bservations

A Monthly Publication Of The
CHESTER COUNTY ASTRONOMICAL SOCIETY

FEBRUARY 2004
(VOLUME 12, NO. 2)
Visit us online at www.ccas.us

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Tonight's session: "Spaceship Earth"

6 Full Moon.

10 CCAS Monthly Meeting in Room 113 at 7:30 p.m. EST in the Boucher Building at West Chester University, on South Church Street in West Chester (see map on page 13).

Topic: "The Astronomy of Mason & Dixon"

13 Last Quarter Moon

17 CCAS Introductory Astronomy classes at the Flower and Cook Observatory in Malvern. Class begins at 7:00 p.m. EST.

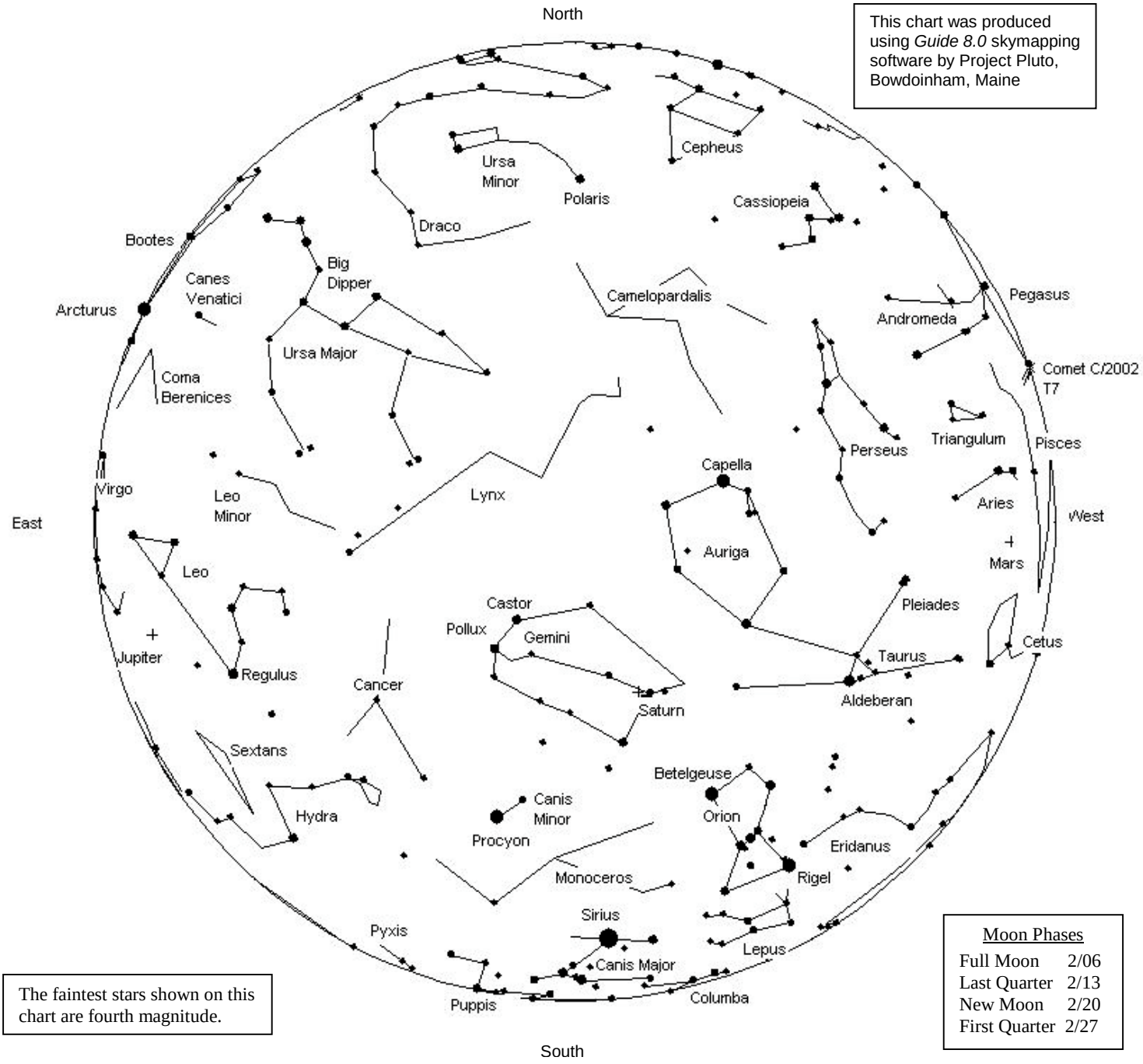
Tonight's session: "The Other Kids on the Block"

20 New Moon

20/21 CCAS Observing session at Myrick Conservation Center (BVA), starts at sunset.

27 First Quarter Moon

29 Happy Leap Day!



The sky over Chester County
February 15, 2004 at 9:00 p.m. EST

The Planets

Mercury is in the morning sky, low in the southeast before sunrise, but moves behind the Sun by late February.

Venus is in the evening sky, setting about 3 hours or more after the Sun. You can't miss it, it's the brightest "star" in the sky after dark until about 7:30 p.m. or so when it sets.

Mars is in the evening sky, in Aries. It's a small dot in telescopes.

Jupiter is rising earlier each night, and is rising shortly after sunset by month's end. In February you can start getting good telescopic views of Jupiter by late evening (10:00 p.m. or later).

Saturn is in the northeast as the Sun sets in the southwest. You can get good telescopic views of Saturn now as soon as it is dark enough to find it. The rings are nicely tipped for good viewing, and as a matter of fact, this year is one of the best years to see the rings!

Uranus is in the evening sky but is now lost in the Sun's glare.

Neptune is too close to the Sun to find this month.

Pluto is in the morning sky, but is still not high enough for telescopic viewing before sunrise.

CCAS February Meeting

The presentation at our February meeting, entitled "The Astronomy of Mason and Dixon," will be delivered by Robert Mentzer. Mr. Mentzer is the treasurer of the Delaware Astronomical Society. He notes that over one-third of Mason's journal is devoted to astronomy. Mason and Dixon used it to determine the latitude and the direction when they surveyed the border between Pennsylvania and Maryland. Recent accurate GPS determinations of the stones have shown the line drifts off the starting latitude by up to 900 feet. Mason's journal is so detailed that it is possible to recreate how they ran the line. Mr. Mentzer finds that Mason and Dixon did a superb job. The drift can be traced to inaccuracies in the then state-of-the-art instruments they used, and the yet to be discovered fact that plumb bobs could be pulled off vertical by local variations in the vertical pull of gravity. This is a fascinating talk that was well received at last year's Mason-Dixon Star Party outside York, PA. Don't miss it!

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CCAS February Observing Session

The next CCAS Observing Session will be at the Brandywine Valley Association's Myrick Conservancy Center (see map on a later page) on Friday February 20, 2004 starting at sunset; or earlier, if you can get there earlier. If it's too cloudy on Friday, then the Observing Session will be on Saturday February 21, 2004. At the observing sessions, there will be help available to set up and use your telescopes. If you're having trouble using your telescope, or finding your way around the sky, come on out and get some assistance. All members are invited whether they have a telescope or not. Telescope owners are always glad to share the view through their telescope. CCAS Observing Sessions are always free of charge. Remember to dress warmly!

