Understanding and Managing Exposure at risk to Natural Catastrophes: From Cat Modeling to Disaster Response

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28 August 2008

Agenda

- What does RMS do?
- RMS' Catastrophe Response Service
- Tools and Resources used during Cat Response
- Tropical Storm Gustav

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Introduction to RMS

" At RMS, our goal is to help clients manage catastrophe risk through the practical application of the most advanced quantitative risk assessment techniques available."

- Hemant Shah, President & CEO

- Founded at Stanford University in 1988
- Multi-disciplinary skills, from science and engineering to insurance
- Solely focused on risk management issues
- Independent and objective information source
- Global presence in major insurance markets

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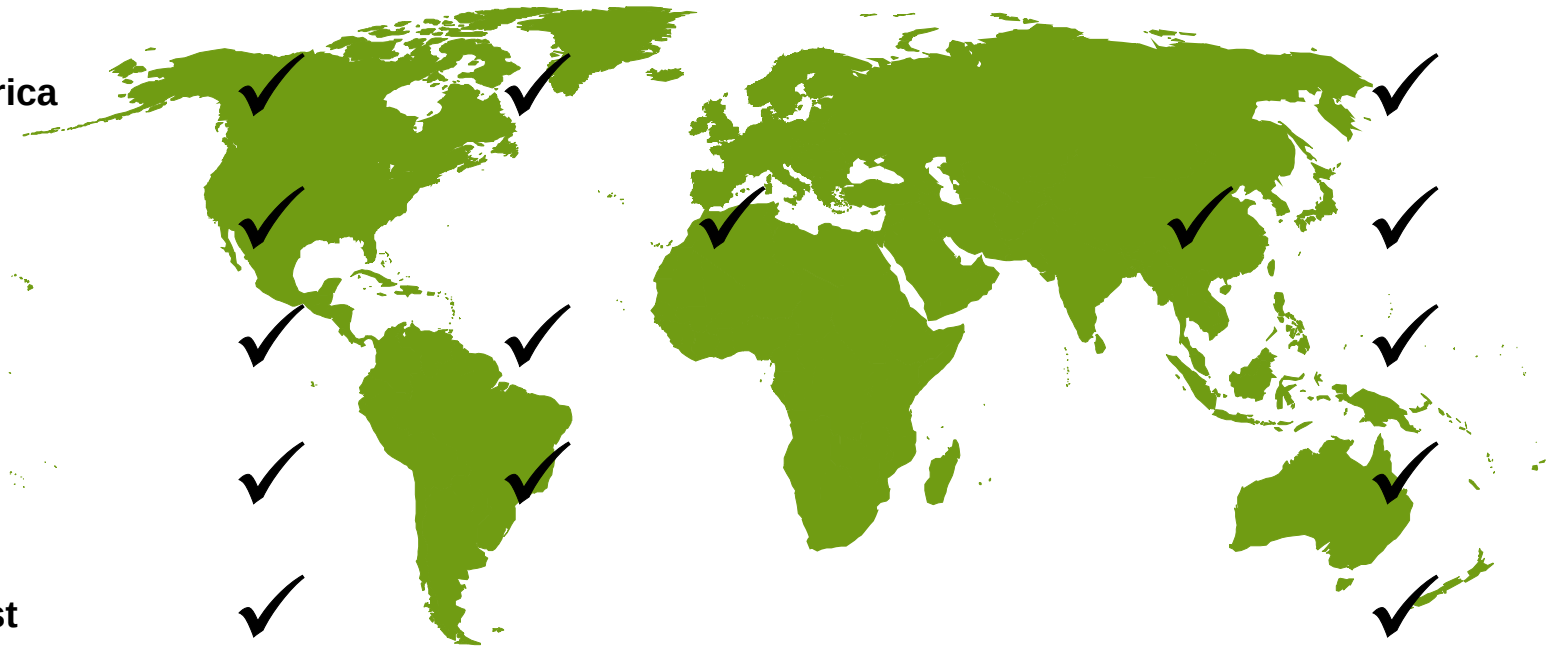
Global Modeling Capabilities

	Earthquake	Hurricane	Wind	Tornado/Hail	Flood	Terrorism
North America	✓	✓		✓		✓
Latin America	✓	✓				✓
Europe	✓		✓		✓	✓
Asia	✓	✓				✓
Oceania	✓	✓				✓
Middle East	✓					✓



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Cat Response at RMS

- AIM: Near real time estimates of damage/losses
- For all natural catastrophe events

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What is the Purpose of Cat Response?

