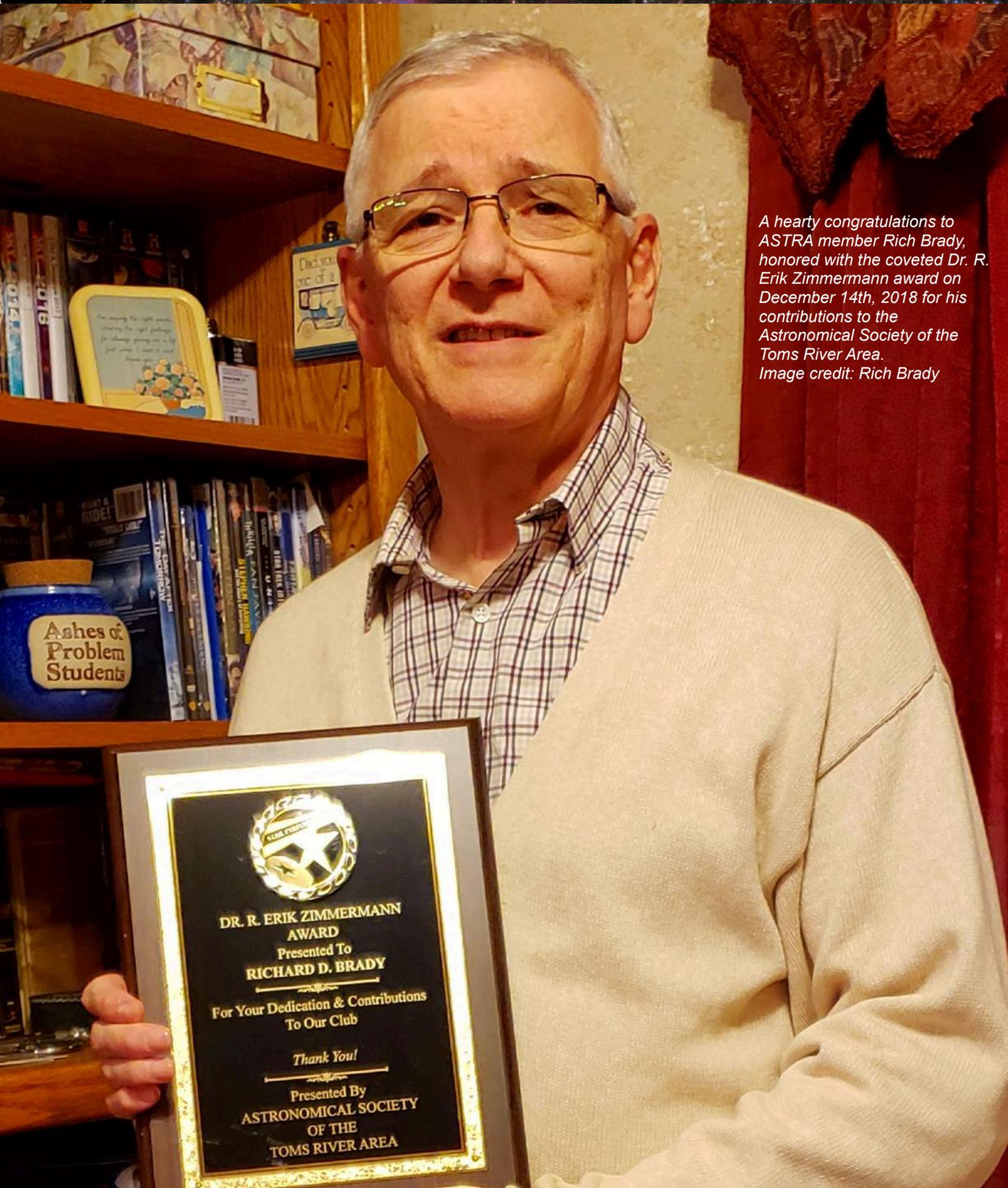


ASTRAL PROJECTIONS

FEBRUARY 2019
VOLUME 30 ISSUE 2



CONGRATULATIONS!



