



# OBSERVATIONS



A MONTHLY PUBLICATION OF THE  
CHESTER COUNTY ASTRONOMICAL SOCIETY

★President: Mike Turco  
★Treasurer: Pete LaFrance

**DECEMBER 1998**

(VOLUME 6, NO. 12)

★Vice President: Kathy Buczynski  
★Secretary: Frank Angelini

[http://members.tripod.com/~ccas\\_2/ccas.html](http://members.tripod.com/~ccas_2/ccas.html)

## CCAS December Meeting

DATE: **Tuesday December 8, 1998**  
TIME: 7:30 p.m. EST  
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 guest speaker at the December meeting 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. Hot young blue straggler stars (BSS) have been observed with the Hubble Space Telescope (HST) in the cores of very old globular star clusters surrounding our Milky Way galaxy. Theory maintains that these stars must be more massive than the hydrogen-burning members of the cluster. These less massive, hydrogen-burning stars are as old as the cluster themselves. The expected lifetimes of more massive stars are far less than the age of the cluster, implying that they must have formed recently. The two most favored theories of BSS formation today involve either the merger of contact binaries, or direct stellar collisions in the crowded cluster core. Dr. Saffer will describe observations made with HST which confirm the high stellar masses (and therefore the young ages), and which also reveal clues to the history of BSS formation and their expected evolution. He will also describe future planned research in this area.

Dr. Saffer is presently Research Assistant Professor in the Department of Astronomy and Astrophysics at Villanova University. He graduated Magna Cum Laude from the University of Utah with a BS in both Mathematics and Physics in 1985, and received his Ph.D. in Astronomy from the University of Arizona in 1991. His varied career includes 10 years in the US Air Force as an aircraft avionics and weapons control systems technician, and five years of postdoctoral research at the Space Telescope Science Institute.

Please mark your calendars, and bring all your interested friends to the December meeting to meet Dr. Saffer and hear about his very interesting work. He is a great speaker with the talent for conveying advanced subject matter to lay audiences, as evidenced by his 1984 Outstanding Teacher Award at the University of Utah. Hope to see you all there!

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### ***From the Vice President:***

The Executive Committee would like everyone to join us for some holiday cheer following the regular meeting on December 8, 1998. We will be gathering at Café Chicane at 15 S. High Street in West Chester. A parking lot is very conveniently located directly across the street. Directions: After leaving the meeting, proceed to High Street (the street parallel to Church Street one block to the east.) Turn left (north) and proceed past the Burger King (on left) and the intersection of Route 842. Café Chicane is in the next block on the right side; the parking lot is on the left. Hope to see you all there.

Holiday Greetings to all!

*Kathy Buczynski*

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**President's Message** November 30, 1998  
Nature's Christmas Present

It was a real disappointment when our November observing sessions were clouded out. We've had fairly decent weather conditions overall this season but those two days last month didn't qualify as such. So now we turn our attention to December which, given some clear nights, should be a great observing month. For those members who do not read the astronomy magazines, here are some of the upcoming sky treats to anticipate as we approach the Christmas season.

The two nearest big galaxies, M31, the Great Andromeda Galaxy, and its sister, M33, appear almost directly overhead this month. This should provide the best seeing for them given a decent atmosphere. The constellation Auriga with its three clusters, M36, 37 and 38 is back at a reasonable hour. The Perseus Double Cluster, the constellation Cassiopeia, the Pleiades and the Hyades all are high in the sky for good viewing. And Orion with its rich collection of objects is starting to show his face again late in the evening.

Jupiter and Saturn continue to be the premier objects. Jupiter is high in the SSE in Aquarius right after sunset at magnitude -2.4, allowing three to four hours of viewing. I'm still waiting for some color to appear in the "Great Red Spot" which has been nearly white since I've been observing the planet. Maybe Santa Clause will color it for us. The planet reaches quadrature (90 degrees east of the sun) on December 11th, so its shadow falls well to the side and a variety of Galilean satellite events is possible (shadow transits, etc.).

