

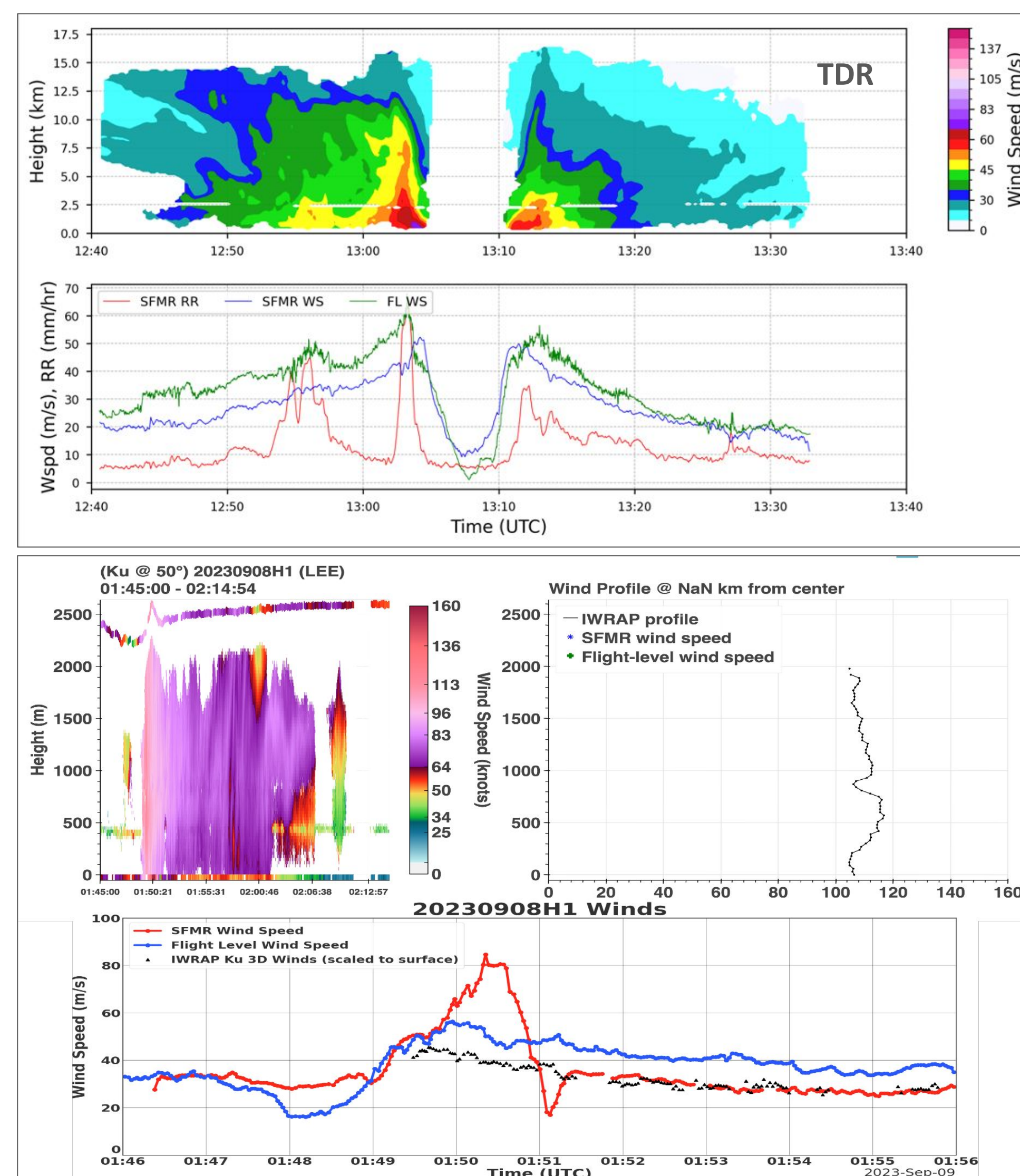
Understanding Conflicting Data



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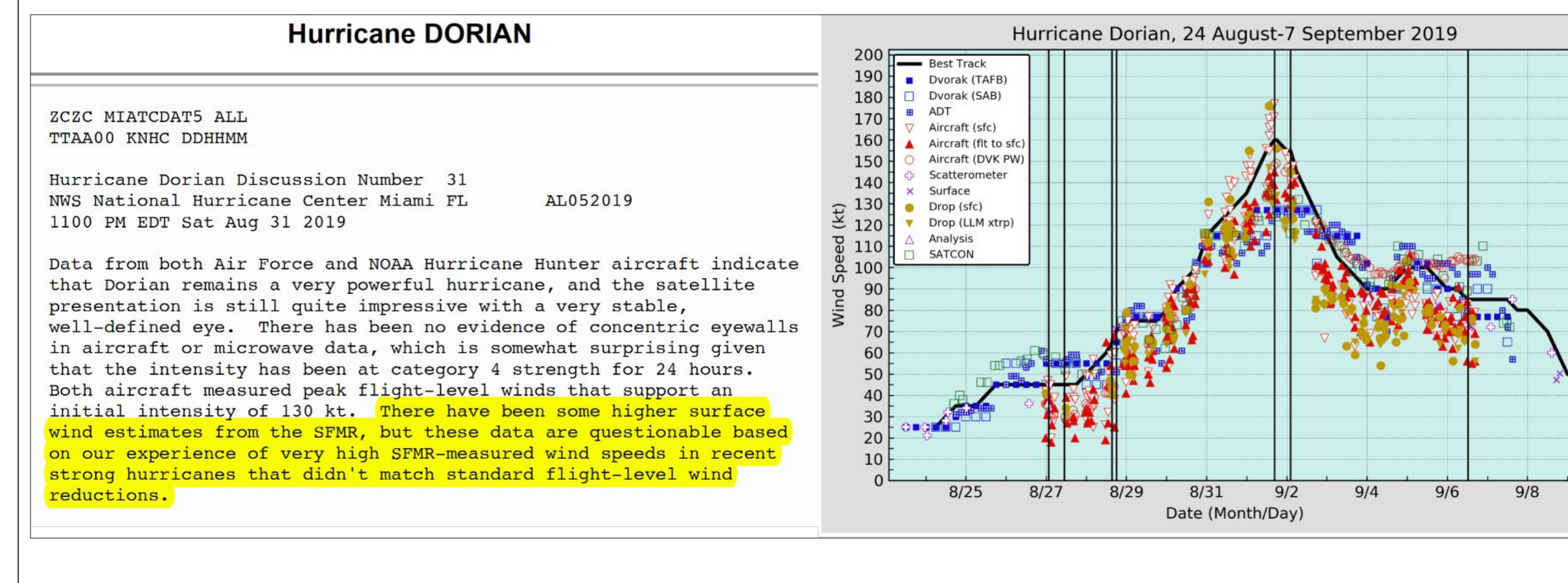
Data Intercomparisons

Intercomparing data from multiple instruments allows for calibration and validation of the different sensors.

