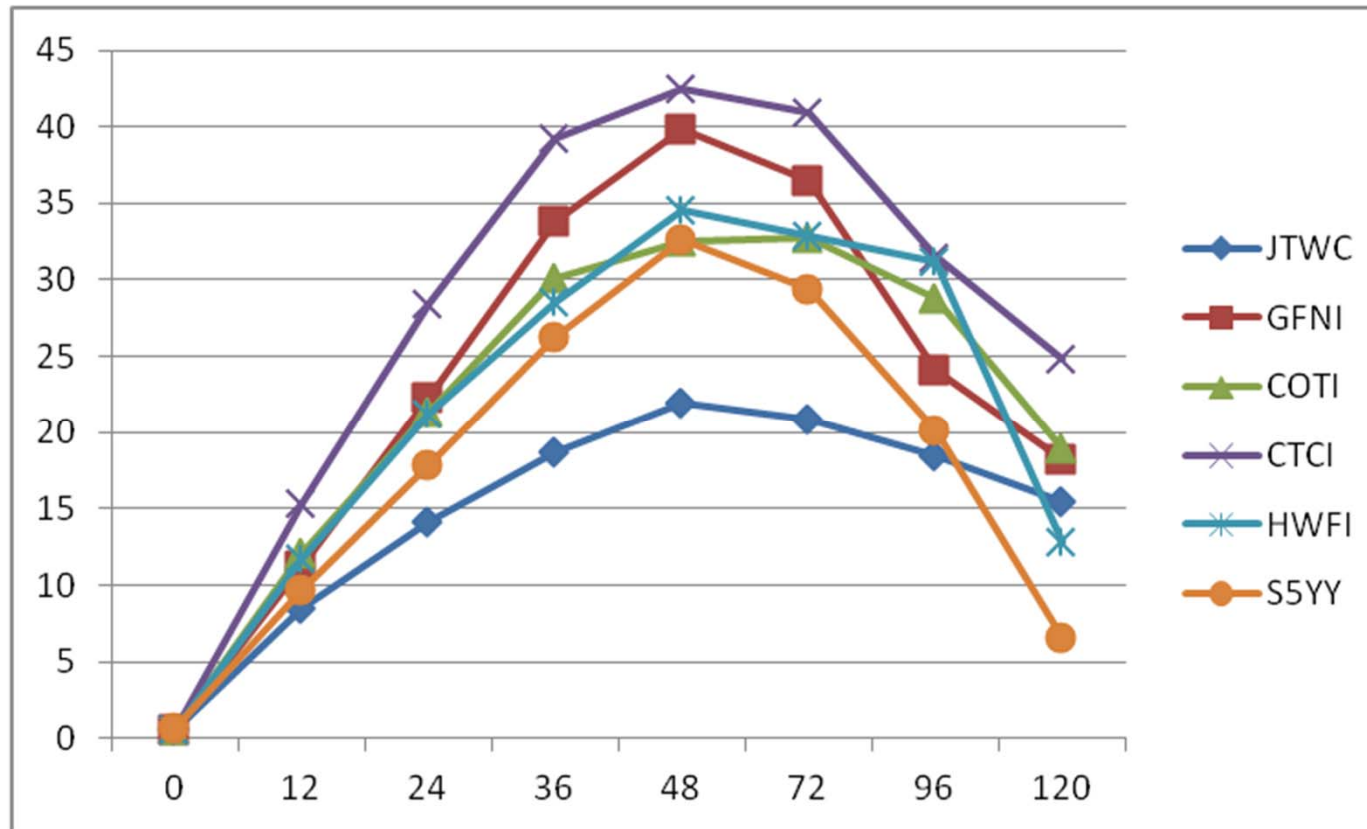




JOINT TYPHOON WARNING CENTER 2013 YEAR IN REVIEW



JTWC INTENSITY PERFORMANCE ON STY HAIYAN - PRELIMINARY



68th INTERDEPARTMENTAL HURRICANE CONFERENCE
4-6 MAR 2014

Mr. Robert (Bob) Falvey
Director, Joint Typhoon Warning Center



MISSION

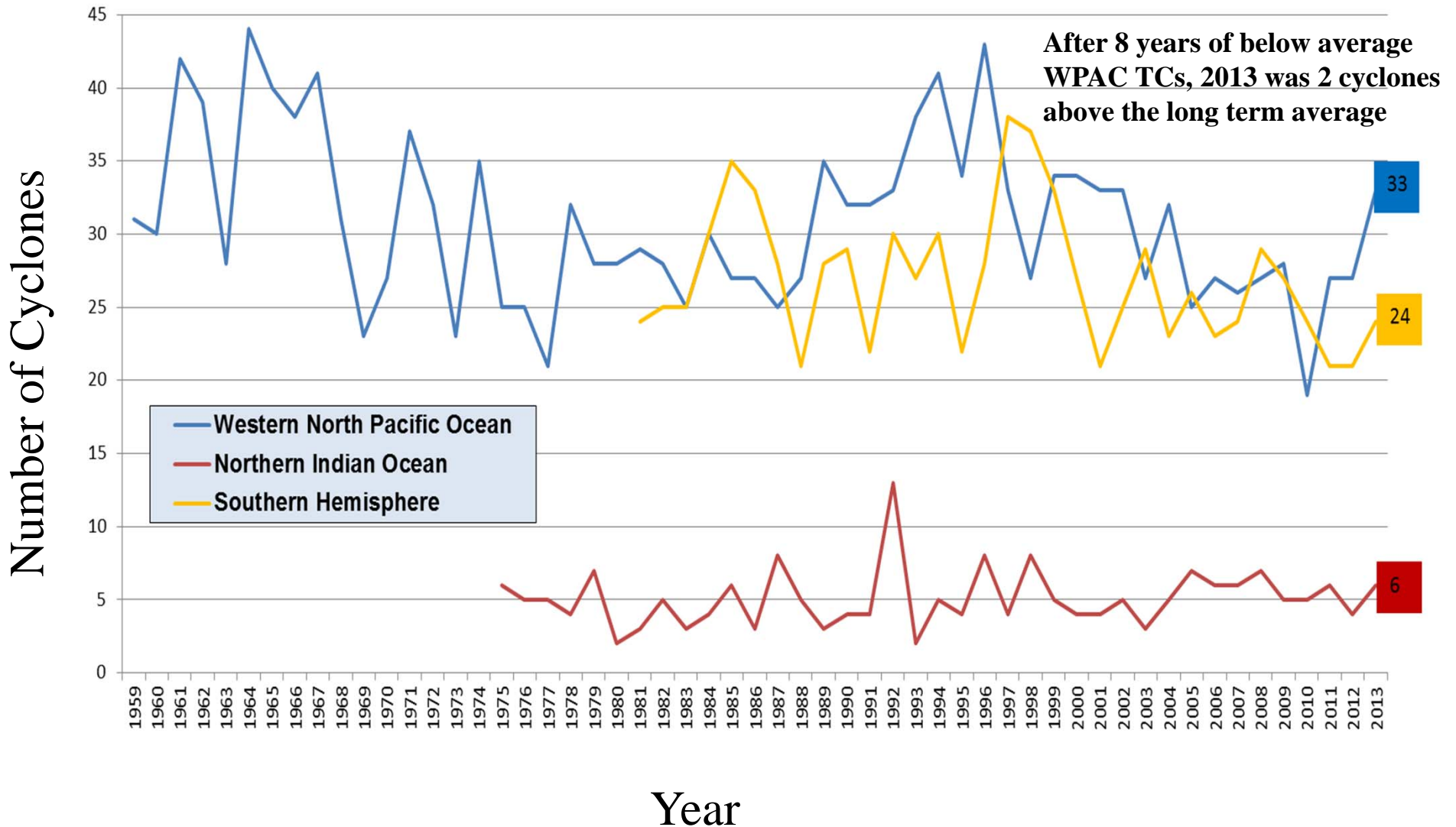


Provide tropical cyclone reconnaissance, analysis, forecast and warning support for Department of Defense, and other US Government assets in the Pacific and Indian Oceans as established by Commander, United States Pacific Command.



