

**HS3 Science Team Meeting**  
**May 5 - 7, 2015**  
**NASA Research Park, Moffett Field, CA**

Links to all cleared presentations are displayed in blue and can be downloaded directly from the ESPO server. These presentations, along with posters and the attendees' list, are also available on the HS3 website:

[http://espo.nasa.gov/missions/hs3/content/HS3\\_Science\\_Presentations](http://espo.nasa.gov/missions/hs3/content/HS3_Science_Presentations)

**Tuesday May 5**

1. [Greeting/Mission Status Overview](#) (Braun)
2. Overview from each instrument team
  - A. Environmental
    - i. [CPL](#) (Hlavka)
      - a. Data processing is complete
      - b. Global Hawk files are broken up into 6 hour segments
    - ii. [AVAPS](#) (Hock)
      - a. 2014 drops: 656 dropsondes and 11 research flights for AV-6.
      - b. Temperature difference changed by 0.14K between 2011 and 2014.
      - c. With regard to big vs. little sondes, no great comparisons currently exist for harsh weather conditions.
    - iii. [S-HIS](#) (Taylor)
      - a. Data collection: real-time (MTS) and post flight (batch processing 30 minutes after)
      - b. Real time data includes temperature plots going over the eye
      - c. Ku downlink issues from early HS3 2014 flights were resolved quickly
      - d. Still going to reprocess the data set and will archive after processing. Data sets are located at the SSEC data site, and will be archived in the coming months.
  - B. Overstorm
    - i. HIWRAP (Heymsfield)
      - a. WB-57 used
      - b. Antenna angle corruption repaired 10/16/2014
      - c. netCDF files are in the archive
      - d. **Need to convert 2014 files from HDF5 to netCDF-4 with CF metadata**
      - e. References provided in place of Algorithm Theoretical Basis Document
    - ii. [HIRAD](#) (Cecil)
      - a. Hurricane Gonzolo 2014: 3 flights gave yielded best data
      - b. Flown on WB-57
      - c. Hurricane Karl 2010 data archived
      - d. GHRC: data turned over, but not yet online. Please email to request the data in the interim.
    - iii. [HAMSR](#) (Lambrigsten)
      - a. Very few flights in 2013 and no flights in 2014

- b. Flew in 2015 on the Cal Water Campaign
  - c. Processed all the data which can be accessed through the HS3 website, the JPL website, and Marshall DAC
- 3. Science Team Member Presentations
  - A. The controversy regarding HS3 surface pressure observations during the rapid intensification of Edouard on September 14-15 (Braun)
  - B. [Intensity change and possible unusual eye wall replacement cycle of Edouard between 14-15 September](#) (Zipser)
  - C. [Multiscale kinematic structure and evolution of Hurricane Edouard from 14-16 September using Global Hawk dropsondes and P-3 airborne Doppler radar](#) (Rogers)
  - D. [On the dynamics of secondary eyewall formation in Hurricane Edouard](#) (Montgomery)
  - E. [Edouard secondary eyewall dynamics as captured by NASA HS3 dropsonde observations](#) (Abarca)
  - F. [Precipitation evolution over 4 days with respect to the shear vector \[using lightning, radar, and passived microwave data\] during Edouard's intensification](#) (Alvey)
  - G. [Hurricane Nadine's interaction with the SAL as seen in observations and COAMPS-TC simulations](#) (Hence)
    - i. How does unevenly distributed shear impact the vortex circulation?
  - H. [Exploring dust impacts on tropical systems from the NASA HS3 field campaign](#) (Nowottnick)
  - I. Observations and modeling of Saharan dust interaction with Hurricane Nadine (2012) (Braun)
  - J. [Warm core and vortex analysis for HS3 case studies elucidated from GH dropsonde data](#) (Halverson)
- 4. Poster Session
  - A. [Evaluation of Tropical Cyclone Inner Core Precipitation Properties using Passive Microwave \(1998-2012\)](#) (Alvey)
  - B. [Comparison of reanalyses and observations over the Atlantic with respect to Tropical Storms](#) (Brammer)
  - C. [Three-year analysis of S-HIS dual-regression retrievals using collocated AVAPS and CPL measurements](#) (DeSlover)
  - D. Lifecycle of Hurricane Nadine (2012) (Dunkerton)
  - E. [Dropsonde and CPL Observations of Tropical Cyclone Cirrus Structure](#) (Duran)
  - F. [Assessing the sensitivity of the tropical cyclone secondary circulations to perturbed outflow via idealized COAMPS-TC simulations](#) (Komaromi)
  - G. [Tropical cyclone characteristics as revealed by WLLN, GRIP, and HS3 data](#) (Stevenson)
  - H. [Simulations of the 24-25 August 2013 SAL event](#) (Tao)
  - I. [Scanning High-resolution Interferometer Sounder \(S-HIS\) Radiometric Calibration and Performance During HS3](#) (Taylor)

