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COMET P/2007 N2 = P/2002 O5 (NEAT)

Comet P/2002 O5 (cf. *IAUC* 7942) has been recovered apparently independently on CCD images obtained at three different observatories:

2007 UT	α_{2000}	δ_{2000}	Mag.	*Observer*
July 15.22509	17^{h}05^{m}36^s.69	−12°42′18″.5	15.8	LINEAR
15.23619	17 05 38.35	−12 41 00.0	16.0	"
15.24728	17 05 39.89	−12 39 40.4	16.6	"
15.25845	17 05 41.73	−12 38 23.8	15.9	"
15.26954	17 05 43.38	−12 37 05.8	15.9	"
16.00235	17 07 43.80	−11 11 33.0	16.4	Fratev
16.00372	17 07 44.31	−11 11 26.6	17.0	Lombardi
16.00635	17 07 44.71	−11 11 07.8	17.1	"
16.00872	17 07 45.02	−11 10 49.7	16.5	Fratev
16.01498	17 07 45.87	−11 10 06.3	16.3	"
16.02155	17 07 46.73	−11 09 19.2	16.5	"

LINEAR (Socorro, NM). 1.0-m f/2.15 reflector. Observations identified via the normal checking of data by the Minor Planet Center.
G. Lombardi and E. Pettarin (Farra d'Isonzo, Italy). 0.40-m f/4.5 reflector. USNO-A2.0 catalogue. Comet has a diffuse coma of diameter $\approx 10''$ and a tail $\approx 15''$ long in p.a. 135°.
F. Fratev and E. Mihaylova (Plana, Bulgaria). 0.25-m f/3.2 reflector. USNO-B1.0 catalogue. Coma diameter $\approx 25''$; total red mag 16.0.

The correction to the predictions on *MPC* 51823 and in the *2007 Comet Handbook* is $\Delta T = -0.36$ day. The following linked orbital elements are by B. G. Marsden, from 254 observations, 2002–2007 (mean residual 0″.7):

Epoch = 2002 July 25.0 TT

$$\begin{array}{llll} T = 2002\ \mathrm{Aug.}\ 3.10144\ \mathrm{TT} & \omega = 15^\circ.30571 & & \\ e = 0.5973957 & \Omega = 282.20995 & \} 2000.0 & \\ q = 1.1742394\ \mathrm{AU} & i = 20.39966 & & \end{array}$$

$a = 2.9166089$ AU $n^\circ = 0.19787311$ $P = 4.98$ years

Epoch = 2007 Aug. 8.0 TT

$$\begin{array}{llll} T = 2007\ \mathrm{July}\ 25.90695\ \mathrm{TT} & \omega = 15^\circ.27124 & & \\ e = 0.5976949 & \Omega = 282.20178 & \} 2000.0 & \\ q = 1.1733898\ \mathrm{AU} & i = 20.40165 & & \end{array}$$

$a = 2.9166666$ AU $n^\circ = 0.19786724$ $P = 4.98$ years

2007 July 16 Daniel W. E. Green