

Global Tropics Hazards And Benefits Outlook

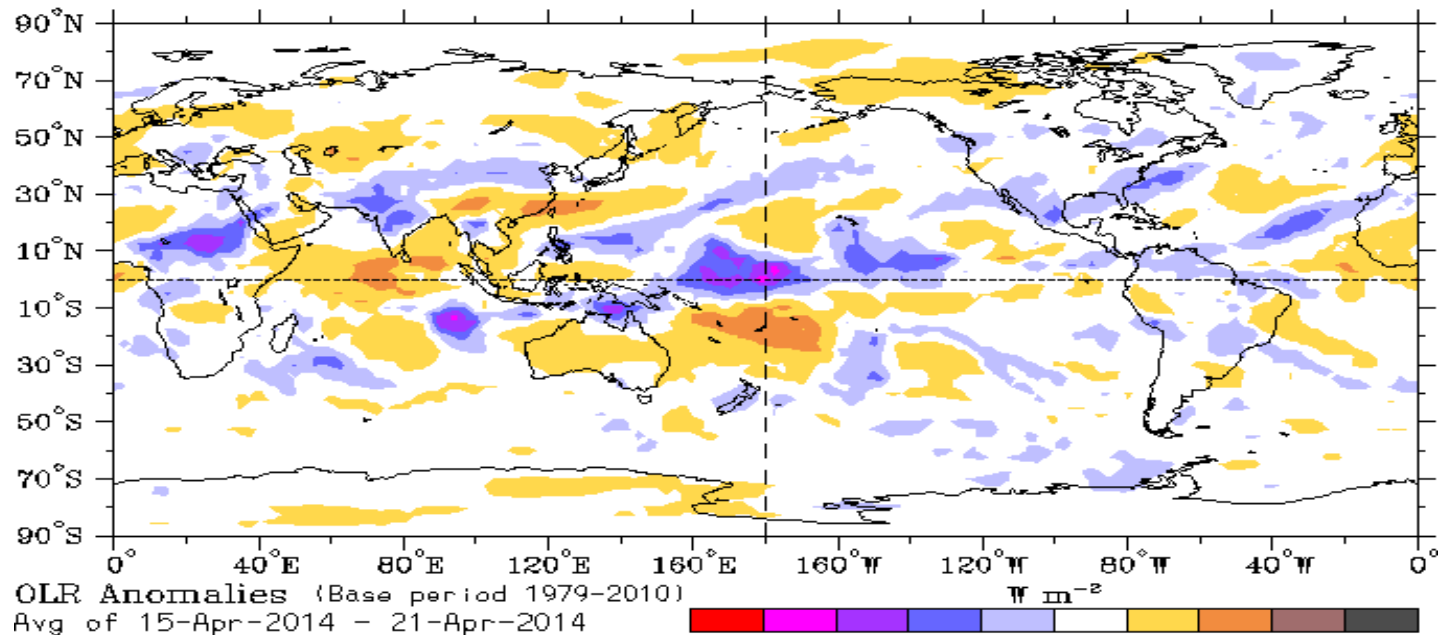
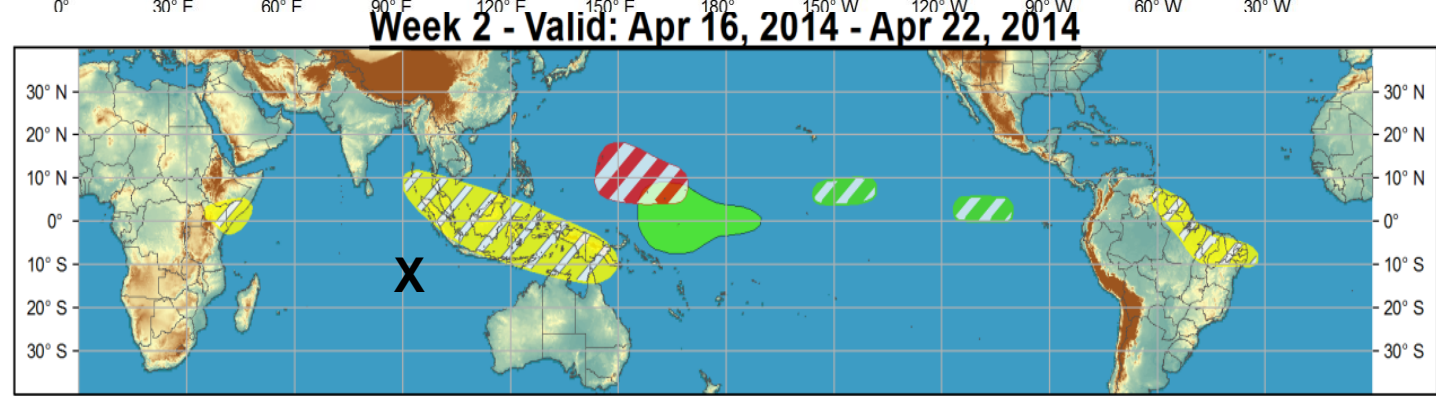
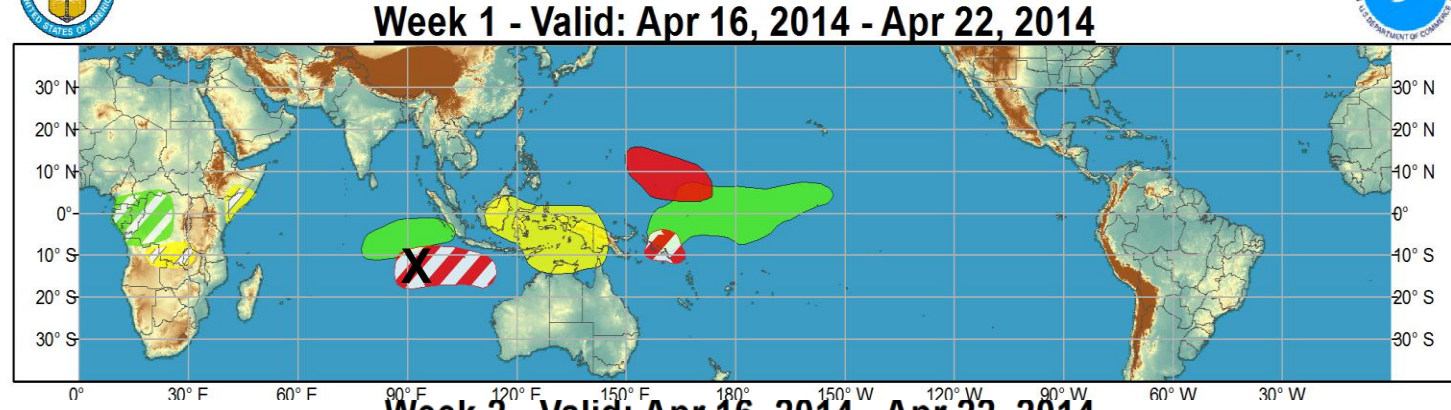
April 22, 2014

Matthew Rosencrans

Outline

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

Outlook Review



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO:

- While ENSO-neutral is favored for Northern Hemisphere spring, the chances of El Niño increase during the remainder of the year, exceeding 50% by summer, and 66% by the end of 2014.
- ENSO Alert System Status: El Niño Watch

MJO and other subseasonal tropical variability:

- The MJO remained weak during the past week.
- Dynamical model MJO index forecasts differ on the strength of the signal during Week-2. Most forecasts indicate slow propagation during Week-1 with a signal emerging over the Americas in Week-2.