*A hearty congratulations to
ASTRA member Rich Brady,
honored with the coveted Dr. R.
Erik Zimmermann award on
December 14th, 2018 for his
contributions to the
Astronomical Society of the
Toms River Area.
Image credit: Rich Brady*

CONTENTS

What's Inside?

Page 3:	Event Calendar
Page 4-5:	Recap
Page 6:	Lunar Eclipse Photos
Page 7:	The Orion Nebula
Page 8-9:	News
Page 10:	Night Sky Notes
Page 11:	Observing Calendar
Page 11:	Club Benefits

Cover Photo

*A striking collage of photos from January 20th's lunar eclipse.
Image credit: Robert Chamberlain*

EVENT CALENDAR

February 8th - Monthly Meeting

Location: Ocean County College, Novins Planetarium, Building #13

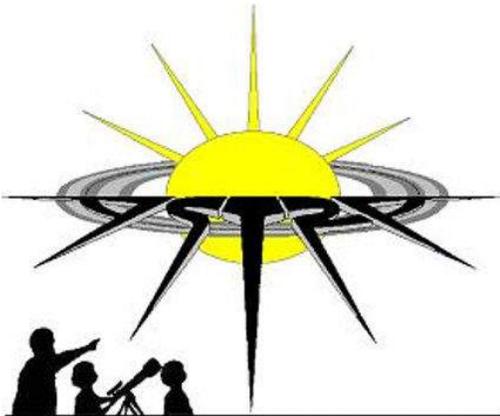
Following club business, ASTRA Treasurer Ro Spedaliere will give a presentation entitled Messier Objects, Part One.

Time: 7:00 p.m. - 10:00 p.m.

February 16th - Cloverdale Park Star Party

Location: Cloverdale Farm County Park, Barnegat, NJ

Time: 6:00 p.m. - 8:00 p.m.



The Astronomical Society of the Toms River Area
www.astra-nj.org

A.S.T.R.A.

Robert J. Novins Planetarium
Ocean County College
P.O. Box 2001
Toms River, NJ 08754-2001

For Your Information...

NASA's Space Place is now called Night Sky Notes.

Club Dues Are Due!

As of 2019, member dues have been reduced to \$15 for current members. New members, and current members who aren't paid up by March 31st, will pay \$20 in dues.

EVENT CANCELLATIONS

Members will receive an email notification of event cancellation, or call the ASTRA Hotline: 609-971-3331

President:

John Endreson

President@astra-nj.org

Treasurer:

Ro Spedaliere

Treasurer@astra-nj.org

Newsletter Editor:

Chris Savia

newsletter@astra-nj.org

Volunteer Proofreader:

Matthew McCue

Vice President-Secretary:

Chris Savia

VP@astra-nj.org

Webmaster:

Donald Durett

Webmaster@astra-nj.org

Newsletter Distribution:

Geoff Redington

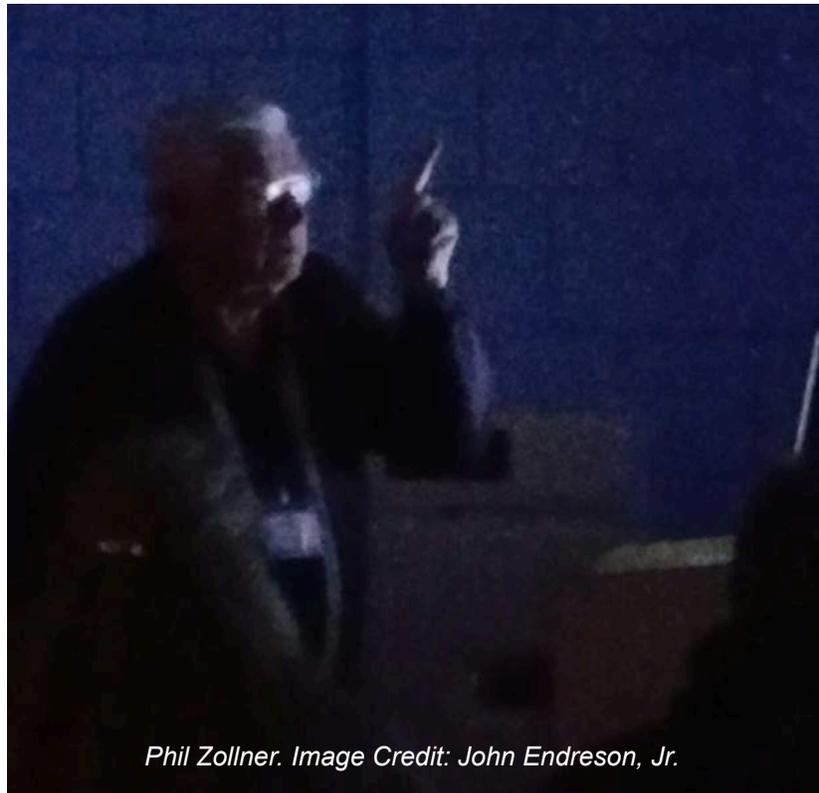
RECAP

In case you've been living under a rock, ASTRA has returned to our familiar classroom meeting place in the Robert J. Novins Planetarium as Building 10 undergoes renovations.

ASTRA President John Endreson, Jr. started the meeting with a rundown of upcoming events and what's ahead for the Astronomical Society of the Toms River Area. Before our annual New Telescope Workshop, Phil Zollner primed old and new members with a presentation on how to use one's new telescope, and what to expect upon first light.

It was a crowded night, but only a few brought along their telescopes but our members were ready to help!

Afterwards, we repaired to the Crystal Diner for our informal, post-meeting meeting. Everyone's welcome to break bread with us so don't be shy!



Phil Zollner. Image Credit: John Endreson, Jr.



A Note Regarding Image Submissions

ASTRA is fortunate to have so many talented astrophotographers among our ranks. Astral Projections is even more fortunate they are so eager to share their masterpieces in our newsletter.

When submitting images, please send them as large as possible with minimal modifications. I can accept files up to 20 megabytes in size, and it'd be super helpful if the image depth is at least 144 pixels by 144 pixels.

Why? It's nigh-impossible to enlarge an image and make it presentable for publication pixelation ruins details and detracts from a photograph.

Thank you!

SUBMISSIONS WELCOME

Members are invited to submit articles, photos, news, or stories for inclusion with Astral Projections. Please contact Chris Savia at newsletter@astra-nj.org.

MARCH'S NEWSLETTER DEADLINE: FEBRUARY 25, 2019

RECAP



Kevin Eak lends a hand.



Phil Zollner shares some sage advice about telescopes.



Sarah Waters sharing a few tips.



Vinny Illuzzi shows a guest how to use a telescope.

LUNAR ECLIPSE



Phil Zollner captures the magic of a full lunar eclipse.



Jim Webster demonstrates the difference a planet's shadow can make on its largest natural satellite.

Before image: ISO 100 / 540mm / f: 6.3 / 1/125 sec - Canon Rebel T6s / Tameron 18-270mm lens with Promaster 2x teleconverter on Skyguilder Pro Mount.

After image: ISO 400 / 540mm / f: 6.3 / 0.4 sec - Canon Rebel T6s / Tameron 18-270mm lens with Promaster 2x teleconverter on Skyguilder Pro Mount.

ASTROPHOTOGRAPHY

The Orion Nebula. Shutter speed: 2 min 30sec (150 sec), ISO: 1600, 14 exposures stacked Telescope: Explore Scientific ED 102 FCD 100. Mount: Celestron CGEMII. Image credit: Sam Granovsky

The War of the Worlds

by Ryan Knipple

ASTRA member Ryan Knipple has a cracking good blog called Red Planet Science News at redplanetsciencenews.weebly.com. Once again he's graciously given permission to share one of his latest posts here at Astral Projections.

