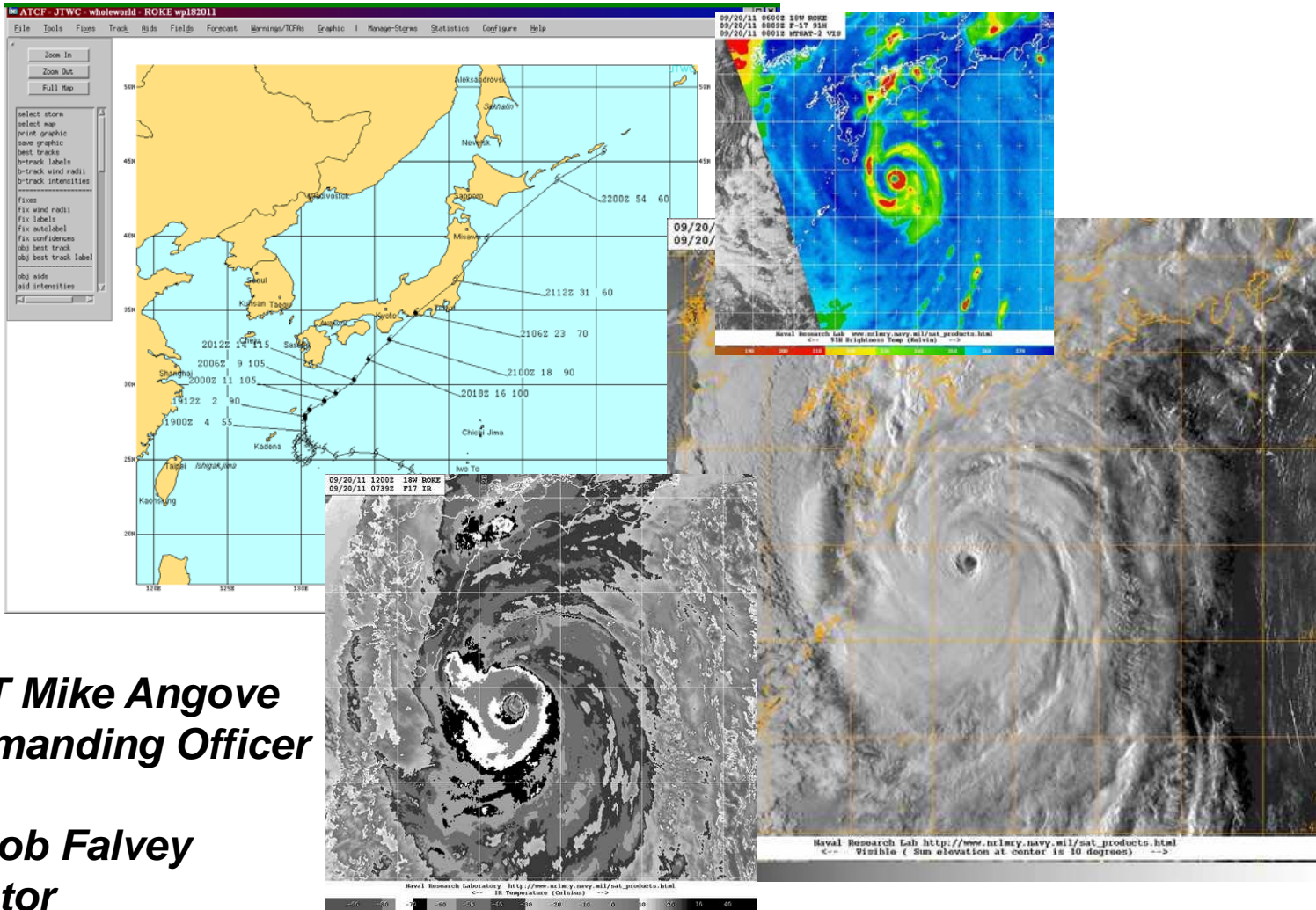




JOINT TYPHOON WARNING CENTER 2011 REVIEW



Typhoon Roke (18W)



CAPT Mike Angove
Commanding Officer

Mr. Bob Falvey
Director



A Year of Transition



Changes

- Shift of naval maritime forecast mission to Fleet Weather Center San Diego

Challenges

- Ensure seamless continuity of support
- Bridge gap between Forecasts and Decisions—TC “information layer” in Pacific

