



# OBSERVATIONS



A MONTHLY PUBLICATION OF THE  
CHESTER COUNTY ASTRONOMICAL SOCIETY

★President: Edwin Lurcott

**JANUARY 1996**

★Vice President: Jim Sylvester

★Treasurer: Pete LaFrance

(VOLUME 4, NO. 1)

★Secretary: Nancy Armstrong

## CCAS January Meeting

DATE: **Tuesday, January 9, 1996**

TIME: 7:30 PM EST

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

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

Parking should not be a problem, since WCU is not in session at this time. It is planned to have only the doors of Schmucker Science Center facing Church Street open for our meeting. All other doors may be locked.

After a brief business meeting, CCAS Vice President Jim Sylvester will give a presentation entitled *What is Life?* in which he will discuss the theory on the beginning of life in the universe. Jim works with molecular genetics at Hahnemann University in Philadelphia. He is aware of what molecules and what conditions are needed to permit life to get started. It will be an appropriate subject in view of man's present search for extraterrestrial life and the discussion on the chances of finding it. All are invited; bring a friend!

Refreshments are available after the meeting. Since WCU is not in session, their observatory will not be available for us to use until our February meeting.

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## January CCAS Observing Session

This month's observing session will be on Friday January 19, with a rain/snow/cloud date of Saturday January 20. Ed Lurcott will host the session at his home at 1384 Station Place, West Chester. A map on the last page should help you find his house. If you need help with directions call Ed at 436-0387. Those members having telescopes are encouraged to bring them. There will plenty of

help available to set telescopes up and to use them. All members are invited to come and enjoy the viewing. Telescope owners always like to have others share the sights of the deep sky. Electric power is available for those who need it for their telescopes.

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## December CCAS Meeting

Following the short business meeting, the floor was opened to members to ask questions about astronomy. As it developed most of the subjects dealt with the life-cycle of a normal star and how they evolve to a red dwarf, white dwarf, neutron star, or a black hole. This mainly depends on the star's original mass. Harry Meza, CCAS member and a physics major at WCU, was very helpful in providing some of the details of a star's life span. It was apparent that this subject would make a good program in the near future. Many thanks to all for their participation in this session.

About six members went up to WCU's 12" telescope on the roof, but sky conditions worsened quickly, preventing any observing.

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## Winter Solstice Celebrated by BVA

The Brandywine Valley Association celebrated the Winter Solstice with a nature walk after which all enjoyed soup, bread, and hot drinks. Connie Shapiro demonstrated the configuration of the Earth and Sun at the time of the Solstice, using a model. Following two stories by Annie Hawkins, a group of brave souls went out into the cold winter night. CCAS member Roger Taylor described many of the stars and constellations visible. The sky was very clear but the air was cold and all of the group had to retreat to the building. It was a good, informative way of bringing this event to the BVA.

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## January's Skies

### Moon Phases

Full Moon	1/05
Last Quarter	1/13
New Moon	1/20
First Quarter	1/27

### The Planets

Venus is the brightest light in the evening sky in January, and is very easy to find after sunset. It's the first "star" you can see after sunset, in the West. This month it moves closer to Saturn, and will pass only 1° away from Saturn on February 2. Could be a great telescopic treat; two planets in one field of view!

Saturn is getting lower in the Southwest after sunset each day as the month progresses. The rings are the primary interest this month. This month we will still be seeing the "night" side of the rings, although they will be getting narrower in appearance as we approach another ring plane crossing in early February.

Mercury reaches its highest point in the western sky after sunset on January 2. After that it "falls" back into the Sun, disappearing from view by month's end.

Mars, Uranus and Neptune are sinking into the West soon after sunset, and are too close to the Sun to be seen this month.

Jupiter is rising before the Sun this month, rising earlier each day.

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

### Lunar Happenings

In late January, when the Moon is still a thin crescent in the evening twilight, it will be quite close to Venus and Saturn. On January 22, it will be close to Venus; the next night, close to Saturn. Since it will be a thin crescent, Earthshine should also be visible on the Moon's face. It will be a pretty naked-eye sight; try also checking it out with binoculars.

A week later on January 29, the Moon will sail across the Hyades star cluster in Taurus, right near Aldebaran. This should be a fine sight in binoculars. More ambitious telescopic viewers could try making some occultation timings, as the Moon will occult (pass in front of) several of the brighter members of the Hyades.

### News on Mother Earth

On January 4, the Earth will reach perihelion, our closest approach to the Sun (recall that Earth's orbit is not a true circle, but an ellipse). Since the yearly point of perihelion varies, sometimes it is closer than average. This year, we will be 1.778% closer than average at perihelion. This will be the closest we've been since

1972. There will be no noticeable difference due to this close approach, except that the supermarket tabloids will probably go into a frenzy predicting polar cap melting's, world-wide flooding, heat waves that turn the Delaware Valley into Death Valley, etc. So now you know the facts and can calm your neighbors down as the block's resident "astronomy and science" expert.