Extratropics:

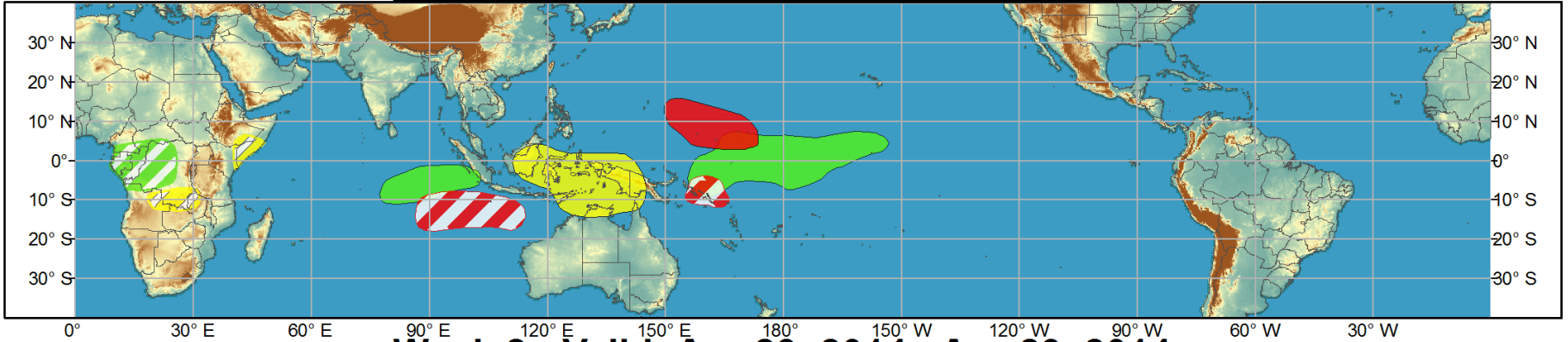
- The extended range forecast for the U.S. is not expected to be impacted greatly by the MJO. Current outlooks indicate above-normal temperatures are favored from the West Coast to the Rockies, while below-normal temperatures are favored from the Great Plains to the East Coast. Above-median rains are likely east of the Mississippi River and the Pacific Northwest, while below-median rains are likely across the Great Basin, Upper Mid-west, and Southern Great Plains.



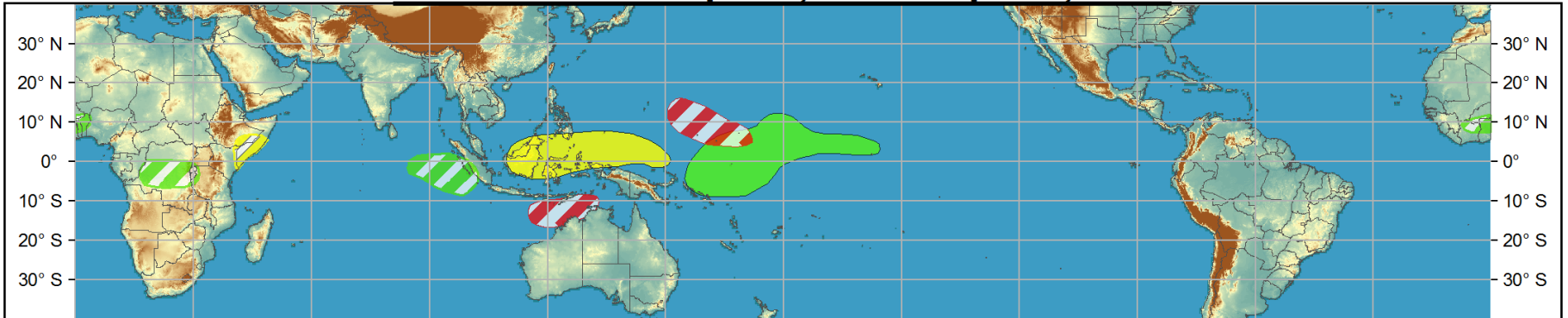
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Apr 16, 2014 - Apr 22, 2014



Week 2 - Valid: Apr 23, 2014 - Apr 29, 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: 04/15/2014

