

ASTRAL PROJECTIONS

NOVEMBER 2019
VOLUME 30 ISSUE 11



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Cover Photo

The Pleiades as seen through the eyes, and equipment, of ASTRA member Jim Webster. Image credit: Jim Webster. Specifications: Canon D80, Samyang 135mm. 90 second exposure.

EVENT CALENDAR

November 8th - Monthly Meeting

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

Following club business, Ryan Knipple continues his ancient astronomy lecture series.

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

November 11th - 2019 Transit of Mercury

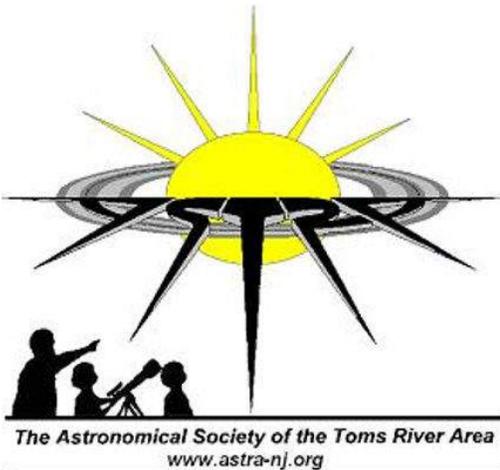
Location: Jakes Branch County Park, Beachwood, NJ

Time: 9:00 a.m. - 1:00 p.m.

November 30th - Jakes Branch Star Party

Location: Jakes Branch County Park, Beachwood, NJ

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



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:

Chris Savia

VP@astra-nj.org

Webmaster:

Donald Durett

Webmaster@astra-nj.org

Newsletter Distribution:

Geoff Redington

ELECTIONS

Election of officers shall take place at the December meeting.
Individual members have one vote. A plurality shall be sufficient to elect.

TERM OF OFFICERS

Office shall be effective on January 1 for a term of one year or until a successor is elected.
The officers of the organization shall be the President, the Vice President-Secretary, and the Treasurer.

The officers shall be elected, and no person may hold more than one elected office concurrently.

ASTRA President: The President shall be the primary point of contact for the organization, speak for the organization in all official matters and preside over all meetings.

ASTRA Vice President-Secretary: ASTRA Vice President-Secretary shall assume the responsibilities of the President in the President's absence, make a record of any formal actions taken by the organization, coordinate with the Newsletter Editor in mailing appropriate club business, keep track of telescope and equipment loans, and maintain the official version of the bylaws and policy documents. In addition the Vice President-Secretary performs as the Astronomical League Correspondent communicating with the Astronomical League, periodically furnishing the League with copies of our membership list.

ASTRA Treasurer: The Treasurer shall be the club membership chairperson, shall maintain the club treasury, shall collect club dues, and shall expend funds as directed. Recurring expenditures normal to the operation of the organization are authorized. The Treasurer shall provide a written report of the year's expenditures, which shall be included in the Newsletter, published within the first calendar quarter. Separate accounting will be maintained for the Telescope Fund and it will not be used for general club operations without a vote at a regular meeting.

Please make your selections by circling the nominee of your choice.

Nominee for President: John Endreson

Nominee for Vice President-Secretary: Write-In

Nominee for Treasurer: Ro Spedalieri

Please bring this ballot to the monthly meeting on December 13th, or mail it to:

**A.S.T.R.A. 2017 Elections
Robert J. Novins Planetarium
Ocean County College P.O. Box 2001
Toms River, NJ 08754-2001**

Alternatively, you can email your ballot to elections@astra-nj.org

ASTRA Meeting on Friday, the 11th of October

by Chris Savia

On Friday the 10th of October, Ro Spedaliere continued part two of her tour of Messier objects covering Messier 35 to Messier 72. Even though giving each Messier object its due, being an astronomical marathon, all of the gathered ASTRA members hung on her each and every word.

Ro discussed how Charles Messier's telescopes couldn't measure up to modern 'scopes, yet he was able to describe and catalogue 110 galaxies, globular clusters, nebulae, and others by the year 1771. ASTRA member Vic Palmieri noted while 18th century optics weren't as good as 21st century optics, everyone had access to darker skies than us. Some of these faint objects were naked eye visible in those clear, dark skies. After giving a rundown of the first installment of her presentation, she took us to the Messier catalog.

