



OBSERVATIONS



A MONTHLY PUBLICATION OF THE
Chester County Astronomical Society

★ *President:* Mike Turco
★ *Treasurer:* Pete LaFrance

JANUARY 2002

(VOLUME 10, NO. 1)

★ *Vice President:* Steve Limeburner
★ *Secretary:* Doug Liberati

http://members.tripod.com/~ccas_2/ccas.html

CCAS January Meeting

DATE: **Tuesday January 8, 2002**
TIME: 7:30 p.m. EST
PLACE: Department of Geology and
Astronomy Lecture Room
(Room 113 – Boucher Building)
West Chester University
LOCATION: South Church Street
West Chester, PA (see map)

Parking is available behind Sykes Student Center on the south side of Rosedale Avenue, and behind the Bull Center at the corner of Rosedale Avenue and South High Street. If you arrive early enough, you may be able to get an on-street parking space. A map is included on a later page.

Our speaker will be CCAS member Bob Popovich. He will deliver an illustrated talk about his summer vacation visit to Yerkes Observatory. Yerkes Observatory, located in Wisconsin, is home to the world's largest refracting telescope, which has an aperture of 40 inches.



CCAS January Observing Session

The next CCAS Observing Session will be on Friday January 11, 2002 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 12, 2002. 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 scope. CCAS Observing Sessions are always free of charge. Children are always welcome as long as an adult accompanies them.

To get to the observing site at the BVA, 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. A map showing the location of the BVA is included on a later page.



Elise Furman Earns Binocular Messier Award



Photo by Ed Lurcott

At the Society's December meeting, President Mike Turco had the pleasure of presenting Elise Furman the Astronomical League's Binocular Messier Award. This is the first Binocular Messier Award earned by a CCAS member. Congratulations Elise!

The Binocular Messier Award is given to any AL member who finds and observes at least 50 of the 110 Messier objects using only binoculars. The observing log for this project does not require that you draw the objects, only that you describe them. Frank Angelini is the coordinator in the CCAS for the AL's Messier Awards. When you finish a Messier Award, contact Frank who will review your logbook and then request the award from the Astronomical League. Frank's phone number is 610-873-7929; he lives in Downingtown.

The Astronomical League has a number of observing awards that members can work on. All CCAS members are also members of the AL. Descriptions and rules for the observing awards can be found on the AL's Website at www.astroleague.org. If you don't have a computer, contact Jim Anderson at 610-857-4751 and he'll get you a copy of what you want.



Photos of Recent Events

All photos by Ed Lurcott



Star Night for West Chester Friends School

CCAS member Kathy Buczynski talks to a group of students at a star night provided by the Society on September 26, 2001. The event occurred at the Brandywine Valley Association's Myrick Conservation Center.



Star Night for Girl Scouts

On October 19, 2001 members of the Society met with a troop of Girl Scouts at West Goshen Township's Reed Park. Here, one of the Scouts looks through Nicholas La Para's telescope. Nicholas is in the red coat, behind the telescope.



John Rutland wins Door Prize

For our Backyard Astronomy class, we gave away a copy of *Turn Left at Orion*. In this photo, Kathy Buczynski presents John Rutland with the book. Congratulations, John!



WHYY Sky Tour at WCU

WHYY-FM broadcast their popular *Sky Tour* program from West Chester University on December 12, 2001. The broadcast was done indoors in room 113 in the Boucher Building, the same room used for the CCAS monthly meeting. In the photo above, the show's host Derrick Pitts (of the Franklin Institute) is seated at the near end of the table, wearing a red shirt.



Dr. Marc Gagne, of WCU's Astronomy Department, talked with the audience before the *Sky Tour* began broadcasting.



Room 113 was full for the WHYY *Sky Tour* broadcast.

