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CALL FOR A CAMPAIGN OF LONG-TERM PHOTOMETRY OF SYMBIOTIC STARS

We suggest to launching an observing campaign for photometry of the selected 28 symbiotic stars (SS).

Long-term (weeks to decades) variations of the brightness (amplitudes 2 to 7 mag) related to the outbursts of SS and sometimes also to orbital motion of the components are commonly observed in many SS. In some cases short-term (minutes to hours) variations (amplitudes 0.01 to 1 mag) are seen, very probably caused by the physical effects in the accreted material around the compact component. The changes of brightness are sudden and unexpected, being the outcome of strong interaction among the components, although their very cause could be different for particular systems. Detailed information on SS one may find besides the quoted references also in the volume: "The Symbiotic Phenomenon", Proc. of the 103rd Colloquium of the IAU, Toruń, Poland, August 18 - 20, 1987, Edited by Mikolajewska, J., Friedjung, M., Kenyon, S. J. and Viotti, R., Dordrecht, Holland.

The proposed programme is aimed at long-term photometry mainly in the standard Johnson UBV system. Its purpose is (i) Compilation and publication of the original photometric data.

Table I.

List of the chosen symbiotic stars

Star	$\alpha_{1950.0}$	$\delta_{1950.0}$	V	Sp
EG And	00 ^h 41 ^m 52 ^s .7	40°24'22".6	7 ^m .5	M2
AX Per	01 33 05.7	54 00 07	12	M
V741 Per	01 55 32.9	52 39 15		G2
UV Aur	05 18 33.3	32 27 50	7.9	C
BX Mon	07 22 52.7	-03 29 51	12	M4
TX CVn	12 42 17.9	37 02 14	9.3	M0
RW Hya	13 31 31.9	-25 07 29	10	M2
T CrB	15 57 24.5	26 03 39	10.0	M3
AG Dra	16 01 23.2	66 56 25	11.2	K3
Draco C-1	17 19 08.5	57 53 01	17.0	C1,2
RS Oph	17 47 31.6	-06 41 40	11.5	M2
AS 289	18 09 34.7	-11 40 55	10.5	M3
YY Her	18 12 25.9	20 58 20	12	M2
AS 296	18 12 33.0	-00 19 53	10.5	M5
V443 Her	18 20 02.9	23 25 47	11.5	M3
AS 338	19 01 32.0	16 21 47	11.5	M5
BF Cyg	19 21 55.2	29 34 34	12	M4
CH Cyg	19 23 14.2	50 08 31	7	M6
HM Sge	19 39 41.4	16 37 33	16	M
AS 360	19 43 35.7	18 29 23	11.0	M6
CI Cyg	19 48 20.6	35 33 23	11.1	M4
V1016 Cyg	19 55 19.8	39 41 30	16	M6
PU Vul	20 19 01.1	21 24 43	9	M4-5
V1329 Cyg	20 49 02.6	35 23 37	14	M5
V407 Cyg	21 00 24.1	45 34 41	15	M
AG Peg	21 48 36.2	12 23 27	9.4	M2
Z And	23 31 15.3	48 32 31	10.5	M2
R Aqr	23 41 14.3	-15 33 43	5.8	M7

(ii) Making sense to the observations of long-term variations of brightness for various SS and also for a single observer.

The aims of the programme could be well fulfilled by rather short (an hour) observations and therefore it is quite suitable for filling in the gaps between other planned observations. Thus the participation in the campaign could enhance the efficiency of using Your instrument without disturbing Your main research programme.

Everybody who wish to participate could select an arbitrary SS (not only those that are proposed by the undersigned) that could be most easily attached to his/her own programme.

All contributions will be gathered by the undersigned and subsequently published in *Contr. Astron. Obs. Skalnaté Pleso* annually (September dead-line). All astronomers who submit good quality data will become the coauthor of the paper and will receive its reprint.

The proposed list contains SS accessible from the northern hemisphere and bright enough for photometry with a small telescope. The data in our list were taken from the book by Kenyon (1986). The values of V magnitudes and spectral types serve for orientation only and describe predominantly the cold components of SS.

Moreover we prepared the finding charts for every programme SS after Bečvář (1962, 1964), POSS (1953), Dixon et al. (1985) and Allen (1984). We selected the comparison stars following the Catalogue by Blanco et al. (1968) and the SAO Star Catalog (1966). In all cases the comparison star S_1 was measured in all colours of the UBV system. We

recommend to derive secondary comparison stars in cases when the angular distance between SS and S_1 is rather large. The observations should be reduced to the international colour system.

We are ready to submit complete campaign instructions to the participants upon request. Of course, all additions and suggestions from the participants are most welcome.

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