

Global Tropics Hazards And Benefits Outlook

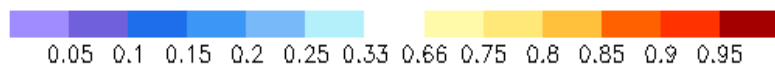
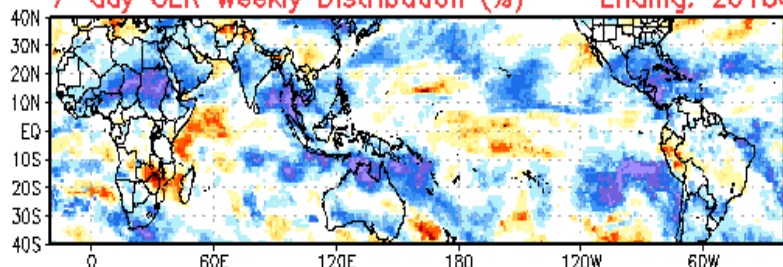
1/30/2018

Brad Pugh
Kyle MacRitchie

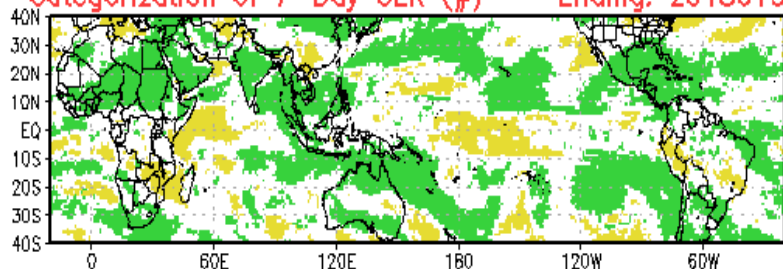
Outline

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

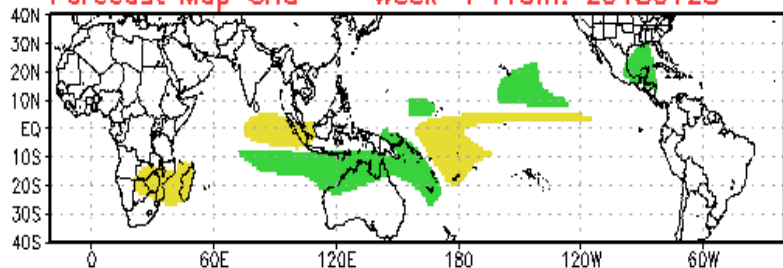
7-day OLR Weekly Distribution (%) -- Ending: 20180130



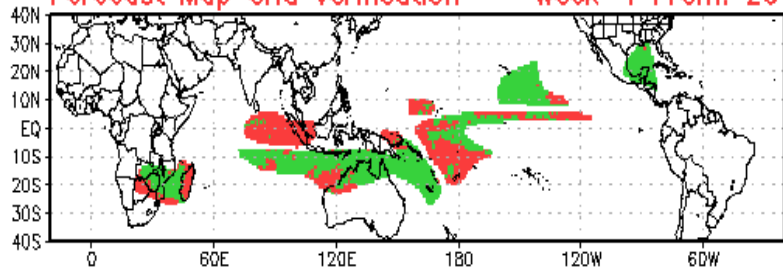
Categorization of 7-Day OLR (#) -- Ending: 20180130



Forecast Map Grid -- Week-1 From: 20180123

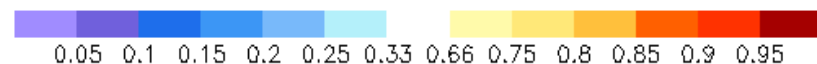
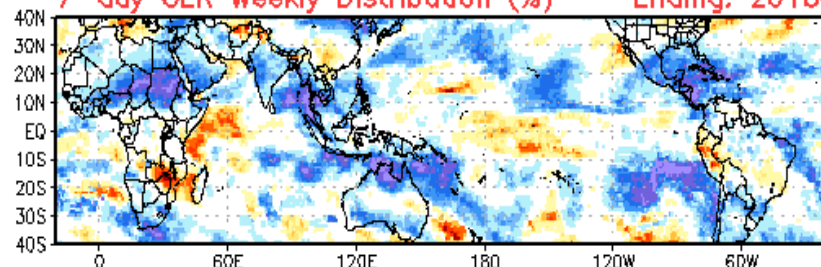


Forecast Map Grid Verification -- Week-1 From: 201801

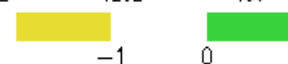
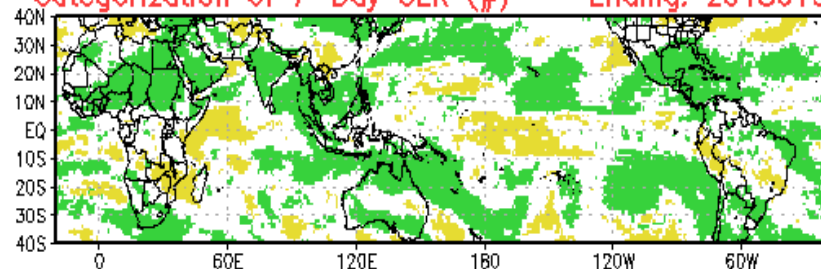


Hit: Green, Miss: Red
Heidke Skill Score: 40.4979

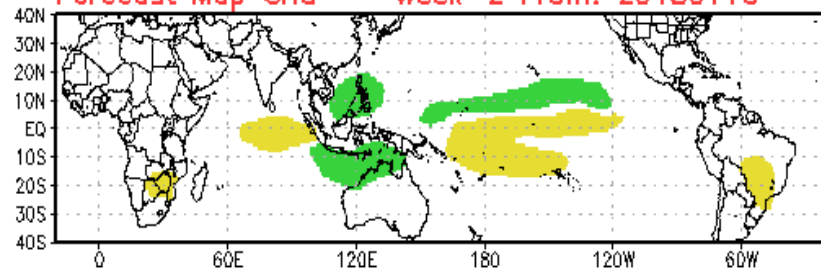
7-day OLR Weekly Distribution (%) -- Ending: 20180130



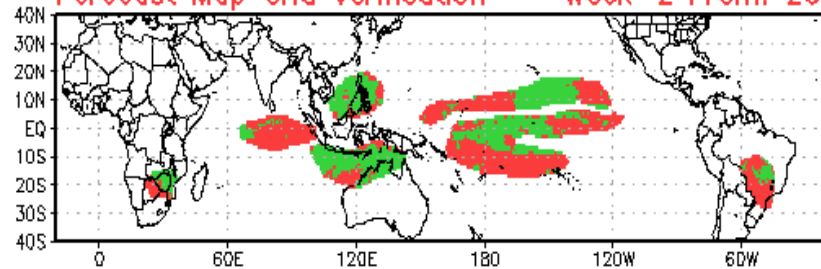
Categorization of 7-Day OLR (#) -- Ending: 20180130