My grandma gave me a copy of War of the Worlds when I was a kid. Since then, I have read it so many times and I just read the classic story again. I once again saw the hydrogen bursts on Mars, the green shooting stars, the cylinders, the creatures (basically, overgrown octopi), the ray guns, the deadly black smoke, and the tripods. My wife evacuated town and I swam in the Thames to escape the monsters. I met a curate who believed the Martians were God's wrath. I watched in horror as the Martians captured the curate and drank of his blood. I rejoiced when the world was free of the Martians due to the tiniest of creatures: germs that man has been immune to for centuries. The Martians died just before they could complete a flying machine. Finally, I contemplated man's place and future in the cosmos as the Martians landed on Venus. I am a huge fan of H.G. Wells!



Jean Muchanic within her meteorite's crater. Image used without permission per Fair Use 17 U.S. Code § 107. Image credit: @JeanMuchanic

A Jersey Shore Meteor?

by Chris Savia

On April 24th, 1922, Toms River and surrounding towns were rocked by an exploding bolide over the Jersey Shore according to multiple newspaper accounts. Despite accounts of a strong odor following the event, no evidence of the object was ever found.

Around January 11th, 2019, Jean Muchanic and her sister Nora found a five foot wide crater in the sand of Silver Beach. What's more interesting is a fireball was observed by nearly 600 people over Pennsylvania and New Jersey on January 9th. Were they related?

Nope.

Turns out the "meteorite" was a coal left over from someone's winter beachside bonfire, according to Derrick Pitts at the Franklin Institute. Mrs. Muchanic told NJ.com, "It was a fun adventure and we got a kick out of it. Now we have the most famous piece of coal in New Jersey."

Maybe Jean will allow ASTRA to display her "meteorite" on Astronomy Day?



Novins Planetarium Honored By The International Planetarium Society

by Chris Savia

On January 5th the International Planetarium Society (IPS) honored the Robert J. Novins Planetarium as its [planetarium of the month](#).

