

Known Galactic field Blazhko stars

M. Skarka

Department of Theoretical Physics and Astrophysics, Faculty of science, Masaryk University, Kotlářská 2, Brno, Czech Republic
e-mail: maska@physics.muni.cz

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ABSTRACT

A list of known Galactic field stars exhibiting Blazhko effect containing 242 stars is presented. All the entries including their designations, positions, pulsation, and Blazhko periods were collected from the available literature. The actual values of parameters are given.

Key words. catalogs – stars: horizontal-branch – stars: variables: RR Lyrae

1. Introduction

In the era of automatic sky surveys and space telescopes, it is increasingly obvious that there is a high percentage of RR Lyrae type stars exhibiting the Blazhko effect (more than 40%, Kolenberg et al. 2010). The light curves of such stars are amplitude- or phase-modulated with the periods typically in the order of tens to hundreds of days¹. This behaviour is named after one of its discoverers, S. N. Blazhko (1907), who noticed it in RW Dra.

Many theories, such as resonances between radial and nonradial modes (Dziembowski & Mizerski 2004), effects connected with convection (Stothers 2006), etc., have tried to describe observed properties, but the explanation of the nature of the Blazhko effect is still missing. A brief overview of the Blazhko effect can be found in Kovács (2009) and Kolenberg (2012). Nowadays, the most likely explanation of the Blazhko effect is considered resonance between the fundamental radial mode and the ninth overtone (Buchler & Kolláth 2011).

Some partial lists of the Blazhko stars have been published (e.g. Smith 1995; Sódor & Wils 2005; Le Borgne et al. 2012), but an overall list has not been available until now. Such a list allows observers and all interested astronomers to quickly check the Blazhko instability of the star in one place and see whether the star needs further observations or not.

2. The list

The list contains values based on the data from sky surveys ASAS (Szczygiel & Fabrycky 2007) and NSVS (Wils et al. 2006), as well as the data based on O–C diagram analyses (Le Borgne et al. 2012), and finally it contains values obtained in detailed studies of many of these stars. Stars with only one modulation period are listed in Table 1, stars with multiple Blazhko period are in Table 2, and RR Lyraes with variable Blazhko period are in Table 3.

Coordinates and magnitude ranges were taken from the VSX database (Watson et al. 2006). If there is more than one available value of the Blazhko period, then the value with the highest

priority is given. The hierarchy of cited references is the following: Values taken from detail studies have the highest priority, data from surveys have lower priority, and the data based on O–C studies the lowest priority. There are some exceptions, mainly if the data with higher priority were published before 1990 or if the data are of worse quality than values with lower priority. If the values of Blazhko periods differ more than one day, then all available values are listed.

The stars are sorted by right ascension. If possible, the ASAS and other designations of the stars were transformed to GCVS names. This is the case of V1820 Ori, BB Lep, V339 Lup, MR Lib, V559 Hya, V552 Hya, V701 Pup, LR Eri, IY Eri, GW Cet, DZ Oct, V354 Vir, V419 Vir, V476 Vir, V551 Vir, OR Com, BT Sco, V1319 Sco, BT Ant, AD UMa, NS UMa, PP UMa, KV Cnc, AI Crt, and FR Psc, which were noted in Wils et al. (2006) and Szczygiel & Fabrycky (2007) in other forms.

There are three stars with special characteristics in the list. These objects deserve to be observed as a matter of priority. Some indications show that BV Aqr is a RRd type (Jerzykiewicz 1995). VX Her is suspected to be a member of an eclipsing binary star (Fitch et al. 1966), which is the first possible occurrence of such objects among RR Lyraes. SU Col probably has three modulation periods, which is also unique behaviour (Szczygiel & Fabrycky 2007). Some stars have a very short period (less than 0.23 d) or amplitude (about 0.1). These objects should be observed first.

Objects with very long (more than 1000 d) Blazhko period are marked by a colon in the second column. The same mark may be used for stars that are only suspected of the Blazhko effect or whose Blazhko period is not well determined. A regularly updated list with Tables 1–3 is also available on the web page <http://physics.muni.cz/~blasgalf>.

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¹ There are also several stars with changing Blazhko effect.

Table 1. List of Blazhko stars with one modulation period.

