

Eclipsing Variables from the MACHO Galactic Bulge Scutum Fields III

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#	Name	Other	Coord (J2000)	Type	Max	Min	System	Period	Epoch (JD)	type	Sp	Comment	L.Curve	Find.Chart	Data
1		MACHO 301_45278_52	18 31 15.57, -13 13 39.8	EW	14.70	14.95	R	0.415675	2449953.9857	min		Comm. 1	301_45278_52.jpg		301_45278_52.txt
2		MACHO 302_45259_415	18 31 22.33, -14 27 44.5	EW	16.75	17.15	R	0.319969	2449889.0540	min		Comm. 2	302_45259_415.jpg		302_45259_415.txt
3		MACHO 302_45428_392	18 31 37.03, -14 25 37.5	EW	16.95	17.35	R	0.433007	2450527.2719	min		Comm. 3	302_45428_392.jpg		302_45428_392.txt
4		MACHO 301_45440_172	18 31 40.64, -13 36 42.9	EW	15.60	15.90	R	0.915865	2449852.2904	min		Comm. 4	301_45440_172.jpg		301_45440_172.txt
5		MACHO 302_45597_328	18 31 57.15, -14 21 49.3	EW	17.15	17.50	R	0.521166	2451453.9220	min		Comm. 5	302_45597_328.jpg		302_45597_328.txt
6		MACHO 303_45754_433	18 32 15.59, -15 05 56.0	EB	16.60	17.10	R	0.692693	2450594.1173	min		Comm. 6	303_45754_433.jpg		303_45754_433.txt
7		MACHO 301_45775_377	18 32 16.31, -13 39 03.2	EB	16.55	17.05	R	0.612270	2450228.1265	min		Comm. 7	301_45775_377.jpg		301_45775_377.txt
8		MACHO 302_45766_423	18 32 17.13, -14 15 46.8	EW	16.85	17.25	R	0.539150	2449859.1806	min		Comm. 8	302_45766_423.jpg		302_45766_423.txt
9		MACHO 301_45777_1472	18 32 17.74, -13 34 18.3	EW	17.05	17.65	R	0.436031	2449924.9379	min		Comm. 9	301_45777_1472.jpg		301_45777_1472.txt
10		MACHO 301_45779_114	18 32 18.76, -13 25 32.4	EW	15.45	15.70	R	0.472231	2449948.9946	min		Comm. 10	301_45779_114.jpg		301_45779_114.txt
11		MACHO 301_45941_716	18 32 20.85, -13 50 52.8	EB	17.20	17.80	R	0.320850	2449833.3109	min		Comm. 11	301_45941_716.jpg		301_45941_716.txt
12		MACHO 302_45931_262	18 32 23.36, -14 30 30.2	EB	16.00	16.45	R	0.893026	2449923.1080	min		Comm. 12	302_45931_262.jpg		302_45931_262.txt
13		MACHO 301_45944_290	18 32 23.94, -13 35 16.1	EB	16.40	17.05	R	0.631211	2449917.9874	min		Comm. 13	301_45944_290.jpg		301_45944_290.txt
14		MACHO 301_45942_561	18 32 24.33, -13 46 00.9	EW	17.10	17.90	R	0.438649	2449900.9730	min		Comm. 14	301_45942_561.jpg		301_45942_561.txt
15		MACHO 302_45934_766	18 32 27.39, -14 17 50.8	EW	17.15	17.85	R	0.458027	2450225.1541	min		Comm. 15	302_45934_766.jpg		302_45934_766.txt
16		MACHO 301_45947_259	18 32 33.43, -13 26 54.7	EB	16.40	17.00	R	0.716489	2449939.9388	min		Comm. 16	301_45947_259.jpg		301_45947_259.txt
17		MACHO 301_46112_395	18 32 41.83, -13 38 42.3	EB	16.75	17.25	R	0.864761	2449939.9388	min		Comm. 17	301_46112_395.jpg		301_46112_395.txt
18		MACHO 302_46098_789	18 32 42.13, -14 33 05.3	EW	17.40	17.95	R	0.328124	2450535.2953	min		Comm. 18	302_46098_789.jpg		302_46098_789.txt
19		MACHO 301_46108_128	18 32 48.76, -13 52 32.0	EW	16.15	16.55	R	0.352968	2449918.9841	min		Comm. 19	301_46108_128.jpg		301_46108_128.txt
20		MACHO 302_46101_162	18 32 49.82, -14 22 21.2	EW	15.75	16.10	R	0.538855	2449908.1742	min		Comm. 20	302_46101_162.jpg		302_46101_162.txt
21		MACHO 302_46100_624	18 32 51.31, -14 23 09.0	EW	17.30	17.90	R	0.364891	2449895.0956	min		Comm. 21	302_46100_624.jpg		302_46100_624.txt
22		MACHO 302_46267_395	18 32 57.63, -14 28 11.5	EW	16.70	17.05	R	0.385373	2449906.1317	min		Comm. 22	302_46267_395.jpg		302_46267_395.txt
23		MACHO 301_46285_221	18 33 04.20, -13 16 46.9	EB	16.45	16.80	R	1.453205	2450233.0748	min		Comm. 23	301_46285_221.jpg		301_46285_221.txt

