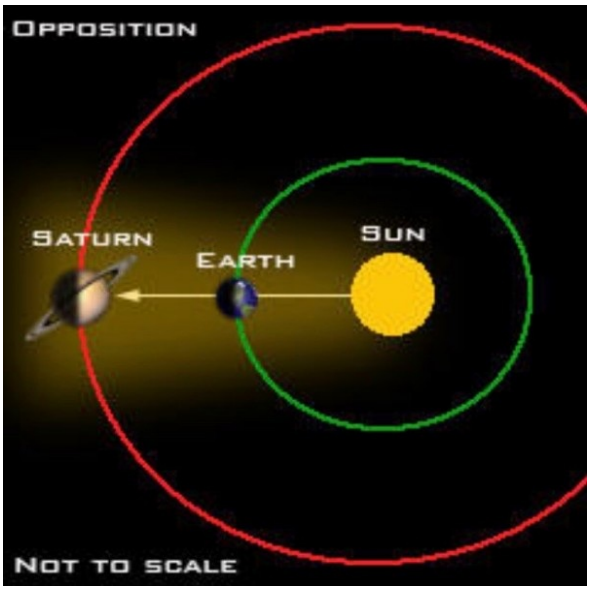
EARTH GOES BETWEEN SUN AND SATURN TONIGHT

In June 2016 our planet Earth lies between the ringed planet Saturn and the Sun, bringing Saturn to what astronomers call opposition. In other words, Saturn is opposite the Sun now. This is a big milestone for our year of observing the ringed planet! The exact time of opposition was on 3 June at 0700 UTC. Saturn is opposite the sun in Earth's sky. As a consequence, Saturn rises in the east at sunset, climbs highest up for the night at midnight and sets in the west at sunrise. It is visible all night, closest and brightest for this year.



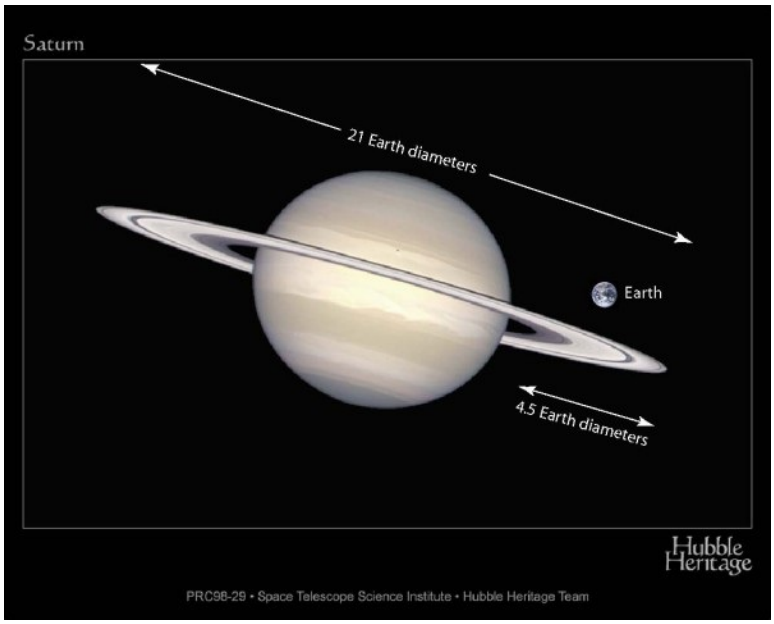
The Earth goes between the sun and Saturn once a year, two weeks later each year

Although Saturn comes closest to Earth for the year at the time of opposition, **this distance is still some 9 times the Earth-Sun distance from Earth. (Astronomers refer to the Earth-Sun distance as the astronomical unit.)**

For a realistic depiction of Saturn's size relative to that of our planet Earth, take a good look at the illustration below.

Tips for recognizing Saturn. Don't assume this is a one-night-only event. Saturn's opposition guarantees the ringed planet will be in good view throughout June and July 2016. Here are three tips for recognizing it:

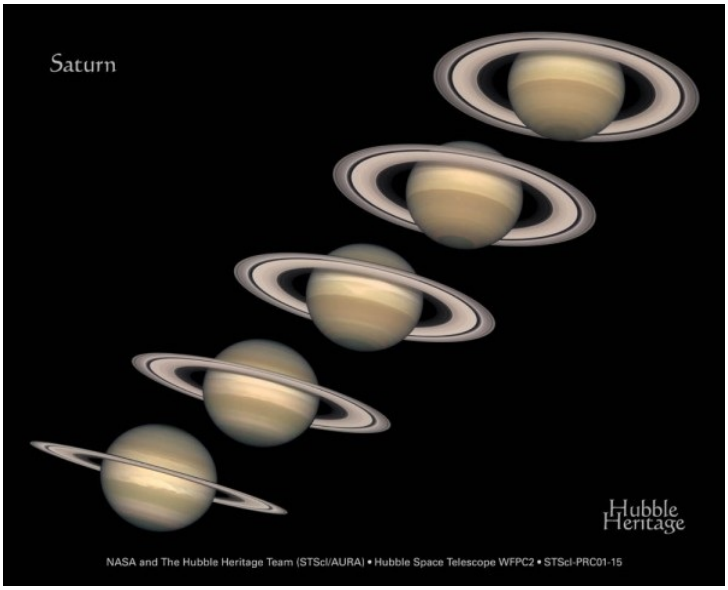
1. Saturn near the planet Mars, which was closest to Earth on May 30 and is now extremely bright, brighter than any other object in the eastern half of the sky each evening. Find Mars, and you can find Saturn nearby.
2. Saturn is also near the star Antares in the constellation Scorpius the Scorpion. Antares is not as bright as Mars, but it is a reddish star, bright and a great twinkler.
3. Saturn, Mars and Antares make a triangle on the sky's dome. Very noticeable. If you have a dark sky, you'll see that this triangle places Mars and Saturn on opposite sides of the arc of three stars close to Antares in the night sky, called the Crown of the Scorpion.



Contrasting the size of Saturn and its rings with our planet Earth via Hubble Heritage Team

Saturn will remain a fixture of the evening sky until October 2016. All the while, golden Saturn shines in close vicinity of ruddy Antares, the brightest star in the constellation Scorpius the Scorpion, and to very bright Mars.

The brightness of Saturn at opposition is partly determined by the orientation of its rings with respect to Earth. In 2016, the rings are wide open, tilted by 26-26.8 degrees, showing their northern face to Earth.



What is opposition? Our movement in orbit brings Earth between Saturn and the Sun about two weeks later every year. Next year, in 2017, Saturn's opposition will come on June 15.

Saturn is the 6th planet outward from the sun and the most distant world that's easily visible to the unaided eye. Galileo in 1610 wrote to **Johannes Kepler** that with his new telescope Saturn seems to have appendages like "ears". **Christiaan Huygens** in 1658 first identified the true nature of the rings..

AK with EarthSky Notes