QC Data Status of DEEPWAVE Dropsonde Data
Location of 279 Dropsondes released during DEEPWAVE
**Quality Control of Dropsonde data**

- **In-Field Data Inspection**
  - Student operators in operations center to evaluate data quality, & submit messages to GTS and Skew-T plots to field catalog
  - Dropsonde operators review quick look plots

- **Raw Profile Examination & Correction**
  - Categorize all drops
    - Overland drops
    - Launch detect issues
    - Fast falls
    - Missing data
    - Sensor failure

- **Calculate Geopotential height of G-V from aircraft GPS altitude at drop locations (~25 m)**

- **Sonde Pressure Correction (~0.7 mb)**
  \[ P = P^{RS} \times P^{REF}_0 / P^{RS}_0 \]

- **ASPEN: Quality Control, sensor time constant corrections, smooth data, add geo-potential height**

- **Waterfall Plots of PTU and Wind**

- **Histograms of PTU and Wind**

- **Visually Examine QC Sounding**

- **Final QC D-Files placed on CODIAC**
Dropsonde Summary Statistics

- 279 dropsondes deployed + 4 engineering drops
- Engineering drops deployed RF01 (3 fast falls of 4)
- Sondes dropped on flights RF02 to RF26, except RF15 (Comparison flight with DLR Falcon)
- 11 Sondes as median dropped per flight
- 67 drops over land
- 1 sounding with no PTH data, winds only
- 3 drops (~1.5%) were fast falls
- Preliminary success rate: 98.5% (275 of 279)
DEEPWAVE Dropsonde data QC Issues

- No unique cases
- Sondes dropped over land, will integrate from aircraft down for Geopontial height
- Sonde Geopotential height calculated from surface up for drops over water
- Upward vertical velocity will be retained in final QC data set
- Fast falls drops, the GPS winds were set to missing
ASPEN Processing
RF02 Drop #1 - Temperature and RH vs Press
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Dropsonde Data Post QC Status Update

• Dropsonde Data QC Post Processing by EOL/ISF Associate Scientist Kate Young

• As of 10/23/2014 dropsonde raw data has undergone initial evaluation, fast fall winds removed, flight level altitude correction.

• Remaining QC includes pressure correction, Batch ASPEN and evaluation of QC data plots (waterfalls and histograms)

• Early November anticipated release date of Dropsonde data