Geophysical Research Abstracts
Vol. 15, EGU2013-6900, 2013
EGU General Assembly 2013

Dynamics and chemical variability of the mesosphere: Atmospheric internal causes and role of the solar forcing

Alain Hauchecorne
CNRS, LATMOS, Guyancourt, France (alain.hauchecorne@latmos.ipsl.fr)

The mesosphere is a transition region between the lower and middle atmosphere mostly influenced by the global increase of greenhouse gases and the external environment of the Earth where the interaction with the Sun plays a dominant role. This a place where complex interactions between dynamics, radiation and photochemistry processes take place. Due to its high sensitivity to the solar variability it may act as an amplifier in the Earth climate-Sun link. Some mechanisms of interaction between the solar variability and the mesosphere will be presented. The role of sudden stratospheric warming in the coupling between the lower and upper atmosphere will be shown as well as the impact of particle precipitation in the polar region.