

ASTRAL PROJECTIONS

JUNE 2020
VOLUME 31 ISSUE 6



e Spedalieri



John



Samuel Granovsky



y



Murphy



Robert Chamberlain



Robert Chamberlain



Vinny



Preston Stahly



St. Micheals

CONTENTS

What's Inside?

Page 2:	Event Calendar
Page 3:	Club News
Page 4-5:	Ad Astra
Page 5:	Mailbag
Page 6-7:	News Briefs
Page 8-9:	Night Sky Notes
Page 10:	Observing Calendar
Page 10:	Club Benefits

Cover Photo

A group photo / screenshot of ASTRA's first virtual meeting from Friday May 8th, 2020. Image credit: Chris Savia



EVENT CALENDAR

PLEASE NOTE AT THIS TIME FUTURE IN-PERSON EVENTS WILL BE CANCELLED FOR THE DURATION OF THE CORONAVIRUS / COVID-19 THREAT.

PLEASE CHECK YOUR EMAILS, THE CLUB FORUM, OR CALL THE ASTRA HOTLINE FOR UPDATES.

THE DEADLINE FOR RE-UPPING MEMBERSHIP HAS BEEN POSTPONED UNTIL FURTHER NOTICE.

PLEASE NOTE ISLAND BEACH STATE PARK HOURS ARE 5AM TO 8PM WHICH PREVENTS AFTER HOURS OBSERVING. GROUPS ARE NOT ALLOWED IN THE PARK AS WELL.

A.S.T.R.A.

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

EVENT CANCELLATIONS

Members will receive an email notification of an 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

Vice President-Secretary:
Jim Webster
VP@astra-nj.org

Webmaster:
Donald Durett
Webmaster@astra-nj.org

Newsletter Distribution:
Geoff Redington

Virtual Monthly Meeting Brief

ASTRA held it's first club virtual meeting via Zoom on Friday the 8th of May. We started by catching up on how everyone was doing with the current quarantine restrictions. We then briefly reviewed the prospects of viewing the Comet SWAN and a vintage astronomy group on Facebook. The main presentation of the night was titled Lightweight Wide-field Astrophotography. Jim Webster's presentation ran for 23 minutes, followed by a lively discussion among members.

The primary premise of the presentation was to be able to perform both Milky Way and deep-sky astrophotography using camera lenses which fit into a backpack and be comfortable enough to carry on a long hike to ideal viewing locations. Using small telescopes with this setup is also possible, noted Jim. As for hiking, Jim and Gloria went for a hike for a proof-of-concept at New Jersey's Island Beach State Park and the cranberry bogs around Whitesbog Village during the latter part of 2019. Lens used were 14mm, 24-105mm, and 135mm.

IMPORTANT NOTICE

As of May 30th the teleconferencing platform Zoom will be upgrading to version 5.0. They're implementing Galois/Counter Mode (GCM) encryption to ensure hackers and Russians aren't eavesdropping on astronomy clubs and folks catching up with their grandparents. Nerdy types can look up the method on Wikipedia.

The important bit is *if Zoom is not upgraded, you will not be able to use it* and virtually interact with family, friends, and colleagues. We want to see you on Friday the 12th of June! Please visit zoom.us for further details on this simple process.

Speaking of which, ASTRA is hosting another open Show-And-Tell where members may volunteer to give a brief presentation on an item of interest like a telescope, mount, application, a book, among many other possibilities related to astronomy.

If you are interested, please contact Jim Webster at jimwebster1015@gmail.com so he can get you in the queue!

Orion Belt region widefield photo - Canon D80 / Samyang 135mm lens and stack of ten photos. Image credit: Jim Webster

The Pleiades - Canon D80 / Samyang 135mm lens and stack of eight photos. Image credit: Jim Webster

Marie Micovic

August 4, 1934 - April 1, 2020

ASTRA is sad to learn of the passing of Marie Micovic, wife of long-time ASTRA member Sam Micovic, in April. She made her last appearance at one of our meetings on September 13, 2019. The following is her obituary, verbatim, from MyCentralJersey.com.

