Circular No. 8670

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)

SUPERNOVAE 2006aa, 2006ac, AND 2006ad

The "Nearby Supernova Factory" collaboration reports the discovery of a type-II supernova (mag $\approx$ 18.9, calibrated to R) in NEAT images obtained on Feb. 8.3 UT; SN 2006ad is located at $\alpha = 9^h07^m43^s.11$, $\delta = +12^\circ03'06''.5$ (equinox 2000.0). Details are given on *CBET* 398, where they also report that spectroscopy (range 320–1000 nm), obtained on Feb. 10.5–10.6, shows 2006aa and 2006ac (cf. *IAUC* 8669) to be type-IIn and type-Ia supernovae, respectively.

NO SUPERNOVA 2006U

The "Nearby Supernova Factory" collaboration also reports that a spectrogram (range 320–1000 nm) of 2006U (cf. *IAUC* 8667), obtained on Feb. 8.4 UT with the University of Hawaii 2.2-m telescope, shows it to be an active galactic nucleus at redshift 0.25. Details are given on *CBET* 397.

COMET 101P/CHERNYKH

Z. Sekanina, Jet Propulsion Laboratory, writes that a fragmentation solution based on 41 accurate astrometric offsets of the companion from the principal nucleus in the period 2005 Nov. 3–2006 Jan. 23 strongly suggests that this companion is not identical with the secondary nucleus (or nuclei) observed during 1991–1992 (cf. *IAUC* 5391). An excellent fit to the 2005–2006 data indicates that the breakup occurred most probably at a heliocentric distance of 8–9 AU in late 1996 or early 1997, almost 5 years after the 1992 perihelion, with an uncertainty of $\pm$ 3 months. The companion's differential nongravitational deceleration is low but still poorly defined, 7.5 $\pm$ 5.9 units of 10^{-5} solar gravitational acceleration, whereas the derived separation velocity is 2.0 $\pm$ 0.2 m/s, nearly in the comet's orbital plane. The companion should be observable for at least two more months as the comet approaches its June conjunction with the sun. It is possible that the companion could once again be detected from August 2006 on. The predicted separation distances and position angles of the companion relative to the principal nucleus (0^h TT, equinox J2000.0): 2006 Feb. 14, 940'', 70°.0; 24, 909'', 70°.4; Mar. 6, 879'', 71°.1; 16, 850'', 71°.9; 26, 822'', 72°.8; Apr. 5, 794'', 73°.9; 15, 767'', 75°.1; Aug. 23, 488'', 93°.5; Sept. 2, 476'', 94°.5; 12, 466'', 95°.3; 22, 458'', 96°.1.

2006 February 11 *Daniel W. E. Green*