



STAR STUFF

Ford Amateur Astronomy Club Newsletter

Star Stuff

This newsletter is published eleven times per year by:

Ford Amateur Astronomy Club
P.O. Box 7527
Dearborn, MI 48121-7527

Officers

President: Arica Flores
Vice President: Sean Pickard
Secretary: Cheri Grissom
Treasurer: Jameson Sullivan

Departments

Webmaster: Liam Finn
Membership: Doug Bauer
Newsletter: Tim Campbell
Equipment: Jeff Gorman
Speakers: Sandra Macika

Club Information

The Ford Amateur Astronomy Club meets on the fourth Thursday of each month, except for the combined November/December meeting which meets on the first Thursday of December – at Henry Ford College Administration Services and Conference Center in Dearborn.

President's Corner

by Arica Flores, President

Fall Observing

This year has not been the best for observing. The weather has made our public observation events difficult this year. I am hoping for better luck in 2026. We still have a few more months until the frigid temperatures arrive, so I am Crossing my fingers for some nice autumn nights. Here are a few of my favorite fall targets.

Saturn was in Opposition on September 21st and should be excellent for observing for the next several months.

The **Milky Way** is still prominent in the evening sky.

The **Orionids Meteor Shower** occur from September 26th through November 22nd, but are peaking the night of October 20th (00:00 UTC Oct 21) along with the new moon.

The **Andromeda Galaxy** (M31) — Fall is a good time to check out the Andromeda Galaxy. If in a dark sky area, it is visible with the naked eye.

Orion the hunter is up in the mornings. The Orion Nebula is visible with the naked eye just below Orion's belt.

Cygnus the Swan with Albireo (otherwise known as the "U of M Star" due to it's Maize & Blue colors.)

Don't Forget to come join us at Astronomy at the Beach this Friday and Saturday 4pm to midnight at Island Lake State Park.

Club Information

Refer to our website for a map and directions:

www.fordastronomyclub.com

Observing

The FAAC primary observing location is Spring Mill Pond located within the Island Lake State Recreation Area near Brighton, Michigan. The Club maintains an after-hours permit. Club members can contact any club officer for procedures to enter or exit the park when the main gate is locked.

The club also has use of a private observing site near Gregory Michigan. See the FAAC Groups.io Group for more information.

Inquiries can be directed to info@fordastronomyclub.com

Membership

Membership is open to anyone with an interest in amateur astronomy. The FAAC is an affiliate of the Ford Employees Recreation Association (FERA).

Fees

Annual - New Members: \$30
Annual - Renewals: \$25
(\$30 if not renewed by Jan 31)

Benefits

Membership includes the Star Stuff newsletter, discounts on magazines, discounts at selected

Secretary's Report

by Cheri Grissom, Secretary

FAAC General Meeting – August 28, 2025

Meeting called to order at 7:02 p.m. by President Arica Flores. Secretary Cheri Grissom, Vice President Sean Pickard, and Treasurer Jameson Sullivan also present. We had a total of 31 in-person attendees, plus 11 online, for a total of 42. Arica asked for member and guest introductions.

To accommodate an earlier starting time for our guest speaker, we changed up the format of the meeting a little bit. Members were encouraged have snacks as soon as they arrived, we then went through a very short business meeting. No reports of note.

Arica reminded us that our next Beginners' Night will be this Saturday, August 30, and the weather looks good so far. We hope for a good turnout.

Gordon Hansen gave a brief Astronomy at the Beach committee report. The dates are September 26 and 27, and we are back at Island Lake Recreation Area, Kent Lake Beach. We will need plenty of volunteers over the two nights to help staff the club table under the tent, help with the club's 20" Dob, and to bring their own telescopes if they would like for public observing on the field. Also, helpers are needed for set-up on Friday afternoon and take-down on Saturday night. There is a sign-up sheet that has already been sent out, but look for a reminder to be sent out soon. Remember, other than operating the Dob, no experience is needed! We welcome all volunteers, old and new members alike.

The keynote speaker for both nights of AATB will be Brother Guy Consolmagno SJ, originally from southeast Michigan and currently Director of the Vatican Observatory and President of the Vatican Observatory Foundation. He is also a highly respected author. His talk will be about Saturn.