Star	RA	Dec	Type	V_{\max} [mag]	V_{\min} [mag]	P_{puls} [d]	Ref.	P_{Bl} [d]	Ref.
RY Psc	00 11 41.10	-01 44 55.3	RRab	11.82	12.72	0.5297456	25	154.53	25
OV And:	00 20 44.86	40 49 41.8	RRab	10.90	11.26	0.47060	3	27	27
SW And:	00 23 43.09	29 24 03.6	RRab	9.14	10.09	0.4422618	3	36.8	26
RX Cet	00 33 38.28	-15 29 14.9	RRab	11.01	11.75	0.5736918	18	255.5	25
ASAS003514-0415.0:	00 35 14.00	-04 15 00.0	RRc	12.92	13.73	0.3445751	25	1616.29	25
ASAS003706-4317.7	00 37 06.00	-43 17 42.0	RRab	13.29	14.60	0.6275343	25	187.12	25
SW Psc:	00 41 19.41	05 20 47.0	RRab	13.3	14.9	0.521265	3	34.5	26
FR Psc:	00 47 57.06	11 42 43.5	RRab	11.5	12.8	0.45568	3	55	27
RU Cet:	01 00 40.30	-15 57 27.6	RRab	11.10	12.03	0.5862844	3	98	26
ET Cep	01 02 23.30	85 23 49.2	RRab	13.5	14.5	0.49716	3	...	37
DR And:	01 05 10.71	34 13 06.3	RRab	12.03	13.15	0.563118	15	~57.5	15
CS Phe	01 09 49.45	-44 18 53.5	RRab	12.66	13.53	0.4843964	3	62.5	17
RU Psc:	01 14 26.04	24 24 56.4	RRc	9.93	10.40	0.390385	3	28	26
AM Tuc:	01 18 30.65	-67 55 05.0	RRc	11.39	11.87	0.4057948	25	1748.86	25
XY And	01 26 42.41	34 04 07.4	RRab	12.90	14.22	0.3987247	9	41.37	9
GW Cet	01 28 48.27	-11 27 12.6	RRab	12.4	13.9	0.516648	3	84.99	25
ASAS013140-4957.3	01 31 40.60	-49 57 18.9	RRab	12.12	13.22	0.464329	25	40.17	25
UX Tri	01 45 35.01	31 22 49.6	RRab	13.07	14.50	0.4669218	13	43.7	13
IY Eri:	02 07 28.18	-57 52 09.5	RRc	10.86	11.31	0.3750261	25	1673.36	25
SS For	02 07 51.98	-26 51 57.7	RRab	9.45	10.60	0.495433	19	34.94	19
RV Cet	02 15 14.90	-10 48 00.7	RRab	10.35	11.22	0.6234139	25	112.05	25
ASAS022637-4119.7	02 26 37.00	-41 19 42.0	RRc	10.08	10.21	0.2941932	25	357.94	25
RV Hor	02 50 20.47	-64 15 40.9	RRab	12.9	14.5	0.5724975	25	79.81	25
ASAS030534-3116.1	03 05 34.00	-31 16 06.0	RRab	12.53	14.00	0.4964538	25	6.77	25
RX For	03 11 13.22	-26 28 58.8	RRab	11.12	12.46	0.59731	18	31.79	23
ASAS031408-3446.4:	03 14 08.00	-34 46 24.0	RRc	11.54	12.07	0.3124235	25	1241.77	25
ASAS032438-2334.7	03 24 38.00	-23 34 42.0	RRab	12.09	13.03	0.6296339	25	335.29	25
X Ret	03 25 20.10	-65 03 18.6	RRab	11.16	12.14	0.4920082	25	160.64	25
ASAS033108+0713.4:	03 31 08.38	07 13 24.9	RRab	10.74	10.87	0.5281963	25	1442.79	25
LR Eri	04 00 10.76	-19 49 37.1	RRab	12.0	13.0	0.60225	17	122	17
FM Per:	04 03 27.06	47 59 51.7	RRab	12.02	13.24	0.489256	14	~122	14
								20	27
AH Cam	04 06 38.89	55 29 59.7	RRab	11.31	12.33	0.3687346	3	10.83	23
XY Eri	04 11 16.78	-13 50 54.3	RRab	12.39	13.27	0.55426	18	50.2	23
BR Tau	04 34 42.91	21 46 21.7	RRab	12.07	13.38	0.3905928	8	19.3	8
AL Pic	04 41 30.80	-52 16 37.0	RRab	12.8	14.0	0.54861	18	34	17
U Cae	04 53 14.41	-37 49 15.9	RRab	11.43	12.70	0.4197835	3	22.8	23
NSV1856	05 08 38.65	-56 02 57.5	RRab	12.5	13.5	0.5160761	25	786.91	25
RY Col	05 15 07.78	-41 37 41.7	RRab	10.44	11.24	0.4788368	25	82.08	23
ASAS052402-2247.4	05 24 02.00	-22 47 24.0	RRab	13.40	14.59	0.6498517	25	10.23	25
ASAS052840-5316.2	05 28 40.00	-53 16 12.0	RRc	13.38	14.05	0.3678062	25	453.43	25
ASAS053022-3234.8	05 30 22.00	-32 34 48.0	RRc	11.77	11.97	0.2331114	25	364.6	25
ASAS053628-3837.0:	05 36 28.00	-38 37 00.0	RRc	12.78	13.23	0.3714727	25	1394.31	25
BB Lep	05 42 30.18	-16 22 54.5	RRab	11.85	12.71	0.5389135	25	22.84	25
ASAS054843-1627.0:	05 48 43.00	-16 27 00.0	RRab	12.96	13.57	0.3767273	25	1663.06	25
ASAS055322-5417.9	05 53 22.00	-54 17 54.0	RRc	12.82	13.38	0.2452638	25	381.58	25
V1820 Ori	05 54 37.13	04 54 11.4	RRab	12.5	13.4	0.47927	3	28	27
VW Dor	06 07 45.71	-66 58 38.8	RRab	11.1	12.25	0.57057	18	25.99	23
RX Col	06 13 14.74	-37 15 00.6	RRab	12.32	12.95	0.59376	18	130	17
								137.77	23

