



Resolving Gravity Waves with Himawari-8 and GOES-16 Imagery at the New Limit of Resolution and the Application to Aircraft-Scale Turbulence

Wayne Feltz

University of Wisconsin - Madison SSEC/CIMSS

The innovations of the Advanced Himawari Imager and the Advanced Baseline Imager enable new ways of detecting possible sources of moderate to severe aircraft turbulence, and the lessons learned can then be transferred to other upcoming as well as existing satellite platforms. Here we will demonstrate ways of overcoming the difficulties of observing gravity waves from geostationary instruments, and reveal “hidden gravity waves,” which is the name we give to gravity waves that often escape detection by subjective observation. We will offer insights about what observational evidence discriminates hazardous from benign waves, using case studies with manual and automated pilot reports.