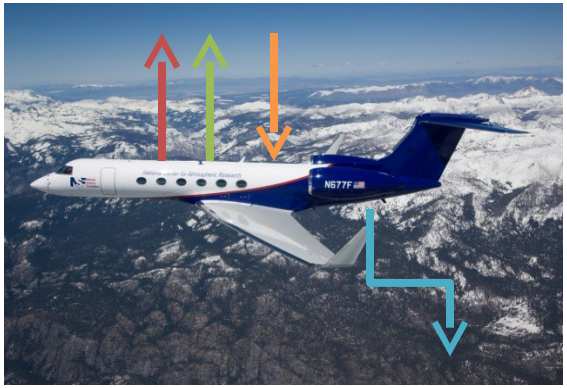
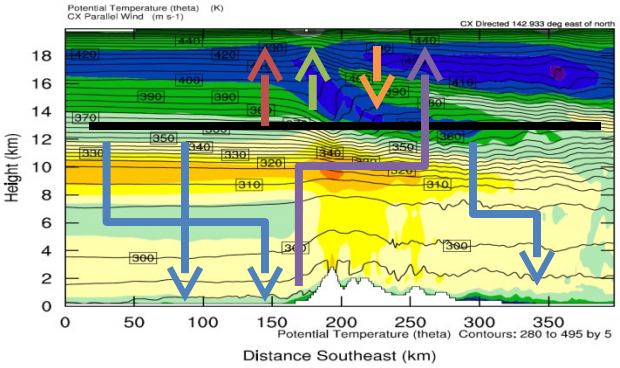

DEEPWAVE-NZ
2014

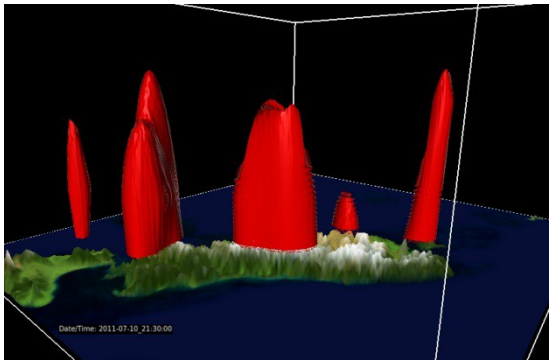
DEEPWAVE: Observing gravity waves from creation to destruction



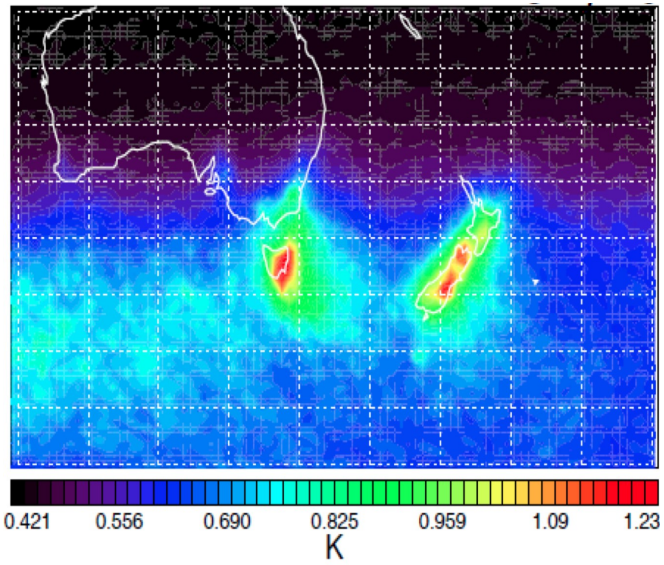
NSF/NCAR Gulfstream V



Measurement span in DEEPWAVE



"Towers" of vertically propagating waves from NZ (simulated)



Brightness temperature variance at 2 hPa (i.e. z~41km) from the Atmospheric Infrared Sounder (AIRS) for July 2003-2011.

Pis: Dave Fritts, Steve Eckermann, Jim Doyle, Mike Taylor, Ron Smith
Support: NSF , NRL and NCAR
Dates: June 1 to July 15, 2014
Base: Christchurch, NZ
Aircraft : Gulfstream V, 22 flights
Instruments: In situ, dropsondes, 2 lidars, 1 IR imager
Altitude Range: 0 to 90km

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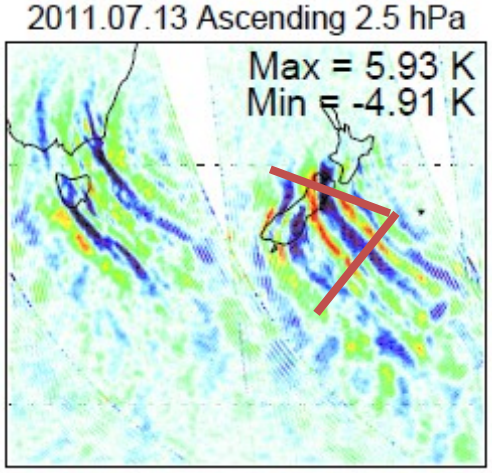

AIRS temperature and DEEPWAVE flight tracks

USA Principal Investigators

- Dave Fritts: GATS (Boulder); Middle atmosphere gravity waves, modeling and observation
- Jim Doyle: NRL (Monterey) Observation, modeling, predictability of gravity waves
- Steve Eckermann: NRL (Washington, D.C.) Satellite observation and theory of gravity waves
- Mike Taylor: Utah State Univ., Observation and instruments for middle atmosphere gravity

DEEPWAVE timeline

- 2008: NRL proposal for gravity wave project
- 2009-2012: SAANGRIA design and NSF proposals (Southern Andes and Antarctic Peninsula)
- Spring 2012: New experiment design for DEEPWAVE-NZ
- Fall 2012: New NSF science proposal for DEEPWAVE-NZ
- February 2013: Instrument flight test
- August 2013: Informal notification of NSF funding
- August 2013: Practice “Dry Run”
- January 2014: International DEEPWAVE Conference in Christchurch
- March 2014: Planning meeting in Boulder

deep wave NZ

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