



OBSERVATIONS



A MONTHLY PUBLICATION OF THE
Chester County Astronomical Society

★ *President:* Mike Turco
★ *Treasurer:* Pete LaFrance

NOVEMBER 2002

(VOLUME 10, NO. 11)

<http://www.ccasastro.org>

★ *Vice President:* Steve Limeburner
★ *Secretary:* Doug Liberati

CCAS November Meeting

DATE: **Tuesday November 12, 2002**
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

Our guest speaker for the October meeting will be Dr. Emil Volcheck. His topic will be “Comets: Past, Present, and Future?”



Membership Fee Increase

There were enough Society members present at the October meeting to make a quorum of the total membership, which meant we were able to take a vote on the proposed dues increase (first proposed and discussed at the May 2002 meeting). The proposal was to raise Regular and Family memberships by \$5.00 each, while keeping Junior, Student, and Senior membership fees the same as they are now. The proposal passed by a solid majority. Regular (or “individual adult”) memberships are now \$25.00 per year, and Family memberships are \$35.00 per year. The change is effective in November 2002.



Workshop: How To Buy A Telescope

The Education Committee has announced they will hold a workshop entitled “How to Buy a Telescope” on Saturday November 23, 2002 from 7:00 to 8:30 p.m. EST. The workshop will be at the Flower & Cook Observatory in Malvern. The class will cover the types of telescopes and mounts, the pros and cons of each type, and what you can expect to see in the different types and sizes of telescopes. Education committee members will have their telescopes with them so that, weather permitting, class attendees can look through different types of telescopes after the presentations. Call Kathy Buczynski (610-436-0821) to reserve your space(s).



CCAS Schedule of Events

December 6/7, 2002 CCAS Observing Session
(Friday/Saturday) Location: BVA
sunset
December 10, 2002 CCAS Meeting
(Tuesday) Location: **TBA**
7:30 p.m. EST



November Skies

Moon Phases

New Moon	11/4
First Quarter	11/11
Full Moon	11/19
Last Quarter	11/27

The Planets

Mercury is too close to the Sun to be seen this month.

Venus is in the morning sky this month, getting rapidly higher in the east before sunrise as the month progresses.

Mars is also in the morning sky, getting higher each morning before the Sun rises, but not as rapidly as Venus. It is so far away now that it is a tiny featureless dot in a telescope.

Jupiter is now rising before midnight. It is best placed for telescopic observations in the early morning hours.

Saturn is rising in the early part of the evening, and it is high enough for good views by about 11:00 p.m. EST this month.

Uranus is in Capricornus this month, and thus visible in the evening sky. This is still a good month to find Uranus using a telescope. It looks like a blue-green disk in a telescope, small and featureless.

Neptune is also in Capricornus. November is a good time to track down Neptune with a steady telescope using moderate to high magnification. It will appear as a tiny disk, perhaps bluish in color; much smaller than Uranus.

Pluto is in Ophiuchus, low in the evening sky, but it is now too low in the sky to see this dim world. You’ll have to wait until next summer to look for Pluto.





From Brobdingnag to Lilliput: My Travels Through 30 Years of the Space Program

By Diane K. Fisher

In the early 70s, as a minor character in the Apollo Program, I worked in the Vehicle Assembly Building (VAB) at Kennedy Space Center. Stepping into the VAB, I felt like the incredible shrinking woman. The space inside accommodated six 45-story office towers with vast open spaces to spare. In the vertical spaces between the office towers, the 363-foot high Saturn V moon rockets were assembled.



The Vehicle Assembly Building at Kennedy Space Center, completed in 1965 for the Apollo Moon Program.

From my third floor office in one tower, I often delivered documents to higher floors in other towers. Between riding the stomach-dropping glass elevators and dashing across to other towers on narrow, open catwalks at the 28th or 44th floor levels, I soon overcame my fear of heights.

On these excursions, I would see the Saturn Vs come together in the 500-foot high bays. After hundreds of engineers and technicians had toiled around the clock for months, the morning of high-bay rollout would arrive. Slowly, the Crawler Transporter would bear forth the Mobile Launch Platform and the majestic Saturn V rocket. The morning sun reflecting off its gleaming white form would take my breath away.

