



Vortex Circulation on Venus

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Recent observations from Venus Express at ultraviolet and near infrared wavelengths show that the hemispheric vortex organization of the atmospheric circulation, first seen from Mariner 10 still persists. Similar vortex organizations in the north and the south hemispheres were seen later from the Pioneer Venus observations during 1978 – 1983, and from Galileo observations in 1990. This suggests that the Vortex organization of the atmospheric circulation is stable and may persist for a very long time indeed. Suomi and Limaye (1978) pointed out the similarities between the vortex organization and the circulation of a tropical cyclone on Earth. Recent Venus Express observations suggest that in addition to those similarities, the structure within the “eye” may also be similar. Many terrestrial tropical cyclones have whorls and features such as the “S” shaped dipole seen on Venus. This suggests that the clues to the super rotation of the Venus atmosphere may lie in understanding how the vortex organization originates and is sustained.

Suomi, V.E., and S.S. Limaye, (1978), Further evidence of vortex circulation, *Science*, 201, p. 1009-1011.