Forecast Map Grid -- Week-2 From: 20180116

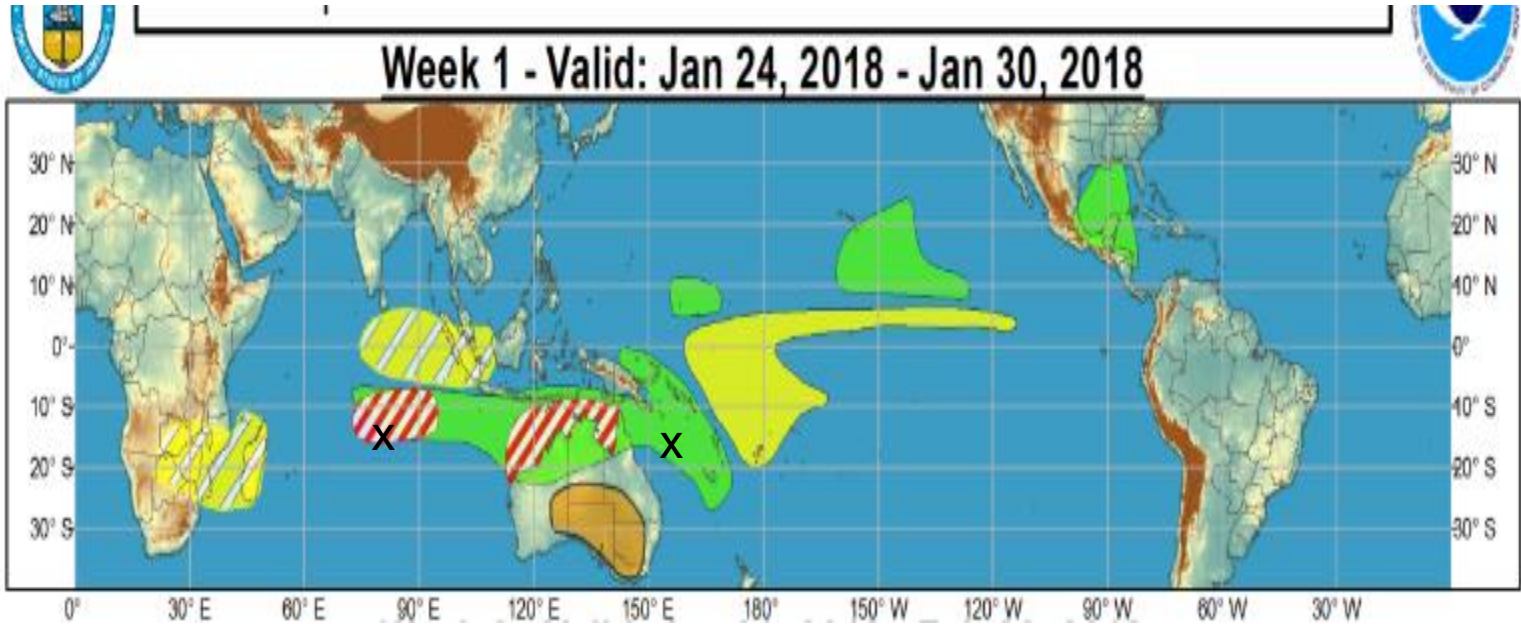


Forecast Map Grid Verification -- Week-2 From: 20180116



Hit: Green, Miss: Red
Heidke Skill Score: 18.2447

Tropical Cyclone Review: Week-1



Synopsis of Climate Modes

ENSO:

- ENSO Alert System Status: [La Niña Advisory](#)
- La Niña is likely (~85-95%) through Northern Hemisphere winter, with a transition to ENSO-neutral expected during the spring.

MJO and other subseasonal tropical variability:

- The MJO remained active, with the enhanced phase advancing to the West Pacific.
- Dynamical and statistical models continue the high amplitude MJO with an eastward propagation across the Pacific (phases 6 through 8) during early February.
- Tropical cyclone development is likely over the Coral Sea and South Pacific with the Indian Ocean becoming less favorable.

Extratropics:

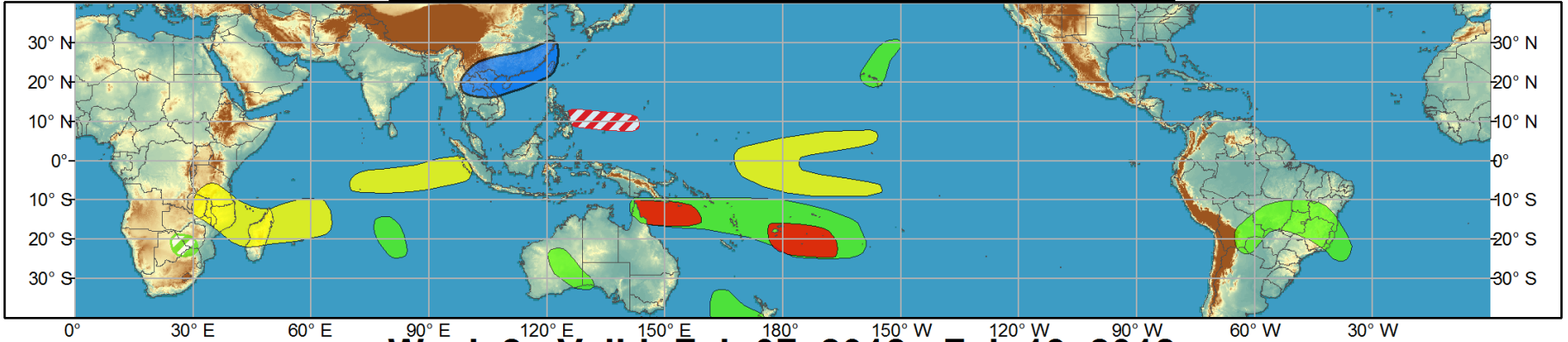
- A West Pacific MJO event favors a continuation of below-normal temperatures beyond Week-2 across parts of the central and eastern U.S.



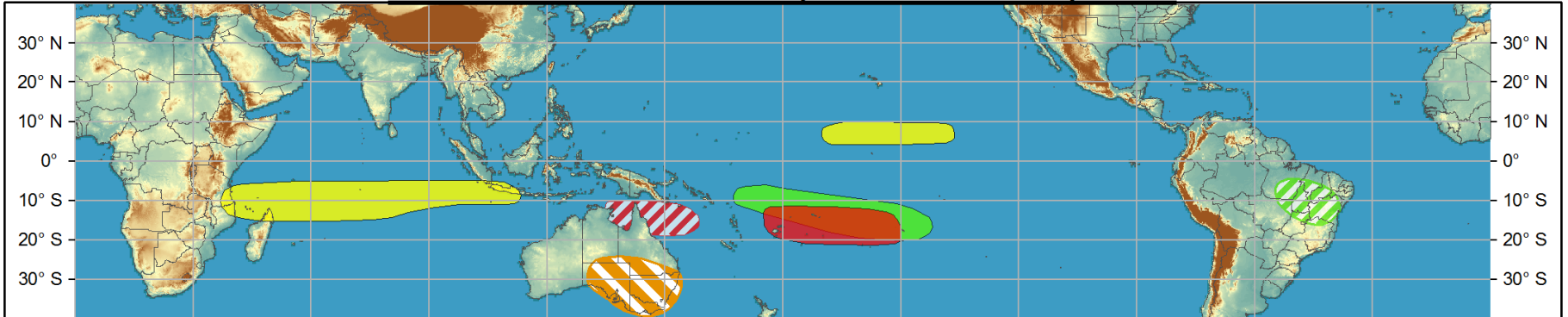
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jan 31, 2018 - Feb 06, 2018



Week 2 - Valid: Feb 07, 2018 - Feb 13, 2018



Confidence
 High Moderate

- Tropical Cyclone Formation** Development of a tropical cyclone (tropical depression - TD, or greater 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: 01/30/2018

Forecaster: Pugh/MacRitchie

Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.

