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1984 UBVR I PHOTOMETRY OF II Peg

The II Peg (HD224085, SAO 091578) is a spectroscopic binary with a spectral type K2-3IV-V, Rucinski (1977), considered to be a member of RSCVn stars. As is well known, its light curves are highly variable in amplitude, phase and mean light level, Hartmann et al. (1979).

Our observations were made during 14 nights, between August and September 1984, from the Observatorio del Roque de los Muchachos at La Palma (Canary Islands), using the People's Photometer a two-channel photoelectric photometer and UBVR I filters of Cousins system (1976) at the Cassegrain focus of 1 m JK Telescope, and on the Swedish 60 cm Cassegrain Telescope with a single channel photon counting photoelectric UBVR Johnson photometer.

The stars SAO 091577 and SAO 091574 were used as comparison. The nightly means of individual differential magnitudes (source-comparison) in UBVR I are listed in Table I, as well the Julian date of the observation.

Table I

J.Date 2445000+	ΔU	ΔB	ΔV	ΔR	ΔI
936.712	-1.708	-0.971	-0.709	-0.682	-0.692
937.712	-1.614	-0.915	-0.661	-0.633	-0.642
938.712	-1.657	-0.969	-0.698	-0.672	-0.698
940.713	-1.701	-0.999	-0.745	-0.714	-0.737
945.712			-0.762		
951.723	-1.578	-0.965	-0.681		
953.578	-1.648	-0.921	-0.687		
954.713		-0.913	-0.708		
955.578		-1.056	-0.801		
955.713	-1.761	-1.052	-0.787		
959.578	-1.676	-0.924	-0.702		
960.713	-1.667	-0.951	-0.715		
961.713	-1.713	-1.030	-0.779		
966.599	-1.640		-0.647		

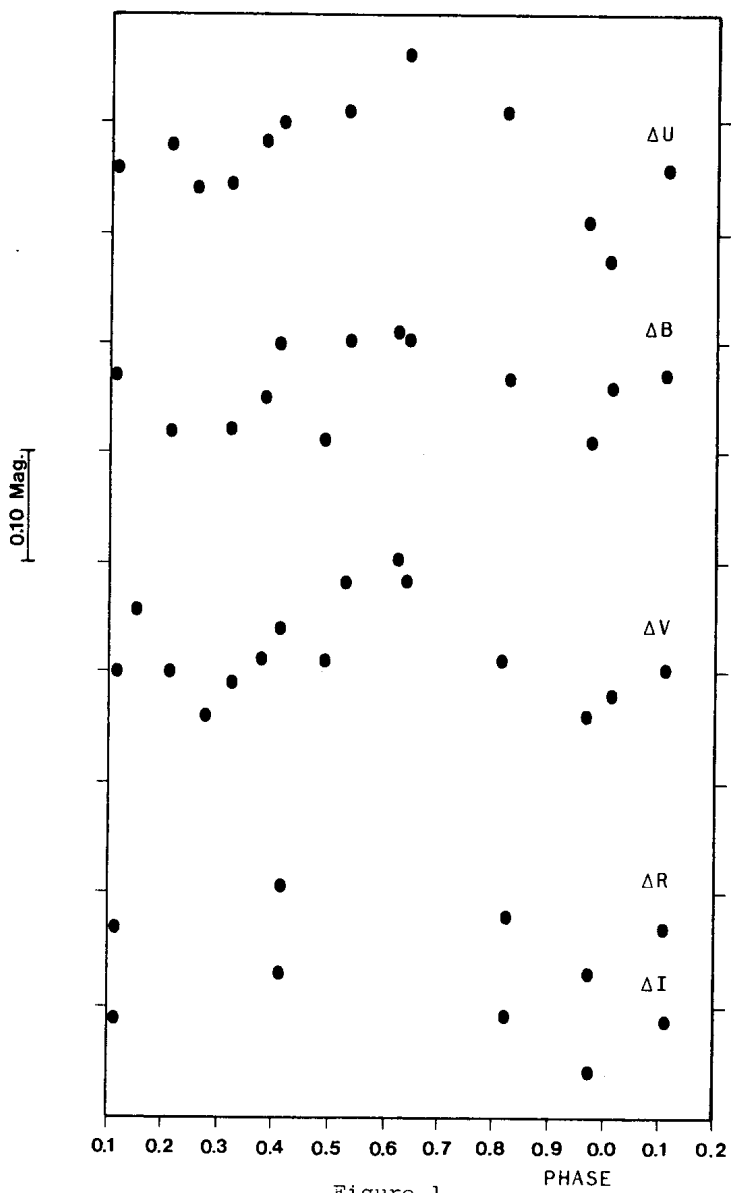


Figure 1

The results are also given in Figure 1, where the differential magnitude is plotted against the phase calculated using the ephemerides of Rucinski (1977)

$$JD = 2443033.10 + 6^d.724183E$$

From the light curves we observed two minima at about 0.26 and 0.97 phases with similar amplitude, approximately 0.15 mag. These new observations are markedly different from those previously reported by Zeilik et al. (1982), Hall and Henry (1983) Lines et al. (1983) and Henry (1983). If compared to the light curve obtained by Nations and Ramsey (1981) it seems to show some similitude since they found two maxima at 0.55 separation in phase although of different amplitude.

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