ANNUAL TC ACTIVITY

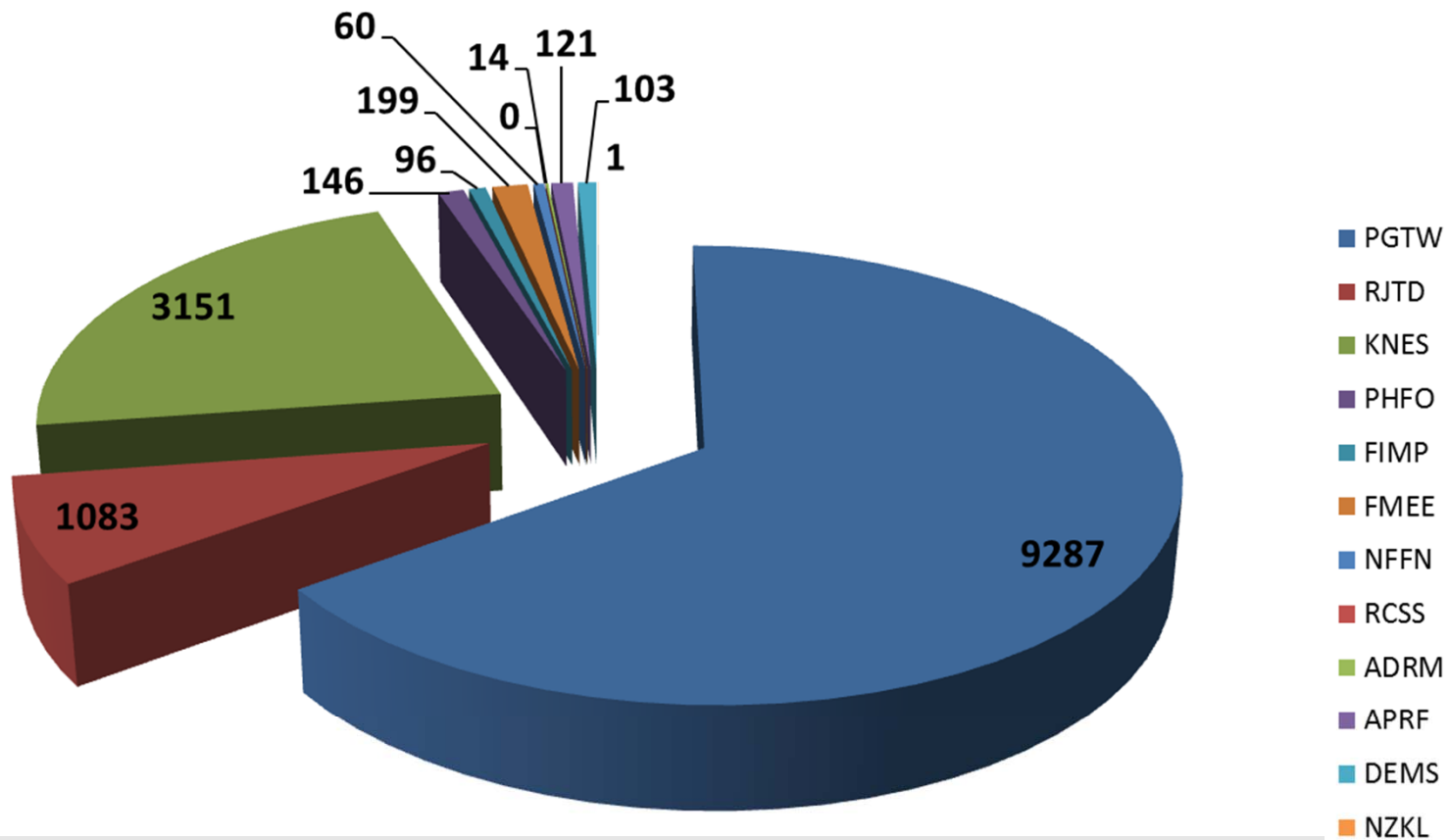
(All Intensities All Basins)





2013 SATELLITE RECON

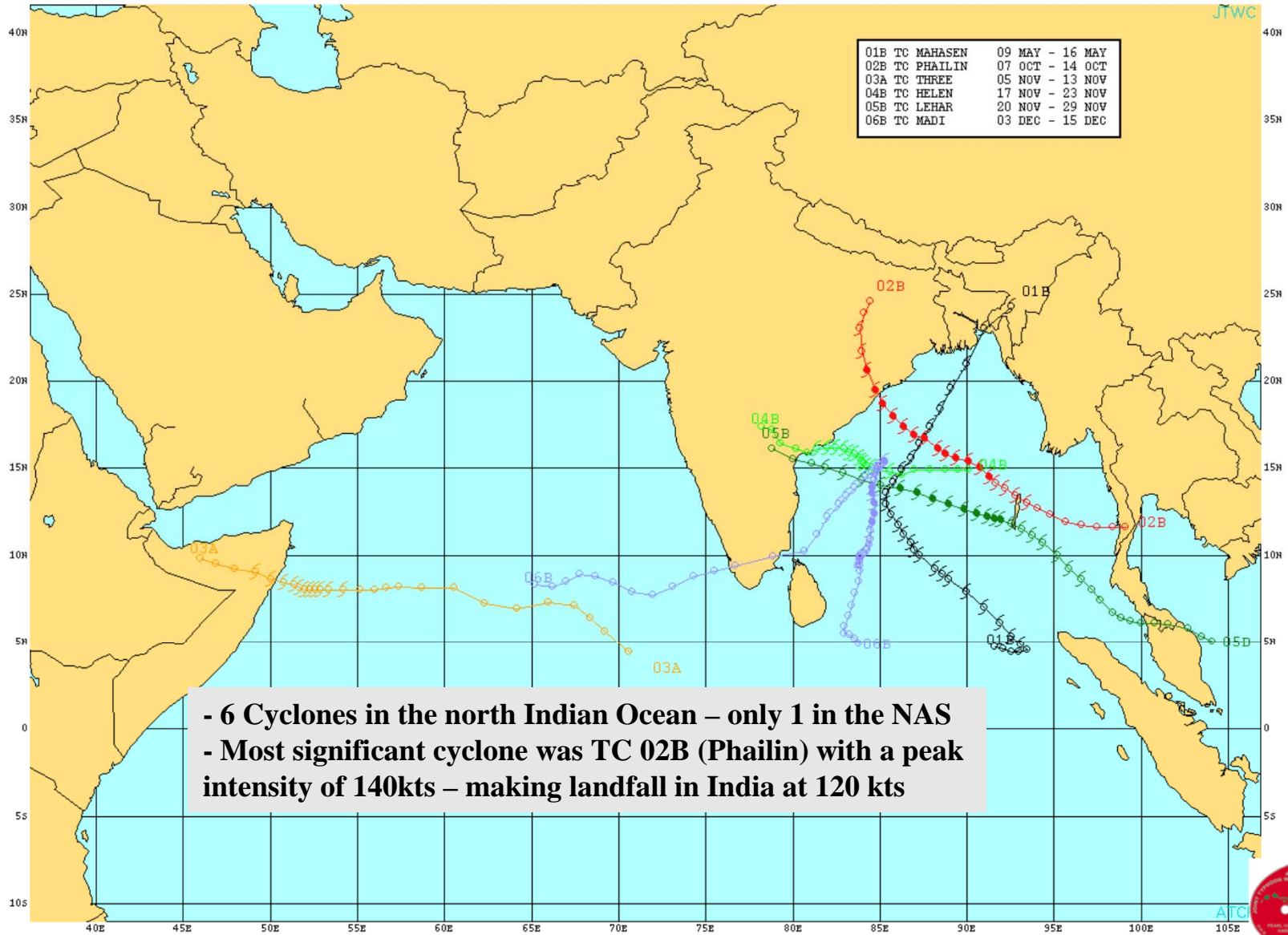
Fixes by Agency – 14,261



- Over 14K satellite fixes in the AOR
- Over 9K completed by JTWC Satellite Analysts
- Over 3K completed by our partners at NESIS SAB



