

BepiColombo Euro-Japan Joint mission to Mercury: Status update

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BepiColombo has been defined as the ESA-JAXA joint mission to Mercury with the aim to understand the process of planetary formation and evolution in the hottest part of the proto-planetary nebula as well as to understand similarities and differences between the magnetospheres of Mercury and Earth.

The baseline mission consists of two spacecraft: the Mercury Planetary Orbiter (MPO) and the Mercury Magnetospheric Orbits

(MMO). The two orbiters will be launched together on one Soyuz-Fregat 2B. JAXA is responsible for the MMO, while ESA is responsible for the MPO as well as the launch and transport of the two spacecraft to Mercury in the insertion of their dedicated orbits.

JAXA has made conceptual design of the MMO spacecraft system (including the interface with the cruising composite system in collaboration with ESA) and model payload. MMO is a spin-stabilized spacecraft to be placed in a 400 km x 12000 km polar orbit. The spacecraft will accommodate instruments mostly dedicated to the study of the magnetic field, waves, and particles in the environment of Mercury.

At the time of this meeting, ESA and JAXA will have issued the announcement of opportunity (A/O) to the Japanese and European science community to call for proposals of the PI responsible instruments.

In this paper, we will report the latest information of this mission.