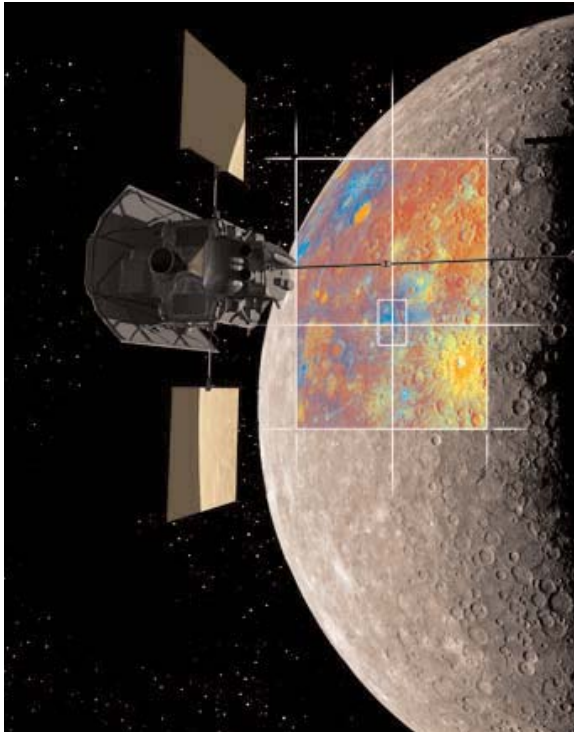


MESSENGER INFORMATION SHEET



The MESSENGER Mission to Mercury

MESSENGER is an unmanned U.S. spacecraft that will be launched in 2004 and will arrive at the planet Mercury in 2011, though it will not land. Instead, it will make its observations of the planet from orbit. MESSENGER will never return to Earth, but will stay in orbit around Mercury to gather data until sometime in 2012.

MESSENGER is an acronym that stands for "MErcury Surface Space ENvironment, GEochemistry and Ranging," but it is also a reference to the name of the ancient Roman messenger of the gods: Mercury, who, it was said, wore winged sandals and was somewhat of a trickster.

MESSENGER will be the second spacecraft ever to study Mercury; in 1974 and 1975 Mariner 10 flew by the planet three times and took pictures of about half the planet's surface. MESSENGER will stay in orbit around Mercury for about one Earth-year, during which time it will make close-up and long-term observations, allowing us to see the whole planet for the first time.

One of the biggest problems MESSENGER will face is the intense heat it will encounter at Mercury. Visible and infrared radiation from the Sun can be 11 times as strong as in space near Earth. Infrared radiation from the hot, sunlit side of Mercury's surface becomes a second significant source of heat for the spacecraft. MESSENGER engineers have had to come up with various solutions for keeping the spacecraft from heating up too much. They have designed a sunshade which will be pointed at all times toward the Sun, so that MESSENGER's instruments observing Mercury are always in the Sun's shadow. MESSENGER's orbit has been designed so that it does not get close to the hottest regions at Mercury's surface, and the spacecraft's solar panels are angled so that they do not look to the Sun face-on but are still able to generate sufficient power to the spacecraft.

For more information about the MESSENGER mission to Mercury, visit: <http://messenger.jhuapl.edu/>