Table 1. continued.

Star	RA	Dec	Type	V_{\max} [mag]	V_{\min} [mag]	P_{puls} [d]	Ref.	P_{Bl} [d]	Ref.
ST Pic	06 14 01.17	-61 28 23.5	RRab	9.29	9.77	0.4857445	25	117.9	25
ASAS062326+0005.8	06 23 26.00	00 05 48.0	RRab	11.96	12.59	0.551317	25	37.24	25
ASAS064615-4319.2:	06 46 15.00	-43 19 12.0	RRc	12.93	13.63	0.3186021	25	1639.61	25
ASAS070001-3732.5	07 00 00.65	-37 32 31.5	RRab	11.85	12.74	0.4941843	25	116.96	25
ASAS070854+1919.7	07 08 53.85	19 19 38.0	RRab	8.69	8.79	0.7789192	25	7.92	25
ASAS071549-4405.3	07 15 49.00	-44 05 18.0	RRc	13.04	13.67	0.3144609	25	488.4	25
RR Gem	07 21 33.53	30 52 59.5	RRab	10.62	11.99	0.3972884	4	7.23	4
ASAS080249-5913.5:	08 02 48.94	-59 13 28.0	RRc	11.75	12.00	0.3541891	25	1185.26	25
ASAS080318-2530.1:	08 03 18.25	-25 30 06.3	RRc	12.5	13.0	0.2697723	25	1542.02	25
SS Cnc	08 06 25.59	23 15 05.7	RRab	11.49	12.72	0.367337	2	5.309	2
DD Hya	08 12 31.81	02 50 05.0	RRab	11.57	12.71	0.501776	3	34.59	23
V701 Pup	08 19 32.86	-23 58 09.8	RRc	10.45	10.75	0.2856671	25	8.1	25
NS UMa:	08 24 24.73	65 43 03.4	RRab	10.75	11.35	0.59910	3	65	27
TT Cnc	08 32 55.18	13 11 28.5	RRab	10.93	11.57	0.56340	23	89.02	23
KV Cnc:	08 40 02.42	27 43 31.6	RRab	11.9	13.0	0.50200	3	42	27
SV Vol	08 48 32.64	-71 39 14.8	RRab	11.78	12.57	0.6099118	3	85.47	23
PP UMa:	08 52 15.07	70 26 23.9	RRab	13.45	14.35	0.51869	3	46	27
ASAS085254-0300.3	08 52 54.00	-03 00 18.0	RRc	12.42	12.65	0.2669022	25	11.8	25
DZ Oct	08 54 48.33	-83 16 57.2	RRab	12.2	13.5	0.47786	18	36.8	25
ASAS090900-0410.4	09 09 00.10	-04 10 24.0	RRc	10.68	11.09	0.3032613	25	8.52	25
SZ Hya	09 13 48.68	-09 19 08.9	RRab	10.44	11.84	0.53724022	3	26.23	23
RW Cnc:	09 19 06.04	29 03 55.7	RRab	10.7	12.6	0.547199	3	87	26
UU Hya	09 36 29.73	04 06 40.3	RRab	11.73	12.73	0.5238684	3	39.89	23
ASAS093731-1816.2	09 37 31.00	-18 16 12.0	RRab	13.05	14.28	0.529175	25	87.73	25
CM UMa	09 43 13.78	49 29 37.3	RRab	12.8	13.8	0.589124	10	27.77	10
CD Vel	09 44 38.24	-45 52 37.2	RRab	11.3	12.4	0.5735076	25	66.35	25
ASAS101200+1921.9:	10 12 00.00	19 21 54.0	RRab	11.55	12.43	0.4826394	25	1141.03	25
Y LMi:	10 15 51.45	32 51 32.5	RRab	11.4	13.3	0.524471	3	33.4	26
Cze V134:	10 22 26.27	59 12 36.2	RRc	11.46	11.63	0.419794	3	...	44
V543 Hya	10 26 08.40	-23 15 13.9	RRab	12.8	13.9	0.59826	17	59	17
BT Ant:	10 32 02.59	-30 10 37.3	RRc	11.55	12.02	0.3304459	25	1731.6	25
AF Vel	10 53 02.49	-49 54 22.7	RRab	10.68	11.78	0.5274139	25	58.55	23
SZ Leo	11 01 36.82	08 09 55.6	RRab	11.79	12.72	0.53408	17	179	17
AH Leo:	11 05 05.29	23 21 08.4	RRab	13.67	14.66	0.4662609	1	~20	1
ASAS110522-2641.0	11 05 22.00	-26 41 00.0	RRc	11.68	12.06	0.2944559	25	7.4	25
ASAS112027-4338.8:	11 20 26.70	-43 38 48.0	RRc	11.05	11.34	0.3795948	25	1480.38	25
AI Crt:	11 26 07.49	-14 03 43.1	RRab	15.5	16.1	0.50290	17	63	17
V354 Vir:	11 43 32.22	02 41 55.6	RRab	12.4	13.3	0.59503	3	59	27
BI Cen	11 45 54.65	-59 22 40.2	RRab	11.18	12.33	0.4531949	3	79.68	23
X Crt	11 48 56.22	-10 26 28.6	RRab	11.09	11.75	0.73284	17	143	17
IK Hya:	12 04 47.27	-27 40 43.3	RRab	9.96	10.42	0.653243	25	72	17
								67.5	23
EL Hya:	12 09 42.07	-34 57 26.3	RRc	13.3	13.8	0.3436271	25	1611.6	25
V552 Hya	12 12 06.12	-26 12 48.2	RRab	12.5	13.8	0.39878	17	48.3	17
TU Com:	12 13 46.92	30 59 07.5	RRab	12.9	16.4	0.461809	3	~75.00	3
SV Hya	12 30 30.50	-26 02 51.1	RRab	9.78	11.00	0.4785475	25	63.29	25
ASAS123812-4422.5:	12 38 12.50	-44 22 30.0	RRab	13.1	13.82	0.523549	25	1307.7	25
V419 Vir	12 48 04.51	-08 20 47.4	RRab	11.98	12.86	0.515287	25	65.69	25
Z CVn	12 49 45.42	43 46 25.6	RRab	11.43	12.36	0.653819	3	22.98	23
AS Vir:	12 52 45.86	-10 15 36.4	RRab	11.60	12.23	0.55340399	3	...	34

