



OBSERVATIONS



A MONTHLY PUBLICATION OF THE
CHESTER COUNTY ASTRONOMICAL SOCIETY

★President: Edwin Lurcott

NOVEMBER 1995

★Vice President: Jim Sylvester

★Treasurer: Pete LaFrance

(VOLUME 3, NO. 11)

★Secretary: Nancy Armstrong

CCAS November Meeting

DATE: **Tuesday, November 14, 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 full, you may still park in the lot behind Bull Theater Building, on the southeast corner of South High Street and Rosedale Avenue.

Our speaker for the November meeting will be Prudence Campbell, Astronomy Instructor at West Chester University. Prudence obtained her Master's degree at West Chester last year in Earth Science, specializing in planetarium education. You may recall her demonstration of WCU's planetarium last November. This month she will again use the planetarium projector to show the stars of the November sky, but will include a discussion of Earth's crossing through the ring plane of Saturn. She hopes to obtain Hubble Space Telescope images taken during the recent ring plane crossing showing what may be the discovery of new moons of Saturn. This program will bring you up to date on Saturn, so be sure to come and enjoy this excellent demonstration by Prudence Campbell.

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.

November Observing Session

On Friday, November 17, 1995, Pete LaFrance is hosting this month's observing session at his home: 413 Church Road in Avondale, PA (see map). Pete's number is 268-2616 if you have difficulty finding his house. All members are invited and may bring their own telescopes, and set them up in the yard next to his observatory. If the weather is obviously not good for observing you may come the next night, Saturday November 18.

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Request for Telescopes (and owners!)

One of the purposes of the Chester County Astronomical Society is to promote an interest in astronomy. Here is an opportunity to fulfill this purpose by conducting an observing session for a home school group.

A request for our participation in a Star Night by a home schooling organization has been received. They plan for a November 28th outing at 127 Knoxlyn Farm Road, off Route 82 south of Kennett Square. The rain date will be November 30.

Maps will be available at the November meeting. There will be 25 children from 4 to 12 years old with their parents. It sounds like a fun time for all. Remember to dress warmly.

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October CCAS Meeting

Those of you who missed the October CCAS meeting really missed a good one. Our own Roger Taylor related how he had to learn about optics, physics, metallurgy, machining, and engineering in order to create his beautiful 12" telescope. It all grew out of that **free** stainless steel bolt, which just **had** to be used somewhere! Roger's humorous talk kept the members smiling and laughing throughout the presentation which ended with the assembly of the `scope right there in the room. Many thanks to Roger for all his efforts to make this one of the best programs of the year!

Constitution Changes Approved

Members have approved the proposed changes in the CCAS Constitution. The following is a brief summary of the approved changes.

1. Types of memberships now include senior and family memberships. A senior member must be 65 years or older. Dues for a senior member will be \$10.00 a year. A family membership may include a husband and wife and all children under 18 years old living at the same address. In a family membership, only the wife and husband are considered voting members of the Society. Family dues are \$30.00 a year.
2. The nominating committee is now called the election committee. This committee will oversee the entire election process including selecting candidates, presenting them to the Society in writing, conducting the election and announcing the results according to the timetable in the Constitution.
3. The President shall be an ex-officio member of all Society committees except the election committee.

Copies of the newly revised Constitution will be available to members as soon as the printing is completed.

The Society still has an urgent need for a Program Chairperson.

The new pamphlet describing the CCAS, its purposes, meeting times and membership types, is available for members to put on bulletin boards or to hand out to interested friends. Feel free to take a few at the November meeting.

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New Members

New members of the CCAS have not been announced in Observations since last May. Therefore it is with overdue pleasure that we welcome the following new members:

Bonnie Fefferman

Barbara Fefferman

George MacNeill

Sarah MacNeill

Harry Meza

Steve Flemming

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October Observing Session

Rained out on Friday night (10/20). It cleared up Saturday right before dark, but nobody showed up at the BVA (except Ed).

