

NASA's Juno spacecraft prepares for rendezvous with Jupiter

NASA's solar-powered Juno spacecraft, set to arrive at Jupiter this year, successfully executed a maneuver to adjust its flight path on Wednesday.

The maneuver refined the spacecraft's trajectory, helping set the stage for Juno's arrival at the solar system's largest planetary inhabitant five months and a day from now.

"This is the first of two trajectory adjustments that fine tune Juno's orbit around the Sun, perfecting our rendezvous with Jupiter on July 4," said Scott Bolton, Juno principal investigator at the Southwest Research Institute in San Antonio.

The Juno spacecraft's thrusters consumed about 0.6 kg of fuel during the burn and changed the spacecraft's speed by 0.31 metres per second.

At the time of the maneuver, Juno was about 82 million kms from Jupiter and approximately 684 million kms from Earth.

Launched on August 5, 2011, the spacecraft will orbit the Jovian world 33 times, skimming to within 5,000 kms above the planet's cloud tops every 14 days.

During the flybys, Juno will probe beneath the obscuring cloud cover of Jupiter and study its aurorae to learn more about the planet's origins, structure, atmosphere and magnetosphere.

The next trajectory correction maneuver is scheduled on May 31.

According to NASA, the name Juno comes from Greek and Roman mythology. The god Jupiter drew a veil of clouds around himself to hide his mischief, and his wife – the goddess Juno – was able to peer through the clouds and reveal Jupiter's true nature.