



Observations

A Monthly Publication Of The
CHESTER COUNTY ASTRONOMICAL SOCIETY

Vol. 33, No. 9 **Three-Time** Winner of the Astronomical League's Mabel Sterns Award ☼ 2006, 2009 & 2016 September 2025

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KSC Space Camp 2025!



CCAS Member Alaric Han attended the 2025 KSC Space Camp. For more details about his experiences at the week-long camp, see pg. 6.

Membership Renewals Due

09/2025	Gioconda Holloway Hopper, Jr. Lurcott, E. Morgan Peterson
10/2025	Abbot Conrad Fisher Kraynik Lane Lester Levin Payton Richardson Riley Rosenblatt Worth
11/2025	Baker Buczynski DiGiovanni Harner Holenstein Hufnagel Kurz Marks Pilgaonkar Prasad Packirisamy Scovill Skupien

September 2025 Dates

- 2nd** • Mercury passes 1.2° north of Regulus, 6 a.m. EDT.
- 6th** • Full Moon, the **Harvest Moon** (2:08 p.m. EDT).
- 12th** • The Moon passes 5° north of Uranus, 10 p.m. EDT.
- 14th** • Last Quarter Moon, 6:32 a.m. EDT.
- 21st** • Saturn is at opposition, 2 a.m. EDT.
- 13th** • Mercury is in superior conjunction, 7 a.m. EDT.
- 21st** • New Moon, 3:54 p.m. EDT.
- 29th** • First Quarter Moon, 7:53 p.m. EDT.



CCAS Upcoming Nights Out

In addition to our monthly observing sessions at the Myrick Conservancy Center, BRC (for directions, see pg. 13), CCAS schedules special "nights out" throughout the year. Members are encouraged to help out during these events any way they can. See below for more information.

- ☼ Saturday, September 6, 2025 - CCAS Solar Observing Session, 10:30 a.m. to 1:30 p.m. EDT, CVT at Exton Park, 132 Church Farm Ln, Exton, PA 19341.
- ☼ Saturday, September 13, 2025 - CCAS Solar Observing Session, 9:30 a.m. to 12:30 p.m. EDT, Downingtown Library.
- ☼ Saturday, September 20, 2025 - CCAS Special Observing Event with the Atglen Public Library and Chester County Parks at Wolfs Hollow County Park, 1766 Glen Run Rd, Atglen, PA 19310.
- ☼ Friday, September 26, 2025 - CCAS Monthly Observing Session, Myrick Conservancy Center, BRC. The observing session starts at sunset.

For more information about future observing opportunities, contact our **Observing Chair**, Don Miller.

Summer/Fall Society Events

September 2025

6th • CCAS Solar Observing Session, 10:30 a.m. to 1:30 p.m. EDT, CVT at Exton Park, 132 Church Farm Ln, Exton, PA 19341. For more information, contact our Observing Chair, [Don Miller](#).

9th • CCAS Monthly Meeting, in person (as well as via Zoom) at WCU's Merion Science Center, Room 112. Guest speaker: Dr. Bhuvnesh Jain from the University of Pennsylvania, Department of Astronomy and Physics. His presentation is titled "The Nature of Dark Matter and Dark Energy and their Roles in Galaxy Formation."

17th-21st • York County Fall Star Party. Susquehannock State Park, 1880 Park Dr, Drumore, PA 17518. For more information, contact our Observing Chair, [Don Miller](#).

20th • Open call for articles and photographs for the October 2025 edition of [Observations](#).

20th • CCAS Special Observing Event with the Atglen Public Library and Chester County Parks at Wolfs Hollow County Park, 1766 Glen Run Rd, Atglen, PA 19310. For more information, contact our Observing Chair, [Don Miller](#).

25th • CCAS Monthly Observing Session, Myrick Conservancy Center, BRC. The observing session starts at sunset. See pg. 17 for map and directions.

26th • Deadline for newsletter submissions for the October 2025 edition of [Observations](#).

27th • CCAS Solar Observing Session from 10:30 a.m. to 1:30 p.m. EDT at Exton Public Library, Exton, PA 19341. For more information, contact our Observing Chair, [Don Miller](#).

October 2025

2nd • CCAS Solar Observing Event, 10:30 a.m. to 1:00 p.m. EDT, with the Coatesville Library and Chester County Parks at SRT Fricks Lock Trailhead, 500 Fricks Lock Rd, Pottstown, PA 19465 (Rain date October 5th). For more information, contact our Observing Chair, [Don Miller](#).

4th • International Observe the Moon Night 2025, 7:30 p.m. to 9:30 p.m. EDT, with the WCU Astronomy Club. For more information, contact our Observing Chair, [Don Miller](#).

9th • CCAS Special Observing Event, 6:00 p.m. to 9:00 p.m. EDT, with the Middletown Free Library at 464 S. Old Middletown Rd, Media, PA 19063. For more information, contact our Observing Chair, [Don Miller](#).

10th • CCAS Special Observing Event, 6:30 p.m. to 10 p.m. EDT, at Hibernia Park. For more information, contact our Observing Chair, Don Miller. Saturday, October 11, 2025 - CCAS Solar Observing Session, 9:30 a.m. to 12:30 p.m. EDT, Downingtown Library. For more information, contact our Observing Chair, [Don Miller](#).

14th • CCAS Monthly Meeting, in person (as well as via Zoom) at WCU's Merion Science Center, Room 112. Guest speaker: Dr. Eric Huff, JPL / NASA, "The Euclid Space Telescope Mission – Shedding New Insights into Cosmology."

16th • CCAS Solar Observing Event, 10:30 a.m. to 1:30 p.m. EDT, West Chester Courthouse, 3 Market Street, West Chester, PA 19382.

20th • Open call for articles and photographs for the November 2025 edition of [Observations](#).

24th • CCAS Monthly Observing Session, Myrick Conservancy Center, BRC. The observing session starts at sunset. See pg. 13 for map and directions.

26th • Deadline for newsletter submissions for the November 2025 edition of [Observations](#).

