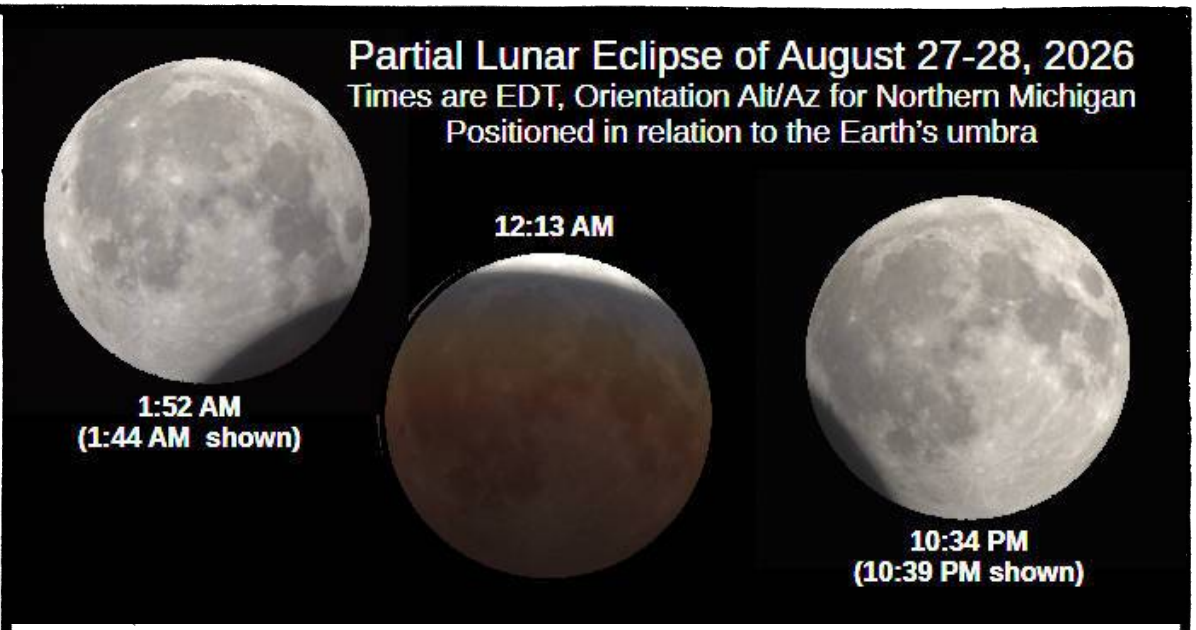
STELLAR SENTINEL
Grand Traverse Astronomical Society
August 2026



The near beginning, middle and near end of the August 27-28 2026 partial lunar eclipse. The motion of the Moon is leftward and a straight line against the celestial sphere. However the Earth's rotation, and our position on it, causes the scene to rotate slightly clockwise for naked eye or binocular observers. The Moon's position is displayed in relation to the fixed umbra shadow. Lunar images created using Stellarium.

Three astronomical events in August, 2026

By Bob Moler

August is host to three astronomical events: The first, a partial, but unremarkable solar eclipse. Later that night, the Perseid meteor shower, unobstructed by any moonlight reaches its peak. Lastly, a partial lunar eclipse, that will be nearly total.

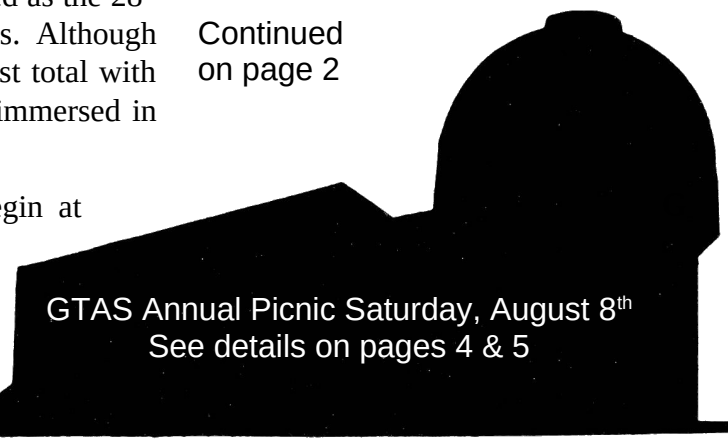
Partial Lunar Eclipse August 27-28

Starting with the most prominent eclipse of the month, the partial lunar eclipse that starts late on the evening of Thursday, the 27th. Officially it's the 28th, since it completely occurs after zero hours Universal Time on the 28th (8 PM EDT on the 27th), it is generally denoted as the 28th of August by official sources. Although it's a partial eclipse it is almost total with 93% of the moon's diameter immersed in the inner umbral shadow.

The umbral phase will begin at 10:34 PM, with mid-eclipse occurring at 12:13 AM. The umbral phase will end at 1:52 AM. The umbral eclipse will last 3 hours and 18 minutes. That's the "partial eclipse". Since the sun is a disk, the earth's shadow appears fuzzy. That fuzzy part is the penumbra where the light of the Sun is increasingly blocked by the earth. I've found that this is noticeable on the Moon for about a half hour or so before and after the umbral phase. The dimmest will be the strongest on the part of the Moon that is nearest the umbra contact point. I've found the viewing the moon through sunglasses or a moon filter enhances the penumbra's dimming effect.

