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Another dozen of new Eclipsing Binaries

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Abstracts: *This paper continues the line of publications of new detected variable stars, which has begun with BAVJ No. 4. In the course of my investigation of known variable stars on a regular basis, nearby stars are sometimes detected as variables.*

Introduction:

The observations were carried out with two semiautomatic telescopes, 8-inch and 14-inch Schmidt-Cassegrain ones, operated at my private observatory. Before 2008, both telescopes were equipped with cooled SBIG ST6 CCD-cameras. Beginning with 2008, these cameras are replaced with SIGMA 1603 cameras, containing a cooled Kodak KAF1603ME chip. Normally, the exposures are 60 s through a Ir & UV cut off filter.

Observations:

Differential magnitudes are calculated using a comparison star, not far from the variable ('a' in the chart). The constancy of the comparison is controlled using several check stars in the field, one of them got the label 'b' in the chart. The maximum sensitivity of the chip in the ST6 is in the red part of the spectrum and that of the KAF1603ME chip is at 640nm. Therefore rough instrumental magnitudes are calculated simply by adding the R-magnitude of the comparison star taken from the USNO-B1.0 catalogue to the differential magnitudes. The coordinates are also taken from the USNO-B1.0 catalogue.

Data analysis:

Concentric aperture photometry is carried out by means of a self-written program, after bias, dark- and flatfield correction of the exposures. The minima timings are to be published in the BAV-Mitteilungen.

Nr	USNO-B1.0	RA2000	DE2000	Type	Epoch 24..	Period	vicinity of
1	1287-0221347	12 43 12.768	+38 43 32.80	EW	57499.5521	0.322131	DF CVn
2	1419-0508154	23 11 47.268	+51 58 08.79	EA	54798.2417	0.905536	BL And
3	1471-0071486	01 51 21.331	+57 06 33.16	EA	54829.3138	0.955500	HS Per
4	1669-0030065	04 07 31.159	+76 59 10.77	EA	54834.4358	0.8536461	AN Cam
5	1113-0498137	20 14 29.169	+21 20 27.28	EW	55393.4523	0.42364	DK Sge
6	1478-0002611	00 03 34.825	+57 52 14.62	EW	55460.4357	0.359812	EY Cas
7	1452-0049820	01 31 30.777	+55 17 56.51	EW	55141.4169	0.3781497	V471 Cas
8	1669-0029801	04 05 25.299	+76 55 21.11	EW	54834.4349	0.3657144	AN Cam
9	1500-0006438	00 12 50.435	+60 04 04.13	EW	57266.5323	0.412718	MS Cas
10	1452-0401705	22 25 49.753	+55 13 06.48	EA	57345.5880	1.159520	EO Lac
11	1434-0430910	22 44 00.331	+53 24 37.01	EW	55851.5071	0.990628	PP Lac
12	1398-0451707	22 23 14.659	+49 52 57.10	EB	55799.5352	0.6662064	MP Lac

Nr	Max	Min I	Min II	comparison (USNO-B1.0)	R1mag	checkstar	lightcurve	chart
1	14.32	14.49	14.45	1287-0221332	13.39	GSC 3021-2628	Fig 1a	Fig 1b
2	14.43	15.00	14.56	1419-0508041	12.83	GSC 3635-2254	Fig 2a	Fig 2b
3	11.20	11.33	11.30	1471-0071601	11.14	GSC 3692-2257	Fig 3a	Fig 3b
4	15.26	16.00	15.34	1669-0030081	14.38	GSC 4514-1590	Fig 4a	Fig 4b
5	14.03	14.35	14.28	1113-0497692	12.58	GSC 1630-0188	Fig 5a	Fig 5b
6	15.00	15.58	15.50	1478-0002195	14.07	TYC 3660-0195	Fig 6a	Fig 6b
7	13.66	13.90	13.88	1452-0049645	11.79	GSC 3674-1380	Fig 7a	Fig 7b
8	12.40	12.52	12.49	1668-0028244	11.92	GSC 4514-1590	Fig 8a	Fig 8b
9	13.78	13.88	13.86	1501-0006551	13.70	GSC 4014-2159	Fig 9a	Fig 9b
10	11.83	12.37	12.32	1451-0402873	11.39	GSC 3986-1381	Fig 10a	Fig 10b
11	11.87	12.13	12.05	1433-0462153	11.21	GSC 3984-1619	Fig 11a	Fig 11b
12	14.35	15.3	14.9	1399-0449482	12.71	TYC 3615-1980	Fig 12a	Fig 12b

