



Observations

A Monthly Publication Of The
CHESTER COUNTY ASTRONOMICAL SOCIETY

Vol. 33, No. 4 **Three-Time** Winner of the Astronomical League's Mabel Sterns Award ☼ 2006, 2009 & 2016

April 2025

In This Issue

CCAS Spring Events.....	2
March 2025 Meeting Minutes.....	2
April 2025 Meeting Agenda.....	2
April 2025 Meeting Guest Speaker Bio	3
STARMUS Launches the Stephen Hawking Medal Junior.....	3
The Sky Over Chester County:	
April 2025	4
April 2025 Observing Highlights	5
Through the Eyepiece: Messier 64	6
Night Sky Notes.....	8
Enchanting April.....	10
Navigating the Mid-April 2025 Night Sky.....	12
Classic La Para.....	13
CCAS Directions: Brandywine	
Red Clay Alliance.....	13
CCAS Original Astrophotography	15
Membership Renewals	16
New Member Welcome	16
CCAS Directions: WCU Map.....	16
Treasurer's Report	16
CCAS Information Directory	17-18

Setting Moon after March 14th Lunar Eclipse



CCAS member Deepak Malkan shot this image of the Moon setting the morning hours after the lunar eclipse on March 14, 2025. See pg. 15 for more of Deepak's photography and details about capturing the images.

Membership Renewals Due

04/2025	Dennis Hepler
	Kataria McCabe
	Miller Noland
	Rossomando
05/2025	Blessing Cunningham
	Haas Kagel
	Mulhall Nigro
	O'Hara Ostanek
06/2025	Crabb Curry
	Dautrich, Chris
	Dautrich, Cindy
	Dhargalkar Hanspal
	Harris Hebding
	Lindtner Mazziotto & Calobrisi
	O'Neill Scott
	Thomas

April 2025 Dates

- 4th • First Quarter Moon, 10:14 p.m. EDT.
- 12th • Full Moon, the [Pink Moon](#), 8:22 p.m. EDT.
- 21st • Mercury is at greatest western elongation (27°), 3 p.m. EDT.
- 20th • Last Quarter Moon, 9:35 p.m. EDT.
- 22nd • Lyrid Meteor Shower peaks.
- 23rd-24th • [Earthshine](#) in the morning hours.
- 24th • The Moon passes 2° south of Venus, 9 p.m. EDT.
- 24th • The Moon passes 2° north of Saturn, midnight EDT.
- 27th • New Moon, 3:31 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, April 5, 2025 - Solar Observing Event with Middletown Free Library Home-school, 12:00 p.m. to 1:00 p.m. EDT.
- ☼ Saturday, April 5, 2025 - Observing Event with Atglen Public Library at Wolf's Hollow Park in Atglen, PA. The event is 7:30 to 10:00 p.m. EDT.
- ☼ Saturday, April 26, 2025 - Solar Observing Event, CVT at Exton Park, 10:30 a.m. to 1:30 p.m. EDT (Rain date: April 27th).

For more information about future observing opportunities, contact our [Observing Chair](#), Don Miller.

Spring Society Events

April 2025

2nd • Introduction to Astronomy Class: Other Kids on the Block—The Planets. Room C106, Peirce Middle School, West Chester, 7 p.m. EDT.

4th • Sacred Heart Academy, 8:30 pm to 10:30 pm EDT.

5th • Observing Session with Atglen Public Library and CC Parks. Wolfs Hollow County Park, 1766 Glen Run Rd, Atglen, PA 19310. 7:30 pm to 10 pm EDT.

9th • Introduction to Astronomy Class: Observing Basics, Star Charts, and Planetarium Software. Room C106, Peirce Middle School, West Chester, 7 p.m. EDT.

11th • CCAS Monthly Meeting, in person (as well as via Zoom) at West Chester University's Merion Science Center, Room 112. Featured Speaker: Dr. Roger Kennedy, CCAS member, solar astronomer, and science educator. "Bringing Solar Science to the General Public."

16th • Introduction to Astronomy Class: Observing Equipment, Binoculars, and Telescopes. Room C106, Peirce Middle School, West Chester, 7 p.m. EDT.

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

21st • West Chester University Planetarium Show: "Exoplanets and the Search for Life," in the Schmucker Science Building. The show starts at 7 p.m. Visit [WCU Public Planetarium Shows](#) for more information and reservations.

23rd • Introduction to Astronomy Class: Beyond Naked-Eye Observing. Room C106, Peirce Middle School, West Chester, 7 p.m. EDT.

25th • CCAS Monthly Observing Session, Myrick Conservancy Center, BRC. The observing session starts at sunset.

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

26th • Solar Observing Event, CVT at Exton Park, 10:30 am to 1:30 pm. EDT (Rain date: April 27th).

May 2025

2nd • West Chester University Planetarium Show: "Meteor Showers Bring May Flowers," in the Schmucker Science Building. Visit [WCU Public Planetarium Shows](#) for more information and reservations.

3rd • West Goshen Park Star Party. 1023 Fern Hill Road, West Chester, PA 19380. 8 pm to 10 pm EDT.

5th • Solar Observation, 12:00 pm. to 1:00 p.m. EDT. Middletown Free Library Homeschool.

13th • CCAS Monthly Meeting, in person (as well as via Zoom) at West Chester University's Merion Science Center, Room 112. Guest Speaker: Dr. Julien de Wit, Dept. of Earth, Atmospheric and Planetary Sciences (EAPS), MIT, "Characterizing exoplanets with high-precision transit methods to measure biosignatures and assess potential habitability."

14th • Solar Observation, 10:30 am. to 1:30 p.m. SRT Fricks Lock Trailhead, 500 Fricks Lock Rd, Pottstown, PA 19465 (Rain date May 15).

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

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

30th • CCAS Monthly Observing Session, Myrick Conservancy Center, BRC. The observing session starts at sunset.

March 2025 Meeting Minutes by Bea Mazziotta, CCAS Secretary

- The March 2025 meeting was held on March 11, 2025 at West Chester University and online via Zoom and YouTube.
- Club President, Dave Hockenberry, announced that the revised and approved new club bylaws would be available to club members next month.
- He also said that CCAS tee shirts were available for purchase. Short sleeve tees were priced at \$7.00 and long sleeves for \$8.00.
- Observing Chair, Don Miller, reviewed the upcoming event and observing calendar. The calendar and details were available at [ccas.us](#).
- Night Sky Network Pins were awarded to members who were not in attendance in February.
- It was noted that March marks the start of galaxy season, when many of the most impressive galaxies are well positioned for observation.
- The evening's guest speaker was Dr. Marc Gagné, WCU Professor in the Earth and Space Sciences Dept.
- His presentation was titled "Of Exoplanets and Cosmology: How JWST is proving exoplanet habitability and searching for the first stars and galaxies."
- Ideally suited for studying very high redshift stars and galaxies, the Webb telescope has given astronomers the ability to see very distant stars and galaxies forming just a few hundred million years after the Big Bang.

