



# OBSERVATIONS



A MONTHLY PUBLICATION OF THE  
**Chester County Astronomical Society**

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

**FEBRUARY 2002**

(VOLUME 10, NO. 2)

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

[http://members.tripod.com/~ccas\\_2/ccas.html](http://members.tripod.com/~ccas_2/ccas.html)

## CCAS February Meeting

DATE: **Tuesday February 13, 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 program will be an illustrated presentation on the planets of our Solar System.



## Public Open House: F & C Observatory

There will be a **FREE** public open house program at the University of Pennsylvania's Flower & Cook Observatory in Malvern, PA on Friday February 22, 2002 at 7:30 p.m. EST. Dr. Trilling of the University of Pennsylvania will talk about his research into planetary formation from disks of dust around stars. After the lecture, there will be observing with the Observatory's telescopes. The Observatory is located on Providence Road, just west of the intersection with Warren Avenue. A map is included on a later page. Children are always welcome as long as an adult accompanies them.



## CCAS February Observing Session

The next CCAS Observing Session will be on Friday February 15, 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 February 16, 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 telescope. 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.



## 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. **The order of the classes has changed again from the order shown in the January newsletter.** These are the dates on which classes will be held:

February 5	Spaceship Earth
February 19	The Moon
March 5	The Solar System
March 19	Star Charts/Planisphere
April 2	Stars
April 16	Constellations
May 7	Planetarium Field Trip (WCU)
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).



## President's Message February 2002

For this issue, I decided to keep my opinions to myself and just list some of the good stuff to see in the sky this month, in addition to Jupiter, Saturn and the constellation Orion.

- 2/8 For you late sleepers (or early risers), Jupiter's moon Callisto will go into eclipse from 1:13 a.m. to 4:22 a.m.
- 2/10 For you non-insomniacs, Jupiter's moons Io and Europa are only 8' apart at 7:44 p.m. Also, the famous variable (eclipsing binary) star Algol reaches its maximum brightness of 3.4 magnitude at 10:10 p.m. Algol's variable period is 2.87 days, so if you catch it at this date and time, you can check it over the next three days and watch it do its thing. It is in the constellation Perseus, and you'll find it almost directly overhead this month.
- 2/12 New moon occurs at 2:41 a.m., so if you have to sneak around outside in the dark this month, this is the night to do it.
- 2/14 The moon reaches apogee, the farthest distance from the earth in its elliptical orbit, at 5:21 a.m. Incidentally, for everything you ever wanted to know about the moon's apogee and perigee with pictures and diagrams and such, see the following web site:

[http://www.fourmilab.ch/earthview/moon\\_ap\\_per.html](http://www.fourmilab.ch/earthview/moon_ap_per.html)

I suggest that Bill O'Hara, our distinguished Librarian, who professes some confusion over the appearance of the moon as it travels across the sky each month, check this web site out. [It may help you figure out the moon's path and orientation over time, Bill. Then, again, maybe it won't.]

- 2/16 For you astrologers, the sun enters Aquarius at 7:00 a.m. I have no idea what this means except that maybe the sun is thirsty.
- 2/18 Mercury is at its greatest illuminated extent of 23 square arc seconds. Maybe I will finally be able to find it through the trees that always seem to obscure it from my view.
- 2/27 The largest full moon of 2002, known as the Snow, Wolf or Hunger Moon, occurs at 4:17 a.m. So all you guys wake up and go out and howl at it with the rest of the wolves. The moon reaches perigee at 2:43 p.m. and unusually high tides will result due to the perigee occurring during a full moon. All you well-heeled members with beach houses make certain that you shut your back doors.

Finally, for those of you who don't already know about it, there is a web site where you can get a neat 4<sup>th</sup> magnitude sky map with notes every month. It even has a second page with the list of naked eye, binocular and telescopic objects for the month. It is very convenient and free. Check it out at <http://skymaps.com>.

See you at the next meeting.

Clear Skies,

Mike Turco



## Calendar Notes

- 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
- June 7/8, 2002 (Friday/Saturday) Observing session and meeting  
Location: BVA  
sunset



## 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>
March 2002	02/22/2002
April 2002	03/29/2002
May 2002	04/26/2002
June 2002	05/24/2002