Table 1. continued.

Star	RA	Dec	Type	V_{\max} [mag]	V_{\min} [mag]	P_{puls} [d]	Ref.	P_{BI} [d]	Ref.
RY Com	13 05 07.99	23 16 42.2	RRab	11.75	12.92	0.468951	8	32	8
UZ Vir	13 08 44.34	13 24 08.3	RRab	12.58	13.70	0.4593925	9	68.24	9
OR Com	13 19 54.50	19 53 36.8	RRab	12.6	13.7	0.601167	3	74	27
AM Vir:	13 23 33.33	-16 39 57.9	RRab	11.16	11.85	0.61509	17	49.8	17
V476 Vir:	13 29 22.48	-05 52 59.2	RRab	11.2	12.1	0.5763497	25	1398.99	25
SS CVn	13 48 15.94	39 54 03.0	RRab	11.53	12.62	0.47851	3	93.72	23
ASAS135740-1202.3:	13 57 40.00	-12 02 18.0	RRc	12.30	12.71	0.2671226	25	1189.91	25
ASAS135813-4215.1	13 58 13.00	-42 15 06.0	RRab	12.43	13.27	0.5231816	25	146.01	25
V674 Cen:	14 03 24.08	-36 24 20.1	RRab	11.0	11.9	0.4939666	25	1650.71	25
ASAS141025-2244.8:	14 10 25.00	-22 44 48.0	RRab	12.60	13.29	0.6398808	25	1556.66	25
V559 Hya	14 13 45.50	-22 54 41.9	RRab	11.9	13.1	0.44794	17	26.6	17
TV Boo	14 16 36.58	42 21 35.7	RRc	10.71	11.30	0.31255936	3	10	27
V551 Vir	14 23 05.58	01 54 00.9	RRab	12.7	13.8	0.44692	3	48	27
SW Boo:	14 27 34.86	36 02 44.1	RRab	11.76	12.88	0.5135281	3	13	26
ST Vir	14 27 39.08	00 54 05.8	RRab	10.84	12.15	0.4108143	3	25.58	23
RS Boo	14 33 33.21	31 45 16.6ä	RRab	9.69	10.84	0.37733896	3	532.48	23
ASAS144154-0324.7	14 41 54.00	-03 24 42.0	RRc	11.40	11.72	0.2293674	25	5.65	25
TY Aps	14 48 50.01	-71 19 41.9	RRab	11.20	12.43	0.5016935	3	109.13	23
MR Lib	14 53 15.44	-14 35 56.8	RRab	12.4	13.4	0.54007	17	41.7	17
V339 Lup	15 03 27.43	-47 56 03.7	RRab	11.5	12.3	0.60058	17	59.5	17
FU Lup	15 09 23.77	-43 19 37.1	RRab	14.0	15.0	0.3821508	25	42.49	25
ASAS151849-1000.0	15 18 49.00	-10 00 00.0	RRc	12.03	12.53	0.3364272	25	802.95	25
ST Boo	15 30 39.23	35 47 04.3	RRab	10.49	11.41	0.62229069	3	284.09	23
AR Ser:	15 33 30.82	02 46 37.9	RRab	11.6	12.2	0.5752124	3	63	27
CG Lib:	15 35 16.81	-24 20 12.5	RRc	11.2	11.8	0.306777	25	1560.06	25
ASAS153830-6906.4	15 38 30.00	-69 06 24.0	RRab	12.26	13.15	0.6224747	25	118.05	25
V1141 Her:	15 54 58.55	42 46 10.5	RRc	10.97	11.56	0.317152	3	~30	45
V1319 Sco:	15 55 51.59	-21 48 32.9	RRc	11.35	11.90	0.2541338	25	1699.52	25
PQ Lup	15 55 53.25	-40 41 43.6	RRab	11.6	12.4	0.58198	17	48.8	17
AR Her	16 00 32.23	46 55 25.7	RRab	10.59	11.63	0.470028	3	32	27
BT Sco	16 12 55.58	-08 27 28.0	RRab	12.61	13.40	0.54871	17	78	17
GSC02050-00745	16 18 34.34	27 28 13.2	RRab	14.27	...	0.508646	3	...	36
BS Aps	16 20 51.50	-71 40 15.8	RRab	11.85	12.49	0.5825589	3	40.93	23
ASAS162158+0244.5	16 21 58.00	02 44 30.0	RRc	12.47	12.99	0.3238044	25	8.11	25
ASAS162811+0304.3	16 28 11.00	03 04 18.0	RRab	13.09	14.74	0.5970104	25	26.28	25
VX Her	16 30 40.80	18 22 00.6	RRab	9.91	11.18	0.4553573	3	455.37	39
UV Oct:	16 32 25.53	-83 54 10.5	RRab	8.70	9.97	0.542625	3	143.73	25
								145	17
								146.99	23
RW Dra	16 35 31.60	57 50 23.2	RRab	11.05	12.08	0.442917	3	41.42	23
ASAS170223-2422.0	17 02 23.18	-24 21 59.2	RRab	11.34	11.73	0.4613693	25	22.18	25
V1124 Her	17 04 32.90	14 26 33.0	RRab	12.10	12.95	0.55102	27	39	27
V365 Her:	17 05 39.86	21 30 58.0	RRab	12.61	13.55	0.3797141	3	40	27
DL Her	17 20 22.45	14 30 38.7	RRab	11.72	12.63	0.5916369	3	34	27
ASAS172721-5305.9	17 27 21.00	-53 05 54.0	RRab	12.30	13.55	0.435433	25	58.66	25
EZ Ara:	17 29 31.78	-55 48 18.7	RRc	12.9	13.7	0.3273052	25	1610.05	25
V421 Her:	17 32 05.47	39 45 32.2	RRab	13.33	14.46	0.55677	3	56	27
V788 Oph:	17 36 09.07	08 09 54.1	RRab	13.3	14.9	0.547131	3	115	3
V434 Her:	17 40 33.01	22 49 02.3	RRab	13.8	15.2	0.5144034	3	26.1	26
V494 Sco:	17 40 48.48	-31 32 31.8	RRab	10.62	11.91	0.427297	25	455	17

Table 1. continued.