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

Our next meeting will be held on April 8, 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 speaker is Dr. Roger Kennedy, CCAS member, solar astronomer, and science educator. "Bringing Solar Science to the General Public."

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 beyond our 2024-2025 season. If you are interested in presenting, or know someone who would like to participate, please contact me at programs@ccas.us.

April 2025 CCAS Member Speaker Information

by Bruce Ruggeri, CCAS Program Chair

Our in-person and Zoom monthly CCAS meeting scheduled for Tuesday, April 8, 2025, will commence at 7:30 p.m. EDT. 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 speaker this month is Dr. Roger Kennedy, solar astronomer, science educator, and distinguished CCAS member. The presentation will commence at approximately 7:50 PM ET. Dr. Kennedy's presentation, is titled "Bringing Solar Science to the General Public." A synopsis and brief bio sketch for Dr. Ken-

nedy are provided in the paragraphs that follow.

Abstract: Humans have followed the path of the sun through the sky for millennia. Our scientific study of our nearest star started in the late 1500's with astronomers, like Galileo, recording the periodic appearance of strange "spots" moving across the sun's disc. As technology improved, as well as our understanding of nuclear fusion and fission processes, our knowledge of the sun and other stars has expanded exponentially.

Recent solar eclipses, the dialogue about climate change, and the success of the Parker Solar Probe (among others) have re-

kindled the general public's interest in learning more about our stellar neighbor.

BioSketch: Roger Kennedy has been a science educator at the secondary and college level for over 50 years. After an internship at the Very Large Array in New Mexico, he joined the NASA MER Spirit mission while providing science outreach programming for the Lodestar Astronomy Center in Albuquerque.

Subsequently, he affiliated with the international Charlie Bates Solar Astronomy Project while providing outreach education for the Solar Dynamic Observatory/GSFC.

(Continued on page 13)

STARMUS Launches the Stephen Hawking Medal Junior at The Kennedy Center

courtesy Astronomy Magazine



Jill Tarter, SETI pioneer and STARMUS Board Member, and Garik Israelian, STARMUS Co-founder and Director, presenting the medal to Gitanjali Rao. Credit: Elman Studio

STARMUS Festival proudly announced the launch of the **Stephen Hawking Medal Junior Category** during

the **STARMUS x Earth To Space** launch event on April 1st at The Kennedy Center. **Gitanjali Rao** was named

the first recipient of this prestigious award. This new category of this prestigious award created by the late Professor Stephen Hawking and STARMUS Festival, represents his last legacy to promote science communication among the younger generation.

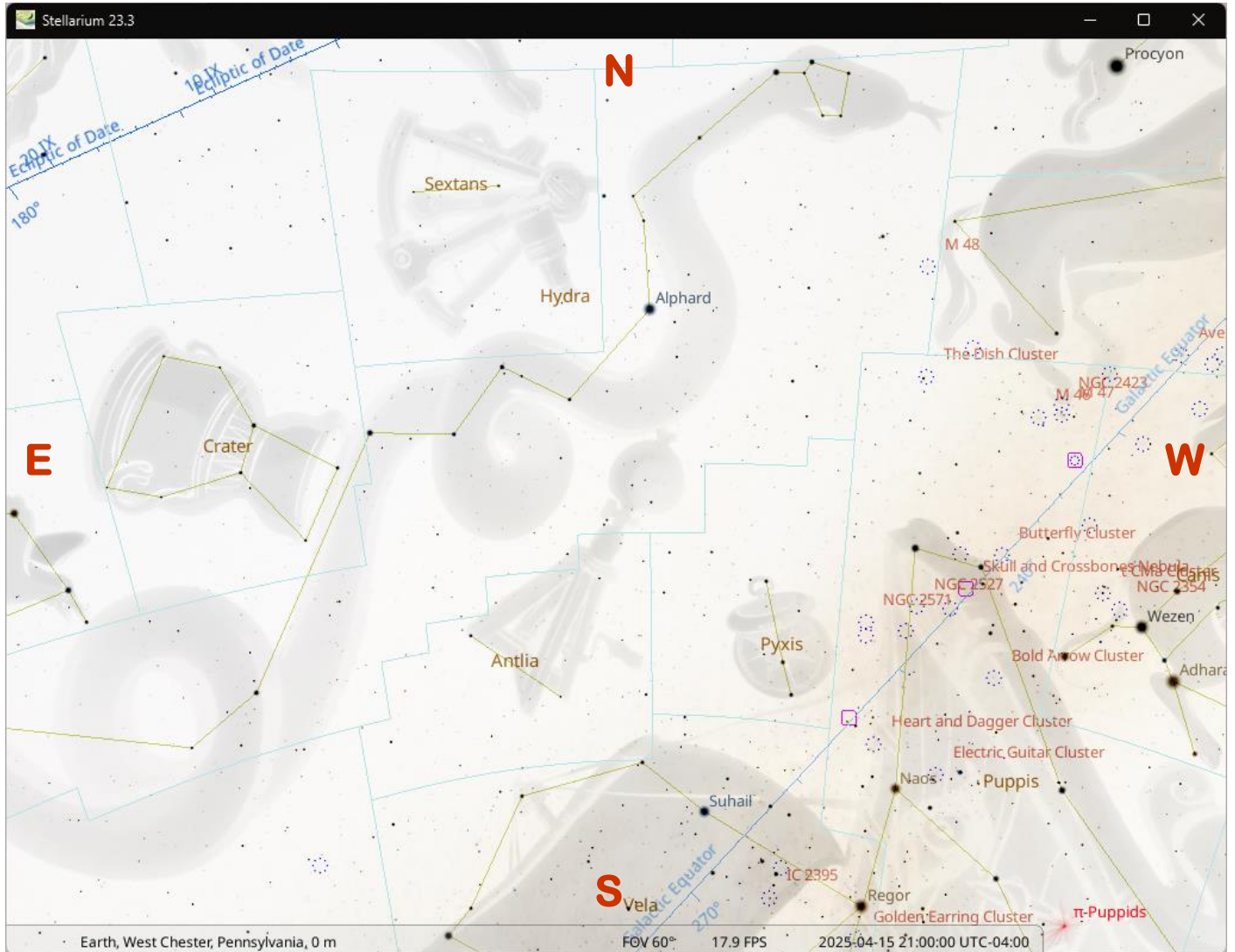
The Stephen Hawking Medal for Science Communication, established in 2015, honored individuals who excelled in bridging the gap between science and the public through various disciplines such as music, arts, and cinema. The Junior Category aimed to recognize and encourage young innovators who demonstrated exceptional talent and dedication to science communication. Like the Ste-

(Continued on page 7)

The Sky Over Chester County

April 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.

