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DISCOVERY OF A PERIOD IN THE SYMBIOTIC STAR AG DRACONIS

AG Dra is a well-known symbiotic star. Its photographic light-curve resembles that of the nova-like stars (Robinson, 1969; Splittgerber, 1974). Since 1955 this star has been in a quiet phase and has shown only small variations about the minimum light.

Since February 1974 I have observed AG Dra photoelectrically in U, B, V with the 60cm-reflektor II of Sonneberg Observatory. During this time the star has been slowly variable with small amplitude in V and B, but with large amplitude in U (see Fig.1). The same behaviour was observed by Beljakina (1969) in 1965....1967. Beljakina (l.c.) concluded from her observations that the variations were irregular, which, however, is not the case. The U variations are clearly periodic with the following elements:

$$U_{\max} = \text{J.D. } 243\,8900 + 554^{\text{d}}. \text{E.}$$

There are good reasons for assuming that all symbiotic stars are binaries containing an evolved red giant and a hot main sequence or white dwarf companion (Bath, 1977; Allen, 1978). But so far only three stars of this class could definitively been shown to be binaries (by T CrB; AR Pav; AG Peg; see Allen 1978). I think that the observations of AG Dra given in this paper could well be explained by binary motion of a hot source. But before a reliable model can be constructed, there are more photoelectric and spectroscopic observations necessary.

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