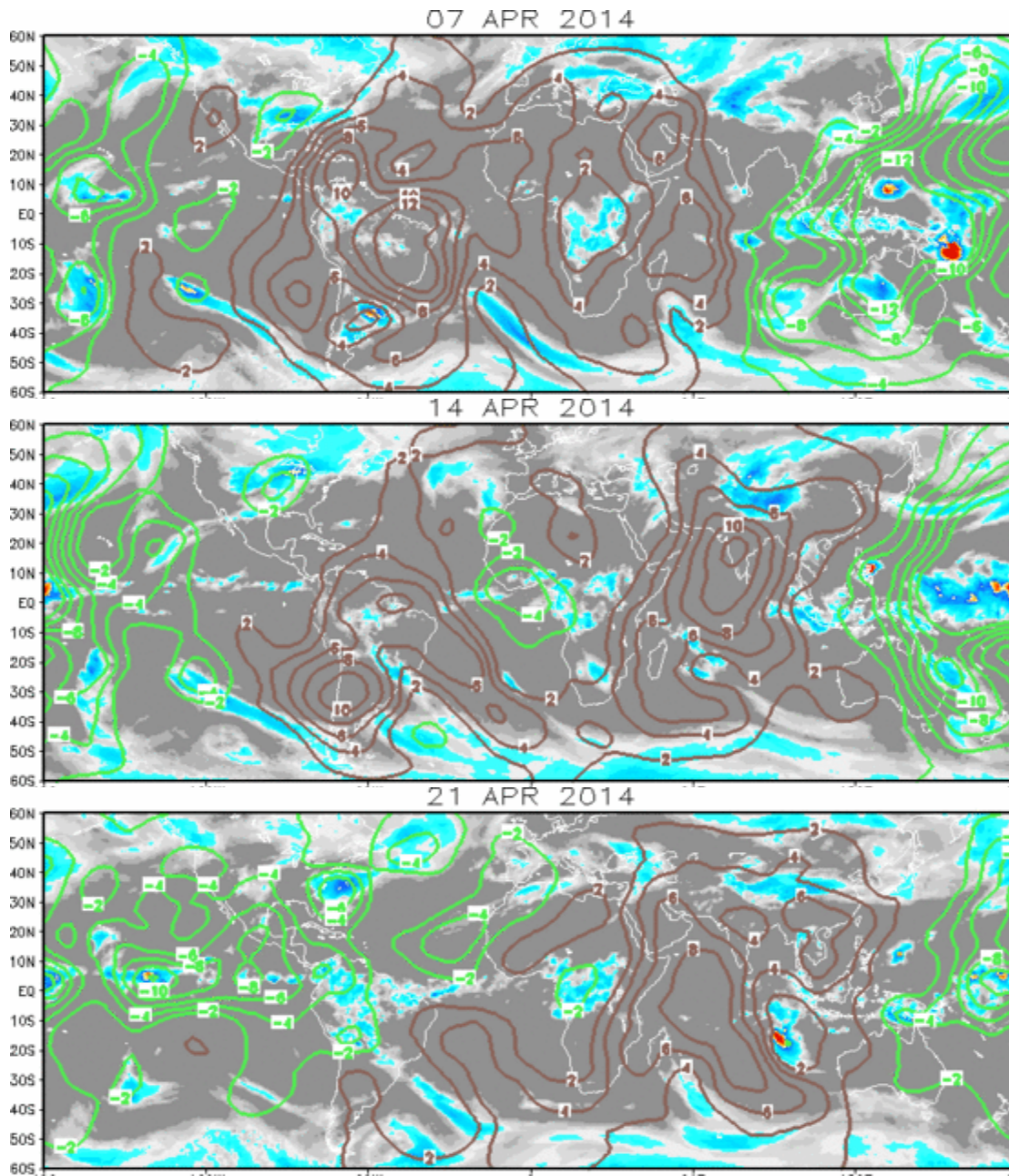
Forecaster: Rosencrans

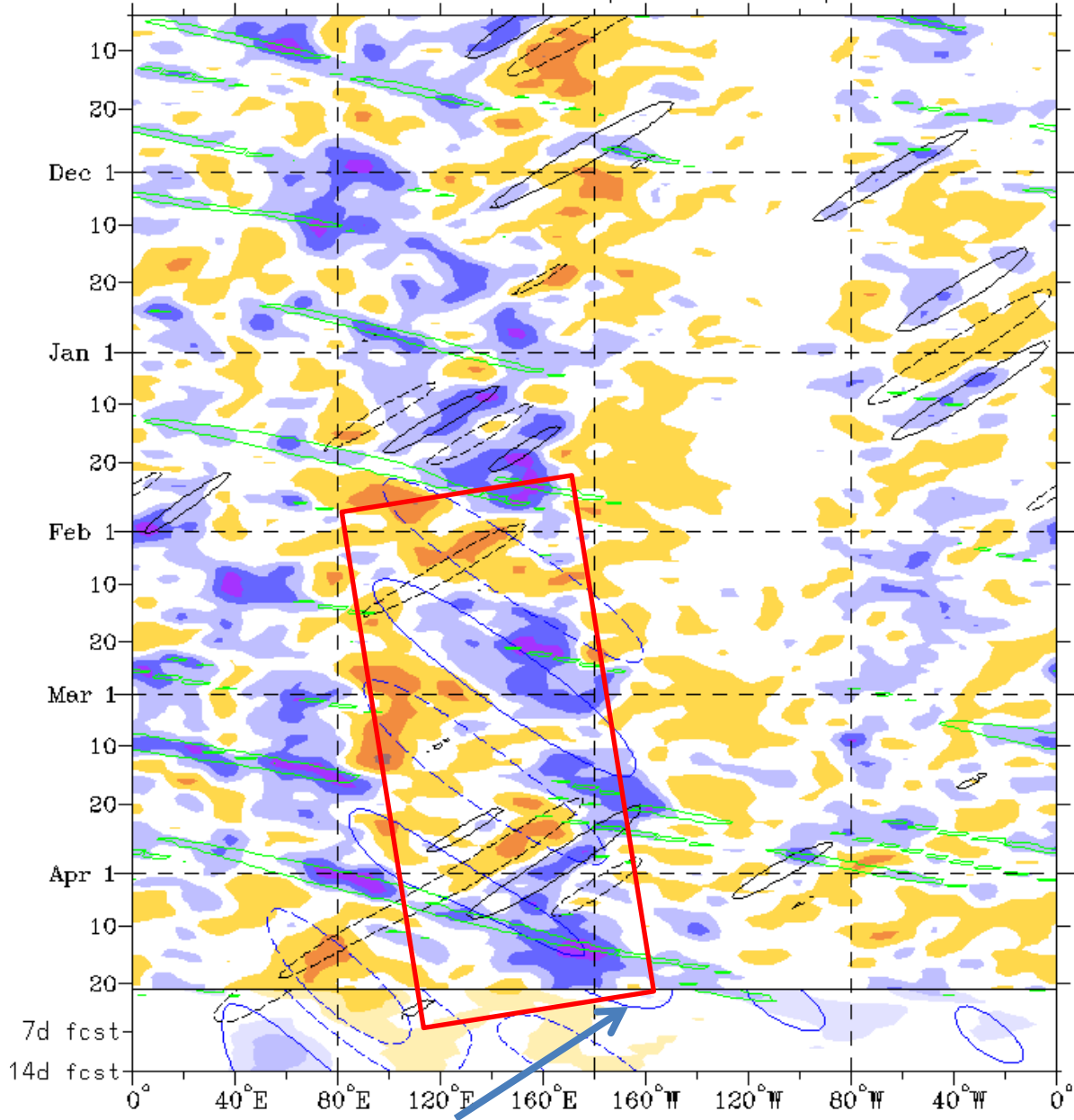
Product is updated once per week. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence





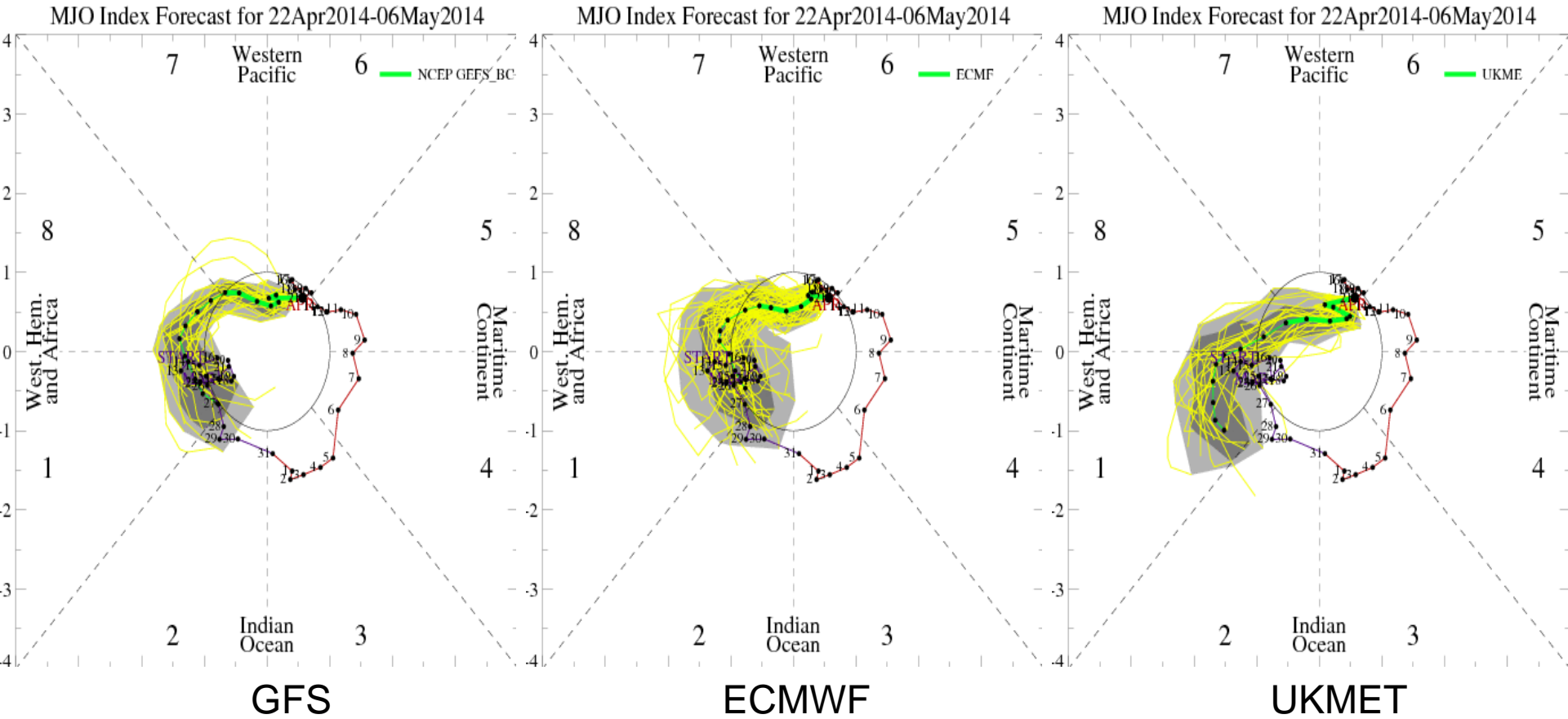
MJO signal weak

Main drivers are now:

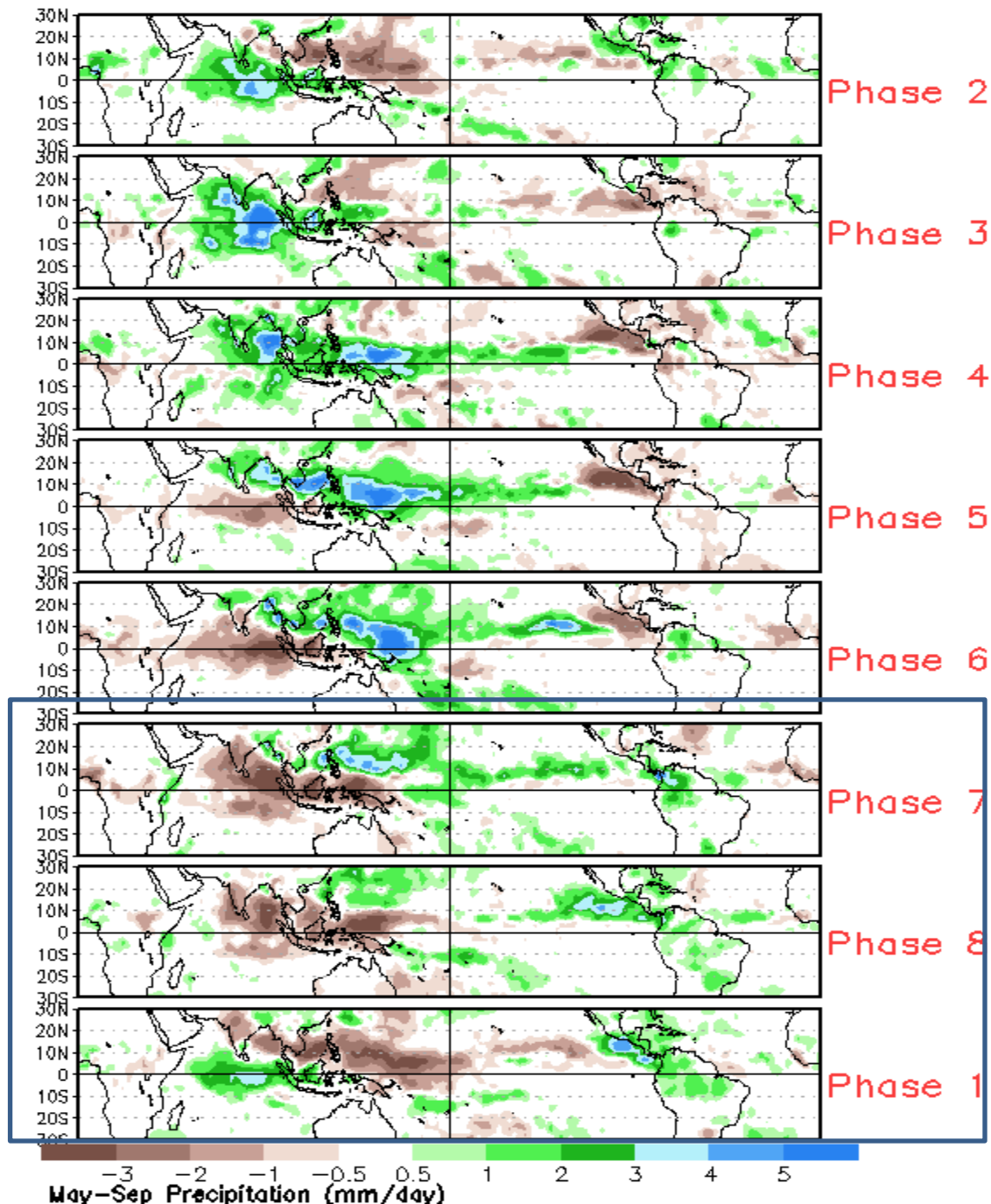
- 1) Atmospheric Kelvin waves (green ovals)
- 2) Equatorial Rossby Waves (black oval, tilted to bottom left)
- 3) Interseasonal state (red box)

Enhanced convection over west/central Pacific

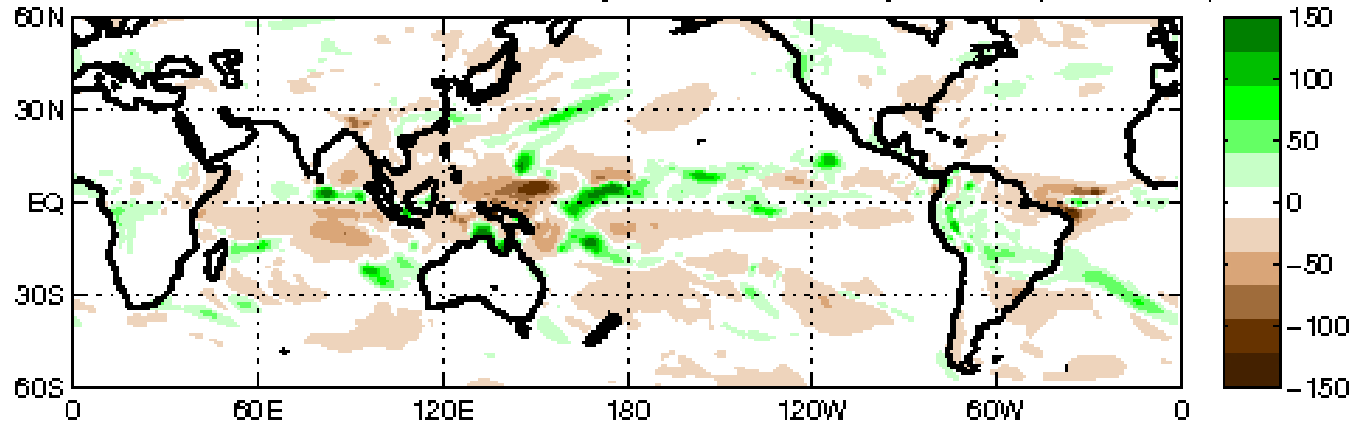
MJO Observation/Forecast



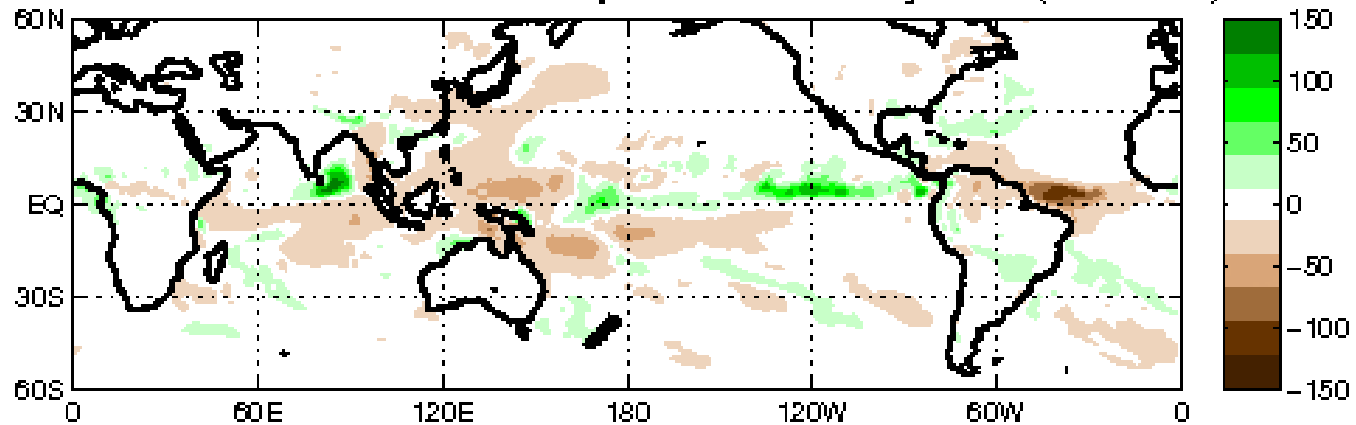
Average Conditions when the MJO is present (May-Sep)



CFS: Anom. PREC Week1: 22-Apr-2014 to 28-Apr-2014 (mm/week)