24	MACHO 301_46283_374	18 33 04.65, -13 25 21.9	EW	16.60	17.05	R	0.452441	2450345.0030	min	Comm. 24	301_46283_374.jpg	301_46283_374.txt
25	MACHO 301_46277_399	18 33 05.88, -13 48 54.6	EA	16.25	16.95	R	2.734550	2450230.1062	min	Comm. 25	301_46277_399.jpg	301_46277_399.txt
26	MACHO 301_46280_316	18 33 06.81, -13 35 05.7	EA	16.30	16.80	R	1.315366	2450246.1164	min	Comm. 26	301_46280_316.jpg	301_46280_316.txt
27	MACHO 301_46278_60	18 33 08.81, -13 45 41.3	EB	14.65	14.88	R	25.0486	2450637.04	min	Comm. 27	301_46278_60.jpg	301_46278_60.txt
28	MACHO 301_46449_1014	18 33 11.94, -13 32 48.7	EW	16.10	16.35	R	1.010367	2449923.1053	min	Comm. 28	301_46449_1014.jpg	301_46449_1014.txt
29	MACHO 301_46451_411	18 33 16.57, -13 26 16.7	EW	17.20	17.70	R	0.376599	2450570.1933	min	Comm. 29	301_46451_411.jpg	301_46451_411.txt
30	MACHO 301_46446_427	18 33 21.21, -13 45 47.0	EW	16.70	17.05	R	0.466130	2449926.0083	min	Comm. 30	301_46446_427.jpg	301_46446_427.txt
31	MACHO 302_46435_415	18 33 21.52, -14 27 04.2	EW	17.05	17.40	R	0.553183	2451284.1925	min	Comm. 31	302_46435_415.jpg	302_46435_415.txt
32	MACHO 301_46446_524	18 33 26.23, -13 43 17.1	EW	17.10	17.50	R	0.418732	2449792.2664	min	Comm. 32	301_46446_524.jpg	301_46446_524.txt
33	MACHO 301_46615_657	18 33 27.95, -13 41 58.3	EW	17.20	18.00	R	0.389918	2450639.1387	min	Comm. 33	301_46615_657.jpg	301_46615_657.txt
34	MACHO 301_46613_1206	18 33 35.68, -13 50 53.0	EA	17.85	18.75	R	0.529092	2450602.1728	min	Comm. 34	301_46613_1206.jpg	301_46613_1206.txt
35	MACHO 301_46616_189	18 33 41.66, -13 36 01.7	EW	15.65	15.95	R	0.326688	2449930.0051	min	Comm. 35	301_46616_189.jpg	301_46616_189.txt
36	MACHO 301_46614_401	18 33 43.00, -13 46 27.9	EW	17.00	17.55	R	0.409488	2450190.2420	min	Comm. 36	301_46614_401.jpg	301_46614_401.txt
37	MACHO 301_46783_77	18 33 59.37, -13 40 49.2	EW	15.05	15.22	R	0.820087	2451309.2386	min	Comm. 37	301_46783_77.jpg	301_46783_77.txt
38	MACHO 301_46948_34	18 34 02.39, -13 53 10.8	EW	15.75	16.10	R	0.462088	2449906.1290	min	Comm. 38	301_46948_34.jpg	301_46948_34.txt

Comments:

1. MinII = 14.95.
2. MinII = 17.15.
3. MinII = 17.30.
4. MinII = 15.90.
5. MinII = 17.50.
6. MinII = 16.85.
7. MinII = 16.85.
8. MinII = 17.25.
9. MinII = 17.55. A blend of several stars. Original MACHO coordinates are presented in the table.
10. MinII = 15.70.
11. MinII = 17.65. The horizontal line is an artefact of the data, it cannot be removed without damaging the data for the star.
12. MinII = 16.20. Blended. Original MACHO coordinates are presented in the table.
13. MinII = 16.65. Blended. Original MACHO coordinates are presented in the table.
14. MinII = 17.80. Blended. Original MACHO coordinates are presented in the table.

15. MinII = 17.80. A blend of several stars. Original MACHO coordinates are presented in the table.

16. MinII = 16.65.

17. MinII = 16.85.

18. MinII = 17.85.

19. MinII = 16.50.

20. MinII = 16.05. Blended.

21. MinII = 17.80. Original MACHO coordinates are presented in the table.

22. MinII = 17.00.

23. MinII = 16.60.

24. MinII = 17.00.

25. MinII = 16.40.

26. MinII = 16.40.

27. MinII = 14.78.

28. MinII = 16.30.

29. MinII = 17.70.

30. MinII = 17.00.

31. MinII = 17.30.

32. MinII = 17.45.

33. MinII = 17.90.

34. MinII = 18.40. Original MACHO coordinates are presented in the table.

35. MinII = 15.90.

36. MinII = 17.50.

37. MinII = 15.22.

38. MinII = 16.05.

Remarks:

The second part of this study was published by Bernhard (2010).

Presented are the details for thirty eight eclipsing variables found from the Scutum MACHO Galactic Bulge fields 301-303 epoch photometry as publicly served via their new Virtual Observatory interface (Smillie 2009) and as downloaded and sourced via TOPCAT.

Each object was checked against the Strasbourg CDS VizieR service and the International Variable Star Index (<http://www.aavso.org/vsx/>) for pre-existence as a eclipsing binary in variability catalogues.

The astrometric positions were derived from the MACHO data base and were improved using Carlsberg Meridian Catalog 14 (CMC14 2006), 2MASS (Skrutskie et al. 2006) and Galactic Legacy Infrared Mid-Plane Survey Extraordinaire (GLIMPSE 2008) if available. The Macho R magnitudes were calculated from the given instrumental R magnitudes using the formula given in Alcock et al. (1999). The programme Period04 (University of Vienna) was used for the data analysis.

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References:

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