On April Fool's Day, Marie (Nanny) Micovic "kicked the bucket" (her words) in the very wee hours of the morning at home surrounded by her family who ADORED every single nuance of who she was.

Marie was a Domestic Goddess but also kicked ass in her "career" as a hostess at "Perkins on the Circle" in the 80s and 90s and had more friends than the rest of the family put together. Seriously.

Her favorite "role" however was running circles around whomever happened to be in her home at the time. In typical Italian fashion she was always found shoving food down ones throat and would not take "No" for an answer. When Nanny put food in front of you, you ate it. If you did not leave her kitchen with "agita" her job was not done.

She loved to cook, bake, clean, laugh, love, travel and cook some more, just so she had more to clean. It was a legit hobby for her. She LOVED her family fiercely as well as her plethora of friends. She loved big. Nanny NEVER missed a party and there was always a wine glass in her hand. She also loved Atlantic City and claimed she liked the slots but really went for the shows. She left us at 85 with the bicep of a body builder and I realize now I never heard about a single show she saw.

Everybody who met her loved her, and she loved them right back. Nanny was a bit boy crazy and a professional flirt. It was an art. She was just so damn smooth about it. She could really work a room, and often did.

Nanny is survived by some foreign man she married 61 years ago after knowing him for only two weeks. By her side when she got hitched to said Yugoslavian was her lifetime friend LuLu.



Their friendship was one for the record books. Sam the Slavic loved her with every fiber of his being, and they were practically attached at the hip. They would STILL get caught french kissing (her words again) when one walked into a room unannounced. Sam will miss her terribly. If you like to play chess, enjoy astronomy, or like to argue over politics please hit him up. He will and does talk to EVERYBODY.

She is also survived by her two stunningly beautiful and amazing daughters who may possibly be Mensa members. Maria Lutz and her husband Frank of Monroe Twp, and Cathy Toomanylastnamestolist and her fiancé Jeff Dostal of Lacey or Wall. You choose.

The light of her life were her two beautiful granddaughters Shaina Marie Hutton, and Erica Hutton. They were surely best buds and could often be found making silly snap chat filter videos. Their other favorite pastime was "Nanny Tuesdays." Dinner and entertainment provided by The Micovics. There was always a lot of food and wine, lots of stories and the occasional

(continued on next page)

(Marie Micovic continued)

bread or plate toss (true story.) Also survived by her adopted and adored grandson Brandon Dalbora of New York City Glitz or Beachwood. Again, you choose.

Nanny adored her nephews Mike and John, the magician and the doctor and their lovely spouses Debbie (the one who doesn't cook) and Kathy. She also is survived by a huge extended family, both biological and by proxy. She had SOOOO many friends. In fact when we posted about her passing on Facebook she had 650 comments in two hours. If that is not "living your dash" then I don't know what is.

Nanny was the sunshine in the rain, her infectious smile was second to none. She is our most adored treasure and we will miss her every day for the rest of our lives. Thanks for the memories Mommy. "So Long" for now.

There will be a private viewing for immediate family on Saturday 4/4 and a celebration of life "rock star style" TBA.

In lieu of flowers, please make a donation to a charity of your choice, or carry out a random act of kindness in her memory.

She would really love that.

Unfortunately, I haven't done any astrophotography in the past few months due to school, as well as island beach being closed. However, I have recently been researching the challenges of imaging with 3nm narrowband filters and fast optics because the wavelengths a filter blocks depends on the angle the light goes through the filter, and fast optics produce wider light cones meaning the angle relative to the perpendicular is greater. If you want I can send you a few paragraphs and pictures of what I have found.

