

## MERCURY

The first planet in our Solar System, Mercury orbits at about 58 million kilometers (36 million miles) from the Sun. Mercury is very hot during the day and very cold at night. Nighttime temperatures can be as low as  $-180^{\circ}\text{C}$  ( $-300^{\circ}\text{F}$ ). Daytime temperatures can be as high as  $427^{\circ}\text{C}$  ( $800^{\circ}\text{F}$ ). On certain days of the year, just before sunrise or just after sunset, we can see Mercury without a telescope. Because Mercury is so close to the Sun, it is normally hidden by sunlight.

### How Big Is Mercury?

Mercury's diameter is 4,879 kilometers (3,032 mi.), only a little larger than that of Earth's Moon. Mercury is the smallest planet in our Solar System.

### How Long Are a Day and Year on Mercury?

Mercury travels through space at a speed of nearly 50 kilometers (31 mi.) per second faster than any other planet. It takes about 88 Earth days to orbit the Sun, so a year on Mercury is 88 Earth days long. Mercury spins around, or revolves, once about every 59 Earth days, so one day on Mercury is 59 Earth days long.

### What Is Mercury Made Of?

Mercury's core, which is made mostly of iron, is about 3,800 kilometers (2,400 mi.) in diameter. Mercury is the second-densest planet after Earth. The mantle and crust are made of rocks and soil; together they are only about 600 kilometers (400 mi.) thick.

Because of the planet's extreme temperatures, Mercury has almost no atmosphere. As a result, meteorites do not burn up as they do in other planets' atmospheres. The many craters on Mercury's surface were caused by all the space objects that have hit it through the years.

### How Many Moons Does Mercury Have?

Mercury does not have any moons because it is so close to the Sun. The Sun's strong gravity would interfere with anything orbiting Mercury.

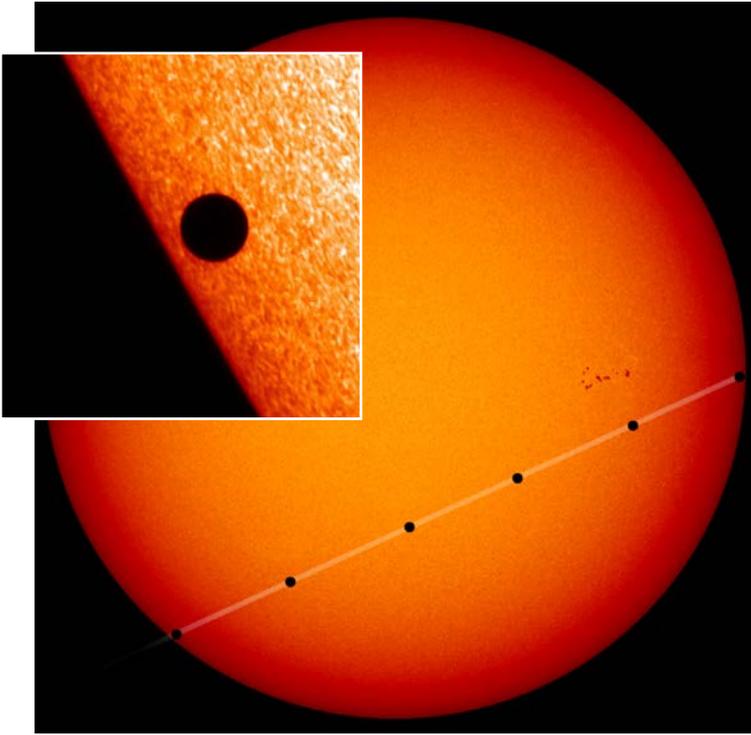
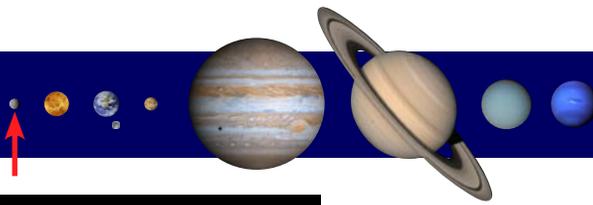
### Going to Mercury?

Mercury is too hot for humans, but two spacecraft have visited the planet. *Mariner 10* reached it first and orbited the planet from 1974 to 1975. In 2011, the *Messenger* spacecraft began to orbit Mercury. Since then, *Messenger* has sent back all kinds of images and data. It began its 2,000th orbit around Mercury on May 22, 2013.

