

Global Tropics Hazards And Benefits Outlook

December 24, 2013

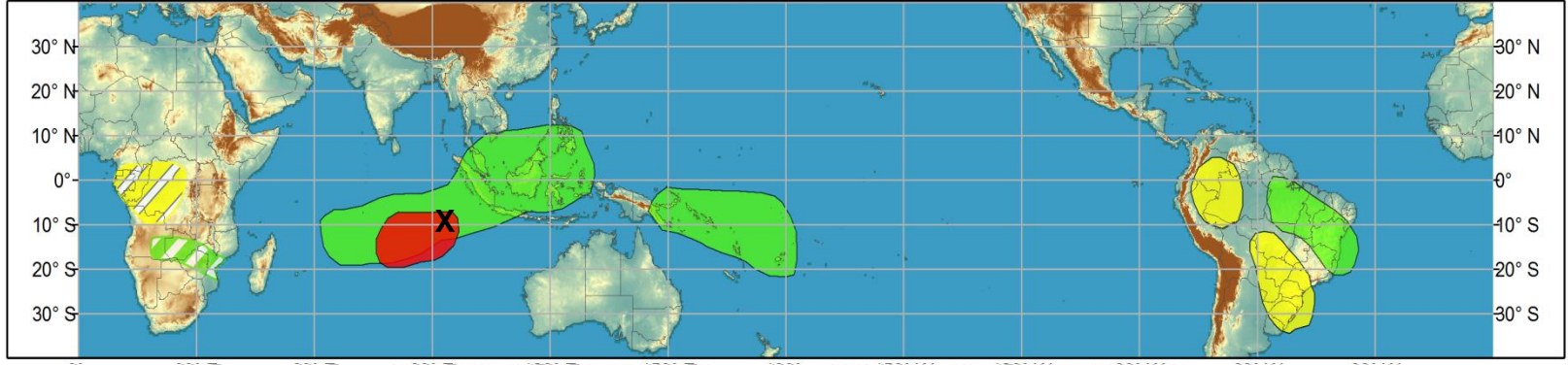
Adam Allgood

Outline

1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts



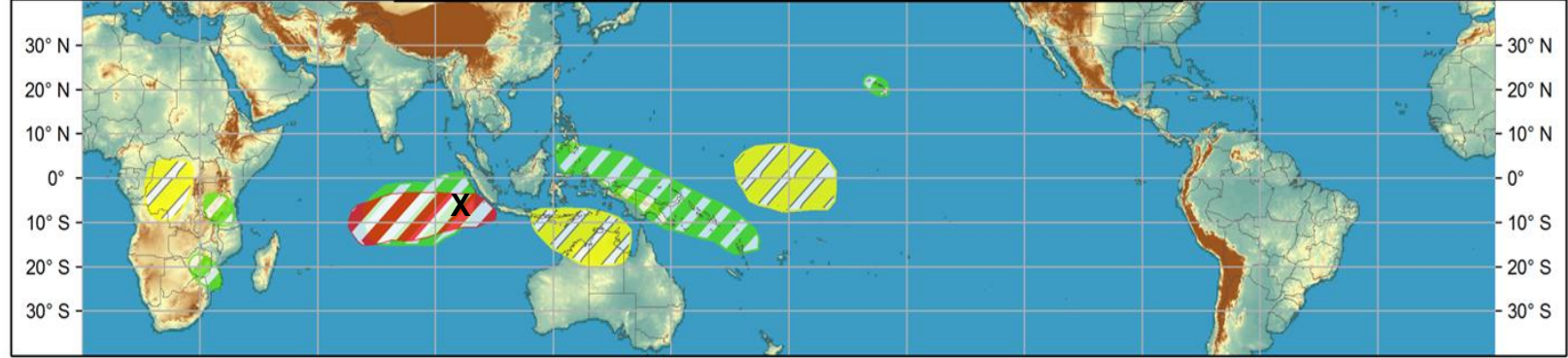
Week 1 - Valid: Dec 18, 2013 - Dec 24, 2013



Outlook Review

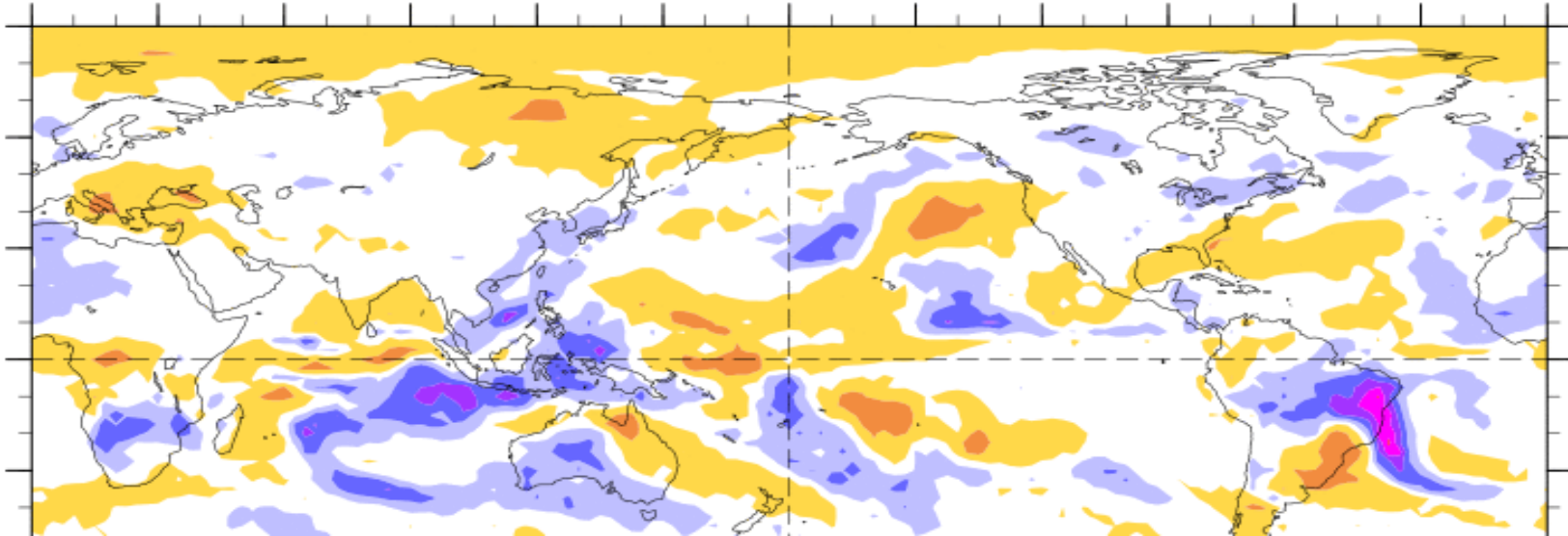
Cyclone
Bruce:
Top sustained
winds: 140 kts
(160mph – Cat
5!)

Week 2 - Valid: Dec 18, 2013 - Dec 24, 2013

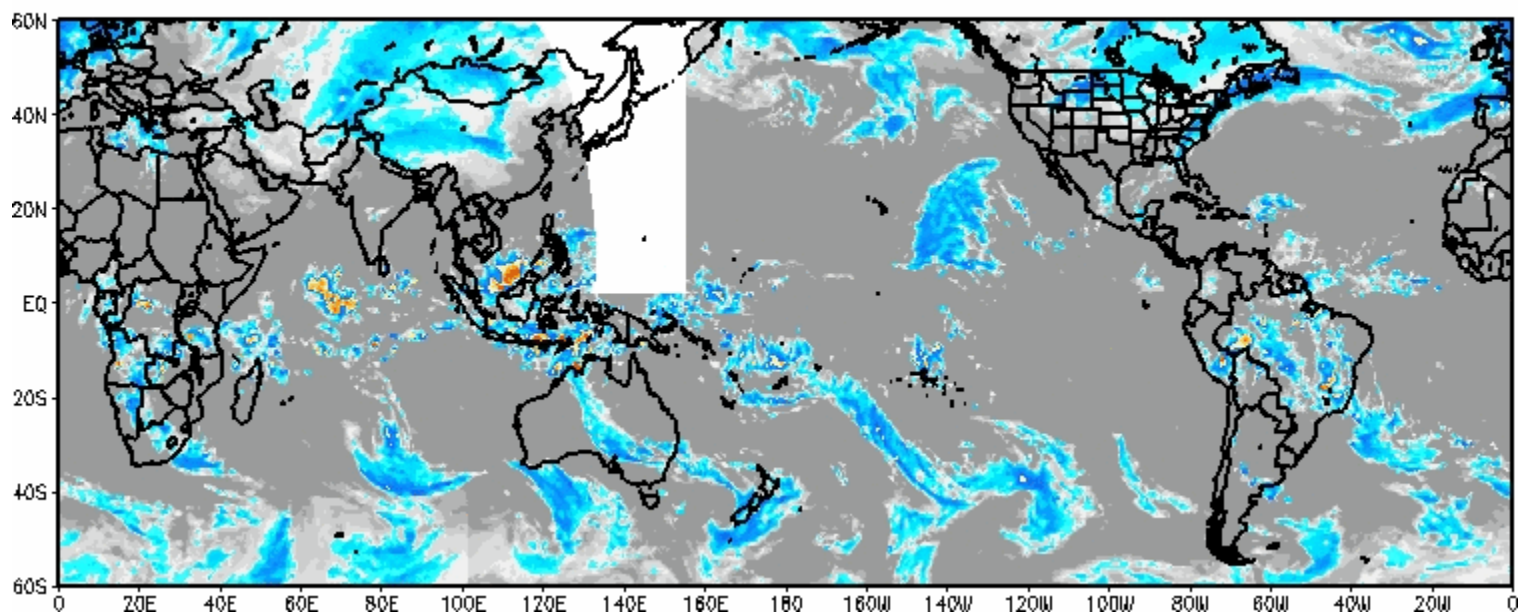


7-Day Average OLR Anomaly

2013/12/16 - 2013/12/22



IR Temperatures
0000 UTC 24 DEC 2013



Synopsis of Climate Modes

ENSO:

- ENSO-neutral is expected to continue into the Northern Hemisphere summer 2014.