- Sam Granovsky

With luck, I will be working with my Lunt 60mm solar telescope and the new ASlair Pro WiFi Camera Controller and still fit in some piano practice as well. ;)

- Jim Webster

ASTRAL PROJECTIONS

I don't have any new photos for you, but I have been paying attention to Venus and its upcoming inferior conjunction.

Venus is not much to look at during most of its orbit around the Sun, But viewing it during the brief time before and after inferior conjunction shows a planet larger than any other as seen from the Earth (almost a minute of arc). A minimum recommended magnification is 10x. The thin crescent is impressive coming toward the Sun and going away from it; and this inferior conjunction is even more interesting in that it is a transit "near miss". It will pass just a quarter of a degree north of the Sun. on June 3. I will try to get some photos after the conjunction since the only flat horizon I have is in the northeast, right where the Sun is rising in June. Here's a photo I took just a few days past inferior conjunction in August, 2015. Since Venus is so bright, short exposures will do, making the bright dawn sky darker.

A fellow eclipse chaser from Ottawa did a little basic trigonometry on the conjunction and calculated that, assuming a Venus distance of 27 million miles, you would have to climb 117,000 miles above the North Pole to see Venus transiting the Sun at this conjunction-- a much greater distance than I would have thought.

- Phil Zollner

"If the stars should appear but one night every thousand years, how man would marvel and stare"

- Ralph Waldo Emerson

"Wolfe Disk" Should Never Have Existed

Many early galaxies in the universe are a literal hot mess thanks to violent and hot mergers. A new paper published in Nature on May 20th, 2020 announces the discover of the Wolfe Disk which is far too orderly for having been formed 1.5 billion years after the Big Bang. Stranger still, stars formed within the Wolfe Disk at a rate ten times that of the Milky Way!

At the moment astronomers reckon the Wolfe Disk formed from cold gas, reigniting a debate over the formation of galaxies and whether they form from hot or cold gas accretion. Still the biggest mystery about the object remains, "How can a large gas mass assemble while maintaining a relatively stable rotating disk?"

ALMA radio image of the Wolfe Disk, seen when the universe was only 10% of its current age. Image credit: ALMA (ESO/NAOJ/NRAO), M. Neeleman; NRAO/AUI/NSF, S. Dagnello.

Pluto's Atmosphere Has Collapsed

As Pluto continues to move further from the sun, after its closest approach in 1989, scientists expect the planet's atmosphere to freeze out and fall as "snow" over Pluto's surface.