- Clients want near real time estimates of their losses (within hours)
- Clients want near real time estimates of the industry loss (and can triangulate with their market shares)

Why?

- All companies need to know if they have enough cash reserves to cover the claims they will face
- If they don't, they will need to
  - liquidise assets quickly (costly),
  - try and find some reinsurance cover (very expensive),
  - or go out of business
- Publicly listed companies need to release their loss estimates to the stock market,
- If they get the loss estimate wrong, it will impact their share price

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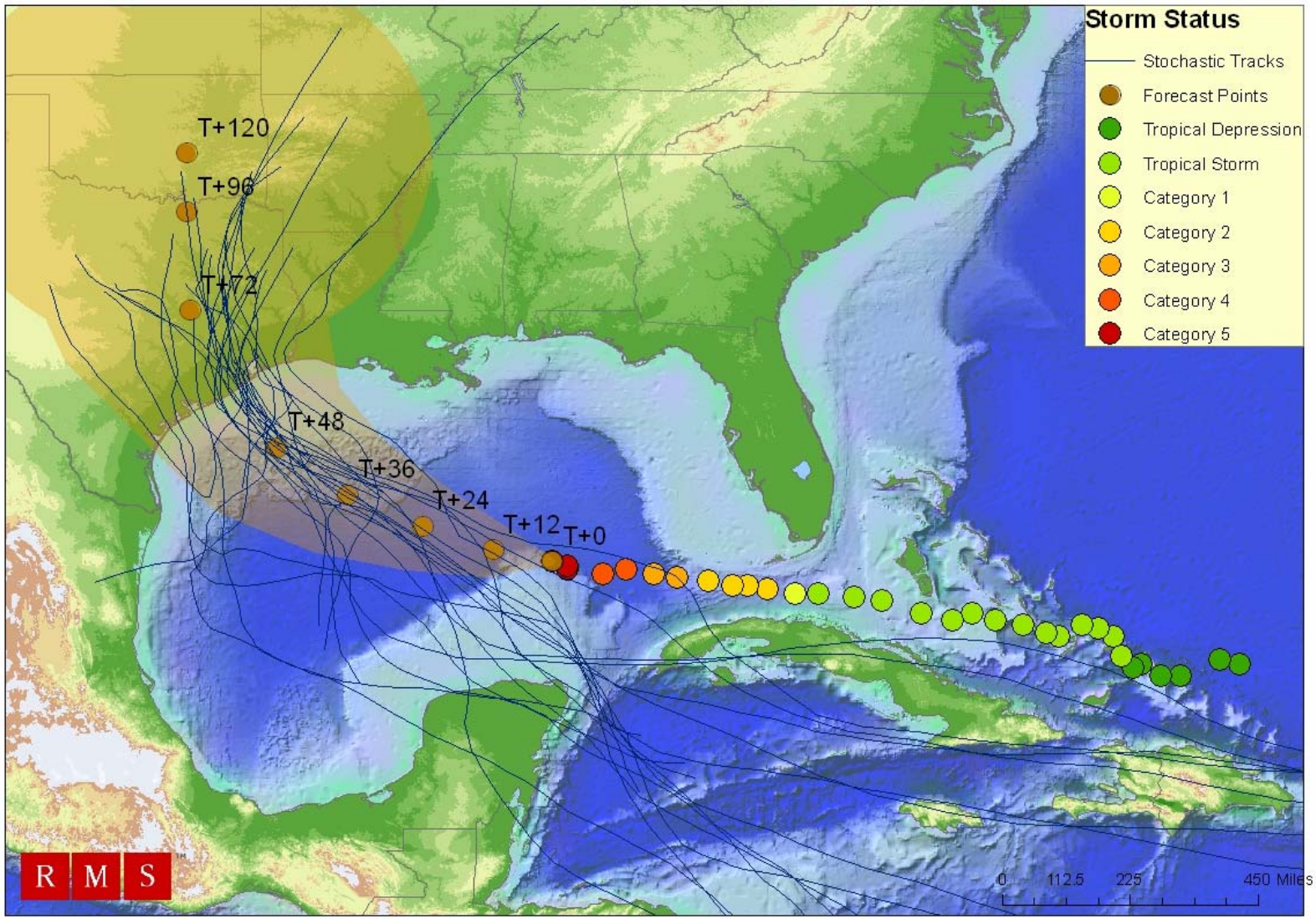
Tools and Resources used for Cat Response