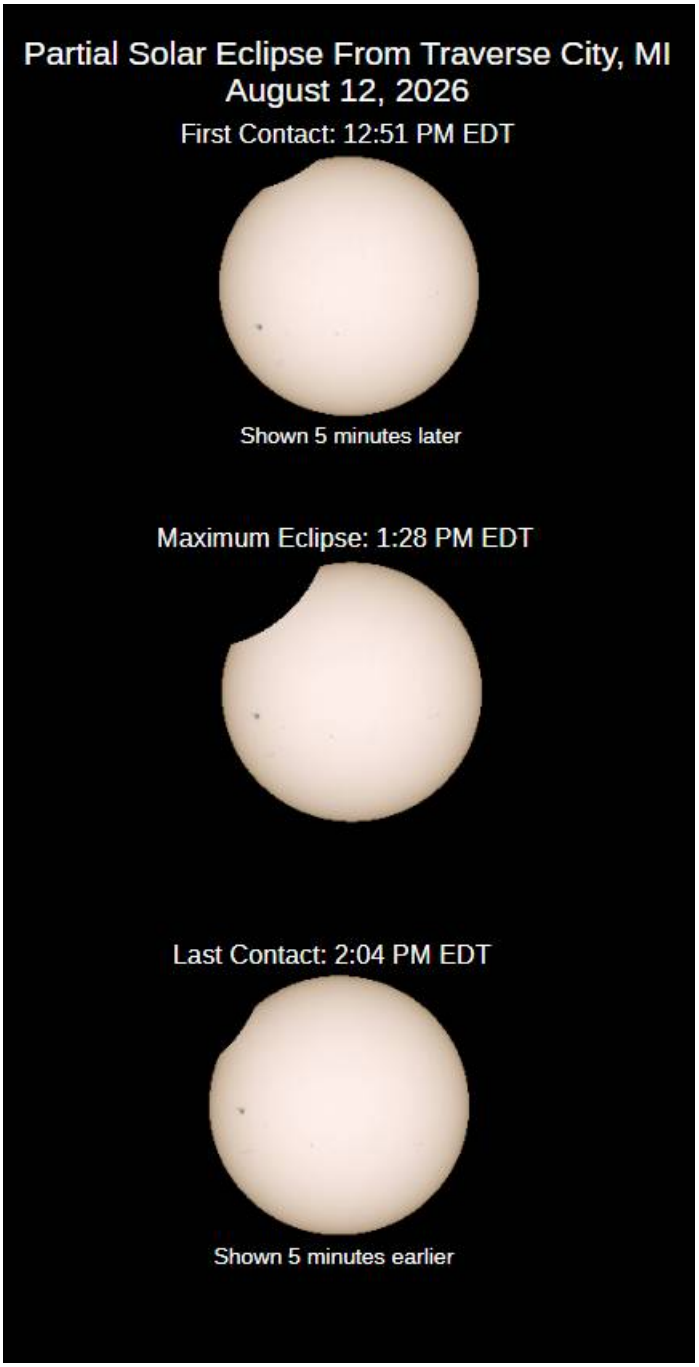
Partial solar eclipse August 12

Continued on page 2



GTAS Annual Picnic Saturday, August 8th
See details on pages 4 & 5

Three astronomical events in August 2026… (Continued from page 1)



Created using Stellarium.

We will see a nibble of an eclipse, with only 11% of the sun's diameter covered at peak on the early afternoon of Wednesday, August 12th. The eclipse will begin at 12:51 PM for the Grand Traverse Area, mid-eclipse will be at 1:28 PM, and the eclipse will be over at 2:04 PM. The times are approximate, based on Traverse City vicinity, specifically Chez Moler, located between Traverse City and Interlochen, the basis for timings for my Ephemeris Program.

This may sound astrological, but you, or rather your location is intimately involved in the timing of, and what you see, of a solar eclipse. Or of any occultation, for that matter.

The usual solar viewing warning applies here. Do not look directly at the sun. If you have solar eclipse glasses from the 2024 solar eclipse, check them out against a bright light, not the sun, for any pin holes that have developed. If any, do not use those glasses! Pinhole projection is another way of viewing the sun, although the moon's nibble on the sun is rather small, so you will have to project a larger image of the sun to get the full effect. Also, telescope eyepiece projection works great!. Do not look through the telescope or the finder. Locate the sun by the telescope's shadow. Project the image through the eyepiece onto a large, white surface.

Perseid Meteor Shower

On August 12th we have a double header. We have the previously described partial solar eclipse, where the moon was playing kissy face with the sun, taking it out of the night sky and have the peak of the Perseid meteor shower later that evening with dark skies between evening and morning twilight.

The Perseid meteor shower is the second most

Continued on page 3

Grand Traverse Astronomical Society - Est. June 1982 – 44 years of service

-----Officers-----		*-----Directors-----*	*----------Patrons----------*
President	Jerry Dobek	Charles Bell	Charles Bell, Robert Carroll & Terri Mills, Daniel Dall'Olmo, Don and Kathy Flegel, Bill Hathaway, Judy Moler, Chris & George Renner, Ronald & Jan Uthe
Vice President	Tony Pernicano	Joe Brooks	
Secretary	Don Flegel	Kim Dobek	
Treasurer	Gary Carlisle	Bill Hathaway	
Editor	Bob Moler		

Upcoming Society Events

Events not held at the Joseph H. Rogers Observatory depend on the weather.

Saturday, August 8 – GTAS Annual Picnic at Evelyn Brandt's Farview Orchards, Suttons Bay.

7 PM to ? – **Details on page 4.**

Saturday, August 15 – Star Party at the Sleeping Bear Dunes, Dune Climb, 9 PM.

Friday, September 4 – Monthly meeting and star party at NMC Rogers Observatory. Also available via **Zoom**. See our website http://www.gtastro.org. for instructions and a link to click.

7 PM – Board of Directors Meeting

8 PM – General Meeting.

9 PM – Star Party, if it is clear.

Saturday, September 12 – Star Party at the Sleeping Bear Dunes, Dune Climb, 9 PM.