MJO and other subseasonal tropical variability:

- The MJO became increasingly coherent during the previous week, though the amplitude of the signal remains weak due to a continued strong influence from other modes of coherent tropical intraseasonal convection anomalies.
- Recent observations and dynamical model MJO index forecasts generally support the propagation of an MJO signal into the western Pacific, but there is significant spread among the model depictions of the speed and amplitude of the signal.

Extratropics:

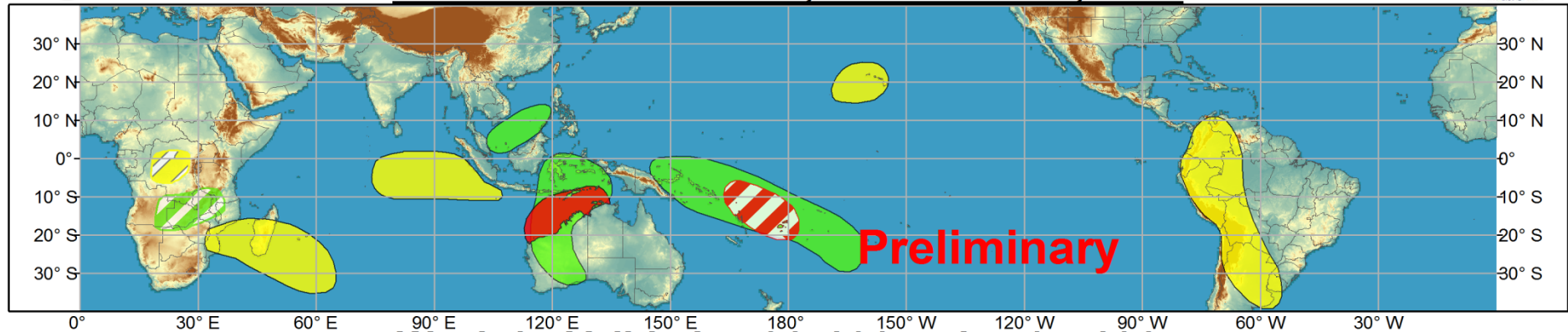
- Ensemble forecasts indicate a shift towards a negative AO and positive PNA pattern during the Week-2 period, which would support below normal temperatures across the eastern CONUS. Lagged composites of an MJO event propagating into the Pacific are also associated with below normal temperatures across the northeastern U.S., and possibly an enhanced southern jet if the MJO propagates through the Western Hemisphere.



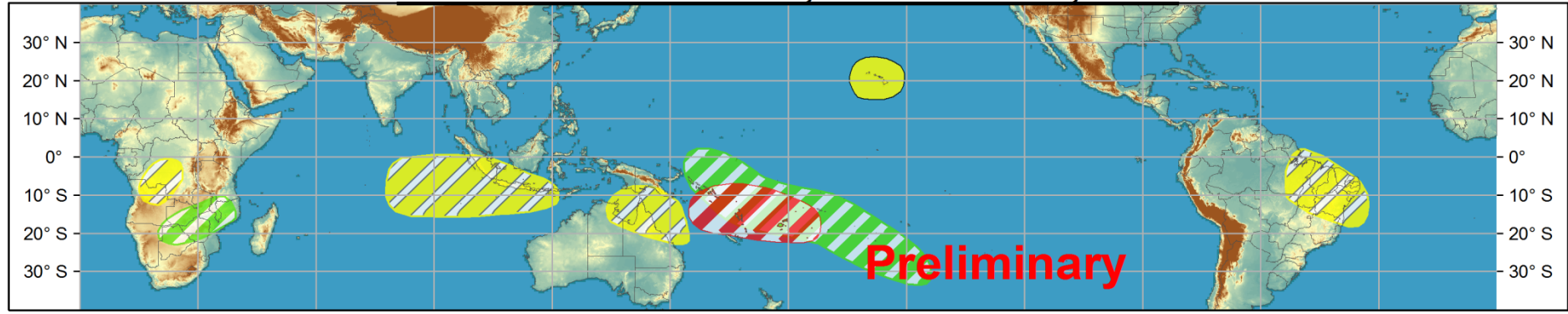
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Dec 25, 2013 - Dec 31, 2013



Week 2 - Valid: Jan 01, 2014 - Jan 07, 2014



Confidence
High Moderate

- Tropical Cyclone Formation** Development of a tropical cyclone that eventually reaches tropical storm/cyclone strength.
- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
- Below-average rainfall** Weekly total rainfall in the lower third of the historical range.
- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
- Below-normal temperatures** 7-day mean temperatures in the lower third of the historical range.

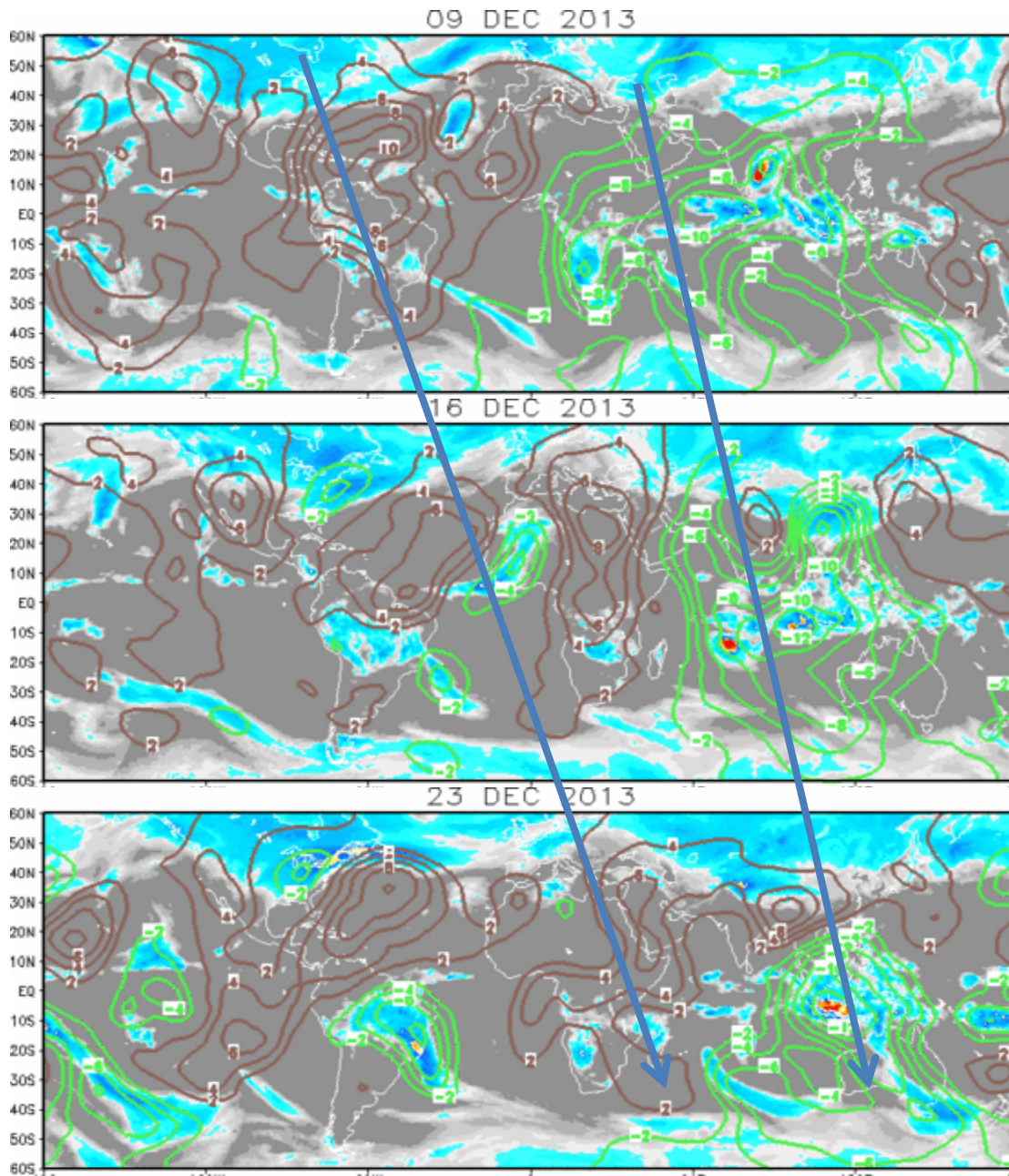
Produced: 12/24/2013
Forecaster: Allgood

Product is updated once per week. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.

