

East Valley Astronomy Club

President	Tom Harvey	998-0035
Vice-President	Ted Heckens	827-1524
Treasurer	Bob Kelley	451-7319
Newsletter	Bill Smith/Roy Halverson	831-1520/844-9563

December

Newsletter

1992

HECKENS ELECTED NEW PRESIDENT

Ted Heckens topped the slate of new officers elected by the East Valley Astronomy Club at its meeting Nov. 18. Heckens will begin his tenure at the next meeting, Dec. 9th

Other officers elected were:

Joe Murray, vice president, and

Bob Kelley, secretary-treasurer.

Named to the board of directors were Dick Simmon, Mike Janes, Bob Kerwin, Bill Heckathorn and Frank Kraljic.

A MARCH MESSIER MARATHON

A.J. Crayon of the Saguaro Astronomy Club is planning a star party at the Arizona City observing site on March 20 at which observers will attempt to locate all 110 items on the Messier list.

EVAC members have been invited to join all Valley clubs plus Tucson astronomers to scan the skies from dusk to dawn.

Optimist that he is, Crayon said that most observers will be able to spot at least 50. Telescope plaques will be given to the top three observers. Those who locate 50 or more will be given certificates.

Later newsletters will include more information on the competition.

COMPUTER PROGRAMS REAL AIDS TO ASTRONOMERS

Joe Murray and Stan Student demonstrated several astronomical programs compatible with Macintoshes and DOS-based computers at the November meeting of EVAC.

A Macintosh program called *Voyager* is best seen on color Macintosh II monitors, but is compatible with less ornate Macs as well. Two megabytes of RAM are recommended.

Voyager allows the user to select a celestial object, then center it on the screen, and print out a sky map to help locate it while observing. And it has many, many other features. Cost is in the neighborhood of \$120.

Murray also demonstrated the *Dance of the Planets*, a program for DOS computers. Described as a "superbly accurate" program, the *Dance* allows the user to view planetary orbits as if from earth, from a vantage point just inside the moon's orbit or from a sphere outside the solar system.

The program emulates brightness of planets and allows the user to zoom in for close looks and out for the broad perspective. It also simulates eclipses, among dozens of other features. Like other astronomical programs, it benefits from being used with a color monitor. It needs a special chip to speed operation. Its list price is \$195. Selling price is unknown.

Stan Student demonstrated and described several programs, most notably *Hypersky*, a sky atlas of great power and versatility. Its basic version holds a significant array of constellations, asterisms and the like, and extra catalogues expand its holdings up to at least 50,000 objects.

It allows wide and narrow perspectives. The user can set RA and declination data and locate objects that way. Or the field can be set to accommodate the view seen through a one-degree eyepiece. And so on. Its power and versatility are remarkable—as is its price: \$49.95.

Another DOS program is called *SkyGlobe*, which can be used to show the rise and set of Messier objects. It's zoomable and its prints of sky maps are fine.

Its price is even finer: it's free and in the EVAC library.

MARK YOUR CALENDAR

EVAC BUSINESS MEETINGS

Dec. 9th - SCC Room PS 170

Guest speaker: Leon Knott

DEEP SKY STAR PARTIES

Jan. 23rd Feb. 20th Mar. 20th

Southern site-see map inside.

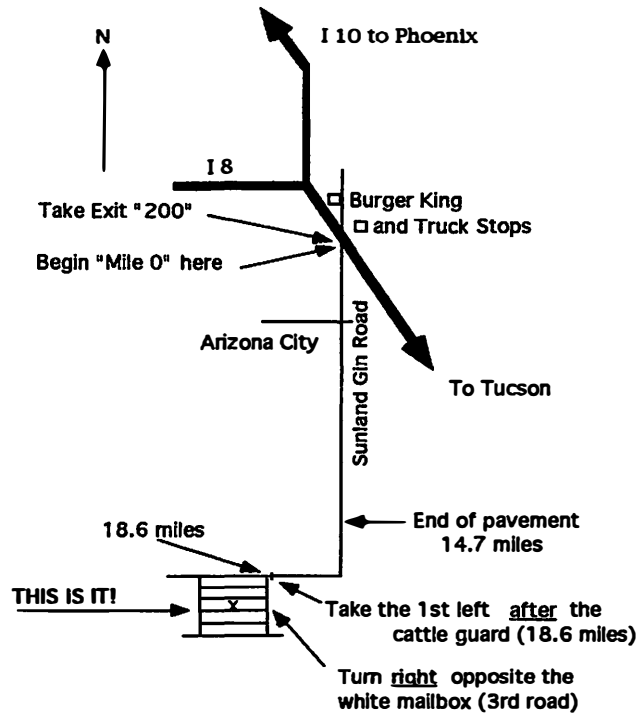
LOCAL STAR PARTY

Jan. 16th Feb. 13th Mar. 13th

Call Joe Murray 482-2918 for instructions.

