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NEW AND CONFIRMED ECLIPSING BINARIES IN THE ASAS-3 AND NSVS DATABASES

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Abstract:
This research presents a list of elements for 120 eclipsing binaries using data from the ASAS-3, NSVS and Hipparcos databases. Some of the systems studied are new and others are confirmed or had wrong elements in the literature.

Methodology

The eclipsing binaries presented in this paper were found combining the methodologies used in OEJV #72 **(Otero, 2007)** for the ASAS database and in OEJV #83 **(Otero, 2008)** for the NSVS database.
ASAS-3 **(Pojmanski, 2005,** http://www.astrouw.edu.pl/~asas3/asas/asas3_catalog_form.html**)** light curves of bright stars (V= 7.5 to 9.9) with B-V smaller than 0.6 and not present in the ASAS catalogue of variable stars were checked for variability using visual inspection. For small amplitude candidates, this check was then repeated using the old ASAS-3 catalogue (http://www.astrouw.edu.pl/~gp/asas/asas3_catalog_form.html) because the observations show higher quality (both in intrinsic scatter and in zero point calibration) due to the use of a different reduction process. Those observations have been used in the analysis instead of the new ones when available.
The public data release from the Northern Sky Variability Survey **(Wozniak et al., 2004)** was searched using the SQL interface available from the Skydot website (http://skydot.lanl.gov/nsvs/nsvs.php). Stars were selected on the basis of a number of statistical criteria. They needed to have at least 60 data points, and a significantly larger standard deviation compared to the average value for their magnitude. It was also required that the mean of squared successive magnitude differences for a star was larger than about 30% of the standard deviation, thus excluding long period variables. Finally, the skewness calculated from a star's magnitudes had to be positive, favouring stars spending more time at maximum than at minimum. Standard flagged data and data with the APINCOMPL mask set **(Wozniak et al., 2004)** were not taken into account during these calculations.
Some of the stars were also selected from the NSV catalogue **(Kukarkin and Kholopov, 1982)** and its supplement **(Kazarovets et al., 1998)** and the GCVS (General Catalogue of Variable Stars, **Kholopov et al., 2006**). Stars in those catalogues that had no given classification or period and with no spectral type published or spectral type earlier than K were checked against the ASAS-3 and NSVS databases.
When data from both surveys were available, the observations have been combined. In those cases the original unfiltered NSVS ROTSE-I magnitudes were shifted to match the ASAS-3 V magnitude of the stars. The amplitude of the eclipses were the same for both datasets so the combination was successful. Saturated data in ASAS-3 and flagged observations in the NSVS datasets were discarded. For some of the brighter stars, available Hipparcos data **(Perryman et al., 1997)** were also used.
Elements were found with AVE **(Barberá, 1996)** and a Microsoft Excel period search utility kindly provided by Patrick Wils **(Wils, 2003)**, who also discovered the variability of some of the stars in this paper. Periods and epochs were then improved by light curve fitting of all the datasets available. The uncertainties are those for when the folded light curve began to show systematic differences. The time span of the observations determines the accuracy of the periods and ranges from 1 (when only data from the NSVS database are available) to 19 years (when there are observations at least from the Hipparcos and ASAS-3 databases).

Results

Table 1 gives positions and cross-identifications for all of the eclipsing binaries studied. The first column gives the star's number in this paper. The following columns give the ASAS or NSVS identifier; other known identification; the variable star designation in case the star is an officially known variable and the star's position according to the NOMAD catalogue **(Zacharias et al., 2005)**.

Table 1 – Positions and cross-identifications for the 120 eclipsing binaries studied.

Star Name				NOMAD position (J2000.0)
#	ASAS/NSVS ID	Other ID	GCVS ID	
1	ASAS 000230-7853.2	GSC 9354-0561	NSV 2	00 02 31.06 -78 53 12.1
2	ASAS 001539+1854.1	HD 1132	New	00 15 38.79 +18 54 04.5
3	NSVS 206432	GSC 4302-1281	New	00 18 24.24 +73 07 24.2
4	NSVS 220265	BD+66 48	New	00 39 56.26 +67 42 55.1
5	NSVS 1674000	BD+60 132	New	00 55 14.25 +61 23 48.7
6	NSVS 1678035	BD+64 99	New	00 56 13.68 +65 07 16.0
7	ASAS 025414-4706.8	GSC 8051-0142	New	02 54 13.51 -47 06 50.3
8	NSVS 4145344	GSC 2859-0900	New	03 09 18.79 +43 44 53.6
9	ASAS 033220-6332.6	GSC 8870-0371	NSV 1193	03 32 19.22 -63 32 33.9
10	ASAS 040259+2718.9	HD 283309	New	04 02 59.25 +27 18 55.4
11	ASAS 045331-0641.7	GSC 4749-1033	NSV 1758	04 53 31.51 -06 41 44.9
12	NSVS 4355247	HD 277177	New	04 54 00.19 +39 33 44.4
13	ASAS 045457+0836.0	HIP 22848	NSV 16192	04 54 56.38 +08 36 00.0
14	ASAS 051203-6510.5	HIP 24221	AR Dor	05 12 03.06 -65 10 32.6
15	NSVS 6916006	HD 243104	New	05 23 36.65 +29 34 27.8
16	ASAS 052853+0634.1	GSC 0113-1822	New	05 28 52.57 +06 34 04.3
17	ASAS 055450+0704.7	GSC 0129-0453	NSV 2727	05 54 50.46 +07 04 42.8
18	NSVS 7049234	GSC 2429-1010	New	06 18 25.73 +34 29 39.1
19	ASAS 063018+2543.7	HD 258278	New	06 30 18.03 +25 43 42.9
20	ASAS 064005+0341.1	HD 261718	V499 Mon	06 40 05.08 +03 41 06.6
21	ASAS 064016+2028.6	2MASS J06401607+2028436	New	06 40 16.07 +20 28 43.6
22	ASAS 064217+2016.9	GSC 1338-1984	New	06 42 17.37 +20 16 48.3
23	ASAS 065008+1630.4	GSC 1331-1781	NSV 3224	06 50 07.35 +16 30 24.9
24	ASAS 065454+1812.8	HD 266084	New	06 54 54.31 +18 12 50.3
25	ASAS 065758+0217.5	HIP 33513	NSV 17253	06 57 57.81 +02 17 32.0
26	ASAS 070922-1620.7	GSC 5964-3133	NSV 3430	07 09 22.55 -16 20 30.7
27	ASAS 071001-6437.1	GSC 8917-1119	New	07 10 01.09 -64 37 07.6
28	ASAS 071242+1605.0	HD 55228	New	07 12 41.66 +16 05 04.5
29	NSVS 682267	GSC 4365-0026	NSV 3639	07 37 01.40 +70 45 50.2
30	ASAS 082819-1042.5	GSC 5432-1651	New	08 28 19.08 -10 42 28.2
31	ASAS 083408-4432.7	HIP 42036	New	08 34 08.14 -44 32 41.4
32	ASAS 083923-0934.7	HIP 42457	NSV 17948	08 39 23.46 -09 34 39.7
33	ASAS 084244-4533.3	HD 74528	New	08 42 43.67 -45 33 18.1
34	ASAS 084516-5351.4	HD 75029	New	08 45 15.55 -53 51 27.6
35	ASAS 085421-3543.6	HD 76339	New	08 54 20.88 -35 43 35.5
36	ASAS 085730-6253.8	HD 77146	New	08 57 29.64 -62 53 49.9
37	ASAS 085740-6630.2	2MASS J08573978-6630123	SZ Vol	08 57 39.78 -66 30 12.4
38	ASAS 090451-3748.1	HD 78037	New	09 04 51.35 -37 48 08.7
39	ASAS 091142-4653.2	HD 79312	New	09 11 42.35 -46 53 10.2
40	ASAS 091225-3803.1	HD 79364	New	09 12 24.86 -38 03 07.4
41	ASAS 093339-5742.1	HD 83061	New	09 33 38.82 -57 42 08.4
42	ASAS 093631+2820.4	HD 83037	New	09 36 31.37 +28 20 23.3
43	ASAS 095048-4441.5	HD 85482	New	09 50 47.64 -44 41 29.4
44	ASAS 095132-4931.4	HD 85607	New	09 51 31.93 -49 31 24.3
45	ASAS 095613-4810.5	HD 86306	New	09 56 12.84 -48 10 28.7

46	ASAS 100452-7928.0	GSC 9405-0307	NSV 4740	10 04 52.50 -79 28 05.3
47	ASAS 100654-4053.4	HD 87842	New	10 06 53.67 -40 53 22.7
48	NSVS 843754	GSC 4542-1465	New	10 15 36.64 +76 41 54.2
49	NSVS 93177	GSC 4636-1311	New	10 16 41.71 +84 32 05.9
50	ASAS 102248-3337.0	HD 90029	New	10 22 48.39 -33 36 58.3
51	ASAS 102736-5823.4	HD 90801	New	10 27 35.85 -58 23 26.5
52	ASAS 102816-5741.6	HD 302839	New	10 28 15.75 -57 41 38.5
53	ASAS 103329-3604.0	HD 91519	New	10 33 29.37 -36 03 57.6
54	ASAS 103400-4731.8	HD 91646	New	10 33 59.50 -47 31 49.9
55	ASAS 103742-7334.8	HD 92438/HD 92453	New	10 37 39.84 -73 34 44.2
56	ASAS 105221-3618.2	SAO 201848	New	10 52 21.38 -36 18 10.5
57	ASAS 105544-6847.5	HD 94924	New	10 55 44.08 -68 47 27.2
58	ASAS 111435-5530.1	GSC 8620-1503	New	11 14 35.48 -55 30 08.3
59	ASAS 111743-5759.5	HD 98310	New	11 17 43.02 -57 59 30.3
60	ASAS 114501-7042.8	GSC 9230-0560	CV Mus	11 45 00.91 -70 42 45.4
61	NSVS 933300	SAO 7479	New	12 00 43.88 +77 05 00.2
62	ASAS 120157-7214.0	GSC 9235-0250	EI Mus	12 01 57.74 -72 14 03.3
63	NSVS 934412	GSC 4550-0183	New	12 06 51.04 +77 18 56.9
64	ASAS 121036-6315.0	2MASS J12103581-6315022	NSV 19271	12 10 35.80 -63 15 02.3
65	ASAS 121451-7433.6	GSC 9239-0020	GM Mus	12 14 50.92 -74 33 32.2
66	ASAS 124338-7746.2	GSC 9417-0733	NSV 5887	12 43 38.27 -77 46 14.3
67	NSVS 898461	GSC 4401-1126	New	13 07 27.53 +69 10 19.0
68	ASAS 131112-4717.4	HD 114423	New	13 11 11.71 -47 17 21.9
69	ASAS 131234-6033.6	HD 114566	New	13 12 34.25 -60 33 38.8
70	ASAS 142755-7252.5	GSC 9265-1422	NSV 6665	14 27 55.26 -72 52 31.1
71	ASAS 143036-7329.8	GSC 9269-1996	NSV 6677	14 30 36.38 -73 29 45.9
72	ASAS 152047-4406.3	GSC 7847-2328	AO Lup	15 20 47.42 -44 06 21.2
73	NSVS 1061580	GSC 4412-1967	New	15 36 36.59 +69 11 20.9
74	ASAS 154607-6040.7	2MASS J15460530-6040351	SX TrA	15 46 05.29 -60 40 35.2
75	NSVS 1048852	GSC 4566-0900	New	15 46 42.68 +81 42 30.6
76	NSVS 1065355	SAO 16887	New	15 52 57.67 +68 43 29.9
77	ASAS 161332-5756.1	GSC 8719-2534	LY Nor	16 13 32.28 -57 56 08.4
78	ASAS 171313-3744.1	2MASS J17131314-3744074	NSV 8300	17 13 13.15 -37 44 07.5
79	NSVS 1118916	GSC 4577-0707	New	17 22 27.42 +80 13 58.6
80	NSVS 1095943	GSC 4421-1708	New	17 35 00.01 +68 59 24.5
81	ASAS 174232-5738.6	GSC 8737-0541	AI Pav	17 42 31.98 -57 38 36.2
82	ASAS 174239+0258.9	GSC 0419-0008	NSV 9555	17 42 38.96 +02 58 51.3
83	ASAS 174323-4733.9	HD 160632	New	17 43 23.34 -47 33 52.6
84	ASAS 174637-5838.8	GSC 8741-0309	NSV 9626	17 46 36.64 -58 38 50.5
85	ASAS 174836-4600.6	SON 8681	NSV 9685	17 48 35.14 -46 00 35.8
86	ASAS 174851-3522.7	GSC 7385-0833	V451 Sco	17 48 51.64 -35 22 30.1
87	NSVS 2960062	GSC 4428-1044	New	17 52 53.51 +67 37 19.8
88	NSVS 1186738	GSC 4429-0655	New	18 12 12.64 +68 42 11.9
89	NSVS 2972767	GSC 4222-0613	New	18 21 13.90 +65 15 09.7
90	NSVS 1198294	GSC 4442-1114	New	18 35 46.04 +73 25 29.5
91	ASAS 184124-3703.1	GSC 7419-1342	ZZ CrA	18 41 23.62 -37 03 06.1
92	ASAS 184427-3717.5	CPD-37 8294	New	18 44 27.35 -37 17 28.1
93	ASAS 193009-2536.1	GSC 6880-1632	New	19 30 08.70 -25 36 03.2
94	ASAS 193443-2422.2	GSC 6889-0302	New	19 34 43.47 -24 22 14.4
95	ASAS 194043+0141.1	BD+1 4065	New	19 40 42.45 +01 41 06.4
96	ASAS 194217-1458.2	HD 185990	New	19 42 17.08 -14 58 13.7
97	ASAS 194249-4119.8	GSC 7941-0130	NSV 12301	19 42 49.15 -41 19 51.7

98	NSVS 3212131	BD+55 2303	New	20 00 50.83 +55 41 21.8
99	NSVS 8480963	HD 331819	New	20 06 53.75 +32 46 58.7
100	NSVS 8534157	GSC 2166-0041	New	20 10 28.75 +29 20 04.9
101	NSVS 3179929	GSC 4232-0281	New	20 11 38.62 +61 33 48.8
102	ASAS 201342+1356.4	HD 355157	New	20 13 42.60 +13 56 24.8
103	ASAS 201352+2133.5	HD 346189	New	20 13 52.01 +21 33 30.7
104	NSVS 8495201	HD 228755	New	20 17 23.76 +36 07 36.0
105	NSVS 8543688	HD 334108	New	20 17 50.67 +28 58 06.5
106	NSVS 5776435	BD+48 3101	New	20 21 00.69 +49 12 18.8
107	NSVS 5738756	2MASS J20302730+4113253	V1827 Cyg	20 30 27.30 +41 13 25.1
108	ASAS 203135+1254.3	GSC 1095-1608	New	20 31 35.02 +12 54 19.9
109	NSVS 5795303	GSC 3578-1636	New	20 38 42.05 +48 41 17.8
110	NSVS 8640243	BD +33 4035	V2247 Cyg	20 48 47.97 +34 26 07.6
111	NSVS 5876294	SAO 50229	New	20 55 19.38 +42 43 31.8
112	ASAS 213418-0340.0	GSC 5212-1461	New	21 34 18.62 -03 39 55.5
113	ASAS 221252+1720.3	GSC 1685-0588	New	22 12 51.79 +17 20 16.2
114	ASAS 221954-4741.6	GSC 8442-0056	UV Gru	22 19 53.90 -47 41 36.9
115	ASAS 223328+1639.0	SAO 107996	New	22 33 28.44 +16 39 01.4
116	NSVS 177929	GSC 4482-1238	New	23 19 06.67 +69 45 14.1
117	NSVS 1428036	GSC 4614-1353	New	23 35 54.67 +81 15 34.0
118	NSVS 187979	GSC 4479-0882	New	23 42 12.09 +67 49 02.0
119	NSVS 192254	GSC 4479-0888	New	23 50 12.87 +68 33 24.5
120	ASAS 235428-1236.6	GSC 5837-0642	New	23 54 27.77 -12 36 34.2

Table 2 lists the elements and data for the stars. The first column gives the star's number in this paper. The other columns give the brightness range of the variable (magnitudes at maximum and at minimum I and II respectively); the passband of the observations (V for ASAS-V and R1 for ROTSE-I magnitudes); the variability type; the period; the epoch of minimum light derived from the complete dataset, the J-K colour as published in the 2MASS catalogue **(Skrutskie et al., 2006)** and the spectral type and its source.

Table 2 – Elements and data for the 120 eclipsing binaries studied.

#	Magnitude range			Filt	Type	Period (days)	Epoch (HJD)	J-K	Spectral type
	Max	Min I	Min II						
1	13.8	14.6:	14.4:	V	EA	0.91727(2)	2453414.52(2)	0.56	
2	9.21	9.5:	9.35:	V	EA	3.12945(3)	2452964.611(8)	0.36	G0 (20)
3	12.63	12.95	12.95	R1	EW	0.39217(3)	2451449.762(6)	0.55	
4	9.50	9.83	9.63	R1	EA	3.5791(9)	2451425.74(3)	0.12	B5 (22)
5	10.02	10.43	10.42:	R1	EA	1.81603(2)	2451339.87(1)	0.07	B9 (18)
6	10.21	10.59	10.50	R1	EA	3.6493(2)	2451390.705(9)	0.62	
7	13.4	14.1	13.85	V	EW	0.2352922(8)	2453639.744(4)	0.49	
8	9.91	10.42	10.30	R1	EA	1.53444(2)	2451540.630(4)	0.17	
9	13.8	14.6	14.0	V	EA	0.553640(5)	2451872.632(6)	0.59	
10	11.27	11.66	11.35	V	EA	2.09160(3)	2451566.648(3)	0.45	G5 (21)
11	12.6	13.0	12.7	V	EA	11.822(3)	2452227.72(5)	0.57	
12	10.81	11.42	10.99	R1	EB	1.10965(3)	2451628.627(5)	0.20	A0 (21)
13	6.85	6.94	6.87	V	EA	1.51058(1)	2447998.857(3)	0.14	A2III (18)
14	7.03	7.16	7.07	V	EA	2.952057(4)	2448608.637(4)	0.28	F5V (6)
15	10.77	11.13	10.84	R1	EA	1.8868(2)	2451531.695(6)	0.32	A5m (23)
16	12.45	12.9	12.9	V	EA:	11.660(1)	2451601.71(3)	0.88	

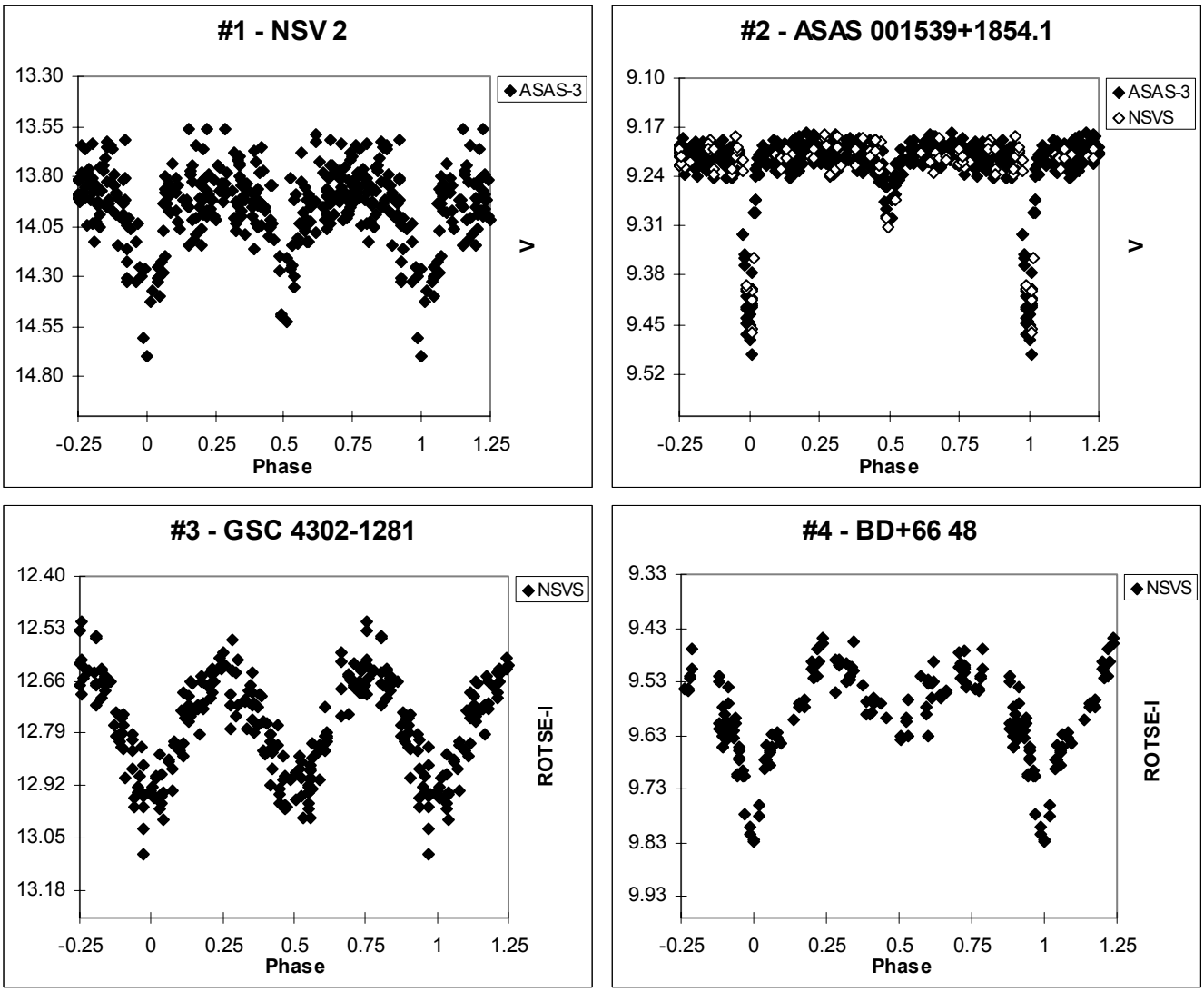
17	13.1	13.7		V	EA	1.52638(2)	2453396.63(2)	0.48	
18	11.22	11.53	11.53	R1	EA	0.78045(2)	2451488.800(5)	0.25	
19	10.39	11.09	10.44	V	EA	2.04642(2)	2454372.884(3)	0.18	A0 (20)
20	11.20	11.55		V	EA	38.95775(9)	2453047.55(1)	0.17	A2V (18)
21	12.42	13.4	12.55	V	EA	2.19763(2)	2453715.792(2)	0.15	
22	11.72	12.35	12.35	V	EW	0.399248(2)	2451612.703(4)	0.25	
23	11.53	<11.90		V	EA	38.044(2)	2453462.58(2)	0.63	
24	10.61	10.83	10.71	V	EB	1.47597(1)	2453483.487(8)	0.13	A2 (20)
25	7.47	7.54	7.48	V	EA	6.7664(1)	2448356.79(2)	0.13	A2:V:m (3)
26	12.85	13.3	13.05	V	EB	1.27288(5)	2454526.63(1)	0.21	
27	11.56	11.8	11.8	V	EA	3.32932(2)	2451933.642(6)	0.24	
28	8.15	8.31	8.28	V	EA	7.5424(1)	2453783.665(4)	0.17	F5pSrSi (18)
29	13.1	14.0:		R1	EA	3.9887(9)	2451590.615(7)	0.20	
30	12.25	12.55	12.55	V	EW	0.407496(2)	2452735.649(6)	0.27	
31	7.46	7.50	7.50	V	EA:	7.8553(3)	2452224.81(6)	-0.17	B2V (18)
32	8.65	<8.80	8.71:	V	EA/DM	92.1711(2)	2448794.107(3)	0.10	A0V (10)
33	8.26	8.52	8.51	V	EA+BE	1.50941(2)	2453010.762(7)	0.05	B2:Vn (11)
34	9.47	9.59	9.51	V	EA/SD	1.031615(6)	2452172.863(5)	0.14	A2/3mA7-A8 (6)
35	9.25	9.35	9.31	V	EB	1.10622(1)	2453040.812(8)	-0.05	B9V (8)
36	8.76	8.94	8.94	V	EA	3.33751(4)	2452619.731(1)	0.15	A5IV/V (6)
37	13.65	14.6:	13.75	V	EA	4.2306(1)	2454205.60(2)	0.40	
38	9.14	9.23	9.22	V	EA	2.18882(3)	2453127.600(8)	0.06	A2IV (8)
39	8.23	8.30	8.25	V	EA	2.61362(6)	2452943.785(8)	0.07	A4V (18)
40	9.87	10.0	9.91	V	EA	2.60431(2)	2453701.827(3)	0.07	B9.5V (8)
41	8.92	9.05	9.01	V	EA	2.08489(4)	2453851.646(5)	0.09	A0V (6)
42	9.10	9.21	9.17	V	EB:	0.379496(2)	2452789.493(2)	0.47	G (15)
43	9.15	9.31	9.21	V	EA	2.45506(2)	2453905.545(4)	0.03	A0V (9)
44	9.52	9.78	<9.63	V	EA	12.43617(9)	2453901.54(1)	0.15	A3/5IV (9)
45	9.55	9.73		V	EA	2.01571(1)	2454172.718(3)	0.05	A1V (9)
46	13.65	<14.8	13.8	V	EA	2.09192(3)	2454159.79(2)	0.37	
47	8.93	9.07	8.98	V	EA	3.45291(5)	2454463.782(7)	0.05	A1IV (7)
48	11.00	11.26	11.06	R1	EA	6.1513(6)	2451567.77(1)	0.35	
49	12.80	13.05	13.05	R1	EW:	0.572734(9)	2451454.75(1)	0.22	
50	9.21	9.28	9.26	V	EA	9.8604(2)	2451906.72(2)	0.22	Fm delta Del (8)
51	9.45	9.64	9.62	V	EA	3.12881(5)	2452703.70(1)	0.03	B2V (11)
52	9.68	9.85	9.77	V	EA	2.04530(3)	2451958.636(4)	0.03	B2 (18)
53	7.68	7.87	7.78	V	EA	2.44514(3)	2453767.696(7)	0.12	A8III (8)
54	8.48	8.64		V	EA	2.86839(2)	2453869.650(3)	-0.04	A0V (7)
55	8.44	8.57	8.56	V	EA	2.45763(2)	2452232.815(3)	0.28/0.29	F6V:/F7:V (3)
56	10.12	10.47		V	EA	1.53364(3)	2453421.758(4)	0.40	G2 (15)
57	7.98	8.17	8.07	V	EB	0.88417(1)	2451339.87(1)	0.09	A1V (6)
58	11.32	11.47		V	EA	3.80399(7)	2454486.72(1)	0.38	
59	9.45	9.54	9.54	V	EA:	1.24357(2)	2454133.79(1)	-0.06	B1.5Vnn (13)
60	13.25	14.7:	13.4	V	EA	1.11104(1)	2453434.84(1)	0.53	
61	10.45	10.77		R1	EA	5.2218(5)	2451370.69(1)	0.25	F2 (15)
62	13.45	14.0:		V	EA	1.35271(3)	2453829.66(2)	0.30	
63	10.98	11.38	11.05	R1	EA	2.09223(2)	2451581.763(2)	0.37	
64	13.0	14.0:		V	EA	0.90819(1)	2453389.805(7)	0.16	
65	13.50	14.3	13.9	V	EB	0.536674(5)	2452105.520(2)	0.47	
66	13.7	14.1		V	EA	4.9695(3)	2453794.81(3)	0.80	
67	12.28	13.25:	12.50	R1	EA	2.34906(7)	2451330.668(6)	0.17	
68	8.22	8.30	8.26	V	EB:	0.88693(3)	2452720.668(5)	0.10:	A0V (7)

