

BepiColombo gets green light for launch site

March 9 2018



BepiColombo. Credit: ESA/ATG medialab; Mercury: NASA/JPL

The mission passed a major review yesterday, meaning that the three BepiColombo spacecraft, along with ground equipment and mission experts, are confirmed to start the move from ESA's centre in the Netherlands to Europe's Spaceport in Kourou, French Guiana at the end of next month. The launch window is open from 5 October until 29 November.

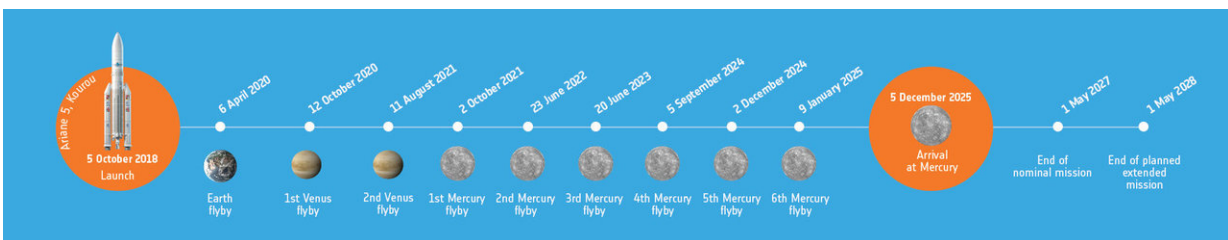
"It's been a long and occasionally bumpy road to this point, and there is still plenty to do until we are ready for launch," says Ulrich Reininghaus, ESA's BepiColombo project manager, "but we are extremely pleased to finally move our preparations to the [launch site](#), and are grateful to everyone who has made this possible.

"In parallel we are continuing with some long-duration firing tests on a replica transfer module thruster, under space-like conditions, to be best prepared for our journey to Mercury."

Once at Kourou, an intensive six months of essential preparation are needed, including more review checkpoints.

Work includes dressing the spacecraft in protective insulation to prepare for the harsh space environment and extreme temperatures they will experience operating close to the Sun, attaching and testing the solar wings and their deployment mechanisms, installing the sunshield, fuelling, and connecting the three spacecraft together.

The final weeks will see the [spacecraft](#) stack inside the Ariane 5 rocket fairing, and preparing the launch vehicle itself, ready to blast the mission on a seven-year journey around the inner Solar System to investigate Mercury's mysteries.



Timeline of flybys during BepiColombo's 7.2 year journey to Mercury, based on

a launch date of 5 October, which marks the start of the launch window in October 2018. Credit: ESA

A transfer module will carry two science orbiters to the innermost planet, using a combination of solar power, electric propulsion and nine gravity-assist flybys of Earth, Venus and Mercury to set it on course.

The two orbiters will make complementary measurements of the innermost planet and its environment from different orbits, from its deep interior to its interaction with the solar wind, to provide the best understanding of Mercury to date, and how the innermost planet of a solar system forms and evolves close to its parent star.

BepiColombo is a joint endeavour between ESA and the Japan Aerospace Exploration Agency, JAXA. ESA is providing the Mercury Transfer Module, the Mercury Planetary Orbiter and the sunshield and interface structure, and JAXA is providing the Mercury Magnetospheric Orbiter.

Provided by European Space Agency

Citation: BepiColombo gets green light for launch site (2018, March 9) retrieved 17 July 2024 from <https://phys.org/news/2018-03-bepicolombo-green-site.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.