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**COORDINATES AND IDENTIFICATIONS FOR
SONNEBERG VARIABLES ON MVS 291–295**

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The list below is a continuation of a series providing accurate positions and identifications for variables appearing on the *MVS* charts (Hoffmeister 1957). The variables here were first described by Hoffmeister (1949). Details about the identification procedure and table layout are contained in the first report of our series (Kinnunen & Skiff 2000). We again acknowledge correspondence with Nikolai Samus in regard to the identification of KP Cas. Steve Levine’s PMM pixel-server (Levine 2000) made this recovery a cinch.

Table 1: Variables on *MVS* 291–295

Sonne.	GCVS	RA (2000)	Dec	s	GSC	IRAS
S 3865	KP Cas*	0 ^h 38 ^m 54 ^s .70	+61°12′59″.9	A		
S 3866	OO Cas	0 44 00.93	+58 56 05.7	T	3667-0376	
S 3867	OS Cas*	0 50 38.48	+60 13 07.2	G	4016-1660	
S 3868	OT Cas	0 53 02.68	+60 35 48.2	A		00500+6019
S 3869	OU Cas*	0 53 16.77	+60 41 44.1	A		
S 3870	OV Cas	0 53 38.03	+63 20 29.1	G	4021-1465	
S 3871	MM Cas	0 54 34.96	+54 26 36.4	T	3672-0571	
S 3872	OW Cas	1 01 21.47	+54 10 30.3	A		
S 3873	V552 Cas*	1 05 18.66	+63 21 24.7	A		
S 3874	KT Cas	1 04 50.17	+54 06 19.9	T	3668-1034	
S 3875	V366 Cas*	1 08 25.61	+58 44 16.9	G	3681-0494	
S 3876	OY Cas	1 11 57.49	+62 07 25.4	A		
S 3877	OZ Cas	1 14 19.57	+62 02 38.6	G	4034-1221	
S 3878	V555 Cas*	1 16 08.22	+55 30 10.2	T	3673-1576	01130+5514
S 3879	PP Cas*	1 20 01.47	+57 31 29.1	T	3678-0224	01168+5715
S 3880	V588 Cas*	1 22 38.09	+54 23 08.3	G	3674-0352	
S 3881	V556 Cas*	1 23 51.77	+62 31 20.0	G	4034-1188	
S 3882	PQ Cas	1 28 36.19	+61 12 07.7	G	4031-2015	01252+6056
S 3883	KU Cas	1 31 02.39	+57 54 12.4	A		
S 3884	IS Per*	1 32 10.23	+54 16 34.9	G	3670-0078	
S 3885	LR Cas	1 32 49.90	+63 01 03.2	T	4035-0600	

Table 1: Variables on *MVS* 291–295 (cont'd.)