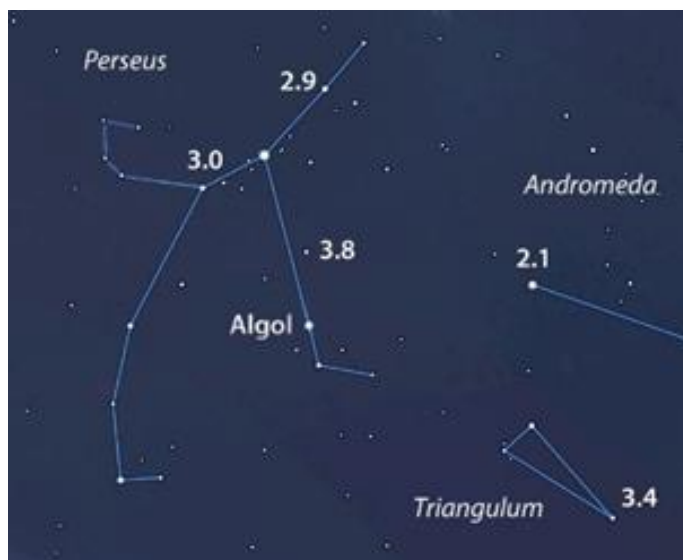


Date	Civil Twilight Begins	Sunrise	Sunset	Civil Twilight Ends	Length of Day
04/01/2025	6:18 a.m. EDT	6:45 a.m. EDT	7:26 p.m. EDT	7:54 p.m. EDT	12h 41m 02s
04/15/2025	5:56 a.m. EDT	6:24 a.m. EDT	7:41 p.m. EDT	8:09 p.m. EDT	13h 16m 57s
04/30/2025	5:34 a.m. EDT	6:03 a.m. EDT	7:56 p.m. EDT	8:25 p.m. EDT	13h 52m 56s

Moon Phases					
First Quarter	04/04/2025	10:14 p.m. EDT	Full Moon	04/12/2025	8:22 p.m. EDT
Last Quarter	04/20/2025	9:35 p.m. EDT	New Moon	04/27/2025	3:31 p.m. EDT

April 2025 Observing Highlights

by Don Miller, CCAS Observing Chair



Algol, the Demon Star, in the Constellation of Perseus

Select Night Sky Objects and Events:

Algol: at minimum on the 1st, 4th, 6th, 9th, 12th, 15th, 18th, 21st, 24th, 27th, 29th

M101: Well placed late in the month.

Messier Marathon: Early April is a good time for this attempt. I've never completed it myself but it is fun to try. There are good planning sites on the web to help you plan your attack.

Binocular Targets: While Boötes does not contain a single Messier object, it does have a number of double stars that are perfect for the binocular astronomer. Delta Boötes (challenging to separate due to a large brightness difference), Mu Boötes (nicely colored pair), and Nu Boötes (nicely colored pair). Give these a try. Another interesting binocular target is Kemble's Cascade in Camelopardalis, a fairly straight line of about 20 stars named after a Franciscan friar.

Key Event this month:

Lyrid Meteor Shower peaks on April 22nd but can be viewed from the 16th through the 25th.

Discussion:

The current weather forecast for our area in April is showing a continuing warming trend. It is April so rain showers are predicted on various days throughout the month. Still, some days will have highs approaching 70° F and nights that are not so cold. Get out there when you can.

Sun:

No eclipses are in store for this month. Did anyone catch the partial solar eclipse on the 29th of March? The sun continues to be very active with high sunspot numbers. For those of you with access to a H-alpha scope, there are lots of prominences and filaments to be observed.

Moon:

1st quarter on the 4th; full on the 12th; last quarter on the 20th and new on the 27th (a supermoon). The full moon this month is known as the [Pink Moon](#) but since the moon will be near its farthest point from the Earth it will be called the micro pink moon. The difference in angular size of the full moon from apogee to perigee is only ~13%. Since the brightness of the moon is proportional to its area, this results in the perigee full moon to be 27% brighter than the apogee version.

April 23rd and 24th will be good mornings for [Earthshine](#) (this is sometimes called the "da Vinci glow"). The waning crescent moon will be small enough to only provide a small amount of light, which helps us on earth see the light on the Moon's unlit face. The Earth's current tilt towards the sun exposes the northern hemisphere areas which still have lots of snow and ice, these areas have a high albedo. This makes the side of the moon which is not illuminated very visible on these days due to the Earth's reflected light.

Planets:

Mercury will have its greatest elongation on the 21st of April. Look to the east before sunrise.

Venus, after its inferior conjunction, is a morning sky object. It will be in conjunction with the moon on the 24th-25th and Saturn on the 28th-29th.

Mars is a night sky object but it will reach its aphe-
lion on the 17th and thus causing it to be at its faint-
est.

Jupiter is still a night time object as well but the window to observe it is getting smaller as its elon-
gation from the sun decreases. The planet sets just
after midnight early in the month but by 10:30 pm
near month's end.

(Continued on page 16)

Through the Eyepiece: Messier 64, the Black Eye Galaxy or Evil Eye Galaxy

by Don Knabb, CCAS Treasurer & ALCOR

Springtime is galaxy viewing time, and a good place to begin your quest is Messier 64, The Black Eye or Evil Eye Galaxy. M64 is in the constellation Coma Berenices which is well up in the eastern sky during April evenings.

The Black Eye Galaxy is a galaxy which was discovered by Edward Pigott in March 1779, and independently by Johann Elert Bode in April of the same year, as well as by Charles Messier in 1780. It has a spectacular dark band of absorbing dust in front of the galaxy's bright nucleus, giving rise to its nicknames of the "Black Eye" or "Evil Eye" galaxy. M64 is well known among amateur astronomers because of its appearance in small telescopes.

So how did it get the name "Black Eye Galaxy"? We have

Sir William Herschel to thank for that: "A very remarkable object, much elongated, about 12' long, 4' or 5' broad, contains one lucid spot like a star with a small black arch under it, so that it gives one the idea of what is called a black eye, arising from fighting."

