



OBSERVATIONS



A MONTHLY PUBLICATION OF THE
Chester County Astronomical Society

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

SEPTEMBER 2001

(VOLUME 9, NO. 9)

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

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

CCAS September Meeting

DATE: Tuesday September 11, 2001
TIME: 7:30 p.m. EDT
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. If you arrive early enough, you may be able to get an on-street parking space. A map is included on a later page.

Our guest speaker will be Rajul E. Pandya, Assistant Professor of Atmospheric Science at West Chester University's Department of Geology and Astronomy. Professor Pandya also teaches beginning Astronomy classes. He will talk to us about meteorology and weather forecasting.



CCAS September Observing Session

The next CCAS Observing Session will be on Friday September 21, 2001 starting at sunset; or earlier, if you can get there earlier. If it's too cloudy on Friday, then the Observing Session will be on Saturday September 22, 2001. At the observing sessions, there will be help available to set up and use your telescopes. If you're having trouble using your telescope, or finding your way around the sky, come on out and get some assistance. 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 always free of charge. Children are always welcome as long as an adult accompanies them.

To get to the observing site at the BVA, turn off Route 842 into the parking lot by the office: look for the signs to the office along Route 842. From that parking lot, go up the farm lane to the left; it's 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. A map showing the location of the BVA is included on a later page.



Calendar Notes

- September 18, 2001 (Tuesday) Backyard Observing Class
Location: Flower & Cook Observatory
7:00 p.m. EDT
- October 2, 2001 (Tuesday) Backyard Observing Class
Location: Flower & Cook Observatory
7:00 p.m. EDT
- October 8, 2001 (Monday) WHYY FM SkyTour
Location: Arcola Intermediate School
8:00 p.m. EDT
- October 9, 2001 (Tuesday) CCAS Meeting
Location: West Chester University
7:30 p.m. EDT
- October 12/13, 2001 (Friday/Saturday) CCAS Observing Session
Location: BVA
sunset
- October 16, 2001 (Tuesday) Backyard Observing Class
Location: Flower & Cook Observatory
7:00 p.m. EDT
- November 6, 2001 (Tuesday) Backyard Observing Class
Location: Flower & Cook Observatory
7:00 p.m. EST
- November 13, 2001 (Tuesday) CCAS Meeting
Location: West Chester University
7:30 p.m. EST
- November 16/17, 2001 (Friday/Saturday) CCAS Observing Session
Location: BVA
sunset
- November 20, 2001 (Tuesday) Backyard Observing Class
Location: Flower & Cook Observatory
7:00 p.m. EST
- December 4, 2001 (Tuesday) Backyard Observing Class
Location: Flower & Cook Observatory
7:00 p.m. EST
- December 11, 2001 (Tuesday) CCAS Meeting
Location: West Chester University
7:30 p.m. EST
- December 14/15, 2001 (Friday/Saturday) CCAS Observing Session
Location: BVA
sunset

Newsletter Deadlines

These are the deadlines for submitting material for publication in the newsletter, through the December 2001 issue.

<u>Issue</u>	<u>Deadline</u>
October 2001	09/26/2001
November 2001	10/27/01
December 2001	11/26/01

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Welcome New Members!

The Society would like to extend a warm welcome to Donald Miller of Downingtown and Robert Tiedemann of Parkesburg. Hello, and Clear Skies!

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Telescopes and Members Needed

The Friends School of West Chester has requested our assistance for a star night on Tuesday September 25, with Wednesday September 26 as a cloud date. Ed Lurcott is working on confirming these dates with the BVA, so contact Ed if you can help. We will meet the fifth graders, with their parents and teachers, at the BVA because their school's location has too many trees to see much of the sky.

