

## Numerical Simulation of Atmospheric Tides in the Martian Atmosphere

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In order to investigate the characteristics of thermal tides in the Martian atmosphere, we performed numerical simulations using a Mars atmosphere general circulation model developed by our group. The latitude-altitude structure of diurnal thermal tides under a typical dust condition in northern winter shows that this mode propagates vertically at low latitude below about 65 km altitude. Above about 65 km altitude, absorption of solar near infrared radiation seems to excite the diurnal thermal tides. A numerical experiment with a constraint of zonally uniform surface temperature implies that about a half of the propagating component of the tides is excited by the dust heating, while the remainder is excited by the diurnal variation of surface temperature.