



# HURRICANE DATA FOR THE INSURANCE AND FINANCIAL INDUSTRIES

Mark Powell

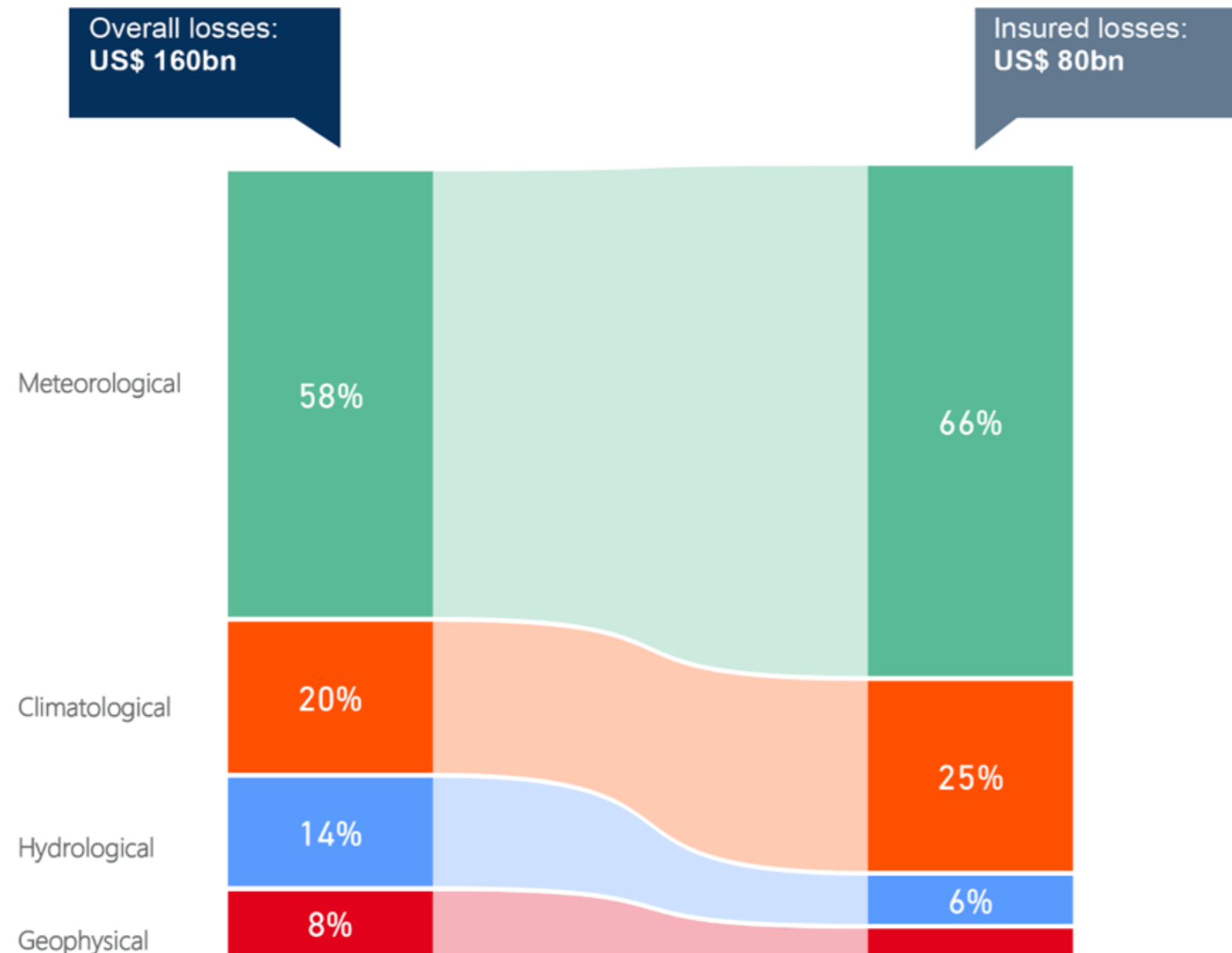
March 13, 2019

**RMS is the global leader in catastrophe modeling for the insurance and financial industries**



# Hurricanes and wildfires cause high losses

## Global losses from natural disasters in 2018



# FLORIDA HAS \$3T AT RISK





- The RMS-HWind team is in Tallahassee Florida



FLORIDA OFFICE OF  
INSURANCE REGULATION

Florida Hurricane Catastrophe Fund



Florida Commission on Hurricane Loss Projection Methodology

FLORIDA STATE UNIVERSITY  
COLLEGE OF BUSINESS  
stormrisk.org  
The Florida Catastrophic Storm Risk Management Center  
Dr. William T. Hold/National Alliance Program in Risk Management and Insurance