### Follow-up on Double Stars by Jim Anderson

In the September 1995 *Observations*, Ed Lurcott published an article about observing double stars, and included a list of bright doubles for our use. I've observed a number of these double stars, and decided to report on my observations. All observations were made using a 60mm f/15 Meade refractor from the balcony of my apartment in a complex with very bad light pollution (which goes to prove Ed's point that you don't need fancy equipment or a really dark observing site to enjoy these little treasures). I reviewed my observing log to locate the date on which I first observed the double, and in the list that follows I've included that date, and any notes I wrote at the time of the observation.

Mu ( $\mu$ ) Bootes 4/12/93 "easy split, even at low power"

Zeta ( $\zeta$ ) Corona Borealis 5/6/93 "Clean split, even at low power (with patience)"

Beta ( $\beta$ ) Scorpius 5/27/93 "clean split, fainter companion seemed to be a faint, delicate blue-white"

Nu ( $\nu$ ) Scorpius 5/27/93 "A quadruple! Also called Jabbah"

Alpha ( $\alpha$ ) Hercules 5/15/93 "Could not split"

Rho ( $\rho$ ) Hercules 5/11/93 "clean split; saw OΣ329 in same field"

95 Hercules 5/15/93 "easy split, both components seemed equally bright"

Epsilon ( $\epsilon$ ) Lyra 5/15/93 "saw main or brighter pair, but could not split them into the famed Double Double. Components did seem elongated; may be wishful thinking"

Beta ( $\beta$ ) Cygnus 5/16/93 "I finished up with Albireo, always a lovely sight"

Gamma ( $\gamma$ ) Delphinus 7/17/93 no notes

Keeping an observing log is also a fun thing to do, especially because you can look back later (like I did for this article) and recall the fun and excitement of finding things in the sky for the first time. Adding a sketch (since this is for your purposes, it doesn't have to be artistic; my drawings certainly aren't!) and comments or reactions like I do can personalize the log into your own "astronomy diary". Some of my notes, like the ones for 5/11/93, when I also found and first saw the great globular cluster M13 in Hercules, really recall vividly for me the great excitement of those **big** nights under the stars!

Has anybody else observed any of the double stars on Ed's list?

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### **First Light** by Jim Anderson

This month we'll cover some of the major constellations of the winter sky. Start by finding the North Star, Polaris. Now turn your back on Polaris so you are facing south. To the southeast (to the left of straight ahead), you should see a prominent group of bright stars. There are 3 close together in a row, with 4 more forming a rough rectangle around those 3. This is Orion, the Hunter. The 3 close stars form his belt, the 2 stars at the northern end of the rectangle are his shoulders, and the 2 at the southern end mark his knees. Orion is a great area to explore with binoculars or a telescope. Incidentally, the three belt stars are very close to the Celestial Equator, the northern-most one lying almost exactly on the CE.

Now look to the north and west of Orion (closer to straight overhead). You'll see a bright star, which may seem reddish in color. This is Aldebaran, the brightest star in Taurus, the Bull (no, not the car). Most of the other stars in Taurus are rather faint, so you may not be able to see them with the naked eye. Taurus is usually pictured as charging Orion.

Further to the north, and more to the east of Taurus you'll see another very bright star. This is Capella, in the constellation of Auriga, the Charioteer. There are several other fairly bright stars in this constellation that you can probably make out. Together with Capella they form a roughly house-shaped figure.

If you look down from Auriga toward the eastern horizon you'll find a bright pair of stars. These are Castor and Pollux, the Gemini twins. Pollux is closer to the horizon (further east, in astro

terms) than Castor. The stars that form the bodies and legs of the Twins stretch back toward the head of Orion.

Further to the east and south of Gemini, you can see another bright star climbing out of the sky-glow along the horizon. This star is almost due east of the "shoulder stars" of Orion, and is called Procyon. It's the brightest star of Canis Minor, the Little Dog, one of Orion's hunting companions.

One last stop, to the south and east of Orion. There you should see a very bright star (yes, that's a star, it's not an airplane climbing up out of Phila. International). This is Sirius, the Dog Star. It marks the constellation Canis Major, the Big Dog, Orion's other hunting companion. Sirius is the brightest star visible in our skies (except the Sun). It does have tough competition in the early evening skies this month, though. Look to the south west, and behold the blazing beacon that is Venus, the Evening Star. By now you're probably getting cold, so that's enough for this month. Enjoy!

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### **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.

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### **Contributing to the Newsletter**

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

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### **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 newsstand 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).

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## **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.

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## **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:

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

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