



the Skyscraper

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AMATEUR ASTRONOMICAL SOCIETY OF RHODE ISLAND * 47 PEEPTOAD ROAD * NORTH SCITUATE, RHODE ISLAND 02857 * WWW.THESKYSCRAPERS.ORG

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AstroEve & AstroAssembly Friday Night & All Day Saturday, October 4 & 5 at Seagrave Memorial Observatory

In-person and on Zoom. Presentations by all speakers will be shared on Zoom. Advance registration is required for Zoom participation

AstroAssembly is the annual convention and fundraising event for Skyscrapers, Inc., owners and operators of Seagrave Memorial Observatory, located in North Scituate, RI. The first "Amateur Astronomical Convention of the Skyscrapers" was held on August 2 & 3, 1952. Through the years, we have welcomed many notable speakers, including well-known astronomers, astrophysicists, scientists, and, even astronauts. This annual event brings together amateurs from all over the New England area to reconnect with old friends, learn something new and just have an enjoyable day.

The festivities will begin with AstroAssembly Eve on Friday night for those in the area; registration for AstroAssembly is not necessary to attend.

There will not be a Saturday evening banquet and speaker as in years past. We will instead, break at 5 PM for a snack, and socializing, as well as distribution of awards

and prizes. The program will conclude with our evening speaker at 6:30 PM.

AstroEve begins at 6pm with a social hour followed by talks at 7pm.

Tony Costanzo – ZWO SeeStar S50 versus Unistellar eVscope

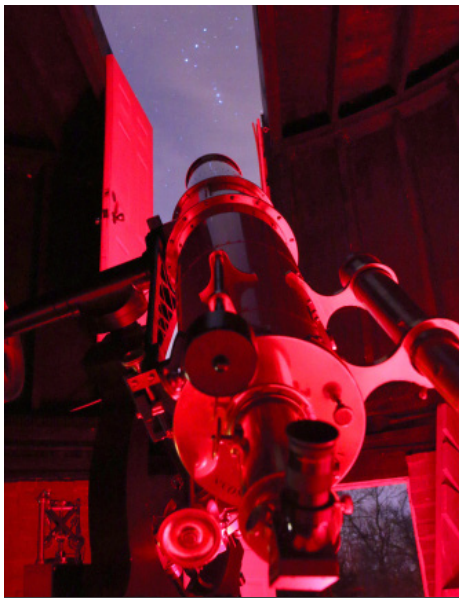
Jim Hendrickson – Visiting Apollo Sites in Texas

John Kocur – April 2024 Total Solar Eclipse

Mahmoud Hallak - Living In Radio Silence, A Summer at NRQZ's GreenBank

Rick Lynch – Smith Observatory, Home of W.R. Brooks

AstroAssembly Saturday Program on page 3.



**Seagrave Memorial
Observatory
Open Nights**
October 5 @ 8pm
October 12, 19, 26 @ 7pm



President's Message

by Linda Bergemann

As I write this message, we are putting the final touches on AstroAssembly 2024. All of the advance work is complete. Tents will go up on Thursday. Food will be ordered on Friday. It's a go! I hope to see you there.

What's next? Observing, of course. In addition to our regular Saturday "open nights", we have four off-site observing events scheduled in October and November. We need member participation in these events to fulfill the Society's objective to "educate the membership and general public on matters pertaining to astronomy."

First up is Steere Farm Elementary School in Pascoag on Friday, October 11. Dave Huestis is the host for this event, and he is expecting more than a hundred people based on past events. Dave is looking for about 8 people with telescopes to showcase the night sky to the school kids and their

families.

Events are planned at River Bend Farm in Uxbridge, MA on Fridays, October 25 and November 8. These are smaller events, but Francine Jackson can always use extra telescopes, accompanied by avid amateurs.

On Thursday, November 7, Dave Huestis will host the school children of Callahan School in Harrisville (Burrillville). Again, Dave is expecting more than a hundred people, and will need about 8 people with telescopes to effectively manage the attendees.

If you have a portable telescope, please consider "hitting the road" and participating in one or more of these events. Sharing your joy of the night sky can be very rewarding and fun. It only takes one enthusiastic youngster to make the night a success. Think about it, please.

Warm wishes and clear skies,

Observing Events:

Open Nights at Seagrave*

Oct. 5, 8-10 PM

Oct. 12, 7-9 PM

Oct. 19, 7-9 PM

Oct. 26, 7-9 PM

Off-site Public Observing*

Steere Farm Elementary

School, Pascoag, RI

Friday, October 11, 7-8 PM

River Bend Farm, Uxbridge, MA

Friday, October 25, 7-8 PM

*Members are welcome and appreciated at all of these events



Skyscrapers Presentations on YouTube

Many of our recent monthly presentations on Zoom have been recorded and published, with permission, on the Skyscrapers YouTube channel. Go to the URL below to view recent presentations.

<https://www.youtube.com/c/SeagraveObservatorySkyscrapersInc>



The Skyscraper is published monthly by Skyscrapers, Inc. Meetings are held monthly, usually on the first or second Friday or Saturday of the month. Seagrave Memorial Observatory is open every Saturday night, weather permitting.

Directions

Directions to Seagrave Memorial Observatory are located on the back page of this newsletter.

Submissions

Submissions to *The Skyscraper* are always welcome. Please submit items for the newsletter no later than **October 15** to Jim Hendrickson at hendrickson.jim@gmail.com.

E-mail subscriptions

To receive *The Skyscraper* by e-mail, send e-mail with your name and address to jim@distantgalaxy.com. Note that you will no longer receive the newsletter by postal mail.

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AstroAssembly 2024

Friday & Saturday, October 4 & 5

Seagrave Memorial Observatory 47 Peepetoad Road North Scituate, Rhode Island

AstroAssembly is the annual convention and fund-raising event for Skyscrapers, Inc., owners and operators of Seagrave Memorial Observatory, located in North Scituate, RI. The first “Amateur Astronomical Convention of the Skyscrapers” was held on August 2 & 3, 1952. Through the years, we have welcomed many notable speakers, including well-known astronomers, astrophysicists, scientists, and, even astronauts. This annual event brings together amateurs from all over the New England area to reconnect with old friends, learn something new and just have an enjoyable day.

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All day Saturday at Seagrave Observatory

Swap Table (please bring your own table), Solar Viewing, Astro-Imaging Contest, Homemade Telescopes (bring yours!).

9:00 AM Registration Open

Morning coffee and pastries provided. Registration includes evening pizza and snacks.

Members: \$25 Non-members: \$30

10:30 AM – Allen Hall, Skyscrapers, Inc.

Restoring the 16” Group 128 Cassegrain for the University of Connecticut

12:00 PM – Deli Lunch

Choice of Grinder (Italian Deluxe, Turkey or Roast Beef), Spinach Pie or Salad (Garden, Garden w/ Grilled Chicken).

\$15 per person. Pre-order and payment with registration required.

Astro-Imaging Contest: Noon to 4:00 PM

See our website for more information.

1:15 PM – Jeff Norwood, Camera Concepts and Telescope Solutions

Recent Developments in Optical and Astronomical Equipment

2:30 PM – Dr. Edward Guimont, Bristol Community College

When the Stars are Right, HP Lovecraft and Astronomy

3:45 PM Doug Gobeille, University of Rhode Island

Extraterrestrials, Black Holes, and Death by Space: Why Astrophysics Matters

5:00 PM Socializing & Lite Dinner

Pizza, snacks, soda, water and coffee included with basic registration.

6:00 PM – Raffle and Astro-Imaging Awards

6:30 PM – Dr. Peter Schultz, Emeritus Brown University

Bad Day Over Chile: Impact of a Cometary Body?

8:00 PM – Observing at Seagrave Memorial Observatory

The observatory’s telescopes will be available for observing (weather permitting), or set up your own telescope on the grounds.

Skylights: October 2024

by Jim Hendrickson

Earth moves to within 1.000 au of the **Sun** on October 5, and will remain closer than 1.000 au until April 3.

