

California Institute of Technology, Pasadena, California 91125 USA

Abstract

The Caltech Gamma-Ray Imaging Payload (GRIP) has observed SN1987A on four balloon flights from Alice Springs, Australia, in May and Nov. 1987, April 1988, and April 1989 (days: 85, 269, 414, and 771 respectively). The instrument is a coded-aperture telescope, sensitive to radiation in the energy range 30 keV to 10 MeV (Althouse et al. 1985). Both gamma-ray continuum and line emission were detected from the supernova, in qualitative agreement with existing models. In addition, we have obtained the first images of the SN1987A region at gamma-ray energies, confirming that the bulk of the gamma-ray emission comes from the supernova, and not from LMC X-1 (Cook et al. 1988). We review the results of these observations, including flux levels and upper limits for both line emission and Compton scattered continuum for each of the four flights.

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References