1. Probabilistic Modelling Parameters



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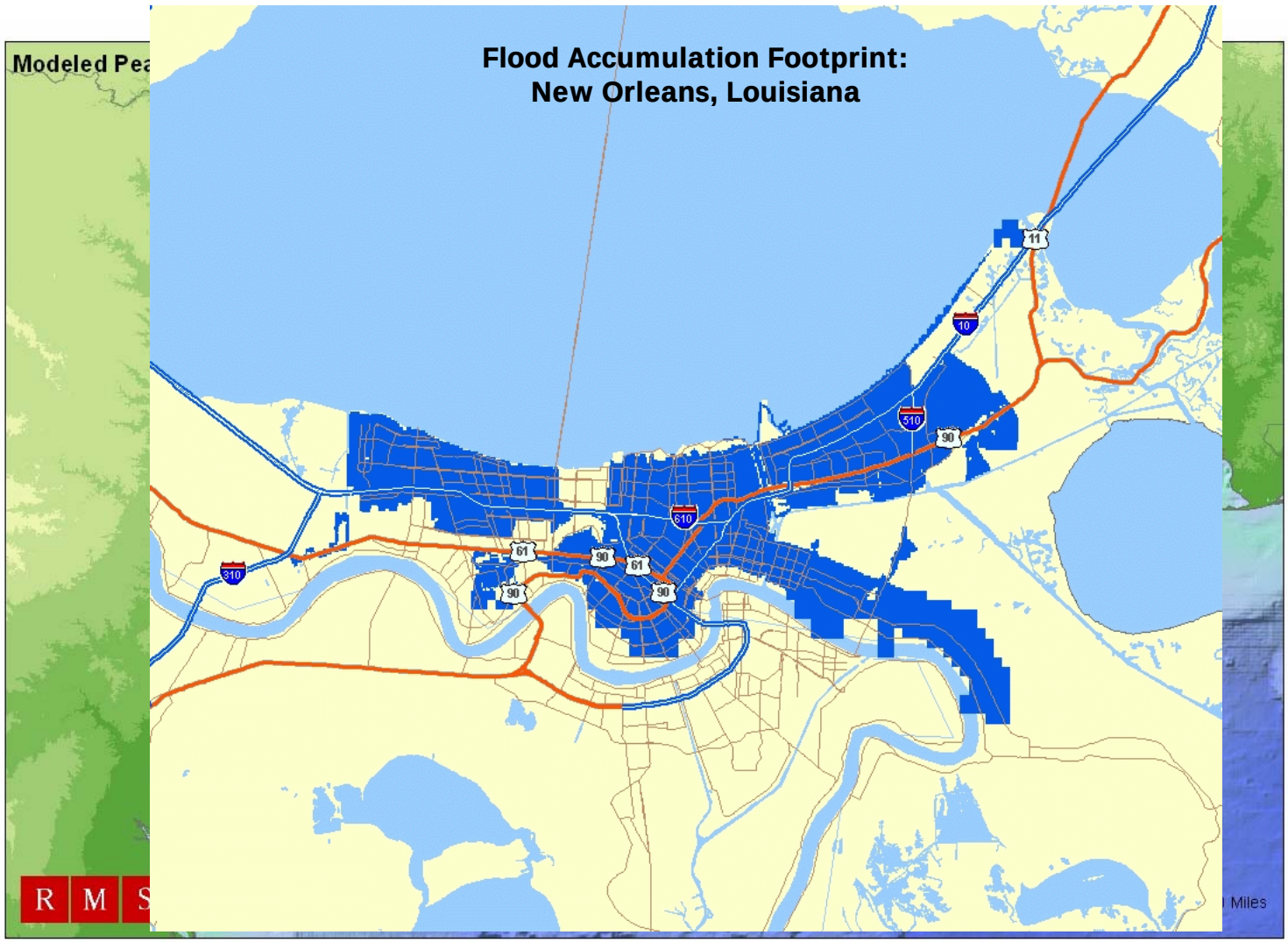
Tools and Resources used for Cat Response

2. Accumulation footprints



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Tools and Resources used for Cat Response

