Office of Federal Coordinator for Meteorology

Joint Action Group for Tropical Cyclone Research

Interagency Strategic Research Plan for Tropical Cyclones: The Way Ahead
Outline of Presentation

Strategic Plan Framework / Systems Engineering Approach
Ms. Robbie Hood, NASA MSFC

The Operational Hurricane Modeling Perspective on the Role of Research
Dr. Naomi Surgi, NCEP/EMC

Recommended Research Priorities
Dr. Frank Marks, AOML/HRD
History of JAG / TCR

• Interagency Tropical Cyclone Research Plan recommended at 58th IHC in 2004
• OFCM formed the Joint Action Group for Tropical Cyclone Research (JAG / TCR) in early 2005
• First JAG / TCR meeting in February 2005
  – Representatives from NSF, NOAA, NASA, Navy, Air Force
  – Frank Marks and Robbie Hood, Co-chairs
• Meeting overview presented at 59th IHC in 2005
• First draft of strategic plan compiled by JAG / TCR co-chairs and OFCM personnel
• Draft forwarded to full JAG / TCR for comment a few weeks ago
• Full JAG / TCR will seek to finalize strategic plan in coming months
Build upon previously vetted strategies
Diverse Missions of Tropical Cyclone Community of Practice

5 – 10 yrs
Basic Research

3 - 5 yrs
Applied Research

0 - 2 yrs
Operations

0 - 2 yrs
Decision Makers

NSF

DOD

DOD

DOD

USGS / DOI

FEMA

NASA R &A

NASA App.

NOAA Res.

NWS
Research to Operation Transition (Closed System)

- Science and Technology Questions
- Observations
- Modeling
- New Knowledge and Technology
- Decisions
- Forecast Operations
- Observations
- Operational Need
- Modeling
Research to Operation Transition
(Community System)

- Science and Technology Questions
- Observations
- Modeling
- New Knowledge and Technology

Decisions
Forecast Operations
Operational Need

Observations
Modeling
Framework of Strategic Plan

• Build upon previously vetted strategies

• Acknowledge diverse mission of partners contributing to Tropical Cyclone Community of Practice (TC CoP)

• Adopt a systems approach
  – Create awareness of stakeholder needs across entire CoP
  – Facilitate communication by developing common vocabulary
  – Design avenues to match research capabilities to stakeholder needs
  – Articulate operational performance metrics and research to operation evaluation process
  – Maintain traceability of successful interagency research to operations transitions
Inputs for Reports

• Joint Agency Group for Tropical Cyclone Research (JAG/TCR) will seek to finalize Interagency Strategic Research Plan during next few months

• Comments and input are welcome

• Send comments and input to:
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  Robbie.Hood@nasa.gov  Robert.Dumont@noaa.gov
Issues to Consider

• Communicating operational requirements to basic research community
• Communicating performance metrics as well as verification and validation procedures
• Building stronger bridges between basic and applied research communities
• Providing traceability of basic research results through the research to operations pipeline
• Opening discussions to long-term planning