

Countdown for PLANET-C Venus orbiter: Report of the Ultraviolet Imager Development

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Venus Climate Orbiter mission (Planet-C), a feature planetary exploration mission of ISAS/JAXA, is running to the launch in 2010. One of the science goals is to understand the atmospheric circulation of Venus. 5 cameras of VCO are designed to measure different wave length and will continuously observe atmospheric phenomena at different altitudes of Venus. By using data from each cameras, we will know a three dimensional atmospheric motion and be able to understand Venusian atmospheric dynamics.

Ultraviolet Imager (UVI), one of the VCO cameras, has two dimensional SiCCD (1024x1024 pixels) and measures scattering lights of the Sun from dayside cloud top (60–70 km altitude) at 283nm (SO₂) and 365nm ('unknown absorber'). UVI will nominally observe whole disk of Venus with high spatial resolution and short time exposure every 2 hours, we will obtain large data set of cloud features. It will show production and loss of cloud structure from large to meso scale, and we can calculate horizontal atmospheric motion from cloud tracking to study meridional circulation .

Now, the development of UVI is in the final stage. We finished making of flight model (FM). The FM product passed environmental examinations. In this presentation, we will show the summary of the progress and FM performance of UVI.