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CCAS Backyard Observing Class

Based on feedback received from students in our first-ever *Beginning Astronomy* class, held this past Spring, we have revamped the class planned for this Fall. The Fall 2001 class will be called *Backyard Observing*, and will concentrate on actual observing: how to find things in the night sky, what's there to see, etc. Each class will include some actual observing, if it is clear the night of the class. Students will be encouraged to bring binoculars and telescopes, if they have them (owning binoculars or a telescope is not required for the class). Each class session will center on some specific constellations visible that night, as well as lunar, solar, and planetary observing. The class will consist of six one-hour sessions, on the first and third Tuesdays of the month, starting with September 18. This is the schedule:

Sept. 18	Lyra & Cygnus
Oct. 2	Pegasus & Andromeda
Oct. 16	Cassiopeia & Cepheus
Nov. 6	Lunar & Solar Observing
Nov. 20	Perseus
Dec. 4	Taurus & Saturn

All classes will be held at the University of Pennsylvania's Flower & Cook Observatory, located in Willistown Township on Providence Road, just west of the intersection with Warren Avenue. Classes will begin at 7:00 p.m. (ET). Registration will be limited to 40 students, due to the classroom size. If you would like to assist with this effort, please contact CCAS Education Chair Kathy Buczynski at 610-436-0821, or via e-mail at kbuczynski@aol.com

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September Skies

Autumnal Equinox

The Autumnal Equinox occurs at 7:04 p.m. Eastern Daylight Time (EDT) on Saturday September 22. That is when the Sun crosses the equator, and autumn begins in the Northern Hemisphere of Earth. It also means that day and night are about the same length of time, 12 hours each.

Moon Phases

Full Moon	9/02
Last Quarter	9/10
New Moon	9/17
First Quarter	9/24

The Planets

Mercury is in our evening sky in September, but is close to the horizon after sunset when it becomes visible. Look in the west-southwest about 30 minutes after sunset. Using binoculars may help; having a low horizon in that direction definitely helps. On September 18 and 19, Mercury will be very close to Spica, and the very thin crescent Moon will be nearby.

Venus is in the morning sky this month, rising about 4:30 a.m.

Mars remains the big show in our evening sky. It is not hard to find, as it is a very bright reddish-orange "star" visible soon after sundown each night in the southern part of the sky. Mars is still close to Earth this month, but the distance is increasing. On nights of good seeing, you can still discern surface details on Mars using a moderately-sized telescope. Mars will be moving eastward across the constellation Sagittarius in September.

Jupiter is in Gemini this month, rising at about 2 a.m., but the best views are just before dawn when Jupiter is higher in the sky (and the Earth's atmosphere is often more tranquil as well at that time).

Saturn is also in the morning sky in September, rising around midnight. On the morning of Monday September 10, during the day, you can watch the Moon occult (pass in front of) Saturn. Look for the Last Quarter Moon, at about 9:15 a.m. EDT. Train a telescope on the Moon, and you should see Saturn nearby. Around 9:20 the Moon will start to cover Saturn: it takes about 100 seconds for the Moon's edge to go from one "end" of the rings to the other "end"! Saturn will reappear starting at about 10:28 that same morning. Times vary slightly depending on your location; the times given are for the Philadelphia area.

Uranus is in Capricornus this month. This is a good month to find Uranus, as it is in our evening sky.

Neptune is also in Capricornus, and therefore also in our evening sky this month. Being dimmer than Uranus, it will be harder to find.

Pluto is in Ophiuchus, and in our evening sky. You'll need at least an 8" telescope, dark skies, good finder charts, and patience to find Pluto.

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Astronomus: 5

A Journal for Young Astronomers

By Bob Popovich

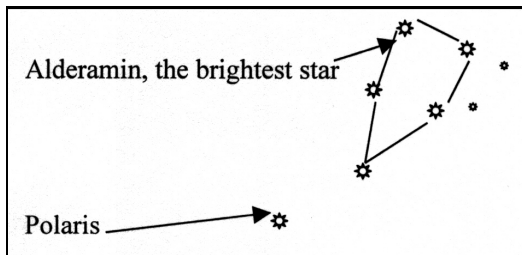
“All Hail the King!”