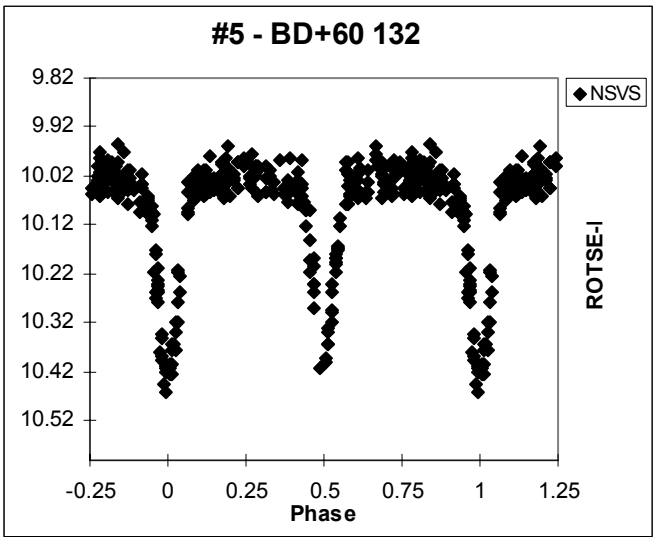
69	8.05	8.16	8.13	V	EB:	10.157(1)	2453476.93(1)	0.17	A1III (15)
70	13.2	13.8	13.5	V	EB	0.551208(6)	2453405.825(5)	0.42	
71	13.3	<14.3	13.5	V	EA	2.7842(1)	2453812.70(2)	0.45	
72	12.95	14.2:	13.1	V	EA	2.75891(4)	2452810.605(9)	0.33	
73	11.25	12.0		R1	EA	3.20644(4)	2451593.733(4)	0.28	
74	13.2	<14.4	13.35:	V	EA	1.90774(3)	2453399.85(1)	0.50	
75	12.39	12.7	12.68:	R1	EA	1.46228(3)	2451571.770(5)	0.28	
76	10.10	10.43	10.24	R1	EA	1.65042(3)	2451414.682(4)	0.31	F8 (15)
77	13.25	14.1:		V	EA	1.39863(4)	2452463.587(9)	0.26	
78	13.1	13.7	13.35	V	EA	2.9567(1)	2454640.64(1)	0.62	
79	13.45	15.0	13.65	R1	EA	1.87622(5)	2451401.796(6)	0.37	
80	12.70	<14.4	13.0:	R1	EA	1.21019(2)	2451332.748(5)	0.36	
81	12.35	13.1:	12.48	V	EA	3.9063(1)	2452040.70(2)	0.68	
82	13.4	14.1	13.7	V	EA	1.11677(1)	2451390.76(1)	0.38	
83	8.68	<8.90	<8.74	V	EA	7.35765(7)	2452898.614(6)	0.16	A0mA5-A7 (7)
84	12.62	13.2	13.15	V	EW	0.494663(5)	2452945.527(4)	0.43	
85	13.4	14.0	13.9	V	EB	0.51275(1)	2452026.800(5)	0.47	
86	11.85	12.2	12.2	V	EA	2.27407(5)	2454329.65(1)	0.32	
87	12.57	13.15	<12.8	R1	EA	10.0799(9)	2451373.71(1)	0.50	
88	12.97	13.6	13.1	R1	EA	1.11377(1)	2451421.790(3)	0.17	
89	10.93	11.20	11.17	R1	EW	1.38061(2)	2451370.860(6)	0.30	
90	12.75	<14.6	13.0	R1	EA	1.20419(2)	2451310.678(5)	0.34	
91	12.65	13.4:	12.7:	V	EA	3.8606(1)	2452814.87(2)	0.34	
92	9.94	10.17	10.14	V	EW:	0.379130(1)	2452814.673(1)	0.28	
93	12.16	13.4	12.22	V	EA	1.516915(5)	2453555.833(3)	0.26	
94	11.47	13.7	11.56	V	EA	1.49863(1)	2453465.866(2)	0.51	
95	10.42	10.67	10.67	V	EA	3.40300(3)	2453153.850(4)	0.45	
96	8.55	8.72	8.62	V	EA	3.70677(4)	2453522.806(7)	0.09	A0V (9)
97	14.2	14.9:	14.7:	V	EA:	2.8765(2)	2452131.63(2)	0.73	
98	10.33	10.55	10.55	R1	EA	1.60275(3)	2451337.882(6)	0.18	
99	10.56	10.87	10.85:	R1	EA	1.34883(3)	2451452.635(7)	0.01	A0 (21)
100	10.78	11.2	11.2	R1	EW	0.63757(2)	2451330.705(9)	0.20	
101	11.48	11.90	11.56	R1	EA	1.72032(3)	2451615.805(4)	0.20	
102	10.85	11.25	11.24:	V	EA	1.746548(8)	2452843.679(5)	0.13	A5 (21)
103	10.41	10.83:	10.82	V	EA	2.97575(3)	2451422.688(7)	0.22	F5 (21)
104	10.16	10.48	10.45:	V	EA:	10.5113(9)	2451518.65(6)	0.64	K0 (20)
105	11.19	11.60	11.60	R1	EA	0.83951(3)	2451464.816(6)	0.26	G5 (21)
106	9.86	<10.24	<10.10	R1	EA	4.9045(1)	2451310.888(5)	0.22	F2 (22)
107	11.4	11.9	11.86	R1	EB:	4.0217(7)	2451328.63(3)	1.19	
108	11.95	12.40	12.08	V	EA	0.753478(2)	2452933.555(5)	0.23	
109	11.66	12.15:	11.77:	R1	EA	3.6028(2)	2451330.704(9)	0.11	
110	10.75	<11.2	11.2:	V	EA	1.25486(1)	2451378.67(1)	0.00	
111	9.02	9.5:	9.4:	R1	EB	2.4931(6)	2451511.60(3)	0.13	A2 (15)
112	12.51	13.8	12.66	V	EA	1.319812(5)	2452790.875(6)	0.25	
113	12.27	12.64	12.64	V	EW	0.960564(8)	2453338.560(7)	0.21	
114	12.75	13.55	13.55	V	EW	0.365690(1)	2454281.873(3)	0.45	
115	9.41	9.56		V	EA	1.01814(1)	2452933.640(5)	0.24	F8 (15)
116	13.02	13.5	13.45:	R1	EW	0.431012(3)	2451479.633(3)	0.53	
117	12.62	12.88	12.88	R1	EW	0.331676(3)	2451524.605(2)	0.44	
118	12.28	12.61	12.52	R1	EB:	0.51978(1)	2451507.885(3)	0.24	
119	11.45	11.68	11.68	R1	EW	0.372266(3)	2451535.698(3)	0.30	
120	12.3	12.8	12.45:	V	EA	1.99119(2)	2452132.775(9)	0.20	A5 (24)

Sources for spectral types in Table 2 (following the numbering in **Otero (2007)**):

3) **Buscombe, 1998**; 6) **Houk and Cowley, 1975**; 7) **Houk, 1978**; 8) **Houk, 1982**; 9) **Houk and Smith-Moore**, **1988**; 10) **Houk and Swift, 1999**; 11) **Jaschek, 1978**; 13) **Kennedy, 1983**; 15) **Ochsenbein, 1980**; 18) **Skiff, 2007**; 19) **Buscombe, 1999**; 20) **Cannon and Pickering, 1993**; 21) **Nesterov, 1995**; 22) **Dieckvoss and Heckmann, 1975**; 23) **Kharadze and Chargeishvili, 1990**; 24) **Slettebak and Brundage, 1971**.

Figures 1 to 120 show the collection of light curves showing the eclipses of all the systems studied in this paper.

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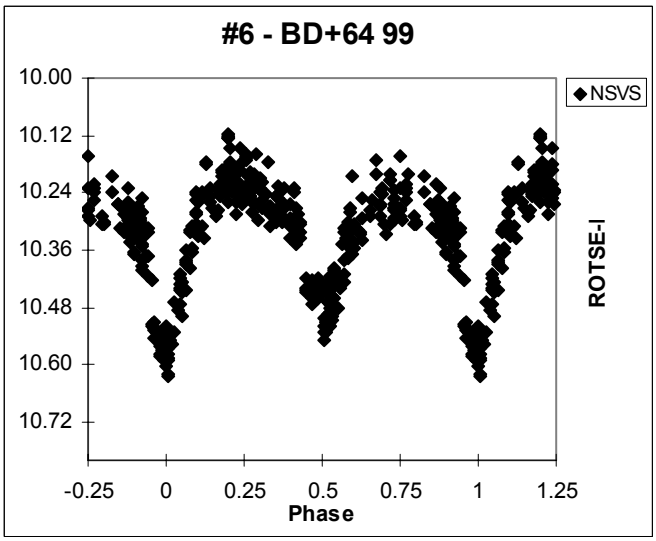
ROTSE-I
Phase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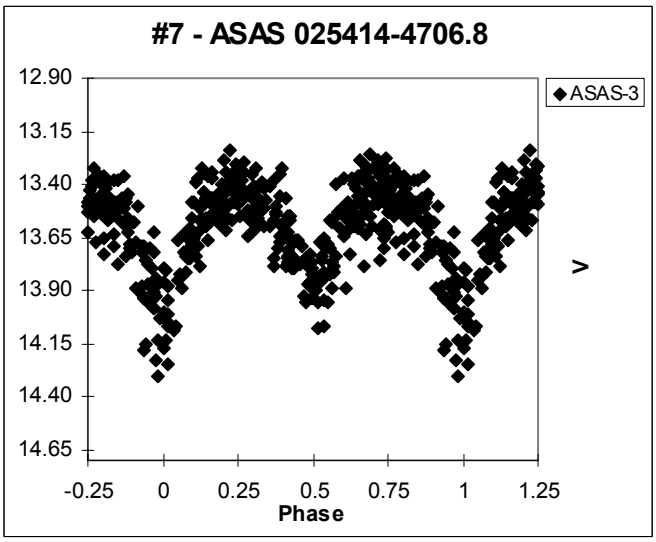
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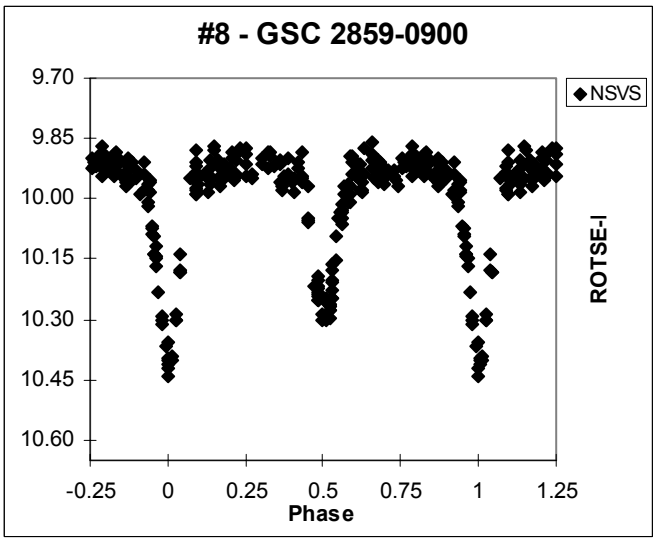
V
Phase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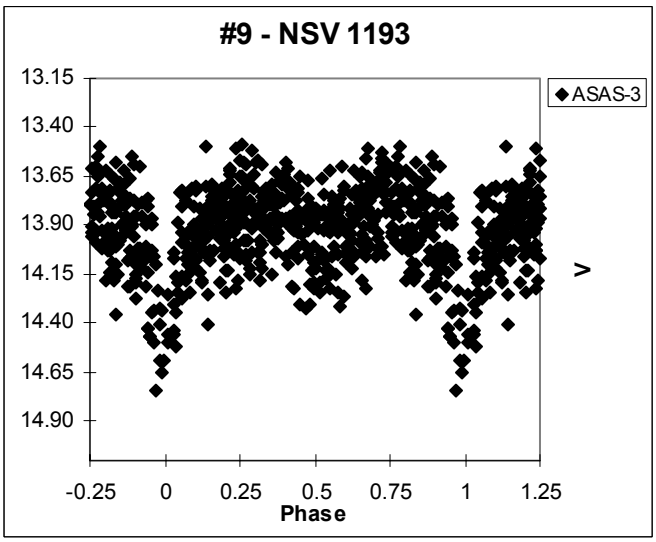
NSVS
ROTSE-I
Phase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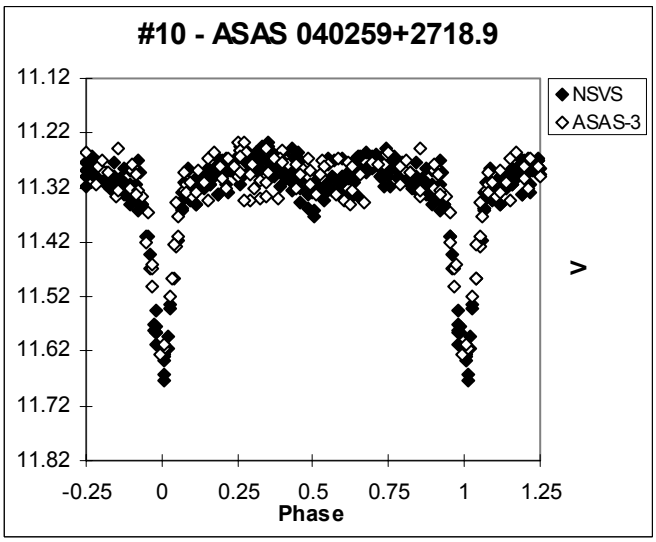
ASAS-3
V
Phase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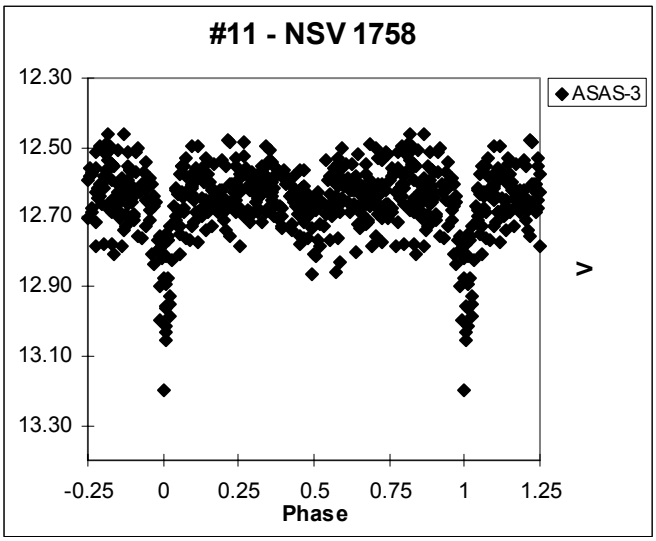
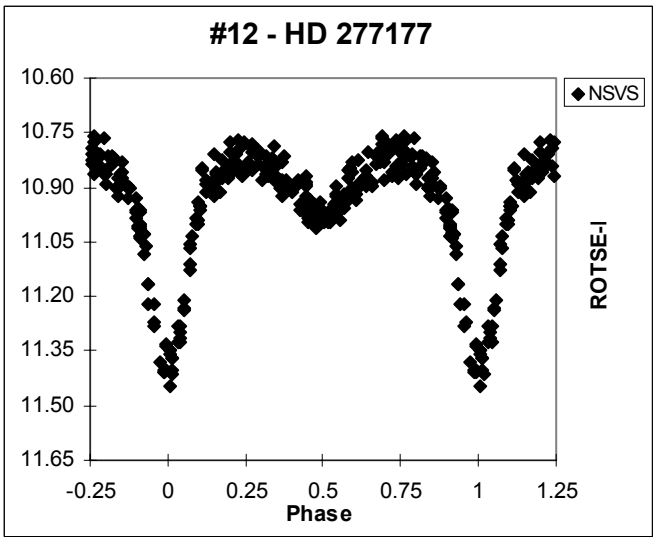
NSVS
ASAS-3
V
Phase


#11 - NSV 1758
ASAS-3
V
Phase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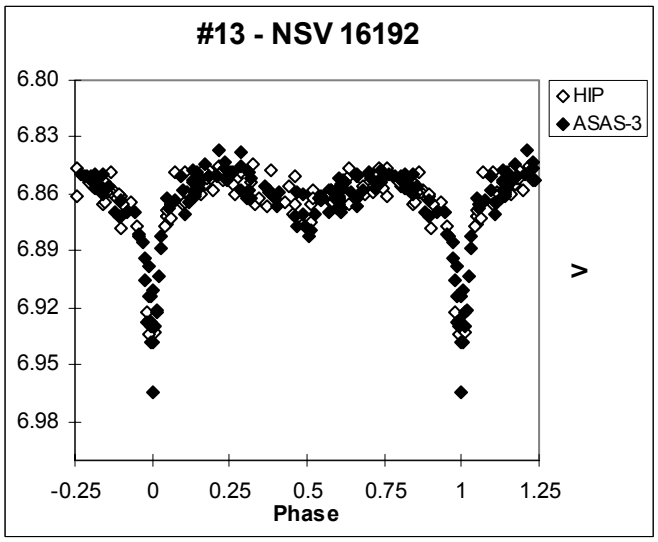
NSVS
ROTSE-I
Phase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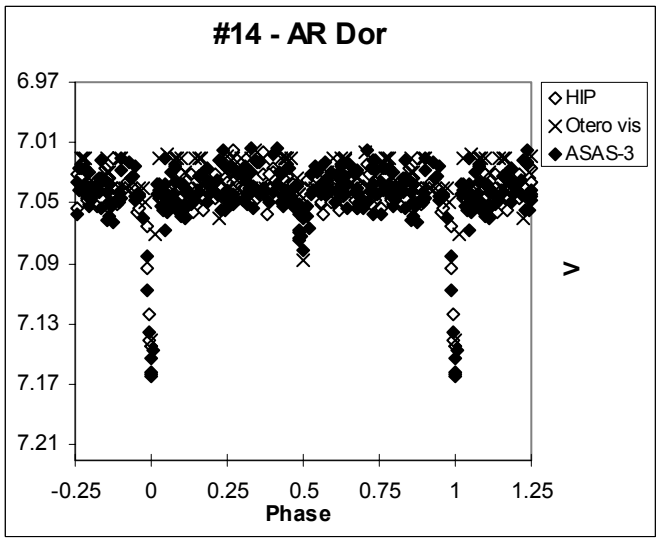
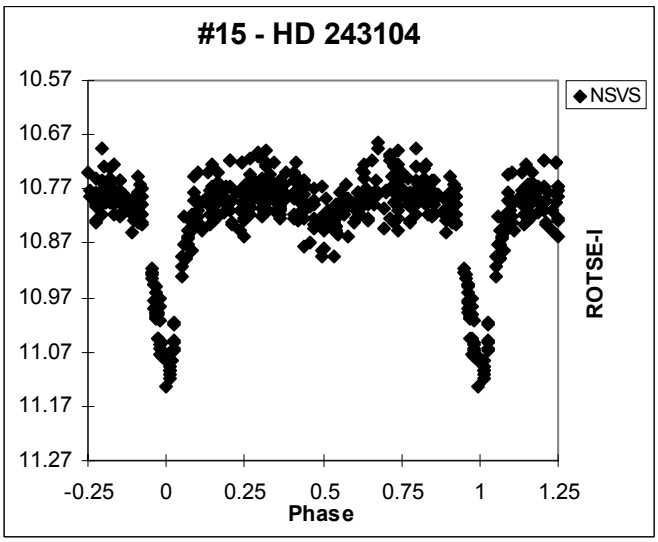
HIP
ASAS-3
V
Phase


