Observations

A Monthly Publication Of The
CHESTER COUNTY ASTRONOMICAL SOCIETY

MAY 2004
(VOLUME 12, NO. 5)
Visit us online at www.ccas.us

Join Your Neighbors on Friday May 7th at 7:00 p.m. EDT

Turn Off Your Outside Lights

We cordially invite all our neighbors in Chester, Montgomery, Delaware and Berks Counties to turn off your outside lights and come to a STAR PARTY at Warwick County Park.

See what you've been missing!

Hear Talks on:
- **How To Save Money *and* Be Safe With Efficient Outdoor Lighting**
- **Looking Through the Eyes of Hubble**

Observe the Heavens through the Clubs' Telescopes

More Details on Page 6

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MAY 2004
(VOLUME 12, NO. 5)
Editor: James J. Anderson
newsletter@ccas.us

In This Issue

Join the Fight for Dark Skies!

You can help fight light pollution, conserve energy, and save the night sky for everyone to use and enjoy. Join the nonprofit International Dark-Sky Association (IDA) today. Individual memberships start at $30.00 for one year. Send to:

International Dark-Sky Association
3225 N. First Avenue
Tucson, AZ 85719-2103

Or visit their Website at www.darksky.org

Dark-Sky Website for Pennsylvania

The Pennsylvania Outdoor Lighting Council has lots of good information on safe, efficient outdoor security lights at their Website:
http://home.epix.net/~ghonis/index.htm

Important May 2004 Dates

1-7 Two comets visible with binoculars in the morning sky! See page 4 for more details.

4 Full Moon.

CCAS Introductory Astronomy class at the Flower and Cook Observatory in Malvern. Class begins at 7:00 p.m. EDT.

Tonight's session: "The Moon"

5 Eta Aquarid meteor shower peaks in the early morning hours. The nearly Full Moon will likely "wash out" many fainter meteors.

7/8 *Save The Stars* star party at Warwick County Park. Program starts at 7:00 p.m. EDT. Turn off all your outdoor lights tonight.

11 Last Quarter Moon.

CCAS Monthly Meeting in Room 113 at 7:30 p.m. EDT in the Boucher Building at West Chester University, on South Church Street in West Chester (see map on page 12).

Topic: "The Observing Programs of the Astronomical League"

14 Mercury at greatest western elongation from Sun (best morning this month to look for Mercury before sunrise).

15 Grand Opening of new astronomy store *Skies Unlimited* in Glenmoore (see page 6).

18 CCAS Introductory Astronomy class at the Flower and Cook Observatory in Malvern. Class begins at 7:00 p.m. EDT.

Tonight's session: "Telescopes, Binoculars, and Mounts"

19 New Moon

21/22 CCAS Observing session at Myrick Conservation Center (BVA) starts at sunset.

25-30 Two comets visible in the evening sky with binoculars! For more details see page 4, and finder charts on pages 13 and 14.

27 First Quarter Moon

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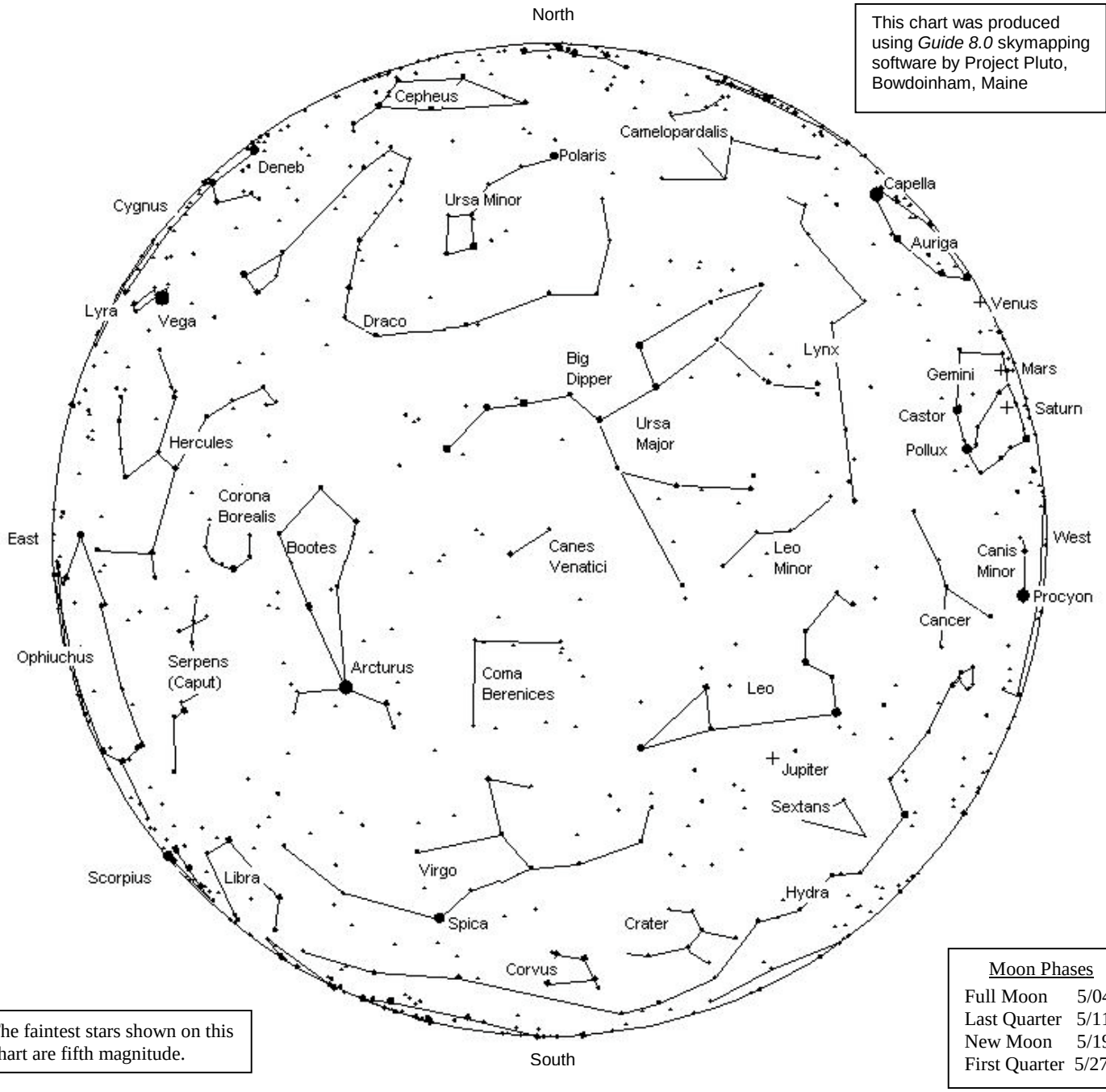

