



2025 Hurricane and Winter Season Review

NOAA Aircraft Operations Center

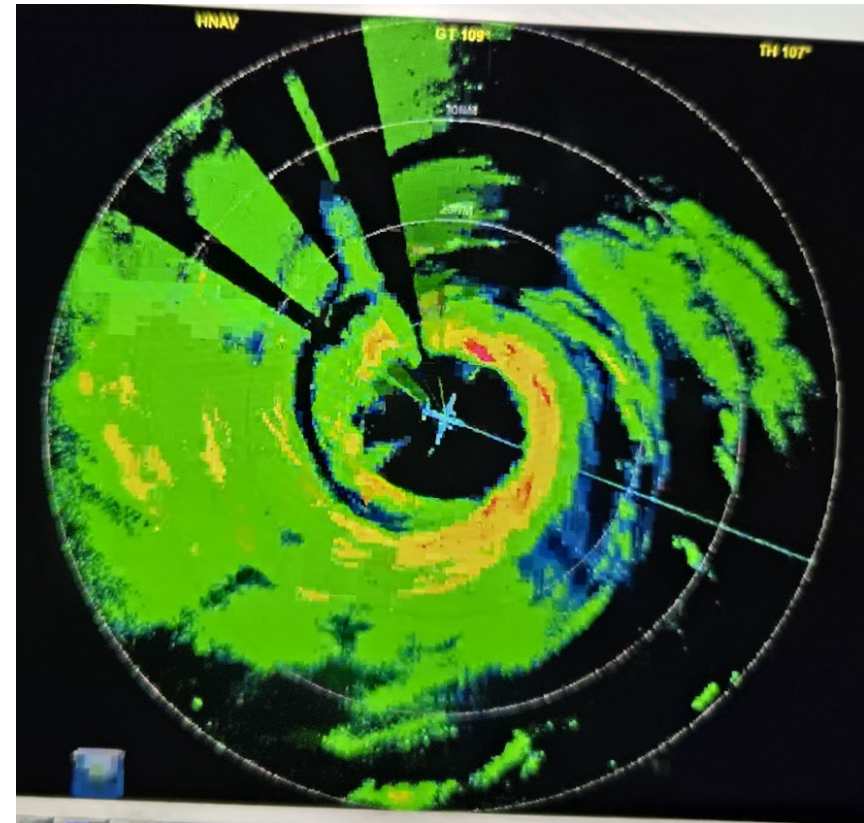


Photos by Jeff Milstein



Flight Plan

1. Atmospheric Rivers 2025
2. Hurricane...
 - a. Aircraft Utilization
 - b. Storms
 - c. Dropsonde Data
 - d. Emergency Response
3. 2026 Forecast



Radar radar picture of Hurricane Melissa. Photo: T. Richards



Atmospheric Rivers 2025

- Honolulu, HI, targeting AR events in January-February 2025
- Successes
 - 20 AR mission flights
 - 172.1 hours
 - 560 sondes (96% success rate)
 - 47 days
- Challenges:
 - Personnel/Funding challenges
 - Lots of change during this period





