OBSERVATIONS

A MONTHLY PUBLICATION OF THE
CHESTER COUNTY ASTRONOMICAL SOCIETY

★President: Edwin Lurcott ★Vice President: Kathy Buczynski
★Treasurer: Pete LaFrance ★Secretary: William O'Hara

APRIL 1998
(VOLUME 6, NO. 4)

CCAS April Meeting

DATE: **Tuesday April 13, 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.

At our April meeting Dr. Stolar, of the University's Department of Geology and Astronomy, will deliver a computer-aided talk about meteors. We will also have a presentation on the constellation Monoceros by Ed Lurcott. As noted below, the Election Committee will report on its work, and the upcoming election of officers in May. Refreshments and socializing will follow the meeting.

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CCAS April Observing Session

The next Observing Session will be on Friday April 24, 1998, with a cloud date of Saturday April 25. If the weather is bad both days, there will not be an observing session in April. The session will be held at the Brandywine Valley Association (a map is included). From the main parking lot by the office, go up the farm lane to the left, about 800 feet or so to the top of the hill. If you arrive after dark, please turn off your headlights and just use parking lights as you come up the hill. 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 they are accompanied by an adult. Remember to dress warmly! It gets cold real fast standing around in the middle of an old pasture in April.

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CCAS Holds First Annual Messier Marathon

Several people gathered at the BVA on Friday March 27 for the Messier Marathon: Frank Angelini, the Coll family, Steve Limeburner, John Imburgia, Kathy Buczynski, Ed Lurcott, Barry Martin, and Mike Turco. From sunset until about 10:30, the skies were not that good. The group had to wait for clouds to clear, more than they were observing. After 10:30 the skies cleared rather dramatically, and the faithful started observing M-objects one right after another. John Imburgia and Frank Angelini teamed up together, and observed 79 objects. Steve Limeburner, with his 4" f/10 Newtonian reflector, picked out a large number of objects by starhopping with the main telescope (no finder!) thereby demonstrating his knowledge and ability to use a telescope without setting circles. Mike Turco, using his new 6" AstroPhysics refractor on a temporary pipe mounting, also observed a large number of objects. Barry Martin and Kathy Buczynski both observed a goodly number of objects with binoculars. At around 4:30 a.m., skies became completely overcast again, ending the fun. On Saturday March 28, Frank Angelini went back and observed another 24, for a total of 103 out of a possible 110. He notes that the visibility of some of them was improved by the use of light-pollution filters. Frank is to be commended for this outstanding accomplishment, as well as for his perseverance!

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AL Observing Award Earned

We are pleased to announce that one of our members, Ed Lurcott, has completed all of the 100 observations needed to earn a Double Star Observing Award from the Astronomical League. As soon as the award comes back from the national award coordinator for the AL, it will be presented to Ed. In the meantime, we extend congratulations to Ed for his accomplishment.

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CCAS Election News

An Election Committee has been formed, consisting of Jim Anderson (Chair), Casie O'Hara, and Bob Smith. The committee has been attempting to contact all Society members. At the April meeting, the slate will be presented to the Society in writing, and any additional nominations will be accepted at that meeting, as required by our Constitution. In the following week, a ballot will be mailed to all Society members in good standing. The ballot can be returned by mail if you can't make it to the May meeting, or the ballots can be turned in at the May meeting. Any mail-in ballots received after Tuesday May 12, 1998, will not be counted. The ballots will be counted at the May meeting on May 12 by the Election Committee, and the results will be announced then. The results will also be published in the June *Observations*. The new officers will be officially installed at the June Society meeting.

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Saturday May 2: National Astronomy Day

What can we do on National Astronomy Day to promote astronomy as a hobby, and our Society as well?? We have reserved a place at the Exton Square Mall, although we are not yet sure if we will have electricity. We are open to suggestions of what to do that day to promote astronomy. Call Ed Lurcott with any ideas (436-0387).

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Wednesday May 8: Telescopes Needed!!

