



OBSERVATIONS



A MONTHLY PUBLICATION OF THE

Chester County Astronomical Society

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

JANUARY 2000

(VOLUME 8, NO. 1)

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

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

CCAS January Meeting

DATE: **Tuesday January 11, 2000**
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.

Our guest speaker, Bart Fried, is a member and past-president of the Antique Telescope Society. His presentation is entitled "The German Influence on American Telescope Making". This should be a fascinating look into the history of telescope making in this country. Don't miss it!



CCAS January Observing Session

The next CCAS Observing Session will be on Friday January 7, 2000 starting at about 6:00 p.m. or earlier, if you can get there earlier. If it's too cloudy on Friday, then the Observing Session will be on Saturday January 8, 2000. 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. Make sure to dress warmly, as it gets cold rather quickly at this time of year.

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.



Special CCAS Observing Session on January 20 for the Total Eclipse of the Moon

The CCAS will have a special observing session this month on the night of Thursday January 20 at the Brandywine Valley Association, to watch the total eclipse of the Moon that occurs that night. The eclipse begins at about 10:00 p.m. EST, with mid-eclipse at about 11:45 p.m., and it will end at about 1:25 a.m. EST on Friday January 21. Make sure you dress warmly for this event. Bring warm beverages like hot cocoa and cider. Bringing something to eat is also a good idea, as your body will be consuming more calories than usual in trying to stay warm.



Telescopes and Members Needed!

There is a star night for some Cub Scouts at the Flower & Cook Observatory on Friday January 14, 2000. This group was scheduled to be there on Monday December 6, 1999, but they were clouded out that night. We need people and/or telescopes to assist with this event. Those without telescopes can assist with pointing out stars, planets, and constellations. These events are always fun and fulfilling, because many of these children will be looking through telescopes for the first time. Remember the first time you saw Jupiter or Saturn through a good telescope? Share the magic!



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 January 28, 2000. The program starts at **7:00** p.m. EST with a talk on a cosmological topic by Dr. Max Tegmark of the University of Pennsylvania. If the skies are clear, there will be observing with the Observatory's telescopes. Children are of course welcome as long as they are accompanied by an adult. The Observatory is located on Providence Road, just west of the intersection with Warren Avenue. A map is included on a later page.

To be scheduled: a Teen Night at the Observatory, for students in 8th through 11th grades. If you would be interested in attending such an event, e-mail the Observatory at:

goldader@dept.physics.upenn.edu



Mea Culpa

Some of you received a receipt for dues with this newsletter. I know it's very late, in some cases, several months late. It's not Pete's fault (Pete LaFrance, our Treasurer). He gave me those receipts several months ago so I could include them in your newsletter envelope. Then I misplaced them here at home, and just discovered them a few days ago. So if you're just now getting a receipt for dues paid months ago, yell at me, not Pete. I'm very sorry I messed this up.

Jim Anderson



President's Message January 2000

The Century's Most Inspiring Images

We briefly reviewed *Sky & Telescope* and *Astronomy* magazines' January 2000 millennium articles at our December club meeting. *S&T's* "10 Most Inspiring Images of the Century" are worth noting and deserve contemplation. What better way is there to start the next millennium than to stop and take pause at pictures which reveal at once how far we've come and yet how much more there is to learn. I urge everyone who hasn't seen them to take a long look. They alone are worth the price of the issue and are, in ascending order:

10. X-ray image of the Sun by the Yohkoh spacecraft (1991). Incredible eruptions show up around the Sun's equator in this x-ray telescope photograph. Like no other image of the Sun you've ever seen.
9. Jupiter with moons Io and Europa by Voyager 1 (1979). Fabulous up-close shot of the transits of the two Jovian moons, transits that we can actually see with our own telescopes from Earth.
8. Saturn from a Voyager spacecraft (early 1980s). The beautiful Saturnian ring system up close with four of Saturn's moons thrown in for good measure. Saturn never ceases to be awe-inspiring. Great detail seen in the rings and in the planet's upper atmosphere.
7. Spiral Galaxy NGC 1232 in Eridanus by the first operational 8.2-meter reflector of the Very Large Telescope array of the European Southern Observatory (recent, but no date given). Composite ultraviolet-, blue-, and red-light exposures of this face-on view of a spiral galaxy gives the impression that it's right next door in this fabulously detailed photo. It's actually estimated to be 110 million light years away. If only we could see such images with our telescopes...
6. The Hubble Deep Field (1995?). The now-famous montage of 100 hours of Hubble imaging represents man's most penetrating view into the depths of the universe. Three thousand galaxies estimated to be over 10 billion light years away were revealed in a patch of sky in

