

# YOUR 2021 ASTRO CALENDAR

Here are a few celestial events to take note of for the rest of the year.



**Sept. 7, Oct. 6, Nov. 4, Dec. 4**  
**New Moons**

These are great nights to set up your telescope or shoot images if the sky is clear. With no moonlight interfering, you'll see faint objects like galaxies and star clusters.

**Sept. 14**  
**Neptune at Opposition and Mercury at Greatest Eastern Elongation**

You'll need a telescope to see Neptune, but you'll be able to catch Mercury with the naked eye just after sunset. Set your sights on a low western horizon and bring binoculars.

**Sept. 30**  
**The Star Pollux**

A waning crescent moon will be visible near the bright star Pollux, slightly above and to the left. It's a nice sight if you're willing to get out of bed in the early morning to catch it.

**Oct. 8**  
**Draconids Meteor Shower**

A young moon (meaning it sets early) will make for a good shower show. The radiant point (the point in the sky

from which meteors radiate) is higher early in the evening but gets low in the northwest after midnight, just about the time meteor activity should pick up.

**Oct. 29**  
**Venus at Greatest Eastern Elongation**

See Venus at its best all year after sunset in the western sky on a low horizon. Venus' orbit is closer to the sun than Earth's, so it's lost in the solar glare most of the time. But when it's at its greatest elongation (its farthest point from the sun), it becomes the third-brightest object in the sky after the sun and moon, which is why it's often called the morning or evening star.

**Nov. 5**  
**Uranus at Opposition**

See blue-green Uranus at its brightest all year. It will be invisible to the naked eye in the city, but if you find a very dark sky you could catch it. Binoculars will help because it's a bit of a challenge to find.

**Nov. 12**  
**Taurids Meteor Shower**

The northern Taurids shower

peaks Nov. 12, but expect shower activity a few days before and after the peak. During the other meteor showers that take place between September and the end of this year — Orionids Meteor Shower from Oct. 20-22, Leonids Meteor Shower from Nov. 16-18 and Ursids Meteor Shower from Dec. 21-22 — the moon is either nearly full or waning gibbous, neither of which is good for meteor viewing. So the Taurids shower is likely the best show you'll get yet this year.

**Nov. 19**  
**Full Moon and a Partial Eclipse of the Moon**

Though technically partial, this lunar eclipse is nearly total, so it should be an interesting sight. It begins at about midnight in Wisconsin, reaches its deepest eclipse around 3 a.m. and will end about an hour before sunrise.

**Dec. 4**  
**Total Solar Eclipse**

You'll only be able to see the moon completely block the sun on this day if you're up for a trip to Antarctica or the surrounding southern seas. Take pictures for us if you go. But you should be able to find the phenomenon live streamed online.

**Dec. 7**  
**Venus at Its Brightest**

Venus will be easy to spot low in the southwest just after sunset. Dec. 7 also marks the earliest sunset of the year, making it feel like the darkest part of winter even though the winter solstice is still two weeks from that date.

**Dec. 13**  
**Geminids Meteor Shower**

The waxing gibbous moon doesn't set until well after midnight, so the sky will only get truly dark after that. Plan to head out after midnight for best viewing of this meteor shower.

## Milky Way Season:

Generally between May and September, the Milky Way is best seen on new moon nights. In Wisconsin, you'll see it early in the morning starting in April, and then between June and September it's out pretty much all night.