May 2025 Meeting Minutes by Bea Mazziotta, CCAS Secretary

- The May 2025 meeting was held on May 13, 2025, at West Chester University and online via Zoom and YouTube.
- Club President Dave Hockenberry welcomed members and guests
- Observing Chair Don Miller reviewed the upcoming events and observing calendar. The calendar with details is available at [ccas.us](#). He reviewed some of the highlights of the May night sky, noting two Globular Clusters which are in constellations that are relatively close to home - M4 in Scorpius and M5 in Serpens. Don also briefly spoke about recent funding cuts that will affect scientific research in general and space exploration in particular. He noted that the Nancy Grace Roman Telescope may not launch due to these cuts. That would be a huge loss. You can make your support for science known by telling your representatives that funding scientific research is important and benefits everyone.
- Don Knabb noted that a CCAS member was awarded a third place Horkheimer journalism award. Look for details in the newsletter. Don presented Kathy Buczynski with her Nightsky Network pin for community outreach. He also reminded members about a lending telescope that is available and informed them that two smaller telescopes may be available for purchase. Please contact Don for further details.
- Bruce Ruggeri, Program Chair, announced that CCAS was able to raise enough money to award 3 scholarships to WCU science students. Recipients' names along with some biographical information will be published in the newsletter.
- Bruce went on to introduce the evening's speaker, Dr. Julien deWit. Dr. deWit holds a PhD in Planetary Science from MIT where he is also on the faculty of the Earth, Atmospheric and Planetary Sciences dept. He initiated the atmospheric exploration of the TRAPPIST-1 exoplanetary system and continues to spearhead the implementation and study of atmospheric surveys and new analytical techniques to enhance our planetary defense capabilities. His presentation was titled 'Searching for Extra-Solar Life while Defending Earth-based Life'.

September 2025 CCAS Meeting Agenda by Bruce Ruggeri, CCAS Program Chair

Our next meeting will be held on September 9, 2025, in person at West Chester University's Merion Science Center, Room 112. The Science Center is located at 720 S. Church St., West Chester, PA. Our guest speaker is Dr. Bhuvnesh Jain from the University of Pennsylvania, Dept of Astronomy and Physics. His presentation is titled "What just happened to dark energy? - Its evolution and new emerging concepts."

Please note that inclement

weather or changes in speakers' schedules may affect the program. In the event there is a change, CCAS members will be notified via e-mail with as much advance notice as possible.

As for future meetings, we are looking for presenters for the coming 2025-2026 season. If you are interested in presenting, or know someone who would like to participate, please contact me at programs@ccas.us.

September 2025 Monthly Meeting Guest Speaker

by Bruce Ruggeri, Program Chair

Our in-person and Zoom monthly CCAS meeting scheduled for Tuesday, September 9, 2025, will commence at 7:30 p.m. EDT. This is our first monthly meeting of the 2025-2026 season.

If you are able to join us in person, our meetings are held at West Chester University's (WCU) Merion Science Center, Room 112. The Science Center is located at 720 S. Church St. in West Chester.

Our guest speaker is Dr. Bhuvnesh Jain from the University of Pennsylvania, Dept of Astronomy and Physics. His presentation is titled "What just happened to dark energy? Its evolution and new emerging concepts."

Synopsis: Cosmologists have long accepted that the observation of the accelerating and expanding universe requires a form of energy with repulsive gravity. The simplest form of this energy, dubbed dark energy, was thought to be vacuum energy (energy in empty space as predicted by quantum field theory). However, measurements reported over the last year from two of the largest cosmological surveys —the *Dark Energy Spectroscopic Instrument* (DESI) survey and the *Dark Energy Survey* (DES)—show that dark energy is not constant but appears to be evolving over time. Any kind of change in time is a big deal for our understanding of cosmology and Dr Jain will explain why.

What is astonishing about the new results is that dark energy appears to have undergone a 'phantom crossing' several



Bhuvnesh Jain, Ph.D.

billion years ago. Dr. Jain will explain what this means and why phantom crossing is troubling news in astrophysics. It is quite probable that the current concept of dark energy must be replaced by something more complicated. Theorists are pursuing a few different ideas for what these new theories might be and how these will shape our current models of cosmology.

In the course of his presentation, Dr. Jain will describe the galaxy surveys that have led to these emerging findings about dark energy and the remarkable telescopes and cameras responsible for these powerful surveys that are changing our current understanding of the universe and its expansion.

Bio sketch: Dr. Bhuvnesh Jain is the Walter H. and Leonore C. Annenberg Professor in the Natural Sciences in the Department of Physics and Astronomy at the University of Pennsylvania. He is also Co-Director of the Penn Center for

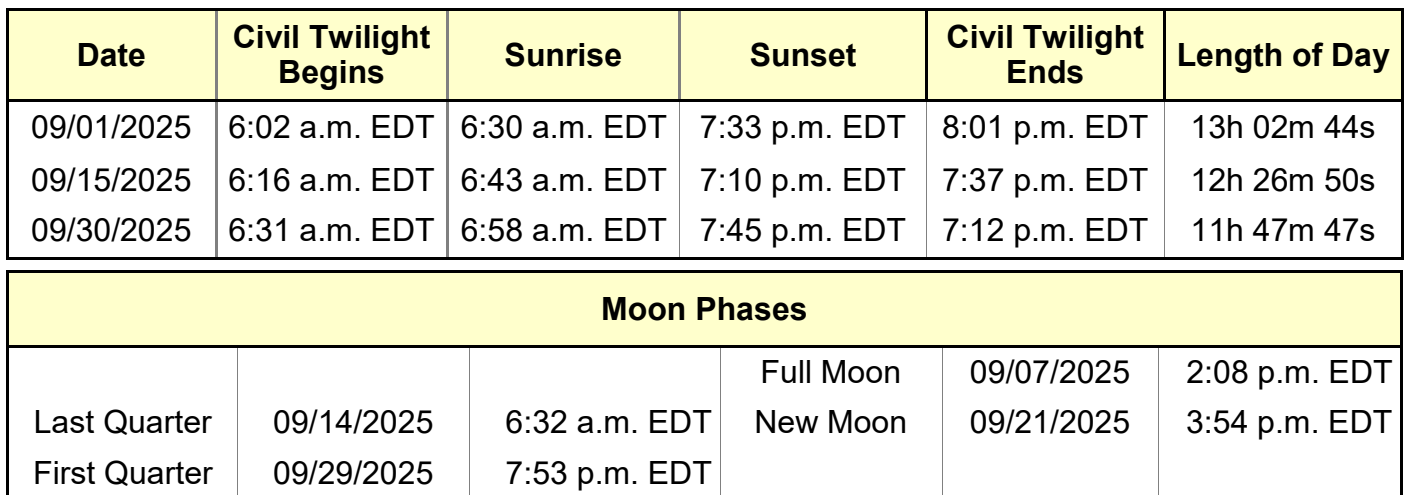
Particle Cosmology and Co-Director of the Penn Data Driven Discovery Initiative (bjain@physics.upenn.edu). He received his B.A in Physics from Princeton University (1989) and PhD in Physics from MIT (1994).

In the course of his career at Penn, Dr. Jain's major research area foci are cosmology, gravitational lensing and machine learning in astronomy. The questions being addressed in his research are: How did small fluctuations in the early universe grow to form the large-scale structure observed today? What is the nature of dark matter and dark energy? And how did these mysterious components of our universe shape the formation of galaxies and clusters?