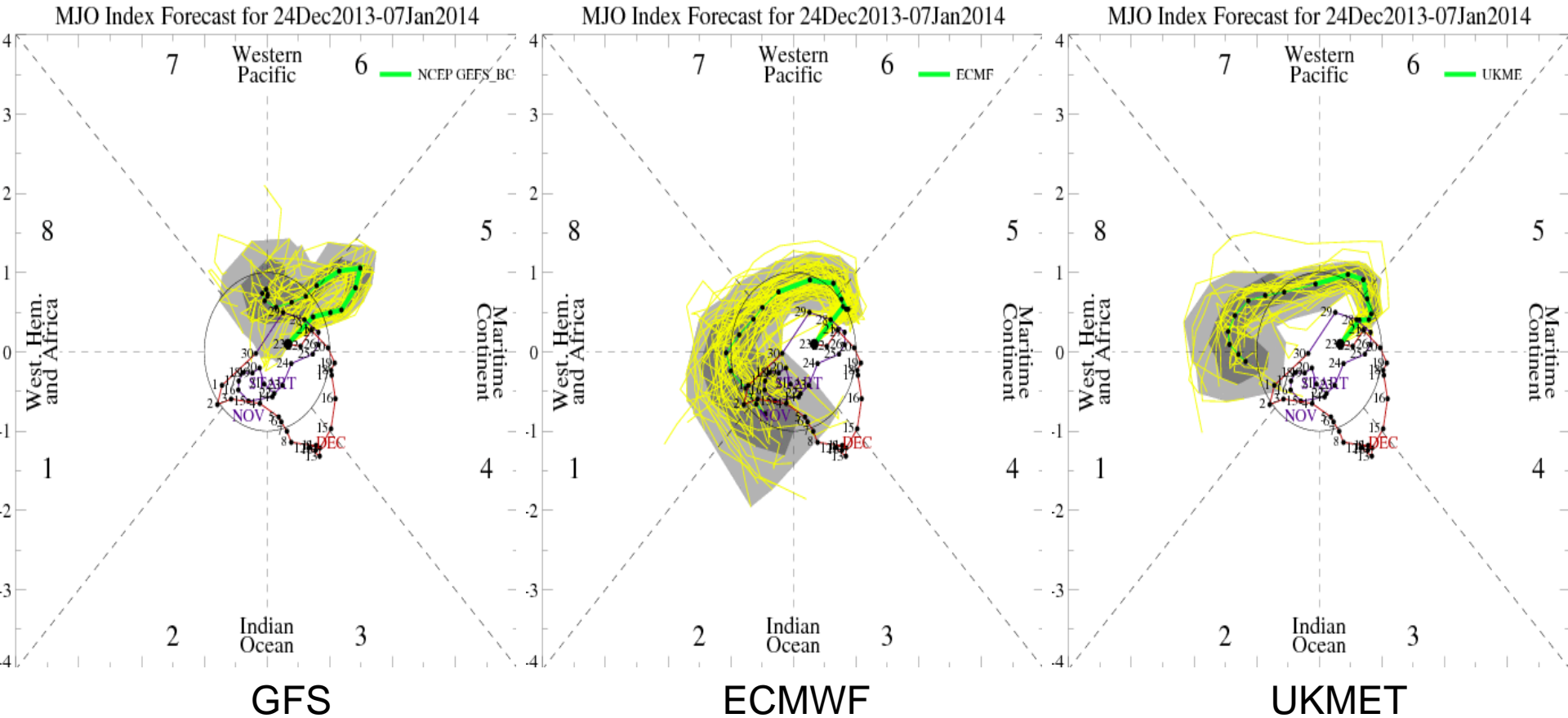


IR Satellite & 200-hpa Velocity Potential Anomalies

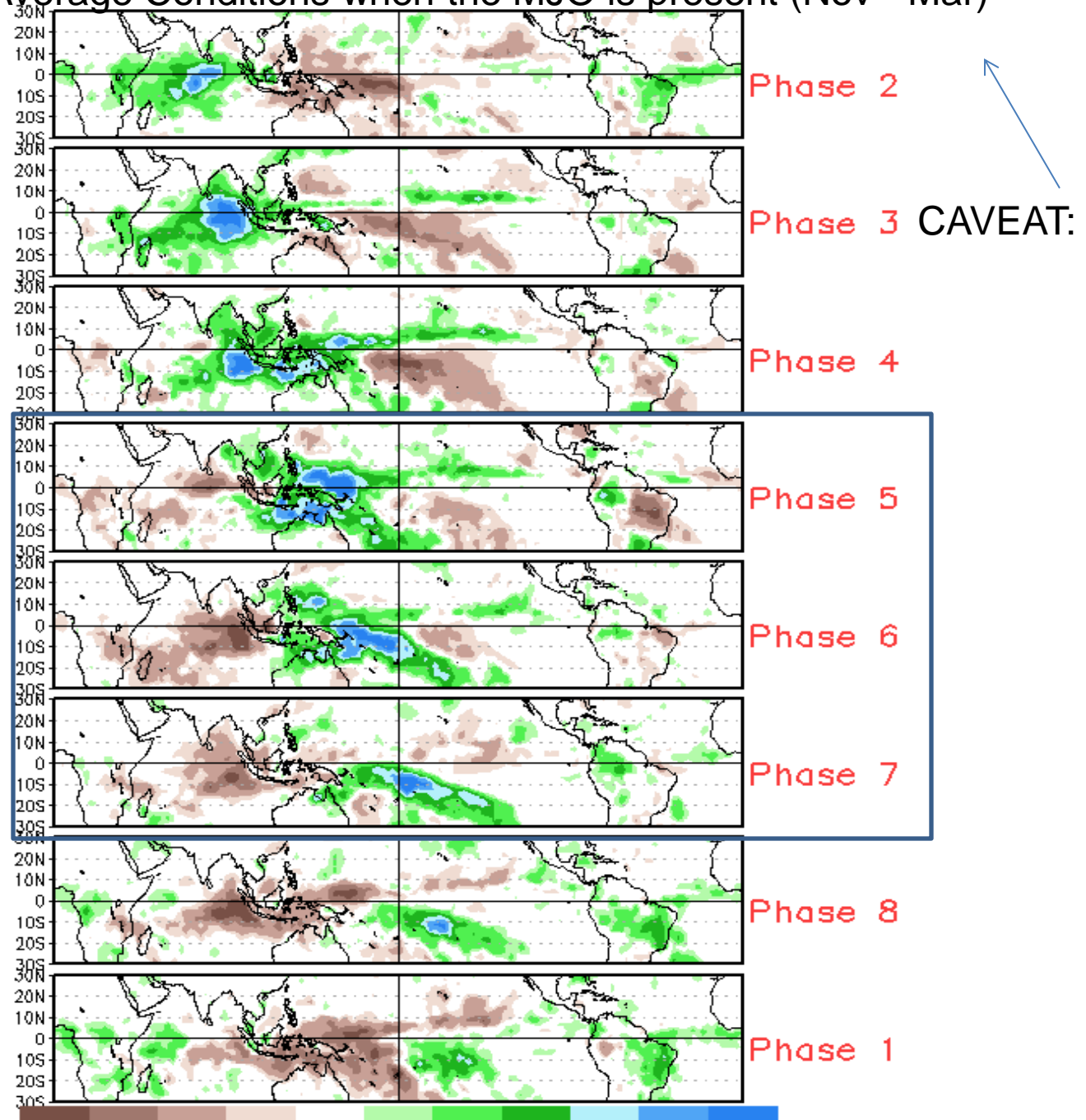
Green: Enhanced Divergence Brown: Enhanced Convergence

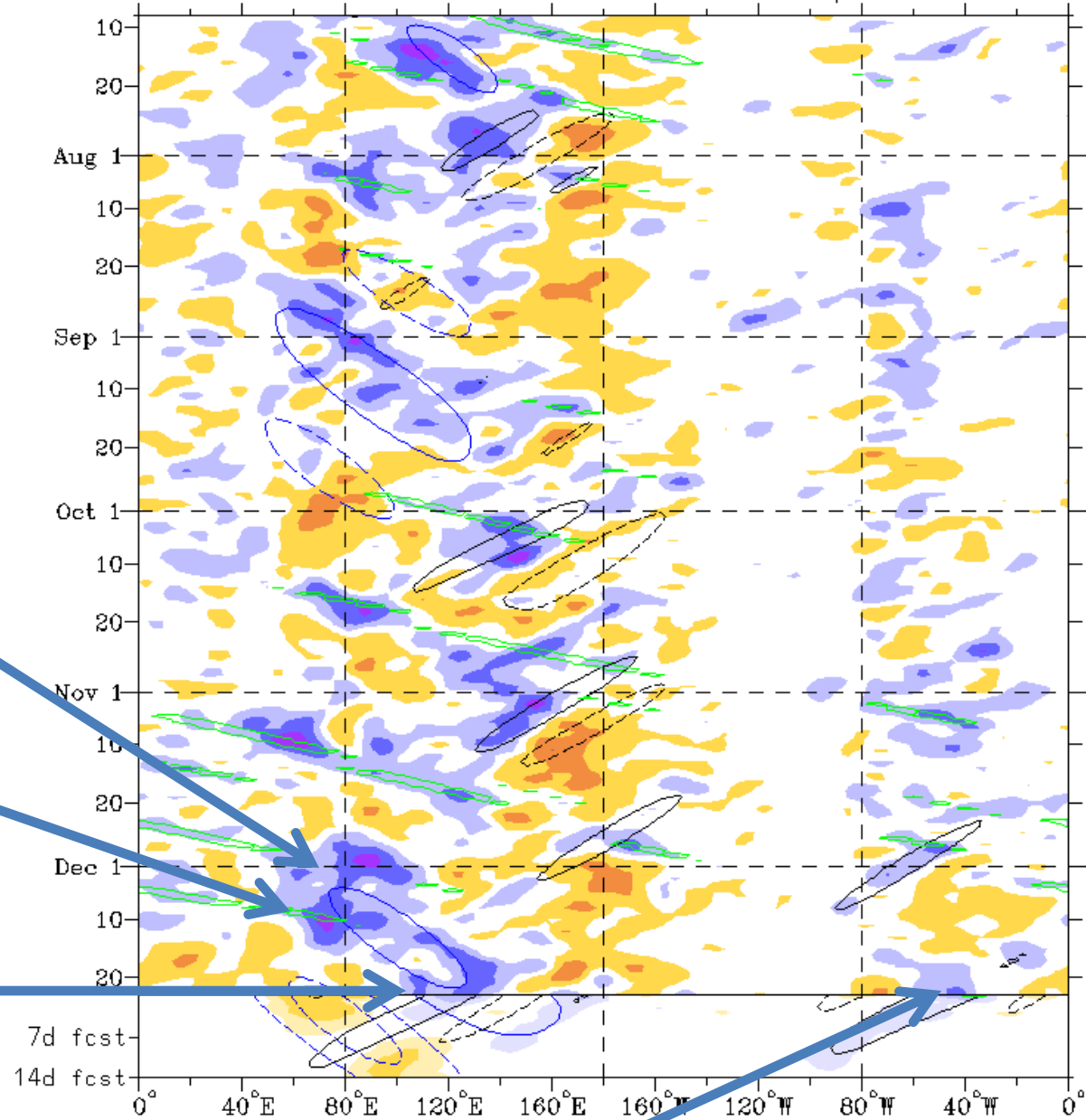


MJO Observation/Forecast



Average Conditions when the MJO is present (Nov - Mar)