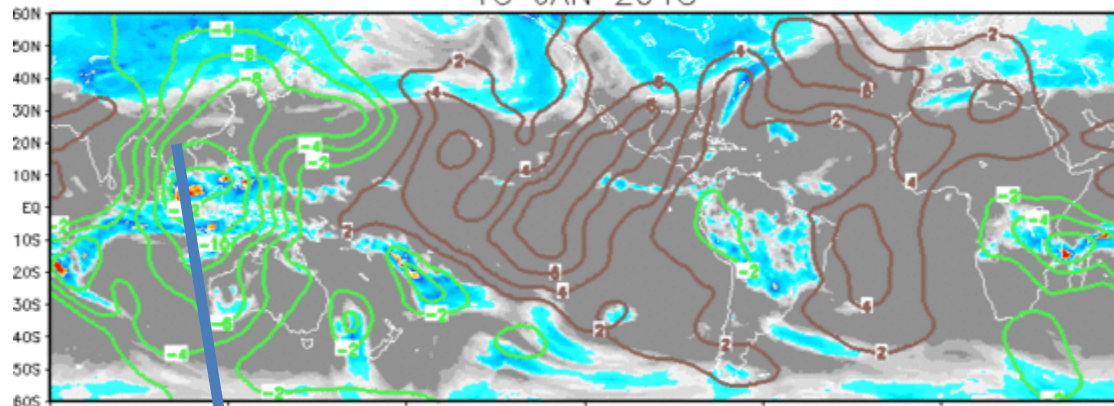


IR Satellite & 200-hpa Velocity Potential Anomalies

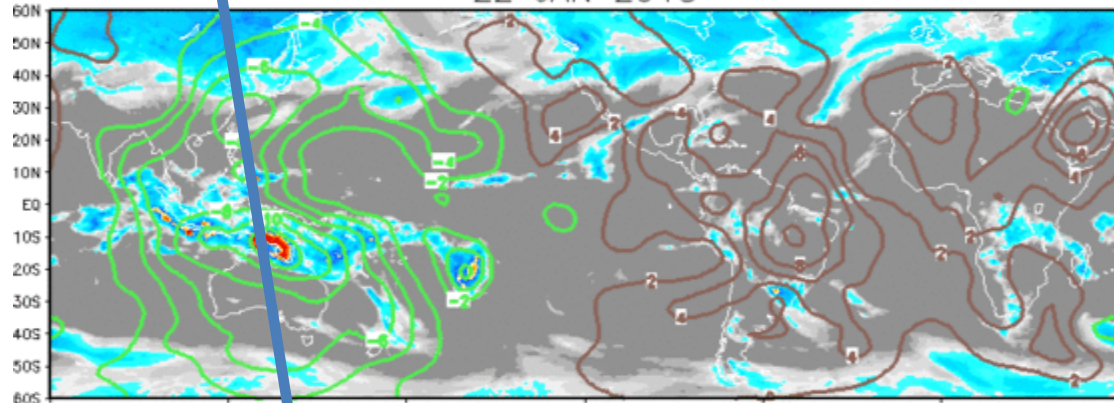
Green: Enhanced Divergence

Brown: Enhanced Convergence

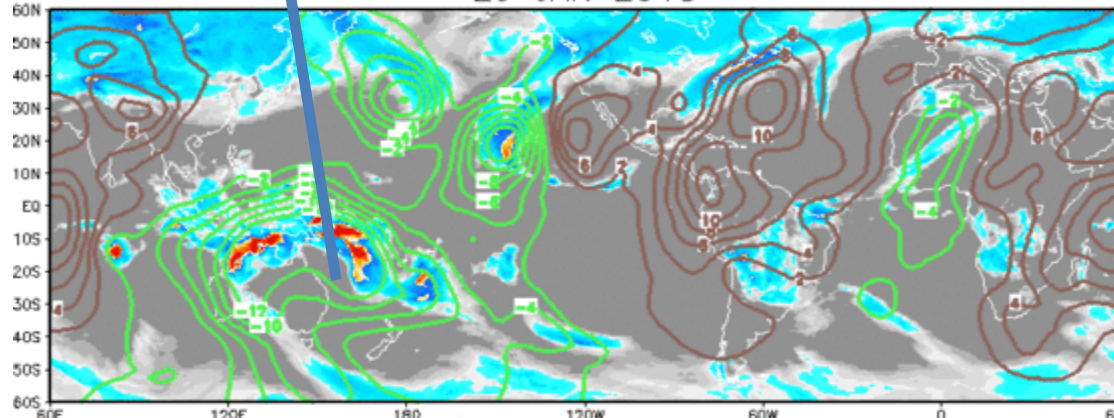
15 JAN 2018



22 JAN 2018



29 JAN 2018



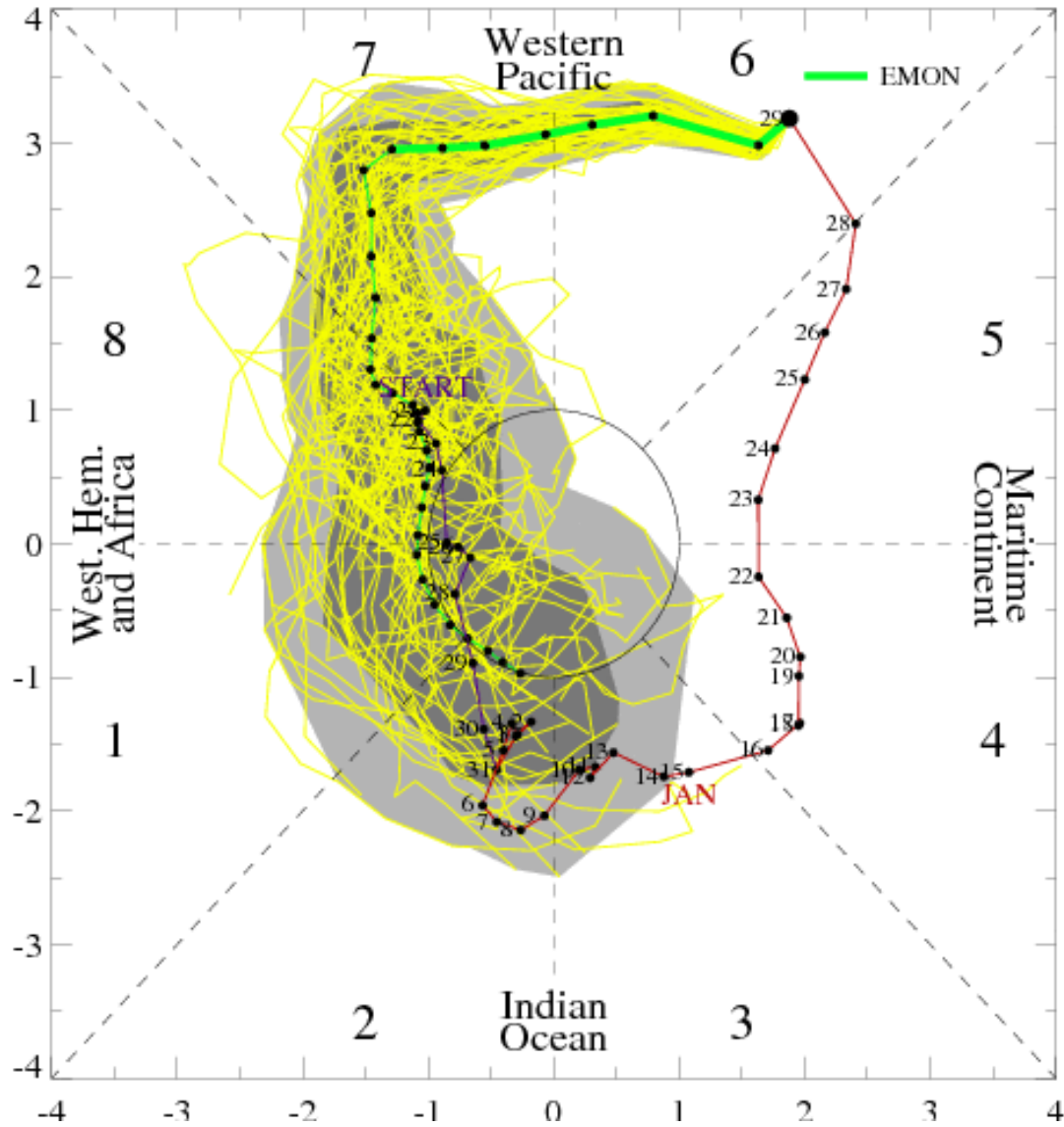
Increasingly organized upper-level response as the MJO began propagating over the Maritime Continent.