#14 - AR Dor
HIP
Otero vis
ASAS-3
V
Phase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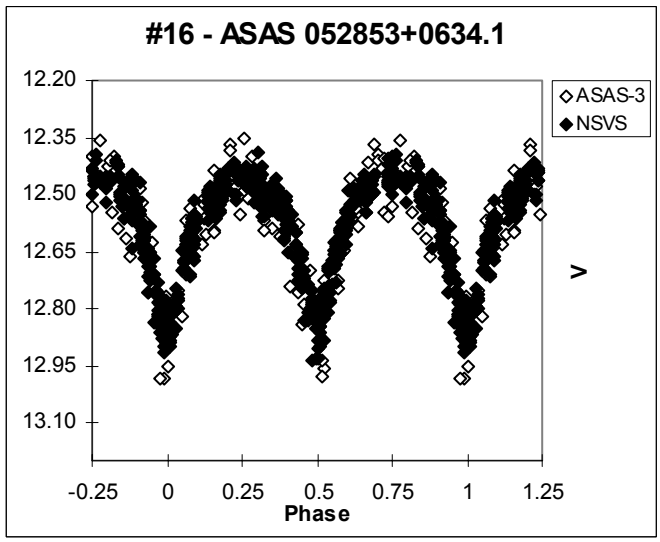
NSVS
ROTSE-I
Phase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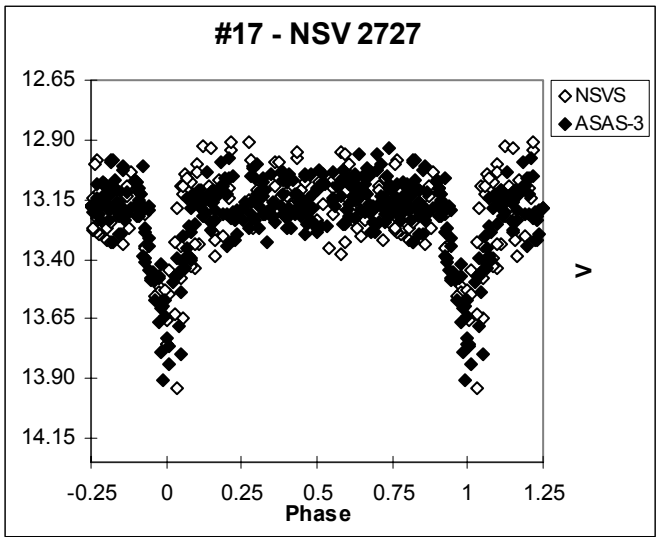
ASAS-3
NSVS
V
Phase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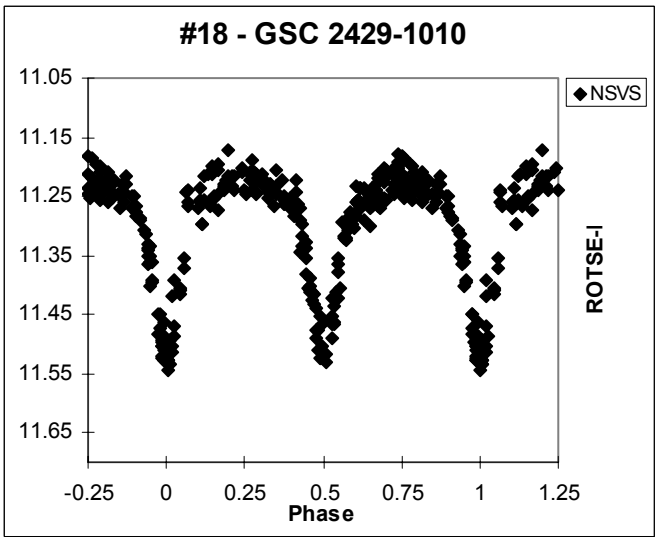
NSVS
ASAS-3
V
Phase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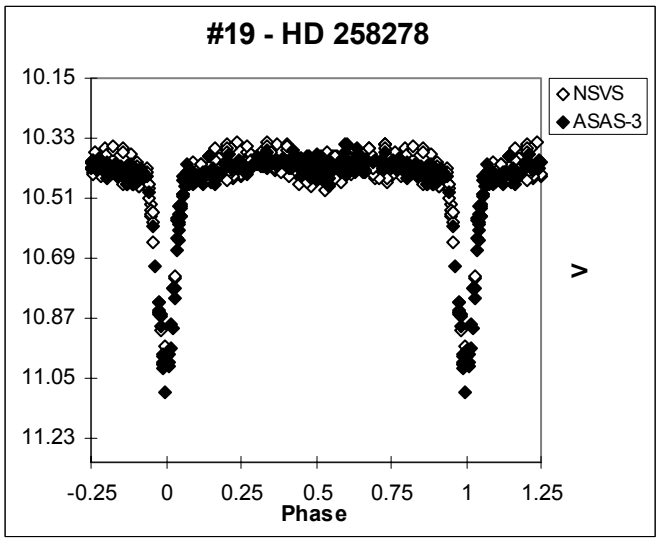
NSVS
ROTSE-I
Phase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NSVS
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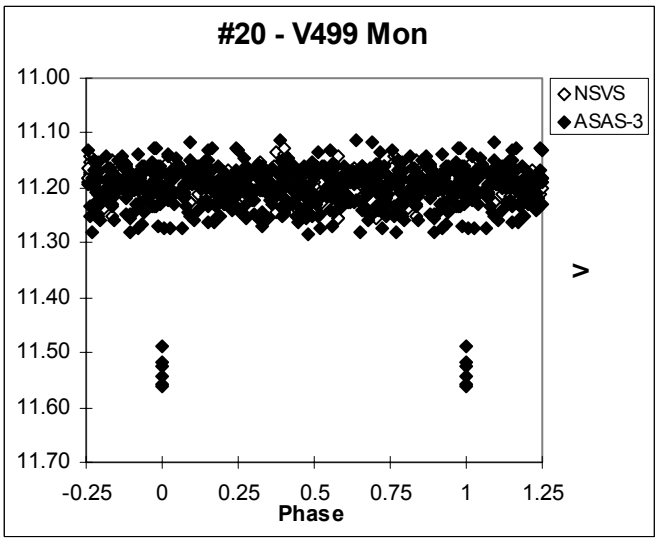
V
Phase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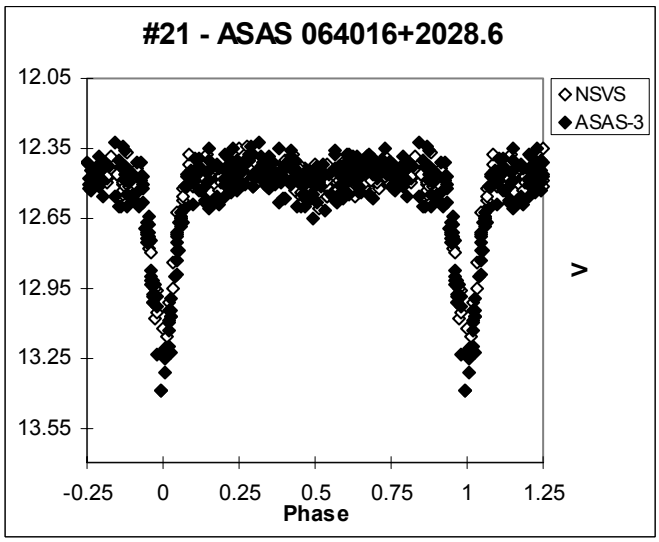
NSVS
ASAS-3
V
Phase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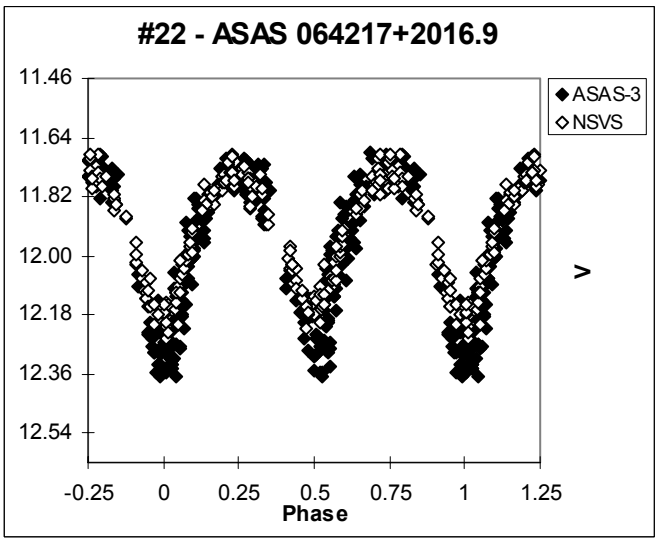
NSVS
ASAS-3
V
Phase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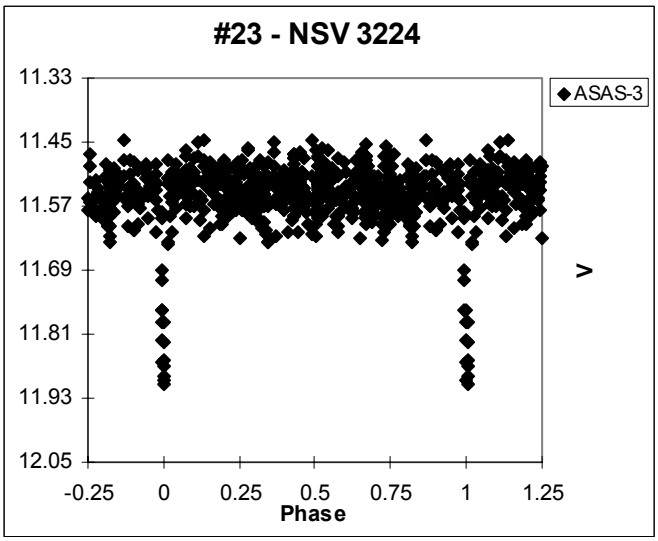
NSVS
V
Phase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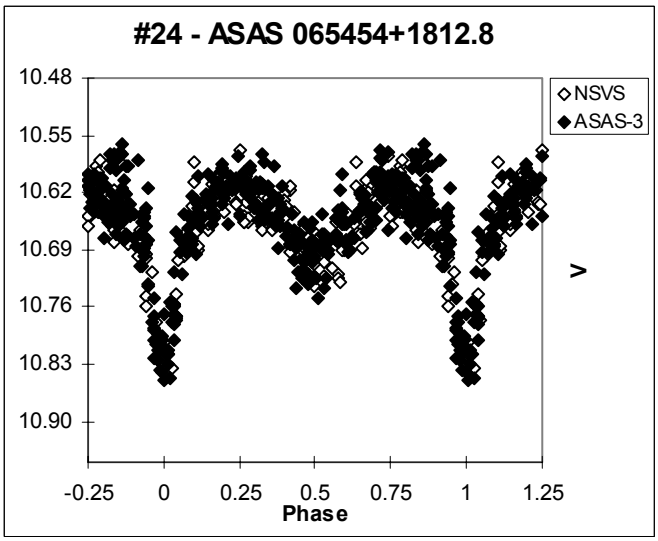
V
Phase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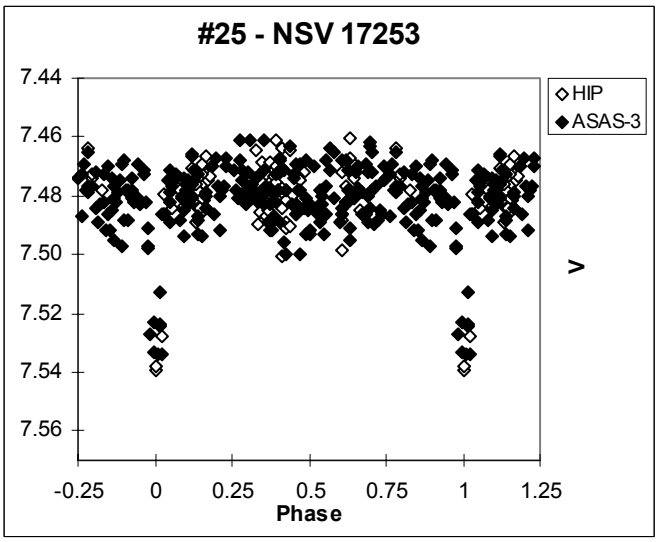
NSVS
ASAS-3
V
Phase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HIP
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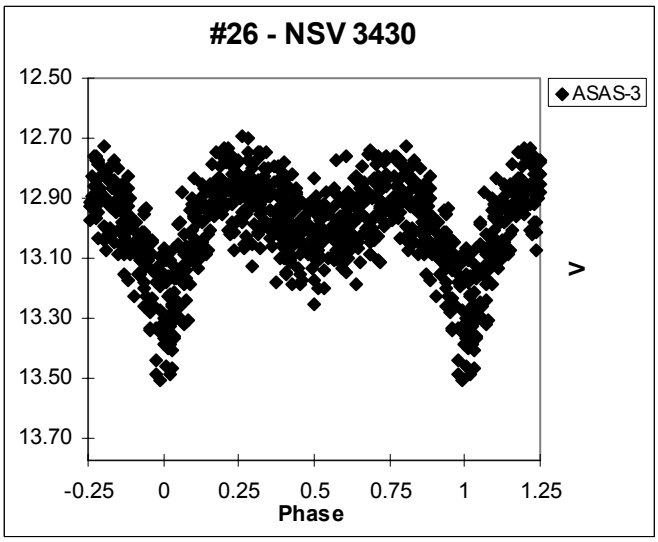
V
Phase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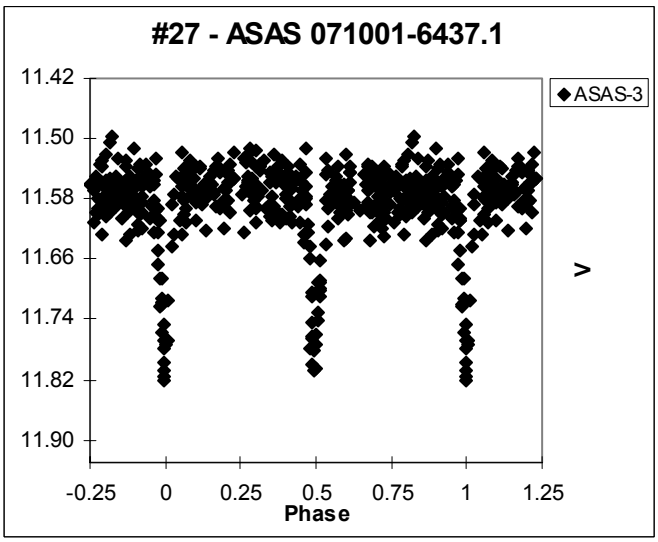
Phase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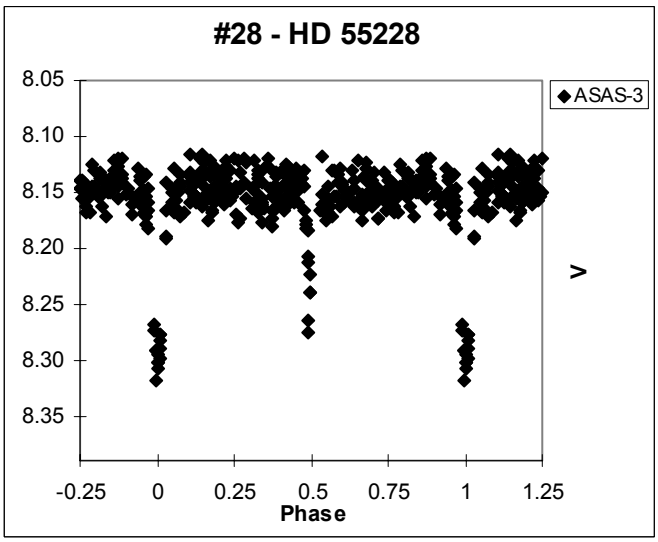
V
Phase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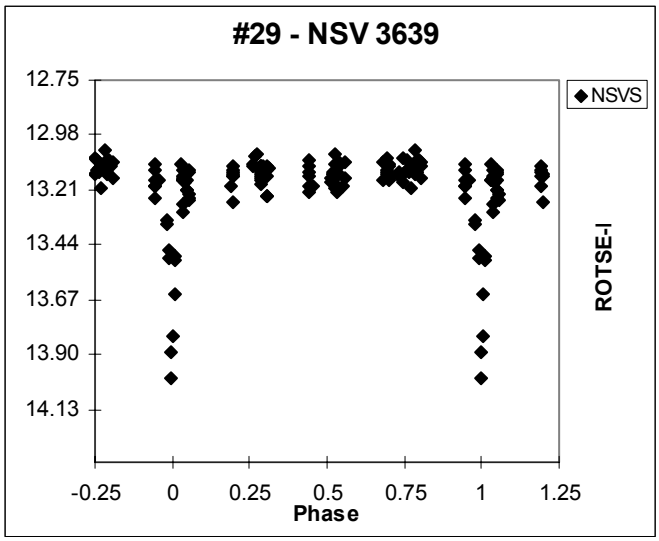
ASAS-3
V
Phase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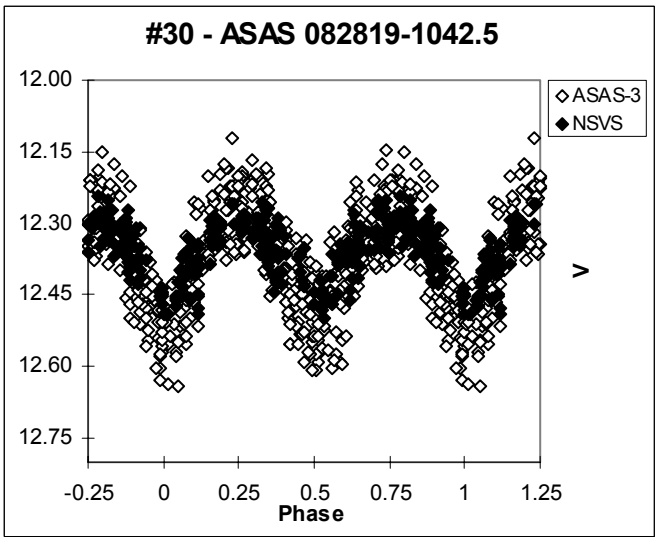
NSVS
ROTSE-I
Phase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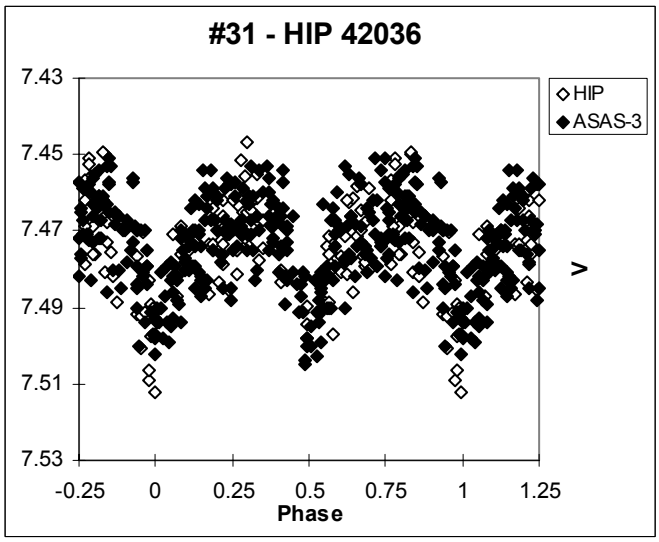
NSVS
V
Phase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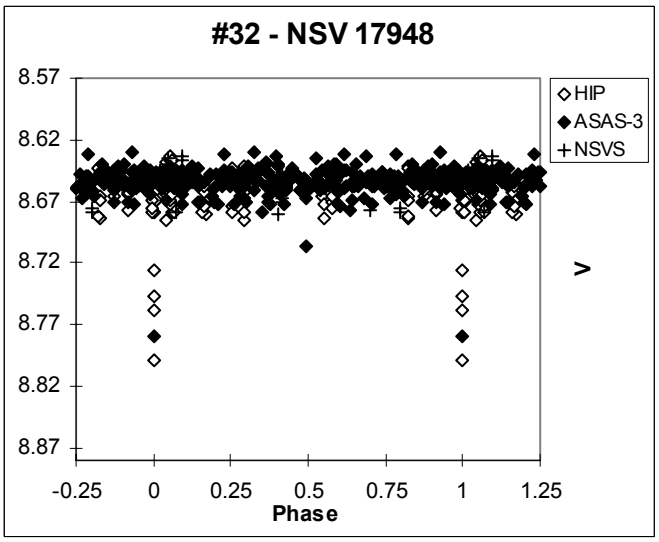
ASAS-3
V
Phase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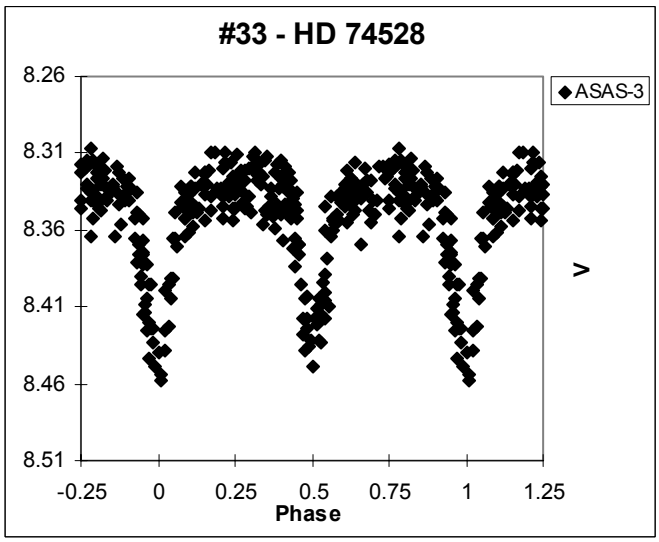
ASAS-3
NSVS
V
Phase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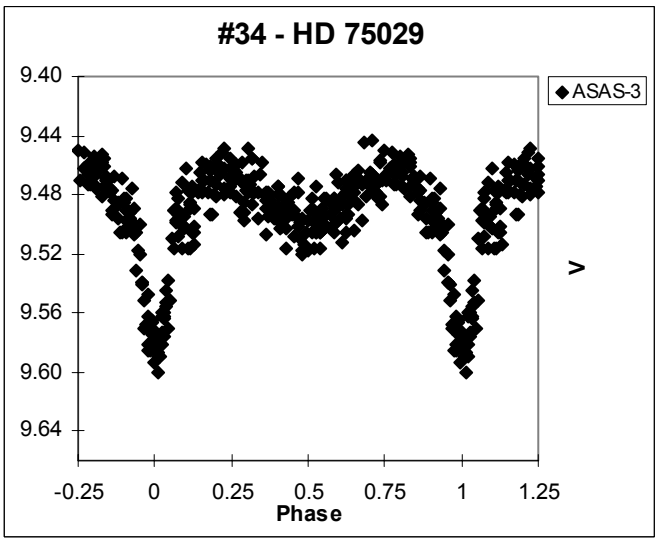
ASAS-3
V
Phase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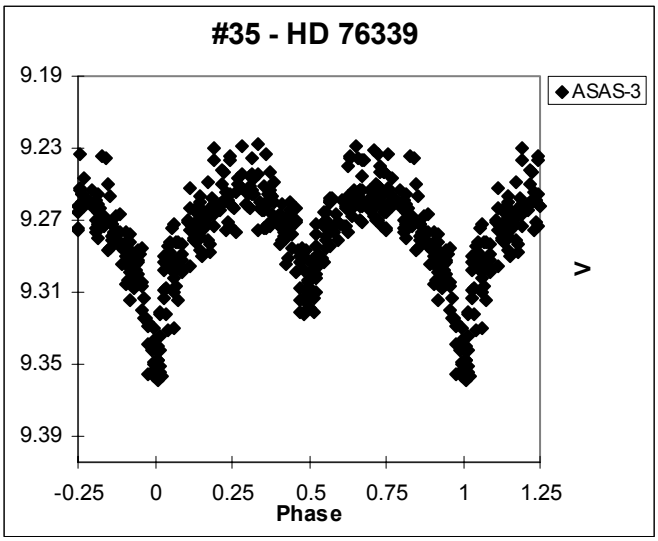
V
Phase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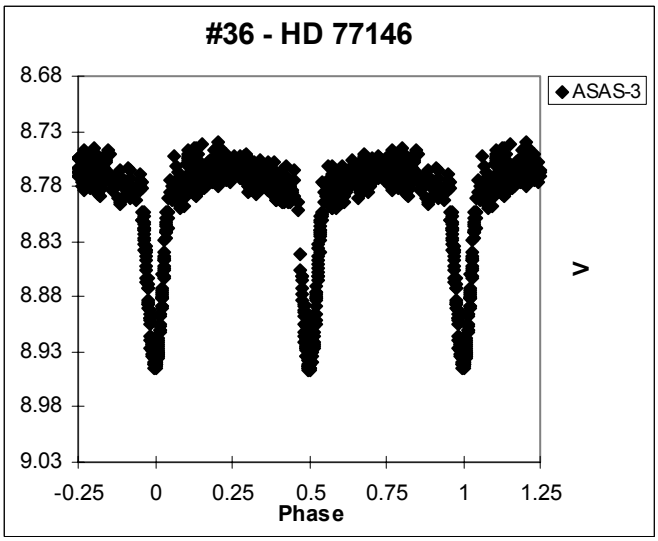
Phase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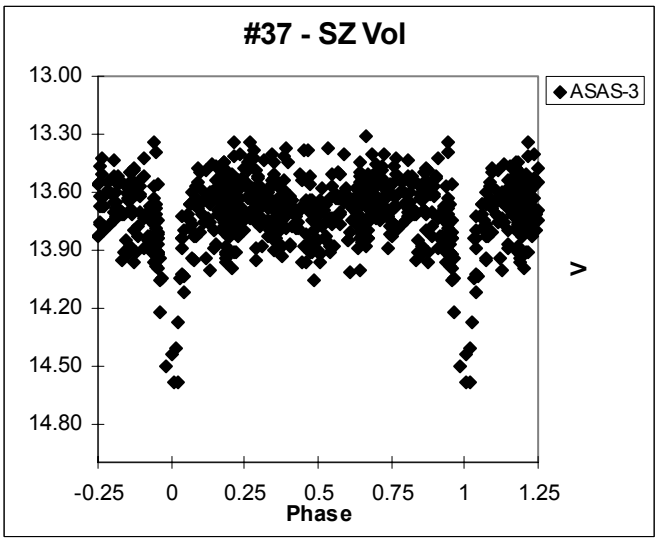
Phase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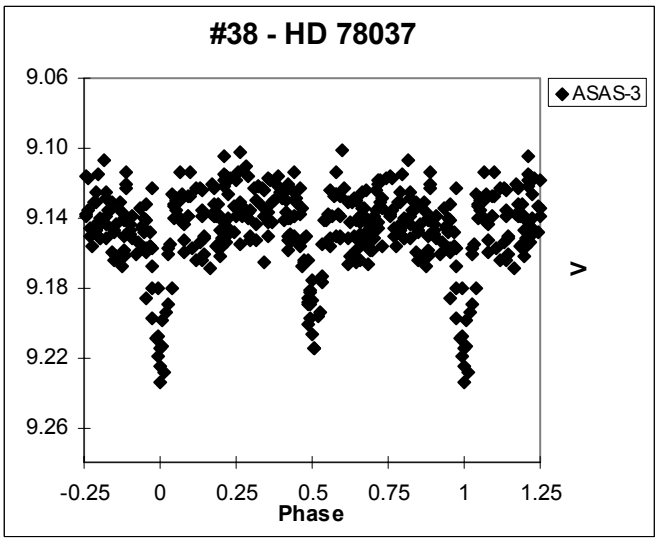
V
Phase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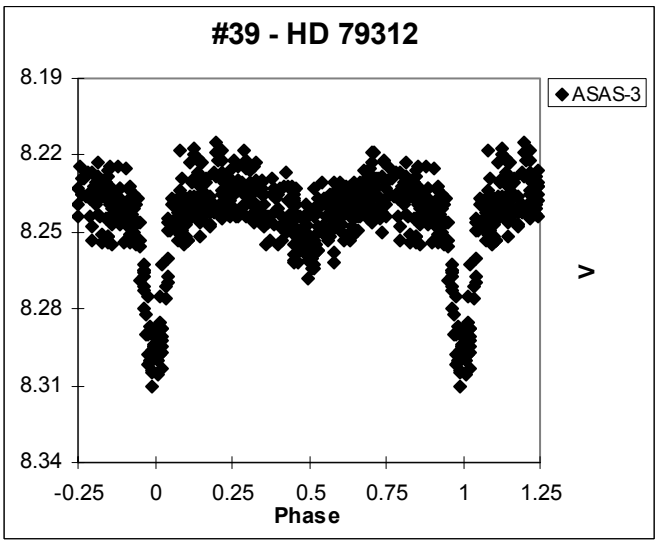
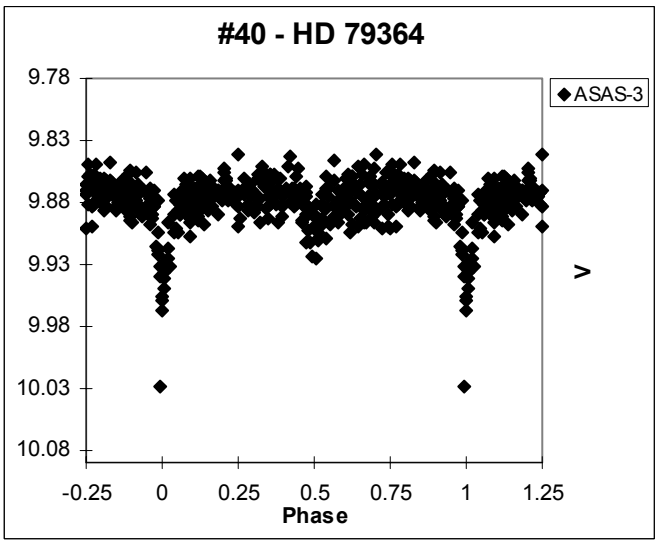
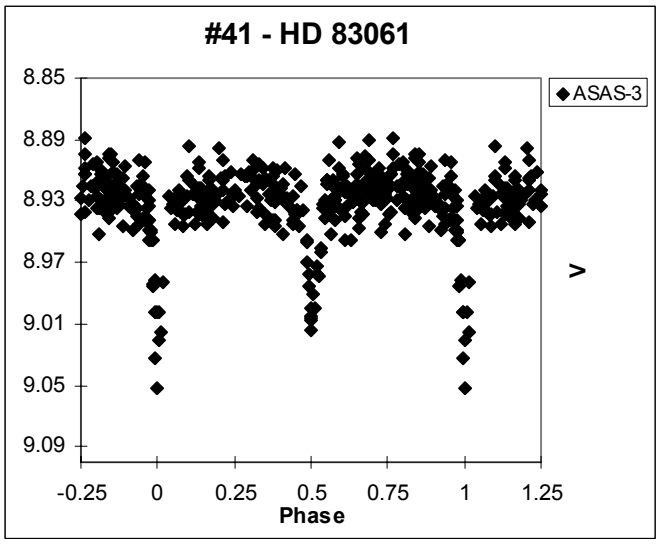
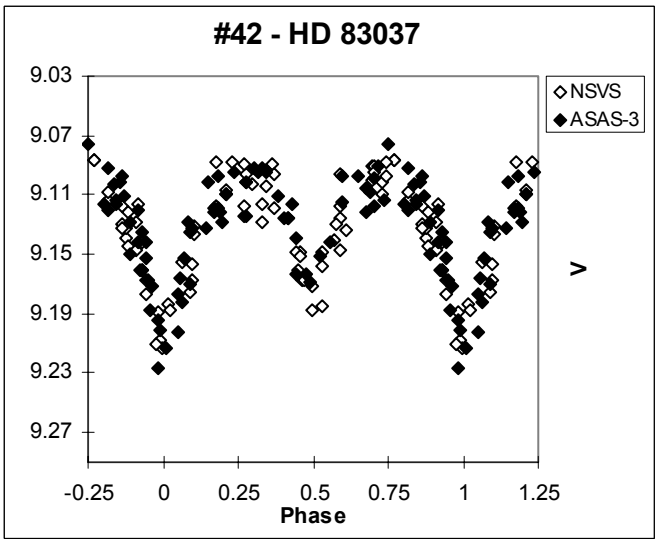
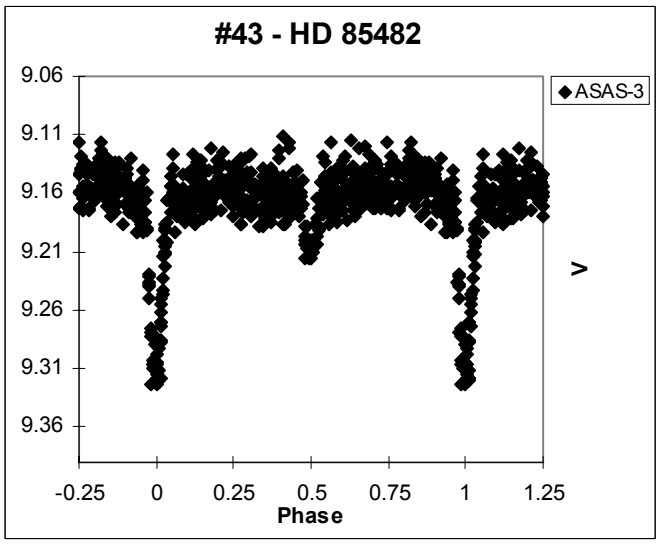
V
Phase

