



OBSERVATIONS

A MONTHLY PUBLICATION OF THE
CHESTER COUNTY ASTRONOMICAL SOCIETY



★President: Edwin Lurcott
★Treasurer: Pete LaFrance

JANUARY 1998
(VOLUME 6, NO. 1)

★Vice President: Kathy Buczynski
★Secretary: William O'Hara

CCAS January Meeting

DATE: **Tuesday January 13, 1998**
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.

At our January meeting we will have a question and answer (or attempts at answers) session after the business meeting. Any member can ask any astronomy question, and any other member can try to answer it. So start thinking of questions!

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CCAS January Observing Session

The next Observing Session will be on Friday January 23, 1998, with a cloud date of Saturday January 24. If the weather is bad both days, there will not be an observing session in January. The session will be held at the Brandywine Valley Association (a map is included). At the observing sessions, there will be help available to set up and use your telescopes. 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 free of charge. Children are always welcome as long as they are accompanied by an adult. Remember to dress warmly! It gets cold real fast standing around in the middle of an old pasture in January.

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Welcome New Members!

We'd like to extend a big welcome to the members who have joined us in recent months. Hello and Clear Skies to Casie O'Hara, Edward Hammond, Richard Lemay, Steve Limeburner, W. Barry and Sally Martin, and Witi Okpaku.

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February Field Trip, Part 1

 by Kathy Buczynski

Field trip to Sproul Observatory

On the campus of Swarthmore College, Sproul Observatory was established in 1911 by donations from William Cameron Sproul, an alumnus and former student of Dr. Susan J. Cunningham, the first professor of mathematics and astronomy. Mr. Sproul was from Chester, Pennsylvania and later became Governor of the Commonwealth of Pennsylvania. (I wish our current administration and ones that follow were also interested in astronomy so that we could do something about this sky-glow!)

The telescope at the Sproul Observatory is the largest refractor between Yale and Washington, D.C. (at the U.S. Naval Observatory, also home to the Vice-President of the U.S.) The refractor at Sproul is a mere 61 cm (24") in aperture and 11 m (36 feet) in focal length. Built by the Brashear Company, the objective lens was made from a crown glass disk furnished by the Parra-Mantois firm of Paris, France, and a flint glass disk furnished by Schott and Genossen of Jena, Germany. These lenses were ground by James B. McDowell, known at that time for his excellent skills in grinding glass lenses. The equatorial mount was also made by Brashear and weighs approximately 50,000 pounds. It is balanced so well that one hand can move it (remember what Newton said about a lever and a place to stand...) This type of telescope was preferred 100 years ago for astrometric purposes. More about the work being done at Sproul next month in *Observations*.

I hope you all can make it to the tour. Wish for clear skies, even with a bright moon that night we still might be able to get a look at the Orion nebula and some doubles. Have any of you been able to split Polaris (it is a double, you know)?

In next month's issue of *Observations*, you'll find more information about the Observatory, the work being done there, and a map to get there. **The tour will start at 7:00 p.m. at the Observatory on Tuesday February 10, 1998;** our regularly scheduled meeting day, but one half-hour earlier. Also, after the tour, we will have a meeting at a local restaurant. If attending the meeting afterward, please reply to me by February 6 so that proper reservations can be made.

Kathy Buczynski 436-0821

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Report on Winter Solstice Party

The CCAS was asked to participate in a Winter Solstice Celebration at the Brandywine Valley Association on December 19. Following the nature hike, the soup and bread, and the storytelling, about 30-35 people gathered behind the office building. Roger Taylor gave an excellent talk on the constellations and objects in the night sky. Pete LaFrance and Ed Lurcott also brought their telescopes to help out with giving the crowd a look at the heavens. Several BVA members expressed thanks for the participation by the CCAS at the Solstice Celebration. Thanks to Roger, Ed, and Pete for making this event a success.

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December CCAS Meeting Notes

Jim Anderson gave a presentation on the constellation Pegasus.

Mike Turco treated us to a slide-and-audio show called *The Story of the Universe*, which he purchased last summer at Mount Palomar. It was a fascinating show.