Calendar Notes

February 5, 2002 (Tuesday)	Beginning Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EST
February 12, 2002 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EST
February 15/16, 2002 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
February 19, 2002 (Tuesday)	Beginning Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EST
March 5, 2002 (Tuesday)	Beginning Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EST
March 12, 2002 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EST
March 15/16, 2002 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
March 19, 2002 (Tuesday)	Beginning Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EST
April 2, 2002 (Tuesday)	Beginning Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EST
April 9, 2002 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EDT
April 12/13, 2002 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
April 16, 2002 (Tuesday)	Beginning Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EDT
April 20, 2002 (Saturday)	National Astronomy Day Location: To be determined all day
May 7, 2002 (Tuesday)	Beginning Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EDT
May 10/11, 2002 (Friday/Saturday)	CCAS Observing Session Location: BVA sunset
May 14, 2002 (Tuesday)	CCAS Meeting Location: West Chester University 7:30 p.m. EDT
May 21, 2002 (Tuesday)	Beginning Astronomy Class Location: Flower & Cook Observatory 7:00 p.m. EDT

January Skies

Moon Phases

Last Quarter	01/05
New Moon	01/13
First Quarter	01/21
Full Moon	01/28

The Planets

Mercury appears low in the west-southwest just after sunset as we start the new year. It will reach its highest point in our evening sky on January 11. After that it will drop rather quickly back into the Sun's glare.

Venus is pretty much lost in the Sun's glare during the month of January.

Mars is still in our evening sky. It is not too hard to find, as it is a bright reddish-orange "star" visible in the southwestern part of the sky soon after sundown. It's the brightest "star" in Pisces. We are too far away from Mars to see any details in a telescope.

Jupiter is in Gemini this month, rising in the east right after sunset. Jupiter outblazes even Saturn, and there's no mistaking it for anything else in that part of the sky! Jupiter reaches opposition on New Year's Eve, December 31. You'll have to wait until later in the evening, say around 11:00 p.m., to get a good look at Jupiter in a telescope.

Saturn is now high in the southeast at nightfall, high enough for good telescopic viewing. It is in Taurus in January. Saturn is a glorious sight, with the rings tipped fully open to our view.

Uranus and Neptune are too low in our evening sky now to be seen.

Pluto is too low in the morning sky to be seen in January.



Newsletter Deadlines

These are the deadlines for submitting material for publication in the newsletter, through the June 2002 issue.

<u>Issue</u>	<u>Deadline</u>
February 2002	01/25/2002
March 2002	02/22/2002
April 2002	03/29/2002
May 2002	04/26/2002
June 2002	05/24/2002



Observer's Handbook 2002: Update

The books are here. I'll bring them with me to the January meeting. If you ordered one, please bring the payment with you. Checks are ok, cash is even better, but no credit cards can be accepted. The bargain price, in case you forgot, was \$14.00 per copy. If you ordered a book and can't make the meeting, I'll call you and we'll figure out how to get your copy to you.



Astronomus: 9

A Journal for Young Astronomers

By Bob Popovich

“A Cloudy Night”

There is nothing quite like the clear, crisp sky of a winter night. Gleaming gems and familiar constellations pierce the night sky and warm our hearts. There is a special beauty to the winter sky that helps us forget the chilly temperatures, at least for a while.

So let's gather our equipment, jot down our observing targets, dress warmly and head out. But with one foot out the door we hear the utterance of that most discouraging word: “clouds.” We stop dead in our tracks. Our hearts sink. In an instant, our anticipation has evaporated.

Hold on, though. We're not in Chester County, PA in the 21st century. Tonight we're assistants to that great observational astronomer: Galileo Galilei. So, being learned people of the 17th century, we would be speaking Latin. And you know what that means! “No, I don't know what that means,” you reply. That means that the word we heard that stopped us in our tracks was the Latin word for “clouds”: NEBULAE.

Now our hearts leap with excitement because in the winter sky, that must mean the loveliest of clouds- the Great Nebula in Orion.

Throwing on our cloaks we race outside and turn to the south. There, high in the south stands a large constellation in the shape of an hourglass. With Rigel at one corner, Betelgeuse at the other and 3 bright stars in a neat row marking the middle, this constellation is easy to identify.