Star	RA	Dec	Type	V_{\max} [mag]	V_{\min} [mag]	P_{puls} [d]	Ref.	P_{Bl} [d]	Ref.
								504.03	25
ASAS174202-4633.7:	17 42 02.00	-46 33 42.0	RRc	10.74	11.11	0.3115788	25	1706.78	25
V829 Oph:	17 49 29.20	12 13 54.5	RRab	13.5	15.0	0.56923	3	165	3
S Ara	17 59 10.73	-49 26 00.5	RRab	9.92	11.24	0.45186	17	49.37	25
AV Dra	17 59 44.21	51 53 01.7	RRab	12.50	13.57	0.55560	3	96	27
ASAS180023-7026.5:	18 00 23.00	-70 26 30.0	RRc	12.08	12.47	0.3556146	25	1162.79	25
WW CrA	18 05 36.79	-43 49 57.4	RRab	11.66	12.48	0.55949	17	35.5	17
ASAS181215-5206.9	18 12 15.00	-52 06 54.0	RRab	12.59	13.26	0.8375462	25	5.22	25
V442 Her:	18 12 58.32	42 03 45.5	RRab	12.5	13.8	0.442084	3	≥ 700.00	29
BD Dra	18 17 51.94	77 17 49.2	RRab	12.05	13.01	0.58902	3	24.11	23
MW Lyr	18 19 53.82	31 58 54.6	RRab	12.5	14.0	0.3976742	5	16.55	5
ASAS182913+2104.3	18 29 13.00	21 04 18.0	RRab	11.26	12.18	0.371117	3	23	27
KM Lyr:	18 30 29.76	40 18 15.8	RRab	12.8	13.9	0.500193	3	30	26
KX Lyr:	18 33 15.22	40 10 22.8	RRab	10.38	11.47	0.44090446	3	...	41
BH Pav	18 34 40.57	-65 27 03.0	RRab	11.5	13.1	0.4769536	25	173.7	25
AQ Lyr	18 34 51.04	26 35 41.8	RRab	12.30	13.51	0.357134	8	64.9	8
CoRoT105288363	18 39 30.86	07 26 53.6	RRab	14.96	15.66	0.56744122	3	35.6	32
V413 CrA	18 47 57.62	-37 44 22.5	RRab	10.23	10.90	0.5893445	25	59.96	25
V349 Lyr:	18 49 24.27	42 44 45.2	RRab	16.78	17.77	0.507074	31	≥ 127	31
BD Her	18 50 32.19	16 31 50.9	RRab	11.72	12.63	0.4739064	3	~ 22	8
V353 Lyr	18 52 01.78	45 18 31.4	RRab	16.0	17.0	0.55682	31	60	31
V354 Lyr:	18 52 50.27	41 33 49.4	RRab	15.0	16.0	0.56168	31	≥ 127	31
V355 Lyr	18 53 25.83	43 09 16.2	RRab	13.8	15.3	0.473697	31	31.4	31
ASAS185719-6321.4	18 57 19.00	-63 21 24.0	RRab	12.28	13.24	0.41217	25	61.39	25
KIC11125706	19 00 58.78	48 44 41.6	RRab	11.83	12.26	0.61324	31	39.4	31
