

60th Interdepartmental Hurricane Conference



***“Hurricane Season 2006:
Building on the Historic 2005 Season”***

March 20 - 24, 2006

Welcoming Remarks

Mr. Samuel P. Williamson

Federal Coordinator for Meteorology

60th Interdepartmental Hurricane Conference

***“Hurricane Season 2006:
Building on the Historic 2005 Season”***



Sponsored and hosted by

**The Office of the Federal Coordinator
for Meteorological Services
and Supporting Research**

Special Welcome

**The Honorable Samuel L. Jones
Mayor of Mobile**



60th Interdepartmental Hurricane Conference

Special Presentation

**Mr. Ryan Welch
Legislative Director,
Office of U.S. Senator Richard Shelby**

Overview

- **WHY ARE WE HERE?**
- **SUCCESSSES AND CHALLENGES**
- **OBJECTIVES / EXPECTED OUTCOMES**
- **THINGS TO DO**
- **LOGISTICS**
- **CONFERENCE AGENDA**
- **INTRODUCTION OF KEYNOTE SPEAKER**

Why Are We Here?

The Ten Most Costly World Catastrophes

	DATE	LOCATION	EVENT	LOSS*
1	8/24/2005	U.S., Others	Hurricane Katrina	\$45,000
2	8/23/1992	U.S., Bahamas	Hurricane Andrew	22,274
3	9/11/2001	U.S.	Terrorist Attacks (WTC, etc.)	20,716
4	1/17/1994	U.S.	Northridge Earthquake	18,450
5	9/2/2004	U.S., Others	Hurricane Ivan	11,684
6	9/20/2005	U.S., Others	Hurricane Rita	10,000
7	10/15/2005	U.S., Others	Hurricane Wilma	10,000
8	8/11/2004	U.S., Others	Hurricane Charley	8,272
9	9/27/1991	Japan	Typhoon Mireille	8,097
10	1/25/1990	Europe	Winterstorm Daria	6,864

* \$ Millions, Insured Losses, 2005 U.S. Dollars

Why Are We Here?

Coastal Population Growth

- More than half of the nation's people live in coastal areas, although coastal counties account for only 17 percent of the total acreage of the contiguous United States (*report completed for the independent Pew Oceans Commission*)
- Nearly half of the world's population lives within 200 kilometers of a coastline and this number is likely to double by 2025 (*Population Reference Bureau*)
- The average population density in coastal areas is about 80 persons per square kilometer, twice the world's average population density (*Population Reference Bureau*)