Jupiter also passes close to the moon this month. On Christmas Eve (if it isn't snowing) you'll see they form a wide pair, and on Christmas night (after the snow) Jupiter is 5 degrees away from the crescent moon. Try to catch both of them in your scope or binoculars.

If there is any object in the sky to justify owning a telescope, it's Saturn. Saturn is in Pisces this month and drops to 0.2 magnitude. It is still a magnificent sight however. The moon appears just 2 degrees S of

the planet on December 27th. Saturn's southern ring face is now visible. The planet's tilt and orbit will make the rings appear to widen until the year 2002. On November 18th, while looking for Leonid meteor stragglers, I observed Saturn and saw the finest detail I have ever seen of that planet. The rings appeared to have a dark outline both inside and outside and all the way around. I could easily see the A-B gap in the rings and the inner ring also. I had never seen the inner ring distinctly before. A darker band across the planet's southern hemisphere was also visible. Saturn takes 29 years to orbit the sun, Jupiter only 12. These two planets will move closer together over the next two years as their orbits bring them to the same part of our sky. Jupiter will overtake Saturn in their "easterly race" in the year 2000.

Those of us who did not get to the Far East to see the glory of the Leonid meteor shower last month take heart. The Geminid shower is coming. It lasts from December 7th to 17th, peaking on the 13th. The moon is nearing new at this time so it should not interfere with viewing the shower. Observers are expecting about 70 meteors per hour on average, 100/hr maximum. Gemini is in the ENE sky this month in the evening.

Check out Mercury this month also. Look close to the SE horizon about 30 minutes before sunrise to locate it. It reportedly will make a very favorable apparition starting around Dec 11th. A 30%-sunlit crescent Mercury is visible on that date. The red star Antares will be on the horizon nearby, but the planet is recognized as the only 0-magnitude object in the sky. On Dec. 16th, the crescent moon hangs 6 degrees above Mercury. Through a telescope the crescent Mercury looks similar to the crescent moon. On Dec. 17th a thin crescent moon is 6 degrees below the planet. Mercury's phase will be past crescent on this date heading toward full near the end of the month.

Mars is coming back! While you won't be able to make out any surface features yet, it rises about an hour after midnight and brightens to first magnitude this month. This portends the opposition of Mars next April as the Earth catches up to the Red Planet.

By the end of the month, Mars contrasts nicely with the white star Spica 7 degrees away, both shining at first magnitude. During the first four months of 1999, we will see a rapid increase in the size and brightness of Mars, as it reaches magnitude -1.7 at opposition.

There are many other things to see this month. The comet Giacobini-Zinner moving past the Helical Nebula NGC 7293 in Aquarius (Dec. 9th to 15th), asteroids Ceres and Isis in the Hyades, Venus returning as the Evening Star, and an occultation of Aldebaran and the moon for us northeasterners Dec. 30/31 to wrap up the month. For amateur astronomers, this adds up to a great Christmas season.

Happy Holidays to all!

*Mike Turco*

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**Leonid Notes** by Jim Anderson

I must say that I was underwhelmed by the Leonids. We were clouded out the morning of November 17; during the afternoon I read glowing reports from the other side of the world on the Web. It was clear on the morning of November 18, so Donna and I got up, bundled up, and went outside at 01:45 EST. Leo was above the horizon, already clearing the line of spruce trees to our east. In the next 30 minutes, I saw 2 fairly bright meteors, both about first magnitude in brightness. That was far less than the "1-2 meteors per minute, most of them dazzlingly bright fireballs" I had read about on the Web 10 hours earlier. The gloriously bright "winter constellations" that were near the meridian were far more impressive! Post-shower analysis of the reports from around the world indicate that the Leonids peaked about 15 hours earlier than predicted and "rates were markedly lower the following night" (as reported on *Sky Online*). That's why we saw so few meteors: the peak occurred before our part of the Earth rotated into good viewing position on November 18.

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**December Observing Session**

The next CCAS Observing Session will be on Friday December 18, 1998 starting at about 7:00 p.m. This session will be held in conjunction with the BVA's Winter Solstice Celebration (see below for more details). If it's too cloudy on Friday, then the Observing Session will be on Saturday December 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. Dress warmly, because it gets cold quickly when you're standing around a telescope in a meadow in December!

