

2018 Tropical Cyclone Operations and Research Forum

72nd Interdepartmental Hurricane Conference

AGENDA

March 9, 2018

Day 1: Tuesday, March 13, 2018

8:00 am Registration (8:00 am - 12:00 pm)

Morning Session Coordinator: OFCM

8:15-8:30 am Welcome: Dr. William Schulz, Federal Coordinator for Meteorological Services and Supporting Research

8:30-10:00 am Panel 1: Tropical Cyclone Operations: Challenges in 2017; New Products and Services Planned for 2018 and 2019

Panel Moderator: **Eric Blake (NHC)**

- NHC: Eric Blake
- CPHC: Tom Birchard
- JTWC: Bob Falvey
- AOC: RDML Nancy Hann, NOAA Corps
- 403rd OG: COL Brian May, USAF

10:00-10:30 am Morning Break

10:30-Noon Panel 2: Recent and Planned Improvements in Modeling Capability

Panel Moderator: **Sundararaman Gopalakrishnan (Gopal) (HRD)**

- EMC: Vijay Tallapragada
- NRL: Jim Doyle
- UKMET: Michael Vellinga
- ECMWF: Fernando Prates

Noon-1:15 pm Lunch on your own

Afternoon Session Coordinator: OFCM

1:15-2:45 pm Panel 3: Ocean Model Impact on Hurricane Forecasting

Panel Moderators: **Nick Shay (RSMAS, UM) and Sue Chen (NRL)**

- Open research questions in ocean observations and modeling and their impact on hurricane predictions: Isaac Ginis (URI)
- Tropical cyclone ocean observation: current state and future outlook: Elizabeth Sanabia (USNA)

- Panel discussions: Pat Fitzpatrick (MsState), Isaac Ginis (URI), George Halliwell (NOAA-AOML), Benjamin Jaimes (RSMAS, UM), Hyun-Sook Kim (NOAA-EMC), Elizabeth Sanabia (USNA), Jun Zhang (NOAA-AOML)
 - Evaluation of impacts of assimilated ocean observations on forecasts. What ocean fields are needed to get the ocean state and response correct for the models (T, S, V) and TC intensity?
 - Targets of opportunity – When are these ocean observations most beneficial?
 - IRMA/JOSE Case Studies
 - Evaluation of autonomous ocean observing systems (Gliders, Alamo Floats, APEX-EM, new types of expendables, Altimetry satellite sensing)

2:45-3:15 pm Afternoon Break

3:15-4:45 pm Session 4: Satellite Advancements

Session Leader: **Mark DeMaria (NHC)**

- Operational use of GOES-16 at NHC - Jack Beven (NHC)
- Applications of the Geostationary Lightning Mapper for tropical cyclone forecasting - Stephanie Stevenson (CIRA/CSU, NHC visiting scientist)
- Operational use of Himawari for TC forecasting - Brian Strahl and Bob Falvey (JTWC)
- Outlook for JPSS data and products for TC analysis and forecasting - Galina Chirokova (CIRA/CSU)
- Open discussion of recommendations to improve utilization of GOES-16, Himawari, and JPSS - Mark DeMaria (NHC)

4:45-5:00 pm Closing Day 1 administrative remarks and adjournment

5:30 pm **Networking Session (Cash bar/hors d’oeuvres at BRIO Restaurant in Dolphin Mall (near hotel))**

Day 2: Wednesday, March 14, 2018

Morning Session Coordinator: OFCM

8:15–8:30 am Administrative remarks

8:30-9:00 am “Florida Public Hurricane Loss Model” (Invited Presentation)

Shahid Hamid, PhD, CFA (Chair and Professor, Department of Finance, College of Business, Florida International University)