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CCAS Introductory Astronomy Class

The Education Committee of the CCAS is offering a class intended to introduce people to basic astronomy. This series of eight classes will be held on the first and third Tuesdays of each month, starting at 7:00 p.m. and ending at 8:00 p.m. These are the dates on which classes will be held:

February 3	Spaceship Earth
February 17	The Other Kids on the Block
March 2	Planispheres/Star Charts
March 16	Stars by Design: Constellations
April 6	The Secret Life of Stars
April 20	Planetarium Field Trip (WCU)
May 4	The Moon
May 18	Telescopes, Binoculars and Mounts

The classes will be held at the University of Pennsylvania's Flower and Cook Observatory in Willistown Township. The FCO is located just a few miles south of Malvern. It is located near the intersection of Warren Avenue and Providence Road, just west of Warren Avenue on Providence Road.

The cost for non-members is $20.00 per person, and $30.00 per family (with the same address). **For current CCAS members, the classes are free!** Space is limited to just 40 people, however, so call Kathy Buczynski to reserve your space **now** (610-436-0821). Also, please call Kathy if you'd like to help at the classes. We have all the instructors lined up, but we can always use help with registration, setup/takedown, and (if it's clear) telescopes and expertise in pointing out constellations when we go outside.

Another way you can help is to make copies of the advertising poster included on a later page in this newsletter. Pass them out to friends, family, and neighbors. Hang them up on "community bulletin boards" at work, church, school, and other public places like libraries. Ask stores if they will allow you to display one somewhere in their store. Help us get the word out about this enjoyable and educational opportunity. Thanks!

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CCAS April Meeting: Date Changed!

Please note that the date of the April Society meeting has been changed from the usual second Tuesday of the month (April 13) to the third Tuesday of the month, April 20. This is so we could combine the meeting with the Introductory Astronomy class in the planetarium at West Chester University. This way all members can attend the planetarium show that night. The planetarium show will be first that night, after which we will hold the monthly meeting to conduct any needed Society business. Class members can leave after the show if they choose, or they can stay for the meeting.

Treasurer's Report by Bob Popovich

December 2003 Financial Summary

Beginning Balance	$1,241
Deposits	105
Disbursements	118
Ending Balance	$1,228

Membership Renewals Due

02/2004:	Carlucci
	Deeney
	Ehrgott
	Farrelly
	La Para
	Marcelli
	Picklo-Smith & Family
	Rahling
	Thomson
03/2004:	Grey
	Harmstead
04/2004:	Bogucki
	Dunlop
	Goldader
	Hess
	Murray
	Plotkin

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Membership Renewals

You can renew your CCAS membership by writing a check payable to "Chester County Astronomical Society" and sending it to our Treasurer:

Bob Popovich
416 Fairfax Drive
Exton, PA 19341-1814

The current dues amounts are listed in the *CCAS Information Directory* on a later page in this newsletter.

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Calendar Notes

February 3, 2004 (Tuesday)	Introductory Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EST
February 10, 2004 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EST
February 17, 2004 (Tuesday)	Introductory Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EST
February 20/21, 2004 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
March 2, 2004 (Tuesday)	Introductory Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EST
March 9, 2004 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EST
March 16, 2004 (Tuesday)	Introductory Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EST
March 19/20, 2004 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
April 6, 2004 (Tuesday)	Introductory Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EDT
April 20, 2004 (Tuesday) (note date change)	CCAS Meeting Location: West Chester University 7:30 p.m. EDT
April 16/17, 2004 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
April 20, 2004 (Tuesday)	Introductory Astronomy Class Location: West Chester University 7:00 p.m. EDT
April 24, 2004	**National Astronomy Day**
May 4, 2004 (Tuesday)	Introductory Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EDT
May 11, 2004 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EDT
May 18, 2004 (Tuesday)	Introductory Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EDT
May 21/22, 2004 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset

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Newsletter Deadlines

These are the deadlines for submitting material for publication in the newsletter, through the December 2004 issue.

Issue	Deadline
March 2004	02/25/2004
April 2004	03/26/2004
May 2004	04/28/2004
June 2004	05/26/2004
July 2004	06/25/2004
August 2004	07/28/2004
September 2004	08/27/2004
October 2004	09/27/2004
November 2004	10/27/2004
December 2004	11/26/2004

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For Sale: *Skywatch '04*

The *SkyWatch '04* annual magazine from Sky Publishing, which includes September 2003 to December 2004 monthly star charts, excellent articles about telescopes, 2004 astronomical highlights, astrophotography and much, much more, is now available to CCAS members at a reduced rate. Newsstand price: $6.99 plus tax. Buy it here for ONLY $**5.00**—WHILE SUPPLIES LAST (the proceeds, which aren't much, benefit the Education Fund of your Society). Call Kathy Buczynski @ 610-436-0821 to reserve your copy.

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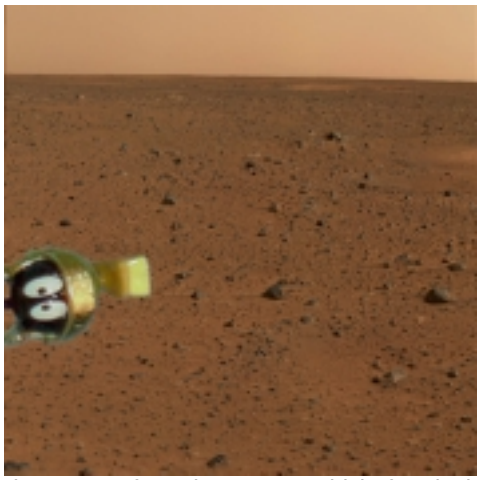
On the Lighter Side of the Final Frontier...



The last picture sent from the Rover *Spirit* before it shut down.

Image and caption courtesy of Vic Carlucci. NASA and the Jet Propulsion Laboratory vehemently deny any connection with this "...obvious and scurrilous fabrication. Everybody knows **real** Martians don't wear cheap plastic Roman helmets!"

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NASA's Space Place

Flying in Formation

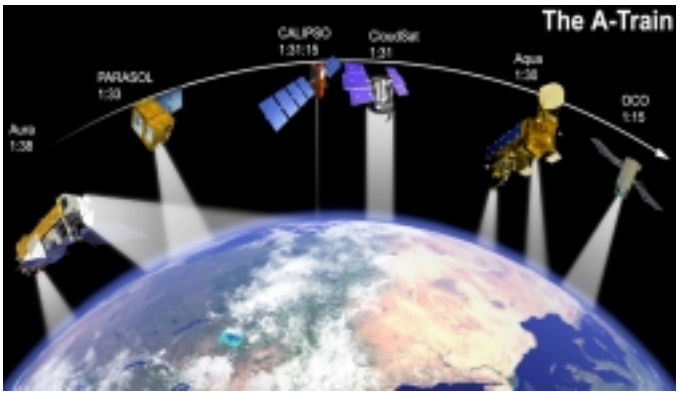
By Patrick L. Barry

Fourteen

You can almost see the tabloid headlines now: "Mid-west farmer spies UFO squadron flying in formation!" "First signs of imminent alien invasion," the subtitle will read.

If only this fictional farmer had been keeping up with NASA's Space Place column, he would have known better. The string of white dots moving in formation across the pre-dawn sky were satellites, not alien spaceships.

Beginning next year, a series of challenging, high-precision launches will insert four satellites into orbits with just the right altitude, position, and orbital inclination to follow in lock step behind NASA's Aqua satellite (launched in May 2002). Scientists have dubbed this squadron of satellites the "A-Train." Along with Aqua, the celestial parade will include Cloudsat, CALIPSO, PARASOL, and Aura.



CloudSat, to be launched in November 2004, will take its place as part of the "A-Train" of satellites flying in formation to take closely timed snapshots of essentially the same scene using a total of 14 different measuring instruments.