Ursa Major 1/12th the width of the Moon. Now that's deep space.

5. Footprint, Apollo 11, taken by astronaut Edwin "Buzz" Aldrin while he was standing on the lunar surface (July 20, 1969). This photo memorializes the first time mankind set foot on another world. A most momentous occasion, probably *the* most momentous of all time. When will we be going back?
4. Mars Pathfinder Panorama taken by the Pathfinder space probe after touch down on the Red Planet (1997). It almost makes you forget the recent Martian space probe failures. A fabulous landscape right out of the Twilight Zone, revealed with great clarity. If only a human can get there...
3. Andromeda Galaxy (M31) (1990). Beautiful, widely published color photo taken by two amateur astrophotographers using the very same 6-inch refractor that I hold near and dear to my heart. Of course, they took the photograph while on the top of Mt. Pinos high above a California desert using some rather sophisticated techniques. A classic shot of the most distant naked-eye object we can see from Earth containing a few hundred billion stars, now believed to be almost 3 million light-years away.
2. Pillars of Creation (M16) taken by the Hubble Space Telescope (1995). When Messier dismissed this object as just another "non-comet" he could not have dreamed what was actually there. Three light-year long pillars of gas and dust at the core of the Eagle Nebula are revealed in this photo, topped by what are called evaporating gaseous globules (EGGS), formations that are larger than our solar system and that may contain embryonic stars. Wow! By the way, check out the CD image of this object taken at the Flower & Cook Observatory. It is on their web site. You can see some of the detail of the gas pillars.
1. Earthrise, Apollo 8 (1968). This famous color photograph of the Earth rising above the lunar horizon taken from the Apollo 8 space capsule will remind you that you live on the most beautiful planet in the universe, bar none. Be thankful, and take good care of it.

Happy New Year everyone.

Mike Turco



Web site for Brown Dwarf Talk by Dr. Reid

At our December meeting, Deb Goldader gave us a summary of the talk on Brown Dwarf stars given by Dr. Neill Reid (U. Penn.) at the November Open House at the Flower & Cook Observatory. As Deb promised, here's the website URL: <http://www.physics.upenn.edu/~www/inr/talks/bdpics/bd1.htm>



Calendar Notes

- February 4/5, 2000: CCAS Observing Session
(Friday) Brandywine Valley Association
- February 8, 2000 CCAS Meeting at West Chester Univ.
(Tuesday) presentation by Dr. Laurence DeWarf
of Villanova University, Dept. of
Astrophysics
Topic: "Solar-type Stars"
7:30 p.m. EST
- February 25, 2000 Free Public Open House at Flower &
(Friday) Cook Observatory in Malvern, PA
Topic: "Survey of the Universe"
by Dr. Deb Goldader
8:00 p.m. EST
- Note: this is a general, pictorial intro-
duction to astronomy, especially
suitable for children
- March 3/4, 2000: CCAS Observing Session
(Friday) Brandywine Valley Association
- March 14, 2000 CCAS Meeting
(Tuesday) Topic: TBA
7:30 p.m. EST
- March 31, 2000 Free Public Open House at Flower &
(Friday) Cook Observatory in Malvern, PA
Topic: TBA
8:00 p.m. EST
- March 31/April 1, CCAS Observing Session
2000: (Friday) Brandywine Valley Association
- April 8, 2000 National Astronomy Day**
(Saturday)
- April 11, 2000 CCAS Meeting
(Tuesday) Topic: TBA
7:30 p.m. EDT
- April 28, 2000 Free Public Open House at Flower &
(Friday) Cook Observatory in Malvern, PA
Topic: TBA
8:00 p.m. EDT
- May 5/6, 2000: CCAS Observing Session
(Friday) Brandywine Valley Association
- May 9, 2000 CCAS Meeting
(Tuesday) Topic: TBA
7:30 p.m. EDT
- September 1-4, 2000 2nd Annual Black Forest Star Party
Labor Day Weekend Cherry Springs State Park, PA