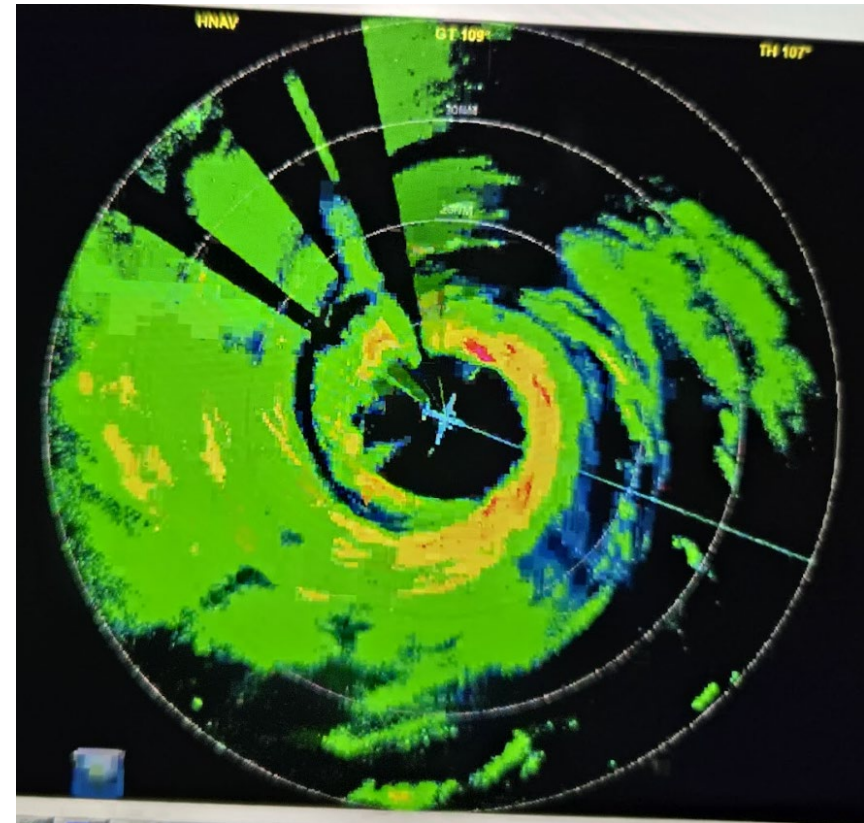
AR 2025 - Dropsondes





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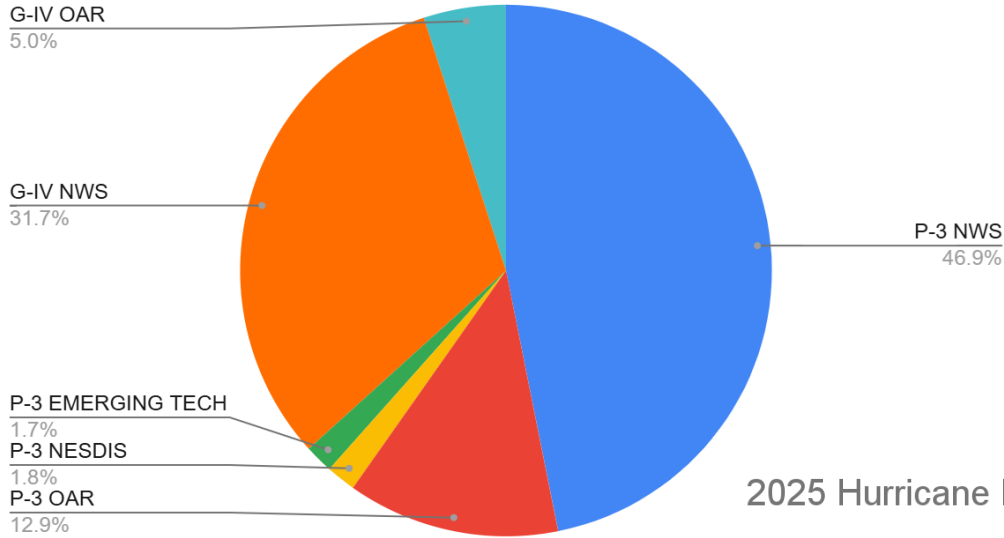


Radar radar picture of Hurricane Melissa. Photo: T. Richards



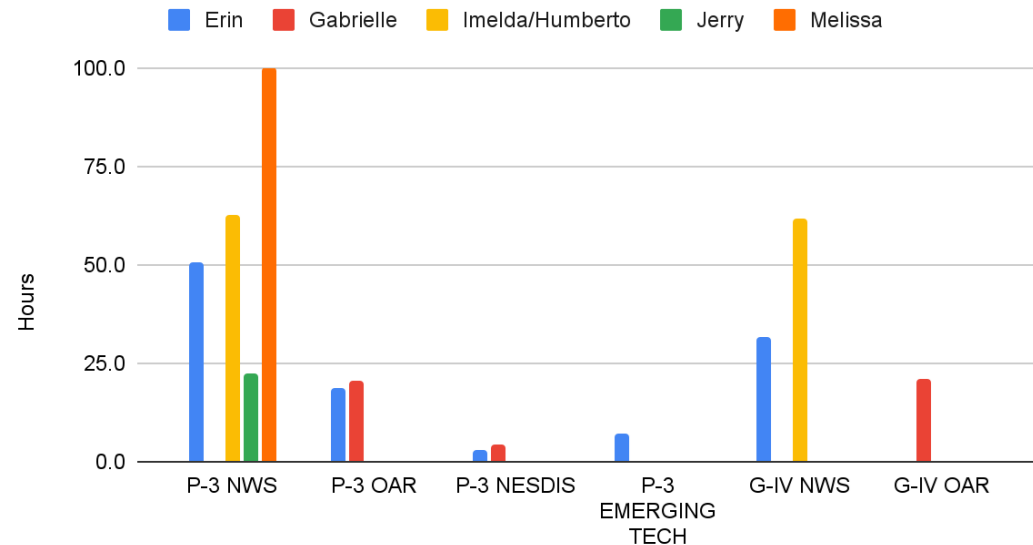
Aircraft Utilization

2025 Hurricane Hour Utilization - Totals



Project	Total Hours
P-3 NWS	194.6
P-3 OAR	53.6
P-3 NESDIS	7.5
P-3 EMERGING TECH	7.2
G-IV NWS	131.6
G-IV OAR	20.8
Total	415.3