In April 2004, NASA will launch CloudSat, an Earth-observing satellite with unique cloud-measurement abilities. These measurements will fill an important role in our understanding of global climate change, making long-term climate change scenarios more accurate and dependable.

So why bother flying in formation? By passing over the same swath of land within seconds or minutes of each other, the satellites will give scientists snapshots of essentially the same scene using a total of 14 different measuring instruments. CloudSat alone carries only one: a millimeter-wavelength radar sounder.

This sounder—the first of its kind put into orbit—lets scientists see a vertical "slice" of the atmosphere that shows clouds, water, and ice between the ground and 30 km altitude, with a vertical resolution of 0.5 km. Even by itself, this instrument would provide an important and unique view of Earth's atmosphere, since the accurate portrayal of clouds is one of the glaring weaknesses with current simulations of climate change.

But this cloud data is even more valuable when combined with measurements from the other satellites in the A-Train: for example, air temperature, trace gases, and radiation into and out of the atmosphere. Scientists can then see connections between, say, temperature and the resulting behavior of clouds. A better understanding of these connections is one of the most sought-after goals of climate research, because changes to global cloud cover would, in turn, have a feedback effect on global temperatures.

The real story of this satellite squadron may not make the tabloid headlines, but at least there's evidence that the imminent threat of climate change is real, which is a lot more than you can say for alien invaders!

Learn more about CloudSat and the A-Train at cloudsat.atmos.colostate.edu. Kids (and grownups) can do interactive cloud picture scrambles and learn "Cloudspeak" (the names of different kinds of clouds) at The Space Place, spaceplace.nasa.gov/cloudsat_puz.htm.

The preceding article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

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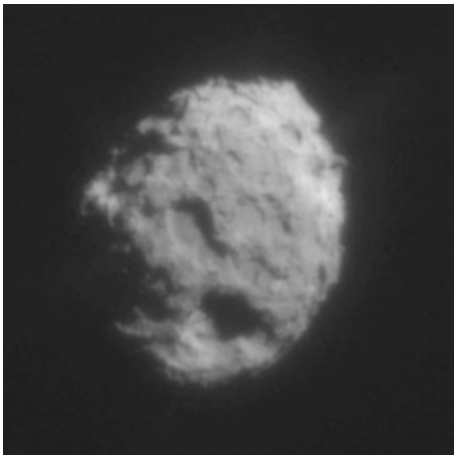
Mission Update: Spacecraft *Stardust*

By Jim Anderson

Last month we noted that the U. S. spacecraft *Stardust* would pass through the tail of the comet Wild 2 on January 2, 2004. As described in the NASA *SpacePlace* article published in the December 2003 newsletter, *Stardust* would snap pictures, collect other data, and (hopefully) collect comet dust in a special collector and return that collector package to Earth in 2006 for analysis. You may have missed the great news about *Stardust* due to the intense media hoopla over the Mars landing on January 3 by *Spirit*. The mission of *Stardust* is deemed a big success, with the craft suffering no damage while passing through the comet's tail, and it seems the sample collection was also a success! Here's an image of the nucleus of Comet Wild 2, snapped when *Stardust* was a mere 150 miles away (I snitched the image from the JPL Website). The resolution and detail is fantastic! Kudos to NASA and JPL for a great job!



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Upcoming Meeting Topics

Program Chair (and Vice President) Steve Limeburner has provided advance information for the March, April, and May meeting topics. **For the April meeting, see the notice on page 3 about the change in date** so we can attend the planetarium show at West Chester University.

In March, CCAS member Lisa A. Compton will talk about Space Academy and her experiences there. Lisa recently wrote to us: "Don't miss the fun-filled and interesting presentation on U.S. Space Camp coming in March. This fascinating presentation will include an overview of my one-week tour of duty at the U.S. Space and Rocket Center's Advanced Space Academy astronaut training program. There will be plenty of photographs and interesting facts along with an in-depth discussion on space shuttle operations and orbiter flightcontrol. During my final 8-hour Extended Duration Mission (EDM) simulation, I commanded a space shuttle mission that included launch, International Space Station (ISS) docking, and return to Earth.

"Also included will be rare photographs of ISS sections taken at the ISS ground staging area at Marshall Space-Flight Center in Huntsville, Alabama."

In May, James Morgan, from the Mid-East Region of the Astronomical League (MERAL), will talk with us about the Astronomical League Observing programs.

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CCAS in Special Light Pollution Program

By Vic Carlucci

The CCAS has joined forces with several other area astronomy societies to organize and conduct a regional program to help educate the public about light pollution. Entitled "Bring Back The Stars," the plan is to encourage people (and businesses and institutions) to turn OFF outdoor lights, as many as possible, for one night to see what a difference it makes. People will be encouraged to hold local star parties, perhaps right in their own darkened neighborhood, to see what they've been missing. The various astronomical societies will hold star parties around the area as well, to provide telescopic viewing for the public, answer questions, and provide more information about light pollution and how they can help reduce it right at their own homes. Efforts are under way to engage the media in promoting this event, and also to have Derrik Pitts do one of his radio programs that night.

The "Bring Back The Stars" gathering is scheduled for May 7th, rain date May 8th. Steve and I are looking for volunteers to help represent CCAS at the event. The responsibilities are to attend two Pennsylvania Outdoor Lighting Council (POLC) meetings held in Limerick to discuss the event and to help at the event itself. All our members are invited to bring their telescopes and help with handouts. Thanks for helping to make this event successful. We will keep you informed as the event nears.

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Astronomical League Observing Awards: 3

By Jim Anderson

Continuing the series of articles to describe the twenty-two observing programs offered by the Astronomical League that you can work on, this month we'll cover some binocular observing programs.

In the December 2003 *Observations* I gave a brief overview of how the programs work, and continued in January 2004 with descriptions of the Universe Sampler Club. If you missed these articles and would like a copy of either of those issues, let me know and I'll send you a copy (Jim Anderson at 610-857-4751 or e-mail at newsletter@ccas.us). You can also get fuller details of the programs from the Astronomical League's Website http://www.astroleague.org, or by buying a copy of the booklet for the observing program from the AL's store. Details on the store and prices are in *The Reflector*, the AL's quarterly publication which all CCAS members receive as part of their CCAS membership.

The Binocular Messier Club

Deep Sky Binocular Club

Southern Skies Binocular Club

The basic intent of these three programs is to show you how much astronomical viewing you can do with common binoculars. Many people have a pair of these "paired (or stereo) telescopes" but never thought of turning them to the stars. These programs encourage you to do just that.

The Binocular Messier program requires you to find 50 of the total 110 Messier objects using only binoculars. You need to keep a logbook listing the name of the object observed, the date and time of the observation, an estimate of the seeing and transparency, the size and power of the binoculars used, and perhaps a brief comment on what you saw. That's it, no need to sketch what you saw. A spiralbound notebook would work just fine for a logbook.

On the Astronomical League Website (www.astroleague.org) the page for the Binocular Messier Club has several links to some very useful information. Appendix A lists the objects visible in smaller binoculars (20MM to 50MM in diameter) and categorizes them as Easy, Tough, or Challenge. Note that the small binocular Easy list contains 42 Messier objects, so you only need eight more from the Tough list to qualify! Appendix B is for larger binoculars (56MM to 80MM in diameter); all 50 objects needed to qualify can be picked from this group's Easy list. Appendix C is for reference, and lists all 110 Messier objects, and the constellation they're in. Furthermore, this Appendix groups the objects by the season of the year when the objects are best observed! Appendix C can be useful even if you're not working on the Binocular Messier program; but then, why aren't you? The web page points out that as part of testing the program the originators observed all 76 objects on the small binocular list (Easy, Tough, **and** Challenge) using a pair of 7x35 Tasco binoculars purchased at Wal-Mart for $19.00! If you don't have web access but would like copies of the pages describing this program let me know; I'll print a copy for you free of charge.