Now you'll recall from previous journal entries that I am partial to binocular astronomy. But for this cloudy night, I would urge you to use a telescope- especially one of Master Galileo's inventions!

Looking at the constellation it is easy to imagine the figure of a broad-shouldered mythological hero with the three bright stars in a row making up his belt and a small grouping of stars below the belt that represent his sword. Galileo has gone off to throw things from that Leaning Tower in Pisa, but he's told us to aim our telescope at the sword and he's instructed us to use relatively low power. The delicate and wispy nebula, he explained, is easier to see at lower power because objects become dimmer as magnification increases. Let's focus in and just look at it the way we look at cumulus clouds on a relaxing summer day.

To me, the nebula has an irregular shape. But perhaps you see some sort of figure. Either way, it is truly a wondrous sight that rivets our attention. Parts of the nebula are brighter than others and it almost gives us the impression of being able to see into a 3-dimensional object. When Charles Messier studied it he saw a separate, smaller nebula nearby and so he catalogued the Great Nebula as M42 and the smaller companion as M43.

As delicate and fragile as it might appear, consider what it is that we're actually gazing upon- a nebula that is 20 light years across (120,000,000,000,000 miles) and lies about 1,500 light years from the Earth. And what's more, it is a place that is

alive with activity. The stars visible within the cloud are all apparently young (in star years). Astronomers tell us that these stars are irradiating the gas that comprises the nebula and this makes the gas (mostly H and He) glow. If seeing conditions are good, you might even make out a color in the nebula. If you do detect a color, send me an e-mail and tell me what you see.

Astronomers also tell us that the gravitational forces within the Great Nebula are causing matter to clump together in various places. At some point, these clumps will be of sufficient mass for nuclear fusion to begin, and a star will be born. Think about what this means- the nebula is actually slowly dissipating as it gives birth to new stars. Someday, the Great Nebula might not be so great. But for now, let's enjoy its greatness.

If we had the time, we could use high power to zero-in on the diamond shaped grouping located in the middle of M42. It is called the Trapezium. But here comes Master Galileo, muttering something about a cannonball and a feather. Let's follow him inside and tell him all about what we've seen on this nebulae night.

Next time: Bully For You!



Cartoon by Nicholas La Para



CCAS to be featured on WCOJ Radio...Again...

Last month we reported that the CCAS would be the topic on December 24, 2001 on the popular talk show “Circling the Square” on WCOJ. Well, somebody doing the scheduling at the station forgot that the show isn't broadcast on Christmas Eve or New Year's Eve... Sooo....

CCAS President Mike Turco will be the guest on WCOJ Radio (1420 AM) on Thursday, January 10, 2002 at 4:00 p.m. on the program "Circling the Square." The topic of discussion with host Doug Sterling will be the Chester County Astronomical Society.

"Circling the Square" is a daily call-in talk show. The show features Chester County people, expressing their opinions on issues that affect Chester County. Each show features guests from area businesses and organizations, and callers with questions are always welcome.



CCAS Beginning 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 5	Introduction
February 19	Spaceship Earth
March 5	Don't Eat Green Cheese
March 19	The Solar System
April 2	Planetarium Field Trip (WCU)
April 16	Constellations
May 7	Stars
May 21	Telescopes and Binoculars

The classes will be held at the 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 is included on a later page.

The cost is \$15.00 per person, and \$25.00 per family, for non-members. **For current CCAS members, the classes are free!** Space is limited to just 40 people, so call Kathy Buczynski to reserve your space now (610-436-0821).

A copy of the advertising poster is included with this newsletter. You can make as many copies of it as you want, to distribute to friends and neighbors. If you can also take it to local stores, churches, YMCAs, schools, and other such public places and get permission to have it posted there, that would be a great help in getting the word out!