1. Probabilistic Modelling Parameters
2. Accumulation footprints
3. GIS files (Shapefiles and KML)
   - Hazard layers
   - Banded windfields

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Tools and Resources used for Cat Response

1. Probabilistic Modelling Parameters
2. Accumulation footprints
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4. Industry Loss Estimate ranges

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Tools and Resources used for Cat Response

1. Probabilistic Modelling Parameters
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3. GIS files (Shapefiles and KML)
   - Hazard layers
   - Banded windfields
4. Industry Loss Estimate ranges
5. Damage Summaries

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Hurricane Gustav

- RMS Cat Response team have been monitoring Gustav since it formed on Tuesday, 26 August
- Global forecast models have been indicating Gustav will make landfall on the US Gulf coast at the beginning of next week
- Daily Cat Update reports posted to rms.com

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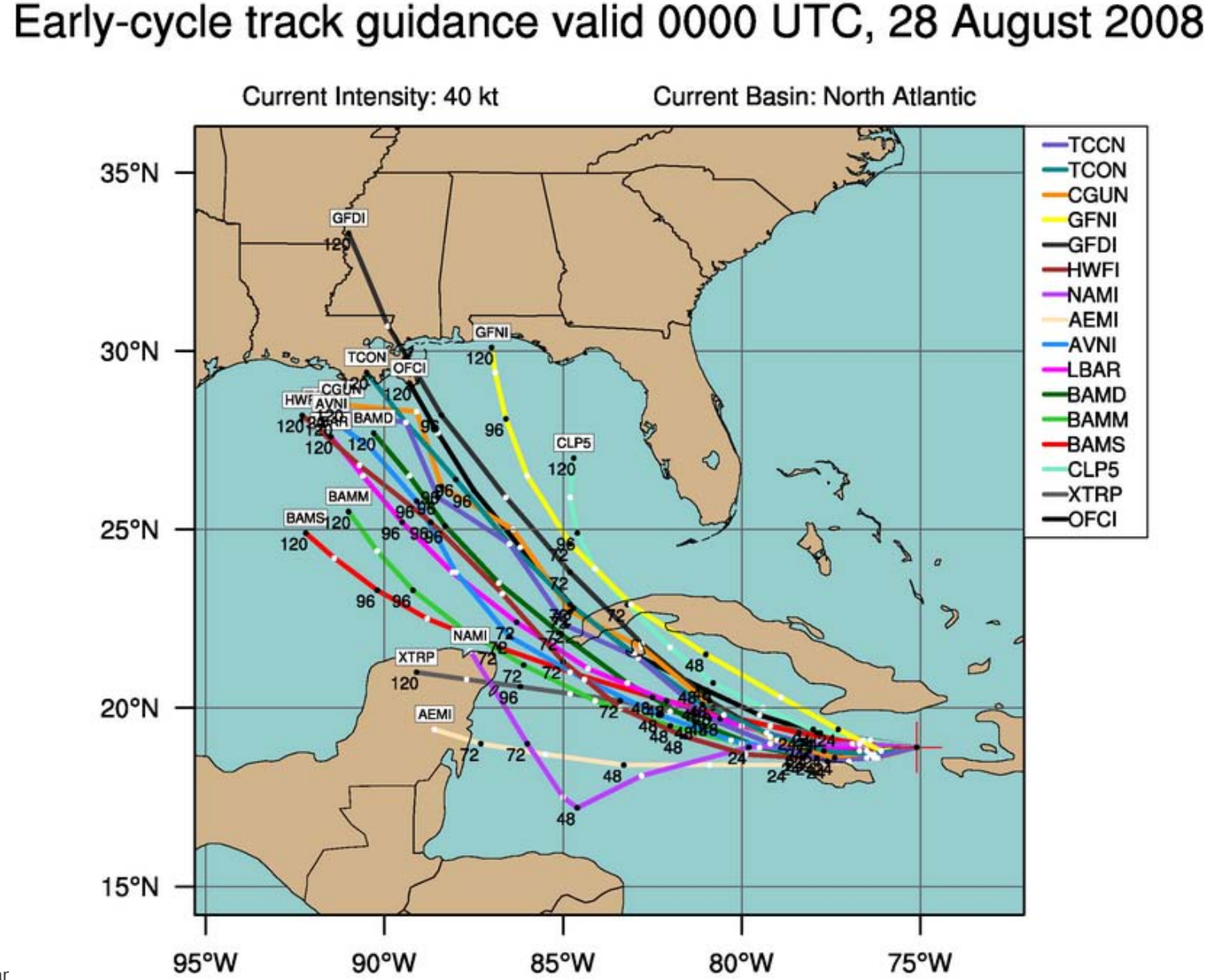
Early Cycle Track Forecasts