The CCAS has been asked to help out with telescopes and expertise at **two** star parties on the same night! One event is for a Girl Scout troop; Kathy Buczynski is coordinating that one (436-0821). The other event is at the Ridge Pike Elementary School, in Plymouth Meeting. The time for this star party is 7:00 p.m. The star party at the Ridge Pike school has become an annual affair, with both the CCAS and Delaware Valley Amateur Astronomers providing telescopes and expertise. Even if you don't have a telescope, but can point out some constellations, come on out to one of these fun-filled gatherings.

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June 2: East Goshen Park Star Party

East Goshen Township has asked the CCAS to run a star party in East Goshen Township Park on Tuesday evening, June 2, with a cloud date of Wednesday June 3. Telescopes and members will be needed to help with the anticipated crowd.

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Upcoming Events

Mark your calendars now for these CCAS Observing Sessions in the coming months:
May 29 (30)
June 26 (27)
July 24 (25)
August 28 (29)

DelMarVa Stargaze IV: April 24-26, 1998, held at Tuckahoe State Park near Queen Anne Maryland.

Northeast Astronomy Forum and Telescope Show: Sunday May 3, 8:30 a.m. - 6:00 p.m. Suffern, NY

BVA Summer Solstice Party: Friday June 19

Astronomical Society of the Pacific Annual Meeting: June 25-July 1 Albuquerque, NM

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June 19-21: Mason-Dixon Star Party

This fine star party takes place south of York, PA, near the state border. It features speakers on a variety of topics, swap tables of astronomical gear, vendor displays, camaraderie, and great observing all night long if you can stay awake. The keynote speaker this year will be Dr. David Dunham, best known for his work in lunar and asteroid occultations: he writes the annual articles on these events in *Sky & Telescope*.

Practically an unlimited number of camping sites is available. No hookups, though. There are also three motels within "telescope distance" of the park, and many others within a 30-minute drive. Ed Lurcott has a brochure with more details. We would like to get together a group of people to attend this event together; camp together in a group, if camping, etc. The idea is to get the CCAS a bit more recognition outside our own area. Chuck Shorten, Shiv Gupta, Rafael Gonzalez, Pete LaFrance, and Ed Lurcott have all attended this event in the past. You can talk to any of them about their experiences.

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July 21-25: ALCON 98

The National Convention of the Astronomical League will be held this year in French Lick, Indiana. There will be at least 8 professional speakers, competitions in astrophotography and CCD imaging, displays by vendors, a banquet, workshops, tours, door prizes, a midnight bowling tournament, and dark-site observing in the Hoosier National Forest. The French Lick Resort is a recently renovated 1920's style hotel. It features indoor and outdoor pools, a world-famous spa, three restaurants, a pizza parlor, a game room, an ice-cream parlor, a bowling alley, two golf courses, numerous tennis courts, and a brand new convention center. Rooms are $79 per night for one or two people. Ed Lurcott is planning to attend. Anyone else interested??

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April's Skies

Moon Phases

First Quarter	04/03
Full Moon	04/11
Last Quarter	04/19
New Moon	04/26

The Planets

Mercury passes between the Earth and the Sun (inferior conjunction) in early April, and emerges into the morning sky in late April. It will not get very high in the sky, though, and will be tough to spot.

Venus is the bright "morning star" in April, and a great sight if you're up before the Sun. See the notes below for a very spectacular sight on April 23.

Jupiter appears in the morning sky in April. See the notes below about its conjunction with Venus on April 23.

Mars and Saturn are both lost in the Sun's glare this month.

Uranus and Neptune are in Capricornus, low in the southeast before dawn.

Pluto rises late at night this month, in Ophiuchus, but it would be extremely difficult to find. Best wait a few more months before trying to find it.