2013 NORTH INDIAN OCEAN

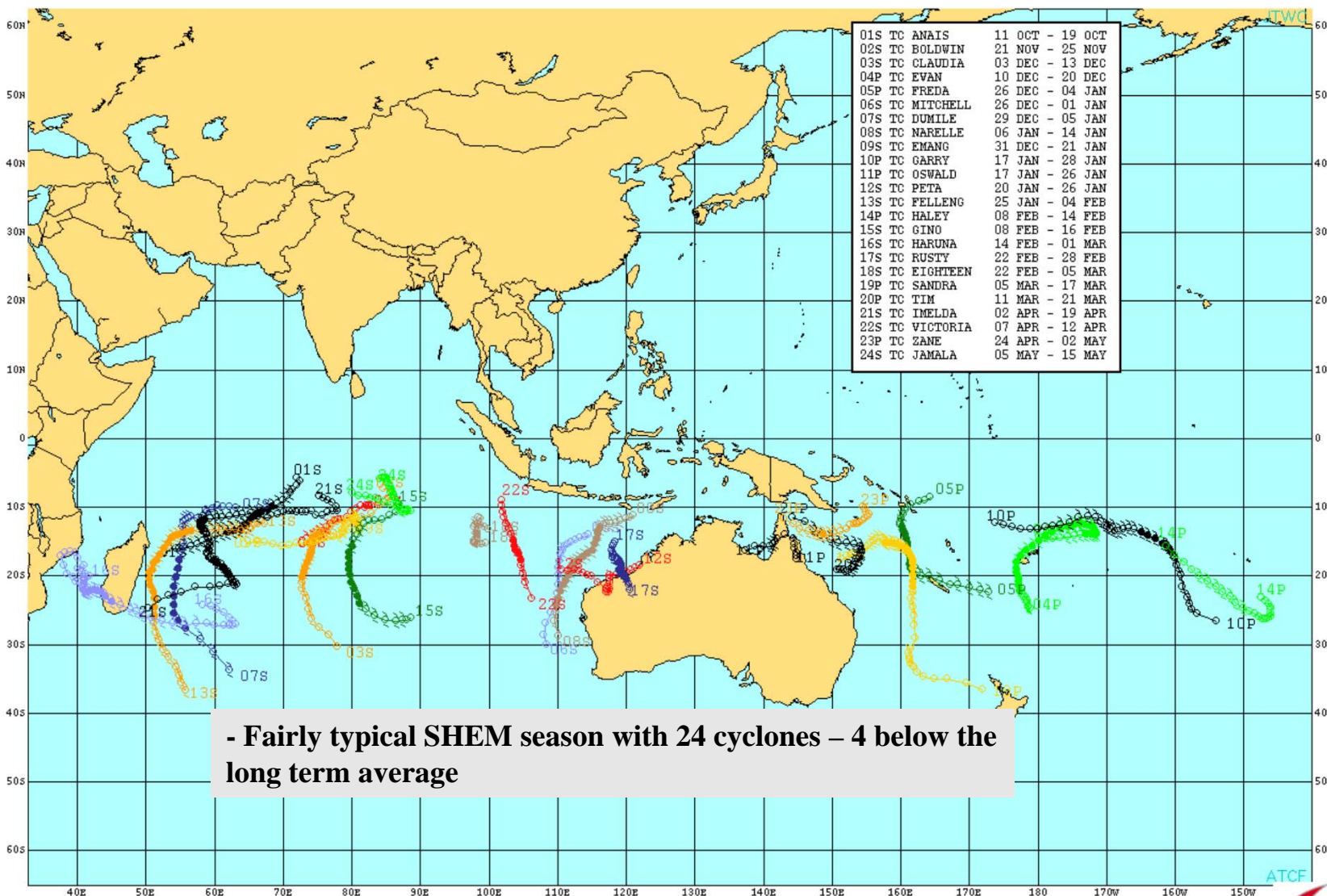


41.53N-45.97E



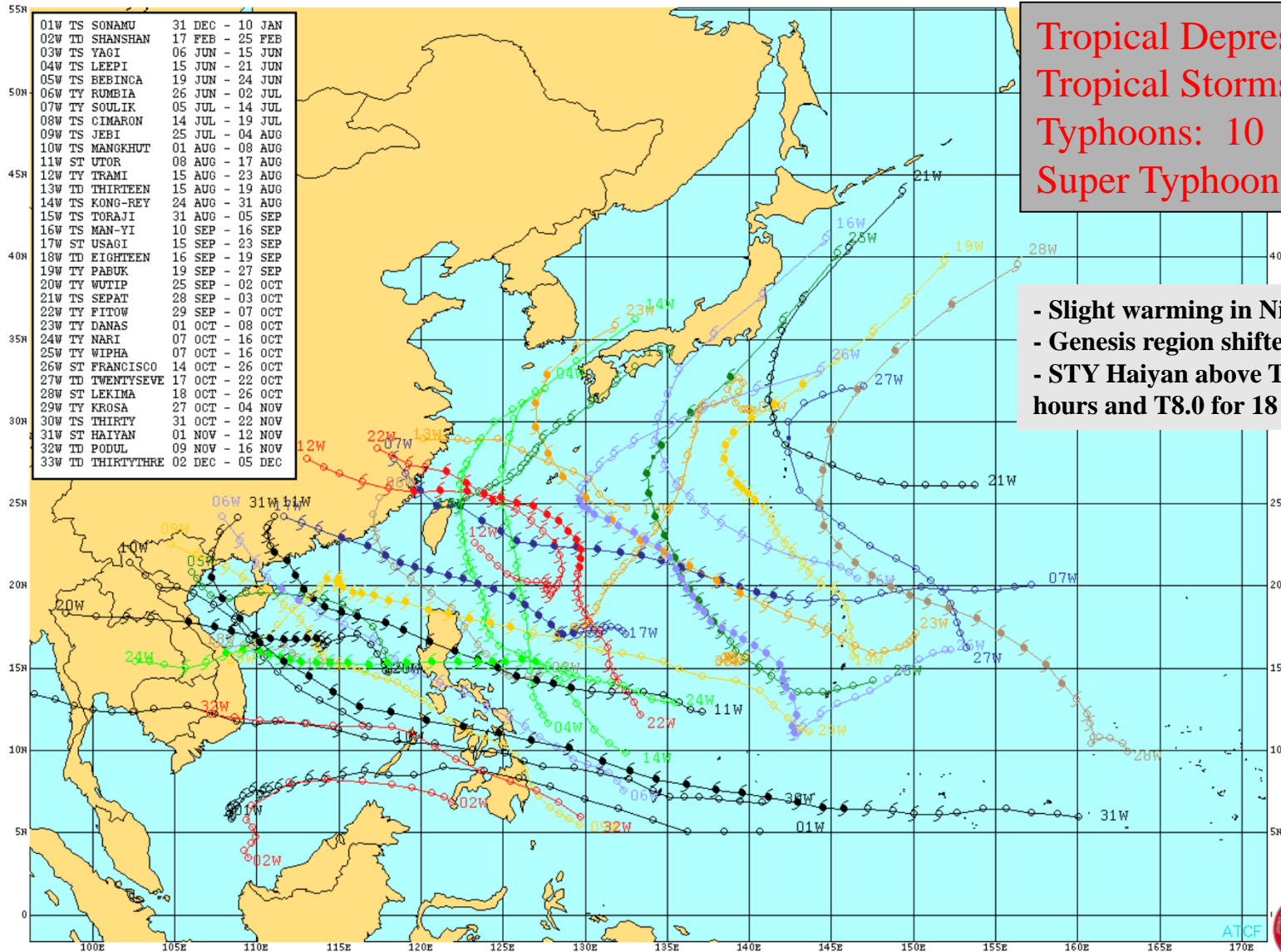


2013 SOUTHERN HEMISPHERE





2013 WESTERN NORTH PACIFIC



Tropical Depressions: 6
Tropical Storms: 12
Typhoons: 10
Super Typhoons: 5

- Slight warming in Nino-4
- Genesis region shifted eastward
- STY Haiyan above T7.0 for nearly 48 hours and T8.0 for 18 hours

