

Global Tropics Hazards And Benefits Outlook

February 11, 2014

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Outline

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

Synopsis of Climate Modes

ENSO:

- ENSO-neutral is expected to continue through the Northern Hemisphere spring 2014

MJO and other subseasonal tropical variability:

- The MJO remained weak during the past week, with more localized subseasonal features such as tropical cyclone activity over the SW Indian Ocean and Kelvin Waves influencing the global tropical convective pattern and also masking a base state favoring enhanced convection over the Western Pacific.
- Dynamical model MJO index forecasts generally support rapid eastward propagation of convective anomalies to the western Pacific during the upcoming two weeks, but it is not clear that this indicates a coherent MJO pattern.

Extratropics:

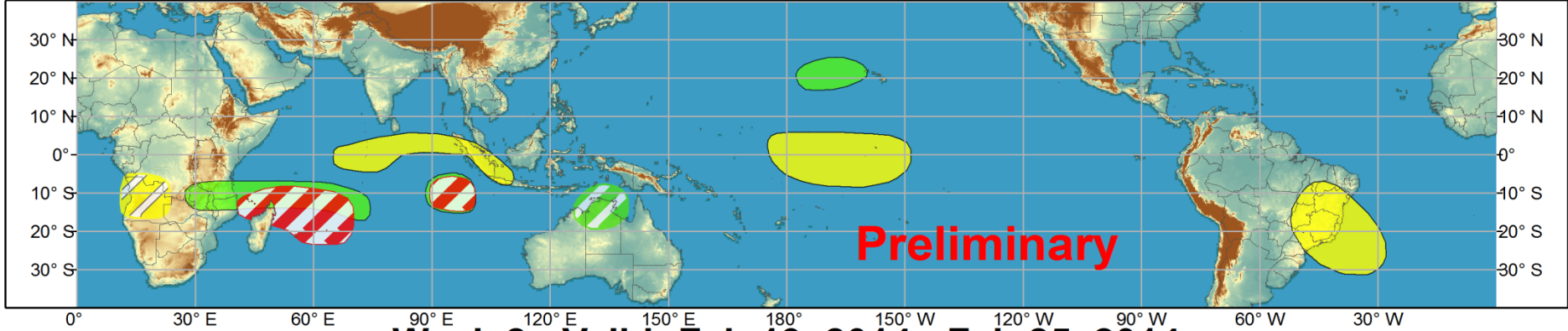
- The AO/NAO are forecast to remain slightly positive, while the PNA is forecast to remain negative.
- The extended range forecast for the U.S. aligns well with composites of the typical extratropical response to anomalous convection over the Indian Ocean, favoring ridging over the eastern CONUS.



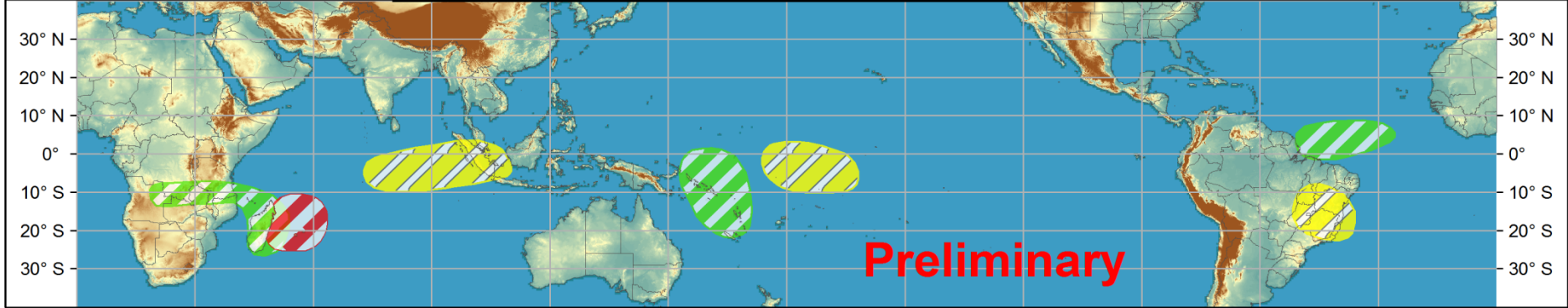
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Feb 12, 2014 - Feb 18, 2014













Week 2 - Valid: Feb 19, 2014 - Feb 25, 2014



Produced: 02/11/2014

Forecaster: Allgood

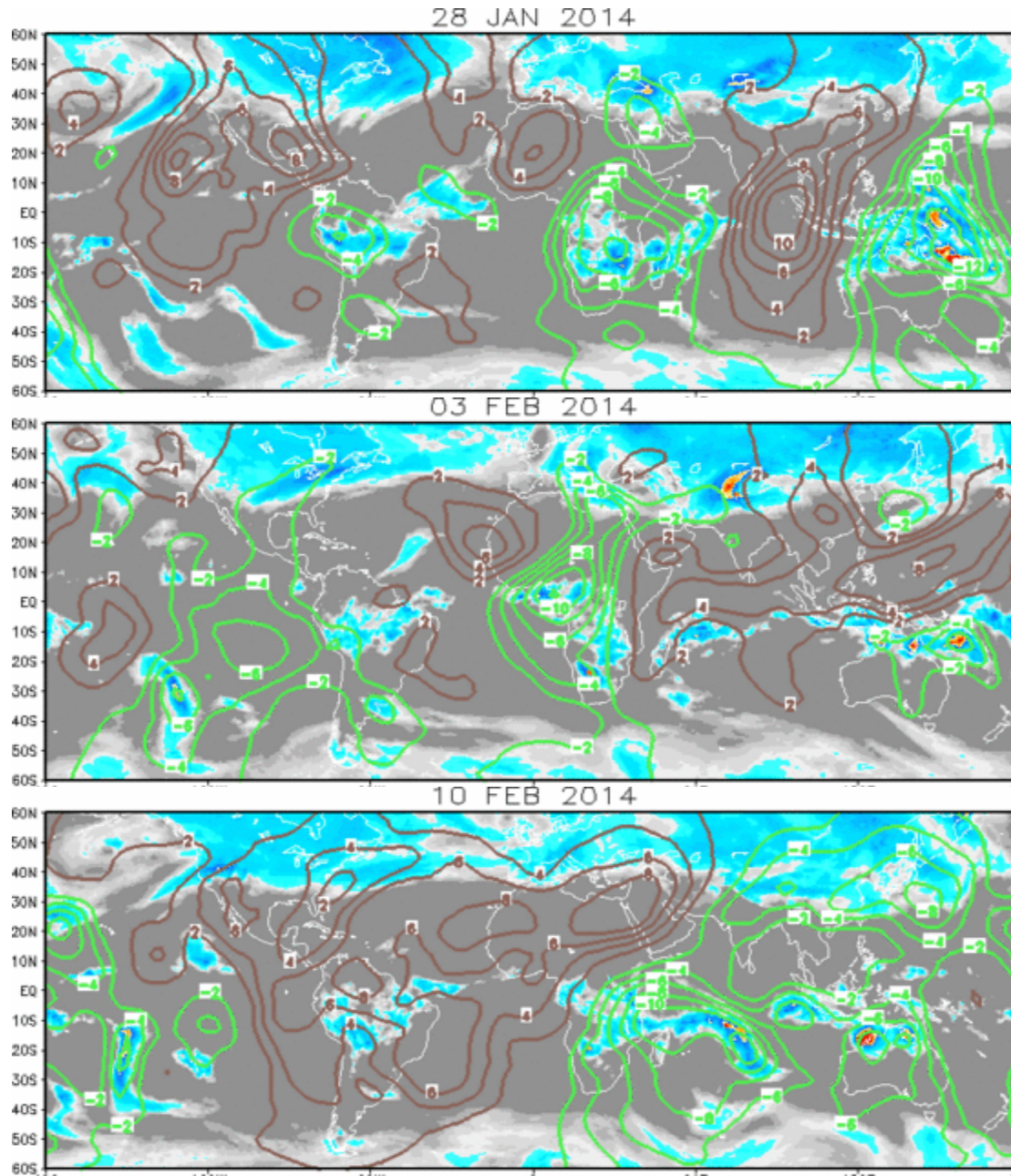
Confidence		
High	Moderate	
Tropical Cyclone Formation	 	Development of a tropical cyclone that eventually reaches tropical storm/cyclone strength.
Above-average rainfall	 	Weekly total rainfall in the upper third of the historical range.
Below-average rainfall	 	Weekly total rainfall in the lower third 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.