Sonne.	GCVS	RA (2000)	Dec	s	GSC	IRAS
S 3886	PR Cas*	1 ^h 32 ^m 51 ^s .36	+58°01'32"4	G	3678-0609	
S 3887	PS Cas	1 35 30.42	+55 42 53.9	G	3675-0346	
S 3888	KV Cas	1 36 38.08	+61 13 26.5	G	4031-1551	
S 3889	PT Cas	1 38 05.61	+55 58 14.8	G	3675-0803	01348+5543
S 3890	PU Cas	1 41 28.11	+59 13 13.9	T	3683-1639	01381+5858
S 3891	MN Cas	1 42 03.04	+54 57 35.8	T	3675-2528	
S 3892	HS Per*	1 52 11.62	+57 06 42.9	G	3692-1540	
S 3893	NSV 1545	4 18 16.97	+35 45 28.0	G	2383-2130	
S 3894	GM Per	4 19 50.87	+41 07 41.8	T	2882-0761	04164+4100
S 3895	GN Per	4 20 52.38	+41 03 30.1	G	2883-0026	04174+4056
S 3896	NSV 1559*	4 21 08.70	+40 56 47.7	A		
S 3897	GP Per	4 23 19.19	+44 14 12.5	G	2891-1394	
S 3898	NSV 1580	4 23 29.08	+42 22 50.1	G	2887-2232	
S 3899	GS Per	4 23 59.63	+41 56 27.6	G	2887-2020	
S 3900	IK Per	4 29 27.46	+42 03 10.7	T	2887-2716	
S 3901	HH Per	4 32 59.35	+41 58 54.5	A		
S 3902	HK Per	4 36 24.95	+41 36 14.2	G	2888-1910	
S 3903	KR Per	4 37 08.91	+44 12 39.7	T	2892-1828	
S 3904	HL Per	4 37 54.13	+39 56 17.2	G	2884-1407	04344+3950
S 3905	HP Per	4 43 31.21	+39 42 45.8	A		
S 3906	NSV 1704	4 44 47.05	+43 35 01.9	A		04412+4329
S 3907	OX Per	4 46 17.95	+36 57 24.4	G	2386-0791	
S 3908	FG Aur	4 55 45.98	+37 21 06.0	G	2399-0029	
S 3909	HW Aur	5 01 25.24	+39 48 12.0	G	2899-1734	
S 3910	FK Aur	5 03 36.05	+40 29 40.3	G	2899-0413	
S 3911	FL Aur	5 05 39.51	+41 13 00.1	G	2899-0115	
S 3912	NSV 1823	5 06 29.04	+40 33 58.1	A		
S 3913	V1013 Ori	5 17 37.15	+05 59 48.6	G	0112-1569	
S 3914	V432 Ori	5 18 47.97	+13 59 12.2	G	0711-2315	
S 3915	V433 Ori	5 21 06.95	+12 45 41.0	G	0707-0658	05183+1242
S 3916	GV Ori	5 23 58.99	+14 34 49.0	G	0712-1569	
S 3917	NSV 2005	5 28 17.00	+04 21 29.9	G	0109-2028	
S 3918	V449 Ori	5 31 16.14	+11 25 31.4	G	0709-1106	
S 3919	HI Ori*	5 31 23.59	+12 09 43.8	G	0709-0378	
S 3920	HM Ori*	5 31 47.79	+12 18 08.2	G	0709-0366	
S 3921	V455 Ori	5 32 15.44	+12 09 34.4	A		
S 3922	V460 Ori*	5 32 43.04	+12 21 08.3	G	0709-1308	05299+1219
S 3923	V503 Ori	5 36 50.17	+10 33 37.5	A		
S 3924	V504 Ori	5 38 09.54	+12 32 14.0	A		
S 3925	V516 Ori*	5 42 13.76	+08 43 56.8	A		
S 3926	V517 Ori	5 42 47.33	+11 07 11.2	G	0718-0147	
S 3927	V519 Ori	5 43 51.08	+09 17 28.9	G	0714-0167	
S 3928	QR Ori	5 44 09.00	+09 09 15.1	A		05413+0907
S 3929	V524 Ori	5 47 16.06	+10 04 52.7	G	0719-0575	
S 3930	V525 Ori	5 50 33.99	+10 23 42.5	A		
S 3931	NSV 2724	5 54 37.10	+04 54 12.1	G	0125-0449	
S 3932	V528 Ori	5 55 48.43	+07 49 36.0	G	0716-0914	
S 3933	DT Tau	5 28 47.17	+16 08 32.7	G	1297-0169	
S 3934	DV Tau	5 31 06.33	+18 33 38.0	T	1301-0792	
S 3935	EX Tau	5 44 19.58	+13 27 55.2	A		

Table 1: Variables on *MVS* 291–295 (cont'd.)