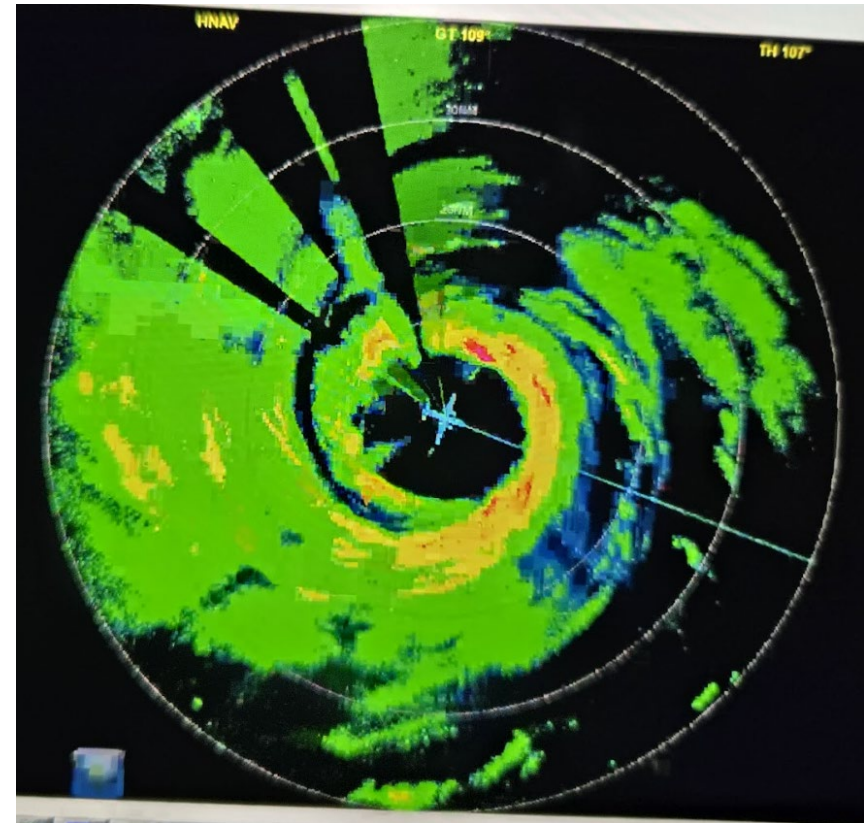
2025 Hurricane Hour Utilization - By Storm





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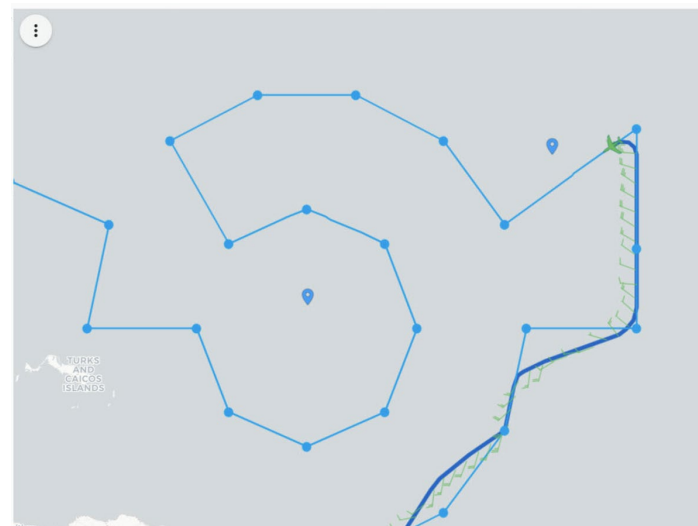
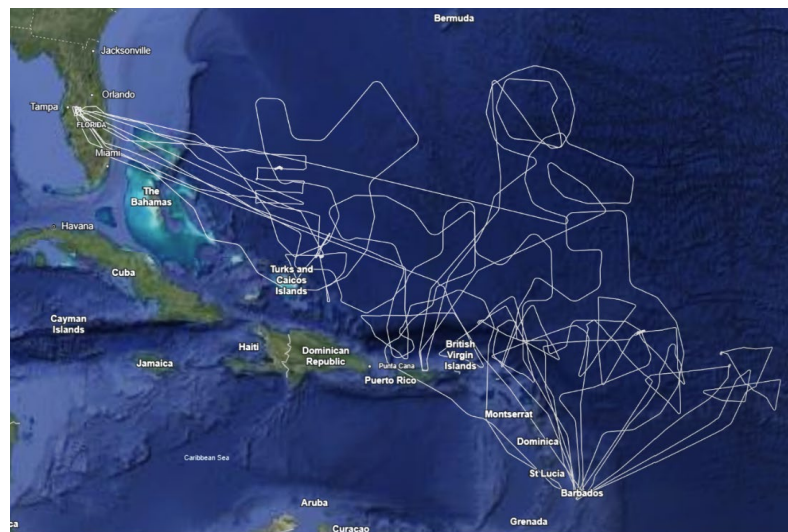


