



# Observations

A Monthly Publication Of The  
CHESTER COUNTY ASTRONOMICAL SOCIETY

**JANUARY 2006**

(VOLUME 14, NO. 1)

Visit our website at [www.ccas.us](http://www.ccas.us)

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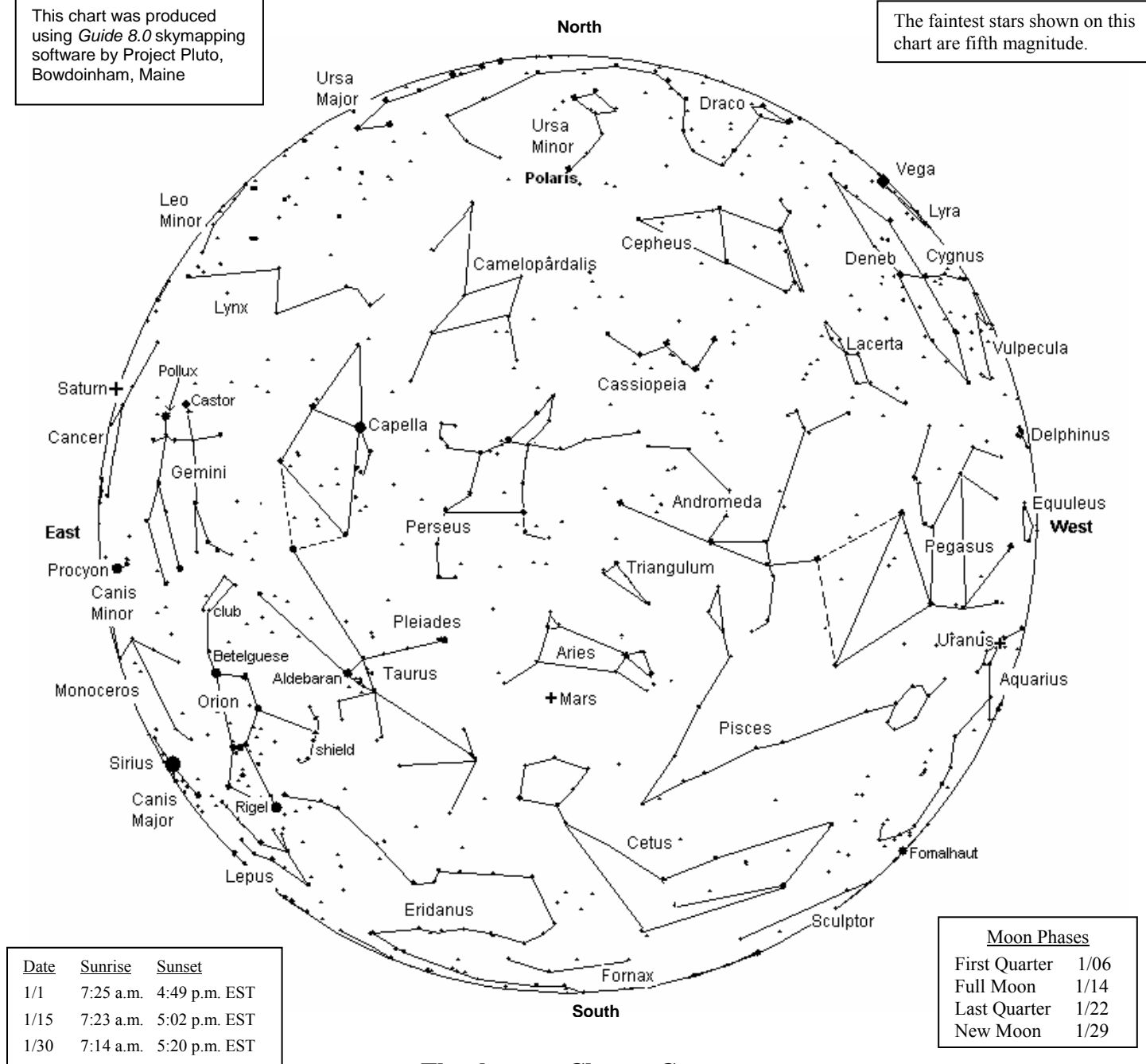
## Important January 2006 Dates

- 3 No** Hercules Observing Cluster meeting!  
See page 3 for details.  
Also: Quadrantid Meteor Shower peaks
- 6** First Quarter Moon
- 10 CCAS Meeting** 7:30 p.m. EST  
Location: Room 113, Boucher Building, West Chester University  
COM: Auriga  
Presentation: "Stars of All Colors" (see page 3)
- 10 No** Hercules Observing Cluster meeting!  
See page 3 for details.
- 14** Full Moon
- 15** The *Stardust* spacecraft drops its sample return capsule, containing samples from the coma of Comet Wild 2, into the Utah desert.
- 17** Hercules Observing Cluster meets.  
Call Kathy Buczynski at 610-436-0821 for details.
- 22** Last Quarter Moon.
- 24** Hercules Observing Cluster meets.  
Call Kathy Buczynski at 610-436-0821 for details.
- 27** Saturn at opposition today.
- 27/ CCAS Observing Session**
- 28** Location: Brandywine Valley Association  
Time: sunset, or earlier (see page 3)
- 29** New Moon
- 31** Hercules Observing Cluster meets.  
Call Kathy Buczynski at 610-436-0821 for details.



This chart was produced using *Guide 8.0* skymapping software by Project Pluto, Bowdoinham, Maine

The faintest stars shown on this chart are fifth magnitude.



### The Planets

**Mercury** is in the morning sky in early January, pretty low and hard to spot.

**Venus** is low in the evening sky as the month starts, dropping lower every night. At midmonth it disappears in the Sun's glare, only to reappear in the morning sky. By the end of January Venus will be rising about 1.5 hours before the Sun.

