

Stratospheric water vapor and climate

Ted Shepherd

Grantham Professor of Climate Science
Department of Meteorology
University of Reading
Reading RG6 6BB, U.K.

Stratospheric water vapor plays an important role in climate, both radiatively and chemically through its effect on ozone. The abundance of stratospheric water vapor is controlled in large part through dehydration of air entering the stratosphere through the tropical tropopause, which provides a mechanism for variability and feedbacks. This talk will present an overview of the role of stratospheric water vapor in climate, and its coupling with other aspects of climate on various timescales, as well as presenting some new results on water vapor feedbacks to different GHG forcings.