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CCD LIGHT CURVE AND REVISED PERIOD
FOR THE RR_c VARIABLE AP SERPENTIS

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Name of the object:	
AP Ser = AN 34.1935 = GSC 920.002 = HIP 74556	
Equatorial coordinates:	Equinox:
R.A. = 15 ^h 14 ^m 01 ^s DEC. = +09°58'52"	2000.0
Observatory and telescope:	
Private observatory, Schlüsselacher, Wald, 0.15-m refractor	
Detector:	SBIG ST-7 CCD camera

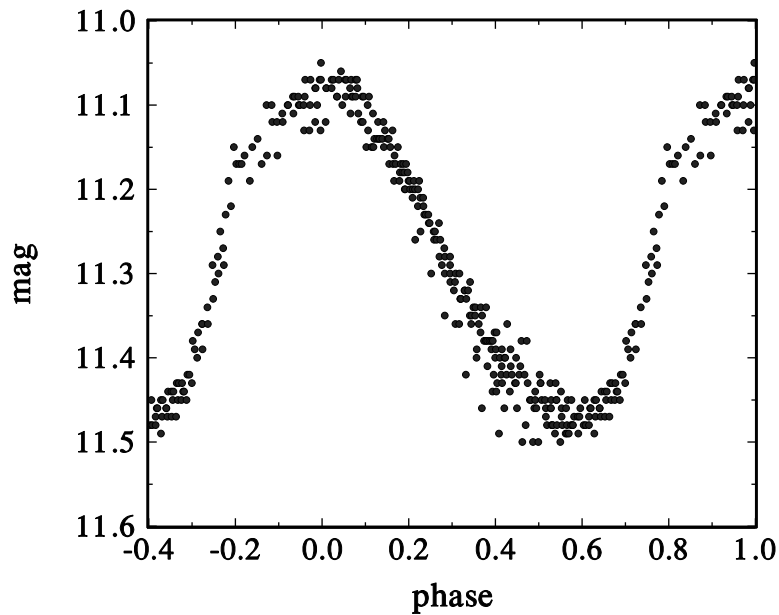


Figure 1. CCD light curve (without filter) of AP Ser

Filter(s):	None
Comparison star(s):	GSC 923.1074
Check star(s):	GSC 923.1281
Availability of the data:	
Upon request from blaettler-wald@bluewin.ch	
Type of variability:	RRc
Remarks:	
<p>The well known RRc variable AP Serpentis, discovered by Hoffmeister (1935), has been reobserved with our CCD equipment as mentioned above. During 8 nights between JD 2451697 and JD 2451724 a total of 312 measurements were secured. AP Ser is the brighter, north-eastern star in a close double. In our aperture photometry, both components of the pair were included in the diaphragm. In the the Digital Sky Survey, the brightness of the companion can be estimated to be about 15.0 mag (photographic). Figure 1 shows our observations folded with a period of 0^d.340853, the best value for the representation of our data. This value is considerably shorter than the one given by de Bruijn and Lub (1985; 0^d.341320), determined from <i>VBLUW</i> photometry secured in 1975, and slightly longer than the period derived from the Hipparcos satellite photometry (http://astro.estec.esa.nl/Hipparcos/), 0^d.340805. Neither of these earlier period values yield light curves of acceptable quality from our data. We have fitted the earlier photometry of AP Serpentis (Varsavsky, 1960; Peña et al., 1990) with our period value and find both sets to be very well representable by it. Due to the rather long time gaps between the available sets of observations, it is not possible to assign cycle numbers unequivocally. A period of 0^d.340852 brings the two latest sets in very good agreement, but fails to do so for the earliest set (Varsavsky, 1960). The most likely reason for this being a slight lengthening of the period value of AP Ser over the course of the last 40 years.</p>	

References:

- de Bruijn, J.W., Lub, J., 1985, *IBVS*, No. 2829
Hoffmeister, C., 1935, *Astron. Nachrichten*, **255**, 401
Peña, J.H., Diaz, L.M., Peniche, R., 1990, *Rev. Mexicana Astron. Astrof.*, **20**, 139
Varsavsky, C.M., 1960, *Astrophys. J.*, **131**, 623