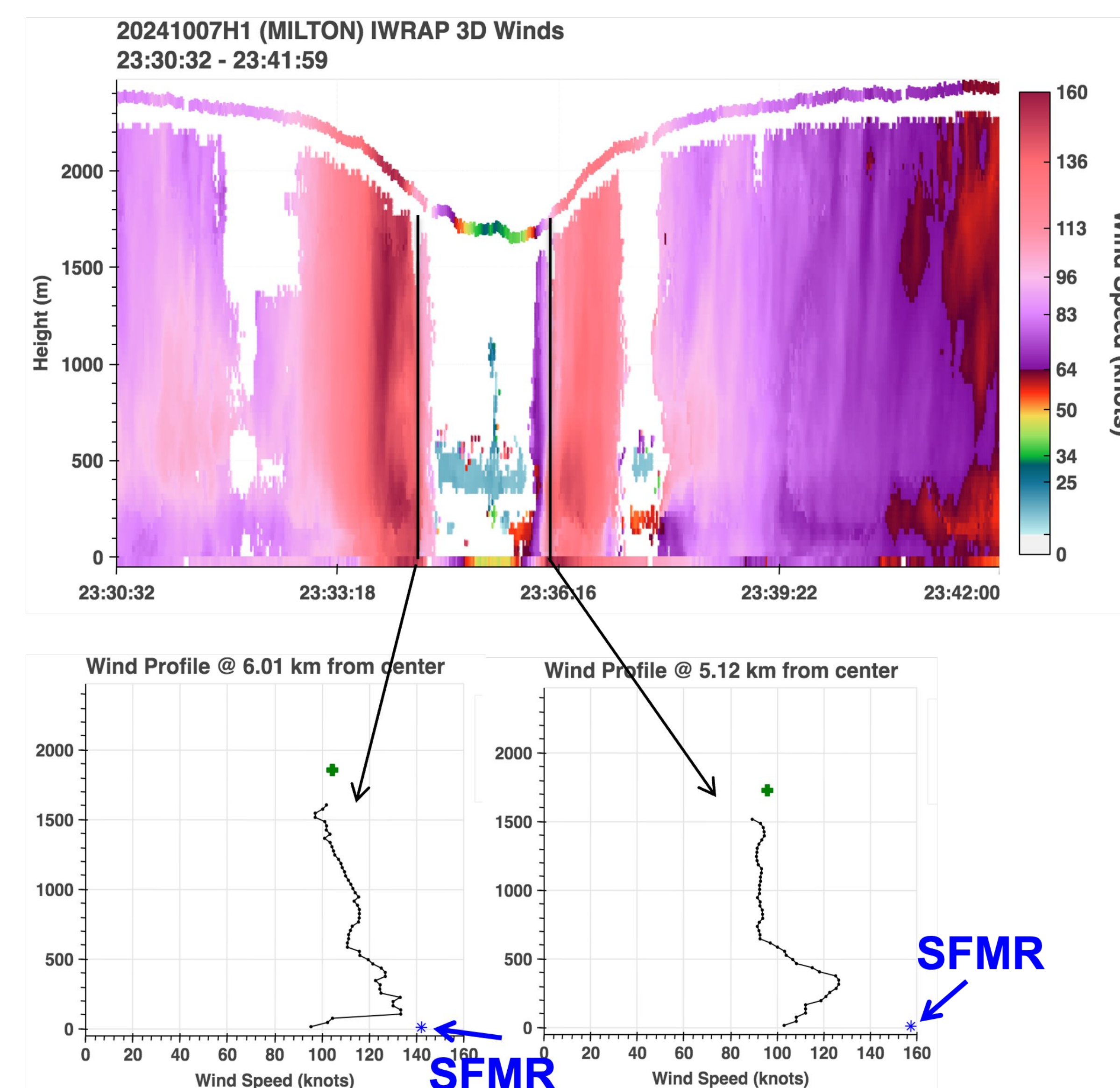


Motivation

Discrepancies in surface wind speed estimates in major hurricanes since 2017.