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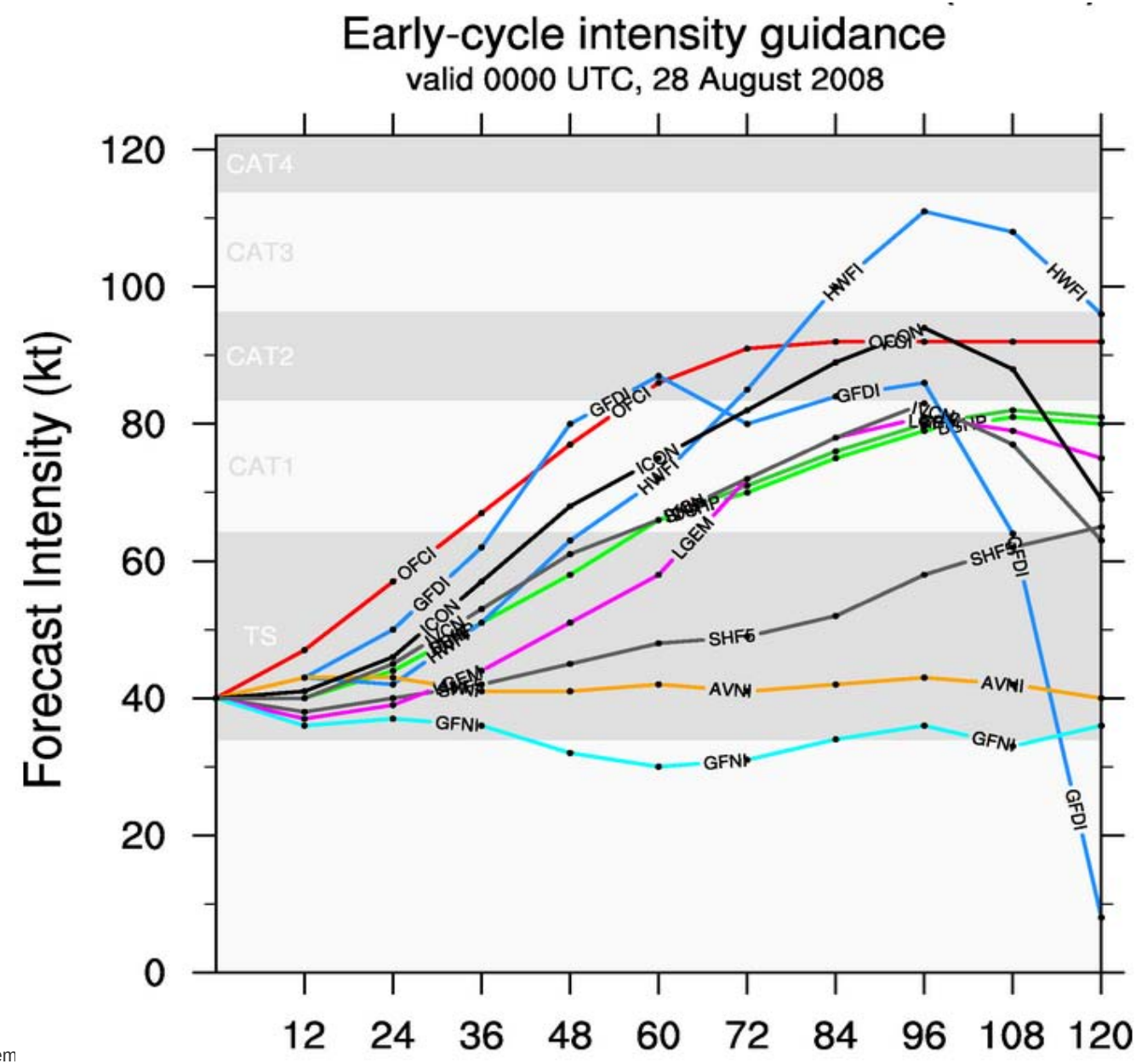
Early Cycle Intensity Forecasts