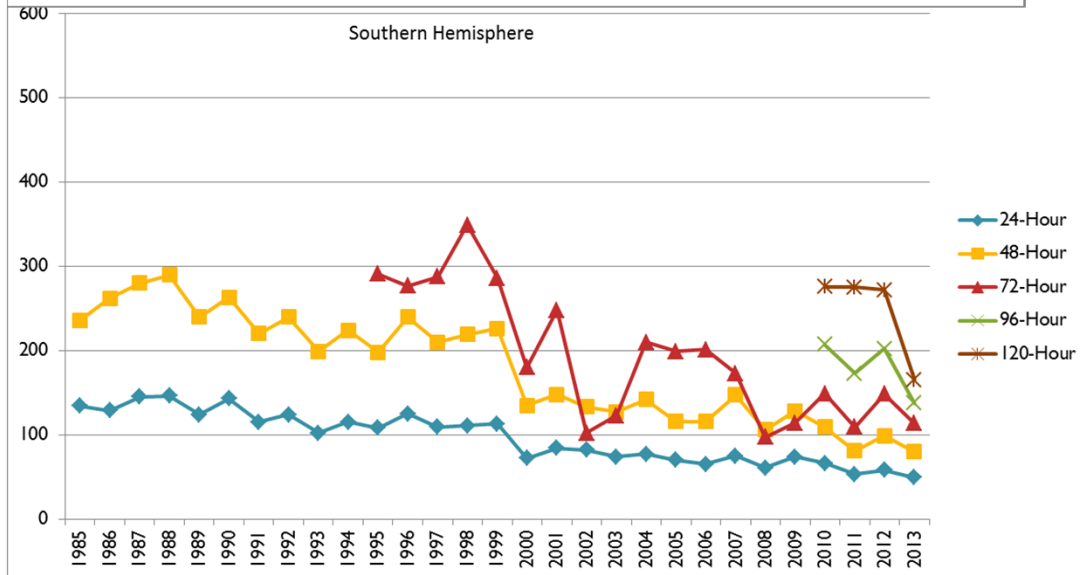
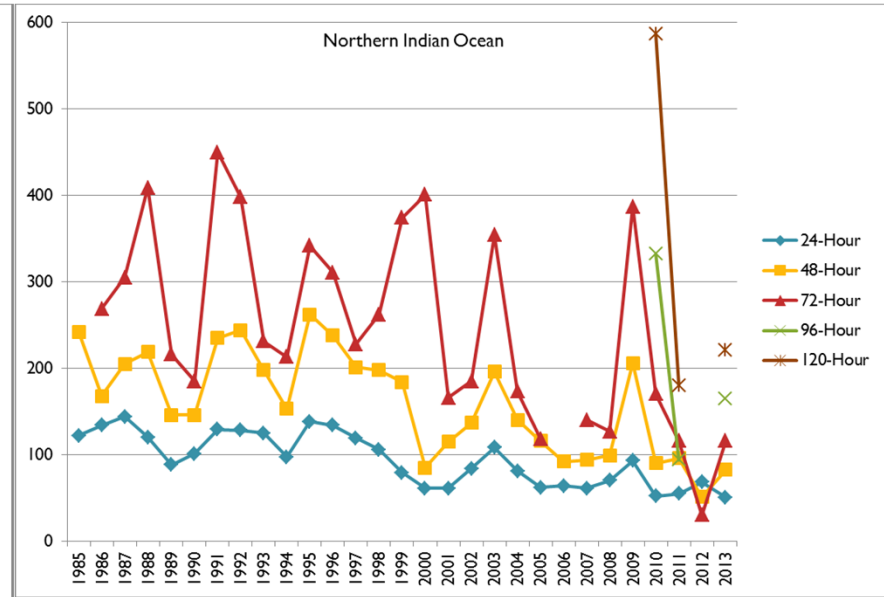
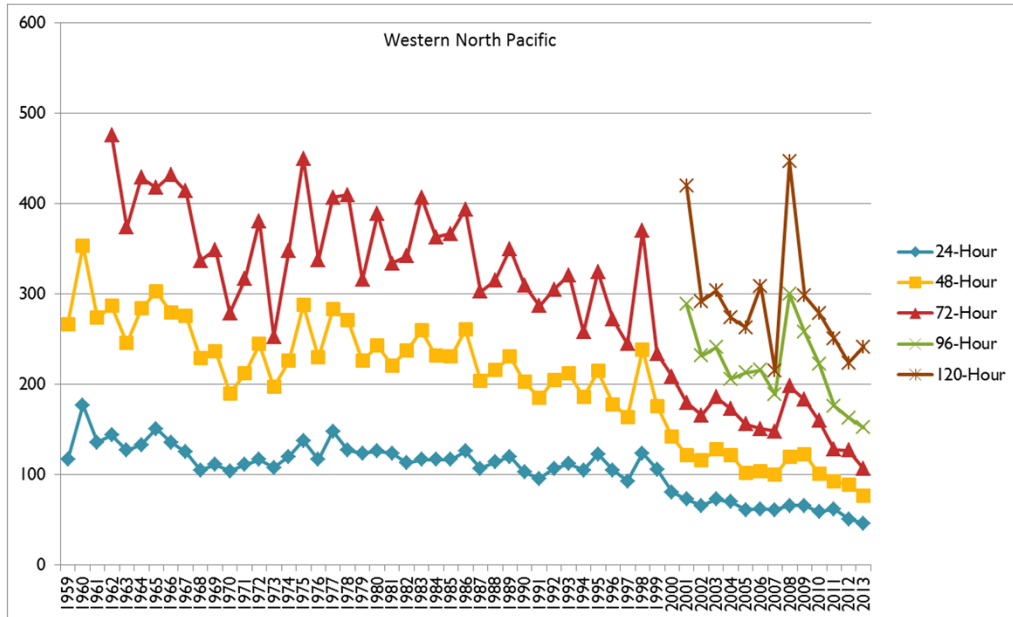
55.05N-119.78E





JTWC TRACK ERRORS

All Basins



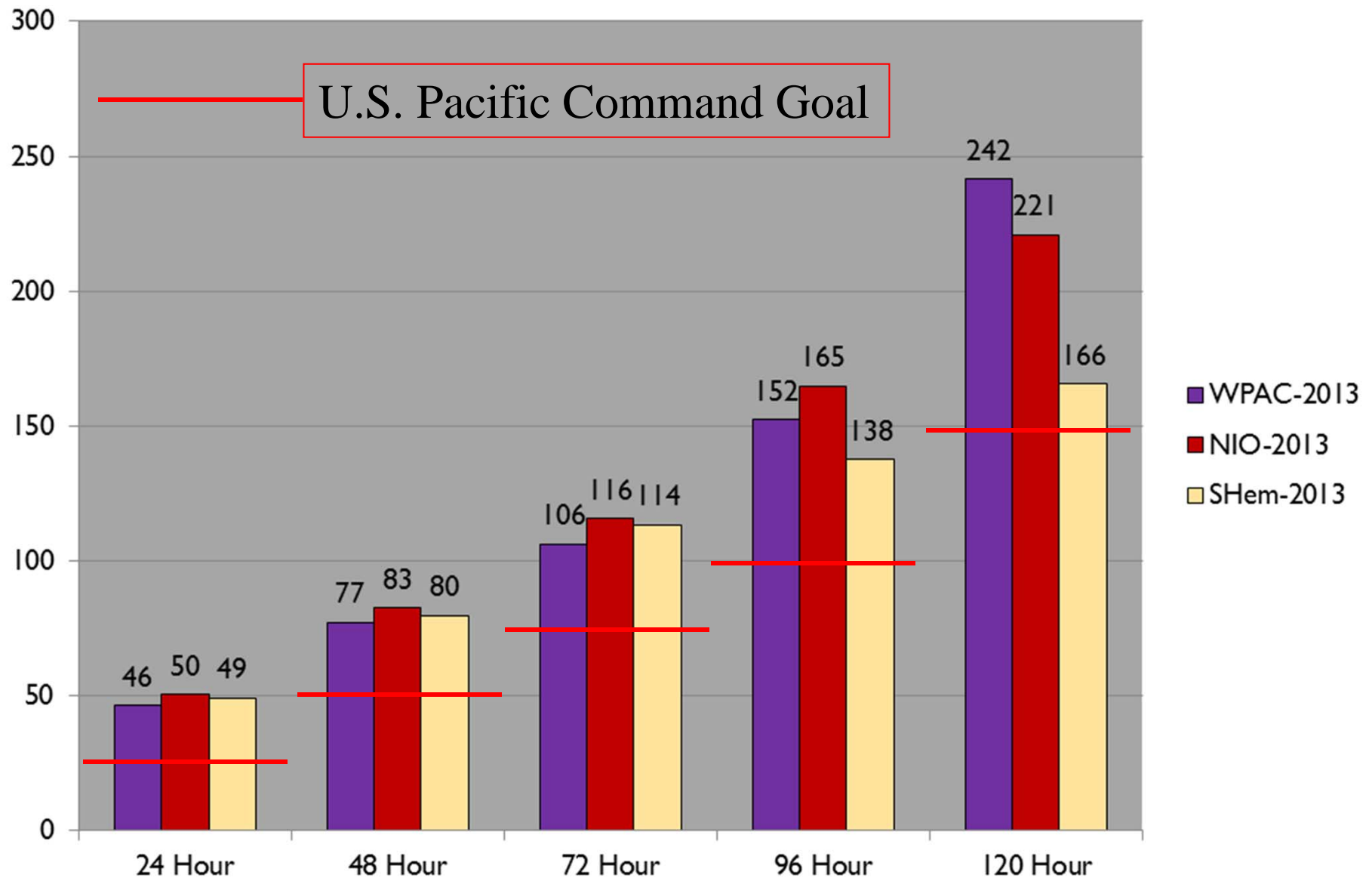
- Continued improvement in track forecasts
- WPAC errors lowest ever at 24-96 hours
- SHEM errors lowest ever at 24,48,72 and 120 hours
- NIO errors remain low and show high yearly variability – low sample size