**Mars:** Mars continues to get further away from us this month. It's still worth taking a look at it in a telescope in early January, although by January 31<sup>st</sup> it's getting too small to see much.

**Jupiter** is getting higher in the morning sky this month. If you're up early take a look.

**Quadrantid Meteor Shower:** peaks on January 3, before darkness falls here. Look in the early evening hours that night for meteors.

**Saturn** reaches opposition on January 27, which means it rises as the Sun sets, and sets as the Sun rises that day. You'll still have to wait until later in the evening, 10:00 or later, before Saturn is high enough for good telescopic viewing. But it's worth the wait! For three weeks starting on the 24<sup>th</sup>, Saturn will be within one degree of M44, the Beehive Star Cluster.

**Uranus** is now too close to the Sun to get a good look at it.

**Neptune** is also now too close to the Sun to get a good look at it

**Pluto** is now out of reach for this year, disappearing behind the Sun. You'll have to wait for next spring to try for Pluto again.

## CCAS January Meeting

DATE: **Tuesday January 10, 2006**  
TIME: 7:30 p.m. EST  
PLACE: Room 113 – Boucher Building  
West Chester University  
LOCATION: South Church Street  
West Chester, PA

A map of the campus showing the location is on page 16.

This month's Constellation of the Month (COM) will be Auriga, presented by Kathy Buczynski.

Nicholas La Para will give a presentation on "Stars of All Colors—An Observer's Guide." This will be an introduction to the spectroscopic classes of stars. This talk will relate the stellar classes to interesting properties of stars, such as color, temperature, lifetime, and mass: no doctorate in astrophysics required! This observer-oriented talk will include a survey of interesting stars in each class that can easily be observed, with data about each star such as distance, size, stage of life, companions, etc.

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## CCAS January Observing Session

The next CCAS Observing Session will be at the Brandywine Valley Association's Myrick Conservancy Center (see map on page 15) on Friday January 27, 2006 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 January 28, 2006. 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 free of charge and open to the public.

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## Welcome!

We welcome our newest members to the Society: Dortehea Cook of West Chester, Lloyd Duncan of West Chester, and Jeffrey Roseberry & Family of Downingtown. We're glad you decided to join us! Clear skies to all!

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## Hercules Observing Cluster Update

by Kathy Buczynski

Due to holiday lights in the neighborhood, the Hercules Cluster meetings will be suspended until mid-January. However, in February we will be starting our Introductory Astronomy classes on the first and third Tuesdays. On those nights, I'd like the Hercules Cluster to meet at the ball field next to the West Goshen Township building (Hallowell Field). The participants of the classes will then be able to observe after the classes right next to the parking lot! Thanks.

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## Treasurer's Report by Bob Popovich

Due to technical difficulties, the November financial statement cannot be included in this month's Observations as planned. We will include it next month, with the December summary.

## Membership Renewals Due

01/2006: Kovacs  
Whitman  
02/2006: Farrelly  
La Para  
Reimer  
Renshaw  
Wilcox  
03/2006: Lyons  
Nelson

★ ★ ★ ★ ★

## 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 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 7	Spaceship Earth
February 21	The Moon
March 7	The Other Kids on the Block
March 21	Planispheres/Star Charts
April 4	Stars by Design: Constellations
April 18	The Secret Life of Stars
May 2	Planetarium Field Trip (WCU)
May 16	Beyond Naked Eye

The classes will be held in the West Goshen Township Building at the intersection of Paoli Pike and Five Points Road. This is just a short distance from the Paoli Pike exit off U.S. Route 202 outside West Chester.

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 and setup/takedown.

The advertising flyer/poster is included in this newsletter on page 14. Feel free to make copies of it and distribute it to friends, family, neighbors; post it in churches, libraries, grocery stores, in any place they will let you post it. Thanks for helping out with the advertising.

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## Needed: Bookshelves for Library

We need some bookshelves to hold the CCAS Library. If you would like to donate some bookshelves (in good, clean, usable shape) please contact our Librarian Linda Lurcott Fragale at 610-269-1737 to arrange a transfer of the shelves.

Thanks!



## Call for Photos for CCAS Web Site

John Hepler, our Society's best-in-nation Webmaster, has asked for photographs/images of Society events to use in making a "photo album" page of what the Society does. If you have images that you can let us use for this album, please contact John at [webmaster@ccas.us](mailto:webmaster@ccas.us) to arrange the transfer. Don't send any attached files with the email, because that address won't accept it. Just send a note telling John what you have, and he will get in touch to arrange the transfer.

John is also willing to accept astro-images taken by Society members for display on the Website. Contact John if you have images we can use, any pictures similar to the images by members we have shared with you in the newsletter in the past year or so.

Thanks!



## CCAS Trip to Washington: Update

At the November meeting, we decided to postpone the trip to Washington to visit the U.S. Naval Observatory and the Air & Space Museum. Trip Coordinator Linda Lurcott Fragale plans to discuss the trip with the members at the January 10<sup>th</sup> Society meeting. All members interested in this trip should attend the meeting. This includes any members who perhaps did not wish to go in December but would be interested in going in the next several months. We need to discuss the difficulties in reserving a date at the USNO, and if we still want to go, we need to pick a date and an alternate date. We need to keep in mind that we are required to make the request to the USNO at least six weeks in advance of our chosen tour date.



