2012 Workshop: MLT event dynamics

Long title
New studies of gravity waves, instabilities and other unusual phenomena observed in the MLT region
Conveners
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Description

Since the early 90's, our ability to investigate and measure gravity waves and instability processes using night-time observations of the Mesosphere and Lower Thermosphere (MLT) airglow emission layers (~80-100 km) has grown enormously. Gravity waves from tropospheric sources have been observed there. Additionally, unusual phenomena termed “wall” events and mesospheric “bores” have been discovered, and new observations of large amplitude “soliton-like” events as well as “breaking waves” have been obtained using a variety of remote-sensing instruments located at sites around the world. Important correlative measurements using Na lidar, meteor radar and optical imagers are providing critical information necessary to investigating the geophysical processes involved with these phenomena and their interactions with the background atmosphere. This workshop is open to everyone with an interest in learning more about waves and wave driven effects on the MLT. It will have a number of presentations describing results from new observations of small and medium-scale gravity waves and latest news on unusual events. We invite theorists to speculate on the triggering and forcing of the processes involved, as well as new models describing such events and gravity waves.

Justification

Quantifying wave coupling into the MLT region continues to be an important theme for CEDAR science. This workshop focuses on the results of new measurmements, especially coordinated studies, together with modeling/theory studies to improve our understanding of the effects of a range of wave-driven phenomena on the MLT region.

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