



# OBSERVATIONS



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

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

**APRIL 2001**  
(VOLUME 9, NO. 4)

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

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

## Society Visits Eastern College Observatory



M101, spiral galaxy in Ursa Major



*Photo by Roy Furman*



M1, nebula in Taurus (remnant of a supernova explosion in 1054 A.D.)



M92, barred-spiral galaxy in Ursa Major

On March 13, 2001, members of the Chester County Astronomical Society were guests at the Eastern College Observatory in St. Davids, PA, not far from King of Prussia. Despite the light pollution, the Observatory's two computer-controlled 16" Meade Schmidt-Cassegrain telescopes gathered some impressive CCD images for CCAS members at the controls. Above, Kathy Buczynski is at the controls, taking the astronomical images you see on this page. Sylvia Hogate is watching over Kathy's shoulder. In the photo at lower left, Steve Limeburner (on right) and a staff member watch the action at the other telescope control computer.



M51, spiral galaxy in Canes Venatici



*Photo by Roy Furman*



The twin domes of the Bradstreet Observatory can be seen atop the McInnis Learning Center at Eastern College.



M95, a barred spiral galaxy in Leo

## Observations Editorial Staff

Editor in Chief: James J. Anderson  
Copy Editors: Donna G. Anderson  
Edwin T. Lurcott

### Contributing Members:

Kathy Buczynski, Roy Furman, Deborah Goldader, Ed Lurcott, Steve Limeburner, Mike Turco

## Newsletter Deadlines

These are the deadlines for submitting material for publication in the newsletter, through the August 2001 issue.

<u>Issue</u>	<u>Deadline</u>
May 2001	04/26/2001
June 2001	05/28/2001
July 2001	06/26/2001
August 2001	07/27/2001

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## Welcome New Members!

The Society would like to extend a warm welcome to Victor Carlucci, Thomas Farrelly, Ronald Horrell & Family, Randall Lyons, Chiara Nuzzo, and Penny Rosselle. Hello everyone, and Clear Skies!

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## April Skies

### Moon Phases

First Quarter	4/01
Full Moon	4/07
Last Quarter	4/15
New Moon	4/23
First Quarter	4/30

### The Planets

Mercury will emerge from the Sun's glare at the very end of April, in our evening sky. It will still be close to the Sun and hard to spot.

Venus is in the morning sky this month, rising before the Sun.

Mars rises around midnight, and by dawn is about as high in the sky as it will get. In the latter half of April Mars starts getting noticeably larger, and is a rewarding telescopic sight for those who are out in the wee hours.

Jupiter and Saturn continue to reign in the west in our evening skies this month.

Uranus and Neptune can be found in the morning sky, in the southeast as dawn approaches.

Pluto is in Ophiuchus in April, north and west of much brighter Mars.

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## CCAS April Meeting

DATE: Tuesday April 10, 2001  
TIME: 7:30 p.m. EDT  
PLACE: Department of Geology and  
Astronomy Lecture Room  
Room 113, Boucher Building  
West Chester University

LOCATION: South Church Street  
West Chester, PA  
(see map on a later page)

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. CCAS meetings are always open to the public, and free of charge. Children are welcome as long as an adult accompanies them.

At the April meeting, we will have a "member's question and answer" session, where you can ask any question about astronomy, and the other members present attempt to answer it. Here are some questions; start looking up answers for them, please. Thanks.