The Sun is 1.8° north of Spica on the 16th, and on the 26th it is positioned halfway to solstice by measure of declination (-12° 43' 09").

The Sun moves into Libra on the 30th, after having spent the past 44 days traversing Virgo, the longest constellation, during the Sun's annual trip on the ecliptic.

The **Moon** is new on the 2nd, beginning Lunation 1259. Although New England doesn't experience it, an annular eclipse occurs over the southern Pacific Ocean and South America.

What's always a stunning sight is the pairing of the crescent Moon with Venus, which occurs on the 5th, when the planet is 3.8° north of the 2.8-day, 8.6% illuminated Moon.

Two nights later, on the 7th, the Moon is 1.6° southwest of Antares, in Scorpius.

When the Moon reaches its first quarter phase at 2:55pm on the 10th, it is near its most southerly declination in Sagittarius.

As it waxes through its gibbous phase, the Moon passes 3.0° east of Saturn on the 14th, and 3.7° east-northeast of Neptune on the 15th.

The Full Hunter's Moon occurs at 7:26am on the 17th, in Pisces. The Moon sets 20 minutes before it reaches full, and rises 6:00pm in the evening, just one minute after sunset.

On the morning of the 19th, the waning gibbous Moon is 4.8° northwest of Uranus, and 2.0° east of the Pleiades in Taurus.

Just before dawn on the 21st, the Moon is 0.6° southwest of Alnath (beta Tauri).

Just after 11:00pm on the 23rd, Mars and the last quarter Moon can be seen rising together about 5° apart. The Moon reaches its precise last quarter phase just five hours later, in Cancer.

On the 26th, the waning crescent Moon lies 3.3° north-northwest of Regulus, in Leo.

Mercury passed its superior conjunction on September 30th, and although it returns to the evening sky, it remains too close to the Sun to be visible for much of the month.

Venus is visible in the evening sky, in Libra. It sets about 75 minutes after sunset. Due to the low angle of the ecliptic on the western horizon, Venus is setting earlier each evening, until October 22, when it begins to set later.

Take out your binoculars or small telescope to Venus on the 5th. Not only is the waxing crescent Moon 3.8° to the south of Venus, but the planet is also just 0.9° south of the wide double star Zubenelgenubi (alpha Librae).

Venus will become more easily visible by mid-month. It moves from Libra into Scorpius on the 17th, and sets about 90 minutes after sunset.

On the 22nd, Venus passes 0.6° northwest of the 28,000 light-year-distant globular cluster M80, in Scorpius.

Venus moves into Ophiuchus on the 24th, and lies 3.1° north of Antares on the 25th. At the end of October, Venus is visible for over 90 minutes after sunset.

Events in October

2	14:49	New Moon (Lunation 1259)
5	19:00	Moon 3.8° S of Venus
5	19:00	Venus 0.9° S of Zubenelgenubi
7	19:00	Moon 1.6° SW of Antares
8	09:00	Draconids
9	03:13	Jupiter Stationary
10	14:55	First Quarter Moon
12	11:00	Comet C/2023 A3 closest to Earth (0.472 au)
14	04:15	Mars Quadrature (90°W)
14	19:00	Moon 3.0° E of Saturn
15	20:00	Moon 3.7° ENE of Neptune
17	07:26	Full Hunter's Moon
19	06:00	Moon 4.8° NW of Uranus
19	20:00	Moon 2.0° E of M45
21		Orionid Meteor Shower
21	03:00	Moon 5.3° N of Jupiter
21	06:00	Moon 0.6° SW of Alnath
21	21:00	Eris Opposition (mag. 18.6, 95.631 au Sun, 94.656 au Earth)
22	19:00	Venus 0.6° NW of M80
24	00:00	Moon 5.0° NE of Mars
24	04:03	Last Quarter Moon
25	18:45	Venus 3.0° N of Antares
26	06:00	Moon 3.3° NNW of Regulus
26	09:00	Sun Declination ½ to Solstice (-12° 43' 09")
30	23:00	Sun in Libra

Ephemeris times are in EDT (UTC-4) for Seagrave Observatory (41.845N, 71.590W)

Mars rises at 11:30pm, in Gemini, in early October.

From the 12th-14th, Mars lies within 1.5° of the Caldwell 39 (NGC 2392), a magnitude 9.2 planetary nebula that lies 9,000 light years away. Mars reaches its point of western quadrature on the 14th.

The last quarter Moon is 5.0° to its north-east on the 23rd-24th.

The waning crescent Moon (just inside of last quarter) is 4.6° north-northwest of Mars on the morning of the 25th.

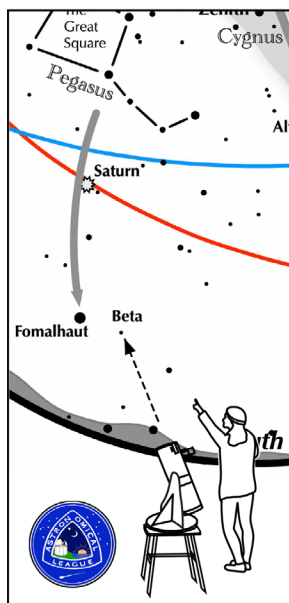
On the 26th, Mars bisects the line connecting Capella and Procyon. Each night following, it gets closer to being in a line with the twin stars Pollux and Castor, until the 28th-29th, when it is right on the line with them. It then "exits" the Winter Hexagon the following night.

The Red Planet enters Cancer on the 29th, and is visible above the east-northeastern horizon by 10:45pm at the end of the month, and the Red Planet enters Cancer on the 29th.

At the beginning of October, **Jupiter** rises at 9:30pm in Taurus. It reaches its stationary point on the 9th, and begins its retrograde motion, which will continue through February 4.

It is notable that during the first half of October, Jupiter forms a line with Sirius and

ASTRONOMICAL LEAGUE Double Star Activity



Other Suns: Beta Piscis Austrini

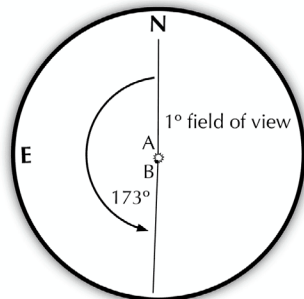
How to find Beta Piscis Austrini on an October evening

The two western stars of the Great Square point southward to the bright star Fomalhaut. One binocular field west lies 4.3 magnitude Beta Piscis Austrini.

Beta Piscis Austrini

A-B separation: 30 sec
 A magnitude: 4.3
 B magnitude: 7.1
 Position Angle: 173°
 A & B colors:
 white, white

Suggested magnification: >20x
 Suggested aperture: >2 inches





Scan the area with binoculars for asterisms and stellar groupings



Between the First Point of Aries and the Water Jar

The **First Point of Aries** marks the intersection of the celestial equator and the ascending ecliptic which defines the location of 0 hrs Right Ascension.

Naked eye and binocular sights

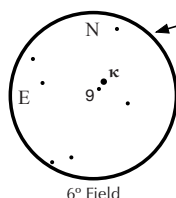
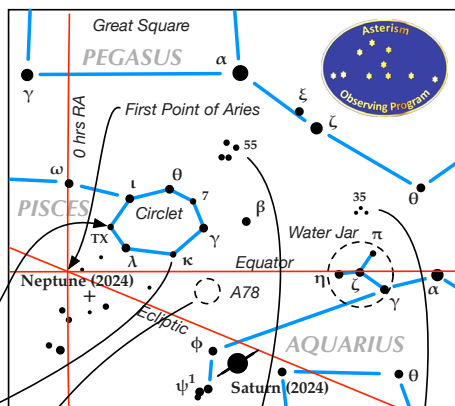
Circllet. These six, maybe seven depending on sky clarity and visual acuity, 4th and 5th magnitude stars trace a squashed circle at the far southwestern corner of Pisces.

It lies 10° below the southern edge of the asterism the **Great Square** in Pegasus, and less than 15° east of another asterism, the four 4th & 5th magnitude stars of the **Water Jar** in Aquarius.