V360 Lyr	19 01 58.53	46 26 45.7	RRab	15.5	16.5	0.55759	31	51.4	31
NR Lyr:	19 08 27.26	38 48 46.0	RRab	12.22	12.98	0.6820264	3	27	27
V450 Lyr:	19 09 36.66	43 21 50.0	RRab	14.3	16.7	0.50461	31	~ 125	31
V366 Lyr	19 09 40.65	46 17 18.1	RRab	15.5	16.5	0.52702	31	65.6	31
V1104 Cyg	19 18 00.41	50 45 17.5	RRab	14.5	15.5	0.43639	31	53.1	31
V1127 Aql	19 24 00.11	01 41 48.9	RRab	14.8	16.0	0.355997	42	26.88	42
CoRoT100881648	19 25 05.43	01 39 23.8	RRab	14.94	...	0.60700	23	59.8	23
CoRoT101128793	19 26 37.32	01 13 34.9	RRab	15.93	16.53	0.4719296	3	18	33
ASAS192824-1852.4:	19 28 24.00	-18 52 24.0	RRc	12.65	13.10	0.3563567	25	1572.33	25
CoRoT101503544	19 29 10.13	00 43 46.9	RRab	14.52	...	0.60500	23	25.6	23
WY Dra	19 33 20.76	80 55 42.9	RRab	12.08	13.64	0.588941	3	14.3	28
ASAS193538-7409.9:	19 35 38.00	-74 09 55.0	RRc	12.57	13.08	0.3499993	25	1608.49	25
V2178 Cyg:	19 40 06.99	38 58 20.4	RRab	15.5	17.0	0.48680	31	≥ 200	31
ASAS194502+2434.2	19 45 02.00	24 34 12.0	RRab	11.72	12.02	0.8458661	25	37.56	25
V808 Cyg:	19 45 39.07	39 30 54.8	RRab	15.3	16.6	0.5478641	31	~ 90	31
FO Pav	19 51 42.20	-62 44 07.8	RRab	11.3	12.2	0.5514395	25	557.17	25
V783 Cyg	19 52 52.71	40 47 35.4	RRab	14.2	15.5	0.6206994	31	27.7	31
ASAS195927-3400.1	19 59 26.70	-34 00 03.5	RRab	11.88	12.65	0.37972	17	45.7	17
V759 Cyg	20 00 26.80	48 59 37.8	RRab	12.1	13.8	0.360014	8	16	8
ASAS200431-5352.3	20 04 31.40	-53 52 20.0	RRc	10.95	12.26	0.32402	25	10.82	25
KM Aql	20 05 56.27	-08 30 52.4	RRab	12.7	13.8	0.4381966	25	192.2	25
V2239 Sgr	20 09 09.67	-41 49 31.8	RRab	12.0	13.0	0.441943	25	45.39	25
V1645 Sgr:	20 20 44.47	-41 07 05.7	RRab	11.5	12.1	0.5529452	3	1331.74	25
GZ Del:	20 22 24.53	10 34 07.3	RRab	15.4	16.7	0.33582841	3	~ 36	38
ASAS202746-2850.5:	20 27 45.70	-28 50 33.0	RRab	12.24	12.64	0.4084525	25	1674.48	25