## Calendar Notes

January 3, 2006 (Tuesday)	<b>NO</b> Hercules Observing Cluster meeting!
January 10, 2006 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EST
January 10, 2006 (Tuesday)	<b>NO</b> Hercules Observing Cluster meeting
January 17, 2006 (Tuesday)	Hercules Observing Cluster meets
January 24, 2006 (Tuesday)	Hercules Observing Cluster meets
January 27/28, 2006 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
January 31, 2006 (Tuesday)	Hercules Observing Cluster meets

## Calendar Notes (cont.)

February 7, 2006 (Tuesday)	Introductory Astronomy class Location: West Goshen Twp. Building 7:00 p.m. EST
February 14, 2006 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EST
February 21, 2006 (Tuesday)	Introductory Astronomy class Location: West Goshen Twp. Building 7:00 p.m. EST
February 24/25, 2006 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
March 7, 2006 (Tuesday)	Introductory Astronomy class Location: West Goshen Twp. Building 7:00 p.m. EST
March 14, 2006 (Tuesday)	<b>CCAS Lunar Eclipse Observing</b> Location: TBA Sunset (or Moonrise, if you prefer)
March 21, 2006 (Tuesday)	Introductory Astronomy class Location: West Goshen Twp. Building 7:00 p.m. EST
March 24/25, 2006 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
April 4, 2006 (Tuesday)	Introductory Astronomy class Location: West Goshen Twp. Building 7:00 p.m. EDT
April 11, 2006 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EDT
April 18, 2006 (Tuesday)	Introductory Astronomy class Location: West Goshen Twp. Building 7:00 p.m. EDT
April 21/22, 2006 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
May 2, 2006 (Tuesday)	Introductory Astronomy class Location: West Chester University 7:00 p.m. EDT
May 9, 2006 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EDT
March 16, 2006 (Tuesday)	Introductory Astronomy class Location: West Goshen Twp. Building 7:00 p.m. EDT
May 19/20, 2006 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset



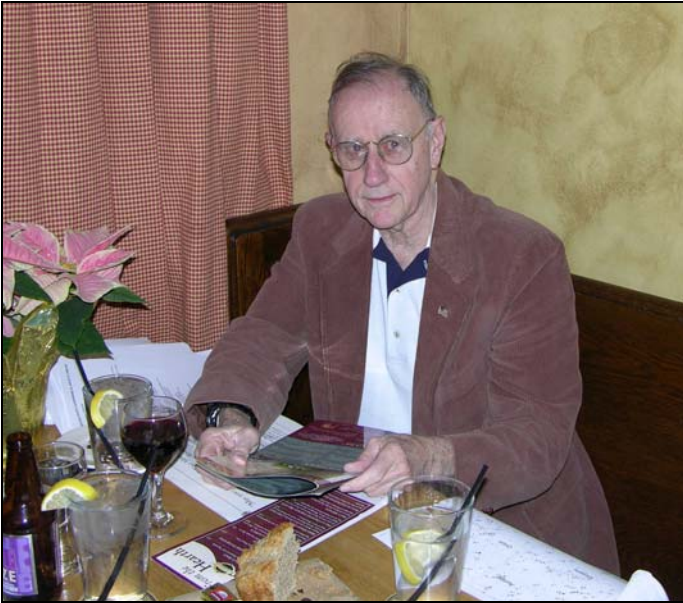
**Happy New Year!**



## Report on CCAS Holiday Party

Pictures by Kathy Buczynski

Text by an Unknown Assailant

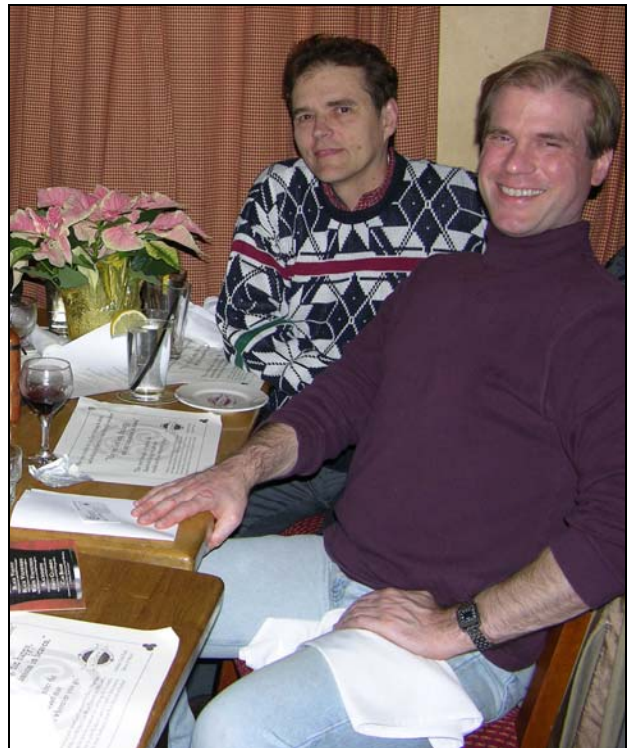


On Tuesday December 13, 2005, Boss Lurcott called his gang together at Kildare's in West Chester for some "holiday cheer."



From left to right, here we see Jeff Roseberry, with Bob and Betsy Popovich, enjoying the "Aurigan Ales."

Eyewitness reports indicate that gang member Diane Renshaw was also present at this "Holiday Gathering," but managed to elude the police photographer. A police sketch artist was called in, but he said the other participants were "too starry-eyed to be of any assistance."



In the same corner Vic Long and John Hepler approved of the fine Orion wines and the "Sirian Slammers."



Marty Bower and Nicholas La Para are obviously enjoying the "Pleiades Pilsners."

Wait staff at the restaurant report overhearing much talk of "seeing faint fuzzies," "shooting the moon," "occulting this" and "eclipsing that," "dark of the moon," "colliding galaxies" and "big bangs." FBI gang experts are still trying to decipher these cryptic references to the gang's "dark site" activities.





Across the table Becky and Keith Padgett sampled the "Hyades Howlers."



Don and Barb Knabb were at Boss Ed Lurcott's table, along with the Boss's protégé Kathy Buczynski. Only the best "Solstice Spirits" were served at this table.

See what you missed? Make sure you attend the next CCAS Holiday Gathering in December 2006!



### **Safe Cleaning of Optics**

by Bruce Holenstein

Here is a link to an Antique Telescope Society article on the proper cleaning of optical surfaces:

<http://webari.com/oldscope/atspages/techtips.htm>.

