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OBSERVATIONS OF A NOVA IN THE LARGE MAGELLANIC CLOUD

On March 14, 1977, Graham has discovered a nova in the Large Magellanic Cloud (Graham et al., 1977). Photoelectric measurements have been published by Lewis and Walker (1977) and by van Genderen (1977).

The nova has been observed in UBV with the 61cm Cassegrain telescope of the Astronomical Institute of the Ruhr University of Bochum at the European Southern Observatory (La Silla, Chile). The measurements are listed in Table 1. Figure 1 shows the V data. To match the measurements of the several authors in the first days after discovery, a correction of  $+0.^m3$  should be applied to the measurements of van Genderen. Later on this correction seems to become smaller. The measurements of Lewis and Walker coincide with the measurements published here. Little differences in the spectral sensitivities of the photometric system may hold for these discrepancies. In the same way the B-V data of van Genderen need a correction of  $-0.^m1$ .

The very smooth and quite quick decline of the V curve confirms the previously published measurements. The B-V data show a strong post maximum rise to the blue, a halt at  $-0.^m15$  between JD 2443228 and JD 2443245, and a slow rise afterwards. From the U data a typical post maximum development can be deduced for the two colour index diagram (Seitter, 1978). The interstellar absorption seems to be low.

The  $t_3$ -time (Schmidt-Kaler, 1957) can be determined to  $18^d$ . This means an absolute magnitude of  $-8.^m3$ . Assuming a maximum brightness of  $m_V = 10.^m5$ , a distance modulus of  $18.^m8$  results, which is in good agreement with the distance of the LMC. According to Seitter (1978) a radius of  $120R_\odot$  follows for the time of the beginning of the observations published here.

Table 1

All times in JD Hel.+2443200

t	V	B-V	U-B	t	V	B-V	U-B
19.616	11.33	.14	-.61	33.590	13.51	-.15	-.77
20.537	11.40	.08	-.55	34.526	13.80	-.2	
21.525	11.69	.03	-.70	35.515	13.55	-.2	
22.521	11.81	.04	-.78	36.526	13.55	-.1	
23.521	12.05	.05	-.71	37.516	13.75	-.1	
24.724	12.20			38.567	13.85	-.1	
25.539	12.56	-.13	-.77	40.513	13.91	-.11	-.74
26.517	12.49	-.07	-.79	42.538	14.10	-.15	-.80
27.504	12.82	-.12	-.81	43.518	14.30	-.2	
28.501	12.95	-.12	-.82	44.535	14.05	-.1	
29.523	13.02	-.18	-.73	45.516	14.25	-.2	
30.518	13.11	-.10	-.78	46.519	14.44	-.25	-.79
31.519	13.30			48.539	14.50	-.2	
32.554	13.50	-.21	-.77	49.524	14.45	-.3	

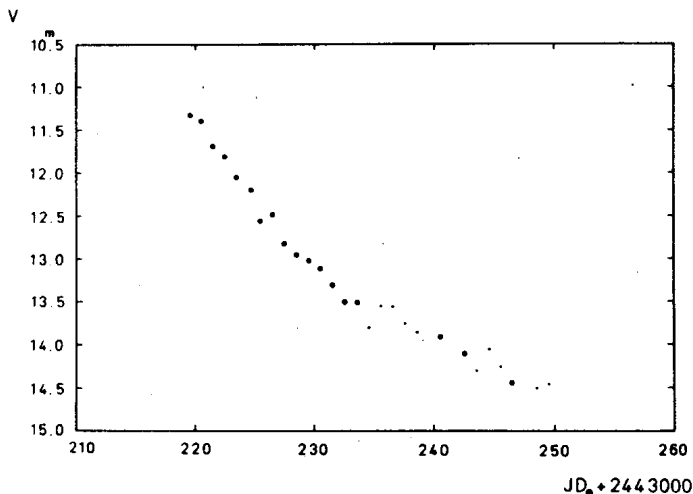


Figure 1.: V curve of the nova. Small dots have lower weight.

M. HOFFMANN

Observatorium Hoher List  
 der Universitäts-Sternwarte Bonn  
 5568 Daun/Eifel

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