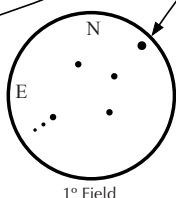
These features are subtle, not bright.

Best seen from a dark location with a transparent sky.

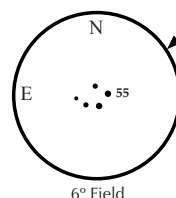
Binoculars users enjoy studying **TX Piscium**. The star varies between 4.8 and 5.2 magnitude, a noticeable amount to the careful observer. It appears as a distinct orange-red hue and its period is irregular, but averages around 224 days.



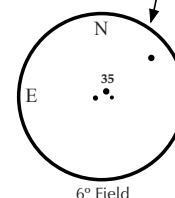
Binocular Double
4.9 mag. Kappa Psc
6.2 mag. 9 Piscium
Separation: 9 min



Asterism A78
7 stars of 7-8 mag.
tracing the outline
of a "rocketship"



Binocular sight
A stellar quintet
Four 5th mag stars
& one 6th mag star.



Binocular sight
A stellar trio
One 5th mag. star &
two 6th mag. stars.

In 2024, Saturn lies 10° southwest of the Circllet and Neptune hides just 5° to its southeast.

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Betelgeuse, and 3.1° west of M1, the Crab supernova remnant.

On the 8th, Ganymede and Io trade visibility on the western side of Jupiter. At 10:34pm, Ganymede begins to emerge from eclipse. Just two minutes later, Io begins to go into eclipse. Io is completely in shadow at 10:38pm, and Ganymede completely emerges by 10:46pm. Later, at 1:24am, Ganymede begins to pass behind Jupiter, becoming completely occulted 13 minutes later. At 2:02am, Io begins to emerge from occultation, and at 3:19am, Ganymede begins to emerge from occultation.

Watch Ganymede and Io go into eclipse within minutes of each other on the 16th, beginning at 12:20am.

On the night of the 20th-21st, the waning gibbous Moon, near its more northerly declination, is 5.3° north of Jupiter.

A tight grouping of the moons appears on

the 22nd-23rd, with Io, Callisto, and Ganymede to the west, and Europa to the east. Io goes into shadow at 2:25am, followed by Ganymede at 4:19am, leaving Jupiter with only two apparent moons, until Io reappears at 5:40am.

A peculiar and rapidly changing orientation of the Galilean moons occurs on the 23rd-24th, when, soon after Jupiter rises, all four moons form an irregular quadrilateral to the east of the planet, with Callisto and Io nearest to Jupiter, and Ganymede and Europa farther out. By 10:30pm, they form a slightly irregular trapezoid, and as Io moves into transit at 12:34am, the outer three moons begin to arrange themselves into a triangle, pointing away from the planet. This figure becomes most prominent at around 2:00am.

At the end of October, Jupiter rises before 8:00pm.

Saturn is in Aquarius, and well placed for

viewing during the evenings. It lies conspicuously on the line from Fomalhaut (alpha Piscis Austrini) through the western edge of the Great Square in Pegasus.

Its largest moon, Titan, is eclipsed by the planet as the sky darkens on the 24th. Titan begins to emerge from shadow at 7:09pm, and takes over a half-hour to fully come into view.

The waning gibbous Moon is 3.0° to the east on the 14th.

In early October, **Uranus** rises at about 8:30pm in Taurus. Although the seventh planet is still two months from opposition, it is still in prime position for viewing. Its position near the northernmost section of the ecliptic puts it in optimal position for observers in the northern hemisphere, as it attains a high elevation in our sky, although in October we have to wait until around midnight for this to occur.

At magnitude 5.7, Uranus is well within reach of binoculars, even in a bright moonlit sky, and from a dark sky, may even be visible without optical aid.

Located just 5° southeast of the Pleiades cluster, Uranus is quite easy to locate. From the westernmost bright stars of the Pleiades, move directly south 4.5° to find a pair of 6th magnitude stars, 14 and 13 Tauri, which are separated by $1/3^\circ$ and lie on an east-west line. The nearest object of similar brightness to this pair of stars, just over 1° to the west-southwest, will be the blue-green glow of Uranus.

By the end of the month, Uranus will be visible above the east-northeast horizon at the end of evening twilight.

Neptune shines at magnitude 7.7 in Pisces, about 14° east-northeast of Saturn.

It can be found by looking for a quadrilateral of 4th and 5th magnitude stars located between the Circllet and magnitude 3.6 iota Ceti, to the southeast. The quadrilateral consists of two parallel lines just under 1.0° apart, 2.5° tall, and aligned in a roughly south-southeast to north-northwest orientation, with the easternmost pair extending slightly longer to the north. Drawing a line diagonally from the southeastern star (33 Psc) through the northwestern star (27 Psc) and extending another 1.5° northwestward will lead to Neptune.

The waxing gibbous Moon is 3.7° east-northeast of Neptune on the 15th.

Comet C/2023 A3 Tsuchinshan-ATLAS is visible with binoculars in October, and could possibly become bright enough to be visible to the naked eye. In the early days of the month, it is located in the eastern sky before sunrise.

The comet is at its closest to Earth on Oc-

tober 12, at a distance of 0.472 au, after which it moves westward at about 6° per day, and becomes visible in the early evening sky.

On the 14th, the nucleus of the comet will be 5° west-southwest of the globular cluster M5 in Serpens. If it retains a sufficiently long tail, it may pass directly over the cluster. On the following evening, the 15th, look for the comet just 1.2° south of M5. Coincidentally, if you're still following Comet 13/P Olbers, it will be just 1.8° to its southwest. 13/P will be about 10th magnitude.

As Earth and C/2023 A3 move away from each other, the comet's motion across the sky becomes noticeably less as the month progresses. It is moving at a rate of 5° per day on the 15th, 4° per day on the 18th, 3° per day on the 21st, 2° per day on the 25th, and 1° per day on November 2.

The nucleus of the comet passes through a notable former constellation known as Taurus Poniatovii in northeastern Ophiuchus

during the waning days of October, and on the 27th-29th, it lies within 3° south of the open cluster IC 4665, which will make a fine sight in binoculars.

Ceres is moving eastward through Sagittarius. At magnitude 9.0, it is located just 0.2° north of the globular cluster M54 on the 7th. On the 14th, it is 0.4° southwest of Ascella, the southeasternmost star of the teapot asterism. It then moves outside of the familiar asterism.

In late October, 4 Vesta will become visible in the eastern sky before dawn. The magnitude 8.2 asteroid is in Virgo, where it will reside until early February. On the 15th and 16th, it passes within 0.1° south of nu Virginis, and on the 22nd, it is located about halfway between Zavijava (beta) 9 Virginis.

Pluto can still be found in Capricornus, 1.7° south-southeast of globular cluster M75. The distant dwarf planet is near the meridian at dusk.

The distant dwarf planet **Eris** reaches op-

position on the 21st, in Cetus. At 94.656 au from Earth, its magnitude 18.6 light takes 13.1 hours to reach us.

The **Draconids**, a very short-duration meteor shower originated from comet 21 P/ Giacobini-Zinner, peaks on October 8. The radiant point is located near the head of Draco, which is circumpolar from Rhode Island, so there is no time that this shower is hidden from our latitude. This is a low-rate shower, so don't expect to see a lot of meteors.

If you miss the peak night of the Draconids, but are still seeing meteors, you're likely seeing sporadics, or Orionids, which are active throughout October.

The **Orionids**, consisting of dust left by comet 1P/Halley, and usually one of the year's better meteor showers, are active throughout October, peaking on the night of the 21st-22nd, when the 83% illuminated waning gibbous Moon will interfere with viewing.

Night Sky Notes:

Catch Andromeda Rising!

by Dave Prosper; updated by Kat Troche

If you're thinking of a galaxy, the image in your head is probably the Andromeda Galaxy! Studies of this massive neighboring galaxy, also called M31, have played an incredibly important role in shaping modern astronomy. As a bonus for stargazers, the Andromeda Galaxy is also a beautiful sight.