The writer, Robert Ariail, states that all cleaning methods of optics damage those surfaces except for one. He advocates using something called Collodion, but note that it is flammable substance. An ATS member in a recent email post suggested an alternate called Opticlean Polymer 60123, Dantronix, Wisconsin [www.opticlean.com](http://www.opticlean.com).

Incidentally, the main Antique Telescope Society web page is <http://webari.com/oldscope/>. One can learn a lot on a wide range of optical topics by reading ATS member posts—interested CCAS members might want to join.



### **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 North First Avenue**  
**Tucson, AZ 85719**

Telephone: 520-293-3198

Fax: 520-293-3192

E-mail: [ida@darksky.org](mailto:ida@darksky.org)

For more information, including links to helpful information sheets, visit the IDA web site at:

**[www.darksky.org](http://www.darksky.org)**

Note that our CCAS Webmaster John Hepler has a link to the IDA home page set up on our Society's home page at [www.ccas.us](http://www.ccas.us).

### **Dark-Sky Website for PA**

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



### **Good Outdoor Lighting Website**

One of the biggest problems we face in trying to reduce light pollution from poorly designed light fixtures is easy access to good ones. When you convince someone, a neighbor or even yourself, to replace bad fixtures, where do you go for good lighting fixtures? Now there is a web site and business intended to address that very problem. At this site you can find information on all kinds of well-designed (that is, star-friendly) outdoor lighting fixtures. This company, Starry Night Lights, intends to make available all star-friendly fixtures they can find, and information on them, in one place. Check it out, and pass this information on to others. Help reclaim the stars!

**<http://www.starrynightlights.com/>**



## Astronomus

“Don’t Let *This* Sleeping Dog Lie”

By Bob Popovich

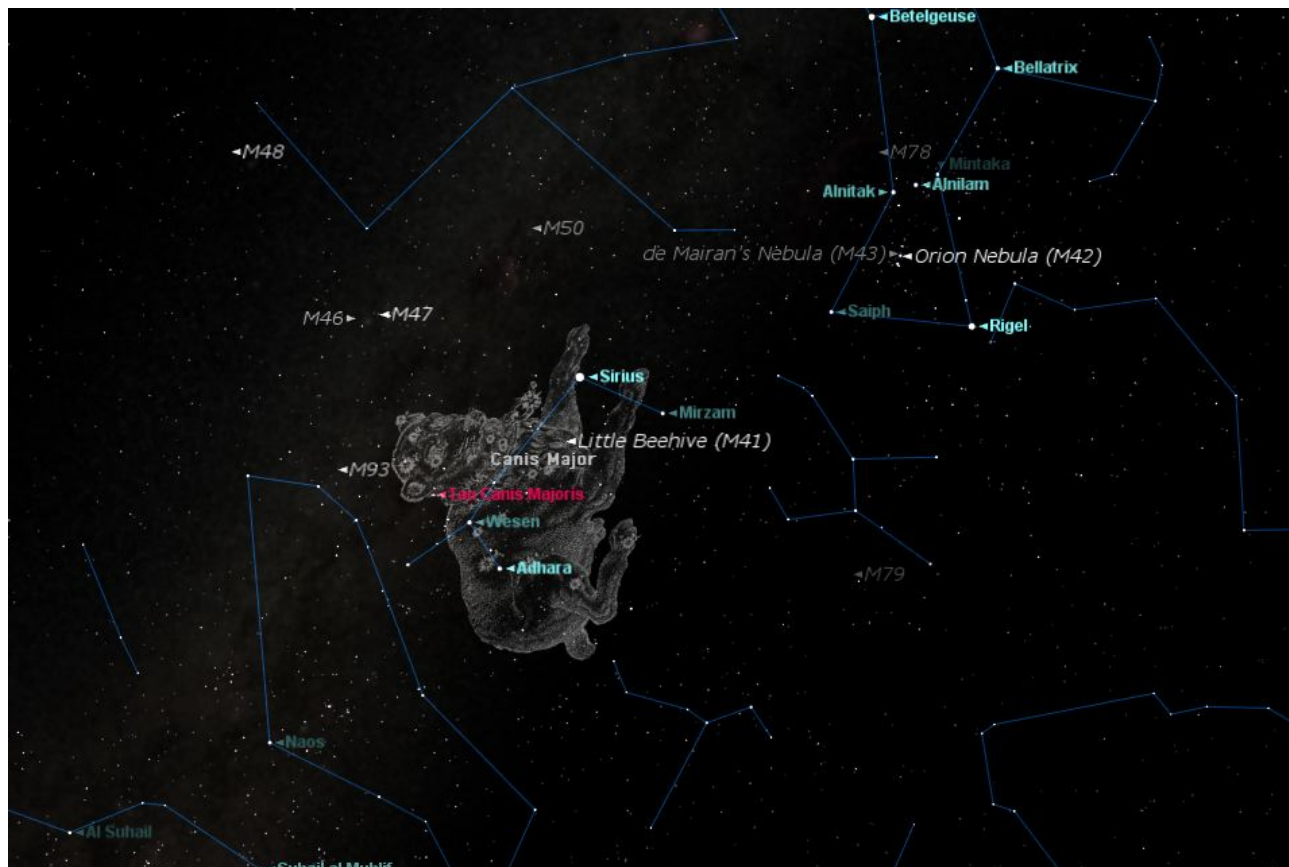
Down the street are a couple of sinister looking dogs that I always avoid. But this time of year there’s also one MAJOR dog that I can’t leave alone. Interestingly enough, that’s his name, too—major dog. Or is it dog major? Syntax aside, Canis Major is one of Orion’s two canine companions and one of four dogs in the heavens (Canis Minor, and Boötes’ two dogs of Canes Venatici, are the other three). In the spirit of the eternal debate about dogs and cats, we note that there are no cat constellations although Draco contains the beautiful Cat’s Eye Nebula. But returning to the big dog, Canis Major offers us a fine observing opportunity within the reach of most binoculars.