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CCAS Lending Library

Our Librarian, Bill O'Hara, has the books in our library all ready for members to borrow. You can drop by Bill's place (call first, of course) to borrow a book. Or you can call Bill before a meeting and ask him to bring a book to the meeting for you. The complete list of books is too big to include in the newsletter; there will be copies available at CCAS meetings. We will be publishing sections of the list each month, though; part 3 is below. Bill's phone number is 696-1422.

Books in Category 3, "Universe":

- 301 - *The Universe*, Scientific American, 1956
- 302 - *The Universe at Large*, Bondi, 1960
- 303 - *The Structure of the Universe*, Schatzman, 1968
- 304 - *Celestial Mechanics*, Ryabov, 1959
- 305 - *The Creation of the Universe*, Gamow, 1957
- 306 - *Challenge of the Universe*, Hynek & Anderson, 1962
- 307 - *The Dynamic Universe: An Introduction to Astronomy, 4th Edition*, Snow, 1991
- 308 - *Burnham's Celestial Handbook, Vol. 1*, Burnham, 1978
- 309 - *Burnham's Celestial Handbook, Vol. 2*, Burnham, 1978
- 310 - *Burnham's Celestial Handbook, Vol. 3*, Burnham, 1978
- 311 - *The Radiant Universe*, Hill, 1952
- 312 - *Discovering the Universe, 4th Edition*, Kaufmann & Comins, 1996
- 313 - *Astronomy, Journey to the Cosmic Frontier*, Fix, 1995
- 314 - *Voyages Through the Universe*, Franknoi, Morrison, & Wolff, 1997

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December Observing Session

The session on December 26 was well attended, with about 15 people in attendance. Pete LaFrance, Mike Turco, and Ed Lurcott brought telescopes. Nobody had any new 16" telescopes for us to play with, darn...

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CCAS Lending Telescope

You can make arrangements to borrow the telescope for a month by contacting Steve Leiden (296-3793). The 6" f/8 reflector can be borrowed by club members for a month at a time.

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Astronomical League News by Jim Anderson

The AL has announced a new observing club, the Urban Sky Club, for those living under light polluted city skies. If there's enough interest, I can get the info on the club and we can start up this program in the CCAS. Let me know if you want the info on this club.

The national AL convention, ALCON '98, will be held at beautiful French Lick Springs Resort in French Lick, Indiana, on July 21-25. I will have more info available soon; the AL will be sending a promotional package out to me later this month. Ed Lurcott has already expressed an interest in attending; anyone else interested?

The AL also has a new national award for young astronomers. Mr. Jack Horkheimer (a.k.a. *The Star Hustler* on PBS) has provided the funding for this new award. It is called the Horkheimer Award for Exceptional Service by a Young Astronomer in Honor of Arthur P. Smith, Jr. Obviously most people will just call it the Horkheimer Award. The award consists of a plaque and a \$1000.00 check, to be presented at each year's ALCON. The first award will be presented at ALCON '98; nominations must be in by March 30, 1998. I have a copy of the nomination form. The criteria are: "Award based upon service to the League including service to any Astronomical League club. Service can be in the

form of educational outreach, knowledge and skills used at public star parties, or other astronomical service." Note that this award is a service award, unlike the National Young Astronomer Award which is for outstanding astronomical research programs by young astronomers. Both awards are for AL members under the age of 19. Both are presented annually at the ALCON. I also have more information on the National Young Astronomer Award.

The AL is also now funding, on the behalf of the regional organizations, the cost of presenting annual Regional Award plaques. These awards are intended to serve as a good way to say thanks to a key organizer of area astronomy events and organizations, or to a key educator in our society. I have more information and nomination forms available for this award also. We belong to the Mid-East Regional AL (MERAL). This region is just now undergoing a re-vitalization effort after many years of dormancy (there was no regional organization at all!)

The AL is also calling for nominations for the national officer elections to be held this year: President, Vice-President, and Executive Secretary. There is a notice with more info on page 6 of the November 1997 *Reflector*.

An AL Amateur Exchange is being established. This is intended to be a "resource directory" of amateur astronomers. These people would be willing to field questions, offer suggestions or advice, promote astronomy, share observations, or demonstrate some aspect of the hobby to either other amateurs or astronomical newcomers. These people will NOT be expected to return long distance phone calls, write long detailed responses to requests for information, or provide copies and postage at their own expense. These rules will be stated boldly on the opening page of the Directory. The idea is to divide the directory into four general categories, which would be further subdivided by specialties. The categories are Construction, Equipment Use, Observing, and Outreach. I have copies of the information and form to be used if you are interested in joining this Directory.