Have you ever seen a *shy* king? Well, our late summer sky has one—Cepheus, the King of Ethiopia. And not only is he shy, but he must be a bit afraid of the dark as well because his wife and daughter are also up in the sky to keep him company.

When I say he’s shy, I mean he’s a bit tough to find. But let’s try because he is a regal part of the sky this month.

An easy way to start our visit with Cepheus is at the Big Dipper. With an outstretched arm, hold up your index, middle and ring fingers between the pointer stars (the two stars at the end of the bowl. This distance is about 5°). Taking that distance about 5x out from the “top” of the bowl, we’ll arrive at Polaris, the North Star. Then continuing about 2x more past Polaris will put us right next to royalty. “Where? I don’t see anything!” Have you given time for your eyes to get used to the dark? I told you he was shy!

Now, imagine a drawing of a house that a small child would make. A square with a triangle on top, right? If we look at the place in the sky where we stopped, we’ll find ourselves near the point of the roof. Facing north this time of year, Cepheus is flipped upside-down on its roof. Looking carefully, we can make out the other 4 stars of modest brightness that make up the basic outline of this constellation. It will look something like this:



As we see, Cepheus is near the North Celestial Pole. All constellations seem to revolve around the North Celestial Pole (it’s really the Earth that’s revolving). And Cepheus, like the Big Dipper and the Little Dipper, is so close to that pole that it never sets at our latitude (40° N).

Looking at the brightest star, let’s raise our binoculars and view it. It is a white star named Alderamin. Now position this star so it’s on the far left of the binocular field of view. Over on the far right, we’ll be able to see a star that’s a distinctly different color than Alderamin. Can you tell its color? Sometimes color is tough to see, but the contrast between these two is clear and beautiful. Let me know at b2n2@aol.com what color you think this other star is.

If we nudge over to the other star at the “base” of Cepheus (opposite Alderamin), we’ll see a skinny triangle of stars (see figure). Notice the one at the “point” of the triangle. It’s not part of the constellation’s basic shape, but it is Cepheus’s fourth-brightest star. That means that astronomers give it the fourth letter of the Greek alphabet as its name: Delta. This star, Delta Cephei, changes brightness over a period of a little

more than five days. At its brightest, it’s about the same as the star in the base of Cepheus. At its dimmest, it’s about the same as the third star of that skinny triangle. Following this star over its period is really fascinating. What if our sun changed its brightness like Delta Cephei? How wonderful to have “old faithful” as our sun. And how equally wonderful to have a star that changes its brightness.

As if all this isn’t wonderful enough, this corner of Cepheus also has the Milky Way running through. Let’s just glide through the area watching for the stars we’ve already identified as well as for others just waiting to be discovered.

An evening of observing fit for a king.

Next time: “Queen For A Day”



WHYY 91 FM SkyTour: October 8, 2001

On Monday October 8, 2001, from 8:00-9:00 p.m., the WHYY SkyTour program will be broadcast live from the Mallon Planetarium at Arcola Intermediate School, where a large star party will be taking place at the same time. The program is hosted by Derrick Pitts, Chief Astronomer of the Franklin Institute of Science in Philadelphia. The CCAS has been invited to attend the star party and bring along our telescopes to help give attendees a look at the October skies. We encourage as many members as possible to attend this event. The CCAS will be mentioned in the advertising for the SkyTour, which will be mailed out to the 5500+ members of WHYY.

Directions: Take US 202 North to US 422. Take US 422 West to the Oaks exit. At the end of the exit ramp, turn right onto Egypt Road. Continue on Egypt Road for 1/10 mile or less, going straight at the next traffic light, until you come to Pinetown Road. Turn left on Pinetown Road. At the second stop sign, turn left on Eagleville Road. Follow this road to the top of the hill. Arcola Intermediate School is on the right side of Eagleville Road.



Report on ALCON 2001 By Ed Lurcott

My wife Evelyn and I attended the July 25-28, 2001 National Convention of the Astronomical League (ALCON.) This year’s emphasis was on the Association of Lunar and Planetary Observers (ALPO) and the International Dark-Sky Association (IDA).