1. Meteor showers are caused by the debris left over from comets crossing Earth's orbit. Does this debris follow the same orbit as the comet? How can they remain in the same part of Earth's orbit to produce annual meteor showers at almost the same day of each successive year?
2. The Astronomical League offers a Lunar certificate to anyone completing observations of about 100 features on the moon. Where can I find an almanac that tells when the best time is to observe each feature?
3. Galileo's method of using Jupiter's moons to determine longitude on land was eventually accepted by mapmakers after 1650. How is this done?
4. For forecasting the weather, I listen to KYW 1060, watch the Weather Channel and network news, and use weather.com and CNN Interactive Weather on the web. What methods do members prefer and why?
5. What is the best way to clean an eyepiece lens, especially if it is an expensive eyepiece?
6. Venus currently appears as a very slim crescent. Is it possible for an amateur to observe the planet Mercury in any sort of crescent phase?
7. Many Hubble Space Telescope images (e.g., the Eagle Nebula) show red stars due to false color. Is false color used for scientific purposes, or just to make a "pretty picture," or both?
8. I am baffled by baffling. This is the method of blocking stray light inside a telescope by masking the inside of it. How do they know where to put the baffles and what size to use?
9. How would I go about observing the International Space Station?

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## CCAS April Observing Session

The next CCAS Observing Session will be on Friday April 20, 2001 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 April 21, 2001. 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. A troop of Boy Scouts is camping at the BVA that weekend; they will visit the Observing Session.

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.



### President's Message April 2001

#### *The Apollo Moon Landings – A Big Hoax?*

On February 15, I watched a show on the Fox network that proposed that the Apollo moon landings never really happened. The show claimed it was an impossible task to achieve, so NASA staged the whole thing, from Area 51 no less, to one-up the Soviets in our Cold War battle. Oh, really?

Conspiracy theories are not to be immediately dismissed. While I don't go quite as far as the X-Files, I will never believe the Kennedy assassination was the work of one man. I may only have been 17, but I knew something was up when I watched Jack Ruby shoot Oswald live, on camera, from *inside* a Dallas police station. Proof positive for me was the morbid demonstration of the conservation of momentum revealed by the Zabruder film a decade later. Shame on Arlen Specter for straight-facing that ridiculous single-bullet theory.

But faked moon landings? Hey, I've been interested in things extraterrestrial almost as long as Ed Lurcott's been tinkering with telescopes. So when I got wind of this show I figured I'd better watch.

Rest easy, everybody. This show was more full of holes than a stop sign on a country road. Here's a few that I picked up.

- "The flag the astronauts put in the ground was waving in the breeze!" (No, the flagpole was being turned back and forth by the astronaut holding it. Effortlessly done without an atmosphere.)
- "There were no stars in the sky!" (Yes, there were. However, as anyone who has ever exposed a photograph knows, the sunlit objects like the astronauts themselves were much too bright for the camera to show both them *and* the much-fainter stars. The exposure setting to photograph the brightly lit astronauts and moon surface was too fast to pick up the much dimmer stars.)
- "In one shot the Lunar Lander can be seen, but in another shot of the same place, the Lander isn't there!" (Didn't they

ever hear of parallax? Move only slightly away from a nearby object (the Lander), and a faraway object (the hill the astronauts were walking around on) still looks the same.)

- "The moonscape of the Apollo landings looks suspiciously like the set from the movie *Capricorn I!*" (Who copied whom? *Capricorn I* was made a decade *after* Apollo 11.)
- "When the astronauts took off from the moon, there was no flaming exhaust from the rockets!" (True, because no air, no "flaming" exhaust.)
- "The astronauts couldn't have survived passing through the radiation of the Van Allen belts. Even the Russians knew that!" (Horse hockey, there isn't enough radiation in the Van Allen belts to seriously affect astronauts inside a spacecraft passing through. That is one of the first things that needed proving prior to attempting the trip.)

The show goes on and on. No blast crater under the Lander. There shouldn't have been any dust under and around the Lander to leave the famous footprint in. Shadow angles are wrong. And where was this phony stage set up? Area 51 in Nevada, of course! At one point the show's chief hoax proponent accused NASA of conspiring in the deaths of the Apollo 1 crew because they were going to spill the beans about the faking. I thought that went a little too far.

I didn't plan to write any opinions on this program. I figured that most of you, if you saw the show, probably got the message as I did. Yet when I read that NASA was deluged with requests from elementary school teachers for explanations because their kids questioned them after seeing the show, I did a slow burn. Therein lies the really bad thing about shows like this. They send out inaccurate, and at times damaging, information. That makes me angry. Those of us who care about getting information on astronomy out to the general public not only have to do that, we have to counter misinformation at the same time.

