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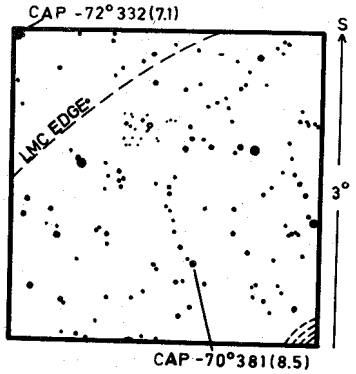
A NOVA IN THE LARGE MAGELLANIC CLOUD, BV 1261

Nova Mensae 1968 was discovered on Bamberg plates taken by I.Paterson with the 10 cm Aero Tessar cameras located at Mount John University Observatory. Exposures of 60 minutes were all made with Gevaert 67 A50 plates. The limiting magnitude on the plates is approximately m_{pg}=13.7. The position of the nova is: RA =$5^h11^m.5$, D = -71°47' (1900). The magnitudes were determined by the use of an iris photometer. The Argelander Step Method was used in conjunction with the selected areas of Brun and Vehrenberg (1). The results are given below. Plates taken with the 10-inch Metcalf camera located at Boyden Observatory were examined for the determination of the pre-nova magnitude. The dates covered by the plates were from November 1965 to November 1966. These Gevaert 67 A50 plates were all 30 minute exposures and showed the nova to be at a constant magnitude of 15.7. Unfortunately, plates are not available for the determination of the post-nova magnitude.

Date	Julian Date	Magnitude
1968 Dec. 13	2440203.0174	below 13.7
Dec. 15	205.0104	below 13.7
Dec. 17	207.0000	10.9
Dec. 17	207.0451	10.9
Dec. 18	208.0069	12.2
Dec. 20	210.9826	13.0
Dec. 21	211.0278	13.0
Jan. 18	239.9549	below 13.7

The total range in magnitudes from pre-nova to maximum is 4.8. Assuming that the distance modulus for the LMC is 18.7, the nova would have a pre-nova absolute magnitude of -3.0. With the assumption that the nova was first observed when at maximum,the nova would have attained M_{max}=-7.8 which is in good agreement with the mean probable absolute magnitude (-7.6) of the ten other LMC and SMC novae. This value is also in good agreement with novae in Messier 31 and for Milky Way novae with visible expanding envelopes (2). The total number of known novae in the LMC



is now seven. The ratio of novae in the two clouds (1:1.7) now differs slightly from that of planetary nebulae (1:1.5) as given by Westerlund (3). The drop of two magnitudes in four days is evidence that it is a very fast nova. One other very fast nova has been observed in the LMC, N Mensae 1951. Below is a comparison of the characteristics of the two novae and above the finding chart of nova Mensae 1968.

	m_{max}	M	Type	Dist.from Bar
N Mensae 1951	11.95	-7,0	very fast	0°.1
N Mensae 1968	10.9	-7.8	very fast	2.4

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(1) Brun,A., and Vehrenberg, H. 1965, Atlas of Harvard-Groninger Selected Areas (Düsseldorf:Treugesell-Verlag).
(2) Henize,K., Hoffleit,D., and Nail,V. McK. 1954, Proc. US Nat. Acad.Sci. 40, 3651; Harvard Repr. No.387.
(3) Westerlund, B.E. 1968, IAU Symp. No.34, 23.