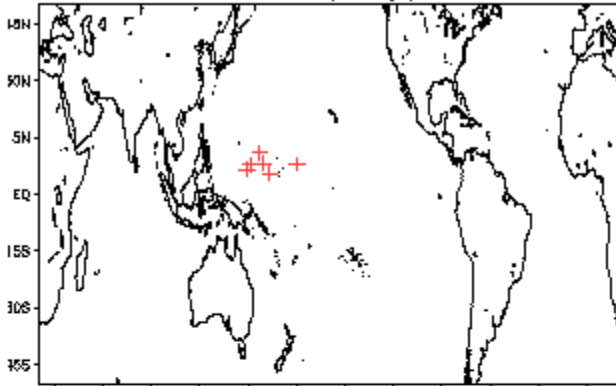


CFS: Anom. PREC Week2: 29-Apr-2014 to 05-May-2014 (mm/week)

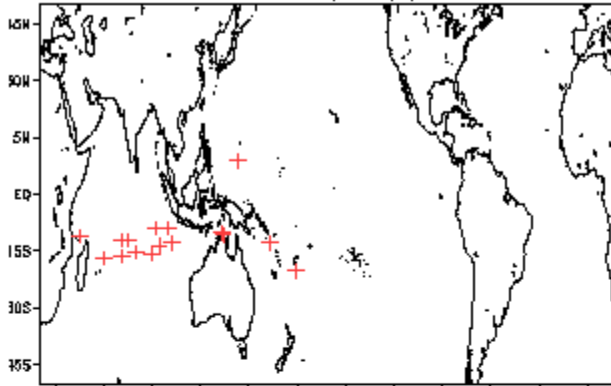


April Tropical Storm Formation by MJO phase

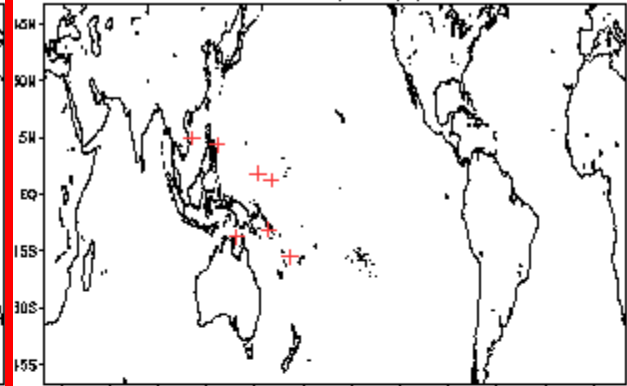
Phase 1 (70 days) 7 storms



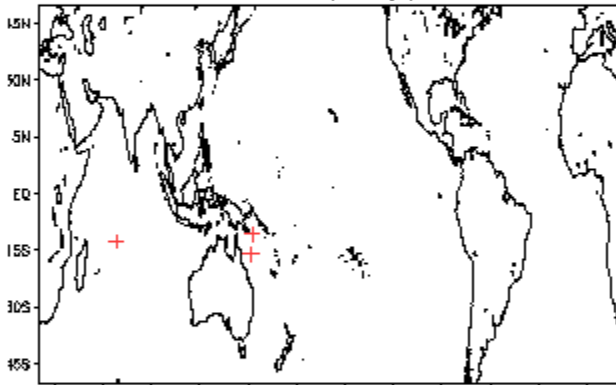
Phase 4 (95 days) 17 storms



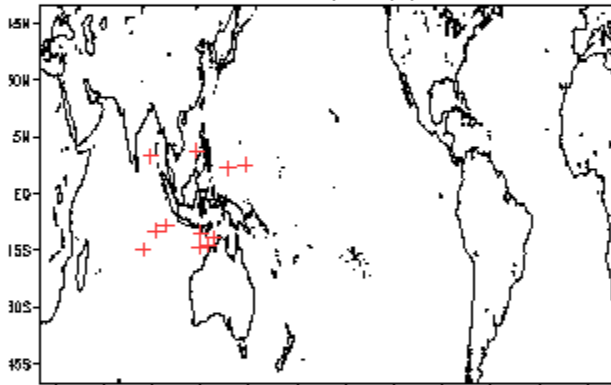
Phase 7 (87 days) 8 storms



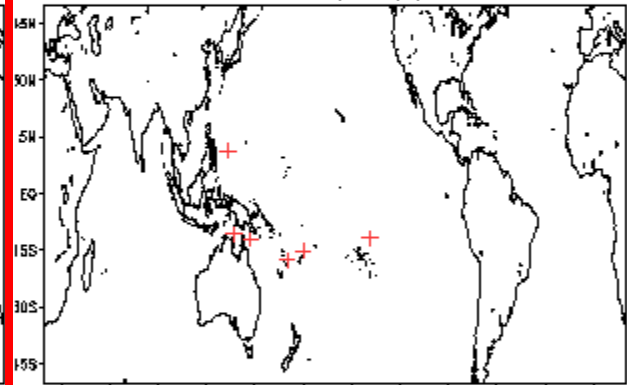
Phase 2 (65 days) 4 storms



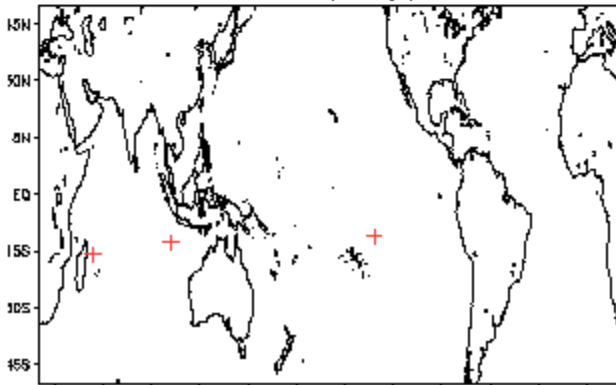
Phase 5 (77 days) 12 storms



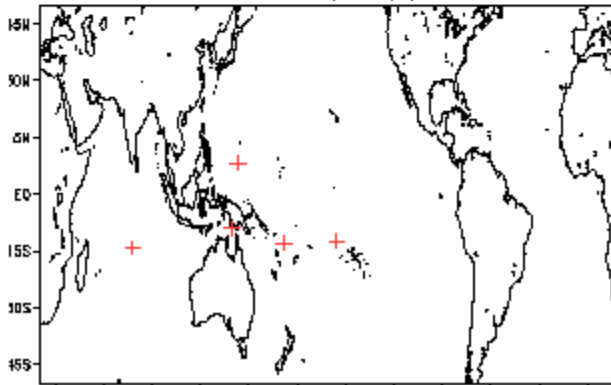
Phase 8 (75 days) 7 storms



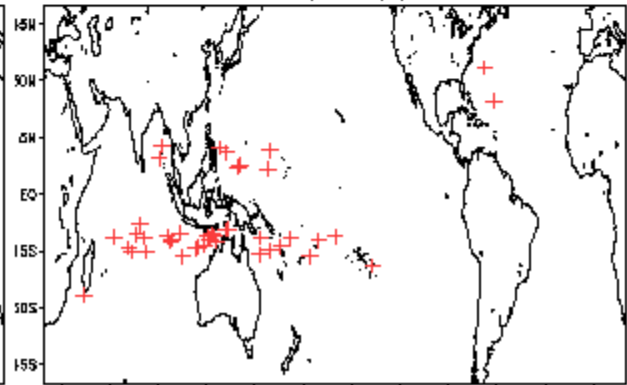
Phase 3 (68 days) 4 storms