John Herschel perpetuated it when he wrote in his own notes: "The dark semi-elliptic vacancy (indicated by an unshaded or bright portion in the figure,) which partially surrounds the condensed and bright nucleus of this nebula, is of course unnoticed by Messier. It was however seen by my Father, and shown by him to the late Sir Charles Blagden, who likened it to the appearance of a black eye, an odd, but not inapt comparison."

M64 is in the constellation Coma Berenices. This region of the

sky is near the north galactic pole, which means we are looking away from the Milky Way. At this area of the night sky there is minimal interference from gas and dust in our galaxy and many galaxies can be seen.

While it is possible to see Messier 64 in binoculars, it will require very dark skies for average binoculars and will only show as a very small, oval contrast change. However, in telescopes as small as 102mm, its distinctive markings can be seen on dark nights with good clarity.

M64 is relatively nearby, around 17 to 25 million light years away from Earth. Recent studies have revealed that the interstellar gas in the outer regions of the galaxy rotates in the opposite direction from that in the inner regions, leading astron-

(Continued on page 7)



Sky map using Stellarium, the free planetarium software: <http://stellarium.org/>

Through the Eyepiece (Cont'd)



Image credit: NASA and The Hubble Heritage Team (AURA/STScI)

(Continued from page 6)

omers to believe that at least one satellite galaxy had collided with it less than a billion years ago.

So as the weather warms, add The Black Eye Galaxy to your observing list, as I plan to do.

Information credits:

- Pasachoff, Jay M. 2000. *A Field Guide to the Stars and Planets*. New York, NY. Houghton Mifflin.

- Dickinson, Terence 2006. *Nightwatch: a practical guide to viewing the universe*. Buffalo, NY. Firefly Books
- http://en.wikipedia.org/wiki/Coma_Berenices
- <https://www.universetoday.com/37593/messier-64-black-eye-galaxy/>

Junior Award (Cont'd)

(Continued from page 3)

phen Hawking Medal, the Junior Medal will recognize such dedication through the categories of music, cinema, or literature.

In its inaugural year, the STARMUS Advisory Board selected a profile that perfectly embodies the type of inspiring young individual deserving of this prestigious recognition. Commencing in 2026, the full nominations process will be open to educational centers worldwide, including universities and secondary schools. These institutions will be invited to nominate their most outstanding students, aged 14 to 20, as candidates.

Winners will be awarded the Stephen Hawking Medal and will have the unique opportunity to enroll in a 4 to 6-week internship at a selected science or arts institution, sponsored by STARMUS and the Stephen Hawking Medal partners. During this internship, they will work on their own scientific communications project, which will be published by STARMUS and the Stephen Hawking Medal collaborators and endorsed by a past winner of the Medal. STARMUS will announce soon the world-class institutions and centers that will collaborate with the Junior Medal Category.

Gitanjali Rao, an American inventor, author, and STEM advocate, was selected as the inaugural recipient of the Stephen Hawking Medal Junior. Rao, known for her groundbreaking inventions and contributions to science at a young age, embodied the spirit of innovation and

(Continued on page 14)

April's Night Sky Notes: Catch the Waves!

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.

The Electromagnetic Spectrum

If you've ever heard the term "radio waves," used a microwave or a television remote, or had an X-ray, you have experienced a broad range of the electromagnetic spectrum! But what is the electromagnetic spectrum? According to Merriam-Webster, this spectrum is "the entire range of wavelengths or frequen-



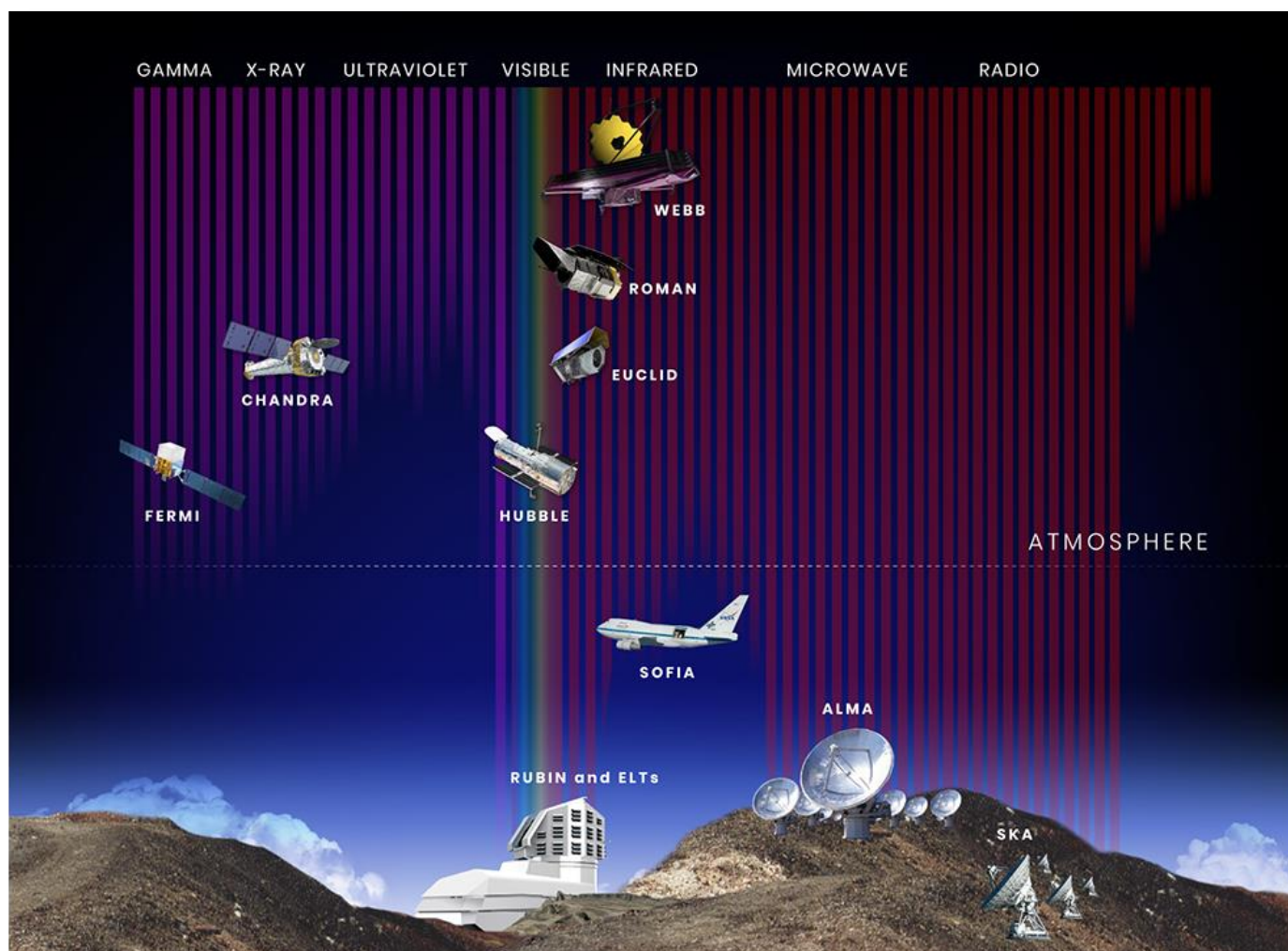
cies of electromagnetic radiation extending from gamma rays to the longest radio waves and in-

cluding visible light." But what does **that** mean? Scientists think of the entire electromagnetic spectrum as many types of light, only some that we can see with our eyes. We can detect others with our bodies, like infrared light, which we feel as heat, and ultraviolet light, which can give us sunburns. Astronomers have created many detectors that can "see" in the full spectrum of wavelengths.