2013 JTWC TRACK ERRORS



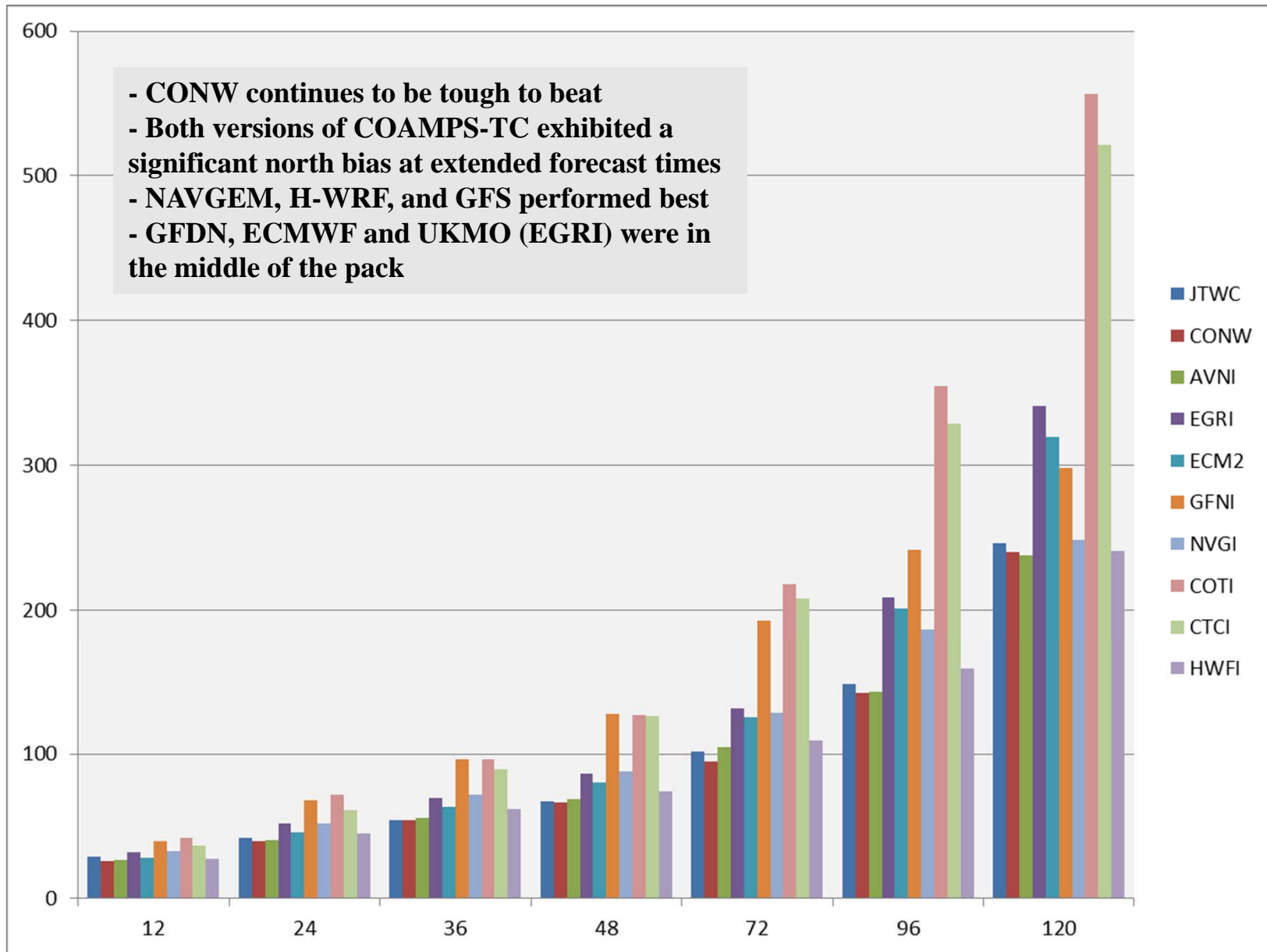
All Basins





2013 MODEL TRACK ERRORS

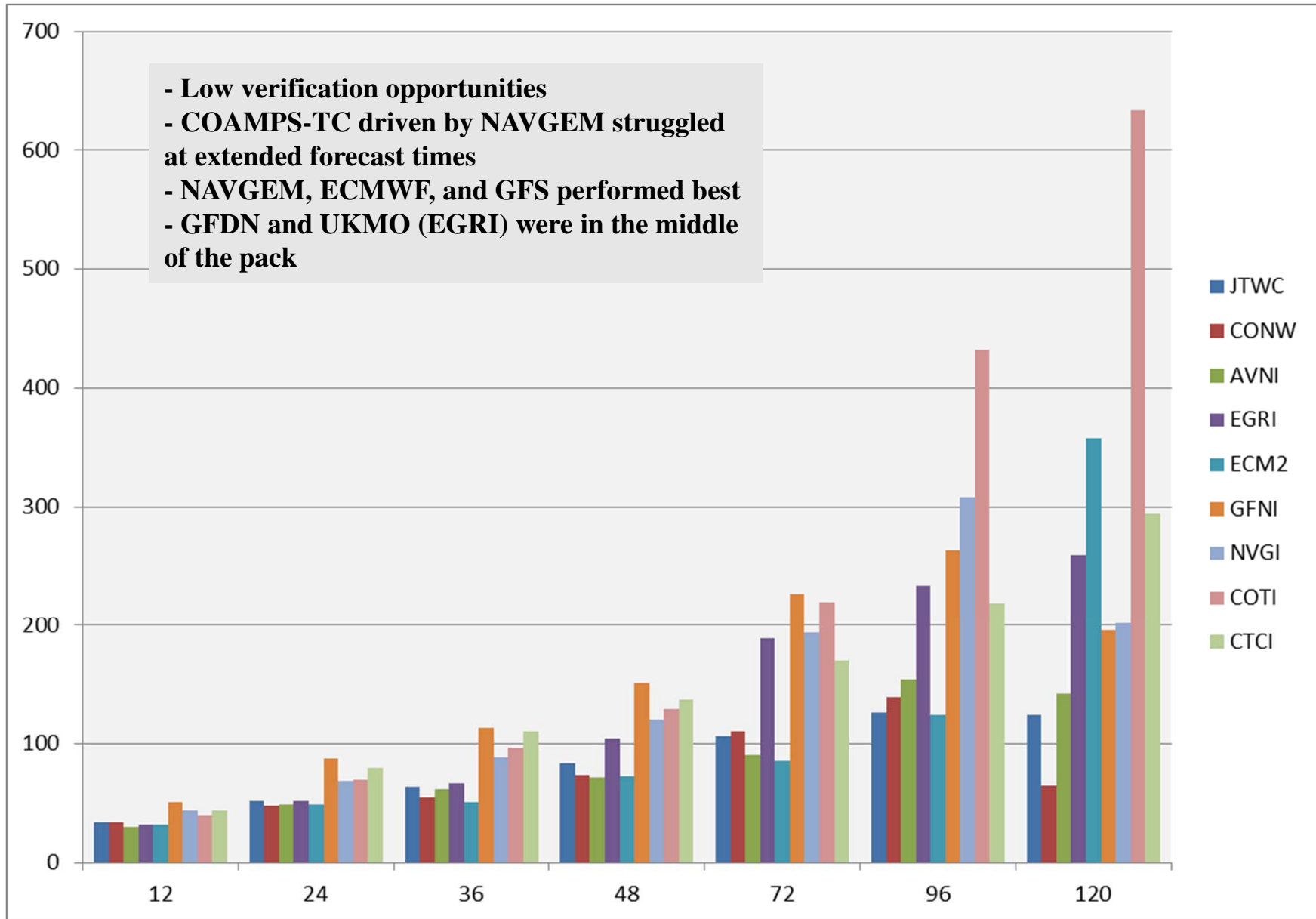
(Western North Pacific – Homogeneous)





2013 MODEL TRACK ERRORS

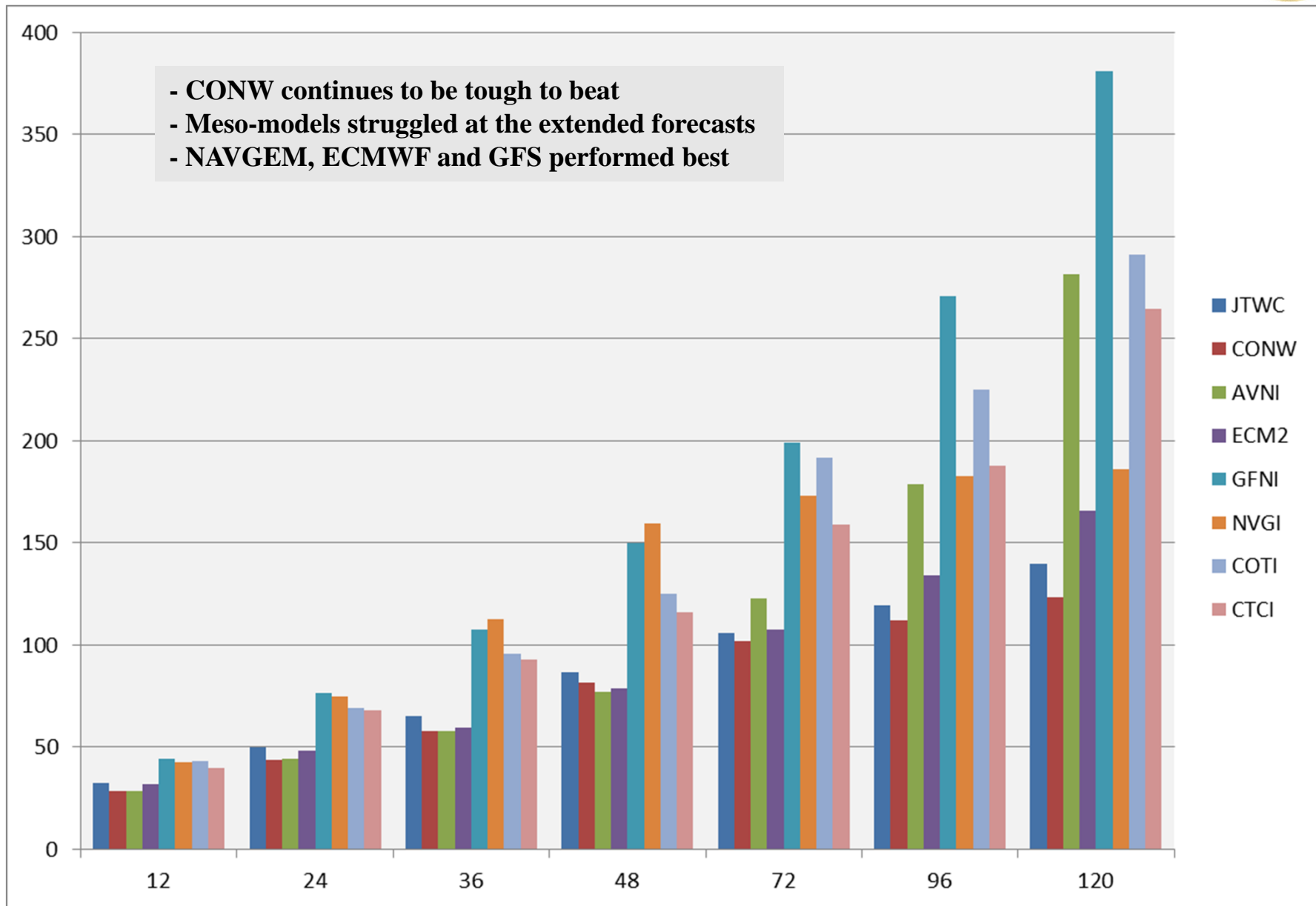
(Northern Indian Ocean – Homogeneous)