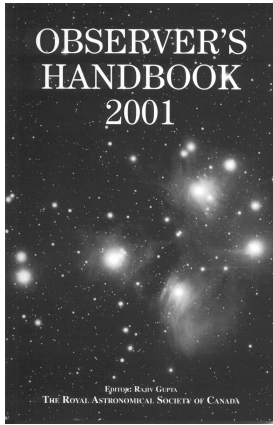
The founder of ALPO, Walter S. Haas, spoke on the history and recent developments in the Association. Ryan Hannahoe spoke of the Young Astronomers Committee of the AL. Ryan has agreed to give a shortened version of his presentation to the CCAS, possibly at our December meeting. Chuck Allen, the president of the AL, presented his new book *How to Start a School Astronomy Club*. A major “surprise speaker” was Dr. Frank Drake, a famous researcher in the Search for Extra Terrestrial Life program (SETI), who is requesting amateur participation in his new Optical SETI Program (until very recently SETI has mainly focused on radio-band frequencies, rather than optical light frequencies). Dr. David Crawford, one of the co-founders of the IDA, outlined some of the

achievements of that organization. Dr. Richard Gott, of Princeton University, gave a very thought-provoking talk about time travel in Einstein's universe.

Unfortunately, Evelyn and I had to leave early Saturday morning, and we did not get to hear the rest of the scheduled talks, nor to attend the awards banquet on Saturday night.



Observer's Handbook 2002: Save Money!



The cover of last year's issue

The *Observer's Handbook* is a very valuable reference tool published each year by the Royal Astronomical Society of Canada. As the information and data presented really covers just about all of North America, it is just as valuable here in Chester County PA as it is in Toronto. This book contains many sections of information. One section is a two-page calendar-type synopsis of the astronomical events visible that month. Full articles, complete with path and totality maps, are published for every solar and lunar eclipse that occurs in the covered year (regardless of where it is visible!). There are sections on each planet, with planetary satellite tracking data, an asteroid section, and an occultation section that covers all occultations visible that year from North America. And that's not all, but I'm not going to list everything.

Best of all, there is a substantial price reduction available for bulk orders. If you buy 1-4 copies, the price is \$22.95 (all prices are in US dollars). 5-19 copies are only \$14.00 each, a savings of \$8.95 each. An order of 20-99 copies costs \$13.50 each, and 100+ copies are \$13.00 each. It seems we should be able to get at least five people in the CCAS who want a copy, so we should be able to secure the \$14.00 price without any trouble. If you'd like a copy, contact Jim Anderson at jimanderson1956@aol.com or call 610-857-4751, and tell me how many copies you want. The books will start rolling off the press in November; I'll place the order and collect the payments when the books arrive.



From the e-mail sack... (continued)

In the December 2000 issue of *Sky & Telescope* magazine, an article written by Mike Turco, "It's Gotta Be White," was published. Since that time, Mike has received numerous e-mail messages from around the world. In the April and August editions of *Observations* we published some of that e-mail, from Fiona Hobson, who lives on a sheep farm 100 kilometers

from the nearest small town in South Africa. Here's the latest from Fiona, our correspondent in the Southern Hemisphere:

Dear Michael,

A brief hello - our e-mail is up and running again and I wanted to say thank you for the last one you sent. I hope you got the mailed letter which I wrote in reply. In case you didn't, (our post is unreliable), in it I said that I liked the article "The Poem" very much, and I hope it will be published soon. And I mentioned that I enjoyed Jim Anderson's article in the *Sky and Telescope* too. Nice to know he's one of your friends.