## **Astronomus: 10**

### *A Journal for Young Astronomers*

By Bob Popovich

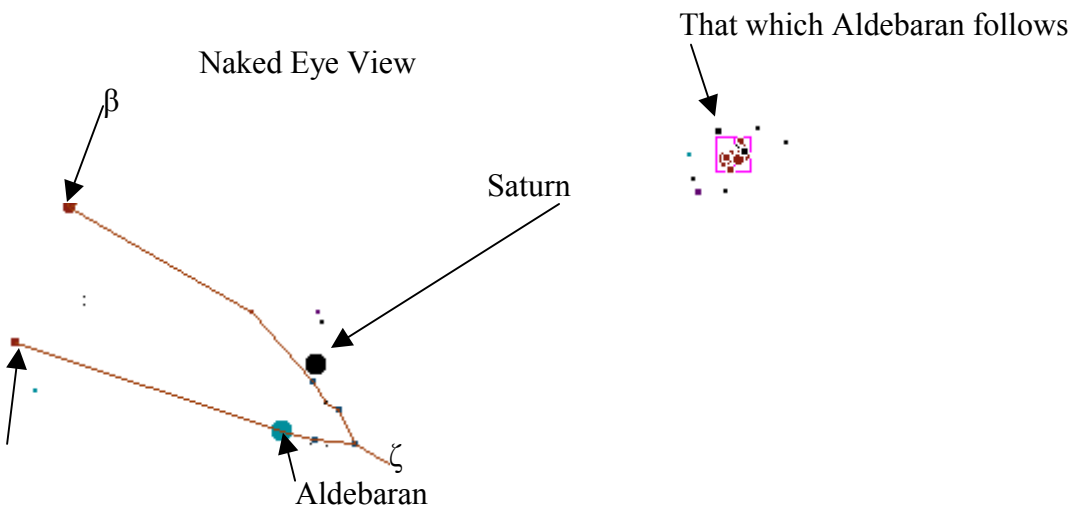
#### **“Bully for You!”**

If you enjoy American history, this month’s title might conjure up the image of Teddy Roosevelt. “Bully” was his way of expressing approval. Teddy also used to greet people with a booming, friendly “dee-lited!” In the mid-winter sky this month, Taurus, recognized since ancient times as a bull is certainly “bully.” It’s also equally certain to “dee-lite” all of us as we turn our attention to it.

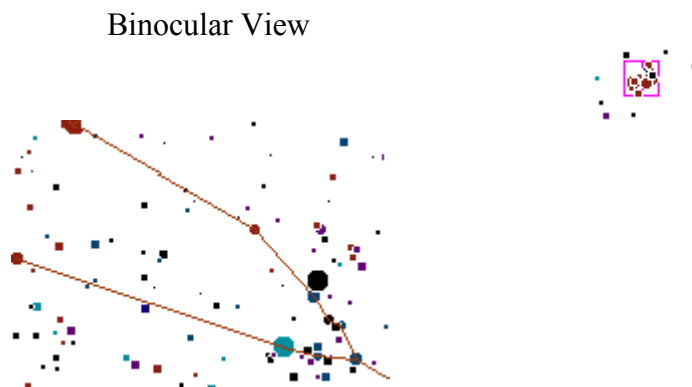
Facing south, Taurus stands high in the sky up and to the right of Orion. We can recognize Taurus as a letter “V” lying on its side. This concentration of stars represents the snout of the bull. And if we extend the “V” to the left, we’ll encounter two additional stars that represent the tips of his horns. These two stars are ζ (zeta) and β (beta) Tauri (the genitive form of Taurus). The bright red-orange star we see is Aldebaran and it marks one eye of the bull. Aldebaran is Arabic for “the follower” because it follows Taurus’ most prominent feature across the sky. “What feature is that you ask?” The answer will become “dee-lightfully” apparent in just a bit.

As we look at Aldebaran, we’ll notice a very bright creamy-yellow star nearby that seems to mark its other eye. But that’s not a star, it’s Saturn. Taurus, of course, is a constellation of the zodiac. And the 12 constellations of the zodiac mark the ecliptic- the line that essentially defines the plane of the solar system. And that means that the planets (except Pluto) revolve around the sun along this line. So, at one time or another, they’ll all move through Taurus. And while Saturn adds an extra touch of beauty, it’s not a permanent feature of the bull for even the ancient Greeks knew that Saturn was a “planetos” (i.e., wanderer).

This illustration will show you what the constellation looks like on a typical night in this area:



Now, let’s raise our binoculars and look again. How spectacular. Makes you want to shout “Olé!”



Look at the glittering stars grouped around Aldebaran! It’s the Hyades cluster. “They look too far apart to be a cluster” True enough. But except for one of the principal stars, they’re all moving together towards Betelgeuse in Orion. And as clusters go, they’re our neighbors being only about 150 light years away from Earth.

The Hyades really draw us in with its beauty. Yet, Taurus is known more for another cluster standing up and to the right. And this one is the prettiest of all clusters. To the Arabs, this cluster was so prominent that the α star (Aldebaran) followed it. Greek mythology gave

them the name of the Seven Sisters. Charles Messier recorded them as the 45<sup>th</sup> object in his catalogue (M45). But we all know this cluster as the Pleiades.