Successes and Challenges

- **Successes:**

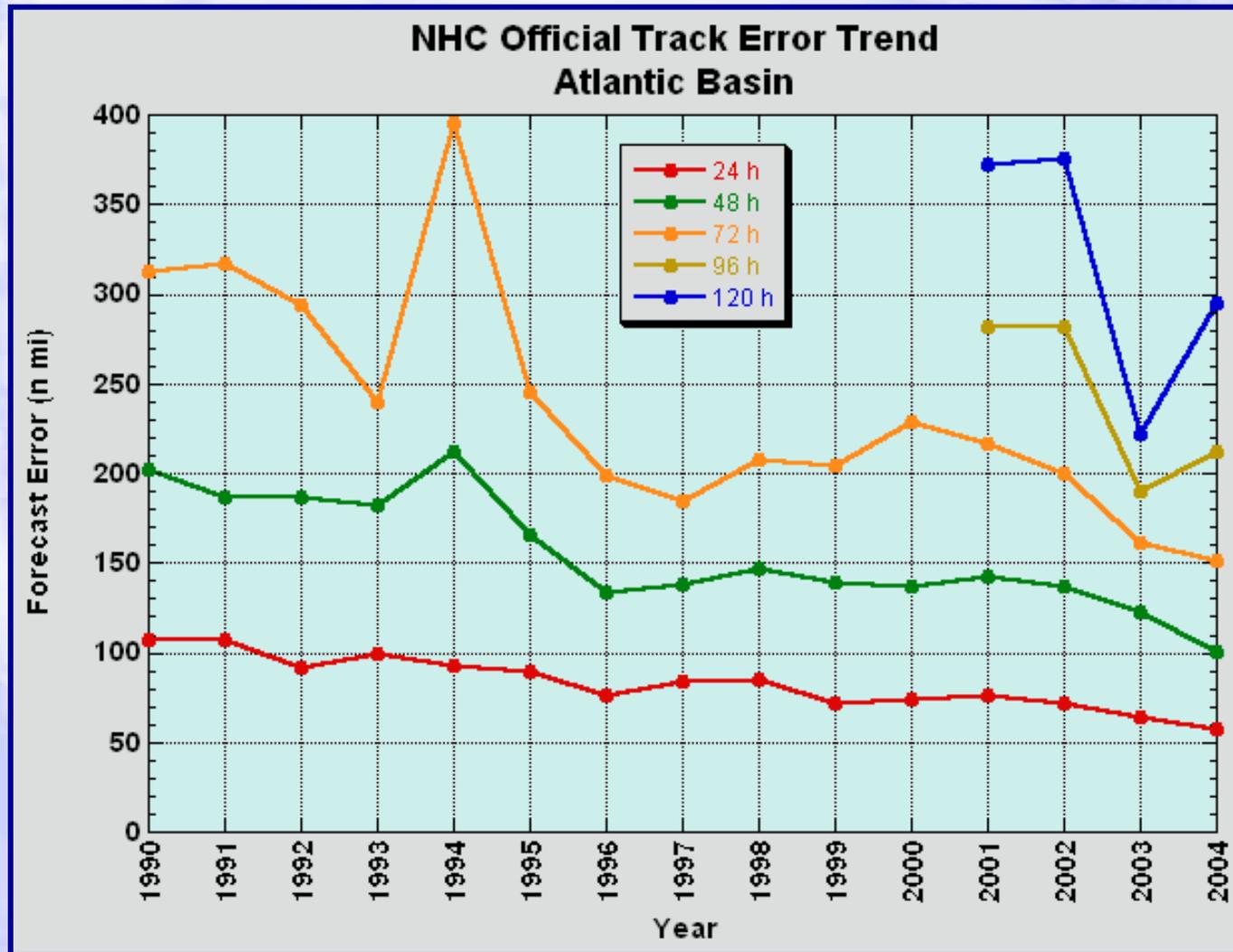
- **Joint Hurricane Test bed**
- **Joint hurricane field programs**
- **Advances in modeling / data assimilation**
- **Improved reconnaissance & observing capabilities (e.g., Stepped Frequency Microwave Radiometer)**
- **Improvements in track and intensity forecast accuracy**

- **Challenges:**

- **Modeling / data assimilation / computing power**
- **Reconnaissance & observing**
- **Improved forecast accuracy for:**
 - **Storm intensity / structure**
 - **Storm track**
 - **Storm surge**
 - **Inland flooding**
- **Information dissemination (technology, message)**
 - **Incorporating results of social science research into operations**