Radar radar picture of Hurricane Melissa. Photo: T. Richards

Erin



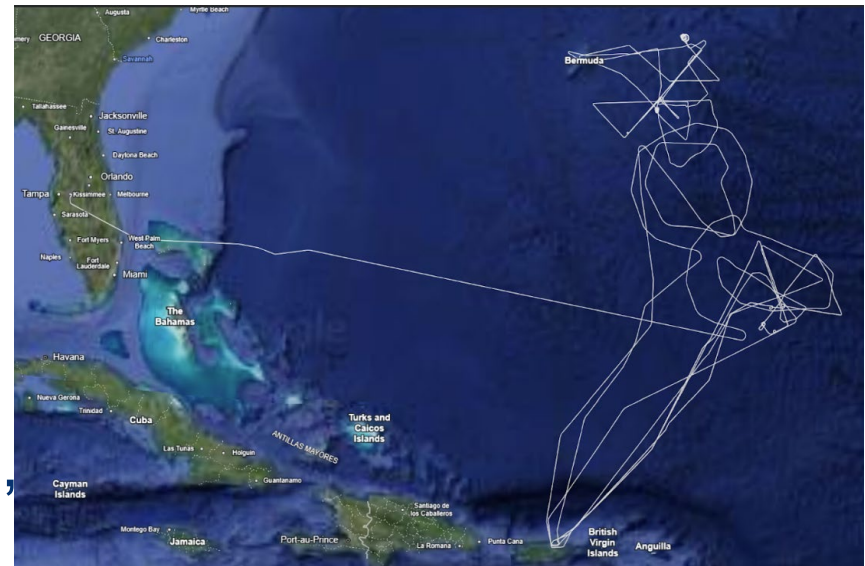
- August 7-20, 2025
- Barbados
- 24 hour operations for P-3s
- Daily operations for G-IV
- AXBTs, Blackswift S0s
- Proximal Windborne Balloon
- “Penny” milestones



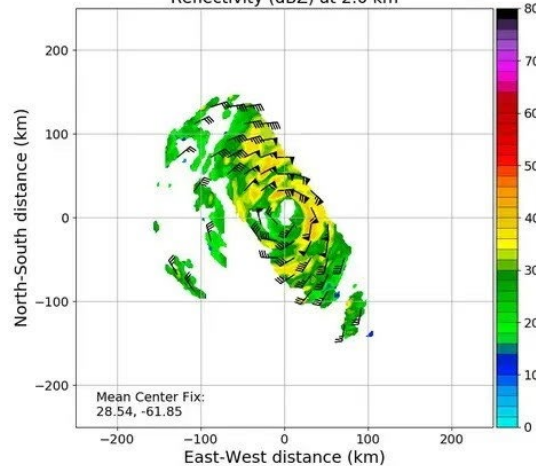


Gabrielle

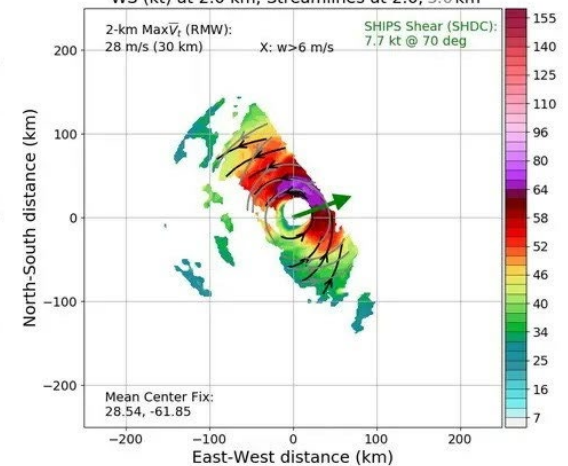
- September 19-23, 2025
- P-3s, G-IV, daytime ops
- San Juan, Puerto Rico; Bermuda
- Fuel tank issue on N43
- Research, Emerging Tech, Ocean Winds
- G-IV Transect



250921N1 (GABRIELLE)
213015 to 221930 UTC
Reflectivity (dBZ) at 2.0 km



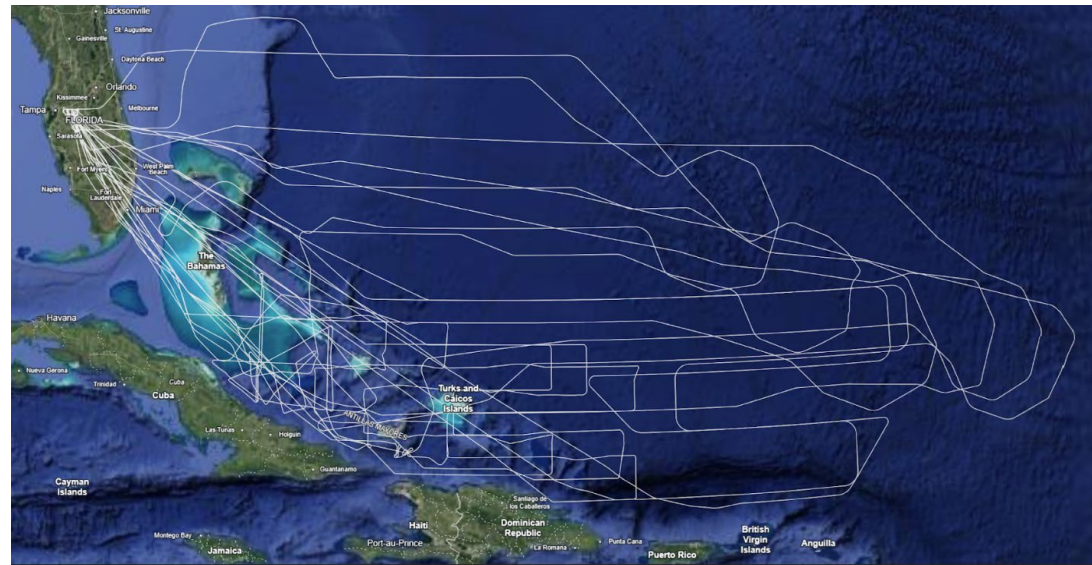
250921N1 (GABRIELLE)
213015 to 221930 UTC
WS (kt) at 2.0 km; Streamlines at 2.0, 5.0 km