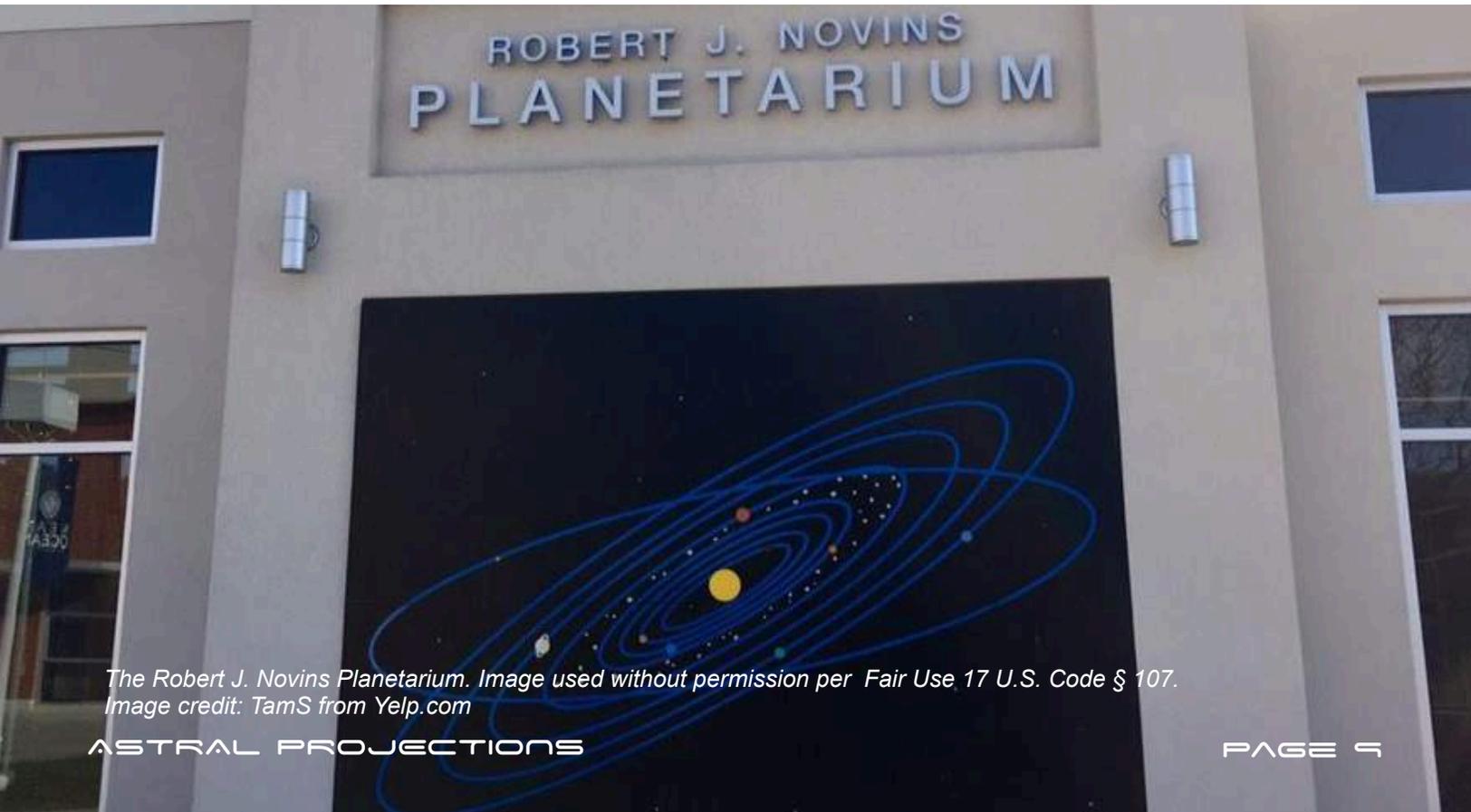
According to its website, "The International Planetarium Society is the global association of planetarium professionals. Its nearly 500 members come from 50 countries around the world. They represent schools, colleges and universities, museums, and public facilities of all sizes, including both fixed and portable planetariums. The primary goal of the Society is to encourage the sharing of ideas among its members through conferences, publications, and networking. By sharing their insights and creative work, IPS members become better planetarians."

From the International Planetarium Society's Facebook page: "The planetarium of the month for January is the Robert J. Novins Planetarium

at Ocean County College in Toms River, New Jersey. It has a 40-foot dome with 101 seats. First opened in October 1974 and threatened by closure in 2007, the public rallied to save the facility and it was renovated and reopened in 2010. The original Viewlex Minolta Series Viewlex II B star projector was donated to the Planetarium Projector Museum in California. (It has since been used in the film "La La Land" and several other productions.) It now has a Zeiss Skymaster ZKP 4, E&S Digistar 4, and AVI Skylase."

Membership with the IPS is open to anyone with an interest in planetariums for \$65 a year or \$100 for 2 years. More than 20 regional and national planetarium associations from across the globe are affiliated with the IPS.

Thank you for honoring our humble planetarium, International Planetarium Society!



The Robert J. Novins Planetarium. Image used without permission per Fair Use 17 U.S. Code § 107. Image credit: TamS from Yelp.com

Hexagon by Night, Quartet in the Morning

by David Prosper

The stars that make up the Winter Hexagon asterism are some of the brightest in the night sky and February evenings are a great time to enjoy their sparkly splendor. The Winter Hexagon is so large in size that the six stars that make up its points are also the brightest members of six different constellations, making the Hexagon a great starting point for learning the winter sky. Find the Hexagon by looking southeast after sunset and finding the bright red star that forms the “left shoulder” of the constellation Orion: Betelgeuse. You can think of Betelgeuse as the center of a large irregular clock, with the Winter Hexagon stars as the clock’s hour numbers. Move diagonally across Orion to spot its “right foot,” the bright star Rigel. Now move clockwise from Rigel to the brightest star in the night sky: Sirius in Canis Major. Continue ticking along clockwise to Procyon in Canis Minor and then towards Pollux, the brighter of the Gemini twins. Keep moving around the circuit to find Capella in Auriga, and finish at orange Aldebaran, the “eye” of the V-shaped face of Taurus the Bull.