Gravitational lensing is the shearing and magnification of light received from distant galaxies. Dr. Jain's laboratory uses 'weak' lensing, the small distortions in the shapes of millions of galaxies, to map the large-scale distribution of dark matter and address cosmological questions. In this regard, Dr. Jain has been involved in the *Dark Energy Survey* (DES) and in the planning of the *Large Synoptic Survey Telescope* (LSST) and the space telescope missions, *Euclid* and *Nancy Grace Roman*. His research group members have carried out lensing measurements and cosmological analyses with the DES. Cross-correlations of galaxies and stars with the cosmic microwave background (CMB) is a promising new field

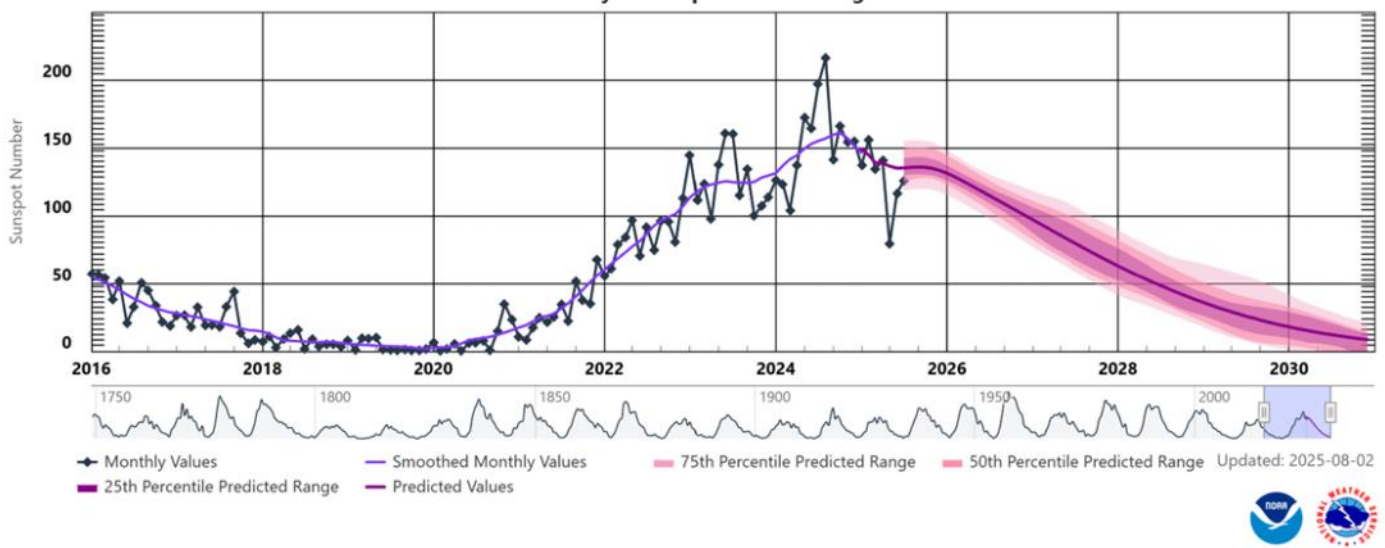
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Note: This screen capture is taken from Stellarium, the free planetarium software available for download at www.stellarium.org.



September 2025 Observing Highlights

by Don Miller, CCAS Observing Chair



Solar Cycle Sunspot Number Progression tracking from the Space Weather Prediction Center National Oceanic and Atmospheric Administration website

Key Events this month:

While there is not one stellar (pun intended) event this month, there is no end to the objects to observe.

Discussion:

It is getting dark sooner and the temperatures, so far, have been moderating. Cloudy skies continue to be a challenge but keep trying to get out. There is so much to enjoy. If you haven't been out to one of our daytime solar observing sessions, you should try to join one this month, even as a member of the public.

Sun:

The sun had an sustained an increased number of sunspots this past month. It remains very active. A partial solar eclipse occurs on the 21st but it will not be visible from our part of the world.

Moon:

Full on the 7th; last quarter on the 14th and new on the 23rd, 1st quarter on the 29th. The full moon this month is called the "Corn Moon." A total lunar

eclipse will occur on the 7th but it will not be visible from our area.

Planets:

Mercury: Too close to the sun this month for observation. It achieves superior conjunction on the 13th.

Venus: Rises a few hours before sunrise.

Mars: Visible only in western sky at evening twilight and its size is only 4" so not a very interesting object.

Jupiter: Rises around 1 a.m. so it is moving towards our evening sky in the months ahead.

Saturn: This planet is slowing becoming an easier to view evening object. It rises around 7:30 p.m. mid-month.

Uranus: Rises around 10 p.m.

Neptune: Rises around 7:30 p.m. in southern Pises.

Select Night Sky Objects and Events:

Sky & Telescope had a nice

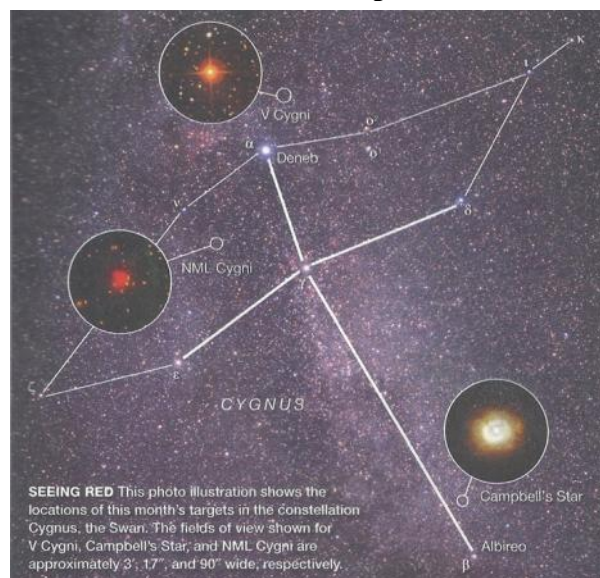


Image Credit: Sky & Telescope

(Continued on page 13)

CCAS Member Alaric Han Attends NASA's Space Camp

by Lyssa & Alaric Han

CCAS member Alaric Han attended Camp KSC 2025, which offered an exciting, hands-on experience for young space enthusiasts. The camp featured STEM activities and astronaut training at the Kennedy Space Center. The Camp is designed for students aged 7 to 16, providing one week-long immersive experience in science, technology, engineering, and math (STEM) activities.

Campers engage in hands-on challenges and simulations throughout the Kennedy Space Center Visitor Complex, including attractions like the Astronaut Training Experience and the Apollo/Saturn V Center.

Alaric joined the youngest age group this summer and experienced so many wonderful activities, including:

- Meet real astronauts and listen to the speech and shows
- Mars habitat operations to solve possible emergencies
- A microgravity simulator, learning to work in a frictionless environment during a simulated spacewalk
- Simulated spaceflight from Kennedy Space Center to Mars
- Mars surface exploration using virtual reality
- Botany Lab vegetable growth and harvesting, sending data to real NASA scientists
- Mars rover robotics to optimize power for the base



Alaric had a busy (but fun) week at Camp KSC 2025!

