## J034-001

## Room: 301B

## PRESENT STATUS OF JAPANESE VENUS ORBITER

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We have proposed a Venus orbiter which will arrive at Venus in 2009 to the Institute of Space and Astronautical Sciences (ISAS). This mission is now go and we will start the internal Phase B study at ISAS in the fiscal year of 2003.

The main purpose of this mission is to reveal the details of the atmospheric motion on Venus and approach the dynamics of the Venusian climate. The angular position of the spacecraft on its orbit (300km x 13Rv with 172 degrees inclination and 30 hours orbital period) is synchronized for 20 hours at its apoapsis with the global atmospheric circulation at the altitude of 50km, thus the snap shots taken every 2 hours will be the images of the same side of the atmosphere. We have 4 cameras to take such snap shots of the planets in different wave lengths. In addition to these 4 cameras, we have a Lightning and Airglow camera (LAC) in visible range. This will be operated when the orbiter is close to the planet.

Several other instruments to measure the plasma environment are seriously considered. They are 1)extreme ultraviolet imager, 2)nonthermal ion mass/spectrum analyzer and electron spectrum analyzer, 3)thermal plasma analyzer, 4)plasma wave analyzer and sounder, and 5)magnetometer We expect that the orbiter will survive after the next solar maximum in 2011 and the comparison of plasma environments around Venus before and after the solar maximum should be quite exciting.