Among the highlights of her presentation were the anecdotes associated with her pursuit of stargazing. Ro remembered how she and ASTRA member Bob Salvatore would sneak away to catch glimpses of these distant objects. The first galaxy she saw was M51 through the late Gene Russo's telescope. Just so happens this was the night she witnessed her first Iridium

flare. Among her favorite objects are globular clusters like M53 in Coma Bernices. Next in the queue was M54, an extragalactic globular cluster which may eventually be absorbed by the Milky Way.

Between describing each object in loving detail, she mentioned how early astronomers called all of the Messier objects nebulae because they weren't able to resolve the details which would've revealed the island universes throughout the night sky. She waxed poetic about the double star of M40, how M44 fits perfectly in binoculars or a small telescope, how astronomers determined M51 / The Whirlpool Galaxy hosts a black hole, the striking and eerie beauty of M64 / the Black Eye Galaxy, Leo's Triplets comprised of M65, M66, and NGC 3628. Of those three, Ro has yet to observe the latter. A little controversy came up with the open cluster of M67 and the ability of one to find a serpent winding through this corner of the night sky. The author of this write-up couldn't see it, but then again when Kevin pointed it out he was blocking my view.

As Ro's presentation drew to a close, she wrapped up with a reading of her poem *The Gentle Astronomer*.



Image credit: Chris Savia

The Gentle Astronomer

The splendor and peacefulness of the universe.

Standing in an open field with the Milky Way as our canopy.

Gazing in awe at items seen many times before.

The fleeting beauty and excitement of a shooting star.

The dancing of an aurora, or a spectacular sunset.

Gentle, loving people who have much in common

Love of animals and nature

Caring for the wild and always looking up even in daylight

A genuine spirit of creativity.

What mysteries of the Universe inspire us

What challenges call us

We feed our intellectual and imaginative spirit,

Yet bond with good friends and make new acquaintances.

People should learn from astronomers

They are friendly, and always willing to share and are very hospitable.

We teach.

Our imagination soars to unexplained heights,

To what lies beyond and we wonder and contemplate the Universe.

*An original composition by Rosemarie Spedaliere
after a night at Coyle Field 2003.*

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.

The Messenger Crosses the Sun: Mercury Transit 2019

by David Prosper

Did you know that there are two other objects in our skies that have phases like the Moon? They're the inner planets, found between Earth and the Sun: Mercury and Venus. You can see their phases if you observe them through a telescope. Like our Moon, you can't see the planets in their "new" phase, unless they are lined up perfectly between us Earthlings and the Sun. In the case of the Moon, this alignment results in a solar eclipse; in the case of Mercury and Venus, this results in a transit, where the small disc of the planet travels across the face of the Sun. Skywatchers are in for a treat this month, as Mercury transits the Sun the morning of November 11!

You may have seen the transit of Venus in 2012; you may have even watched it through eclipse glasses! However, this time you'll need a solar telescope to see anything, since eclipse glasses will only reveal the Sun's blank face. Why is that? Mercury is the smallest planet in our solar system, and closer to the Sun (and further away from Earth) during its transit than Venus was in its 2012 transit. This makes Mercury's disc too small to see without the extra power of a telescope. Make absolutely certain that you view the transit via a telescope equipped with a safe solar filter or projection setup. Do NOT combine

binoculars with your eclipse glasses; this will instantly burn a hole through the glasses – and your eyes! While most people don't have solar telescopes handy, many astronomy clubs do!

What a fun opportunity to see another planet during the day! This transit is expected to last over five hours. Folks on the East Coast will be able to watch the entire transit, weather permitting, from approximately 7:35 am EST until around approximately 1:04 pm EST. Folks located in the middle of North America to the west coast will see the transit already in progress at sunrise. The transit takes hours, so if your weather is cloudy, don't despair; there will be plenty of time for skies to clear! You can find timing details and charts via eclipse guru Fred Espenak's website: bit.ly/mercurytransit2019 Mercury's orbit is small and swift, and so its position in our skies quickly changes; that's why it was named after the fleet-footed messenger god of Roman mythology. In fact, if you have a clear view of the eastern horizon, you'll be able to catch Mercury again this month! Look for it before dawn during the last week of November, just above the eastern horizon and below red Mars. Wake up early the morning of November 24th to see Mars, the Moon, and Mercury form a loose triangle right before sunrise.

