



## **Can radio occultation be used to discern long-term tropopause trends?**

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Previous studies have found trends in important tropopause parameters (height, temperature, structure), which may be sensitive indicators of anthropogenic climate change. However, uncertainties with the underlying data cast doubts on the significance of these findings. Radio occultation (RO) represents a promising new technique for determining long-term trends in tropopause parameters due to its excellent stability properties, but discrepancies in how the different products process the data raise new concerns.

In this study, we combine four different RO products to construct a consistent tropopause record spanning the past ten years. This record is used to diagnose decadal trends in key tropopause parameters. We discuss the significance of these trends in light of the specific uncertainties associated with the individual RO products and in comparison with conventional observations. Our results provide important details on how to best utilize RO-derived tropopause data for climate change studies.