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COMET P/2007 V2 (HILL)

R. E. Hill reports his discovery of a comet (discovery observation tabulated below) of mag $\sim$ 19 with a diffuse $4'' \times 6''$ coma and a broad tail $\sim 2'$ long in p.a. 260° in four co-added 30-s CCD exposures taken in $2''$–$3''$ seeing with the Mt. Lemmon 1.5-m reflector. His four co-added 60-s unfiltered images taken the following night (Nov. 10.3 UT) show a well-condensed circular coma and a broad tail $2'.6$ long. Following posting on the Minor Planet Center's NEOCP webpage, J. Young reports that CCD images taken by W. Young and himself in very poor seeing on Nov. 10.24–10.28 with the Table Mountain 0.61-m $f/16$ Cassegrain reflector show a round $6''$ diffuse coma with with no central condensation and no visible tail seen. R. Ligustri and D. Da Rio (Talmassons, Udine, Italy, 0.35-m reflector) write that their twenty co-added 180-s exposures from Nov. 9.83–9.85 show a very faint coma of diameter $\sim 20''$.

2007 UT	α_{2000}	δ_{2000}
Nov. 9.29539	$2^h38^m15^s.99$	$+12°05'51''.8$

The available astrometry (with prediscovery Spacewatch observations from Oct. 14) and the following orbital elements appear on *MPEC* 2007-V75.

$$\begin{array}{lll} T = 2007\ \text{July}\ 31.744\ \text{TT} & \omega = 277°.971 & \\ e = 0.32388 & \Omega = 100.245 & \left.\right\} 2000.0 \\ q = 2.74859\ \text{AU} & i = 2.449 & \end{array}$$

$$a = 4.06522\ \text{AU} \qquad n° = 0.120248 \qquad P = 8.2\ \text{years}$$

2007 VA$_{85}$

An apparently asteroidal object of mag 18.5–19 discovered by the LINEAR survey on Nov. 4.1 UT has the shortest known period ($P = 7.6$ yr) for a sun-orbiting natural object with a retrograde orbit ($i = 132°.6$). Attempts to find cometary activity have been unsuccessful. The available astrometry and orbital elements appear on *MPEC* 2007-V73.

COMET P/2007 T6 (CATALINA)

Additional observations have show this comet (cf. *IAUC* 8881) to be of short period, as indicated by the orbital elements on *MPEC* 2007-V56 (T = 2007 Aug. 19.586 TT, $e = 0.50400$, $q = 2.23213$ AU, $\omega = 335°.833$, $\Omega = 102°.636$, $i = 22°.148$, equinox 2000.0, $P = 9.55$ yr).

2007 November 10 *Daniel W. E. Green*