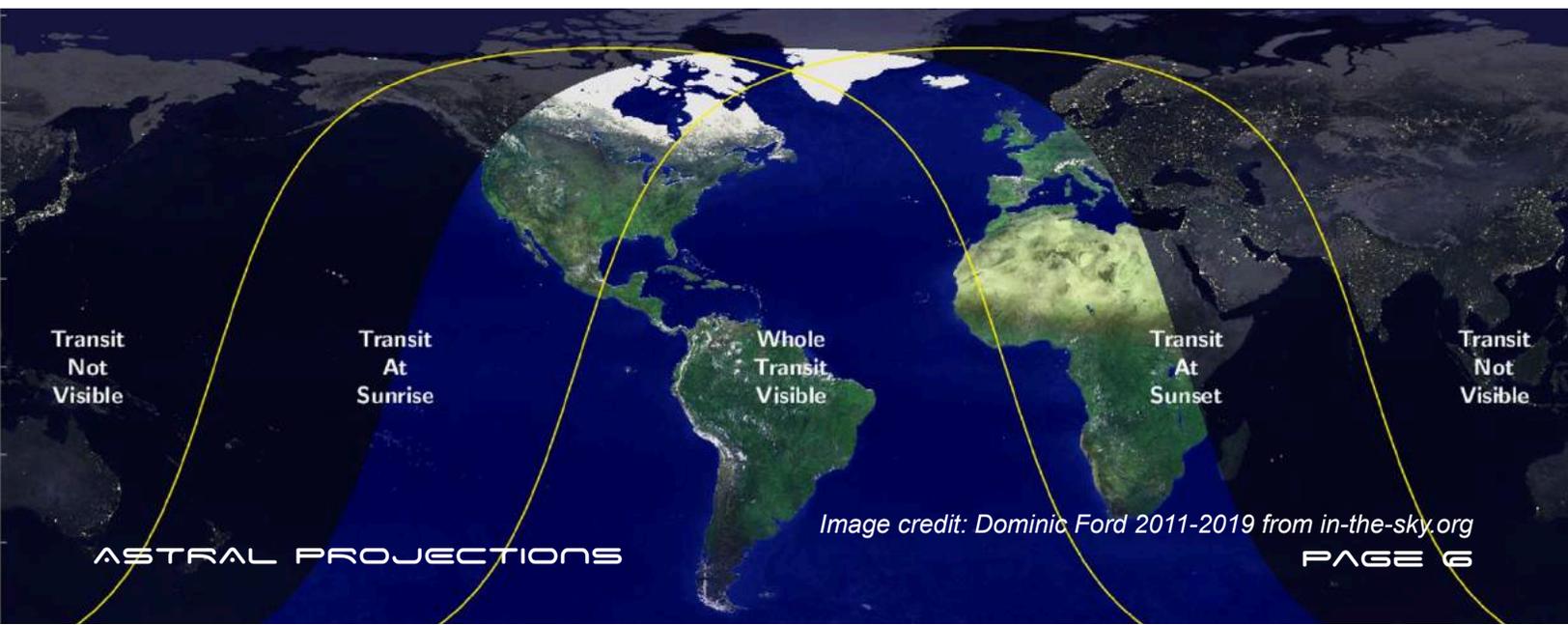


Image credit: Dominic Ford 2011-2019 from in-the-sky.org

OBSERVING CALENDAR

November 11 - Transit of Mercury. 13-14 times a century Mercury, the innermost planet, crosses the face of the Sun. The transit begins approximately 7:30 a.m. until approximately 1 p.m. EST. If you lack a solar filter, please remember not to gaze at the sun with your remaining eye. See page 6 for additional details.

November 12 - Full moon at 8:34 a.m.

November 18-19 - Leonids meteor shower at its peak. Look towards its eponymous constellation, Leo, to observe this event. The show begins around 10:49 p.m., culminating (reaching its highest point in the sky) near dawn (6 a.m. EST) for the best display. Peak activity of 15 meteors per hour is expected near 1 a.m. EST on the 18th and 19th.

November 24 - Conjunction of Venus and Jupiter. Venus and Jupiter will pass within 1.4° degrees of each other

November 26 - New moon at 10:05 a.m.

November 28 - Mercury reaches its highest point in the sky of 17° above the eastern horizon.

November 29th - Conjunction of the Moon and Saturn. The moon and Saturn will pass within 0°55' of each other in the constellation of Sagittarius. Look south starting at 4:51 p.m. EDT. The pair will be visible until 7:22 p.m. when they begin setting towards the southwest.

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

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.

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.