Zoom Meeting Link: https://us02web.zoom.us/j/8388913229?omn=88435646093

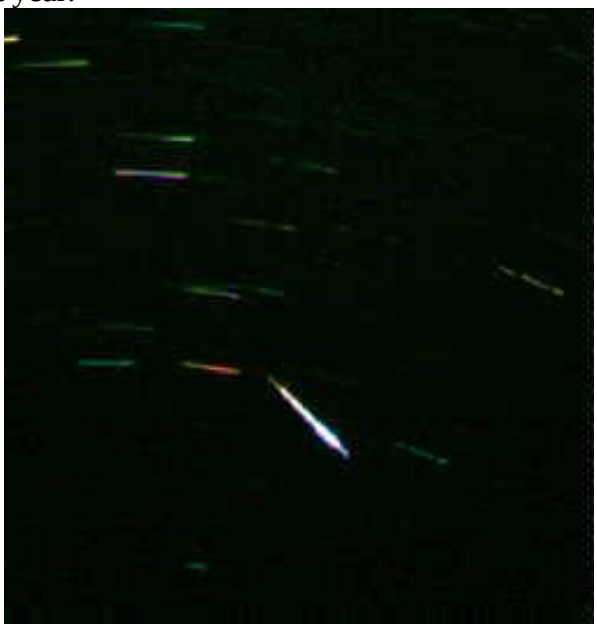
active annual meteor shower. The most active is the Geminids of December during a period that's cold and generally very cloudy here in Northern Michigan. This makes it the best meteor shower of the year for us.

Observing this meteor shower is very easy and one needs no special equipment. A blanket to lie on, mosquito repellent, warm clothes, some coffee and snacks, if staying the night, and a dark location.

Binoculars are nice to take a break to explore the Milky Way and to observe the smoky train left by a particularly bright meteor. These can be viewed for a minute of more and deform and twist due to the different wind directions and speeds at different altitudes.

The Perseid meteor shower, like all meteor showers are caused by the debris left along the orbits of comets. If the comet's orbit crosses close to the Earth's orbit we can get a meteor shower. Comets spend the majority of their time far from the Sun, where it's very cold, and are in very elongated orbits.

The comet responsible for the Perseids is 109P/Swift-Tuttle. It was independently discovered by L. Swift and P. Tuttle in 1862. It was first recorded as being seen in 69 BC by, you guessed it, the Chinese. It's a big comet, with a nucleus some 16 miles in diameter, and it crosses the Earth's orbit, so it is a potentially hazardous object, and if it hit the Earth, would wreak more damage than the asteroid that killed the dinosaurs. From the 1862 appearance the comet was given a period of 120 years. It didn't show in 1982. An observation of the previous appearance of the comet in 1737 allowed a recalculation of the orbit and a new return year of 1992. That was correct. The comet was recovered that year. ★



My one and only good Perseid photo.

Details of the GTAS Annual Picnic and Star Party

This year's picnic and star party will be in lieu of our normal August meeting. It's Saturday evening August 8th at the Evelyn Brandt's Farview Orchards. They have a beautiful high spot which overlooks the Grand Traverse Bay to the east and the Manitou islands to the west. We've had picnics there many times.

Time:

7 pm, or as soon as you can make it. Don't be in a hurry to leave. Though we will have a full moon, the sunsets from there are spectacular, and so are the dark moonless skies. If it's clear, bring your scope.

Location:

It's located at 304 S Herman Rd, Suttons Bay. It's the drive marked 304 Farview Orchards. S Herman road runs into County Rd. 633 (Center Rd) south of Suttons Bay. Drive up Herman Rd about 1.4 miles. The drive will be on the left, coming from TC, at the point opposite Crestwood Rd that runs into Herman from the right.

Follow the asphalt drive turning to the left at each of the two forks on it. The road will end in a gravel road by the front of a brown house (The Brandt's). The drive will take you through a cherry orchard to the picnic and viewing spot on top of the hill. It's nearly a mile from Herman Road to the picnic spot. www.gtastro.org/members has a map from S. Herman Road to the picnic site, including an aerial photograph from MapQuest. That map is reproduced on the next page. In the past the Brandt's have provided for a porta-potty be set up there.

What To Bring:

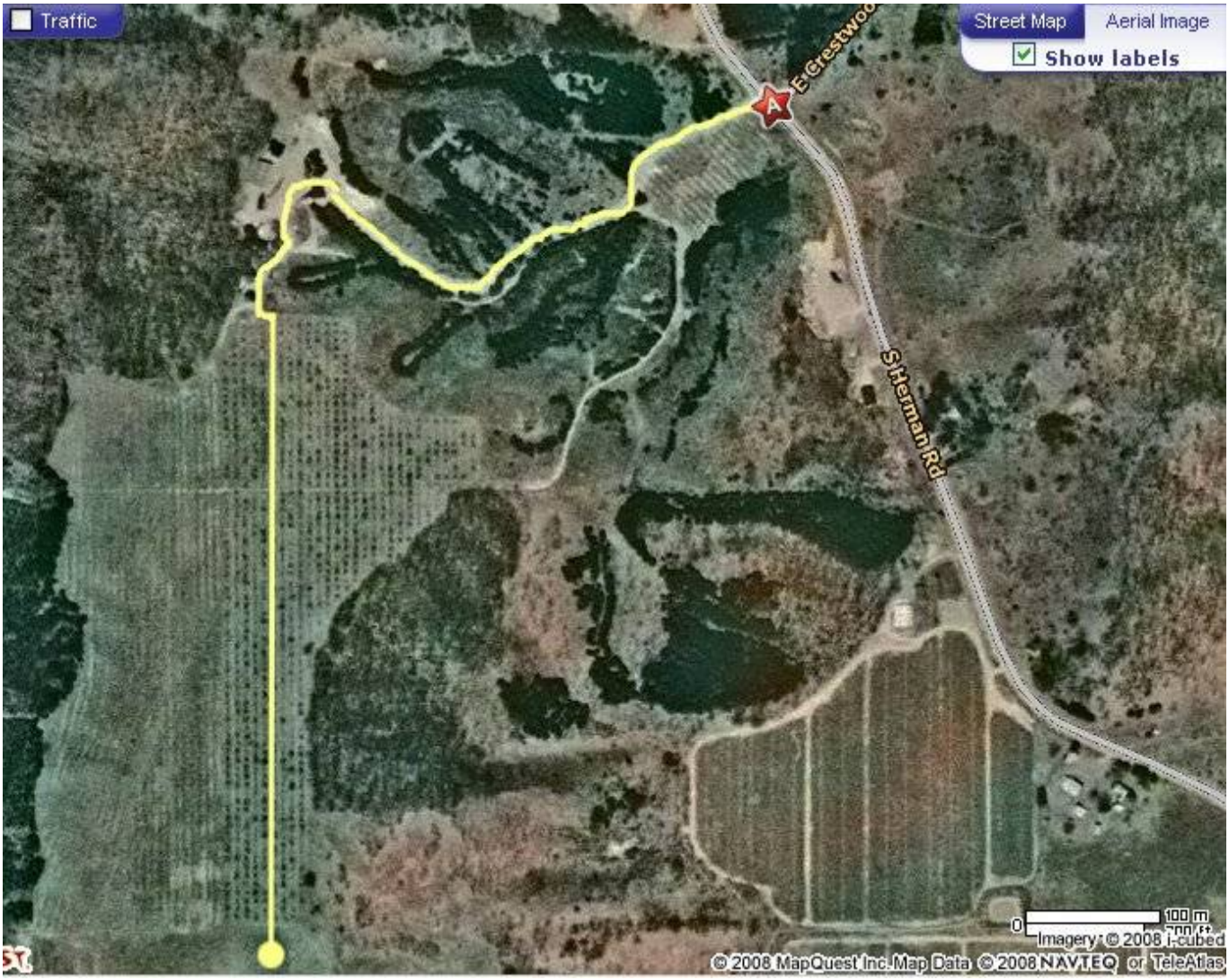
Bob Moler will cook corn on the cob and hot dogs, plus Jerry Dobek will provide brats. Bring a dish (salad, vegetable, or dessert) to pass. You will also have to provide your own table service, beverage, chairs, trays or tables.

