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INTERNATIONAL ASTRONOMICAL UNION**

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COMET P/2009 S1 = P/2001 Q10 (GIBBS)

R. Matson (Irvine, CA) has identified astrometric observations of this comet (cf. *IAUC* 9074) on NEAT 1.2-m reflector frames taken on 2001 Aug. 23 and 24 at Haleakala and on 2001 Sept. 24 and Oct. 27 at Palomar.

2001	UT	α_{2000}	δ_{2000}	Mag.
Aug.	23.60821	2 ^h 14 ^m 09. ^s 59	− 6° 22′ 20.8″	20.0
	24.61243	2 14 47.80	− 6 35 40.8	20.2
Sept.	24.48475	2 22 42.84	−14 38 01.7	19.8
	24.50631	2 22 42.65	−14 38 22.6	19.3
Oct.	27.27596	2 09 16.92	−22 00 18.3	19.3
	27.28631	2 09 16.49	−22 00 23.6	19.9
	27.29669	2 09 16.13	−22 00 28.7	19.7

The following revised orbital elements by B. G. Marsden link the 2001 and 2009 apparitions; 2001 elements and residuals appear on *MPEC* 2009-X01.

Epoch = 2009 July 28.0 TT

$$\begin{array}{ll}
 T = 2009 \text{ Aug. } 4.1741 \text{ TT} & \omega = 224.0034 \\
 e = 0.378003 & \Omega = 157.9798 \\
 q = 2.440203 \text{ AU} & i = 26.1102 \\
 a = 3.923174 \text{ AU} & n^\circ = 0.1268375 \quad P = 7.77 \text{ years}
 \end{array}
 \left. \vphantom{\begin{array}{l} T \\ e \\ q \\ a \end{array}} \right\} 2000.0$$

COMET P/2009 W1 (HILL)

Additional astrometry has shown that this comet (cf. *IAUC* 9095) is of short period; orbital elements from *MPEC* 2009-W147:

$$\begin{array}{ll}
 T = 2009 \text{ Sept. } 26.669 \text{ TT} & \omega = 52.372 \\
 e = 0.33828 & \Omega = 56.066 \\
 q = 2.97739 \text{ AU} & i = 14.625 \\
 a = 4.49949 \text{ AU} & n^\circ = 0.103266 \quad P = 9.54 \text{ years}
 \end{array}
 \left. \vphantom{\begin{array}{l} T \\ e \\ q \\ a \end{array}} \right\} 2000.0$$

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Visual magnitude estimates (cf. *IAUC* 9095): Nov. 19.726 UT, 7.2 (K. Hornoch, Vohancice, Czech Republic); 21.719, 7.4 (P. Schmeer, Bischmisheim, Germany); 22.067, 7.5 (C. Hergenrother, Tucson, AZ, U.S.A.); 25.672, 7.5 (K. Sárneczky, Budapest, Hungary); 26.708, 7.4 (W. Vollmann, Vienna, Austria); 27.065, 7.5 (Hergenrother); 28.683, 7.2 (Sárneczky).