cont'd next column

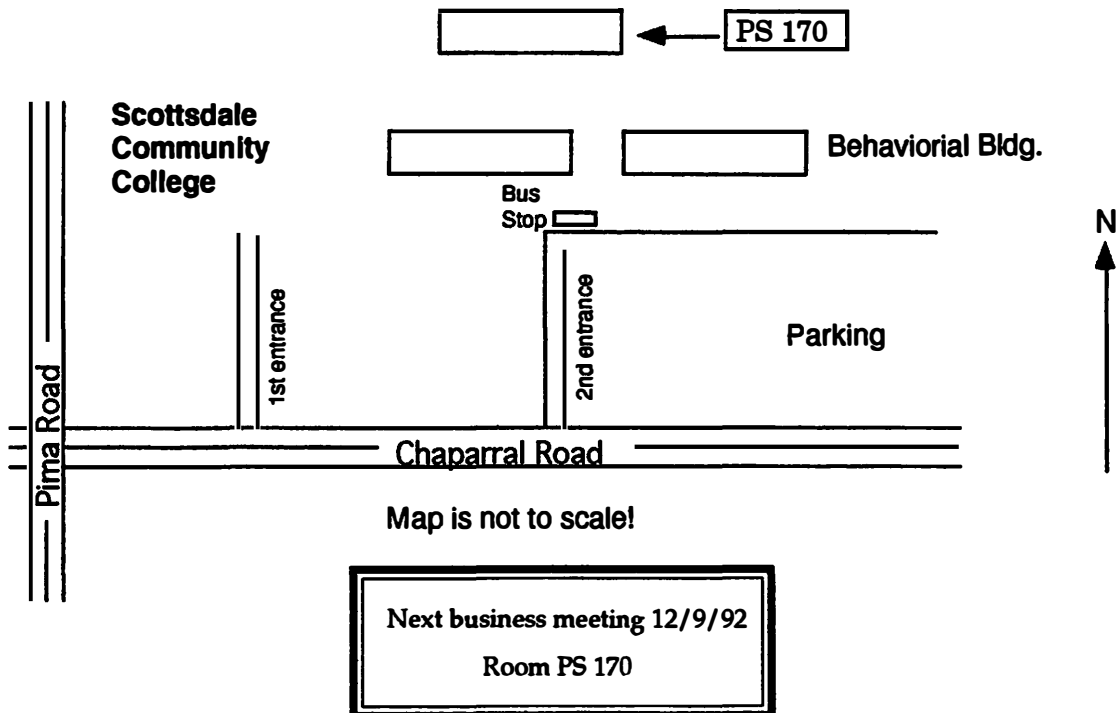
RENEW NOW AT \$15. AFTER DEC. 31ST DUES INCREASE TO \$20.00.



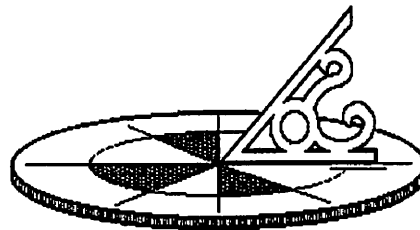
Believe it or not, they named the street opposite the white mailbox:
MOON CHILD!!