2013 MODEL TRACK ERRORS

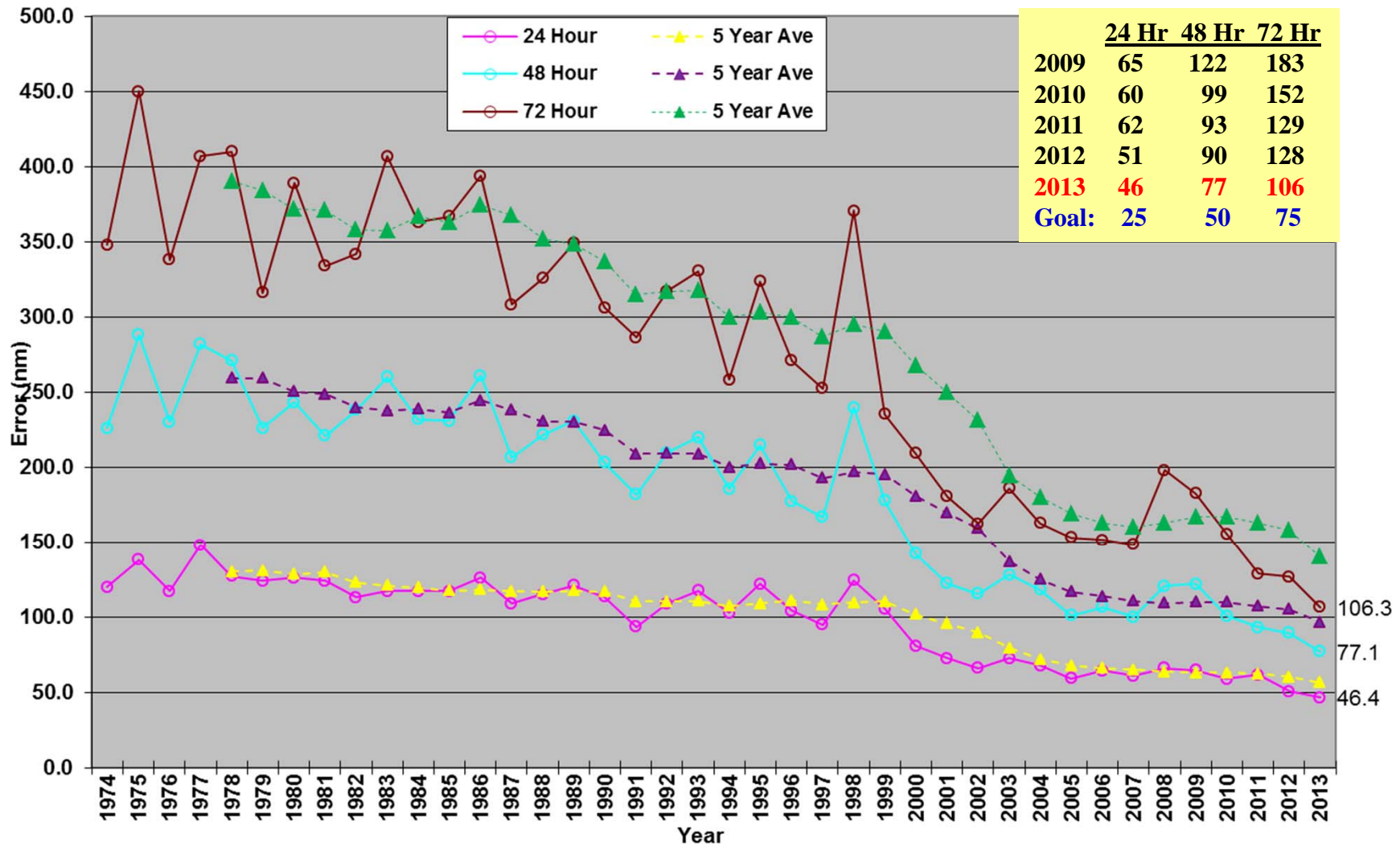
(Southern Hemisphere – Homogeneous)





JTWC TRACK ERRORS

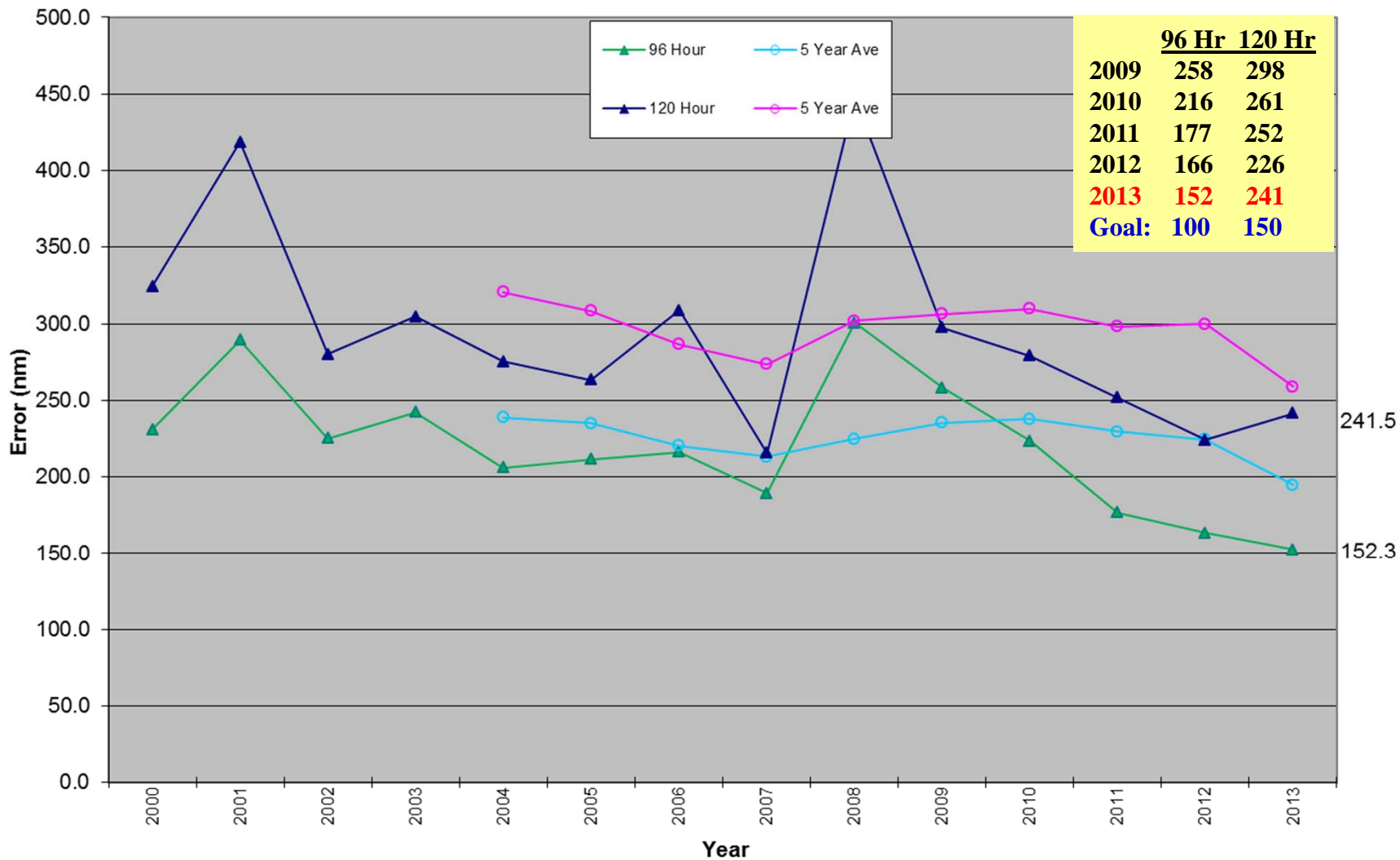
(Western North Pacific - 24-72 Hours)





