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09:00-09:15

## ベピコロombo水星探査計画の最新状況：惑星間空間航行およびフライバイの初期結果と今後の観測計画

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### Updated status of BepiColombo: results and observation plan of interplanetary cruise and flybys

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The ESA-JAXA joint mission BepiColombo is now on the track to Mercury. After the successful launch of the two spacecraft for BepiColombo, Mio (Mercury Magnetospheric Orbiter: MMO) and Mercury Planetary Orbiter (MPO), commissioning operations of the spacecraft and their science payloads were completed. BepiColombo will arrive at Mercury in the end of 2025, and it has 7-years cruise with the heliocentric distance range of 0.3-1.2 AU. The long cruise phase also includes 9 planetary flybys: once at the Earth, twice at Venus, and 6 times at Mercury. Even during the interplanetary cruise phase, the BepiColombo mission can contribute to the heliospheric physics and planetary space weather in the inner solar system. In addition, NASA's Parker Solar Probe was launched in 2018 and it is orbiting around Sun (~0.05 AU at perihelion). ESA's Solar Orbiter was launched in February 2020 and will have a highly elliptic orbit between 1.2 AU at aphelion and 0.28AU at perihelion. These multi spacecraft observations provide us great opportunities to investigate the inner heliosphere. The first Earth flyby was successfully completed on 10 April 2020. The spacecraft crossed the Earth's magnetosphere and thus it was a great opportunity to calibrate and test the instrument performances onboard Mio and MPO. The next Venus flyby will happen on 15 October 2020 and the Mio spacecraft will observe the plasma environments around Venus which is highly interacted with the solar wind. Here we present the updated status of BepiColombo mission, initial results of the science observations during the interplanetary cruise and planetary flybys, and the upcoming observation plans.