- DEEP SKY -

January 23rd



December Calendar



by
Byron Scott

<u>Date</u>	<u>Day</u>	<u>Event</u>
02	Wed.	First quarter Moon
09	Wed.	Full Moon—The moon in December is sometimes called The Moon before Yule or Long Night Moon
		Total eclipse of the Moon— please check your commercial calendars for details.
13	Sun.	Geminid Meteors—Duration for this shower is about 5 days, with the peak day being the 13 th of Dec. (hourly rate about 50)
16	Wed.	Last quarter Moon
18	Fri.	Comet Gale at perihelion
21	Mon.	Winter Solstice
22	Tue.	Ursid Meteors— Duration for this shower is about 4 days, with the peak day being the 22 nd of Dec. (hourly rate about 15)
23	Wed.	Partial solar eclipse — NE China, Korea, Japan
24	Thu.	New Moon
25	Fri.	Christmas
29	Tue.	Moon at apogee

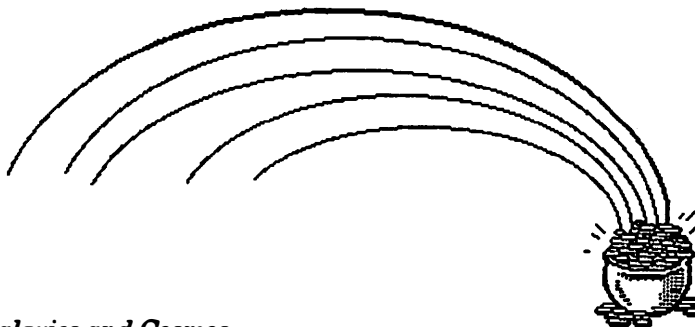
December Flashback

On December 21, 1968, Apollo 8 (USA) conducted the first manned orbit of the moon.

NEXT BUSINESS MEETING IS DECEMBER 9TH

Guest speaker will be Leon Knott. Leon has recently moved from South Carolina and is an expert telescope maker. His talk is entitled "Making Moonshine." If you would like to know how he is going to tie moonshine and telescope making together, then you'd best plan to attend. He plans to include slides to illustrate his talk. Don't miss it! Meeting starts at 7:30. Bring a friend!

EVAC LIBRARY



Astronomer's Universe: The Stars, Galaxies and Cosmos

by Herbert Friedman

Astronomy From the Earth To The Universe

by Jay M. Pasachoff

Astronomy Structure of the Universe

by A. E. Roy & D. Clarke

Astronomy With A Small Telescope

by James Muirden

Astrophotography For the Amateur

by Michael Covington

Atoms of Silence - An Exploration of Cosmic Evolution

by Hubert Reeves

Burnham's Celestial Handbooks:

Vol. 1 Andromeda - Cetus

Vol. 2 Chamaeleon - Orion

Vol. 3 Pavo - Vulpecula

Deep Sky Objects: A Guide for the Amateur Astronomer

by Jack Newton

Peterson Field Guide to the Stars and Planets

by Donald H. Menzel

How to Make a Telescope

by Jean Texereau

How to Use An Astronomical Telescope

by James Muirden

Introductory Astronomy & Astrophysics

by Zeilik & Smith

Star Guide - A Unique System for Identifying the Brightest Stars In the Night Sky

by Steven L. Beyer

Turn Left At Orion

by Guy Consolmagno & Dan Davis

Universe From Your Backyard

by David J. Eicher

Universe Guide To Stars and Planets

by Ian Ridpath & Wil Tirion

Whitney's Star Finder

by Charles A. Whitney

The X-Ray Universe

by Wallace Tucker & Ricardo Giacconi

SPECIAL THANKS TO DICK SIMMON AND ROBERT KERWIN WHO DONATED THE ABOVE BOOKS. THE LIBRARY NOW INCLUDES SOFTWARE DONATED BY STAN STUDENT. CHECKOUT COULDN'T BE EASIER. SEE THE INSTRUCTIONS BELOW.

To check out a book from the EVAC library contact Carl Lorson (834-6864) prior to the next business meeting. Let him know which book you would like and he will bring it to the next business meeting. If you have books to donate, please see Carl at the meeting and we will include an updated list in future newsletters.

The Deep Sky Notebook

by Robert Kerwin

Fornax

The constellation Fornax lies directly east of Sculptor, last month's constellation. Like Sculptor, Fornax contains few bright stars, the brightest being Alpha Fornacis, magnitude 3.8. The primary deep sky objects in Fornax are galaxies, although you will also find a planetary nebula and a globular cluster among the offerings. The globular cluster is actually part of the Fornax System, a dwarf elliptical lying approximately 650,000 light years away. The Fornax System is probably beyond the reach of amateur instruments, however, the globular (NGC 1049) shines at 13th magnitude and should be visible in an eight-inch scope.

