

Thermal Tide and its Momentum Transport in Venus' Atmosphere

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Many studies have been conducted to examine thermal tides and its momentum transport in the atmosphere of Venus. In these studies, it is shown that the tides can contribute to the maintenance of the super-rotation.

However, since over-simplified basic fields were used to obtain diurnal and semi-diurnal thermal tides in these studies, it is not clear whether these results can be applied to the actual atmosphere of Venus. To make this clear, a linearized primitive equation model is constructed. Thermal tides are obtained for more realistic basic fields, which are estimated from observations.