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On May 22, you can watch Saturn all night long

Editor's note: Members of the Quad-Cities' Popular Astronomy Club provide periodic columns on astronomical events.

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In May, all the planets in our solar system are visible in the night sky, with the exception of Mars.

One of the most spectacular planets for observers is Saturn, which reaches opposition on the night of May 22. Opposition means that the planet is opposite the sun from our viewpoint. As a result, Saturn will rise at sunset and be visible all night long.

Saturn, which is named for the Roman god of agriculture, is the farthest planet from Earth that can be observed by the unaided human eye.

Saturn's ring system is the most extensive and complex in the solar system, extending hundreds of

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thousands of kilometers from the planet. Material in the rings ranges in size from a few micrometers to several tens of meters in diameter.

Saturn's largest moon, Titan, is a bit bigger than the planet Mercury. Titan is the second largest moon in the solar system, second to Jupiter's moon Ganymede. A total of 53 moons have been discovered orbiting Saturn and nine more are awaiting further confirmation.

On the night of May 22, Saturn can be found in the constellation Libra, the Scale. Look to the southeast shortly after sunset to find a bright star rising above the horizon. That's Saturn.

At this time, Saturn will be the second brightest object in the night sky at magnitude 0.0. Only Jupiter, in the constellation Cancer

to the west, will be brighter at magnitude -2.0.

Another advantage on May 22 is that it will be four days since the new moon, so the effect of moonlight will have virtually no impact on viewing Saturn.

Although Saturn will be visible all night long, the best viewing time for it will be about 1:30 a.m. when Saturn is nearly overhead in the night sky.

Through a pair of 10-power binoculars there is not much detail visible. Stepping up to a four-inch telescope will greatly improve the view of Saturn, and the viewer will be able to see the Dark Cassini Division that separates the outer A ring from the inner B ring.

Titan also will be visible to the south of Saturn. Depending on viewing conditions, three additional

moons also may be visible between Saturn and Titan — Tethys, Dione and Rhea. Because of their close proximity to Saturn, these moons noticeably will change position throughout the night.

Over time, the tilt of Saturn changes from our perspective on Earth. On occasion, the rings are viewed on edge and will disappear. That's not the current case. The rings of Saturn are tilted 24 degrees to our line of sight.

For folks without a telescope, the Popular Astronomy Club will host observing sessions throughout the year in the Niabi Zoo parking lot from dusk until midnight, weather permitting.

The observing schedule for the rest of 2015 is May 16, June 20, July 18, Aug. 15, Sept. 19, Oct. 17, and Nov. 21.

For more information on Saturn and other planets, visit solarsystem.nasa.gov.