



## **A long period (2001-2007) wave activity global analysis in the troposphere-stratosphere system, from GPS RO CHAMP temperature data**

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From a long period (2001-2007) GPS radio occultation (RO) temperature data obtained with CHAMP Low Earth Orbit satellite, the global wave energy considering different upper cutoffs for apparent vertical wavelengths beyond the 10 km limit recently considered in the stratosphere is analyzed. In particular, it is expected that long vertical wavelengths belonging to mountain and planetary waves are now better included. The wave potential energy is calculated around the tropopause/s after converting T profiles to potential temperature. This allows for an integrated analysis of the troposphere-stratosphere system. Taking into account basic restrictions inherent to the RO retrieval itself, as refraction due to background wind and wavelengths distortion due to the not vertically directed line of tangent points (LTP), global and local features as a function of latitude, longitude, height and time are presented. Previous conclusions by other authors and by ourselves are discussed and reviewed.