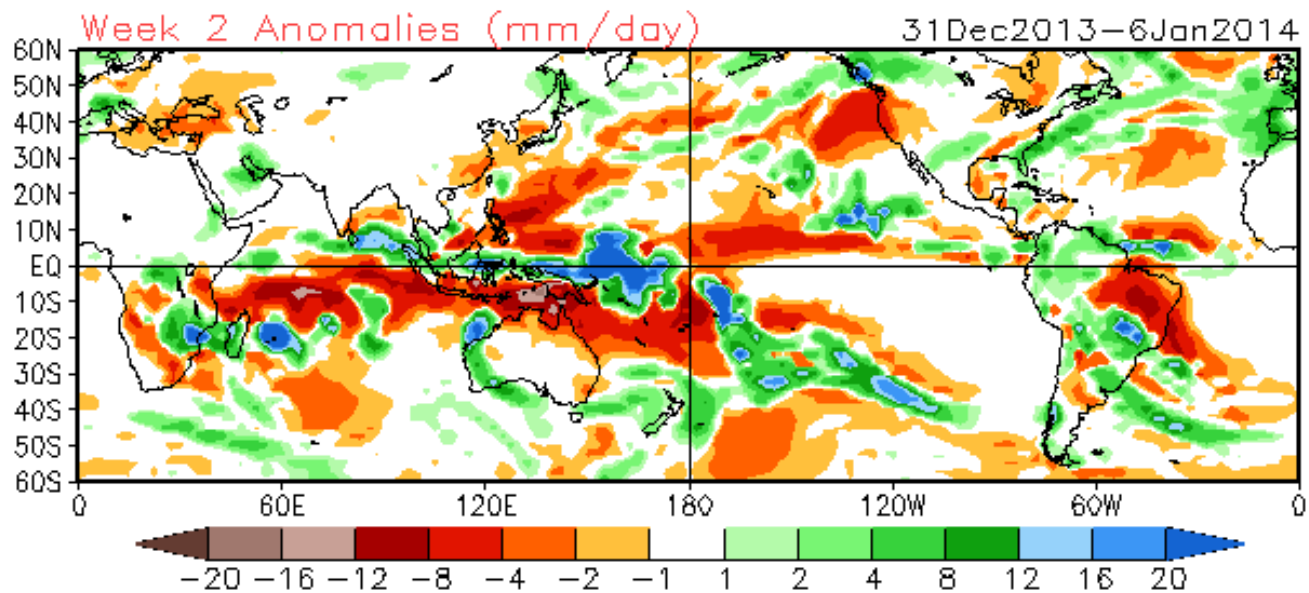
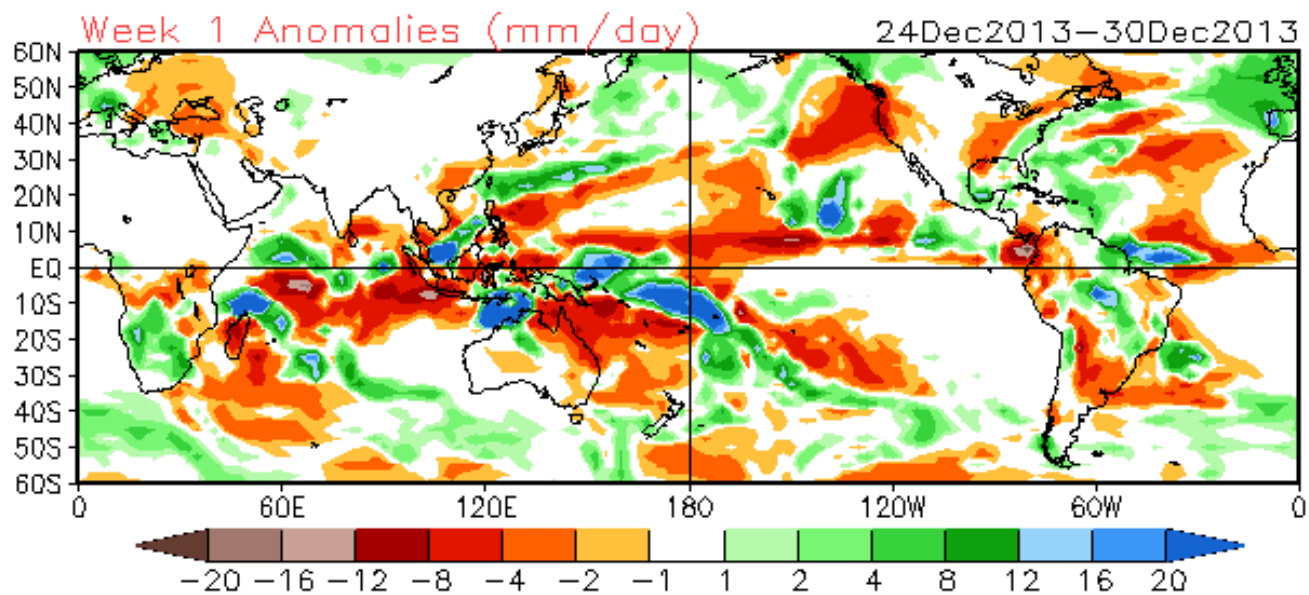


Persistent convection over the I.O. during early December.

Kelvin Wave propagated through the main convective envelope during mid-December.

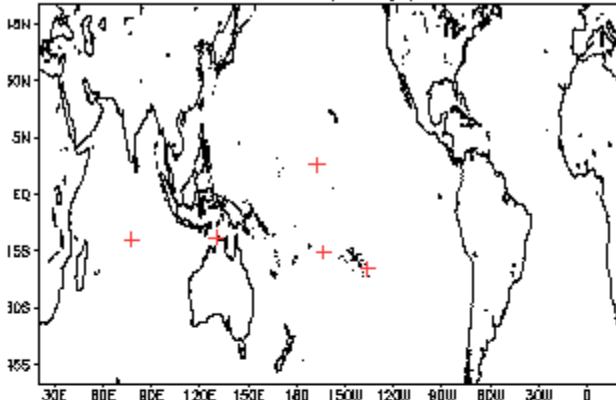
Note persistence and slower eastward propagation of enhanced convection behind KW over Maritime Continent.

Indications of other modes of variability, including enhanced convection over S. America

