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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)

SUPERNOVA 2004gs IN MCG +03-22-20

Further to *IAUC* 8452, S. Park and W. Li report the LOSS discovery of an apparent supernova (mag 17.1) on an unfiltered KAIT image taken on Dec. 12.43 UT. SN 2004gs is located at $\alpha = 8^h38^m23^s.18$, $\delta = +17°37'39''.8$ (equinox 2000.0), which is $9''.8$ west and $12''.7$ south of the nucleus of MCG +03-22-20. A KAIT image taken on Dec. 4.42 already showed a hint of the new object (limiting mag $\sim$ 19.5), while an image taken on Nov. 24.45 showed nothing at this position (limiting mag $\sim$ 19.0).

N. Morrell, G. Folatelli, and M. Hamuy, Carnegie Supernova Project, report that a CCD spectrogram (380–920 nm) of SN 2004gs, obtained on Dec. 13.25 UT with the Las Campanas 2.5-m du Pont telescope (+ WFCCD Spectrograph), shows it to be a type-Ia supernova near maximum light. The expansion velocity, derived from the blueshift of the minimum of Si II 635.5-nm, is 11600 km/s (assuming a recession velocity of 7988 km/s for the host galaxy as given in the NED database). SN 2004gs shows an enhanced Si II 597.2-nm absorption line. No evidence for Na I D 589.3-nm can be seen (with an upper limit of 0.05 nm), which suggests little or no dust absorption in the host galaxy.

SUPERNOVAE 2004gd, 2004ge, 2004gf, AND 2004gl

Further to *IAUC* 8452, A. V. Filippenko and R. J. Foley write that inspection of CCD Keck I spectra, also obtained on Dec. 12 UT, shows that SN 2004gd (*IAUC* 8443) is of type IIn, strongly resembling SN 1985G (Pastorello *et al.* 2002, *MNRAS* **333**, 27). Prominent, relatively narrow (FWHM 1000 km/s) hydrogen-Balmer emission lines are superposed on broader bases and exhibit narrow P-Cyg absorption components with minima displaced by $\sim$ 700 km/s from the emission-line cores. Similar absorption features are seen in the Fe II multiplets and other lines; they are probably produced by a dense circumstellar shell. SN 2004ge (*IAUC* 8443) is of type Ic, shortly after maximum brightness; the shape of its continuum argues that it is heavily reddened, and the equivalent width of the narrow interstellar Na I D absorption line at 589 nm is $\sim$ 0.2 nm. SN 2004gf (*IAUC* 8444) is of type II, probably within a few weeks past explosion, based on the blue continuum; the Hα line is vastly dominated by the emission component (FWHM = 2200 km/s), although all other lines (Balmer, Fe II, O I, Ca II) show more typical P-Cyg profiles. SN 2004gl (*IAUC* 8446) is of type Ia, three weeks past maximum brightness; the redshift of the host galaxy, measured from narrow emission lines in the nucleus, is 0.0393.

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