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**December's Skies**

Moon Phases

- Full Moon 12/03
- Last Quarter 12/10
- New Moon 12/18
- First Quarter 12/26

**Comet LINEAR**

This new telescopic comet is moving along the borders between the constellations Lacerta, Pegasus, Cygnus and Vulpecula in December. Brightness estimates put it between about mag. 8.5 to 9.0.

Coordinates:

Date	R.A.	Dec.
12/01	22h 02.31m	+37° 13.3m
12/05	21h 45.24m	+32° 09.7m
12/10	21h 32.07m	+27° 30.6m
12/15	21h 23.84m	+24° 08.9m
12/20	21h 18.43m	+21° 39.2m
12/25	21h 14.77m	+19° 45.5m
12/30	21h 12.23m	+18° 17.5m

Coordinates are from *Sky Online*, at <http://www.skypub.com/>

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## Mike Turco Earns Double Star Award

CCAS Observing Chair Ed Lurcott had the pleasure of presenting Mike Turco with an award from the Astronomical League at the November meeting. Mike observed 100 double and multiple star systems to earn a certificate and lapel pin, thus becoming a certified member of the Astronomical League's Double Star Club. Congratulations, Mike!

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## Astronomical League News from the ALCor

The CCAS is part of a nationwide federation of astronomical societies, called the Astronomical League. At this year's national meeting (ALCON '98), held this past July in French Lick, Indiana, the AL Council approved several changes to the Astronomical League Bylaws. These changes are presented below, on page 7. We will take a vote at the December CCAS meeting, to decide if we approve of the changes. Then I will mark our Society ballot and mail it back to the Executive Secretary by December 31, 1998. Then it will be counted with the ballots from the other societies around the country; results will be printed in the AL's quarterly newsletter, *The Reflector*.

If you cannot attend the December meeting, and you are a regular member, a senior member, or a family member, in good standing (meaning your dues are paid up) you can mark the page with the proposed amendments to indicate if you approve or not, and mail it back to me by December 15, 1998. There are three sections listed on the page; simply write "approve" or "disapprove" beneath each section. Votes received by mail after December 15 will not be included in the count. I will publish the final vote count for each section in the January 1999 *Observations*.

Mail ballots to:

Jim Anderson  
19 Bluff Road  
Thorndale, PA 19372-1104

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## BVA Winter Solstice Celebration

The Brandywine Valley Association is holding its annual Winter Solstice Celebration on Friday December 18. Cost is \$3.00 for members of the CCAS, as the CCAS has a "family" membership in the BVA. As noted above, our December Observing Session is being held in conjunction with the Solstice Celebration. The Celebration starts at 5:00 p.m. EST with a Winter Hike (bring flashlights!) A potluck dinner will start at 6:00 p.m. (bring soup or bread to share; hot spiced cider will be provided to drink.) Then everyone will walk over to the barn, where storyteller Bill Wood will weave winter tales. After that, if it is clear, there will be a stargazer's walk. It is at that time that we will provide telescopic viewing, if it is clear. If it is not clear on Friday, the Winter Solstice Celebration will be held, but without the stargazing program.

If it is cloudy on Friday, though, the CCAS will still hold an Observing Session on Saturday at the BVA. Provided, of course, that the skies clear for Saturday.

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## Dark-Sky Website for PA

The Pennsylvania Outdoor Lighting Council has lots of good information on safe, efficient outdoor security lights at their Website:

<http://home.epix.net/~ghonis/index.htm>

*Thanks to Steve Limeburner for this information.*

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## New Book by an Old Friend of the CCAS

You may recognize the name Jim Mullaney as an author of observing articles and booklets, such as *The Finest Deep-Sky Objects*, a Sky Publishing reprint of a series in *Sky & Telescope* magazine. Most of our members, however, do not know that Jim lives in Exton and is an old friend of the CCAS. Jim has a new book coming out, and he wants to offer CCAS members a special deal on it. I've included the ad copy here as Jim sent it to me.

