COMET SOFTWARE

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COMET SOFTWARE is a set of computer programs to help comet observers in their research. All programs are written using C language and work under DOS.

Comet Software contains the following files::

- LOCATION.DAT
  This file contains the user's location. User should change location using COMSETUP.EXE program.

- PLANET.DAT
  This file contains the orbital elements of major planets

- COMET.ELE
  COMET.ELE is an ASCII file that contains orbital elements of comets; user may change these orbital elements or add some of new comets in this file. User may download the COMETCR.DAT file from the URL:
  ftp://cfa-ftp.harvard.edu/pub/MPCORB/
  and run the COMELE.EXE program to upgrade orbital elements included in the COMET.ELE files.

- COMEPH.EXE
  COMEPH.EXE computes ephemeris for selected comet

- COMALL.EXE
  COMALL.EXE computes ephemeris of all comets listed in COMET.ELE file.

- COMORBIT.EXE
  COMORBIT.EXE shows the orbit of a selected comet for a time given by user, also major planets orbit are shown

- COMORB2.EXE
  COMORB2.EXE shows the orbit of a selected comet for a time period given by user, also major planets orbit are shown

- COMET.DOC
  Comet Software User's Guide

As example, ephemeris for comet C/2002 C1 (Ikeya-Zhang) computed for Milano are erported:

```
COMEPH: Comet Ephemeris
1996, S.Foglia, Serafino Zani Observatory

Comet:   C/2002 C1 (Ikeya-Zhang)

T  2002  3 18.9793      ω   34.66495 |
e  0.98995410           Ω   93.37037 | Equinox J2000.0
q  0.5070584 A.U.       i   28.12161 |

m =  7.0 + 5.0 log R +  4.0 log r

Ephemeris for Milano
Longitude: -9.139667    Latitude: 45.191111     Altitude: 126.5
```

Date			R.A.2000	Decl.2000	Delta	r	Mag	Elong.	Motion	
year	mo	day	hh mm.mm	dd pp.p	A.U.	A.U.	V	°	"/h	PA
2002	5	7.00	17 48.29	+51 48.3	0.41952	1.16955	5.4	101.8W	329	243
2002	5	8.00	17 37.76	+50 23.1	0.42391	1.18633	5.4	104.1W	325	240
2002	5	9.00	17 28.01	+48 55.7	0.42885	1.20307	5.5	106.4W	319	238
2002	5	10.00	17 18.99	+47 26.9	0.43435	1.21978	5.5	108.6W	313	235
2002	5	11.00	17 10.63	+45 57.3	0.44039	1.23645	5.6	110.7W	307	233
2002	5	12.00	17 2.90	+44 27.3	0.44698	1.25309	5.6	112.8W	300	231
2002	5	13.00	16 55.73	+42 57.3	0.45409	1.26970	5.7	114.8W	293	229
2002	5	14.00	16 49.08	+41 27.8	0.46174	1.28626	5.8	116.7W	286	227
2002	5	15.00	16 42.91	+39 59.1	0.46989	1.30279	5.8	118.6W	278	225
2002	5	16.00	16 37.18	+38 31.6	0.47856	1.31928	5.9	120.4W	271	224
2002	5	17.00	16 31.86	+37 5.3	0.48771	1.33572	5.9	122.1W	263	222