Continuation of the coherent Wave-1 pattern.

Eastward propagation of enhanced phase to the West Pacific, while suppressed phase enters western Indian Ocean.

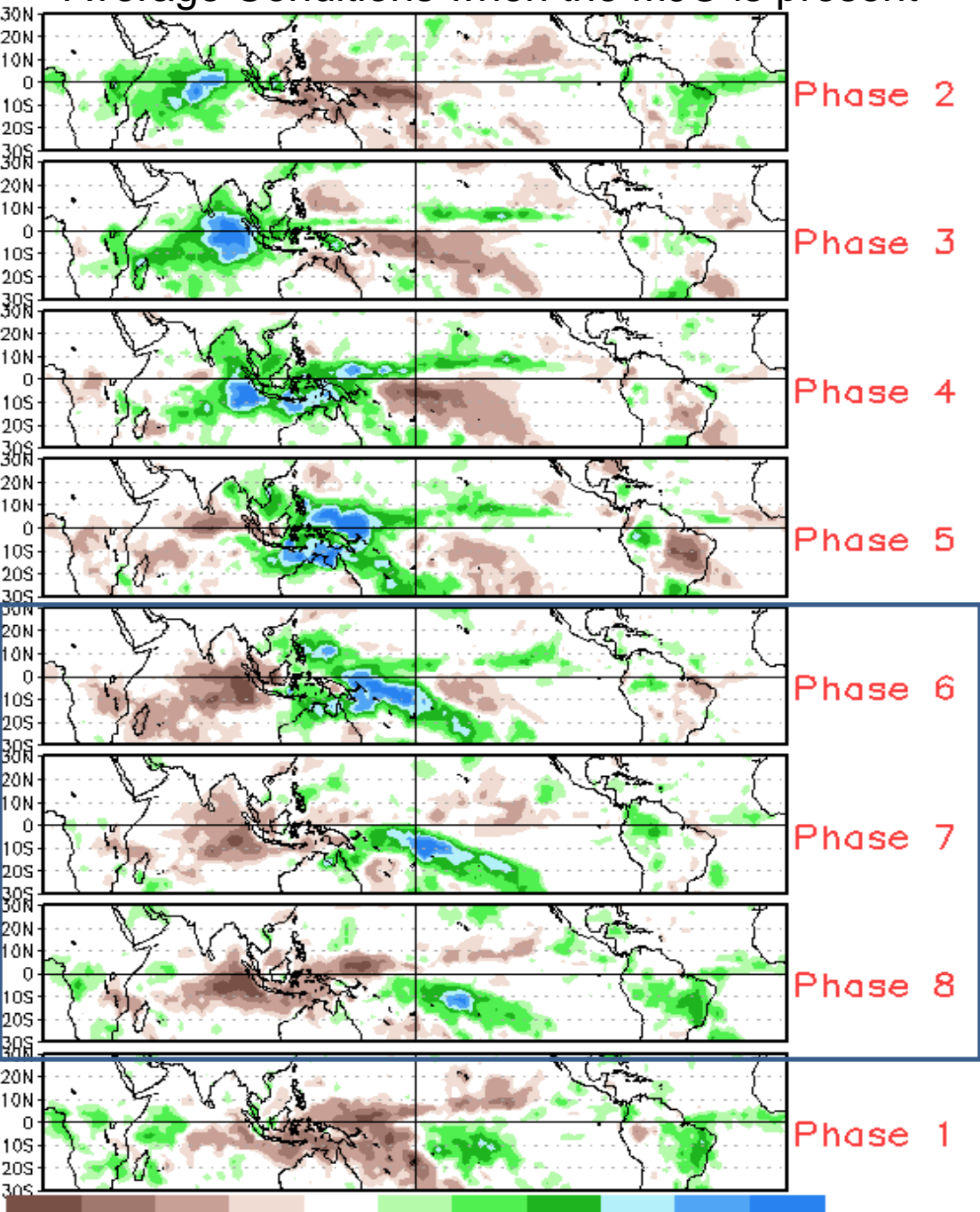
ECMWF Monthly

MJO Index Forecast for 30Jan2018-02Mar2018



GFS is similar but with higher amplitude

Average Conditions when the MJO is present



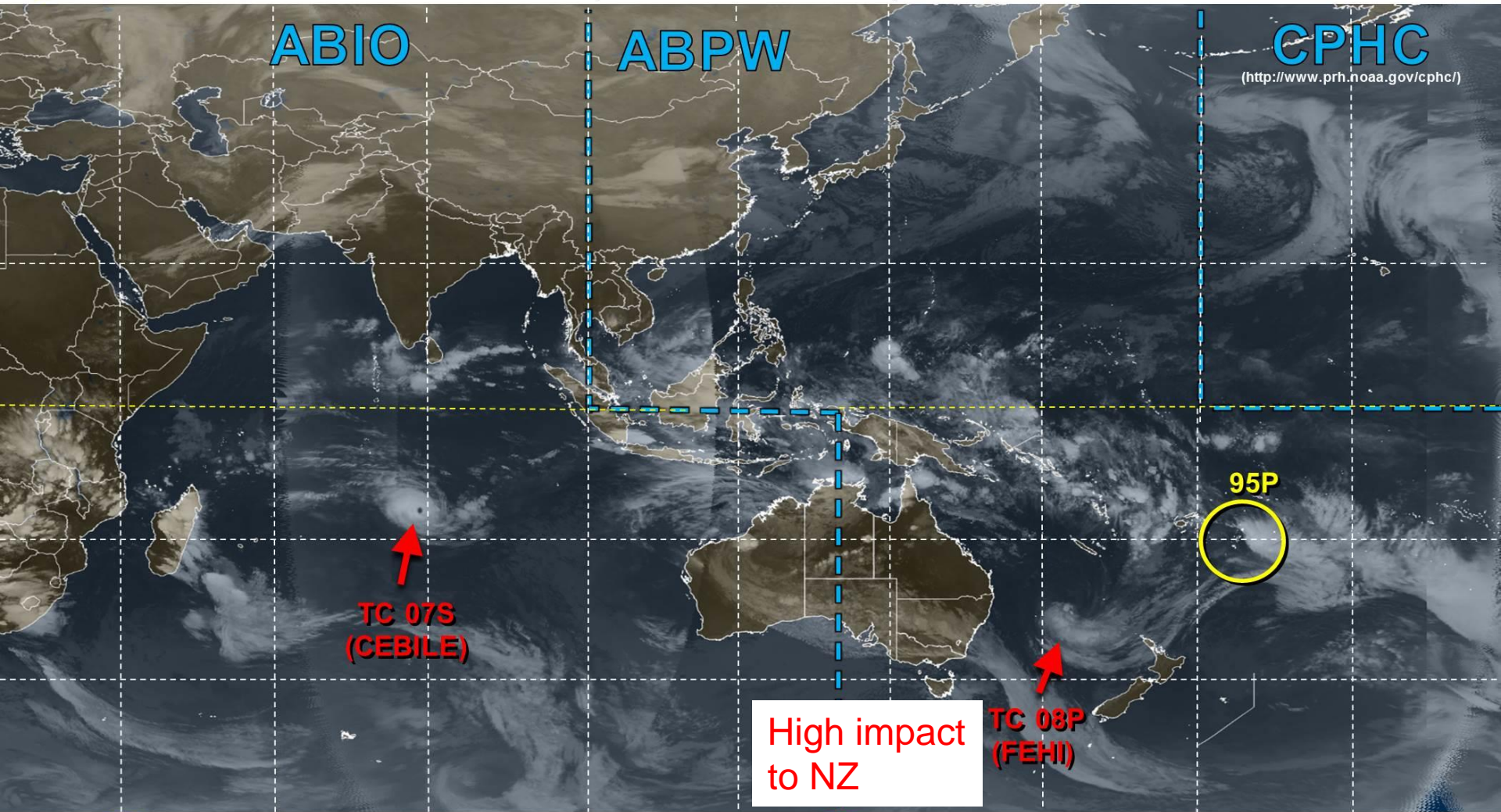
CAVEAT: These panels are representative of robust MJO events.