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

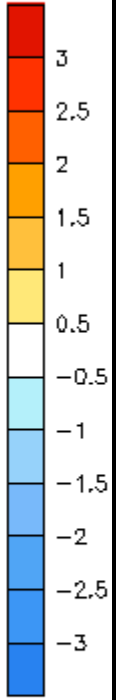
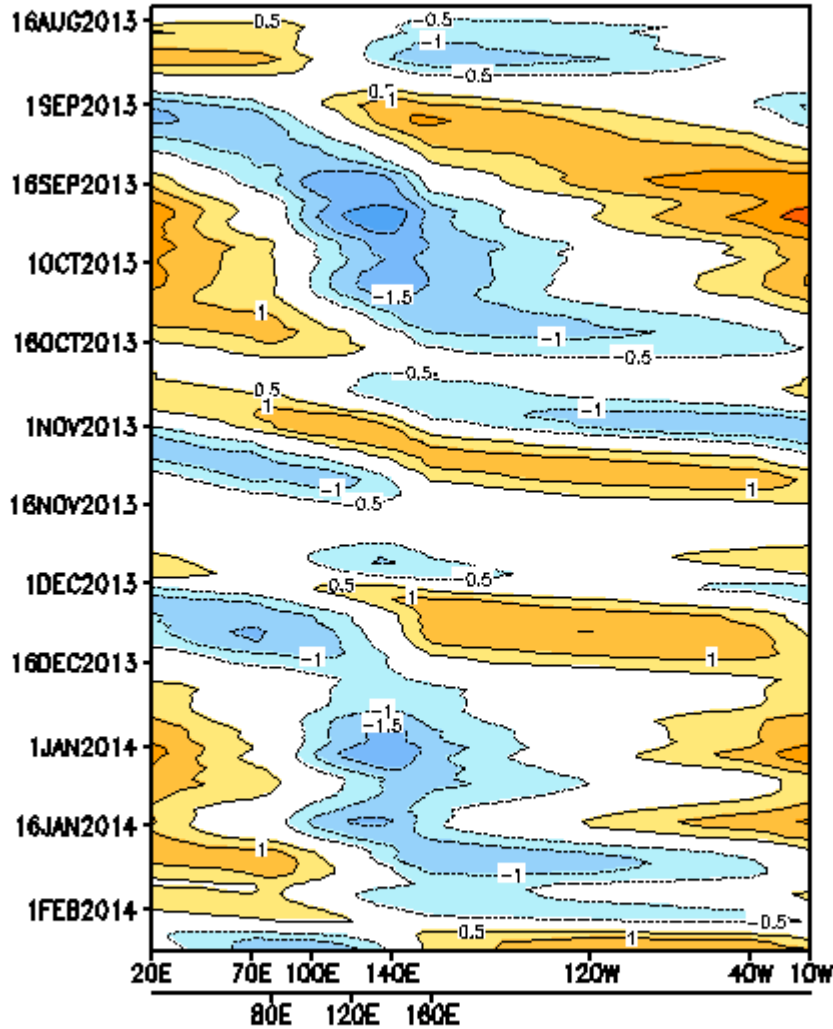


Anomalous convection in the Indian Ocean (TC), although not widespread, produced a robust atmospheric response, as observed in the 200-hPa VP anomaly field

