Analysis of fine structures of Venusian clouds using VMC on Venus Express

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At low latitudes of Venus observed by ultraviolet wavelength range, turbulent-like patterns are observed at the cloud top (Markiewicz *et al.*, 2007). Although it is usually thought that the cloud in the visible wavelength range has little contrasts, structures of clouds are discernible by the observation of Venus Express (Titov *et al.*, 2007). The structures observed by visible wavelength range reflect the horizontal distribution of clouds' thickness because the absorption of sunlight by the "unidentified absorber" which is important in ultraviolet wavelengths is not significant. Since visible light is strongly related to the energy budget of Venus, to study features of clouds in visible wavelength range is important.

In this study, we analyzed the structures of Venusian cloud at low latitude using the data obtained by VMC on Venus Express spacecraft. Using a method of enhancing contrast of the cloud features, which simultaneously eliminates one-dimensional streaky noises fixed to the detector, the contrasts of the cloud features become clear even in the visible wavelength range. We discuss the spatial structures of the Venusian clouds in the visible wavelength range.

Keywords: Venus, visible image, cloud morphology