Telescope Types

While multiple types of tele-

(Continued on page 9)



This illustration shows the wavelength sensitivity of a number of current and future space- and ground-based observatories, along with their position relative to the ground and to Earth's atmosphere. The wavelength bands are arranged from shortest (gamma rays) to longest (radio waves). The vertical color bars show the relative penetration of each band of light through Earth's atmosphere. Credit: NASA, STScI

Night Sky Notes (Cont'd)



NASA's Hubble Telescope captured the Pillars of Creation in 1995 and revisited them in 2014 with a sharper view. Webb's infrared image reveals more stars by penetrating dust. Hubble highlights thick dust layers, while Webb shows hydrogen atoms and emerging stars. You can find this and other parts of the Eagle Nebula in the Serpens constellation. Credit: NASA, ESA, CSA, STScI, Hubble Heritage Project (STScI, AURA)

(Continued from page 8)

scopes operate across the electromagnetic spectrum, here are some of the largest, based on the wavelength they primarily work in:

- **Radio:** probably the most famous radio telescope observatory would be the Very Large Array (VLA) in Socorro County, New Mexico. This set of 25-meter radio telescopes was featured in the 1997 movie *Contact*. Astronomers use these telescopes to observe protoplanetary disks and black holes. Another famous set of radio telescopes would be the Atacama Large Millimeter Array (ALMA) located in the Atacama Desert in Chile. ALMA was one of eight radio observatories that helped produce the first image of supermassive black holes at the center of M87 and Sag-

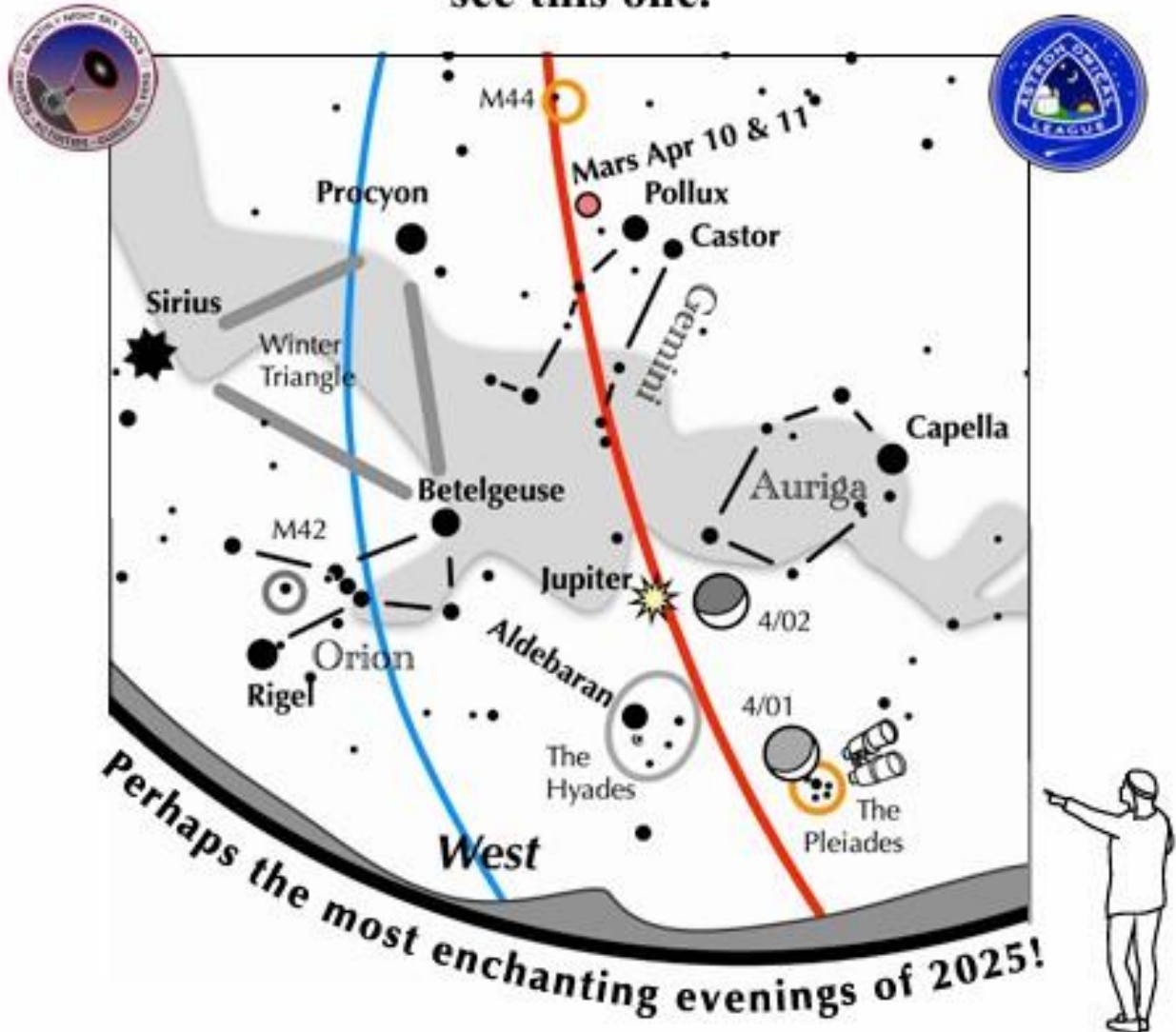
ittarius A* at the center of our galaxy. Radio telescopes have also been used to study the microwave portion of the electromagnetic spectrum.