- Engineering builds, themed to each age group
- Hands-on STEM challenges
- Team building, communication and collaboration activities

Meanwhile, Alaric and I had the honor of watching two Starlink rockets launch at the Banana Creek Launch Viewing

Area at the Apollo/Saturn V Center, and at the ATLANTIS NORTH LAWN located to the left of the Space Shuttle Atlantis. It was breathtaking to watch a rocket launch at such a close distance.

Alaric will share his experiences participating in the Sky Puppy Observing Program in next month's edition of *Observations*.

Solar Observing at Chester Valley Trail head, Exton Park

by CCAS President Dave Hockenberry



Roger Kennedy showing solar prominences, Rill lines, and sunspots as Linda Kennedy and Ranger Rita look on.

The “Solar Observers” of the Chester County Astronomical Society put on a great demonstration at Exton Park 8/15/2025. Led by Roger and Linda Kennedy this solar event was a smashing success. Ranger Rita Mouyanar,

who coordinated the event for the park service, said that all 45 people who signed up for the event attended, plus members of the public who happened to stop on their way to and from the Chester Valley Trail. Our Society

members showed off the sun with two Hydrogen Alpha solar telescopes, a Spectrograph, and one Maksutov-Cassegrain telescope with a white light filter. The crowd was enthusiastic and had many thoughtful questions for us throughout the day. Guests ranged from hikers, family groups, bicyclers, and kids of all ages.

Our Society now has a very active program for showing the public our closest star, and all interested Society members are encouraged to take part and help. Even if you don't have a solar-equipped telescope, we can always use more hands for manning the information tables, directing the crowds, and promoting the Club. And, of course, it is a great opportunity to view our sun through some fabulous gear during Solar Maximum!

Our next solar events are scheduled for Saturday, 9/6/2025 again at CVT Trail head at Exton Park from 10:30 to 1:30, and Saturday, 9/13/2025 at Downingtown Library from 9:30 to 12:30. We hope to see you there! Don't forget your sun block lotion and a good hat...



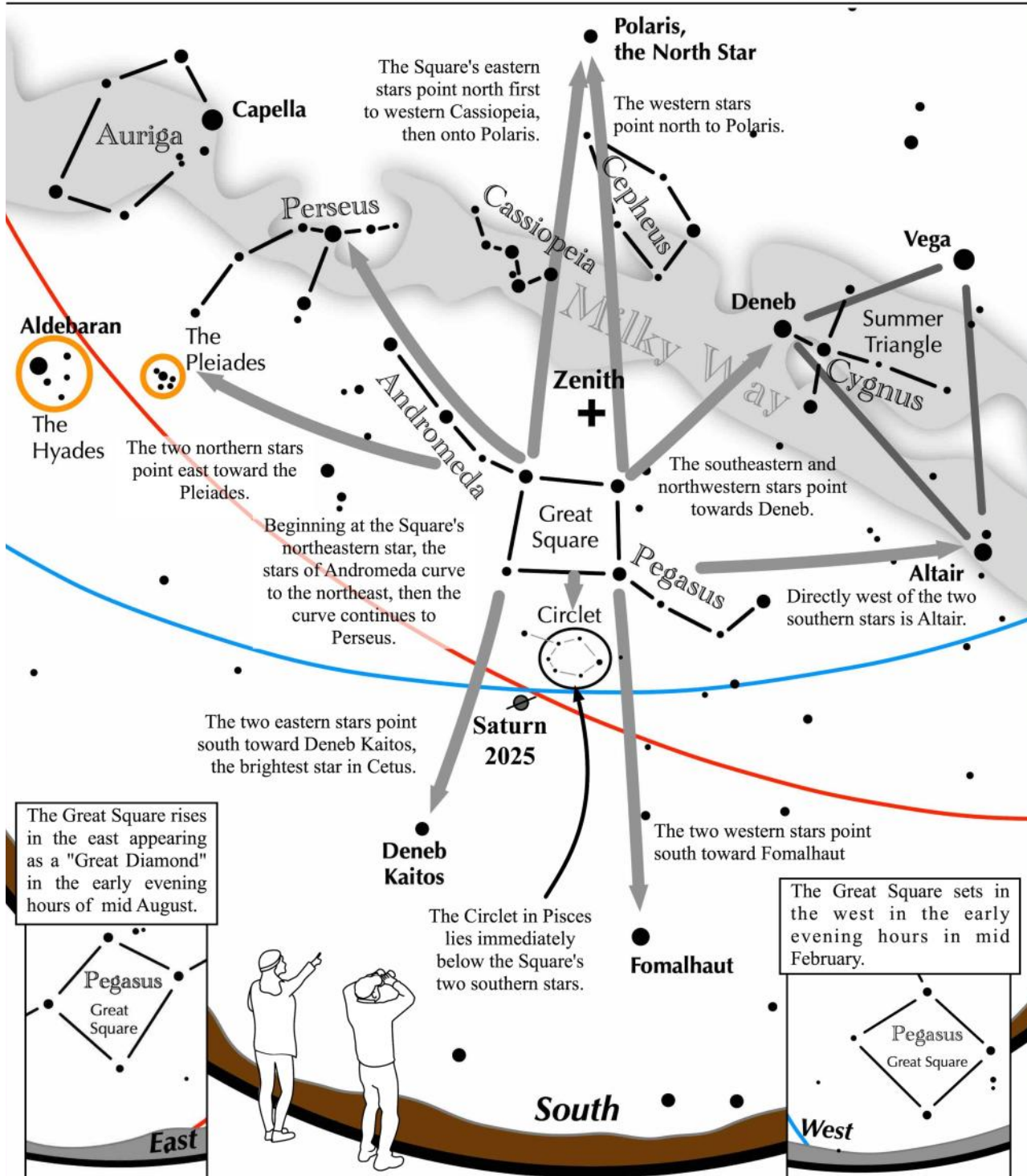
Even the youngest guests were thrilled by views of our closest star!



Navigating the mid Autumn Night Sky: Great Square Guide



Befriend these four stars, slightly dimmer than those of the more famous Big Dipper, and they'll guide you on a tour of the Autumn sky.



Summer 2025 CCAS Camping Trip to Cherry Springs State Park by CCAS Treasurer & ALCOR Don Knabb



Setting up camp in the middle of the viewing field

During the dark window of July, several CCAS members traveled to north-central Pennsylvania to Cherry Springs State Park to camp under the amazing night sky in this sparsely populated area of forest. We had three crystal clear nights and pleasant days with temperatures in the 70s during the day and 60s at night.

Cherry Springs State Park is nearly as remote and wild today as it was two centuries ago. Named for the large stands of black cherry trees originally found in the area, the 82-acre

state park is surrounded by the 262,000-acre Susquehannock State Forest.