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Report on Exton Library Star Party

The CCAS has received a \$50 donation check from the Chester County Library for the observing session we did for them behind the Exton Library on Friday October 29th. That night

Steve Limeburner, Jim & Donna Anderson, Bill O'Hara, and Mike Turco fought the lights of the mall parking lot and succeeded in pleasing a group of parents and children with a tour of the heavens. Denise Stout, the Youth Services Outreach Librarian, wrote a gracious thank-you note, saying that everyone had a great time and that they are hoping to have us back again. Thanks to all the members who made this event a success.

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January Skies

Moon Phases

New Moon	01/06
First Quarter	01/14
Full Moon	01/20 Total Lunar Eclipse!
Last Quarter	01/28

The Planets

Mercury is lost in the Sun's glare in January.

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

Mars is low in the southwest after sunset, in Aquarius this month. It's now very far away from us, so even a telescope won't improve much on the naked-eye view.

Jupiter is the brightest "star" in our evening skies this month, and very easy to find. Jupiter is always a grand sight in a telescope of any size!

Saturn is about 40 minutes behind (east of) Jupiter, and will be a great sight in a telescope as the rings are now well-tipped toward us and thus "wide open." The positions of the Sun, Earth, and Saturn this month will give us an excellent view of the shadow of the planet falling across the rings, which really heightens the 3-D effect!

Uranus, Neptune, and Pluto are lost in the Sun's glare in January. Well, you might be able to find Pluto in the pre-dawn sky, but it will be extremely difficult to see because of the low angle and its dimness. Best to wait a few months before trying to find Pluto.

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ASTROCON 2000

Astrocon 2000 is the national convention of the Astronomical League, being held this year at the Holiday Inn Beach Resort in Ventura, California. The dates of the convention are July 19 through 22, 2000. This year's convention is being held together with the conventions of these organizations: Association of Lunar and Planetary Observers (ALPO), Astronomical Society of the Pacific (ASP), American Association of Variable Star Observers (AAVSO), International Occultation Timing Association (IOTA), American Association of Amateur Astronomers (AAAA), International Dark-Sky Association (IDA), Search for Extraterrestrial Intelligence Institute (SETI), and the Society

of Amateur Radio Astronomers (SARA). Whew! Quite a list. Planned events include: Star-B-Que, tours to Griffith Observatory, Mt. Wilson Observatory, JPL Pasadena, up to 80 speakers and presentations, and a star party at Mt. Pinos. There will also be discounted tickets to Disneyland (the original), and to other area theme parks as well. Confirmed speakers include: Tony and Daphne Hallas (astro-photographers extraordinaire), Andre Borman (consultant to *Star Trek*), Dr. Tim Hunter, Don Mascholz, Ed Krupps, and Richard Berry.

Web page for more info: <http://www.vcas.org/astrocon/>

You can save money by registering before March 1, so if you're planning to attend, register now!

Finally, if anyone would like to present a paper at Astrocon, contact Paula Berinstein via e-mail at: pberinstein@worldnet.att.net



A.L. Regional Meeting: Sept. 29 - Oct. 1, 2000

The Mid-East Region of the Astronomical League (MERAL), to which our Society belongs, is having a meeting in Charlottesville, VA on September 29 through October 1, 2000. This will be the first MERAL meeting in many years. It will feature a program of speakers, vendors, and an exhibit area, a lunch banquet, and door prizes. This event is being sponsored by the Charlottesville Astronomical Society. The Astronomy Department of the University of Virginia has been kind enough to allow attendees to observe for two nights at their Fan Mountain Observatory, 15 miles south of Charlottesville. The Observatory has a 40" astrometric reflector (which attendees may get a look at on a tour, but will not be able to use), and a 30" reflector (which amateurs are often allowed to use), and plenty of space to set up your own telescope(s). There is a photo of a recent star party held there by the Charlottesville Astronomical Society at their Website (<http://members.aol.com/kharker/cas/>). There is also a good map of the layout of the facilities at Fan Mountain Observatory on the Astronomy Department's Website (<http://www.astro.virginia.edu/pubnrite/Geninfo/layout.html>).

