

October 2024 Chippewa Valley Astronomy Update

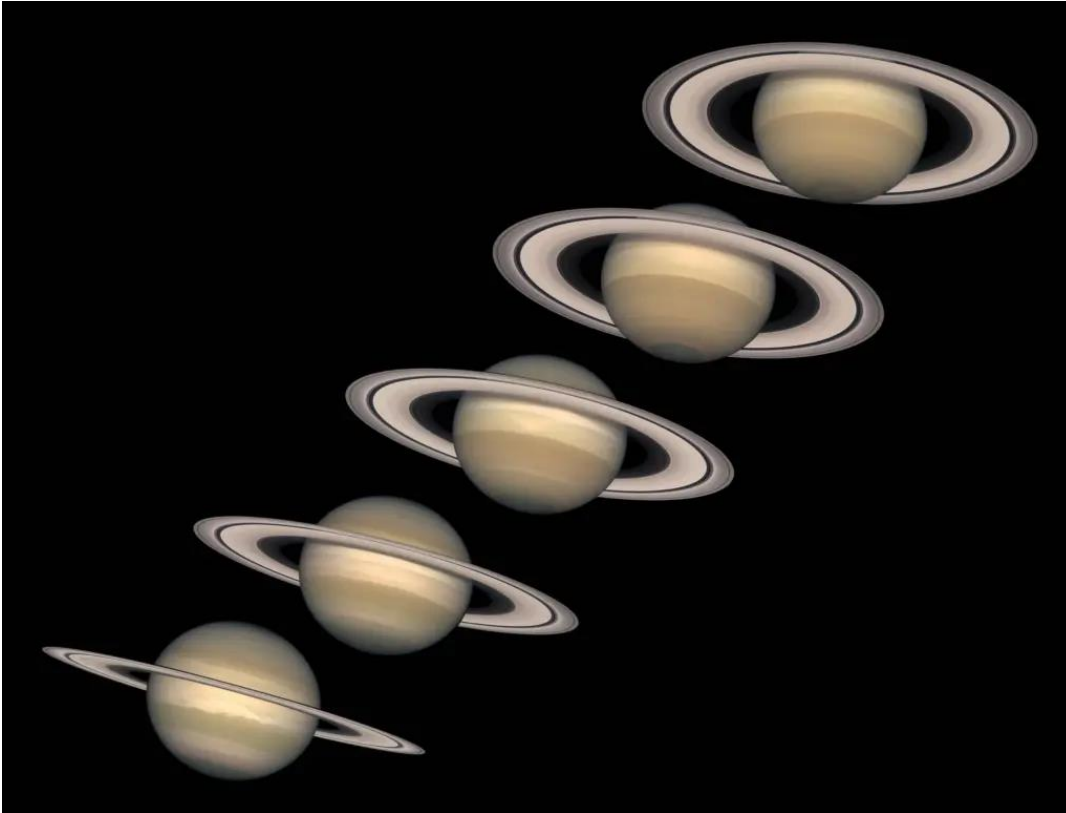


Photo caption:

As Saturn orbits around the sun, we are treated to a changing view of the magnificent ring system. Right now the ring system is almost “edge-on” from our view, and the rings are incredibly narrow.

Image credit:
NASA

Saturn is Giving a Rare Show

Essay by Lauren Likkel

This summer, Saturn was the only planet in the night sky for viewing by visitors to Hobbs Observatory. But it is a showstopper. We are within a year of the most extreme edge-on view we ever get of Saturn’s rings. It looks amazing, the rings are reduced to a spike of light cutting through the planet. Saturn’s rings have a constant tilt – just like the Earth’s axis has a constant tilt. As it orbits the sun, us earthlings from our near-sun location see different views of Saturn’s rings. About every seven and a half years, our view of the rings changes from one extreme to the other: from face-on to a more edge-on view. Try to see it in the next few months to see how it looks with the rings almost exactly edge on.

There are five planets that you can see without a telescope, and they were known and named by ancient sky observers. Mercury orbits so close to the sun that it sets almost as soon as the sun, so few of us ever see it. That leaves Venus, Mars, Jupiter, and Saturn. They look like stars to the naked eye, usually brighter than the ‘real’ stars’. Ancient observers could tell a planet from a star because stars have patterns that keep the same shape over the centuries, but the planet locations change slowly over weeks or months because they orbit the sun. To orbit the sun once, it takes about 12 years for Jupiter and almost 30 years for Saturn. Jupiter is where it was among the stars 12 years ago. If you have reached the age that you can collect social security early, only twice in your life has Saturn returned to the constellation it was in when you were born.

Venus is the evening sky now, but it sets early because it always stays close to the sun. You probably saw bright Venus if you were looking for the comet this week.

Jupiter is now rising in the evening, but at Hobbs Observatory it doesn't rise over the tree line until about 10pm. If you are up early enough to step outside before 6:30am, you can see Jupiter high in the sky to the south, over the constellation of Orion the hunter. That location among the stars is the same place we see the sun in June, very high in the sky and rising and setting far to the north. The sun "moves" across the stars because as Earth orbits the sun our view from Earth changes. Since Earth takes a year to orbit, the sun comes back to the same place against the stars every year.

There is a lot to enjoy in the current night sky, from the comet and Venus to the giant planets Jupiter and Saturn. Don't forget to take time to enjoy the stars this fall.

-- Lauren Likkel is a member of the Chippewa Valley Astronomical Society