



Rapid Intensification: Implication on Operational Forecast Errors

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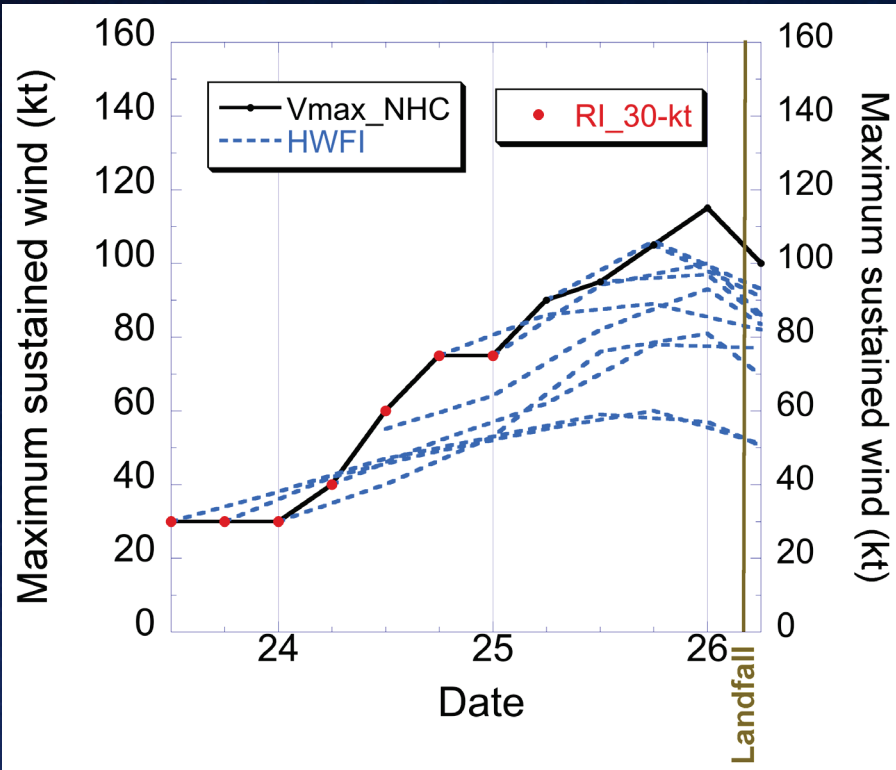
HFIP Annual Review

Miami, FL

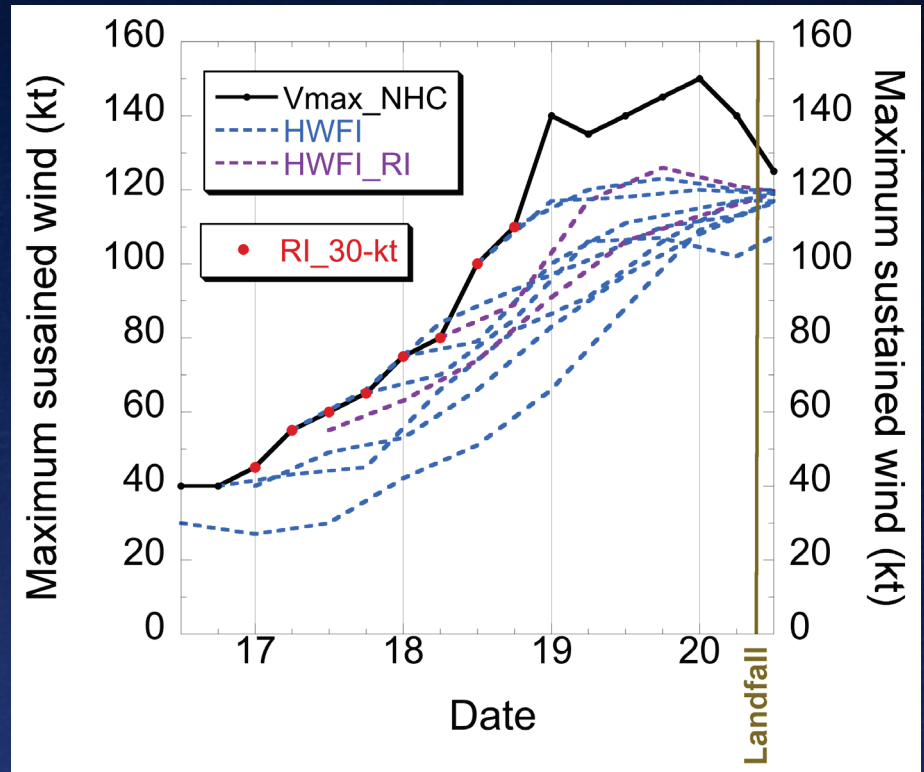
November 9, 2017

Model Forecasts for Notable 2017 RI storms

Harvey (2017)