The last Apollo mission was 30 years ago. As the Apollo program ended, some thought human missions to the Moon, Mars, and beyond would continue apace. Though they didn't continue, the Apollo program remains a single, large step in our technological evolution as a species. It is a great tribute to the intelligence, ingenuity, and dedication of the people responsible for the Apollo missions that they were so successful and the disasters so few. NASA's program today continues to build on the technological and managerial legacy bequeathed us by Apollo.



The Saturn V and Mobile Launch Platform are carried to the launch pad on the Crawler Transporter. Notice the tiny humans below the platform.

And just where are we now? Among its other tasks, the International Space Station is teaching people to live in space for long periods. Robotic space missions are studying issues like land use and global warming and discovering the wonders of the universe, its history, and our place in it. With humanity's many other pressing needs, such quests must be done efficiently.

Part of NASA's mission is to develop the technologies to do cost-effectively what has never been done before at all. NASA's New Millennium Program develops and validates new technologies for space. Missions such as Deep Space 1 and Earth Observing 1 carry and test multiple new technologies (such as ion propulsion and advanced imaging instruments) previously untried in space. And, unlike the Saturn V, the ultimate gas-guzzling muscle car of the 70s, the new technologies must be the "zero emission" vehicles of the 21st century: small, efficient, and capable beyond anything done before.

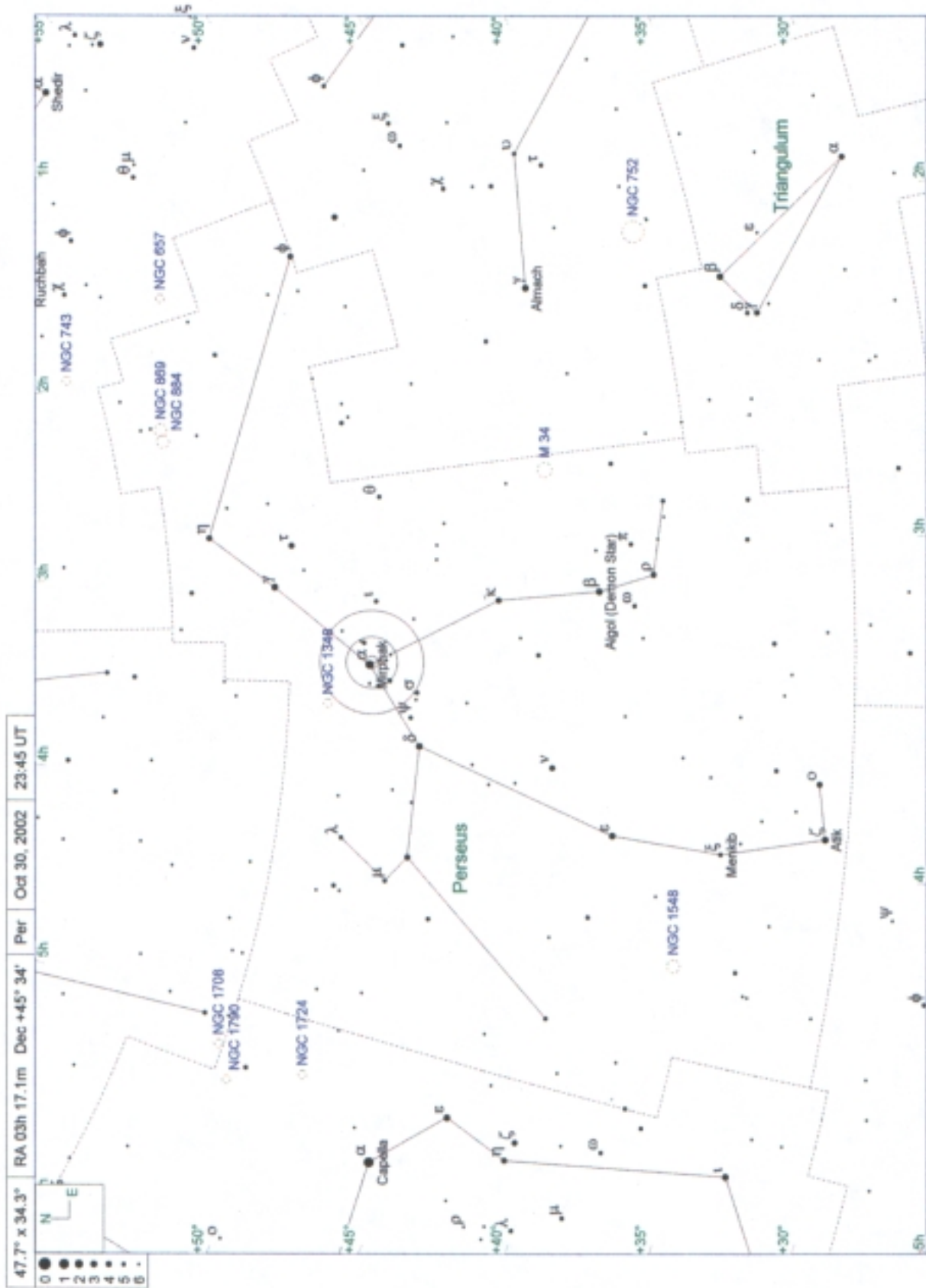
Many of the New Millennium technologies are described for adults at nmp.nasa.gov and for children at *The Space Place*, spaceplace.nasa.gov.

