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NOVA IN THE LARGE MAGELLANIC CLOUD 2009 No. 2

W. Liller, Viña del Mar, Chile, reports the discovery of an apparent nova (mag ≈ 12.1) in the Large Magellanic Cloud from two photographs taken with Kodak Technical Pan film on May 4.994 UT, the position given as $\alpha = 5^{\text{h}}31^{\text{m}}28^{\text{s}} \pm 3^{\text{s}}$, $\delta = -67^{\circ}05'38'' \pm 8''$ (equinox 2000.0). No star brighter than mag ~ 19 appears at this position on a U.K. Schmidt image of the field, and nothing brighter than mag 14.0 was visible on Liller's photograph from 2009 Apr. 23.01. L. A. G. Monard, Pretoria, South Africa, reports a confirmation of the presumed nova at unfiltered mag 12.5 on CCD images taken under less-than-ideal conditions on May 7.716, the position end figures measured as $26^{\circ}42', 39''.4$, adding that no star is visible at this position on the Digitized Sky Survey (limiting red mag 20), though there is a star of red mag ≈ 18.5 located $\sim 1''$ southwest of the new object.

2009 HC₈₂

Another minor planet in a retrograde orbit but showing no apparent cometary features has been discovered (cf. *MPEC* 2009-J04) by the Catalina Sky Survey. The following orbital elements are from *MPO* 157545:

$$\begin{array}{llll} \text{Epoch} = 2009 \text{ June } 18.0 \text{ TT} & & & \\ \left. \begin{array}{ll} T = 2008 \text{ Nov. } 3.8564 \text{ TT} & \omega = 296^{\circ}58'14'' \\ e = 0.810058 & \Omega = 294.6157 \\ q = 0.463311 \text{ AU} & i = 154.5642 \end{array} \right\} 2000.0 \\ a = 2.439225 \text{ AU} \quad n^{\circ} = 0.2587178 \quad P = 3.81 \text{ years} \end{array}$$

COMETS C/2009 A2, C/2009 A3, C/2009 A4, C/2009 A5 (SOHO)

Further to *IAUC* 9039, additional Kreutz sungrazers have been found on SOHO website images, being tiny and stellar in appearance (peak mag ~ 7.5 , except C/2009 A2 at mag ~ 7) in C3 images. C/2009 A3 was small and "roughly stellar" in C2 images. All except C/2009 A2 (condensed, and teardrop-shaped) were slightly diffuse and elongated (peak mag ~ 11 , except C/2009 A2 and A3 at mag ~ 10) in STEREO HI1-A images.

Comet	2009 UT	α_{2000}	δ_{2000}	Inst.	F	<i>MPEC</i>
C/2009 A2	Jan. 1.054	$18^{\text{h}}55^{\text{m}}.8$	$-25^{\circ}55'$	C3	HS	2009-F18
C/2009 A3	1.613	18 58.2	-25 28	C3/2	HS	2009-F30
C/2009 A4	2.154	19 01.1	-25 14	C3	HS	2009-F30
C/2009 A5	2.488	19 05.1	-25 39	C3	HS	2009-F30