Guest Speaker

Tim Campbell introduced our guest speaker coming to us via Zoom. Neil Mottinger is a 58-year veteran of NASA's Jet Propulsion Laboratory (JPL). His primary work has been on unmanned planetary exploration probes. In addition to the NASA space program, he has assisted other countries including Germany, Japan, and India with spacecraft guidance. His talk

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area equipment retailers, and after-hours access to the Island Lake observing site and private observing sites.

Astronomy or Sky & Telescope magazine discounts are available by contacting the FAAC club treasurer treasurer@fordastronomyclub.com for the discount form. The form should be sent to the respective publisher with your subscription request and payment. Do not send money directly to FAAC.

The FAAC has a pool of equipment including telescopes, cameras, and other gear used for outreach. Much of the gear can be borrowed for personal use in the interest of furthering your knowledge and experience in astronomy.

Please see the equipment list for further information.

Club Wear

Club logo-wear (embroidered with club logo) can be ordered directly through LLBeanBusiness.com

See the [groups.io](#) files section for ordering information and instructions on how to request the correct logo.

Communication

The FAAC uses Groups.io for our email distribution list (both formal and informal discussion.)

Observing nights & locations (scheduled and unscheduled as weather permits), equipment

October's Night Sky Notes: Let's Go, LIGO!

by Kat Troche of the Astronomical Society of the Pacific



September 2025 marks ten years since the first direct detection of gravitational waves as predicted by Albert Einstein's 1916 theory of General Relativity. These invisible ripples in space were first directly detected by the Laser Interferometer Gravitational-Wave Observatory (LIGO). Traveling at the speed of light (~186,000 miles per second), these waves stretch and squeeze the fabric of space itself, changing the distance between objects as they pass.



Waves in Space

Gravitational waves are created when massive objects accelerate in space, especially in violent events. LIGO detected the first gravitational waves when two black holes, orbiting one another, finally merged, creating ripples in space-time. But these waves are not exclusive to black holes. If a star were to go supernova, it could produce the same effect. Neutron stars can also create these waves for various reasons. While these waves are invisible to the human eye, this animation from NASA's Science Visualization Studio shows the merger of two black holes and the waves they create in the process.

questions, events, outreaches, etc. are normally discussed via this list.

Join by visiting <https://groups.io/g/FordAstronomyClub> to request membership.

Articles & Submissions

Your submissions to Star Stuff are welcome! Send your story and/or images to the editor at: starstuff@fordastronomyclub.com

Observatory

The FAAC maintains and operates the Hector J Robinson Observatory (HJRO) at Lincoln Park Schools.

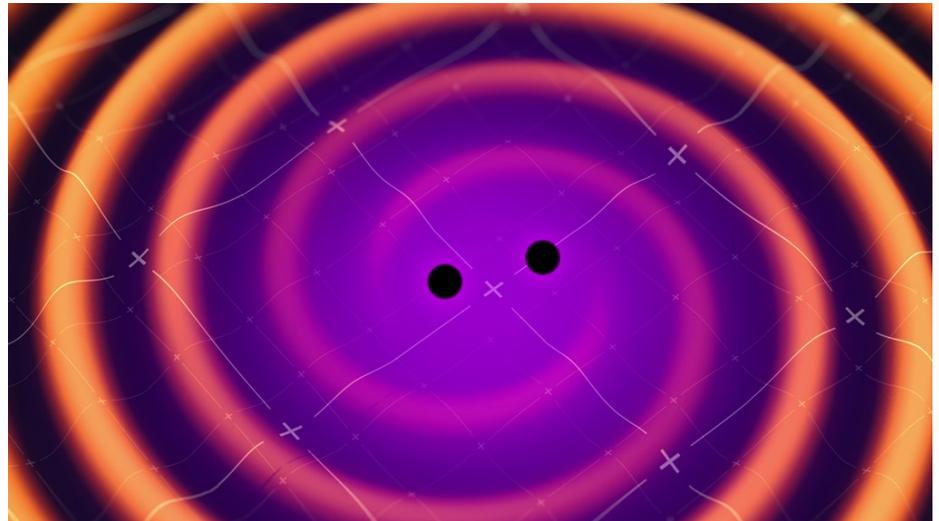
The observatory houses a 14" Celestron C14 Schmidt Cassegrain Telescope as well as other instruments and can be used by club members.