Have you heard that all the stars you see at night are part of our Milky Way galaxy? While that is mostly true, one star-like object located near the border between the constellations of Andromeda and Cassiopeia appears fuzzy to unaided eyes. That's because it's not a star, but the Andromeda Galaxy, its trillion stars appearing to our eyes as a 3.4 magnitude patch of haze. Why so dim? Distance! It's outside our galaxy, around 2.5 million light years distant - so far away that the light you see left M31's stars when our earliest ancestors figured out stone tools. Binoculars show more detail: M31's bright core stands out, along with a bit of its wispy, saucer-shaped disc. Telescopes bring out greater detail but often can't view the entire galaxy at once. Depending on the quality of your skies and your magnification, you may be able to make out individual globular clusters, structure, and at least two of its orbiting dwarf galaxies: M110 and M32. Light pollution and thin clouds, smoke, or haze will



Spot the Andromeda Galaxy! M31's more common name comes from its parent constellation, which becomes prominent as autumn arrives in the Northern Hemisphere. Surprising amounts of detail can be observed with unaided eyes when seen from dark sky sites. Hints of it can even be made out from light polluted areas. Use the Great Square of Pegasus or the Cassiopeia constellation as guides to find it. Credit: Stellarium Web

severely hamper observing fainter detail, as they will for any “faint fuzzy.” Surprisingly, persistent stargazers can still spot M31’s core from areas of moderate light pollution as long as skies are otherwise clear.

Modern astronomy was greatly [shaped by studies of the Andromeda Galaxy](#). A hundred years ago, the idea that there were other galaxies beside our own was not widely accepted, and so M31 was called the “Andromeda Nebula.” Increasingly detailed observations of M31 caused astronomers to question its place in our universe – was M31 its own “island universe,” and not part of our Milky Way? Harlow Shapley and Heber Curtis engaged in the “Great Debate” of 1920 over its nature. Curtis argued forcefully from his observations of dimmer than expected nova, dust lanes, and other oddities that the “nebula” was in fact an entirely different galaxy from our own. A few years later, Edwin Hubble, building on Henrietta Leavitt’s work on Cepheid variable stars as a “standard candle” for distance measurement, concluded that M31 was indeed another galaxy after he observed Cepheids in photos of Andromeda, and estimated M31’s distance as far outside our galaxy’s boundaries. And so, the Andromeda Nebula became known as the Andromeda Galaxy.

These discoveries inspire astronomers to this day, who continue to observe M31 and many other galaxies for hints about the nature of our universe. One of the Hubble Space Telescope’s longest-running observing campaigns was a study of M31: the Panchromatic Hubble Andromeda Treasury (PHAT). Dig into NASA’s latest discoveries about the Andromeda Galaxy, on their [Messier 31](#) page.

This article is distributed by NASA’s Night Sky Network (NSN). The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Originally posted by Dave Prosper: September 2021

Last Updated by Kat Troche: September 2024



Generated version of the Andromeda Galaxy and its companion galaxies M32 and M110. Credit: Stellarium Web



While M31’s disc appears larger than you might expect (about 3 Moon widths wide), its “galactic halo” of scattered stars and gas is much, much larger – as you can see here. In fact, it is suspected that its halo is so huge that it may already mingle with our Milky Way’s own halo, which makes sense since our galaxies are expected to merge sometime in the next few billion years! The dots are quasars, objects located behind the halo, which are the very energetic cores of distant galaxies powered by black holes at their center. The Hubble team studied the composition of M31’s halo by measuring how the quasars’ light was absorbed by the halo’s material. Credits: NASA, ESA, and E. Wheatley (STScI)

Book Review

The Moon That Wasn't: The Saga of Venus' Spurious Satellite

by Helge Kragh, Boston: Birkhauser Verlag, 2008,
ISBN [978-3-7643-8908-6](#), hardbound, \$109.99 US

Reviewed by Francine Jackson

Last time, we introduced the work of astronomers through the ages as they tried to determine through the centuries whether Venus has a moon. Turns out, there is a book that was written on this very topic.

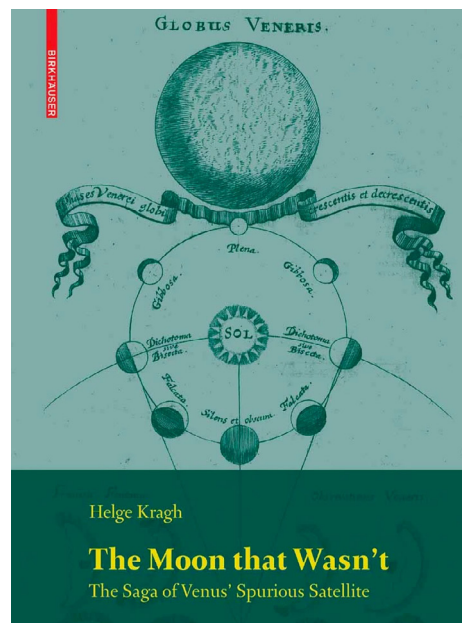
Yes, this book is rather old, but the “question” of a moon around Venus suddenly came up in recent literature, as in 2002 astronomer Brian Skiff at Lowell Observatory discovered what he called a quasi moon around Venus. Apparently he found an asteroid that seems to orbit Venus, but isn't bound to it gravitationally: instead, it has a complex orbit that goes around Venus and our Sun. This makes its motion unstable, so it will eventually be ejected from this orbit. This object originally was listed as 2002VE68, but was shortened to 2002VE; however, artist Alex Foster, when creating a map of it, misread it as ZOOZVE, which, on February 5, 2024, the IAU, the official astronomical naming organization, designated this is how our new solar system member would be called.

This isn't the first time Venus has thought to have a satellite; in fact, astronomers from the beginning of telescope observations have believed they have seen something traveling with our neighbor. As early as the 1630s, Francesco Fontana, a telescope maker, but not considered the best observer,

was stating he had seen markings on Venus, plus, “Two small dots. . . I would suppose to be her Courtiers and Attendants.” This did catch the attention of his contemporaries, and from there it became a quest to locate and confirm them. Such names as Giambattista Riccioli and Pierre Gassendi acknowledged the observations, but not with the positivism Fontana desired.

However, the moon observations weren't done: In the 18th century, J. D. Cassini also believed he had seen one, as well as other astronomers of the day. But, during the transits of Venus of 1761 and 1769, the search was on, and no one definitely saw a tiny object traveling across the Sun with its parent planet. Many astronomers then began speaking of the moon as a figment of others' imagination, a reflection within the telescope, or just a star or planet (very often Uranus) within Venus's line of sight.

The Moon That Wasn't is a complete introduction to the trials and tribulations of astronomers attempting to discover what just isn't there. Surprisingly, though, at the same time, there was talk of two moons belonging to Mars, also, although they weren't found until the end of the 19th century. The author has given both extensive footnotes and an incredible bibliography to describe the work performed by many astronomers:



believers, most of whom drew their “discoveries,” and skeptics, who could not confirm what others had seen. She even gives a list of seven possible explanations, from optical illusions to sunspots.

Although today we are certain Venus doesn't have a satellite companion, this book is a great example of how so many professional observers could have believed in both their equipment and their seeing to see what we know isn't there. As a history of observations, real or imagined, within our solar system, this comprehensive book is very much worth reading.

From the Annals of Popular Astronomy

by Rick Lynch

In the late 1800s the astronomical publication of the time was the Sidereal Messenger started at Cincinnati Observatory and later moved to Goodsell Observatory of Carleton College in Minnesota. The Sidereal Messenger was a modest publication in size, catering to those interested in astronomy, the primary science of the time. The Messenger continued to be published for a few years only to be replaced by a new,

more comprehensive journal, Popular Astronomy.