Step aside, Arlen. Now it's shame on you, Fox.

#### *Mike Turco*

P.S. For a really great debunking of the entire show, check out the web site: [www.badastronomy.com](http://www.badastronomy.com). It is a site "devoted to airing out myths and misconceptions in astronomy and related topics." It's worth a bookmark.



### 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 April 20, 2001. The program starts at **8:00** p.m. EDT with a talk by Dr. Angelica de Oliveira-Costa, entitled "The Cosmic Microwave Background: New Challenges." If the skies are clear, there will also 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.

This may be the last Public Night at the Flower & Cook Observatory. FCO Director Deb Goldader, who started the programs, has submitted her resignation to the University of Pennsylvania.





## Calendar Notes

- April 19-22, 2001 DelMarVa Star Gaze VII  
Location: Tuckahoe State Park, Queen Anne, Maryland
- May 5, 2001 (Saturday) Northeast Astronomy Forum and Telescope Show  
Location: Rockland Community College, Suffern, NY
- May 8, 2001 (Tuesday) CCAS Meeting & Officer Elections  
Location: WCU, Boucher Bldg. Rm. 113  
Topic: TBA  
7:30 p.m. EDT
- May 18/19, 2001 (Friday/Saturday) CCAS Observing Session  
Location: BVA  
sunset
- June 15/16, 2001 (Friday/Saturday) CCAS Meeting & Observing Session  
Location: BVA  
sunset
- June 15/16, 2001 (Friday/Saturday) CCAS Meeting & Observing Session  
Location: BVA  
sunset
- June 22-24, 2001 Mason-Dixon Star Party  
Location: Spring Valley Park in York County PA
- July 20/21, 2001 (Friday/Saturday) CCAS Meeting & Observing Session  
Location: BVA  
sunset
- July 25-28, 2001 ALCON 2001  
Astronomical League National Meeting  
Location: Frederick, Maryland
- August 11/12, 2001 Perseid Meteor Shower  
Location: everywhere  
early morning hours
- August 17/18, 2001 (Friday/Saturday) CCAS Meeting & Observing Session  
Location: BVA  
sunset



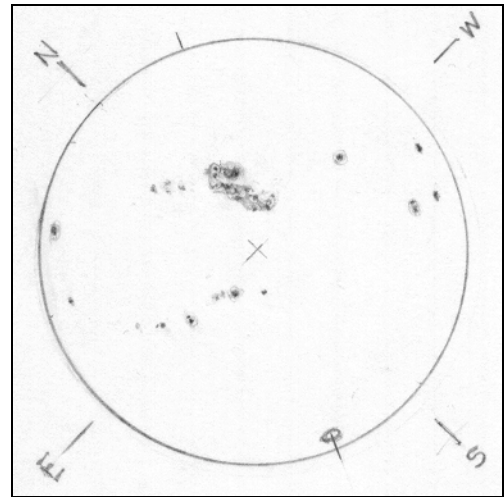
## CCAS Beginning Astronomy Class

This series of eight classes is being 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 the remaining four classes will be held, and the topics for each session:

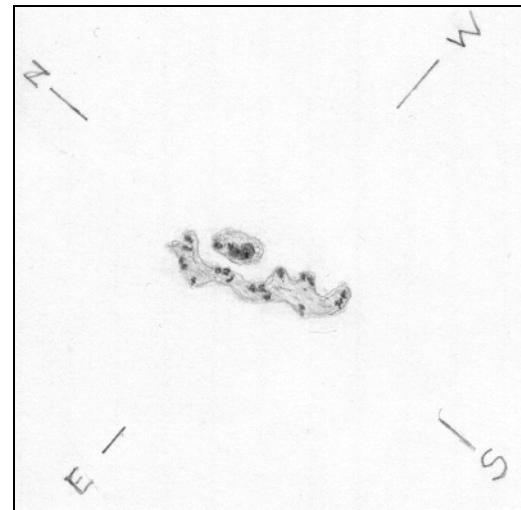
- April 3 Planetarium Field Trip (WCU)  
April 17 Constellations  
May 1 Stars  
May 15 Telescopes and Binoculars  
May 22 Private Open House at Flower & Cook Observatory for class members only

Contact Kathy Buczynski (610-436-0821) with any questions you have about the class.

