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SUPERNOVAE 2006cg AND 2006ch

Two apparent supernovae have been reported from unfiltered CCD frames: 2006cg by R. Quimby and P. Mondol (in poor weather conditions; cf. *IAUC* 8622), and 2006ch by K. Itagaki (Teppo-cho, Yamagata, Japan, 0.60-m f/5.7 reflector; communicated by S. Nakano, Sumoto, Japan).

SN	2006 UT	α_{2000}	δ_{2000}	Mag.	*Offset*
2006cg	May 6.23	$13^h05^m02^s.32$	$+28^\circ44'24''.0$	16.6	2″ W, 3″ N
2006ch	May 9.76	23 47 06.12	+29 28 50.6	16.5	17″ E, 10″ S

Additional approximate magnitudes for 2006cg: May 12.25 UT, 16.7; 14.23, 16.5. The estimated positional uncertainty of 2006cg is 1″.5 in each coordinate. SN 2006cg was found by subtracting a co-addition of images taken between 2004 Dec. 15 and 2005 June 29 (limiting mag $\sim$ 19.4) from the 2006 May images. A spectrum (range 420–890 nm) of 2006cg obtained on May 17.28 shows it to be a type-Ia supernova around a week past maximum (cf. *CBET* 511). Additional magnitudes for 2006ch in NGC 7753: 2005 Aug. 30, [19.0; Nov. 10, [19.0; 2006 May 11.764, 16.6; 14.752, 16.8. SN 2006A (cf. *IAUC* 8656) appeared on the other side of the center of NGC 7753, but no spectroscopic information has been reported on that object.

(99942) APOPHIS

L. A. M. Benner, J. D. Giorgini, and S. J. Ostro, Jet Propulsion Laboratory; M. C. Nolan, Arecibo Observatory; and M. W. Busch, California Institute of Technology, report that Arecibo (2380-MHz, 12.6-cm) radar observations of minor planet (99942) = 2004 MN_4 during May 6.497–6.562 UTC yielded a 5.5σ continuous-wave detection and a Doppler measurement of -118256.8 Hz at May 6.534, for a correction of $+0.1 \pm 0.1$ Hz ($+6 \pm 6$ mm/s) relative to the nominal prediction. An orbit estimation incorporating the new Doppler measurement with 779 optical measurements spanning 2004 Mar. 15–2006 Mar. 26, along with the four Doppler and two range measurements from observations in 2005, increases the 2029 Apr. 13.9 earth-center miss-distance by 450 km, from 5.86 ± 0.11 to 5.93 ± 0.09 $R_\oplus$, and reduces the along-track-position uncertainty at closest approach from $\pm$ 730 to $\pm$ 570 km (cf. *IAUC* 8593). The volume of the one-standard-deviation spatial uncertainty region decreases by 23 percent, from 261000 to 201000 km^3, and the nominal predicted earth-close-approach distance in 2036 increases from 0.168 to 0.276 AU, moving the statistical earth encounter to a lower-probability region within the distribution of possible orbits.

2006 May 17 *Daniel W. E. Green*