The Deep Sky Binocular program continues the idea of the Binocular Messier program to introduce you to sixty more beautiful objects that were not discovered by Messier (and hence are not on the Messier list). You are required to keep a logbook with the same information required for the Binocular Messier program. The WebPages for the Deep Sky Binocular

club has the list of the sixty required objects. Again, if you need help ask me and I'll print you a copy of the web pages for free.

The Southern Skies Binocular program again continues the idea of the previous programs, but concentrates on objects visible from "southern skies." Mainly this means "from the Southern Hemisphere," but a large number of these objects can also be seen from southern parts of the United States (Florida, southern Texas, and Hawaii). So if you sometimes vacation in those locales, or think you might soon, check out this program as well and pack your binoculars and star charts on that trip!

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Comet Alert

As noted last month, there is a comet in our evening sky, moving through the constellations of Pisces and Pegasus during the months of January through April: Comet C/2002 T7 (LINEAR). It was discovered by an automated sky search program called LINEAR that is specifically looking for dangerous Earth-orbit-crossing asteroids. That's why it's not named after a specific person or persons, like Comet Hale-Bopp.

In February this comet is forecast to be around magnitudes 8.0-7.0, getting brighter as the month progresses but remaining a binocular or telescopic object. Comet brightness "forecasts" like these are always very "iffy"; however, this is a comet that most of us should be able to find with telescopes and binoculars, even if it never gets bright enough to spot without optical aid. It should be much easier to find this month, as it spends February moving past γ Pegasi, the southeastern corner star of the "Great Square of Pegasus." Also, the planet Venus will be moving eastward through Pisces, just to the south of the comet's location. This should make it easier to find the comet. Just find Venus in the evening sky (look toward the west, where the Sun set, and it's the brightest "star" you'll see), locate the "Great Square of Pegasus" to the right (north) of Venus, and search the area around the star at the southeastern corner of the "Square" (that will be the "uppermost" corner on the side of the "Square" closest to Venus). See the finder chart on page 14, which includes a track of the position of Venus through February. If you use the finder chart outside when looking for the comet, hold the western side of the chart (see the little compass on the chart) down toward the ground as you hold it in front of you. Then it will be aligned to match the stars in the sky in front of you. Once you've found Venus and are facing it, that is.

Don't forget, if you find this comet you can count it toward the Universe Sampler Observing Program, or the Comet Observers Program. If you image it, you can send me a copy to include in *Observations*.

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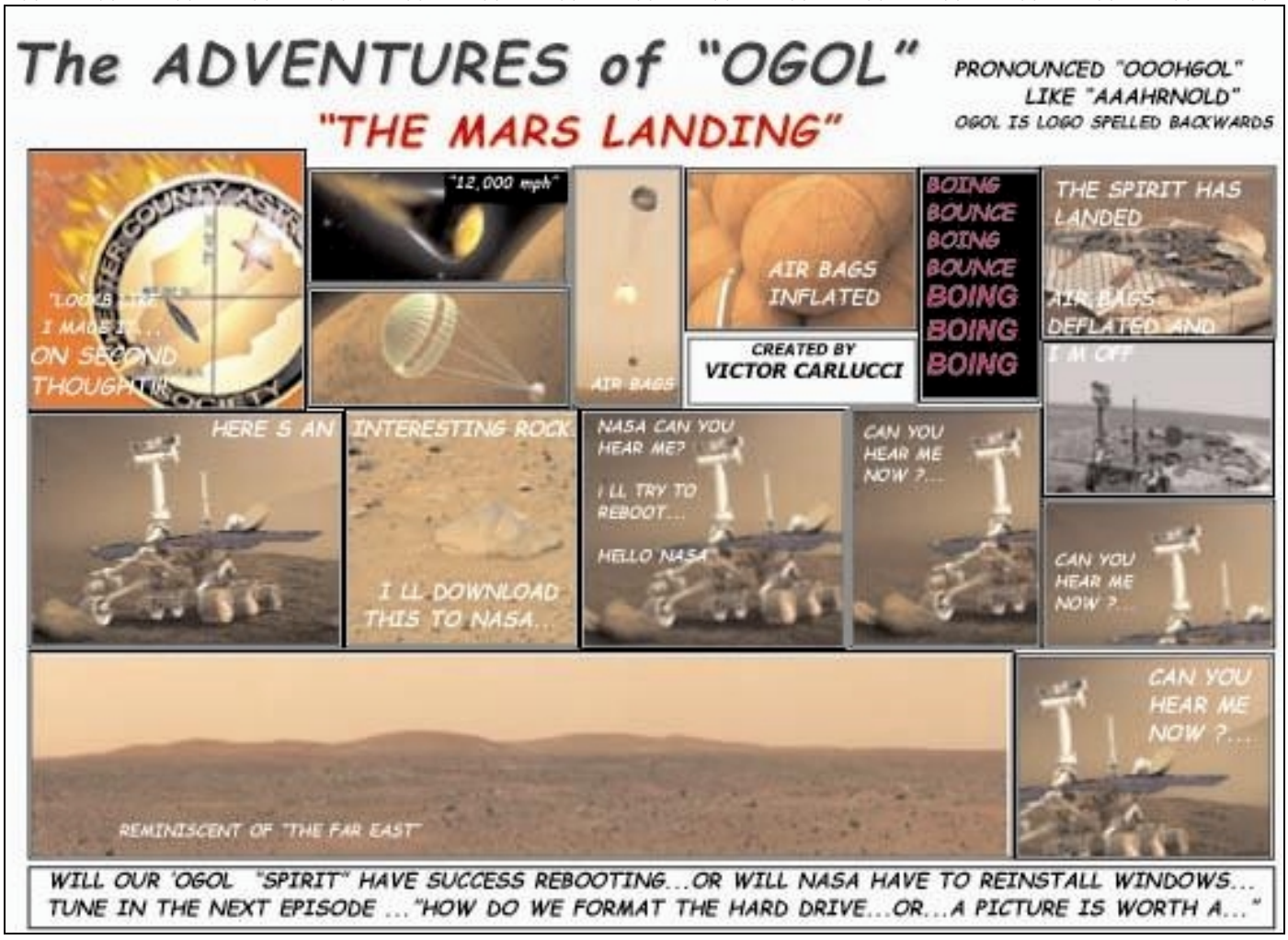


Astronomus

"The Sky Gear"

By Bob Popovich

Depending on your age, the word *machine* probably brings to mind one of two images—either a sleek, silent conglomeration of microchips and circuit boards or a well oiled, humming assemblage of pistons, arms and gears. I confess that my image more resembles the latter. And, I suspect, the same would be true for most of the great astronomers of history. (Not that I'm one of them, mind you, I'm just *retro*.)

A machine's whirring maze of non-plastic parts has a beauty all its own. And unlike the micro machines of today, it's also fun to watch. The rhythm draws you in. The steadiness is comforting. After a while, it's almost as if the machine has become an animated being.

As the stargazers of old stared at the *celestial machine*, they may have seen its components as if they were parts of a machine. Like any machine, they must have reasoned, the heavens can be understood—component by component—if one but *disassembles* it, studies it carefully over an extended period of time and records their observations in a careful and accurate manner. And the one gear that drew the most attention was that big, shiny brass gear that seemed central to so many of the celestial machines movements—the ecliptic.