The observatory is adjacent to the athletic field situated between the Lincoln Park Middle School and High School buildings near

1701 Champaign Rd.
Lincoln Park, MI 48146

The school system has designated four "key-holders" within the club who have the ability to open the observatory.

Call (313) 444-5850 to learn when the observatory is opening (or request an opening).



Two black holes orbit around each other and generate space-time ripples called gravitational waves in this image. Credit: NASA's Goddard Space Flight Center Conceptual Image Lab.

How it Works

A gravitational wave observatory, like LIGO, is built with two tunnels, each approximately 2.5 miles long, arranged in an "L" shape. At the end of each tunnel, a highly polished 40 kg mirror (about 16 inches across) is mounted; this will reflect the laser beam that is sent from the observatory. A laser beam is sent from the observatory room and split into two, with equal parts traveling down each tunnel, bouncing off the mirrors at the end. When the beams return, they are recombined. If the arm lengths are perfectly equal, the light waves cancel out in just the right way, producing darkness at the detector. But if a gravitational wave passes, it slightly stretches one arm while squeezing the other, so the returning beams no longer cancel perfectly, creating a flicker of light that reveals the wave's presence.

The actual detection happens at the point of recombination, when even a minuscule stretching of one arm and squeezing of the other changes how long it takes the laser beams to return. This difference produces a measurable shift in the interference pattern. To be certain that the signal is real and not local noise, both LIGO observatories — one in Washington State (LIGO Hanford) and the other in Louisiana (LIGO Livingston) — must record the same pattern within milliseconds. When they do, it's confirmation of a gravitational wave rippling through Earth. We don't feel these waves as they pass through our planet, but we now have a method of detecting them

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Planetarium

FAAC members are volunteer operators for the Hammond Planetarium at Henry Ford College.

Planetarium shows are free and open to the public.

Four seasonal planetarium shows are offered per year with the stars and constellations of the current season as well as a multi-media presentation featuring select planets.

Public planetarium shows are normally the third Wednesday of each month at 7:00pm. Please see the planetarium schedule for specific times. It is posted here:

fordastronomyclub.com/hfc-planetarium

Social Media

The FAAC has several social media accounts. Members are encouraged to join and follow them.

Facebook

facebook.com/FordAstronomyClub

Twitter

twitter.com/Ford_Astro

Discord

<https://discord.gg/RH6rhAPWb8>

Scheduled Club Events

Month	Date	Sunset	Location
September	26th & 27th	4pm - Midnight	Astronomy at the Beach (Kent Lake Beach at Island Lake)

Hammond Planetarium

Date	Time	Topic
October 10th	7:30pm	Fall Planetarium Show
October 15th	7:30pm	Fall Planetarium Show

Club Meeting Topics & Speakers

Meeting	Speaker	Topic
September 25th	Dean Regas	The New & Improved Solar System
October 23rd	Jim Shedlowsky	The Way We Found the Universe

September Meeting

The New and Improved Solar System

Dean Regas, Astronomer, Public Speaker, Author, and Television Host

Description:

Astronomers are finding new objects in our Solar System every day. Orbiting the Sun we have Planets, Asteroids, Plutoids, Comets, and more. And don't forget Moons! Join me to explore the latest images from weird, wild worlds, delve into the newest discoveries and space missions, and talk about little Pluto and its improved place in our solar system.

Bio:

Dean Regas is a renowned public speaker, author, educator, national popularizer of astronomy and an expert in observational astronomy. He served as the astronomer for the Cincinnati Observatory from 2000-2023 and was the Astronomer in Residence at the Grand Canyon in 2021. He is the author of seven books including "All About Orion," "100 Things to See in the Night Sky" and "How to Teach Grown-Ups About Pluto." From 2010-2019 Dean was the co-host of the PBS program Star Gazers. Dean has contributed to Astronomy Magazine, Sky and Telescope Magazine, Farmer's Almanac, USA Today, Science

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Equipment

The FAAC maintain an equipment pool of telescopes, binoculars, cameras, and other equipment used for special events. Much of this equipment is available to members.