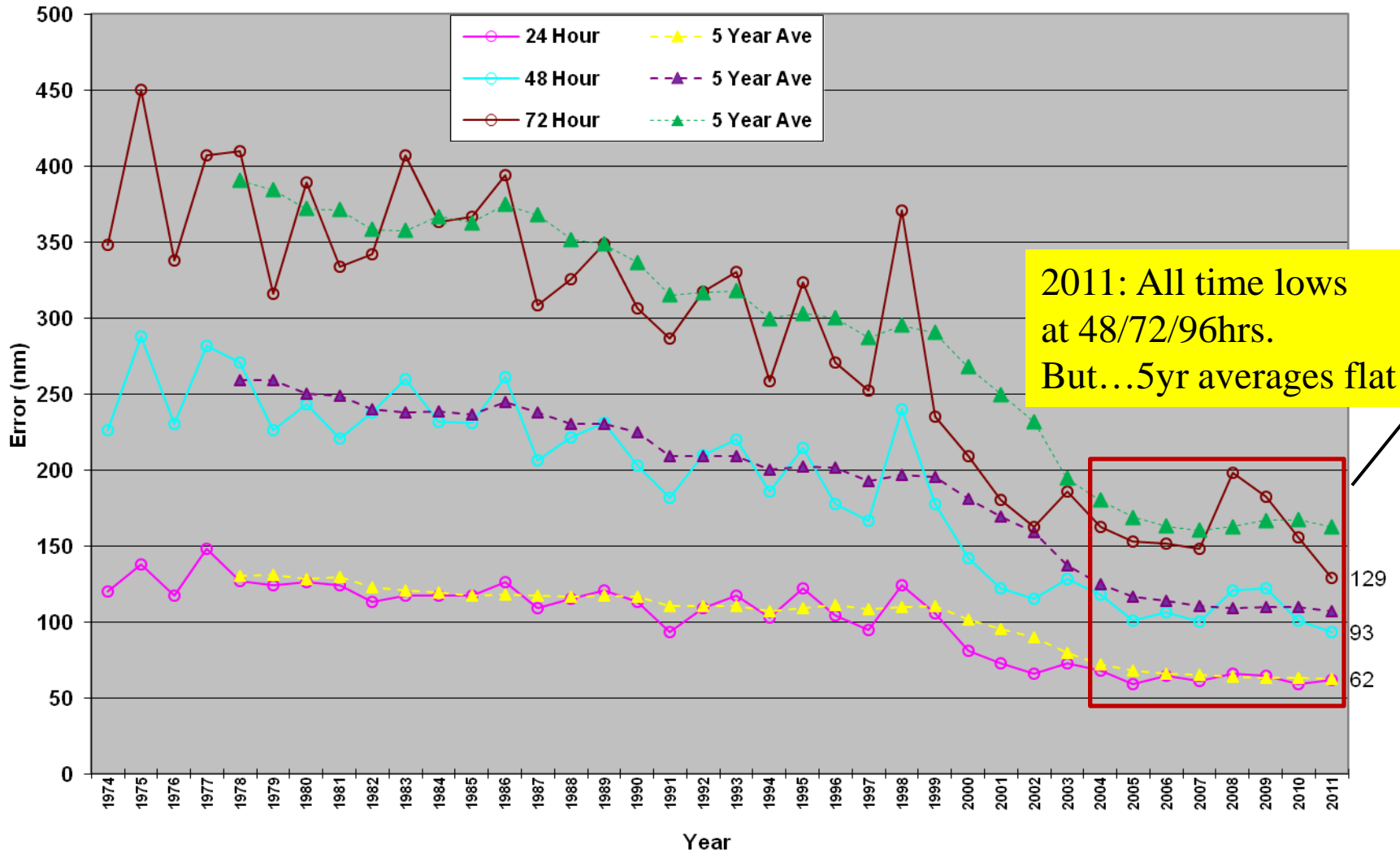
Opportunities

- Realign JTWC; singular focus on tropical forecasts and warnings
- Implement “Decision Support” capability



JTWC TRACK ERRORS

(Western North Pacific - 24-72 Hours)