Even today we have much to learn by dismantling the celestial machine and examining the ecliptic. So if you're willing, let's begin. First of all, the ecliptic is an imaginary line that traces out the apparent path of the sun against the background stars. And, with nearly machine-like precision, it also traces out the general path of all the planets (except the planet wanna-be, Pluto) as well as our moon. Surely this is a very special part of our celestial machine! For those of you accustomed to a conventional depiction: (From left to right along the ecliptic are the moon, Jupiter, the Earth's umbra and Saturn.)

Illustration 1

For those of you who want to be a bit unconventional, read on…

Owing to the tilt of our axis, the ecliptic drifts high in the daytime summer sky (and relatively low at night) and sinks low in the daytime winter sky (and relatively high at night). Thus we have the sun's apparent motion in our sky—high in the summer and low in the winter while its nighttime complement, the moon, is low in the summer and high in the winter.

Illustration 2 includes a white circle with hash marks—that's the ecliptic, along with the planets and the moon. At noon on January 14 the sun's altitude above the horizon is only about 28°. And the moon, as you can see, is below the horizon. Now fast forward to just before sunrise the next morning and you can see (Illustration 3) that the last quarter, at its meridian, has an altitude of about 42°—a full 50% higher in the sky the sun.

If we move to the summer sky on, say, June 14, the sun would be at an altitude of 75° while the moon barely works up the energy to get to 33°.

Now the backdrop to the sun's motion features the same 12 constellations (13 actually, but that'll be for another time). And while we steadfastly deny it, all of us know our zodiac sign. I'm an Aquarius and my birthday is in January. Aquarius is, however, a summer constellation. So the notion of a person's "sign" tells us the apparent position of the sun at our birth (the sun is "in" Aquarius), not which constellation was in the night sky. Foolish superstition though it is, the exhaustive study of the zodiacal constellations and the motion of the planets through them contributed greatly to the science of astronomy. In fact, many of the great astronomers of history were very well versed in astrology. They, too, were impressed by the special nature of the ecliptic.

Illustration 2

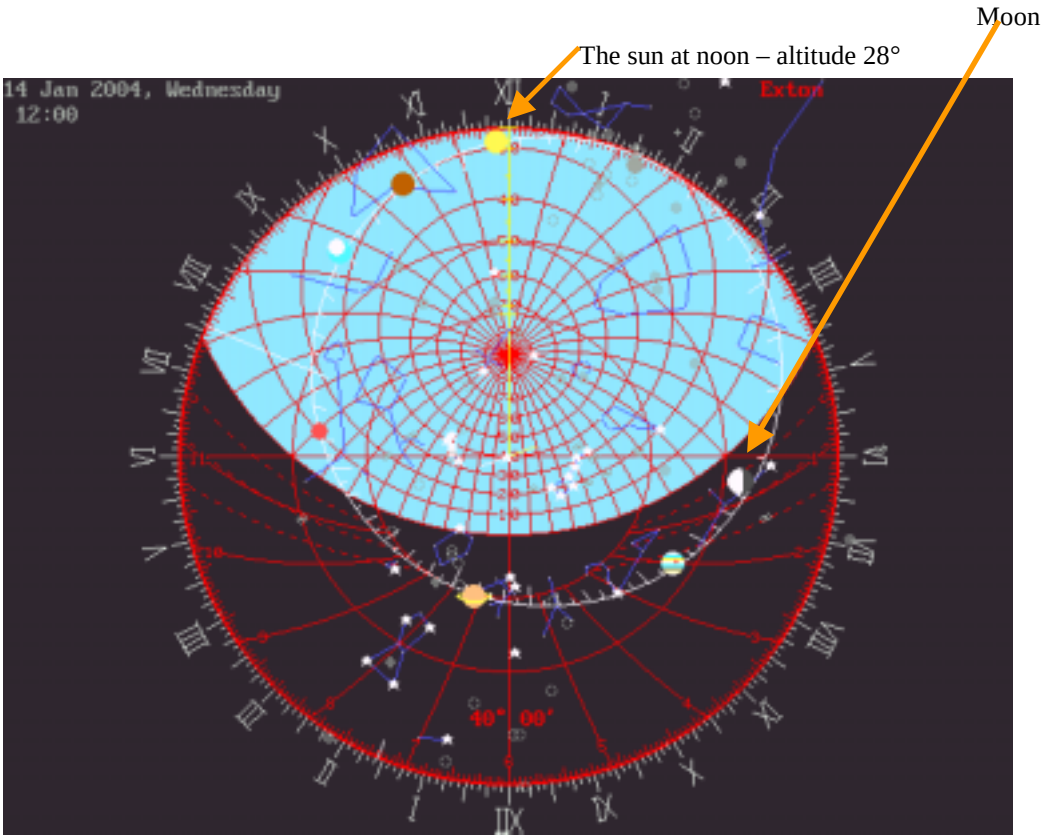
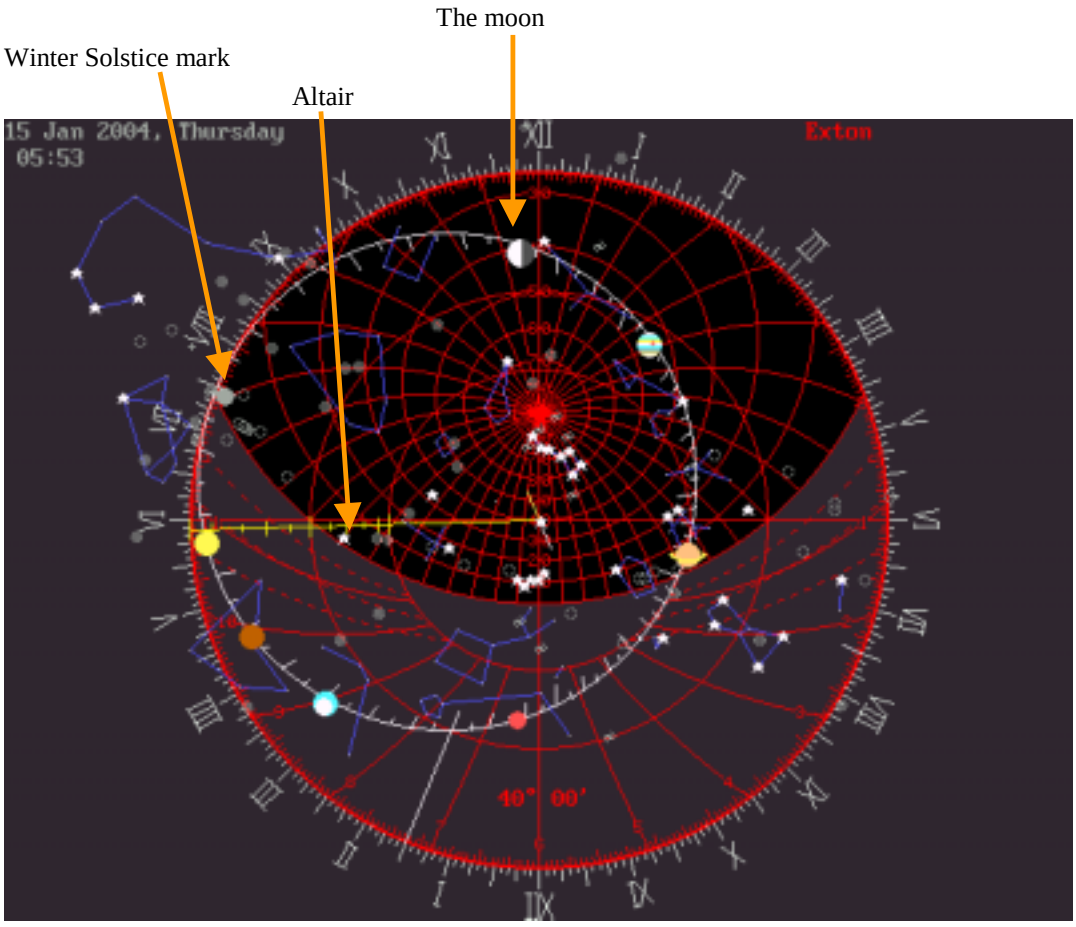


Illustration 3



Watching the sky gear turn season after season, year after year, astronomers could compare other collected data against this motion as they strove to understand the intricacies of the celestial machine. Looking again at Illustration 3, we can see something else that the astronomers of old deduced by studying the ecliptic—the point on the ecliptic marking the location of the sun at the winter solstice helped them determine the celestial "latitude" of any rising star. In other words, our sky gear tells us a star's right ascension. By reading the outer "hour" scale of the astrolabe, we estimate Altair's right ascension to be 19 hours, 45 minutes. The exact measurement turns out to be 19 hours 50 minutes 59 seconds. Not bad! (Regrettably, the "hour" scale may be difficult to read in this illustration.)