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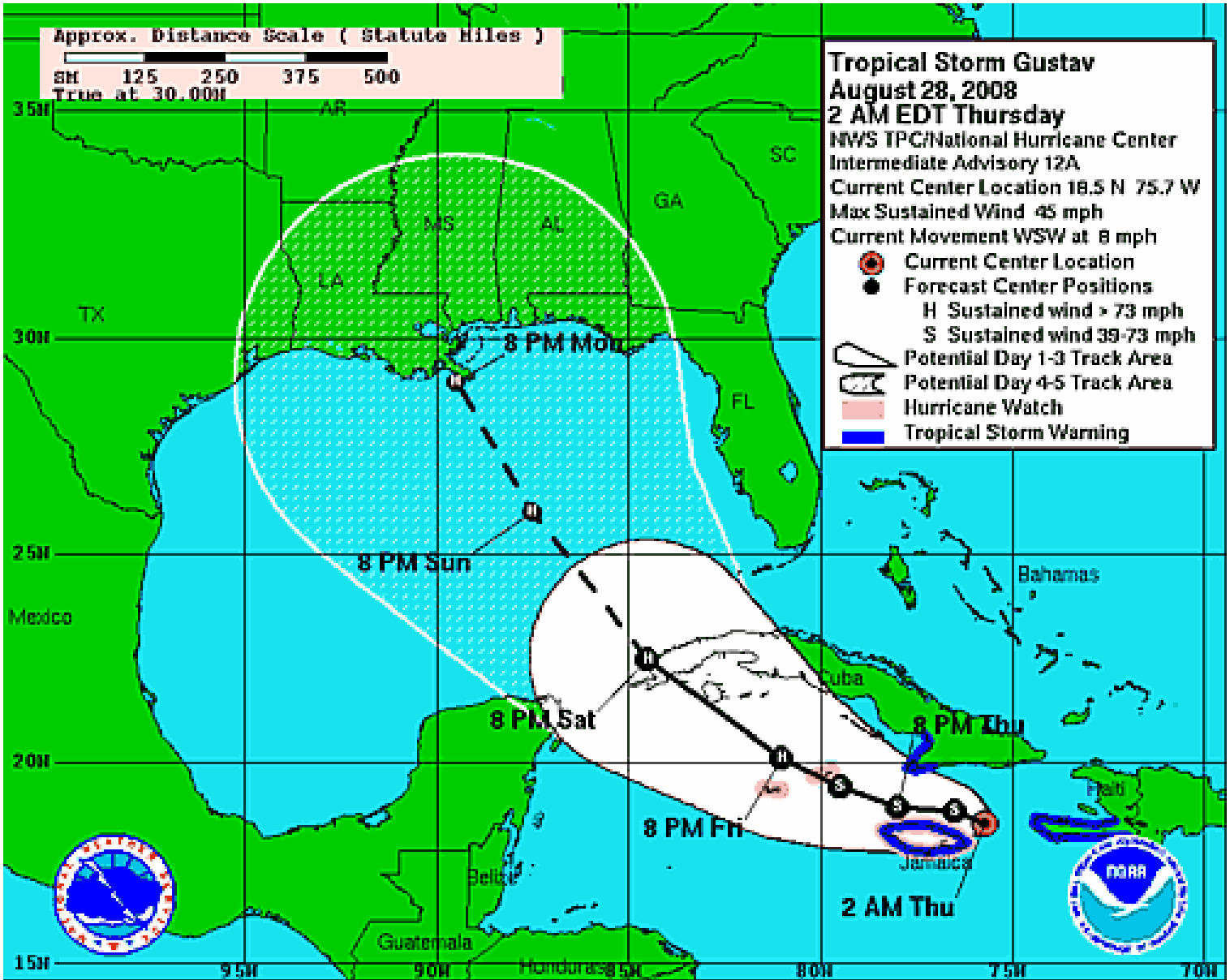
Official NHC Forecast: Track and Intensity



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Preparing to Respond to Gustav

- Aiming to assess the industry losses prior to and after landfall
- Taking account of uncertainties associated with the storm
- Preparing to deliver quantitative information to our clients so they can identify their exposure at risk and assess their losses

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Summary

- RMS has a variety of tools and resources that allows companies to understand their exposure at risk: from catastrophe models to disaster response
- Actual catastrophes are the frontline of modelling and when modelling becomes real
- RMS catastrophe response service enables clients to assess their losses real time, using RMS' model and other tools

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