Phase 6 (65 days) 8 storms



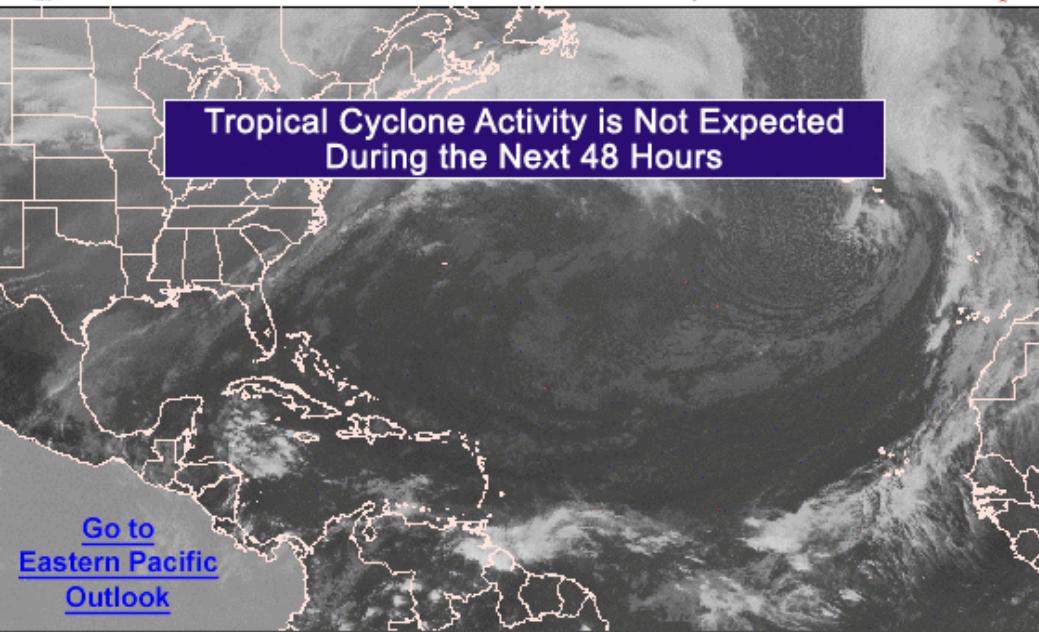
Null (369 days) 43 storms





Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



655 AM EST SAT DEC 7 2013

Satellite Image: 0400 PM EST

Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
 Medium 30-50%
 High >50%

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



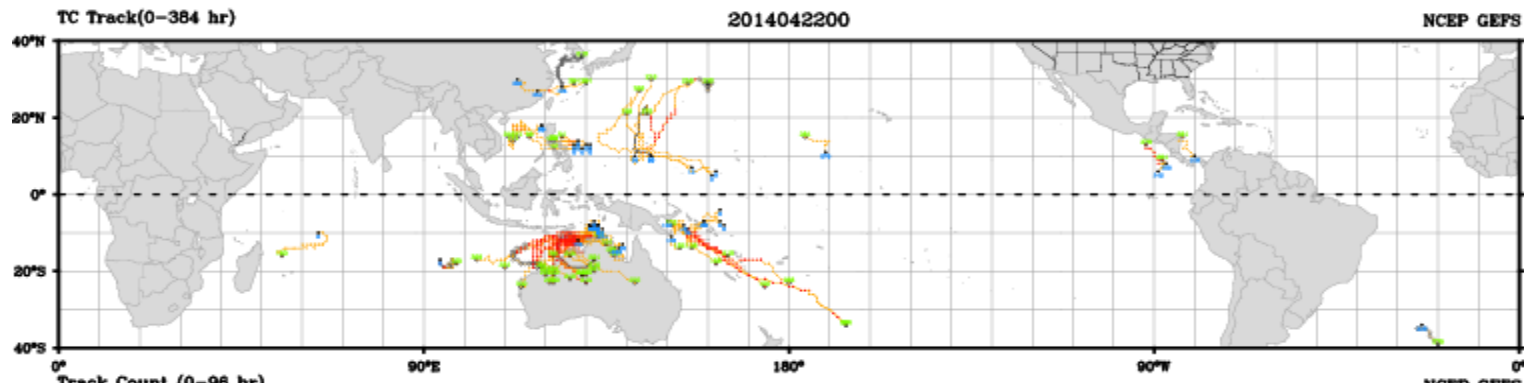
1000 PM PST SAT NOV 30 2013

Satellite Image: 0822 PM PST

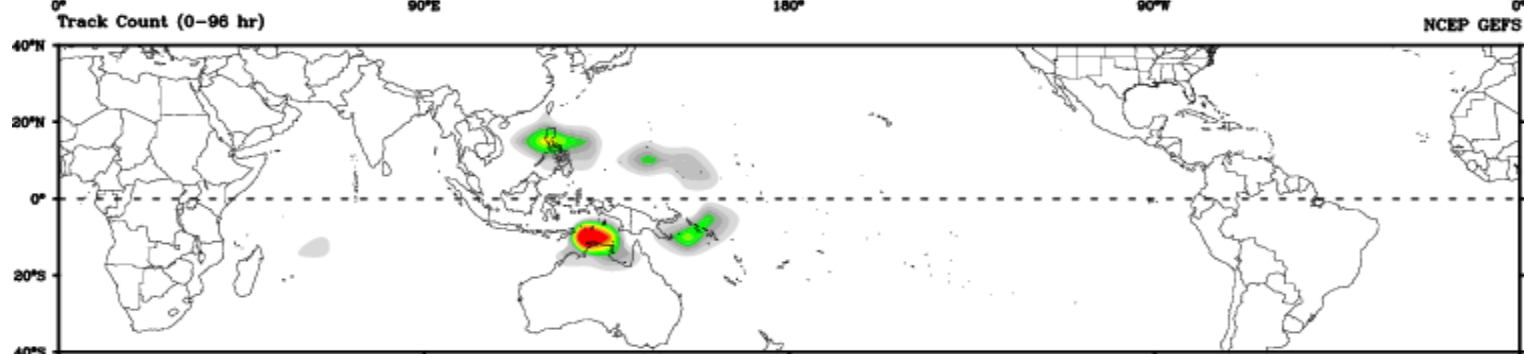
Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

Low <30%
 Medium 30-50%
 High >50%

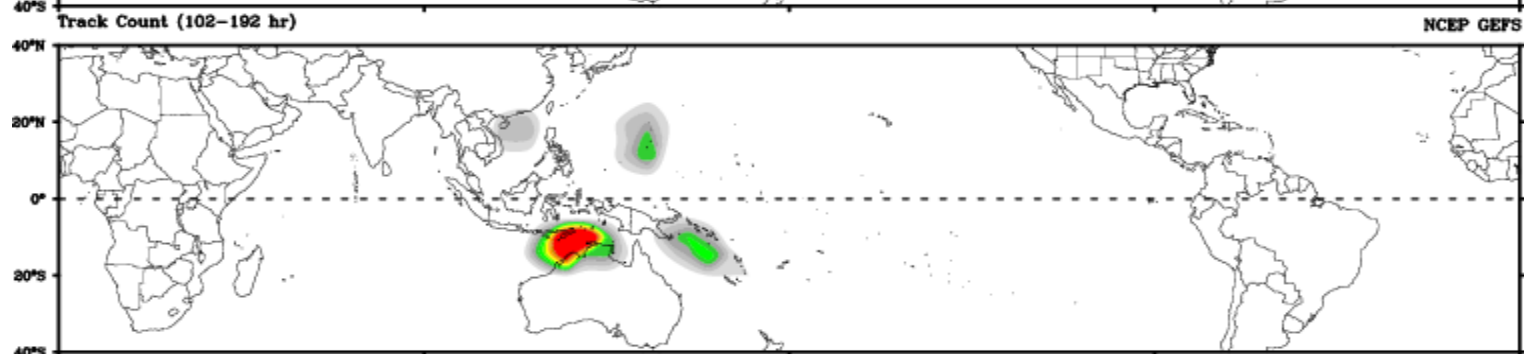
CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)