Popular Astronomy became the leading astronomical publication with extensive worldwide circulation. It catered to professional and amateur astronomy audiences. Published on a monthly basis, its many pages contained extensive articles, calendar of astronomical events, observational reports, reports on amateur societies, and a

modest amount of advertising.

Over the last several months I have been reviewing the issues at Seagrave Observatory which belonged to Frank E. Seagrave. I have found much reference to Rhode Island astronomy and Skyscrapers, Inc. I thought copies of these entries would be of interest to our members as to our rich early history. Space permitting each issue of the Skyscraper will have a reprint.

Popular Astronomy December 1935

Notes from Amateurs (monthly column)

The Third Year of the Rhode Island Skyscrapers

The annual dinner of the Skyscrapers Amateur Astronomical Society of Rhode Island was held at Faunce House, Brown University, on June 6, 1934. Following this, the annual election and business meeting was held at Ladd Observatory. The following officers

were elected: President, Dr. Harry L. Koopman; vice-presidents, Mr. Harry A. MacKnight and Ralph C. Patton; secretary-treasurer, Miss Grace Cragin.

The program of the third year was as follows:

July 27, 1934	Outdoor meeting at the home of Mr. Frank P. Sherman, Johnston, Rhode Island.
August 10, 1934	Visit to Oak Ridge Station of the Harvard College Observatory.
August 30, 1934	Outdoor meeting at the home of Mr. Franklin S. Huddy, Chepachet, Rhode Island.
September 12, 1934	Mr. Paul Eberhart of Ladd Observatory spoke on "A Summer at Yerkes Observatory."
September 29, 1934	A large delegation attended the first annual convention of the Amateur Telescope Makers of Boston at Oak Ridge Station, Harvard College Observatory.
October 1, 1934	Mr. C.F. Stiles of Boston spoke on "Photographing Meteor Spectra."
November 7, 1934	Dr. Fred L. Whipple of Harvard College Observatory spoke on "Celestial Photography."
December 3, 1934	Miss Maribelle Cormack spoke on "Time."
January 9, 1935	Mr. H.A. MacKnight spoke on "The Grinding and Testing of a Telescope Mirror."
February 4, 1935	Dr. W.V. MacGillvra of Worcester, Massachusetts spoke on "The Eye as an Optical Instrument."
March 6, 1935	Mr. Donald S. Reed spoke on "Nova Herculis."
April 1, 1935	Dr. A.B. Focke of Brown University spoke on "Aluminizing Astronomical Mirrors," then demonstrated the modern method of evaporation.
May 1, 1935	After the annual dinner, Dr. Harlow Shapley, Director of Harvard College Observatory, spoke on "Galactic Exploration."

Among the projects planned and started during the third year of the organization, were the acquisition of a library; the sponsoring of an astronomical radio broadcast; the making of a 400-foot film of 16mm motion pictures showing the making of reflecting tele-

scopes by amateurs; the construction, in cooperation with Ladd Observatory of Brown University, of a Schmidt camera of focal ratio $f/1$. Professor C.H. Smiley of Brown University designed the camera and Mr. H.A. MacKnight and D.S. Reed are constructing it.



Cosmic Coffeehouse

*Informal astronomy chat room
meets on the 15th of each month at 7:00pm*

- interactive ZOOM format
- current news
- featured speakers
- equipment reviews
- observing notes
- fun 'n games

To receive your invite, send request to Astro-Geek@comcast.net

Observer's Challenge: NGC 6822: Barred Irregular Galaxy

by Glenn Chaple

(Mag 9.3; Size 15.5" X 13.5')

Last month's Observer's Challenge, the galaxy NGC 6703 in Lyra, escaped the eyes of both William Herschel and his son, John, primarily because of its relative faintness (magnitude 11.3) and small size (just 2.4 arc-minutes). Would a brighter and larger galaxy be easier to view? Ask anyone who has tried to catch a glimpse of this month's Challenge, NGC 6822 ("Barnard's Galaxy" in Sagittarius), and you'll get a resounding "No!" Barnard's Galaxy is a full two magnitudes brighter than NGC 6703, but its light is spread out into an oval-shaped area that's half the moon's apparent diameter. And, yes, the Herschels missed this one as well.

Barnard's Galaxy bears the name of its discoverer, the American astronomer Edward Emerson Barnard. He spotted it with a small refracting telescope (sources disagree as to whether it was 5 or 6 inches in aperture) in 1884. And therein lies the secret to visually capturing this elusive galaxy – use small aperture and low magnification to encompass a field at least a degree across. In the early 1920s, Edwin Hubble noted that Barnard's Galaxy was better viewed with low power in a 4-inch finderscope than with the primary focus of the 100-inch Mt. Wilson reflector! You can even see it with binoculars in areas where skies are exceptionally dark and transparent.

Barnard's Galaxy is located at the 2000.0 coordinates RA 19h44m56.6s and DEC -14o47'21". Starhoppers can find their way using the accompanying chart, courtesy of www.skyledge.net.

If, after an extensive effort, you're unable to spot Barnard's Galaxy, don't leave the area! In the same low-power field, a little over a half-degree NNW at 2000.0 coordinates RA 19h43m57.8s and DEC -14o09'12", is the tiny (22 by 15 arc-second) planetary nebula NGC 6818. Under low magnifications, it may be mistaken for a 10th magnitude star. An eyepiece yielding 60X or more will reveal its fuzzy nature.

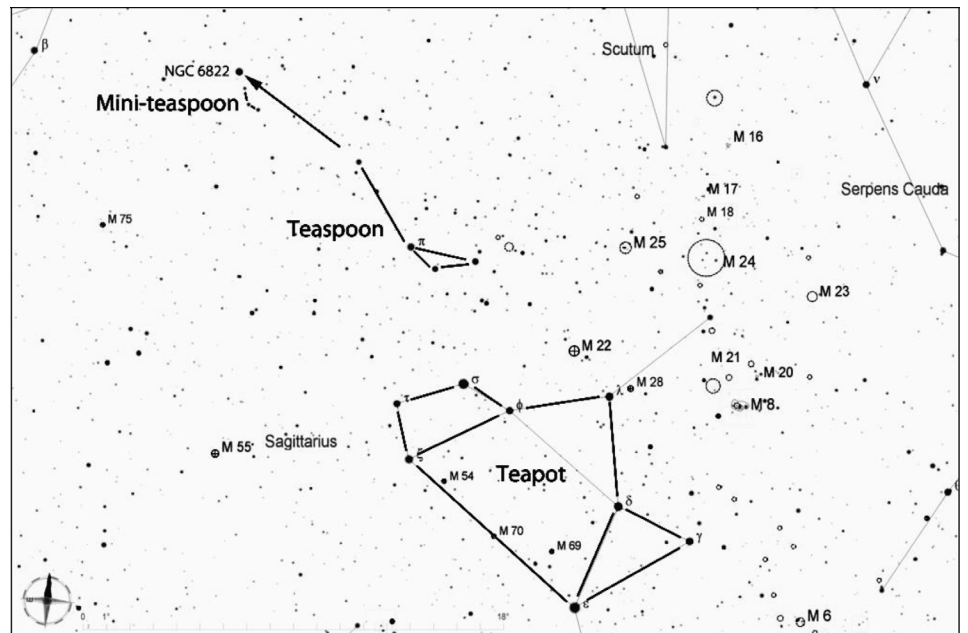
Barnard's Galaxy is classified as a dwarf barred irregular galaxy. At a distance of 1.5 million light-years. It's a member of



NGC 6822 (Barnard's galaxy). This galaxy is a jewel, it is part of the local group, but not a satellite of the Milky Way, at 1.6 MLY away in Sagittarius. Hubble found 11 Cepheids in this galaxy, locking down its distance. It is an irregular galaxy, no defined core is seen, and the brightest stars are resolved easily in my image. What is interesting is that it has a number of H α regions with active star formation occurring. This took me several tries, but I took this with RGB filters for the galaxy, but then took H α filter images, and was able to enhance these H α regions, they are quite stunning and scattered throughout the galaxy, the brightest 3 are on the north edge. Taken with my 32 inch scope, about 3 hours of imaging, RGB and H α , processed in PixInsight. Mario Motta

the Local Group of galaxies that includes our Milky Way and the Andromeda Galaxy.

