

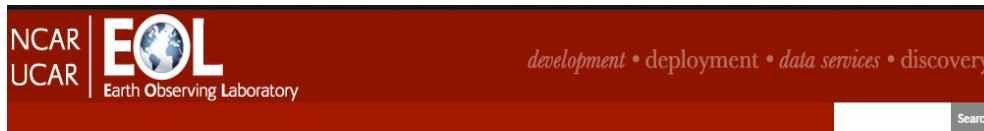
NCAR/EOL DEEPWAVE Data Archive & Discussion

Data Management & Services (DMS)

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https://www.eol.ucar.edu/field_projects/deepwave



May 29, 2014 to July 27, 2014

Project Location:

Christchurch, New Zealand; South Island, New Zealand; and surrounding Southern Ocean

Project Phase: Data Stewardship

Funding Type: NSF Funded

What's New?:

DEEPWAVE Science Meeting, 11-12 December 2015

[Presentations Now Available](#)

Project Description:

DEEPWAVE (Deep Propagating Gravity Wave Experiment over New Zealand) studied the dynamics of gravity waves (GWs) from the surface of the Earth to the mesosphere and lower thermosphere (MLT). The project examined how tropospheric winds and storms modulate the generation of GWs, how GWs propagate across the tropopause into the stratosphere, and how the Polar Night Jet and tidal winds influence GW propagation and breakdown in the middle atmosphere. Important observational components of DEEPWAVE included in situ measurement from the NSF/NCAR HIAPER Gulfstream-V research aircraft along with surface, airborne and satellite-based remote sensing. EOL also deployed an Integrated Sounding System (ISS) with a radar wind profiler and other ground instrumentation on the West Coast of New Zealand.

Scientific Objectives

- Detailed measurement of deeply propagating GWs over several density scale heights using in situ and airborne remote sensing
- Determine the relationship between GWs in the Upper Troposphere and Lower Stratosphere (UTLS) and GWs in the Mesosphere and Lower Thermosphere (MLT).
- Implementation of new airborne remote sensing lidars and a mesospheric temperature mapper (MTM) to extend GW measurements into the MLT.
- Comparison of airborne observations of GWs with satellite observations
- Assessment of GW variations with altitude, including filtering and interactions throughout the stratosphere and mesosphere, and the implications for vortex-edge drag and MLT forcing.
- Development and testing of numerical models of GW generation and deep propagation over several density scale heights.

DATA ACCESS

Data Access
Field Catalog
Dry Run Field Catalog

DATA DOCUMENTATION

HIAPER Documentation Summary
Data Policy
Dataset Documentation Guidelines
Data Submission Instructions

FACILITIES & PLATFORMS

HIAPER Gulfstream GV
ISS

PUBLICATIONS

DEEPWAVE Publications

DOCUMENTS

DEEPWAVE Overview Presentation
Site Survey Report
DEEPWAVE Badge
DEEPWAVE Operations Plan
▶ A Summary of MTP Results for DEEPWAVE
DEEPWAVE Image Gallery

MEETINGS AND PRESENTATIONS

DEEPWAVE Meetings

Data Archive

- Data Public Domain Feb 2016
- Total Archive 1.5 TB
- Total Dataset Orders to Date: 322
- Archive 87% Complete
 - (108 of 125 Datasets linked)
 - Missing/Preliminary Data
- **NEW!** High Resolution Radiosonde Composite Online
- DOIs Assigned to Datasets
- Submissions Instructions Online

Publications

- 41 Publications/Conference Proceedings listed Online
- Submissions Instructions Online

Meetings & Presentations

- Please provide copy of your final presentation (PDF).
- Presentations from this meeting will be posted online (password protected)

EOL DEEPWAVE support sponsored by