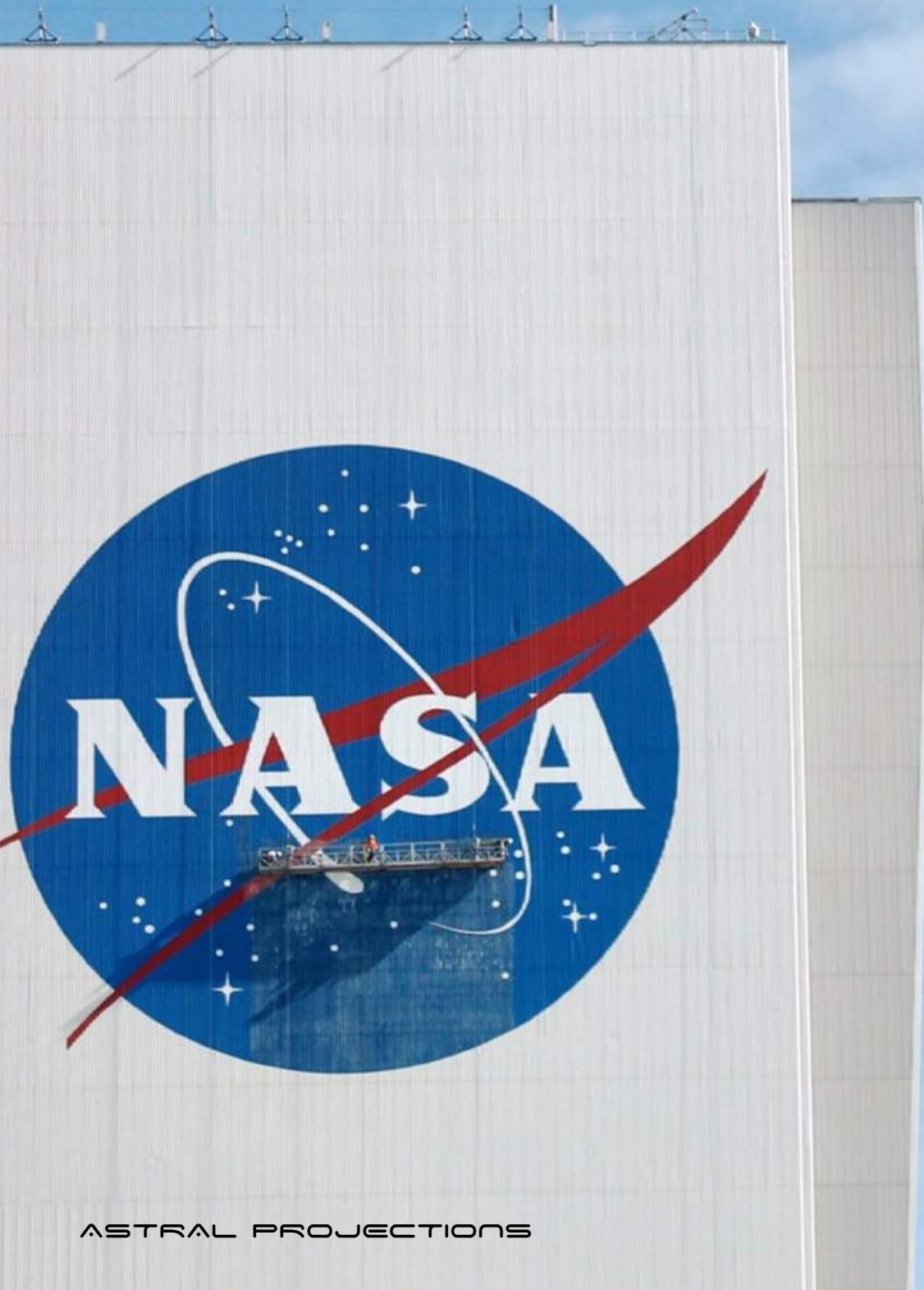
A previous model of this phenomenon projected Pluto's atmosphere would shrink by 1%, but a recent occultation of a star by Pluto shows a drastic reduction of 20%. Ko Arimatsu and her colleagues at Kyoto University note further observations are necessary to confirm this drastic change. Since Pluto is so far away, its tenuous atmosphere's influence on starlight is minimal even with their 60cm reflecting telescope.

Current theories for this collapse are concerned with the cooling of Sputnik Planitia, believed to be central to regulating Pluto's atmosphere.

Pluto's majestic mountains, frozen plains and foggy hazes taken a mere 15 minutes after New Horizon's closest approach on July 14, 2015. Image credit: NASA/JHUAPL/SwRI

NEWS BRIEFS

Joey Roulette (@joroulette) with Reuters and other news outlets shared this image on Twitter with the following text on May 29th, 2020: The meatball painters are back out. If only today was launch day. Image credit: Joey Roulette



Summer Triangle Corner: Vega

by David Prosper and Vivian White

If you live in the Northern Hemisphere and look up during June evenings, you'll see the brilliant star Vega shining overhead. Did you know that Vega is one of the most studied stars in our skies? As one of the brightest summer stars, Vega has fascinated astronomers for thousands of years.

