

**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)

(119979) 2002 WC₁₉

K. S. Noll, Space Telescope Science Institute (STScI); W. M. Grundy, Lowell Observatory; S. D. Kern, STScI; H. F. Levison, Southwest Research Institute; and D. C. Stephens, Brigham Young University, report the detection of a binary companion to the transneptunian object (119979) 2002 WC₁₉ (cf. *MPECs* 2003-A25, 2003-V38), which is in a 1:2 resonance with Neptune. The observations were made during 2006 Nov. 5.960–5.985 UT with the High Resolution Camera of the Advanced Camera for Surveys on the Hubble Space Telescope, using the clear filters with one 300-s exposure at each of four dithered positions on the detector. The two components were separated by an angular distance of $0''.090 \pm 0''.008$ and differ in brightness by 2.5 magnitudes. The fainter component lies at a position angle of $233^\circ \pm 6^\circ$ from the primary. The projected separation of the objects in the sky plane is 2760 ± 250 km.

SUPERNOVAE 2007aa, 2007ab, 2007ac, 2007ad, 2007ae

Five apparent supernovae have been discovered on CCD frames (unfiltered unless otherwise noted below) and reported to the Central Bureau: 2007aa by Takao Doi of Seabrook, TX, U.S.A. (0.40-m *f*/10 Cassegrain reflector at Weimar, TX); 2007ab by L. A. G. Monard (cf. *IAUC* 8813); 2007ac and 2007ad by T. Puckett and P. Gray (cf. *IAUC* 8804); and 2007ae by Markku Nissinen and Veli-Pekka Hentunen (Varkaus, Finland; Meade LX200 telescope + Bessel *R* filter). Discovery observations:

SN	2007 UT	α_{2000}	δ_{2000}	Mag.	<i>Offset</i>
2007aa	Feb. 18.308	12 ^h 00 ^m 27. ^s 69	− 1°04′51. ⁶ ″	15.7	60″ E, 68″ N
2007ab	Feb. 19.104	16 51 29.13	− 3 05 33.6	17.8	47″ W, 15″ N
2007ac	Feb. 19.44	16 47 02.36	+40 08 47.6	17.5	2″0 W, 8″7 N
2007ad	Feb. 19.47	17 24 24.58	+44 56 15.9	17.4	4″9 E, 10″7 S
2007ae	Feb. 19.892	17 01 51.95	+79 01 54.6	17.5	8″ E, 21″ S

Additional information is available on these objects on the following *Electronic Telegrams*: 2007aa in NGC 4030, *CBET* 848 and 850 (type-II, discovered \sim 19 days past explosion); 2007ab in MCG −01-43-2, *CBETs* 851 and 853 (type-II, discovered \sim 2 weeks past explosion); 2007ac in UGC 10550, *CBETs* 854 and 859 (type-II, discovered about a week past explosion); 2007ad in UGC 10845, *CBETs* 854 and 857 (type-II, discovered within a few days of explosion); 2007ae in UGC 10704, *CBETs* 856 and 859 (type-Ia, discovered just before maximum).