

Observation planning in PLANET-C mission

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The Venus Climate Orbiter mission (code name: PLANET-C) aims at understanding the atmospheric circulation of Venus. The instruments, the spacecraft design and the orbit of VCO are optimized for imaging observations of meteorological phenomena. The onboard instruments are cameras to map clouds and minor constituents at ultraviolet and infrared wavelengths with large-format array detectors (IR1:Near-IR Camera 1, IR2:Near-IR Camera 2, UVI:Ultraviolet Imager, LIR:Longwave IR Camera), a high-speed imager to detect lightning (LAC:Lightning and Airglow Camera), and an ultra-stable oscillator for observing the vertical structure of the atmosphere with radio science technique. In the nominal sequence, all cameras except LAC will be operated every 1-2 hours to get global views of the Venusian atmosphere, and LAC will be operated in the shadow region of Venus. The equatorial elongated orbit with westward revolution fits the observations of the movement and temporal variation of the Venusian atmosphere which rotates westward. In this talk we will introduce the observation plan and the data analysis procedure.