Messenger spacecraft on way to Mercury

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NASA's Messenger spacecraft swung by Earth for a Tuesday gravity assist that propelled it deeper into space on its long journey toward Mercury.

Scientists at the Johns Hopkins University Applied Physics Laboratory in Laurel, Md., said Messenger's systems performed flawlessly.

The National Aeronautics and Space Administration said the spacecraft swooped around Earth, using the planet's gravity to significantly change its trajectory, sending it toward Venus for another gravity-assist flyby next year.

Launched Aug. 3, 2004, from Cape Canaveral, Fla., the solar-powered spacecraft is approximately 581 million miles into its 4.9-billion-mile voyage that includes 14 more loops around the sun.

Messenger will fly past Venus twice and Mercury three times before moving into orbit for a year-long science mission around Mercury.

"This Earth flyby is the first of a number of critical mission milestones during Messenger's circuitous journey toward Mercury orbit insertion," said Sean Solomon, the mission's chief scientist. "Not only did it help the spacecraft sharpen its aim toward our next maneuver, it presented a special opportunity to calibrate several of our science instruments."