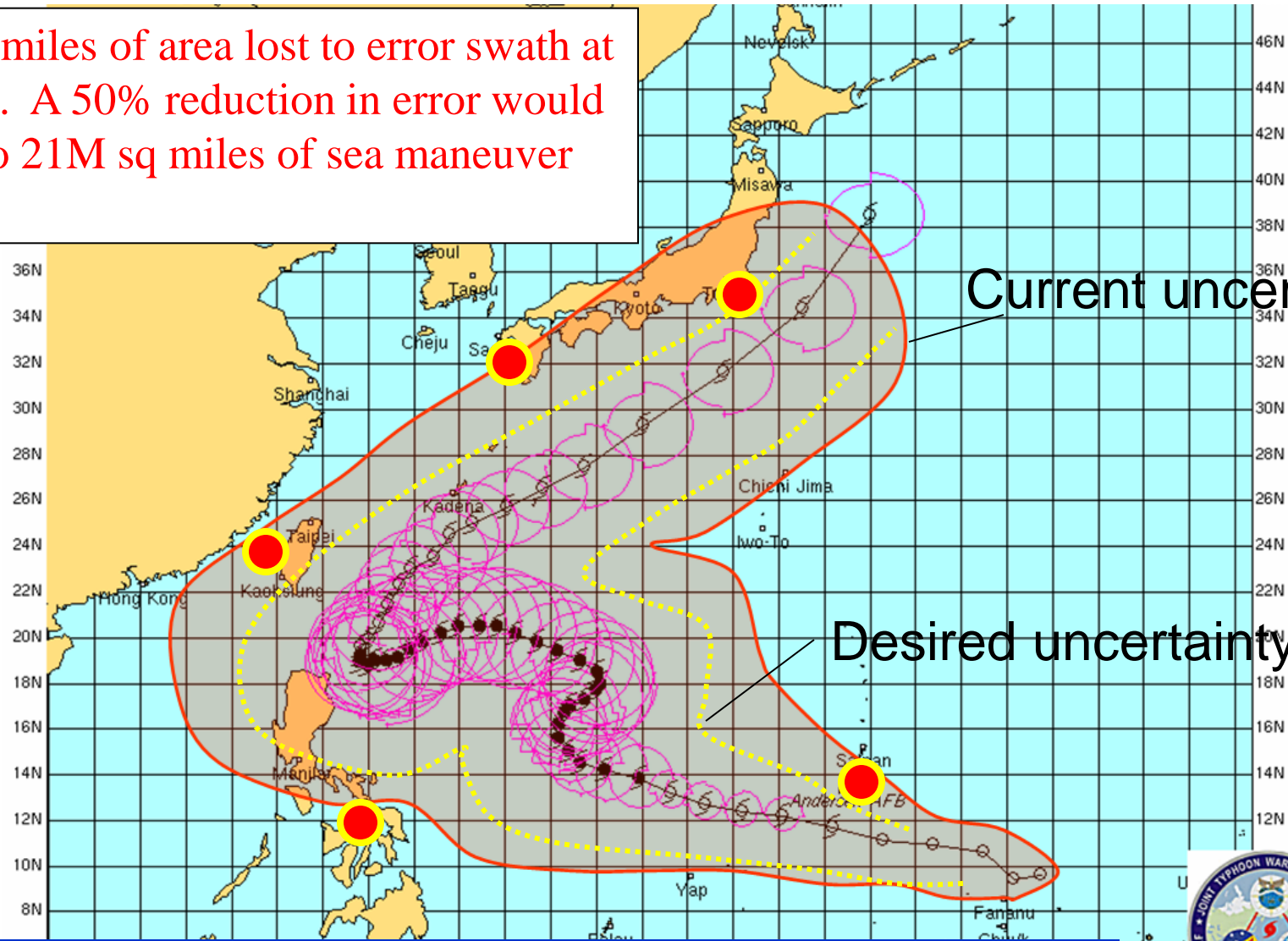




Western Pacific: Active Battlespace



1.4M sq miles of area lost to error swath at 72 hours. A 50% reduction in error would add up to 21M sq miles of sea maneuver per year.



