



Venus's induced magnetosphere during active solar wind conditions at BepiColombo's Venus 1 flyby

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Out of the two Venus flybys that BepiColombo uses as a gravity assist manoeuvre to finally arrive at Mercury, the first took place on 15 October 2020. After passing the bow shock, the spacecraft travelled along the induced magnetotail, crossing it mainly in the Y_{VSO} -direction. We discuss the BepiColombo Mercury Planetary Orbiter Magnetometer (MPOMAG)

data, with support from three other plasma instruments: the Planetary Ion Camera (PICAM), the Mercury

Electron Analyser (MEA) and the radiation monitor (BERM). Behind the bow shock crossing, the magnetic field showed a

draping pattern consistent with field lines connected to the interplanetary magnetic field wrapping around the planet. This flyby showed a highly active magnetotail, with, e.g., strong flapping motions at a period of ~ 7 min. This activity was driven by solar wind conditions. Just before this flyby, Venus's induced magnetosphere was impacted by a stealth coronal mass ejection, of which the trailing side was still interacting with it during the flyby. This flyby is a unique opportunity to study the full length and structure of the induced magnetotail of Venus, indicating that the tail was most likely still present at about 48 Venus radii. This presentation will take place after the second Venus flyby by Solar Orbiter and BepiColombo and Solar Orbiter on 9 and 10 August, respectively.

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