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EARLY UB_V PHOTOMETRY OF SUPERNOVA 1987A IN LMC**

The supernova 1987A in the Large Magellanic Cloud could be observed by the author just after its detection on Feb. 24 during the nights of Feb. 24/25 and Feb. 25/26, using the ESO 50cm telescope on La Silla/Chile. Observations were made in UB_V Johnson system using the blue-sensitive photomultiplier EMI 6256.

Because of a limit of 5.5 mag for V-brightness it was necessary to mount a mask on the telescope tube which reduced the aperture to 25 cm.

Stars in E-regions (Cousins, 1973 - updated by Vogt et al., 1981) were used as extinction stars; as local comparison stars served HD 42525 (AOV-type) and HD 43107 (B8V-type).

As reported by Wampler (1987) and West (1987) the supernova brightened very rapidly during a few hours by a factor of 200 till about Feb. 23.4 UT and reached around V = 6 mag. One night later V went up to a value between 5 and 4.5 mag.

Now the first few nights after detection of SN 1987A were interesting for the fact that its V-brightness was still somewhat increasing before reaching a maximum for the following days.

The results of my UB_V measurements are given in Table I. The observations started on Feb. 25 at about 1:30 UT with V = 4.65 mag. Five hours later V had increased slowly, but rather continuously to V = 4.60 mag. One night later around V = 4.52 mag was measured during five hours, indicating a more slowly increase of V than before.

The change of the colours during both nights shows that B remained about constant and U dropped slightly. Further observations with the ESO 50cm telescope were carried out by Magnusson (1987) beginning on Feb. 26/27. The evolution of the lightcurves during the next few days shows a rather constant value of V around 4.4 mag and a significant decrease of B and U, together with an increase of the infrared brightness I.

Altogether the evolution of the B-lightcurve indicates a maximum of B between Feb. 25 and 26; the maximum of U was reached probably before Feb. 24. Further photometric observations will provide us with data about the final maximum of V which is still some unclear at the moment. As far as we know, this supernova is too faint for a type II supernova, probably due to physical conditions of this unusual object itself.

** Observations collected at ESO/La Silla, Chile

Table I: UBV data

Date UT	V	B-V	U-B
Feb. '87	(mag)	(mag)	(mag)
25.067	4.65	0.03	-0.68
25.077	4.64	0.03	-0.70
25.087	4.63	0.03	-0.69
25.246	4.60	0.08	-0.66
25.254	4.61	0.07	-0.66
25.264	4.60	0.07	-0.62

26.226	4.52	0.17	-0.47
26.242	4.52	0.16	-0.46
26.259	4.52	0.17	-0.48
26.270	4.52	0.18	-0.47
26.289	4.51	0.19	-0.47

Error (+/-)	0.01	0.01	0.02

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