Contingency:

Only once in the over 20 years we've been holding picnics have we been chased off the hill prior to the actual meal. That was last year. We've been chased off once after we ate, but those are the only two instances of weather related problems up there. I, your editor, will consult with Jerry Dobek in the afternoon, and by 3:00 PM e-mail a message to all members who get this newsletter **if** we need to cancel due to weather. Will mail everybody all members who get this newsletter. Still there's no guarantee the weatyher will hold… This is Michigan.

★





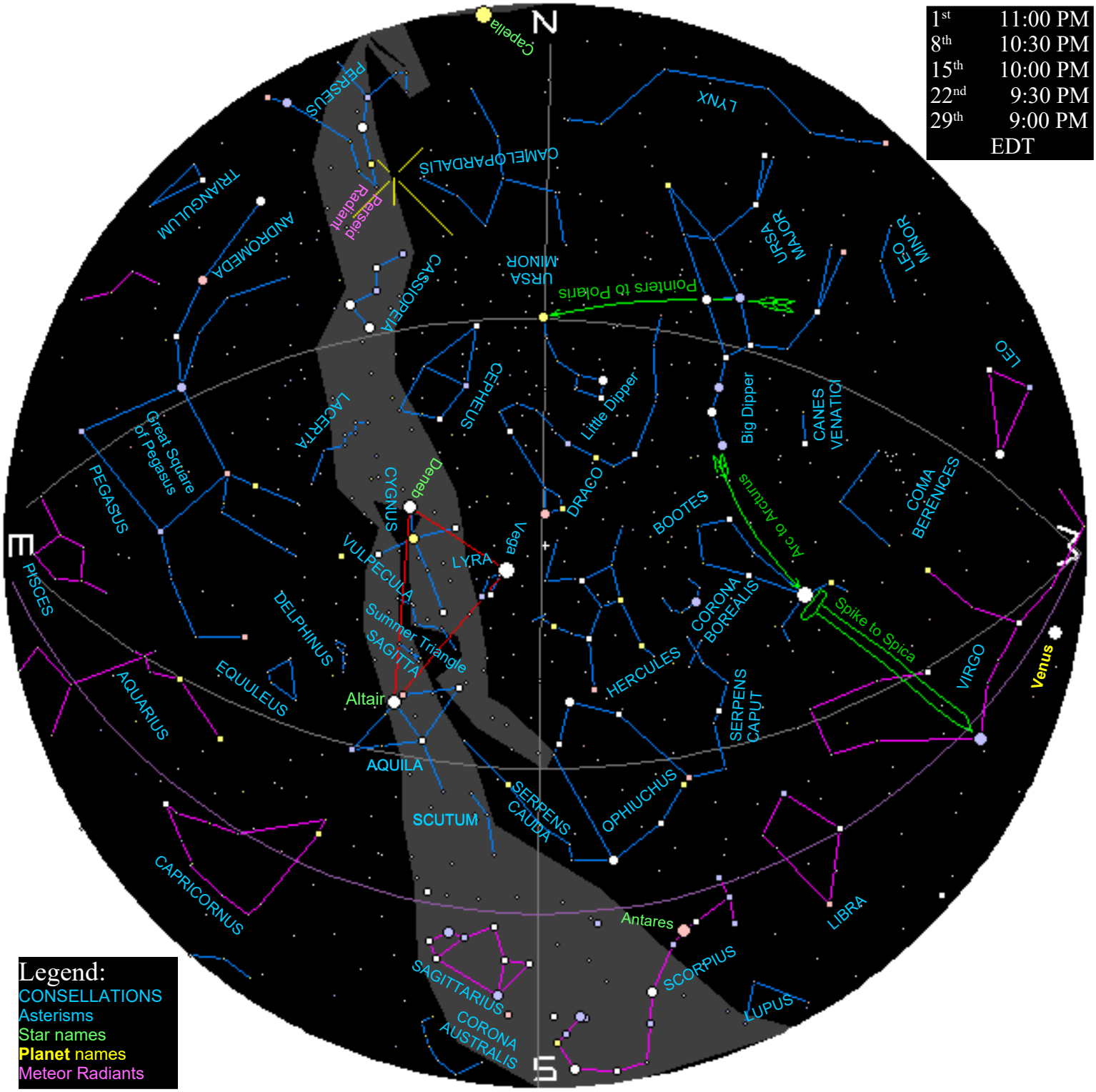
Once you turn off Herman Rd., there's only 0.9 miles to go. If Gary and Eileen Carlisle beat you there, and they probably will, they will post GTAS signs directing you from Herman Rd. to the picnic site.