Vega is the brightest star in the small Greek constellation of Lyra, the harp. It's also one of the three points of the large "Summer Triangle" asterism, making Vega one of the easiest stars to find for novice stargazers. Ancient humans from 14,000 years ago likely knew Vega for another reason: it was the Earth's northern pole star! Compare Vega's current position with that of the current north star, Polaris, and you can see how much the Earth's tilt changes over thousands of years. This slow movement is called precession, and in 12,000 years Vega will return to the northern pole star position. Bright Vega has been observed closely since the beginning of modern astronomy and even helped to set the standard for the current magnitude scale used to categorize the brightness of stars. Polaris and Vega have something else in common, besides being once and future pole stars: their brightness varies over time, making

them variable stars. Variable stars' light can change for many different reasons. Dust, smaller stars, or even planets may block the light we see from the star. Or the star itself might be unstable with active sunspots, expansions, or eruptions changing its brightness. Most stars are so far away that we only record the change in light, and can't see their surface.

NASA's TESS satellite has ultra-sensitive light sensors primed to look for the tiny dimming of starlight caused by transits of extrasolar planets. Their sensitivity also allowed TESS to observe much smaller pulsations in a certain type of variable star's light than previously observed. These observations of Delta Scuti variable stars will help astronomers model their complex interiors and make sense of their distinct, seemingly chaotic, pulsations. This is a major contribution towards the field of astroseismology: the study of stellar interiors via observations of how sound waves "sing" as they travel through stars. The findings may help settle the debate over what kind of variable star Vega is. Find more details on this research, including a sonification demo that lets you "hear" the heartbeat of one of these stars, at:

bit.ly/DeltaScutiTESS

Vega System

Cool Outer Belt

Warm Inner Belt

Planets?

Solar System

(4x Scale)

Cool Kuiper Belt

Warm Asteroid Belt

Jupiter

Saturn

Uranus

Neptune

Vega possesses two debris fields, similar to our own solar system's asteroid and Kuiper belts. Astronomers continue to hunt for planets orbiting Vega, but as of May 2020 none have been confirmed. Image credit: NASA/JPL-Caltech

NIGHT SKY NOTES



Can you spot Vega? You may need to look straight up to find it, especially if observing after midnight. Image credit: NASA

Vega in the Summer Triangle Facing Northeast, June Evenings

OBSERVING CALENDAR

June 3 - Mercury reaches its highest point in the evening sky. Shining at .4 magnitude, Mercury will reach a peak altitude of 19° above the western horizon at sunset affording an opportunity to observe this elusive inferior planet.

June 4 - Mercury at greatest eastern elongation.

June 7 - Full moon at 6:44 a.m.

June 8 - Conjunction of the moon and Jupiter. The moon and Jupiter will share the same right ascension, with the moon passing 2°11' to the south of Jupiter in the constellation of Sagittarius. The pair become accessible around 11:42 p.m., reaching their highest point of 28° above the southern horizon at 3:41 a.m. before being lost in the sunrise.

June 8 - Conjunction of the moon and Saturn. The moon and Saturn will share the same right ascension with the moon passing 2°40' to the south of Saturn in the constellation of Capricornus. The pair become accessible around 11:58 p.m., reaching their highest point of 28° above the southern horizon before being lost in the sunrise.

June 12 - Conjunction of the moon and Mars. The moon and Mars will share the same right ascension, with the moon passing 2°44' to the south of Mars. The pair become accessible around 1:19 a.m., reaching their highest point of 36° above the southeastern horizon before being lost in the sunrise.

June 20 - Summer solstice at 5:43 p.m. ASTRA members are discouraged from participating in wanton, bloody naked rites at suspicious stone circles.

June 22 - New moon at 1:38 p.m.

June 27 - Boötid meteor shower reaches its peak. Look northwest around 9 p.m. towards the constellation of Boötes to spy a few shooting stars.

WHY JOIN?

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

ISLAND BEACH STATE PARK PERMITS

Island Beach State Park permits are available but due to the current coronavirus / COVID-19 situation, the park's hours are now 5 a.m. to 8 p.m. which precludes overnight observing. The IBSP office also stated they are not allowing groups entry into the park.

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.

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.