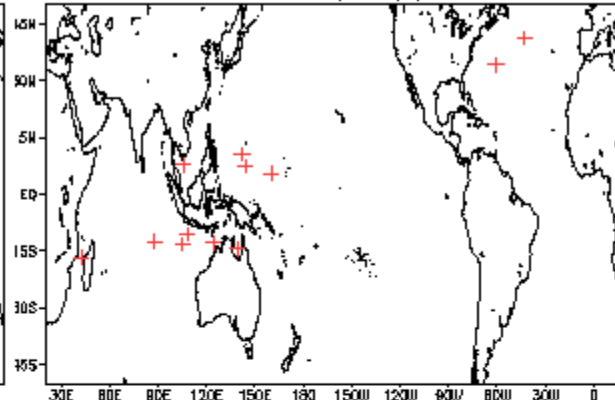


December Tropical Storm Formation by MJO phase

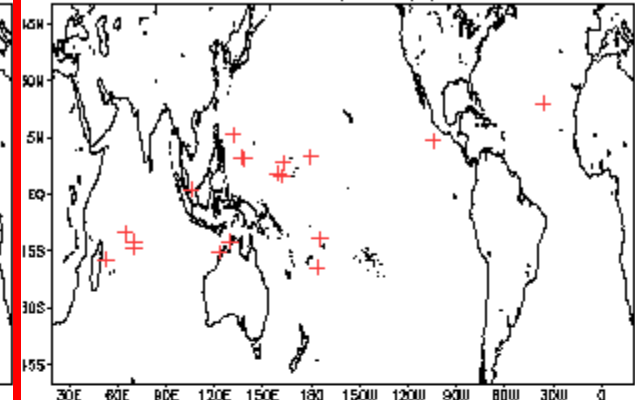
Phase 1 (48 days) 7 storms



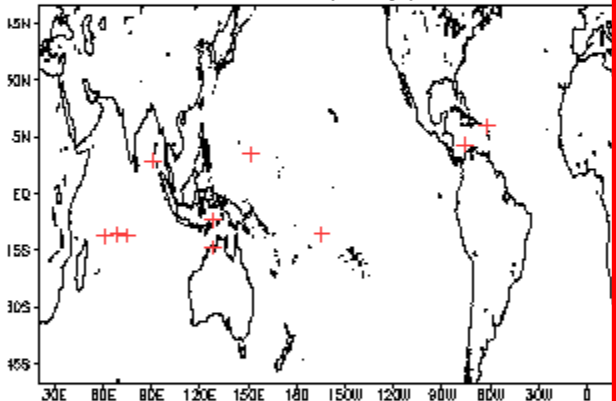
Phase 4 (72 days) 13 storms



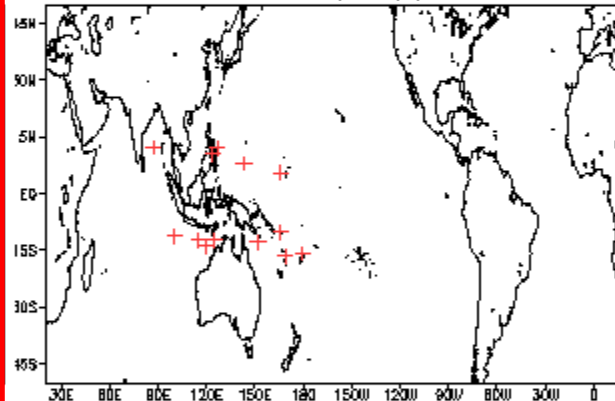
Phase 7 (103 days) 19 storms



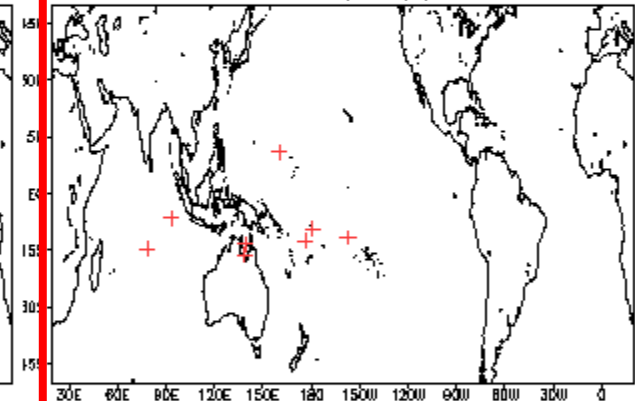
Phase 2 (67 days) 11 storms



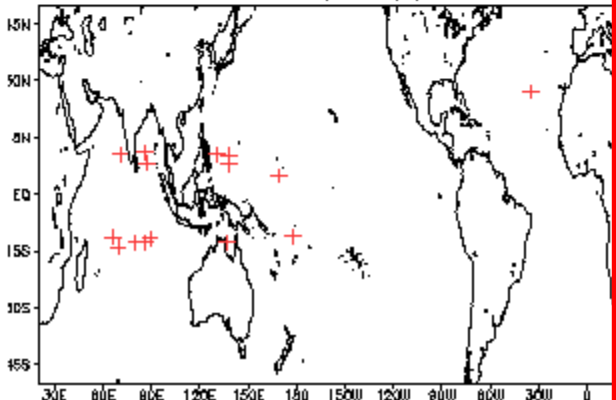
Phase 5 (73 days) 14 storms



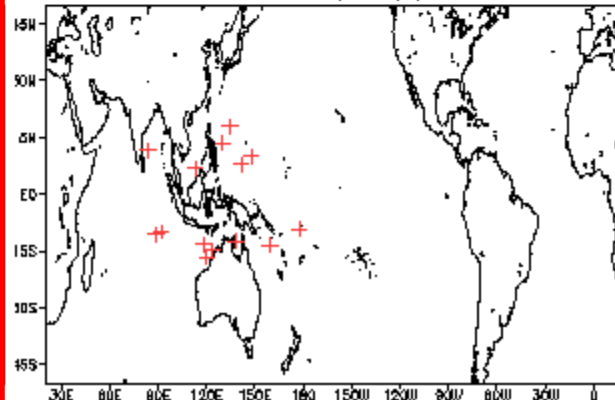
Phase 8 (76 days) 9 storms



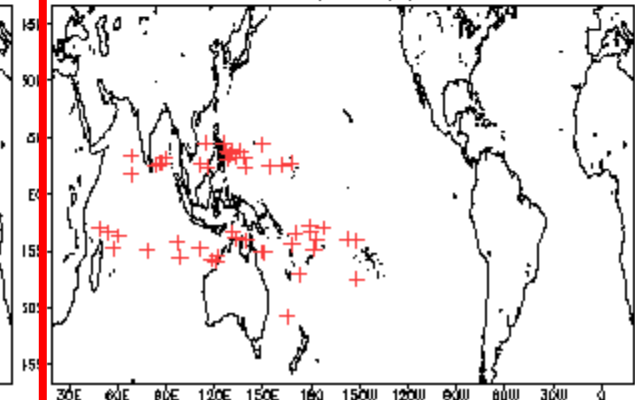
Phase 3 (101 days) 16 storms



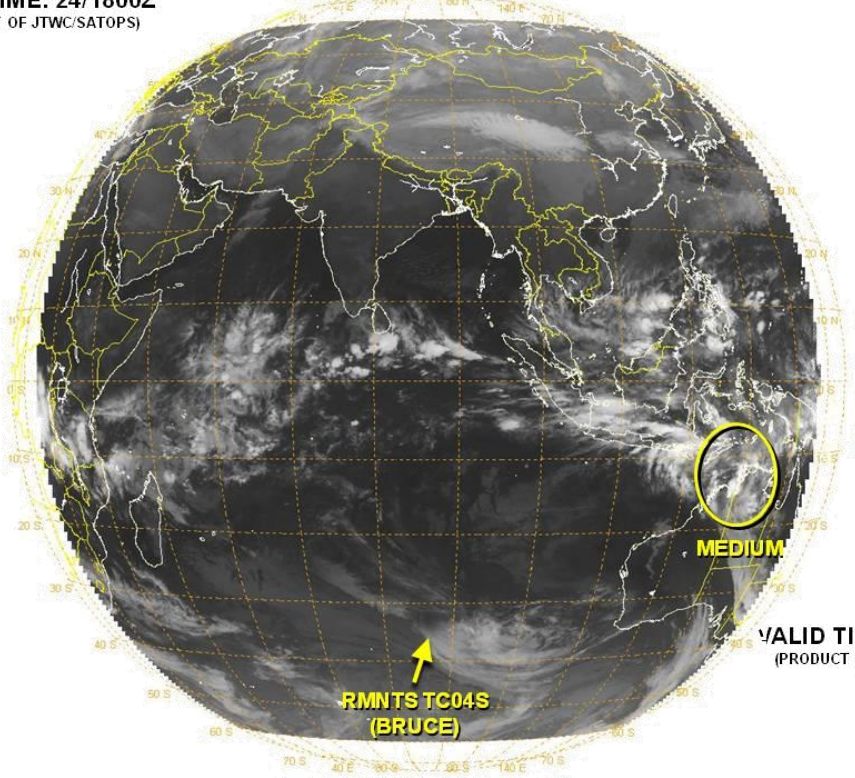
Phase 6 (69 days) 15 storms



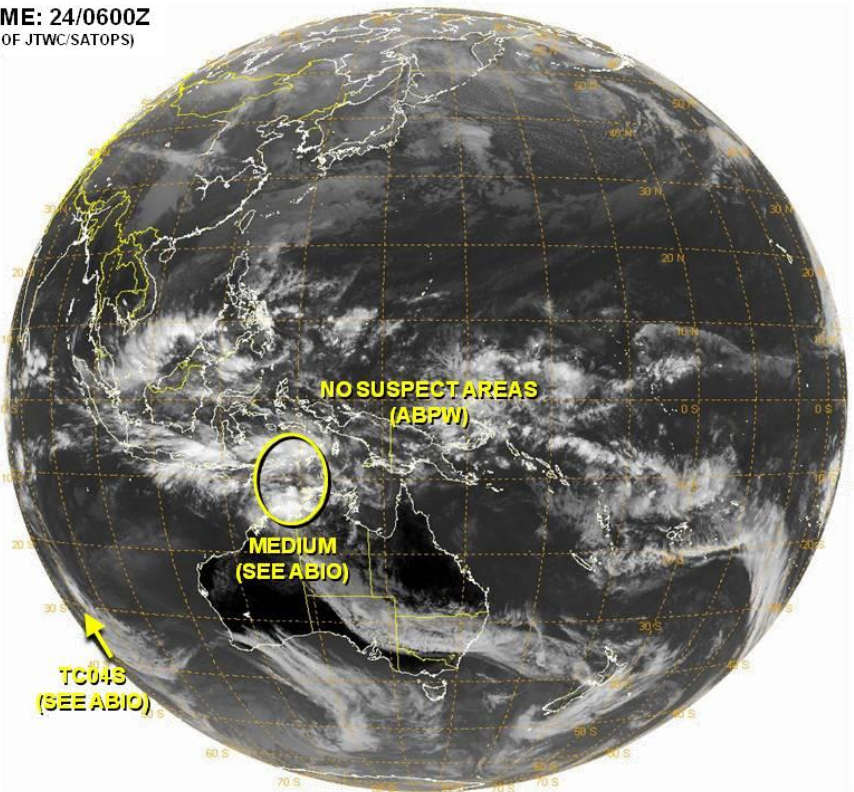
Null (416 days) 52 storms

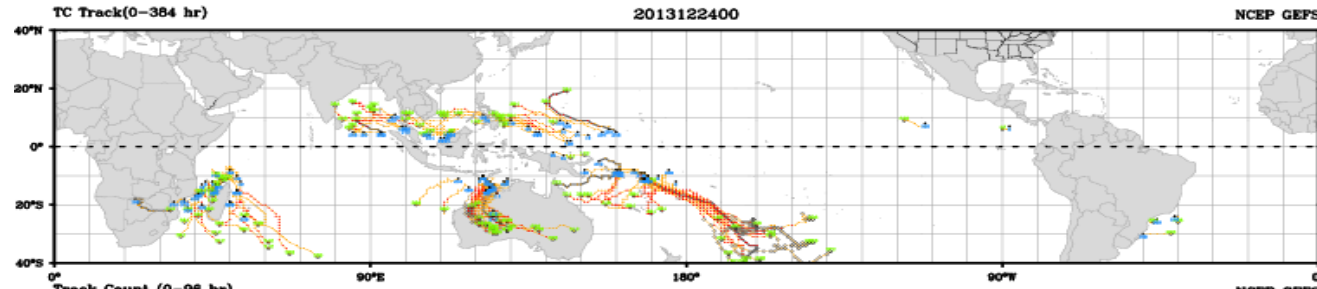


VALID TIME: 24/1800Z
(PRODUCT OF JTWC/SATOPS)