*Celestial Harvest: 300-Plus Showpieces of the Heavens for Telescopic Viewing and Contemplation*

The long-awaited sequel to the *Sky & Telescope* series reprint *The Finest Deep-Sky Objects*, which has been in use by both amateur and professional astronomers around the world since 1966. This new 100-page, spiral-bound observing manual covers both solar system and deep-sky wonders (highly-tinted first-magnitude, single and variable stars; double and multiple stars; asterisms and associations; open and globular clusters; diffuse and planetary nebulae; galaxies and the Milky Way) visible in typical "backyard" telescopes ranging from 2-inches to 14-inches in aperture.

*Celestial Harvest* contains basic observational data, observing techniques, and thousands of vivid, fascinating and little-known descriptions by classic observers from the past three centuries, in addition to those culled from the author's own visual observations of an original survey working list of over 3,000 objects spanning more than 40 years! Besides its personal use by stargazers, (both for planning a night's observations and at the eyepiece itself), it also provides an ideal guide to the very best celestial wonders for showing at observatory and planetarium public nights, astronomy club star parties, and astronomy course observing sessions.

That's the end of the ad copy that will appear in *Sky & Telescope* and *Astronomy* magazines in the spring. The special deal is this: the price of the new book will be \$33.00 + \$5.00 shipping and handling; if 10 or more CCAS members want a copy, Jim can sell them to us for \$30.00 each, and he said he will deliver them to us in person at a CCAS meeting, thereby also saving us the shipping charges. Think it over; if you're willing to buy a copy, let Jim Anderson know at the December meeting. If you can't make the December meeting and you want a copy, call Jim Anderson at 610-380-4512 by December 31, 1998. If we get 10 or more commitments, Jim (Anderson) will contact Jim (Mullaney) and arrange the transaction.

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## News from Neighboring Societies

[Editor's Note]: All that is required to have notices published here is to include Jim Anderson on the mailing list of your society's newsletter. See below for Jim's address.

### From *Focus*, the newsletter of the Delaware Astronomical Society:

#### Upcoming Meeting Topics

Dec. 15	"Christmas Star" video (Jack Horkheimer) Swap Table, Silent Auction, Party	
Jan.	Starlight - Photographic and Telescopic Filters	
Feb.	White Dwarfs	Judy Provancal, Bartol
Mar.	CCD Astronomy	Dave Groski
Apr.	Spectrometry at Mount Cuba Astronomical Observatory	Jack Fisher
May	Dinner Meeting Black Holes	Dr. Harry Shipman
June	Sundials	Dr. Emil Volcheck

All DAS meetings are held at the Mount Cuba Observatory in Greenville, Delaware (just north and west of Wilmington). For more information contact CCAS members Emil Volcheck (610-388-1581) or Pete LaFrance (610-268-2616), both of whom are also members of DAS. DAS President Warren Jacobs could also help (610-566-0510). Or check the DAS Website at:

<http://www.physics.udel.edu/>

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### Future Meetings

The January 1999 meeting will be a special meeting: look for details in next month's *Observations*.

After that, it's:

February 9, 1999 - Rm 113, Boucher Bldg, WCU  
 March 9, 1999 - Rm 113, Boucher Bldg, WCU  
 April 13, 1999 - Rm 113, Boucher Bldg, WCU  
 May 11, 1999 - Rm 113, Boucher Bldg, WCU

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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](mailto:SNY114@aol.com)

Or mail the contribution, typed or handwritten, to:

Jim Anderson  
19 Bluff Road  
Thorndale, PA 19372-1104

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## CCAS Website

Pete LaFrance has set up a Web page for the Society 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](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 (610-268-2616).

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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.

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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. Copies of the catalog will be available at CCAS meetings. Bill's phone number is 696-1422.

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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. 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): Frank Angelini (610-873-7929)

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

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

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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:** 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

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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 19311-9785**

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## *Sky & Telescope* Magazine Group Rates

Subscriptions to this excellent periodical are available through the CCAS at a reduced price of \$27.00, which is much less the newsstand price of \$48.00, and also cheaper than individual subscriptions (\$37.95)! 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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