

## Effects of Topography on the General Circulation of the Martian Atmosphere

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We have developed a new general circulation model (GCM) of the Martian atmosphere. The model includes the Martian surface topography but we do not consider the effect of dust. Simulation results show that the zonal mean fields vary significantly with seasons. At solstice, a cross-equatorial Hadley cell is dominant, while at equinox, two cells are formed above 20 km height and the pattern of meridional circulation is symmetric with respect to the equator. However, even at equinox, there appears a cross equatorial circulation whose upward branch is located at 15S below 20 km height. It is revealed that the potential temperature difference between hemispheres produced by zonal mean topography causes this asymmetric circulation.