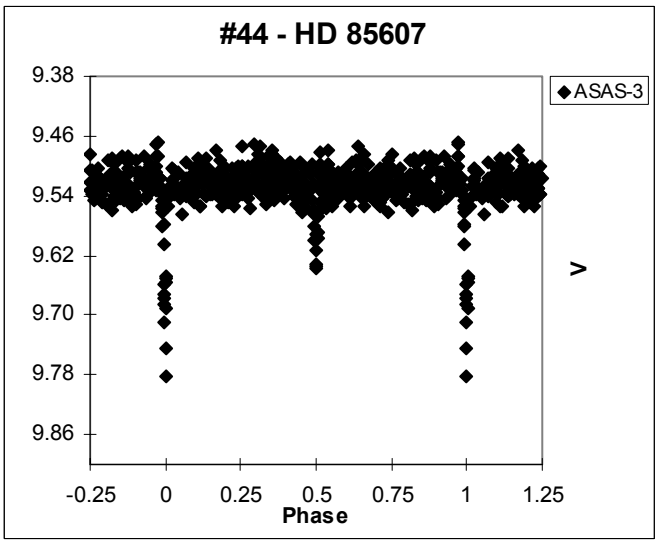

#39 - HD 79312
ASAS-3
V
Phase

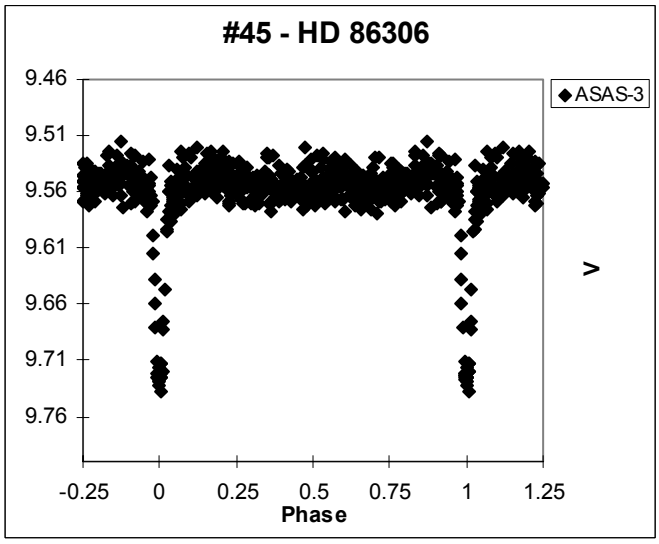

#40 - HD 79364
ASAS-3
V
Phase

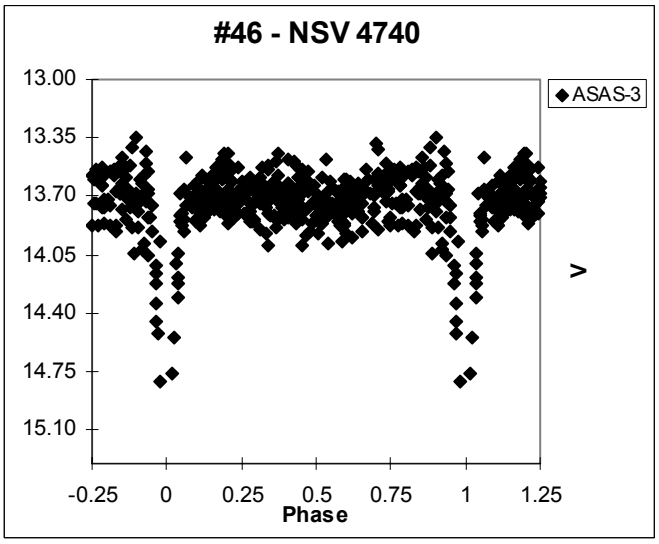

#41 - HD 83061
8.85
8.89
8.93
8.97
9.01
9.05
9.09
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

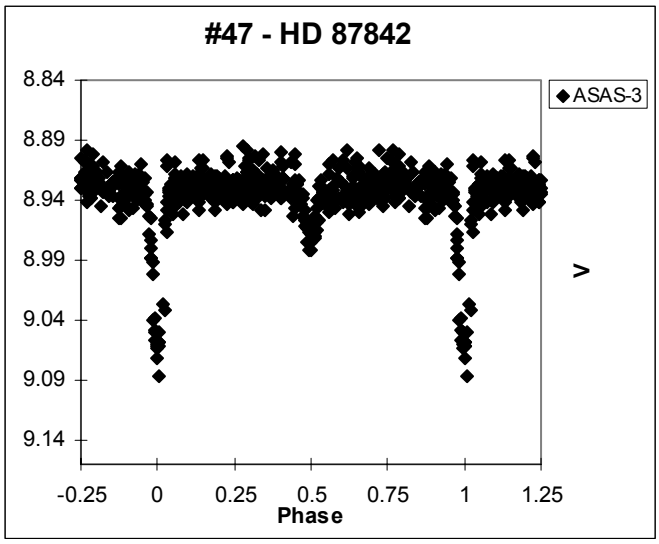

#42 - HD 83037
9.03
9.07
9.11
9.15
9.19
9.23
9.27
NSVS
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

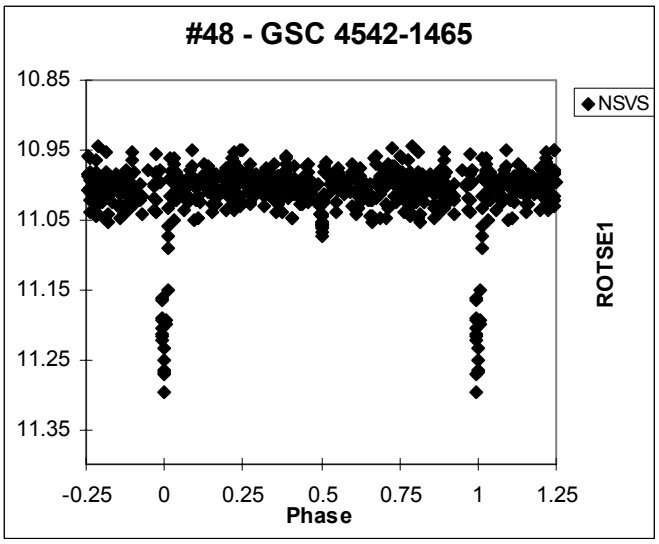

#43 - HD 85482
9.06
9.11
9.16
9.21
9.26
9.31
9.36
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

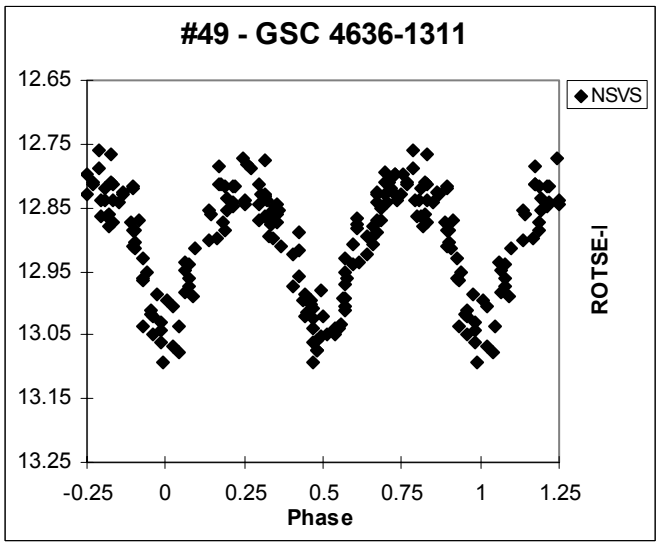

#44 - HD 85607
9.38
9.46
9.54
9.62
9.70
9.78
9.86
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

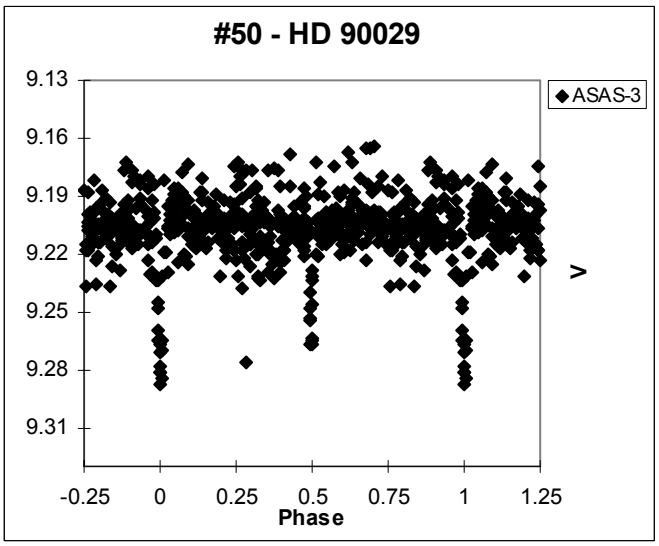

#45 - HD 86306
9.46
9.51
9.56
9.61
9.66
9.71
9.76
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

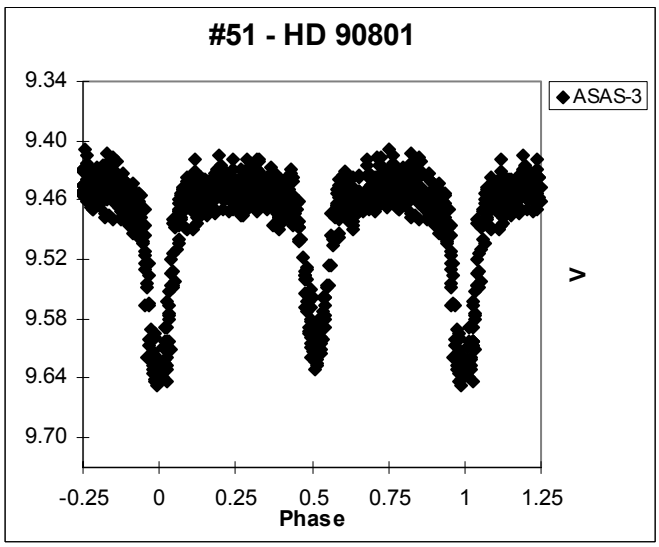

#46 - NSV 4740
13.00
13.35
13.70
14.05
14.40
14.75
15.10
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

