	EW	14.4	15.0	R	0.3863	2451516.170	min		Comm. 22	22.jpg	chart22.jpg	NSVS 651959
23		GSC 4098-01461	05 59 27.97, +62 39 10.4	EW	14.2	14.7	R	0.28482	2451499.085	min		Comm. 23	23.jpg	chart23.jpg	NSVS 2239664
24		GSC 4353-01154	06 00 45.00, +71 36 26.4	EW	13.7	14.4	R	0.30675	2451521.827	min		Comm. 24	24.jpg	chart24.jpg	NSVS 653211 NSVS 560565
25		GSC 4099-01073	06 01 00.36, +61 56 51.7	EW	12.3	12.6	R	0.41470	2451503.548	min		Comm. 25	25.jpg	chart25.jpg	NSVS 2240220
26		GSC 4349-00573	06 01 29.64, +71 08 19.4	EB	13.9	14.5	R	0.56556	2451519.97	min		Comm. 26	26.jpg	chart26.jpg	NSVS 652866 NSVS 561322

27		GSC 4357-00984	06 08 44.46, +73 33 42.9	EW	13.15	13.5	R	0.32584	2451523.877	min		Comm. 27	27.jpg	chart27.jpg	NSVS 657893
28		GSC 4345-01226	06 10 44.31, +68 00 15.2	EW	13.5	14.0	R	0.34783	2451521.549	min		Comm. 28	28.jpg	chart28.jpg	NSVS 652493 NSVS 567910
29		GSC 4529-01428	06 12 51.13, +77 10 50.7	EW	12.85	13.15	R	0.29061	2451513.64	min		Comm. 29	29.jpg	chart29.jpg	NSVS 592545 NSVS 628168
30		GSC 4525-01151	06 13 06.61, +76 29 48.9	EW	13.0	13.5	R	0.44113	2451515.038	min		Comm. 30	30.jpg	chart30.jpg	NSVS 593566 NSVS 627544
31		GSC 4349-01135	06 14 13.77, +70 52 32.7	EW	14.1	14.5	R	0.35253	2451521.473	min		Comm. 31	31.jpg	chart31.jpg	NSVS 656710 NSVS 565370
32		GSC 4349-01223	06 18 43.60, +70 12 34.2	EB	13.9	14.8	R	0.43903	2451523.043	min		Comm. 32	32.jpg	chart32.jpg	NSVS 657623
33		GSC 4353-00253	06 22 02.03, +72 18 47.0	EB :	12.55	12.83	R	1.1484	2451522.140	min		Comm. 33	33.jpg	chart33.jpg	NSVS 660644
34		GSC 4357-00036	06 22 57.51, +73 30 42.9	EB	13.5	14.3	R	1.1514	2451523.187	min		Comm. 34	34.jpg	chart34.jpg	NSVS 661962
35		GSC 4370-01089	06 28 02.47, +74 24 22.7	EW	14.0	14.9	R	0.4117	2451514.42	min		Comm. 35	35.jpg	chart35.jpg	NSVS 599928 NSVS 664037
36		GSC 4533-01428	06 28 47.34, +79 22 11.6	EW	13.8	14.3	R	0.36296	2451512.748	min		Comm. 36	36.jpg	chart36.jpg	NSVS 592204 NSVS 633184
37		GSC 4529-00062	06 31 40.66, +78 39 52.4	EW	14.4	15.2	R	0.30118	2451513.577	min		Comm. 37	37.jpg	chart37.jpg	NSVS 593873 NSVS 633243
38		GSC 4105-00193	06 42 43.66, +64 21 51.6	EW	13.2	13.7	R	0.40146	2451531.160	min		Comm. 38	38.jpg	chart38.jpg	NSVS 2340948
39		GSC 4366-00667	06 45 11.28, +72 51 36.4	EA:	13.9	14.3	R	0.6016	2451524.21	min		Comm. 39	39.jpg	chart39.jpg	NSVS 667840
40		TYC 4105 00131 1	06 47 52.17, +64 11 45.0	EW	12.1	12.3	R	0.41980	2451527.718	min		Comm. 40	40.jpg	chart40.jpg	NSVS 2343413 NSVS 2367911
41		GSC 4363-00167	06 48 04.05, +70 45 34.2	EW	13.8	14.2	R	0.30330	2451526.535	min		Comm. 41	41.jpg	chart41.jpg	NSVS 667824
42		GSC 4105-00096	06 50 30.52, +64 46 25.4	EW	13.2	13.6	R	0.36045	2451528.567	min		Comm. 42	42.jpg	chart42.jpg	NSVS 2344418 NSVS 2369559
43		GSC 4371-00817	06 50 47.22, +73 21 32.7	EW	13.3	13.75	R	0.338555	2451525.557	min		Comm. 43	43.jpg	chart43.jpg	NSVS 669582
44		GSC 4534-00109	06 54 01.59, +80 21 25.8	EB	13.0	13.45	R	0.48608	2451501.896	min		Comm. 44	44.jpg	chart44.jpg	NSVS 594342 NSVS 637698 NSVS 740032
45		GSC 4367-01331	06 59 18.56, +71 49 51.9	EW	12.6	13.1	R	0.399885	2451526.230	min		Comm. 45	45.jpg	chart45.jpg	NSVS 671466
46		GSC 4114-01866	07 03 33.80, +63 08 08.7	EW	12.5	13.05	R	0.34750	2451530.631	min		Comm. 46	46.jpg	chart46.jpg	NSVS 2351481 NSVS 2373570
47		GSC 4530-01042	07 17 04.93, +77 10 26.1	EW	11.55	12.20	R	0.298438	2451528.964	min		Comm. 47	47.jpg	chart47.jpg	NSVS 604134 NSVS 706128 NSVS 736527
48		GSC 4531-01322	07 47 38.95, +78 10 10.5	EW	12.80	12.95	R	0.26742	2451523.196	min		Comm. 48	48.jpg	chart48.jpg	NSVS 711725 NSVS 743502
49		GSC 4373-01102	07 51 52.22, +74 53 43.5	EW	13.8	14.3	R	0.32348	2451553.773	min		Comm. 49	49.jpg	chart49.jpg	NSVS 714435 NSVS 739082
50		GSC 4540-02108	08 19 25.58, +77 05 13.9	EW	13.0	13.35	R	0.35445	2451530.837	min		Comm. 50	50.jpg	chart50.jpg	NSVS 718616 NSVS 747838
51		GSC 4544-01457	08 55 59.08, +78 24 26.3	EW	14.0	14.8	R	0.24835	2451513.517	min		Comm. 51	51.jpg	chart51.jpg	NSVS 723323 NSVS 755576
52		GSC 4544-02037	09 21 18.09, +78 37 41.5	EW	12.5	12.63	R	0.30172	2451525.370	min		Comm. 52	52.jpg	chart52.jpg	NSVS 726564 NSVS 759672 NSVS 839115
53		GSC 4544-00606	09 24 13.30, +79 44 54.2	EW	13.0	13.6	R	0.35034	2451492.277	min		Comm. 53	53.jpg	chart53.jpg	NSVS 725083 NSVS 760241 NSVS 841652
54		GSC 4552-00118	11 28 30.15, +79 38 56.2	EW	12.4	13.0	R	0.36274	2451458.976	min		Comm. 54	54.jpg	chart54.jpg	NSVS 826555 NSVS 857769 NSVS 934156