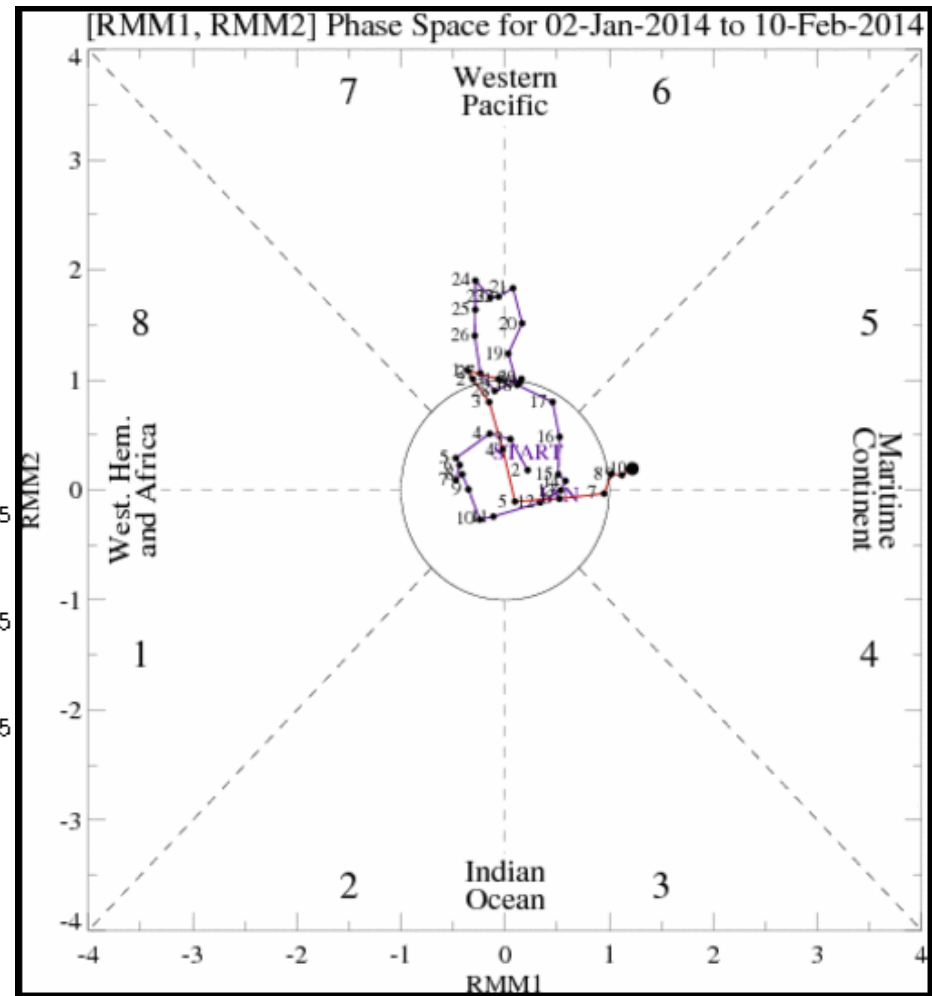
CPC VP Based MJO Index

Wheeler-Hendon MJO Index

5 -day Running Mean

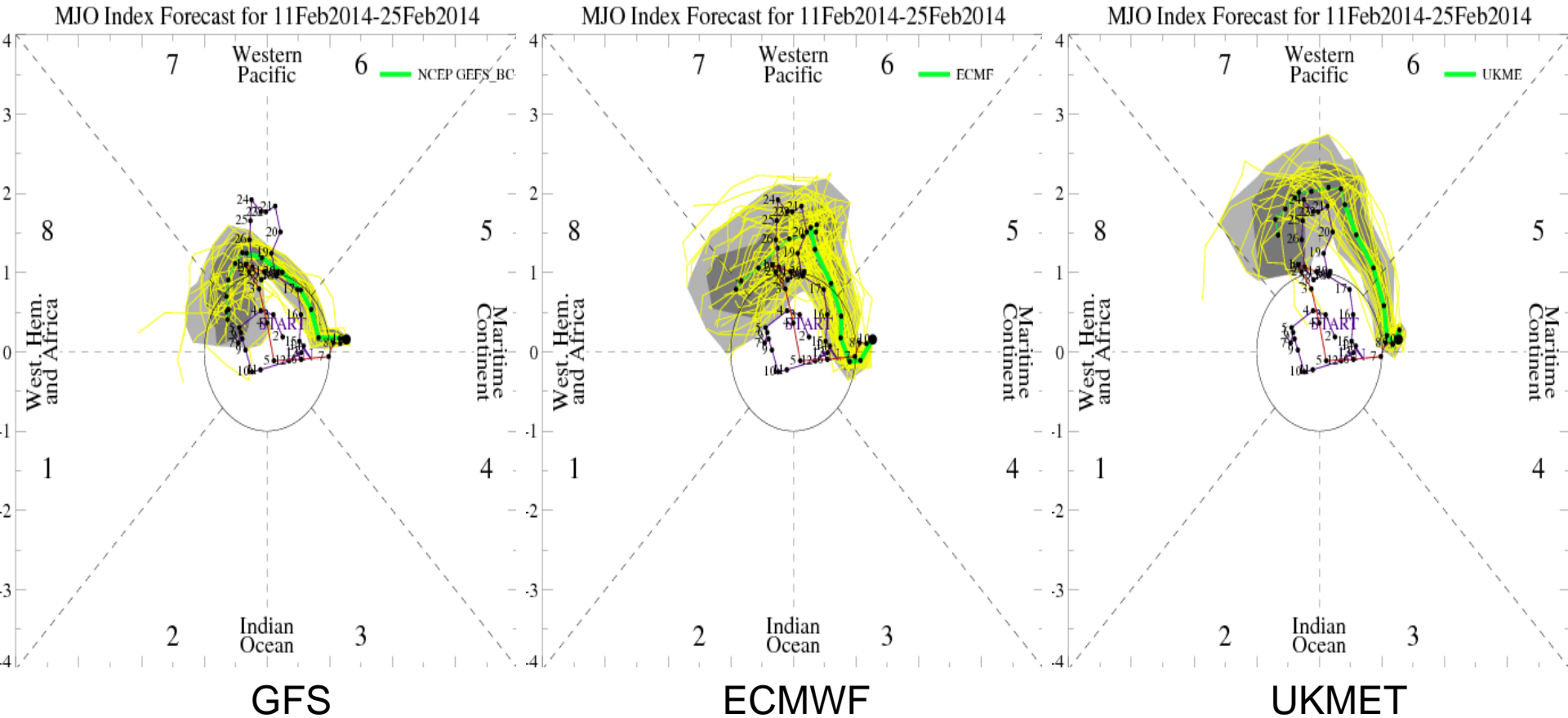


Data updated through 11 Feb 2014



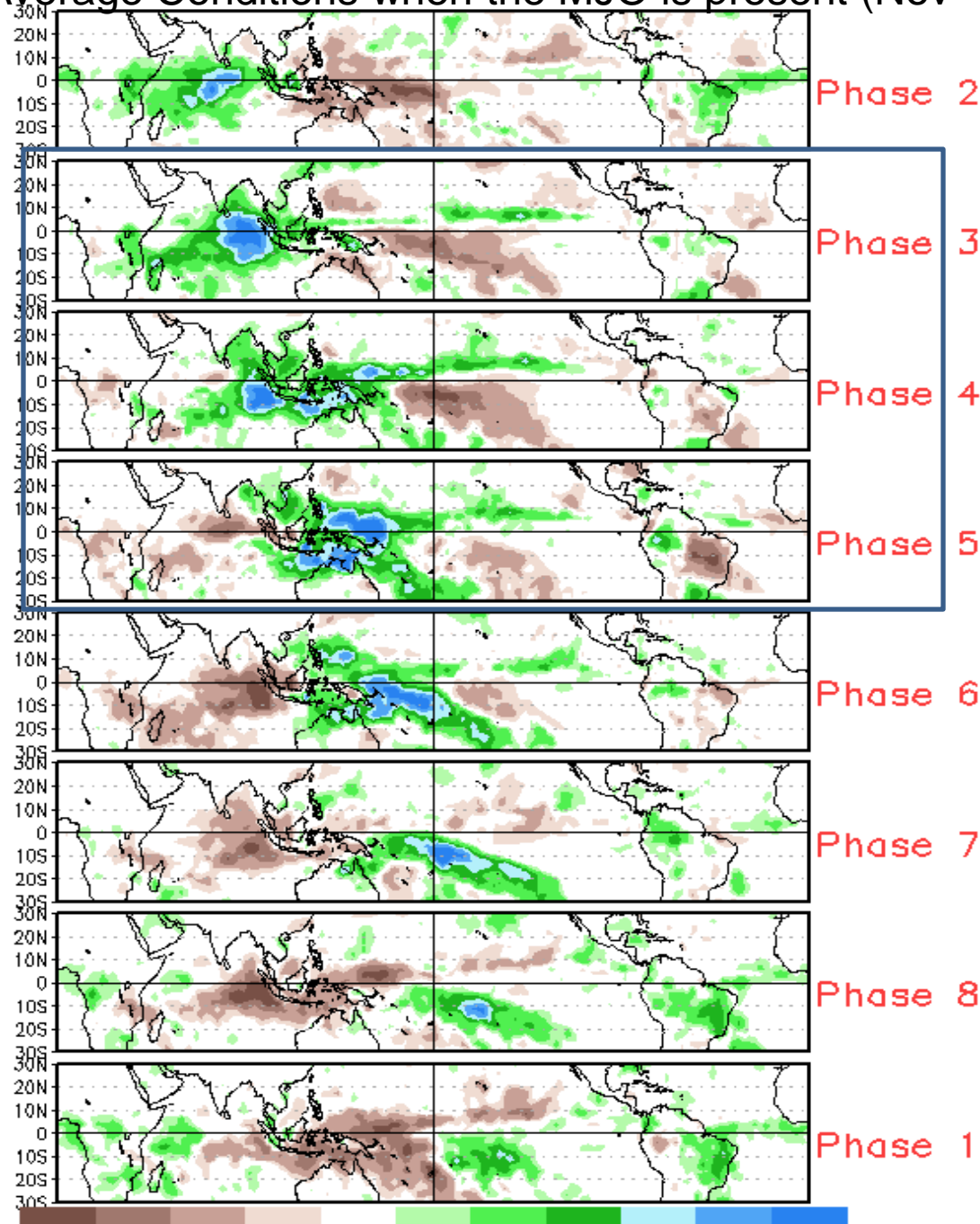
CPC Index depicts enhanced phase over IO, RMM Index over Maritime Continent

MJO Observation/Forecast



Dynamical models bring the RMM Index into the western Pacific by Week-2, with a propagation speed on the high end of the MJO envelope.