The Space Place now offers a three minute answer to a space-related question on a toll-free phone line. Dr. Marc Rayman, Deep Space 1 Manager (and an amateur astronomer himself), answers a question about space or space exploration. Call (866) 575-6178 to hear the monthly message.

Diane K. Fisher is the developer and writer for The Space Place web site.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.





PERSEUS
Telrad circles centered on Alpha Persei

LITTLE KNOWN ASTRONOMY HISTORY



GALILEO OBSERVES THE PHASES OF VENUS DE FILIPPI ACROSS THE PIAZZA

Cartoon by Nicholas La Para



Astronomus: 19

A Journal for Younger Astronomers

By Bob Popovich

“Boy, Is He/She Ugly!”

It was close. I was all but ready to submit last month’s article to our award-winning editor when my trigger finger twitched off the mouse. Since my custom is to have each article end with the title of the next month’s story, I was all set to launch the title “Boy, Is *She* Ugly!” through cyberspace. But at the last moment, hesitation. Why should the tale of Perseus and the gorgon Medusa serve to upset more than a few of our Society’s members? True, this mythological story of good (beautiful) vs. evil (ugly) does refer to “Medusa and *her sisters*”, but why not “Medusa and *his brothers*”? Since mythological stories are meant not only to entertain but also illustrate aspects of the human condition, it seems unfair to assign certain traits to one gender and not to another. Try reading this myth and reversing the genders. How might we advertise this new mythological story? What about “Will our *heroine* Perseus emerge victorious and slay the stone-cold *bad-boy* Medusa”?

In any case, suffice it to say that good always triumphs over evil. And no matter how you look at the constellation of Perseus, he/she is good. Very good. In fact, this sparkling beauty has few rivals in our autumn sky. And what about Medusa? Well, let's explore and find out...