Current uncertainty

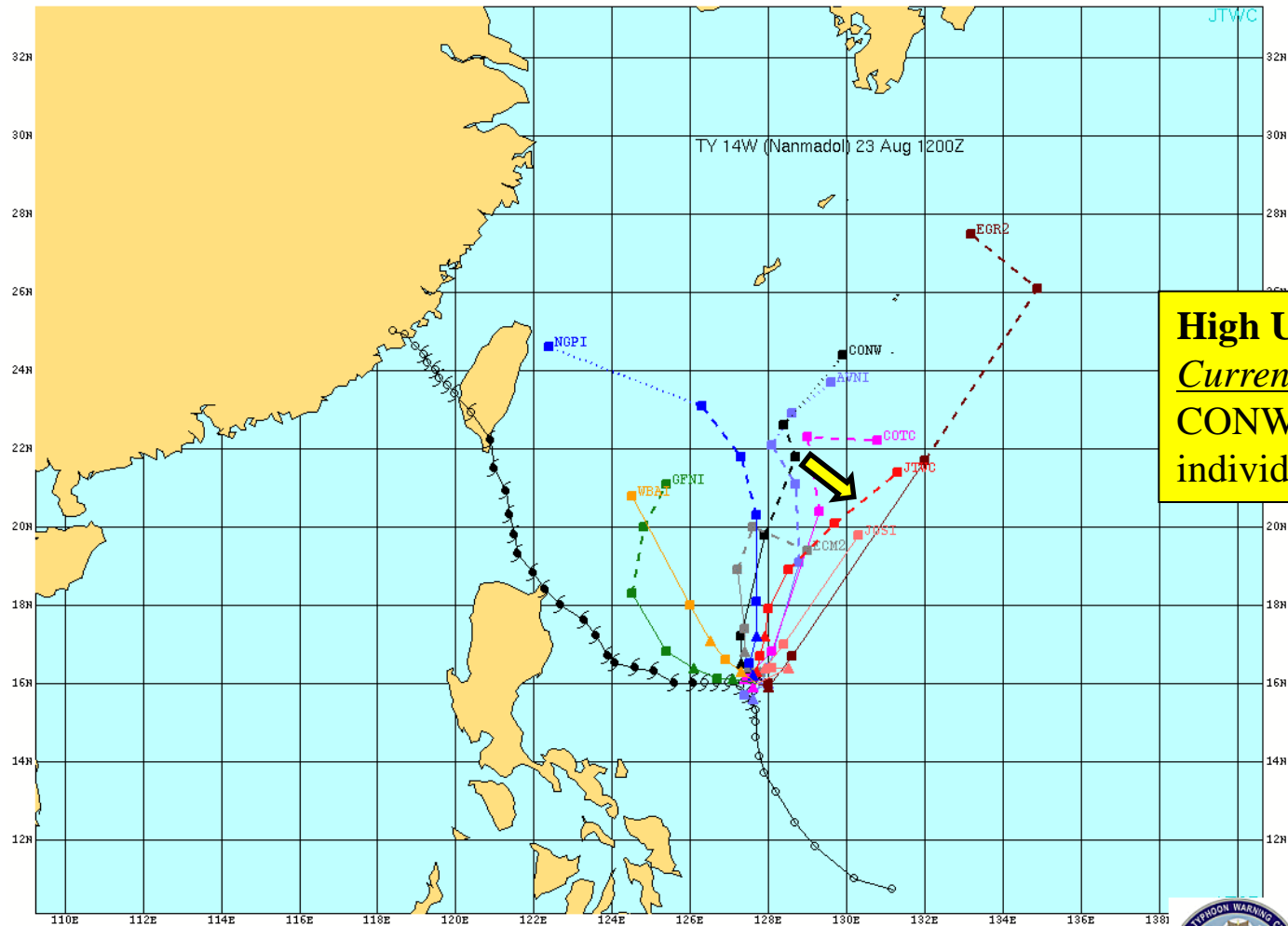
Desired uncertainty

PACOM Goal: Increase US/Coalition Sea Maneuver Space





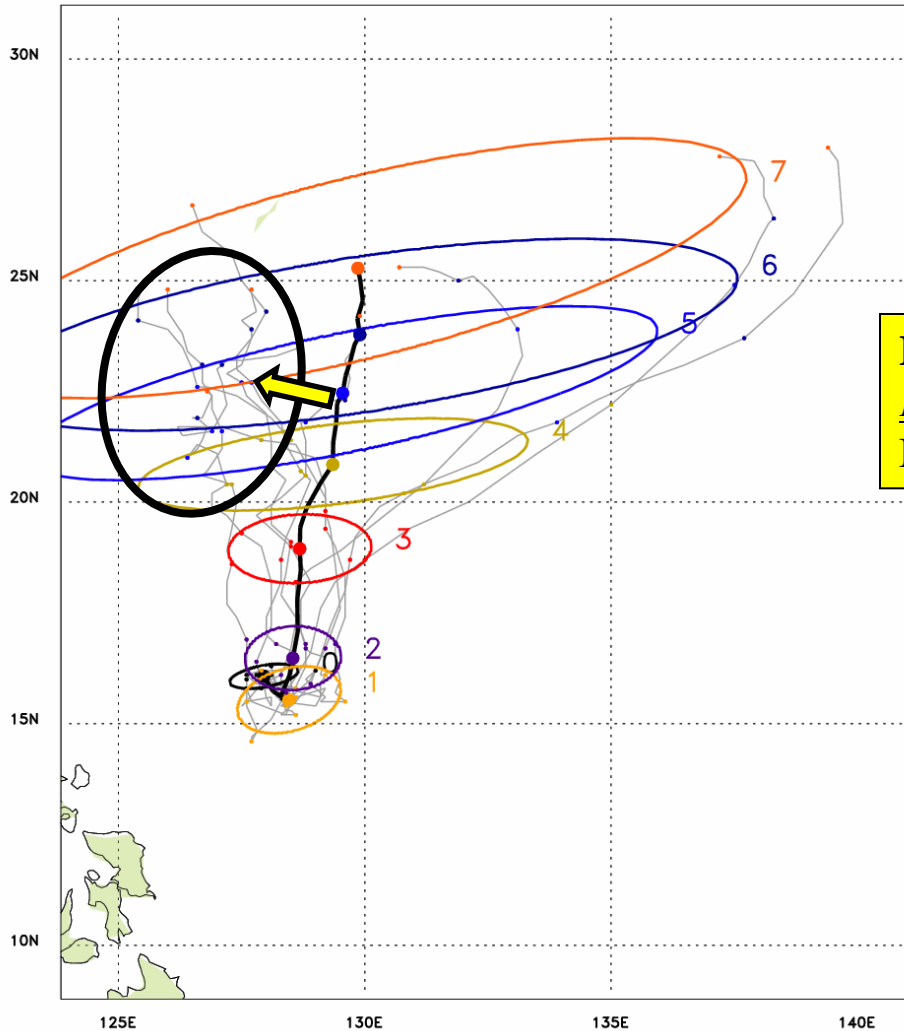
Challenge: Reduce Track Errors in Uncertain Environments