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



Phase 2

Phase 3

Phase 4

Phase 5

Phase 6

Phase 7

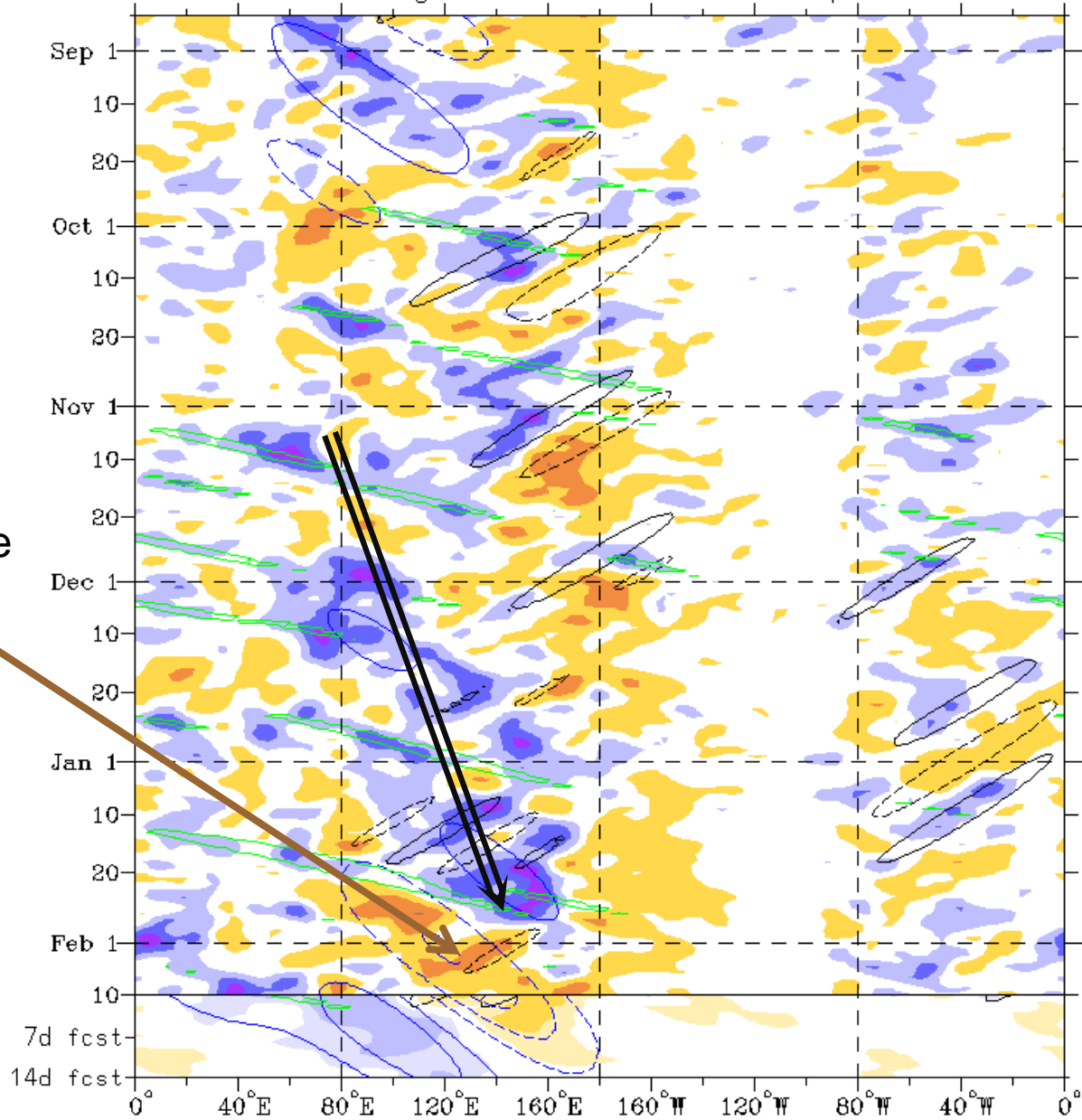
Phase 8

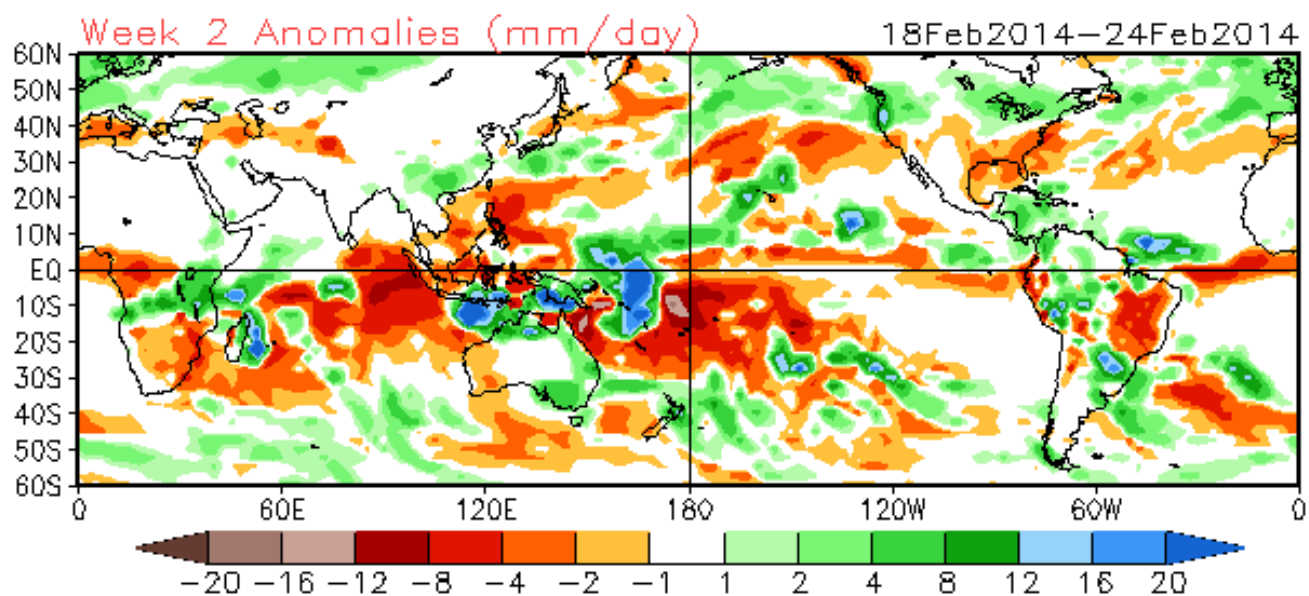
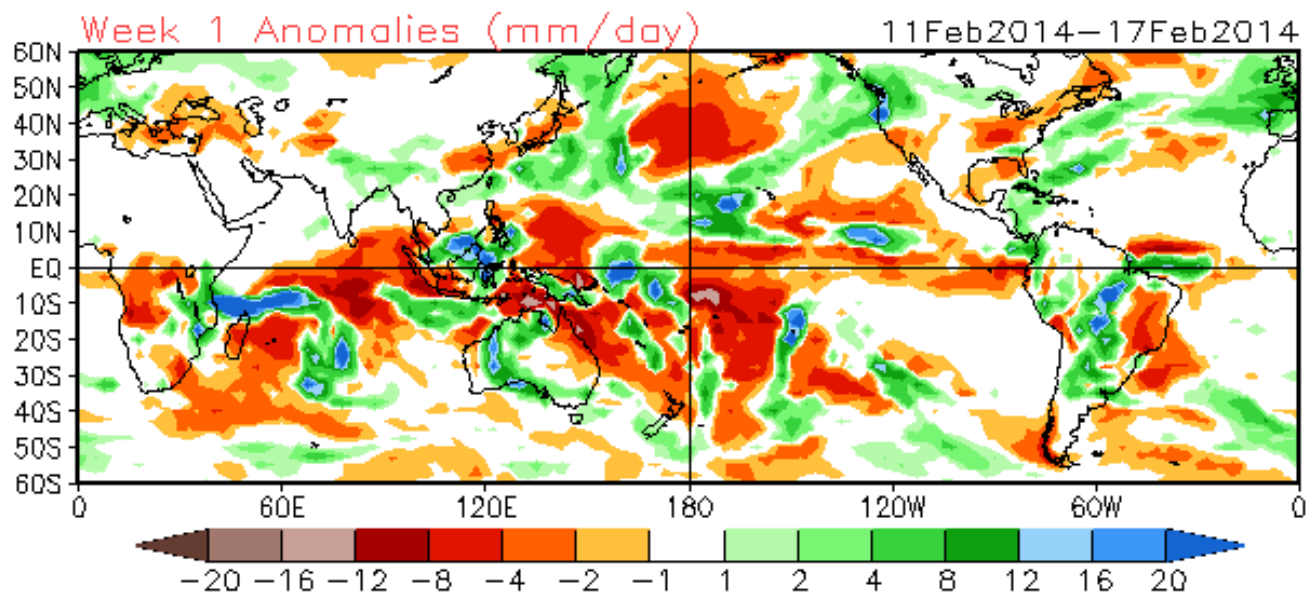
Phase 1

