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COMETS C/2008 K3–K11 AND C/2008 L4 (SOHO)

Further to *IAUC* 8981, additional near-sun presumed comets have been found on SOHO website images — all Kreutz sungrazers except for C/2008 K7 (Meyer group), which was tiny, stellar in appearance, and faint (mag ~ 7.5–8), and C/2008 K10, which was small and stellar in appearance (mag 7–7.5, brightening as it left the C2 field-of-view but never appeared in C3). C/2008 K10 has been identified by R. Kracht with C/1999 X3 (cf. *IAUC* 8735; not reported until 2006 and being near the limit of visibility in C2 images) and C/2004 E2 (cf. *IAUC* 8365), an identification confirmed by B. G. Marsden (with linked orbits and residuals published on *MPC* 2008-S49; for epoch 2008 May 14.0 TT, T = 2008 May 31.334 TT, q = 0.04797 AU, e = 0.98162, $\omega = 353^\circ.611$, $\Omega = 323^\circ.655$, $i = 6^\circ.259$, equinox 2000.0); Marsden notes that close approaches occurred to the earth on 2000 Jan. 13 (Δ = 0.058 AU) and Mars on 2004 May 19 (Δ_M = 0.032 AU). K. Battams writes that C/2008 K3 was tiny, extremely faint (mag ~ 8.5), and stellar in appearance. C/2008 K4 was one of the brightest comets seen by SOHO (saturating slightly in both LASCO cameras, with estimated peak magnitude ~ 1–2), appearing as a bright teardrop in C3 images and having a partly-forked, "thick" tail ~ $0^\circ.5$ long in C2 images; both SECCHI COR cameras also imaged C/2008 K4, with the tail appearing somewhat thinner in the COR2A images and showing the slight "fork" in the COR2B images. C/2008 K5 and C/2008 K7 were tiny and stellar in appearance (mag ~ 7.5–8). C/2008 K6 was tiny and stellar in appearance (mag ~ 7) in C3 images, and elongated and very diffuse in C2 images. C/2008 K8 was very diffuse (mag ~ 8). C/2008 K9 and C/2008 K11 were both small and very diffuse (mag ~ 8–8.5, the former being perhaps slightly fainter than the latter). C/2008 L4 was small and slightly diffuse (mag ~ 7–7.5).

Comet	2008 UT	α_{2000}	δ_{2000}	Inst.	F	*MPEC*
C/2008 K3	May 17.858	$3^h41^m.0$	$+17^\circ51'$	C2	MK	2008-M13
C/2008 K4	21.988	4 08.3	+16 12	C3/2	RM	2008-M13
C/2008 K5	23.579	4 02.4	+18 52	C2	MK	2008-M13
C/2008 K6	25.513	4 10.2	+18 08	C3/2	HS	2008-O15
C/2008 K7	25.913	4 13.3	+22 23	C2	JR	2008-O15
C/2008 K8	28.079	4 20.9	+19 43	C2	JR	2008-O15
C/2008 K9	28.704	4 23.1	+19 47	C2	GP	2008-O15
C/2008 K10	30.881	4 27.8	+21 22	C2	RK	2008-O16
C/2008 K11	31.038	4 31.8	+20 05	C2	GS	2008-O16
C/2008 L4	June 2.371	4 39.4	+20 18	C2	MK	2008-O16

2008 September 26 *Daniel W. E. Green*