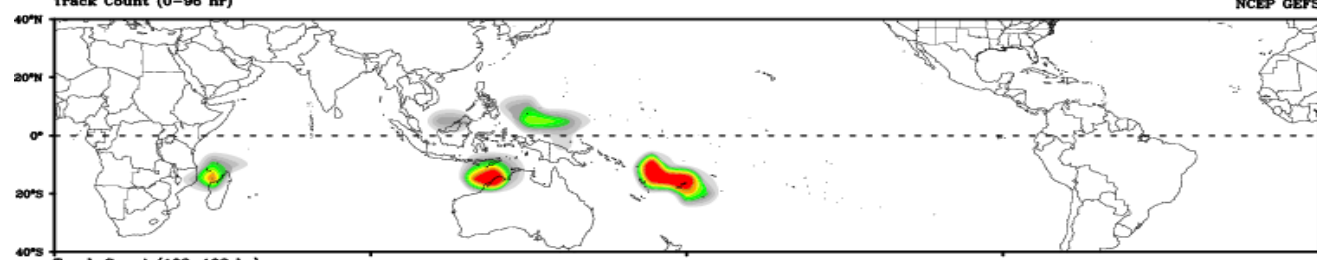


VALID TIME: 24/0600Z
(PRODUCT OF JTWC/SATOPS)

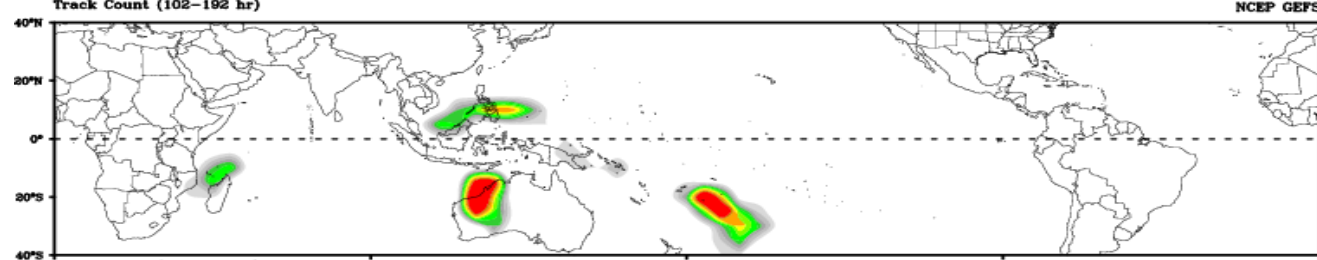




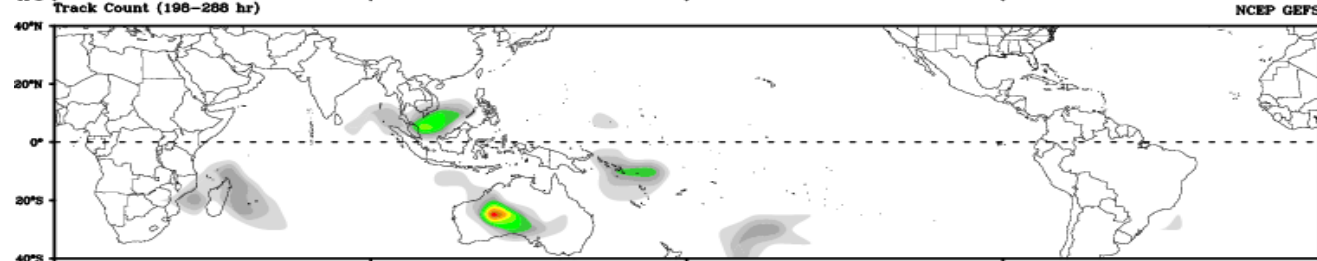
Days 1-4



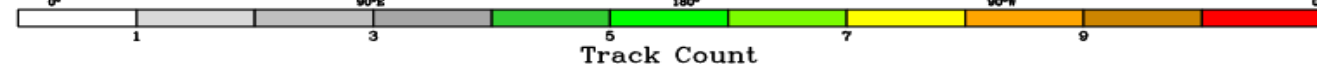
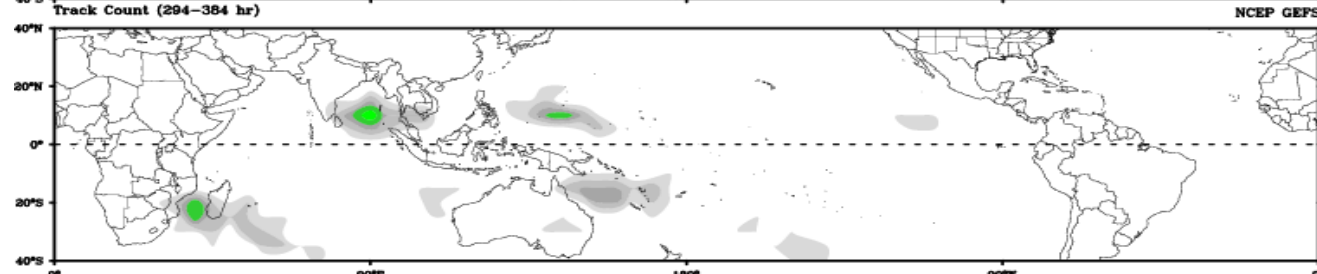
Day 5-8