Tropical Cyclone Development Potential

IMAGE TIME 30/1530Z

(PRODUCT OF JTWC/SATOPS)



ABIO

ABPW

CPHC

(<http://www.prh.noaa.gov/cphc/>)

TC 07S
(CEBILE)

TC 08P
(FEHI)

95P

High impact
to NZ

LOW

TC formation unlikely within 24 hours

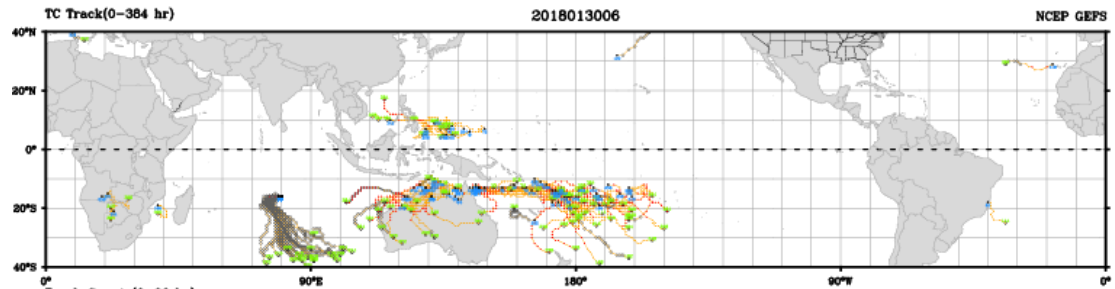
MEDIUM

TC development likely, but expected to occur beyond 24 hours

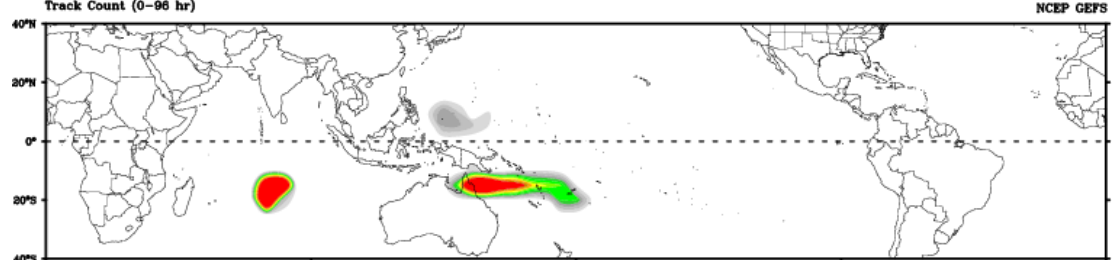
HIGH

TC development likely within 24 hours (Reference TCFA)

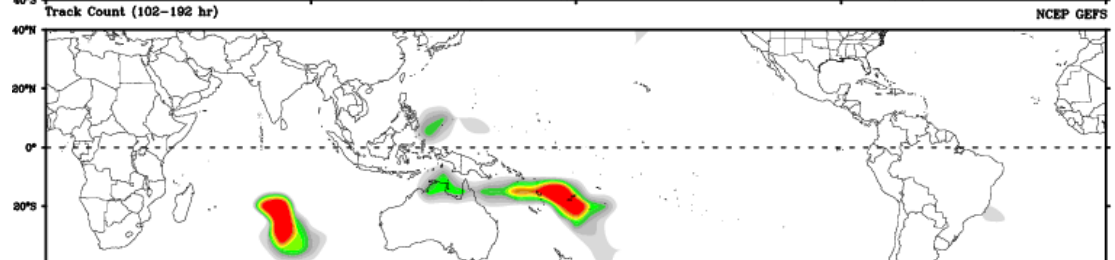
Tropical Cyclone (Reference Warning)



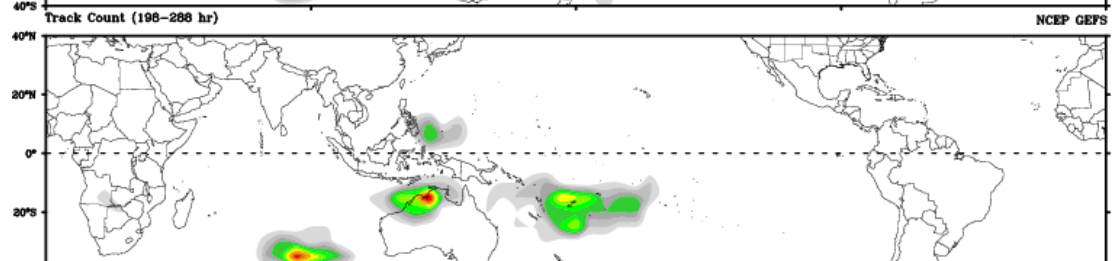
Days 1-4



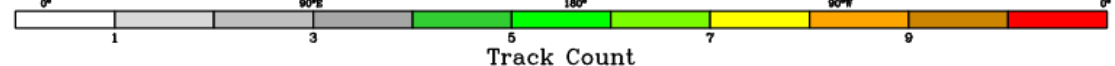
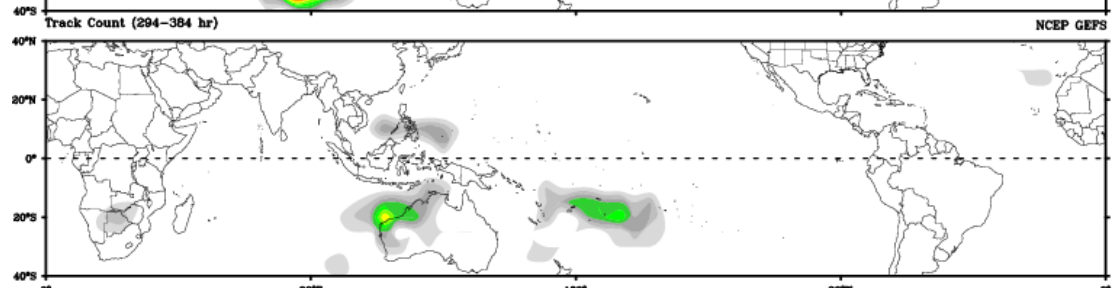
Day 5-8



