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Initial results and updated plans of the BepiColombo mission during interplanetary cruise

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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. Up to now we have performed several science observation campaigns with other missions and successfully obtained science data during cruise. These multi spacecraft observations provide us great opportunities to investigate the inner heliosphere. In 2021 the second Venus flyby and the first Mercury flyby will happen on 10 August 2021 and on 1 October 2021, respectively. 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.