- J. [Summary of Tropical Cyclone Cloud-Top Products and Analyses from Satellite during the HS3 Project](#) (Velden/Griffin)
  - K. Composite analysis of cloud structures in tropical cyclones observed by CloudSat (Wu)
  - L. [The thermodynamic and kinematic lifecycle of Hurricane Edouard as seen by dropsonde observations](#) (Zawislak)
5. Science Team Member Presentations
- A. [GHRC HS3 Data Archive](#) (Maskey)
    - i. Located at <http://ghrc.nsstc.nasa.gov>
    - ii. Login information- Username: hs3scienceteam Password: BlueOcean2012
    - iii. netCDF-4 data format requested
    - iv. If there are multiple versions of data uploaded, the latest version of the data will be available
    - v. ACTION: HIRAD still needs to upload 2013 data
    - vi. ACTION: HIWRAP still needs to upload 2012 and 2014 data
  - B. [SHOUT](#) (Wick)
    - i. Similar to GRIP payload
  - C. [The final two MDR flights of 2014](#) (Dunion)

### Wednesday May 6

1. Science Team Member Presentations
- A. [On the intensity change of Hurricane Earl \(2010\)](#) (Zhang)
  - B. [Study of Hurricane Edouard of September 2014 using data assimilation and prediction experiments using a cloud-resolving model](#) (Krishnamurti)
  - C. [Predictability and dynamics of the rapid intensification of Hurricane Edouard \(2014\) evaluated through convection-permitting ensemble forecasts](#) (Zhang)
  - D. [Observations of the TC Diurnal Cycle during Hurricane Edouard](#) (Dunion)
    - i. CIMSS Real-Time Product Support available on MTS Summer 2015
  - E. [Tropical cyclone diurnal cycle as seen by TRMM](#) (Cecil)
  - F. [Characterizing the evolution of Hurricane Karl \(2010\) through analysis of high-resolution Doppler radar data](#) (DeHart)
  - G. [Summary of hurricane outflow jet structure derived from GH dropsonde observations during HS3 \(2012-14\)](#) (Black)
  - H. [Hurricane outflow, initial condition sensitivity, and HS3 observation impact](#) (Doyle)
  - I. [Use of HS3 data for understanding the tropical cyclone outflow layer](#) (Molinari)
  - J. [Tropical cyclone interaction with an upper level cold core low](#) (Nava)
  - K. [Lagrangian flow boundaries divide cyclones and nearby dry air](#) (Rutherford)
  - L. [HIWRAP observations of Hurricane Gonzalo](#) (Didlake)
  - M. [The influence of environmental moisture variability on tropical cyclogenesis associated with African easterly waves](#) (Throncroft)

- N. [Real-time assimilation of Global Hawk dropsonde observations for improved hurricane track and intensity forecasts from NCEP's operations HWRF model](#) (Sippel)
- O. [Atmospheric profiles from SHIS during the HS3 field campaigns-retrieval technique and results](#) (Smith)
- P. [HIWRAP analysis of HS3 and GRIP data with a focus on the RI of Hurricane Karl \(2010\)](#) (Guimond)
- Q. [A dropsonde-based analysis of the genesis of Tropical Storm Gabrielle \(2013\)](#) (Helms)  
[Mesoscale convective mass flux in tropical cyclones](#) (Gjorgjievska)
- R. [Moisture and vorticity budgets in tropical cyclones calculated from HS3 dropsonde data](#) (Juracic)

## 2. ACTIONS

- A. Send Scott Braun a list of planned publications, and please let him know when it's accepted.
- B. Keep Scott Braun updated when papers are submitted and accepted via email. Please send a highlight slide that gets the main point across, with a second slide containing your paper's information to give HQ an idea. Scott to send out example via the list serve.
- C. Special issue ideas? Possibly GRIP?
- D. AMS Tropical Conference
  - i. Submit abstracts to Jason Dunion (organizing abstracts, posters, and data)
  - ii. Use HS3 button when submitting