Sonne.	GCVS	RA (2000)	Dec	s	GSC	IRAS
S 3936	QX Ori	5 ^h 53 ^m 33 ^s .27	+13°56′55″.3	A		05507+1356
S 3937	QY Ori	5 56 12.38	+16 28 27.4	A		
S 3938	QZ Ori*	5 56 03.38	+12 39 02.3	G	0724-0867	05532+1238
S 3939	V336 Ori	5 57 34.39	+19 49 11.7	G	1320-2007	
S 3940	V338 Ori*	5 59 41.66	+16 51 14.8	A		
S 3941	V340 Ori	6 01 25.63	+15 30 09.6	T	1313-1397	
S 3942	CQ Tau	5 35 58.46	+24 44 54.1	T	1865-1798	
	FN Aur*	5 39 45.98	+32 34 04.7	T	2408-0676	
S 3943	FO Aur	5 43 03.98	+32 12 15.2	G	2409-1108	
S 3944	FP Aur	5 43 38.78	+30 53 31.5	T	2405-0090	
S 3945	FQ Aur	5 44 31.10	+30 40 39.6	G	2405-0626	05412+3039
S 3946	FS Aur	5 47 48.32	+28 35 11.6	A		
S 3947	FT Aur	5 48 11.13	+32 15 15.9	G	2409-1165	05449+3214
S 3948	FV Aur	5 49 42.04	+31 07 07.2	A		
S 3949	CR Tau	5 51 28.87	+24 03 30.8	T	1862-1633	
S 3950	NSV 2702	5 54 22.47	+32 29 04.3	G	2410-0926	
S 3951	FX Aur	5 54 20.98	+28 36 31.6	G	1875-2119	05511+2836
S 3952	FY Aur	5 55 12.15	+28 43 38.2	A		
S 3953	CT Tau	5 58 50.11	+27 04 41.9	T	1871-0570	
S 3954	EO Tau	6 00 17.32	+23 54 39.3	T	1864-0188	
S 3955	DO Gem	6 01 27.02	+23 51 19.3	A		
S 3956	DQ Gem	6 03 08.59	+26 37 49.6	G	1872-0535	
S 3957	DR Gem	6 03 23.05	+24 03 03.0	A		
S 3958	DS Gem	6 05 19.53	+22 32 52.6	G	1864-1523	
S 3959	FZ Aur	6 06 43.59	+31 55 19.7	A		
S 3960	GG Aur	6 07 00.35	+32 13 10.4	G	2423-0566	06037+3213
S 3961	GH Aur	6 09 27.70	+28 29 44.0	A		06062+2830
S 3962	NSV 2853*	6 10 43.93	+25 10 32.1	A		
S 3963	GI Aur	6 11 36.40	+29 26 42.0	T	1889-0165	
S 3964	V392 Ori	6 11 25.16	+18 32 59.6	T	1318-0945	
S 3965	V668 Ori	6 11 50.64	+19 57 14.2	G	1322-1165	
S 3966	V344 Ori*	6 15 18.96	+15 31 00.0	A		
S 3967	V382 Ori	6 20 09.71	+17 37 02.4	G	1319-1646	06172+1738
S 3968	GR Gem	6 23 20.24	+20 49 58.3	A		
S 3969	GZ Gem*	6 24 06.84	+18 42 11.3	G	1332-1013	
	CC Gem*	6 24 27.00	+18 39 00.1	G	1332-0381	
S 3970	EI Gem	6 25 03.27	+19 12 54.0	G	1336-1240	
S 3971	EK Gem	6 26 36.18	+20 14 41.6	G	1336-1261	06236+2016
S 3972	DU Gem	6 26 40.04	+18 42 13.9	A		
S 3973	DV Gem	6 26 58.34	+18 39 58.8	A		
S 3974	EL Gem	6 29 07.96	+20 48 42.5	G	1340-2008	
S 3975	EM Gem	6 30 22.99	+22 04 29.2	G	1340-1663	06273+2206
S 3976	GT Gem	6 31 33.02	+20 17 24.9	A		
S 3977	EN Gem	6 33 53.90	+18 41 18.2	A		
S 3978	EO Gem	6 34 18.39	+23 23 36.4	G	1880-0742	
S 3979	EQ Gem	6 37 19.80	+18 12 48.7	T	1333-0198	
S 3980	ER Gem	6 38 21.68	+21 57 04.1	A		

Table 1: Variables on *MVS* 291–295 (cont'd.)