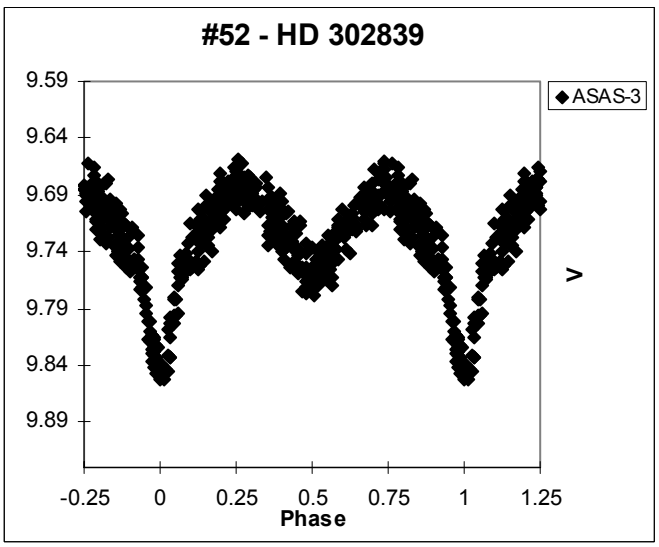

#47 - HD 87842
ASAS-3
V
Phase

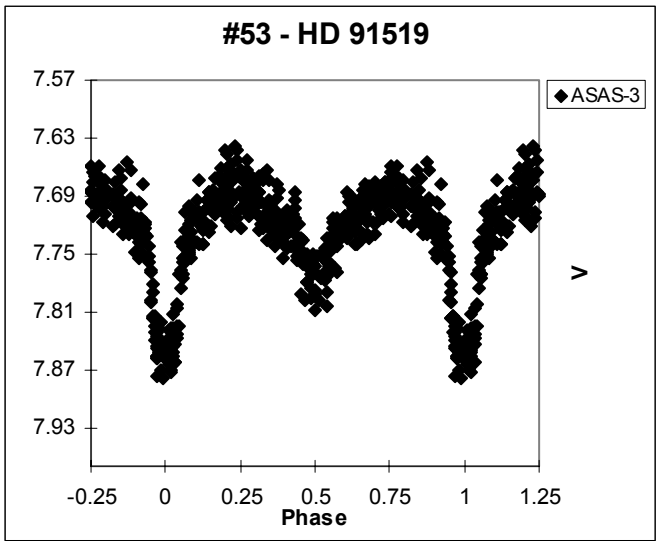

#48 - GSC 4542-1465
NSVS
ROTSE1
Phase

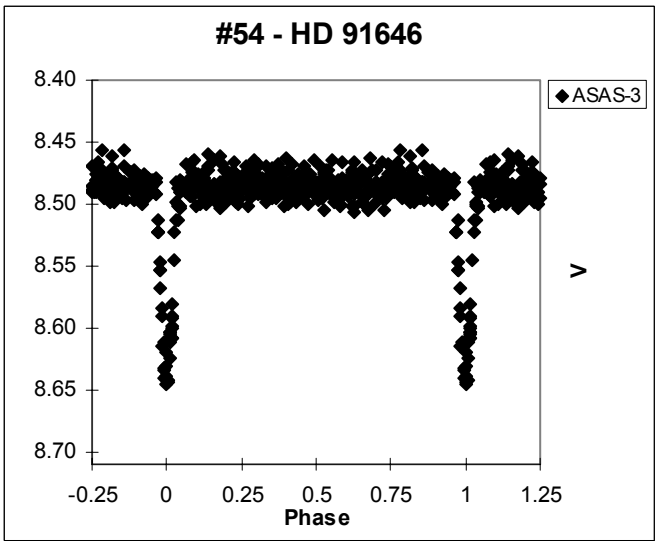

#49 - GSC 4636-1311
NSVS
ROTSE-I
Phase

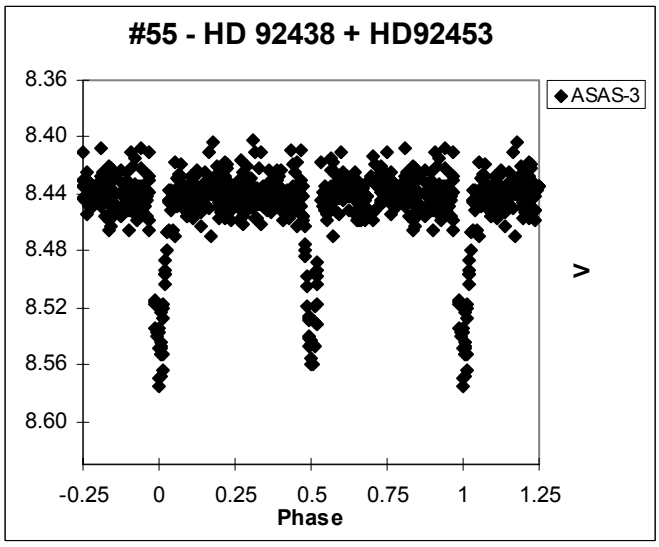

#50 - HD 90029
ASAS-3
V
Phase

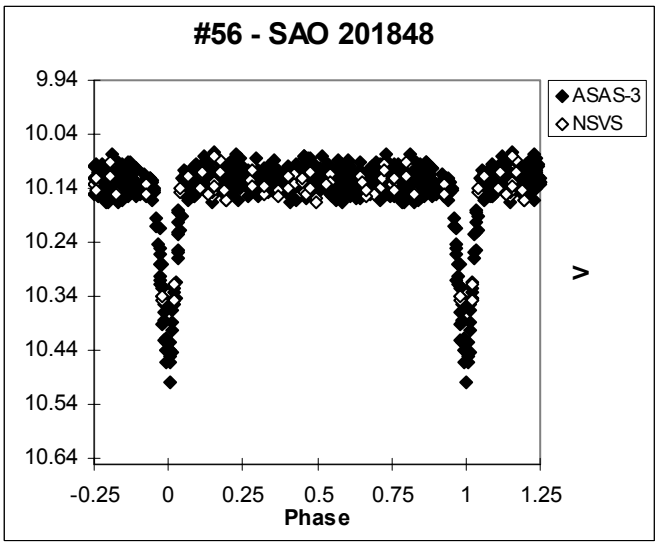

#51 - HD 90801
ASAS-3
V
Phase

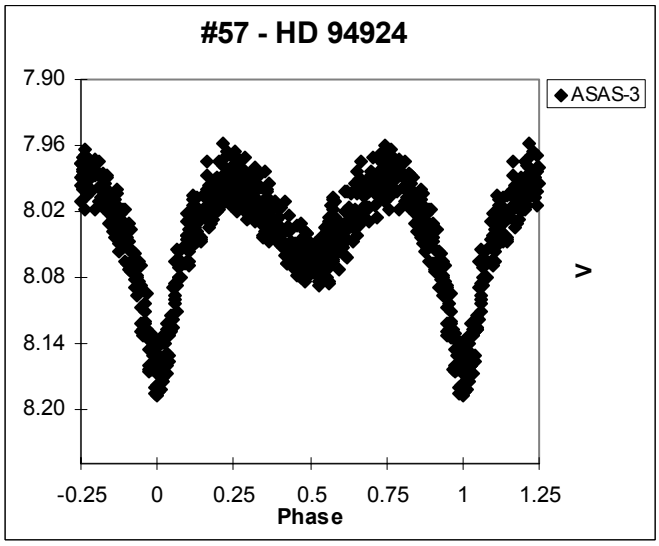

#52 - HD 302839
ASAS-3
V
Phase

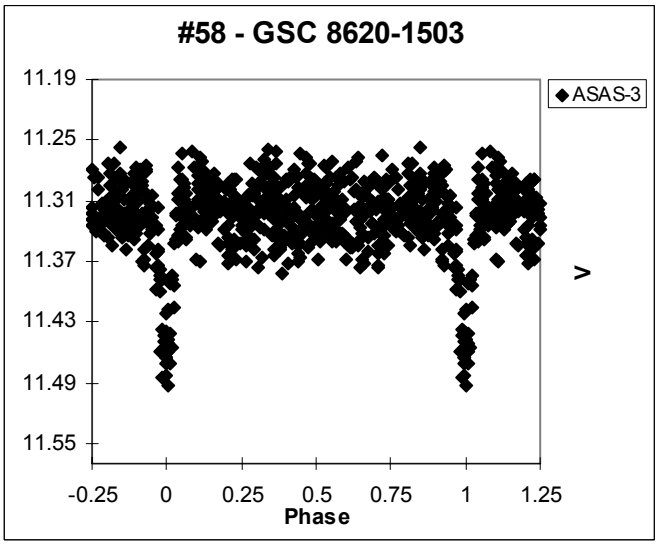

#53 - HD 91519
ASAS-3
V
Phase
7.57
7.63
7.69
7.75
7.81
7.87
7.93
-0.25
0
0.25
0.5
0.75
1
1.25

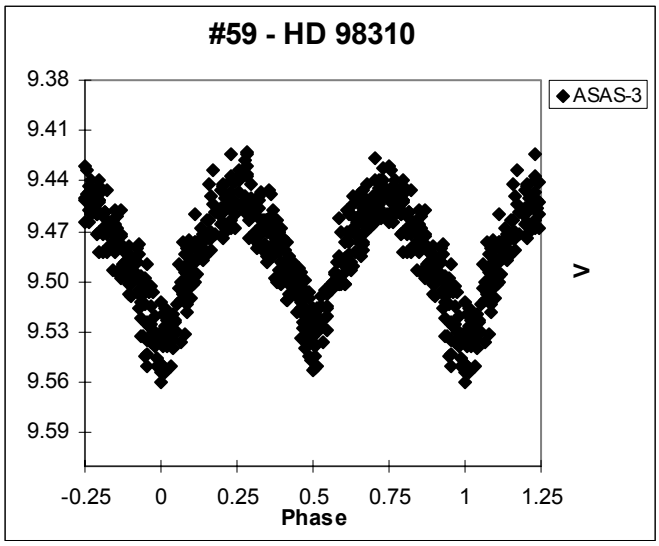

#54 - HD 91646
ASAS-3
V
Phase
8.40
8.45
8.50
8.55
8.60
8.65
8.70
-0.25
0
0.25
0.5
0.75
1
1.25

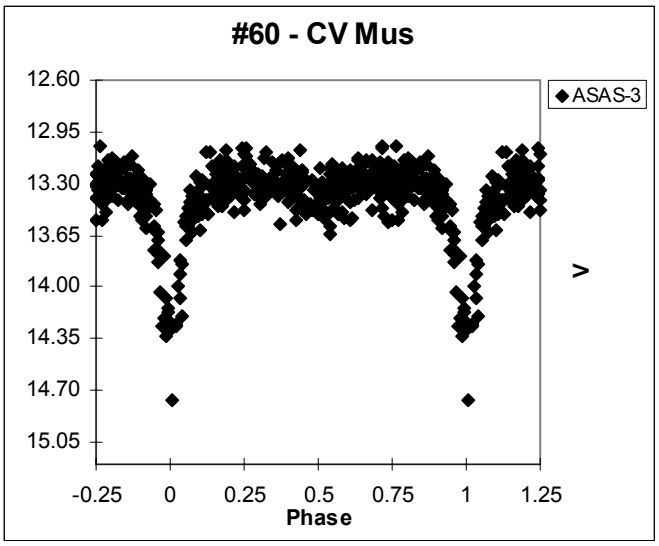

#55 - HD 92438 + HD92453
ASAS-3
V
Phase
8.36
8.40
8.44
8.48
8.52
8.56
8.60
-0.25
0
0.25
0.5
0.75
1
1.25

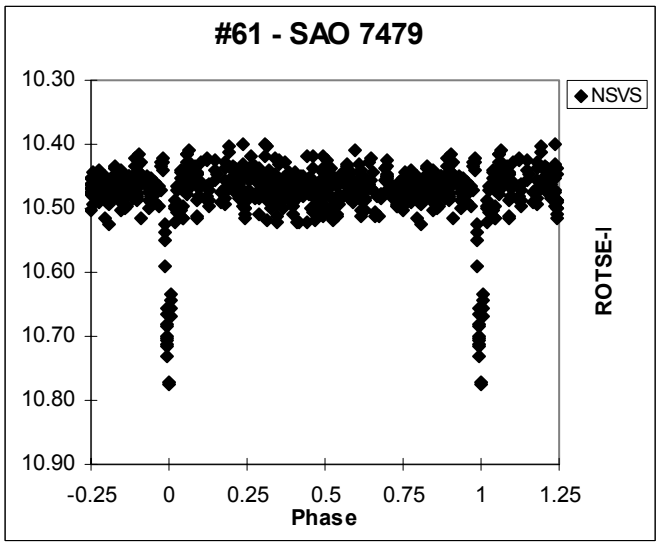

#56 - SAO 201848
ASAS-3
NSVS
V
Phase
9.94
10.04
10.14
10.24
10.34
10.44
10.54
10.64
-0.25
0
0.25
0.5
0.75
1
1.25

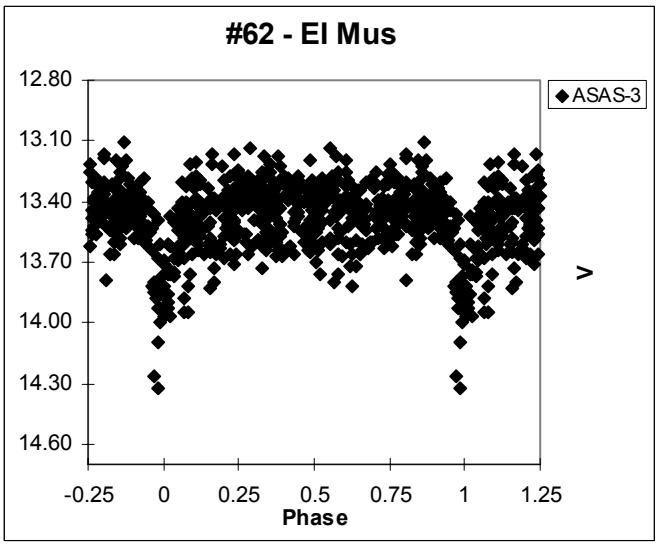

#57 - HD 94924
ASAS-3
V
Phase
7.90
7.96
8.02
8.08
8.14
8.20
-0.25
0
0.25
0.5
0.75
1
1.25

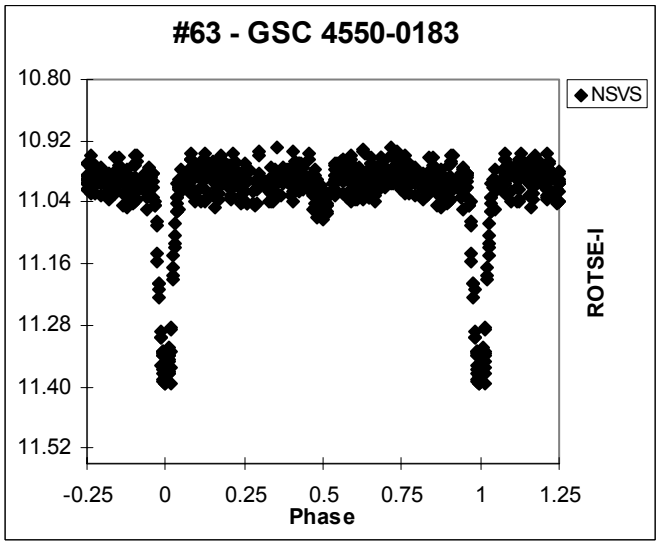

#58 - GSC 8620-1503
ASAS-3
V
Phase
11.19
11.25
11.31
11.37
11.43
11.49
11.55
-0.25
0
0.25
0.5
0.75
1
1.25

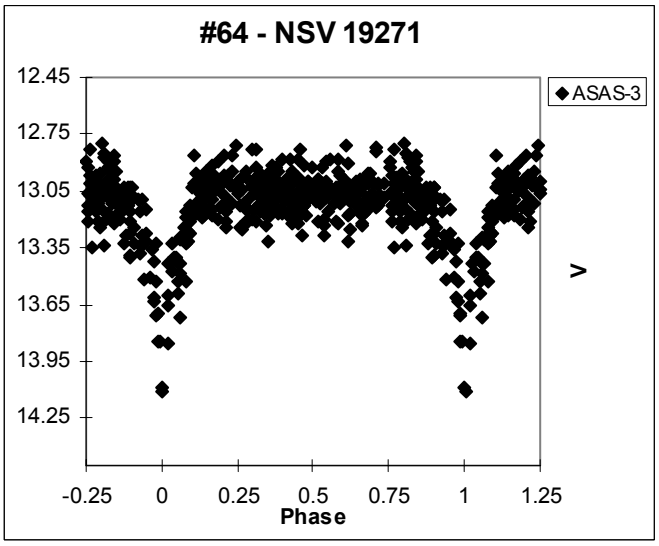

#59 - HD 98310
ASAS-3
V
Phase

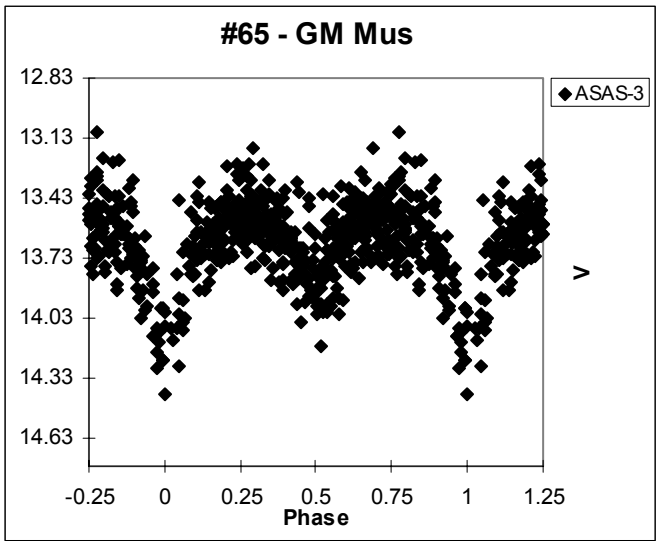

#60 - CV Mus
ASAS-3
V
Phase

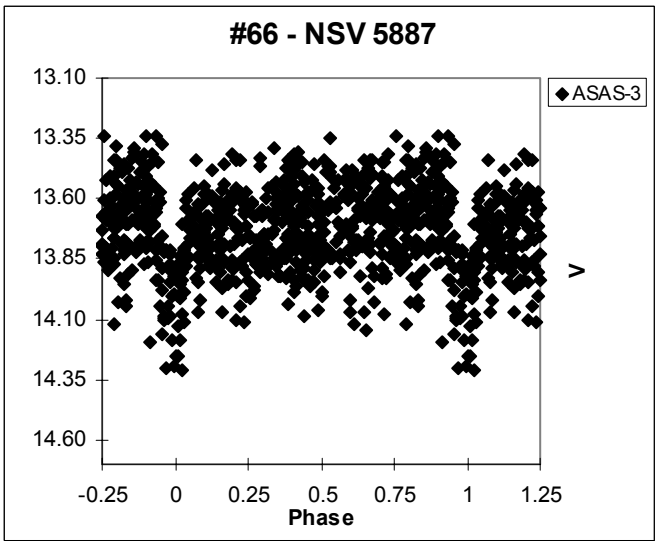

#61 - SAO 7479
NSVS
ROTSE-I
Phase

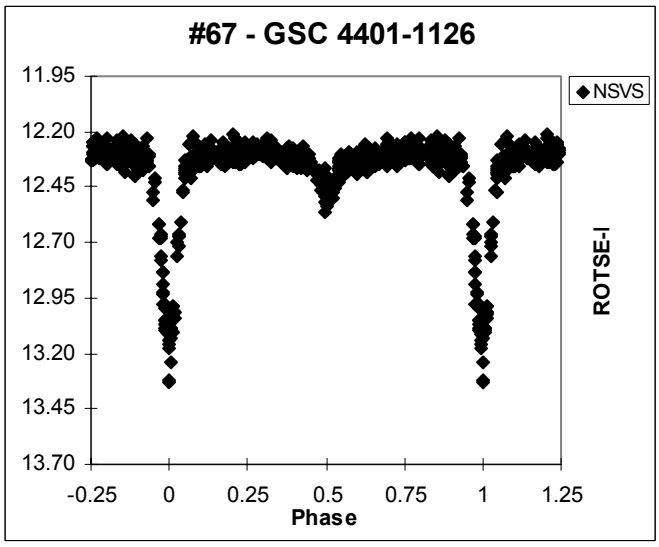

#62 - EI Mus
ASAS-3
V
Phase

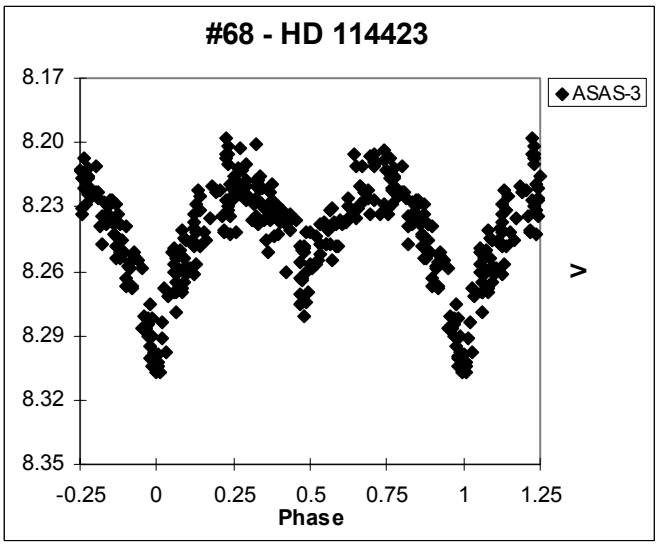

#63 - GSC 4550-0183
NSVS
ROTSE-I
Phase

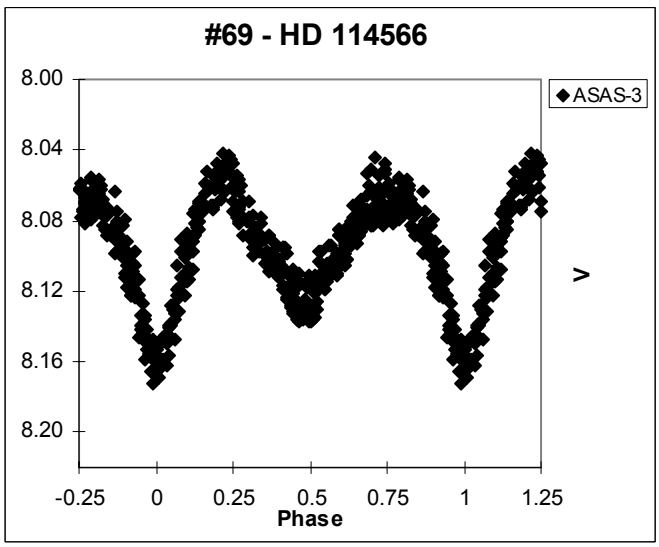

#64 - NSV 19271
ASAS-3
V
Phase

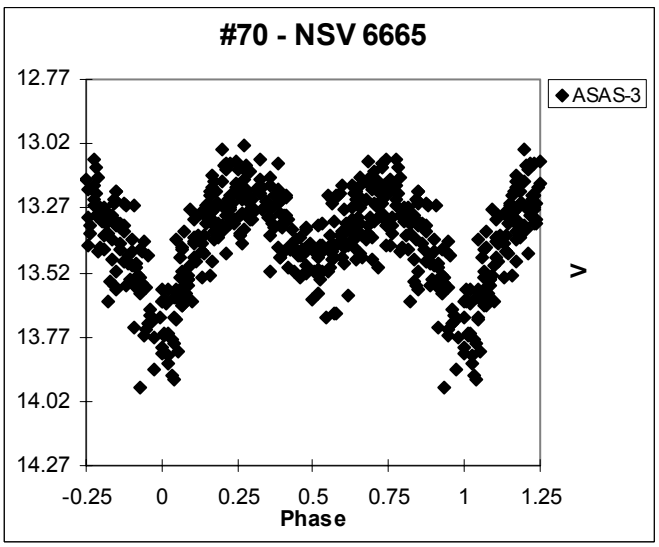

#65 - GM Mus
ASAS-3
V
Phase
12.83
13.13
13.43
13.73
14.03
14.33
14.63
-0.25
0
0.25
0.5
0.75
1
1.25

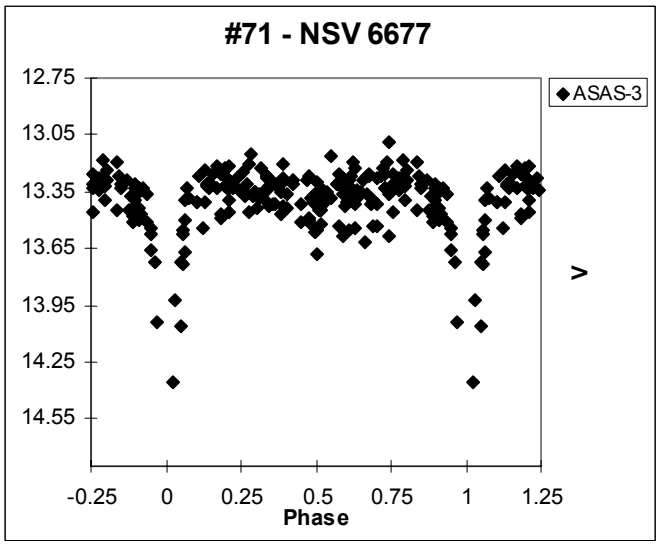

#66 - NSV 5887
ASAS-3
V
Phase
13.10
13.35
13.60
13.85
14.10
14.35
14.60
-0.25
0
0.25
0.5
0.75
1
1.25

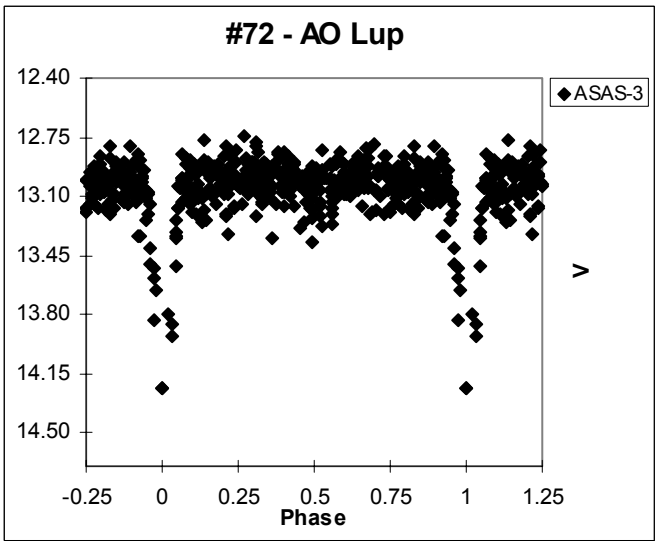

#67 - GSC 4401-1126
NSVS
ROTSE-I
Phase
11.95
12.20
12.45
12.70
12.95
13.20
13.45
13.70
-0.25
0
0.25
0.5
0.75
1
1.25

