

The Use of the Flat Field Panel for the On-Ground Calibration of Metis Coronagraph on Board of Solar Orbiter

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Abstract : Solar Orbiter, launched on February 9th 2020, is an ESA/NASA mission conceived to study the Sun. The payload is composed of 10 instruments, among which there is the Metis coronagraph. A coronagraph aims at taking images of the solar corona: the occulter element simulates a total solar eclipse. This work presents some of the results obtained in the visible light band (580-640 nm) using a flat field panel source. The flat field panel gives a uniform illumination; consequently, it has been used during the on-ground calibration for several purposes: evaluating the response of each pixel of the detector (linearity); and characterizing the Field of View of the coronagraph. As a conclusion, a major result is the verification that the requirement for the Field of View (FoV) of Metis is fulfilled. Some investigations are in progress in order to verify that the performance measured on-ground did not change after launch.

Keywords : solar orbiter, Metis, coronagraph, flat field panel, calibration, on-ground, performance

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