



OBSERVATIONS



A MONTHLY PUBLICATION OF THE
CHESTER COUNTY ASTRONOMICAL SOCIETY

★President: Edwin Lurcott

DECEMBER 1995

★Vice President: Jim Sylvester

★Treasurer: Pete LaFrance

(VOLUME 3, NO. 12)

★Secretary: Nancy Armstrong

CCAS December Meeting

DATE: **Tuesday, December 12, 1995**

TIME: 7:30 PM EDT

PLACE: Planetarium (room 186)
Schmucker Science Center
West Chester University

LOCATION: South Church St. & Rosedale Ave.
West Chester, PA (see maps)

Although it's usually crowded, parking is now available again in the lot behind the Sykes Student Center on the south side of Rosedale Ave. If that's full, you may still park in the lot behind Bull Theater Building, on the southeast corner of South High Street and Rosedale Avenue.

During the past year, many members have asked questions following the meetings or during our observing sessions. It is not certain that they received satisfactory answers. Therefore, in an effort to help our members learn more about the universe around us, we have planned an open-forum type session for the December meeting. Members may raise questions to which they would like to have answers or further explanations. At this meeting we will not only need members to ask questions, but also members to help answer them. Those members having astronomical reference books are encouraged to bring them to help provide proper responses. We encourage all members to ask questions, as we are all learning more about astronomy every month (even our more experienced members).

Refreshments are available after the meeting. If time and weather permits, we can go up to the observatory on the roof of the Science Center and "look around" with WCU's 12" telescope.

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For Sale

A 4.5 inch Edmund equatorial reflector telescope on a metal tripod is for sale by Tricia Garwood. If interested, call Tricia at 692-5053.

The Next CCAS Observing Session

Since the December New Moon is near the holidays, CCAS will have its next observing session on Friday January 19, 1996 at the home of Ed Lurcott. The rain/snow/cloud date will be Saturday January 20. A map will be included with the January issue of *Observations*.

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November CCAS Meeting

Pru Campbell, Astronomy Instructor at WCU, gave us another fine program with the planetarium projector, taking us through the November skies. After the show, she projected the latest images from the Hubble Space Telescope, showing a ring-less Saturn and what may be a newly discovered moon. She also showed us more Hubble images, those recent ones of the Eagle Nebula which you may have seen in the newspaper. The detail and resolution of the pictures were fantastic! Many thanks to Pru for this excellent presentation.

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November Observing Session

Pete LaFrance hosted the November observing session at his home in Avondale. It was quite cold but the skies were fairly good. Jim Sylvester set up his 3.5" Questar and Ed Lurcott set up his home-built 6" reflector next to Pete's observatory. Jim learned to use his setting circles to locate objects including the Andromeda Galaxy, much to his pleasure. (It was much brighter without his blue filter in place!) Jim's wife Linda and their two children also enjoyed the viewing, and the hot drinks provided by the LaFrances.

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Celebrate the Winter Solstice

The Brandywine Valley Association (BVA) will celebrate the winter solstice on Thursday, December 21, from 5:00 to 9:00 PM at the Myrick Conservation Center. The Center is 6 miles west of

West Chester on Route 842. Included are a guided winter hike at 5:00 PM, a pot-luck supper (bring soup or bread) at 6:00 PM, a winter story by Annie Hawkins, and a star-walk if the skies are clear. Contributions for this event is \$3.00 per person. Please call ahead, (610) 793-1090.

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Holiday Greetings from the President

Another year coming to a close, and time to think back on the contributions of the CCAS members. All members have contributed simply by being members and attending the various meetings and observing sessions.

I wish to recognize the fine support by the other CCAS officers. Vice President Jim Sylvester, who stood by ready to take over at a moment's notice, and contributed greatly to revising the Constitution. Treasurer Pete LaFrance, who took control of CCAS funds and membership lists, and produced the CCAS mailing labels. He has been to every CCAS function this year, gladly carrying his 8" scope to all observing sessions, and is so willing to assist others with their equipment.

Secretary Nancy Armstrong has recorded the minutes of all CCAS meetings, helped out with the refreshments, and greeted newcomers to both the meetings and observing sessions. He has also included basic astronomy concepts while teaching her kindergarten class at Friendship Elementary School in Coatesville. I also wish to express my appreciation to our newsletter editor Jim Anderson, who's doing such a fine job making *Observations* what it is today. He writes many of the more informative articles, for which much research is required.

Many thanks to all the committee chairpersons for their many efforts during the entire year. It is the efforts of all of these people that makes the CCAS such a success.

I want to take this opportunity to wish each member and their family the best for the coming holiday season (and 300 clear nights for the coming year!).

Ed Lurcott, President CCAS

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Space Exploration Notes

The Galileo space probe arrives at Jupiter and swings into orbit about the giant planet on December 7, 1995. It has already released a probe that will parachute into Jupiter's atmosphere to make many measurements

on December 7. It will surely be big news this month, so watch the newspapers and news shows. The Galileo mission is scheduled to last at least 2 years, as the spacecraft continues to orbit Jupiter and make several close passes by the moons of Jupiter.

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December's Skies

Moon Phases

Full Moon	12/07
Last Quarter	12/15
New Moon	12/22
First Quarter	12/28

The Planets

Saturn is in the South after sunset. The rings are the primary interest this month. On 11/19 the Sun passed to the other side of the ring-plane as seen from Earth. That means that this month we will be seeing the "night" side of the rings, although they will be tough to see. On the other hand, the lack of glare from the rings means the moons of Saturn will be easier to see. How many can you see?

Uranus and Neptune are sinking into the West soon after sunset, moving closer to the Sun. But they can still be seen this month.

Pluto is now showing up in the morning skies, if you know where to look.

