

# Saturn

[Home](#) > [Planets](#) > [Saturn](#)

## The Solar System's "Lord of the Rings"

Saturn has been a source of wonder and amazement for Earth dwellers since ancient history. This sense of wonder increased in 1610 when Galileo turned his first telescope on this giant planet and was the first person to see Saturn's beautiful ring system.

What Galileo saw, although he didn't see it clearly, was the beautiful system of rings that surround the giant planet. His early telescope wasn't good enough to show details in the rings, so he wasn't quite sure what he was seeing, but he certainly realized that it was something very special. It wasn't until 1659 when Christiaan Huygens, using a much better telescope, discovered that Saturn was surrounded by rings. (Saturn was the first planet I ever saw through my telescope and I will never forget how stunning it was to see the rings for the first time.)

The advantage that we have now is that we can see the rings of Saturn using almost any moderately priced telescope. A good telescope allows us to see that there isn't just one ring around Saturn, but that what appears to be one ring through a low powered telescope is revealed as a complicated system of rings through a good telescope.

## So Light it Floats!

Saturn is the sixth planet from the Sun and the second-largest planet in our solar system. Only Jupiter is larger. In spite of its giant size, though, Saturn doesn't weigh very much. In fact, as a whole, Saturn is lighter than water and would float in a bathtub if you had one big enough (of course the water bill would be extremely high).

Another interesting side effect of Saturn's low density is the fact that it actually "flattens out" at its equator, which you can clearly see in the full-size images of the planet on this page. Saturn's day is only a little more than ten hours long, which means that it rotates very quickly. The combination of its high rotation speed and low density makes the planet flatten out or "oblate" at its equator.

## Saturn's Rings

Until the Voyager missions visited Saturn, about all we knew about the rings was that they were exceptionally beautiful and had a large gap in them called the Cassini Division. By the time the Voyager spacecraft left the ringed planet, we knew that the ring system was very complex and was actually made up of many, many separate rings, including one ring that appeared to be "braided".

In addition, we had learned that the appearance of the rings could change. One of the more interesting and puzzling features of the rings were what looked like the spokes of a wagon wheel. All in all, although the Voyager missions taught us a lot about Saturn's rings, they also raised even more questions.

Hopefully the Cassini mission that is currently exploring Saturn will help solve some of the ongoing mysteries about Saturn's system of rings. You can find out more about the

### Saturn Facts

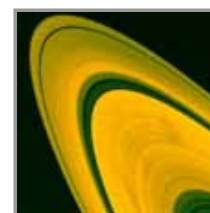
<b>Distance from Sun</b>	Approximately 856 million miles
<b>Number of Moons</b>	At least 34
<b>Diameter</b>	Approximately 86,000 miles
<b>Length of Day</b>	10 hours, 39 minutes
<b>Length of Year</b>	29.5 years
<b>Name</b>	Roman god of agriculture
<b>Visited by</b>	Pioneer 11, Voyager 1, Voyager 2, Cassini

Saturn



A Voyager [picture](#) of Saturn

Saturn's Rings



Click [here](#) to learn more about Saturn's rings.

rings by clicking on the link at right.

### Titan

Dutch astronomer Christiaan Huygens discovered Saturn's moon Titan in 1655. For the next several hundred years, this large moon frustrated scientists by hiding itself behind a very thick atmosphere which prevented us from learning a whole lot about it. That all changed in January of 2004 when a joint mission by NASA and the European Space Agency landed a special spacecraft on the moon's surface. This was the first time that any spacecraft had landed on any moon other than the Moon of Earth. The probe discovered that Titan had a surface that was more varied than we had ever imagined. Click on the link at right to learn more about Titan and the mission.



### Saturn's Family of Moons

Not only does Saturn have a very large family of moons, second in number only to Jupiter, but the moons have a very wide variety of shapes, sizes and colors. Ranging in size from *enigmatic* Titan, which is well over 3000 miles in diameter to tiny Pan, which is about twelve miles in diameter, to the even smaller "moonlets" that have yet to be named, Saturn's family members come in a wide assortment of shapes and sizes.

In addition to the wide selection of shapes and sizes, the moons of Saturn also feature a wide selection of colors, geography and surface features. It's almost like Saturn has a miniature solar system all to itself. Click on the link at right to learn more about this very interesting family of moons.



#### Find Out More About Saturn

##### Saturn Page at the Nine Planets Site

The Saturn section of the Nine Planets site has more detail about this beautiful ringed world.

##### Cassini for Kids

NASA's Jet Propulsion Laboratory has a special site just for kids about the Cassini mission to Saturn

##### The Voyager Mission

The Voyager mission sent back some spectacular images of the ringed planet during its trip through our solar system

Note: All links will open in a new browser window