Table 1. continued.

Star	RA	Dec	Type	V_{\max} [mag]	V_{\min} [mag]	P_{puls} [d]	Ref.	P_{Bl} [d]	Ref.
ASAS203145-2158.7	20 31 45.00	-21 58 42.0	RRc	11.25	11.64	0.317152	25	792.83	25
ASAS203420-2508.9	20 34 20.00	-25 08 54.0	RRab	11.58	12.48	0.5262389	25	666.44	25
ASAS203749-5735.5:	20 37 49.00	-57 35 30.0	RRc	12.38	12.66	0.4199162	25	1270.33	25
ASAS204440-2402.7	20 44 39.90	-24 02 44.0	RRc	12.75	13.11	0.205333	25	6.64	25
FK Vul	20 52 31.00	22 26 11.7	RRab	12.06	12.95	0.4340527	3	56	8
RV Cap	21 01 28.87	-15 13 46.1	RRab	10.22	11.57	0.4477465	25	231.66	25
ASAS210741-5844.2:	21 07 41.00	-58 44 12.0	RRc	13.33	13.78	0.3462376	25	1479.95	25
Z Mic:	21 16 22.71	-30 17 03.1	RRab	11.26	11.92	0.5869258	3	...	34
ASAS211839+0612.3:	21 18 39.40	06 12 18.0	RRc	11.04	11.53	0.2914601	25	1176.75	25
ASAS212034+1837.2	21 20 34.00	18 37 12.0	RRab	11.50	12.26	0.5624065	25	81.3	25
DM Cyg	21 21 11.55	32 11 28.7	RRab	10.93	11.99	0.419863	7	10.57	7
ASAS212331-3025.0:	21 23 31.00	-30 25 00.0	RRc	12.35	12.84	0.367442	25	1739.74	25
ASAS212433-5712.1	21 24 33.24	-57 12 04.2	RRab	12.95	13.99	0.6051401	17	133.38	25
RY Oct	21 36 09.37	-77 18 13.5	RRab	11.46	12.46	0.563469	3	216.45	23
ASAS213826-3945.0:	21 38 26.00	-39 44 57.0	RRc	13.07	13.56	0.4107031	25	1540.12	25
ASAS214101+0109.6	21 41 01.00	01 09 36.0	RRab	12.43	13.0	0.6156709	25	522.58	25
RS Oct	21 47 16.91	-87 39 06.4	RRab	12.2	13.4	0.458038	3	244.2	25
RT Gru	21 51 58.44	-45 59 06.7	RRab	12.19	13.15	0.51216	17	87	17
SS Oct	21 53 35.38	-82 46 43.8	RRab	10.8	12.1	0.6218493	25	144.93	23
BV Aqr:	22 02 54.00	-21 31 32.1	RRc	10.72	11.24	0.363714	3	11.2	26
								1413.43	25
ASAS221556-2522.6	22 15 55.70	-25 22 39.0	RRab	11.30	12.08	0.5467383	25	5.78	25
TY Gru:	22 16 39.42	-39 56 18.0	RRab	13.6	14.7	0.570076	3	...	34
GP Aqr:	22 25 39.14	-07 56 27.7	RRc	10.66	11.04	0.4052637	25	1618.65	25
AE Peg:	22 27 21.54	16 48 16.7	RRab	11.83	13.15	0.4967235	3	23	27
ASAS223427-5635.4	22 34 27.00	-56 35 24.0	RRab	13.07	13.45	0.61499	17	63	17
ASAS225131-3006.2:	22 51 31.00	-30 06 12.0	RRc	13.21	13.66	0.3384769	25	1681.8	25
ASAS225248-2442.2	22 52 47.80	-24 42 12.0	RRab	12.78	13.97	0.5295565	25	181.2	25
BH Peg:	22 53 01.04	15 47 16.6	RRab	9.99	10.79	0.640993	3	39.8	26
ASAS225323+0846.1	22 53 23.20	08 46 09.0	RRab	12.60	14.11	0.4930493	25	348.58	25
ASAS225518-2317.6:	22 55 18.00	-23 17 36.0	RRc	13.00	13.55	0.3935794	25	1557.88	25
BO Gru	23 06 58.64	-43 54 38.5	RRc	12.1	12.6	0.2811062	25	10.24	25
ASAS231209-1855.4:	23 12 09.00	-18 55 24.0	RRc	12.73	13.05	0.3079943	25	1349.89	25
GV And:	23 13 12.56	36 54 04.0	RRab	13.07	14.03	0.528092	16	~32	16
ASAS232031-1447.9	23 20 31.00	-14 47 54.0	RRab	12.46	13.05	0.6269552	25	54.52	25
ASAS233951-1644.4	23 39 51.30	-16 44 25.0	RRc	12.16	12.68	0.3553741	25	875.96	25
DY And:	23 58 42.21	41 29 19.4	RRab	12.94	14.15	0.6030897	3	...	35