To find out more about the Observer's Challenge, log on to rogerivester.com/category/observers-challenge-reports-complete.

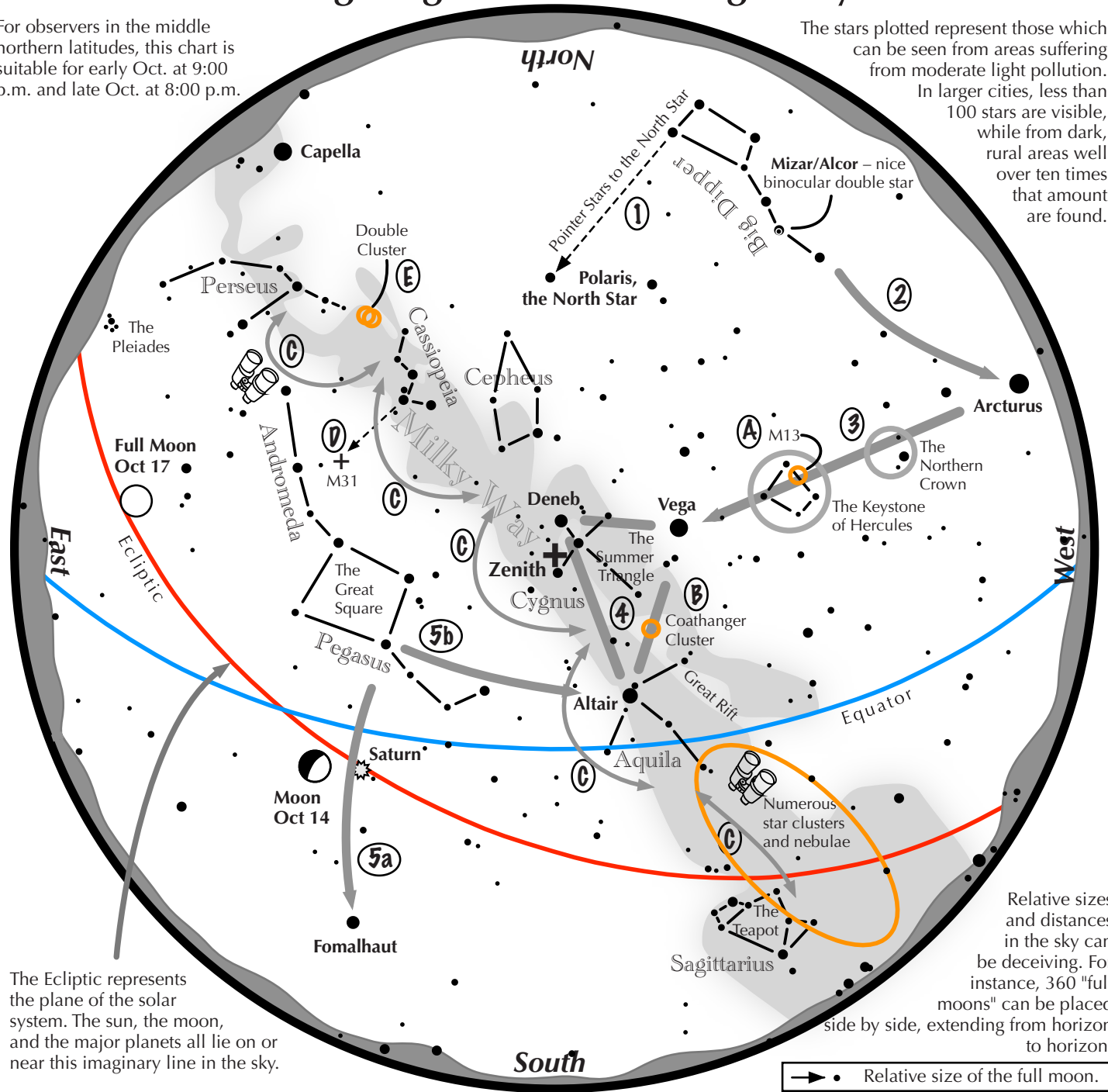


Star hop from www.skyledge.net by Jim Mazur. Star charts created with Cartes du Ciel.

Navigating the October Night Sky

For observers in the middle northern latitudes, this chart is suitable for early Oct. at 9:00 p.m. and late Oct. at 8:00 p.m.

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.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

Navigating the October 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 intersects Arcturus, the brightest star in the early October evening sky.
- 3 To the northeast of Arcturus shines another star of the same brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 4 Nearly overhead lie the summer triangle stars of Vega, Altair, and Deneb.
- 5 High in the east are the four moderately bright stars of the Great Square. Its two southern stars point west to Altair. Its two western stars point south to Fomalhaut.

Binocular Highlights

A: On the western side of the Keystone glows the Great Hercules Cluster, a ball of 500,000 stars. **B:** 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger. **C:** Sweep along the Milky Way for an astounding number of fuzzy star clusters and nebulae amid many faint glows and dark bays, including the Great Rift. **D:** The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval. **E:** Between the "W" of Cassiopeia and Perseus lies the Double Cluster.



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

The Sun, Moon & Planets in October

This table contains the ephemeris of the objects in the Solar System for each Saturday night in October 2024. Times in Eastern Daylight Time (UTC-4) for Seagrave Observatory (41.845N, 71.590W).