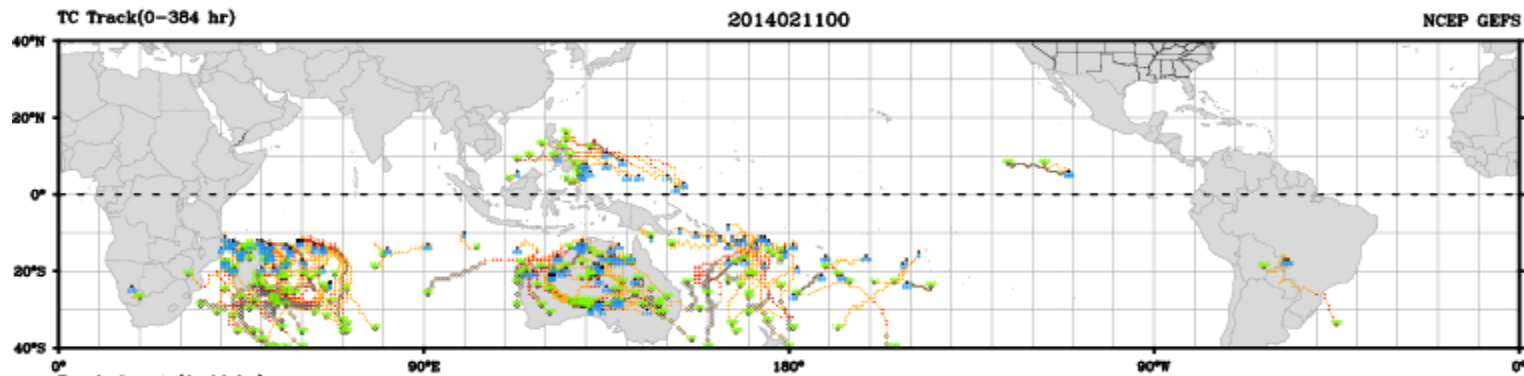
CAVEAT:



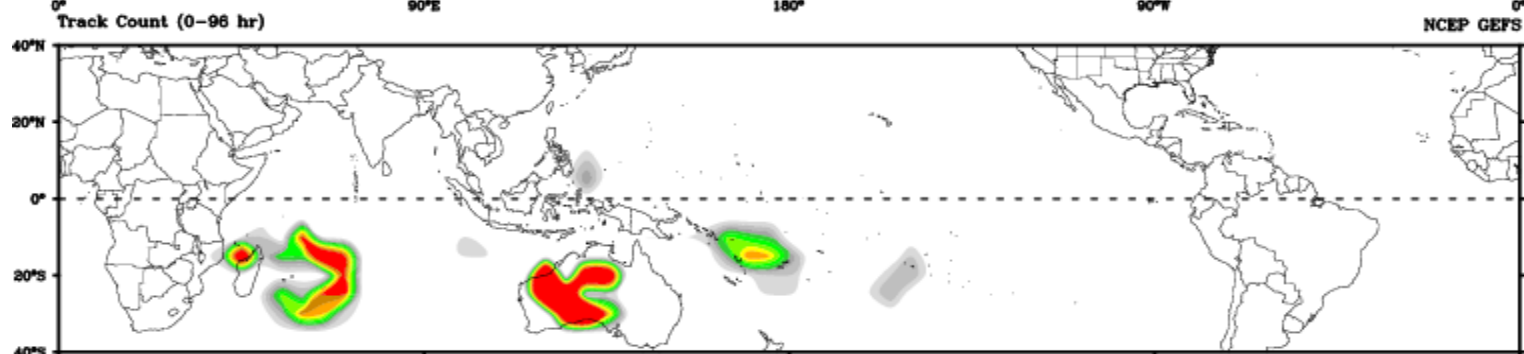
Suppressed convection over the Maritime Continent, western Pacific has masked a low-frequency pattern favoring enhanced convection over the western Pacific.