Do you notice that the ecliptic in Illustrations 2 and 3 is off-center with respect to the astrolabe face? That's how they accounted for the afore-mentioned fact that the ecliptic turns high in the daytime summer sky and dips low in the daytime winter sky.

But turn it does. Slowly, predictably, wonderfully. Devote some time to pondering the movement of the sky gear and appreciate all those great men and women who came before us and loved to do the same thing.

Next Time: Stellar Lucky Charms

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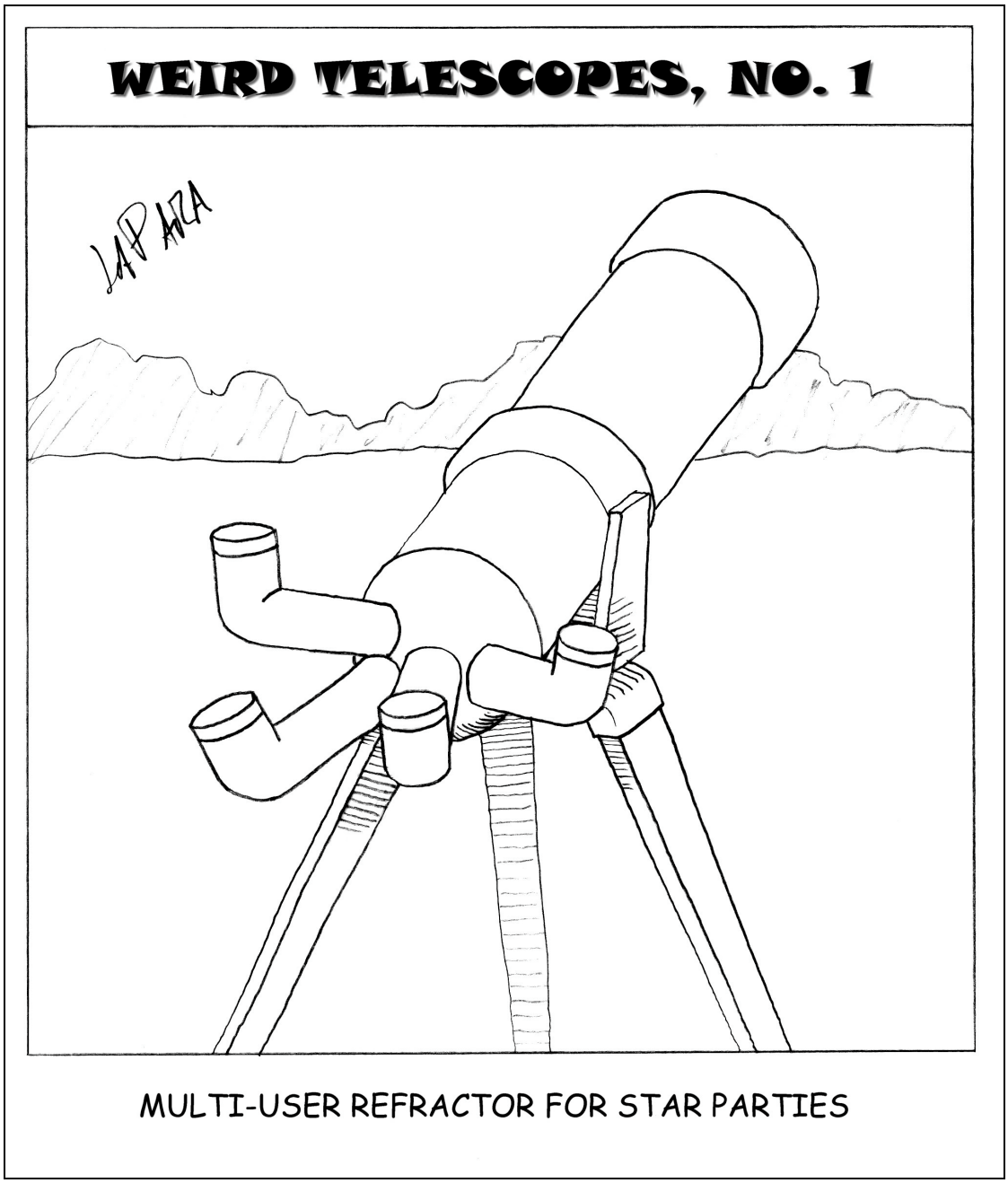

Cartoon by Nicholas La Para

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CCAS Information Directory

CCAS Lending Telescopes

Contact Kathy Buczynski to make arrangements to borrow one of the Society's lending telescopes. CCAS members can borrow a lending telescope for a month at a time; longer if no one else wants to borrow it after you. Kathy's phone number is 610-436-0821.

CCAS Lending Library

Contact our Librarian, Bill O'Hara, to make arrangements to borrow one of the books in the CCAS lending library. Copies of the catalog are available at CCAS meetings. Bill's phone number is 610-696-1422.

Contributing to *Observations*

Contributions of articles relating to astronomy and space exploration are always welcome. If you have a computer, and an Internet connection, you can attach the file to an e-mail message and send it to **newsletter@ccas.us**

Or mail the contribution, typed or handwritten, to:

Jim Anderson
1249 West Kings Highway
Coatesville, PA 19320-1133

Get CCAS Newsletters via E-mail

You can receive the monthly newsletter by e-mail. All you need is a PC or Mac with an Internet e-mail connection. To get more information about how this works, send an e-mail request to Jim Anderson, the newsletter editor, at:

newsletter@ccas.us

CCAS A.L. Award Coordinators

These are the members to contact when you have completed your observing log for the Messier, Binocular Messier, Lunar, or Double Star Awards:

Messier (both): Frank Angelini
(610-873-7929)

Lunar: Ed Lurcott
(610-436-0387)

Double Star: Jim Anderson
(610-857-4751)

CCAS Purpose

The Chester County Astronomical Society was formed in September 1993, with the cooperation of West Chester University, as a non-profit organization dedicated to the education and enjoyment of astronomy for the general public. The Society holds meetings (with speakers) and observing sessions once a month. Anyone who is interested in astronomy or would like to learn about astronomy is welcome to attend meetings and become a member of the Society. The Society also provides telescopes and expertise for "star nights" for school, scout, and other civic groups.

