Geophysical Research Abstracts
Vol. 14, EGU2012-2979, 2012
EGU General Assembly 2012

Investigations of the dynamic with lidars; potential contribution of Infrasound

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Long temperature records obtained at several locations have been allow to monitor the long-term evolution and the dynamic processes of the middle atmosphere. A large part of the variability is due to gravity and planetary waves. Both have an impact on long-term trend estimates and add a dynamic feedback to the cooling potential due to the radiative greenhouse gaz forcing and similarly for solar and volcanic forcing. The global scale can be monitor in using the synergy between satellites and the lidar network, however tides are a strong issue to achieve such a challenge. Recent results of the lidar investigations will be given as an illustration to show some of the dynamical issues at different scales where the infrasound may contribute to improve our knowledge.