Potential Ensemble Application

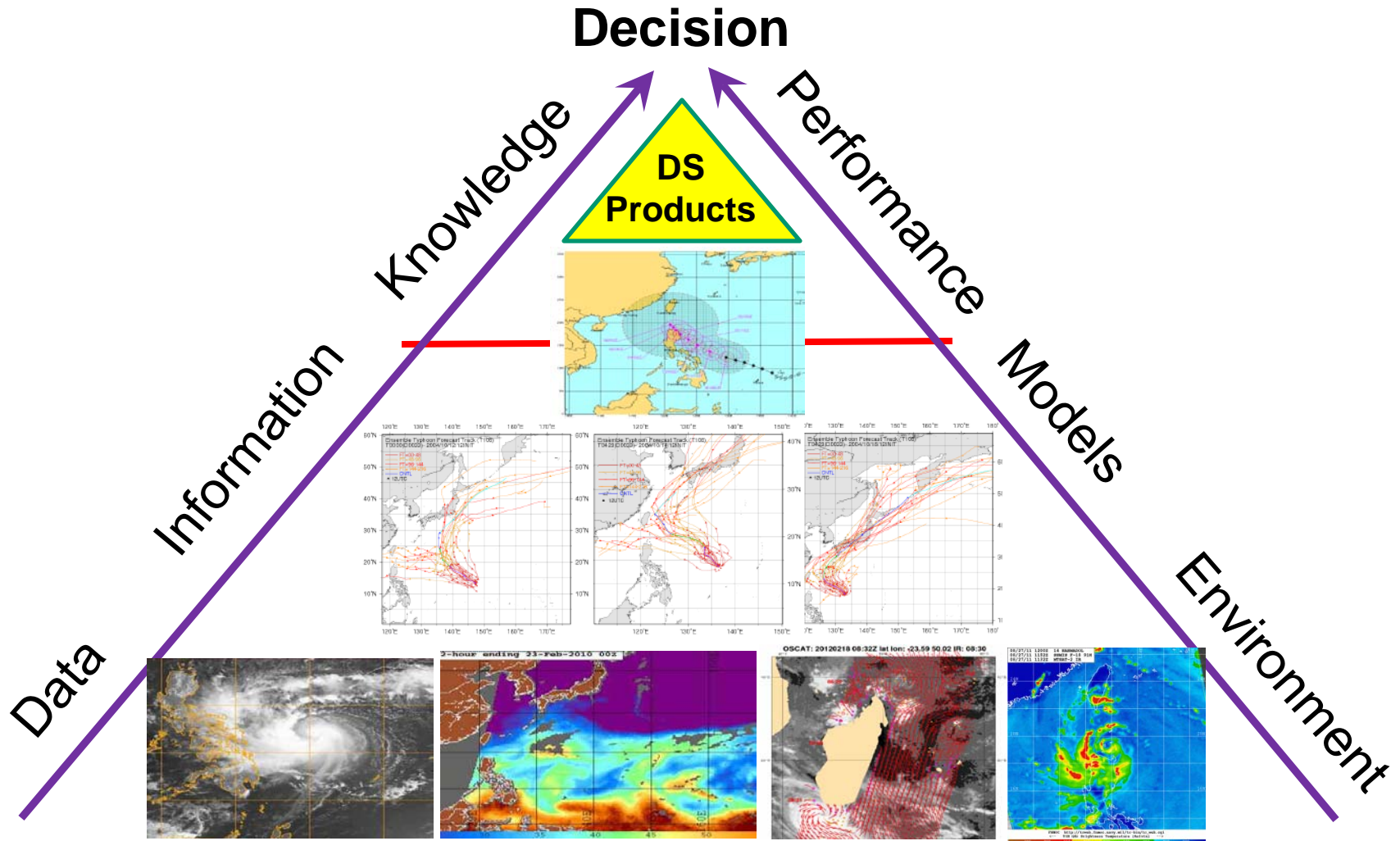
FIM-G7 ensembles and ellipses, IC=2011082312
for storm number 14 in the WP basin



High Uncertainty Tracks
