Observations

A Monthly Publication Of The
CHESTER COUNTY ASTRONOMICAL SOCIETY

Vol. 33, No. 7 ***Three-Time*** *Winner of the Astronomical League's Mabel Sterns Award ☼ 2006, 2009 & 2016* *July 2025*

In This Issue

Taking a Break during a Solar Observing Session

CCAS Member Roger Kennedy takes a break in the shadow of a helicopter blade during the Special Observing Session "FamilyFest" at the American Helicopter Museum, West Chester, PA on July 21, 2025 For more details about the event, see pg. 3.

Membership Renewals Due

07/2025	Beidler
	Hunsinger
	McGuigan
	Morgan
	Piehl
	Ramadoss
	Rauenzahn
08/2025	Borowski
	Johnston & Stein
	Kellar
	Knabb
	Lurcott, L.
	Manigly
	Schultz
	Tiedemann
	Trunk
	Zullitti
09/2025	Gioconda
	Holloway
	Hopper, Jr.
	Lurcott, E.
	Morgan
	Peterson

July 2025 Dates

2nd • First Quarter Moon, 3:30 p.m. EDT.

4th • Mercury is at greatest eastern elongation (26°), 1 a.m. EDT.

10th • Full Moon, the Buck Moon, 4:36 p.m. EDT.

13th • Venus passes 3° north of Aldebaran, midnight EDT.

17th • Last Quarter Moon, 8:37 p.m. EDT.

22nd • The Moon passes 5° north of Jupiter, midnight EDT.

24th • New Moon, :3:11 p.m. EDT.

31st • Mercury is in inferior conjunction, 8 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.

☼ Friday, July 18, 2025 - CCAS Special Observing Session, Battle of the Clouds, 8:30 p.m. to 10:30 p.m. EDT. Cohosted by the Chester County Library System. (Rain date: July 19th.)

☼ Friday, July 25 2025 - CCAS Monthly Observing Session, Myrick Conservancy Center, BRC. The observing session starts at sunset.

☼ Saturday, August 2, 2025 - CCAS Solar Observing Session from 10:00 a.m.to 1:00 p.m. EDT at Downingtown Library, Downingtown, PA. For more information, contact our Observing Chair, Don Miller.

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

Summer Society Events

July 2025

18th • CCAS Special Observing Session, Battle of the Clouds, 8:30 p.m. to 10:30 p.m. EDT. Cohosted by the Chester County Library System. (Rain date: July 19th.) For more information, contact our Observing Chair, Don Miller.

20th • Open call for articles and photographs for the August 2025 edition of Observations.

22nd-25th • CCAS Special Camping Trip & Observing Session at Cherry Springs State Park, Coudersport, PA. For more information, contact our Observing Chair, Don Miller.

24th-27th • Stellafane Convention. The 88th Convention of Amateur Telescope Makers on Breezy Hill in Springfield, Vermont. Sponsored by the Springfield Telescope Makers, Inc.

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 August 2025 edition of Observations.

August 2025

2nd • CCAS Solar Observing Session from 10:00 a.m.to 1:00 p.m. EDT at Downingtown Library, Downingtown, PA. For more information, contact our Observing Chair, Don Miller.

12th-13th • Perseid Meteor Shower Peaks. The Perseids are one of the best meteor showers to observe, producing up to 60 meteors per hour at their peak. The shower's peak usually occurs on August 12th, but you may be able to see some meteors any time from July 17th through August 23rd. On August 12th, the moon will be 84% full. The radiant point for this shower is in the constellation Perseus.

14th • CCAS Solar Observing Session from 10:30 a.m.to 1:30 p.m. EDT at CVT at Exton Park, 132 Church Farm Ln, Exton, PA 19341. For more information, contact our Observing Chair, Don Miller.

19th-22nd • CCAS Special Camping Trip & Observing Session at Cherry Springs State Park, Coudersport, PA. For more information, contact our Observing Chair, Don Miller.

20th • Open call for articles and photographs for the July 2025 edition of Observations.

22nd - 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 July 2025 edition of Observations.

29th • CCAS Special Observing Session: Starr Farm Park, Downingtown PA. 8:00 to 10:00 p.m. EDT. For more information, contact our Observing Chair, Don Miller.

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 "The Nature of Dark Matter and Dark Energy and their Roles in Galaxy Formation."

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.

CCAS Solar Observing Event at the American Helicopter Museum

by Dave Hockenberry, CCAS President

Linda Kennedy shows a member of the public the sun in all its glory

The American Helicopter Museum hosted their annual Family Day event on June 21, 2025, and again the Chester County Astronomical Society was invited to lend support with daytime Solar Telescope Observing. This event is always popular for showcasing the museum. Food trucks, vendors, and special information tables from a wide variety of groups were available to interact with the public. Special activities for kids, including bounce houses, made the event fun for the whole family.

CCAS members Roger and Linda Kennedy took the lead in

(Continued on page 8)

Scientists Discover Rare Planet Using Phenomenon Predicted by Einstein

by Ben Turner, Senior Staff Writer, Live Science

Astronomers have used a space-time phenomenon first predicted by Albert Einstein to discover a rare planet hiding at the edge of our galaxy. The exoplanet, dubbed AT2021uey b, is a Jupiter-size gas giant located roughly 3,200 light-years from Earth. Orbiting a small, cool M dwarf star once every 4,170 days, the planet's location is remarkable — it is only the third planet in the entire history of space observation to be discovered so far away from our galaxy's dense center.

Yet perhaps more exceptional than the planet's location is the method used to discover it. The effect, known as microlensing, occurs when the light of a host star is magnified by the warping of space-time due to a planet's gravity.

The researchers published their findings May 7 in the journal Astronomy & Astrophysics.