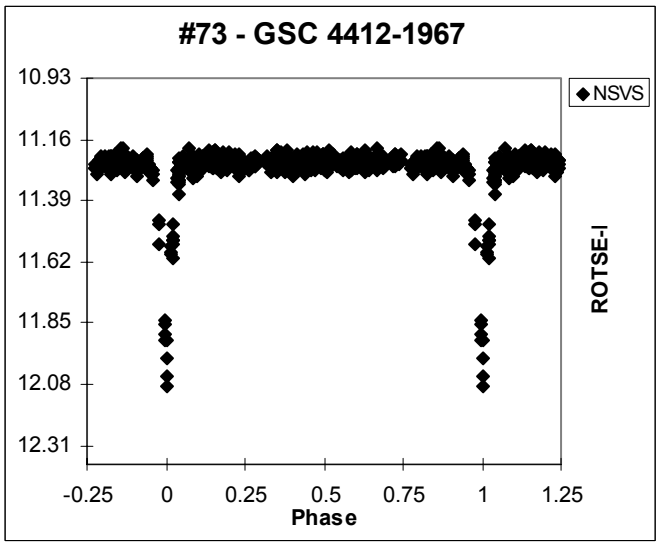

#68 - HD 114423
ASAS-3
V
Phase
8.17
8.20
8.23
8.26
8.29
8.32
8.35
-0.25
0
0.25
0.5
0.75
1
1.25

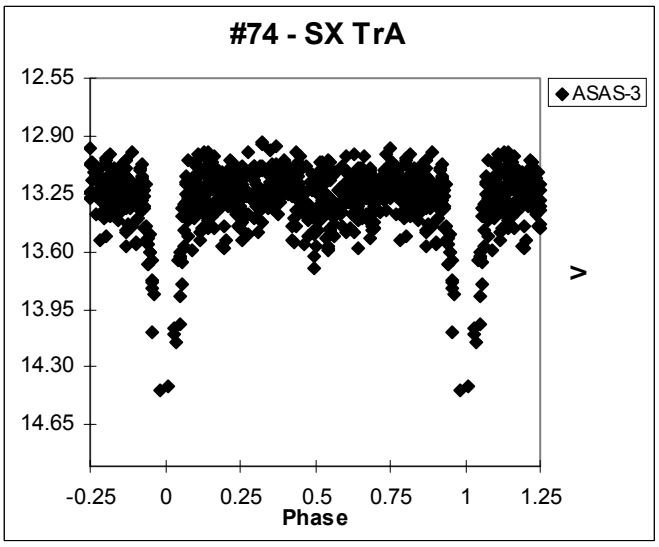

#69 - HD 114566
ASAS-3
V
Phase
8.00
8.04
8.08
8.12
8.16
8.20
-0.25
0
0.25
0.5
0.75
1
1.25

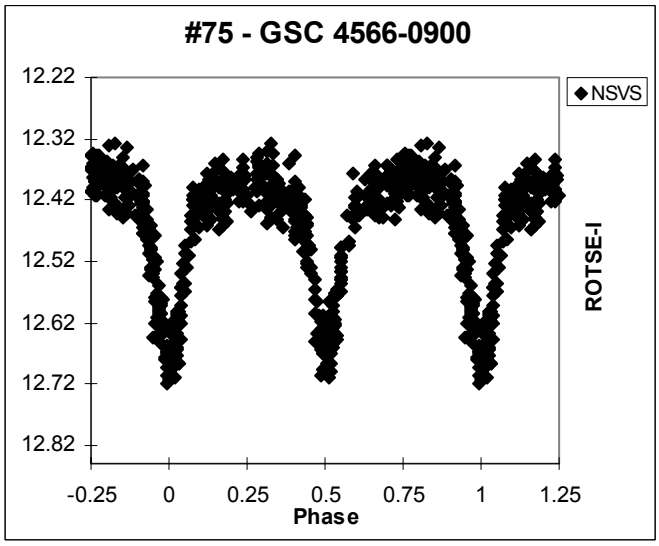

#70 - NSV 6665
ASAS-3
V
Phase
12.77
13.02
13.27
13.52
13.77
14.02
14.27
-0.25
0
0.25
0.5
0.75
1
1.25

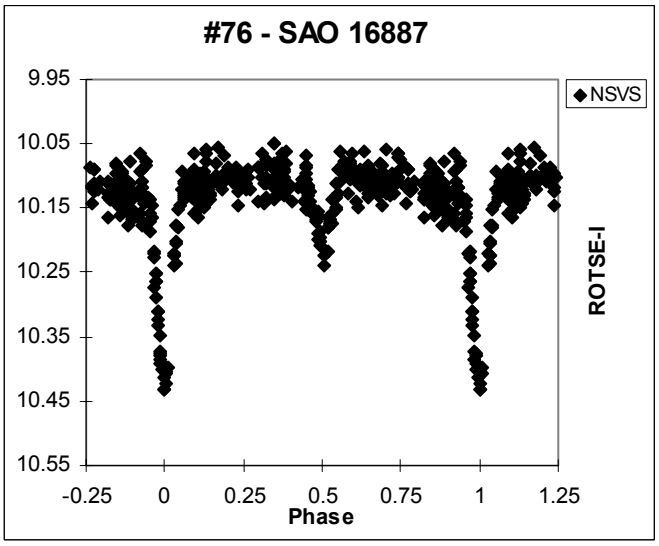

#71 - NSV 6677
ASAS-3
V
Phase

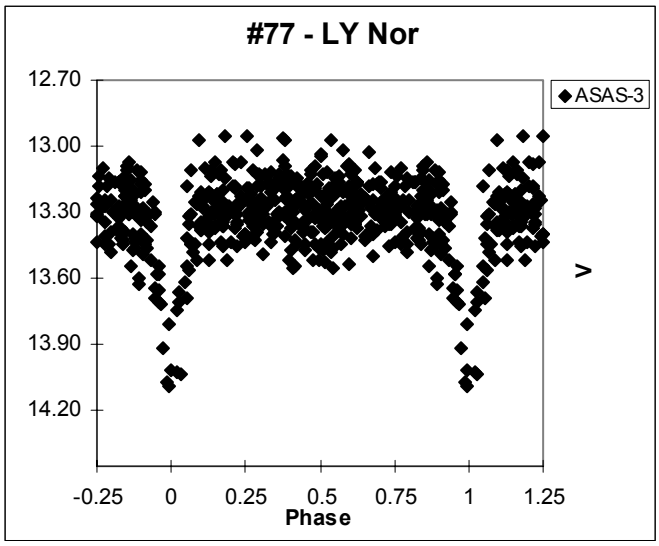

#72 - AO Lup
ASAS-3
V
Phase

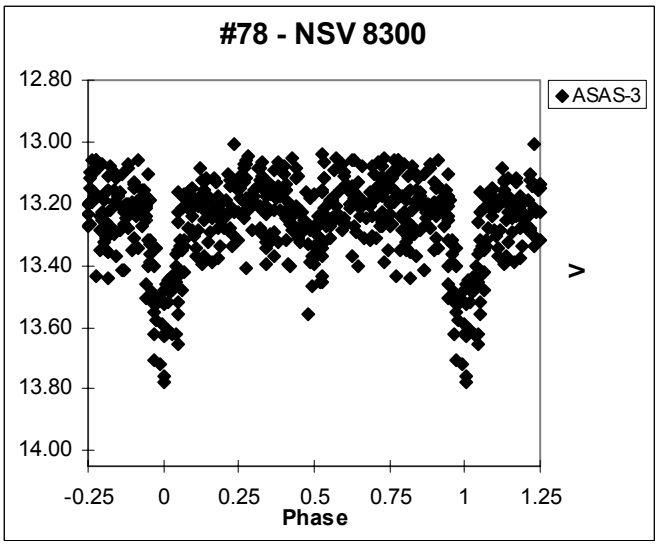

#73 - GSC 4412-1967
NSVS
ROTSE-I
Phase

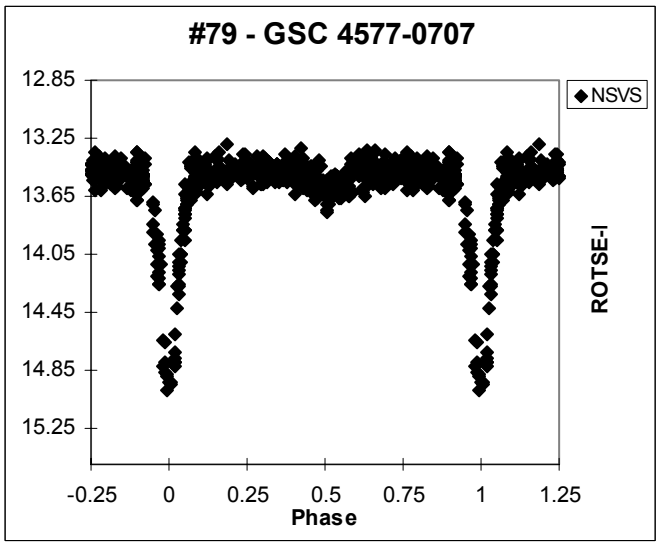

#74 - SX TrA
ASAS-3
V
Phase

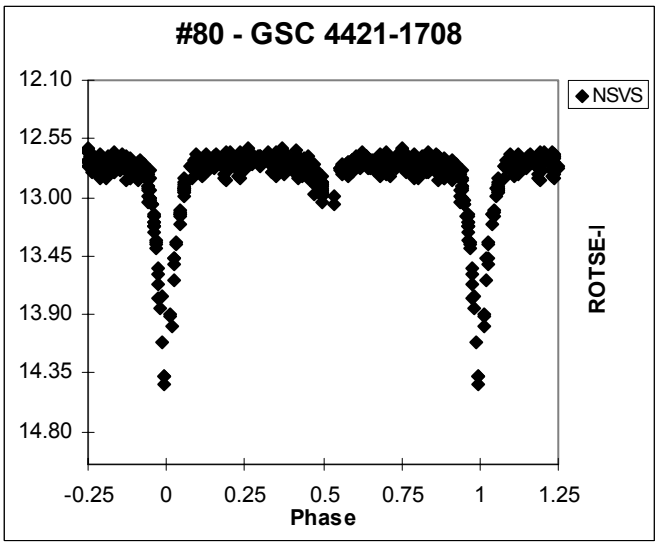

#75 - GSC 4566-0900
NSVS
ROTSE-I
Phase

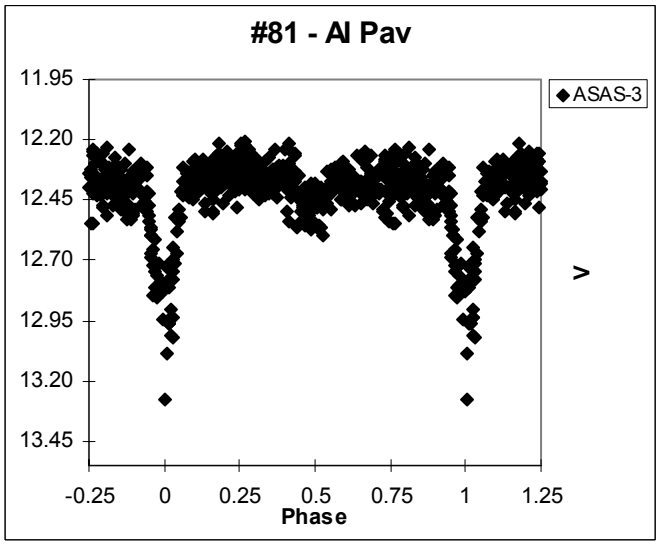

#76 - SAO 16887
NSVS
ROTSE-I
Phase

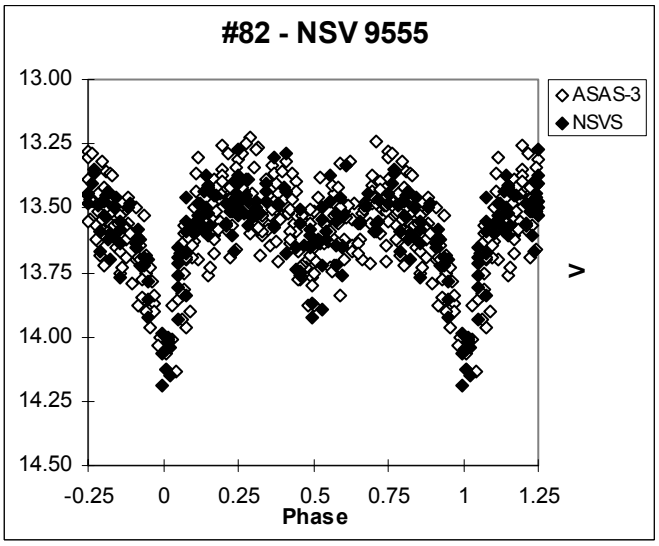

#77 - LY Nor
ASAS-3
V
Phase

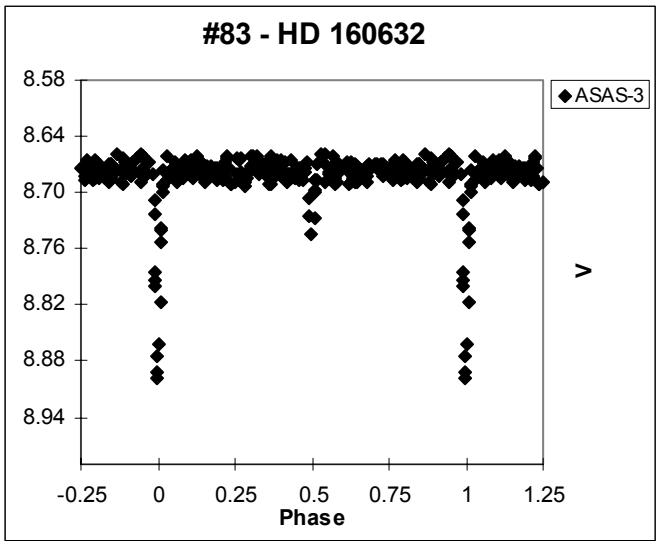

#78 - NSV 8300
ASAS-3
V
Phase

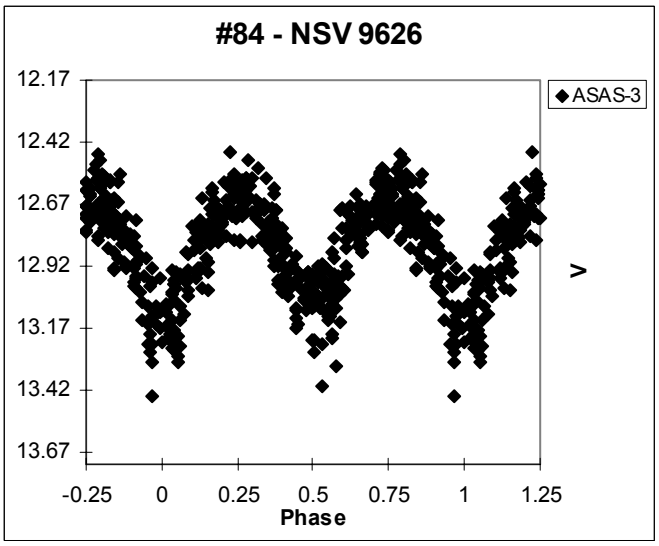

#79 - GSC 4577-0707
NSVS
ROTSE-I
Phase

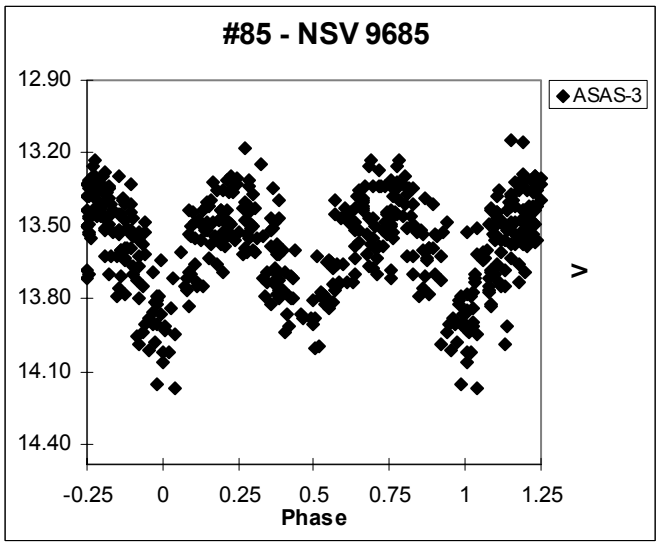

#80 - GSC 4421-1708
NSVS
ROTSE-I
Phase

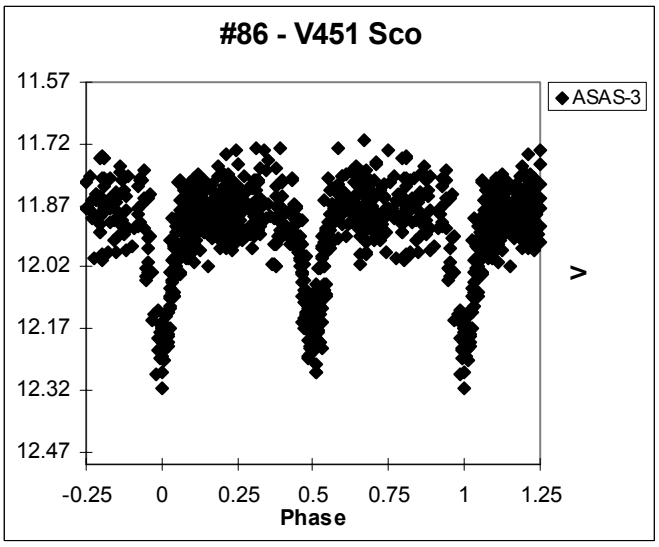

#81 - Al Pav
ASAS-3
V
Phase

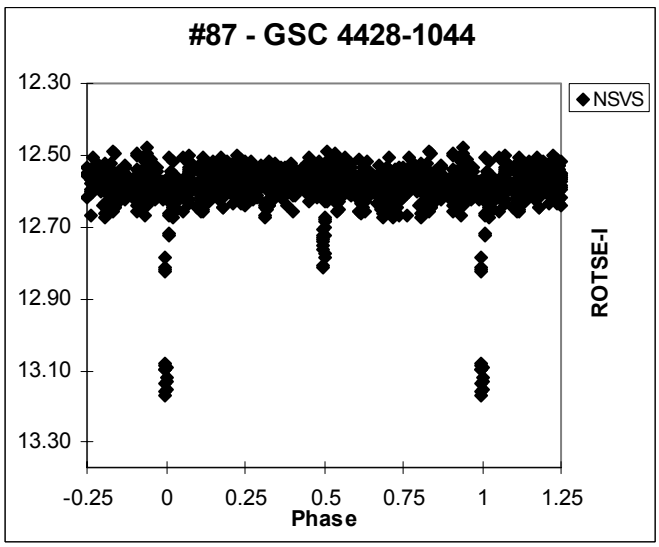

#82 - NSV 9555
ASAS-3
NSVS
V
Phase

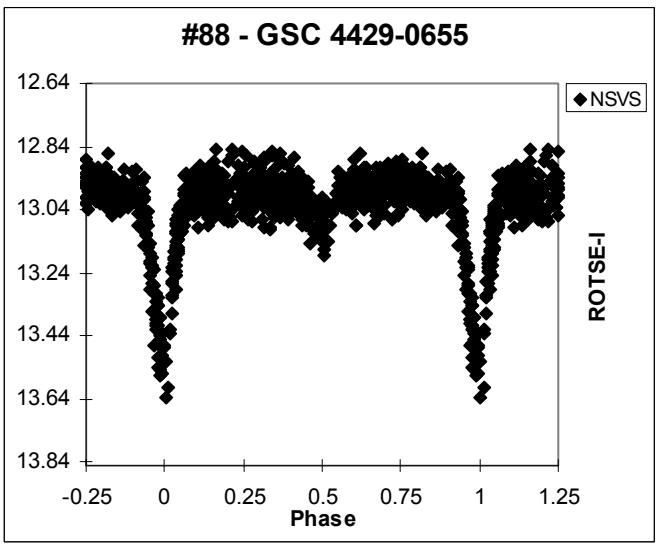

#83 - HD 160632
8.58
8.64
8.70
8.76
8.82
8.88
8.94
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

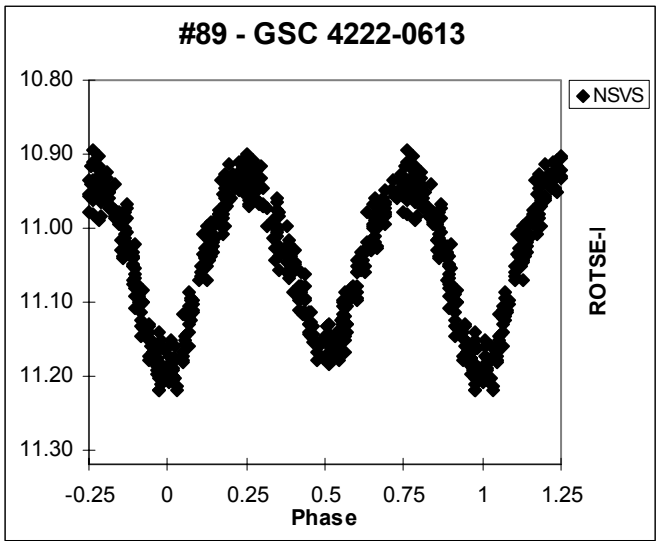

#84 - NSV 9626
12.17
12.42
12.67
12.92
13.17
13.42
13.67
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

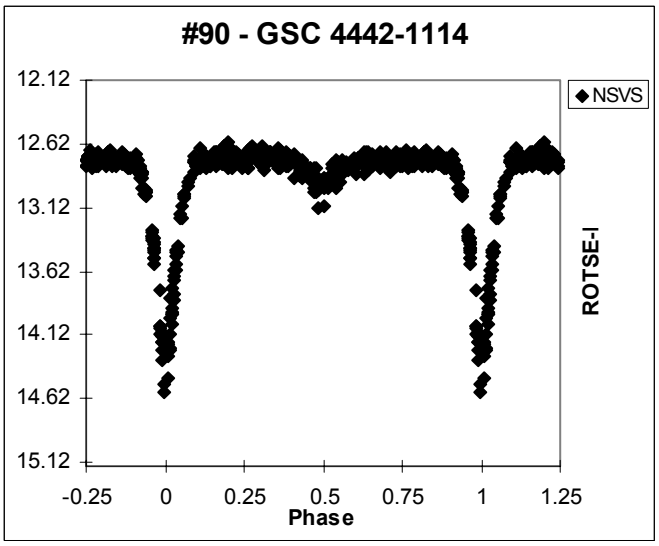

#85 - NSV 9685
12.90
13.20
13.50
13.80
14.10
14.40
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

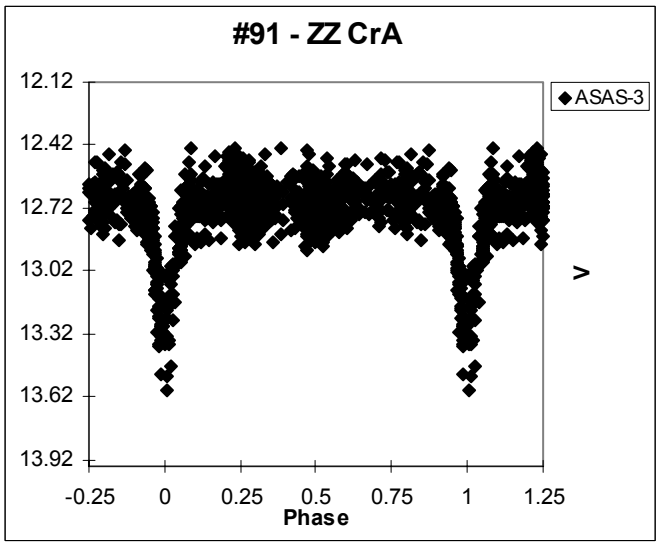

#86 - V451 Sco
11.57
11.72
11.87
12.02
12.17
12.32
12.47
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