Imelda/Humberto

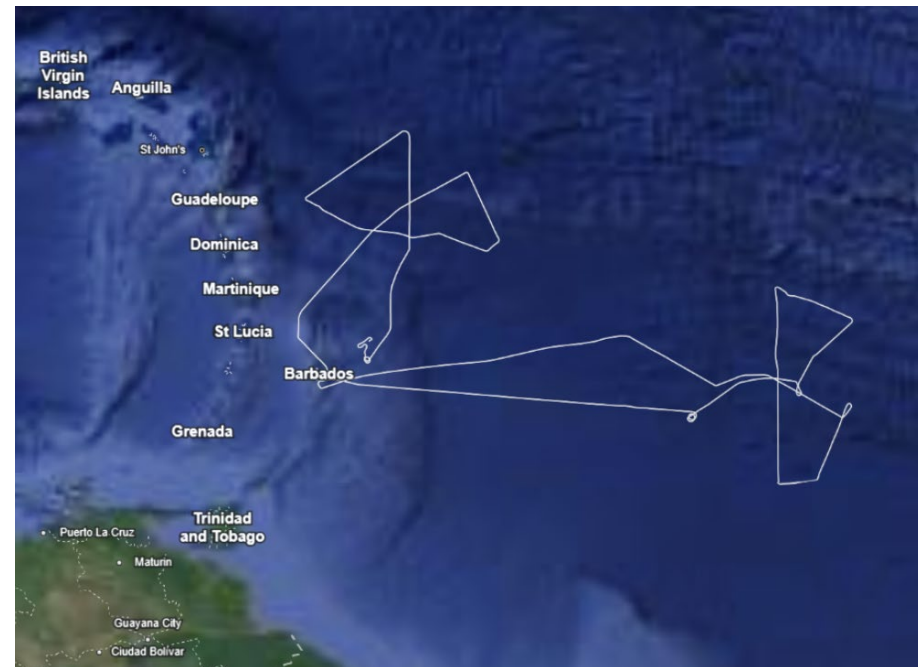
- September 25-29, 2025
- From Lakeland
- Two-storms at once
- 24 hr ops for both P-3s, G-IV





Jerry

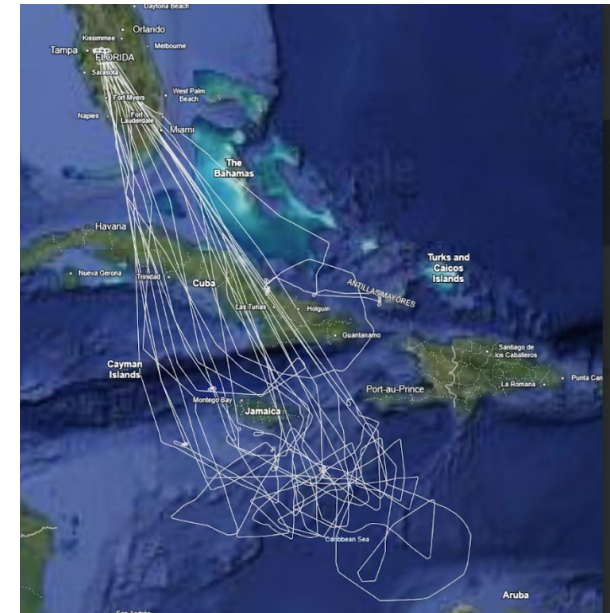
- October 6-10
- Barbados
- Government shutdown
- N42 only, operational tasking
- 4 flights, 22.2 hours





Melissa

- October 22-30 from Lakeland
- N42; 24 hour ops
- Overstress, quick turn around
- AOC sponsored G-IV Training Flight
- Black Swift S0 records



The NOAA Hurricane Hunters
 Published by Sophie Talbert · October 29, 2025 ·

Heading straight into the eye of Hurricane [#Melissa](#) on NOAA WP-3D Orion [#NOAA42](#) "Kermit" to collect critical data that helps improve forecasts and research. 🌪️🇺🇸

Visit [NOAA NWS National Hurricane Center](#) and [hurricanes.gov](#) for the latest forecasts and advisories.