So far the classes have gone well, and we have had about 28-30 people in attendance at each session. There have been about 8 attendees eligible for the telescope drawing at each session.



Drawing of Sunspot Activity  
2:30 p.m. EST March 28, 2001  
by Edwin T. Lurcott



Detail of Major Sunspot Complex  
Estimated length 90 – 100,000 miles North to South  
2:20 p.m. EST March 28, 2001  
by Edwin T. Lurcott



## National Astronomy Day is Saturday April 28

We have made arrangements for the CCAS to have an exhibit at the Exton Square Mall for National Astronomy Day. We plan to have tables with displays and telescopes inside, and solar observing outside (if it's clear that day). **We need people to help man the tables and the outside solar telescope!** We will be there from 10:00 a.m. until 6:00 p.m. You don't need to stay the whole 8 hours. Even if you can only be there for an hour that will be a big help. That will allow us to give people meal breaks or rest breaks. Also, any ideas you think of for enhancing our display that day are most welcome.

Please contact Ed Lurcott (610-436-0387) to help us stage a great Astronomy Day exhibit! It's a good way to get your picture in *Observations!* And, believe it or not, it really is a lot of fun!



## CCAS Officer Elections: May 2001

This is an election year in the Chester County Astronomical Society. The offices of President, Vice President, Secretary, and Treasurer are up for election. The term of office is two years. As this April newsletter goes to press, this is the slate of candidates:

For President: Mike Turco

For Vice President: Steve Limeburner

For Secretary: Doug Liberati

For Treasurer: Pete LaFrance

If you would like to nominate someone, or would like to run for office yourself, please contact the Election Committee: Ed Lurcott (610-436-0387) or Jim Anderson (610-380-4512). All nominations must be made by April 15 so that ballots can be printed and mailed in time for the May Society meeting, when the election will be held.



### From the e-mail sack...

In the December 2000 issue of *Sky & Telescope* magazine, an article written by Mike Turco, "It's Gotta Be White", was published. Since that time, Mike has received numerous e-mail messages from around the world. Here are two of those messages.

Date: 11/26/00 7:08:17 AM Eastern Standard Time

From: robhobson@cybertrade.co.za (Robert Hobson)

To: maturco@aol.com

Dear Mr Turco,

I just want to tell you how much my family and I enjoyed your article in the latest *Sky and Telescope*. We read it with much amusement, sympathising with your feelings entirely. A year or two back we bought a small second-hand reflector for using at school Astronomy Society meetings, and I remember the disappointment I felt when I first saw it, and it was red. If it hadn't been so cheap and so hard to find I might also have decided not to afford it...

We live in South Africa on a sheep farm, in the middle of nowhere, 100 km from the nearest town (Graaff-Reinet) and 200 km from the nearest city (Port Elizabeth). Which means that we have wonderfully dark skies. It is very dry in the region where we live, rather like Arizona I believe, so the air is clear and most nights are cloud free. Here on the farm I have an old 8-inch reflector (painted white), which I made when I was a teenager in the early 1970's. I also longed to own a telescope, but here in South Africa you simply could not buy one, so I embarked on the long job of making one. It took me nearly three years, being a girl and not very handy at technical things, but now I still enjoy it, especially since my husband built me a small observatory for it. Once a year we hold an "astronomy camp" here, for pupils from our children's school in Graaff-Reinet, and then the telescope gets well used. Living far from major centres makes me feel very isolated from other amateur astronomers, so magazines like *S & T* are important to me. Thank you again for your well-written piece.

