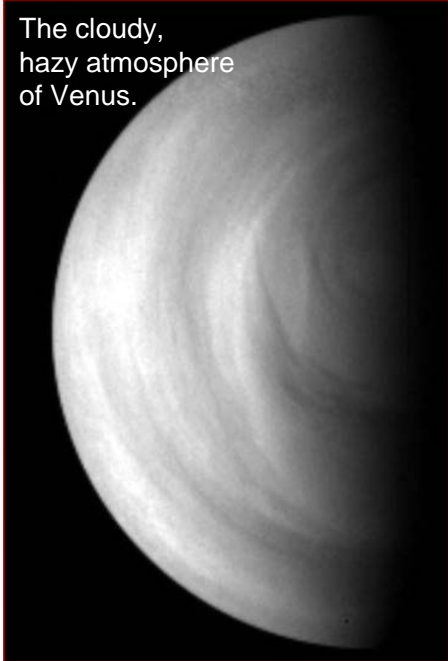


# Venus Clouds Differ from Morning to Evening

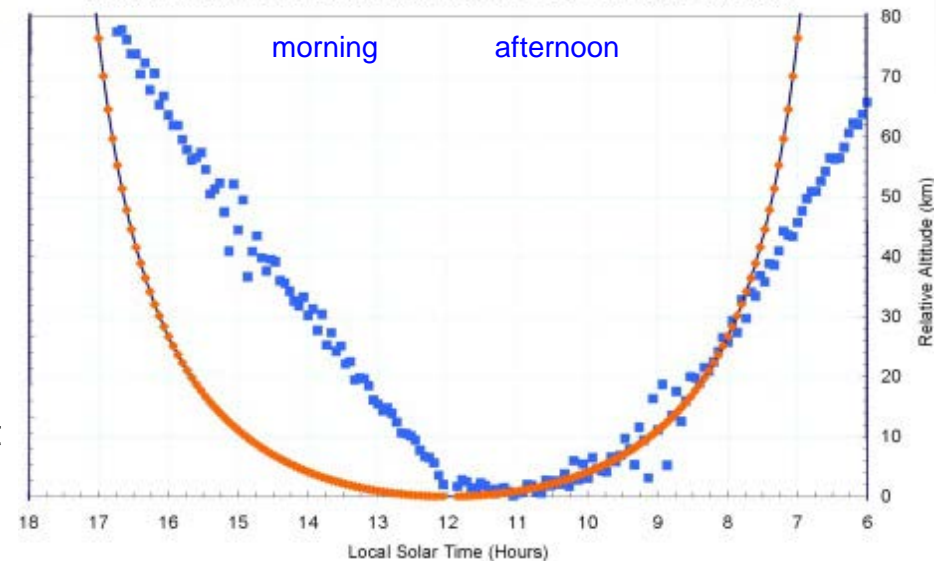
The cloudy, hazy atmosphere of Venus.



Though the mission has ended, analysis of data captured by the **Venus Monitoring Camera (VMC)** on **Venus Express** is still shining light into Venus' cloudy atmosphere.

- Venus is covered globally with a mixture of clouds and hazes. These are comprised of two particle sizes and composed of dilute sulfuric acid and other substances whose identities remain unknown.
- Results from the VMC showed that the distribution of cloud and haze particles was not symmetric about local noon. The orange line in the figure below is an idealized “clear atmosphere” model that shows how the relative altitude of the optical depth changes with local time. The blue dots show the actual variation at 1013 nm wavelength which is due to the presence of hazes and clouds.

Relative Level of Unit Optical Depth (uv) at 5 Deg S vs Local Solar Time



- After eliminating many reasons for these inconsistencies, scientists concluded that this data indicated that the haze reaches much higher altitudes than the clouds, and that there is a variation in this optical depth of the atmosphere with latitude.
- Additionally, the data indicates that different photochemical processes are at work during different periods of the day.