Its unmistakable trademark star is the brilliant Sirius at an apparent magnitude of -1.4. Second only to our sun as the brightest star in the sky, its name is one of few that appears to be Greek rather than Arabic in its origin. *Seirios* means “scorching” in Greek. Step out on a crisp winter night and you’ll have no question as to how the star earned its name. From its position in the daytime sky in August (the “dog days”), it is now climbing to a commanding evening position at Orion’s heels in the southern part of our winter sky. This star signaled the new year to classical Athens, and it told the Egyptians that that the Nile would soon be flooding meaning that the planting season was at hand. One unexplained oddity about Sirius is that some ancient records describe it as red in color. Anyone have any thoughts on this?

Only 4° south of Sirius (within one binocular field of view) is another of Messier’s beauties—M41 (the Little Beehive). If you’re able to observe far from light-polluted skies M41 is actually a naked eye sight, at least that’s how Aristotle recorded it in 325 BC. Through my 7x50s, this cluster is a rich collection of some 15-20 blue stars, some of which appear to be paired.

About four additional degrees to the south you’ll come to Tau Canis Majoris ( $\tau$ ). This blue super-giant is the center of NGC 2362. The Tau star tends to obscure the glow from the cluster, but big binoculars should still be able to resolve some of the cluster’s members. As you gaze at this target consider this—astronomers feel that this may be one of the youngest known clusters but they’re not sure if the Tau star is actually part of the cluster or merely in our line of sight. With the cluster at a distance of 5,000 LY, the implication for having the Tau star be a part of the NGC 2362 is staggering: it would have the luminosity of 50,000 suns! How can anything be that bright?

As you can from the chart below, our big dog is poised along the edge of the winter Milky Way. Hence the journey from Sirius to M41 to NGC 2362 should be made in a leisurely manner so as to take in the beautiful soft glow from the direction of the Norma-Cygnus arm of our galaxy.



I'll leave you with this little bit of verse about our big dog from none other than Robert Frost.

### **Canis Major**

The great Overdog,  
That heavenly beast  
With a star in one eye  
Gives a leap in the east.

He dances upright  
All the way to the west  
And never once drops  
On his forefeet to rest.

I'm a poor underdog,  
But tonight I will bark  
With the great Overdog  
That romps through the dark.

Next Time: Time—Constant and Variable.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★



### **A New View of the Andromeda Galaxy**

By Dr. Tony Phillips and Patrick L. Barry

This is a good time of year to see the Andromeda galaxy. When the sun sets and the sky fades to black, Andromeda materializes high in the eastern sky. You can find it with your unaided eye. At first glance, it looks like a very dim, fuzzy comet, wider than the full moon. Upon closer inspection through a backyard telescope—wow! It's a beautiful spiral galaxy.

At a distance of “only” 2 million light-years, Andromeda is the nearest big galaxy to the Milky Way, and astronomers know it better than any other. The swirling shape of Andromeda is utterly familiar.



Typical image of the Andromeda Galaxy in visible light.

