



OBSERVATIONS



A MONTHLY PUBLICATION OF THE
CHESTER COUNTY ASTRONOMICAL SOCIETY

★President: Mike Turco
★Treasurer: Pete LaFrance

SEPTEMBER 1998
(VOLUME 6, NO. 9)

★Vice President: Kathy Buczynski
★Secretary: Frank Angelini

CCAS September Meeting

DATE: **Tuesday September 8, 1998**
TIME: 7:30 p.m. EDST
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.

Our September meeting speaker will be Dr. Emil Volcheck. The topic will be "Space Travel: For Real?" Dr. Volcheck will review a bit of the background of the space program, look at some of the fundamentals involved in traveling outside the Earth, and speculate on targets for future journeys.

Looking ahead to October's meeting (Oct. 13), our speaker will be Professor Rex Saffer of Villanova University. He will make a presentation on the presence of blue stars, called "blue stragglers," in globular clusters. This is a phenomenon that he is studying. Globular clusters are believed to be very old formations, and the presence of blue stars in them presents something of an enigma, as they are relatively young.

Mark your calendars now so you don't miss either one of these fascinating presentations! Hope to see you all there!

★ ★ ★ ★ ★

September Observing Session

The CCAS Observing Session will be on Friday September 18, 1998 starting at about 8:00 p.m. If it's too cloudy on Friday, then the Observing Session

will be on Saturday September 19, 1998. 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 an adult accompanies them.

★ ★ ★ ★ ★

CCAS Website is Live!!

Pete LaFrance has set up a Web page for the Society, and it is now available on the World Wide Web (Internet). He has included some pictures taken by CCAS members. Check it out at:

http://members.tripod.com/~ccas_2/ccas.html

Pete welcomes any additions to the site by Society members. The contributions can be of any astronomy subject or object, or can be related to space exploration. The only requirement is that it is your own work; no copying copyrighted material!! Give your contributions to Pete LaFrance (268-2616).

★ ★ ★ ★ ★

September Quiz Question

We all know that a light-year is a measure of distance, not time. It is the distance that light travels in one year. A nanosecond is one one-billionth of a second. To the nearest tenth of an inch, how long is one light-nanosecond? The first person to call Jim Anderson with the correct answer wins a genuine light-nanosecond ruler. Call 380-4512; if I'm not home leave a message with your name and answer. The answering machine will tell me the date and time you called. Ed Lurcott is not eligible to win (sorry, Ed).

★ ★ ★ ★ ★

A Brief Report on ALCon '98 by Ed Lurcott

French Lick, Indiana, famous for its mineral springs in the early part of this century, was the setting for the 51st Convention of the Astronomical League. (The PLUTO company still bottles and sells water from the springs) The 485 room French Lick Springs Resort Hotel was the center for all convention activities hosted by the Louisville Kentucky and Evansville Indiana Astronomical Societies.

Starting on Wednesday July 21, the program included registration for the 250 attendees, welcoming remarks, and the first of seven program sessions that concluded on Saturday afternoon. Some of the outstanding presentations included:

Chuck Allen on "Our Mister H-bomb" (a comparison of H-bomb and Solar fusion);

Dr. Tim Hunter on "Tricolor CCD Imaging with 24" Telescope at the Grasslands Observatory AZ";

Wayne Johnson on "Supernova Hunting" (Wayne has discovered 6 supernova, followed up by HST observations);

Ray Berg on "Computer Aided Variable Star Observing" ('scope control and recording of data);

Dr. J. Richard Gott III on "Time Travel and the Beginning of the Universe" (the keynote address);

Bob Gent and Tim Hunter on "The Battle to Preserve Our Night Skies";

Dr. Don Parker on "CCD Images";

Mike Bennett and Dennis Schatz on "Astronomical Society of the Pacific's Project Astro Workshop";

Dr. Tom Crawford on "Popullution: A Chemical Demonstration" (population explosion consequence)

Jack Horkheimer on "The Comet that Killed Cleopatra" (44 BC);

Dr. F. Story Musgrave on "Artistic View of the Universe" (A Celebration of the Color Blue);

Sarah Gavit on "NASA, Probing the Subsurface of Mars" (a miniature probe);

Dr. James Kaler on "Extreme Stars: At the Edge of Creation";

Mary Dombrowsky (age 17) on "Cataclysmic Stellar Variability with Eclipsing Binary Superimposition";

Dr. F. Story Musgrave on "The HST Repair Mission" (main banquet address, on some problems involved in preparation and execution of the mission).

