



These two colour photos of the Large Magellanic Cloud show the sudden appearance of the bright supernova 1987A. They were obtained with a 6 x 6 Hasselblad camera mounted piggy-back on the GPO and Danish 1.5-m telescopes, respectively. The left-hand photo was taken on February 23, between 01 : 00 and 01 : 20 UT and is the last colour picture taken before the supernova exploded, probably a few hours later. The

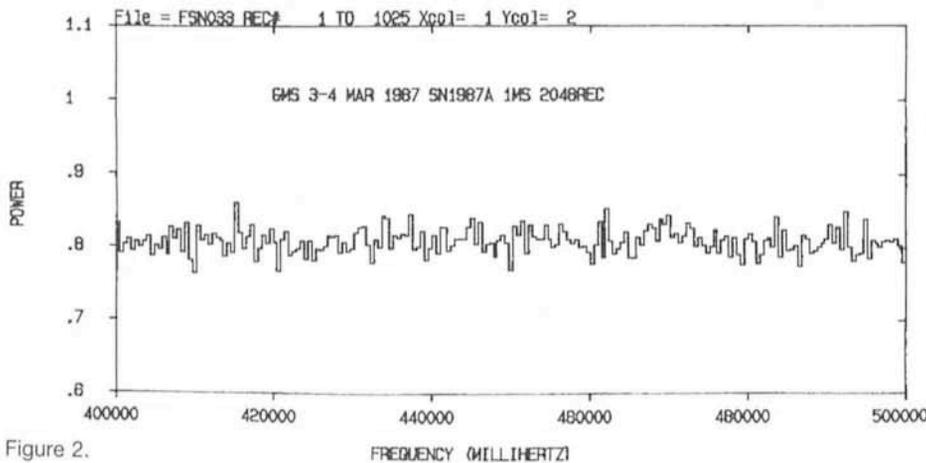


Figure 2.

500 Hz. In Figure 2 a portion of the Fourier transform of the GMS data is shown. Calibration of the system is in Progress and the monitoring of the SN 1987 A will continue until it becomes too faint for this telescope.

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Chronology of a Once-in-a-Lifetime Event

Only 48 hours separate the two photos above, but during this brief interval an event happened that excited an entire generation of astronomers. Re-

flecting the importance of this supernova, the Central Bureau for Astronomical Telegrams issued no less than 15 IAU Circulars in the course of 9 days only, breaking all records in the history of astronomy. At ESO, these circulars were read through a computer link to the Headquarters in Garching as soon as they were issued, and immediately sent on to the observers at La Silla by telefax. In this way, and also by numerous telex messages and phone calls, the scientists were kept informed about what was going on in other places.

The time immediately following the discovery was particularly hectic. Here is a provisional compilation of the main events during the first hours, drawn from the information available on March 4:

UT

Feb.

22.4 Photos obtained with the University of Aston satellite tracking



right-hand photo was taken exactly two days later, on February 25, also at UT 01 : 00. On that date, the supernova had reached visual magnitude 4.5. It is well visible, left of the centre and above the LMC main body as the lower right (round) of the two bright objects. The other object, which is extended and more diffuse, is the Tarantula Nebula (30 Doradus). (Agfachrome 1000 RS emulsion, C. Madsen.)

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| <p>camera in Australia (R. H. McNaught) show the progenitor Sanduleak -69 202 at normal magnitude 12.</p> | <p>24.02 Shelton starts 3-hour exposure with the 25-cm astrograph of the University of Toronto station at Las Campanas.</p> | <p>24.72 McNaught now thinks that it has brightened to 4.4</p> |
| <p>23.06 C. Madsen at La Silla obtains colour photo of LMC (above).</p> | <p>24.2 Suspected visual sighting of the supernova by O. Duhalde, also at Las Campanas.</p> | <p>24.8 Spectral observations commence with the International Ultraviolet Explorer, a satellite telescope in orbit around the Earth, jointly operated by ESA and NASA.</p> |
| <p>23.08 I. Shelton at Las Campanas obtains photo of LMC (not yet showing the supernova).</p> | <p>24.23 Shelton discovers the supernova on his plate after development. The IAU Telegram Bureau is informed soon thereafter.</p> | <p>24.8 Night falls in South Africa and multicolour photometry observations start at the SAAO.</p> |
| <p>23.12 Five pulses, above 7 MeV, are detected during a 7 sec interval with the neutrino telescope in the Mount Blanc tunnel. This experiment is a collaboration between Istituto di Cosmogeofisica, Torino, Italy, and the Institute of Nuclear Studies in Moscow, USSR.</p> | <p>24.37 Independent discovery by A. Jones, at Nelson, New Zealand, who estimated it at magnitude 5.1</p> | <p>24.9 A spectrum obtained with the 1.9 reflector at SAAO shows few features and appears to indicate that the object may be of Type I.</p> |
| <p>23.44 The supernova is recorded as a 6.1 magnitude object on plates taken with the satellite tracking camera in Australia, but it is not yet detected by the operators.</p> | <p>24.4 A telegram announcing the discovery of the supernova, now designated "1987 A", is sent to all major observatories from the IAU Telegram Bureau.</p> | <p>25.0 Night falls in Chile and observers at all telescopes on La Silla turn their attention to 1987 A . . .</p> |
| | <p>24.46 McNaught estimates it at magnitude 4.8.</p> | <p>25.05 The second colour picture of LMC, now with the supernova, is obtained by C. Madsen.
R. M. West (ESO)</p> |