

# Rosetta probe lined up nicely for Earth approach

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Artist view of ESA's Rosetta cometary probe. The spacecraft is covered with dark thermal insulation in order to keep its warmth while venturing into the coldness of the outer Solar System, beyond Mars orbit. Credits: ESA, image by AOES Medialab

(PhysOrg.com) -- Following the first and primary trajectory correction manoeuvre 22 October, Rosetta is lined up nicely for the approach to Earth. The manoeuvre provided an 8.8 cm/s change in orbital velocity and the thruster performance was accurate. Closest approach to Earth is now scheduled for 08:45 CET on 13 November.

The results of last Thursday's trajectory correction manoeuvre (TCM) have been analysed by ESA's Flight Dynamics team at ESOC.

"The manoeuvre was very close to the predicted and required amount. We will continue to analyse the results to determine whether we will need any additional manoeuvres," said Trevor Morley, lead ESA Flight Dynamics specialist working on [Rosetta](#).

To analyse the performance, the team used data from a number of sources, including:

- Telemetry radioed down by Rosetta, including star tracker data and parameters related to fuel usage and thruster operation
- Doppler and ranging data received from the ESA and NASA ground stations that have been following Rosetta over the past few days

Based on preliminary analysis, the 86-second [thruster](#) burn over-performed slightly, in the range of 0.06-0.07%.

As a result, the predicted time of closest approach, or perigee passage, on 13 November is 08:45:40 CET. This estimate will be updated in the next few days.

The team have slots of additional TCMs at 1 week, 1 day and 6 hours prior to closest approach at their disposal.

The tracking stations following Rosetta in the past few days include ESA's 35m DSA 1 station at New Norcia, Australia, and NASA's DSN antennas at Goldstone, California and Robledo, near Madrid.

Provided by European Space Agency ([news](#) : [web](#))

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