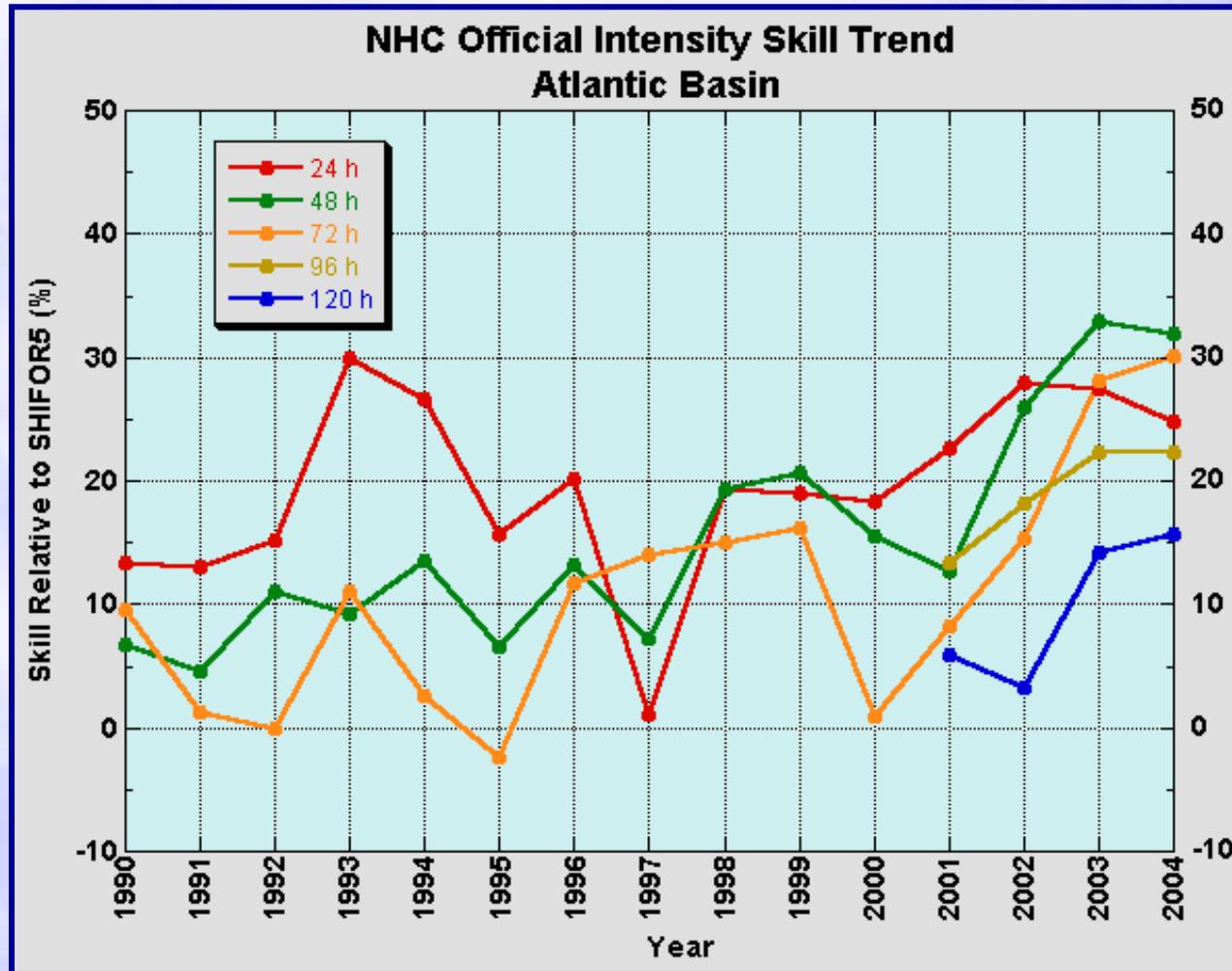
Successes and Challenges

15-Year Atlantic Track Errors



Successes and Challenges

Intensity Forecasts On The Upswing



Successes and Challenges

- **Successes:**

- Joint Hurricane Test bed
- Joint hurricane field programs
- Advances in modeling / data assimilation
- Improved reconnaissance capabilities (e.g., Stepped Frequency Microwave Radiometer)
- Improvements in track and intensity forecast accuracy

- **Challenges:**

- **Modeling / data assimilation / computing power**
- **Reconnaissance and observing**
- **Improved forecast accuracy for:**
 - **Storm intensity / structure**
 - **Storm track**
 - **Storm surge**
 - **Inland flooding**
- **Information dissemination (technology, message)**
 - **Incorporating results of social science research into operations**

Conference Objectives

- Review the Nation's tropical cyclone forecast and warning program from end-to-end and update the *National Hurricane Operations Plan* for 2006
- Evaluate lessons learned from the 2005 hurricane season, with a focus on Hurricanes Katrina, Rita, and Wilma
- Examine the results of the Joint Hurricane Test bed (JHT) as a model for transitioning successful research results into operations

Conference Objectives

- **Review the federal priorities for tropical cyclone research and development for the next decade, to include relevant social science issues**
- **Examine the needs and requirements for future tropical cyclone surveillance and reconnaissance observations**
- **Evaluate changes in forecast and warning messages needed to improve public awareness, preparedness, and response**

Expected Outcomes

- **Specific changes/updates to the 2005 *National Hurricane Operations Plan* (NHOP)**
 - **Leading to publication of the 2006 NHOP**
- **Additional inputs into the draft OFCM-sponsored *Interagency Strategic Research Plan for Tropical Cyclones***
 - **Aiding in completion of a plan which will set the Federal goals and priorities for tropical cyclone research for the next 10 years**