"This kind of work requires a lot of expertise, patience, and, frankly, a bit of luck," study co-author Marius Maskoliūnas, an astronomer at Vilnius University in Lithuania, said in a statement. "You have to wait for a long time for the source star and the lensing object to align and then check an enormous amount of data. Ninety percent of observed stars pulsate for various other reasons, and only a minority of cases show the microlensing effect."

Nearly 6,000 alien worlds beyond our solar system have been discovered since the first exoplanet was detected in 1992. The two most common detection methods, called transmit photometry and radial velocity, detect planets through the dimming of host stars as they pass in front of them, or from the wobble that the planets' gravitational tugs impart upon them.

A rarer method, known as microlensing, is derived from Einstein's theory of general relativity and is produced by massive objects as they warp the fabric of the universe, called space-time. Gravity, Einstein discovered, isn't produced by an unseen force but by space-time curving and distorting in the presence of matter and energy.

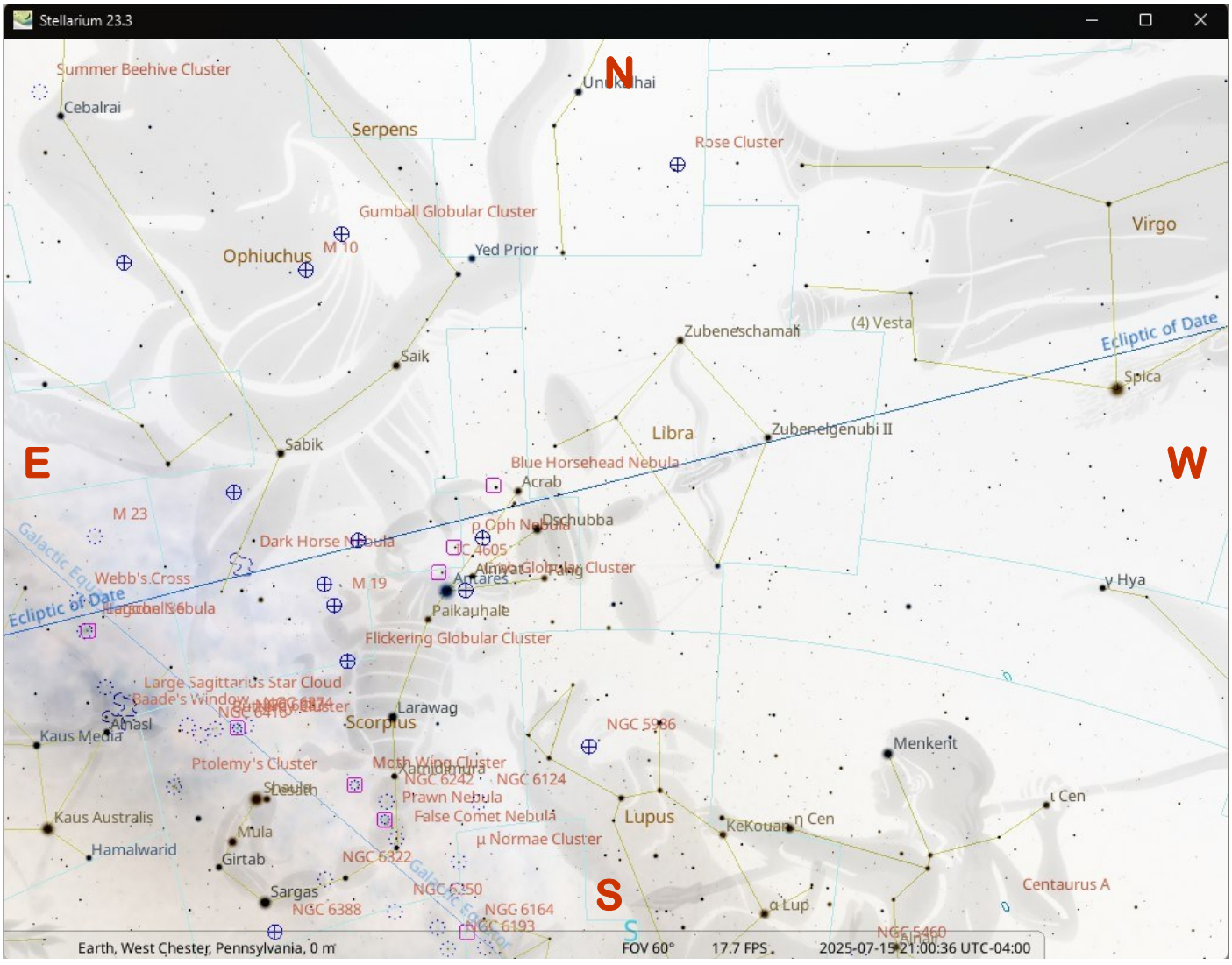
This curved space, in turn, determines how energy and matter move through it. Even though light travels in a straight line, light traveling through a curved region of space-time also travels in a curve. This means that when a planet passes in front of

(Continued on page 7)