Night sky enthusiasts flock to the park for its dark skies which are famous for great views of the Milky Way, planets, and hard-to-see astronomical objects and phenomena. We were very lucky to have three clear nights enjoying the amazing night sky with the Milky Way stretching from one horizon to the other.

We set up camp on Tuesday afternoon, with seven club members arriving within an hour of each other. The first

couple of hours are spent setting up camp and having dinner. Then the telescopes come out and get set up for the night's observing.

Pete Kellerman had his usual small scopes that he is an expert at using. Sue Johnston and Bob Stein brought their 8-inch Dobsonian. Barb and I brought our 120mm APM binoculars and our Seestar S50. Dave Hockenberry brought his Televue 101 and his newly purchased Pegasus Astro SmartEye electronic eyepiece,

(Continued on page 10)

Cherry Springs (Cont'd)



Setting up the scopes for a night of observing

(Continued from page 9)

which is a digital camera and electronic eyepiece all in one.

CCAS member Dennis Kearns was staying at a local hotel and unfortunately, we did not connect with him, but new member Dwayne Myers camped near our circle of telescopes and stopped by to say hello.

On Wednesday several of us traveled to Wellsboro, a wonderful little town about a half hour from Cherry Springs. We made a run to the hardware store for some supplies then had ice cream at a great little shop in a historic building in the center



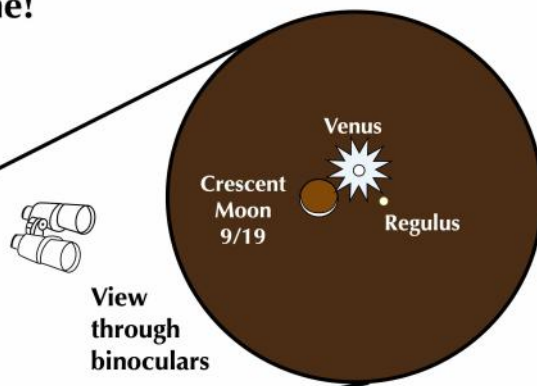
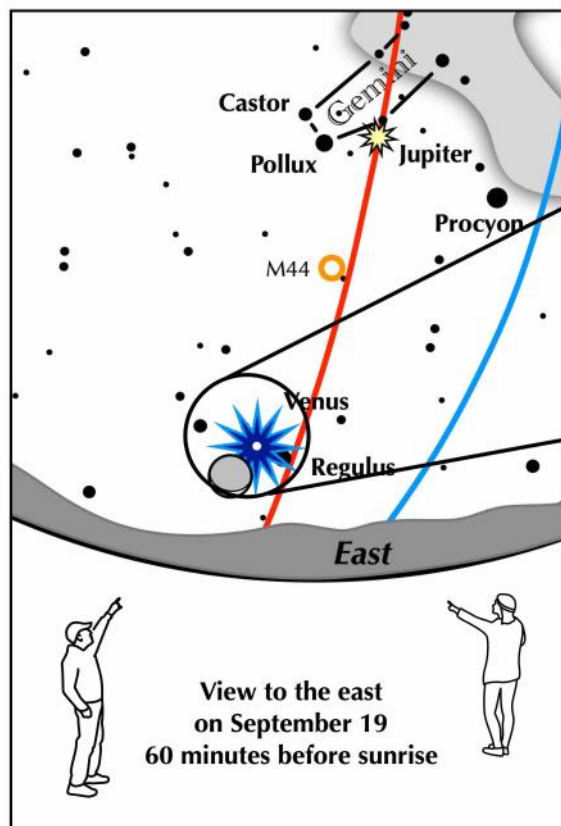
Lyman Run State Park

of Wellsboro. After that we had dinner at our favorite restaurant – yes, we had dessert first – life is short! After dinner we headed back to the park for a night of observing.

Thursday, after sleeping late, we headed to Lyman Run, another state park about 7 miles away. There we took a swim in the lake, had more ice cream, and took showers before heading back to Cherry Springs for dinner and more observing that night.

(Continued on page 11)

If you can see only one celestial event in the morning this September, see this one!



Crescent moon meets brilliant Venus and the star Regulus

On the morning of September 19, the crescent moon, full with earthshine, joins brilliant Venus and the brightest star in Leo, Regulus, for a dramatic sight. Look low in the east-northeast 60 minutes before sunrise.

Be sure to use binoculars to cleanly separate this celestial trio!

Above them all shines bright Jupiter, itself forming an attractive isosceles triangle with the twin stars of Gemini, Castor and Pollux. To their lower right shines the bright star Procyon.



Cherry Springs (Cont'd)

(Continued from page 10)

I've included several pictures of our camp setup in this article. Several night sky images that Dave Hockenberry took with his SmartEye along with some that I took with our Seestar S50 will appear in next month's edition of *Observations*. Dave's SmartEye is a truly amazing device. We could see deep sky objects better than ever before, in full color!

There were several dozen other campers at the park, and it was enjoyable to meet some of them and see their equipment.



Lake at Lyman Run State Park

Unfortunately, our August trip to Cherry Springs did not have good weather, so only three members camped, and they had clear skies only one night from midnight to 2 or 3 a.m. There's not much we can do about the weather!