Sonne.	GCVS	RA (2000)	Dec	s	GSC	IRAS
S 3981	ET Gem	6 ^h 39 ^m 26 ^s .32	+21°00'18"0	G	1341-1602	06364+2103
S 3982	EU Gem	6 39 42.03	+17 11 33.6	G	1333-1496	
S 3983	EW Gem	6 44 49.89	+24 18 10.3	A		
S 3984	EX Gem	6 45 26.20	+20 28 14.3	G	1338-0087	06424+2031
S 3985	EY Gem	6 45 32.45	+17 13 31.0	G	1334-0744	
S 3986	FH Gem	6 48 49.50	+17 51 22.7	T	1335-1382	
S 3987	GU Gem	6 50 10.71	+18 46 26.2	A		
S 3988	GM Mon	6 23 21.77	+07 39 54.2	G	0732-1978	
S 3989	GN Mon	6 26 01.06	+08 03 53.3	A		06232+0805
S 3990	V714 Mon	6 29 12.42	+04 44 40.0	T	0141-0638	
S 3991	NSV 3066	6 39 27.00	+03 31 02.4	A		
S 3992	V446 Mon	6 43 17.37	+01 09 39.3	A		
S 3993	V447 Mon	6 44 16.00	+04 29 54.2	G	0155-2719	
S 3994	MR Mon	6 47 11.52	+01 31 45.7	T	0148-1053	
S 3995	V449 Mon	6 47 56.44	+02 47 55.7	A		
S 3996	QR Mon	6 54 06.33	+00 47 36.5	T	0149-0625	06515+0051
S 3997	V631 Mon	7 01 23.28	+06 35 12.5	G	0174-1053	06586+0639
S 3998	HM Mon	7 03 02.89	+00 13 49.1	G	0162-0265	
	GO Mon*	6 34 30.51	+09 24 13.5	G	0737-0633	
S 3999	DY Gem	6 35 57.81	+14 12 46.0	T	0745-1495	
S 4000	ES Gem	6 38 15.95	+17 23 40.0	A		
	EE Gem*	6 39 18.25	+13 13 55.8	A		
	GP Mon*	6 40 41.85	+09 51 45.1	G	0750-0895	
S 4001	IO Mon	6 40 58.83	+09 30 57.6	G	0750-1832	
S 4002	IP Mon	6 41 00.97	+09 32 44.7	G	0750-1777	
S 4003	GR Mon*	6 41 04.96	+09 50 46.7	A		
S 4004	IQ Mon*	6 41 17.24	+09 54 33.1	A		
S 4005	IR Mon	6 43 00.01	+11 13 53.0	A		
S 4006	EZ Gem	6 46 04.47	+13 05 02.4	A		
S 4007	NSV 3215*	6 48 14.40	+08 25 54.5	G	0747-2023	
S 4008	FM Gem	6 50 43.85	+17 53 02.3	G	1335-0959	
S 4009	FN Gem	6 50 54.21	+14 29 37.6	T	0759-2087	06480+1433
S 4010	GX Mon*	6 52 47.0	+08 25 21	S		
S 4011	GZ Mon	6 54 48.45	+08 20 21.0	G	0748-1774	06520+0824

Notes:

- FN Aur SVS 332.
 KP Cas Downes *et al.* (1997) and previous IDs in error; in outburst at 15^m5-16^m on POSS-II J plate (JD 2447770.86), identifiable with a 18^m very blue ($b-r = -0.2$) star in USNO-A2.0.
 OS Cas S1* 16.
 OU Cas ID uncertain, blue candidate chosen.
 PP Cas IRC +60045.
 PR Cas near to but outside position error-ellipse of IRAS 01296+5746.
 V366 Cas faint companion on northeast; not IRAS 01053+5829, which is the background HII region [FT96] 125.1-4.0.
 V552 Cas chart rotated so that north is to the upper right.
 V555 Cas CSV 132.
 V556 Cas position also given by Schmidt & Seth (1996).
 V588 Cas GCVS 4.1 position 3/3 in error.

Notes (cont'd.):

CC Gem	AN 4.1934.
EE Gem	SV* R 196.
GZ Gem	faint companion 10" southwest.
GO Mon	AN 48.1934.
GP Mon	AN 10.1924 = NGC 2264 80.
GR Mon	V359 Mon.
GX Mon	[TVH89] 19 = [PCC93] 113 = [WTM81] OH 205.6+04.1.
IQ Mon	NGC 2264 197.
HI Ori	HK Ori also shown on this chart.
HM Ori	RX J0531.8+1218.
QZ Ori	western component of a close pair.
V338 Ori	southeastern star of a pair.
V344 Ori	GCVS 4.1 position 3'0 in error.
V460 Ori	GCVS 4.1 position 3'5 in error.
V516 Ori	southeastern star of a pair.
HS Per	GCVS 4.1 position 5'1 in error.
IS Per	not GSC 3670-0306.
NSV 1559	southern of two similarly-bright stars, variable on POSS-I/II red plates.
NSV 2853	northeastern star of a pair.
NSV 3215	double star; it is uncertain which (if either) is variable.

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