Help Needed With Society's 20" Telescope

The Society's 20" telescope belongs to the whole Society; it is intended to be available for use by members at Observing Sessions, and even for short-term borrowing by Society members. The problem we have with implementing this policy is, simply put, lack of mobility. We need a member with a big enough truck or minivan, and preferably with the storage space at home for the telescope, to volunteer to be the telescope's "custodian" and "chauffeur." The custodian would of course be able to use the telescope whenever it wasn't out on loan. The biggest part of the telescope is the bottom part; it weighs a couple hundred pounds. We have wheels and handles that convert that piece into a large "wheelbarrow" for

moving it, though, and ramps so it can be wheeled right into a vehicle. Ed Lurcott is willing to keep storing the telescope in his garage, if someone can volunteer to be the chauffeur, but not the custodian. If you can help, please call Ed Lurcott.



CCAS Newsletters Available via E-mail

You can choose to receive the monthly newsletter by e-mail. When the newsletter is finished, I convert it to a special type of file (a .pdf, for Portable Document Format) using a utility called Adobe Acrobat. Then all you need on your PC, besides an Internet connection with e-mail, is the Adobe Acrobat Reader program for your PC or Mac. This program is available free of charge from Adobe. Just connect to their Website at www.adobe.com and follow the links and directions for downloading and installing the correct Reader program for your PC or Mac. On the main screen (home page) of Adobe, at the top look for a "button" labeled "Products" and click it. On the next screen, scroll down to where it says "Adobe Acrobat Reader", and click that. Then click on "Download Now". Make sure the version number of the Reader you get is at least 4.0 because I'm using Adobe Acrobat version 4.0 to make the .pdf files. If you have an earlier version of the Reader, like 3.0, you'll have problems reading the files I make with Acrobat 4.0. The 4.0 Reader can read 3.0 files without a problem, so if you're currently using a 3.0 Reader you will still be able to read older files produced by Acrobat 3.0 if you upgrade your Reader to 4.0.

Once you've done that, then just send me an e-mail to let me know you want to switch to e-mail delivery of the newsletter. The biggest advantage of getting your newsletter this way is you get it two to three days earlier. Another of the advantages of getting the newsletter this way is that the photos and/or drawings that are color in the original will be in color in your copy of the newsletter. When we make the paper copies for mailing, they get copied in black & white, and sometimes the copy quality of pictures is not good. Another advantage is that getting your newsletter by e-mail will save the Society money in copying and mailing expenses. In the past year some issues have cost the Society \$75.00 and more in copying and mailing costs. So if you want your newsletter by e-mail, send me an e-mail at jim.anderson@mckesson.com and I'll get you set up on the e-mail distribution list.



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

Dark-Sky Website for PA

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>



CCAS Information Directory

CCAS Lending Telescope

Contact Kathy Buczynski to make arrangements to borrow the Society's lending telescope. CCAS members can borrow the 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 email message and send it to

Jim.Anderson@McKesson.com

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:

Jim.Anderson@McKesson.com

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 Officers

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: Pete LaFrance
(610) 268-2616

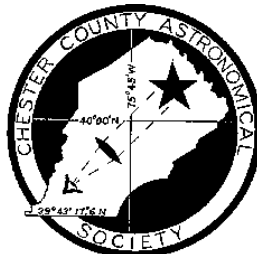
Secretary: Doug Liberati
(610) 827-2149

**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



CCAS Membership Information

The present membership rates are as follows:

REGULAR MEMBER.....\$20/year
SENIOR MEMBER.....\$10/year
STUDENT MEMBER.....\$ 5/year
JUNIOR MEMBER.....\$ 5/year
FAMILY MEMBER.....\$ 30/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 our Treasurer, Pete LaFrance. Mail to:

Pete LaFrance
413 Church Rd.
Avondale, PA 19311-9785

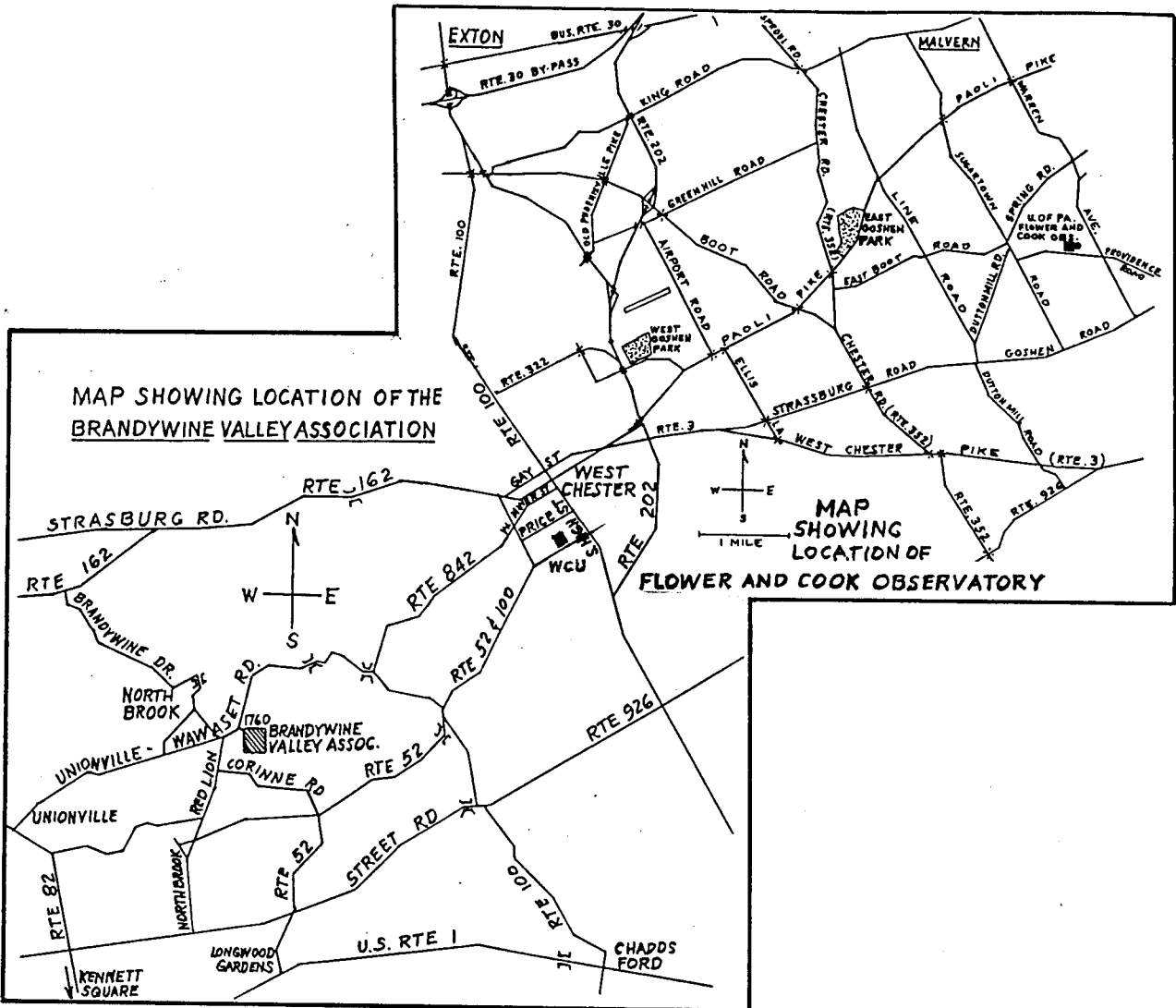
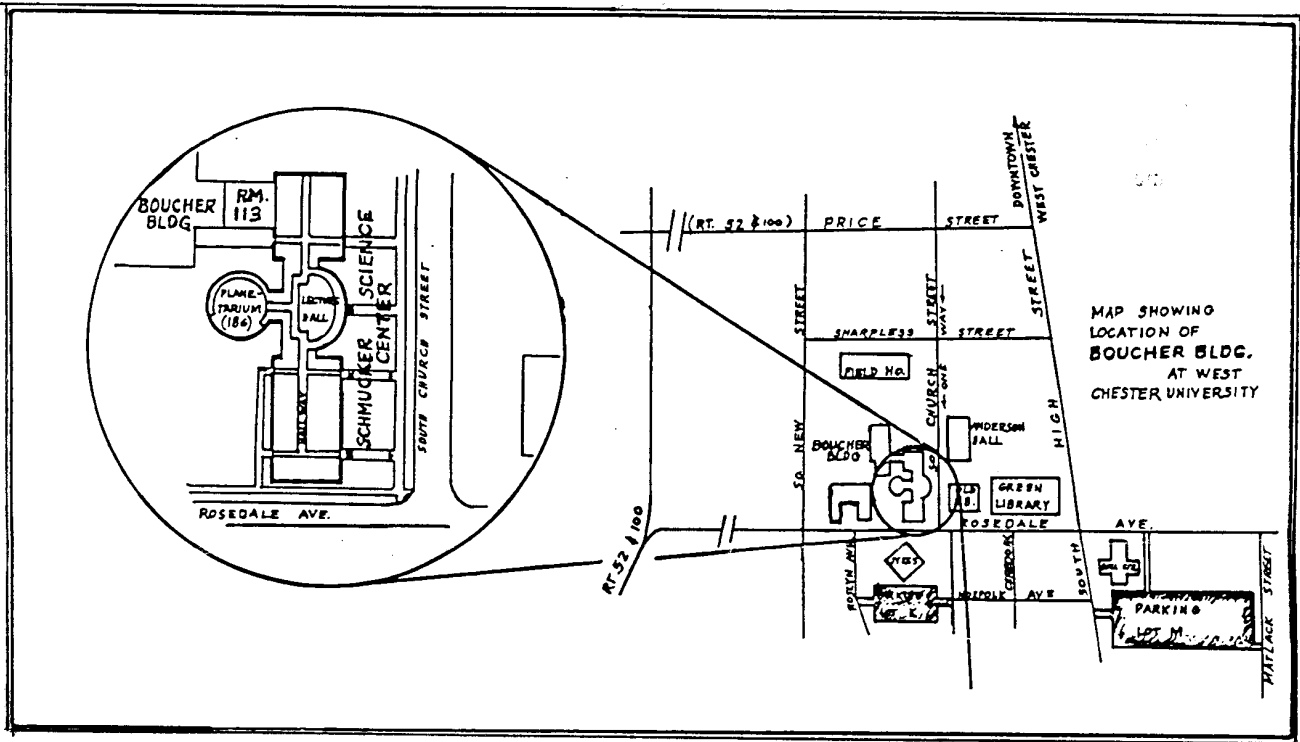
Sky & Telescope Magazine Group Rates