The Sky Over Chester County

July 15, 2025 at 9:00 p.m. ET

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

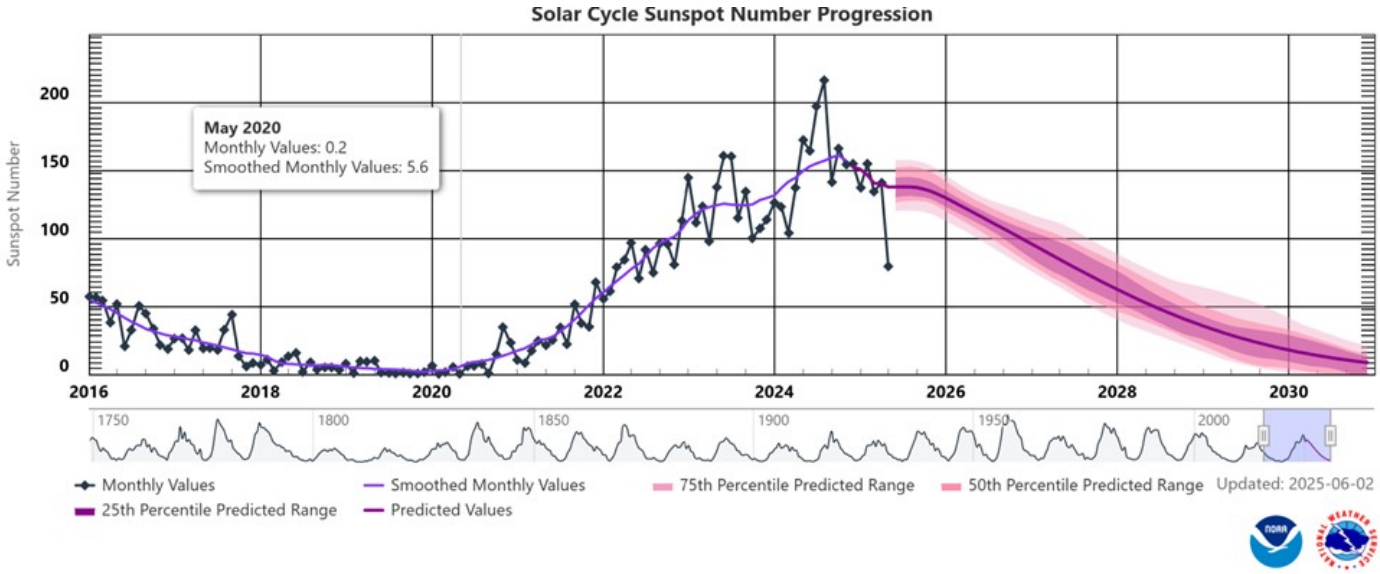


Date	Civil Twilight Begins	Sunrise	Sunset	Civil Twilight Ends	Length of Day
07/01/2025	5:04 a.m. EDT	5:37 a.m. EDT	8:34 p.m. EDT	9:07 p.m. EDT	14h 57m 18s
07/15/2025	5:14 a.m. EDT	5:46 a.m. EDT	8:29 p.m. EDT	9:01 p.m. EDT	14h 43m 15s
06/30/2025	5:29 a.m. EDT	6:00 a.m. EDT	8:16 p.m. EDT	8:46 p.m. EDT	14h 16m 22s

Moon Phases					
First Quarter	07/02/2025	3:30 p.m. EDT	Full Moon	07/10/2025	4:36 p.m. EDT
Last Quarter	07/17/2025	8:37 p.m. EDT	New Moon	07/24/2025	3:11 p.m. EDT

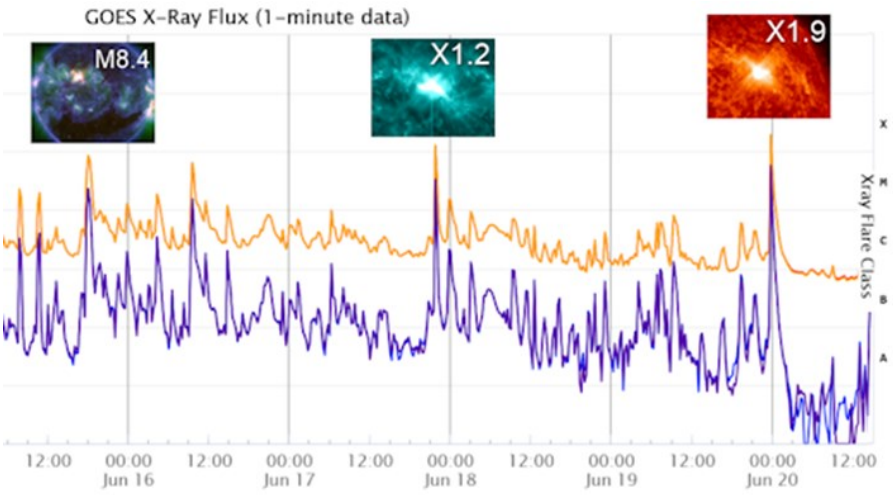
July 2025 Observing Highlights

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:



Sun: The sun is continuing its streak of zero spotless days with 113 spot number as of this writing (20 June). In June, there were a number solar flares which resulted in shortwave radio blackouts around the world. The flares have been associated with sunspot 4114 and could potentially continue for a while (See above).

Moon: 1st quarter on the 2nd; full on the 10th; last quarter on the 17th and new on the 24th. There are a number of names given to the full moon this month. A common one is "buck moon" as this is the time of year when male deer (bucks) start to grow their antlers. Clair Obscur effects to look for:

- July 2nd: Lunar X and V, look near Purbach crater
- July 4th: Eyes of Clavius

Planets:

We still are in a time where there are a limited number of planets visible for evening viewing.

Mercury: At greatest elongation on the 4th in the evening sky.

Venus: A close conjunction with Uranus but for our area this will occur in the daytime. Venus rises after midnight. While it is well placed in the morning sky, it is only half as bright as it was in February as it moves away from Earth.

Mars: Rises around 10 pm. Its angular size is currently only 4.6 arcseconds. Mars will have a conjunction with the moon on the 28th.

Jupiter: Rises just before sunrise in Gemini.

(Continued on page 8)

Through the Eyepiece: The Serpens-Ophiuchus Double Cluster

by Don Knabb, CCAS Treasurer & ALCOR

At nearly any summer or fall star party one of the favorite objects for observing in binoculars or a wide field telescopic view is the famous Double Cluster in Perseus. The Double Cluster is the common name for the naked-eye open clusters NGC 884 and NGC 869, which are close together in the constellation Perseus.

