

Spectroscopic observation of HCl hemispheric distribution in the Venus lower atmosphere

Kenji Tokuda[1]; Noriyuki Ohira[1]; Naomoto Iwagami[2]

[1] Earth and Planetary Sci., Tokyo Univ; [2] Earth and Planetary Science, U Tokyo

A hemispheric distribution of HCl in the Venus lower atmosphere was derived from the 1.7 maicro-meter thermal emission spectrum. HCl is the reservoir of the ClOx family which is believed to play important role in the Venus atmosphere. That is, the ClOx catalytic cycle may be the key for the long-standing riddle 'CO2 atmosphere stability problem'. The hemispheric distribution may allow us to ascertain the truth of the current scenario.

The measured mixing ratio shows a mean value of 0.5 ppm as has been reported previously while it shows a latitudinal gradient; 40 ppm in the low latitudes and 70 ppm in the middle latitudes.