The sky over Chester County

May 15, 2004 at 9:00 p.m. EDT

The Planets

Mercury is in the morning sky around mid-May, low in the east just before sunrise.

Venus is in the evening sky, setting as much as 3 hours after the Sun as May begins. You can't miss it, it's the brightest "star" in the sky after dark until about 8:00 p.m. or so when it sets. As the month goes on, Venus gets lower each night as it moves toward the Sun. By May 31 it is visible only about one hour after sunset.

Mars is in the evening sky, moving closer to Saturn. It's a small dot in telescopes.

Jupiter is now high in the south at dusk, in Leo. You can get good telescopic views of Jupiter as soon as it's dark.

Saturn is in Gemini. 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 morning sky and visible telescopically.

Neptune is also in the morning sky and visible telescopically.

Pluto is in the morning sky, and is now high enough for telescopic viewing before sunrise. You'll need good charts and patience to find Pluto.

Comets!

by Jim Anderson

It will be possible to view as many as **three** comets in the month of May! In the first week of May, if you get up about an hour and a half before sunrise, you can find two comets in the eastern sky with binoculars. On May 1st, the Sun rises at about 6:00 a.m. EDT, so you would have to get up at about 4:30 a.m. Comet Bradfield is low in the northeast, near Andromeda. It may still be showing a long thin tail. Comet C/2002 T7 (LINEAR) will be low in the east-southeast sky, to the south (or right) of Comet Bradfield, south of the Great Square of Pegasus. This comet is reportedly not showing a tail, so it will look like a fuzzy star. I don't have finder charts for these two comets for this week, but they shouldn't be hard to find with binoculars. After about May 7th, you won't be able to see either one.

At about that time, May 7, Comet C/2001 Q4 (NEAT) will be appearing in our evening sky, climbing up out of the Sun's glare. Look toward the west to find it with binoculars, although brightness forecasts say it may be visible with the naked eye. Using binoculars and telescopes, you should be able to see this comet for the rest of May. A finder chart for it is located on page 13.

Then in late May, around May 25th, Comet C/2002 T7 (LINEAR) re-appears in our evening sky, low in the west after sunset. A finder chart for this comet in the last week of May is located on page 14. It will not likely be as bright as Comet C/2001 Q4 (NEAT), but it should still be easy to find in binoculars. It's not often we have two comets this bright in our sky at the same time, and yet it happens **twice** this month: once in early May in the morning sky and again in late May in the evening sky. Don't miss it!

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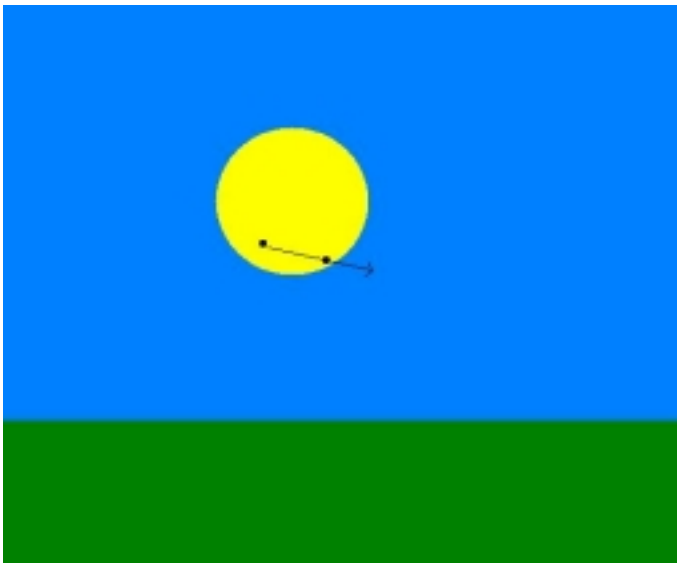
Transit of Venus: Tuesday June 8, 2004

by Jim Anderson

Venus transits the Sun (meaning that it passes between us and the Sun, and will be visible as a large black dot against the face of the Sun—using proper filters to protect your eyes, of course). This happens on the morning of June 8; for us the transit will be in progress when the Sun rises. Transits of Venus happen literally once in a lifetime; the last one was in 1882.

Well, that's not entirely true. Transits of Venus occur in pairs, eight years apart, with about 100+ years between the last transit of one pair and the first transit of the next pair of transits. There will be another transit of Venus, visible from Chester County, in 2012. But I still think of this as a once-in-a-lifetime event. For one thing, either the 2004 or the 2012 transit could be clouded out for us (pray God that **both** will not be clouded out!). For another thing, well, none of us can be sure we'll still be alive in 2012. So if it's clear enough on June 8, make sure you don't miss this show! I've already scheduled a vacation day for myself on June 8 so I won't feel torn about "getting to work" that day. If the weather forecast on June 7 says that we'll be overcast on June 8, then I'll probably cancel the vacation day and go to work (and mope all day about the crummy weather hiding the transit from us).

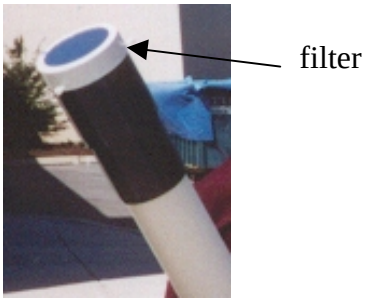
This crude diagram (by *Observations* staff artist Jim Anderson) gives a rough idea what the transit will look like. The size of the Sun and Venus are exaggerated for clarity.