JTWC TRACK ERRORS

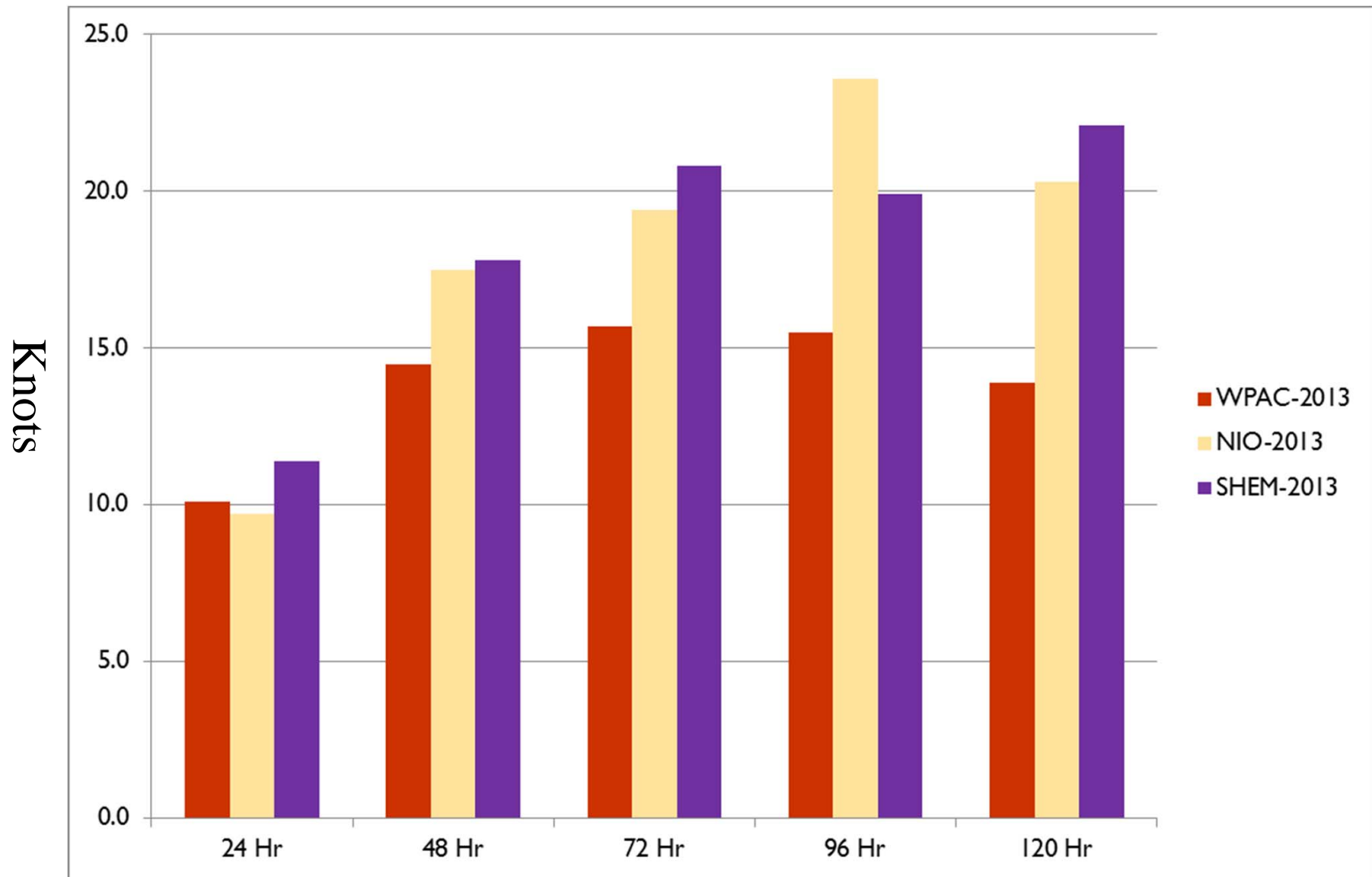
(WESTERN NORTH PACIFIC – 96-120 Hours)