- **Infrared:** The James Webb Space Telescope (JWST) operates in the infrared, allowing astronomers to see some of the earliest galaxies formed nearly 300 million years after the Big Bang. Infrared light allows astronomers to study galaxies and nebulae, which dense dust clouds would otherwise obscure. An excellent example is the [Pillars of Creation](#) located in the [Eagle Nebula](#). With the side-by-side image comparison above, you can see the differences between what JWST and the Hubble Space Telescope (HST) were able to capture with their respective instruments.

- **Visible:** While it does have some near-infrared and ultraviolet capabilities, the Hubble Space Telescope (HST) has primarily operated in the visible light spectrum for the last 35 years. With over 1.6 million observations made, HST has played an integral role in how we view the universe. [Review Hubble's Highlights here.](#)
- **X-ray:** Chandra X-ray Observatory was designed to detect emissions from the hottest parts of our universe, like exploding stars. X-rays help us better understand the composition of deep space objects, highlighting areas unseen by visible light and infrared telescopes. This image of the [Crab Nebula](#) combines data from five different telescopes: The VLA (radio) in red;

(Continued on page 11)

**If you can see only one celestial event this April,
see this one.**



**Enhance the scene –
use binoculars!**

www.astroleague.org

On April 1 & 2, look low in the west-northwest 60 minutes after sunset.

- On the first evening, the crescent moon, glowing full with earthshine, floats immediately above the delicate Pleiades star cluster. To its upper left, shine Aldebaran and the intriguing Hyades star cluster. And bright Jupiter lies above that.
- On the second evening, the slightly thicker, but more pronounced crescent moon moves above the Pleiades and next to Jupiter.
- Above it all, red Mars plows through Gemini, reaching alignment with Castor and Pollux on April 10 & 11.

Night Sky Notes (Cont'd)



The Crab Nebula, located in the Taurus constellation, is the result of a bright supernova explosion in the year 1054, 6,500 light-years from Earth. Credit: X-ray: NASA/CXC/SAO; Optical: NASA/STScI; Infrared: NASA/JPL/Caltech; Radio: NSF/NRAO/VLA; Ultraviolet: ESA/XMM-Newton

(Continued from page 9)

Spitzer Space Telescope (infrared) in yellow; Hubble Space Telescope (visible) in green; XMM-Newton (ultraviolet) in blue; and Chandra X-ray Observatory (X-ray) in purple. You can

view the breakdown of this multiwavelength image [here](#).

Try This at Home

Even though we can't see these other wavelengths with our eyes, learn how to create multiwavelength images with the [Cosmic](#)

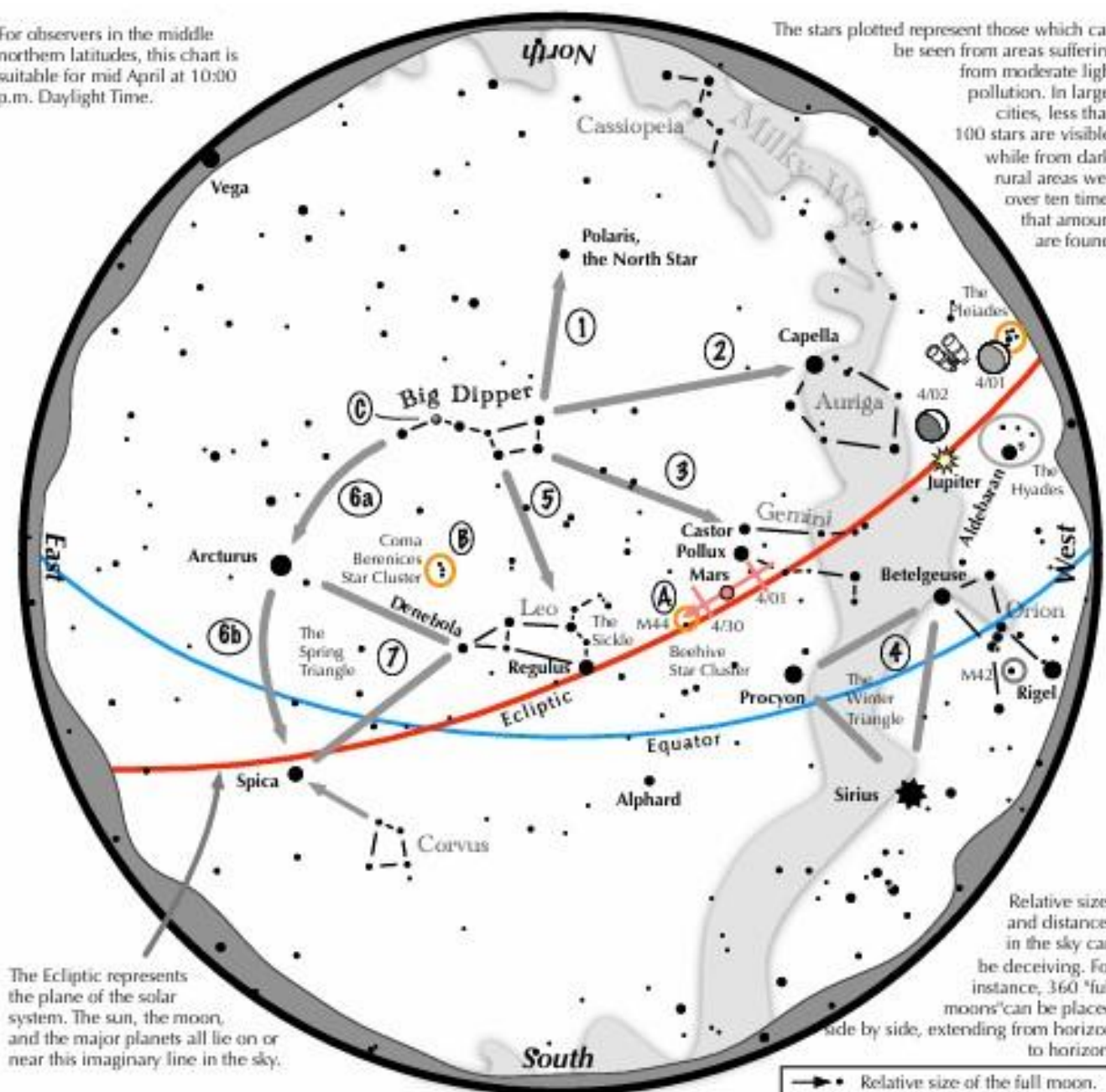
[Coloring Compositor](#) activity and explore how astronomers use representational color to show light that our eyes cannot see with our [Clues to the Cosmos](#) activity.

Navigating the Mid-April 2025 Night Sky

courtesy of the Astronomical League

For observers in the middle northern latitudes, this chart is suitable for mid April at 10:00 p.m. Daylight Time.