But another beautiful double cluster is the Serpens-Ophiuchus Double Cluster, or more easily called the S-O Double Cluster. This pair of open clusters is made up of NGC 6633 and IC 4756. These open clusters have been named the Tweedledum and Tweedledee clusters by astronomy author Steven James O'Meara. NGC 6633 is also called the Captain Hook Cluster or the Wasp-Waist Cluster. IC 4756 has other names also, such as Graff's Cluster or the Secret Garden Cluster.

I enjoy hunting for open clusters with binoculars while lying back on a reclining chair. If I don't have time or it is too late to set up a telescope, binoculars allow me to see many beautiful open clusters in a short amount of time. The S-O Double Cluster is easy to find with binoculars if you scan between Ophiuchus and Aquila. On a very clear night with no Moon, both clusters can be glimpsed at the very edge of naked eye visibility.

IC 4756 has an apparent magnitude of 4.6 and lies about 1600 light years away. It is estimated to be 700 million years old. NGC 6633 was discovered in 1745 by Philippe Loys de Chéseaux and was independently rediscovered by Caroline Herschel, who included it in her

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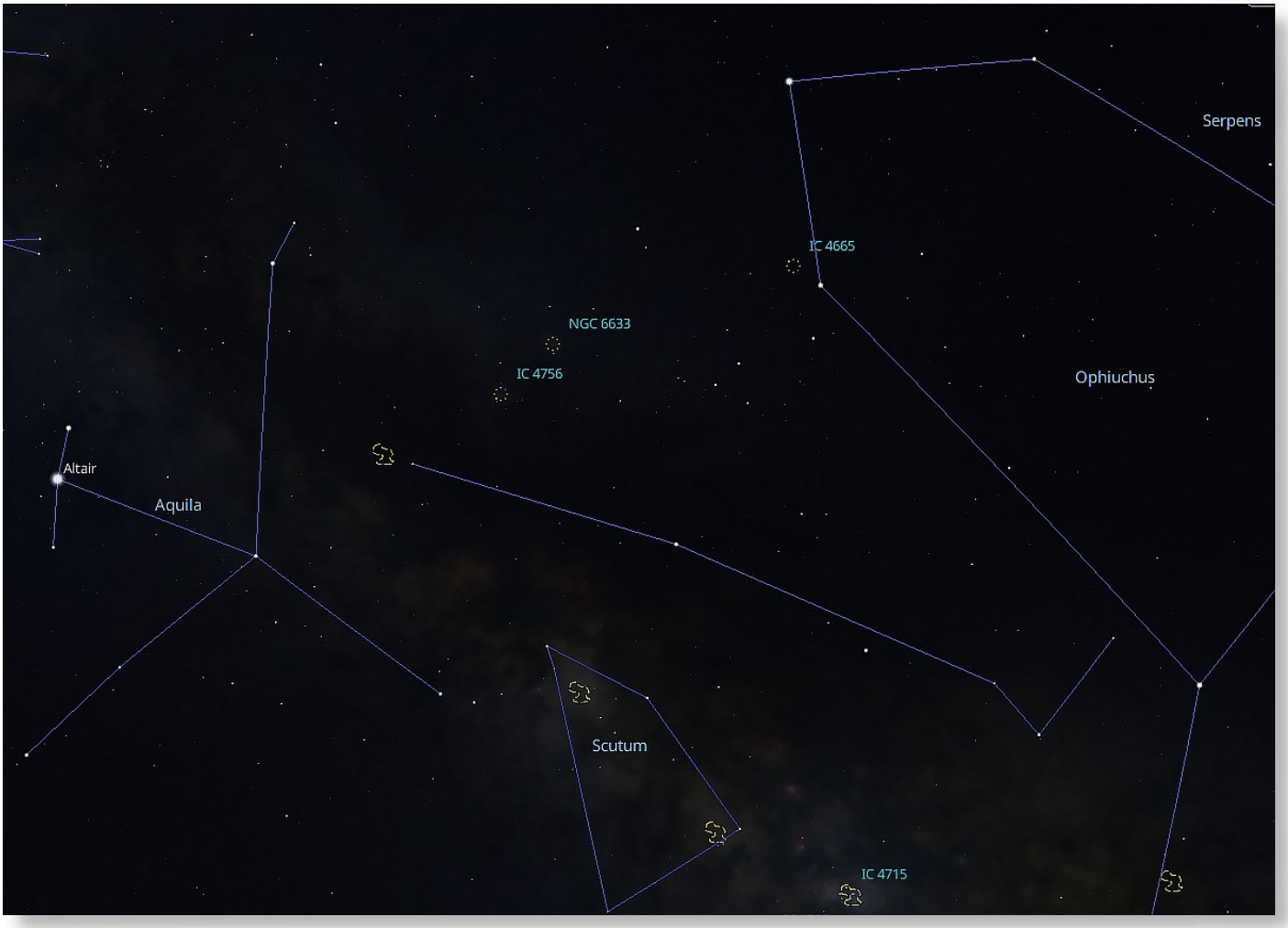


Image Credit: sky map produced using Stellarium, the free planetarium software

Through the Eyepiece (Cont'd)

Image Credit: sky map produced using Stellarium, the free planetarium software

(Continued from page 6)

brother's catalog as H VIII.72. This cluster is nearly as large as the full moon and contains 30 stars which make it shine at a total magnitude of 4.6; the brightest star is of mag 7.6. Its age is estimated at 660 million years.

I could not find a good photograph of the S-O Double Cluster, but this image from Stellarium shows what the S-O Double Cluster would look like in a wide field telescopic view or binoculars.