Our first object is a double star, **Omega Fornacis**. This is a fairly easy double in just about any scope. The stars are magnitudes 5 and 8 and are separated by 11 arc-seconds. In my observing notes, I list the colors as "brilliant blue-green and off-white," an unusual color combination. What colors do you see? About three degrees southeast of Omega lies **NGC 1097**, a bright galaxy. NGC 1097 has a bright nucleus surrounded by a faint glow and is elongated northwest-southeast. Under good seeing conditions with an eight-inch or larger telescope, you may be able to see some mottling or graininess in the brighter parts of the galaxy.

Another bright galaxy, **NGC 1316** is located about ten degrees southeast of NGC 1097. NGC 1316 is about one degree south and one degree west of a compact triangle of sixth-magnitude stars consisting of χ_1 , χ_2 and χ_3 Fornacis. This galaxy is a strong radio source (Fornax A). Visually, it appears as a bright nucleus surrounded by a faint haze that fades slowly and smoothly to the background. The galaxy is elongated northeast-southwest. While in the area, be sure to look for NGC 1317, a nearby 11th magnitude galaxy. It looks similar to NGC 1316, with a bright nucleus and a surrounding elongated halo. About three degrees northeast lies **NGC 1365**, a barred spiral galaxy. NGC 1365 appears as a faint circular glow with a faint stellar nucleus. With good seeing conditions, you may be able to detect segments of the spiral arms extending north on the west side of the glow and south on the east side. There is also a faint (magnitude 13.5) star just northwest of the nucleus.

The **Fornax Galaxy Cluster** (Fornax I) is located less than a degree to the northeast of NGC 1365 and is a fascinating area for moderate-size instruments. With a low-power eyepiece giving a one-degree field, you may be able to see as many as nine galaxies at once. See the accompanying finder chart for help in identifying the many galaxies in this area. The majority of the galaxies are small and faint, so use higher magnifications to explore the area in detail. Most of the galaxies plotted on the chart should be visible in an eight-inch telescope. This is one of the few galaxy clusters visible in modest amateur telescopes.

Leaving the Fornax cluster and moving northwest by about eight degrees, we encounter **Alpha Fornacis**, a double star. The components are magnitudes 4 and 7, separated by 2 arc-seconds. Low-altitude seeing, coupled with the magnitude differential makes this double somewhat challenging. The colors are both white, although you may notice a tinge of blue in the fainter star. Our final object is **NGC 1360**, a bright, though often overlooked planetary. This nebula is even visible in a 60mm telescope. It appears as a bright, uniform oval haze with a conspicuous central star. A nebular filter will improve the contrast of the nebula, but will not reveal any additional detail.

Fornax contains many fascinating objects for moderate-size telescopes. With good skies, this area will keep you busy for many hours.