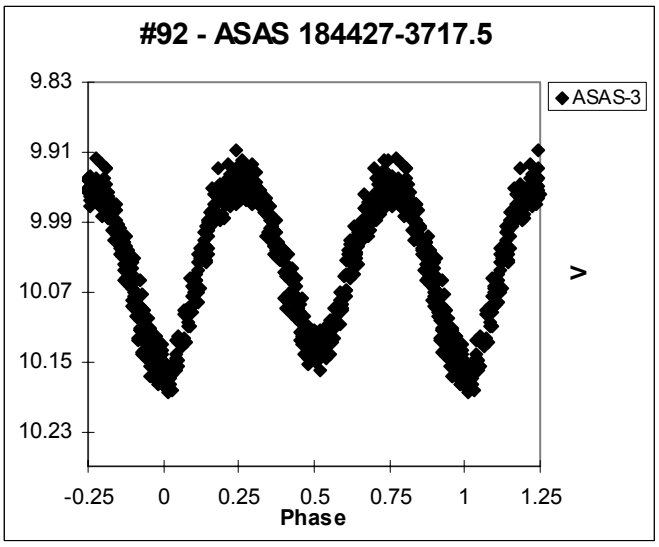

#87 - GSC 4428-1044
12.30
12.50
12.70
12.90
13.10
13.30
NSVS
ROTSE-I
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

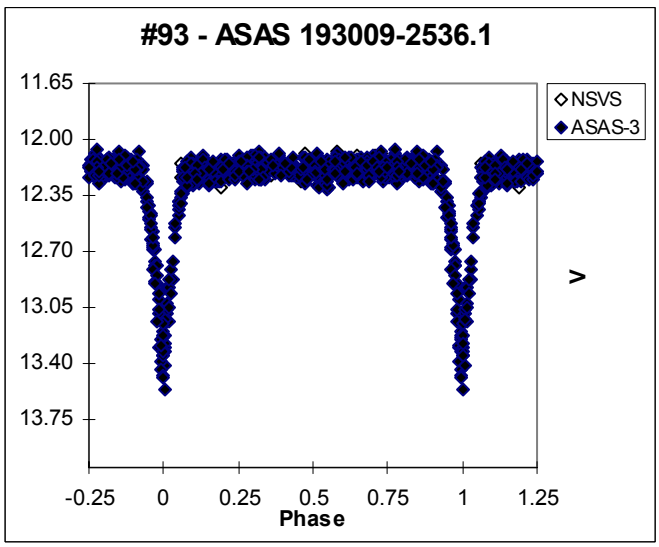

#88 - GSC 4429-0655
12.64
12.84
13.04
13.24
13.44
13.64
13.84
NSVS
ROTSE-I
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

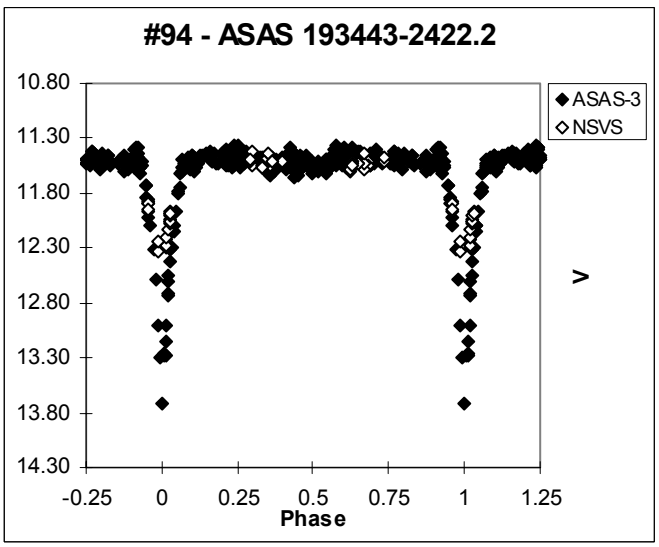

#89 - GSC 4222-0613
NSVS
ROTSE-I
10.80
10.90
11.00
11.10
11.20
11.30
-0.25
0
0.25
0.5
0.75
1
1.25
Phase

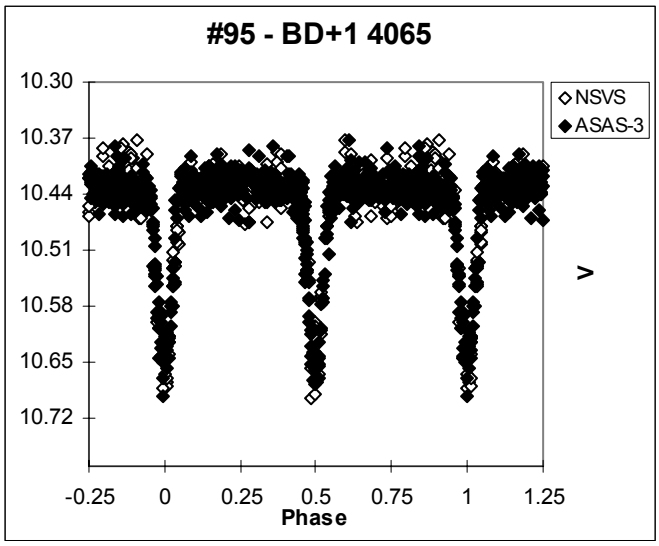

#90 - GSC 4442-1114
NSVS
ROTSE-I
12.12
12.62
13.12
13.62
14.12
14.62
15.12
-0.25
0
0.25
0.5
0.75
1
1.25
Phase

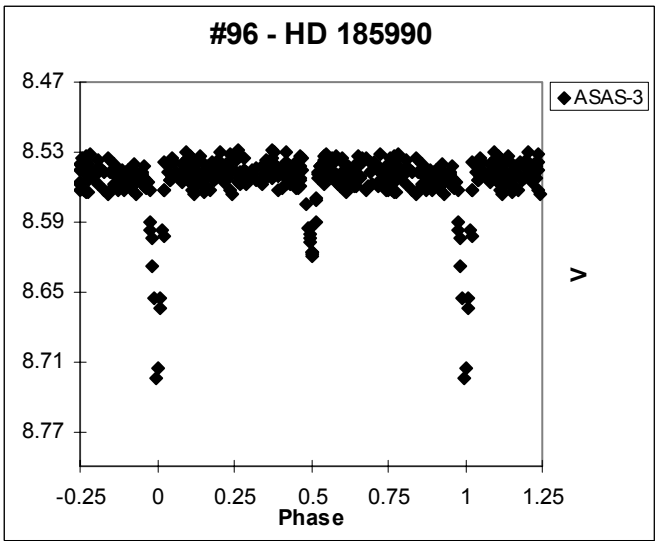

#91 - ZZ CrA
ASAS-3
V
12.12
12.42
12.72
13.02
13.32
13.62
13.92
-0.25
0
0.25
0.5
0.75
1
1.25
Phase

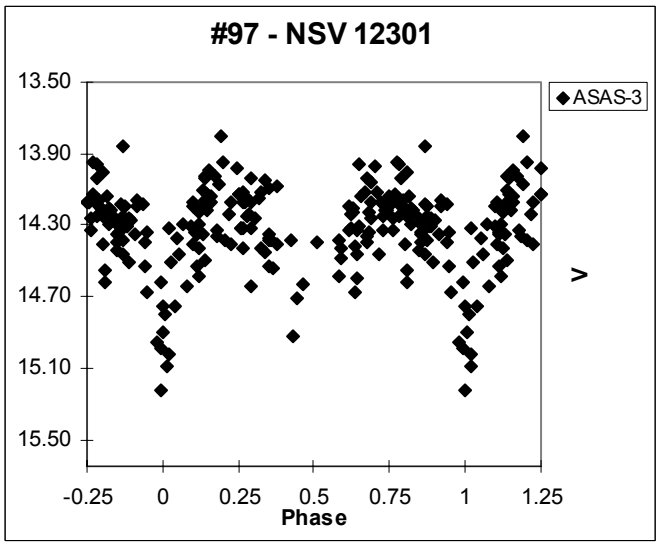

#92 - ASAS 184427-3717.5
ASAS-3
V
9.83
9.91
9.99
10.07
10.15
10.23
-0.25
0
0.25
0.5
0.75
1
1.25
Phase

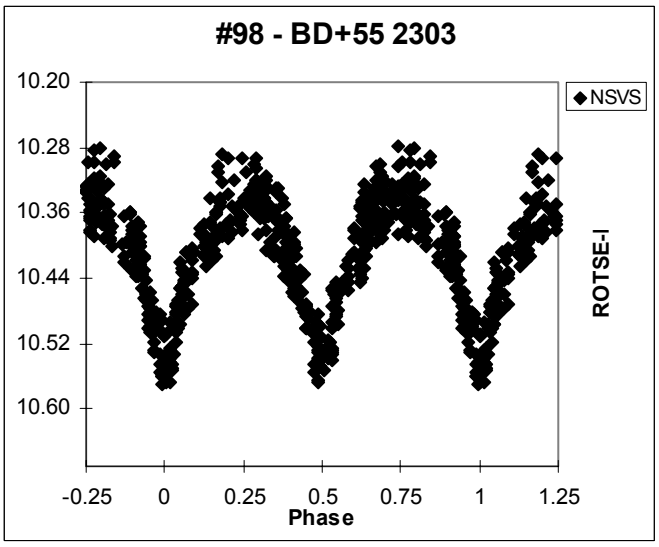

#93 - ASAS 193009-2536.1
NSVS
ASAS-3
V
11.65
12.00
12.35
12.70
13.05
13.40
13.75
-0.25
0
0.25
0.5
0.75
1
1.25
Phase

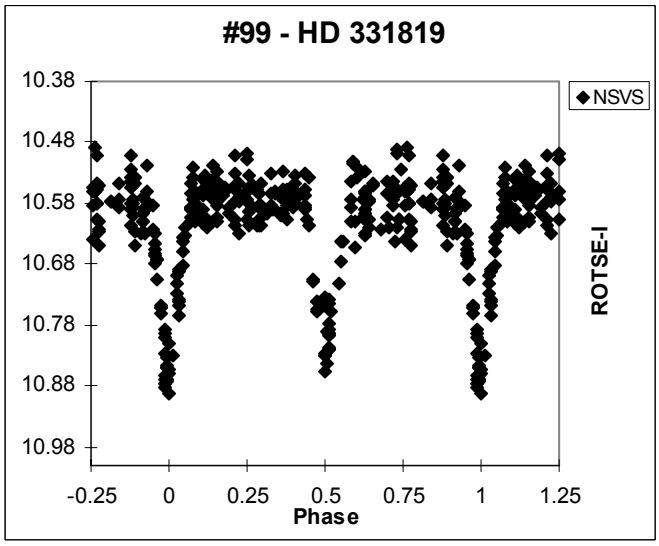

#94 - ASAS 193443-2422.2
ASAS-3
NSVS
V
10.80
11.30
11.80
12.30
12.80
13.30
13.80
14.30
-0.25
0
0.25
0.5
0.75
1
1.25
Phase

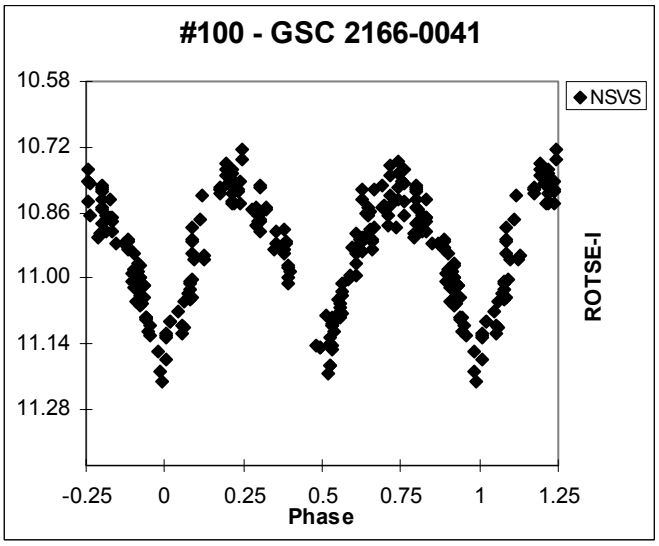

#95 - BD+1 4065
NSVS
ASAS-3
V
Phase

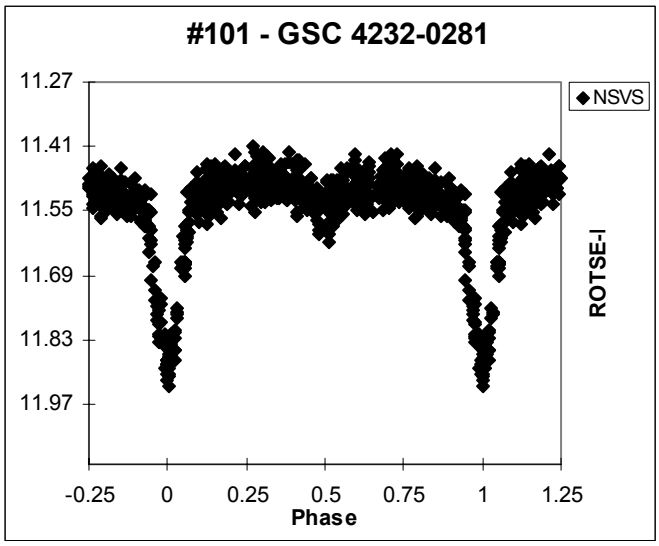

#96 - HD 185990
ASAS-3
V
Phase

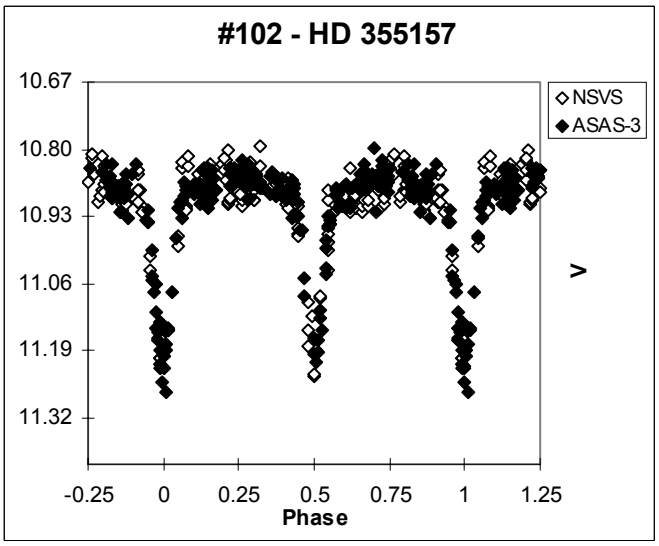

#97 - NSV 12301
ASAS-3
V
Phase

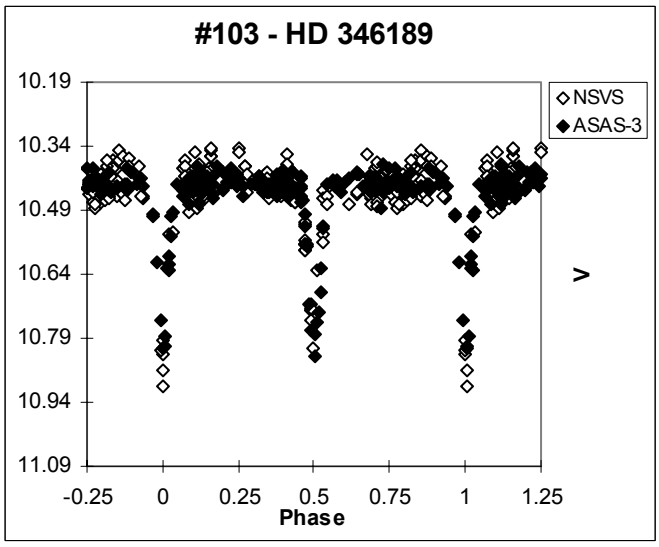

#98 - BD+55 2303
NSVS
ROTSE-I
Phase

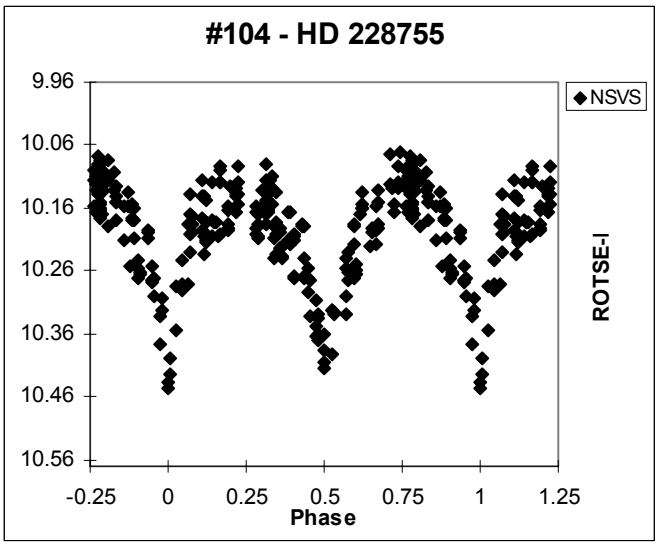

#99 - HD 331819
NSVS
ROTSE-I
Phase

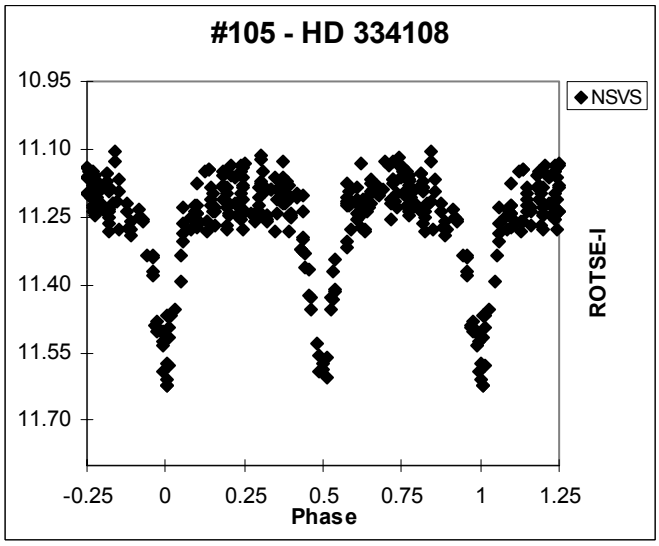

#100 - GSC 2166-0041
NSVS
ROTSE-I
Phase

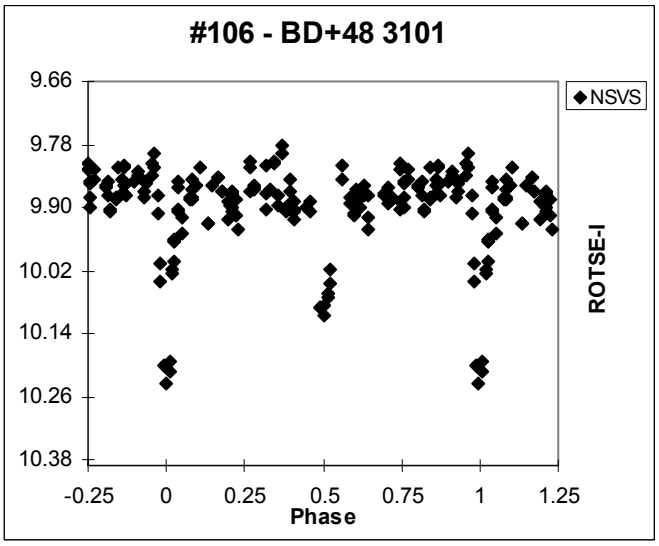

#101 - GSC 4232-0281
11.27
11.41
11.55
11.69
11.83
11.97
NSVS
ROTSE-I
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

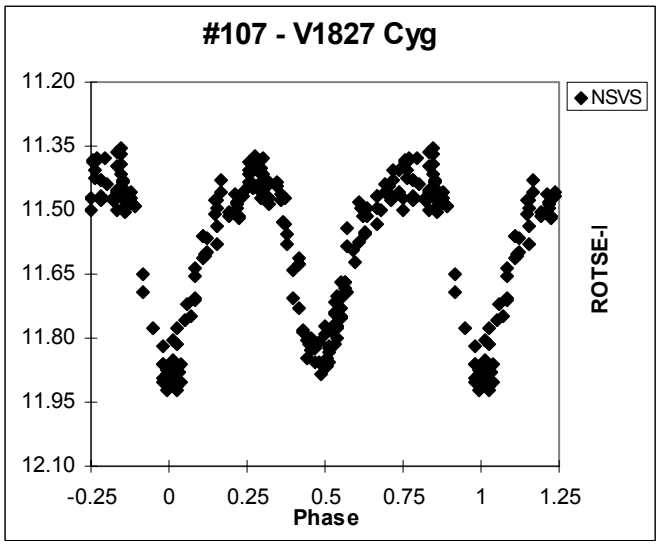

#102 - HD 355157
10.67
10.80
10.93
11.06
11.19
11.32
NSVS
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

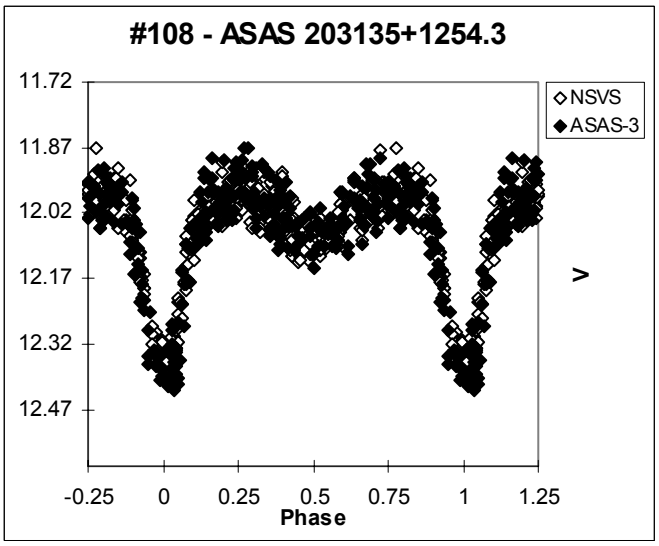

#103 - HD 346189
10.19
10.34
10.49
10.64
10.79
10.94
11.09
NSVS
ASAS-3
V
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

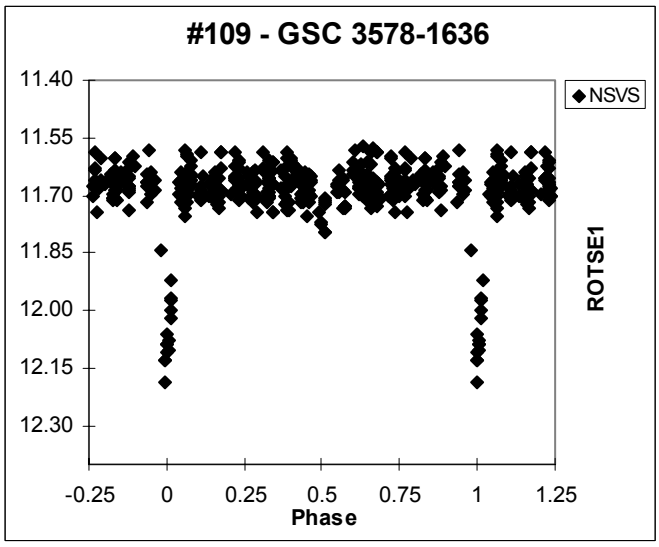

#104 - HD 228755
9.96
10.06
10.16
10.26
10.36
10.46
10.56
NSVS
ROTSE-I
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

