Circular No. 8442

Central Bureau for Astronomical Telegrams
INTERNATIONAL ASTRONOMICAL UNION
Mailstop 18, Smithsonian Astrophysical Observatory, Cambridge, MA 02138, U.S.A.
IAUSUBS@CFA.HARVARD.EDU or FAX 617-495-7231 (subscriptions)
CBAT@CFA.HARVARD.EDU (science)
URL `http://cfa-www.harvard.edu/iau/cbat.html` ISSN 0081-0304
Phone 617-495-7440/7244/7444 (for emergency use only)

SUPERNOVA 2004gc IN ARP 327

Independent discovery reports have been received of an apparent supernova in Arp 327 by A. del Olmo, A. Martinez, S. Pedraz, and M. Alises at Calar Alto (2.2-m telescope + CAFOS focal reducer; B, V, R, and I images) on Nov. 18.106 and 19.014 UT and by O. Trondal and M. Schwartz (cf. *IAUC* 8419; Tenagra II 0.81-m telescope, unfiltered CCD images) on Nov. 18.4 and 19.2 (at mag ~ 17.4). Schwartz provides the following position for the new object: $\alpha = 5^h21^m49^s.95$, $\delta = +6^o40'33''.7$, which is $2''.0$ east and $3''.1$ south of the galaxy's nucleus. Nothing is visible at this location on a Tenagra II image taken on 2002 Oct. 26.4 (limiting mag ~ 19.5).

SUPERNOVA 1999bw IN NGC 3198

B. Sugerman and M. Meixner, Space Telescope Science Institute; and J. Fabbri and M. Barlow, University College, London, report the detection of the type-IIn supernova 1999bw in archival Spitzer IRAC images of NGC 3198 obtained by the SINGS Legacy program on 2004 May 1.4 UT. A source was detected in all four IRAC bands at $\alpha = 10^h19^m46^s.80$, $\delta = +45^o31'35''.4$ (equinox 2000.0; $\pm$ $0''.3$ in each coordinate), in close agreement with the optical position (*IAUC* 7149). The measured flux densities (mJy) at 3.6, 4.5, 5.8, and 8.0 μm are 0.02 $\pm$ 0.01, 0.04 $\pm$ 0.01, 0.11 $\pm$ 0.02, and 0.19 $\pm$ 0.04, respectively. This rise is fitted by a 450-K blackbody with integrated flux 3.1×10^{-13} erg cm^{-2} s^{-1}, which, for a distance to NGC 3198 of 14.5 Mpc (Kelson *et al.* 1999, *Ap.J.* **514**, 614), corresponds to a luminosity of 6.2×10^{38} ergs s^{-1} and a blackbody radius of 1.6×10^{16} cm. This size is consistent with ejecta expanding at 1000 km/s in the five years since core collapse, suggesting the reported emission may be from dust that condensed within the ejecta. A convolved companion source is also detected, separated by $3''.9$ at p.a. 209^o, with 3.6-, 4.5-, 5.8-, and 8.0-μm fluxes of 0.08 $\pm$ 0.01, 0.07 $\pm$ 0.01, 0.33 $\pm$ 0.04, and 0.88 $\pm$ 0.08 mJy, respectively.

SUPERNOVA 2004et IN NGC 6946

Visual magnitude estimates: Sept. 29.774 UT, 12.8 (K. Hornoch, Lelekovice, Czech Republic); Oct. 3.86, 12.9 (J. Carvajal, Madrid, Spain); 11.908, 12.8 (Hornoch); 15.483, 12.4 (S. Yoshida, Gunma, Japan); Nov. 9.490, 12.7 (Yoshida).

2004 November 20 *Daniel W. E. Green*