Best wishes,

Fiona Hobson

In Mike's reply to this message, he said something about envying the dark skies, and joked about the CCAS visiting the Hobsons for an Observing Session. This was the reply from Fiona.

Date: 12/3/00 12:44:10 PM Eastern Standard Time

From: robhobson@cybertrade.co.za (Robert Hobson)

To: MATurco@aol.com (Michael A. Turco)

Dear Michael,

We were delighted to receive your reply. This is just to say : thank you, and please do come! We would love to be your dark sky site, especially if it meant real people coming here with real telescopes!

My husband Rob is a qualified civil engineer, but instead has been farming for the past 22 years. He grew up on a farm, and when his father offered him the opportunity of managing this property, Rob realised that farming is what he really wanted to do. He has loved it. I was a high school science teacher when I married him and came to live here in the middle of nowhere, a decision I have never regretted. This past year I have in fact been teaching again - my children's school in Graaff-Reinet needed a science teacher, so I agreed to help them out until they could find one. Finding science teachers is very difficult here, so I ended up teaching the whole year. I love teaching, so it was fun, though I do not like living away from home all week, and will not be continuing next year. (Our academic year starts in January.)

We have four children, a daughter of 19, two sons of 17 and 15, and a daughter of 12. They are a great blessing to us.

Ever since comet Shoemaker-Levy hit Jupiter I have been running a small astronomy society at the children's school. We meet once a month, and the membership consists of about 25 teenagers, with one or two parents who come occasionally. If you or any of your club members were ever to visit us, I would try to organise that you get to meet the astronomy kids. It would be such a thrill for them - they seldom get exposed to anyone other than me who knows anything about astronomy.

Our farm is lovely, and we always enjoy visitors. Our farmhouse is made of stone, a nice big house, situated in rolling hills. I have always enjoyed the feeling of being in the wild, away from all signs of civilisation, able to go for long walks in the "veld" - do you know this word?, it means large areas of wild, uncultivated, natural bush and scrub. The farm consists of about six thousand hectares of veld, on which we run sheep and goats. There are wild animals too, such as large antelope (kudu and springbok) as well as smaller deer and lots of small mammals and reptiles. Lots of birds too of course. We can accommodate about six guests comfortably, although we usually host about 14 teenagers at astronomy camps. So please do feel welcome!

My observatory is of course very small, a typical 3 m x 3 m (10 ft x 10 ft) square building with a sliding roof. But it is surrounded by a large flat area where any number of telescopes could stand! My telescope is not that wonderful, sometimes the optics are not perfectly collimated, and right now its mirror needs re-aluminising, - it's quite a job organising to get the mirror to the national observatory at Sutherland, where aluminising is done. But I still love using the telescope, even with its occasional imperfections. It has a

good equatorial mount, but no clock drive, so I do not engage in photography. However, just ordinary straightforward observing is very rewarding here. Not only do we have dark skies, but both summer and winter nights are long, and seldom unbearably cold. And the southern skies are magnificent. If we were ever to move to the northern hemisphere my husband and I agree that the thing we would miss most would be the southern constellations. The Milky Way in the Southern Cross and Carina regions is just amazing, with an incredible wealth of open clusters, and then there are the famous globulars Omega Centauri and 47 Tucanae, and the Magellanic Clouds.... (I remember walking outside one night in 1987, and looking up at the lovely sky, and realising that there seemed to be a new star in the Large Magellanic Cloud. I did not remember a bright star just there. At that stage I was busy with little children and was somewhat out of astronomy - I did not receive *Sky and Telescope* then - and it was some time before my *Scientific American* informed me of the wonderful new supernova in the LMC. It was exciting to have seen it without knowing to look for it.)

So, thank you again for your friendly reply. We will keep in touch, and we hope that one day you will indeed come out here and visit us.