Mercury is climbing higher in the western sky after sunset as the month passes, being well placed for observation by the latter half of December.

Jupiter is sinking toward the Sun in the evening sky, and by mid-month will become invisible, passing behind the Sun.

Mars is also sinking into the sunset, but more slowly. On December 22-24 it will be close to Mercury, and easier to find in the evening twilight.

Venus is the brightest light in the evening sky in December. By the end of the month it will be visible for about 2.5 hours after sunset!

Meteor Showers

The Geminid meteor shower peaks on December 13, but the Moon will be a waning gibbous (between Full and Last Quarter), which may interfere with this meteor shower. Since Gemini rises in the early evening hours, the radiant is getting high in the northeast as early as 9:00 PM. That makes the Geminids one of the few meteor showers that put on a good show **before** midnight! The rate can be as many as 50 or 60 meteors per hour. This shower can also be seen for several days before and after 12/13 as well. All you need to see a meteor shower is a reasonably dark sky, warm clothes, and a pair of eyes. Check it out!

Another shower occurs on the 22nd, right before New Moon. Named after the Little Dipper (Ursa Minor), the radiant for the Ursa Minorids is the bowl of the Little Dipper. That means the shower should give a good show all night long. Usually this shower has about 15 meteors per hour, but higher rates approaching 50 per hour have been recorded. Since this shower has not been well-studied, accurate predictions are tough to make. So this one may well be worth watching.



Double Stars and the Moon

At a previous meeting of the Society, copies of the Astronomical League's new Double Star Club's rules and observing list were made available. The suggested form for recording your observations was not included with that handout. At the December meeting, a revised copy of that list **with** the "log" form will be available.

And, the Astronomical League has also just announced a Lunar Observing Club. Copies of the rules, observing list, and hints (no suggested recording form was included) will also be available.



First Light by Jim Anderson

Last month we discussed planispheres; earlier we discussed finding North as a way of orienting yourself. In the early evening sky this month you can see several of the sky's important "signposts". Find north, then face west. You should be able to find a triangle of bright stars. The closest one to the horizon, and furthest south, is Altair. To the north of that is the brightest of the three, which is Vega. Further above the horizon, between the other two, lies Deneb. These 3 first magnitude stars form the "Summer Triangle". It's setting earlier each night now as we move into winter, but remember it. It will become one of your more important and easily-recognized celestial landmarks. Oh, that **really** bright star further south along the horizon? That's the planet Venus, currently appearing as the Evening Star.

Now look overhead, almost straight up. Just a little to the north of "straight up" (called the zenith by astronomers) you can see a group of bright stars that form a W, or a M (depending on how you look at it). This is Cassiopeia (kass ee oh pee eye), The Queen of Ethiopia. It is a circumpolar constellation, meaning that it is always above the horizon at our latitude. Cassiopeia and the Big Dipper are almost exactly opposite each other across the Celestial North Pole, with Polaris in the middle (Polaris, of

course, is very close to the Pole). So when Cassiopeia is high in the sky, like it is this month, look straight down toward the northern horizon, passing through Polaris, and you'll find the Big Dipper hugging the treetops.

Still overhead, but to the south and west of Cassiopeia, you can see a box or square of fairly bright stars. This is the "Great Square of Pegasus", part of the constellation Pegasus (peg ah sus), the Winged Horse. A little further south and west of this you may notice a bright star that is pretty much by itself. That's the planet Saturn.

Finally, if it's much past 8 PM or so, turn and face east. Just rising above the horizon you will see an unmistakable pattern of bright stars. There are 3 close together in a row, that run almost straight up from the horizon. Around those 3 are 4 more bright stars that form a rectangle, lying on its side. This is Orion (or eye on), the Hunter. He's lying on his side this month. Picture the 2 stars on the northern end of the rectangle as his shoulders, the 3 close stars in the middle as his belt, and the 2 stars at the southern end of the rectangle as his knees, and you have the picture. As the winter goes on, Orion will become the dominant star pattern in the sky, and your landmark for finding many other constellations. Along with the other "signposts" surveyed in this month's column, Orion will in a few months become like an old friend, and you'll find it as easily as you find the Big Dipper now. Clear Skies!



Also Available

A free brief overview on getting started in astronomy called *Getting Started In Astronomy* is also available from the CCAS. It can be picked up at a CCAS function, or you can call the newsletter editor to get a copy mailed to you. Suggestions for improving this introduction to our hobby are always welcome.



Contributing to the Newsletter

Contributions of articles relating to astronomy and space exploration, sketches of observations, maybe observing "challenge lists," etc. are always welcome.



Membership Renewals

Now is a good time to check the date printed on the address label of this issue of *Observations*. 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

Sky & Telescope magazine group rates!

Subscriptions to this excellent periodical are available through the CCAS at \$24 per year, a significant savings over newstand prices (\$50.24 per year that way), and even 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 (see previous page for the address).

CCAS's Purposes

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.

Membership Information

The present membership rates are as follows:

REGULAR MEMBER

(18 years or older)\$20/year

SENIOR MEMBER

(65 years or older)\$10/year

STUDENT MEMBER

(full-time college student) \$ 5/year

JUNIOR MEMBER

(under 18 years old)\$ 5/year

FAMILY MEMBER

(husband, wife & children)\$ 30/year

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

President:	Edwin Lurcott	(610) 436-0387
Vice Pres:	Jim Sylvester	(610) 696-1102
Treasurer:	Pete LaFrance	(610) 268-2616
Secretary:	Nancy Armstrong	(610) 873-7531
Public Rel:	Kathy Cseke	(610) 644-9543
Obs Chm:	Mike Tucker	(610) 584-8236
Newsletter:	Jim Anderson	(610) 993-0261