An Observing Challenge

by Ed Lurcott & Jim Anderson

In the early morning hours of Wednesday April 22 and Thursday April 23, just as dawn is breaking (about 5:25-5:30 EDST), the two very bright planets Venus and Jupiter will be just 0.5° apart! That is about the apparent width of the Full Moon. That also means that by using low to medium power eyepieces on most telescopes, you will be able to see both planets at one time! They will be low in the sky, so the telescopic viewing will not be all that great, but it is still an interesting treat. On April 22, the waning crescent Moon will be higher and to the right of the two planets. On April 23, the Moon will be less than 2° away from Jupiter and Venus! This will be truly spectacular sight, telescope or no telescope! The few days leading up to April 22 will also be interesting to watch, if you're up and about, as the planets and the Moon draw ever closer together.

Supernova in Ursa Major

A supernova has been observed in a spiral galaxy located in Ursa Major, the Big Bear (the Big Dipper is part of Ursa Major). The galaxy is NGC3877; the supernova has been designated 1998S. NGC3877 lies just 0.3° south of χ Ursae Majoris (pronounced Chi Ursay Majoris). This third magnitude (3.71) star is easy to find, not far from δ U Ma which is one of the bowl stars in the Big Dipper. You do need a fair-sized telescope to see it, however, as the galaxy is listed as being about 11th magnitude, and the supernova is about 12th magnitude. We see the galaxy close to edge-on, so it appears to be enlongated in shape. I (Jim Anderson) saw the supernova on the night of March 28 with my 10" f/6 relector, from my backyard in Thorndale. The core of the galaxy appeared as a fuzzy star, with another star nearby that seemed even brighter. Kinda like a double star, except one of the stars was fuzzy. The supernova seems brighter and easier to see because the galaxy's "magnitude" is how bright it would be as a point source, like a star. Instead, the light is spread out over a larger area, and can seem dimmer than

its listed magnitude. Anybody else see it, or maybe image it??

See if you can observe these stars with the help of the finder charts included with this issue of *Observations*.

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Book Review by Jim Anderson

Turn Left At Orion
Guy Consolmagno and Dan M. Davis
Cambridge University Press, 1997
ISBN 0 521 48211 9 hardback
$24.95 available through Sky Publishing

The subtitle of this book is a very accurate description of its contents: "A hundred night sky objects to see in a small telescope - and how to find them". The only mis-representation in the subtitle is the count of objects. The book begins with a section describing how to use it. After that is a section describing lunar observations you can make with a small telescope. Following that is a section on the planets that are interesting sights in a small telescope: Venus, Mercury, Mars, Jupiter, and Saturn. These first sections are not included in the enumeration of 100 objects, so there are really more than 100 objects covered by the book.

After those first sections comes the meat of the book: 4 sections arranged by season of the year. In each section, 25 (or more) deep sky objects within the reach of a small `scope are described. In these sections a rather unique approach is taken. First you are given clear easy diagrams of that season's skies, with directions on finding the brighter stars and constellations. Following that is 2 (sometimes more) pages on each of the 25 objects for that season: the best double stars, star clusters, nebulae, galaxies, etc. Each object's pages show clearly and simply how to find the object, starting with a "naked eye" view of the constellation that it is in. Then there is a finderscope view, showing how the object will look in the finderscopes common to small `scopes (straight-through, 6x30 views: image is drawn upside-down and reversed). Then there is a drawing showing how the object would look in a small `scope with a low-power eyepiece, drawn assuming the `scope is a small refractor with star diagonal, so this image is just reversed, not upside down. The authors made all of the observations themselves with small telescopes, drawing only what they thought the "average" person would notice. Then there is a text description on the object, noting things like colors (the drawings are reproduced in black and white), followed by an explanation in layman's terms of what it is you are looking at. In a manner similar to the approach used in *Burnham's Celestial Handbook*, the first time a new type of object is covered, there is a more detailed explanation of that type of object: open star clusters, planetary nebulae, galaxies, etc. The difference, once again, is the level of the description: this book explains it in terms the average layman can understand, yet remains scientifically accurate.

Following those four sections, there is a section with more information on topics like "How to run a telescope", and "Where do you go from here?". Once again, the authors avoid making the text any more technical than is absolutely necessary.

