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PHOTOELECTRIC OBSERVATIONS OF PW Vul

A set of photoelectric observations of Nova Vul 1984. No. 1 (now designed as PW Vul) was carried out at the University Observatory in Brno on 4 nights during August - September 1984. The observations were made with the 60 cm reflector and photoelectric photometer equipped with UBV filters and EMI 6256S photomultiplier. The data of the comparison stars are given in Table I. The UBV data of all comparison stars were derived in the usual way from UBV standards near PW Vul. From our measurements it follows that all these comparisons are constant.

Table I

Object	BD	SAO	V	B-V	U-B
Comparison star A	$+27^{\circ}3391$	87213	7.460	+0.550	-0.040
Comparison star B	$+27^{\circ}3400$	87257	8.987	+0.153	-0.158
Comparison star C	$+27^{\circ}3390$	87211	9.675	+0.210	-0.325

The mean errors of the photometry are 0.007 mag for comparisons A and B, and 0.011 mag for comparison C, respectively.

The Nova PW Vul was measured differentially to comparison A. The means of individual observations were grouped into normal points and are listed in Table II. Our measurements in V colour are plotted in Figure 1 , where other published UBV observations are plotted too.

From Figure 1 it is clear that after the first outburst the brightness of PW Vul changed with an amplitude of about 1.5 mag on the time scale 6-7 days.

Individual observations in V colour (on the night 28/29.8) are plotted in Figure 2. Two different changes in brightness are present here:

1. small fluctuations in the range 0.03-0.04 mag during 5-6 minutes
2. changes in the range 0.15-0.20 mag during 2-3 hours (observed by Noskova (1984) and Schult (1984), too).

The character of the light variations in B and U colours is the same as in V.

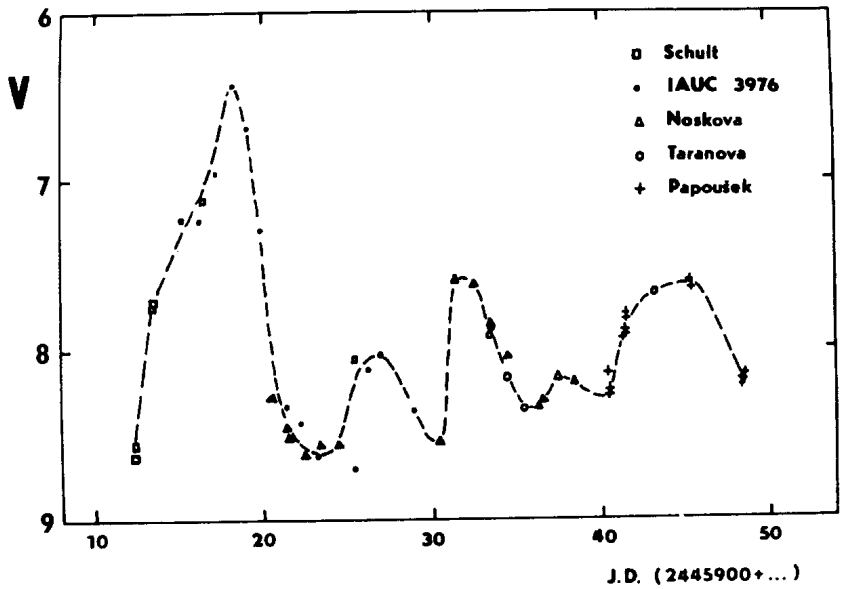

Figure 1
The light curve of PW Vul in V colour

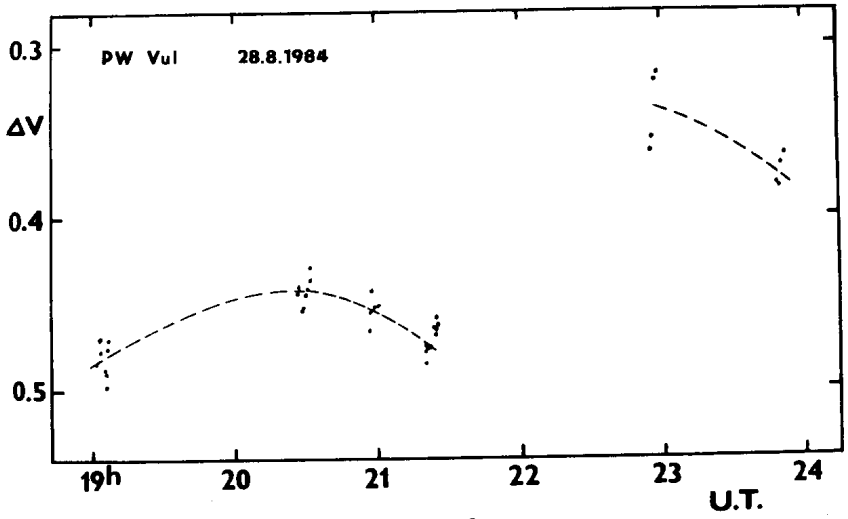

Figure 2
The light changes of PW Vul during one observational night

Table II

J.D. 2440000+	V	B-V	U-B	N
5940.384	8.146	+0.543	-0.476	13
.392	8.265	-	-	14
.411	8.257	+0.431	-	22
5941.299	7.931	+0.410	-0.544	27
.361	7.898	+0.413	-0.540	32
.375	7.902	-	-	5
.396	7.927	+0.404	-0.551	21
.433	7.912	-	-	7
.453	7.789	+0.422	-0.493	15
.489	7.818	+0.406	-0.514	14
5945.299	7.605	+0.430	-0.512	21
.325	7.643	+0.444	-	17
.333	7.643	-	-	9
5948.299	8.178	+0.375	-0.550	34
.317	8.214	+0.356	-	18
.371	8.182	+0.370	-0.600	26
.442	8.160	+0.361	-0.570	22

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