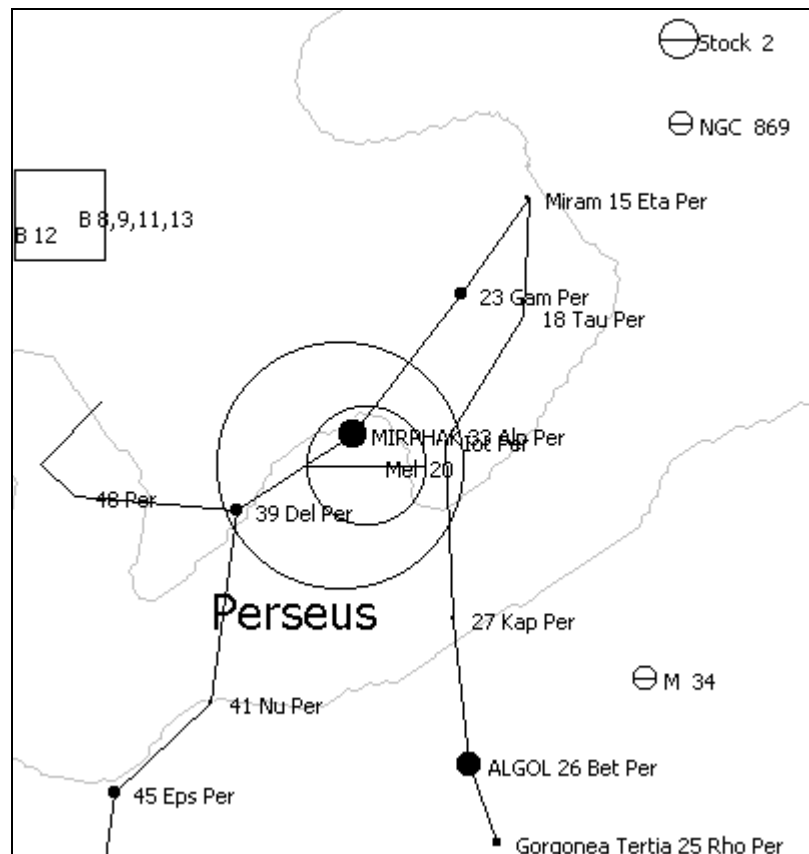
Facing east, Perseus stands out clearly just below Cassiopeia. Two strands of stars are apparent. One marks Perseus' torso and a leg while the other designates an outstretched arm at the end of which dangles the severed head of the gorgon.

Alpha Persei (Mirphak) is a star of magnitude 1.8 in Perseus' torso. It is set in the midst of a loose grouping of stars known as Melotte 20 or the Alpha Persei Group. In binoculars, this is a striking conglomeration of piercing blue/white stars. And just to accent this beautiful sight, you might even be able to detect a red-orange star at the bottom of your field of view. Can you see it? This star field is something you can keep coming back to time and time again. Truly lovely.

Traveling "up" from Melotte 20 towards Cassiopeia the stars thin out quickly. Just as you pass the "top" of the constellation (2+ binocular FOVs) you'll come upon another sight sure to take your breath away—NGC 869 and NGC 884: the Double Cluster. Appearing to us as being one right behind the other (they're actually 800 light years apart), these two clusters delight us with a distinct 3-D effect. A depth of field rarely seen with binoculars. Not only that, but these two beautiful clusters also sit close to several objects in Cassiopeia as well. And as all of this area is in the Milky Way, let's feel free to just go with the flow...

And Medusa? Returning to Mirphak, we nudge over 2 binocular FOVs to the southwest until we come to a rather prominent star known by several names including Gorgonea Prima, Al Ghoul or Algol. This is the easiest-to-observe eclipsing binary visible in our northern skies. Brightening and dimming noticeably over a period of just under 3 days, can you imagine how confounded and terrified our ancient counterparts must have been while observing this star? Little wonder that the Arabic name "Al Ghoul" means "the prankster." What a perfect star to mark Medusa's head. And what about that dreadlocks hairdo made of snakes? (Sorry Bob Marley fans.) They're a smattering of dim stars that fade away to Algol's west.

There is so much more of beauty to enjoy in this constellation—don't pass up M34 or Stock 2. And don't worry; though you may be motionless while gazing at the beauty of these targets, you haven't turned to stone. Medusa or no Medusa.



Note: The large circle represents a 7x50 binocular field of view

Next Time: All I Want For Christmas



[Editor: CCAS member Nicholas La Para has been kind enough to share with us a letter he recently sent to his township supervisors voicing his concerns about light pollution. It is reprinted here as an example that you could use to write a similar letter of your own. Unfortunately, I don't have the additional "informational pieces" Nicholas mentions at the end of his letter.]

Nicholas La Para 713 Folly Hill Road Kennett Square PA 19348 610-388-7640

October 26, 2002

East Marlborough Supervisors,
Richard Hannum, et. al.