Obviously, *Observations* is a low-budget operation...

The transit will have started before the Sun rises here in Chester County. On June 8, sunrise is at 5:30 a.m. EDT. You'll want to get set up before that time. Before June 8, find a good place with a low horizon to the northeast (where the Sun will be rising at that time of year). If there are trees, hills, neighbors' houses blocking your view to the northeast, simply remove them. Seriously, look for another observing site where that isn't a problem.

Also before June 8, make **sure** you have proper solar filters to protect your eyes! Looking at the Sun without proper filters **will** damage your eyes! The lens in your eye focuses sunlight on your retina just like the lens in magnifying glass focuses sunlight on paper, and you know what happens to the paper. Same thing happens to your retina: it is burned. There's no sensation of pain because there are no pain nerves in your retina. Sunglasses and heavily fogged camera film are not safe filters. One kind of safe filter is a specially coated Mylar film. This kind is often mounted in cardboard frames much like a pair of eyeglasses. These can be bought from astronomy equipment retailers, often for just a couple of dollars. Another kind is Number 14 welder's glass, sold by welding supply shops for replacing the eye filters in welder's hoods. Another type of safe solar filter for telescopes is a specially coated piece of optical glass, fitted in a cell that slips on over the end of the telescope. They look similar to this one:



The kind of "solar filter" that fits on the eyepiece of a telescope is **not** safe. These are often supplied as "standard equipment" with inexpensive telescopes. The problem with this type of filter is that the heat of the Sun's rays has already been focused and concentrated when it reaches the eyepiece and the filter. The resulting heat stress can easily cause the glass in the filter to shatter, with all that concentrated heat and light immediately hitting your eye. The type of filter that fits over the end of the telescope is safe because the heat is still spread out, not concentrated, when it hits the filter. The special coating also reflects part of the heat away from itself. As a result, the heat stress on it is far less than the stress on an eyepiece type filter. Don't take chances with your eyesight! We now have an astronomy equipment store opening in our area on May 15 (see story on page 6); you can go there before June 8 and get knowledgeable assistance in selecting safe solar filters for use in viewing the transit.

The **only** safe way to observe the Sun without solar filters is to project an image of the Sun through a telescope or a pair of binoculars onto a white screen, like a piece of cardboard. The tricky part of this approach is aiming the instrument at the Sun without looking at the Sun directly. It can be done, but it is tricky: you look at the shadow cast by the instrument to see when it is pointed at the Sun. When the shadow gets smaller/shorter, you're pointing the instrument more directly at the Sun. If you plan on using the image projection method, you might want to practice it a bit before June 8.

Other than seeing Venus as a black dot on the face of the Sun, what else can you look for? For telescopic viewers, the most interesting time is just before Venus reaches the edge of the Sun's disk. As the black dot approaches the "blackness" of space at the Sun's edge, there appears a "bridge" of darkness from Venus to the edge, giving Venus a teardrop-shaped appearance. This is called the "black drop effect." While it is basically an optical illusion that scientists understand, it is real in the sense that it is not caused by your eyes: this effect has been photographed during transits of Mercury (which occur more often). Venus will approach the edge of the Sun's disk for us at about 7:06 a.m. EDT; start looking for the black drop effect several minutes before that. Venus then moves completely off the Sun's disk about 20 minutes later, at 7:26. Some observers of past transits have reported seeing Venus after that, silhouetted against the brightest part of the inner corona of the Sun.

As always, you are encouraged to send reports of your transit-viewing experience to *Observations*, in writing with or without drawings or photos, to share with your fellow Society members.

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CCAS May Meeting

James Morgan, from the Mid-East Region of the Astronomical League (MERAL), will talk with us about the Astronomical League Observing programs. There are programs for all levels of astronomical interest; come out and find out which ones you might like to use. The meeting starts at 7:30 p.m. EDT on May 11 at West Chester University (see map on page 12).

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CCAS May Observing Session

The next CCAS Observing Session will be at the Brandywine Valley Association's Myrick Conservancy Center (see map on page 11) on Friday May 21, 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 May 22, 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 telescopes. CCAS Observing Sessions are always free of charge.

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CCAS Introductory Astronomy Class

The Education Committee of the CCAS is presently running a class intended to introduce people to basic astronomy. This series of eight classes is 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 and topics for the remaining classes:

May 4	The Moon
May 18	Telescopes, Binoculars and Mounts

The classes are 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. A map showing the location is on page 11.

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Treasurer's Report by Bob Popovich

March 2004 Financial Summary

Beginning Balance	$1,105
Deposits	328
Disbursements	57
Ending Balance	$1,376

Membership Renewals Due

05/2004:	Brownback
	Grillo
	Hain
	Jackson
	Pioch
	Turco
06/2004:	Taylor
07/2004:	O'Hara
	Quirk

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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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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 "Save 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 involved astronomical societies will hold a star party at Warwick County Park, 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. The "Save The Stars" gathering is scheduled for May 7th, rain date May 8th. All our members are invited to bring their telescopes and help with handouts. Thanks for helping to make this event successful.

This is a really important endeavor. After all, how can you teach your children and grandchildren to "reach for the stars" if they've never seen the stars??

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Librarian Needed

Our current Librarian, Bill O'Hara, needs to retire from this position. We therefore need someone who can serve as the Society Librarian. This person would keep track of the 60 or so books we have in the Society's collection. This person would need to store these books at their home, as we don't have a location where the Society can store anything. On the other hand, this means the person serving as Librarian (and their family) has ready access to all those fine books on astronomy and space exploration! That household could well consider itself lucky to have such a library right at hand! Please consider helping out the Society and letting Bill retire by serving as Librarian. If interested please contact our President Mike Turco at 610-399-3423. Thanks!

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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
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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New Astronomy Store in Glenmoore!