Six stars are actually visible with the naked eye (many more come into view with binoculars) and they have been an awesome sight for ages. In fact, one book of the Old Testament mentions the Pleiades twice. If you know which book it is, send me an e-mail at [b2n2@aol.com](mailto:b2n2@aol.com).

All of the stars of this cluster are gleaming blue-white gems. And in the stillness of a winter's night, they warm our souls, if not our toes.

Perhaps the Pleiades remind you of the Big Dipper. Or perhaps they remind you of the logo of a Japanese car manufacturer. You see, the Japanese word for Pleiades is Subaru.

We'll slowly conclude our evening with Taurus by just drinking in the Pleiades. A glorious sight immortalized in mythology, the history of astronomy, auto manufacturing and even Holy Scripture. And there they stand. Night after night. For our enjoyment and wonder. How "dee-lightful."

Next time: "Inseparable".



Cartoon by Nicholas La Para

## CCAS Secretary's Report

Meeting of January 8, 2002

By Doug Liberati

Meeting convened on January 8, 2002 at approximately 7:30PM.

Officers in attendance were President Mike Turco, Vice President Steve Limeburner and Secretary Doug Liberati.

Kathy Buczynski had flyers on hand for this year's sessions of the astronomy classes. She requested that members take them and post them in appropriate places to generate interest. The class offerings this year are the same as last year. Additionally, there were several extra copies of *Skywatch '02* magazine that were not needed for the class. Kathy was offering these for five dollars; money to be put toward the education fund.

Member Directories are now available, they can be had from Kathy. The *Observer's Handbook 2002* order is also in. If you ordered one, you can get it from Jim Anderson.

Ed Lurcott's Observing Report was included in the January newsletter. **He also informed us of the upcoming occultation of Saturn by the Moon on February 20, 2002. In our area, this will occur at about 7:22 PM EST.**

Mike Turco was scheduled to make a local radio appearance on WCOJ 1420 AM on January 10th, talking astronomy and promoting the CCAS.

This announcement prompted Deborah Goldader to raise the topic of creating a group Public Relations officer, to get our message out to the community. There was discussion on this topic, but no decision and no volunteers. Mike did report a great improvement in our visibility in the last year.

The business meeting concluded with Jeff Goldader passing on a status report on the Flower and Cook Observatory.

As the presentation, Bob Popovich presented a slide tour of his visit to Yerkes Observatory, as well as the history of the construction of the 40" refractor and the observatory.



### Jupiter Bulletin from *Sky & Telescope*

John McAnally, assistant coordinator of the Association of Lunar and Planetary Observers Jupiter section (ALPO), issued an alert today to encourage amateurs to observe the activity taking place near the Great Red Spot (GRS), located in the south edge of Jupiter's South Equatorial Belt, one of the two conspicuous cloud bands girdling the planet.

For 60 years, three large ovals persisted in the South Temperate Belt. Now the last of the three, designated BA, appears to be on a collision course with the Great Red Spot. Observers favored with steady seeing conditions and clear skies will have a ringside seat for this rare event. But, more than this, amateur observations may also provide insight into the dynamics of Jupiter's cloud belts. Says McAnally, "Astronomers are asked to make special efforts to observe this GRS/BA interaction so that a complete sequence of events can be constructed to characterize the behavior of the winds, jet

stream, and other atmospheric conditions surrounding this interaction — data that would be of great value."

To see the oval, you'll need predictions of when Jupiter's Great Red Spot and surrounding areas transit the planet's meridian and are best for viewing. Amateurs are requested to visit the ALPO Jupiter section on the Web for instructions on how to submit their observations.

*Gary Seronik*

Ed. Note: predictions of when the Great Red Spot transits Jupiter's meridian can be found in *Sky & Telescope* magazine each month, and by visiting [www.skypub.com](http://www.skypub.com).