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Space Exploration Notes

On November 10th, at night, the European Space Agency will launch a new satellite from French Guiana in South America. The Infrared Space Observatory (ISO for short) will be the first infrared telescope in Earth orbit since the early 1980's. Slated for an 18-month mission, its 60 cm telescope will capture infrared images and spectra from a number of targets.

Meanwhile, the Galileo space probe continues to approach Jupiter, and will arrive and swing into orbit about the giant planet on December 7, 1995.

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November's Skies

Moon Phases

Full Moon	11/07
Last Quarter	11/15
New Moon	11/22
First Quarter	11/25

The Planets

Saturn is in the Southeast after sunset.

Uranus and Neptune are near the Sagittarius/Capricornus border, to the southwest in the evening hours, well-placed for observation.

Pluto passes behind the Sun this month.

Mercury also passes behind the Sun this month.

The Big Show in planets this month is provided by Jupiter, Mars, and Venus, congregating in the Southwest right after sunset. During the third week of November, all three planets will be within 2 degrees of each other. It will be the most impressive grouping of planets this year. A young crescent moon joins the group on November 23 and 24. There's a good series of diagrams on page 65 of the November 1995 *Sky & Telescope* that show the positions of the planets through the month. *Astronomy* magazine has a feature article on the conjunction, with a series of diagrams, in their November 1995 issue. Don't miss the show!

Meteor Shower

The Leonid meteor shower peaks on November 17 or 18, when the Moon is a waning crescent. The dim Moon may interfere a bit with this meteor shower, but it may be worth checking out anyway. Since Leo rises in the early morning hours, that's the best time to see this shower. Earlier in the evening you may see meteors streaking upwards (westward) from the eastern horizon.

The peak rate is usually about 10 bright meteors per hour. However, every 33 years the Leonids "storm", with rates above 2,000 meteors per hour! They last "stormed" in 1966, with the next "storm" due in 1999. Predictions of these storms is far from an exact science, so the Leonids bear watching for each of the next 4 or 5 years.



CCAS Upcoming Schedule

Meeting dates for the remainder of this year are:

December 12 7:30 PM EST

Mark your calendars now as to not miss a meeting!



Lacerta by Jim Anderson

Probably not too many people are familiar with the constellation Lacerta (luh sir' tuh), the Lizard. It's not a bright or large constellation, and there are not a lot of note-worthy deep-sky targets within its borders. You might say that it's a bit off the beaten path.

Your first question might be, where exactly is it? Take a look at the star chart in this month's astronomy periodicals, or set your planisphere to today. You'll find Lacerta almost straight overhead, near the zenith this month. Its neighbors are Cygnus, Pegasus, Andromeda, Cepheus, and Cassiopeia. You may need darker skies to see it, since its brightest star's magnitude is listed as 3.77 (mag 4 for most of us without photometers!).

Lacerta is not an ancient constellation. It seems that as European mapmakers in the 17th century starting making star atlases and catalogs, they thought that there was too much "blank space" between the classic constellations as listed by Ptolemy (2nd century AD). Since in the 17th century there were not firm boundaries between the constellations, as there are now, the astronomers and mapmakers started adding constellations to fill in the gaps. Lacerta was first drawn by a German astronomer named Johannes Hevelius, in 1690. It was one of seven constellations Hevelius devised that later became accepted as official. Hevelius gave the constellation an alternate name, Stellio, which is a newt with star-like spots that is found along the coast of the Mediterranean Sea. It's interesting to note that the Chinese called this same group of stars the Flying Serpent, or Dragon.

Other European mapmakers and astronomers also tried to name this group of stars. In

1679, for example, Royer had called it The Scepter and Hand of Justice, in honor of his king, Louis XIV. Around 1780, Bode would call it The Frederici Honores, to honor his king, Frederick the Great. The question was settled for all time in 1928 by the International Astronomical Union. In that year the IAU defined a list of 88 constellations, and settled their boundaries. Since the IAU frowned upon naming constellations for monarchs and other historical personages, Hevelius' Lizard won out.