There is an astronomy equipment store called ***Skies Unlimited*** opening in our area. The Grand Opening is scheduled for Saturday May 15, 2004, from 10:00 a.m. until 6:00 p.m. EDT. TeleVue will be sending a representative and some additional door prizes, which include an 11mm Nagler T6 eyepiece, plus Bandmate Nebular filters in 1.25" and 2" formats. The store's phone number, (610) 321-9881, and Website URL, www.skiesunlimited.net, will not be active before May 15.

Directions: Go four miles north of the Downingtown exit of the PA Turnpike on PA-100; turn left onto PA-401, then immediately turn left again into Ludwig's Village. The new store is next to Ludwig's Village Market.

CCAS member Ed Dunlop was at the NorthEast Astronomy Forum (NEAF) where he saw a display booth for *Skies Unlimited*. Ed reports that their table was loaded with gear, including stuff from Celestron, TeleVue, Vixen, etc. He bought a Rigel Starlite red LED flashlight at 25% less than the price at the *Sky & Telescope* table at NEAF.

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Report on Star Gaze X Star Party

By Steve Limeburner

On the weekend of April 15-18, I traveled to Queen Anne County, Maryland, for the Stargaze X Star Party held annually by the DelMarva Stargazers. The event was held at Tuckahoe State Park, which is about 100 miles from my home. There were about 60 people in attendance, with the usual variety of astronomical gadgetry one can expect at any large star party. Although there is some light pollution from Baltimore and surrounding towns, overhead and to the south the sky was very dark.

Although it is said that the state bird of Maryland is the mosquito, there were none to speak of in the three days I was there. The weather was excellent, with daytime highs in the 70s. Because of the unobstructed site, a comfortable breeze lasted throughout the weekend. This was also helpful at night, because it prevented dew from forming on optics. Nighttime temps plunged to the 30s on Thursday and Friday nights due to the clear, transparent sky. It was a big difference from my visit here in October, when I was attacked by mosquitoes and had to keep a tarp over most of my equipment to keep it from being soaked by dew!

Saturday night was the most comfortable. Although it was not as clear as the previous nights, I managed to get some of my best views of the weekend, looking through Kent Blackwell's 25" dob on an equatorial platform. Kent is from North Carolina, and says he plans on attending the upcoming Mason Dixon Star Party in York, PA , the weekend of May 20-24 (see www.masondixonstarparty.org).

Kent pointed his huge dob at the Sombrero Galaxy M104, and for the first time I saw the equatorial dust lane that gives the galaxy its name. I asked Kent if it would be easier to see the same feature in the beautiful edge-on galaxy NGC 4565, and he gladly pointed the scope at it so we could take a look. By this time, a line of people was forming behind the ladder to the eyepiece, which in this case was probably 12 feet off the ground! The view of NGC 4565 reminded me of the photographs of it in astronomy books. The dust lane was clearly visible, and the galaxy stretched across the entire field of view! After everyone got a look, I suggested to Kent that he point the scope at the Black-Eye Galaxy, M64. Once again, everyone was treated to a fantastic view of a beautiful galaxy. Kent decided to go for the center of the Virgo Cluster next, the M84/M86 region. Here I easily spotted seven bright galaxies in the same field of view, the most I have ever seen in one

field! Moving the scope manually, I was able to see about 8 more galaxies which comprise the group known as “Markarian’s Chain.”

Looking through another scope, an 18" dob, I was treated to a fantastic view of the Whirlpool Galaxy, M51, with its magnificent spiral arms easily visible. It was by far the best telescopic view of this object that I have ever seen. During the daytime, an owner of a 6-inch Astro-Physics refractor showed me Jupiter. I was astounded that the moons of Jupiter are visible in the DAYTIME! It was easy to see Io and Europa, and also a shadow transit on the planet, all before the sun had set! The sun itself showed some prominences through a solar telescope.... In conclusion, it was a great weekend getaway which I will not soon forget.

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NASA's Space Place

Voyage to a Double Planet

By Patrick L. Barry and Dr. Tony Phillips

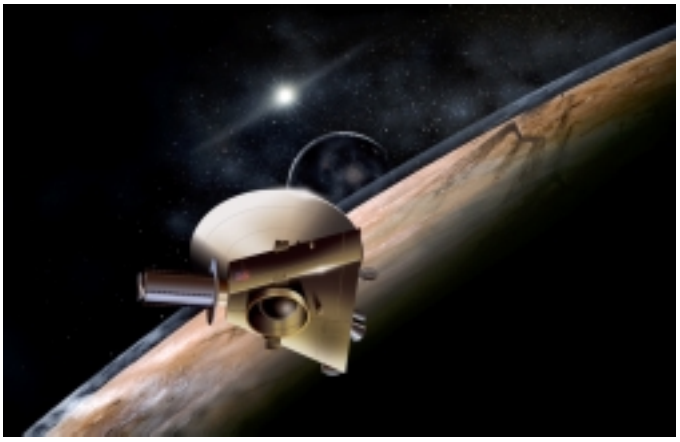
Download a "nine planets" screensaver for your computer with spectacular photos of our solar system, and you'll notice that one planet is conspicuously missing: Pluto. Icy and mysterious, Pluto is the only planet never visited and photographed by NASA space probes.

In fact, the clearest image we have of Pluto is a tiny, pixelated blob of light and dark patches taken by the Hubble Space Telescope in 1994. It's tantalizing but not much more. Earth-based telescopes have succeeded, however, in discovering one amazing fact: Pluto is not a lone world, but a double-planet system. Its companion, measuring about half the size of Pluto itself, is named Charon.

Work is underway to launch a robotic probe to visit and photograph Pluto and Charon. The project, called New Horizons, will map both worlds. Sensors will chart surface minerals and ices, and catalog the gases that make up Pluto's wispy atmosphere.

"It's the second epoch in the exploration of the planets," says Alan Stern, the principal investigator for New Horizons at the Southwest Research Institute in Colorado. "We're going to the very edge of the solar system."