An open cluster is a group of up to a few thousand stars that were formed from the same giant molecular cloud and have roughly the same age. More than 1,100 open clusters have been discovered within the Milky Way galaxy, and many more are thought to exist. They are loosely bound to each other by mutual gravitational attraction and become disrupted by close encounters with other clusters and clouds of gas as they orbit the galactic center. Open clusters generally survive for a few hundred million years. In contrast, the more massive globular clusters of stars exert a stronger gravitational attraction on their members, and can survive for many billions of years.

Information credits:

- Dickinson, Terence 1996. *Summer Stargazing.* Firefly Books
- Stellarium planetarium software
- SkySafari Pro iPad app
- http://www.deepskyforum.com/ NGC 6633 and Graff 1 The Tweedledum and Tweedledee Clusters

Rare Planet (Cont'd)

(Continued from page 3)

its host star, its gravity acts as a lens — magnifying the star's light and causing its brightness to spike.

"What fascinates me about this method is that it can detect those invisible bodies," Maskoliūnas said, essentially by measuring the bodies' shadows. "Imagine a bird flying past you. You don't see the bird itself and don't know what color it is — only its shadow. But from it, you can, with some level of probability, determine whether it was a sparrow or a swan and at what distance from us. It's an incredibly intriguing process."

AT2021uey b's cosmic shadow was first spotted in 2021 in data taken by the European Space Agency's Gaia telescope, revealing its presence by a momentary spike in the brightness of its host star.

The astronomers then took detailed follow-up observations using Vilnius's Molėtai Astronomical Observatory, from which they calculated its source as a planet 1.3 times the mass of Jupiter. Its host star burns at about half the temperature of our own, and the gas giant sits four times farther than Earth's distance from the sun.

According to the researchers, the planet's discovery so far from the Milky Way's central bulge, in a region that is comparatively sparse in heavier elements needed to form planets, offers a fresh hint of the unlikely places where planets can be found.

(Continued on page 14)

Observing (Cont'd)

(Continued from page 5)

Saturn: This planet begins retrograde motion on the 13th of July. This planet rises around midnight.

Uranus: Rises after 2 am in Taurus.

Neptune: Rises after midnight, and it enters retrograde motion on the 4th of July in Pisces.

Select Night Sky Objects and Events:

M52 will be well placed this month. A gorgeous open cluster in the band of the milky way, on the western edge of Cassiopeia. This is a great binocular object.

One of my favorite deep sky objects is the **Needle Galaxy** (NGC 4565), an edge-on spiral in Coma Berenices. You can see this readily in an 8" or larger telescope (or with a smart scope like Seestar). A large dust lane cuts across the middle of it. Magnitude 9.6 at a distance of 42 MLyrs.

Look for NGC 4565 in Coma Berenices this month.

Helicopter Museum Event (Cont'd)

(Continued from page 3)

organizing the solar observing, and with their magnificent "custom" Lunt Solar Telescope gave magnificent views of a very active sun in Hydrogen Alpha.

Pete Kellerman assisted with a white light Solar filter equipped telescope, and Bruce Ruggeri manned at smaller Lunt 60mm Ha telescope. Another white light filter view was available on my telescope, so there were plenty of solar scopes on hand to show the public the sun.

Don Knabb assisted by attending the CCAS information booth and answering questions about CCAS.

Bruce Ruggeri arranges informational materials for public distribution.

Many thanks to all who participated in making event a success for the Helicopter Museum!

CCAS is doing another event for the Helicopter Museum late Fall in November. So, if you missed this one, come on out for a night event later this year.

Binocular Challenge for July 2025
courtesy of Astronomical League

The Astronomical League OC Open Cluster Program

M6 & M7

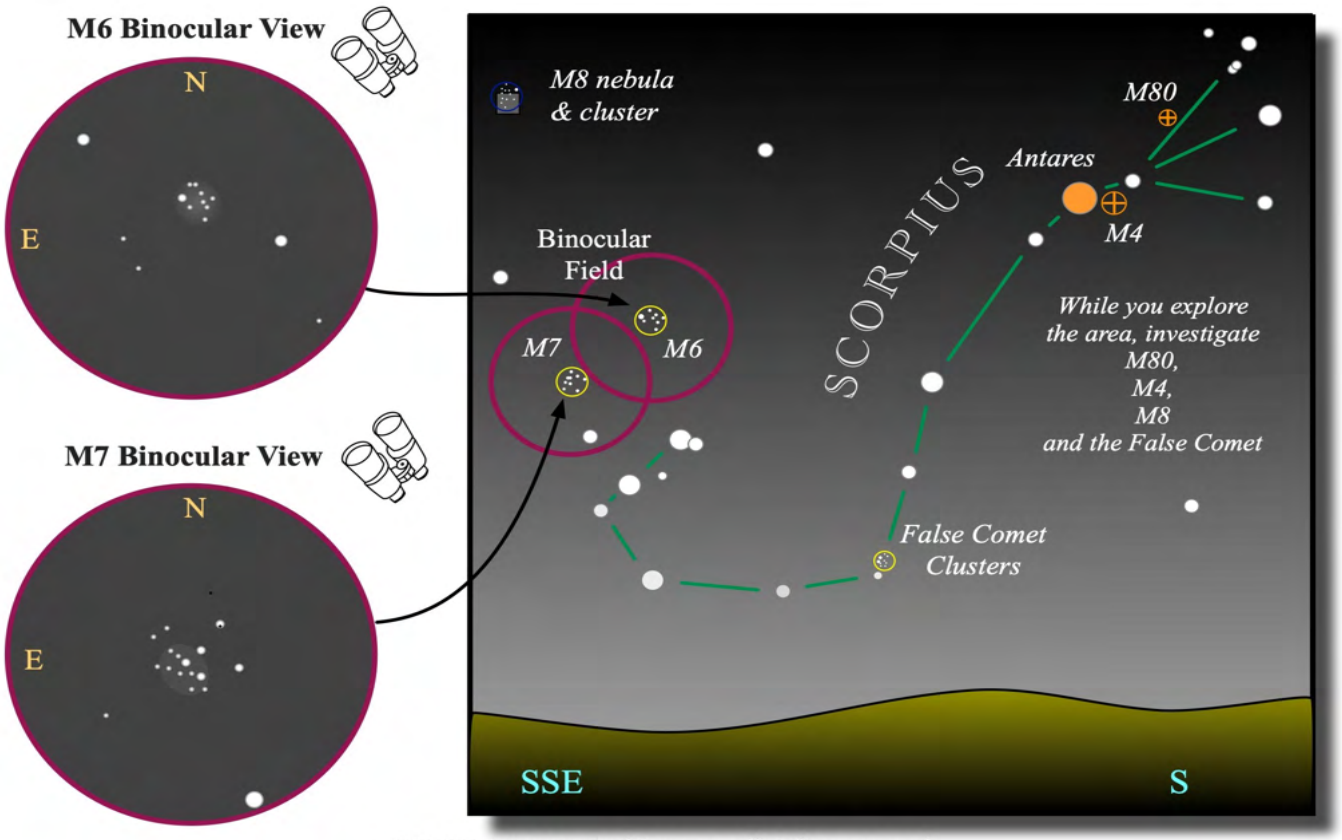
When these two big, bright, and beautiful open star clusters appear in the early evening in mid June, summer is not far behind.

