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The BepiColombo mission - a comprehensive exploration of Mercury

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BepiColombo is a joint project between ESA and the Japanese Aerospace Exploration Agency (JAXA). The Mission consists of two orbiters, the Mercury Planetary Orbiter (MPO) and the Mercury Magnetospheric Orbiter (MMO). The mission scenario foresees a launch of both spacecraft with an ARIANE V in the second half of 2014 and an arrival at Mercury in the first half of 2021. For more details see [1].

From their dedicated orbits the two spacecraft will be studying the planet and its environment. The MPO scientific payload comprises eleven instruments/ instrument packages; the MMO scientific payload consists of five instruments/instrument packages. Together, the scientific payload of both spacecraft will perform measurements to find clues to the origin and evolution of a planet close to its parent star.

The Nominal Science Mission of BepiColombo will cover 1 terrestrial year and be divided into 2 six-month phases, tentatively called the global mapping and target mapping phases. The latest status of the BepiColombo mission will be given with special emphasis on the scientific return of its payload complement.

References

[1] Benkhoff, J., van Casteren, J., Hayakawa, H., Fujimoto, M., Laakso, H., Novara, M., Ferri, P., Middleton, H. R., and Ziethe, R. BepiColombo—Comprehensive exploration of Mercury: Mission overview and science goals Planetary and Space Science, Volume 58, Issue 1-2, p. 2-20, 2010