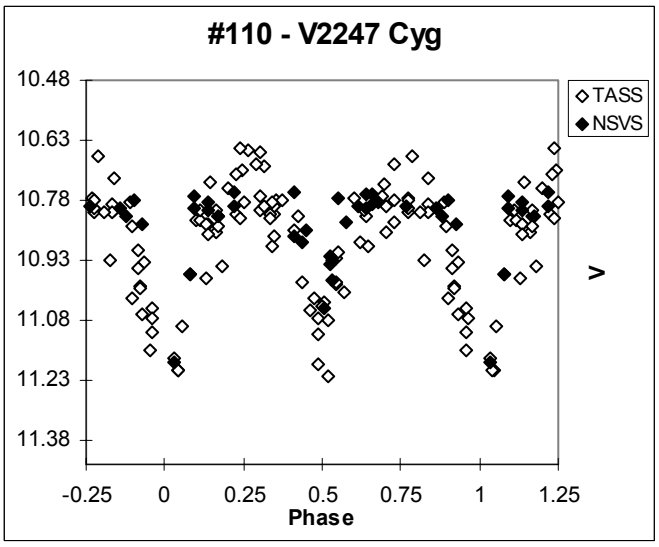

#105 - HD 334108
10.95
11.10
11.25
11.40
11.55
11.70
NSVS
ROTSE-I
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

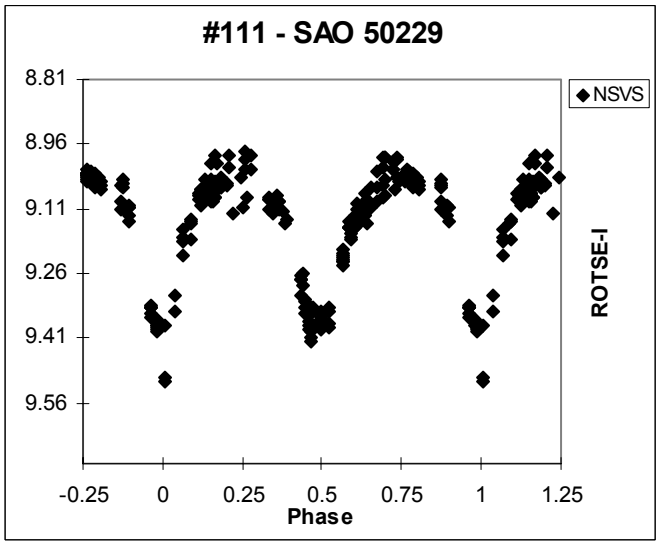

#106 - BD+48 3101
9.66
9.78
9.90
10.02
10.14
10.26
10.38
NSVS
ROTSE-I
-0.25 0 0.25 0.5 0.75 1 1.25
Phase

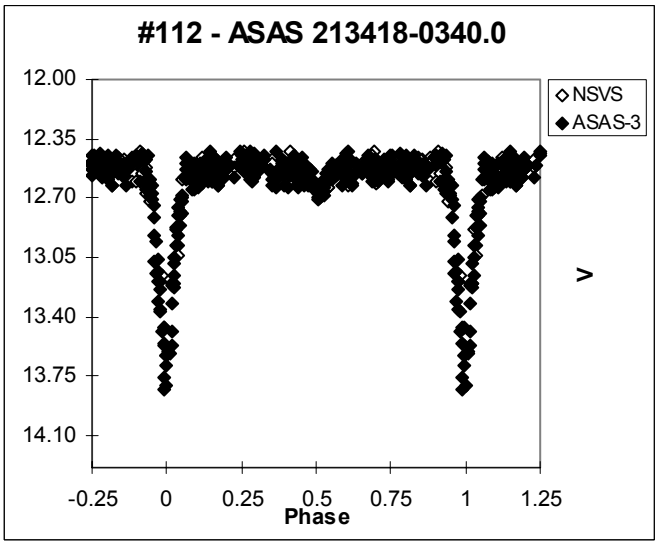

#107 - V1827 Cyg
NSVS
ROTSE-I
Phase

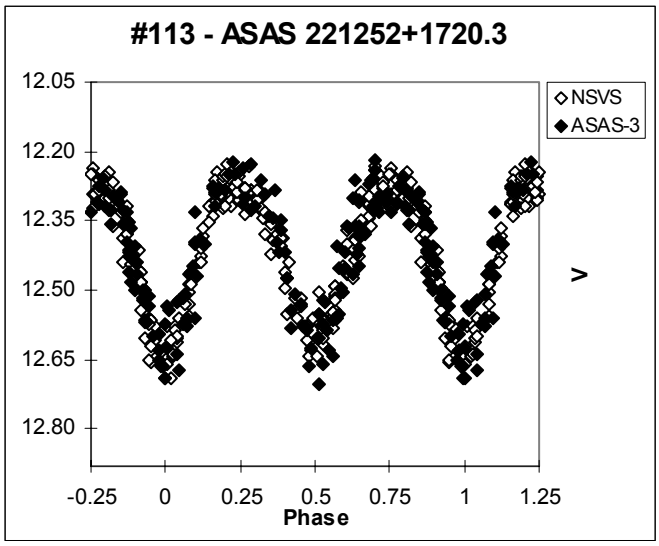

#108 - ASAS 203135+1254.3
NSVS
ASAS-3
V
Phase

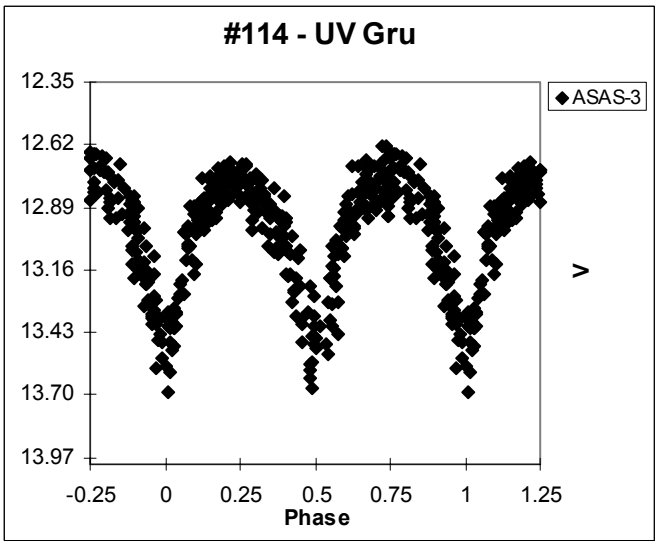

#109 - GSC 3578-1636
NSVS
ROTSE1
Phase

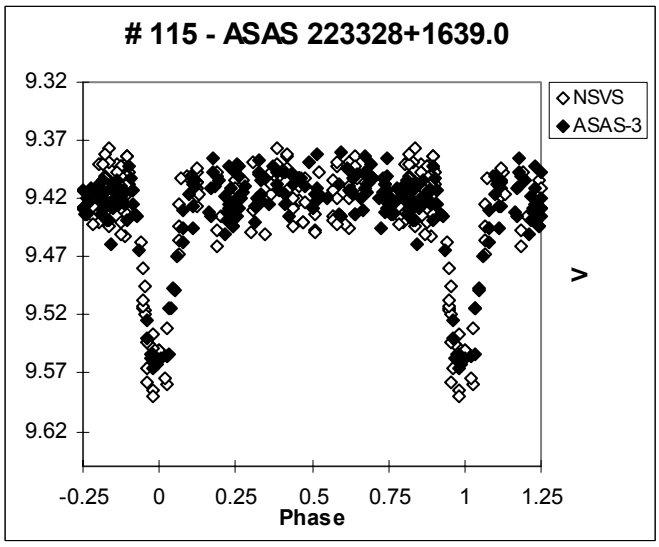

#110 - V2247 Cyg
TASS
NSVS
V
Phase

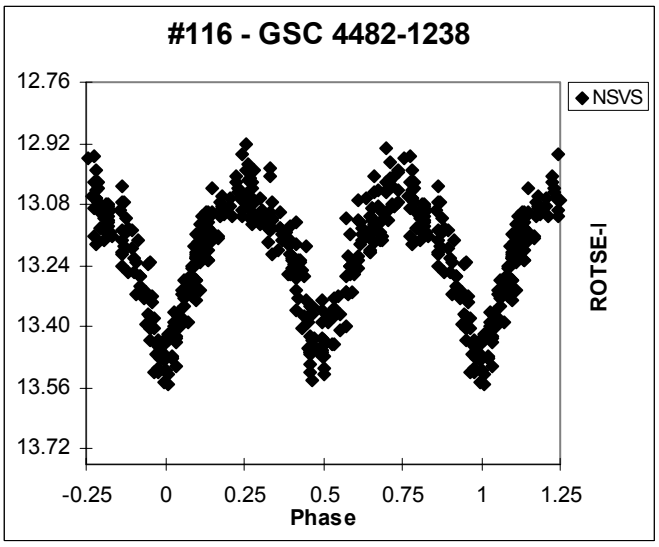

#111 - SAO 50229
NSVS
ROTSE-I
Phase

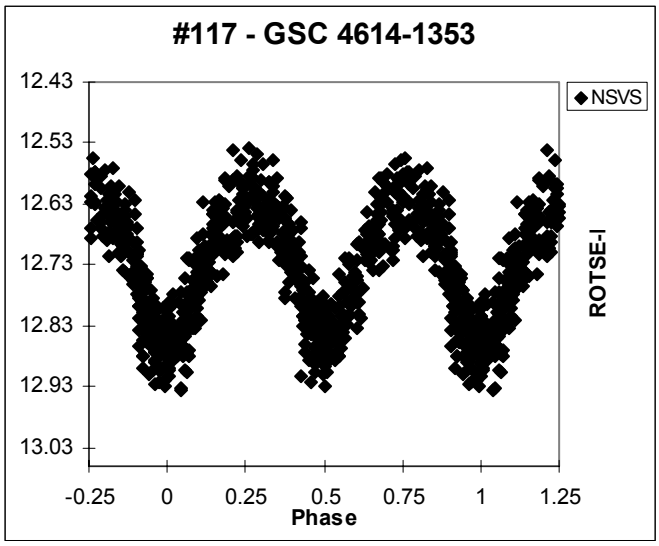

#112 - ASAS 213418-0340.0
NSVS
ASAS-3
V
Phase

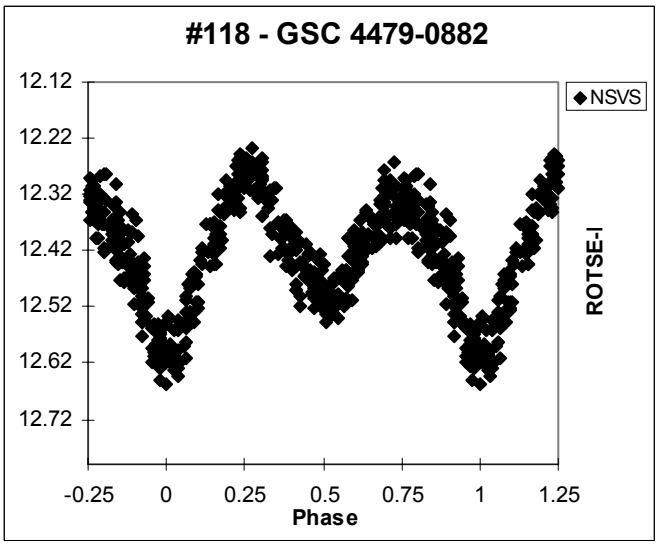

#113 - ASAS 221252+1720.3
12.05
12.20
12.35
12.50
12.65
12.80
NSVS
ASAS-3
V
-0.25
0
0.25
0.5
0.75
1
1.25
Phase

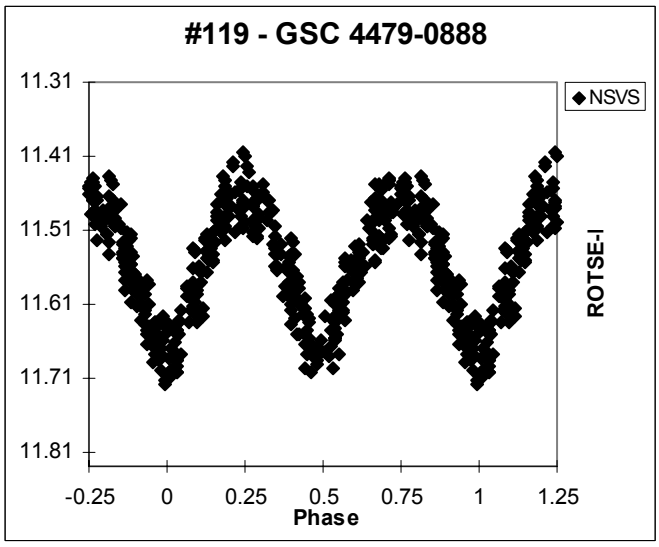

#114 - UV Gru
12.35
12.62
12.89
13.16
13.43
13.70
13.97
ASAS-3
V
-0.25
0
0.25
0.5
0.75
1
1.25
Phase

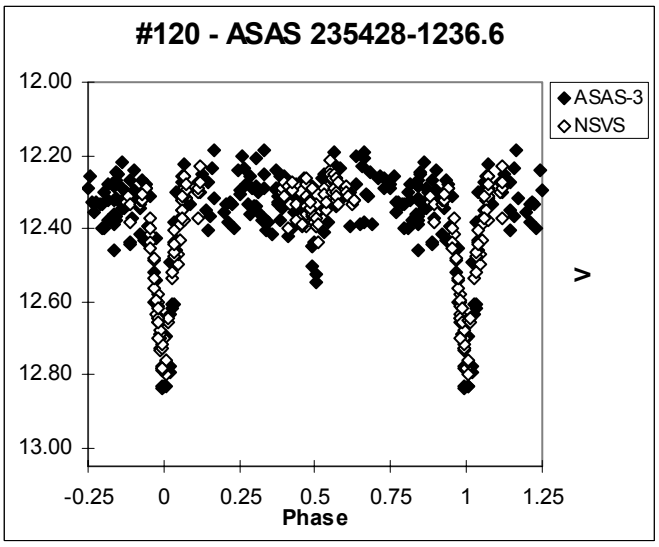

115 - ASAS 223328+1639.0
9.32
9.37
9.42
9.47
9.52
9.57
9.62
NSVS
ASAS-3
V
-0.25
0
0.25
0.5
0.75
1
1.25
Phase


#116 - GSC 4482-1238
12.76
12.92
13.08
13.24
13.40
13.56
13.72
NSVS
ROTSE-I
-0.25
0
0.25
0.5
0.75
1
1.25
Phase









Notes for individual stars:

#1 - Classified as E: in the NSV catalogue.
#2 - Classified as ED/ESD with a wrong period of 1.043045 d. in the ASAS catalogue.
#5 - Primary eclipse might be the secondary.
#7 - Classified as ESD/ED with a wrong period of 0.266771 d. in the ASAS catalogue.
#10 - Classified as MISC with a wrong period of 0.079938 d. in the ASAS catalogue.
#11 - Classified as E in the NSV catalogue.
#13 - Wrong period of 0.7552 d. in **Koen and Eyer (2002)**. Visual binary. A= 7.07; B= 9.11 Hp. Sep. 1".83 **(Perryman et al., 1997)**..
#16 - Long period EW-type light curve. Classified as CW-FU/EC/ESD with a period of 5.82900 d. in the ASAS catalogue.
#17 - Period might be twice the value given. Classified as E: in the NSV catalogue.
#18 - Primary eclipse might be the secondary.
#20 - GCVS time of minimum (HJD 2434776.37) used to improve the period.
#21 - Classified as ED with a wrong period of 4.394800 d. in the ASAS catalogue.
#22 - Classified as EC with a wrong period of 0.499187 d. in the ASAS catalogue. NSVS amplitude is reduced by light from nearby stars.
#23 - Period found by Geert Hoogeven.
#24 - Classified as ESD/DCEP-FU/ACV/ED in the ASAS catalogue with a wrong period of 5.6780 d.
#25 - Visual binary, A= 7.81 (A2.V:m); B= 9.22 (G8IIIe, **Skiff, 2007**) Hp; sep. 0".92 **(Perryman et al., 1997)**. Spectroscopic period of 6.7663 d. in **Pourbaix et al. (2005)** for the A-component and 4.4813 d for the B component, so this

is a quadruple system and the eclipser is the A-type star.
#26 - Classified as S in the NSV catalogue.
#27 - Classified as ED with a wrong period of 4.99580 d. in the ASAS catalogue.
#29 - Few observations. Min II may have been missed. S-type in the NSV catalogue.
#30 - Classified as DSCT with a period of 0.203748 d. in the ASAS catalogue. NSVS amplitude is reduced by light from nearby stars.
#31 - It might be EB. Primary eclipse might be the secondary.
#32 - Visual binary. A= 8.84; B= 11.09 Hp. Sep. 1".19 **(Perryman et al., 1997)**.
#33 - The range given corresponds to the BE-variability extrema. Eclipses have an amplitude of 0.12 (Min I) and 0.11 mag. (Min II) with a mean V-range from 8.33 to 8.45. Mean magnitude variations due to the BE-type variability have been subtracted for the eclipsing plot. See Fig. 121 for the long-term variations.

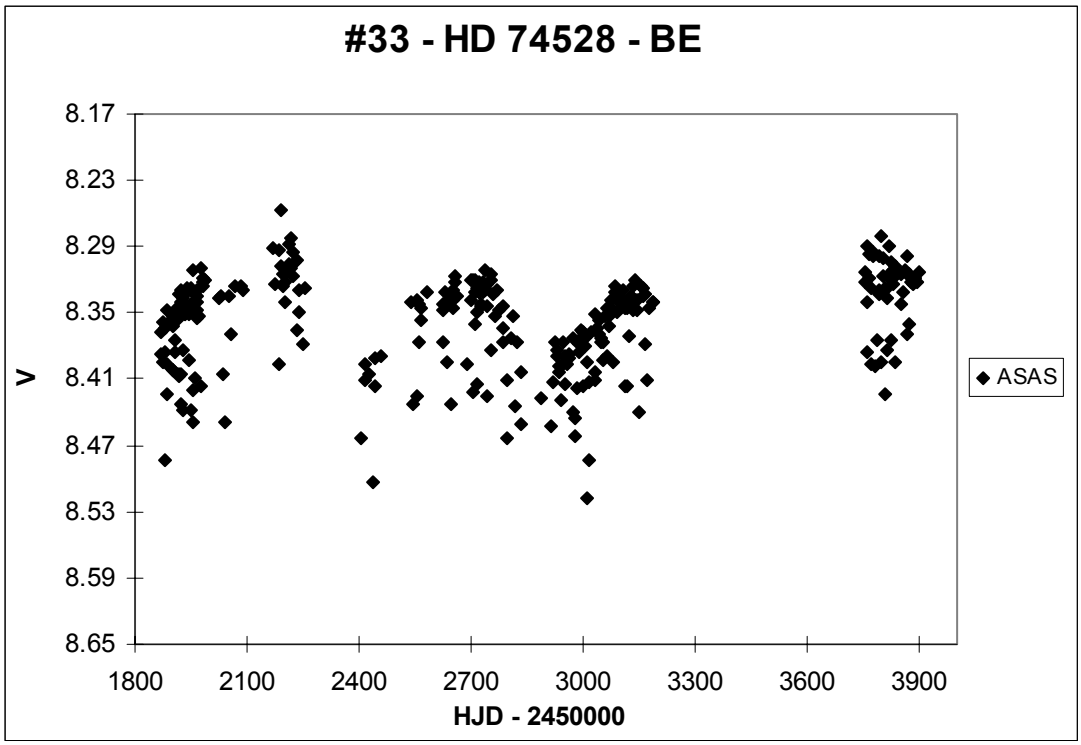


Figure 121: Light curve of HD 74528 showing its BE variability. Faint data points below the mean magnitude level correspond to eclipses. ASAS-3 data used.

#34 - Not a member of IC 2391 **(Perry and Hill, 1969)**
#36 - Primary eclipse might be the secondary. Visual binary. A= 9.2; B= 10.9. Sep. 3".5 **(Worley et al., 1997)**
#38 - ASAS V mag. contaminated by light from GSC 7677-1407.
#39 - Visual binary. A= 8.4; B= 9.0. Sep. 1".0 **(Worley et al., 1997)**
#42 - Visual binary. Sep. 12”.6. Mag. difference 0.5 **(Worley et al., 1997)**. Amplitude reduced by the companion. It is not known which component is the eclipsing binary.
#43 - Amplitude reduced by light from nearby stars. Total eclipses.
#44 - Visual binary. A= 10.1; B= 10.4. Sep. 0".2 **(Worley et al., 1997)**. It is uncertain which component is the eclipsing binary.
#45 - Total eclipses. Period might be twice the value given.
#47 - Visual binary. A= 9.0; B= 11.0. Sep. 0".5 **(Worley et al., 1997)**
#49 - It might be RRC-type with half the period.
#52 - In open cluster IC 2581.
#54 - Period might be twice the value given with similar minima. Visual binary, A= 8.5; B= 12.0. Sep. 2".2 **(Worley et al., 1997)**
#55 - Visual binary. A= 9.15; B= 9.29 V. Sep. 20".9 **(Fabricius et al., 2002)**. Combined magnitude given so the amplitude is reduced. It is uncertain which component is the eclipsing binary. Period might be half the value given. Position given is for the A-component HD 92438.
#57 - Period might be twice the value given.
#58 - Period might be twice the value given.

#59 - Possible grazing eclipses or it might be ELL.
#60 - GCVS position and identification are wrong, the star is not GSC 9230-0974.
#61 - Period might be twice the value given.
#62 - Period might be twice the value given.
#63 - Total eclipses.
#64 - Period might be twice the value given. Classified as E: in the NSV catalogue.
#66 - Classified as L in the NSV catalogue.
#68 - Visual binary. A= 8.6; B= 9.6. Sep. 3".5 **(Worley et al., 1997)**. It might be a distorted EA.
#69 - It might be ELL.
#70 - Classified as EA: in the NSV catalogue.
#75 - Primary eclipse might be the secondary.
#77 - Period might be twice the value given.
#78 - Classified as E in the NSV catalogue.
#81 - 2MASS position given.
#82 - Classified as E: in the NSV catalogue.
#84 - Classified as EW: in the NSV catalogue.
#85 - Classified as S in the NSV catalogue.
#86 - Period might be half the value given with no secondary eclipse.
#92 - Classified as DSCT with a period of 0.189560 d. in the ASAS catalogue. Grazing eclipses or it might be ELL.
#93 - Classified as ED with a period of 3.033934 d. in the ASAS catalogue.
#94 - Classified as ED with a period of 2.998104 d. in the ASAS catalogue. NSVS amplitude is strongly reduced by light from GSC 6889-0486.
#95 - Period might be half the value given. Primary eclipse might be the secondary.
#97 - Classified as E: in the NSV catalogue.
#98 - EW-like light curve.
#99 - Primary eclipse might be the secondary.
#100 - Classified as DSCT: with a period of 0.146567 d. in **Piquard, 2001**. Visual binary, A= 10.8; B= 11.4; sep. 4".9 **(Worley et al., 1997)**. It is uncertain which component is the EW. Position given is for the primary star.
#102 - Primary eclipse might be the secondary.
#104 - Long period EW-like light curve.
#105 - Primary eclipse might be the secondary.
#107 - Long period EW-like light curve.
#108 - Classified as ESD with a period of 0.753622 d. in the ASAS catalogue.
#110 - TASS data used **(Droege, 2003)**. Visual binary. A= 10.8; B= 12.60; sep. 26".4 **(Worley et al., 1997)**
#112 - Classified as ED with a period of 2.639328 d. in the ASAS catalogue.
#113 - Classified as ESD/DCEP-FO/EC with a wrong period of 1.852608 d. in the ASAS catalogue. Classified as RR with a period of 0.556 d. in **Kane et al. (2005)**.
#115 - Classified as ED with a wrong period of 34.905640 d. in the ASAS catalogue.
#117 - Blend with GSC 4614-1605 and GSC 4614-1096
#118 - O'Connell effect. Max II= 12.32
#120 - Classified as ESD/EC with a wrong period of 1.983700 d. in the ASAS catalogue.

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