Best wishes,

Fiona Hobson



### 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. Thanks.



### A.L. Youth Activities Committee

The Astronomical League has many programs to promote astronomy. One of these programs is the Youth Activities Committee, whose Chair is Ryan Hannahoe. Ryan lives in Pennsylvania, and is a very active 9<sup>th</sup> grade amateur astronomer. Ryan may speak to the CCAS this year about the Youth program; Steve Limeburner is working with him on this. In the meantime, Ryan asked us to let everyone know that the A.L. plans to release a 30-page booklet in July entitled *How To Start A High School Astronomy Club*. Any interested teachers can contact him at hstinst@aol.com. The Y.A.C. Website is at:

[http://youth\\_in\\_astronomy.homestead.com/index.html](http://youth_in_astronomy.homestead.com/index.html)



### Youth Space Program at West Chester Univ.

This summer, West Chester University will present a program for students aged 9 through 16 entitled "Journey Into Space." This program will run from July 2 through July 13, 2001 (excluding July 4). Daily class time is 9:00 a.m. to 4:00 p.m., except on field trip days. Cost is \$500.00, and enrollment is limited. A "resident option" is available at \$850.00 per person based on double occupancy, with breakfast, lunch, and dinner included. The theme this year is "Off to Mars!" Activities will include working with satellite imagery and processing, weather tracking satellites, computer labs, building and launching your own rockets, learning the basic principles of rocket design and flight, life support technology, weightless training (underwater SCUBA), Mars habitat design, and more! The only "prerequisite" is an "interest in space." Contact Jim Anderson for a copy of the brochure (610-380-4512). For an application, contact the Director, Nancy McIntyre at West Chester University (610-436-2393) or e-mail at nmcintyre@wcupa.edu



### A.L. Observing Awards Updates

CCAS Members also belong to the nationwide Astronomical League, which means they are eligible to receive observing awards in recognition of their development as observational astronomers. Below is a list of awards already awarded to CCAS members. Is anyone else working on an A.L. observing award? Let *Observations* know how you're doing.

#### CCAS Messier Certificates:

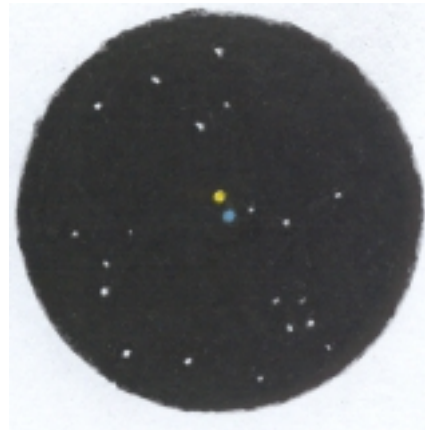
- Jim Anderson, Basic (now has 87 of 110 objects)
- Frank Angelini, Honorary
- John Imburgia, Basic (now has 84 of 110 objects)
- Ed Lurcott, Honorary

#### CCAS Lunar Certificates:

- Jim Anderson
- Elise Furman
- Steve Limeburner

#### CCAS Double Star Certificates:

- Jim Anderson
- Steve Limeburner
- Ed Lurcott
- Mike Turco



Double Star 145 Canis Majoris  
Drawing by Jim Anderson



## 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

**jimanderson1956@aol.com**

Or mail the contribution, typed or handwritten, to:

**Jim Anderson**  
**19 Bluff Road**  
**Thorndale, PA 19372-1104**

### 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:

**jimanderson1956@aol.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  
 (610-380-4512)

### 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

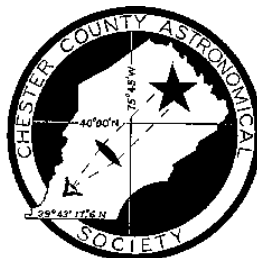
**Treasurer:** Pete LaFrance  
 (610) 268-2616

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

**ALCor and Newsletter:** Jim Anderson  
 (610) 380-4512

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

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



### 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)