Two naked-eye planets are visible in the evening sky this month. As red Mars moves across Pisces, NASA’s InSight Mission is readying its suite of geological instruments designed to study the Martian interior. InSight and the rest of humanity’s robotic Martian emissaries will soon be joined by the Mars 2020 rover. The SUV-sized robot is slated to launch next year on a mission to study the possibility of past life on the red planet. A conjunction between Mars and Uranus on February 13 will be a treat for telescopic observers. Mars will pass a little over a degree away from Uranus and larger magnifications will allow comparisons between the small red disc of dusty Mars with the smaller and much more distant blue-green disc of ice giant Uranus.

Speedy Mercury has a good showing this month and makes its highest appearance in the evening

on February 27; spot it above the western horizon at sunset. An unobstructed western view and binoculars will greatly help in catching Mercury against the glow of evening twilight.

The morning planets put on quite a show in February. Look for the bright planets Venus, Jupiter, and Saturn above the eastern horizon all month, at times forming a neat lineup. A crescent Moon makes a stunning addition on the mornings of February 1-2, and again on the 28th. Watch over the course of the month as Venus travels from its position above Jupiter to below dimmer Saturn. Venus and Saturn will be in close conjunction on the 18th; see if you can fit both planets into the same telescopic field of view. A telescope reveals the brilliant thin crescent phase of Venus waxing into a wide gibbous phase as the planet passes around the other side of our Sun. The Night Sky Network has a simple activity that helps explain the nature of both Venus and Mercury’s phases at bit.ly/venusphases



CLUB BENEFITS

OBSERVING CALENDAR

February 6 - New moon at 4:03 p.m. EST.

February 10 - The Moon and Mars will pass within 6°04' of each other in the constellation of Pisces. Look 55° above the southwest horizon at 5:42 p.m. EST.

February 13 - Uranus and Mars will pass within 1°03' of each other in the constellation of Pisces. Look 51° above the southwest horizon at 6:07 p.m. until setting at 10:49 p.m. EST.

February 18 - Venus and Saturn will pass within 1°05' of each other in the constellation of Sagittarius. Look east two hours and fifteen minutes before dawn.

February 20 - Full moon at 9:42 p.m. EST.

February 27 - Mercury at greatest eastern elongation. Mercury will be 18.1° from the sun and visible in the west around sunset.

February 27 - The Moon and Jupiter will pass within 2°19' of each other in the constellation of Ophiuchus. The pair will be 26° above the southern horizon before fading as dawn breaks at 6:15 a.m. EST.

WHY JOIN?

For \$15.00 a year, you can enjoy many benefits with the Astronomical Society of the Toms River Area. Members can take advantage of A.S.T.R.A.'s lending library, borrow telescopes for observations, have access to private star parties, in addition to camaraderie with local amateur astronomers. Contact one of our club officers today to join the fun.

ISLAND BEACH STATE PARK PERMITS

One of the perks of being an ASTRA member is the special permit for after-hours stargazing at Island Beach State Park. Please contact the executive board for more details about how you can acquire your 2019 permit.

ASTRA'S TELESCOPES

ASTRA has several different types of telescopes, telescope mounts, along with binoculars, eyepieces, and eyepiece filters available for members to borrow. If any member is interested, please check out ASTRA's website and contact John Endreson at telescope-loan@astra-nj.org, or 609-971-3331.

ASTRA'S LIBRARY

Many books are available for loan to ASTRA members from our library. A list of these books is available at the ASTRA website. To request any of these books, please email John Endreson at Library-Loan@astra-nj.org, or call 609-971-3331 with your request for materials.

VOLUNTEER PRESENTERS

Members are invited to give presentations related to astronomy or space science at our monthly meetings. Please contact a club officer to make arrangements.