Each piece of equipment is either stored by a club volunteer who offers to be the caretaker of the item, or by the person who last borrowed the item.

Most equipment can be borrowed for one-month durations. At the end of the month, the borrower can extend the loan if no other members have requested it.

Some items are reserved for special events use and are not normally available to be borrowed.

If you are interested in borrowing an item, please contact either the current holder of the equipment, or contact the club equipment manager, Jeff Gorman, at equipment@fordastronomyclub.com

Item	Held by	Item	Held by
Telescopes		Display Items	
TK1 Coronado Personal Solar Telescope (Doublestack) w/Meade Autostar Goto Mount	Kristie Whittington	Astronomy Event Sign (3' x 6')	Gordon Hansen
TK5 4.5" Reflector on Fitz GEM mount	Bob MacFarland	Astronomy Event Signs 18x24" (x8)	Liam Finn
TK6 8" Orion XT8i Dobsonian	Dan Smith	PVC Display Board - Folding	Sandra Macika
TK7 TPO 8" f/4 Newtownian Astrograph (OTA Only - no mount)	Scott Smith	Banner - Small (24" x 32")	Sandra Macika
TK8 20" f/5 Obsession Dob, Ladder & EP Kit	Liam Finn	Banner - Medium (24" x 72")	Sandra Macika
TKn Celestron 6" Refractor & AGT Mount		Banner - Large (32" x 16')	Sandra Macika
TKn Meade 8" f/5 Newtonian & LX-70 Mount		Tri-Fold Presentation Boards	Sandra Macika
Zhumell 20x80 Binoculars		Other	
Presentation Tools		Canopy (10' x 10')	Liam Finn
Projector (older)	Jim Frisbie	Pop Cooler	Sean Pickard
Projector (newer)	Gordon Hansen	TA Sky Quality Meter	Liam Finn
Projection Screen 8'	John McGill	36" Flat-Top Griddle	Gordon Hansen
Bullhorn	Liam Finn	Demonstration Tools	
Speaker System w/Wireless Mic	Liam Finn	Weigh on Planets Scale	Liam Finn
Logo Tablecloth (x2)	Gordon Hansen	Lunar Phase Kit	Bob MacFarland
		100' Scale Model Solar System Kit	Bob MacFarland
		NSN Meteorite (Outreach) kit	Sandra Macika

Item	Held by
Imaging Cameras	
C2 Meade Deep Sky Imager Pro III w/Autostar Suite	Gordon Hansen
C6 Canon 60Da Astrophotography DSLR and accessories	Tim Dey
Other Imaging Equipment	
CA1 Rigel Systems Spectroscope	Gordon Hansen
C7 Canon EOS EF 70-200mm f/1.4L IS USM lens & tripod mounting ring (for Canon EOS cameras)	Gordon Hansen
Rokinon 8mm f/3.5 Fish-Eye Lens (Canon EOS Mount)	John McGill
Special Event Items - Not available for Loan Out	
BK2 Zhumell 25x100 Binoculars, hard case, & Zhumell TRH-16 tripod w/soft fabric bag	Sandra Macika
TAK1 Night Vision Image Intensifier for telescopes (2" barrel size)	Tim Dey
Lunt 100mm H-alpha Solar Telescope with Celestron CG-5 equatorial mount	Tim Campbell

Secretary's Report (Con't from Page 2)

tonight is entitled "Introduction to Deep Space Navigation."

Neil started by giving us his background and explaining how he went from being the son of a Midwest farmer, to developing an interest in astronomy, and finally ending up at JPL. Hint: A homemade backyard telescope was involved!

He explained in detail what the Deep Space Network is and how it is used to communicate with interplanetary spacecraft. In short, it is an array of three giant radio antennas spaced approximately 120 degrees apart around the globe. These radio antennas are what enable us to "talk" to spacecraft many millions of miles away.