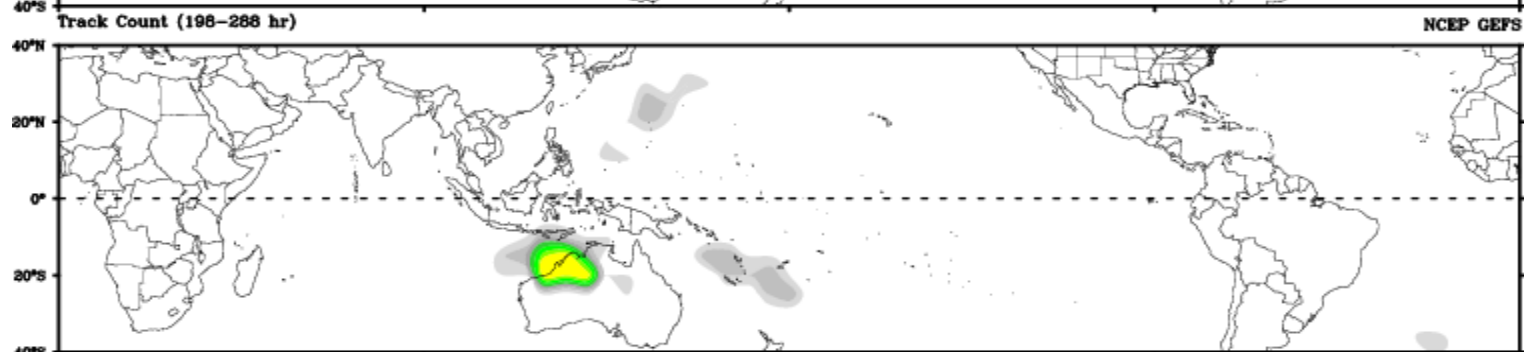
Days 1-4



Day 5-8

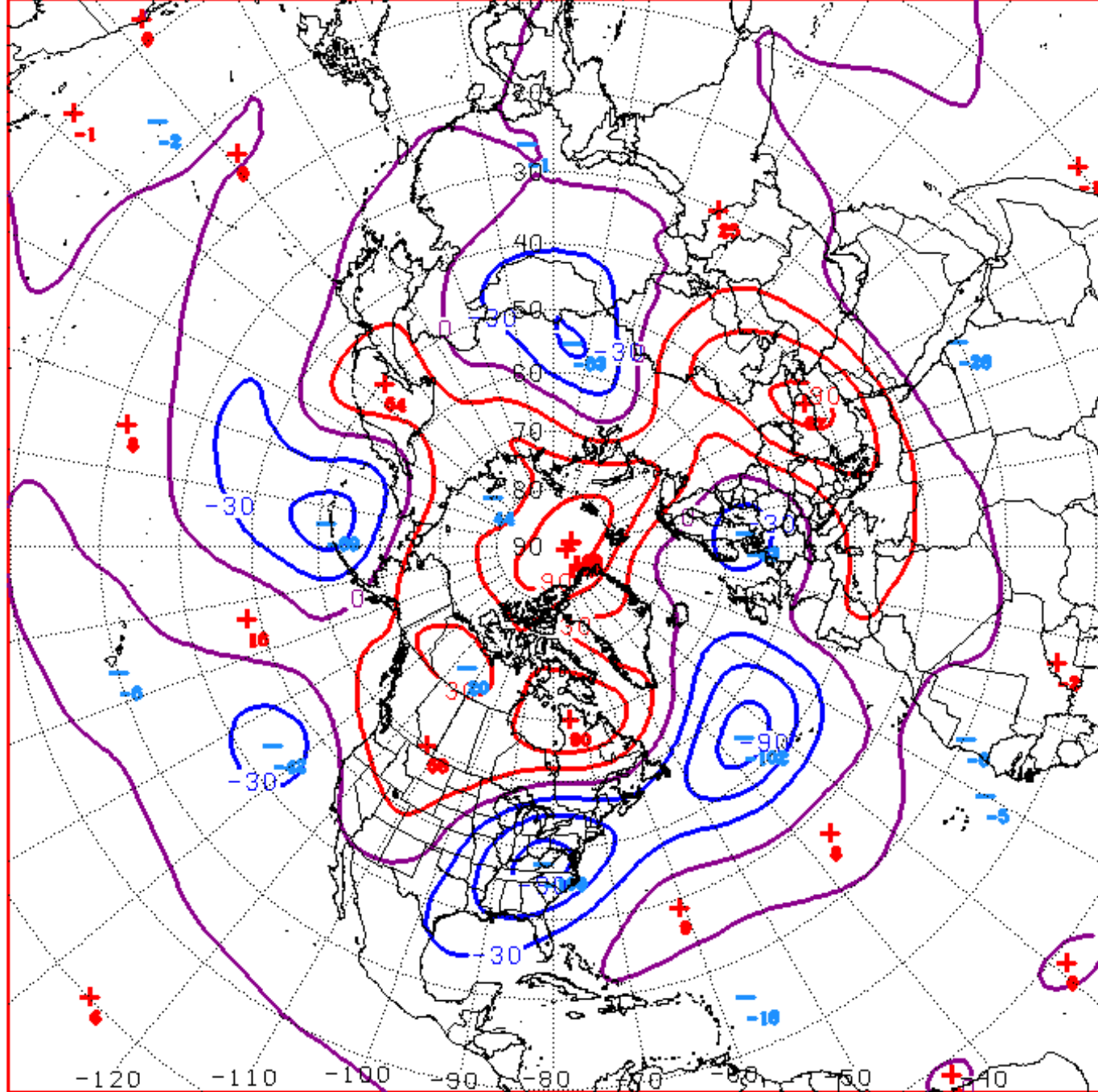


Day 9-12



Day 13-15

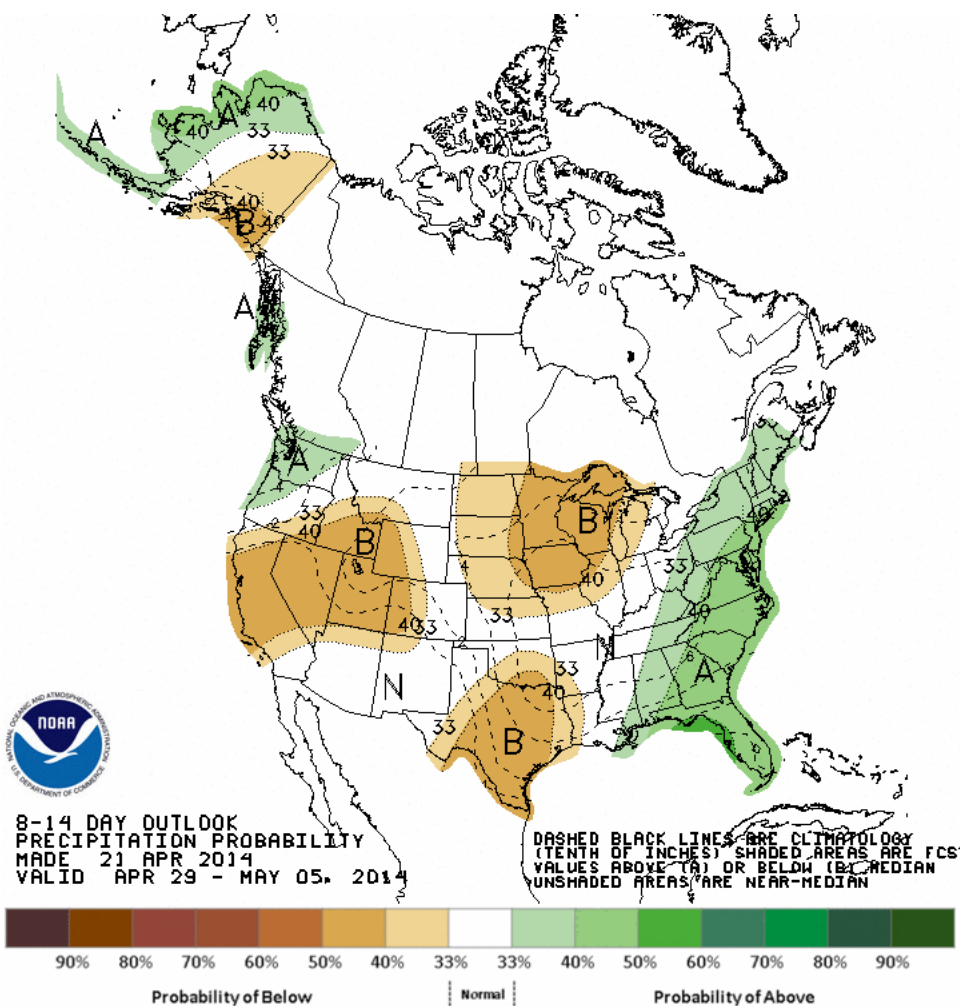
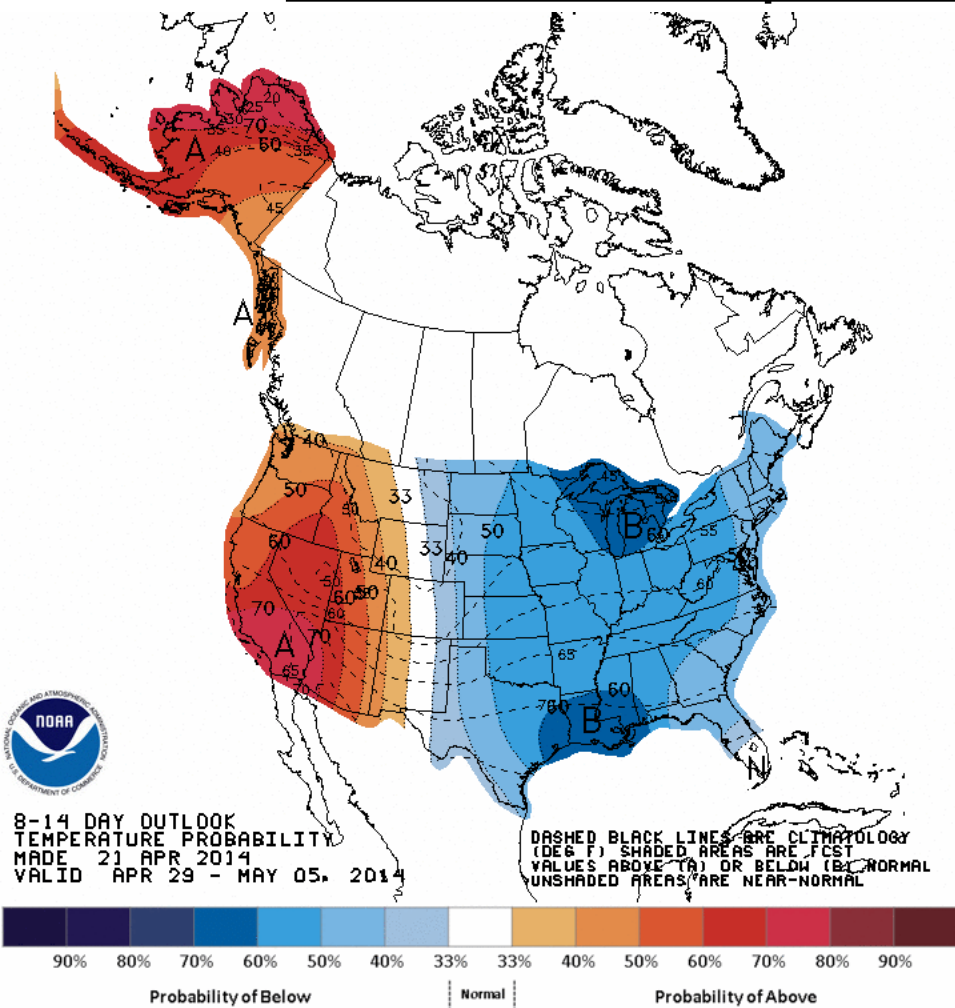
Connections / U.S. Impacts



D+11 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE APR 22 2014 1052 UTC CNTD MAY 03 2014

Week 2 – Temperature and Precipitation

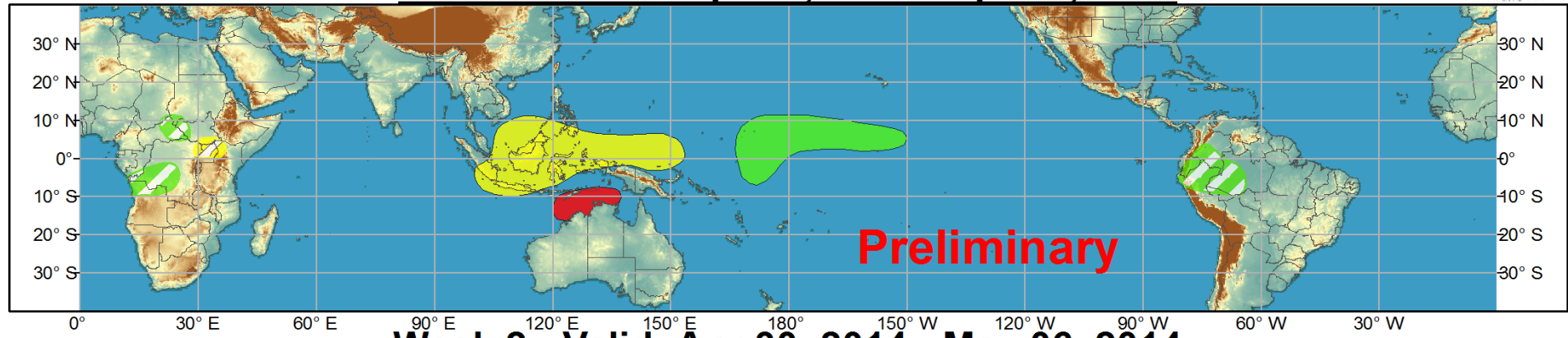
Seeing some patterns consistent with lagged impacts from Phase 5/6 MJO, but not proper linkages over the Pacific to allow preliminary attribution.



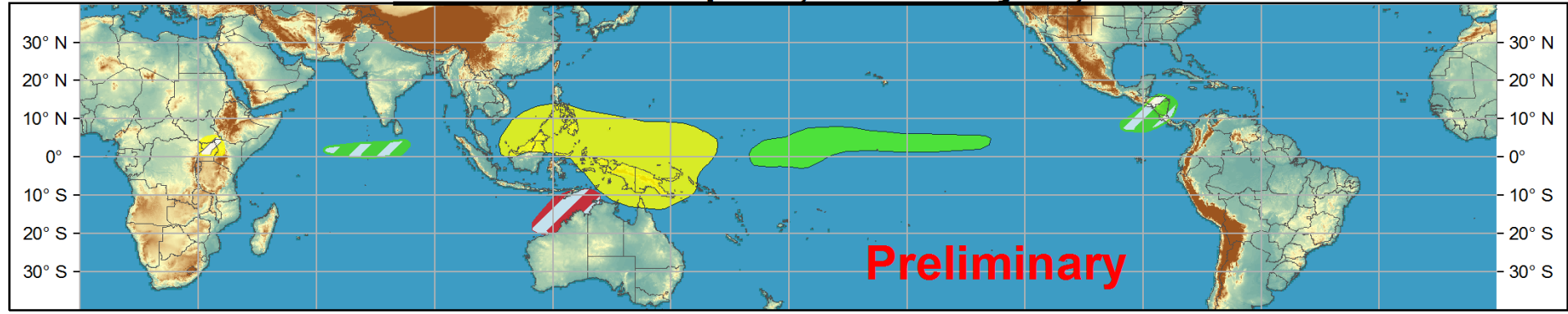


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Apr 23, 2014 - Apr 29, 2014



Week 2 - Valid: Apr 30, 2014 - May 06, 2014



Produced: 04/22/2014

Forecaster: Rosencrans

Confidence		
High	Moderate	
		Development of a tropical cyclone that eventually reaches tropical storm/cyclone strength.
		Weekly total rainfall in the upper third of the historical range.
		Weekly total rainfall in the lower third of the historical range.
		7-day mean temperatures in the upper third of the historical range.
		7-day mean temperatures in the lower third of the historical range.

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.