If you have recently begun your journey under the stars, why not whet your appetite by exploring southeastern Scorpius and its two wonderful open star clusters, M6 & M7. You will return to them year after year!

While they are visible to the unaided eye from a dark location, binoculars help greatly.
1. Identify Scorpius standing low in the south-southeast on a late spring or early summer evening. As summer proceeds, it is found low in the south, then low in the southwest in the early fall.
2. From red Antares, direct your gaze southward down the scorpion's back, then turn eastward.
3. When its tail hooks northward, continue the length of that hook.
4. M6 and M7 should be plainly visible in the binocular field.

M6:
A faint hazy glow is seen by the unaided eye from a dark, clear site. Two dozen stellar lights can be discerned with 10x50 binoculars.

M7:
A glittery glow is easily spotted off the scorpion's tail by the unaided eye. Binoculars reveal many faint stars.



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July's Night Sky Notes: Spy the Scorpion

by Kat Troche

This article is distributed by the NASA Night Sky Network, a coalition of hundreds of astronomy clubs across the US dedicated to astronomy outreach.

Visit nightsky.jpl.NASA.gov to find local clubs, events, stargazing info and more.

As summer deepens in the Northern Hemisphere, a familiar constellation rises with the galactic core of the Milky Way each evening: Scorpius the Scorpion. One of the twelve zodiacal constellations, Scorpius contains many notable objects, making it an observer's delight during the warmer months.

Here are some items to spy in July:

- **Antares:** referred to as "the heart of the scorpion," this supergiant has a distinct reddish hue and is visible to the naked eye. If you have good skies, try to split this binary star with a medium-sized telescope. Antares is a double star with a white main-sequence companion that comes in at a 5.4 magnitude.
- **Messier 4:** one of the easiest globular clusters to find, M4 is the closest of these star

(Continued on page 11)

The star map of the Scorpius constellation highlights the star Antares and several notable deep-sky objects like the Rho Ophiuchi Complex, Messier 4, the Cat's Paw Nebula, and Caldwell 76, the Baby Scorpion Cluster. Credit: Stellarium Web

A digital map of the Rho Ophiuchi Complex. Credit: Stellarium Web

(Continued from page 10)

clusters to Earth at 5,500 light years. With a magnitude of about 5.6, you can spot this with a small or medium-sized telescope in average skies. Darker skies will reveal the bright core. Use Antares as a guide star for this short trip across the sky.

- **Caldwell 76:** If you prefer open star clusters, locate C76, also known as the Baby Scorpion Cluster, right where the 'stinger' of Scorpius starts to curve. At a magnitude of 2.6, it is slightly brighter than M4, albeit smaller, and can be spotted with binoculars and the naked eye under good sky conditions.

Lastly, if you have an astrophotography set up, capture the Cat's Paw Nebula near the stinger of Scorpius. You can also capture the Rho Ophiuchi cloud complex in the nearby constellation Ophiuchus. Brilliant Antares can be found at the center of this wondrous structure.

Manaiakalani

While many cultures tell tales of a 'scorpion' in the sky, several Polynesian cultures see the same stars as the demigod Māui's fishhook, Manaiakalani. It is said that Māui didn't just use his hook for giant fish in the sea, but to pull new islands from the bottom of the ocean. There are many references to the Milky Way representing a fish. As Ma-