He presented illustrations of the celestial sphere, an astronomical model which represents an infinitely large sphere with Earth at its center that allows us to map the sky. This astronomical coordinates system is what allows us to know when and where to send a

spacecraft and be assured that it will arrive at the proper destination.

We are grateful to Tim Dey for setting up this talk with Neil Mottinger. The meeting was well-attended, and we had a lively question-and-answer session that followed.

What's Up in the Night Sky

Sean went over our calendar of upcoming events, which can also be found on our website and in "Star Stuff." Saturn is at opposition on September 21. He also gave dates for upcoming ISS transits of the sun and moon.

Meeting adjourned at 9:04 p.m.

Monthly speaker (cont'd from page 5)

Friday and Here & Now. He is also the host of a popular astronomy podcast called "Looking Up with Dean Regas." Dean brings the complicated field of astronomy down to Earth for people of all ages.

September 4, 2025 Board Meeting Summary

(Videoconference meeting.) All board members present except VP Sean Pickard. Six other members present. Our upcoming general meeting on September 25 will feature guest speaker Dean Regas of the Cincinnati Observatory giving an in-person talk about the History of the Telescope.

Treasurer: Jameson reported our current balance to the board.

Membership: Doug Bauer advises he will be sending out renewal notices starting in November. We have recently had one member renew their membership for 2025. Doug will also take care of reserving the auditorium for our meetings for 2026.

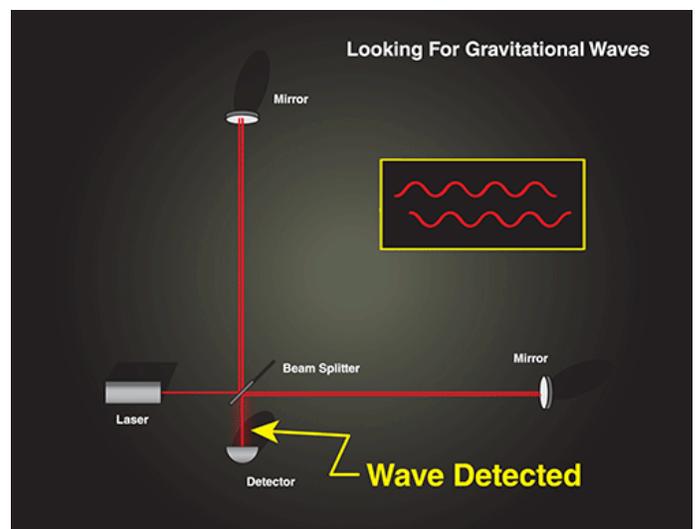
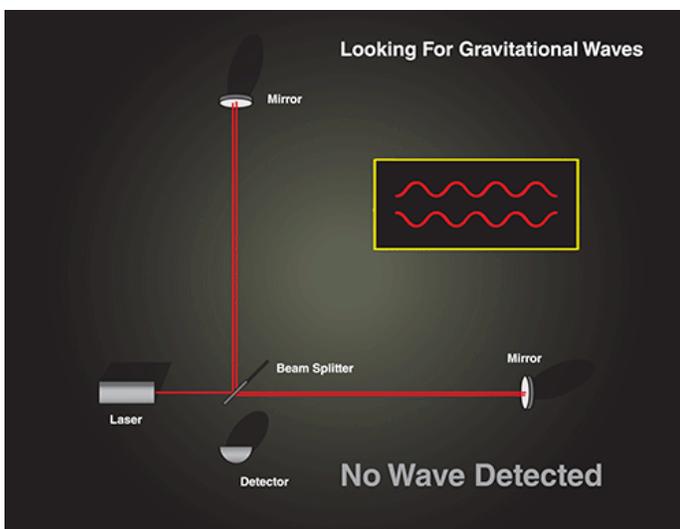
Social Media/Website: Liam Finn advises the club now has an Instagram account. Isha has volunteered to be the manager of this account.

Club Equipment: Jeff Gorman advises everything is nearly up to date. Look to see the Celestron C8 SCT with mount and the Celestron 70mm refractor with mount added to our inventory and borrowable soon.