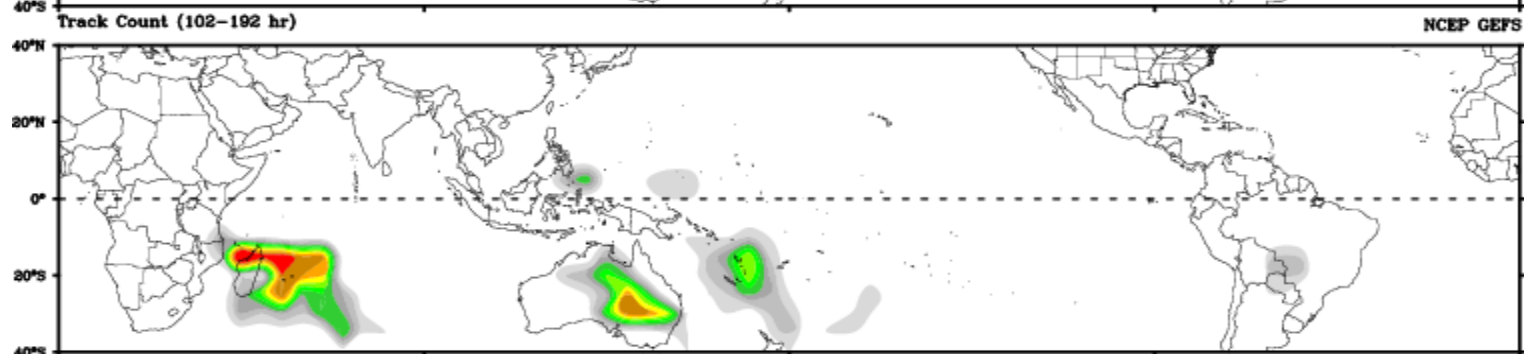




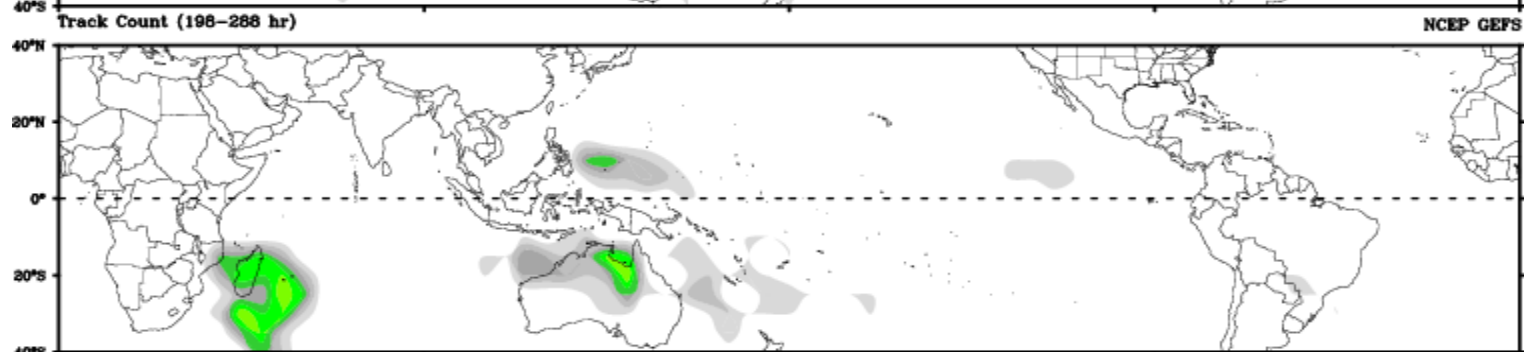
Days 1-4



Day 5-8

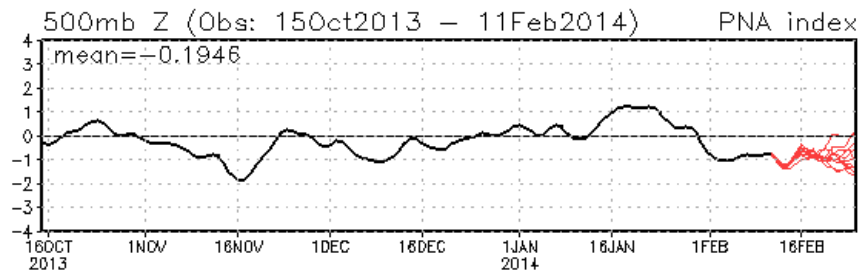


Day 9-12

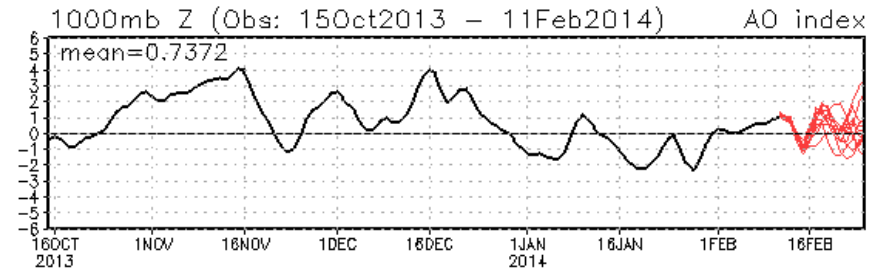


Connections to U.S. Impacts

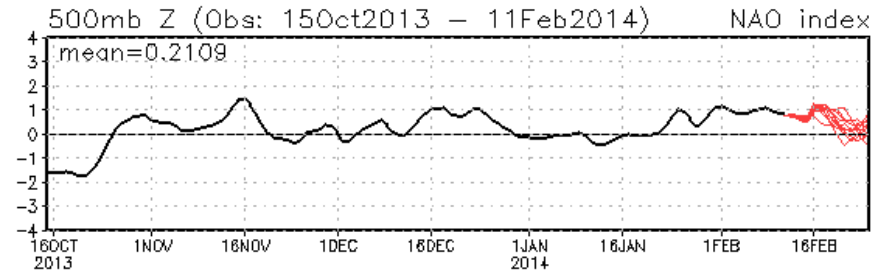
