

EUV imagery of Venus magnetosphere

Ichiro Yoshikawa[1], Atsushi Yamazaki[2], Masato Nakamura[3]

[1] ISAS, [2] Univ. of Tokyo, [3] Earth and Planetary Sci, Univ. Tokyo

According to PVO observations, a significant amount of plasmas in the dayside flows to the nightside [Knudsen et al.,1982]. This fact suggests that there should be an effective loss process in the Venus ionosphere. "Clouds" is considered to be one of the candidates which are related to plasma loss process. However, the global shape, formation and the dependence on the IMF of the clouds are still unknown, because the PVO obtained only local information on plasmas.

Global imaging by using EUV technique is a promising means to further such a study.

We propose the EUV telescope onboard Venus orbitor. This instrument has a capability of detecting He I, He II, O II, and H I emissions simultaneously.

According to PVO observations, a significant amount of plasmas in the dayside flows to the nightside [Knudsen et al.,1982]. This fact suggests that there should be an effective loss process in the Venus ionosphere. "Clouds" is considered to be one of the candidates which are related to plasma loss process. However, the global shape, formation and the dependence on the IMF of the clouds are still unknown, because the PVO obtained only local information on plasmas.

Global imaging by using EUV technique is a promising means to further such a study.

We propose the EUV telescope onboard Venus orbitor. This instrument has a capability of detecting He I, He II, O II, and H I emissions simultaneously.

The field of views are 10 degree. Using the spinning motion of the satellite, this instrument obtains 2D imagery.

In this paper, we present our motivations for conducting EUV imaging. And also, the design of the telescope is shown.