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BEHAVIOUR OF THE X-RAY BINARY V1727 CYGNI = 4U2129 +47 IN 1984

On the basis of the sequence of comparison stars given by Wenzel (1983) the star was inspected on 35 blue-sensitive plates (ORWO-ZU21+GG13+BG12) from 31 nights taken with the 50/70/172 cm Schmidt camera of Sonneberg Observatory covering the time interval between 1 May 1984 and 13 December 1984. The individual estimates are given in Table I. On most of the plates the star is below the limiting magnitude. V1727 Cygni is only visible on some individual plates. There, its brightness varies between $m_B = 17^m.9$ and

Table I

J.D.hel	m_B	Rem.	J.D.hel	m_B	Rem.
244....			244....		
5822.543	$> 18^m.0$		5945.502	$> 17^m.9$	iv
5843.438	> 17.9	iv	5946.454	$\gg 17.9$	iv
5855.494	$17.9::$		5946.513	18.2	
5871.494	> 17.9	iv	5962.362	$\gg 17.5$	iv
5905.437	18.0		5973.372	> 17.9	iv
5905.473	18.05		5991.341	> 17.9	iv
5907.435	$\gg 17.9$	iv	6000.377	18.3	
5911.444	> 17.5	iv	6001.336	> 17.9	iv
5912.415	> 17.9	iv	6002.337	> 17.9	iv
5913.401	> 17.9	iv	6003.350	> 17.9	iv
5916.401	> 17.9	iv	6004.359	$\gg 17.9$	iv
5916.426	> 17.9	iv	6005.393	18.0	iv
5930.367	> 18.05		6018.283	> 17.9	iv
5934.463	$\gg 17.5$	iv	6019.280	18.1	
5935.484	18.1		6019.303	18.2	
5936.475	17.9		6047.221	> 17.9	iv
5940.463	> 17.9	iv	6048.229	> 17.9	iv
5942.470	> 17.9	iv			

iv = invisible

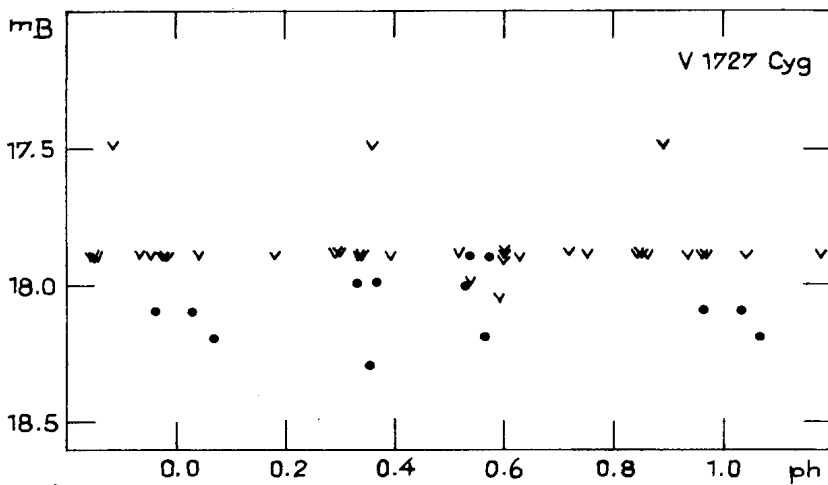


Figure 1

$m_B = 18.3$. The behaviour given here characterizes the inactive state of the star which probably started near 7 September 1983 (Wenzel, 1983).

Figure 1 shows the observations listed in Table I, reduced to one common epoch by means of the elements:

$$\text{Min (hel.)} = 244\,4403.743 + 0.218\,2579 \cdot E$$

given by McClintock et al. (1982). The arrows indicate "fainter than" observations.

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References:

- Wenzel, W., 1983, I.B.V.S., No. 2452.
McClintock et al., 1982, *Astrophys. J.*, 258, 245.