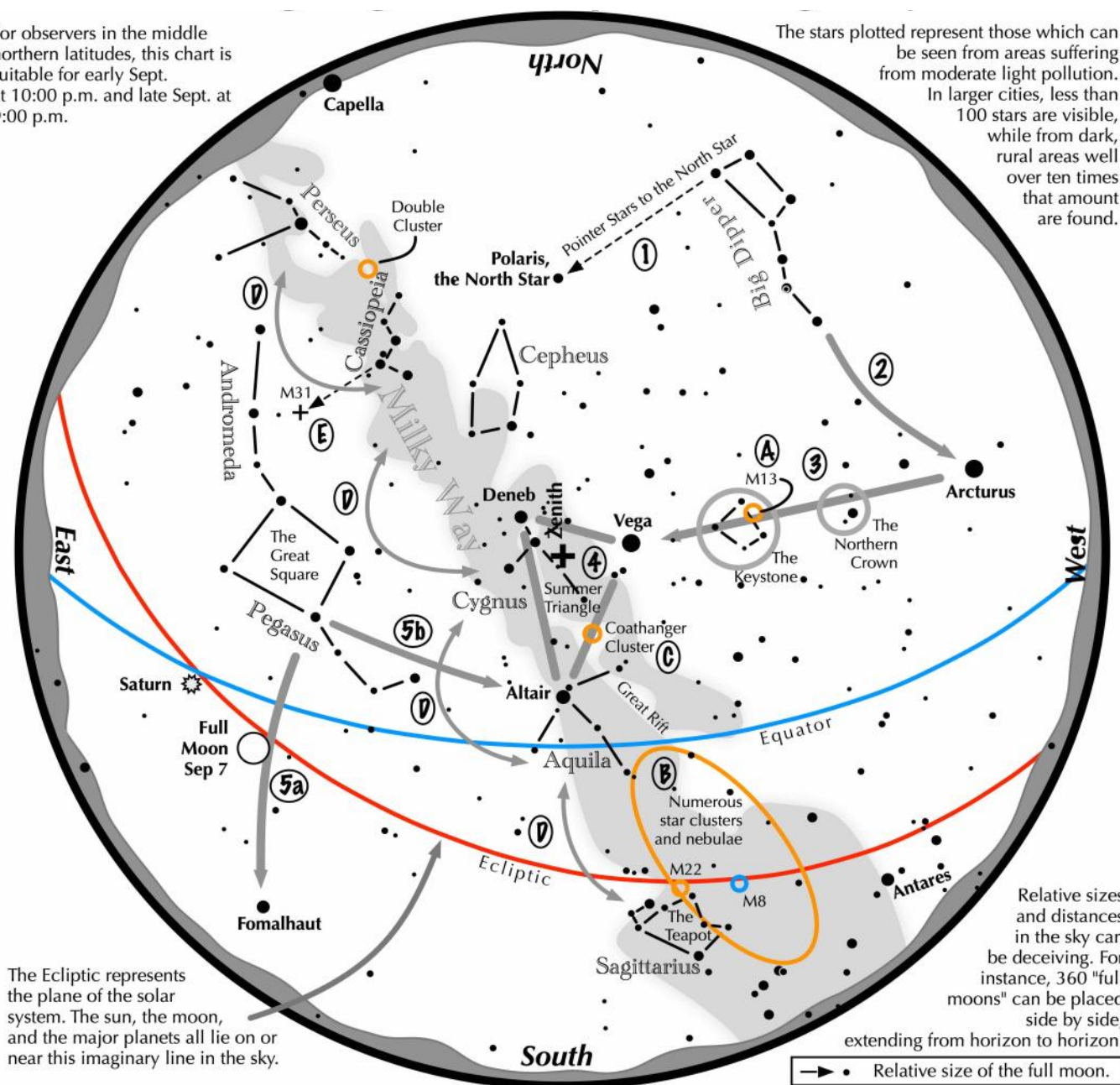
The York County Star Party is coming in September, so I encourage everyone to consider camping or at least coming to the event for an evening since it is only about an hour's drive from West Chester. The sky is not as dark as Cherry Springs, but it is also not a 5-hour drive.

Navigating the Mid-September 2025 Night Sky

courtesy of the Astronomical League

For observers in the middle northern latitudes, this chart is suitable for early Sept. at 10:00 p.m. and late Sept. at 9:00 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



Navigating the mid September night sky: Simply start with what you know or with what you can easily find.

- 1 Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
- 2 Follow the arc of the Dipper's handle. It intersects Arcturus, the brightest star in the September evening sky.
- 3 Nearly overhead shines a star of similar brightness as Arcturus, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 4 The stars of the summer triangle, Vega, Altair, and Deneb, shine overhead.
- 5 The westernmost two stars of the Great Square, which lies high in the east, point south to Fomalhaut. The southernmost two stars point west to Altair.

Binocular Highlights

- A: On the western side of the Keystone glows the Great Hercules Cluster.
- B: Between the bright stars Antares and Altair, hides an area containing many star clusters and nebulae.
- C: 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
- D: Sweep along the Milky Way for an astounding number of faint glows and dark bays, including the Great Rift.
- E: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval.

Astronomical League www.astroleague.org/outreach; duplication is allowed and encouraged for all free distribution.



Observing (Cont'd)

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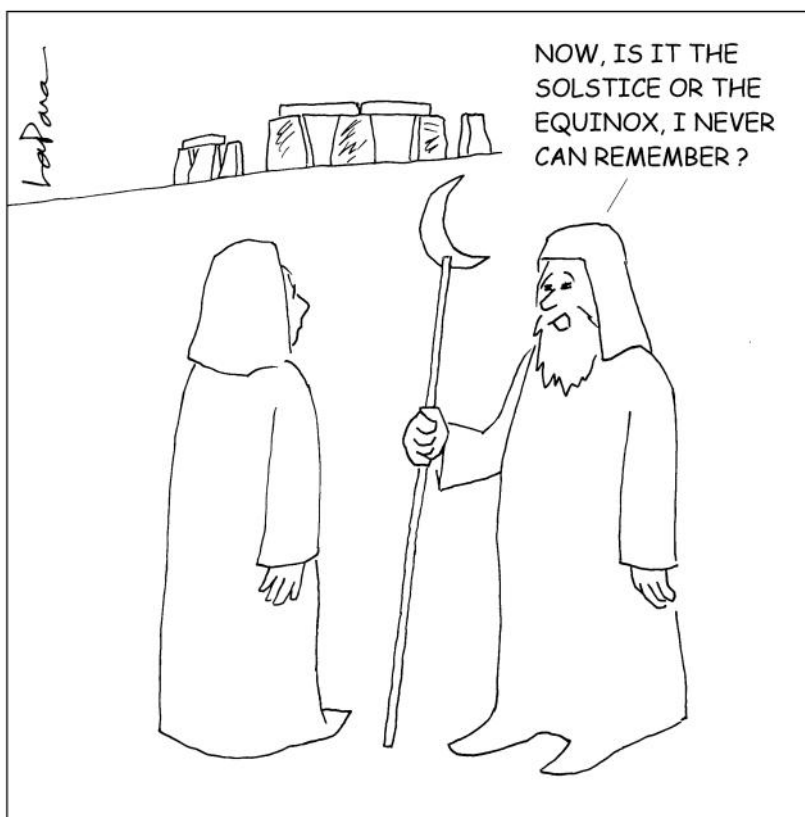
article this month on three red wonders in Cygnus. Let's explore them:

V Cygni, less than 3 degrees north of Deneb. This red star has its appearance due the high amount of carbon in its outer atmosphere.