The Stars and Planets for August 2026

By Bob Moler

Planets are plotted for mid month. The star positions are correct for:

1st	11:00 PM
8th	10:30 PM
15th	10:00 PM
22nd	9:30 PM
29th	9:00 PM
	EDT



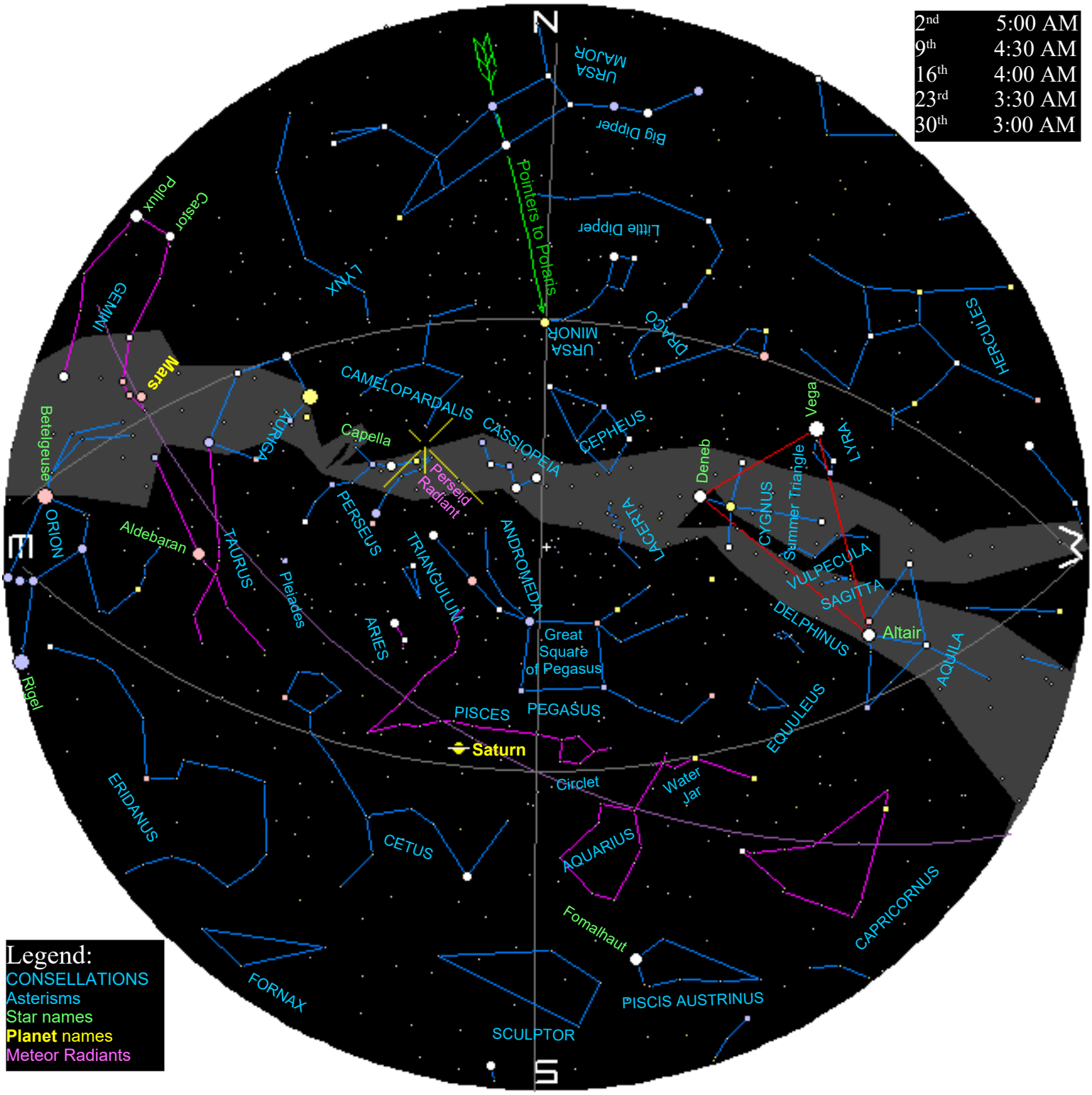
Legend:
CONSELLATIONS
Asterisms
Star names
Planet names
Meteor Radiants

August is the greatest month to view the stars, in my humble opinion. That's because the summer Milky Way extends to the southern horizon showing us the great star fields in Sagittarius and Scutum along with Scorpius. Binoculars are all that is necessary to scan the milky band for deep sky wonders such as star clusters and nebulae, both bright and dark. Chart time at mid month is 10 pm in tune with the decreasing sunset and twilight end times. Venus is the only naked eye planet up at this time. Check out also the location of the Perseid radiant low in the northeast. The peak of the shower occurs on the evening of the 12th, and will be free of moonlight due to the new moon that day.