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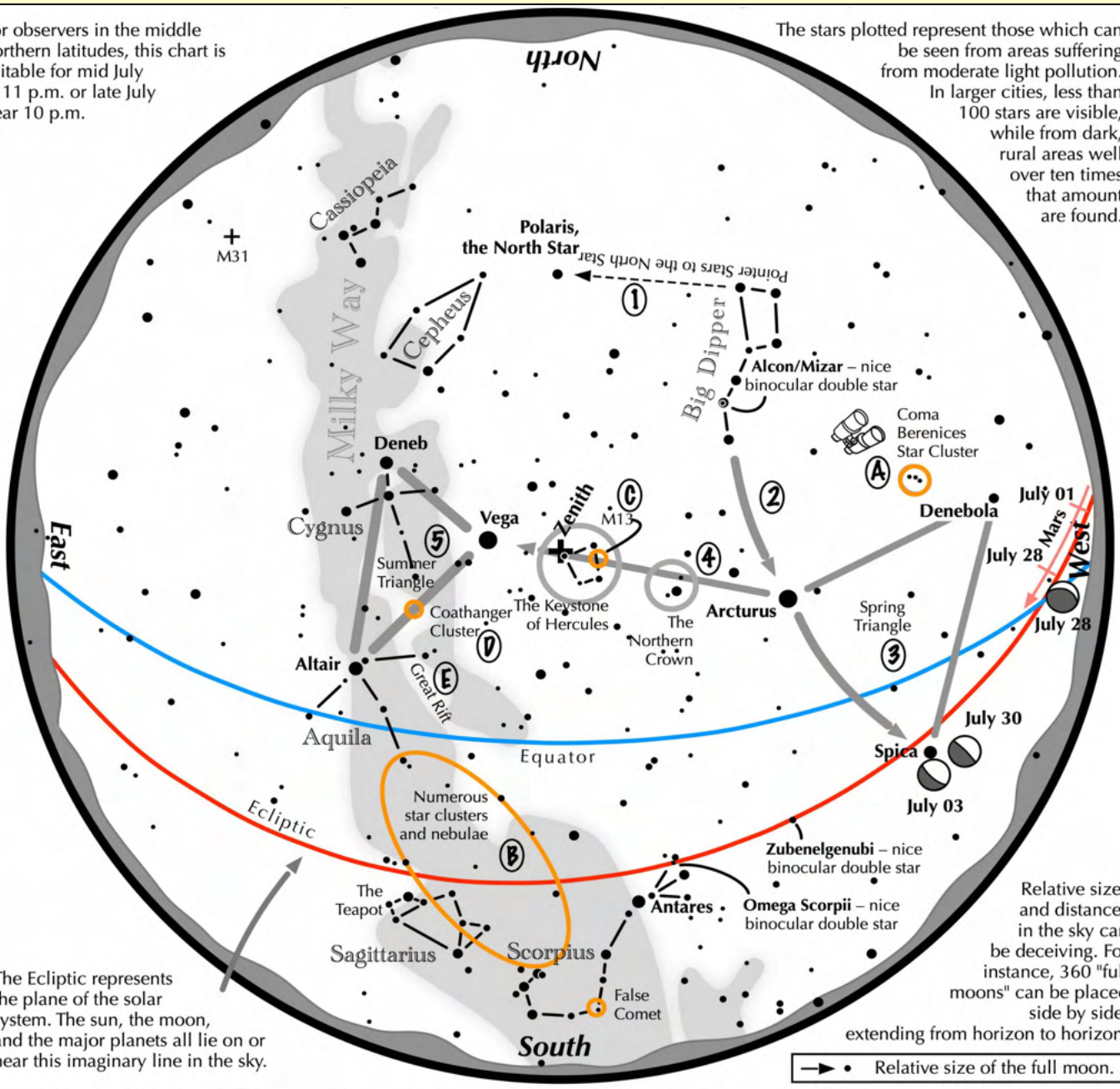
Navigating the Mid-July 2025 Night Sky

courtesy of the Astronomical League



Navigating the mid July 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 first intersects Arcturus, the brightest star in the July evening sky, then continues to Spica. Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.
3. To the northeast of Arcturus shines another star of similar brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The
4. Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
5. High in the East lies the Summer Triangle stars of Vega, Altair, and Deneb.

Binocular Highlights

A: Between Denebola and the tip of the Big Dipper's handle, lie the stars of the Coma Berenices Star Cluster.
B: Between the bright stars Antares and Altair, hides an area containing many star clusters and nebulae.
C: On the western side of the Keystone glows the Great Hercules Cluster, containing nearly 1 million stars.
D: 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
E: Sweep along the Milky Way for an astounding number of faint glows and dark bays, including the Great Rift.

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

Night Sky Notes (Cont'd)

(Continued from page 11)

naiakalani rises from the southeast, it appears to pull the great celestial fish across a glittering sea of stars.

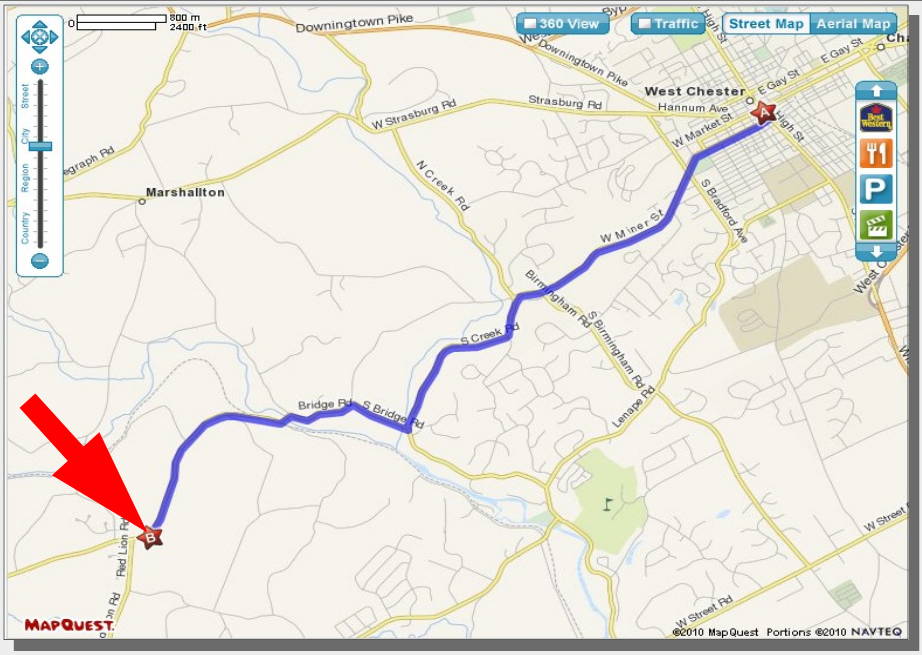
Measure Your Darkness

While you can use smartphone apps or dedicated devices like a Sky Quality Meter, Scorpius is a great constellation to measure your sky darkness with! On a clear night, can you trail the curve of the tail? Can you see the scorpion's heart? Use our free printable Dark Sky Wheel, featuring the stars of Scorpius on one side and Orion on the other for measurements during cooler months. You can find this resource and more in the Big Astronomy Toolkit.