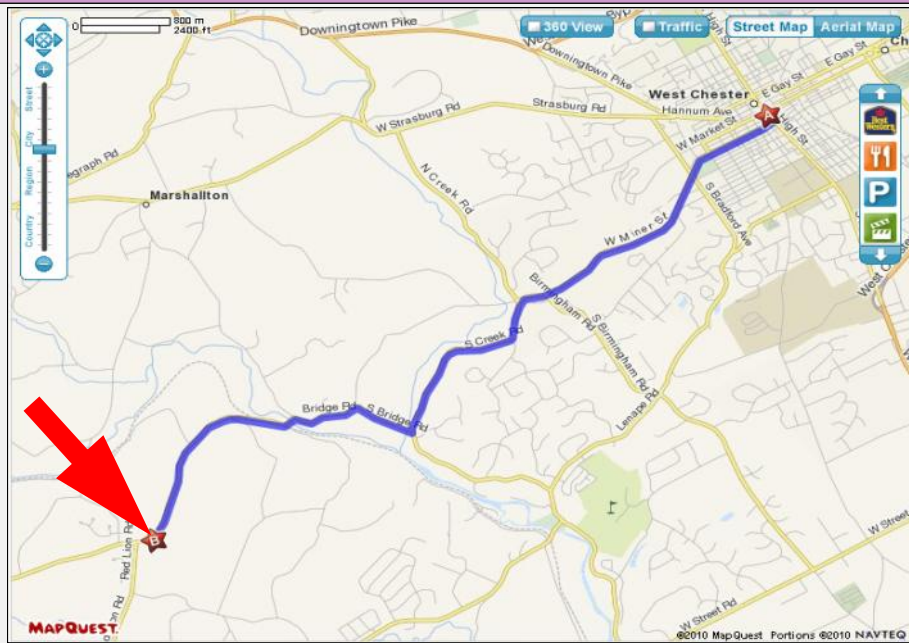
Campbell's star, near Albireo, is a small (5") wonder that is not a star at all but rather a very compact planetary nebula. It is surrounded by a cloud of red gas.

The third object, **NML Cygni** is one of the largest stars known (40x mass of the sun, 100,000x the luminosity of the sun). This one will be likely beyond most of our telescopes as its brightness varies between 16 to 18.

Classic La Para by Nicholas La Para



CCAS Directions



Brandywine Red Clay Alliance

1760 Unionville Wawaset Rd
West Chester, PA 19382
(610) 793-1090
<http://brandywinewatershed.org/>

BRC was founded in 1945 and is committed to promoting and protecting the natural resources of the Brandywine Valley through educational programs and demonstrations for all ages.

Brandywine Red Clay Alliance

The monthly observing sessions (held February through November) are held at the Myrick Conservation Center of the Brandywine Red Clay Alliance.

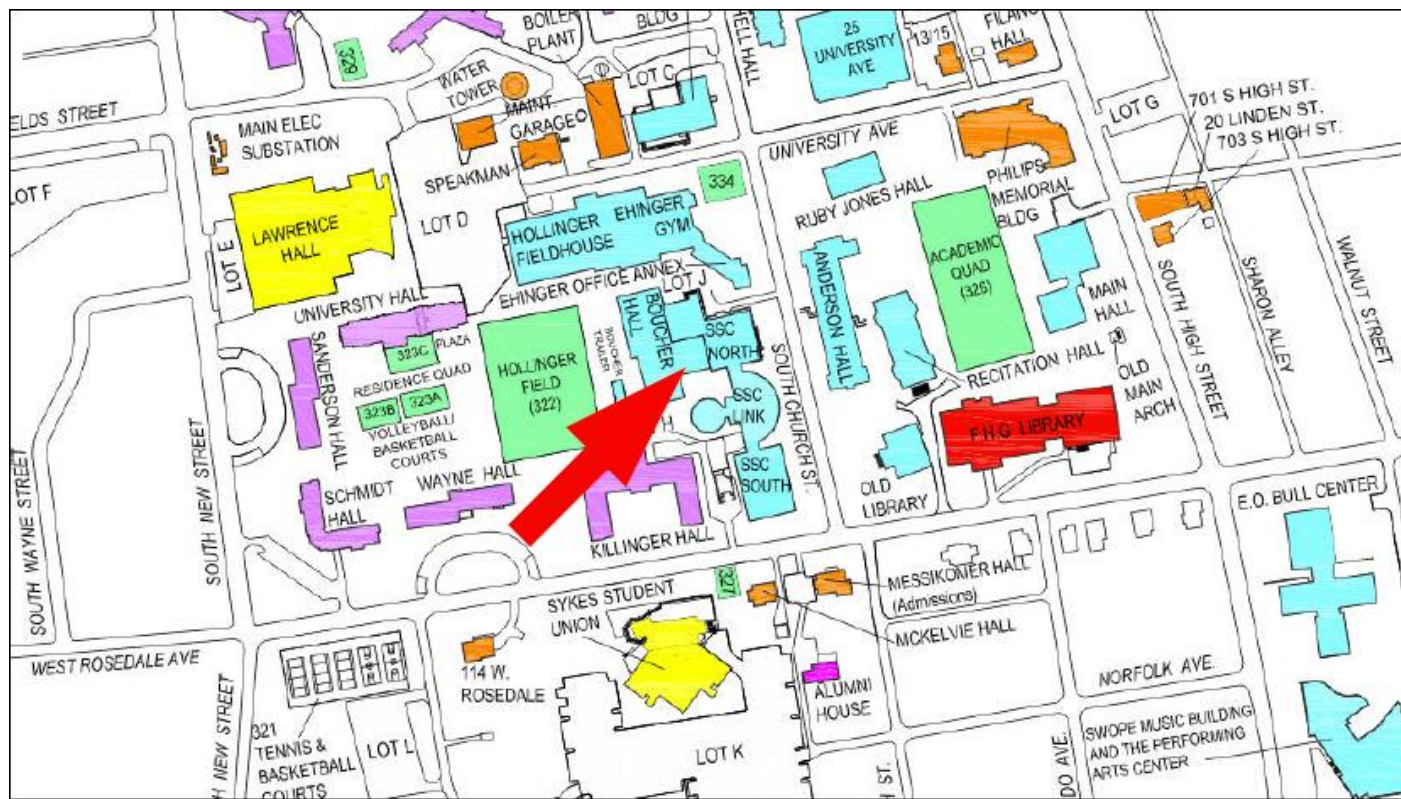
To get to the Myrick Conservation Center from West Chester, go south on High Street in West Chester past the Courthouse. At the next traffic light, turn right on Miner Street, which is also PA Rt. 842. Follow Rt. 842 for about 6 miles. To get to the observing site at the BRC property, turn left off Route 842 into the parking lot by the office: look for the signs to the office along Route 842. From that parking lot, go left through the gate and drive up the farm lane about 800 feet to the top of the hill. The observing area is on the right.

If you arrive after dark, *please turn off your headlights and just use parking lights* as you come up the hill (so you don't ruin other observers' night vision).

CCAS Directions

West Chester University Campus

The monthly meetings (September through May) are held in Room 112 in Merion Science Center (formerly the Boucher Building), attached to the Schmucker Science Center. The Schmucker Science Center is located at the corner of S. Church St & W. Rosedale Ave. Parking is generally available across Rosedale in the Sykes Student Union parking lot (Lot K).



Speaker Bio (Cont'd)

(Continued from page 3)

of cosmology.

Cosmologists have been intrigued recently by puzzles related to the current expansion rate of the universe (called H_0) and the growth of cosmic structures: direct measurements appear to disagree with the predictions of the standard model of cosmology anchored by the early universe. Dr. Jain and his group work on both the theory and data sides of the H_0 puzzle and he will share various aspects of his work on understanding dark energy in his presentation to the CCAS.

