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PHOTOELECTRIC UBV PHOTOMETRY OF SY For

In the GCVS, SY For was classified as U Geminorum type star. However, Wenzel (1973) doubted this classification and concluded from a survey on Sonneberg patrol plates that SY For is a semiregular reddish variable star of a cycle length of 50 to 60 days and an amplitude of roughly  $1^m.5$ .

SY For was included in a photoelectric survey of southern U Gem stars which was carried out in Dec. 1972 with the 1 meter telescope of the European Southern Observatory in La Silla/Chile. The telescope was equipped with a single channel photometer and a dry ice cooled EMI 6256 A multiplier. All observations were obtained in the UBV system.

The finding chart shows SY For as well as 5 field stars for which UBV values have been obtained (Table 1). Star 1 was selected as main comparison star and was monitored always together with the variable. All data were first reduced to the UBV standard system. Afterwards, the results of the variable were corrected according to the difference between the accompanying measurement of the comparison star and its general mean value.

Normally, 1 to 3 UBV sets per night were obtained. Only on Dec. 15, SY For was monitored for 104 min revealing a total of 82 UBV observations. In none of these cases short time scale variations exceeding  $0^m.01$  could be found. Therefore nightly averages were calculated and listed in Table 2.

The present photometry confirms that SY For is a red star probably of spectral type K. During the time of observation (10 days) it showed quite linear gradients in V and B-V ( $+0.042$  and  $-0.015$  mag per day, respectively), well compatible with cycle length and amplitude of Wenzel (1973). SY For can definitely

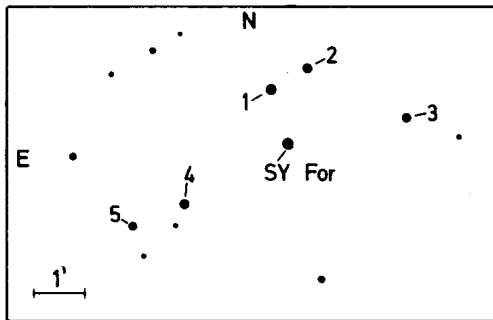
be excluded from the U Gem class and classified as SR star.

Table 1  
Mean UBV Values for the Field Stars  
around SY For

Star	V	B-V	U-B	n
1	12.44	0.77	0.17	16
2	13.98	0.70	0.00	2
3	13.37	0.20	0.09	3
4	13.21	0.77	-0.11	2
5	13.93	0.72	0.15	2

Table 2  
Nightly Averaged UBV Values of SY For

HJD 244...	V	B-V	U-B	n
1661.665	10.89	1.41	0.61	3
1664.597	11.05	1.35	0.51	2
1665.540	11.07	1.35	0.51	1
1666.573	11.09	1.34	0.42	82
1667.543	11.14	1.31	0.42	2
1668.549	11.17	1.32	0.42	2
1669.549	11.19	1.30	0.48	2
1671.559	11.31	1.26	0.49	1



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Reference:

Wenzel, W., 1973, IAU Inf.Bull.Var.Stars No. 763