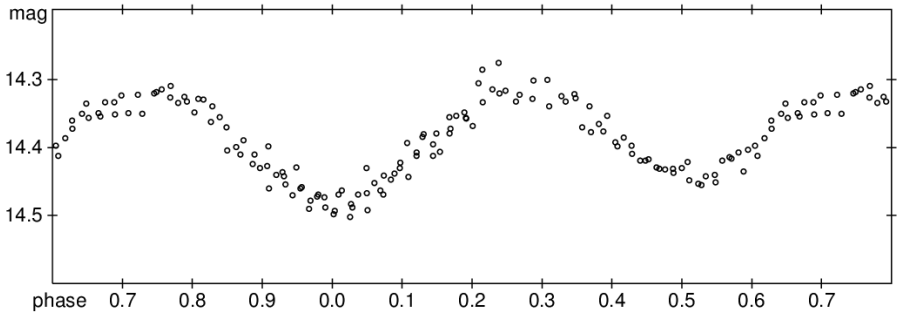

Fig. 1a: Lightcurve for USNO-B1.0 1287-0221347

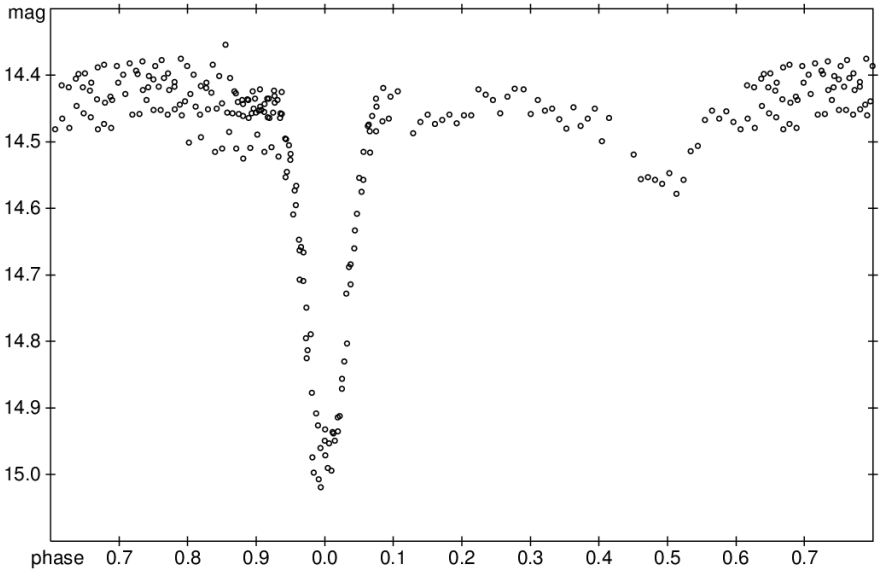

Fig. 2a: Lightcurve for USNO-B1.0 1419-0508154

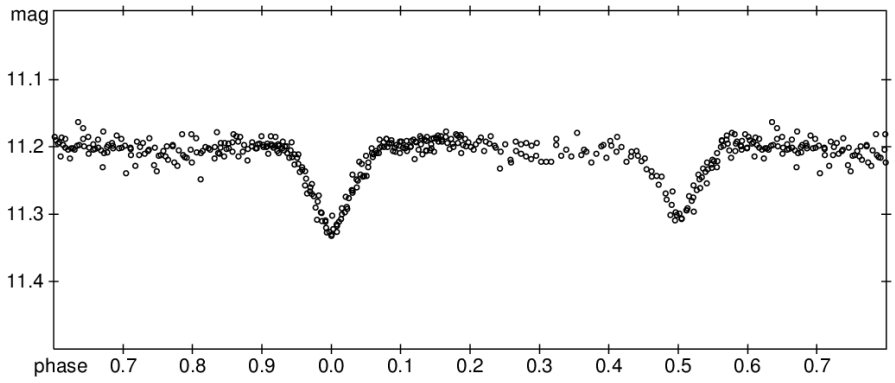

Fig. 3a: Lightcurve for USNO-B1.0 1471-0071486

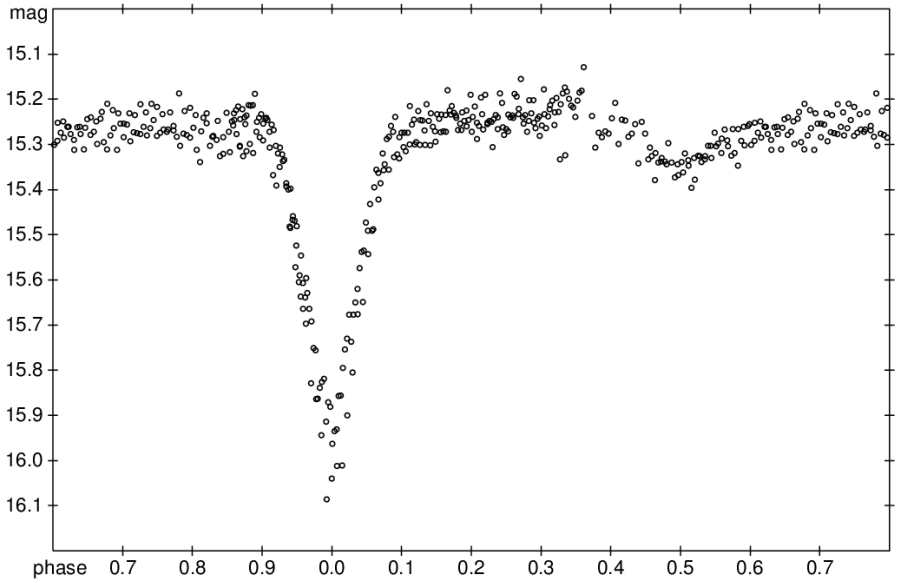

Fig. 4a: Lightcurve for USNO-B1.0 1669-0030065

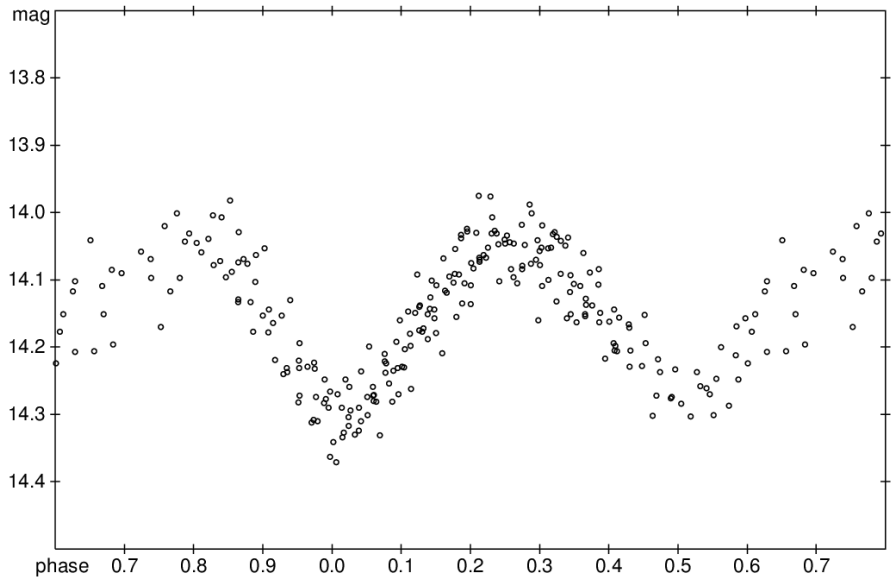