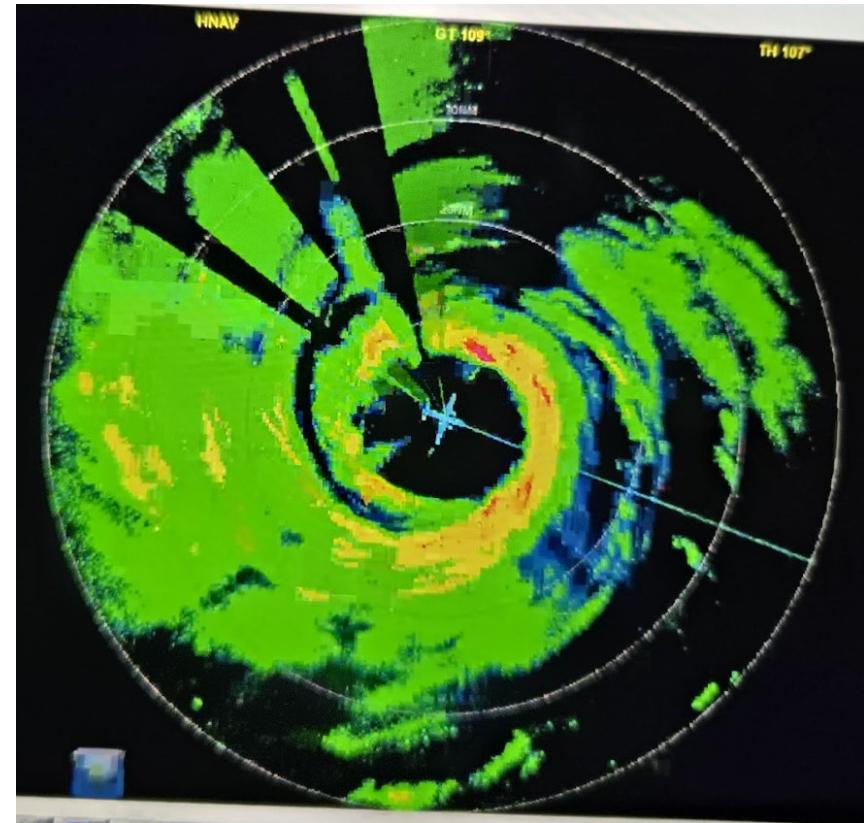
🎥 Video credit: Cmdr. Danielle Varwig, NOAA Corps





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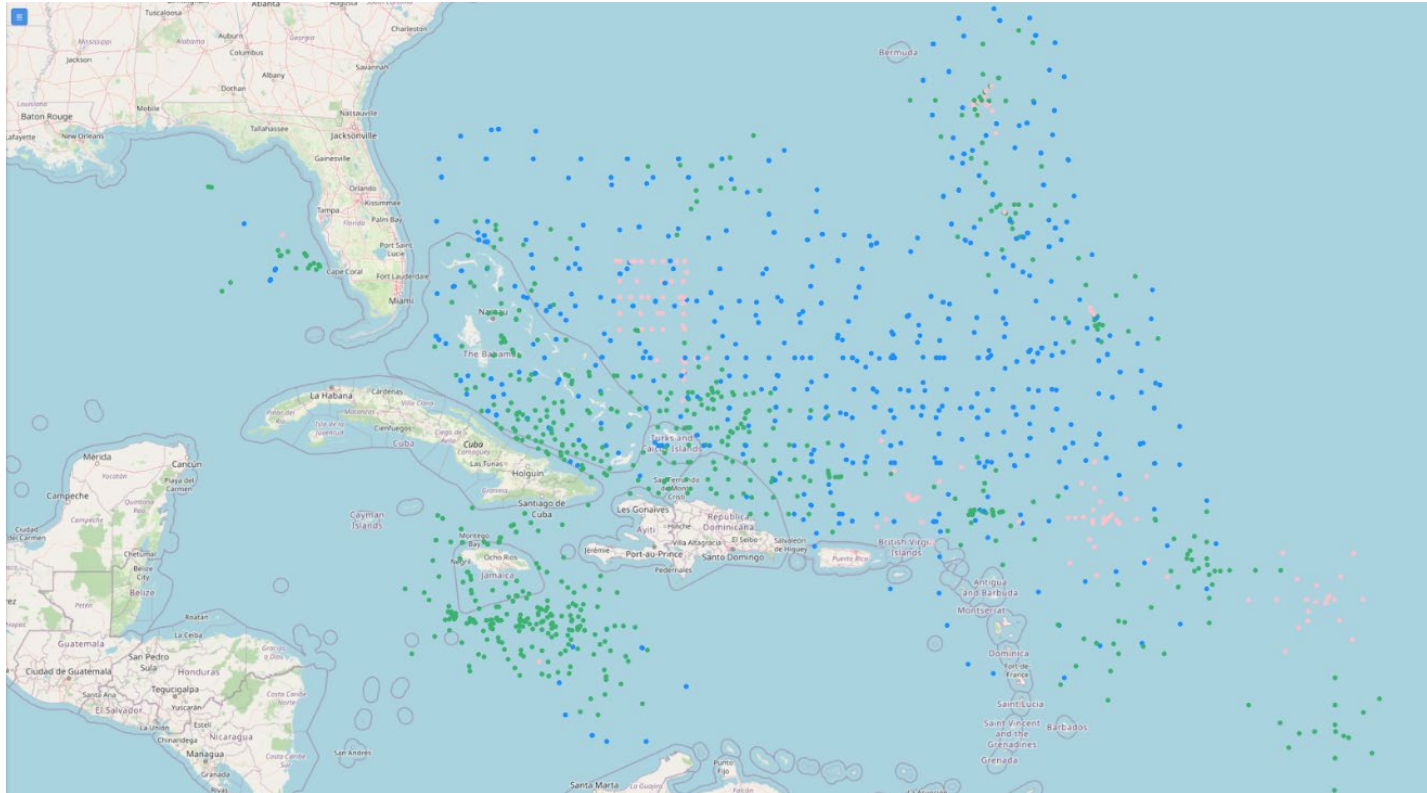