PNA: Observed & ENSM forecasts



AO: Observed & ENSM forecasts



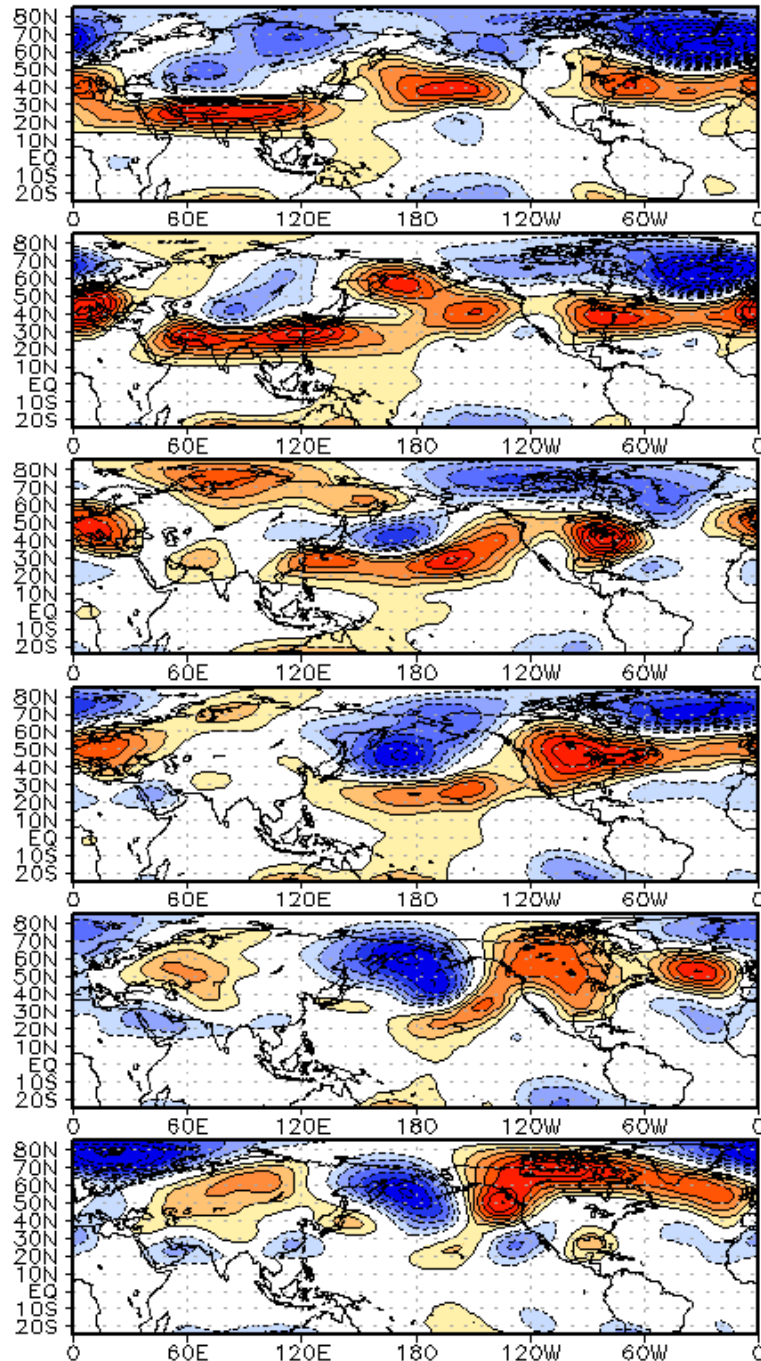
NAO: Observed & ENSM forecasts

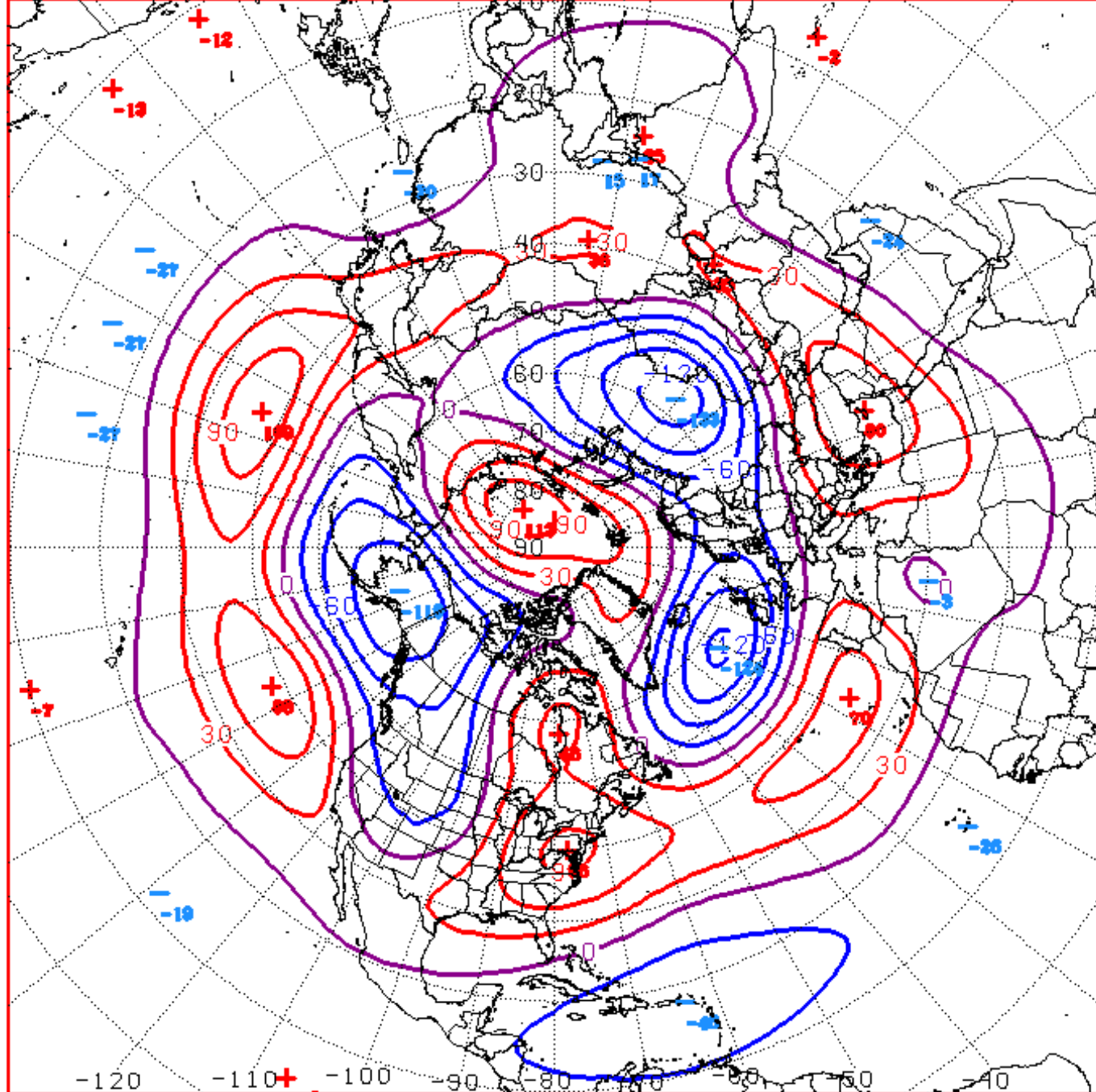


Lagged composites based on a Phase-4 MJO.

Note strong ridging over the eastern CONUS during the Week-2 period.