CCAS Membership Information and Society Financials

Treasurer's Report by Don Knabb

Aug. 2025 Financial Summary

Beginning Balance	\$1559
Deposits	\$185
Disbursements	-\$0
Ending Balance	\$1744

New Member Welcome!

Welcome to new CCAS member Robbie LaRocca from Eagleville, PA.

We're glad you decided to join us under the stars! Clear skies to you!

Membership Renewals

You can renew your CCAS membership by writing a check payable to "Chester County Astronomical Society" and sending it to our Treasurer:

Don Knabb
988 Meadowview Lane
West Chester PA 19382

The current dues amounts are listed in the *CCAS Information Directory*. Consult the table of contents for the directory's page number in this month's edition of the newsletter.

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 \$35.00 for one year. Send to:

International Dark-Sky Association
5049 E Broadway Blvd, #105
Tucson, AZ 85711

Phone: 520-293-3198
Fax: 520-293-3192
E-mail: ida@darksky.org

For more information, including links to helpful information sheets, visit the IDA web site at:

<http://www.darksky.org>

Dark-Sky Website for PA



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

<http://www.POLCouncil.org>

Find out about Lyme Disease!

Anyone who spends much time outdoors, whether you're stargazing, or gardening, or whatever, needs to know about Lyme Disease and how to prevent it. You can learn about it at:

<http://www.lymebasics.org>

Take the time to learn about this health threat and how to protect yourself and your family. It is truly "time well spent"!

Good Outdoor Lighting Websites

One of the biggest problems we face in trying to reduce light pollution from poorly designed light fixtures is easy access to good ones. When you convince someone, a neighbor or even yourself, to replace bad fixtures, where do you go for good lighting fixtures? Check out these sites and pass this information on to others. Help reclaim the stars! And save energy at the same time!



Light pollution from poor quality outdoor lighting wastes billions of dollars and vast quantities of valuable natural resources annually. It also robs us of our heritage of star-filled skies. Starry Night Lights is committed to fighting light pollution. The company offers the widest selection of ordinance compliant, night sky friendly and neighbor friendly outdoor lighting for your home or business. Starry Night Lights is located in Phoenix, Arizona.

Phone: 520-280-3846

<http://www.starrynightlights.com>



LIGHTHOUSE
OUTDOOR LIGHTING

Lighthouse Outdoor Lighting is a dedicated lifetime corporate member of the [International Dark-Sky Association](http://www.darksky.org). Lighthouse's products are designed to reduce or eliminate the negative effects outdoor lighting can have while still providing the light you need at night.

211 North Walnut St.
1st Floor
West Chester, PA 19380

Phone: 484-291-1084 or 800-737-4068

<https://www.lighthouse-lights.com/landscape-lighting-design/pa-west-chester/>

Local Astronomy-Related Stores

Listing retail sites in this newsletter does not imply endorsement of any kind by our organization. This information is provided only as a service to our members and the general public.



High Point Scientific is a retailer of telescopes, binoculars, eyepieces and telescope accessories from Meade, Celestron, Televue, Orion, StellarMate, Takahashi, and many more. They also have an extensive blog of advice and education for amateur astronomers.

High Point Scientific
442 Route 206
Montague NJ, 07827

Phone: 800-266-9590

<https://www.highpointscientific.com/>



Located in Manayunk, Spectrum Scientifics educates and entertains customers with an array of telescopes, microscopes, binoculars, science toys, magnets, labware, scales, science instruments, chemistry sets, and much more.

4403 Main Street
Philadelphia, PA 19127

Phone: 267-297-0423
Fax: 215-965-1524

Hours:
Monday thru Friday: 9AM to 5PM

<http://www.spectrum-scientifics.com>

CCAS Information Directory

CCAS Lending Telescopes

Contact Don Knabb to make arrangements to borrow one of the Society's lending telescopes. CCAS members can borrow a lending telescope for a month at a time; longer if no one else wants to borrow it after you. Don's phone number is 610-436-5702.

Contributing to Observations

Contributions of articles and images 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 e-mail message and send it to: newsletter@ccas.us to:

Dr. John C. Hepler
21 Medinah Drive
Reading, PA 19607

The deadline for submissions to the monthly newsletter is the 26th of each month. Articles and images should be original or the author/artist must be given credit. Articles should be in MS Word format with 12 point Times New Roman Font with single row spacing and one-inch margins on all four sides. Images should be in JPG or PNG file format. The submission window opens on the 20th of each month.

CCAS Newsletters via E-mail

You can receive the monthly newsletter (in full color!) via 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 Dr. John Hepler, the newsletter editor, at: newsletter@ccas.us.

CCAS Website

Dr. John Hepler is the Society's Webmaster. You can check out our Website at:

<http://www.ccas.us>

Dr. Hepler 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 copyrighted material! Give your contributions to Dr. Hepler at (484) 883-5033 or e-mail to webmaster@ccas.us

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 "nights out" for school, scout, and other civic groups.

CCAS Executive Committee

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

President: Dave Hockenberry
610-558-4248

Vice President: Pete Kellerman
610-873-0162

ALCor & Treasurer: Don Knabb
610-436-5702

Observing: Don Miller
610-247-8712

Secretary: Beatrice Mazziotta
610-933-2128

Program: Bruce Ruggeri
610-256-4929

Education: Don Knabb
610-436-5702
Dennis O'Leary
610-701-8042

Webmaster & Newsletter: John Hepler
484-883-0533

CCAS Membership Information

The 2023 membership rates are as follows:

REGULAR MEMBER.....\$30/year
SENIOR MEMBER.....\$15/year
STUDENT MEMBER.....\$ 5/year
JUNIOR MEMBER.....\$ 5/year
FAMILY MEMBER.....\$40/year

Membership Renewals

Check the Membership Renewals on the front of each issue of *Observations* to see if it is time to renew. If you need to renew, you can mail your check, made out to "Chester County Astronomical Society," to:

Don Knabb
988 Meadowview Lane
West Chester PA 19382-2178

Phone: 610-436-5702
e-mail: treasurer@ccas.us

Sky & Telescope Magazine

The club membership subscription cost for *Sky and Telescope* magazine has increased to **\$45.75**. This is still a good saving from the regular rate of **\$57.75**.

There is no need to go through the CCAS treasurer for subscriptions or renewals. Just go to the Sky and Telescope website and select "Magazine", then under the FAQs you can subscribe at the club rate.

<https://skyandtelescope.org/subscribe/>

If you have **any** questions call Don Knabb at 610-436-5702.

Astronomy Magazine Group Rates

Subscriptions to this excellent periodical are available through the CCAS at a reduced price of **\$34.00** which is much less than the individual subscription price of **\$42.95** (or \$60.00 for two years).

There is no need to go through the CCAS treasurer for subscriptions or renewals. Just call customer service at 877-246-4835 and request the club rate for your new subscription or renewal.