Object	Date	RA	Dec	Const	Mag	Size	Elong	Phase(%)	Dist(S)	Dist(E)	Rise	Transit	Set
Sun	5	12 45.0	-4 50.5	Vir	-26.8	1919.1	-	-	-	1.000	06:47	12:34	18:20
	12	13 10.7	-7 30.2	Vir	-26.8	1923.0	-	-	-	0.998	06:55	12:32	18:09
	19	13 36.8	-10 04.7	Vir	-26.8	1926.9	-	-	-	0.996	07:03	12:31	17:58
	26	14 03.4	-12 32.1	Vir	-26.8	1930.5	-	-	-	0.994	07:11	12:30	17:48
Moon	5	14 09.3	-16 38.6	Vir	-9.1	1767.5	24° E	4	-	-	09:36	14:34	19:24
	12	20 31.1	-24 37.8	Cap	-12.2	1919.9	105° E	63	-	-	15:53	20:47	01:50
	19	2 59.6	19 46.3	Ari	-12.7	1997.8	158° W	96	-	-	19:08	03:05	11:12
	26	9 42.5	16 51.4	Leo	-11.4	1784.9	71° W	34	-	-	01:17	08:31	15:33
Mercury	5	12 58.1	-5 13.3	Vir	-1.2	4.8	3° E	100	0.420	1.415	07:05	12:49	18:31
	12	13 40.7	-10 18.0	Vir	-0.7	4.8	8° E	98	0.448	1.415	07:39	13:04	18:27
	19	14 22.4	-14 51.6	Vir	-0.4	4.9	12° E	95	0.464	1.388	08:10	13:18	18:24
	26	15 03.6	-18 46.8	Lib	-0.3	5.0	16° E	91	0.466	1.336	08:40	13:31	18:22
Venus	5	14 47.4	-16 37.8	Lib	-3.8	12.6	32° E	84	0.727	1.340	09:37	14:37	19:37
	12	15 21.4	-19 19.0	Lib	-3.9	13.0	34° E	82	0.728	1.299	09:54	14:44	19:33
	19	15 56.2	-21 36.3	Sco	-3.9	13.5	35° E	81	0.728	1.257	10:11	14:51	19:30
	26	16 32.0	-23 25.8	Oph	-3.9	13.9	37° E	79	0.728	1.214	10:28	14:59	19:31
Mars	5	7 13.7	22 59.2	Gem	0.5	7.7	85° W	88	1.508	1.213	23:30	07:02	14:34
	12	7 28.7	22 41.3	Gem	0.4	8.0	89° W	88	1.517	1.164	23:19	06:49	14:20
	19	7 42.6	22 21.4	Gem	0.3	8.4	93° W	88	1.526	1.114	23:06	06:36	14:05
	26	7 55.4	22 01.2	Gem	0.2	8.8	96° W	88	1.535	1.063	22:53	06:21	13:48
1 Ceres	5	18 53.0	-30 18.0	Sgr	8.9	0.4	89° E	97	2.942	2.780	14:42	18:39	22:37
	12	18 59.8	-30 05.6	Sgr	9.0	0.4	84° E	97	2.945	2.879	14:20	18:19	22:17
	19	19 07.3	-29 51.1	Sgr	9.1	0.4	79° E	97	2.948	2.977	13:59	17:59	21:59
	26	19 15.5	-29 34.5	Sgr	9.1	0.4	74° E	97	2.951	3.074	13:38	17:39	21:41
Jupiter	5	5 22.4	22 26.3	Tau	-2.4	42.7	111° W	99	5.055	4.610	21:41	05:10	12:39
	12	5 22.4	22 26.3	Tau	-2.4	43.6	118° W	99	5.057	4.513	21:13	04:43	12:12
	19	5 21.8	22 25.7	Tau	-2.5	44.5	125° W	99	5.059	4.423	20:45	04:14	11:43
	26	5 20.5	22 24.4	Tau	-2.5	45.3	132° W	99	5.061	4.340	20:17	03:46	11:14
Saturn	5	23 04.8	-8 16.5	Aqr	0.7	18.9	152° E	100	9.657	8.764	17:17	22:49	04:21
	12	23 03.3	-8 25.5	Aqr	0.7	18.8	144° E	100	9.655	8.825	16:49	22:20	03:52
	19	23 02.0	-8 32.9	Aqr	0.8	18.6	137° E	100	9.653	8.898	16:20	21:52	03:23
	26	23 00.9	-8 38.6	Aqr	0.8	18.4	130° E	100	9.651	8.982	15:52	21:23	02:54
Uranus	5	3 38.3	19 11.0	Tau	5.7	3.7	135° W	100	19.568	18.843	20:11	03:26	10:41
	12	3 37.5	19 08.2	Tau	5.6	3.8	143° W	100	19.567	18.765	19:39	02:54	10:08
	19	3 36.5	19 05.1	Tau	5.6	3.8	150° W	100	19.566	18.699	19:11	02:25	09:40
	26	3 35.5	19 01.6	Tau	5.6	3.8	157° W	100	19.565	18.646	18:43	01:57	09:11
Neptune	5	23 55.3	-1 57.6	Psc	7.8	2.4	166° E	100	29.897	28.926	17:45	23:40	05:35
	12	23 54.6	-2 01.9	Psc	7.8	2.4	159° E	100	29.896	28.964	17:17	23:12	05:06
	19	23 54.0	-2 05.9	Psc	7.8	2.4	152° E	100	29.896	29.016	16:49	22:43	04:38
	26	23 53.4	-2 09.5	Psc	7.8	2.3	145° E	100	29.896	29.081	16:21	22:15	04:10
Pluto	5	20 10.3	-23 24.8	Cap	14.5	0.2	107° E	100	35.112	34.800	15:24	19:56	00:27
	12	20 10.2	-23 24.9	Cap	14.5	0.2	100° E	100	35.117	34.922	14:56	19:28	23:59
	19	20 10.3	-23 24.7	Cap	14.5	0.2	94° E	100	35.121	35.046	14:29	19:01	23:32
	26	20 10.4	-23 24.2	Cap	14.5	0.2	87° E	100	35.126	35.171	14:02	18:33	23:05

Jupiter
August 30, 2024
Shadow Transit of Io

Gregory T. Shanos Sarasota, Florida USA
Meade LX200GPS 250mm 2500mm f/10
ZWO ASI 462MC one-shot color camera
Vernonscope 1.25x Barlow 4000mm f/16
Derotated 4 minutes with WinJupos

Magnitude: -2.3
Diameter: 37.9"
Phase: 99.0%
Altitude: 49°
Seeing: 7/10 Good
Transp: 7/10 Clear, Humid
Resolution: 0.15"/pixel



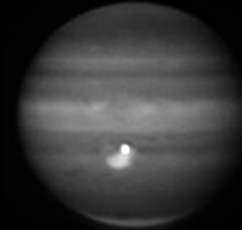
09h 02.5m UT
Astronomik L2 UV-IR cut filter
CMI: 37.0° CMI: 43.3° CMI: 161.0°
Moon Io just above the Red Spot



Jupiter
August 30, 2024
Transit of Io

Gregory T. Shanos Sarasota, Florida USA
Meade LX200GPS 250mm 2500mm f/10
ZWO ASI 462MM monochrome camera
Derotated 5 minutes with WinJupos

Magnitude: -2.3
Diameter: 37.9"
Phase: 99.0%
Altitude: 51°
Seeing: 5/10 Ave
Transp: 7/10 Clear, Humid



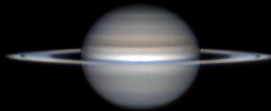
09h 13.9m UT
Chroma 889 +/-18nm methane band filter
CMI: 43.9° CMI: 50.2° CMI: 167.9°
Bright Moon Io just above the Red Spot



Saturn at Opposition
September 8, 2024

Gregory T. Shanos Sarasota Florida
Meade LX200GPS 250mm fl 2500mm f/10
ZWO ASI 462 MC one-shot color camera
Vernonscope 1.25x Barlow 4000mm f/16
Derotated five minutes with WinJupos

Magnitude: 0.6
Diameter: 19.2"
Phase: 100%
Altitude: 53°
Seeing: 7/10 Good
Transparency: 7/10 Light Clouds,
Hazy, Humid
Resolution: 0.15"



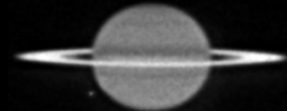
04h 41.9m UT
Astronomik L2 UV-IR cut filter
CMI: 24.2° CMI: 264.1° CMI: 123.3°
Seeliger effect: a brightening of Saturn's rings during opposition



Saturn at Opposition
September 8, 2024

Gregory T. Shanos Sarasota, Florida
Meade LX200GPS 250mm fl 2500mm f/10
ZWO ASI 462 MM monochrome camera
Vernonscope 1.25x Barlow

Magnitude: 0.6
Diameter: 19.2"
Phase: 100%
Altitude: 55°
Seeing: 7/10 Good
Transparency: 7/10 Light clouds,
hazy, humid



05h 14.9m UT
Chroma U Bessel (320nm-380nm) narrowband filter
CMI: 43.6° CMI: 282.8° CMI: 141.9°
Seeliger effect: a brightening of Saturn's rings during opposition
Moon is Rhea



Partial Lunar Eclipse of the Harvest Supermoon
September 18, 2024 02h 46m UT



Gregory T. Shanos Sarasota, Florida
Meade Refractor 60mm 250mm f/4
ZWO ASI 178MM monochrome camera
Optolong UV-IR cut filter

September 17, 2024
10:46 pm local time
Maximum Eclipse at 8.7%

STARRY SCOOP

Editor: Kaitlynn Goulette



WHAT'S UP

Dominating the fall sky is the well-known flying horse constellation, Pegasus. This grouping of stars is easily recognizable with the help of the asterism known as the Great Square of Pegasus, which resembles a baseball diamond as it rises above the tree line. Located nearby is Andromeda the princess, who happens to share a star with Pegasus. This constellation contains the Andromeda Galaxy, the closest large galaxy to us and one of the only galaxies we can view with the unaided eye.

Shortly after sunset, the planets dazzle us in our evening sky and make great telescopic targets. Saturn reached opposition last month and now rises before sunset and journeys across our sky, following the ecliptic, throughout the night. October 14th offers a view of Saturn joined by the waxing gibbous moon. Jupiter rises about 9pm, with ruddy-colored Mars following about two hours later. The moon joins this duo from the 19th to the 23rd.