I watched the August 14 occultation of Saturn by the moon, visible over Africa, and it was wonderful, most worthwhile. I've never seen anything like it before. I got up at 2.45 a.m. just in time to see the moon, an orange crescent, rising over the distant hills. At first I thought that the occultation must have already started, as there was no sign of Saturn, but when I used binoculars I saw a "faint star" just below the moon. It didn't look like Saturn at all, it was so faint, but later I realised that the atmospheric haze - the moon being so low - and the closeness of the moon must have considerably masked Saturn's brightness. Anyway, this "star" disappeared behind the moon at 3.03, and I sat bundled up watching and waiting rather anxiously as the moon danced in and out of some thin puffy clouds. To my relief, by 3.30 the clouds had almost all gone and the moon was a good height above the hills, bright and white, with its dark side faintly visible. The sky was perfectly dark - it doesn't start getting light until after 5 a.m. here at this time of year. Suddenly, at 3.36, a bright spot appeared on the dark rim of the moon, just above one of the "horns" of the crescent. If the crescent moon had been a bent letter "i", then Saturn was the dot. A very bright "i" with a sparkling golden jewel for a dot - quite beautiful. Gradually the gap between the moon and Saturn grew, very slowly, and I sat and watched for another half hour or so. It was still a stunning sight when I finally returned to bed.

I see in the *S & T* that later this year there'll be further occultations of Saturn by the moon, one mostly in daylight and one visible at night, both only visible in the northern hemisphere. So hopefully you'll get to see this too. You've probably seen it before, it's just that I've never witnessed the reappearance of any bright thing from behind the moon before and it was amazing.

Best wishes,

Fiona.

P.S. In two weeks time there is the annual "astronomy camp" here on the farm, when about 12 teenagers come here for the weekend. I intend giving them your article about the North Star to read - I'm sure they'll find it hilarious, as did our own kids.



Telescope for Sale

Via e-mail from Al Lamperti, of the Delaware Valley Amateur Astronomers:

I thought I would contact local clubs to see if anyone in your club was interested in purchasing a used 18" Obsession with Galaxy optics, FeatherTouch focuser, light shroud, Astro

Systems secondary holder and a carrying bag for the truss tubes. New with these features is over \$5,000, I am selling for \$3,600 with pick up here in Philadelphia. I'm with the DVAA. Thanks,
Al

Al's e-mail address is lamperti@vm.temple.edu

If you're interested in calling Al, contact Mike Turco (610-399-3423), who is also a DVAA member, to get Al Lamperti's phone number.



A.L. Observing Awards Updates

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 four 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 (610-857-4751)

Below is a list of awards already awarded to CCAS members. Is anyone else working on an A.L. observing award? Let *Observations* know how you're doing.

CCAS Messier Certificates:

Jim Anderson, Basic (now has 88 of 110 objects)

Frank Angelini, Honorary

John Imburgia, Basic (now has 84 of 110 objects)

Ed Lurcott, Honorary

CCAS Lunar Certificates:

Jim Anderson

Elise Furman

Steve Limeburner

CCAS Double Star Certificates:

Jim Anderson

Steve Limeburner

Ed Lurcott

Mike Turco



MEGAMEET X Star Party: Sept. 15

This annual star party is held at the observatory site of the Lehigh Valley Amateur Astronomers, Pulpit Rock Astronomical Park. It is located near Hamburg, PA, north of Reading. If you've heard of Hawk Mountain, well, Pulpit Rock is on the same mountain. This is an excellent observing site, and you can leave the party at any time if you don't want to stay all night. Ed Lurcott has a number of flyers for this event. There is also more information on the Web site of the Lehigh club, www.lvaas.org. The LVAAS has 4 permanent observatories at this site, including a 40" telescope now under construction.



Black Forest Star Party: Sept. 14-15

This annual star party is held at Pennsylvania's first official "dark sky" State Park, Cherry Springs State Park, in northern Pennsylvania. Ed Lurcott, Steve Limeburner, and Pete LaFrance have all been there and can attest to the excellent observing conditions. Ed has flyers for this year's event, or you can register via their Web site at www.bfsp.org, and print out more information about costs and facilities. The list of speakers for the daytime sessions includes Ed Ting, who is well known for his telescope review Web site, Scopereviews.com. Ed has also written many articles for *Amateur Astronomy* and *Sky & Telescope* magazines. Another speaker will be Mel Bartels, a very widely-respected amateur telescope maker. Mel will give two talks, one called "Future Trends in Amateur Astronomy" and the other "How to Build a Computerized Motor Drive System for Your Telescope." Best of all, if the weather is clear, the observing from this site is probably the best of any star party in the northeast US. The camping site and the observing site are one and the same, so your observing site (telescope) is right outside your tent or camper. Convenient!