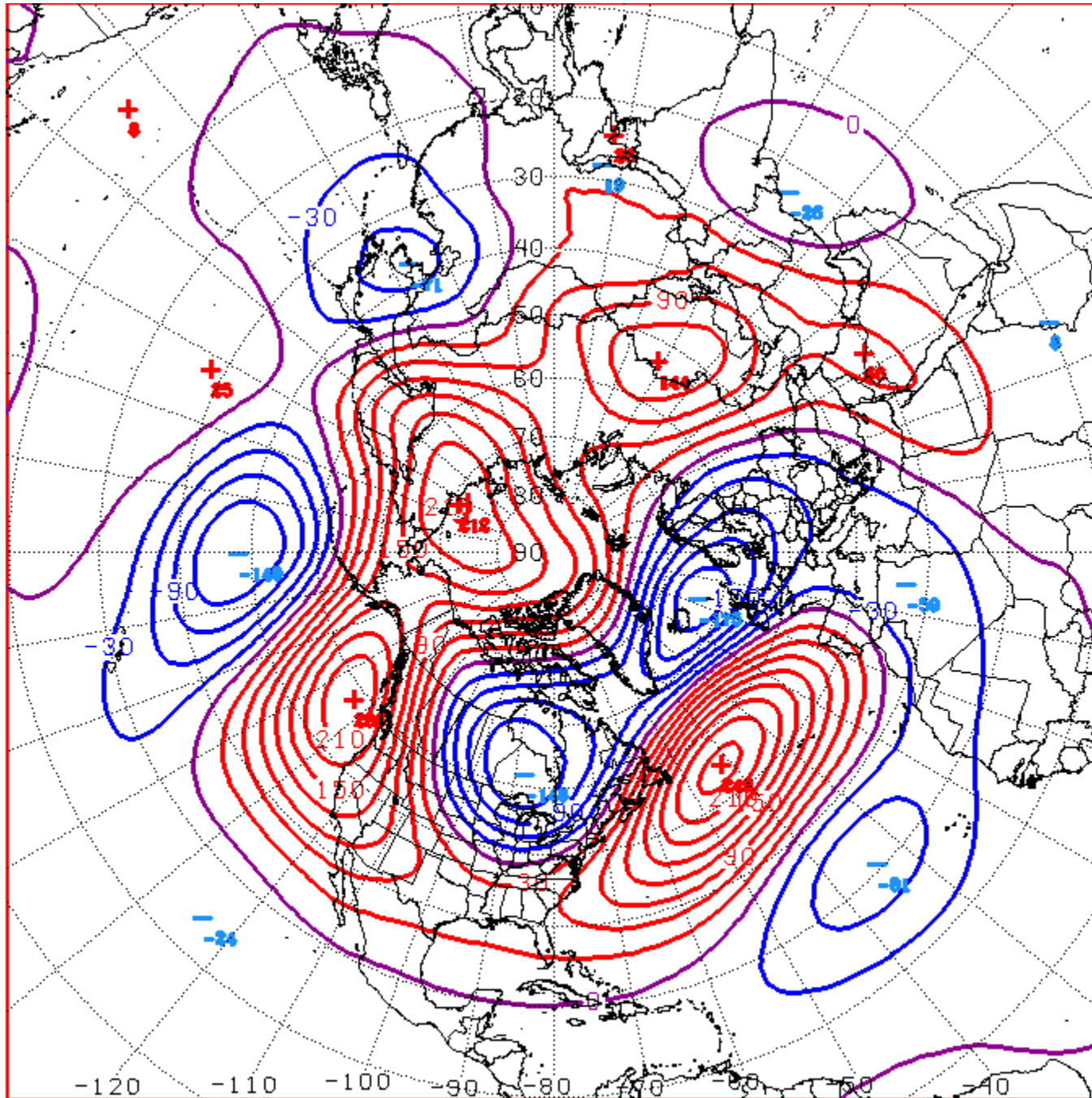
Day 9-12



Day 13-15

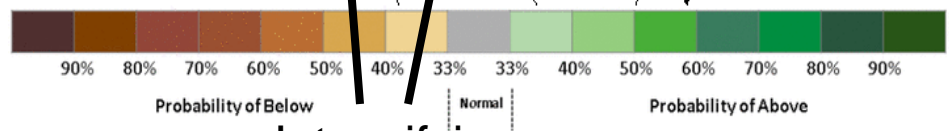
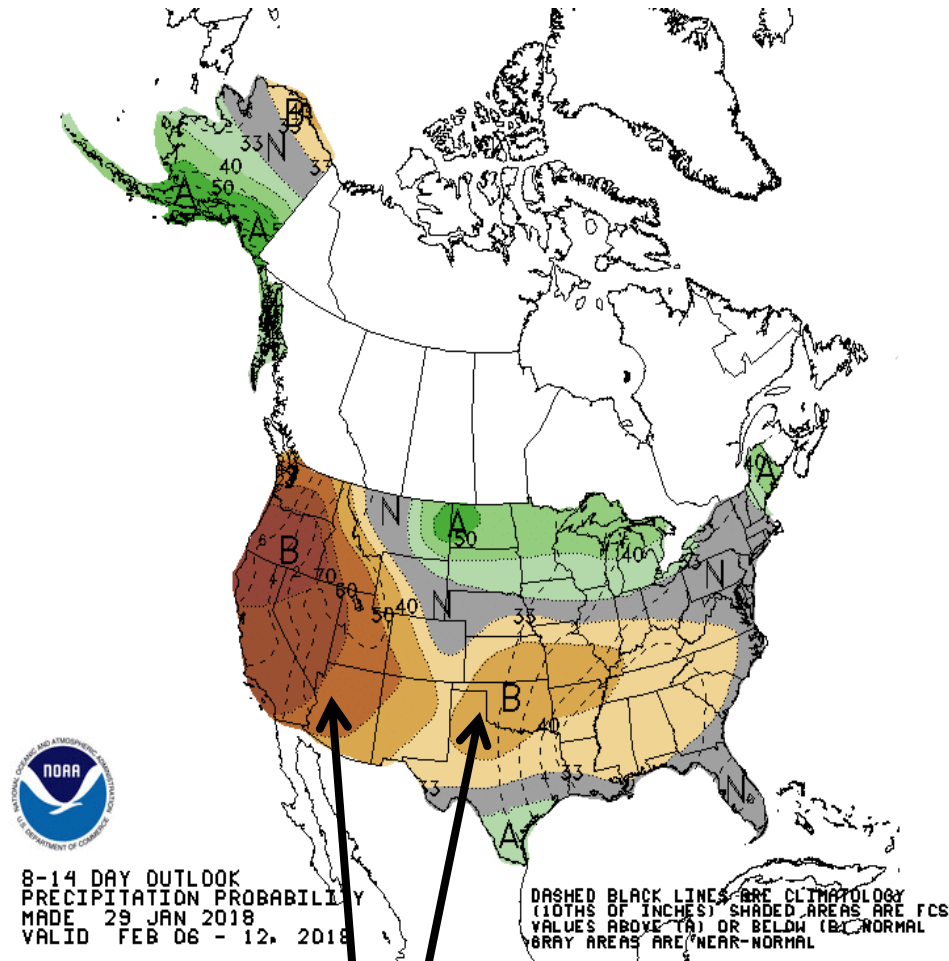
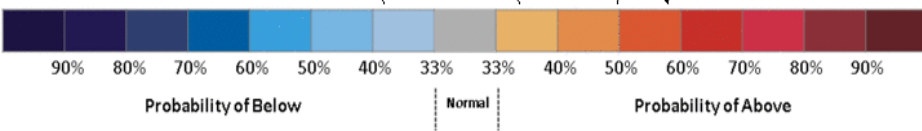
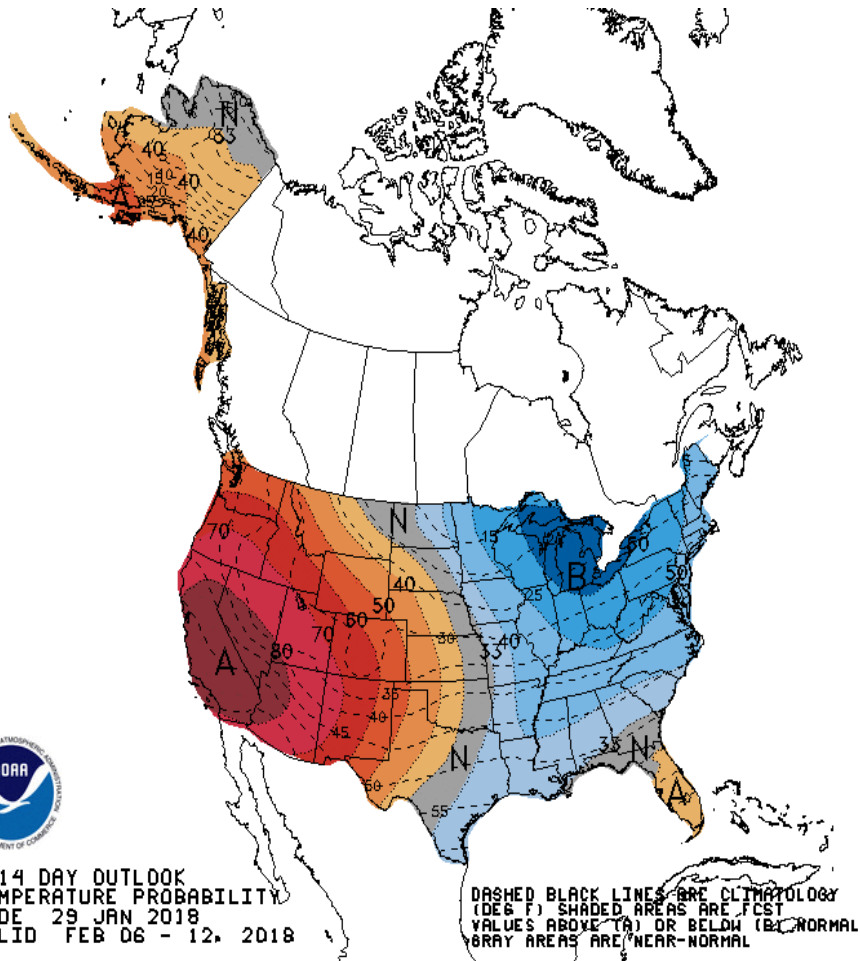


