

Workshop to Develop a Science Strategy for the Program for Hurricane Intensity Forecast Improvement and Impacts Projection (HiFi)

**11-13 October 2006
Chevron
4800 Fournace Pl, Bellaire, TX**

The overall purpose of the workshop is to guide the development of a science strategic plan, so much of the time is devoted to working sessions that will work through a draft Plan, both filling it out and suggesting changes.

Wednesday: Atmospheric and Oceanic Processes

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07:30 Breakfast and registration

08:15-08:30 Introductions, including welcome by Chevron Executive

08:30-09:20 Introduction by Greg Holland, Roger Lukas, and Tom Gustafson setting the context for the workshop including some brief history of HiFi, funding opportunities, required outcome of the workshop, and HiFi Strategy Document.

09:20-09:50 Break

09:50-11:30 Overview presentations on atmospheric, oceanic, and air-sea interaction processes of potential importance to hurricane intensity change, plus an overview on longer term hurricane projections.

Atmosphere: Wayne Schubert

Oceanic Jim Price

Air-Sea Interface: Alex Soloviev

Projections: Peter Webster

11:30-12:00 General discussion

12:00-13:30 Lunch

13:30-15:30 Break into working groups (atmosphere, coupling, ocean, projections) to consider the processes highlighted by the talks and to start filling out the science strategy document.

15:30-16:00 Break

1600:1730 Plenary reports and further discussions on the conclusions from each group

18:30---- Workshop Dinner

Thursday: Observing and Modeling Systems and Technology

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- 07:30 Breakfast
- 08:00-09:30 Overview presentations on technology for atmospheric, oceanic, and air-sea interaction observations of importance to hurricane intensity change.
Space Borne: Chris Velden/Nick Shay
Atmospheric: Russ Elsberry
Air-Sea Fluxes: Chris Fairall
Oceanic: Tom Sanford
- 09:30-09:50 Break
- 09:50-11:20 Break into working groups (atmosphere, air-sea interface and oceanic) to consider observing technologies and systems and provide input to the science strategy document.
11:20-12:00 Plenary reports and further discussions on the conclusions from each group.
- 12:00-13:00 Lunch
- 13:00-14:30 Overview presentations on modeling issues.
Hurricane Modeling: Chris Davis
Oceanic Modeling: Isaac Ginis
Modeling the Air-Sea Interface: Shuyi Chen
- 14:30:15:00 General discussion
- 15:00-1520 Break
- 1520-16:30 Break into working groups (atmosphere, ocean and coupling) to consider modeling, physics and subgrid parameterization issues (3 groups, but to collectively consider all modeling issues) and to provide input to the science strategy document
- 16:30-17:30 Plenary reports and further discussions on the conclusions from each group.
- 18:00 Reception at Bradford Homesuites

Friday: Bringing it together

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07:30 Breakfast

08:00-10:00 Given the previous days' conclusions how can we efficiently test the various hypotheses regarding intensity prediction limitation? What mix of observations and models is required for each one?

Breakout into two groups, process studies and experimental prediction:

The process study group should consider observations and modeling work needed to understand the processes that are hypothesized to limit intensity prediction and impacts projection. Can some process studies be combined? Which are most ready to be conducted?

The experimental prediction group should consider the observations, parameterizations, and modeling work needed to both improve and understand the limits to intensity prediction and impacts projection, both at present and in the future using models with improved physics and better initialization.

10:00-11:00 Breakout summary reports and plenary discussion.

11:00-12:00 Summing up and future science (Roger and Greg) and funding (Tom) plans: Presentation of a draft plan for the first phase of HiFi work, and general discussion including implementation aspects; Presentation of a proposed organizational structure, including working groups; Action items and assignments.

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12:00-13:00 Lunch

13:00-16:00 Writing group commences