The probe is scheduled to launch in January 2006. Its journey will be a long one. Pluto is more than thirty times farther away from the Sun than Earth is! Even with a speed boost from a flyby of Jupiter, the probe won't arrive at Pluto until July 2015. Afterward, the probe will venture on to explore the Kuiper Belt, a distant "halo" of small, frozen objects surrounding the solar system, from which comets originate.



Artist's idea of the New Horizons spacecraft flying by Pluto and its moon, Charon, with the Sun in the distant background. (Credit: Dan Durda.)

Aside from sheer curiosity about these distant worlds, scientists are motivated by questions about the formation of the solar system. Orbiting in the deep freeze far from the sun, Pluto and Charon have undergone less change than the inner planets during the solar system's 4.5 billion year history. These two worlds will provide a glimpse into the past.

Pluto could also shed light on the origin of our own Moon. Earth, with its single, large moon, is unusual. The Pluto-Charon system is the only other pair like it in the solar system. In fact, some astronomers consider Earth and the Moon to be a double planet, too. So knowing more about Pluto and Charon could give clues about how the Earth-Moon system formed.

And, of course, the spectacular, up-close photos of Pluto and Charon are going to look great as a screensaver!

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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Astronomus

“Just Another Night At The Office”

By Bob Popovich

Do you ever decide to go out and observe when doing nothing seems like a better idea? Just grab your binoculars to join the cosmos even though you've got no observing plan and little hope of seeing anything new & exciting? There are times when this compulsion gnaws at me until I finally accede. Is this because observing is what amateur astronomers are supposed to do? Or might it be a show of defiance of the elements? In a sense it makes me upset because it's the sort of mechanical behavior that's akin to doing your job on a day when you'd rather not be. Routine. Mundane. Ho hum.

Well, whatever it was that nudged me out the door on one particular night in March, I have only to say that it turned out to be anything but just another night at the office.

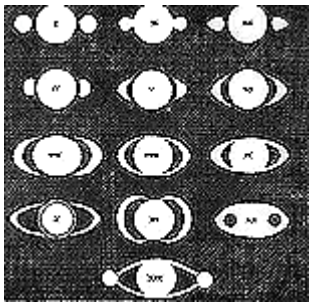
My guess is that by March of each year most of us have had our fill of the season of falling water (frozen and otherwise), high winds and numbing temperatures. So much so that perhaps the spirit of Tycho Brahe (or is it Michael Jordan?) whispers "just do it" in our ear. Just go. Look. You never know what you may see.

So on that March night there came that spirit that gave me the will to step over the threshold and go out the door. Now as it happens, both the sky and the ground were clear and the temperature was tolerable. About as ideal as you could expect. And a sign of things to come…

Though lacking an observing plan, I had both my binoculars and my telescope at hand. Ready for whatever the heavens might bring. Just pull the oars in the boat and let the current take me where it will.

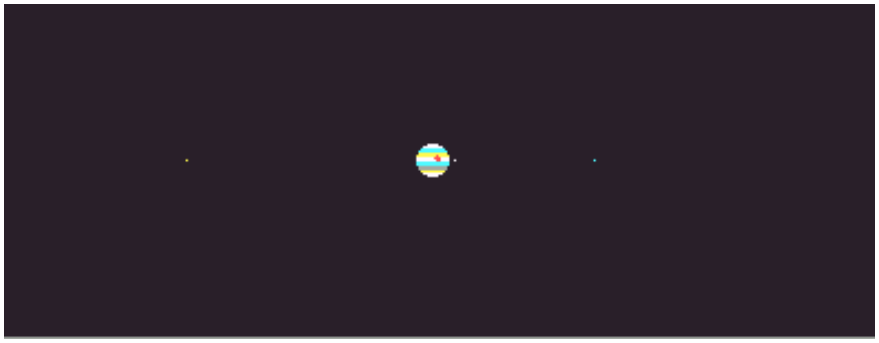
The ecliptic was first to grab hold of me. A clear path right by 4 of the 5 classical planets—Venus, Mars, Jupiter and Saturn. Beginning in the west/northwest, Venus was of a brightness that a polarizing filter was in order. Dimming the glare showed a beautiful gibbous phase. Mars, in contrast, resembled a moderately bright star bathed in the glow of the Pleiades. But looking at it through my 7x50s led me not to a non-descript point of light but rather a flood of memories from the opposition party at Mike Turco's home. In that still March moment I was transported to a lovely summer evening surrounded by friends and telescopes gazing at the red planet's surface features and polar caps. How delightful!

On next to Saturn. Always a stunning sight, the rings were especially crisp and the Cassini Division was clearly seen even at my telescope's lowest power. With binoculars, Saturn appeared as a planet with two lumps on either side. Remember reading about how early telescope astronomers sketched Saturn? Can you imagine the reaction of the first person whose telescope actually allowed them to resolve the lumps into the now-familiar ring system?



I stared at this beauty for the longest time. What a privilege to see this planet through precision optics on a crisp, clear night! Especially since the rings will soon start to tip away from their currently favorable angle. So do get out and view Saturn this year!

Next, Jupiter. By Jove, what a surprise! Of all the times I've seen our solar system's giant, this was a first—from left to right were Callisto, Europa, Ganymede and Io. I call your attention to Europa. First I tried refocusing. Then removing the eyepiece to clean it. Only afterwards did I realize that Europa was passing across the disk of its parent. It was, literally, an out of this world experience.



I paused to catch my breath. I had seen 4 celestial beauties from about 20° above the western horizon to nearly overhead. Glancing then at my feet to see planet 5, I gave thought to the astounding good fortune that was mine that night. Encountering more than half of the solar system's principal planets (excluding Sedna) in one observing session. And this was just another night at the office?

Having realized that an observing plan isn't always needed to have a fruitful evening under the skies, I left the ecliptic for the galactic equator. Orion was still well positioned and M42 was calling. The Great Nebula may be the premier sight in the northern hemisphere. The wispy cloud with the embedded stars of the trapezium is nothing short of magnificent no matter how many times you see it. On that evening, I used a newly acquired light pollution filter that was supposed to enhance views of emission nebula. Well, enhance was not an overstatement. The nebula's area more than doubled in size and gained substantially more definition. Not a Hubble picture, mind you, but—wow!—anything but ho hum.

