



# OBSERVATIONS



A MONTHLY PUBLICATION OF THE  
CHESTER COUNTY ASTRONOMICAL SOCIETY

★President: Edwin Lurcott  
★Treasurer: Pete LaFrance

**AUGUST 1996**  
(VOLUME 4, NO. 8)

★Vice President: Emil Volcheck  
★Secretary: William O'Hara

## CCAS August Observing Session

DATE: **Friday August 16, 1996**  
RAIN DATE: Saturday August 17, 1996  
(regardless of weather)  
TIME: 8:15 PM EDT  
PLACE: Brandywine Valley Association  
(BVA)  
LOCATION: Brandywine Valley Association  
1760 Unionville-Wawaset Rd  
(PA Rte. 842)  
West Chester, PA (see map)

**Important Note:** In August the monthly Society meeting is combined with the monthly observing session. Both are held at the BVA. If skies are bad on Friday, there is no meeting or observing. If skies are bad on Saturday, then the Society meeting will be held at the BVA, but there will be no observing session for that month.

At our August meeting, Jim Anderson will discuss "Zen and the Art of Telescope Building", relating his experience in building a 10" reflector. Kathy Buczynski, not to be outdone, will deliver another of her excellent presentations on constellations, this month covering Corona Borealis. There will also be some time for questions from the floor. The BVA property is approximately six miles west of West Chester on Route 842. As usual, 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. A map is enclosed. This month's observing features the parade of the Gas Giants (see below) and the glories of the summer Milky Way. Don't miss it!

In September we will resume meeting at West Chester University .

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## CCAS Welcomes New Members

It's been a while since we welcomed new members to the Society. These are the people who have joined us since November 1995 (the last time we recognized new members in *Observations*):

Charles Burtner, Jody Burtner, Scott Burtner, Ryan Burtner, Shiv Gupta, John Imburgia, Carole Imburgia, Leslie Jones, Chris Jones, Steven Leiden, and Joseph Sommar & family. Welcome one and all.

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## MegaMeet V

CCAS has received an invitation to attend the Fifth Annual MegaMeet at Pulpit Rock, sponsored by the Lehigh Valley Amateur Astronomical Society. Pulpit Rock is the dark sky site of LVAAS, 1582 feet up in the Blue Mountains, between Lenhartsville and Hamburg PA. Gates are open from 4 to 9:30 PM Saturday Sept. 7, 1996. On "the Rock" are several observatories housing telescopes ranging in size from 8" to 40" in aperture. You can bring your own 'scope and stay as long as you want, camping overnight or leaving when you wish. Facilities are rather limited, consisting of Porta-Potties. If the weather is questionable you may call Priscilla at 610-683-6397 after 12 noon on Saturday for the go/no-go decision. Rain date is Saturday September 14, 1996. See Ed Lurcott for further information and maps.

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## DelMarVa Dark Sky Star Party

The DelMarVa Stargazers will host a fall "Dark Sky" star party at Tuckahoe State Park, Queen Anne, MD, on September 13-15, 1996. Events include star gazing on Friday and Saturday nights, a swap table

Saturday morning (bring your own table), and talking about telescopes and astronomy on Saturday afternoon.

Tuckahoe is in the DelMarVa Peninsula in a remote area, with no white lights visible from the observing field. Facilities include campsites, hot showers, hiking trails, boating, fishing, birding, etc. Contact Ed Lurcott for further details and a registration form. The registration fee is \$15.00. Free coffee will be available, as well as some inexpensive snacks.



### Coming in September: Lunar Eclipse!

The last total lunar eclipse visible from North America in this century will be on the night of September 26-27, 1996. This eclipse will start about 1.5 to 2 hours after sunset, so the Moon will be higher in our sky when the eclipse starts. Unlike the April eclipse, when the Moon rose fully eclipsed for us, the Moon will not enter the umbra (the darkest part of the Earth's shadow) until 9:12 PM EDT. Make plans now so you don't miss the show, or you will have to wait until the next century to see another total lunar eclipse!