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.

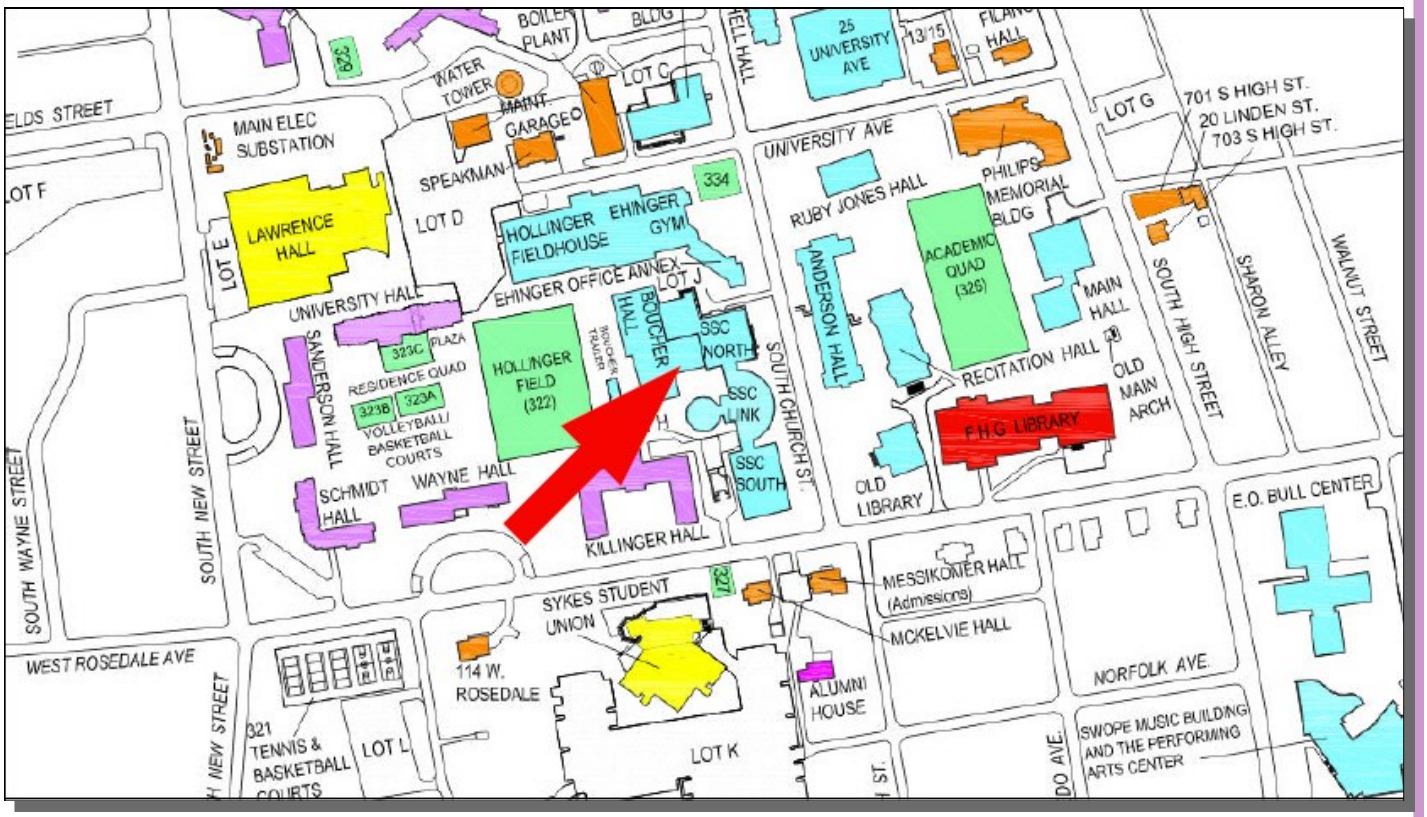
To get to the Myrick Conservation Center from West Chester, go south on High Street in West Chester past the Courthouse. At the next traffic light, turn right on Miner Street, which is also PA Rt. 842. Follow Rt. 842 for about 6 miles. To get to the observing site at the BRC property, turn left off Route 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).



Rare Planet (Cont'd)

(Continued from page 7)

"When the first planet around a sun-like star was discovered, there was a great surprise that this Jupiter-type planet was so close to its star," Edita Stonkutė, another Vilnius University astronomer and leader of the microlensing project that found the planet, said in the statement.

"As data accumulated, we learned that many types of planetary systems are completely unlike ours — the solar system. We've had to rethink planetary formation models more than once."

CCAS Membership Information and Society Financials

Treasurer's Report
by Don Knabb

June 2025 Financial Summary

Beginning Balance	$1985
Deposits	$303
Disbursements	-$1024
Ending Balance	$1264

New Member Welcome!

Welcome to new CCAS members Wayne Bremser from Newtown Square, PA, and Dwayne Myers from Phoenixville, 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.

CCAS Information Directory

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 is a dedicated lifetime corporate member of the International Dark-Sky Association. 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
Public Relations:	Ann Miller 610-558-4248

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 & Tel*escope 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.