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SUPERNOVAE 2005cc, 2005cd, 2005ce, 2005cf

Four discoveries of supernovae have been reported from unfiltered CCD frames: 2005cc by T. Puckett and A. Langoussis (cf. *IAUC* 8520; 0.35-m automated supernova patrol telescope); 2005cd by Y.-T. Chen and C.-P. Hu, Graduate Institute of Astronomy, National Central University, Jung-Li, report discovery (cf. *IAUC* 8471); and 2005ce and 2005cf by H. Pugh and W. Li (LOSS/KAIT; cf. *IAUC* 8527).

SN	2005 UT	α_{2000}	δ_{2000}	Mag.	*Offset*
2005cc	May 19.22	$13^h57^m04^s.85$	$+41^\circ50'41''.8$	17.7	$1''.2$ W, $5''.0$ S
2005cd	May 16.526	10 50 57.60	− 2 08 48.2	17.4	$12''.9$ W, $12''.8$ N
2005ce	May 28.47	22 36 32.96	+25 45 35.0	18.5	$0''.9$ E, $12''.2$ S
2005cf	May 28.36	15 21 32.21	− 7 24 47.5	16.4	$15''.7$ W, $123''$ N

Additional approximate magnitudes from the respective discoverers: SN 2005cc in NGC 5383, 2003 May 12 UT, [19.5–20.0 (Puckett); 2005 May 20.12, 17.7 (B. Harris, Oviedo, FL, 0.40-m reflector). SN 2005cd in IC 651, Apr. 4.609, [18.6; May 18.477, 17.9. SN 2005ce in IC 5233, 2004 Dec. 19.14 UT, [19.5; 2005 May 30.46, 18.6. SN 2005cf in MCG −01-39-3, May 25.37, [18.5; May 30.35, 15.5.

V. Stanishev and A. Goobar, Physics Department, Stockholm University, report that a spectrum (range 350–900 nm) of SN 2005ce, obtained on May 29.2 UT by T. Augusteijn with the Nordic Optical Telescope (+ ALFOSC), shows it to be most likely a type-Ib/c supernova a few days after maximum. The spectrum is blue and, after correcting for the host-galaxy recession velocity (7375 km/s as given by Haynes and Giovanelli 1984, *A.J.* **89**, 758; via NED), is similar to the de-reddened and de-redshifted spectrum of SN 1999ex at 5 days after maximum (Hamuy *et al.* 2000, *A.J.* **124**, 417). The absorption features at 415 and 630 nm are stronger than in SN 1999ex, and two weak absorptions at 470 and 585 nm, which are not seen in SN 1999ex, are also present.

M. Modjaz, R. Kirshner, and P. Challis, Harvard-Smithsonian Center for Astrophysics, report that a spectrum (range 350–740 nm) of SN 2005cf, obtained on May 31.22 UT by P. Berlind with the F. L. Whipple Observatory 1.5-m telescope (+ FAST), shows it to be a type-Ia supernova, around ten (or more) days before maximum light. The supernova expansion velocity, derived from the minimum of Si II (rest 635.5 nm), and adopting the NED recession velocity of 1937 km/s for the host galaxy (de Vaucouleurs *et al.* 1991, *Third Ref. Cat. of Bright Galaxies*, ver. 3.9), is ~ 15000 km/s.

2005 June 7 *Daniel W. E. Green*