Radar radar picture of Hurricane Melissa. Photo: T. Richards



Dropsonde Summary

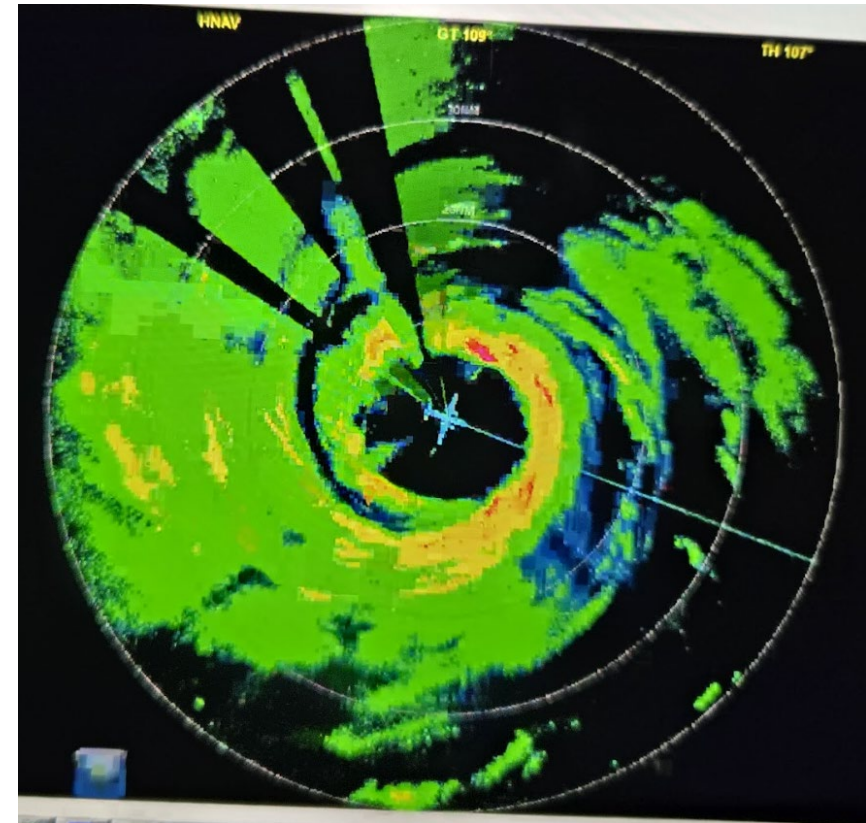
- 2025 Hurricane Season: 884
- P-3: 463
 - Radius of Max Winds/Eyewall: 97
- G-IV: 421
- Greater than 95% success rate





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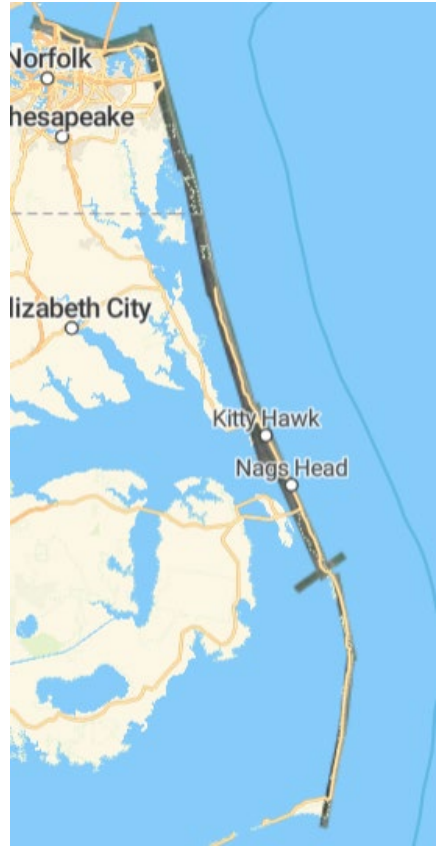