2013 JTWC INTENSITY ERRORS

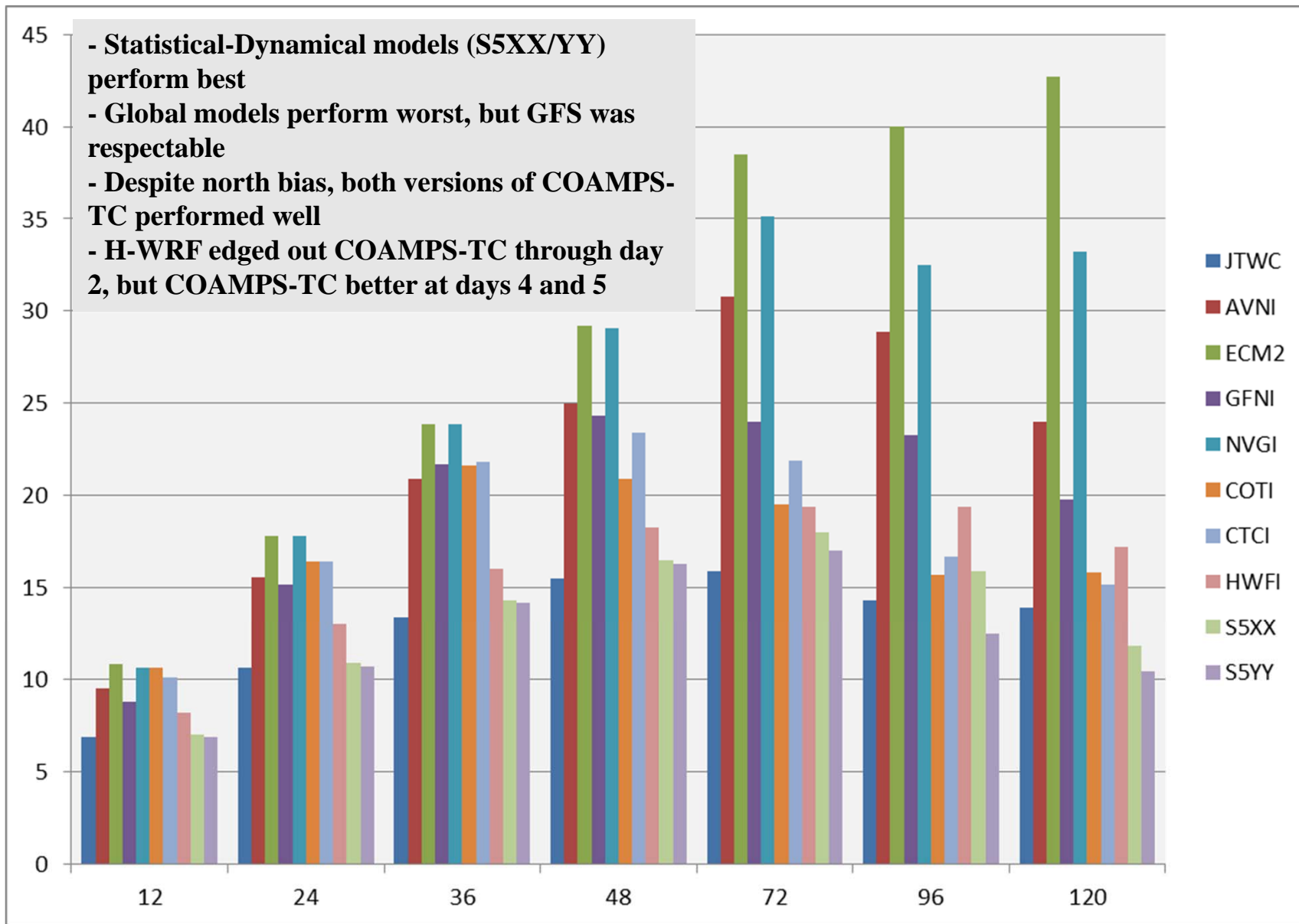
All Basins





2013 MODEL INTENSITY ERRORS

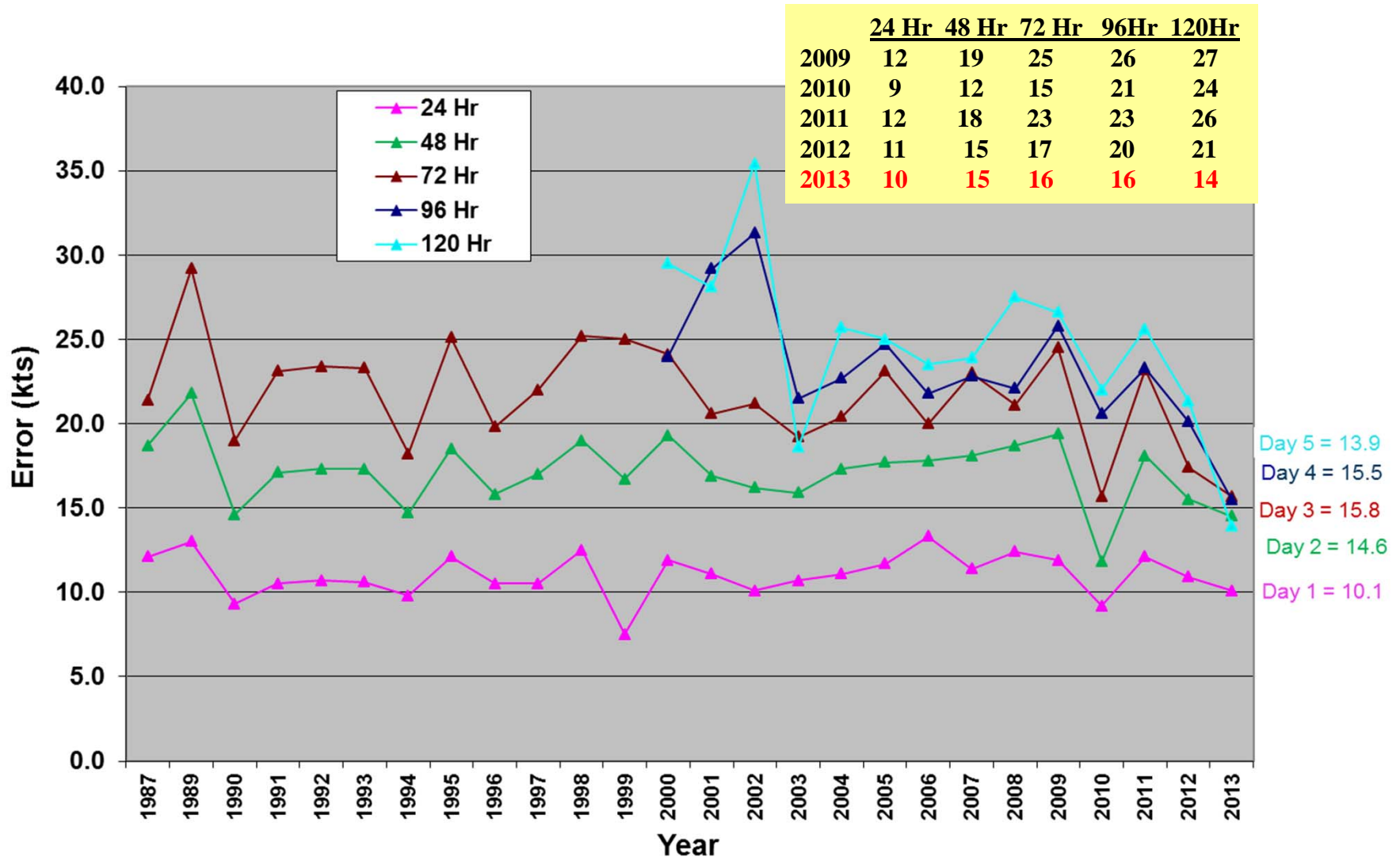
(Western North Pacific – Homogeneous)





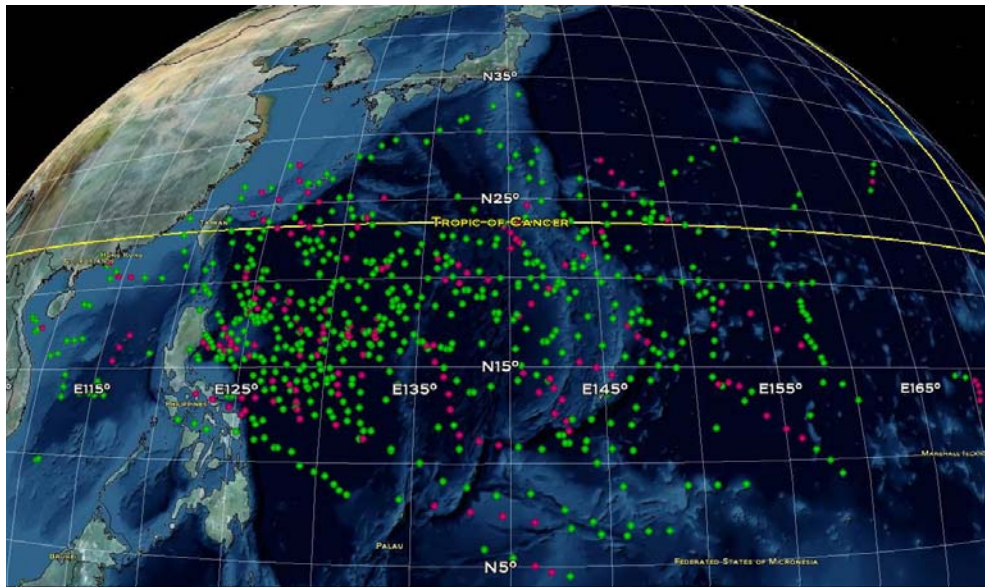
JTWC INTENSITY ERRORS

(Western North Pacific 24 - 120 Hours)

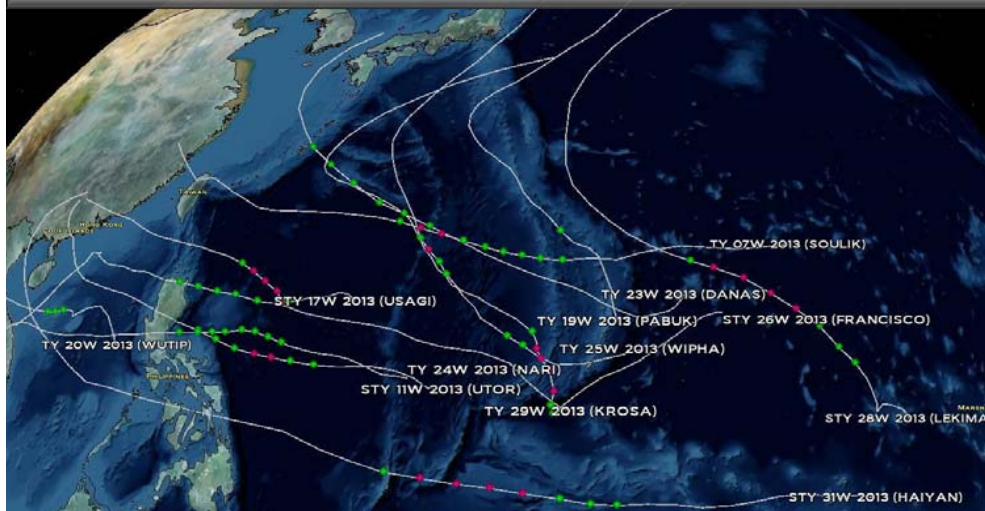




Rapid Intensification



Where RI (Green) & ERI (Red) Occurs (2001-2013 WPAC)

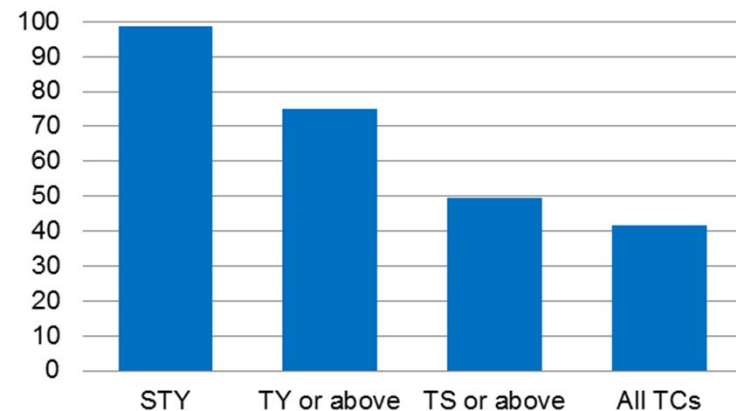


2013 Tropical Cyclones with RI or ERI

RI (≥ 30 kts/24 hrs) and ERI (≥ 50 kts/24 hrs) remains a intensity forecast challenge

- Widespread favorable conditions increase likelihood of RI/ERI in WPAC
- Over 40% of all TCs and 50% of TCs reaching TS strength or greater in WPAC experience RI
- RI handled poorly by models
- 12 TCs in 2013 with RI/ERI (6 in Oct!)

2001-2013 Average % of WPAC Tropical Cyclones with at Least One RI Episode - by Intensity





2013/4 PROJECTS/EVENTS



- **Genesis or Development potential evaluation continues**
- **Ensemble TC forecasting evaluation continues**
- **ATCF Version 5.6 expected in April**
- **AWIPS-2 Stand-alone (ATOM) evaluation**
- **GFDN upgrades / coupling – pushing to continue funding**
- **COAMPS-TC implemented at FNMOC - NAVGEM as parent model**
- **COAMPS-TC running at NAVO - GFS as parent model**
- **HFIP H-WRF runs expanded to cover entire JTWC AOR**
- **Global Hawk – planned field campaign in WESTPAC in 2016/17**
- **JTWC Collaboration website moved to NDBC**
 - <https://pzal.ndbc.noaa.gov>
- **JTWC Public website planned move to NDBC**



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QUESTIONS

