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COMETS C/2008 O4, C/2008 O5, AND C/2008 O6 (SOHO)

Further to *IAUC* 8986, additional near-sun presumed comets have been found on SOHO website images; C/2008 O5 is a Kreutz sungrazer, and C/2008 O6 belongs to no known group. C/2008 O5 was stellar in appearance in C3 images (mag ~ 6.5–7.0), and small and slightly diffuse in C2 images. C/2008 O6 was stellar in appearance and quite bright (mag ~ 6.5). Contrary to the inference on *IAUC* 8985, C/2008 O4 also belongs to no known group, and the last sentence of the first paragraph (regarding C/2008 O4) should be replaced with the following: C/2008 O4 was small and condensed, being brightest at the edge of the C2 field-of-view (mag perhaps 7.5) and becoming fainter as it approached the occulter.

Comet	2008 UT	α_{2000}	δ_{2000}	Inst.	F	*MPEC*
C/2008 O5	July 17.196	$7^h29^m.8$	$+18°29'$	C3/2	BZ	2008-S68
C/2008 O6	17.571	7 52.8	+23 59	C3/2	HS	2008-T10

COMET 205P/GIACOBINI

Z. Sekanina, Jet Propulsion Laboratory, reports that both companion nuclei (*IAUC* 8978) are fragments of long lifetimes. While their brightness may fluctuate and will generally decrease with time on account of increasing heliocentric and geocentric distances, they are not expected to disintegrate soon. Nucleus 'B', the one closer to the principal nucleus 'A', is found to have separated from it in the second half of 2006, ~ 700 days before perihelion, when the comet was 4.8 AU from the sun, while the more distant companion 'C' appears to have detached from 'A' at the very end of 1998, at 5.5 AU from the sun and slightly more than 3 years before the previous perihelion, which occurred on 2002 Jan. 21.0. The nongravitational decelerations relative to 'A' are derived to be 3.1 ± 1.0 and $4.3 \pm 0.1 \times 10^{-5}$ units of solar gravitational acceleration for 'B' and 'C', respectively, and their separation velocities are calculated to have been 0.11 ± 0.05 and 0.7 ± 0.4 m/s. The comet has a history of splitting long before perihelion (Sekanina 1979, *Icarus* **38**, 306). The predicted separation distance and position angle for 'B' relative to 'A' are as follows (2008, 0^h TT): Oct. 1, 68″, 265°; 21, 62″, 269°; Nov. 10, 54″, 270°; 30, 48″, 269°; Dec. 20, 42″, 268°. The predicted separation distance and position angle for 'C' relative to 'A' are: Oct. 1, 619″, 266°.2; 11, 568″, 267°.5; 21, 518″, 268°.3; 31, 470″, 268°.6; Nov. 10, 425″, 268°.6; 20, 384″, 268°.3; 30, 347″, 268°.0; Dec. 10, 314″, 267°.6; 20, 284″, 267°.4.

2008 October 2 Daniel W. E. Green