AATB: Gordon Hansen is still looking for volunteers! All FAAC members are welcome, no experience required. We need help staffing the club table under the tent, helping out in the field with our 20" Dob, bringing your own telescope to share with the public, and also set-up and take-down before and after the event. We are hoping to recruit many new members to the club, and the more current members we have on hand and visible at the event, the easier this will be.

We also talked about guest speakers and the fact that we have not set anything up yet for 2026, which is coming up fast. We are grateful to Sandra Macika, who has done this job for many years and will continue to do so, but she can definitely use some new ideas from you, our membership. Please feel free to contact her or any board member.

Gravitational Waves (Con't from Page 2)



Animation of how LIGO (Laser Interferometer Gravitational-Wave Observatory) detects gravitational waves using a laser, mirrors, and a detector. You can find the animated version [here](#). Credit: NASA

Get Involved

With the help of two additional gravitational-wave observatories, VIRGO and KAGRA, there have been 300 black hole mergers detected in the past decade; some of which are confirmed, while others await further study.

While the average person may not have a laser interferometer lying around in the backyard, you can help with two projects geared toward detecting gravitational waves and the black holes that contribute to them:

- Black Hole Hunters: Using data from the TESS satellite, you would study graphs of how the brightness of stars changes over time, looking for an effect called gravitational microlensing. This lensing effect can indicate that a massive object has passed in front of a star, such as a black hole.
- Gravity Spy: You can help LIGO scientists with their gravitational wave research by looking for glitches that may mimic gravitational waves. By sorting out the mimics, we can train algorithms on how to detect the real thing.

You can also use gelatin, magnetic marbles, and a small mirror for a more hands-on demonstration on how gravitational waves move through space-time with JPL's Dropping In With Gravitational Waves activity!

University of Michigan Public Nights at the Observatory

2025 Schedule

Public nights at the U of M Observatory will be held, weather permitting, on these nights.

- Observing sessions require suitable sky conditions. To learn the status of any event, check the Observatory's home page and/or CASL social media pages beginning one hour before the event. Please arrive no later than one half hour before the scheduled end of the session.
- All sessions are free and open to the public. These events are family friendly, but best suited to children over the age of 4. Observing sessions are primarily held outdoors. Please dress appropriately for personal comfort during your visit.
- The Observatory is located on the main campus of the University of Michigan-Dearborn, in the Science Learning and Research Center (SLRC). Park in the parking lot behind the SLRC (Parking Lot A) and enter the building through the west door. Take the elevator to the third floor, and turn left to go through the double doors to the observing deck.

For more information visit our website at:

<https://umdearborn.edu/casl/centers-institute/um-dearborn-observatory>

Club volunteers are welcome and appreciated at these events. If you would like to volunteer, you *do not* need to bring a telescope. The observatory has several 8" Celestron SCT telescopes on piers located on the observation deck — but they appreciate have enough volunteers on hand to staff each telescope.

Contact Liam Finn or Tim Campbell if you are interested.

