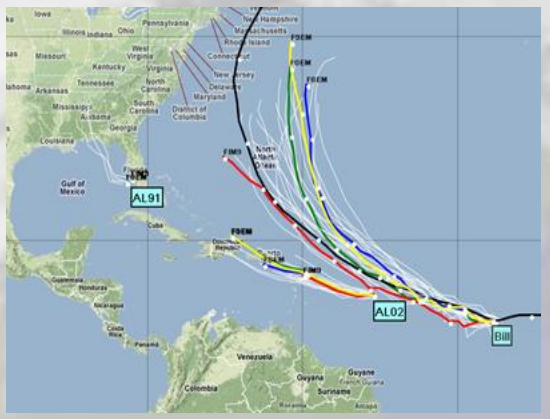

HFIP Goals

- **Reduce numerical forecast errors in track and intensity by 20% in 5 yrs, 50% in 10 yrs**
- **Extend forecast skill to 7 days**
- **Increase probability of detecting rapid intensification at day 1 to 90% and 60% at day 5**
- **Improve Storm Surge forecast**

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

United States Department of Commerce

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Silver Spring, MD 20910
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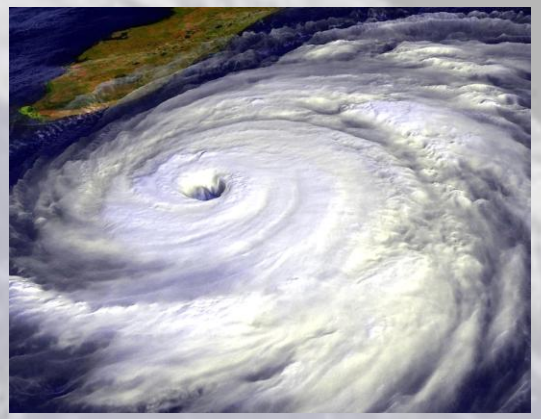
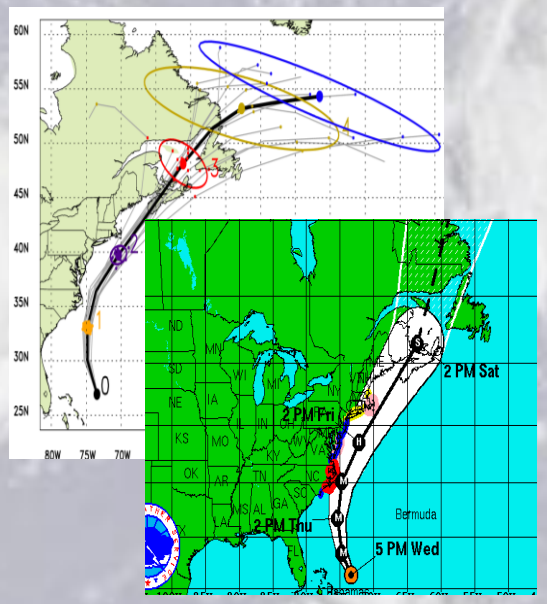


Improve NOAA's forecast services for tropical storms and hurricanes through improved hurricane forecast science and technology



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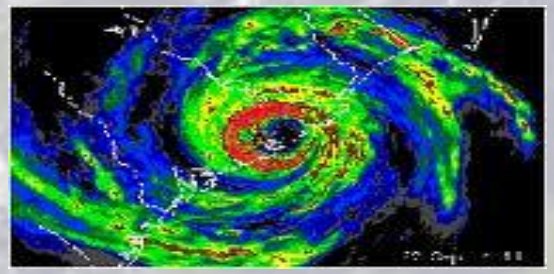
NOAA HURRICANE FORECAST IMPROVEMENT PROJECT

Research and Development

Transition to Operations

A balanced approach of hurricane prediction technology

***HFIP** provides the basis for NOAA and other agencies to coordinate and perform hurricane research and development needed to significantly improve guidance for hurricane track, intensity, and storm surge forecasts. It also engages and aligns the inter-agency and larger scientific community efforts towards addressing the challenges posed to improve hurricane forecasts.*



Accomplishments

- HFIP is making significant progress toward meeting its 5-yr goals
- Preliminary results are showing greater than 20% improvement in track and intensity forecast accuracy
- Demonstrated on the HFIP experimental computer (T-jet)
- Global models with advanced data assimilation can meet track goals
- Aircraft radar data improves intensity forecast accuracy

Expected Target System

- Global model ensemble with Hybrid Data Assimilation
  - 20 members at 20 km
  - Multi Model (at least two models)
- Regional model ensemble
  - 20 members at 3 km
  - Multi model (at least two models)
  - Using all available aircraft and satellite data in the core and near environment of hurricane
- Statistical Post-processing

Challenges

- Limited operational high performance computing availability
- Model initialization issues within the first 24-36 hrs
- Better utilization of existing satellite data
- Development of useful probabilistic forecast products and effectively communicate the information

T-JET

For more information on HFIP please visit: http://www.hfip.org