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COMET C/2005 K2 (LINEAR)

M. Bezpalko reports the LINEAR discovery of a comet with a short tail in p.a. 270°. Following posting on the 'NEO Confirmation Page', R. Hutsebaut (Bruxelles, Belgium; remotely using the 0.25-m reflector at 'New Mexico Skies Observatory') writes that his CCD images from May 20.2–20.4 UT show the object to be very diffuse with a tail 1′ long in p.a. 270°. Also, J. Young (Table Mountain Observatory, Wrightwood, CA, 0.6-m reflector) writes that his CCD images taken on May 20.4 show a large, elongated, very diffuse 8″ coma of mag 17.5 with little central condensation and a faint, broad, 40″-long tail spanning p.a. 255°–275°.

2005 UT	α_{2000}	δ_{2000}	Mag.	*Observer*
May 19.35543	22 06 50.32	+74 57 29.4	18.7	LINEAR
19.36469	22 06 53.42	+74 58 09.3	18.8	"
19.37391	22 06 55.75	+74 58 49.0	19.2	"
19.38318	22 06 59.03	+74 59 31.5	19.0	"
20.23898	22 11 51.51	+76 03 38.4	18.1	Hutsebaut
20.34618	22 12 32.09	+76 11 56.7	17.6	"
20.35156	22 12 35.05	+76 12 19.9	17.3	"
20.39306	22 12 50.39	+76 15 32.4	17.5	Young
20.40463	22 12 54.65	+76 16 26.4		"
20.41898	22 13 00.62	+76 17 37.3		"
20.42951	22 13 04.86	+76 18 27.9		"
20.43854	22 13 08.32	+76 19 08.8		"
20.44537	22 13 10.81	+76 19 41.7		"

Very preliminary parabolic orbital elements ($H_{7.5}$ = 18.0):

$$T = \text{2005 June 29.009 TT} \qquad q = 0.67950 \text{ AU}$$

$$\left.\begin{array}{l} \omega = 206^\circ.479 \\ \Omega = 57.161 \\ i = 94.371 \end{array}\right\} 2000.0$$

2005TT	α_{2000}	δ_{2000}	Δ	r	ϵ	β	Mag.
May 20	22 10.4	+75 45.4	0.807	1.048	69.3	64.6	17.7
22	22 25.7	+78 24.9	0.760	1.020	68.6	67.5	17.5
24	22 54.1	+81 19.3	0.714	0.992	67.6	70.7	17.2
26	0 00.3	+84 17.5	0.669	0.965	66.4	74.2	17.0
28	3 04	+86 04.5	0.626	0.938	64.9	77.9	16.8
30	6 25.3	+83 55.1	0.587	0.912	63.0	82.0	16.5

2005 May 20 *Daniel W. E. Green*