As long as I was on the "M" list, I thought, why not visit a few more? M43 (Orion), M45 (Taurus), M36, 37 & 38 in Auriga and M35 in Gemini. All easily acquired and all just beautiful.

By this point, I was an astronomical version of Lucille Ball in the candy factory—hungrily scooping up more than could be imagined. But how glorious to keep that heavenly conveyor belt moving!

This was certainly not just another night at the office. Thanks, Tycho. And thanks, Michael.

Next Time: From the Bottom Up

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Cartoon by Nicholas La Para

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): Jim Anderson
(610-857-4751)

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

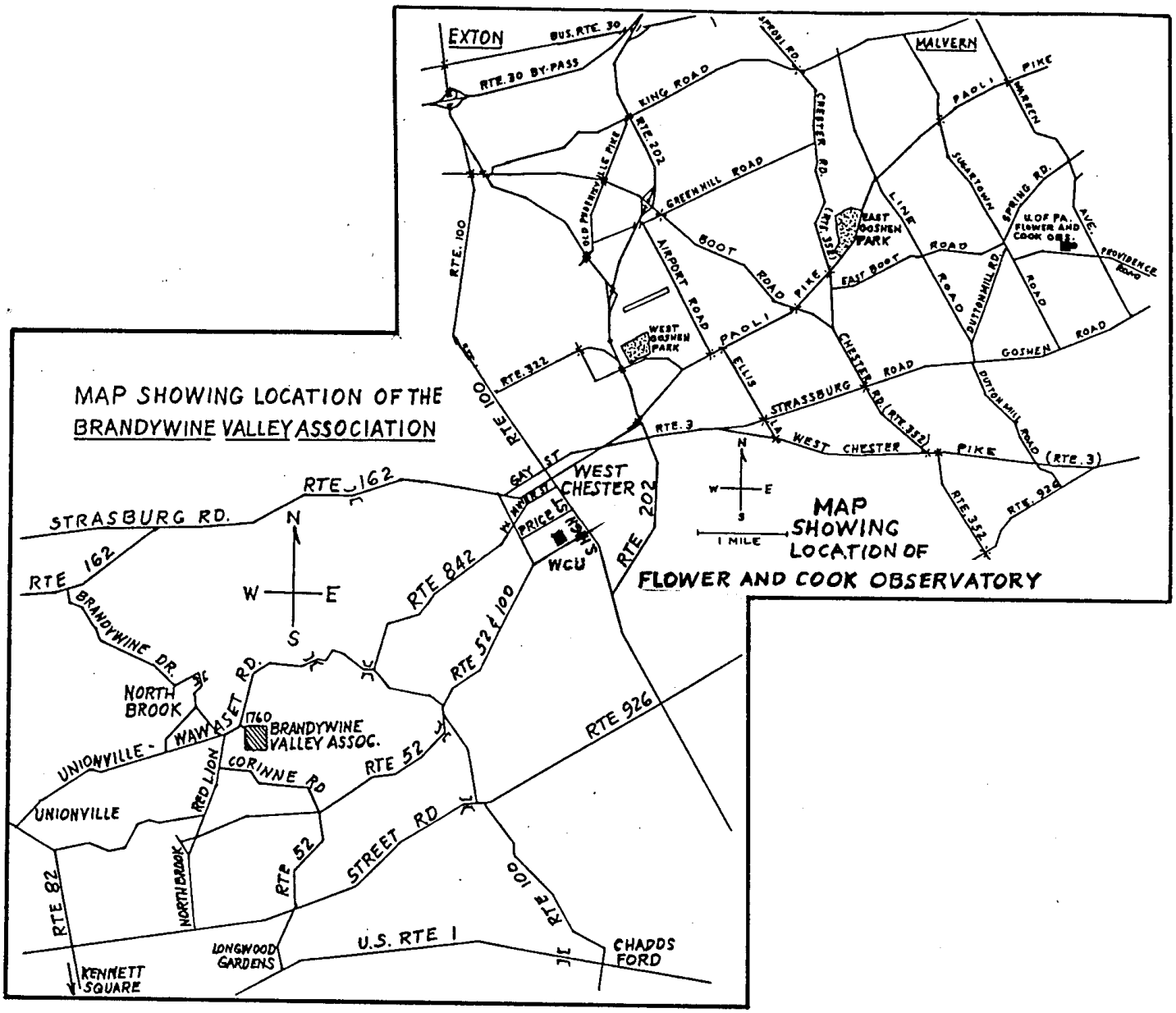
Subscriptions to this excellent periodical are available through the CCAS at a reduced price of **$32.95** which is much less than the newsstand price of $66.00, and also cheaper than individual subscriptions ($42.95)! Make **sure** you make out the check to the **Chester County Astronomical Society** (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:

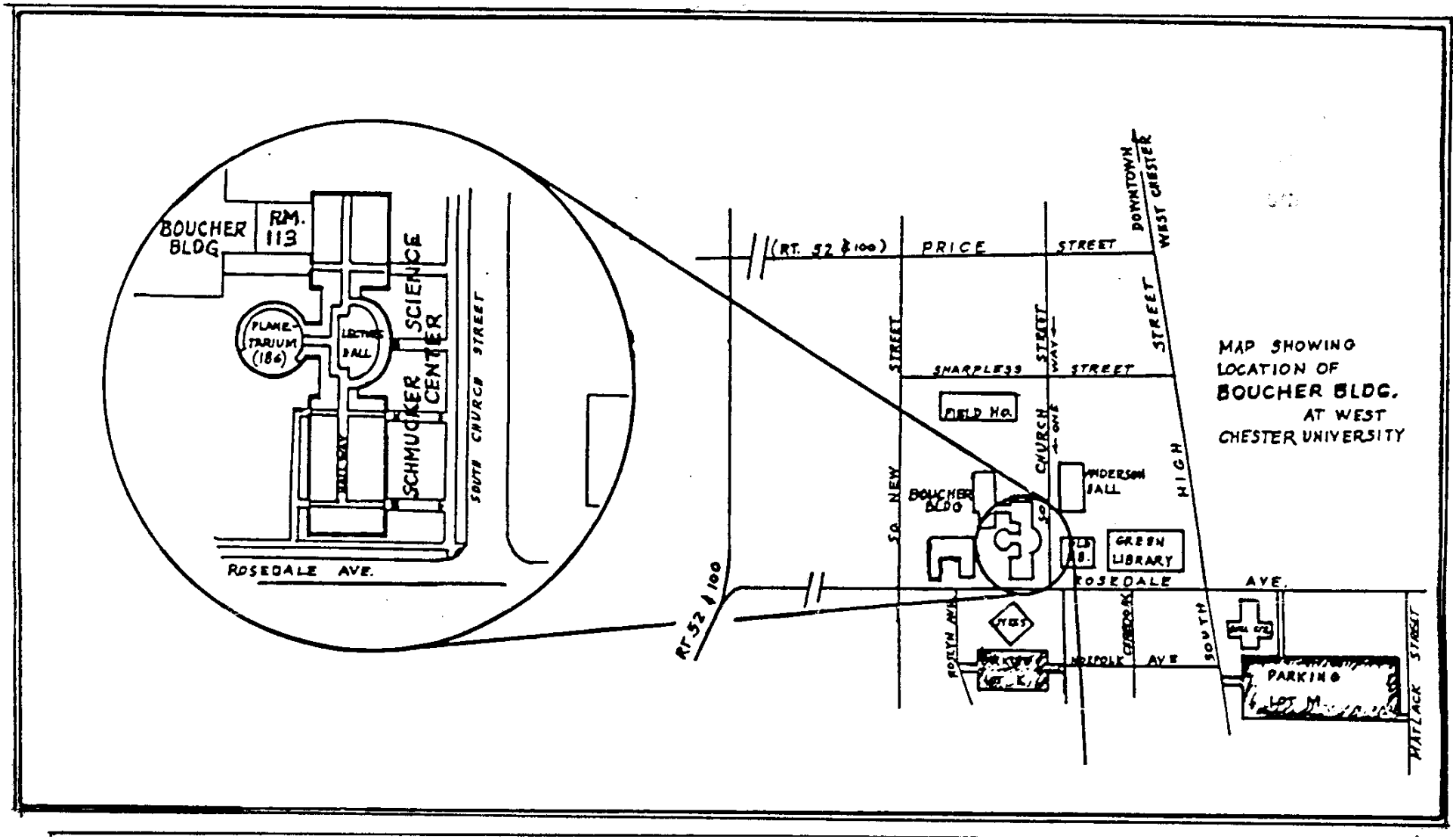
http://www.ccas.us/

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**

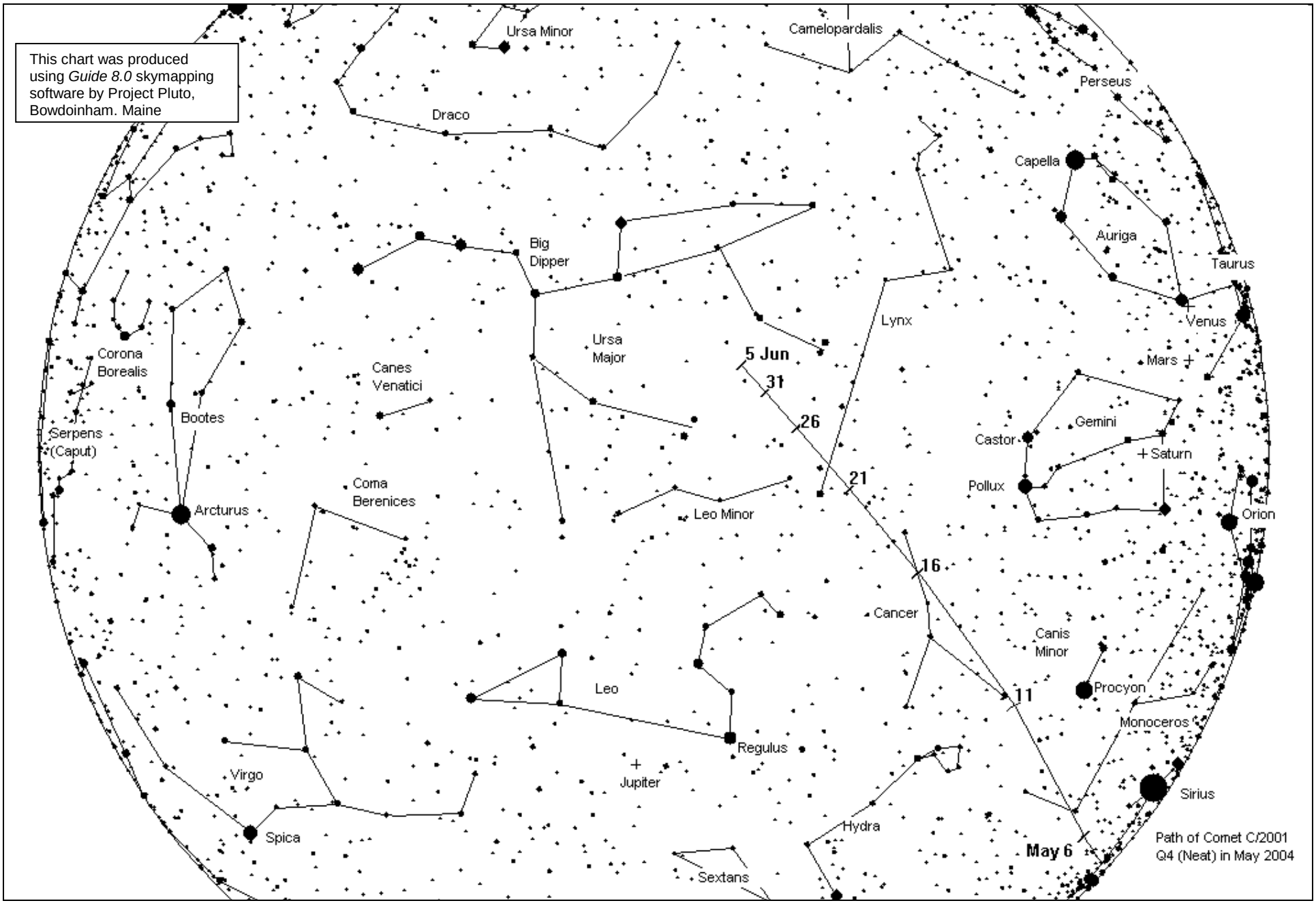


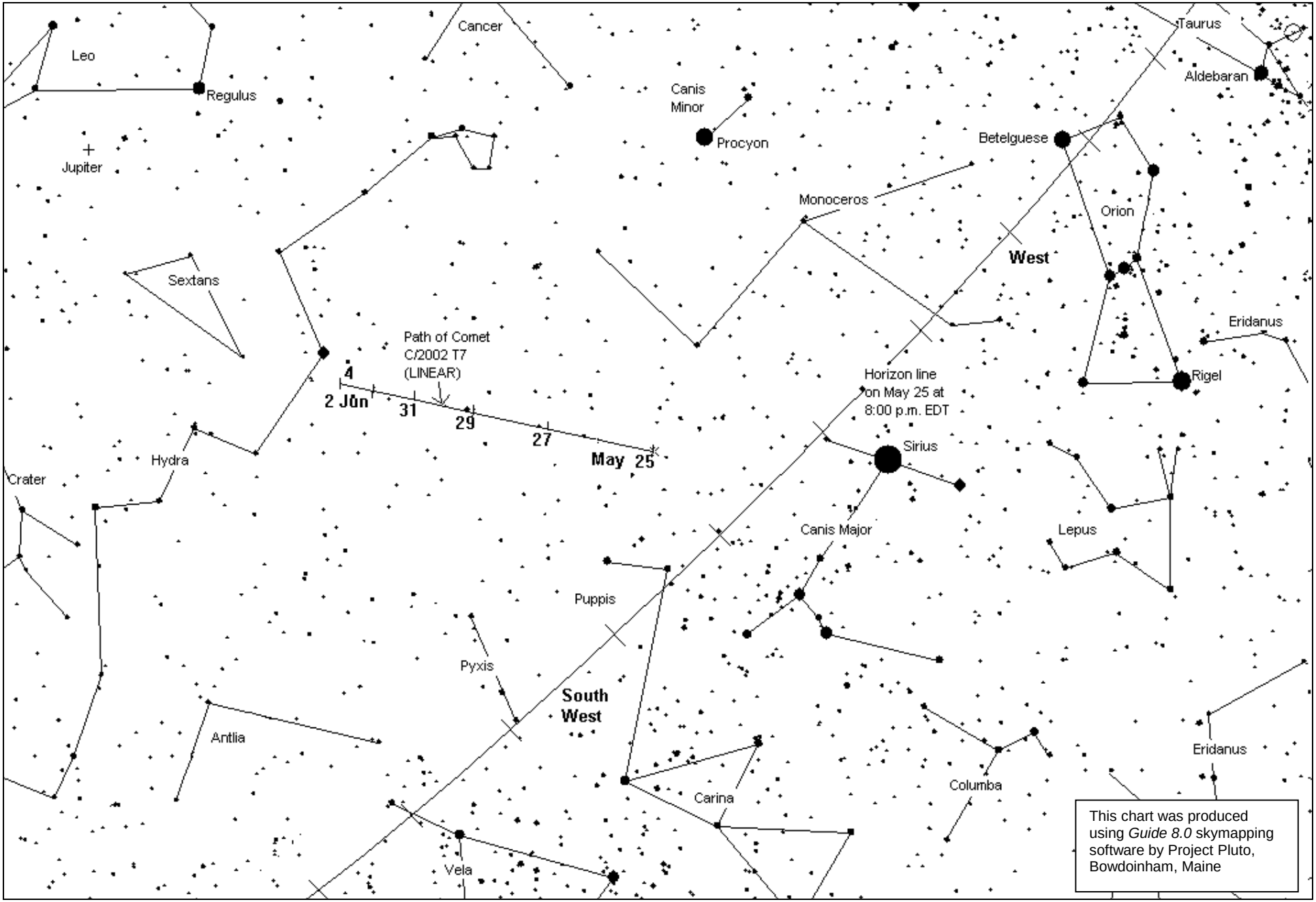
To get to the Myrick Conservation Center of the Brandywine Valley Association from West Chester, go south on High Street in West Chester past the Courthouse. At the next traffic light, turn right on Miner Street, which is also PA Rt. 842. Follow Rt. 842 for about 6 miles.

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.


This chart was produced using *Guide 8.0* skymapping software by Project Pluto, Bowdoinham. Maine
Ursa Minor
Camelopardalis
Perseus
Draco
Capella
Auriga
Taurus
Big Dipper
Lynx
Venus
Ursa Major
5 Jun
31
26
21
16
11
May 6
Mars
Corona Borealis
Canes Venatici
Bootes
Gemini
Castor
Saturn
Pollux
Serpens (Caput)
Coma Berenices
Arcturus
Leo Minor
Orion
Cancer
Canis Minor
Procyon
Leo
Monoceros
Regulus
Virgo
Jupiter
Sirius
Hydra
Spica
Sextans
Path of Comet C/2001 Q4 (Neat) in May 2004


Leo
Regulus
Cancer
Canis
Minor
Procyon
Taurus
Aldebaran
Betelguese
Jupiter
Monoceros
Orion
West
Sextans
Path of Comet
C/2002 T7
(LINEAR)
4
2 Jun
31
29
27
May 25
Horizon line
on May 25 at
8:00 p.m. EDT
Eridanus
Rigel
Sirius
Hydra
Crater
Canis Major
Lepus
Puppis
Pyxis
South
West
Antlia
Carina
Columba
Eridanus
Vela
This chart was produced using *Guide 8.0* skymapping software by Project Pluto, Bowdoinham, Maine