Future approach: nudge Ensemble Mean toward Ensemble Median?

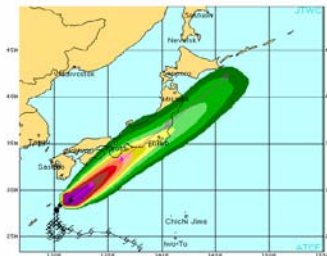
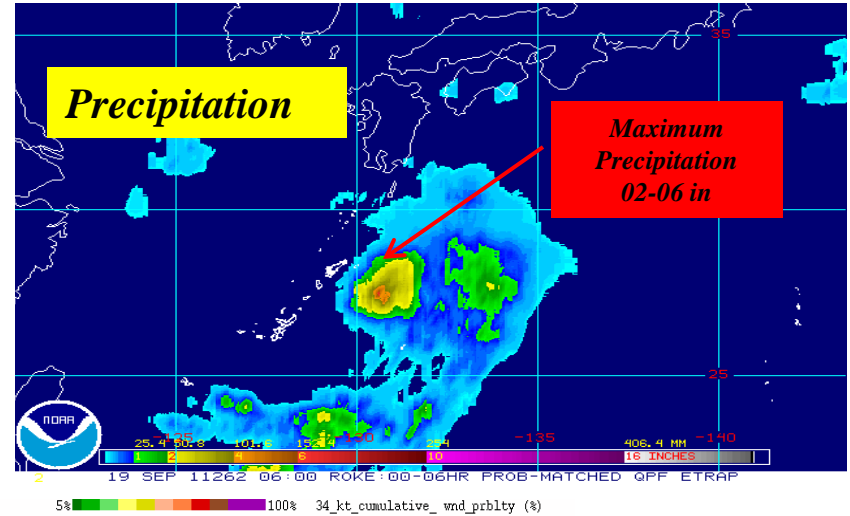
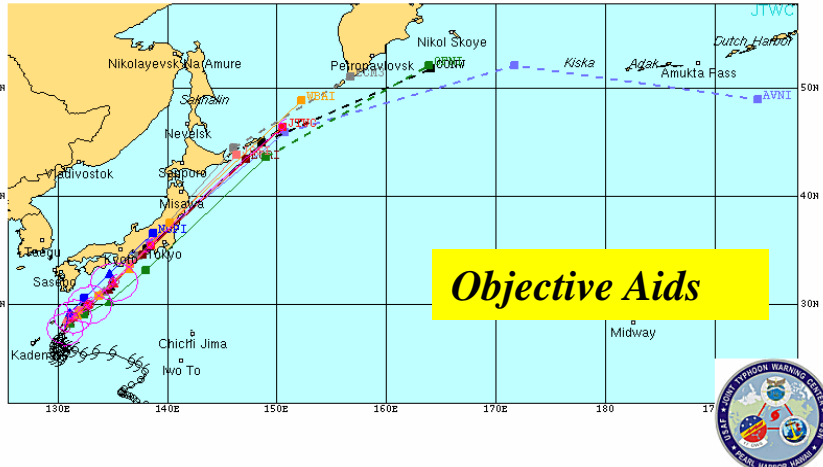