Finally, the AL is calling for nominations for the three national awards presented each year at the ALCON to adult members. Nominations must be received by March 31, 1998 for ALCON '98. The three awards are: Astronomical League Award, for any person(s), amateur or professional, making worthwhile contributions to the science of astronomy on a national or international level; Leslie C. Peltier Award, for an amateur astronomer who has contributed astronomical observations of lasting significance; and the G.R. Wright League Service Award to honor current or past League volunteers for service to the Astronomical League. I have information on submitting nominations for each of these awards if you are interested.



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 4 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. These "clubs" will arrange times for the members working on those awards to get together to share experiences and advice in finding interesting sights in the night sky, and possibly also to observe together. Working on these awards also gives you a plan of observing, so to speak. "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): Bob Hartje (610-325-7285)

Lunar Club: Ed Lurcott (610-436-0387)

Double Star Club: Jim Anderson (610-380-4512)

Information on the Sunspotters Club will be available at the January meeting.



January's Skies

Moon Phases

First Quarter	01/05
Full Moon	01/12
Last Quarter	01/20
New Moon	01/28

The Planets

Mercury puts on a good show in the morning sky this month, especially during the first half of January.

Venus is in our evening sky in early January and easy to spot due to its brightness. It will be the first bright "star" you see in the southwest after sunset. But around mid-month Venus passes between us and the Sun, and then will appear in the morning sky by the end of the month.

Mars is in the evening sky, an orange or red "star" in the southwest at dusk. It will be near much-brighter Jupiter.

Jupiter is the brightest "star" in the southwest at dusk. Jupiter is the most fascinating planet to study with even the smallest telescopes.

Saturn is in the south at dusk in January. Its largest moon Titan can usually be seen even in small telescopes.

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

Neptune is not far from Uranus, and also lost in the glare.

Pluto is in the morning sky now, but it would be extremely difficult to find. Best wait a few more months before trying to find it.



Solar Eclipse in February

Request an extended lunch break on Thursday February 26. There will be a partial eclipse of the Sun, from about 12:30 (+ or -); maximum at about 1:15, and ends at about 2:08. Times are EST. About 20% of the Sun will be blocked by the Moon.

Warning: Do NOT look at the Sun without proper filter protection! Take a piece of aluminum foil, poke a small hole in it with a pin, and use that to project the Sun's image onto a piece of white paper. Tape the paper to some cardboard to stiffen it. You could also take another piece of cardboard, cut a square hole in it, and tape the foil with the pinhole over it, which makes the foil easier to hold.



January Quiz Question

In what year did the stellar explosion occur that formed the Crab Nebula in Taurus? We're looking for the approximate year that the explosion actually occurred.

First person to call Ed Lurcott (436-0387) with the correct answer wins a prize.

The answer to December's question was provided first by Richard Koon: 53,309,655 miles or 57% of the distance to the Sun (93 million miles).

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For Sale:

Four 0.965" Orion multi-coated eyepieces, fully coated, 2 years old, not used much, excellent condition, good "upgrade" eyepieces for many beginner telescopes. Set includes a 25mm FL Kellner, 18mm FL Kellner, 9mm FL Orthoscopic, and a 7mm FL Orthoscopic. \$15.00 each or all four for \$50.00.

Jim Anderson
19 Bluff Road
Thorndale, PA 19372
610-380-4512

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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@hbc.com

Or mail the contribution, typed or handwritten, to:

Jim Anderson
19 Bluff Road
Thorndale, PA 19372-1104

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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

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Sky & Telescope Magazine Group Rates

Subscriptions to this excellent periodical are available through the CCAS at a reduced price, which is about half the newsstand price, and also cheaper than individual subscriptions! 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 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

For further information on membership or society activities you may call:

President: Edwin Lurcott (610) 436-0387
Vice Pres: Kathy Buczynski (610) 436-0821
Treasurer: Pete LaFrance (610) 268-2616
Secretary: William O'Hara (610) 696-1422
Program: Kathy Buczynski (610) 436-0821
ALCor and
Newsletter: Jim Anderson (610) 380-4512
Librarian: William O'Hara (610) 696-1422

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