Expected Outcomes

- **Specific immediate actions that can be taken to bridge the gap between the hurricane forecast and warning message preparer and the message receiver to improve public awareness, preparedness, and response**
 - **Goal: get people out of harm's way to save lives and reduce injuries; protect property and resources**
- **A list of current and promising surveillance and reconnaissance capabilities that will serve as an initial framework for the development of future tropical cyclone observational needs and requirements**

Mobile: Things to Do

- **Visit the Gulf Coast Exploreum.** Currently on display is the groundbreaking exhibition *Mummy: the Inside Story*, from The British Museum, London. For information on ticket prices and hours of operation, call (251)-208-6873.
- **Attend the 13th Annual Festival of Flowers.** Discover “The Secret Garden” at Mobile’s signature spring garden and floral event held on the campus of Providence Hospital. For more information, call 1-877-777-0529.
- **Visit the USS Alabama Battleship Memorial Park.** Explore a mighty battleship, winner of nine battle stars in World War II. Stroll stem to stern on the World War II Submarine USS Drum. For more information, call 1-800-426-4929.
- **Play golf.** Mobile has 21 championship golf courses.
- **For other options:** Visit the following “Things to Do” website.
http://www.mobile.org/pl_things_attract.php

Conference Logistics

Conference Chair: Mr. Samuel P. Williamson

Conference Coordinators

**Mr. Bob Dumont
Mr. Mark Welshinger**

Media Coordinators

**Mr. Kent Laborde
Mr. Mark Welshinger**

**Asst. Coordinator for
Conference Arrangements**

Ms. Erin McNamara