Decision Support Initiative





TC Decision Support (Notional)



EXPERIMENTAL TC-COR GUIDANCE

SITE TC-COR

Atsugi 2
Camp Fuji 2
Camp Zama 2
Yokosuka 2
Yokota AB 2

*** BASED ON JTWC WARNING NR 037 FOR TYPHOON 18W (ROKE) ***

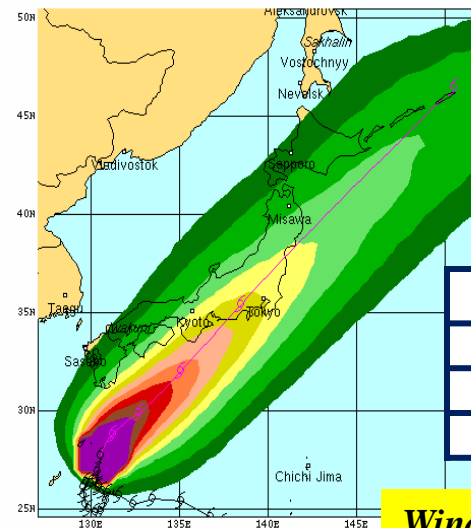
NOTES:

TC-COR SETTINGS ARE BASED ON RELATIONSHIP BETWEEN HURRICANE WATCHES/WARNINGS AND 64 KT CUMULATIVE PROBABILITIES IN THE ATLANTIC AND GULF OF MEXICO. THEY ARE OBJECTIVE GUIDANCE FOR ONSET OF 50 KT WINDS AT MILITARY INSTALLATIONS. EACH SITE HAS ITS OWN SENSITIVITIES, WHICH THESE TC-COR SETTINGS DO NOT ADDRESS. THE FOLLOWING CUMULATIVE PROBABILITIES ARE USED FOR THE TC-COR THRESHOLDS:

TC-COR4 5% PROBABILITY OF 50 KT AT 72 H
TC-COR3 6% PROBABILITY OF 50 KT AT 48 H
TC-COR2 8% PROBABILITY OF 50 KT AT 24 H
TC-COR1 12% PROBABILITY OF 50 KT AT 12 H

END OF EXPERIMENTAL TC-COR GUIDANCE

**TC Conditions Of
Readiness (COR)**



Atsugi/Yokosuka Greatest chance for 34 kt wind:
(48 hr incremental period)
20/18z to 21/18z

Misawa Greatest chance for 34 kt wind:
(72 hr incremental period)
21/18z to 22/18z

Location	72hr	120hr
Atsugi	44%	44%
Yokosuka	41%	41%
Misawa	18%	18%

Wind Speed Probabilities



STRATEGIC OBJECTIVES



- Modernize JTWC data analysis and display capability
 - Evaluate NOAA/NWS GOTS capability (AWIPS-2)
- Operationalize model ensemble forecasting capability
 - Incorporate national and international ensemble modeling to specify—**and reduce**—uncertainty in track forecasts
 - Expand fine scale ensemble model capability for intensity forecasts
- Improve influence over Research-to-Operations (R2O)
 - Leverage partnerships with NOAA research programs like the Joint Hurricane Testbed (JHT) and Hurricane Forecast Improvement Program (HFIP)
- Modernize and expand product suite
 - Add geo-spatial product capabilities like GIS and Google Earth
 - Expand Tropical Analysis Discussion (ABPW/ABIO)
 - Implement Decision Support Capability for TC impacts