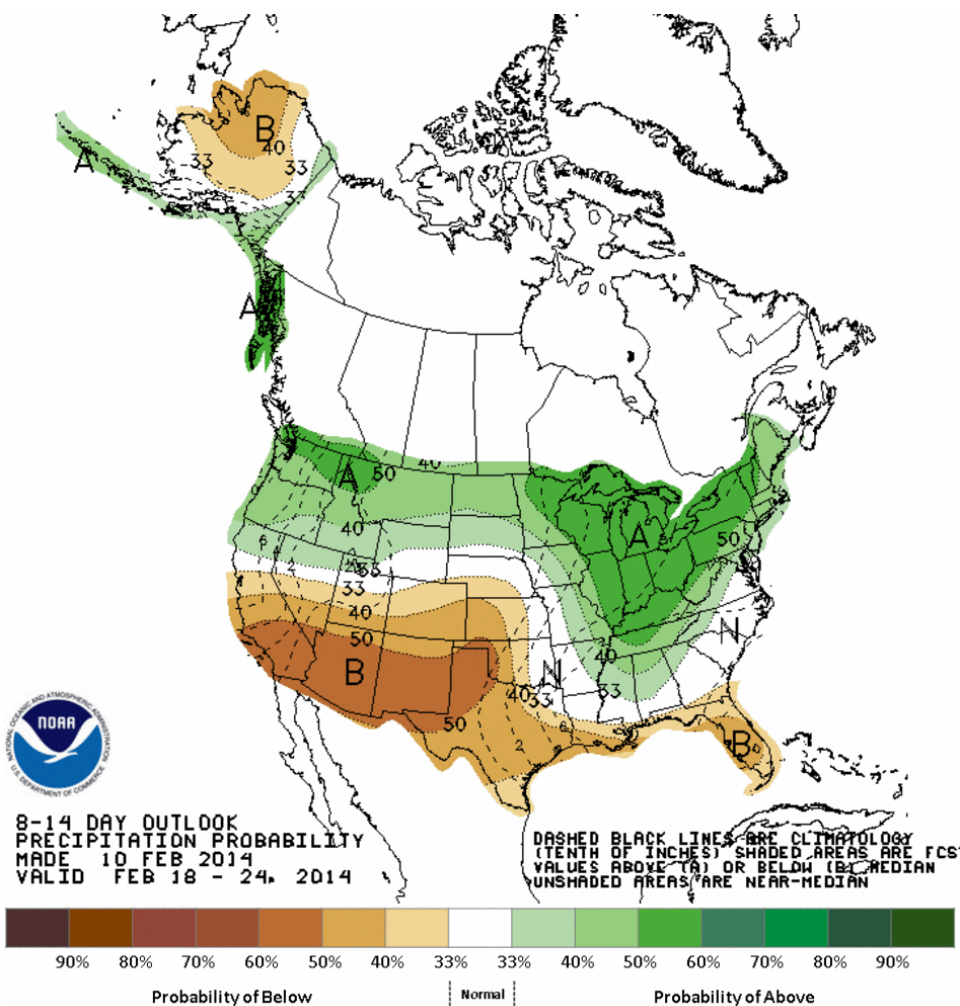
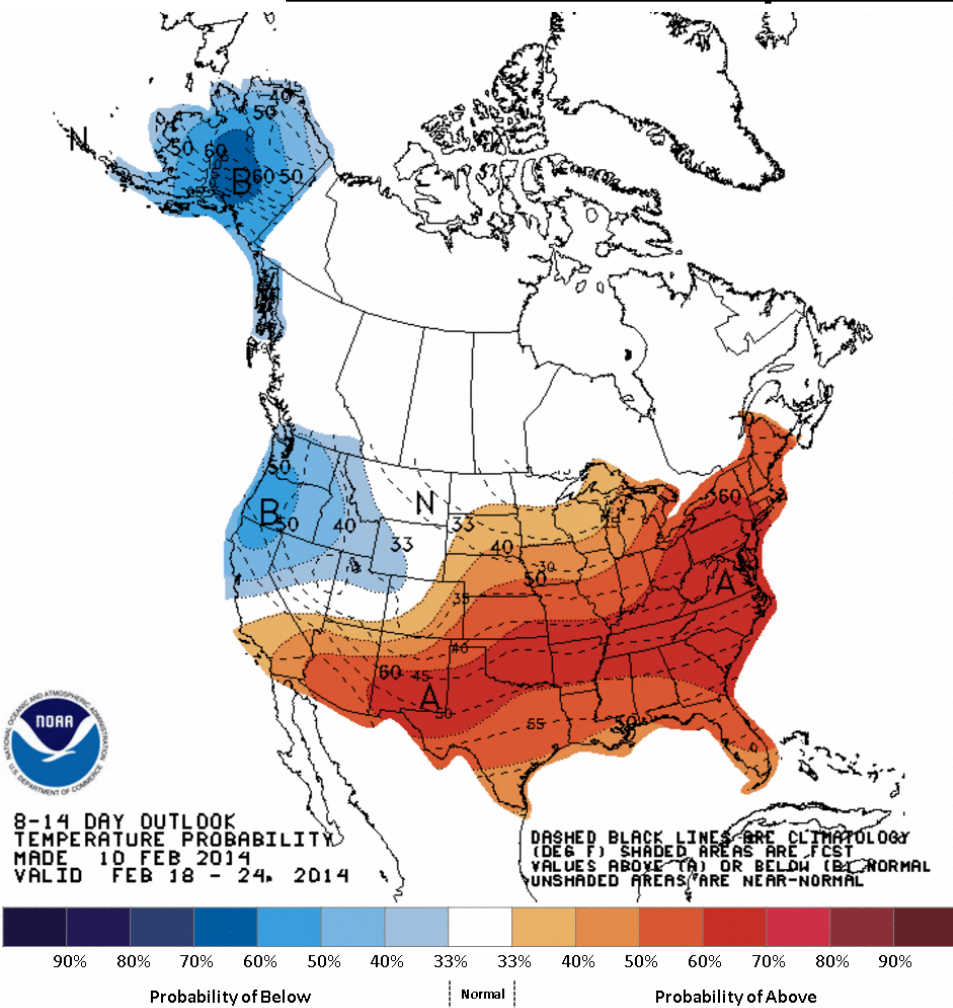
The pattern change may be short lived if anomalous convection refires over the western Pacific.





D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE FEB 11 2014 1109 UTC CNTD FEB 22 2014

Week 2 – Temperature and Precipitation

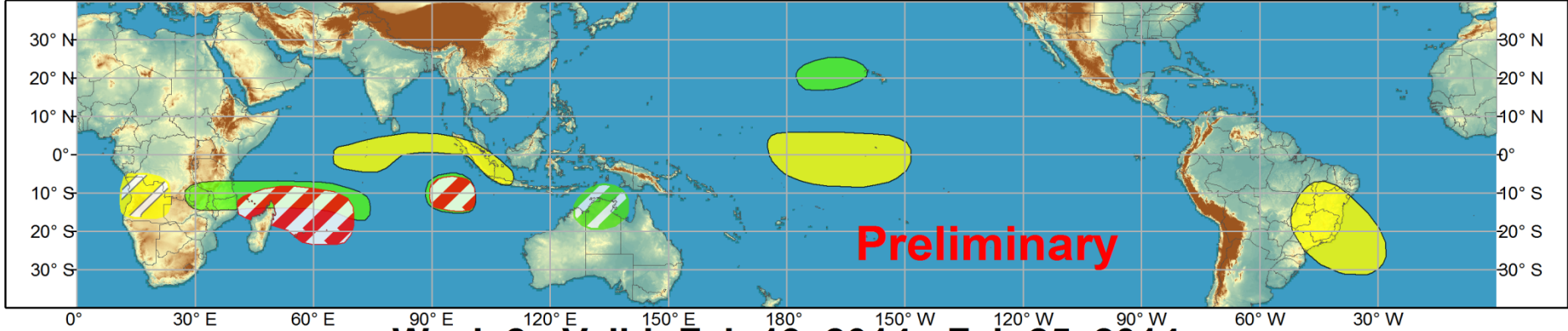




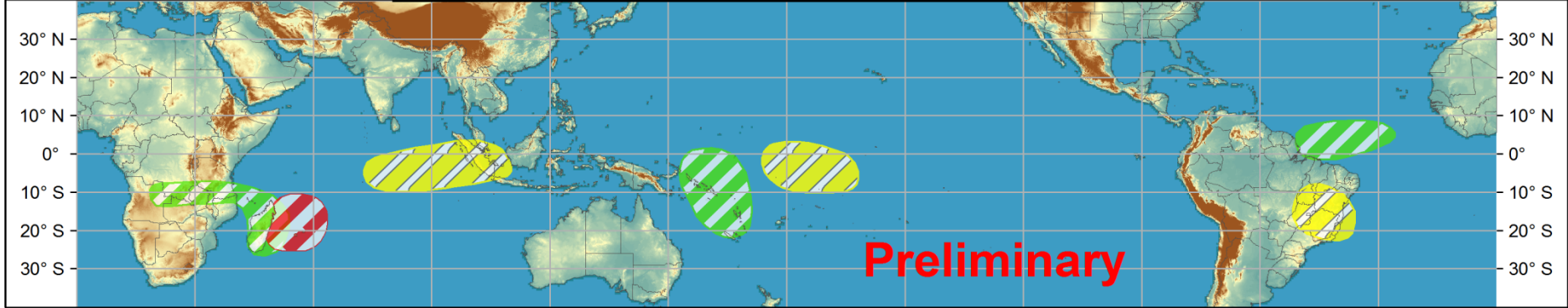
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Weekly total rainfall in the upper third of the historical range.

Below-average rainfall



Weekly total rainfall in the lower third of the historical range.

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