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INTERNATIONAL ASTRONOMICAL UNION**

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COMET P/2009 B3 (VAN NESS)

G. Hug, Scranton, KS, U.S.A., reports his recovery of comet P/2005 R2 (cf. *IAUC* 8597) on images obtained with the 0.56-m reflector at his Sandlot Observatory. A very faint, straight, narrow tail was observed extending at least $5'-6'$ in p.a. 300° . The indicated correction to the prediction on *MPC* 62880 is $\Delta T = -0.06$ day.

2009	UT	α_{2000}	δ_{2000}	Mag.	Observer
Jan.	31.36200	$10^{\text{h}}57^{\text{m}}13^{\text{s}}.96$	$+0^\circ44'12''.1$	20.7	Hug

The above observation and three others, together with the following linked orbital elements and an ephemeris, appear on *MPEC* 2009-C03.

Epoch = 2011 June 8.0 TT

$$\left. \begin{array}{ll} T = 2011 \text{ June } 16.2308 \text{ TT} & \omega = 3.3321 \\ e = 0.379597 & \Omega = 312.6719 \\ q = 2.122533 \text{ AU} & i = 10.2396 \end{array} \right\} 2000.0$$

$$a = 3.421219 \text{ AU} \quad n^\circ = 0.1557517 \quad P = 6.33 \text{ years}$$

COMET P/2009 B4 (LINEAR)

Hug also reports his recovery of P/2002 CW₁₃₄ (cf. *IAUC* 7858) in images taken at 25° altitude; the comet did not appear different from stellar images in the same exposures. The indicated correction to prediction on *MPC* 56802 is $\Delta T = -0.32$ day.

2009	UT	α_{2000}	δ_{2000}	Mag.	Observer
Jan.	31.48615	$14^{\text{h}}30^{\text{m}}50^{\text{s}}.15$	$-22^\circ00'01''.1$	19.6	Hug
	31.50481	$14 \ 30 \ 51.92$	$-22 \ 00 \ 23.0$	20.0	"
Feb.	1.43053	$14 \ 32 \ 21.53$	$-22 \ 17 \ 31.7$	19.3	"
	1.45242	$14 \ 32 \ 23.47$	$-22 \ 17 \ 56.4$	19.5	"
	1.46701	$14 \ 32 \ 24.91$	$-22 \ 18 \ 13.5$	19.6	"

The following linked orbital elements and an ephemeris appear on *MPEC* 2009-C04.

Epoch = 2009 Jan. 9.0 TT

$$\left. \begin{array}{ll} T = 2009 \text{ Jan. } 5.6142 \text{ TT} & \omega = 190.2682 \\ e = 0.488719 & \Omega = 348.2590 \\ q = 1.843732 \text{ AU} & i = 15.2133 \end{array} \right\} 2000.0$$

$$a = 3.606102 \text{ AU} \quad n^\circ = 0.1439286 \quad P = 6.85 \text{ years}$$