Dear Supervisors:

I am writing after seeing the story in the Kennett Paper about the proposed park in Unionville. I want to urge you to consider for this and all future projects insisting on full cut-off lighting that does not increase light pollution – that is, lighting that puts the light on the ground where we want it, and doesn't throw light up into the sky.

There are many things to say about light pollution, but I will mention just three:

1. Full cut-off lighting makes economic and business sense. Lower wattage can be used to achieve the same (actually more pleasant) lighting on the areas needed
2. Full cut-off lighting makes environmental sense. One of the precious beauties of Chester County is the night sky. I'm sure those of you who have lived a long time in this area remember the skies of your youth. Those are gone, and we and our children are the poorer for it. Where is the Milky Way? Where are the thousands of stars that take your breath away?
3. Full cut-off fixtures of all types are available from many manufacturers. So are retro-fit shields to convert wasteful fixtures to full cut-off. The International Dark-Sky Association website (darksky.org) can lead you to these, as can good lighting engineers.

As an amateur astronomer, of course I am interested in a non-light-polluted sky. But from the response I've seen to the many public telescope sessions my club (Chester County Astronomical Association) conducts, I know that enthusiasm for the beauty of the night sky is widespread in young and old. I urge you seriously to consider insisting on non-light-polluting standards for construction in East Marlborough.

I have taken the liberty to include a couple of informational pieces with this letter.

Sincerely,

Nicholas La Para

CCAS Information Directory

CCAS Lending Telescope

Contact Kathy Buczynski to make arrangements to borrow the Society's lending telescope. CCAS members can borrow the lending telescope for a month at a time; longer if no one else wants to borrow it after you. Kathy's phone number is 610-436-0821.

CCAS Lending Library

Contact our Librarian, Bill O'Hara, to make arrangements to borrow one of the books in the CCAS lending library. Copies of the catalog are available at CCAS meetings. Bill's phone number is 610-696-1422.

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

jim.anderson@mckesson.com

Or mail the contribution, typed or handwritten, to:

Jim Anderson
1249 West Kings Highway
Coatesville, PA 19320-1133

Get CCAS Newsletters via E-mail

You can receive the monthly newsletter by e-mail. All you need is a PC or Mac with an Internet e-mail connection. To get more information about how this works, send an e-mail request to Jim Anderson, the newsletter editor, at:

jim.anderson@mckesson.com

CCAS A.L. Award Coordinators

These are the members to contact when you have completed your observing log for the Messier, Binocular Messier, Lunar, or Double Star Awards:

Messier (both): Frank Angelini
(610-873-7929)

Lunar: Ed Lurcott
(610-436-0387)

Double Star: Jim Anderson
(610-857-4751)

CCAS Purpose

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. The Society also provides telescopes and expertise for "star nights" for school, scout, and other civic groups.

CCAS Officers

For further information on membership or society activities you may call:

President: Mike Turco
(610) 399-3423

Vice Pres: Steve Limeburner
(610) 353-3986

Treasurer: Pete LaFrance
(610) 268-2616

Secretary: Doug Liberati
(610) 827-2149

**ALCor and
Newsletter:** Jim Anderson
(610) 857-4751

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

Observing: Ed Lurcott
(610) 436-0387

Education: Kathy Buczynski
(610) 436-0821

CCAS Membership Information

The present membership rates are as follows:

REGULAR MEMBER.....\$25/year
SENIOR MEMBER.....\$10/year
STUDENT MEMBER.....\$ 5/year
JUNIOR MEMBER.....\$ 5/year
FAMILY MEMBER.....\$ 35/year

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

Sky & Telescope Magazine Group Rates

Subscriptions to this excellent periodical are available through the CCAS at a reduced price of **\$29.95** which is much less than the newsstand price of \$54.00, and also cheaper than individual subscriptions (\$39.95)! 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.

CCAS Website

Pete LaFrance is the Society's Webmaster. You can check our Website at:

<http://www.ccasastro.org/>

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) or e-mail to lafrance@kennett.net