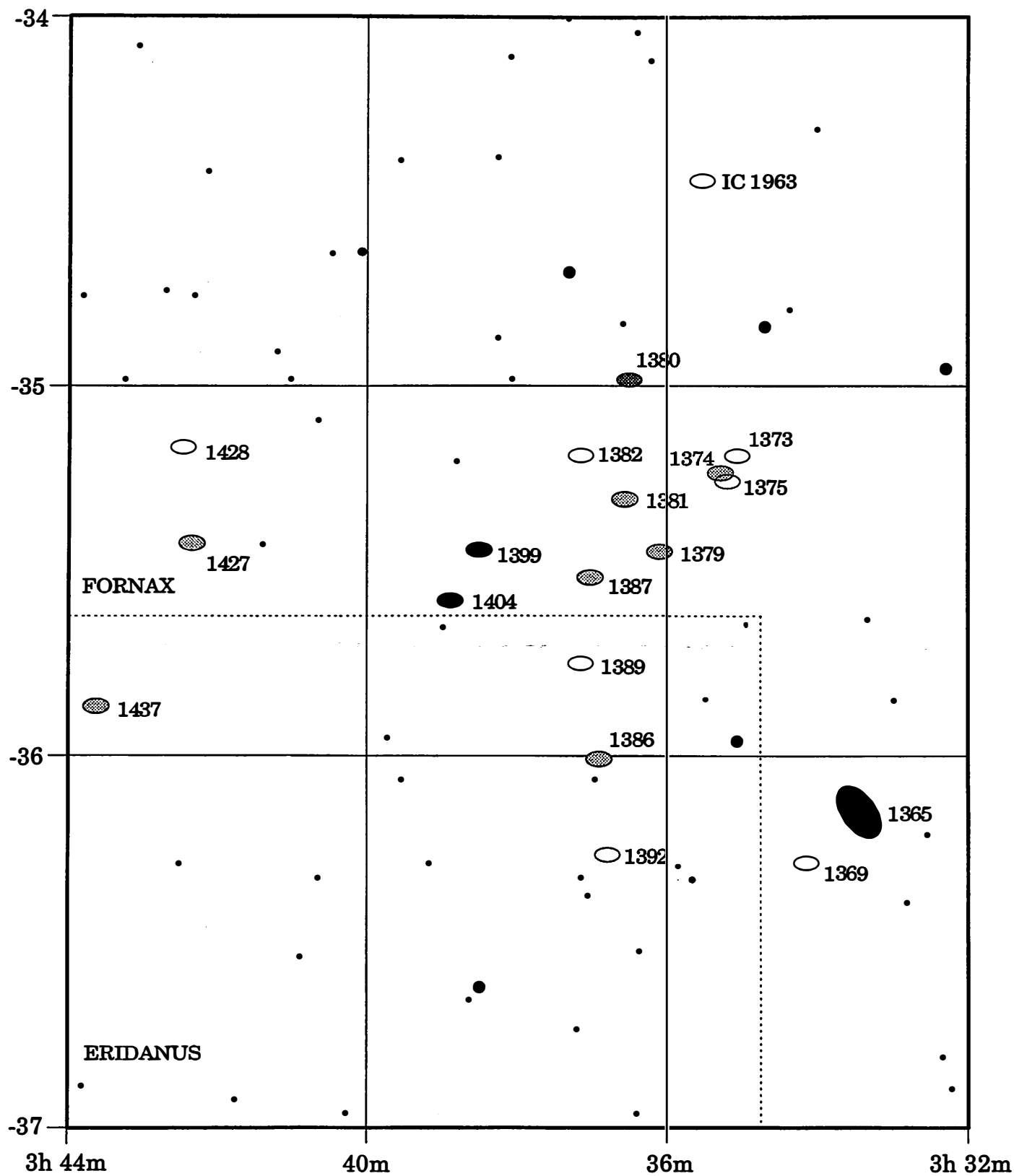
Fornax

Tirion chart: 18

U2000 charts: 308-312, 353-356

Name	Type	Mag	Size	R.A.	Dec.
ω Fornacis	ds	5.8	10.8"	2h 34m	-28.2
NGC 1097	g	9.3	9.3	2h 46m	-30.3
NGC 1316	g	8.9	7.1	3h 23m	-37.2
NGC 1365	g	9.5	9.8	3h 34m	-36.1
Fornax I	see accompanying chart and text				
α Fornacis	ds	4.7	1.9"	3h 12m	-29.0
NGC 1360	pn	---	6.5	3h 33m	-25.9

The Fornax I Cluster



Galaxy Magnitudes

● >10.5

● 10.5 - 11.5

● 11.5 - 12.5

○ <12.5 or not listed



Inadvertently, Roy dooms the entire earth to annihilation when, in an attempt to be friendly, he seizes their leader by the head and shakes vigorously.

