

Abstract:

Atmospheric gravity waves are ubiquitous multiscale oscillations generated by flow over orography, moist convection, geostrophic imbalance, etc. They dynamically couple the different layers of the atmosphere, play a role in setting the position and strength of the tropospheric jet streams, and play a leading order role in the stratosphere and mesosphere. However, much of the gravity wave spectrum cannot be resolved in a typical climate model, and observational constraints on their activity are also scarce. I will present recent work aiming to improve both our understanding of the effects of gravity waves on climate variability and their representation in global climate models.