Join the Fight for Dark Skies!

You can help fight light pollution, conserve energy, and save the night sky for everyone to use and enjoy. Join the nonprofit International Dark-Sky Association (IDA) today. Individual memberships start at \$30.00 for one year. Send to:

International Dark-Sky Association

3225 N. First Avenue

Tucson, AZ 85719-2103

Dark-Sky Website for PA

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

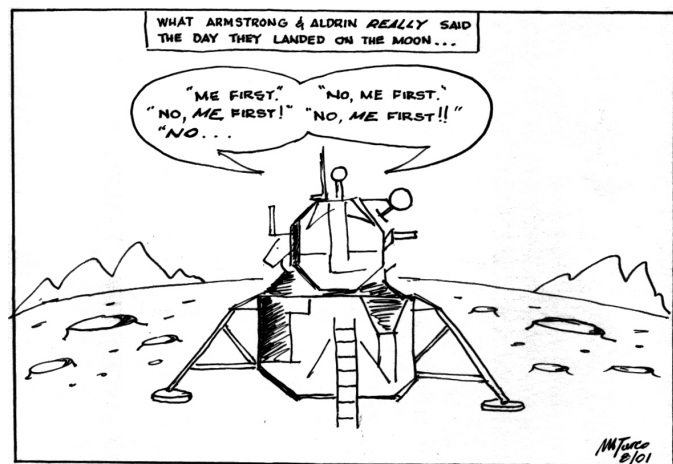
<http://home.epix.net/~ghonis/index.htm>





DAVE BAGLEY TRIES OUT HIS NEW DOBSONIAN BINOCULAR RIG

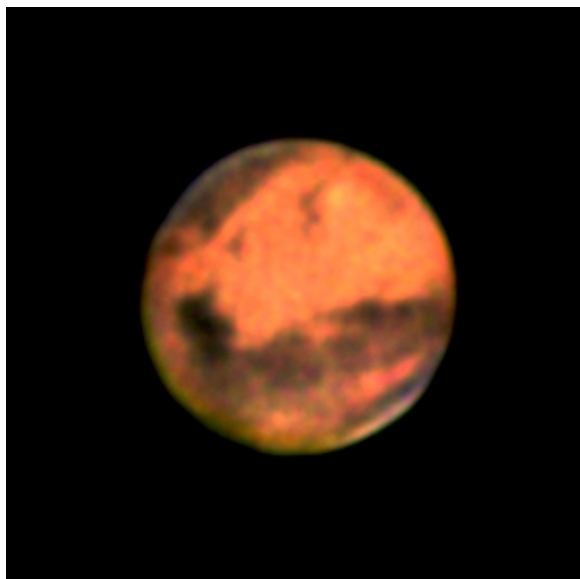
cartoon by Nicholas La Para



cartoon by Mike Turco

Observations of Mars

By Frank Angelini



20 June 2001 23:20 EDT



25 June 2001 23:05 EDT

Subject: MARS
Date: 20 & 25 June, 2001
Location: Backbone Mountain, West Virginia
Equipment: TMB 180mm f/9 EDF Refractor on Custom Parallax Mount
Various Eyepieces, Star Diagonal, Adapters, etc.
Olympus E-10 Digital SLR Camera