The Charlottesville Astronomical Society has contacted me (Jim Anderson) to see how many people from our Society **might** be interested in attending. This would **not** be a firm commitment to attend, nor a reservation; it is just to get a "ballpark" number of possible attendees for budgeting reasons (how many brochures should be printed, how much hotel space should be set aside, things like that). It's been so long since there was a MERAL meeting that they have no basis for planning the logistics. So if you're interested in hearing more, and in maybe attending this meeting, let me know by January 31, 2000, and tell me how many will be in your party. Thanks.
Jim Anderson

My phone number is 610-380-4512.



Nebraska Star Party: July 29 - August 4, 2000

We have received brochures about the 7th Annual Nebraska Star Party, held at Merritt Reservoir, 27 miles south of Valentine, Nebraska. The site boasts great dark sky observing. If you would like to see one of the brochures, contact Jim Anderson at 610-380-4512.



News from Neighboring Societies

[Editor's Note: All that is required to have notices published here is to include Jim Anderson on the mailing list of your society's newsletter. See below for Jim's address.]

From Focus, the newsletter of the Delaware Astronomical Society:

Upcoming Meeting Topics and speakers:

January 18, 2000 (Tuesday) 8:00 p.m. EST	"How to Set-up, Align, and Find Heaven - You Can Get There!" in the McCullough Planetarium by Hank Bouchelle, Tom Sidowski, and Billie Westergard
February 15, 2000 (Tuesday) 8:00 p.m. EST	"Astronomy in Daylight" by Olaf Kirshner
March 21, 2000 (Tuesday) 8:00 p.m. EST	"What Makes Color?" by Bob Mentzer
April 18, 2000 (Tuesday) 8:00 p.m. EDT	"Cosmology's Embarassments" by Billie Westergard
May 16, 2000 (Tuesday)	Annual Dinner Meeting "The Art & Science of Early Star Atlases" by Ray Harris, President of Lehigh Valley Amateur Astronomy Society
June 20, 2000 (Tuesday) 8:00 p.m. EDT	"Variable Stars" by Dr. Judi Provencal, MCAO Resident Astronomer

DAS meetings are held at the Mount Cuba Observatory in Greenville, Delaware. For more info contact President Warren Jacobs (610-566-0510). Or check their Website at:

<http://www.physics.udel.edu/>



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.



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

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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

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Sky & Telescope Magazine Group Rates

Subscriptions to this excellent periodical are available through the CCAS at a reduced price of **\$29.95 (note that this has just increased, as of October 1999)**, 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.

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CCAS Website

Pete LaFrance has set up a Web page for the Society on the World Wide Web (Internet). He has included some pictures taken by CCAS members. Check it out 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).

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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 the editor at jim.anderson@hboc.com. Or mail the contribution, typed or handwritten, to:

Jim Anderson
19 Bluff Road
Thorndale, PA 19372-1104

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AL Observing Programs

One of the benefits of joining the CCAS is that you also become a member of the Astronomical League, a national federation of astronomy clubs. The AL has a series of Observing Awards, and four observing clubs based on these awards have been started in the CCAS. These are the Messier Club, the Binocular Messier Club, the Lunar Club, and the Double Star Club. Working on these awards also gives you a plan of observing: "What will I look at tonight?" becomes "Which Messier objects are visible tonight that I haven't seen yet?" Each club has a volunteer coordinator:

Messier Clubs (both): Frank Angelini (610-873-7929)
Lunar Club: Ed Lurcott (610-436-0387)
Double Star Club: Jim Anderson (610-380-4512)

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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
3545 N. Stewart
Tucson, AZ 85716

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>

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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

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