The Stars and Planets for August 2026 Mornings

By Bob Moler

Planets are plotted for mid month. The star positions are correct for:



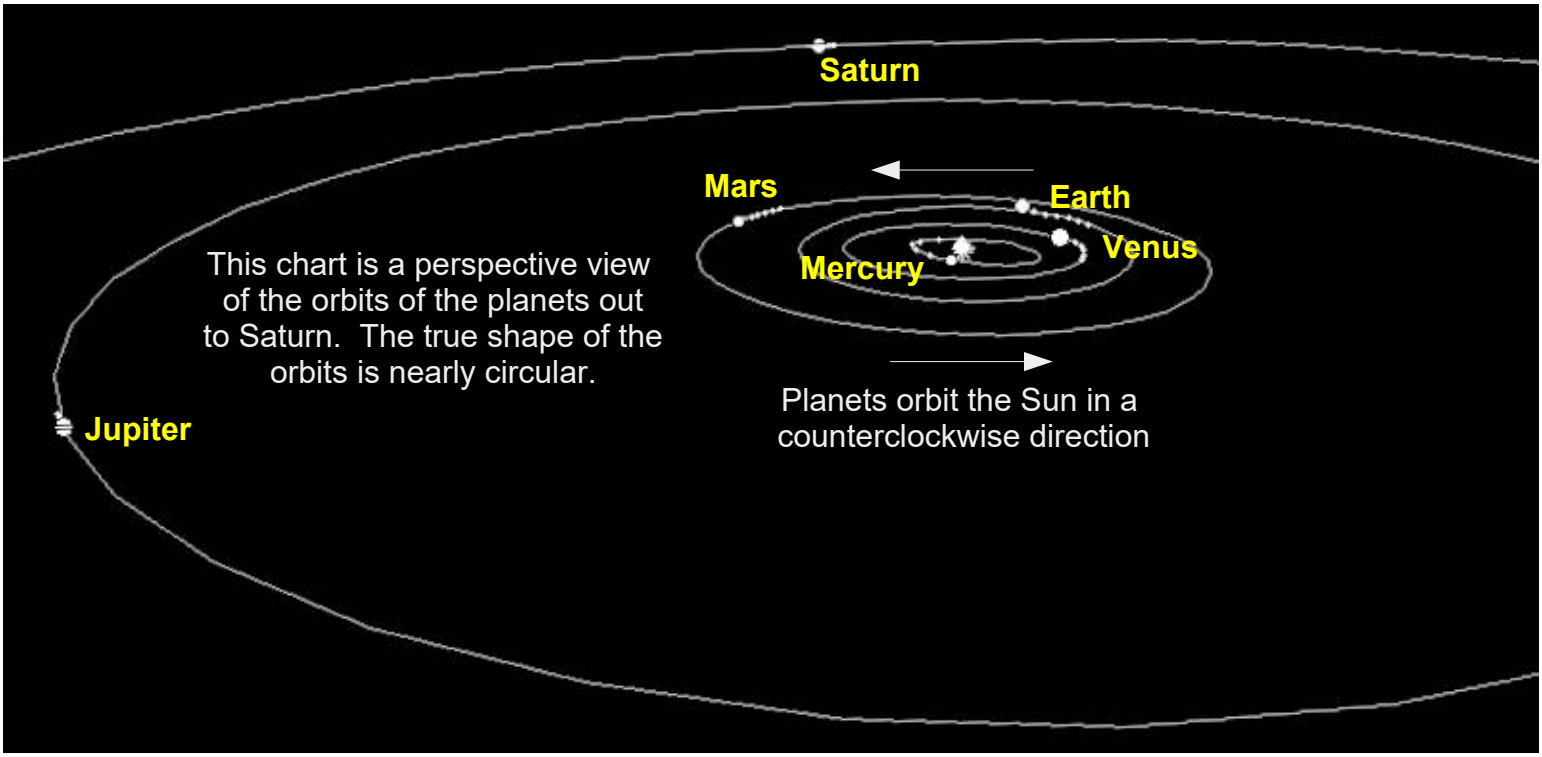
The August morning sky looks a lot like the November evening sky with Orion throwing a leg over the eastern horizon as Robert Frost said in his poem *The Star-splitter* (https://www.poetryfoundation.org/poems/44273/the-star-splitter). It isn't suggested, as Brad McLaughlin did in the poem, that you burn your house down for the insurance money to buy a telescope. Come to a star party instead, or buy a used telescope. The big deal about morning observing in August is the peak of the Perseid meteor shower on the evening of the 12th. This year the peak of the shower comes at new moon, the most perfect moonless night. Saturn and Mars are the morning planets now.