COMET SWIFT-TUTTLE

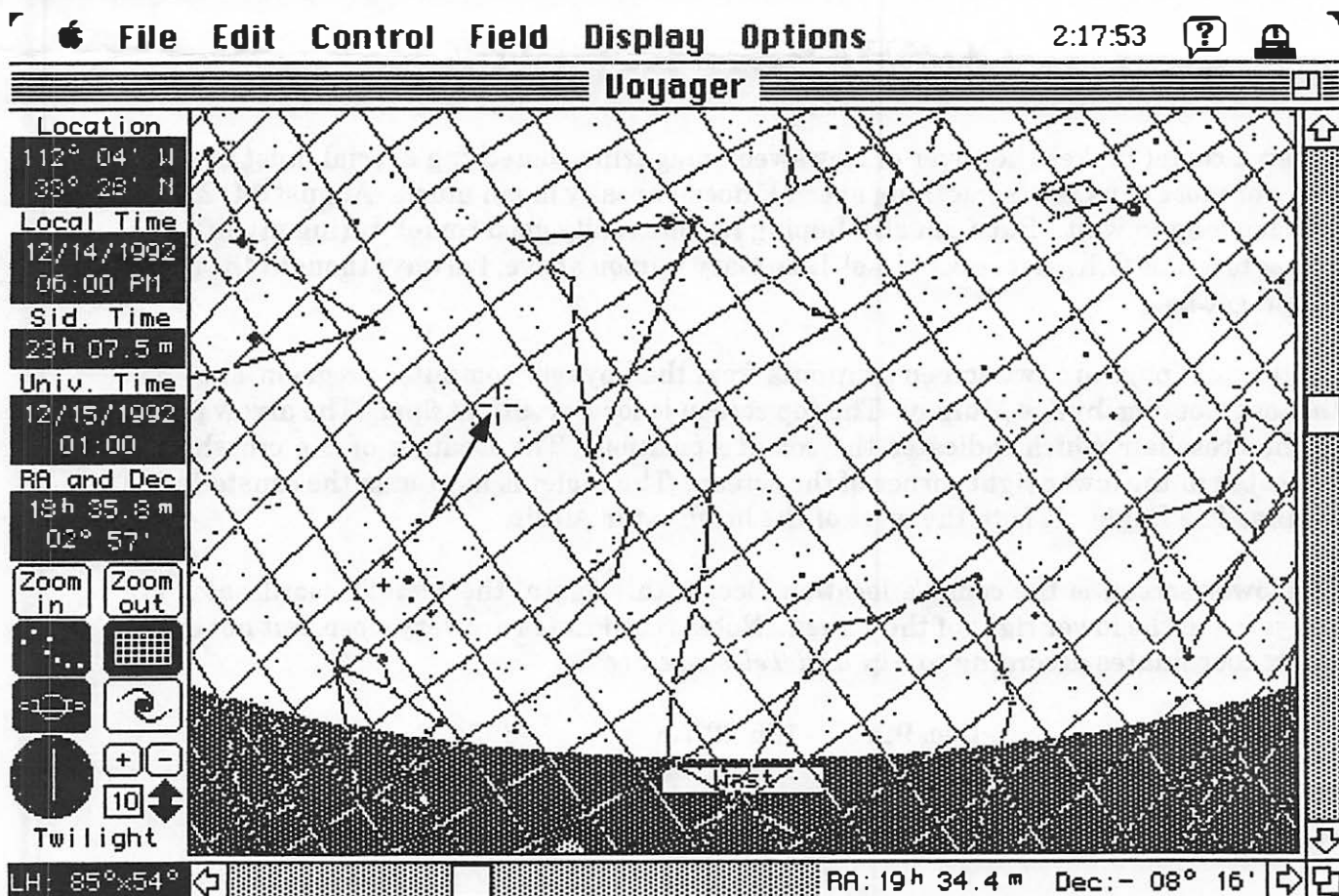
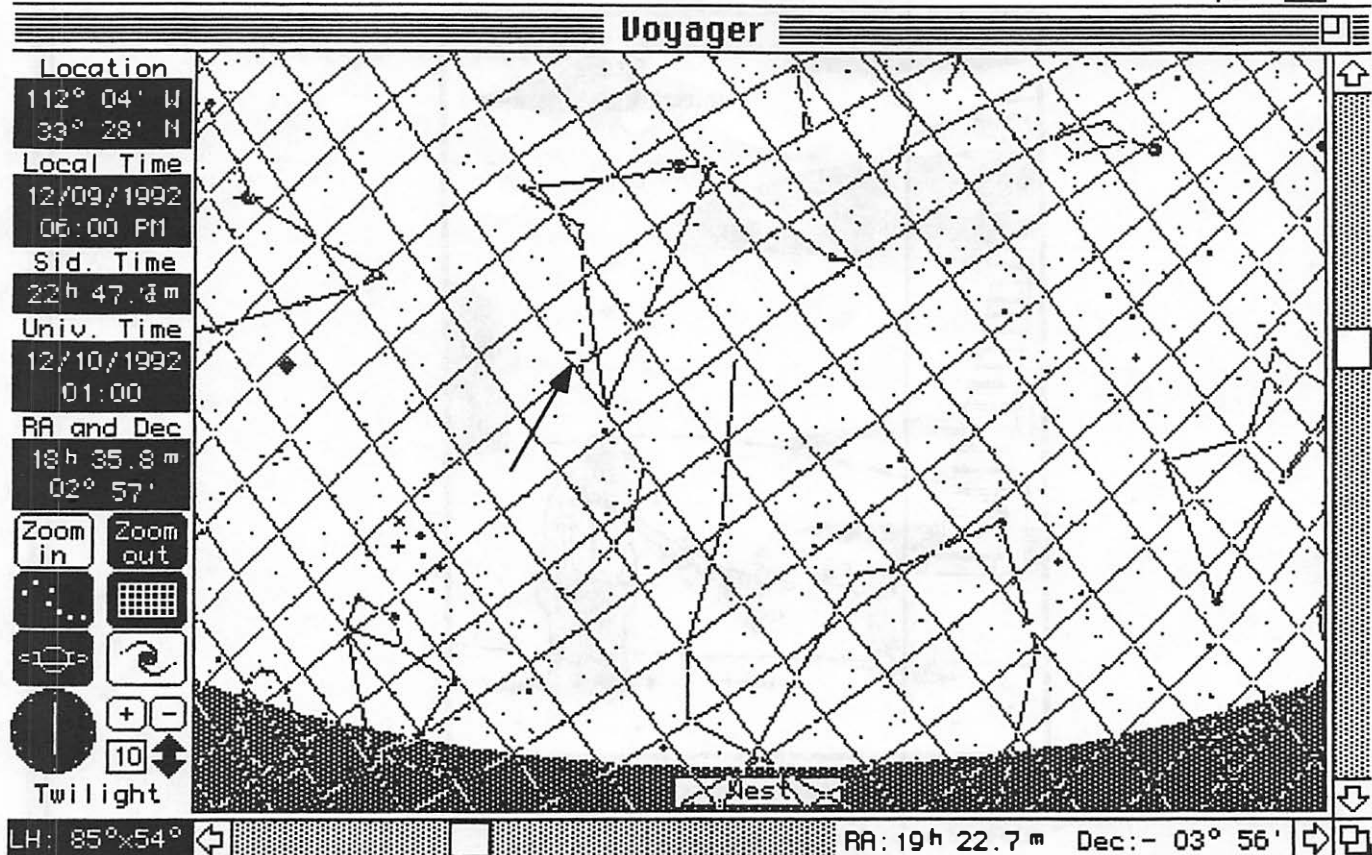
When a comet makes the cover of Newsweek magazine something special must be going on. For most of us the "something special" doesn't really mean much. August 14, 2126 is just too long to wait. But I am still hoping for one really good comet during my lifetime. Super bright is O.K., not super close! Like Gary Larson above, I always thought the aliens would get us.

