

Planet Saturn



NASA has been exploring the planets for decades, sending probes and landers to make scientific measurements and gather information about the atmosphere and surface of our neighbors in the solar system. It's a complex problem to link up probes with another planet that is orbiting around the Sun at the same time that Earth is also moving around the Sun.

Saturn is the sixth planet in distance away from the Sun and Earth is the third planet from the Sun. Saturn revolves around the Sun in an elliptical orbit. At its closest Saturn is 840 million miles from the Sun; at its furthest it is 940 million miles. This is ten times further from the Sun than the Earth which is just 93 million miles away from the Sun. So a NASA space probe needs to travel about 750 million miles out into space to link up with Saturn. In the 1970s NASA crafts called Pioneer-Saturn, Voyager 1 and Voyager 2 were launched. It took several years before they reached Saturn to return photos and data to Earth. NASA launched the Cassini probe in 1997 and it began orbiting Saturn in 2004.

Saturn is the second largest planet, smaller than the largest planet Jupiter. Like Jupiter Saturn rotates fast. It takes Saturn just only about 10½ hours to complete one rotation; this is the length of a day on Saturn. With such a large distance in its orbit around the Sun, it takes Saturn about 29½ Earth years to complete one revolution around the Sun.

Like Jupiter, scientists believe that Saturn does not have a solid surface. Instead, they believe that Saturn has a gaseous surface composed of ammonia, methane and water. Scientists believe that there is an inner core of iron and rocky materials beneath the outer layer of gases. Saturn has a cloudy atmosphere.

The unique feature of Saturn is its seven major rings that form a concentric circle around its equator. The major rings are as much as 180,000 feet wide each and they are between 660 to 9,800 feet thick. The major rings are made up of thousands of ringlets. Ringlets contain ice particles that range in size from microscopic to ten feet. Saturn has more than 25 moons. The largest moon is Titan which is larger than planet Mercury.