PlanetTalk
Computed by Bob Moler

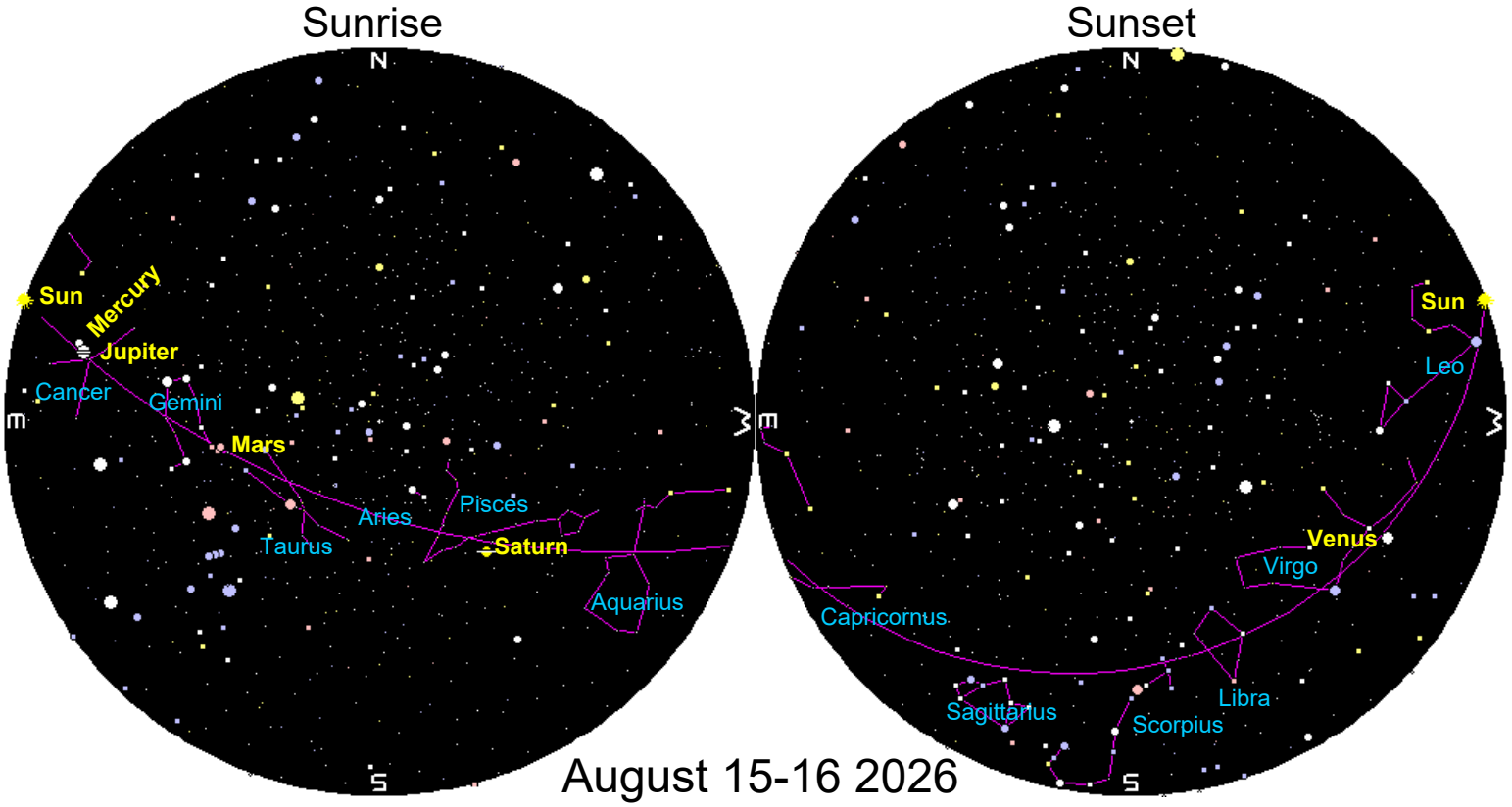
For more information on planets each Wednesday:
https://bobmoler.wordpress.com

The Naked Eye Planets

August 1st, 6th, 11th, 16th, 21st, 26th, & 31st



The Planets as Seen From Northern Michigan



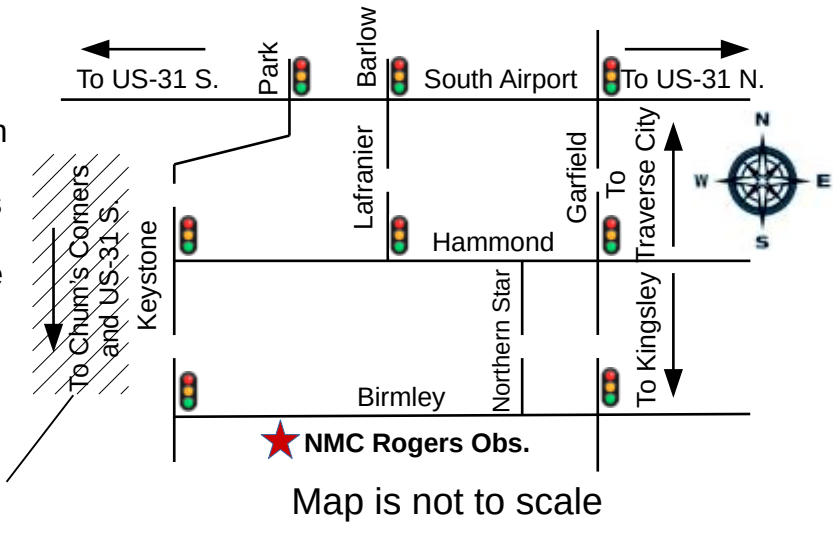
August 15-16 2026

CELESTIAL CALENDAR

	Date		Time	Event
Aug	1	Sa		Venus: 45.3° E
	2	Su	3:59 AM	Mercury Elongation: 19.5° W
	5	We	10:21 PM	Last Quarter
	7	Fr	2:23 AM	Moon-Pleiades: 1.2° S
	8	Sa	7:42 PM	Moon North Dec.: 28.1° N
	9	Su	1:31 AM	Moon-Mars: 4.4° S
	10	Mo	7:18 AM	Moon Perigee: 363300 km
	12	We	1:37 PM	New Moon
	12	**We**	**1:47 PM**	**Total Solar Eclipse,11% partial here**
	12	**We**	**9:56 PM**	**Perseid Shower: ZHR = 90**
	13	Th	5:56 AM	Moon Descending Node
	15	**Sa**	**1:59 AM**	**Venus Greatest Elongation: 45.9° East**
	16	Su	4:46 AM	Moon-Venus: 2.2° N
	17	Mo	7:49 AM	Moon-Spica: 2.6° N
	19	We	10:46 PM	First Quarter
	21	Fr	12:17 AM	Moon-Antares: 0.7° N
	22	Sa	4:20 AM	Moon Apogee: 404600 km
	22	Sa	6:59 AM	Moon South Dec.: 28.1° S
	27	Th	12:44 PM	Mercury Superior Conjunction
	27	Th	2:47 PM	Moon Ascending Node
	28	**Fr**	**12:14 AM**	**Partial Lunar Eclipse**
	28	Fr	12:18 AM	Full Moon
Sep	1	Tu		Venus: 44.6° E

Sky Events Calendar by Fred Espenak and Sumit Dutta (NASA's GSFC), http://eclipse.gsfc.nasa.gov/SKYCAL/SKYCAL.html to make your own for any year. Some additions and clarifications were made by the editor.