Day 9-12

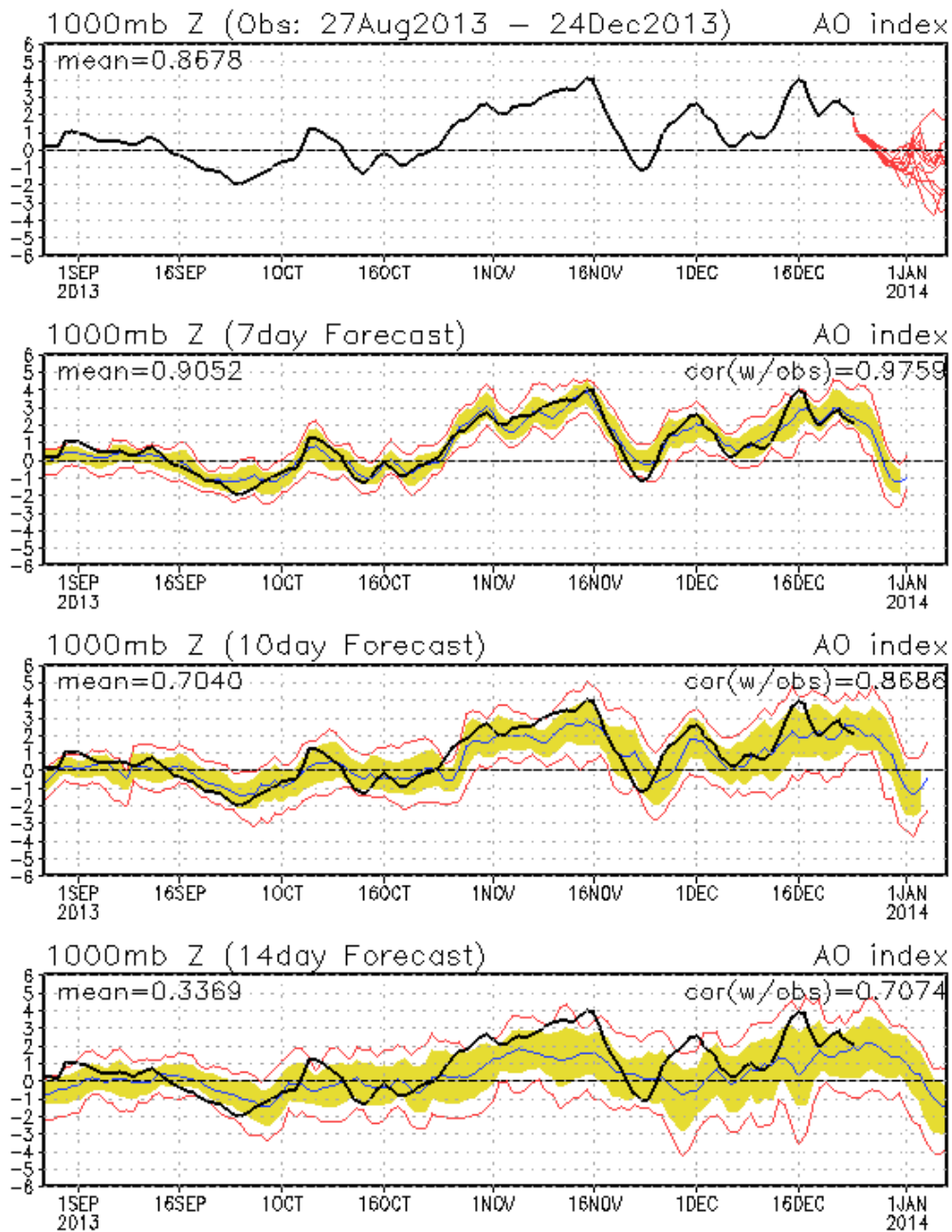


Day 13-16

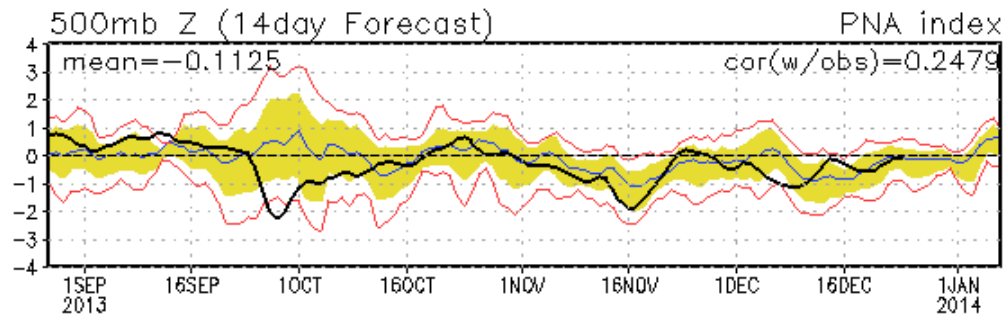
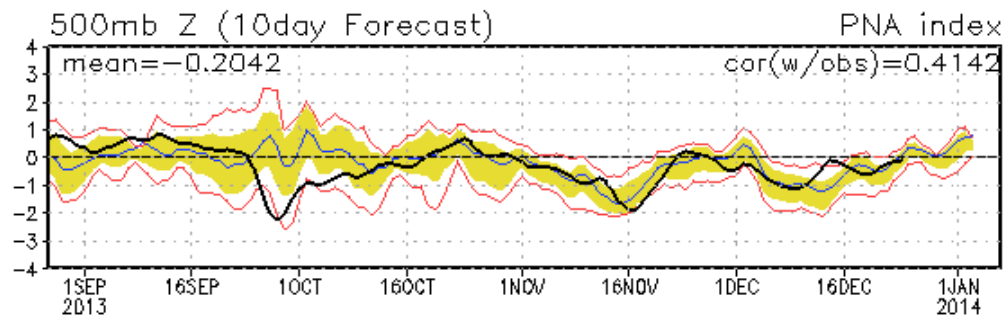
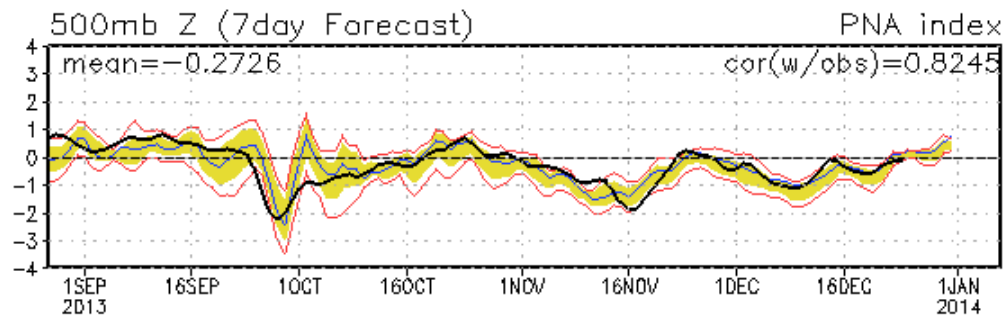
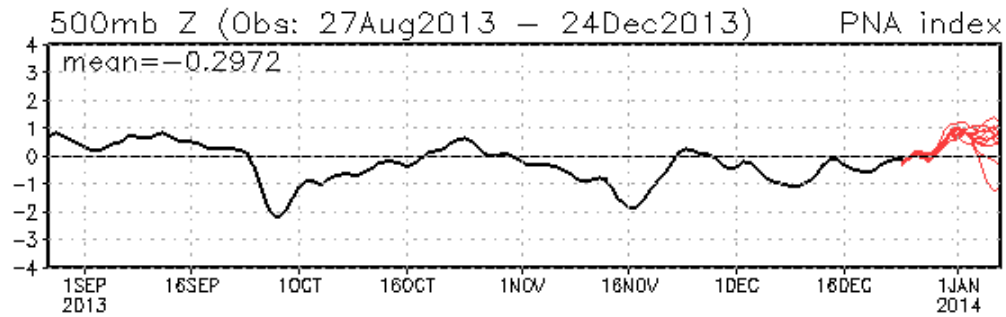