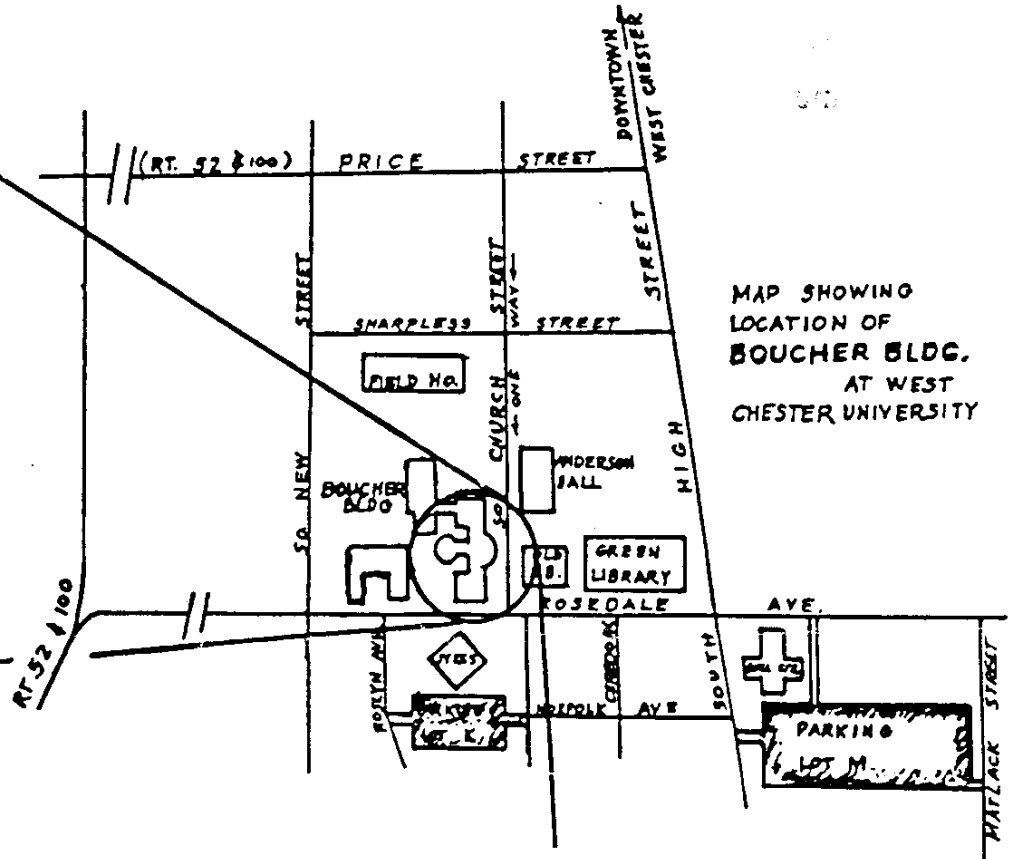
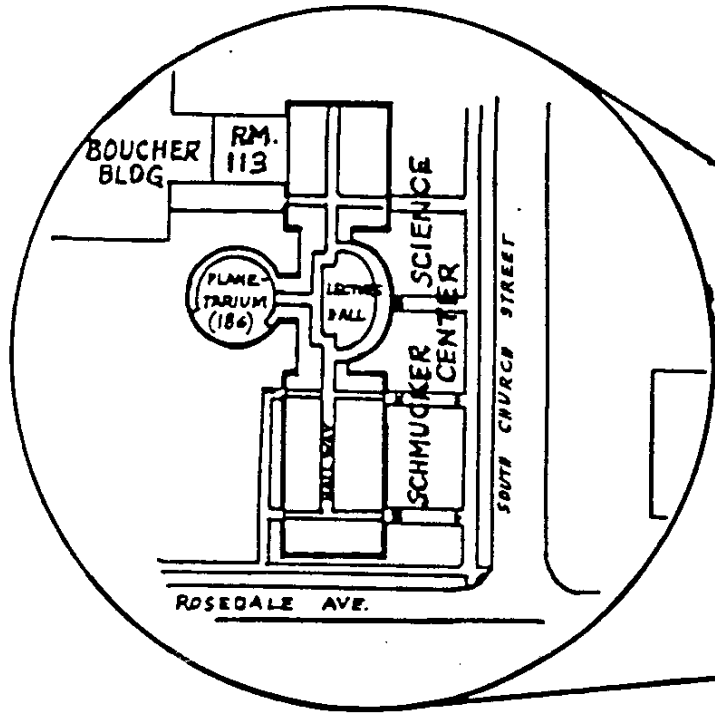


### CCAS Newsletters Available via E-mail

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](http://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](mailto:jim.anderson@mckesson.com) and I'll get you set up on the e-mail distribution list.





MAP SHOWING  
LOCATION OF  
BOUCHER BLDG.  
AT WEST  
CHESTER UNIVERSITY

## 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](mailto: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](mailto: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

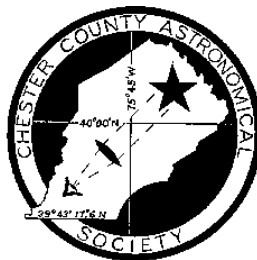
**Secretary:** Doug Liberati  
(610) 827-2149

**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](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](mailto:lafrance@chesco.com)