Dark sky observing was available at nearby Patoka Lake State Park (25 miles away!) An astrophotography contest, a silent auction, vendor displays, and an Astronomical League sales table were all included during the convention. At the Business Meeting the newly elected AL officers were presented:

President is Chuck Allen;

Vice President is Bob Gent;

Secretary is Terry Manor;

Treasurer is Jackie Wade;

Executive Secretary is Janet Stevens;

Reflector editor is Ed Flaspoebler.

Several awards were given out at the banquet, including the new Jack Horkheimer Award for Young Astronomers, which was presented to Jennifer Harland (19). The A.L. Young Astronomer Award was given to Mary Dombrowsky (age 17; prize included a 10" computer-controlled Meade telescope, donated by Meade Instrument Corp.) The Leslie Peltier Award was given to Roger Sinnott for the new *Millennium Star Atlas*.

The 1999 ALCon will be in Spokane, Washington. The 2000 ALCon will be in Ventura, California. The 2001 ALCon will be somewhere in the Eastern United States (the site has not been picked yet). The 2002 ALCon will be held in Salt Lake City, Utah.

Barry Beamer, the outgoing AL President, announced some new AL Observing Programs that are being started: Asteroid, Universe Sampler, Planetary, and Variable Stars.

Looking back it was a very good convention and I am glad I went, and happy that I met so many interesting people. Although the next two ALCons will be held on the West Coast, I would highly recommend that you plan to attend the 2001 ALCon, when it will be here on the East Coast.

★ ★ ★ ★ ★

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 Deborah Goldader, Gus Hrisoulas, Rachana Patel-Rana and Family, and Michael Replogle!



Flying Down the Milky Way by Jim Anderson

As darkness falls in September, the constellation Cygnus is nearly straight overhead. Many people see some of the stars in Cygnus as a cross, the Northern Cross. The Northern Cross is an example of an asterism, a group of stars that make up a recognizable pattern, but are not a constellation. The first magnitude star Deneb stands at the head of the Cross. Deneb is the northernmost of the three first magnitude stars that make up another, larger asterism known as the Summer Triangle (the other two are Vega, in Lyra, and Altair, in Aquila). The name Deneb, however, returns us to the Swan imagery, for Deneb is from the Arabic for "tail," meaning, of course, the tail of the Swan. The crossarms of the Cross are the wings of the Swan, and the Swan's long neck is stretched out southward, pointing the way toward the heart of the Milky Way in Sagittarius. The star at the foot of the Cross, then, marks the head of the Swan. This star is called Albireo; oddly enough, the name has nothing to do with the Arabic names for it, but is probably the result of one or more misunderstandings that occurred in translating it into English. Albireo is a fitting star to mark the head of the Swan, for it is one of the loveliest double stars in the heavens; one star being yellow in color, the other blue in color. You can see the "Eyes of the Swan" with a pair of binoculars, if you can hold them steady enough.

Returning to the Arabic myths, Deneb really is short for "Al Dhanab al Dajajah," the Tail of the Hen. As far back as 300 B.C., Arabic peoples saw this constellation as a hen. The bird imagery that came down to us through the many different cultures may go all the way back to the Chaldean culture of ancient Mesopotamia. Clay tablets found along the Euphrates River show a stellar bird of some kind.

This bird appears to be "Urakhga," the original source of the Arabic "Rukh," or Roc, the bird that Sinbad the Sailor knew.

The ancient Greeks knew of the bird symbolism associated with this constellation, but had lost the story behind it. Hence, for them it became the Swan. The exact identity of the Swan, however, varies in different sources. One story says that the Swan is Orpheus, a great hero from Thrace. Orpheus was such a great singer and lyre player that even the animals and the tress of the forest would come to hear him play and sing. When Orpheus died, the gods transported him to the heavens as a swan, flying along right next to his beloved lyre (Lyra) for all eternity.

Another story said that Cygnus is really the chief god, Zeus, in another of the famous disguises he used to seduce mortal women. As Cygnus he seduced Leda of Sparta. Leda thus became the mother of Castor and Pollux (of Gemini fame). With her mortal husband Tyndareus, Leda also begat Helen, who of course later begat the Trojan War.

