NEW INSIGHTS ON THE GLOBAL TROPOPAUSE BASED ON GPS DATA

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GPS radio occultation provides high vertical resolution temperature measurements with global sampling, affording an unprecedented ability to observe the global tropopause. GPS data have been used to document climatology and variability of the tropopause, and also to help understand novel phenomena such as multiple tropopauses, the extratropical tropopause inversion layer and widening of the tropical belt. This talk will summarize some of the key results on tropopause structure and variability obtained from GPS data, and discuss ongoing new work that links temperature structure with the behavior of trace constituents and clouds in the tropopause region.