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SUPERNOVA 2003ma

A. Rest, Physics Department, Harvard University, on behalf of the SuperMACHO collaboration, reports the discovery of a supernova (at "VR" magnitude 20.5) at $z = 0.289$ behind the Large Magellanic Cloud on images obtained on 2003 Dec. 13 with the Cerro Tololo 4-m Blanco telescope in the course of the SuperMACHO microlensing survey (Rest *et al.* 2005, *Ap.J.* **634**, 1103). The object, designated SN 2003ma, faded by only 2.9 mag in I over the first 4.7 years following peak brightness ($I = 19.7$). It is located at $\alpha = 5^{h}31^{m}01^{s}.878$, $\delta = -70°04'15''.89$ (equinox 2000.0), which is $0''.1$ south of its host galaxy. Spectroscopy obtained with the Gemini South telescope (+ GMOS) on 2003 Dec. 22.3 and with the Magellan Clay telescope (+ MagE) on 2008 Dec. 28.3 shows 2003ma to be a very luminous type-IIn supernova, similar to SN 1988Z (Turatto *et al.* 1993, *MNRAS* **262**, 128). The 2008 spectrum shows an intermediate-width Hα line with a FWHM of 5800 km/s. Details will be given in a paper by Rest *et al.* (2009, *Ap.J.*, submitted).

COMET P/2009 U6 (LINEAR)

K. Kadota, Ageo, Saitama-ken, Japan, reports pre-discovery CCD images of this comet (cf. *IAUC* 9090), obtained with a 0.25-m $f/5$ reflector on Oct. 19.80–19.81 UT, showing the object at total mag 16.8 with a $0'.4$ coma and a tail $0'.7$ long in p.a. 285°. The following elliptical orbital elements (from 29 observations, Oct. 19–30) appear on *MPC* 67414:

$$
\begin{array}{llll}
T = 2009\text{ Aug. }11.839\text{ TT} & & \omega = 311^{\circ}.110 & \\
e = 0.59878 & & \Omega = 112.915 & \Big\}\, 2000.0 \\
q = 1.51357\text{ AU} & & i = 14.680 & \\
a = 3.77239\text{ AU} & n^{\circ} = 0.134518 & P = 7.33\text{ years} &
\end{array}
$$

COMETS C/2009 K13 AND C/2009 K14 (SOHO)

Further to *IAUC* 9091, additional Kreutz sungrazers have been found on SOHO website images. C/2009 K13 was slightly diffuse and small (mag ~ 8). C/2009 K14 was very diffuse and very faint (mag ~ 8–8.5).

Comet	2009 UT	α_{2000}	δ_{2000}	Inst.	F	*MPEC*
C/2009 K13	May 31.171	$4^{h}31^{m}.0$	$+20°05'$	C2	BZ	2009-O18
C/2009 K14	31.746	4 31.4	+20 02	C2	BZ	2009-O18

  Daniel W. E. Green