Connections to U.S. Impacts



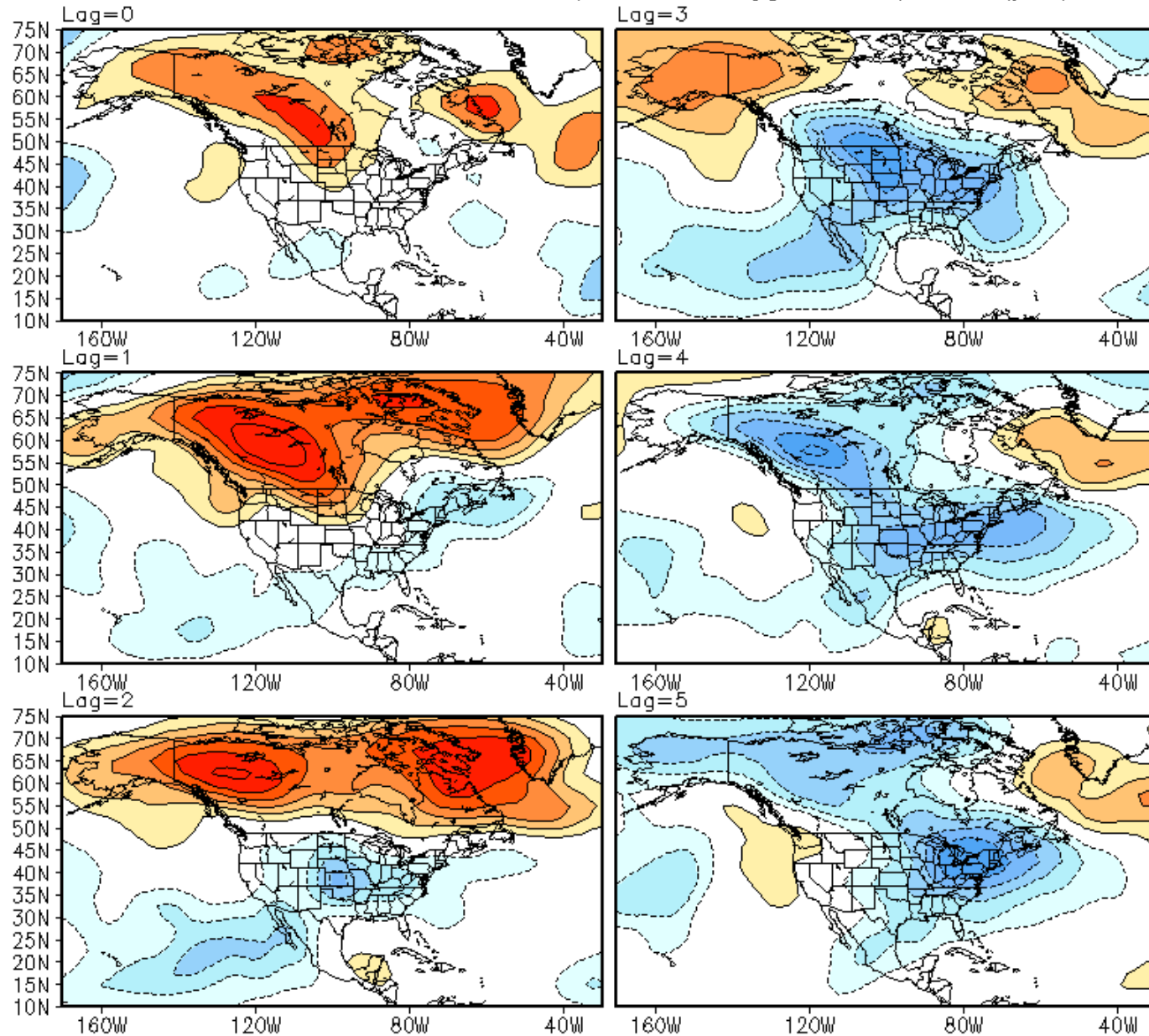
D+11 500 MB ANOMALIES FROM 06Z ENSM
 CPC MAP MADE JAN 30 2018 1156 UTC CNTD FEB 10 2018