COAPS  
Center for Ocean-Atmospheric  
Prediction Studies

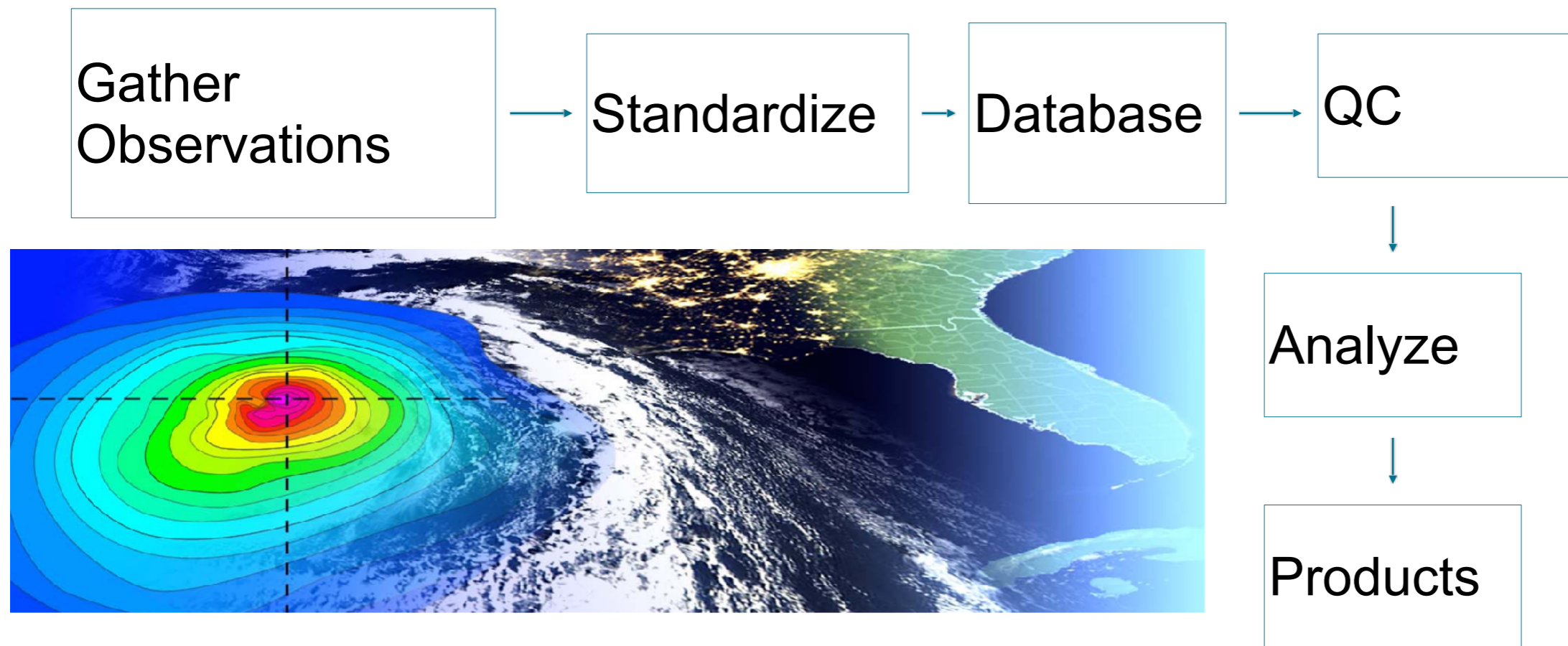
Earth, Ocean and Atmospheric Science

FLORIDA A&M UNIVERSITY - FLORIDA STATE UNIVERSITY  
COLLEGE OF ENGINEERING

# HWIND: WHAT IS IT?



A state of the art system for real-time hurricane analysis



# HWind originated at HRD with JHT and other support



R2O didn't happen

# With help from



NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION OCEANIC AND ATMOSPHERIC RESEARCH  
**TECHNOLOGY PARTNERSHIPS OFFICE**  
Promoting Partnership & Commercialization of NOAA Technology and Innovations