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 April night sky: Simply start with what you know or with what you can easily find.

- 1 Extend an imaginary line north from the two stars at the tip of the Big Dipper's bowl. It passes Polaris, the North Star.
- 2 Draw another imaginary line west across the top two stars of the Dipper's bowl. It strikes Capella low in the northwest.
- 3 Through the two diagonal stars of the Dipper's bowl, draw a line pointing to the twin stars of Castor and Pollux in Gemini.
- 4 Look in the west-southwest for the bright Winter Triangle stars of Sirius, Procyon, and Betelgeuse.
- 5 Directly below the Dipper's bowl reclines the constellation Leo with its primary star, Regulus.
- 6 Follow the arc of the Dipper's handle. It first intersects Arcturus, then continues to Spica.
- 7 Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.

Binocular Highlights

- A: M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux.
 B: Look nearly overhead for the loose star cluster of Coma Berenices.
 C: In the Big Dipper's handle shines Mizar next to a dimmer star, Alcor.

Duplication allowed and encouraged for all free distribution.



Speaker Bio (Cont'd)

(Continued from page 3)

Currently, he provides outreach education programs for NASA HEAT, Parker Probe and PUNCH missions. Over the past 15 years, his nearly 1500 programs have engaged close to 200,000 children and adults!

Roger holds various graduate academic degrees and certifications from Temple, West Chester and Bowling Green State Universities; Swinburne and New Mexico Institutes of Technologies. His specialties are spectroscopy and geochemistry.

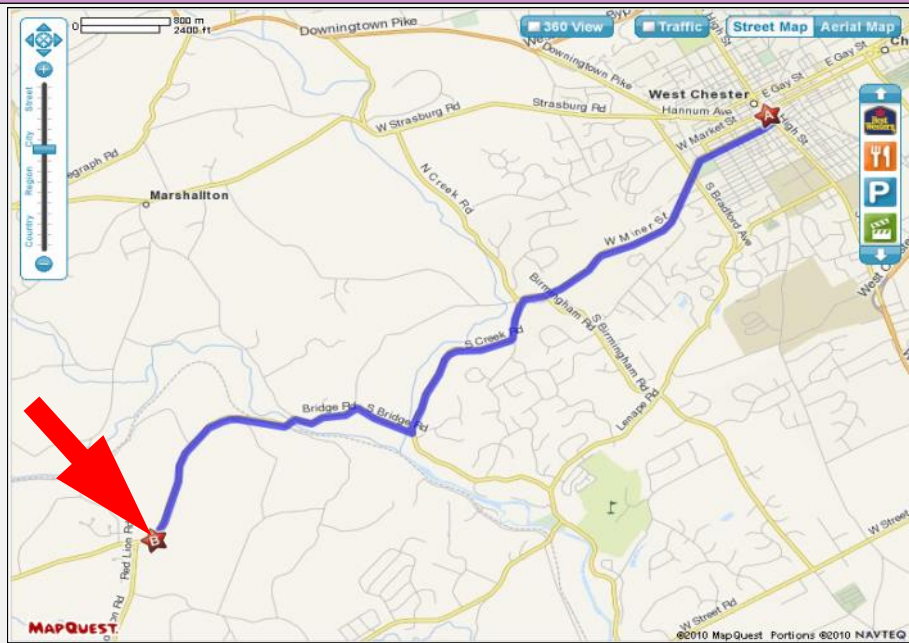
Please note that supplemental educational materials on the Parker Solar Probe Mission and PUNCH Mission to study the Sun will be available at the CCAS meeting and are also available upon request from me (bruce.ruggeri@gmail.com).

Classic La Para by Nicholas La Para



HERBERT FINDS HIMSELF IN THE GRIP OF
QUANTUM UNCERTAINTY.

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).

Junior Award (Cont'd)

(Continued from page 7)

curiosity that Professor Hawking championed. She was named TIME's first "Kid of the Year" in 2020 for her work in science and technology. Gitanjali is also the inventor of "Epione"—a device for early diagnosis of prescription opioid addiction using genetic engineering, and "Kindly"—an anti-cyberbullying service using AI and Natural Language processing, which is now a UNICEF "Digital Public Good" service available worldwide.

"Being the first recipient of the Stephen Hawking Medal Junior is an absolute honor, but it also comes with a massive responsibility," said Rao. "I recognize that I am a trailblazer for thousands of young people beyond me who also have the passion to make a difference in our communities, especially girls of color."

Garik Israelian, STARMUS co-founder and Director, celebrated this huge step for the Stephen Hawking Medal in approaching younger generations with the Junior Category. "Stephen always shared that he became interested in science being inspired by his professor Dikran Tahta, who opened his eyes to mathematics and changed his life. Since the esteemed STARMUS Advisory Board and Professor Hawking created this Medal in 2015, we all shared the same dream: to inspire the younger generations, serving as a motivational bridge with science through recognizing exceptional contributions in science communications. We've awarded such iconic figures of our

time such as Jane Goodall, Hans Zimmer, Christopher Nolan, Buzz Aldrin, David Attenborough, Brian May, The Big Bang Theory, Brian Eno among many other internationally renowned figures of science, space, music, and the film industry. It was a natural step for the medal to create a dedicated category for emerging talents who will actually be responsible for the future."

"The STARMUS Advisory Board chose Gitanjali Rao as the first recipient because of her exceptional talent, dedication to science communication, and her inspiring role as a young innovator" added Professor Israelian. "The Medal reflects not only Stephen Hawking's amazing dedication to science communication but also the STARMUS spirit. As our dearest Jane Goodall — founder of the Jane Goodall Institute and STARMUS Board member — said, 'STARMUS brings together people who can link head with heart.'"

Brian May, Queen lead guitarist and STARMUS cofounder, celebrated the launch of the Stephen Hawking Medal Junior with these words: "We believe this is going to make a difference in the future by encouraging young minds, young artists, young scientists, and young communicators. We hope that the next generation will be inspired to bring art and science even closer together and make this world a better place."

This announcement was made at the STARMUS x Earth To Space event, a two-day program held as part of the Earth To

Space Festival at the prestigious Kennedy Center. The event, being held on April 1-2, 2025, featured an impressive lineup of Nobel Prize-winning scientists, astronauts, and explorers, including former NASA astronauts Nicole Stott and Frank Lee Culbertson Jr., Nobel Laureate Kip Thorne and artist Lia Halloran, world-renowned best-selling author Mario Livio, President of the US National Academy of Sciences Marcia McNutt, renowned astrophysicist Eva Villaver, quantum mind reader David Zambuka and SETI pioneer Jill Tarter.