Radar picture of Hurricane Melissa. Photo: T. Richards



Emergency Response - Erin

- King Air N65RF
- Outer Banks
- Total hours: 10.2
- Total images: 2,882



Aerial view of Highway 12 in Buxton, North Carolina following Hurricane Erin. Credit: NOAA



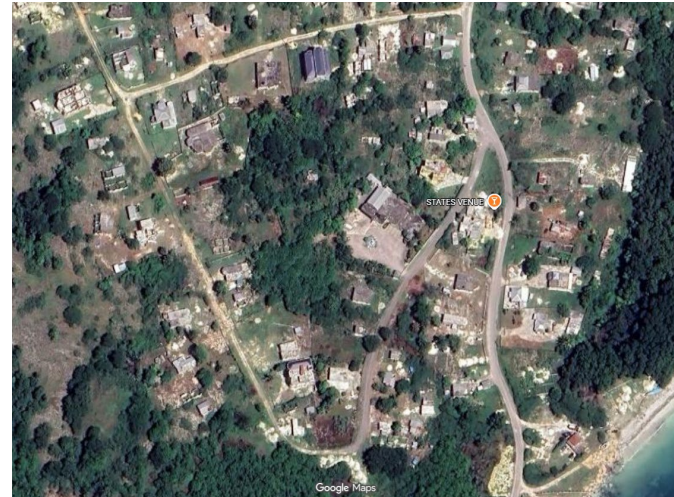
Emergency Response - Melissa



Melissa:

- Jamaica
- N65RF; International, interagency effort
- 55.8 hours; 14,891 images
- Department of State:

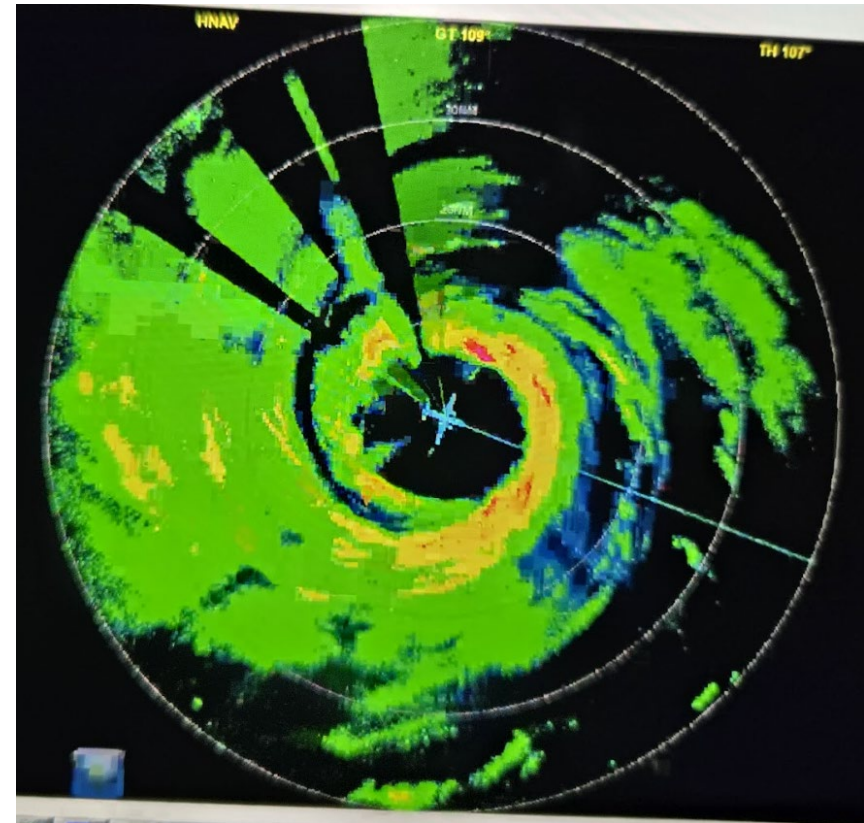
"I got a peek at the...Melissa Response and it was great to see NOAA's overflight and satellite imagery in there. Seeing this interagency partnership at work to support a priority response at the tactical level is really incredible and I am grateful to you and the team for everything you have done to make this happen."





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2026 Forecast



Atmospheric Rivers 2026

- Portland, OR; ongoing through March

Hurricane Season 2026

- N42RF - July 15
- N43RF - June 1
- Gulfstream 550 - this summer, online this fall*
- New Aircraft Allocation Plan - Support for Operations, Research, Ocean Winds, Emerging Technologies
- Windborne Deconfliction with 53rd Weather Reconnaissance Squadron

Questions?