CCAS Executive Committee

For further information on membership or society activities you may call:

President: Mike Turco
(610) 399-3423

Vice Pres: Steve Limeburner
(610) 353-3986

Treasurer: Bob Popovich
(610) 363-8242

Secretary: Caitlin Grey
(610) 918-9049

ALCor and Newsletter: Jim Anderson
(610) 857-4751

Librarian: William O'Hara
(610) 696-1422

Observing: Ed Lurcott
(610) 436-0387

Education: Kathy Buczynski
(610) 436-0821

Public Relations: Vic Carlucci
(610) 458-7457

CCAS Membership Information

The present membership rates are as follows:

REGULAR MEMBER.....$25/year
SENIOR MEMBER.....$10/year
STUDENT MEMBER...….....$ 5/year
JUNIOR MEMBER.....$ 5/year
FAMILY MEMBER.....$35/year

Membership Renewals

Check the date printed on the address label of this issue of *Observations*; "exp." appears in front of it, just after your name. If you are due to renew, you may send your renewal check made out to "Chester County Astronomical Society". Mail to:

Bob Popovich
416 Fairfax Drive
Exton, PA 19341-1814

Sky & Telescope Magazine Group Rates

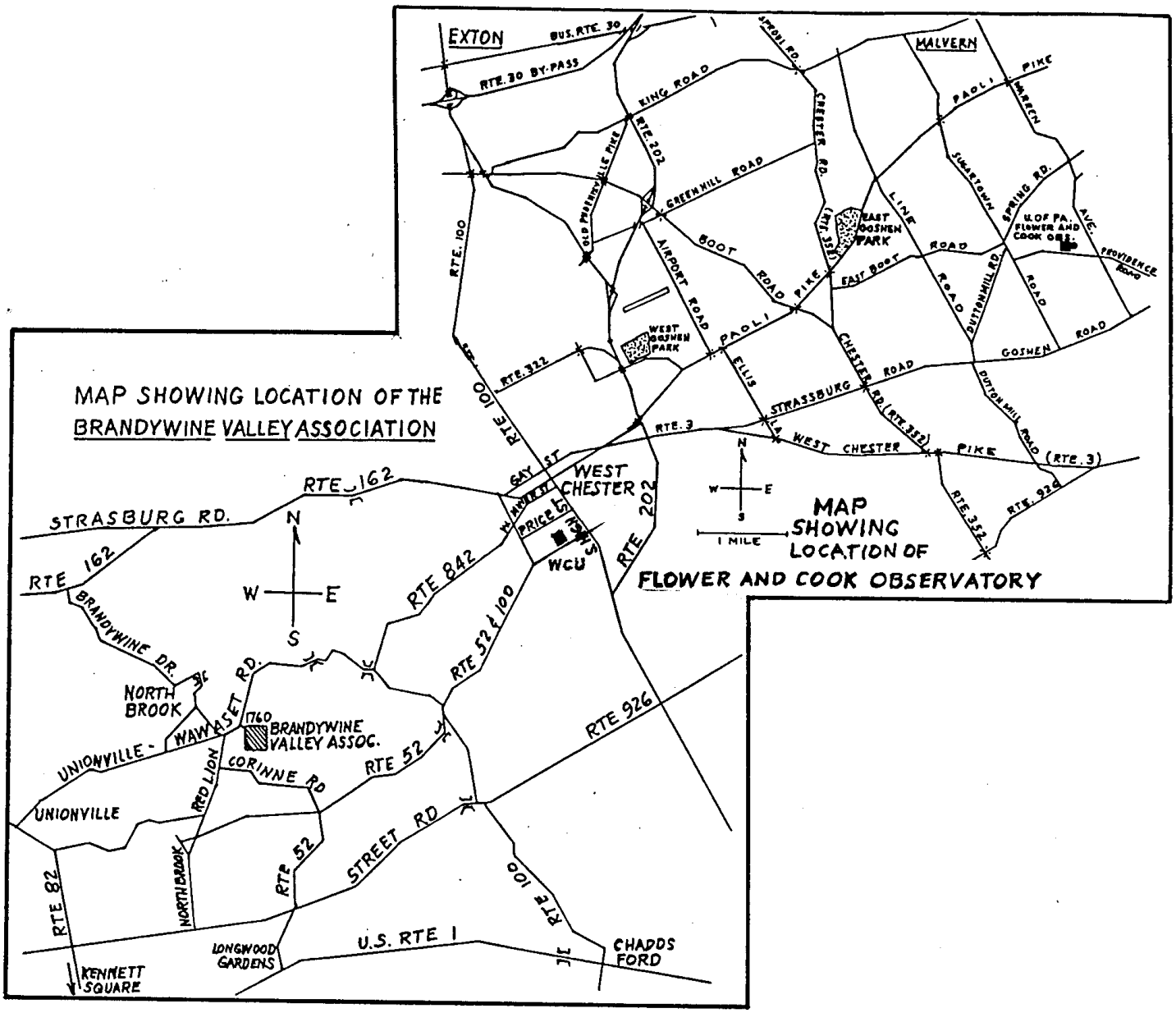
Subscriptions to this excellent periodical are available through the CCAS at a reduced price of **$32.95** which is much less than the newsstand price of $66.00, and also cheaper than individual subscriptions ($42.95)! Make **sure** you make out the check to the **Chester County Astronomical Society** (do **not** make the check out to Sky Publishing, this messes things all up big time), note that it's for *Sky & Telescope*, and mail to Bob Popovich. Or you can bring it to the next Society meeting and give it to Bob there. **If you have any questions by all means call Bob first (610-363-8242).** Buying a subscription this way also gets you a 10% discount on other Sky Publishing merchandise.

CCAS Website

Pete LaFrance is the Society's Webmaster. You can check our Website at:

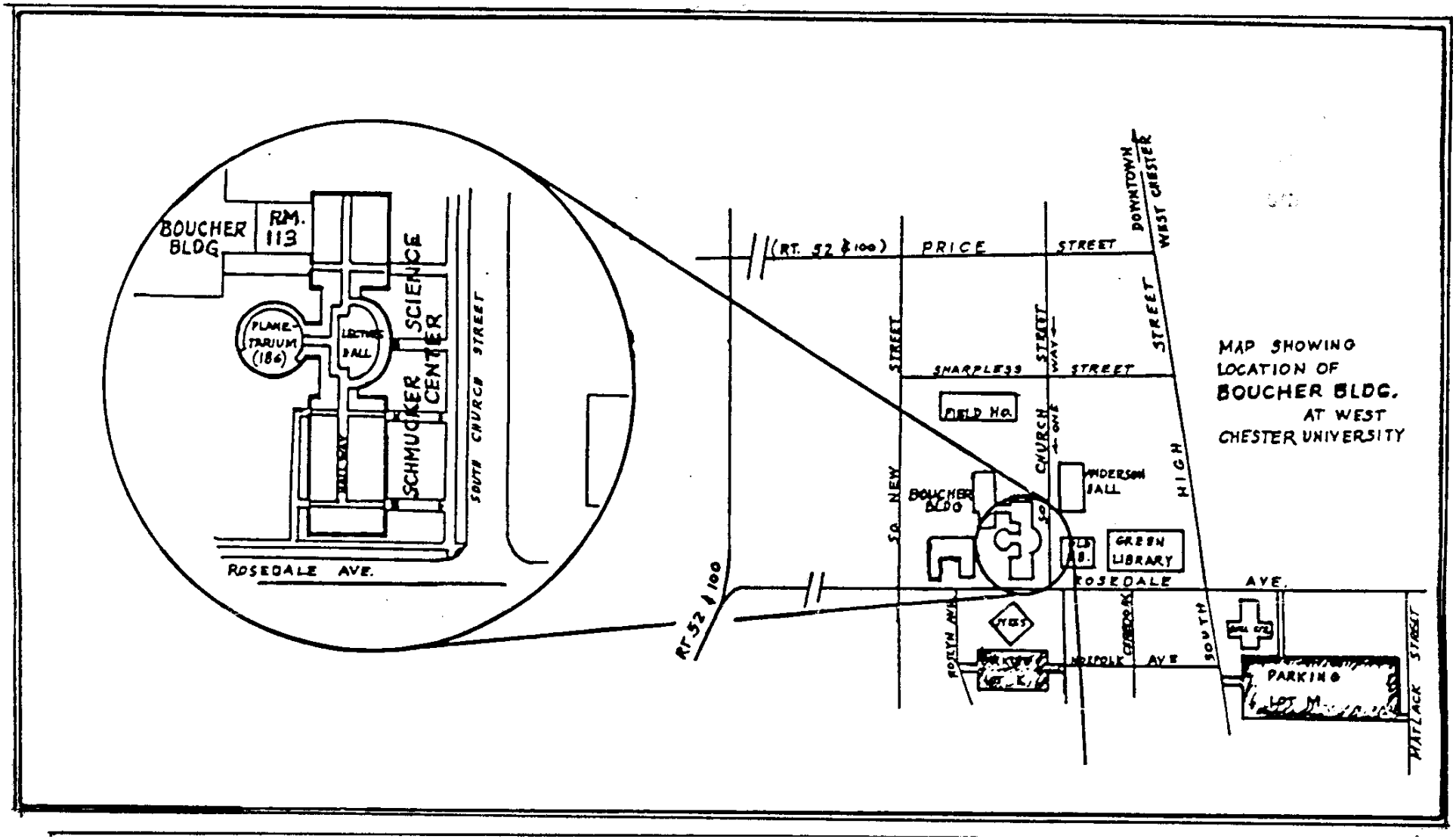
http://www.ccas.us/

Pete welcomes any additions to the site by Society members. The contributions can be of any astronomy subject or object, or can be related to space exploration. The only requirement is that it is your own work; no copying copyrighted material! Give your contributions to Pete LaFrance (610-268-2616) or e-mail to **lafrance@kennett.net**

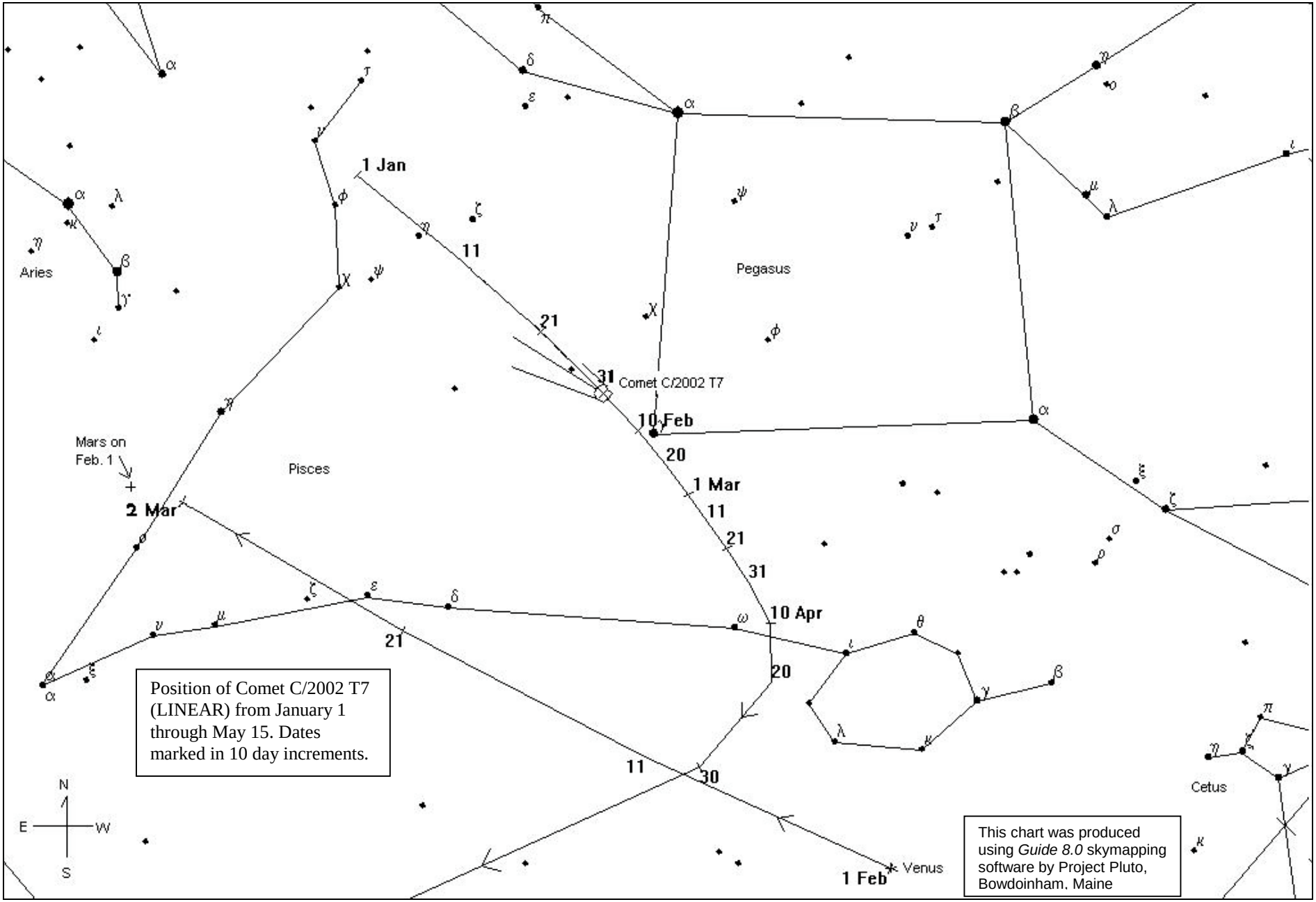


To get to the Myrick Conservation Center of the Brandywine Valley Association from West Chester, go south on High Street in West Chester past the Courthouse. At the next traffic light, turn right on Miner Street, which is also PA Rt. 842. Follow Rt. 842 for about 6 miles.

To get to the observing site at the BVA property, turn off Route 842 into the parking lot by the office: look for the signs to the office along Route 842. From that parking lot, go up the farm lane to the left; it's about 800 feet or so to the top of the hill. If you arrive after dark, please turn off your headlights and just use parking lights as you come up the hill (so you don't ruin other observers' night vision).



Parking is available behind Sykes Student Center on the south side of Rosedale Avenue (Parking Lot K), and behind the Bull Center at the corner of Rosedale Avenue and South High Street (Parking Lot M). If you arrive early enough, you may be able to get an on-street parking space along South Church Street, or along Rosedale Avenue. You can take the Matlack Street exit from Rt. 202 South; Matlack Street is shown on the map at the lower right corner with Rt. 202 off the map. If approaching West Chester from the south, using Rt. 202 North, you would continue straight on South High Street where Rt. 202 branches off to the right. This would bring you onto the map on South High Street near Parking Lot M, also in the lower right corner.


1 Jan
11
21
31
Comet C/2002 T7
10 Feb
20
1 Mar
11
21
31
10 Apr
20
30
1 Feb
Venus
Mars on
Feb. 1
2 Mar
21
Aries
Pisces
Pegasus
Cetus
Position of Comet C/2002 T7 (LINEAR) from January 1 through May 15. Dates marked in 10 day increments.
N
E
W
S
This chart was produced using *Guide 8.0* skymapping software by Project Pluto, Bowdoinham, Maine