The Grand Traverse Astronomical Society meets on the 1st Friday of each month except August at the Northwestern Michigan College Rogers Observatory. The public is invited to all society functions as our guests. We are a non-profit group dedicated to the study of astronomy. If you'd like more information about us, our meeting and outreach schedule, see our website: www.gtastro.org.



Map is not to scale

Sun, Moon, and Twilight for NMC Observatory (Traverse City)

August, 2026 Local time zone: EDT

DATE	SUN RISE	SUN SET	DAYLIGHT HOURS	TWILIGHT* END	TWILIGHT* START	MOON PHASE	MOON RISE OR SET**	TIME	ILLUM FRACTN
Sat 1	06:29a	09:07p	14:38	10:22p	05:13a		Rise	10:29p	89%
Sun 2	06:30a	09:06p	14:36	10:21p	05:15a		Rise	10:48p	81%
Mon 3	06:31a	09:05p	14:33	10:19p	05:16a		Rise	11:07p	72%
Tue 4	06:32a	09:03p	14:31	10:17p	05:18a		Rise	11:29p	62%
Wed 5	06:33a	09:02p	14:28	10:16p	05:19a	L Qtr	Rise	11:57p	51%
Thu 6	06:34a	09:01p	14:26	10:14p	05:21a		Rise	12:32a	40%
Fri 7	06:35a	08:59p	14:23	10:12p	05:22a		Rise	01:20a	29%
Sat 8	06:37a	08:58p	14:21	10:10p	05:24a		Rise	02:22a	19%
Sun 9	06:38a	08:56p	14:18	10:09p	05:25a		Rise	03:36a	10%
Mon 10	06:39a	08:55p	14:16	10:07p	05:27a		Rise	04:58a	4%
Tue 11	06:40a	08:53p	14:13	10:05p	05:28a		Rise	06:22a	1%
Wed 12	06:41a	08:52p	14:10	10:03p	05:30a	New	Set	08:59p	0%
Thu 13	06:42a	08:50p	14:08	10:01p	05:31a		Set	09:21p	2%
Fri 14	06:44a	08:49p	14:05	10:00p	05:33a		Set	09:41p	7%
Sat 15	06:45a	08:47p	14:02	09:58p	05:34a		Set	10:00p	13%
Sun 16	06:46a	08:46p	13:59	09:56p	05:35a		Set	10:20p	21%
Mon 17	06:47a	08:44p	13:57	09:54p	05:37a		Set	10:41p	30%
Tue 18	06:48a	08:43p	13:54	09:52p	05:38a		Set	11:05p	39%
Wed 19	06:49a	08:41p	13:51	09:50p	05:40a	F Qtr	Set	11:35p	49%
Thu 20	06:51a	08:39p	13:48	09:48p	05:41a		Set	12:11a	58%
Fri 21	06:52a	08:38p	13:45	09:46p	05:43a		Set	12:56a	68%
Sat 22	06:53a	08:36p	13:42	09:44p	05:44a		Set	01:50a	76%
Sun 23	06:54a	08:34p	13:40	09:42p	05:46a		Set	02:51a	84%
Mon 24	06:55a	08:32p	13:37	09:40p	05:47a		Set	03:57a	90%
Tue 25	06:56a	08:31p	13:34	09:38p	05:49a		Set	05:06a	95%
Wed 26	06:58a	08:29p	13:31	09:36p	05:50a		Set	06:15a	99%
Thu 27	06:59a	08:27p	13:28	09:34p	05:51a		Set	07:24a	100%
Fri 28	07:00a	08:25p	13:25	09:32p	05:53a	Full	Rise	08:36p	99%
Sat 29	07:01a	08:24p	13:22	09:30p	05:54a		Rise	08:54p	96%
Sun 30	07:02a	08:22p	13:19	09:28p	05:56a		Rise	09:13p	91%
Mon 31	07:03a	08:20p	13:16	09:26p	05:57a		Rise	09:35p	84%

* Nautical Twilight

** Moonrise or moonset, whichever occurs between sunset and sunrise

Grand Traverse Astronomical Society

Membership Application / Renewal for 2026

For renewing members, all we need is your name and email or street address to identify you, plus any information that has changed.

___ I am interested, please send me more information about the next GTAS meeting. (Also see www.gtastro.org)

___ I'll join, payment enclosed

___ Membership renewal

Membership term runs from January to December

Email Address:_____

Newsletter Delivery: ___ Email ___ Mail (Postcard only)

Interests: _____

Name(s): _____ Home Phone: _____ Cell:_____

Address: _____ __

(Street, City, State ZIP)

Dues: ___ Single Membership $25.00/yr

___ Family.....….....$30.00/yr

___ Student (up to 18 years age)....$15.00/yr

___ Patron (Donation)……..……..$_____

Mail check to: G.T.A.S.

Gary Carlisle, Treasurer

1473 Birmley Road

Traverse City, MI 49696-8808

For new members just joining mid-year, pro rate the dues thus: Annual Dues x months remaining in the year / 12.
Example: Single Joining in June: $25.00 X 6 (Jul-Dec) / 12 = $12.50

Eileen Carlisle
Avon Representative
1473 Birmley Road
Traverse City, MI 49696-8808
Phone: 946-8123 Fax: 929-0859
E-Mail: EileenAvonRep@charter.net

WANTED: Astronomers interested in working with Project ASTRO POLARIS.
Willingness to work with K-12 students and teachers. Visiting classrooms and conducting experiments, discussing astronomy interests and events. Sharing your love of astronomy with others. Will provide; training, materials, instuctionals and support.
Please contact: Jerry Dobek Site Coordinator Project ASTRO POLARIS NMC Science & Math 1701 East Front Street Traverse City, MI 49686 email jdobek@nmc.edu phone 946-1787 obsv. 223-4545 home