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COMET C/2009 O3 (HILL)

R. E. Hill reports his discovery of a comet with the Catalina 0.68-m Schmidt telescope (discovery observation tabulated below), noting that co-added 30-s exposures show a nuclear condensation elongated northeast-southwest and a $6'' \times 10''$ coma with a broad, diffuse tail $\sim 2'$ long in p.a. 260° (though on July 30.4 UT, the coma $< 2''$). After posting on the 'NEOCP' webpage, other CCD astrometrists have noted the cometary appearance. Below are given measured coma diameters and tail information from images obtained July 30.0–30.5: $10''$ coma (diffuse with central condensation), $30''$ tail in p.a. 250° (P. Birtwhistle, Great Shefford, Berkshire, England, 0.40-m reflector); strong central condensation with a tail at least $40''$ long in p.a. 255° (L. Buzzi, Varese, Italy, 0.60-m reflector); tail $> 1'$ long toward p.a. 245° (E. Prosperi, Larciano, Italy, 0.35-m reflector; fifty co-added 30-s exposures taken by P. Camilleri, E. Guido, G. Sostero, and himself); compact nuclear condensation and a broad, diffuse tail $27''.7$ long in p.a. $247^\circ.5$ (R. Holmes and H. Devore, Charleston, IL, U.S.A., 0.61-m astrograph); $\sim 5''$ compact coma and a $30''$ tail in p.a. 225° (E. Guido and G. Sostero, remotely using a 0.25-m reflector near Mayhill, NM, U.S.A.; six co-added unfiltered 120-s exposures); round $10''$ coma (J. E. McGaha, Tucson, AZ, U.S.A., 0.36-m reflector; five stacked 60-s exposures); faint tail in p.a. $\sim 225^\circ$ (W. H. Ryan, Magdalena Ridge 2.4-m reflector).

2009 UT	α_{2000}	δ_{2000}	Mag.	*Observer*
July 29.43294	$1^h31^m27^s.03$	$+10^\circ16'52''.4$	17.5	Hill

The available astrometry, the following preliminary parabolic orbital elements by B. G. Marsden, and an ephemeris appear on *MPEC* 2009-O54.

$$T = 2009\ \text{Apr.}\ 21.770\ \text{TT} \qquad \left.\begin{array}{l}\omega = 130^\circ.389\\ \Omega = 180.985\\ i = 12.750\end{array}\right\}2000.0$$
$$q = 1.88365\ \text{AU}$$

COMET C/2008 Y18 (SOHO)

Further to *IAUC* 9042, another Kreutz sungrazer has been found on SOHO website images, being extremely faint (mag $\sim$ 8.5–9) and slightly diffuse in C2 images, and diffuse (mag $\sim$ 11.5) in STEREO HI1-A images.

Comet	2008 UT	α_{2000}	δ_{2000}	Inst.	F	*MPEC*
C/2008 Y18	Dec. 25.829	$18^h24^m.5$	$-24^\circ47'$	C2*	MK	2009-M41

2009 July 30 *Daniel W. E. Green*