

NASA's Mercury probe set for death plunge

Washington: Two weeks from now, the first-ever NASA spacecraft to orbit Mercury will take a dramatic death plunge into the innermost planet of the solar system. Nearly out of fuel, the Messenger probe will hit Mercury's surface at 14,080 km per hour, creating a crater about 52 feet across.

"We will be impacting the surface on April 30 around 3.25 p.m. (Eastern Daylight Time)," mission systems engineer Dan O'Shaughnessy from the Johns Hopkins University said in a statement on Thursday.

Launched in August 2004, Messenger (MErcury Surface, Space ENvironment, GEochemistry, and Ranging mission) travelled 7.9 billion km on a journey that included 15 trips around the sun and flybys of the Earth once, Venus twice and Mercury three times.

It is the second spacecraft to study mercury up close. NASA's Mariner 10 probe flew by Mercury three times in 1974 and 1975, Space.com reported. "Messenger's grave could help researchers better understand Mercury's rates of space weathering which tends to turn bright, freshly exposed materials dark," added Sean Solomon, mission's principal investigator.

Mercury is covered by craters. "But having an impact crater on the Mercury's surface from the Messenger probe will be an important benchmark," he noted. Ground-based instruments will not be able to monitor the Messenger crater.

However, the BepiColombo Mercury probe -- a joint European-Japanese effort due to launch in 2017 and arrive in orbit around Mercury in 2024 -- can study it. "That will be an important study that comes a decade from now," Solomon added. The Messenger's observations have helped scientists construct the best-ever maps of the planet. The spacecraft began orbiting Mercury in March 2011.

The four-year mission was blessed with many scientific findings, including one in 2012 that provided compelling support for the hypothesis that Mercury harbours abundant frozen water and other volatile materials in its permanently shadowed polar craters.

"We now have real knowledge about the planet Mercury that shows it to be a fascinating world as part of our diverse solar system," John Grunsfeld, associate administrator for NASA's Science Mission Directorate, said in a statement. IANS