



The Venus flybys opportunity with BEPICOLOMBO

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BepiColombo is a dual spacecraft mission to Mercury to be launched in October 2018 and carried out jointly between the European Space Agency (ESA) and the Japanese Aerospace Exploration Agency (JAXA).

The Mercury Planetary Orbiter (MPO) payload comprises eleven experiments and instrument suites. It will focus on a global characterization of Mercury through the investigation of its interior, surface, exosphere and magnetosphere. In addition, it will test Einstein's theory of general relativity. The second spacecraft, the Mercury Magnetosphere Orbiter (MMO), will carry five experiments or instrument suites to study the environment around the planet including the planet's exosphere and magnetosphere, and their interaction processes with the solar wind. The composite spacecraft made of MPO, MMO, a transfer module (MTM) and a sunshield (MOSIF) will be launched on an escape trajectory that will bring it into heliocentric orbit on its way to Mercury. During the cruise of 7.2 years toward the inner part of the Solar System, BepiColombo will make 1 flyby to the Earth, 2 to Venus, and 6 to Mercury. Only part of its payload will be obstructed by the sunshield and the cruise spacecraft configuration, so that the two flybys to Venus will allow operations of many instruments, like: spectrometers at many wavelengths, accelerometer, radiometer, ion and electron detectors.

A scientific working group has recently formed from the BepiColombo community to identify potentially interesting scientific cases and to analyse operation timelines. Preliminary outputs will be presented and discussed.