Maria (2017)



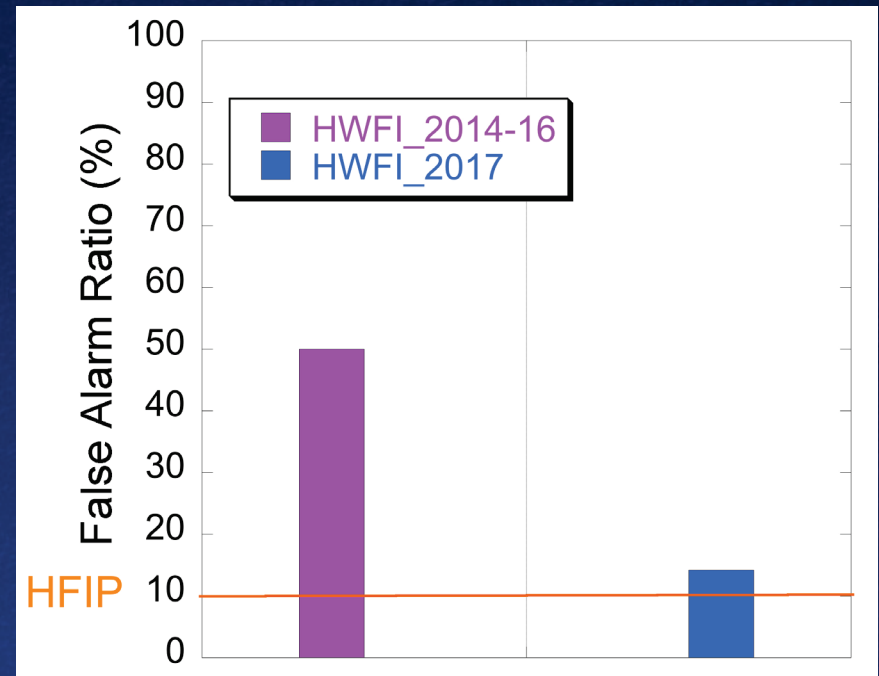
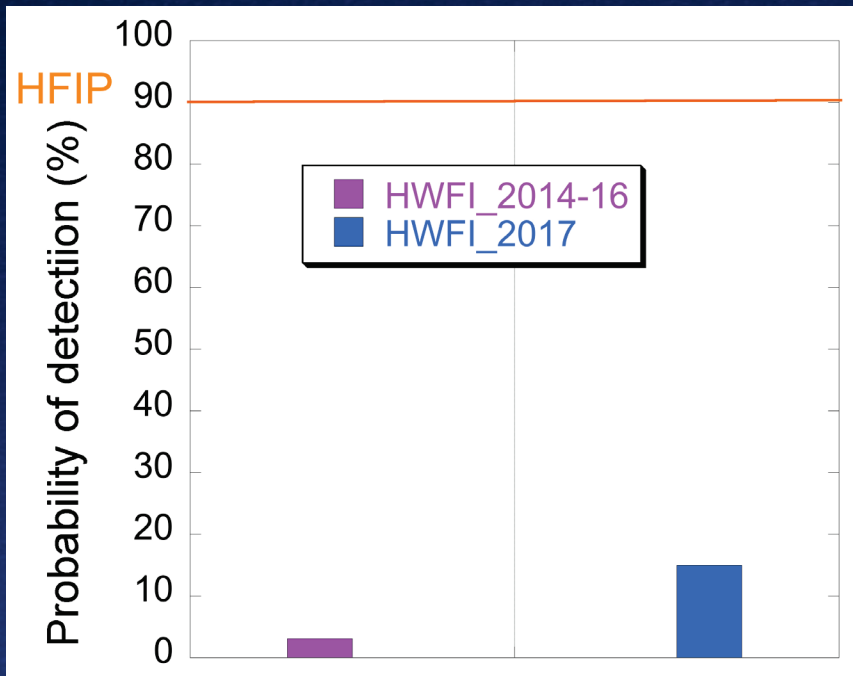
HWFI Probability of Detection (POD) and False alarm Ratio (FAR)

RI threshold ≥ 30 kt in 24-h

Atlantic basin

POD

FAR



2015-2017 Atlantic Forecast Error Statistics (Includes both overwater and overland cases)