Fig. 5a: Lightcurve for USNO-B1.0 1113-0498137

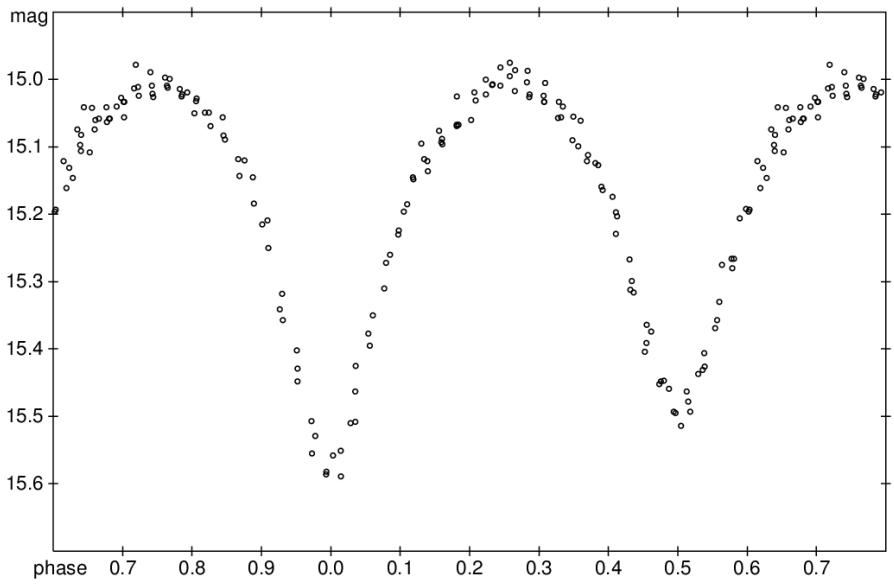

Fig. 6a: Lightcurve for USNO-B1.0 1478-0002611

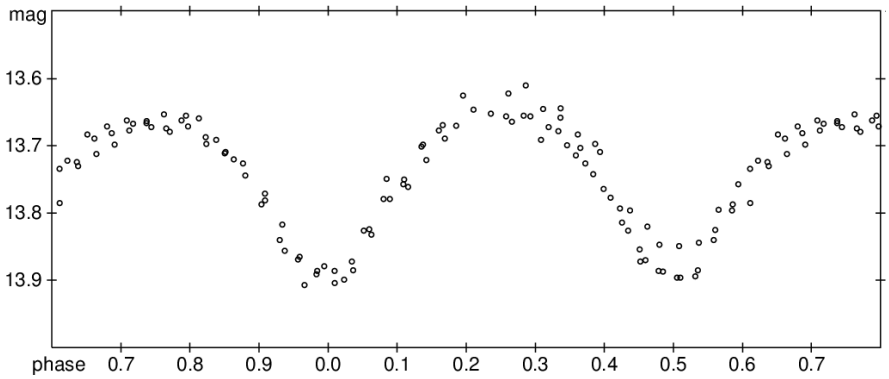

Fig. 7a: Lightcurve for USNO-B1.0 1452-0049820

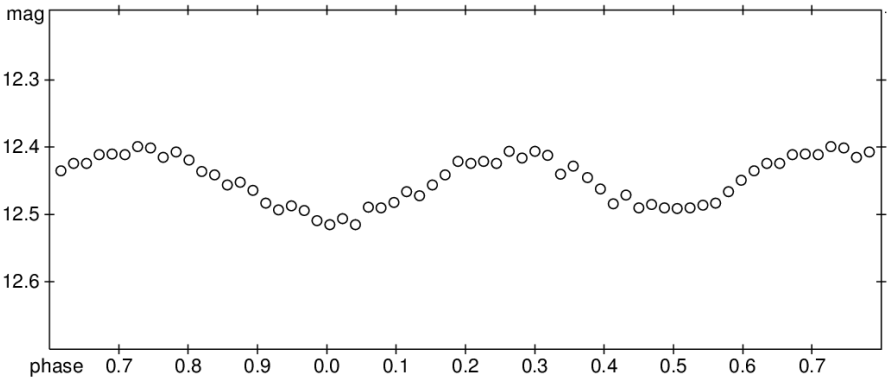

Fig. 8a: Lightcurve for USNO-B1.0 1669-0029801

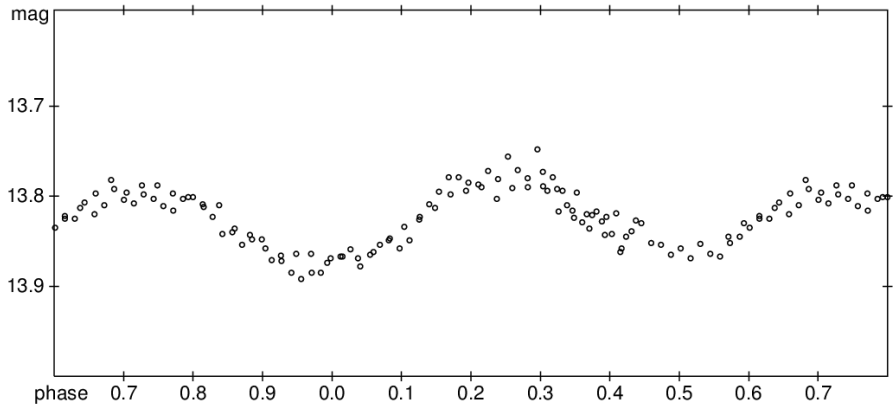

Fig. 9a: Lightcurve for USNO-B1.0 1500-0006438

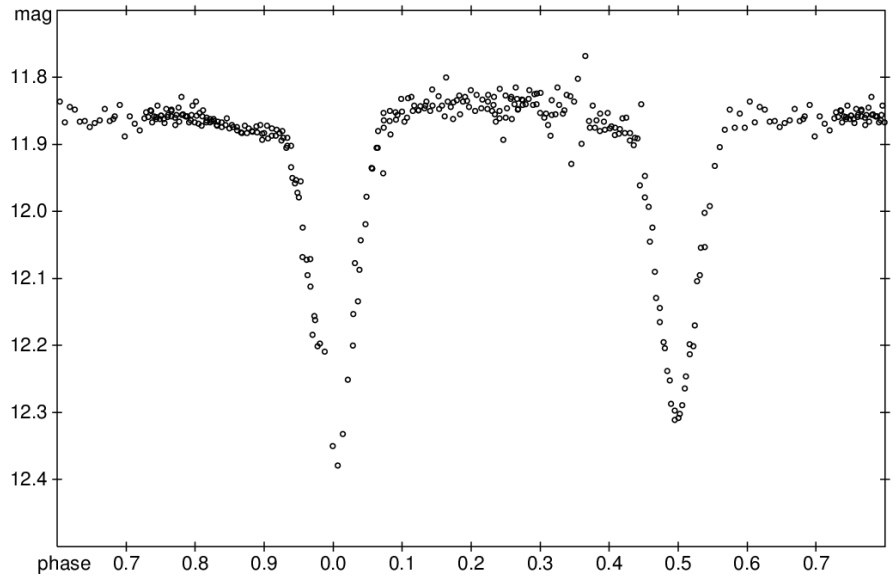