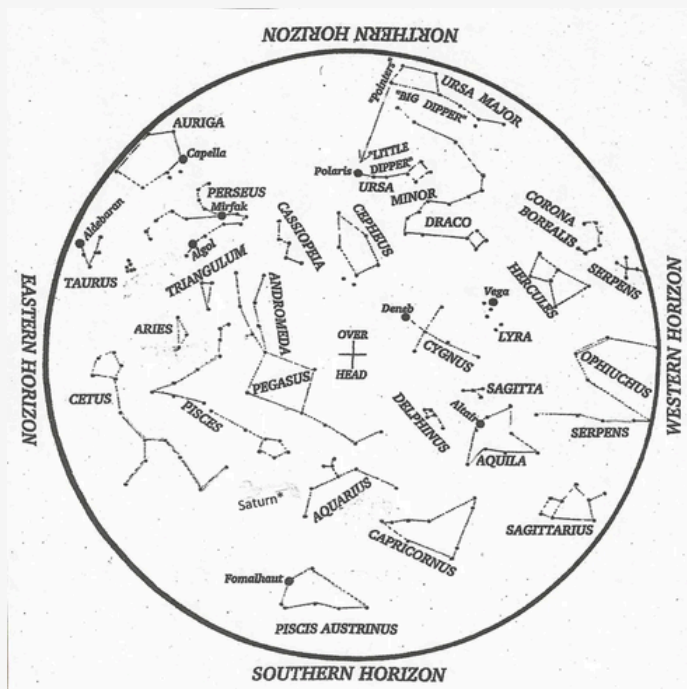
This month, we are treated to two meteor showers. The Draconid meteor shower runs annually from October 6th to the 10th and is considered unusual as it peaks in the early evening hours of the 7th rather than after midnight. Later in the month, the Orionid shower reaches its peak on the evening of the 21st into the morning of the 22nd. It runs from October 2nd to November 7th. This spectacle is produced by Earth traveling through debris left behind by the famous Comet Halley and is best viewed in a dark place after midnight.

Comet Tsuchinshan-ATLAS, designated Comet

C/2023 A3, has the potential to decorate our evening skies in mid-late October. It reached its closest approach to the sun in late September and is first visible in our skies around October 12th, very low in the west. As the month continues, the comet is positioned increasing higher in the sky and dims as it races away from the sun. It is brightest on the days following its closest approach but will remain visible in our skies with a pair of binoculars until month's end, although comets often prove to be unpredictable.

OCTOBER'S SKY

- 2: New Moon**
- 7: Draconid Meteor Shower Peak**
- 17: Full Moon, Supermoon**
- 21-22: Orionid Meteor Shower Peak**



Credit: Roger B. Culver

Hold star map above your head and align with compass points.

OBSERVATIONS

The Arunah Hill Nature and Science Center in Cummington, MA, hosts an annual public outreach event, Arunah Hill Days. This year, I had the pleasure of attending with my family and long-time astronomy friends.

During the day, attendees had the opportunity to go on guided nature walks and explored the structures located throughout the woods built by teams of Boy Scouts a few decades ago. Afterwards, the annual rocket launching competitions took place. People of all ages had fun designing and building model rockets to launch into the sky.

Unfortunately, Mother Nature was not on our side throughout the event, but my family and I decided to stay an extra day and had the opportunity to observe for a few hours before the storms rolled in. My good friend and fellow astronomer, Lani Ching, brought her 8-inch Dobsonian telescope and observed a vast array of targets located throughout the sky. While she focused on specific objects, I conducted a tour of the heavens with a green laser pointer and gave newer astronomers a chance to learn the constellations and their mythological lore.

Astrophotography was a common theme throughout the night. Marsha Wilcox dazzled fellow stargazers with her advanced equipment and results, imaging objects in narrowband to reveal details otherwise invisible. My mother, Joy Goulette, also joined the fun and put her new SeeStar smart telescope to use for the first time.

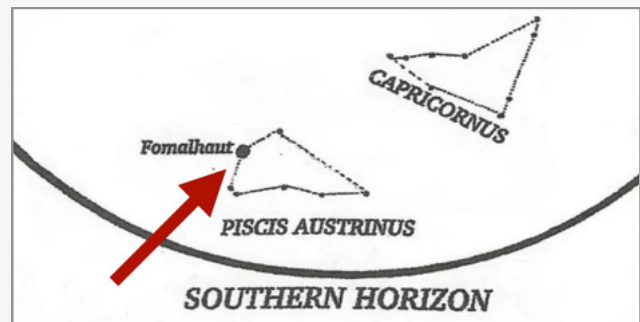


The purpose of the Starry Scoop is to communicate current astronomy and space events. If you want to share your observations or get digital copies of the Starry Scoop, contact starryscoop@gmail.com. The Starry Scoop is now on Facebook. Clear skies!

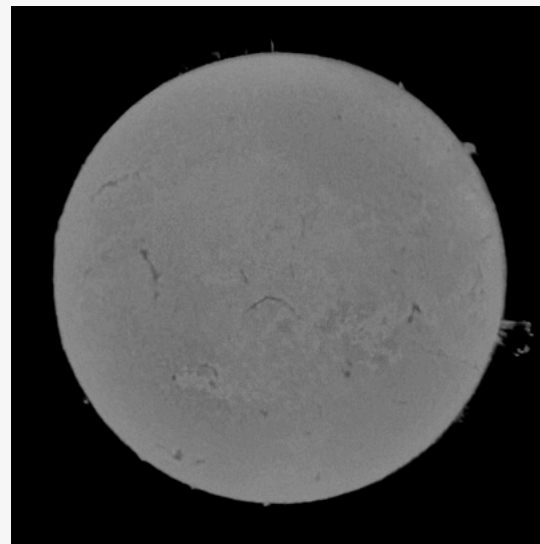
OBJECT OF THE MONTH

The featured object for the month of October is Fomalhaut, commonly known as the Lonely Star. Located in Piscis Austrinus about 25 light years away, its name in Arabic means mouth of the fish. In 1983, astronomers discovered a debris disk of dust and rock orbiting the star and they believe this to be the remnants of past planets or the beginnings of a solar system.

Fomalhaut can be found low in the southeastern sky after the sun sets. It gets its nickname, The Lonely Star, because it's the only first magnitude star in this area, which makes it easily recognizable. Use the star map below to help you locate it. Good luck!



Fomalhaut Map



The sun as viewed through a telescope of an Arunah Hill Days attendee. Photo by Kaitlynn Goulette

Directions to Seagrave Memorial Observatory

From the Providence area:

Take Rt. 6 West to Interstate 295 in Johnston and proceed west on Rt. 6 to Scituate. In Scituate bear right off Rt. 6 onto Rt. 101. Turn right onto Rt. 116 North. Peeptoad Road is the first left off Rt. 116.

From Coventry/West Warwick area:

Take Rt. 116 North. Peeptoad Road is the first left after crossing Rt. 101.

From Southern Rhode Island:

Take Interstate 95 North. Exit onto Interstate 295 North in Warwick (left exit.) Exit to Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.

From Northern Rhode Island:

Take Rt. 116 South. Follow Rt. 116 thru Greenville. Turn left at Knight's Farm intersection (Rt. 116 turns left) and follow Rt. 116. Watch for Peeptoad Road on the right.

From Connecticut:

- Take Rt. 44 East to Greenville and turn right on Rt. 116 South. Turn left at Knight's Farm intersection (Rt. 116 turn left) and follow Rt. 116. Watch for Peeptoad Road on the right.
- or • Take Rt. 6 East toward Rhode Island; bear left on Rt. 101 East and continue to intersection with Rt. 116. Turn left; Peeptoad Road is the first left off Rt. 116.

From Massachusetts:

Take Interstate 295 South (off Interstate 95 in Attleboro). Exit onto Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.



47 Peeptoad Road
North Scituate, Rhode Island 02857