Subscriptions to this excellent periodical are available through the CCAS at a reduced price of **\$29.95** which is much less than the newsstand price of \$54.00, and also cheaper than individual subscriptions (\$39.95)! Make out a check to the Chester County Astronomical Society, note that it's for *Sky & Telescope*, and mail to Pete LaFrance. Or you can bring it to the next Society meeting and give it to Pete there. 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://members.tripod.com/~ccas_2/ccas.html

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@chesco.com





Beginning Astronomy Class



Flower & Cook Observatory

**February 5
through
May 21, 2002**

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

Cost

\$15.00 per person
or
\$25.00 per family

For ages 9 - 90

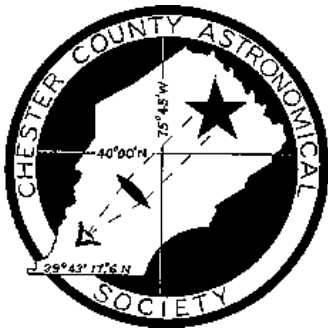
Location

University of Pennsylvania's
Flower & Cook Observatory

753 Providence Road
(near Warren Avenue)

Malvern, Pa.

Sponsored by the
Chester County
Astronomical Society



All classes are taught by
members of the CCAS,
a club of amateur astronomers

Price Includes

- Parking
- Handouts
- 4-month CCAS membership
- CCAS Monthly newsletter
- Observing sessions
- Star locator (planisphere)
- Drawing for excellent beginners' guide book
Turn Left At Orion

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