Fig. 10a: Lightcurve for USNO-B1.0 1452-0401705

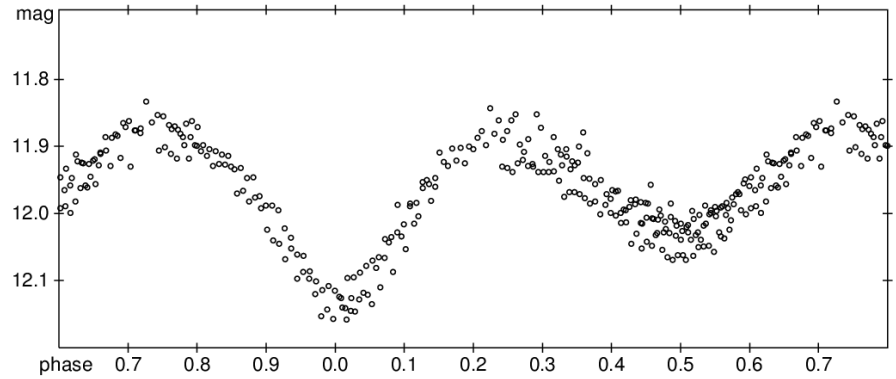

Fig. 11a: Lightcurve for USNO-B1.0 1434-0430910

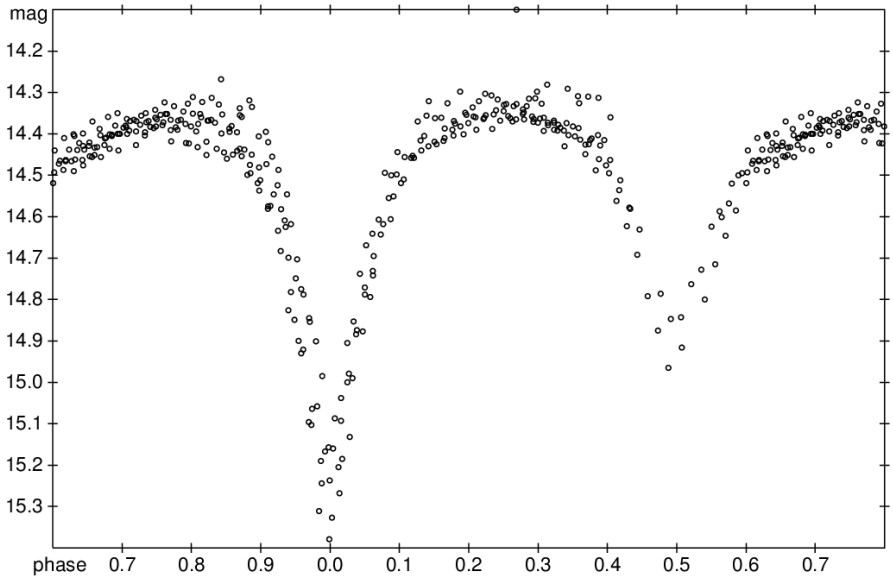

Fig. 12a: Lightcurve for USNO-B1.0 1398-0451707

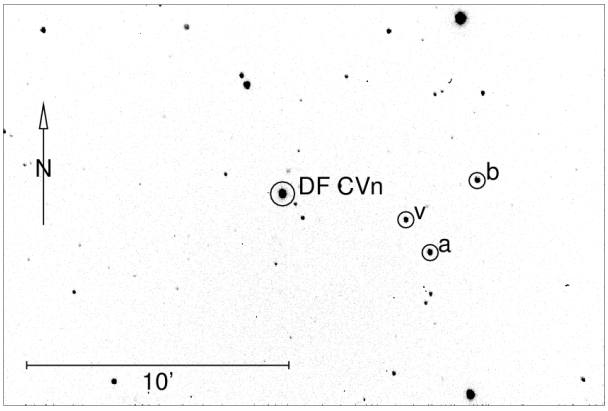

Fig. 1b: Chart for USNO-B1.0 1287-0221347

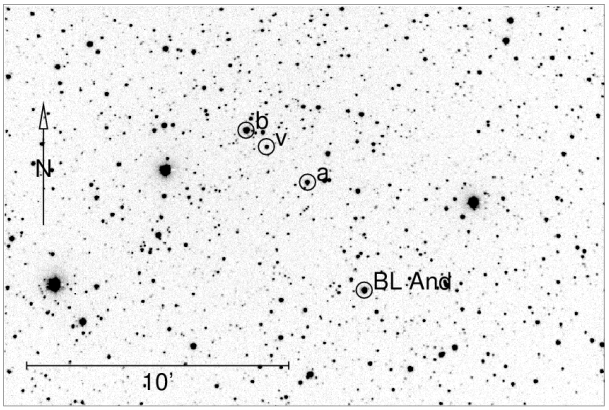

Fig. 2b: Chart for USNO-B1.0 1419-0508154

