Circular No. 8522

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)

COMET C/2005 H1 (LINEAR)

An apparently asteroidal object (discovery observation below) reported by the LINEAR search program, and posted on the 'NEO Confirmation Page', was found by J. Young (Table Mountain Observatory, 0.6-m reflector) to show a round 4″ coma with little central condensation and a slightly fan-shaped tail ~ 16″ long on his CCD images taken on May 2.31–2.38 UT; his images on May 3.3 showed a similar appearance, though it had faded by half a magnitude to mag 19.5, and the tail length was only 10″. G. Hug (Eskridge, KS, 0.7-m reflector) writes that the object appears slightly diffuse on his CCD images taken on May 3.3. A. Fitzsimmons (2.0-m Faulkes Telescope-North at Haleakala) notes that four 60-s R-band exposures taken on May 2.5 show a faint asymmetric coma extending 3″ in p.a. 250°.

2005	UT	α_{2000}	δ_{2000}	Mag.
Apr.	30.32224	$17^h15^m23^s.08$	$+48°04'20''.5$	20.3

The available astrometry, the following preliminary parabolic orbital elements, and an ephemeris appear on *MPEC* 2005-J11.

$$T = 2005\ \text{Feb.}\ 25.833\ \text{TT} \qquad \left.\begin{aligned}\omega &= 110^\circ.999\\ \Omega &= 68.371\\ i &= 83.436\end{aligned}\right\}2000.0$$
$$q = 5.10555\ \text{AU}$$

SUPERNOVAE 2005bf AND 2005bv

M. Modjaz, R. Kirshner, and P. Challis, Harvard-Smithsonian Center for Astrophysics, report that a spectrum (range 340–730 nm) of SN 2005bv (cf. *IAUC* 8520), obtained on May 2.32 UT by P. Berlind with the F. L. Whipple Observatory 1.5-m telescope (+ FAST), shows it to be a type-Ia supernova, with a spectral-feature age (cf. Riess *et al.* 1997, *A.J.* **114**, 722) of ~ 15 (± 2) days after maximum light. The supernova expansion velocity, derived from the minimum of Si II (rest 635.5 nm) and adopting the recession velocity of 10 689 km/s for the host galaxy as measured from Hα emission of an H II region in the host galaxy, is ~ 10400 km/s. A spectrogram of SN 2005bf (cf. *IAUC* 8507), obtained by Berlind on May 2.15, shows it to be a type-Ib supernova, confirming reports by Wang and Baade (*IAUC* 8521). The spectrum has developed conspicuous lines of He I (rest 447.1, 587.6, 667.8, 706.5 nm) and is very similar to spectra of SN 1984L (Harkness *et al.* 1987, *Ap.J.* **317**, 355), ~ 2 weeks after maximum. SN 2005bf was previously classified (*IAUC* 8509) as a type-Ic supernova.

2005 May 3 *Daniel W. E. Green*