



Technicians reposition and level the Cassini orbiter.

Launched from Kennedy Space Center on Oct. 15, 1997, the Cassini-Huygens spacecraft will reach the Saturnian region in July 2004. The mission is composed of two elements: The Cassini orbiter that will orbit Saturn and its moons for four years, and the Huygens probe that will dive into the murky atmosphere of the moon Titan and land on its surface. The sophisticated instruments onboard these spacecraft will provide scientists with vital data to help understand this mysterious, vast region.

Cassini-Huygens is an international collaboration between three space agencies. Seventeen nations contributed to building the spacecraft. The Cassini orbiter was built and managed by NASA's Jet Propulsion Laboratory. The Huygens probe was built by the European Space Agency. The Italian Space agency provided Cassini's high-gain communication antenna. More than 200 scientists worldwide will study the data collected.

The Spacecraft

- ... is about the size and weight of an empty 30-passenger school bus standing on its end. It weighs roughly 5,650 kg (6 tons), more than half of which is rocket fuel.
- ... reached relative speeds of 5.2 kilometers per second (11,634 miles per hour) approaching Saturn, 19.0 kilometers per second (42,511 miles per hour) flying by Earth and 13.6 kilometers per second (30,430 miles per hour) flying by Venus - equivalent to flying from Los Angeles to Boston in under 5 minutes!
- ... will send more than 300 gigabytes of data back to Earth throughout the mission, which is equivalent to more than 400 CD-ROMs of information. A stack of these CD-ROMs would be 40-centimeters (15.8-inches) high. It is also about 2,400 times the amount of information found in the Encyclopedia Britannica.
- ... will send more than 300,000 color images of Saturn, the rings, Titan and the other moons. Of those, 1,100 pictures of Titan will be taken by the Huygens Probe during its swirling descent.

Source: <http://saturn.jpl.nasa.gov/>

Key dates of the Saturn Tour are:

- June 11, 2004:** Flyby of the furthest moon orbiting Saturn, Phoebe, at an altitude of 2,000 km (1,243 miles).
- July 1, 2004:** Crossing of Saturn's Ring Plane during the spacecraft's critical Saturn Orbit Insertion sequence.
- Dec. 25, 2004:** Huygens probe separates from the Cassini orbiter.
- Jan. 14, 2005:** Huygens begins its descent through Titan's cloudy atmosphere, where it lands on the surface about two and half hours later.