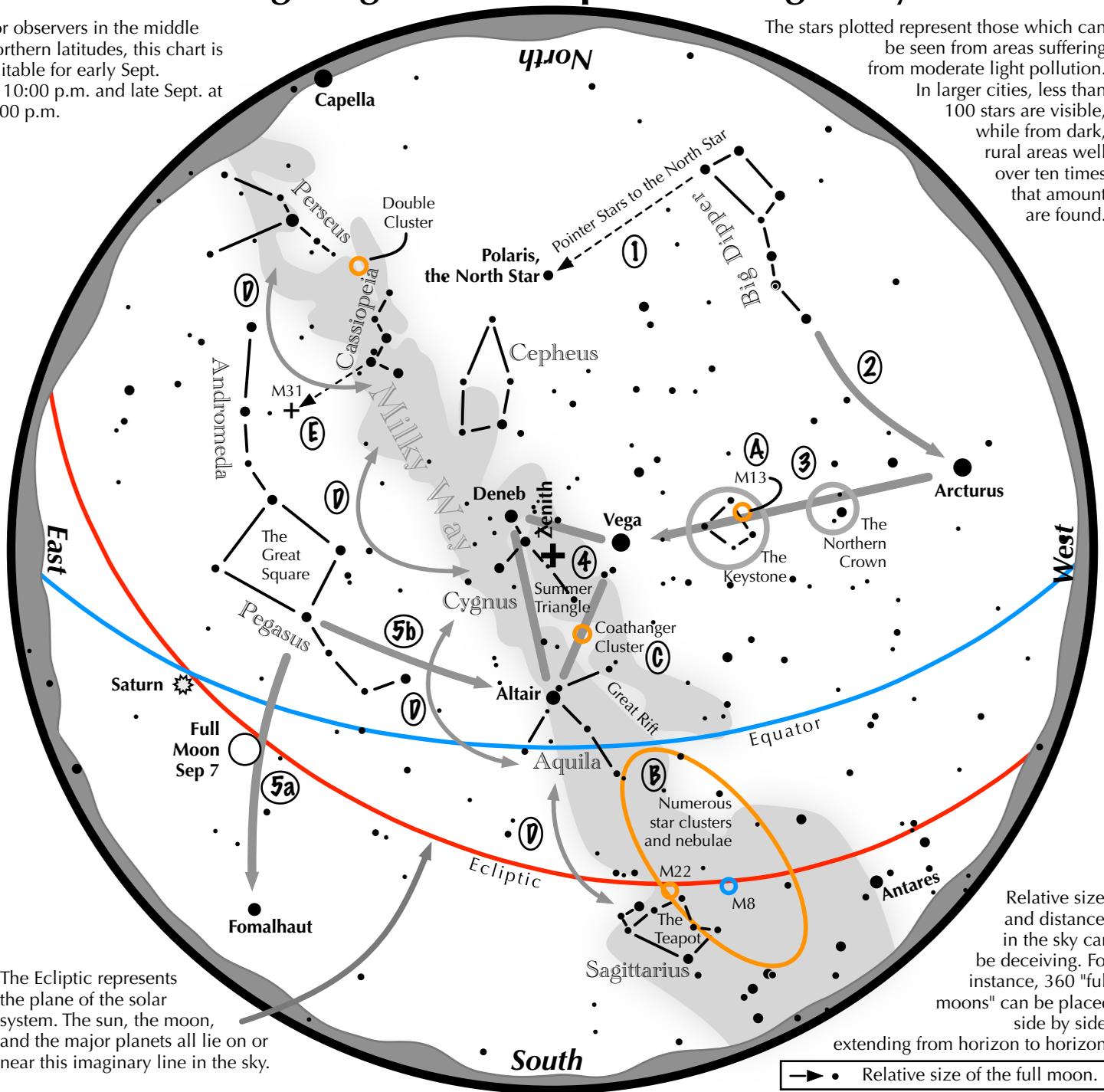


April 25	9:30pm – 11:30pm
May 2	9:30pm – 11:30pm
May 16	10:00pm - Midnight
May 30	10:30pm – 12:30am
June 6	10:30pm – 12:30am
June 20	10:30pm – 12:30am
June 27	10:30pm – 12:30am
July 18	10:30pm – 12:30am
July 25	10:30pm – 12:30am
August 1	10:30pm – 12:30am
August 15	10:00pm - Midnight
August 22	10:00pm - Midnight
September 12	10:00pm - Midnight
September 19	9:30pm – 11:30pm
October 10	9:30pm – 11:30pm
October 17	9:30pm – 11:30pm
October 31	8:00pm – 11:00pm

Navigating the mid September Night Sky

For observers in the middle northern latitudes, this chart is suitable for early Sept. at 10:00 p.m. and late Sept. at 9:00 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.

→ • Relative size of the full moon.

Navigating the mid September 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 September evening sky.
- 3 Nearly overhead shines a star of similar brightness as Arcturus, 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 The stars of the summer triangle, Vega, Altair, and Deneb, shine overhead.
- 5 The westernmost two stars of the Great Square, which lies high in the east, point south to Fomalhaut. The southernmost two stars point west to Altair.

Binocular Highlights

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

