Central Bureau for Astronomical Telegrams INTERNATIONAL ASTRONOMICAL UNION

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URL http://cfa-www.harvard.edu/iau/cbat.html ISSN 0081-0304
Phone 617-495-7440/7244/7444 (for emergency use only)

SUPERNOVAE 2004gw, 2005B, 2005D, 2005E, 2005F, 2005G

Further to IAUC 8459, J. Graham and W. Li report the LOSS discovery of three apparent supernovae on unfiltered KAIT images:

SN	$2004~\mathrm{UT}$	α_{2000}	δ_{2000}	Mag.	$O\!f\!f\!set$
	Jan. 13.22				139" W, 19" N
2005F	Jan. 13.42		$+13\ 33\ 56.3$		52" E, 14" N
2005G	Jan 14 60	13 44 32 79	+ 4 46 44 3	16.5	13"4 W 12"0 N

Additional unfiltered CCD magnitudes (KAIT unless noted otherwise): SN 2005E in NGC 1032, 2004 Dec. 19.20, [19.0; 24.23, [18.0; 2005 Jan. 14.10, 16.8 (M. Schwartz, 0.8-m Tenagra II telescope); 14.20, 16.8. SN 2005F in MCG +02-23-27, 2004 Dec. 17.43, [19.5; 2005 Jan. 13.91, 17.8 (O. Trondal, Oslo, Norway, 0.25-m telescope); 14.43, 17.8. SN 2005G in UGC 8690, 2004 June 25.20 UT, [19.0; 2005 Jan. 15.56, 16.5.

R. J. Foley and A. V. Filippenko, University of California, Berkeley, report that inspection of CCD spectra (range 320–920 nm), obtained on Jan. 15 UT with the Keck I 10-m telescope (+ LRIS), reveals that SN 2005E is of type Ib/c, close to (or perhaps a few days before) maximum brightness. The presence of weak He I absorption lines favors the type-Ib classification, although the differences between type-Ib and -Ic supernovae can be difficult to discern at early times. SN 2005F is of type Ia, ~ 2.5 weeks past maximum. Adopting the NED redshift of 8545 km/s, the minimum of the 635.5-nm Si II feature is at a velocity of 10700 km/s. SN 2004gw (IAUC 8459) is probably of type Ia, 3-4 weeks past maximum brightness, although it exhibits a number of spectral peculiarities that render the classification uncertain. SN 2005D (IAUC 8464) is of type II, roughly a month after the explosion. H α has a classic P-Cyg profile, and the other Balmer and Fe II lines are strong. Adopting the NED redshift of 8505 km/s, the ejecta velocity measured from the $H\alpha$ absorption minimum is unusually large. $\sim 13000 \text{ km/s}$. Weak He I absorption lines are present, suggesting that the object is specifically of type IIb; indeed, its spectral characteristics are similar to those of the first-reported spectrum of SN 2004ex (IAUC 8420), which eventually developed prominent He I lines (IAUC 8446), although SN 2005D has stronger He I absorption and a redder continuum, consistent with it being somewhat older than SN 2004ex.

Corrigendum. On IAUC~8462, 'Supernova 2005B in UGC 11066', line 9, for SN 2005A read SN 2005B