

# OBSERVATIONS

A MONTHLY PUBLICATION OF THE  
CHESTER COUNTY ASTRONOMICAL SOCIETY

★President: Edwin Lurcott  
★Treasurer: Pete LaFrance

**JULY 1995**  
(VOLUME 3, NO. 7)

★ Vice President: Jim Sylvester  
★ Secretary: Nancy Armstrong

## CCAS JULY MEETING

DATE: **Friday, July 21, 1995**  
RAIN DATE: **Saturday, July 22nd, 1995**  
(regardless of weather)

TIME: 8:15 PM EDT  
PLACE: Brandywine Valley Association (BVA)  
1760 Unionville-Wawaset Road (Rte. 842)  
West Chester, PA (see map)

Continuing with our combined monthly meeting and observing session, we will meet at the barn of the BVA headquarters. If we have poor weather on both nights, we will hold a meeting with no observing session on Saturday evening. This arrangement will continue through the month of August.

Since last month's meeting was so lightly attended (only three members), Ed Lurcott has agreed to bring his working orrery out again and demonstrate "The Scale of the Solar System" at the July meeting.

Weather permitting, observing of the night sky will begin as soon as it is dark enough. Mars, Jupiter and Pluto will already be in the sky at sunset. The movements of Jupiter's moons are fairly rapid and can be observed in the course of the evening. Uranus and Neptune rise just after sunset and Saturn rises about 11:30 PM. Saturn's rings are on edge to Earth and present a challenge to any telescope, but four or five moons are visible under good conditions.

Deep sky enthusiast will be happy the date for this session was chosen so that there will be no interference from the moon. The summer evening skies are full of marvelous objects to see; clusters, nebulae, galaxies, double and variable stars. All are there waiting for you to see and to contemplate their existence.

All are invited. Those bringing 'scopes may drive up the farm road to the left of the parking lot. Members not owning 'scopes are encouraged to come and enjoy the views through the 'scopes. 'Scope owners are always pleased to have others

look through them. Plus, binoculars will enable you to see many objects in the sky, bring a pair!

The BVA is allowing us to use their facilities and CCAS members are reminded that we should leave the area as clean as we found it. Your cooperation will be appreciated. For further information call Ed Lurcott, 436-0387.

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## JUNE CCAS MEETING

Cloudy conditions prevailed during the weekend of CCAS's June meeting. This coupled with vacations and other summer activities probably contributed to the very attendance. No formal meeting was held and, of course, no observing. However, Pete LaFrance did set up Ed Lurcott's orrery and the outdoor model of the solar system, only to take them down again.

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## JUNE 30TH OBSERVING FROM AVONDALE

Observing from Pete LaFrance's home was also clouded out for the four members who showed up. Instead, Pete demonstrated some of the features of his new computer, including downloading current weather maps showing the clouds over Avondale. Another session will be scheduled soon.

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## SUMMER MEETINGS

Please note the schedule of our summer meetings which are combined with observing sessions at the Brandywine Valley Assoc.(BVA).

<u>Primary Date</u>	<u>Rain Date</u>
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<b>Fri., July 21</b>	<b>Sat., July 22</b>
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<b>Fri., Aug., 18</b>	<b>Sat., Aug. 19</b>
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## NOTES ON CORONA BOREALIS

by Jim Anderson

If you look at the monthly star charts in the June issues of either *Astronomy* or *Sky & Telescope*, you will notice a small half-circle of stars near the meridian, sandwiched in between Hercules and Bootes. This is the constellation Corona Borealis, the Northern Crown.

Corona Borealis is one of Ptolemy's original 48 constellations, as described in his work *The Almagest*, written in the second century AD. Ptolemy was an Egyptian astronomer, living in Alexandria. Although earlier references to various constellations exist, *The Almagest* is the earliest known attempt at a comprehensive list and description of stars and constellations (well, at least as this writer knows). According to Greek Mythology, this crown belonged to Ariadne, the daughter of King Minos of Crete. Most people know of this legend. King Minos kept a monster, the Minotaur, in a labyrinth. As a tribute to Crete, seven young men and seven young women from Athens were fed to the beast each year. One year, Ariadne fell in love with one of these men, Theseus. She gave him a ball of thread and a sword to take into the labyrinth with him. He slew the Minotaur with the sword, and then followed the trail of thread from the ball back out of the labyrinth. Athens was released from its tribute obligation, and Theseus and his companions set sail back to Athens. Of course Ariadne went with Theseus, but he abandoned her on the island of Naxos, when she was asleep. When she awoke she was found by the god Dionysius (god of the vine, a.k.a. Bacchus), who immediately married her. One version of the story says that Theseus gave Ariadne the jeweled crown for their pending marriage, before he abandoned her. The other version (the better one, I think) says Dionysius gave the crown to Ariadne as a wedding present. When she died, Dionysius set the crown amid the stars for all eternity.