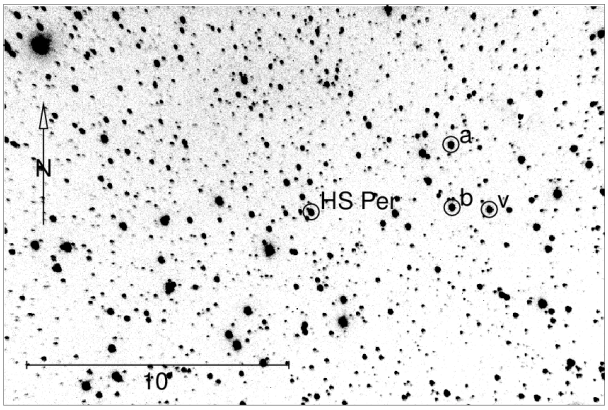

Fig. 3b: Chart for USNO-B1.0 1471-0071486

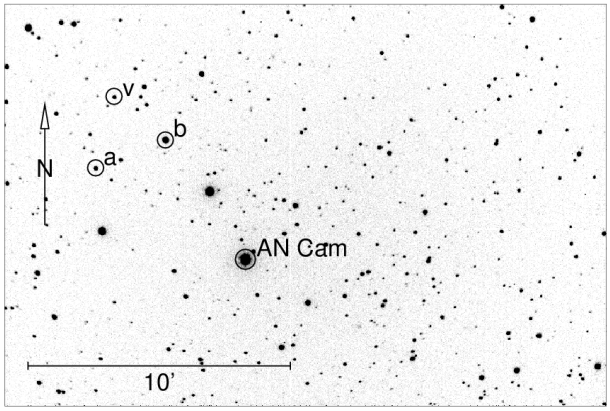

Fig. 4b: Chart for USNO-B1.0 1669-0030065

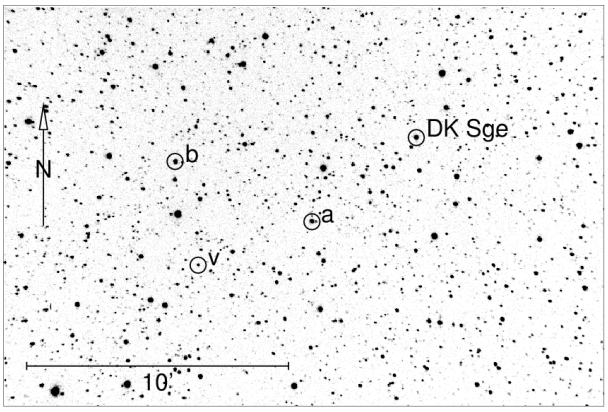

Fig. 5b: Chart for USNO-B1.0 1113-0498137

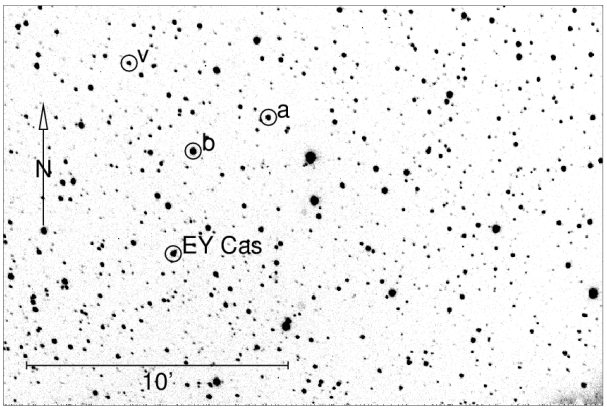

Fig. 6b: Chart for USNO-B1.0 1478-0002611

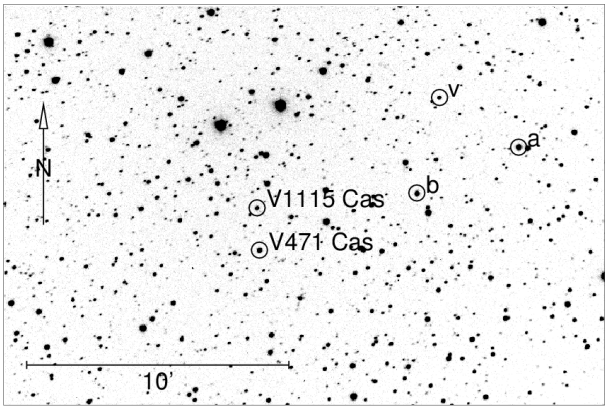

Fig. 7b: Chart for USNO-B1.0 1452-0049820