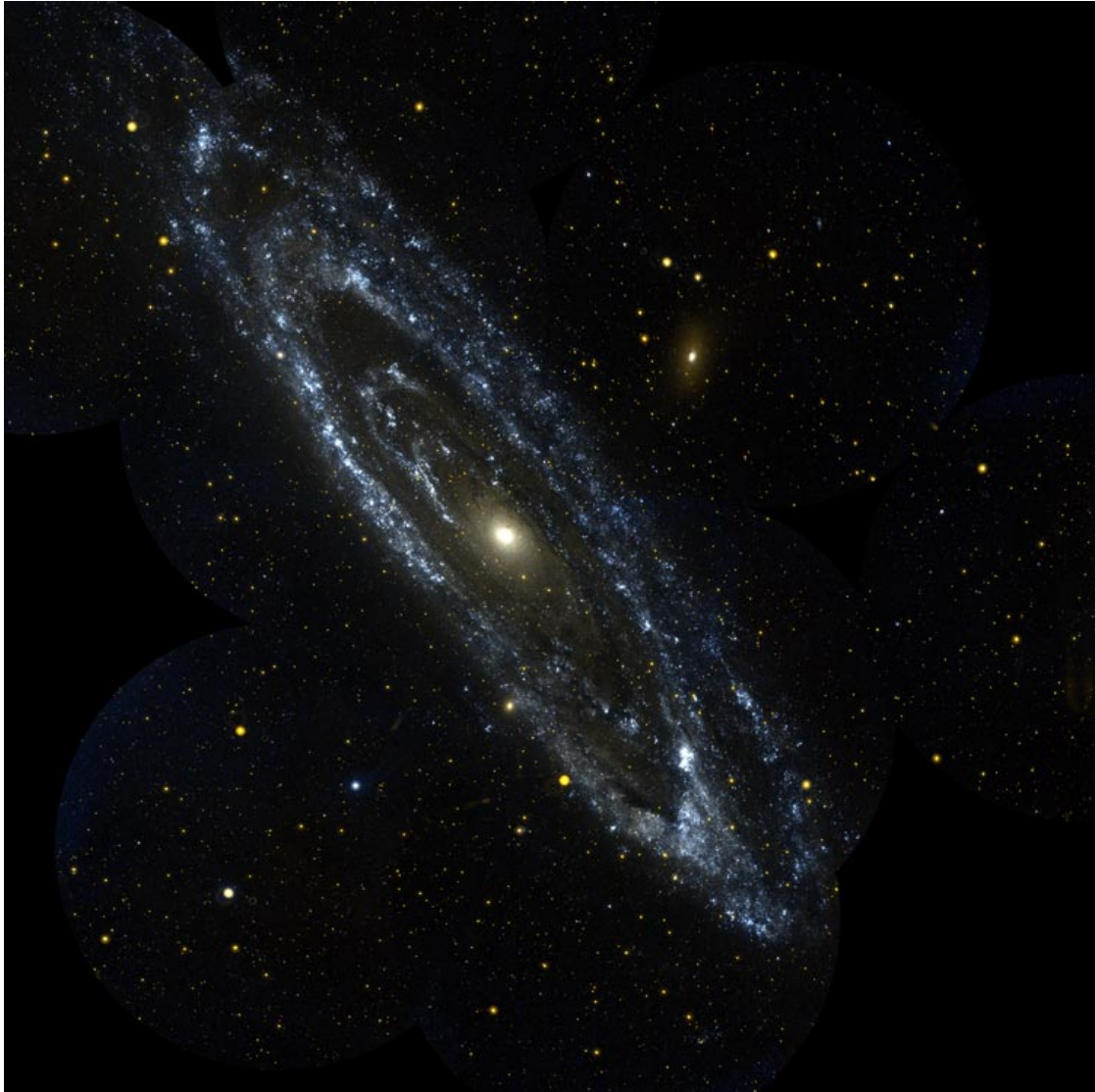


Not anymore. A space telescope named *GALEX* has captured a new and different view of Andromeda. According to *GALEX*, Andromeda is not a spiral but a ring.

*GALEX* is the “*Galaxy Evolution Explorer*,” an ultraviolet telescope launched by NASA in 2003. Its mission is to learn how galaxies are born and how they change with age. *GALEX*’s ability to see ultraviolet (UV) light is crucial; UV radiation comes from newborn stars, so UV images of galaxies reveal star birth—the central process of galaxy evolution.

*GALEX*’s sensitivity to UV is why Andromeda looks different. To the human eye (or to an ordinary visible-light telescope), Andromeda remains its usual self: a vast whirlpool of stars, all ages and all sizes. To *GALEX*, Andromeda is defined by its youngest, hottest stars. They are concentrated in the galaxy’s core and scattered around a vast ring some 150,000 light years in diameter. It’s utterly unfamiliar.

“Looking at familiar galaxies with a new wavelength, UV, allows us to get a better understanding of the processes affecting their evolution,” says Samuel Boissier, a member of the *GALEX* team at the Observatories of the Carnegie Institution of Washington.



The *GALEX* telescope took this UV image of the Andromeda galaxy (M31), revealing a surprising shape not apparent in visible light.

Beyond Andromeda lies a whole universe of galaxies—spirals, ellipticals and irregulars, giants and dwarfs, each with its own surprising patterns of star formation. To discover those patterns, *GALEX* has imaged hundreds of nearby galaxies. Only a few, such as Andromeda, have been analyzed in complete detail. “We still have a lot of work to do,” says Boissier, enthusiastically.

*GALEX* has photographed an even greater number of distant galaxies—“some as far away as 10 billion light-years,” Boissier adds—to measure how the rate of new star formation has changed over the universe’s long history. Contained in those terabytes of data is our universe’s “life story.” Unraveling it will keep scientists busy for years to come.

For more about GALEX, visit [www.galex.caltech.edu](http://www.galex.caltech.edu).

Kids can see how to make a galactic art project at [spaceplace.nasa.gov/en/kids/galex/art.shtml](http://spaceplace.nasa.gov/en/kids/galex/art.shtml).

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



## CHEECH AND CHONG DO COSMOLOGY



Cartoon by Nicholas La Para



## Results of CCAS Member Survey done in the summer of 2005

The various possible topics of interest are ranked according to the level of interest expressed by the members via the survey, going from greatest interest at the top to lowest interest at the bottom. The “points” awarded each question (1=little or no interest, 5 = very interested) were added up, and that total was divided by the number of members who answered the question (not all members answered every question). This gave an average interest score, which is listed in the first column below. The text of the question/topic is in the second column.

<b>Avg. Score</b>	<b>Topic</b>
4.786	news of observing opportunities (comets, etc.)
4.769	observing meteors and meteor showers
4.462	telescope observations
4.385	observing challenges for beginning observers
4.308	observing planets
4.308	the monthly sky (bright stars, constellations)
4.286	naked eye observations
4.267	binocular observations
4.231	constellation information (what to observe)
4.200	lunar observing
4.091	reports on other CCAS activities
4.077	reports of members' observations
4.000	lunar eclipse observing
4.000	observing comets
3.846	telescope types and selection criteria
3.833	constellation history and mythology
3.750	current space exploration coverage
3.750	Internet astronomy resources
3.750	how to attend a star party
3.667	observing challenges for intermediate observers
3.667	history of astronomy
3.615	binocular types and selection criteria
3.615	observing double stars
3.583	computer programs for planning observing sessions
3.500	telescope accessories (types, uses, tips)
3.500	meteorites
3.500	dark-sky information (outdoor lighting)
3.500	computer planetarium programs
3.500	trip reports (star parties, eclipse trips, etc.)
3.462	solar observing
3.417	space exploration history
3.385	solar eclipse observing
3.333	observing occultations
3.308	observing deep-sky objects (objects outside the solar system)
3.272	observing earth-orbiting satellites
3.182	astroimaging (with CCD devices, digital cameras)
3.166	observing challenges for advanced observers
3.077	Astronomical League news
2.909	cosmology
2.818	astrophotography (with camera)
2.727	building a telescope



Please tell us if you agree or disagree with these statements about Society meetings.

1 = you strongly disagree

2= you disagree

3 = you neither agree nor disagree (no opinion)

4 = you agree

5 = you strongly agree

Higher scores indicate stronger agreement with statement.

<b>Avg. Score</b>	<b><i>statement</i></b>
4.400	We don't have enough guest speakers, like professional astronomers
4.111	The seating isn't comfortable or well arranged
4.000	Presentations are too technical
3.400	I like the Constellation of the Month series
3.000	Parking is a problem
2.889	Meetings are too formal
2.000	The projection equipment and capabilities in Room 113 at WCU are excellent
1.889	We should take more field trips

Please tell us if you agree or disagree with these statements about Society observing sessions.