Attendees also enjoyed the spectacular 'Explosive Universe' concert by renowned musicians from the STARMUS All Stars, such as Derek Sherinian, Ron 'Bumblefoot' Thal, Tony Franklin, and Vinny Appice. This concert was a highlight of the event, showcasing the fusion of science and music that STARMUS is known for. The celebration of the beauty and mystery of the universe promised to be an unforgettable experience for all attendees.

STARMUS has announced its next edition, 'STARMUS La Palma, The Island of Stars,' featuring a short preview of the STARMUS La Palma documentary. This event will be held on the island of La Palma from April 25 to 28, 2025, with a focus on protecting the night skies in collaboration with the Starlight Foundation. The program will include STARMUS Talks with over 40 renowned speakers, such as Jane Goodall, Nobel Laureate

(Continued on page 15)

CCAS Original Astrophotography

by Deepak Malkan



Here are a few of my pictures of the March 14th lunar eclipse, taken from a ship cruising the Atlantic Ocean somewhere between Buenos Aires and Rio de Janeiro. Taking the pictures was quite challenging on a moving platform (the ship). I had a Canon EOS 6D Mark II and a Tamron 150-600mm lens. At 600mm it gave a max 6.3 f-stop exposure. The first two photos capture a few phases of eclipse before totality. The last was taken during totality between 3:30-4:30 am local time.

Junior Award (Cont'd)

(Continued from page 14)

ates, astronauts, and other scientific luminaries. The 'Sonic Universe' concert will showcase the STARMUS All Stars with special guest Glenn Hughes, Oscar and 15 Latin Grammy winner Jorge Drexler, and the Spanish pop-rock band Efecto Pasillo, among others. Additionally, there will be two STARMUS Camps and the educational project 'Interscholar,' aimed at engaging thousands of young students with science, music, and space."

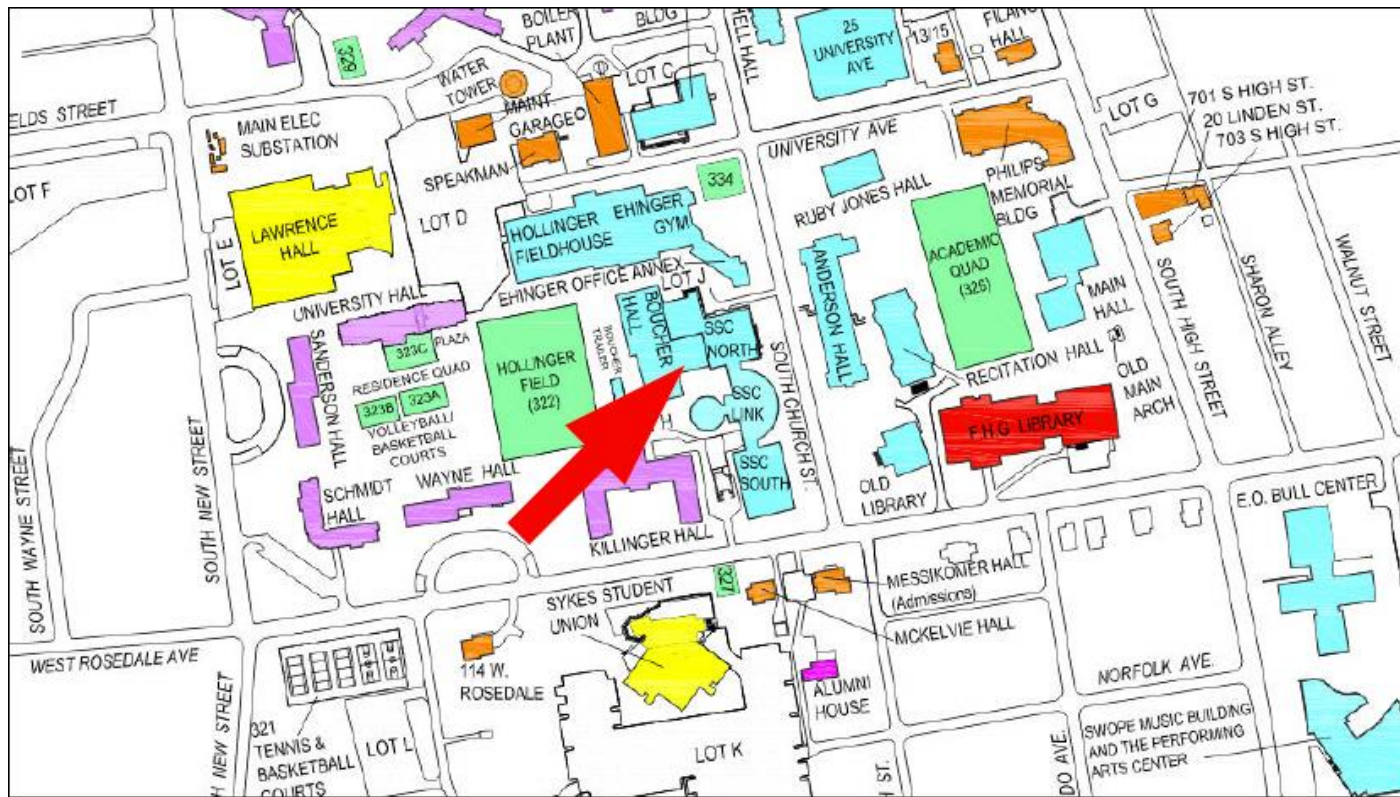
The event also included the US premiere of the STARMUS VI film, which showcases the most exciting moments of the 2022 STARMUS Festival in Armenia. This film perfectly captures the essence of STARMUS and the unique STARMUS experience, merging the gathering of the most brilliant minds and talented artists of our time with the local culture.

[Editor's Note: Read the [original article online](#)]

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).



Observing (Cont'd)

(Continued from page 5)

Saturn will be an early morning object as it emerges from the sun's glare. If you can view it, the planet's rings will appear like a thin line across its face due to the orientation of the rings versus our viewpoint.

Uranus is moving into conjunction with the sun and will be lost to view by the month's end.

Neptune will be an early morning object for telescope observers.

CCAS Membership Information and Society Financials

Treasurer's Report by Don Knabb

March 2025 Financial Summary

Beginning Balance	\$2198
Deposits	\$298
Disbursements	-\$646
Ending Balance	\$1850

New Member Welcome!

Welcome to new CCAS members WCU student Sophia Coleman from Brookhaven, PA, Rajendra Narikimelli from Devon, PA, Ashritha Adem from Malvern, PA, and Robert Breckenridge from Christiana, DE.

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

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 & 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.