Audiovisual Specialists

**Mr. Ken Barnett
Mr. Ellis Godfrey**

Registrars

**Ms. Dawn Erlich
Ms. Carmelitta Riley
Ms. Carolyn Serey**

Conference Logistics

Presentation Timers

**Ms. Christina Bork
Mr. Tony Ramirez**

Session Coordinators

**Mr. Bob Dumont
Mr. Frank Estis
Dr. Paul Try
Mr. Floyd Hauth
Lt Col Rob Rizza**

Poster Session

Ms. Robbie Hood

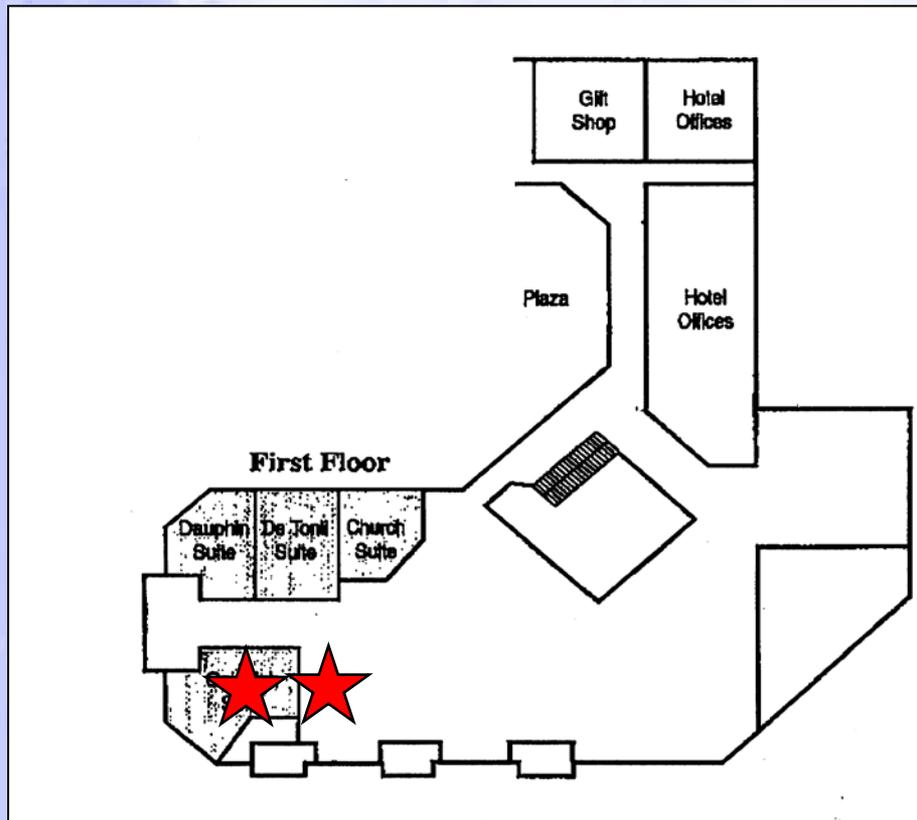
Conference Logistics

Rapporteurs

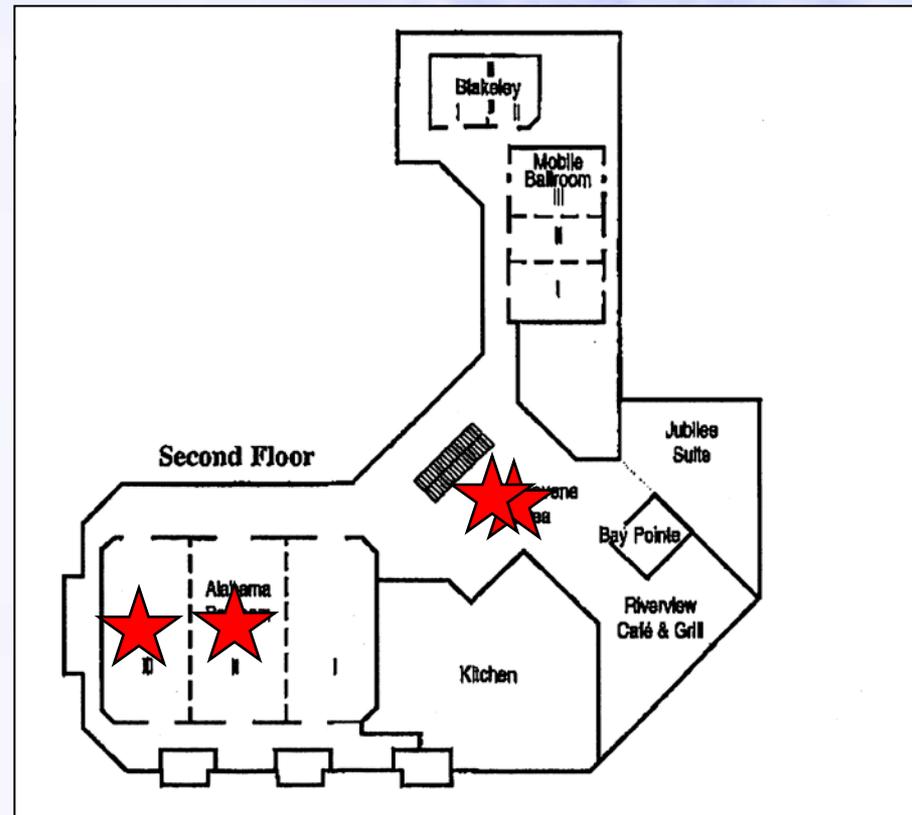
Mr. Frank Estis
Mr. Jim McNitt
Mr. Scott Kiser
Lt Col Rob Rizza
Mr. Floyd Hauth
Mr. Tony Ramirez
Ms. Margaret McCalla
Mr. Robert Dumont
Mr. Mark Welshinger

Conference Logistics

First Floor



Second Floor



Conference Agenda

This Afternoon

- **Keynote Address: VADM Conrad C. Lautenbacher, Jr., USN (ret.)**
Undersecretary of Commerce for Oceans and
Atmosphere / NOAA Administrator **1:15 – 1:35 PM**
- **Panel Discussion: *Policy Partnerships in Tropical Cyclone Research***
and Operations **1:40 – 3:10 PM**

Moderator: Dr. Aaron “Bill” Williams, Director,
Coastal Weather Research Center; Associate
Professor of Geography; and Coordinator of
Meteorology, University of South Alabama

Panelists: Dr. Margaret Leinen, Assistant Director for
Geosciences, NSF

Dr. Jack Kaye, Director of the Research and Analysis
Program within the NASA Earth-Sun System Div

Mr. Michael Buckley, Acting Deputy Director, Mitigation
Division, FEMA

Mr. Robert Winokur, Technical Director, Office of the
Oceanographer and Navigator of the Navy

Conference Agenda

Later This Afternoon

- **Introduction of Lead Federal Agency Representatives** **3:10 - 3:20 PM**
- **Afternoon Coffee/Soda Break** **3:20 - 3:45 PM**