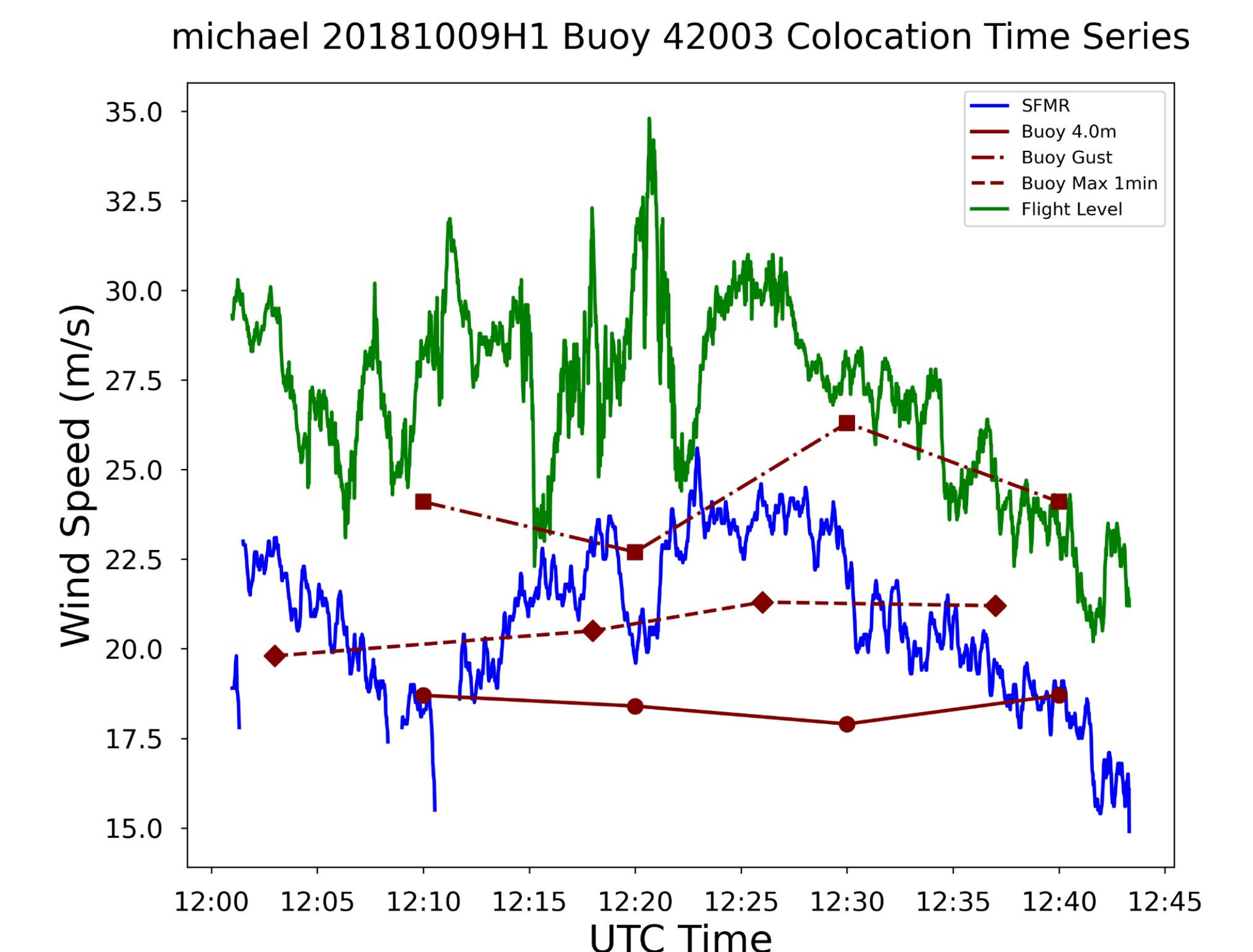


Collecting data at multiple levels allows for a better understanding of the different data sources and tropical cyclone structure.



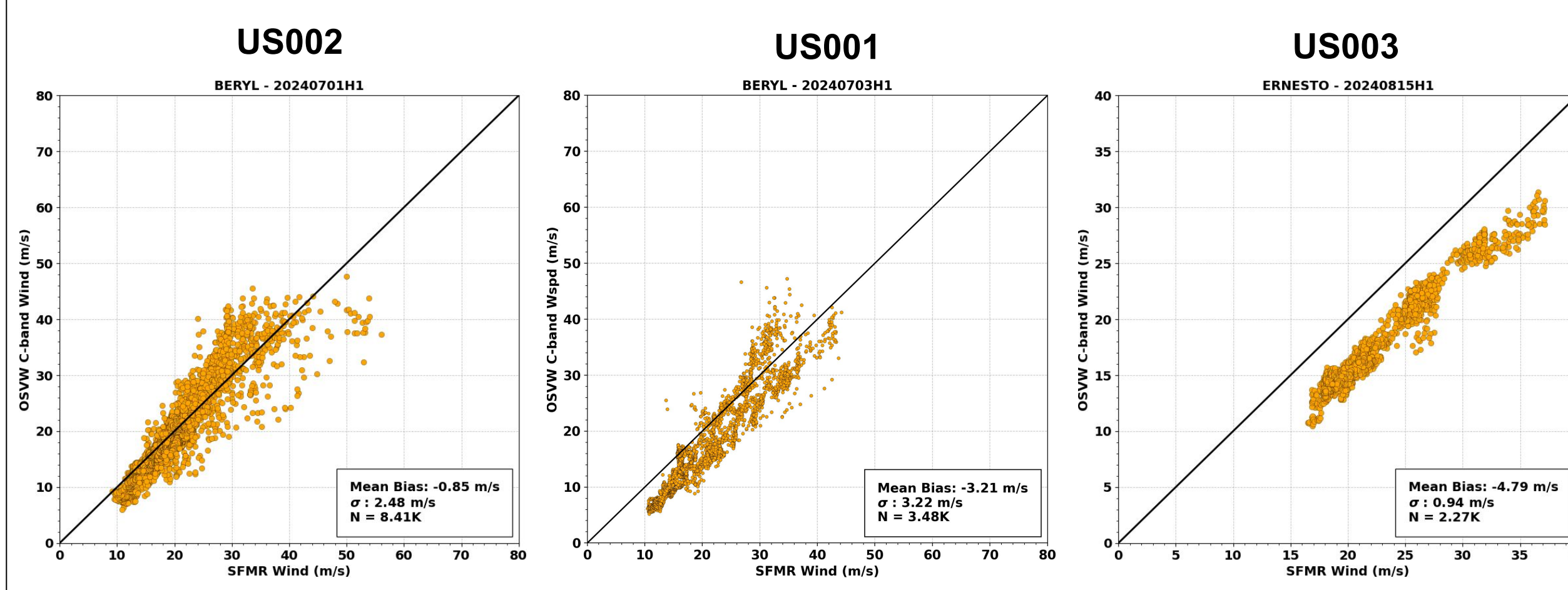
1-minute Sustained Winds

How do aircraft observations relate to 1-minute sustained winds from buoys?



SFMR Errors

Intercomparisons of Stepped-Frequency Microwave Radiometer (SFMR) and Imaging Wind and Rain Airborne Profiler (IWRAP) data provided insight into SFMR retrieval errors that otherwise *may not have been identified*.



Impacts

- Improved understanding of aircraft data will lead to more accurate TC intensity and structure analyses and forecasts.
- SFMR data transmission suspended during 2024 hurricane season from NOAA aircraft.
- Products developed during comparisons can be transitioned from research to operations.