On the next page are two screen printouts from the Voyager computer program shown at the last meeting by Joe Murray. The top screen is for Dec. 9th at 6pm. The arrow points to the crosshair which indicates the comet's position. The location of the crosshair is indicated in the lower right corner of the screen. The comet is located in the constellation Aquila, The Eagle. It is to the west of the bright star Altair.

The lower screen is the comet's location Dec. 14th. Again, the comet's coordinates are indicated in the lower right of the screen. Note: coordinates are very close, but not exact. Exact coordinates according to *Sky and Telescope* are:

Dec. 9th	19h 22.7m	-3° 54'
Dec. 14th	19h 34.5m	-8° 13'

Magnitudes for each date are 6.7 and 6.8 respectively.



NOTE: Arrows indicate position of crosshair. Crosshair indicates approx. comet position.



East Valley

Astronomy Club

Membership Form

Please complete the information on the form and return to the address below along with a check to EVAC for \$15.00 annual dues.

Bob Kelley, EVAC Treasurer
9071 E. Sutton
Scottsdale, AZ 85260

Name _____
Address _____
Phone # _____

RENEW TODAY!
DUES INCREASE TO \$20 AS OF JAN. 1ST

Please

Print

() New () Renewal () Change of address

Major area(s) of interest:

- () General observing
() Lunar observing
() Planetary observing
() Telescope Making
() Astrophotography
() Other _____

It is not necessary, but do you currently own astronomy equipment?

() Yes () No

If yes, please describe. _____

How did you hear about the East Valley Astronomy Club? _____

CLIP AND SAVE

Monthly business meetings
are on the Wednesday nearest
to the full moon.



EVAC/Bill Smith

1663 S. Sycamore

Mesa, AZ 85202



Renew before Dec. 31st-check inside