Coordinator: Mr. Robert Dumont, OFCM

- **Session 1: 2005 Hurricane/Typhoon Season in Review** **3:45 - 5:45 PM**

Session Leaders: **Mr. Max Mayfield, TPC/NHC**
CAPT John O'Hara, COMPACFLT

- **Reception/Icebreaker: Alabama III room (6:30 - 8:00 PM)**

Conference Agenda

Wednesday Evening

- **Conference Banquet**

- **Cash Bar**

6:30 - 7:00 PM

- **Banquet**

7:00 - 9:00 PM

Banquet Address

**The Honorable Gregory Brent Warr
Mayor, Gulfport, Mississippi**

**Followed by the presentation of the
Richard H. Hagemeyer Award**

Conference Agenda

Friday Morning

Continental Breakfast (7:30 - 8:15 AM)

Coordinator: Mr. Robert Dumont, OFCM

Opening / Administrative Remarks (8:15 AM)

- **Review of Action Items and NHOP Changes (8:20 - 8:40 AM)**

Dr. Edward Rappaport (TPC/NHC)

- **Tropical Cyclone Reconnaissance and Observation Systems Wrap-up (8:40 – 9:00 AM)**

Mr. Mark Welshinger (OFCM)

- **Workshop Wrap-up (9:00 – 9:30 AM)**

Dr. Brenda Phillips (OSU)

Ms. Naomi Moye (Abraham's Group)

Dr. Robert Serafin (NCAR)

- **Final Wrap-up (9:30 – 10:00 AM)**

Keynote Speaker

Keynote Speaker: VADM Conrad C. Lautenbacher, Jr., USN ret.)

**Undersecretary of Commerce for Oceans and Atmosphere /
NOAA Administrator**



***The Power
Of
Partnerships***

Opening Session Panel

Policy Partnerships in Tropical Cyclone Research and Operations

- **Moderator:**
 - **Dr. Aaron “Bill” Williams, Director, Coastal Weather Research Center; Associate Professor of Geography; and Coordinator of Meteorology, University of South Alabama**
- **Panelists:**
 - **Dr. Margaret Leinen, Assistant Director for Geosciences, NSF**
 - **Dr. Jack Kaye, Director of the Research and Analysis Program within the NASA Earth-Sun System Division**
 - **Mr. Michael Buckley, Acting Deputy Director, Mitigation Division, FEMA**
 - **Mr. Robert Winokur, Technical Director, Office of the Oceanographer and Navigator of the Navy**

Federal Agency Lead Reps

Air Force – Brig Gen Richard Moss

Commander, 403rd Wing
Kessler AFB, MS

Navy – Mr. Robert Winokur

Technical Director, Office of the
Oceanographer and Navigator of
the Navy, *Washington, DC*

USA Corps of Engineers - Dr. Andrew Garcia

Research Scientist,
U.S. Army Engineer R&D Center
Vicksburg, MS

DOI / USGS – Ms. Marge Davenport

Acting Senior Leadership Manager
Florida Integrated Science Center
Norcross, GA

USDA - Dr. Harlan Shannon

Meteorologist
Washington, DC

NOAA - Mr. Max Mayfield

Director, TPC/NHC
Miami, FL

NASA – Dr. Jack Kaye

Director of the Research and Analysis
Program within the NASA Earth-Sun
System Div, *Washington, DC*

DHS / FEMA - Mr. Michael Buckley

Acting Deputy Director, Mitigation Div
Washington, DC

DOE – Mr. David Soboroff

Technology Manager, Office of
Energy Assurance, *Washington, DC*

DOT / FAA – Mr. Joseph M. Miller

Air Traffic Security Coordinator
NCR Coordination Center
Washington, DC

Ground Rules

- **Questions welcomed...time permitting**
- **Significant agency issues worked through lead agency reps**
 - **User community & agency reps are welcome to raise issues for discussion during Q&A periods and at Thursday workshops**
- **Significant issues reviewed daily at OFCM staff meeting**
 - **Issues that need to be reviewed by Working Group for Hurricane and Winter Storms Operations and Research**
 - **Presented to the Working Group on Thursday afternoon**
 - **Results of discussions and any action items**
 - **Summarized during the Final Plenary Session**