As noted above, Lacerta doesn't have a lot of deep sky targets. Burnham's *Celestial Handbook* lists a number of double stars, some variable stars, three open star clusters (NGC7209, 7243, and 7245), and one dim planetary nebula. A minor meteor shower that is visible in August and September has its radiant near Beta Lacertae, and are therefore called the Lacertids. Professional astronomers are very interested in an odd object known as BL Lacertae. At first it was thought that BL Lac was a variable star. It is now known to belong to a unique class of very distant, and highly variable objects resembling quasars in both energy output and size. Unlike quasars, though, BL Lac objects seem to be related to elliptical galaxies, and, strangely enough, their spectra reveal no discernible lines.

Perhaps more interesting to the average stargazer is the fact that the Milky Way runs through the northern part of the constellation. There are many lovely star fields in this area that are visible in binoculars. Keep that in mind. The next time you're out observing, take some binoculars along, find the Lizard, and use the binoculars to sweep along the "star-like spots" on the Stellion's back. Enjoy!

References:

- The Cambridge Guide to the Constellations*,
by Michael E. Bakich
- Star Names, Their Lore and Their Meaning*,
by Richard H. Allen
- The Box of Stars*,
by Catherine Tennant
- Peterson Field Guides, Stars and Planets*,
by Donald Menzel & Jay Pasachoff
- Burnham's Celestial Handbook, vol. 2*,
by Robert Burnham, Jr.
- Star List 2000*,
by Richard Dibon-Smith
- Norton's 2000.0, 18th Edition*,
by Ian Ridpath



First Light by Jim Anderson

Last month we discussed learning the constellations. I mentioned two learning aids you could use, a book or a planisphere. At our October meeting, Dr. Emil Volcheck, of the Mount Cuba Observatory in Delaware (just across the border) offered us some good insights into which of these learning aids is the most helpful. He and the observatory staff have found that most people find a planisphere to be more helpful. That's because a book can only show sky maps for a limited number of days, while the typical planisphere can be set for any day of the year, to show you how the sky looks on that day.

The best planisphere is one called *The Night Sky*, by David Chandler. It's better because it shows the sky looking North on one side, and the sky looking South on the other. This helps minimize the distortion found in other planispheres, or in the flat "circle" maps like those in the monthly astronomy mags. The sky does appear as a dome when you look at it (even though we know it's not), and when you try to draw that on a flat piece of paper, it gets distorted (the distortion gets worse the closer you get to the edges). Many people probably remember this from geography classes in school, where we heard about the difficulties in trying to draw maps of the Earth: how hard it was to put what is globular in shape on a flat piece of paper. *The Night Sky* can be found at local bookstores, or ordered through them. It's available from Sky Publishing Co. (1-800-253-0245). It can also be purchased from the Mount Cuba Observatory (302-654-6407). Dr. Volcheck added that they sell it for less than Sky Publishing, so check it out.

"First Light" is a term used by astronomers in reference to the first time a new telescope is used. That first night looking at the stars with a new telescope is the first time that telescope has seen starlight; hence, "first light".

For our newsletter, I'm thinking that would be a good title for a regular column for beginners. I'm hoping that other Society members will contribute to this column. Share experiences of what worked for you, or didn't work. Astronomy can be a overwhelming hobby, but with some good guidance at the beginning it can provide enjoyment for a lifetime. And no one person has all "the right answers," so let's all help each other out. If you have some thoughts or hints, but don't feel comfortable about writing, give me a call and tell me about it. You can provide the idea, and I'll write it up. Also, you could submit questions that you'd like an answer for. I'll look it up or ask other experienced Society members, and we'll get you an answer. We can publish those here for everyone to read.

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.

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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. This is your club newsletter; contribute as often as you like. Such contributions can be handwritten, typed, or be on computer diskettes (I use Microsoft Word for Windows). If you don't feel too confident about your writing skills, but have an idea or info you'd like to share with the club, call Jim Anderson (993-0261) and we'll work something out. Please don't let good ideas or knowledge get lonely! Share them with the club!

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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 Treasurer, Pete LaFrance. Mail to:

Pete LaFrance
413 Church Rd.
Avondale, PA 19311

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:

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

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