

## Dusk and Daytime Finder Chart

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If you want to find the intergalactic tramp (globular Cluster NGC 2419), use Uranometria. But if you want to find a comet at sunset or a planet in broad daylight, Uranometria won't help. A quick and dirty way to make charts, especially useful when the Sun washes out the sky, involves John Walker's Your Sky website along with the Harvard Comet site. Your Sky ( [www.fourmilab.ch/yoursky](http://www.fourmilab.ch/yoursky) ) by John Walker, who makes AutoCAD, is also accessible through the Clear Sky Chart sites

(such as [www.cleardarksky.com/c/DeerTrailCOkey.html](http://www.cleardarksky.com/c/DeerTrailCOkey.html)

by clicking on "Star Map".

The Harvard comet site is: <http://cfa-www.harvard.edu/iau/Ephemerides/Comets/>

From there you can click your way to the orbital elements you will need. To make your finder chart, begin by getting to the Your Sky site and be sure the location is right. If you want to find a bright daytime comet (such as McNaught seen lately), minimize the Your Sky and find your way to the orbital elements for the comet you seek. Click and drag over the orbital elements and copy (by holding down Ctrl and hitting the "c").

What you copy will look something like:

```
C/2006 P1 (McNaught)
Epoch 2007 Apr. 10.0 TT = JDT 2454200.5
T 2007 Jan. 12.7961 TT MPC
q 0.170742 (2000.0) P Q
z -0.000109 Peri. 155.9771 +0.1269048
-0.1739154
+/-0.000024 Node 267.4144 +0.6753090
+0.7362590
e 1.000019 Incl. 77.8349 +0.7265348
-0.6539695
```

Next, get back to the Your Sky and paste what you copied into the "Asteroid and Comet Tracking" "Paste orbital elements below:" box near the bottom (by holding down Ctrl and hitting the "v"). This box is just above the Sun, Moon, and planets ephemeris chart. To be sure it is working, scroll up to just below the big round chart and click the "Update" button.

Unless the comet is up at your present time, click the box next to "Universal time" and type in the time (in Greenwich England) when you expect to see the comet here, and then click the "Update" button. Keep trying different times until the comet shows up on the horizon you want. If you can't find it, check the ephemeris in the Harvard site for the comet you want, and figure out what time (if at all) it will be up in your location.

If you want detailed info near the horizon, click the "View Horizon at this Observing Site" button (back on the Your Sky site). This will bring up a view of the northern horizon but it changes time back to the present. Which means you need to type your way back to the future in the "Universal time" box again.

If you remember where the comet was after you pasted the orbital elements and updated the chart, you can then type in the part of the horizon you want to see and click the "Update" button.

To tidy up your chart, go down the list and un-check almost everything except "Moon and planets". In the "Show stars brighter than magnitude" type in 1 or maybe 0, and finally change the "Color scheme" to black on white. Your main guides will be the locations of the horizon, Sun, Moon, and maybe Venus (shown as the female symbol without the Mercury wings on it's hat). After you print your chart, maybe use whiteout on Pluto and Uranus since you won't be seeing them in the daytime with your 10x50s anyway.

Use extreme caution and shade the sun with a building corner or roof overhang. Be absolutely certain that you cannot point your binoculars at the Sun. Better to not see the comet than to not see anything ever again because you boiled the vitreous humor out of your eyeballs with binoculars and sunshine.