Session 1

Coordinator: Mr. Robert Dumont, OFCM

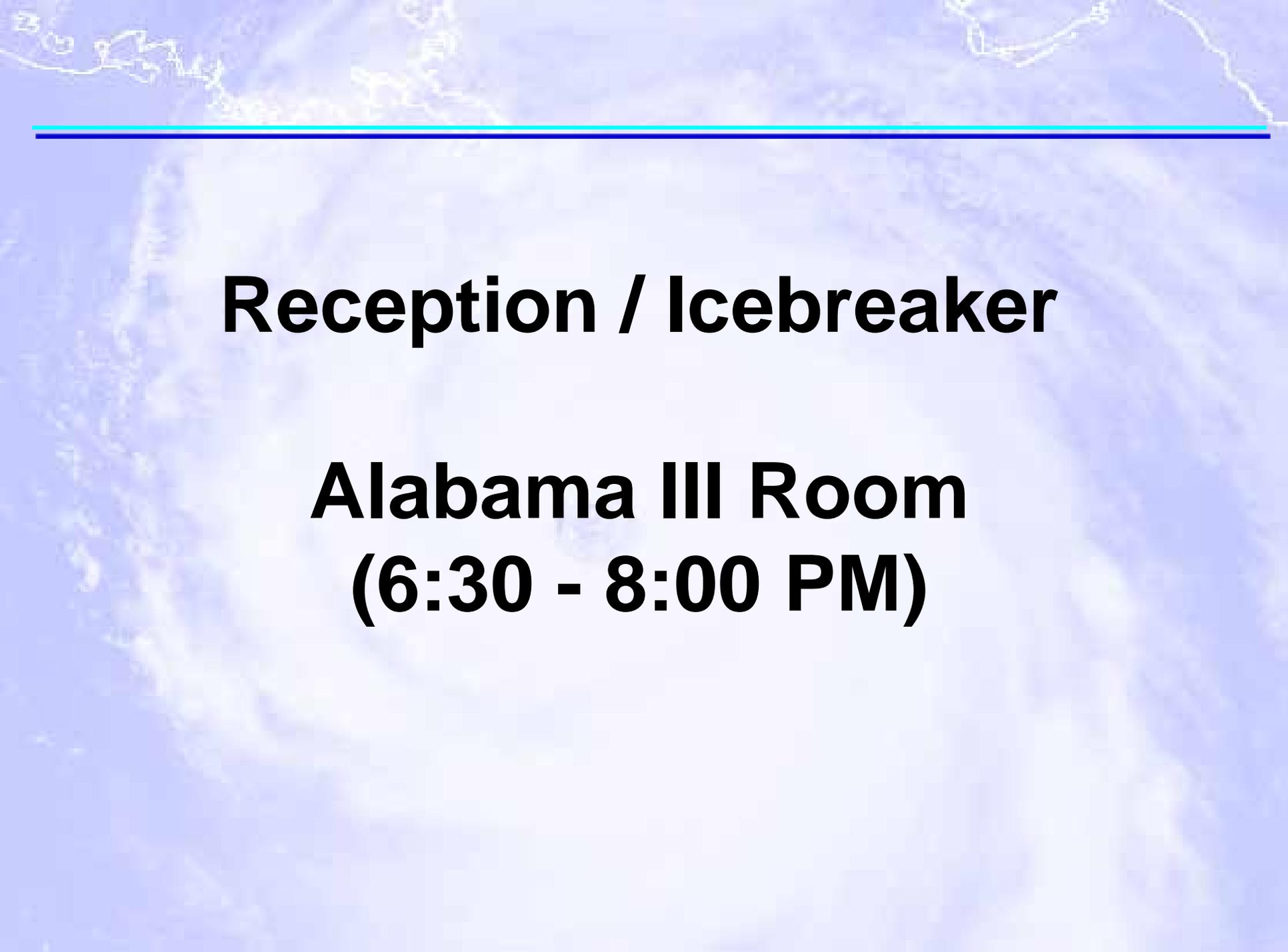
**2005 Hurricane/Typhoon Season in Review
(3:45 to 5:45 PM)**

Session Leaders

Mr. Max Mayfield, Director, TPC/NHC

CAPT John O'Hara, COMPACFLT

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Reception / Icebreaker

**Alabama III Room
(6:30 - 8:00 PM)**