Yet a third story says that Cygnus is related to the story of Phaethon (that's Phaethon, not photon). Phaethon was a mere mortal who one day discovered that his father was really the sun god Helios. In a burst of emotionalism at their reunion, Helios let Phaethon drive the chariot of the Sun across the sky. Being a mortal, Phaethon could not control such a powerful vehicle, and his reckless driving threatened to incinerate the Earth because he was getting the Sun too close to Earth. Seeing this, the chief god Zeus blasted Phaethon with a thunderbolt from Mount Olympus, knocking Phaethon into the river Eridanus. Phaethon's closest friend, named Cygnus, dove into the river to search for the body. Cygnus swam back and forth across the water in his search, much like a swan does. Helios, moved by Cygnus' love and devotion, changed Cygnus into a Swan and placed him in the sky.

Across the seas in North America, the Shoshone Indians of the Great Basin area in Utah and Wyoming saw the stars of Cygnus and Vulpecula as a grizzly bear. This great bear is running up a snow-

covered mountain. As he goes he knocks loose many ice crystals, which became a trail (the Milky Way).

So whether it's a bird or a bear, its eyes (Albireo) are forever gazing into the heart of the Milky Way in Sagittarius. Considering this, perhaps it's really an amateur astronomer! No matter which story you decide to tell about it, never forget on these warm pleasant nights of the waning summer to linger with Cygnus, swimming down the glories of the Milky Way.

Have Fun!

Clear Skies!

References:

Bullfinch's Mythology, by Thomas Bullfinch
Skywatching, by David H. Levy
Stars and Planets; Peterson's Field Guides,
by Donald H. Menzel and Jay M. Pasachoff
Star Names: Their Lore and Their Meaning,
by Richard H. Allen
Stars of the First People, by Dorcas S. Miller



September's Skies

Moon Phases

Full Moon	09/05
Last Quarter	09/12
New Moon	09/20
First Quarter	09/28

The Planets

Mercury is visible in the morning sky, near Venus.

Venus is low in the east-northeast before sunrise.

Mars is rising in the morning sky, above and to the right (west and south) of brighter Venus.

Jupiter is the brightest "star" in the east in the early evening, climbing higher as the night progresses. Jupiter is a fine sight in any size telescope (in binoculars too!)

Saturn is rising in the east as darkness falls, but isn't high enough for good viewing until late evening. The rings are tilted at an angle of 17° from edge on.

Uranus and Neptune are in Capricornus, well placed in the south as darkness falls. The May 1997 issue of *Sky & Telescope* has a finder chart for these two planets.

Pluto is in Ophiuchus, just north of the head of Scorpius. It is high in the southern sky as twilight fades. It requires

at least an 8" - 10" telescope, dark skies, and lots of patience to bag Pluto.

Lunar Occultation: September 12, 1998

The Moon will occult (pass in front of) the first magnitude star Aldebaran in Taurus on the night of September 11-12, 1998. It will also occult the nearby Hyades star cluster. Occultation timings are one way that amateur astronomers can make contributions to science. This occultation will be visible from our area, weather permitting. Aldebaran will disappear at around 2:20 a.m. on September 12 (EDT), and reappear at about 2:45 a.m. (EDT). Amateurs equipped with a camcorder and a short-wave radio receiver can make highly accurate recordings of occultations of bright stars by the Moon, such as this one. See page 112 in the September 1998 *Sky & Telescope* for more details.



Future Observing Sessions

All at the BVA:

- October 23 (24), 1998
- November 20 (21), 1998
- December 18 (19), 1998

Future Meetings

All at Room 113, Boucher Building, WCU:

- October 13, 1998
- November 10, 1998
- December 8, 1998



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 SNY114@aol.com

Or mail the contribution, typed or handwritten, to:

Jim Anderson
19 Bluff Road
Thorndale, PA 19372-1104



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. Bill's phone number is 696-1422.

★ ★ ★ ★ ★

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. Working on these awards also gives you a plan of observing: "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 (610-497-3623)

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

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

★ ★ ★ ★ ★

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

★ ★ ★ ★ ★

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.

★ ★ ★ ★ ★

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.

★ ★ ★ ★ ★

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: Mike Turco (610) 399-3423

Vice Pres: Kathy Buczynski (610) 436-0821

Treasurer: Pete LaFrance (610) 268-2616

Secretary: Frank Angelini (610) 873-7929

ALCor and

Newsletter: Jim Anderson (610) 380-4512

Librarian: William O'Hara (610) 696-1422

Observing: Ed Lurcott (610) 436-0387

★ ★ ★ ★ ★