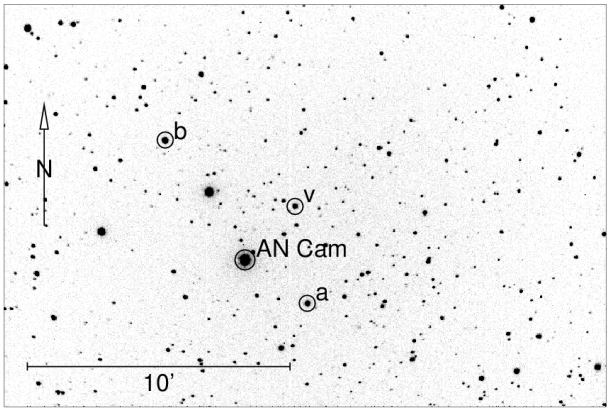

Fig. 8b: Chart for USNO-B1.0 1669-0029801

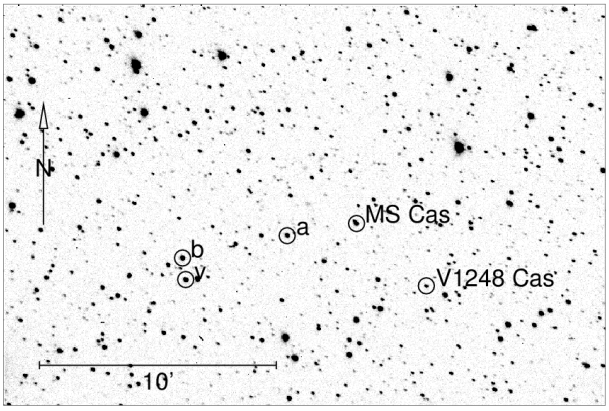

Fig. 9b: Chart for USNO-B1.0 1500-0006438

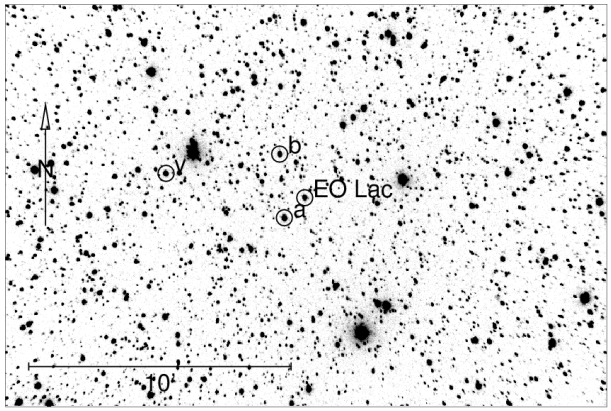

Fig. 10b: Chart for USNO-B1.0 1452-0401705

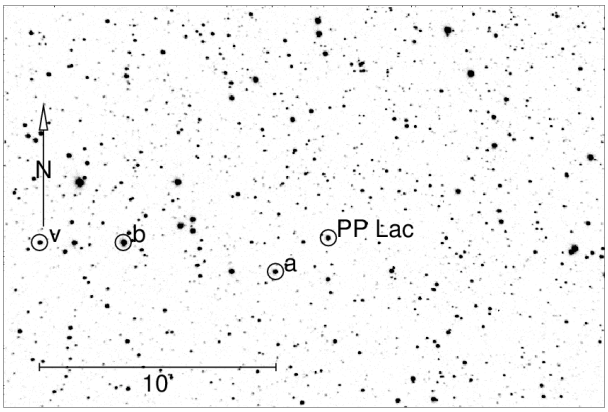

Fig. 11b: Chart for USNO-B1.0 1434-0430910

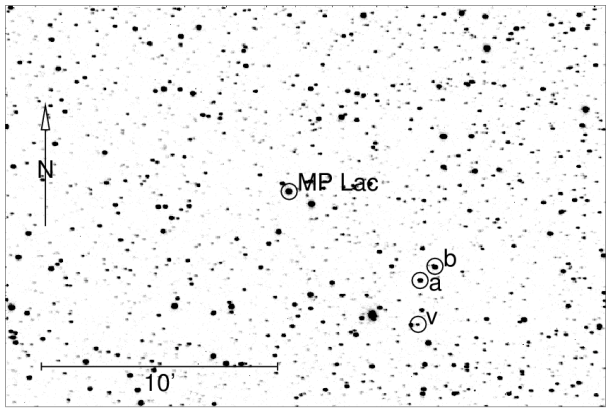

Fig. 12b: Chart for USNO-B1.0 1398-0451707

Remarks:

1	16 minima could be observed between 2004 and 2016
2	7 minima could be observed between 2008 and 2013
3	8 minima could be observed between 2008 and 2015
4	7 minima could be observed between 2009 and 2016
5	10 minima could be observed between 2008 and 2013
6	19 minima could be observed between 2009 and 2015
7	13 minima could be observed between 2009 and 2015
8	12 minima could be observed between 2009 and 2016
9	14 minima could be observed between 2006 and 2015
10	8 minima or parts of them could be observed between 2001 and 2015
11	10 minima could be observed between 2008 and 2015
12	10 minima could be observed between 2009 and 2014

Acknowledgements

This research has made use of the SIMBAD database, operated at CDS, Strasbourg, France

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