Comments:

1. MinII = 11.4. Primary eclipse might be the secondary.

2. MinII = 13.25. Primary eclipse might be the secondary.

3. MinII = 13.45.

4. MinII = 10.15.

5. MinII = 13.55.

6. MinII = 12.85.

7. MinII = 14.2. Primary eclipse might be the secondary. A twice shorter period (0.20125 d, type RRC) is possible.

8. MinII = 14.1.

9. MinII = 12.8:.

10. MinII = 14.1.

11. MinII = 11.85. Primary eclipse might be the secondary.

12. MinII = 13.85.

13. MinII = 12.75.

14. MinII = 12.3.

15. MinII = 13.6. Primary eclipse might be the secondary.

16. MinII = 14.0.

17. MinII = 13.6. Primary eclipse might be the secondary.

18. MinII = 11.38. Primary eclipse might be the secondary.

19. MinII = 11.72.

20. MinII = 12.9. Primary eclipse might be the secondary.

21. MinII = 14.1.

22. MinII = 15.0. Primary eclipse might be the secondary.

23. MinII = 14.6.

24. MinII = 14.4. Primary eclipse might be the secondary.

25. MinII = 12.6.

26. MinII = 14.0.

27. MinII = 13.5. Primary eclipse might be the secondary.

28. MinII = 14.0. Primary eclipse might be the secondary.

29. MinII = 13.15. Primary eclipse might be the secondary.

30. MinII = 13.45. Primary eclipse might be the secondary.

31. MinII = 14.4.

32. MinII = 14.3.

33. MinII = 12.70.

34. MinII = 13.8.

35. MinII = 14.7.

36. MinII = 14.3. Primary eclipse might be the secondary.

37. MinII = 15.1.

38. MinII = 13.65.

39. EB type is not excluded .

40. MinII = 12.3. Primary eclipse might be the secondary.

41. MinII = 14.1.

42. MinII = 13.55.

43. MinII = 13.7.

44. MinII = 13.15.

45. MinII = 13.1. Primary eclipse might be the secondary.

46. MinII = 13.03.

47. MinII = 12.15. Identification with the X-ray source 1RXS J071659.2+771039 is possible.

48. MinII = 12.90.

49. MinII = 14.1.

50. MinII = 13.3.

51. MinII = 14.6.

52. MinII = 12.6.

53. MinII = 13.55. Primary eclipse might be the secondary.

54. MinII = 12.9.

Remarks:

I present the discovery of 54 new short-period eclipsing binaries (mostly EW and EB) in Camelopardalis. 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