The only other story about Corona Borealis that I've found so far is a Celtic legend. In this story, the constellations are a castle, Caer (castle of) Arianrhod. Arianrhod was the daughter of the King of the Fairies, Don. The souls of magicians, kings, and poets supposedly go to this castle after death.

Corona Borealis is rather devoid of deep-sky targets. The *Observing Handbook and Catalogue of Deep-Sky Objects* lists only two faint elliptical galaxies, NGC5958 and NGC5961. These are

challenge objects for large amateur telescopes. In the southwest corner of the constellation lies a remote "super-cluster" of galaxies. It is, alas, too faint for almost any amateur telescope to see. That's a shame, really for in one-half of a degree of sky (about the apparent size of the Full Moon) there are over 400 galaxies! Estimates say this group is over 1000 million light-years away.

There are a number of interesting stars in Corona Borealis, though. Gamma Coronae is a close double star, the orbital period is about 91 years. Eta Coronae is another close double with a period of about 41.5 years; perhaps more interesting is the fact that both stars in this system are much like our own sun. Sigma Coronae is another interesting double, where the separation of the two stars is increasing; the orbital period has been calculated at about 1000 years. Can your telescope split these doubles? For more challenging doubles, check the various catalogues available.

There are also two very interesting variable stars in Corona Borealis. R Coronae is a very unusual irregular variable. It shines most of the time at about 6th magnitude. Then in a matter of weeks it fades to anywhere between magnitudes 7 and 15. These minima may last several months, or for several years. T Coronae, on the other hand, is probably the best known example of a recurrent nova. It usually shines at about magnitude 10, far below naked-eye visibility. But two times in the last 100 years it has risen to shine at about 2nd magnitude, earning it the nomiker "The Blazing Star." According to *Burnham's Celestial Handbook*, T Coronae is one of six known recurrent novae, and one of only two that reaches naked-eye visibility at maximum.

So the next time it's not a good night for "faint fuzzies," cruise through Corona Borealis and check out the interesting stars there. Any of the many star charts and maps will help you locate them. Who knows, maybe you'll be one of the first to catch T Coronae on the rise! And remember the legends of fairy castles and souls, or of love found, spurned, and found again. Most of all, enjoy!

### References:

*The Box of Stars*, Catherine Tennant  
*Stars and Planets, Peterson Field Guides*, Donald Menzel & Jay Passchoff  
*Bullfinch's Mythology*, Thomas Bullfinch  
*Burnham's Celestial Handbook, vol. 2*, Robert Burnham, Jr.  
*Starlist 2000*, Richard Dibon-Smith  
*Observing Handbook and Catalogue of Deep-Sky Objects*, Christian Luginbuhl & Brian Skiff

## MASON-DIXON STAR PARTY

June 23 -25: It has been reported that this event also was clouded out, including a rain storm. So it appears the weather god was not kind to us in the month of June. But let us not give up. One of these times we will hit a crystal clear night and when we do it all becomes worthwhile.

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## ASTRONOMICAL SOCIETY OF THE PACIFIC (ASP)

CCAS members attended the annual meeting of the ASP. Mike Tucker, John Stolar and Ed Lurcott attended the "Universe '95" meeting of ASP on the campus of the University of Maryland College Park, Maryland June 22nd, 23rd and 24th. A tour of NASA's Goddard Space Flight Center highlighted the activities on Friday. Many noted professional astronomers and researchers presented talks on Saturday and Sunday. Some of the talks dealt with the lensing effect of massive galaxies or clusters of galaxies which bends light rays from more distant quasars. By estimating the mass and the distance of these galaxies and measuring the amount of light displacement, the Hubble constant can be determined thus implying the size and age of the universe. The observations being used in this reach were made by the new very large optical and radio telescopes on earth and from other instruments from space, including the Hubble telescope.

It was exciting to hear about these new developments in astronomy directly from those conducting the research. Also, it was a special opportunity to participate in an ASP meeting, since they are normally held on the west coast.

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## MEMBERSHIP RENEWALS

Many members have already renewed their membership, but there are some who have not. Now is a good time to check the date printed on the address label of this issue. If you are due to renew, you may send your renewal check made out to our new Treasurer, Pete LaFrance.

Mail to: **Pete LaFrance**  
**413 Church Rd.**  
**Avondale, PA 19311.**

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## CHESTER COUNTY ASTRONOMICAL SOCIETY'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

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  
**Pubic Rel:** Kathy Cseke (610) 644-9543  
**Obs Chm:** Mike Tucker (610) 584-8236

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