HWFI

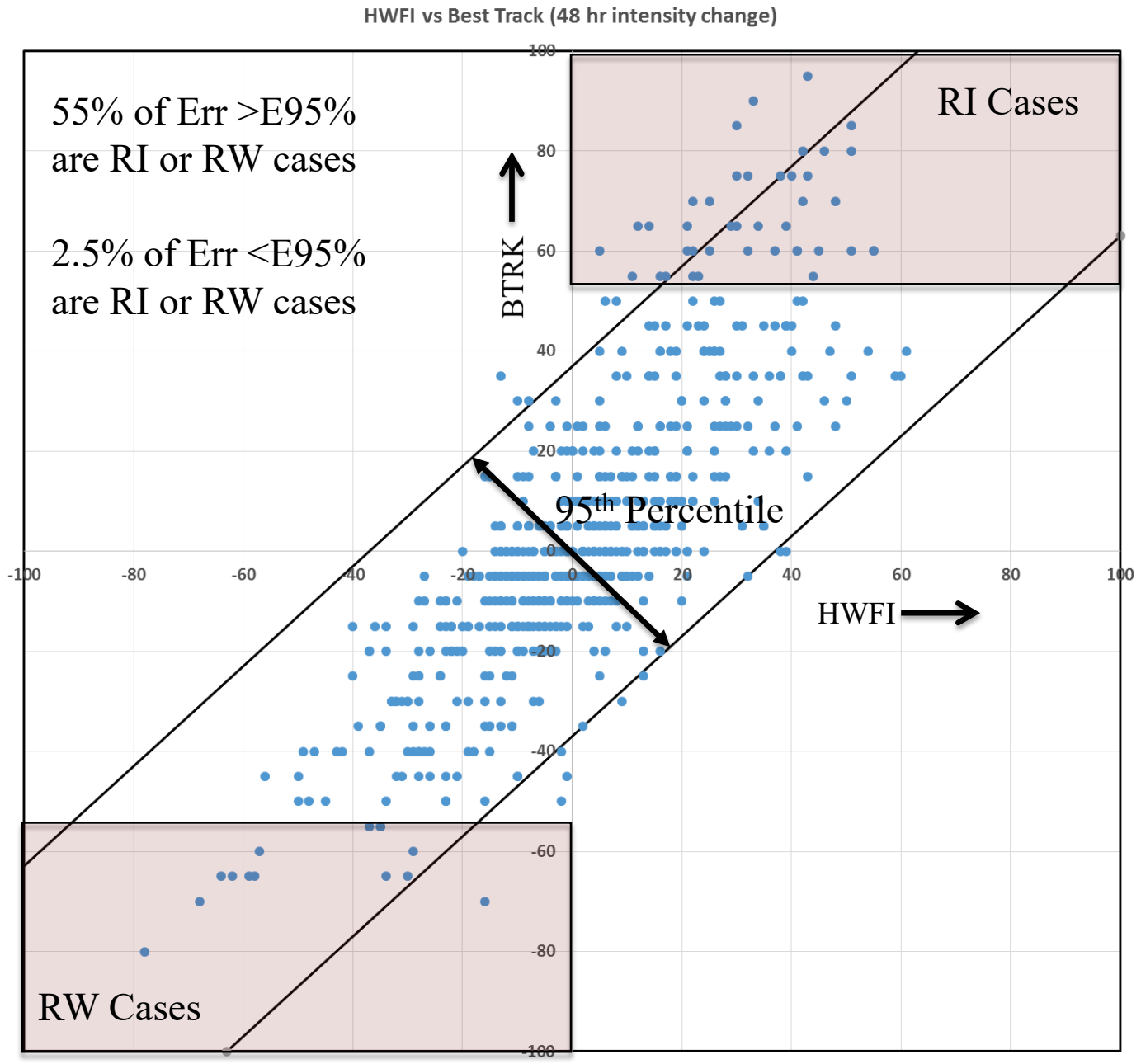
No.	Lead-time (h)	Current 95% error (kt)	50% reduction (kt)
788	24	27	13.5
633	48	37	18.5
492	72	37	18.5

NHC Official

No.	Lead-time (h)	Current 95% error (kt)	50% reduction (kt)
788	24	25	12.5
633	48	35	17.5
492	72	35	17.5

48-h
lead-time

48-h
lead-time
RI \geq 55kt



55% of Err $>$ E95%
are RI or RW cases

2.5% of Err $<$ E95%
are RI or RW cases

RW \leq 55kt

RW Cases

RI Cases

95th Percentile