Table 2. Blazhko stars with multiple modulations.

Star	RA	Dec	Type	V_{\max} [mag]	V_{\min} [mag]	P_{puls} [d]	Ref.	P_{mod1} [d]	P_{mod2} [d]	Ref.
SU Col: ^a	05 07 47.05	-33 51 54.5	RRab	11.32	13.33	0.4873552	25	65.41	88.98	25
UZ UMa	08 18 53.94	+73 05 47.8	RRab	13.10	15.00	0.4668413	6	26.7	143	8
LS Her	16 02 03.79	+17 28 50.4	RRc	11.04	11.53	0.230808	21	12.75	109	21
V872 Oph:	17 55 17.81	+08 13 42.9	RRab	14.70	15.80	0.45197319	3	13.5	51.13	40
RZ Lyr	18 43 37.88	+32 47 54.0	RRab	10.60	12.03	0.511230	11	121	30	11
V445 Lyr	18 58 25.59	+41 35 48.6	RRab	15.30	17.30	0.513075	31	53.2	143.3	31
XZ Cyg	19 32 29.31	+56 23 17.5	RRab	8.90	10.16	0.46659934	20	57.5	41.6	20
CZ Lac	22 19 30.76	+51 28 14.8	RRab	10.77	11.26	0.432174	30	14.6	18.6	30

Notes. ^(a) SU Col has one additional modulation period 29.5 d.

Table 3. Stars with changing Blazhko period.

Star	RA	Dec	Type	V_{\max} [mag]	V_{\min} [mag]	P_{puls} [d]	Ref.	P_{BLmin} [d]	P_{BLmax} [d]	Ref.
AD UMa:	09 23 38.66	+55 46 33.2	RRab	15.0	16.3	0.548315	3	35	40	26
RV UMa	13 33 18.09	+53 59 14.6	RRab	9.81	11.30	0.468060	3	89.9	90.63	12
XZ Dra	19 09 42.61	+64 51 32.1	RRab	9.59	10.65	0.4764955	24	73	77	24
RR Lyr	19 25 27.91	+42 47 03.7	RRab	7.06	8.12	0.566839	22	38.8	40.8	22

References. (1) Phillips & Gay (2004); (2) Jurcsik et al. (2006); (3) Samus et al. (2012) or Watson et al. (2006); (4) Jurcsik et al. (2005); (5) Jurcsik et al. (2008); (6) Sódor et al. (2006); (7) Jurcsik et al. (2009b); (8) Jurcsik et al. (2009a); (9) Sódor et al. (2012); (10) Szeidl et al. (2012); (11) Jurcsik et al. (2012); (12) Hurta et al. (2008); (13) Achtenberg & Husar (2001); (14) Lee & Schmidt (2001b); (15) Lee & Schmidt (2001a); (16) Lee et al. (2002); (17) Sódor & Wils (2005); (18) Kovács (2005); (19) Kolenberg et al. (2009); (20) La Cluyzé (2004); (21) Wils et al. (2008); (22) Kolenberg et al. (2006); (23) Le Borgne et al. (2012); (24) Jurcsik et al. (2002); (25) Szczygiel & Fabrycky (2007); (26) Smith (1995); (27) Wils et al. (2006); (28) Chris et al. (1975); (29) Schmidt & Lee (2000); (30) Sódor et al. (2011); (31) Benkő et al. (2010); (32) Chadid et al. (2011b); (33) Poretti et al. (2010); (34) For et al. (2011); (35) Cano & Smith (2010); (36) Antipin et al. (2005); (37) Oppenheim & Benson (1998); (38) Hacke & Steiner-Sohn (1988); (39) Wunder (1990); (40) Hacke (1988); (41) Firmanjuk (1974); (42) Chadid et al. (2010); (43) Virmina et al. (2012); (44) Antipin et al. (2010).

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