Connections to U.S. Impacts

AO: Observed & ENSM forecasts

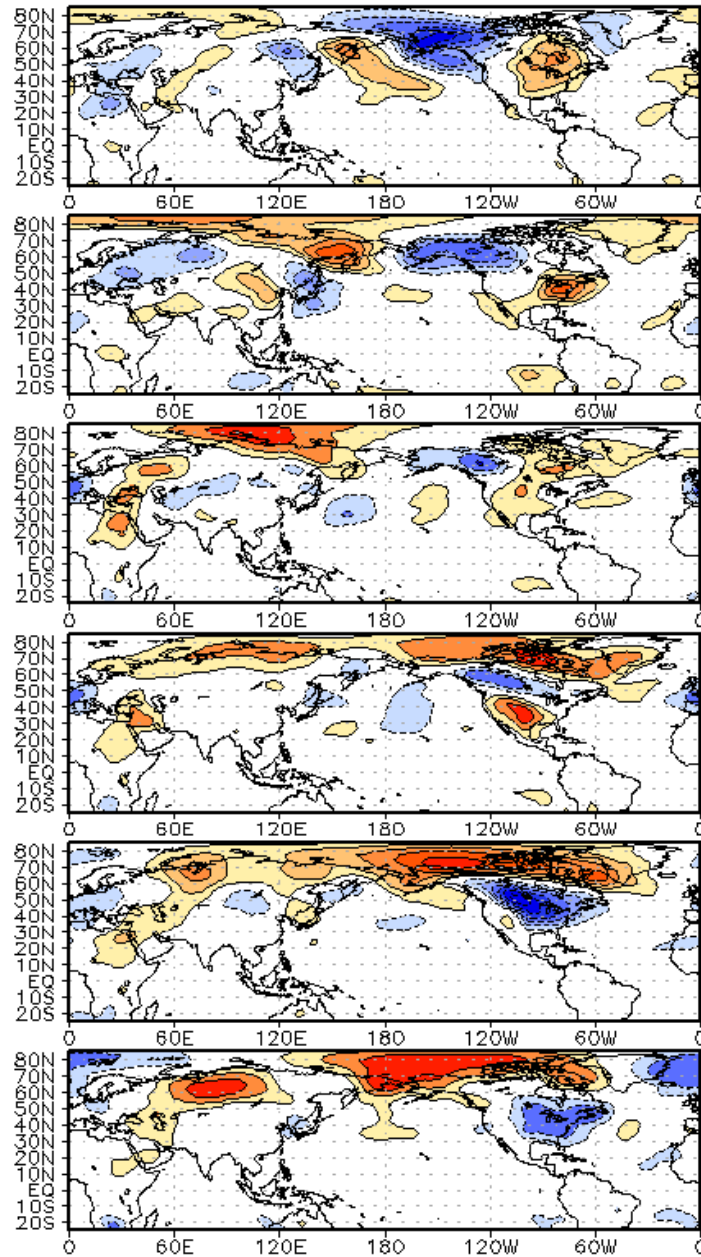


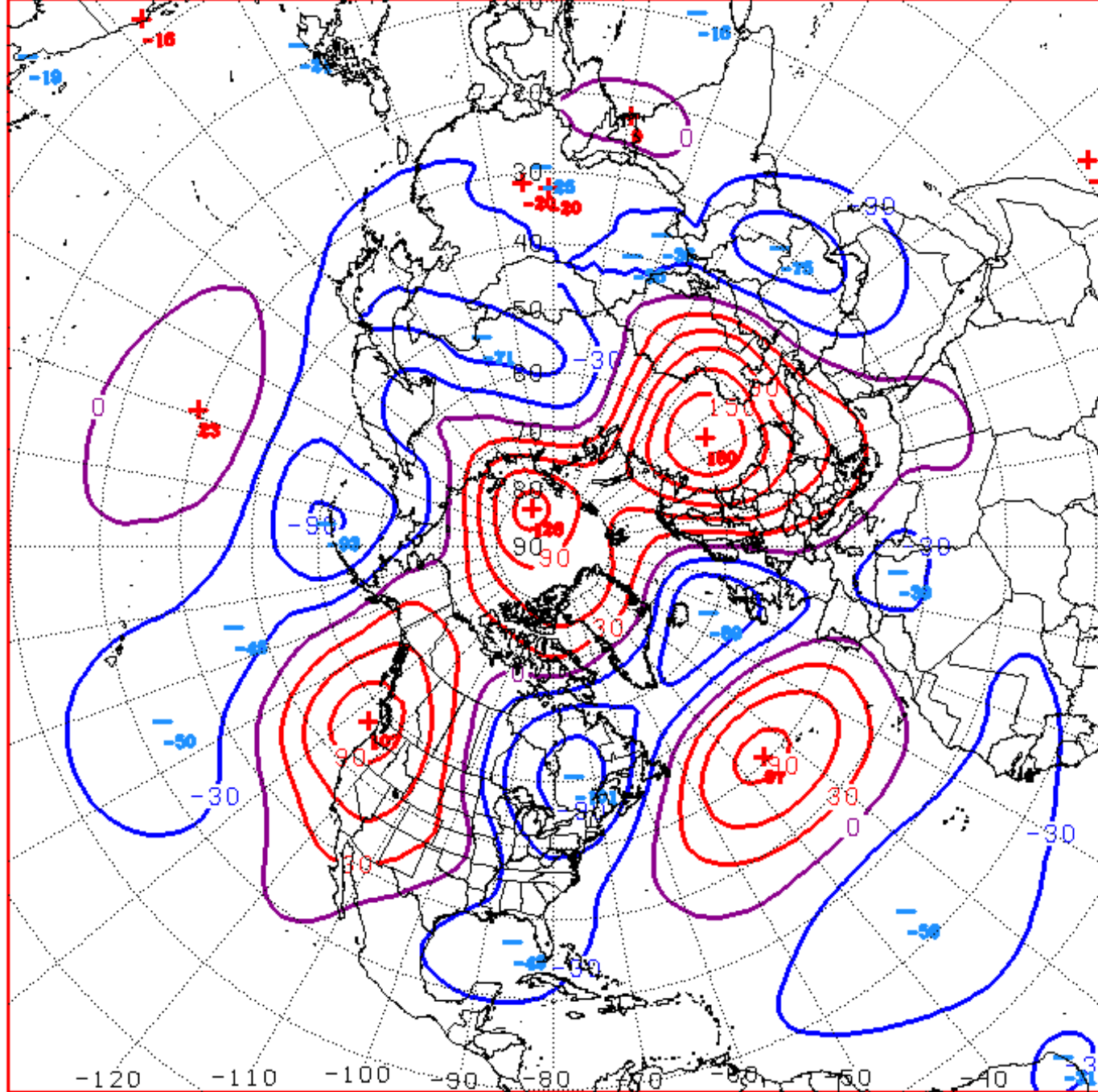
PNA: Observed & ENSM forecasts



US Composites based on MJO Phase

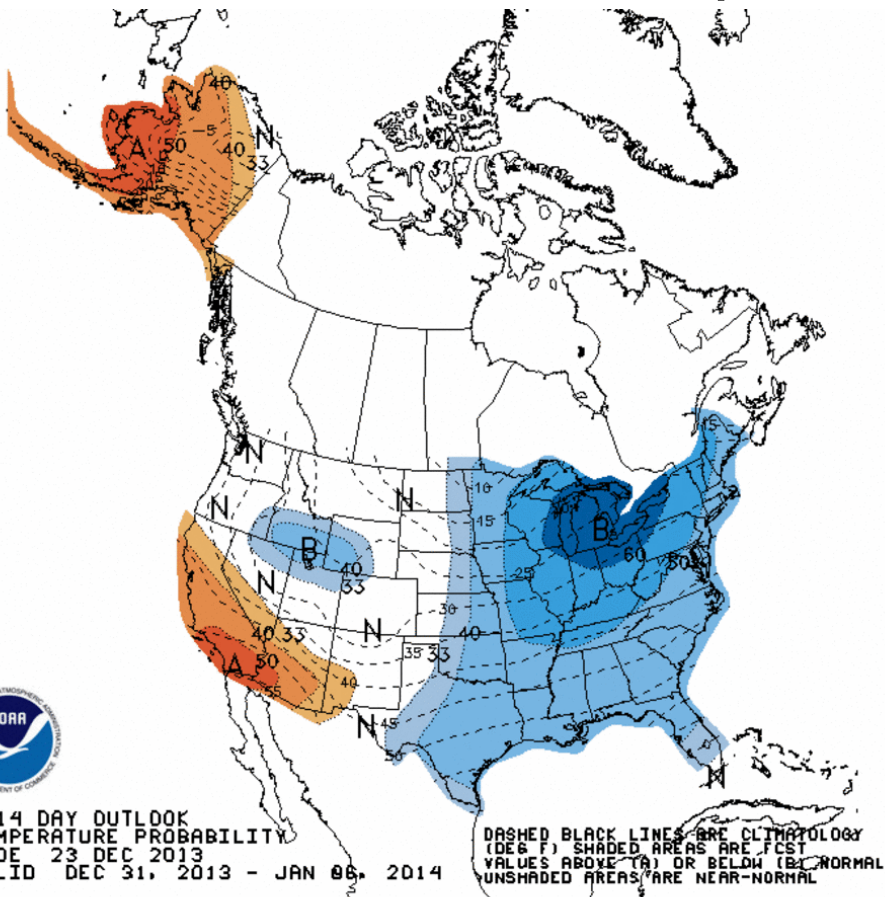
WHMJO Phase 5 t850 Lagged Composite (ndj)



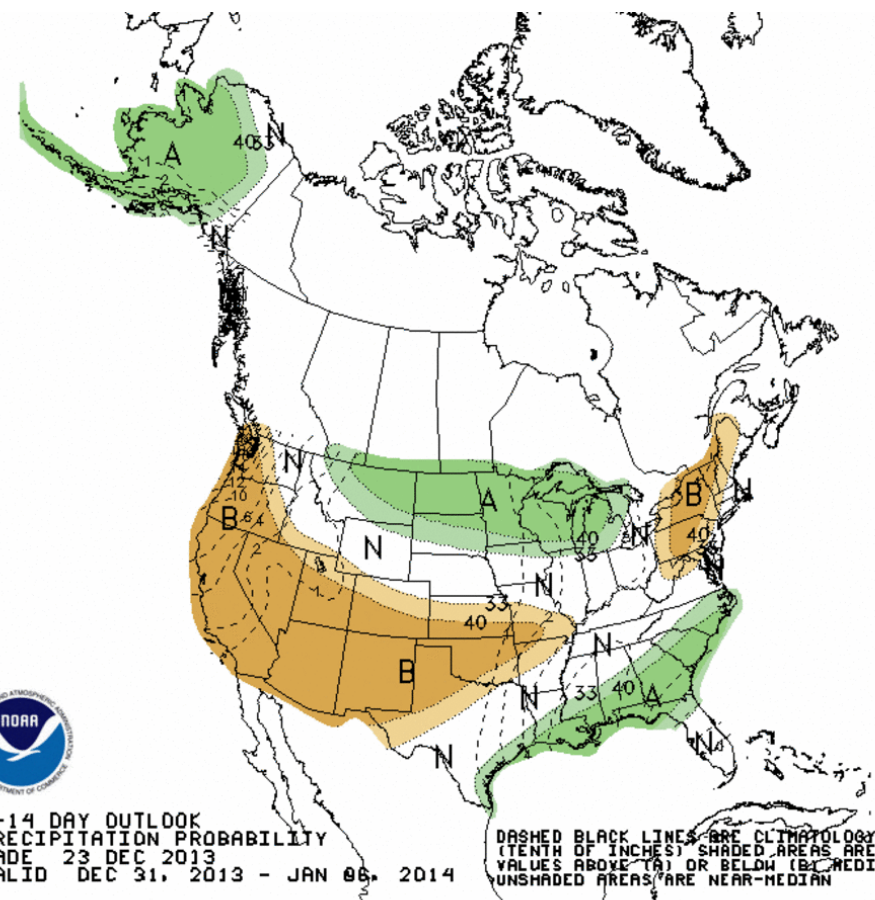
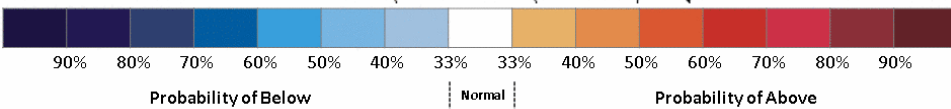


D+11 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE DEC 24 2013 1040 UTC CNTD JAN 04 2014

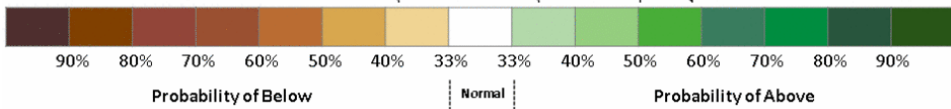
Week 2 – Temperature and Precipitation



8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 23 DEC 2013
VALID DEC 31, 2013 - JAN 06, 2014



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 23 DEC 2013
VALID DEC 31, 2013 - JAN 06, 2014

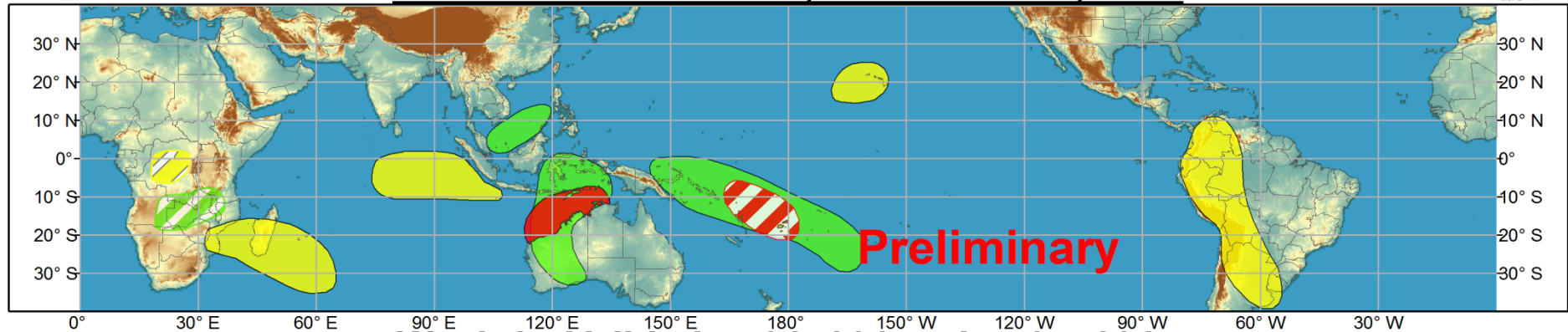




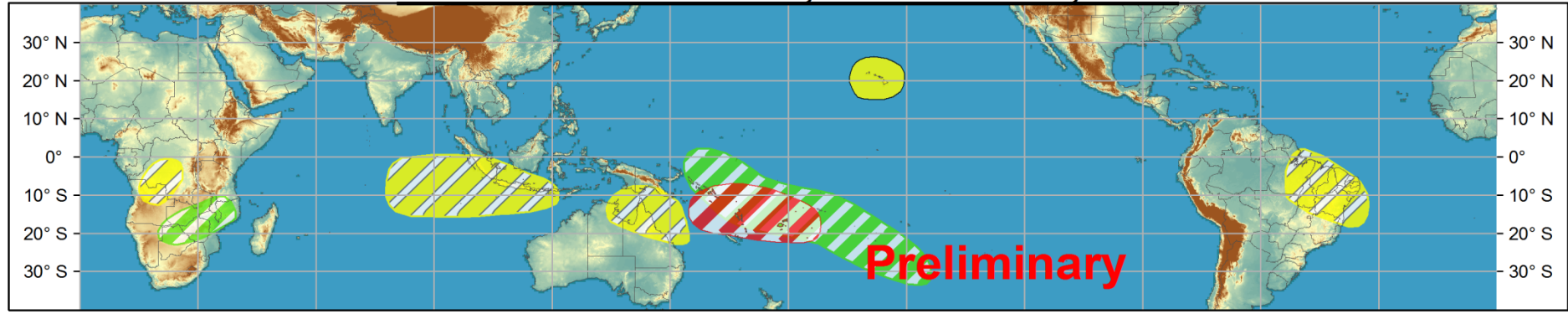
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