Circular No. 8508

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SUPERNOVA 2005bg IN MCG +03-31-93

R. Quimby, P. Mondol, F. Castro, M. Sellers, P. Hoeflich, and J. C. Wheeler, University of Texas; and C. Gerardy, Imperial College, report the discovery of a supernova in unfiltered CCD images taken with the 0.45-m ROTSE-IIIb telescope at McDonald Observatory on Mar. 28.17 (with the new object at mag $\sim$ 16.2) and Apr. 2.16 UT (mag $\sim$ 16.1). SN 2005bg is located at $\alpha = 12^{\rm h}17^{\rm m}17^{\rm s}.18$, $\delta = +16^{\circ}22'17''.6$ (equinox 2000.0), which is $0''.6$ north and $0''.4$ east of the core of MCG +03-31-93. The new object was found by subtracting a co-addition of images taken between 2004 Dec. 11 and 2005 Jan. 17 (limiting mag $\sim$ 18.6); a similar subtraction showed nothing at this location on Mar. 20.19 (limiting mag $\sim$ 17.2). A spectrum (range 430–890 nm) of the new object, obtained on Apr. 7.13 with the 9.2-m Hobby/Eberly Telescope (+ Marcario Low-Resolution Spectrograph) by B. Roman and S. Rostopchin, shows it to be a type-Ia supernova. Assuming the NED host-galaxy recession velocity of 6921 km/s, the expansion velocity derived from the minimum of the Si II 635.5-nm feature is 11000 km/s. The spectrum also shows Mg II 448.1-nm, Fe II 508.3-nm, and S II 545.4- and 564.0-nm lines; however, the Ca II infrared triplet is not detected. Additional unfiltered CCD magnitudes for SN 2005bg: Apr. 3.16 UT, 15.8; 5.15, 15.6.

SUPERNOVA 2005bd AND 2005be

M. Modjaz, R. Kirshner, and P. Challis, Harvard-Smithsonian Center for Astrophysics, report that a spectrum (range 340–730 nm) of SN 2005bd (cf. *IAUC* 8505), obtained on Apr. 9.15 UT by H. Landt 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 $\sim$ 8 ($\pm$ 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 11119 km/s for the host galaxy, is $\sim$ 11000 km/s.

M. Salvo, B. Schmidt, and J. Norris, Australian National University (ANU), report that a spectrum (range 360–530 nm) of SN 2005be (*IAUC* 8506) was taken at the ANU 2.3-m telescope (+ Double-Beam spectrograph) at Siding Spring on Apr. 6.70 UT. Cross-correlation with a library of supernovae spectra (see *IAUC* 8098) shows SN 2005be to be a type-Ia supernova nearly a week past maximum light, at a redshift $z = 0.035$. This is the same redshift value found for the host galaxy from the position of the Ca H and K lines in its spectrum.

2005 April 10 *Daniel W. E. Green*