9:00-10:15 am **Session 5: JHT Project Status: (Pt 1)**

Session Leader: **Jason Sippel (HRD)**

- “The Joint Hurricane Testbed (JHT): A 2018 Update” Jason Sippel (NOAA/HRD), Christopher Landsea (NWS/NHC), Mark DeMaria (NWS/NHC)
- JHT Project 1: Evolutionary Programming for Probabilistic Tropical Cyclone Intensity Forecast - Paul Roebber and Clark Evans (UW-Milwaukee)

- JHT Project 2: Improvements to Operational Statistical Tropical Cyclone Intensity Forecast Models Using Wind Structure and Eye Predictors - Galina Chirokova (CSU/CIRA), John Kaplan (AOML/HRD)
- JHT Project 3: Improvements and Extensions to an Existing Probabilistic TC Genesis Forecast Tool Using and Ensemble of Global Models - Bob Hart and Dan Halperin (FSU)

10:15-10:40 am Morning Break

10:40-Noon **Session 6: JHT Project Status: (Pt 2)**

Session Leader: **Jason Sippel (HRD)**

- JHT Project 4: Estimation of Tropical Cyclone Intensity Using Satellite Passive Microwave Observations - Haiyan Jiang (Florida Intl Univ.)
- JHT Project 5: Improvement and Implementation of the Probability based Microwave Ring Rapid Intensification Index for NHC/JTWC Forecast Basins - Yongxian Pei and Haiyan Jiang (Florida Intl Univ.)
- JHT Project 6: Transition of Machine-Learning Based Rapid Intensification Forecasts to Operations - Andrew Mercer and Kimberly Wood (MSU)
- JHT Project 7: Ensemble-based Pre-genesis Watches and Warnings for Atlantic and North Pacific Tropical Cyclones - Russ Elsberry (UC-CS)

Noon -1:15 pm Lunch on your own

Afternoon Session Coordinator: OFCM

1:15-1:50 pm **Session 7: HFIP Update**

Session Leader: **Frank Marks (HRD) and Nicole Kurkowski (NWS)**

- Update on NOAA's Hurricane Forecast Improvement Project: Proposed Framework for Addressing Section 104 of the Weather Research Forecasting Innovation Act of 2017

1:50-2:15 pm Afternoon Break

2:15-4:45 pm **Working Group for Tropical Cyclone Operations and Research (WG/TCOR) Meeting**, chaired by Dr. Mark DeMaria (NCEP/NHC).

4:45-5:00 pm **Closing Day 2 administrative remarks and adjournment**

Day 3: Thursday, March 15, 2018

Morning Session Coordinator: OFCM

8:15-8:30 am Administrative remarks

8:30-10:15 am **Session 8: Advances in Airborne Observing Systems, Infrastructure, and Product Improvement**

Session Leader: **LT COL Kaitlyn Woods, 53rd WRS**

- Implementation of New Vortex Message – Eric Blake (NHC)
- NHC Long-range process for adding new products - Mike Brennan (NHC)

- AOC update - Alan Goldstein and Paul Flaherty (NOAA/OMAO)
- Operational Impact of Data Collected from the Global Hawk Unmanned Aircraft During SHOUT- Jason Dunion (Univ of Miami/CIMAS - NOAA/AOML/HRD)
- Low Altitude UAS Missions into Major Hurricane Maria (2007) - Joe Cione (NOAA/AOML/HRD)
- Forecast of long range capabilities for the WC-130 – Kaitlyn Woods (53rd WRS)
- AWIPS2, ATCF – Chris Mello and Craig Mattocks (NHC)
- Evaluation/value of extra dropsondes deployed by AFRES - Jason Sippel (HRD)

10:15–10:45 am Morning Break

10:45-11:45 am Final Plenary Session

- **WG/TCOR Report**, Dr. Mark DeMaria (NCEP/NHC), Chairperson
- **Conference action items**, Glenn Austin (OFCM)
- **Presentation of the Richard H. Hagemeyer Award**, Dr. William Schulz, Federal Coordinator for Meteorological Services and Supporting Research

11:45 am Adjourn