Sect. 15 of Federal Technology Transfer Act of 1986 15 U.S. C. 3710d

## R2B in 2014



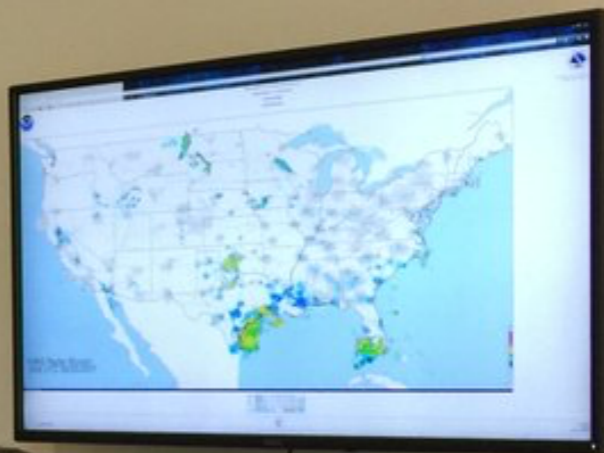
## Acquired by RMS Oct. 2015





# Forecast Center

RMS



# OBSERVATIONAL PLATFORMS



- Aircraft
  - 53rd Hurricane Hunter C130s (sondes, sfmr, FL data)
  - NOAA P3s (sfmr, sondes, airborne Doppler radar, FL)
  - UAVs
- Surface
  - NDBC Buoys and C-MAN stations
- Remote sensing
  - ASCAT
  - SMAP
  - CYGNSS
  - SAR

# FORECASTING



- Multi model forecasts
- Regional models
- Ensemble models
- Intensity and rapid intensity prediction schemes
- Continued investment in development and validation against observations is critical

# Observations lead the way!

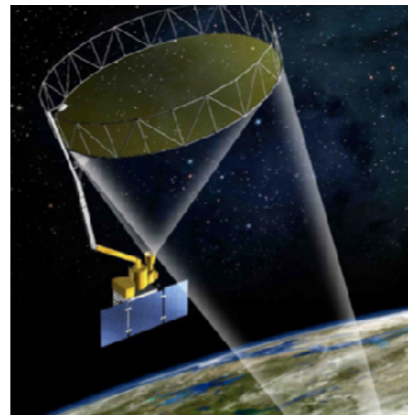
*We need continued investments in air and space borne platforms*



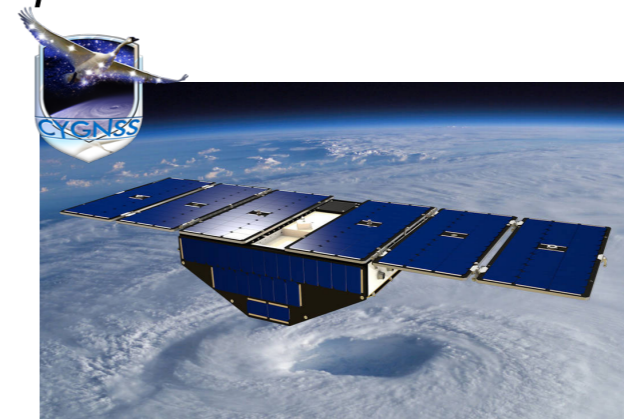
*Cutting edge data to map global storm impacts*



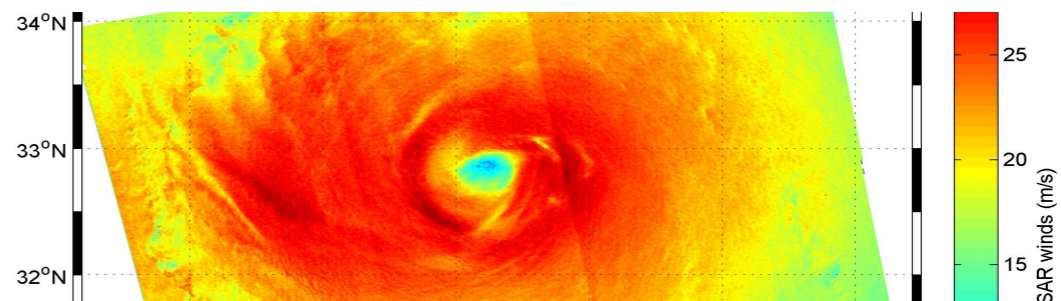
NOAA P3 C130 UAVs



SMAP



CYGNSS



SAR