Last June I had the opportunity to visit a college buddy who lives in West Virginia. He is not an astronomy buff, but is a very accomplished digital photographer. We decided to team up and take some pictures through my new TMB refractor. We had to drive 2 hours from his home outside Morgantown to a dark site near Backbone Mountain. We started setting up at about 7:00 PM and waited until dark. Since this is a fairly dark site we were able to easily find Vega before 9:00 PM. I was particularly interested in looking at this bright star (mag. 0.10) in order to judge the level of false color in the new scope. At first I was not excited because I could see some color inside and outside of focus. This was with a Brandon 2-inch star diagonal and Brandon12mm eyepiece. There was no false color in focus. Later, as Vega rose higher in the sky, all traces of false color disappeared. We concluded that atmospheric distortion at lower altitudes had been affecting seeing conditions, and that the atmospheric effects were negligible as you approach the zenith. Since

the moon was new on the 20th of June, I can't comment on the scope's performance on lunar targets. I hope to report on this in the near future.

As Mars approached transit at our location, we set up the scope and digital camera for eyepiece projection. My friend had just purchased an Olympus E-10, 4-megapixel camera, and we were anxious to try it out on Mars. This summer, Mars is a fairly bright object, at a distance of approximately 0.45 AU and diameter of about 21 arc-seconds. In addition, on June 20th, Mars was at almost 100 percent phase (0.991). This was the first time I had done any serious planetary work with the new scope, and I must admit I was very pleased with the performance. Using a homemade adapter, we mounted the digital camera, and 12mm Brandon eyepiece on the scope. The following section, describes how we estimated the proper exposure time.

Exposure Setting

The following formula is a good guideline for calculating exposure but it is still recommended to "bracket" either side of the calculated value, ie. take one longer and one shorter exposure.

$$\text{Exposure} = \frac{(\text{f ratio})^2}{K * \text{ASA film speed}} \text{ sec.}$$

Where: K¹ is 20 for a crescent Moon
 40 for first/last quarter Moon
 200 for the Full Moon
 13.6 for Saturn
 32.5 for Jupiter/Mars
 1310 for Venus

$$\text{and (f ratio)} = \frac{\text{System focal length}}{\text{Telescope aperture}}$$

$$\text{System focal length} = \text{Camera lens focal length} * \text{telescope magnification}$$

$$\text{and Telescope magnification} = \frac{\text{Telescope focal length}}{\text{Eyepiece focal length}}$$

This might look complicated, but most of the values become constants for a particular telescope and need only to be calculated once. As a worked example, take the following which gave us the correct exposure for Mars last June. My telescope has an aperture of 180mm (7-inches) and focal length of 1620mm (63-inches). Doing eyepiece projection on Mars through a 12mm eyepiece with a 50mm camera lens and a digital camera (Olympus E-10) with an equivalent speed of 100 ASA film yields:

$$\text{Telescope magnification} = \frac{1620}{12} = 135 \text{ x}$$

$$\text{System focal length} = 50 * 135 = 6750\text{mm}$$

$$\text{System f ratio} = \frac{6750}{180} = 37.5$$

$$\text{Exposure} = \frac{37.5^2}{32.5 * 100} = \frac{1406}{3250} = 0.43 \text{ seconds}$$

We took several shots with the Olympus camera on auto exposure with shutter priority and aperture priority. We also shot a series of frames using manual settings of 0.25, 0.30, 0.40 and 0.50 seconds. The digital images were post processed using Adobe PhotoShop 6.0. The attached images of Mars were the best of the bunch taken on the two nights. We hope to continue this collaboration in the future, and hope to capture other planets, the moon and possibly some of the brighter deep-sky objects.

¹ Values for "K" taken from Sky & Telescope Magazine

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

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

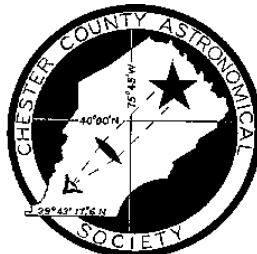
Secretary: Doug Liberati
(610) 827-2149

**ALCor and
Newsletter:** Jim Anderson
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Pete LaFrance is the Society's Webmaster. You can check our Website at:
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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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