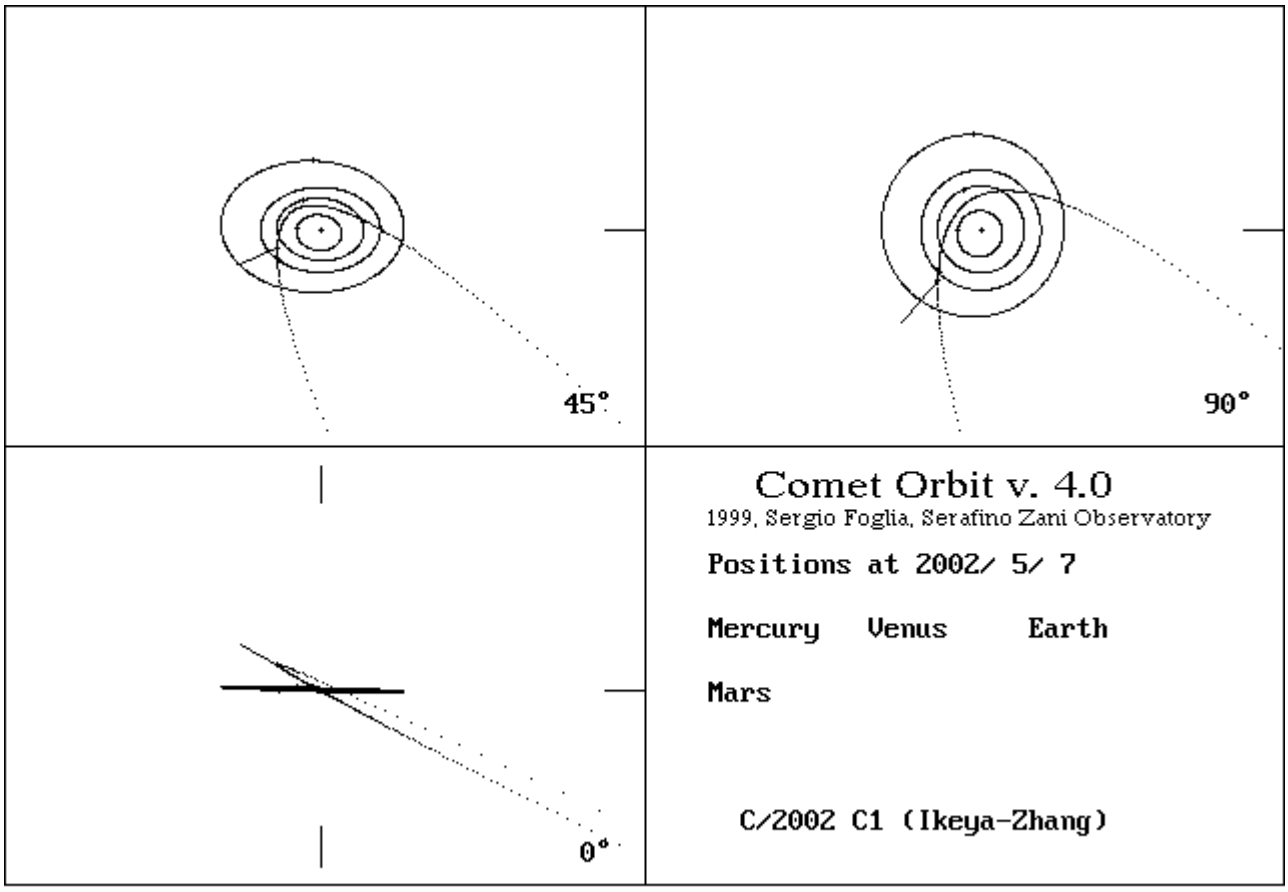
in the output file orbital elements of comet are reported:

T perihelium time
e eccentricity
q perihelic distance in A.U.
ω longitude of perhelium in degrees
Ω longitude of ascending node in degrees
i inclination in gradi

for each date the following information are given:

Date	
Year mo day	year month day
R.A.2000	Right Ascension J2000.0
Decl.2000	Declination J2000.0
Delta	geocentric distance in A.U.
r	heliocentric distance in A.U.
Mag.	Total magnitude in the V band
Elong.	Elongation from Sole in degrees (E=East, W=West)
Motion	
"/h	motion in arc sec per hour
PA	position angle of motion

Positions for 2002 may 7 is obtained with COMORBIT.EXE: also major planets positions are shown. Three different point of view are reported and inclination respect to ecliptic plane are the following: 45°, 90° e 0°. An 1-A.U. lenght ficticious tail is also shown.



Comet Software is available free at the following URL:

http://www.uai.it/sez_ast/