

UBV Light Curves of AR Lacertae During 1980~81 and 1981~82

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The *UBV* observations of the brightest RS CVn-type eclipsing binary star AR Lac are made at four observatories, two in Korea and two in the US, in 1980~81 and 1981~82 seasons. As a result of the cooperation, two light curves in the yellow and in the blue are completed for each observing seasons.

The orbital period of AR Lac decreased by $0.^m014$ since 1977. An analysis of our yellow light curves together with other five yellow curves available in the literature since 1975 shows that there seems no periodicity in the migration of the distortion waves. There is a gradual decrease of at least $0.^m1$ between 1976 and 1982 in the brightness of the cooler component if one assume that the hotter component is constant.

Differential Photometry of the Metallic-Line Eclipsing Binary AN Andromedae

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The close binary star AN And with Orbital period of 3.22 days is of particular interest because it is a number of the very few known eclipsing systems of metallic line features.

Differential photoelectric photometry in the standard *UBV* system was carried out during fifteen nights in 1979, 80 and 81 by using three telescopes furnished with photoelectric photometers in Tokyo Astronomical Observatory: the 91cm reflector at the Mitaka campus and the 91cm reflector at the Okayama Astrophysical Station.

The general features of the light variation seem to be represented by symmetric light curves due to eclipses with considerable ellipticity effect. It may be noted here that the present light curves in *UBV* do not show any appreciable dips as previously reported by Tremko and Bakos (1978).

Photometric and Spectroscopic Observations of RS Cvn in 1982

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BV photoelectric observations of RS CVn were made for seventeen nights in the period from January to June in 1982 with the photoelectric photometer system of 61-cm reflector of the Yonsei University Observatory. One time of minimum light has been determined and the observed light curves were compared with other curves reported by others in past for the investigation of the wave

migration. Spectroscopic observations obtained simultaneously with the present photometer observations at the Okayama Astrophysical Observatory in Japan will also be presented.

BW Vul 변광성의 광전측광⁺

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BW Vulpeculae 변광성 ($p=4.1282470632$)에 대한 "Worldwide Observing Campaign" (M.S. Snowden)의 계획에 따라 소백산 24" 망원경으로 UBV 와 b (Strömgren) 측광을 수행했다. Δb -광도 곡선에서는 $\phi \simeq 0.83$ 부근에서 Stillstand가 나타나는 것 같다. V 와 B 광도 곡선에서는 보이는 $\phi \simeq 0.63$ 부근의 Stillstand는 더 많은 관측에서 그 존재여부가 확인되어야 할 것이다.

광도곡선 및 여러 관계식에서 구한 물리량은 다음과 같다.

$\langle V \rangle = 6.55$, $\langle B \rangle - \langle V \rangle = -0.132$, $\langle U \rangle - \langle B \rangle = -0.900$, $Q = -0.8123$, $\log T_e = 4.396$, $M_v = -3.57$
 ~ -3.803 , $B.C. = -2.5426$, $M_{bol} = -6.113 \sim -6.346$, $R = 7.97 \sim 8.87 R_\odot$, $Mass = 13 M_\odot$, pulsation constant
 $Q = 0.0322 \sim 0.02742$

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