### Do You Know?

- Mercury was named after the Roman messenger god because it was the fastest planet as it moved around the Sun.
- The Sun's rays are about seven times as strong on Mercury as they are on Earth. Standing on its surface, the Sun would appear more than three times larger than it does on Earth.
- If you are ten years old in Earth years, you are forty-three years old in Mercury years.

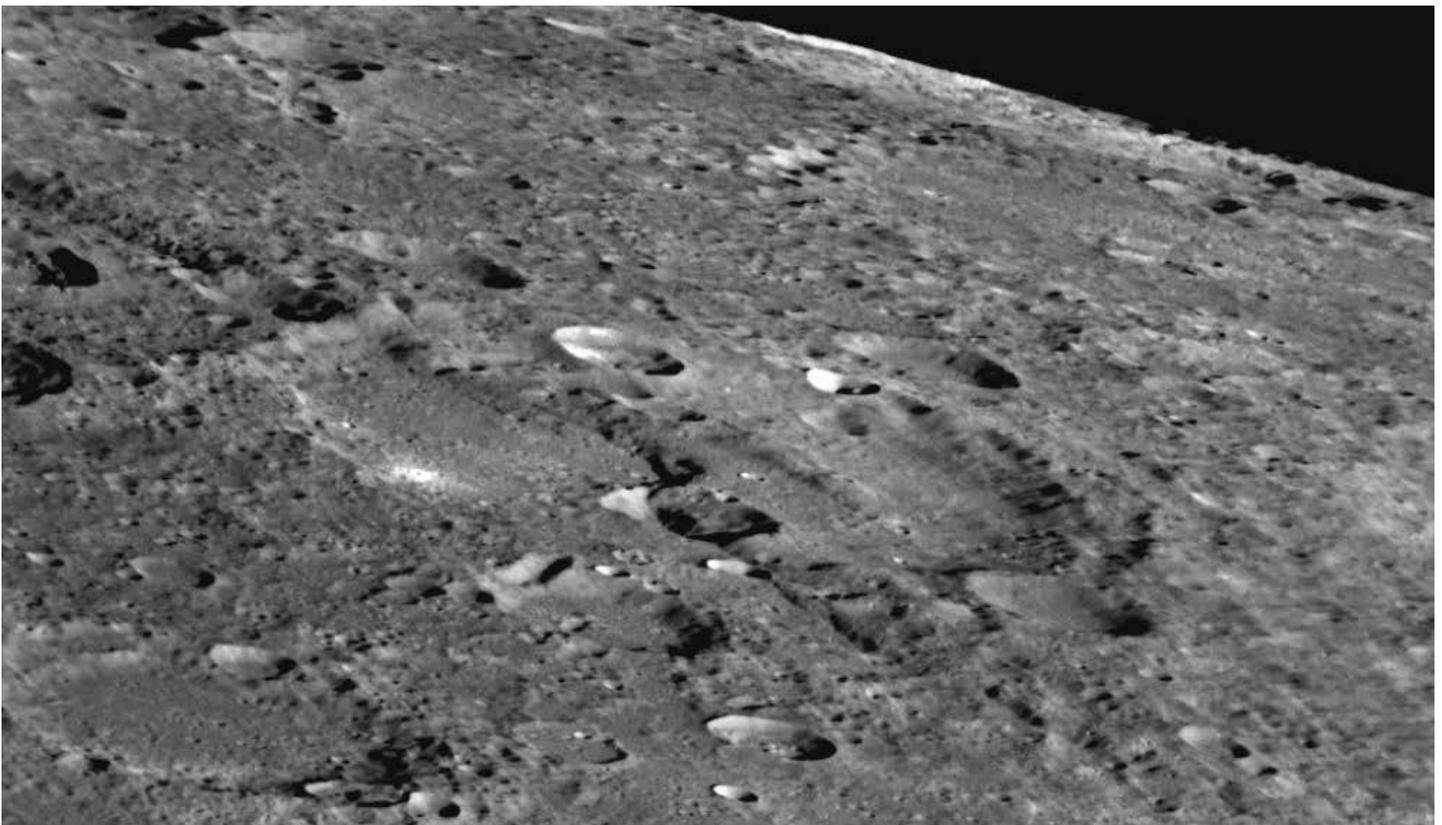
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The Size of Earth  
Compared to Mercury



People on Earth can see Mercury pass across the face of the Sun thirteen times every century. This event is called a *transit*. Using special cameras, scientists were able to follow Mercury's path as it moved across the Sun in 2003. Remember to never look directly at the Sun.



A close-up view of Mercury's surface taken by the *Messenger* spacecraft shows the many pits and craters caused by impacts.