Week 2 – Temperature and Precipitation

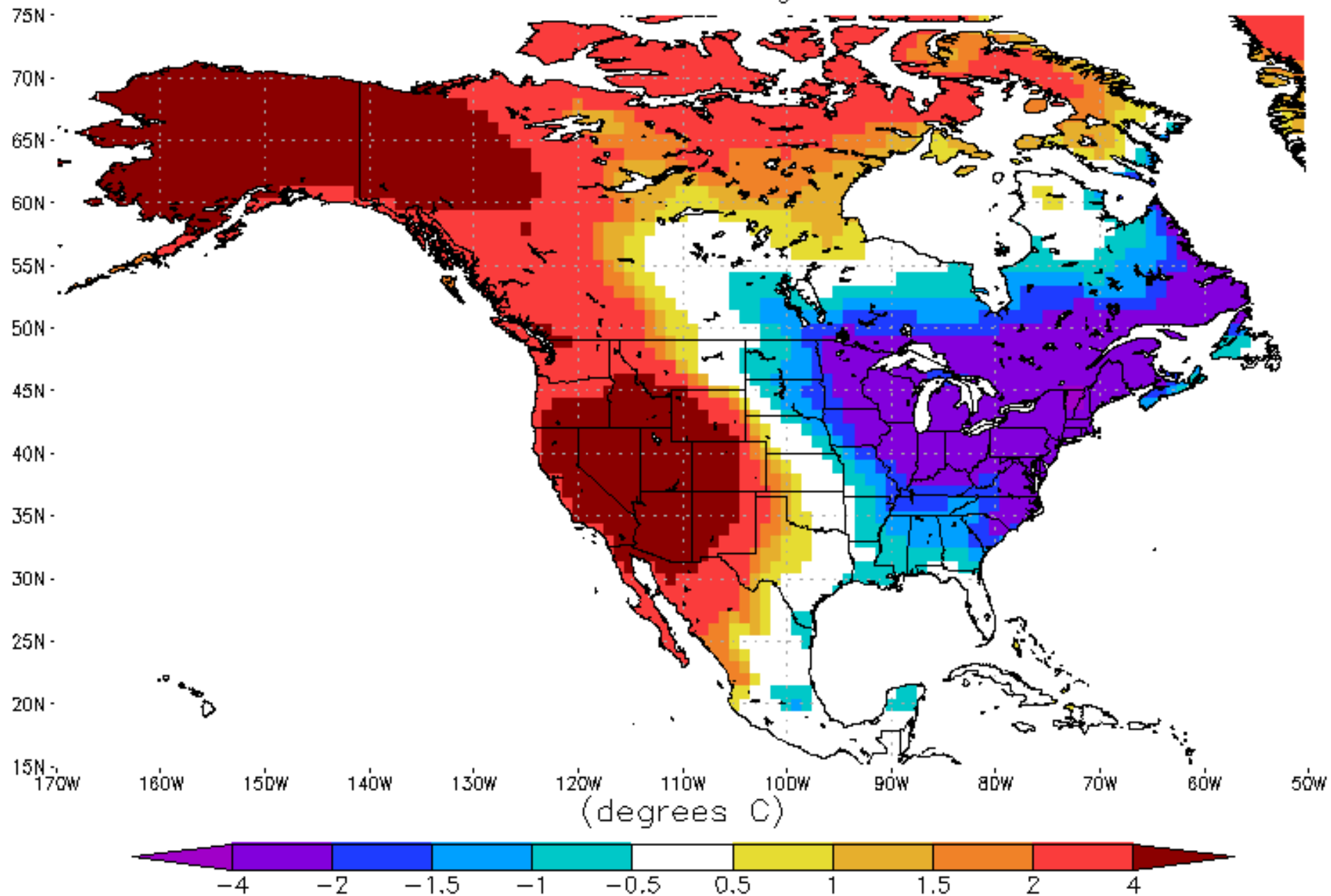


Intensifying
Drought

RMM Phase 7 850-hPa Temperature Lagged Composite (jfm)



CFS Temperature Anomalies Issued 29Jan2018
Week-3 Forecast Ending 20Feb2018

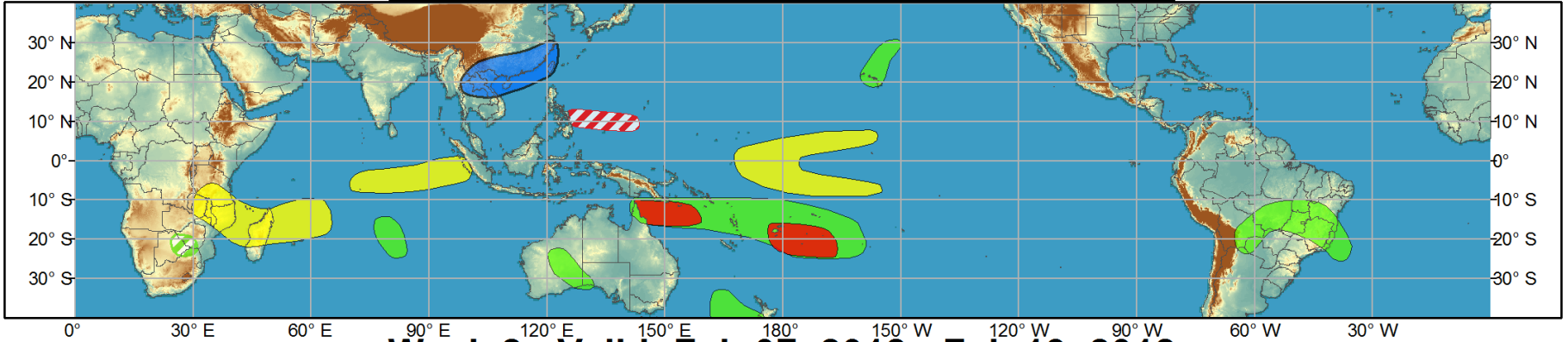




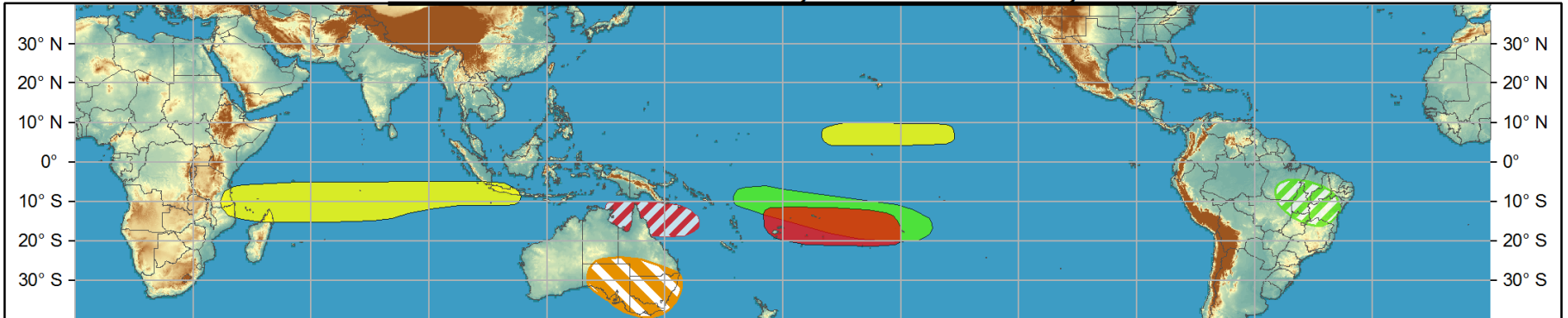
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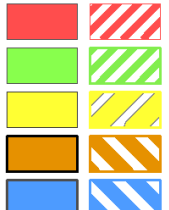
Tropical Cyclone Formation

Above-average rainfall

Below-average rainfall

Above-normal temperatures

Below-normal temperatures



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