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COMET 232P/2009 W1 = 1999 XO_{188} (HILL)

As first announced on *CBET* 2083, F. Manca (Bosisio Parini, Italy) has suggested that comet P/2009 W1 (cf. *IAUCs* 9095, 9097) was observed at its previous perihelion passage as 1999 XO_{188}, the observations of which (all by LINEAR, from 1999 Dec. 12 and 15 and 2000 Jan. 2, with the comet's magnitude given then as $\sim$ 18–19) are given on *MPS* 9249 and 82876. An orbit was published on *MPO* 50446. Additional Mt. Lemmon observations from 2008 Nov. 8 and an orbital linkage are given on *MPEC* 2009-Y21. This comet has been assigned the permanent number designation 232P.

COMET C/2009 Y1 (CATALINA)

As first announced on *CBET* 2084, an apparently asteroidal object reported by R. E. Hill (discovery observation tabulated below) using the Catalina Sky Survey 0.68-m Schmidt telescope, after being added to the Minor Planet Center's 'NEO Confirmation Page', was found to be cometary by W. H. Ryan and E. V. Ryan at the Magdalena Ridge Observatory, when observations on Dec. 18.4 and 20.5 UT with the 2.4-m *f*/8.9 reflector showed a faint tail in p.a. 260°. Hints of cometary activity on the western side of the nuclear condensation were also suspected by H. Sato (remotely using an RAS Observatory 0.25-m *f*/3.4 reflector near Mayhill, NM, U.S.A.) on Dec. 18.4 and by L. Buzzi (Schiaparelli Observatory, 0.60-m *f*/4.6 reflector) on Dec. 20.2.

2009 UT	α_{2000}	δ_{2000}	Mag.	*Observer*
Dec. 17.51495	$12^h10^m29^s.85$	$+44^\circ28'31''.3$	19.4	Hill

Further astrometry and an ephemeris were given on *MPEC* 2009-Y33. The following revised parabolic orbital elements are taken from *MPC* 67973.

$$T = 2011\ \text{Jan.}\ 27.935\ \text{TT} \qquad \left.\begin{aligned}\omega &= 126^\circ.887\\ \Omega &= 160.306\\ i &= 107.326\end{aligned}\right\}2000.0$$
$$q = 2.53705\ \text{AU}$$

2009 YS_6

An asteroidal object discovered via the 1.5-m reflector of the Mt. Lemmon survey on Dec. 17 (red mag $\sim$ 20) has a retrograde orbit (cf. *MPEC* 2009-Y35; $T \sim$ Feb. 2011, $q \sim 1.3$ AU, $P \sim 12$ yr, $i \sim 144°$). Additional astrometry is desired.

2009 December 31 *Daniel W. E. Green*