1 = you strongly disagree

2= you disagree

3 = you neither agree nor disagree (no opinion)

4 = you agree

5 = you strongly agree

Higher scores indicate stronger agreement with statement.

<b>Score</b>	<b><i>statement</i></b>
3.917	The BVA is too far away
3.750	We need an observing site that is easier to get to
3.667	We need electrical hookups for telescope equipment
3.636	The BVA is hard to find
3.385	We need restrooms at the observing site
3.167	We need a more handicapped-accessible observing site
3.000	We need a permanent storage shed at the observing site for the Society's 20-inch telescope
2.833	We need a darker observing site

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

## 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, Linda Lurcott Fragale, to make arrangements to borrow one of the books in the CCAS lending library. Copies of the catalog are available at CCAS meetings, and on the CCAS website. Linda's phone number is 610-269-1737.

### 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 [stargazer1956@comcast.net](mailto:stargazer1956@comcast.net)

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 (in full color!) via 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:

[stargazer1956@comcast.net](mailto:stargazer1956@comcast.net)

### 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)

Constellation Hunters: 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:** Kathy Buczynski  
(610) 436-0821

**Vice Pres:** Jim Anderson  
(610) 857-4751

**ALCor and Treasurer:** Bob Popovich  
(610) 363-8242

**Secretary:** Vic Long  
(610) 399-0149

**Newsletter:** Jim Anderson  
(610) 857-4751

**Librarian:** Linda Lurcott Fragale  
(610) 269-1737

**Observing:** Ed Lurcott  
(610) 436-0387

**Education:** Kathy Buczynski  
(610) 436-0821

**Webmaster:** John Hepler  
(610) 363-0811



### 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 Treasurer's Report in each issue of *Observations* to see if it is time to renew your membership. If you are due to renew, you can mail in 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

John Hepler is the Society's Webmaster. You can check our Website at:

<http://www.ccas.us/>

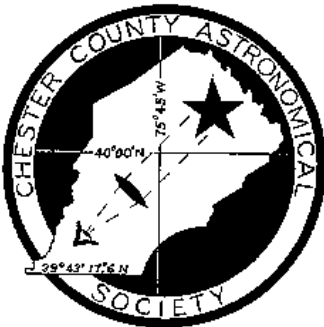
John welcomes any additions to the site by Society members. The contributions can be of any astronomy subject or object, or can be related to space exploration. The only requirement is that it is your own work; no copying copyrighted material! Give your contributions to John Hepler (610-363-0811) or e-mail to [webmaster@ccas.us](mailto:webmaster@ccas.us)

# Introductory Astronomy Class

**February 7  
through  
May 16, 2006**

8 one-hour classes  
First & Third Tuesdays  
7:00 p.m. to 8:00 p.m.

Sponsored by the  
Chester County  
Astronomical Society



Visit our web site at

**www.ccas.us**

## Cost

\$20.00 per person  
or  
\$30.00 per family  
(with same address)

For ages 9 - 90

## Price Includes

- Parking
- Handouts
- 4-month CCAS membership
- CCAS Monthly newsletter
- Observing sessions
  - Star locator (planisphere)
- Drawing for excellent beginners' guide book  
*Nightwatch*

## Location:

**West Goshen  
Township Building**

At intersection of Paoli Pike  
and Five Points Road  
**West Chester, Pa.**

## Learn:

- What's in the sky this month
- How to find stars and constellations in the sky
- How to find planets
- How to observe eclipses
- How to use binoculars
- How to use telescopes
- How to use star charts
- What's on the Moon
- The differences between stars
- The life cycle of stars
- About types of telescopes
- Why we have seasons
- How the Earth moves in space
- About the Solar System
- About light pollution



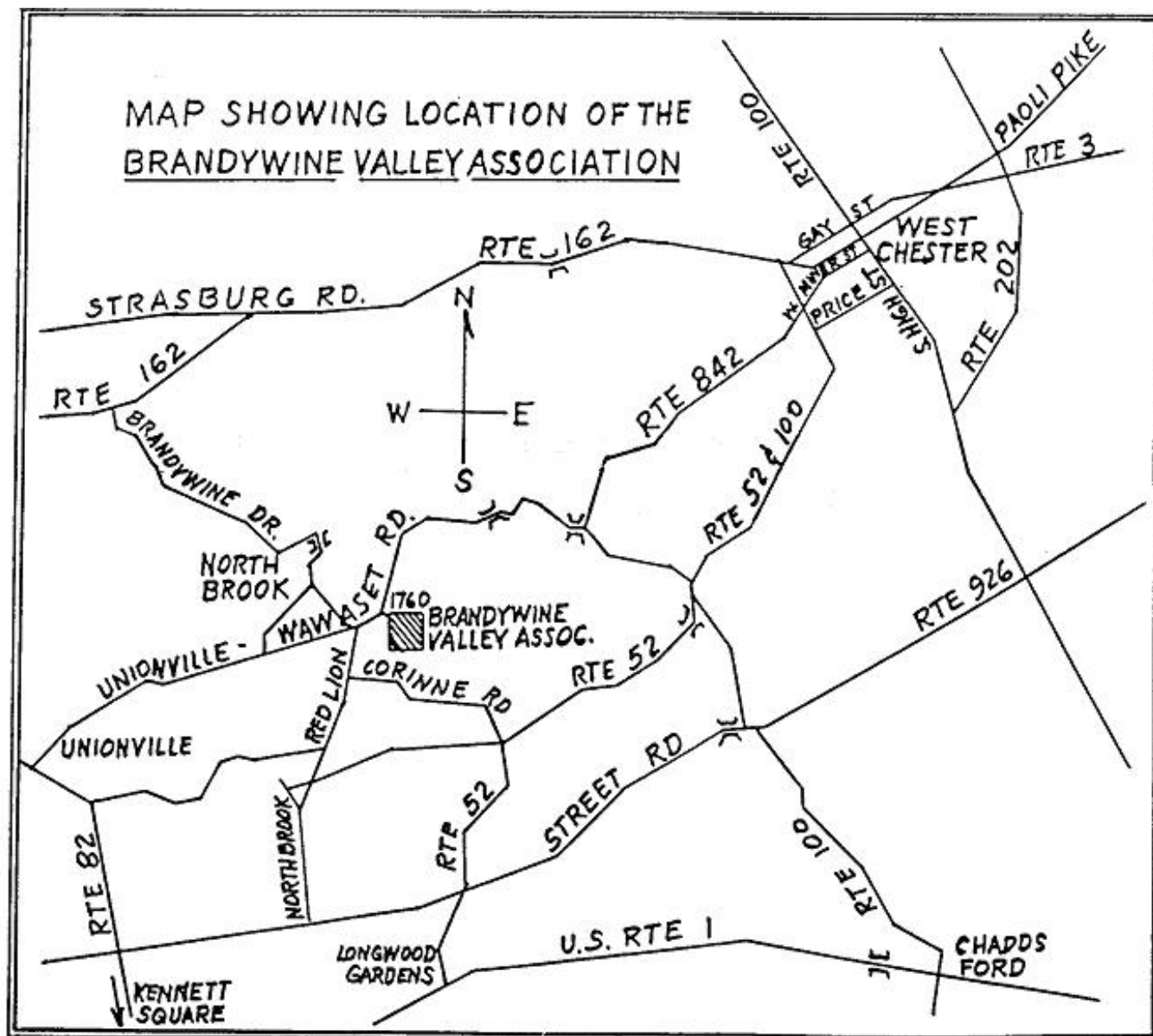
Enrollment limited to 40.  
Call and reserve  
your space now!