### August's Skies

#### Moon Phases

Last Quarter	8/06
New Moon	8/14
First Quarter	8/21
Full Moon	8/28

### The Perseid Meteor Shower

The Perseid Shower usually lasts about 4 nights, August 11 through 14. The peak activity this year is forecast to be in the early morning hours of Monday August 12. Since New Moon is on the 14th, it won't "drown out" the fainter Perseids. So this year should be a really good show! Optical aid is **not** required for meteor showers. More on the Perseids below!

### The Planets

Mercury will be in the evening sky this month, shortly after sundown. But it will be hard to spot, because it will

not be high in the sky. If you see it, let us know. This is the worst apparition of Mercury this year.

Venus moves higher in the morning sky this month, rising three hours before the Sun. Venus will be catching up on Mars as the month winds down.

Mars also rises higher into the morning sky in August. As noted above, it will be about 10° away from Venus on August 1, with Venus closing to within about 3° by August 30.

Jupiter leads the parade of the Gas Giants across the evening sky in August. It's fairly easy to find, in the south right after sunset.

Neptune is next after Jupiter in this month's parade, about four binocular fields east of brighter Jupiter. Neptune shines at about magnitude 7.8 in the constellation Sagittarius.

Uranus is in Capricornus, shining at about magnitude 5.7. It is third in line in our little parade of planets, about one binocular field east of fainter Neptune.

Saturn brings up the rear of the parade, rising a few hours after sunset. Since it's in a part of the sky without a lot of bright stars (on the Pisces-Cetus border) Saturn isn't too hard to spot.

Pluto actually leads the parade, lying to the west and north of Jupiter. But it is so faint you need at least an 8" telescope and good seeing to find it. Has anyone else spotted it this year? I think I did (Jim A.)

### Space Exploration Notes

#### Historical Notes for August

In 1959, the US launches Explorer 6, the first spacecraft to take pictures of Earth from space and return them to Earth via radio.

In 1960, the US launches Echo 1. The Soviets launch Sputnik 5, the first spacecraft to carry living creatures into orbit and return them safely to Earth (two dogs).

In 1962, the US launches Mariner 2 to Venus.

In 1966, the US launches Lunar Orbiter 1, which helps map the lunar surface in detail, preparing for the Apollo manned landings later.

In 1970, the Soviets launch Venera 7 to Venus.

In 1971, the Apollo 15 mission broadcasts the first live television coverage of a lunar liftoff.

In 1975, the US launches the Viking 1 lander to Mars. It landed on Mars in 1976, as NASA's contribution to the Bicentennial celebration.

In 1977, the US launches Voyager 2 to the outer planets. Also in 1977, the space shuttle *Enterprise* completes the first real test of the shuttle's gliding and landing capabilities.

In 1978, the US launches the Pioneer-Venus 2 spacecraft to Venus.

In 1981, Voyager 2 flies past Saturn.

In 1983, STS-8 *Challenger* lifts off with the first African-American in space, Guion Bluford, Jr. It was also the first nighttime launch of a space shuttle.

In 1989, Voyager 2 flies past Neptune.

In 1993, the US loses contact with the Mars Observer spacecraft.



### **Perseid Meteor Shower this month**

As mentioned above, the Perseid meteor shower occurs this month, running roughly from August 11 through 14. The peak is predicted to fall early on the morning of Monday August 12. The Moon will be a slim crescent this year, so its light won't drown out fainter Perseids, as does happen when the Moon is Full around Aug. 11-14. At their peak on August 12, you could see as many as 100 meteors per hour. And the best instrument for watching a meteor shower is your eyes! In fact, if you try to use binoculars or a telescope, you probably will miss all the action.

To watch the Perseids, pick a place as free as possible from lights. Face the northeast, and watch for the constellation Perseus as it rises over the horizon. If you traced the lines of the meteors backward, you would find that they all seem to radiate from a central point in Perseus. That's why they're called Perseids. Many people recommend a chair, or even a folding beach chair or chaise lounge, for relaxing while you watch the meteors. That way you can lay back, and you don't have to crane your

neck backwards. Some people like to listen to music on a personal tape or CD player. Bring some friends, some snacks, and make it a party! It can get chilly laying under the stars for long periods, even in

August, so dress warmly. Some recommend bringing blankets or sleeping bags, just in case you get really cold. If you plan to lay out for a long time, another good idea is a sheet of plastic to lay over top you and your covers, to keep the dew from soaking you. And don't forget bug spray!

