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SUPERNOVA 2005cs IN M51

Wolfgang Kloehr, Schweinfurt, Germany, reports his discovery of an apparent supernova (mag $\sim$ 14) on CCD frames taken with a 0.20-m reflector on June 28.907 and 28.928 UT, with a weak earlier image of the new object (at mag perhaps 16) also found by Kloehr on a frame taken on June 27.933. Kloehr gave the position for SN 2005cs as $\alpha = 13^{h}29^{m}53^{s}.37$, $\delta = +47^{o}10'28''.2$ (equinox 2000.0), which is 15$''$ west and 78$''$ south of the center of M51 (= NGC 5194). Nothing was visible at this location on earlier frames taken by Kloehr on May 11 and 26, on an 'LRGB' image taken by R. Muendlein on Feb. 5, or on a Digitized Sky Survey image. W. Li, University of California at Berkeley, reports that a CCD image taken with the Katzman Automatic Imaging Telescope (KAIT) at Lick Observatory on June 30.25 confirms the new object at mag $\sim$ 13.5; Li provides position end figures $52^{s}.85$, $36''.3$, which is $67''.3$ south of the nucleus of M51. A KAIT image taken on June 15.20 showed nothing at this position (limiting mag $\sim$ 19.0). H. Yamaoka, Kyushu University, reports that K. Itagaki (Teppo-cho, Yamagata, Japan; 0.60-m telescope) obtained the following position end figures for SN 2005cs from an unfiltered CCD image taken on June 30.484, when the new object was at mag 14.3: $52^{s}.78$, $35''.7$; nothing was visible at this location on Itagaki's image taken in poor conditions on June 20.598 (limiting mag 17.0).

SUPERNOVAE 2005cn AND 2005cr

M. Modjaz, R. Kirshner, and P. Challis, Harvard-Smithsonian Center for Astrophysics, report that a spectrum (range 450–740 nm) of SN 2005cn (cf. *IAUC* 8549), obtained on June 28.21 UT by M. Calkins and R. Hutchins with the F. L. Whipple Observatory 1.5-m telescope (+ FAST), shows it to be a type-Ia supernova with a spectral-feature age (Riess *et al.* 1997, *A.J.* **114**, 722) of $\sim$ 3 ($\pm$ 2) days after maximum light; the supernova expansion velocity, derived from the minimum of Si II (rest 635.5 nm), and adopting the NED recession velocity of 2065 km/s for the host galaxy (from da Costa *et al.* 1998, *A.J.* **116**, 1) is $\sim$ 10000 km/s. A spectrogram of SN 2005cr (cf. *IAUC* 8552), obtained on June 28.19, shows it to be a type-Ia supernova, a few 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 6437 km/s for the host galaxy (from Drinkwater *et al.* 1996, *MNRAS* **279**, 595) is $\sim$ 11000 km/s.

2005 June 30 *Daniel W. E. Green*