In summary, I found *Turn Left At Orion* to be an excellent guide for beginners in the hobby of astronomy. The most refreshing aspect of the book is its clear, easy to understand approach to learning your way around the nighttime sky. Perhaps best of all is the lack of glorious, full-color, long-exposure photographs of the covered deep-sky objects. There is nothing wrong with such photos, I love them as much as anyone. It's just that I think that often leads to disappointed beginners, who soon quit, because "everything looks so blah in my little telescope". This book seeks to avoid that problem by showing all objects exactly as they look in 2"-6" telescopes. In my opinion, it is the best guide for beginners on the market today; and I've bought or looked at a great many of them. From now on, whenever people ask me "what is a good guide for beginners in astronomy?", I will answer "*Turn Left At Orion*" without any hesitation.

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Monthly Quiz Question

The winner of the March question "What are the coordinates (in R.A. and Dec.) of the Sun on the Vernal Equinox" was Frank Angelini. The answer is 0h 0m Right Ascension, 0 degrees 0 minutes Declination. Zero zero, for short.

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The Hubble: A True Hall of Famer

By Mike Turco

I was shocked to read in the May issue of *Astronomy* that the Hubble Space Telescope is due for retirement in seven years. It seems that when the Next Generation Space Telescope is up and running, the Hubble will be put out to pasture. Well, we better not just let it drift in space!

The Hubble Space Telescope (HST) has to be the greatest single advancement in observational astronomy in our lifetime, if not in history. If I didn't already think so, I was convinced after receiving the slides I used during the recent eclipse cruise in the Caribbean. In my frenzied quest for material (I had all of four days to prepare five one-hour lectures on astronomy for the cruise), I contacted the Astronomy Society of the Pacific and obtained a few slide sets to use for the lectures. Two of the sets I chose dealt with images from the HST. They are at once the most fascinating and incredible images ever taken.

Close ups of Martian dust storms, auroras on Jupiter and Saturn, details of Pluto, star births in the Eagle Nebula, quasars, protoplanetary discs, photo-evaporation, exploding stars, and the now famous Deep Field where we see a mere 11 billion years into the past. So much more of the universe has been revealed and in such a spectacular fashion! The HST has provided explanations, added immensely to man's knowledge base, and raised a myriad of new questions which will keep scientists busy for decades.

In baseball, a player must wait five years after retirement before he becomes eligible for the Hall of Fame. I say the Hubble Space Telescope gets a special dispensation. As soon as it is retired from service, we snatch that baby out of orbit and Shuttle it back to earth. Then, with much pomp and circumstance, we put it where it belongs, enshrined among the many photos and images which it made famous, at the Smithsonian Air & Space Museum. Only there can it get what it deserves. It would be a fitting tribute to one of man's greatest achievements.

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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. We will be publishing sections of the list each month, though; part 6 is below. Bill's phone number is 696-1422.

Books in Category 8, "Nebulae, Star Clusters, Giants, and Comets":

801 - *The Comet is Coming*, Calder, 1980

802 - *Red Giants and White Dwarfs*, Jastrow, 1979

803 - *Messier's Nebulae and Star Clusters*, Jones, 1982

Books in Category 9, "Space":

901 - *The High Frontier*, O'Neill, 1982

902 - *Radio Astronomy*, Calder, 1958

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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. These "clubs" will arrange times for the members working on those awards to get together to share experiences and advice in finding interesting sights in the night sky, and possibly also to observe together. Working on these awards also gives you a plan of observing, so to speak. "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 (610-325-7285)

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

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

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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

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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

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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.

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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.

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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:	Edwin Lurcott	(610) 436-0387
Vice Pres:	Kathy Buczynski	(610) 436-0821
Treasurer:	Pete LaFrance	(610) 268-2616
Secretary:	William O'Hara	(610) 696-1422
Program:	Kathy Buczynski	(610) 436-0821
ALCor and Newsletter:	Jim Anderson	(610) 380-4512
Librarian:	William O'Hara	(610) 696-1422

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