**Kathy Buczynski**  
610-436-0821

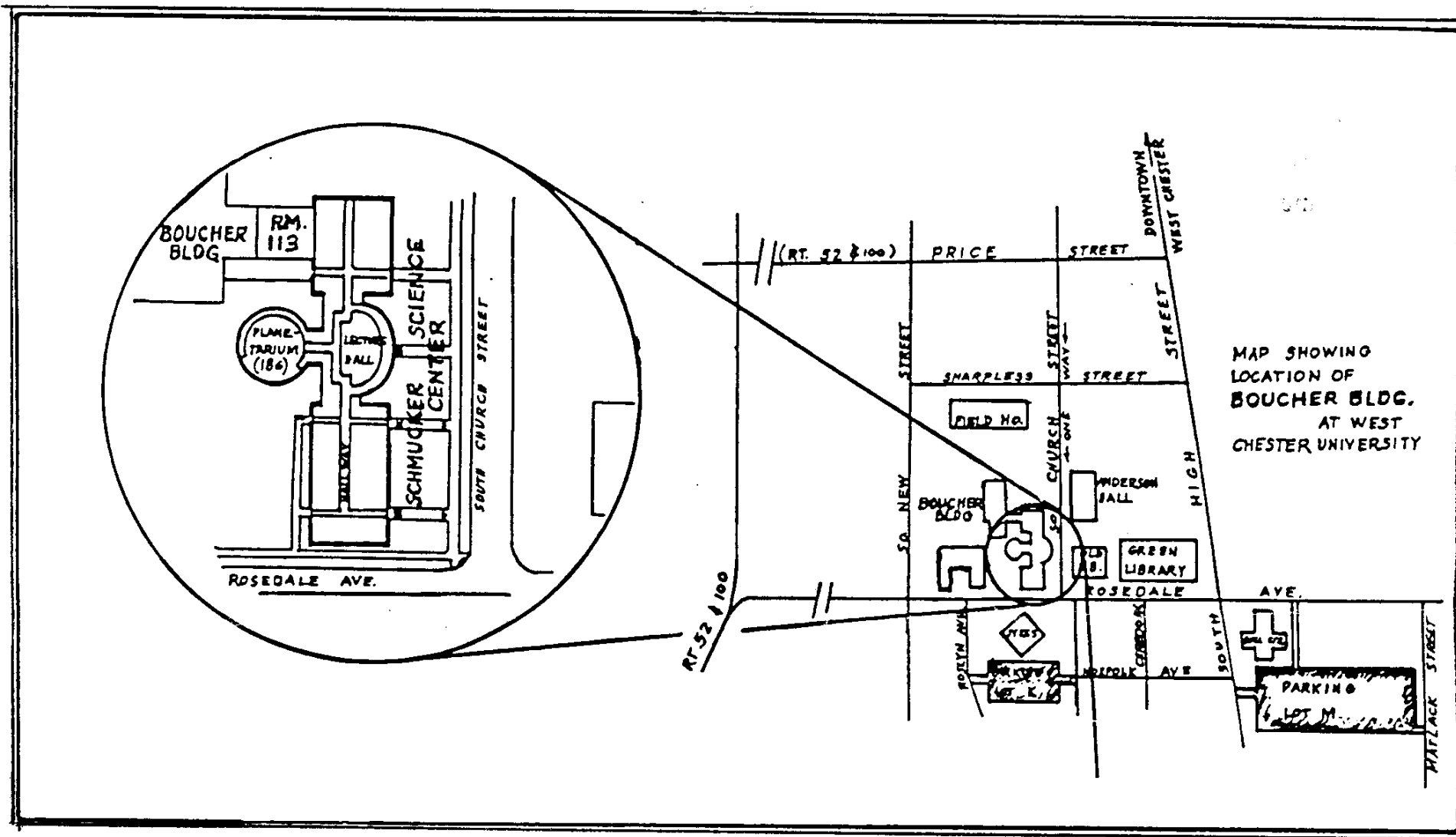


Note: Content of class sessions subject to change without notice





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.