The best time to observe is after midnight, but many Perseids can be seen as soon as it gets dark enough. After midnight, our position on the Earth is rotating directly into the stream of meteors.

Meteor showers are the remains of comets that circle the Sun in regular orbits. Some of these comets' orbits cut across the Earth's orbit. The dust blown off the comet by the Sun (which forms the comet's tail) trails behind the comet in that orbital path. Eventually a long trail of debris, like a tube in space, forms. When the Earth cuts through the tube, the debris is pulled down by the Earth's gravity. The dust particles burn up in the atmosphere, producing fiery trails across the sky. Sometimes the particles are a little larger, and can produce spectacular fireballs. The Perseids come from Comet Swift-Tuttle, which last passed through these parts in 1992. The Perseids fall rather fast, as meteors go, because the direction of the dust in the comet's orbit is opposite the Earth's direction. That increases the closing speed. Interesting fact 1: The Perseids have been recorded as far back as 36 BC Interesting fact 2: The Perseids are also known as the Tears of St. Lawrence in some parts of England and Germany, for the meteors can begin falling as early as August 10, the anniversary of St. Lawrence's martyrdom. St. Lawrence was tortured and killed in Rome on August 10, 258 by the anti-Christian emperor Valerian.

You can call them the Tears of a Saint or the tail of a comet, or just plain call them the Perseids. However you name them, they are a marvelous sight. Enjoy!



### **Comet Hale-Bopp**

Latest reports indicate that Comet Hale-Bopp is now at about magnitude 5.5-6.2. I haven't estimated the magnitude myself, but I have seen it twice now and

those estimates sound about right to me. I was surprised to find how easy it was to find in my 8x50 finderscope (which is roughly equivalent to one-half a pair of 7x50 binoculars). I know that Emil Volcheck has also seen it now, and more than once. Ed Lurcott has seen it several times too. Has anyone else seen it, and care to comment? Oh, and that statement in last month's newsletter about being able to see it with the naked eye already. That would be a real stretch, to put it mildly, especially in July. Keep looking with binoculars, though, and remember to record the date when you can first find it with the naked eye.

**August-September Coords for Comet Hale-Bopp**

<u>Date</u>	<u>R.A.</u>	<u>Dec.</u>	<u>Constell.</u>
8/1	18h 10.7m	-08° 52'	Serpens Cauda
8/5	18h 05.5m	-08° 32'	Serpens Cauda
8/10	17h 59.4m	-08° 07'	Ophiuchus
8/15	17h 53.7m	-07° 42'	Ophiuchus
8/20	17h 48.7m	-07° 21'	Ophiuchus
8/25	17h 44.2m	-07° 01'	Ophiuchus
8/30	17h 40.3m	-06° 41'	Ophiuchus
9/4	17h 37.0m	-06° 23'	Ophiuchus
9/9	17h 34.4m	-06° 06'	Ophiuchus
★	★	★	★ ★

**First Light**

Next month: Those nasty stellar coordinates, like the ones up above for Comet Hale-Bopp. This had been promised for this month, in last month's installment of this column, but was not ready for publication at press time. We apologize for this dereliction of duty (hey, is it my fault the Olympics are so captivating?)

**Also Available**

A free brief overview called *Getting Started In Astronomy* is 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. Articles for the *First Light* column, intended for beginners, are also needed.

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**For Sale**

One University Optics primary mirror cell for a 10" or 10.1" Newtonian telescope primary mirror. Slightly used and modified. Retails for \$47.95+shipping, asking \$25.00. Contact Jim Anderson.

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**Contributing to the Newsletter**

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 **skywalkr56@aol.com**. Or mail to:

Jim Anderson  
1086 King Road IVY-312  
Malvern, PA 19355

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**Membership Renewals**

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 \$27 per year, 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.

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**CCAS 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

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