Global Tropics Hazards And Benefits Outlook

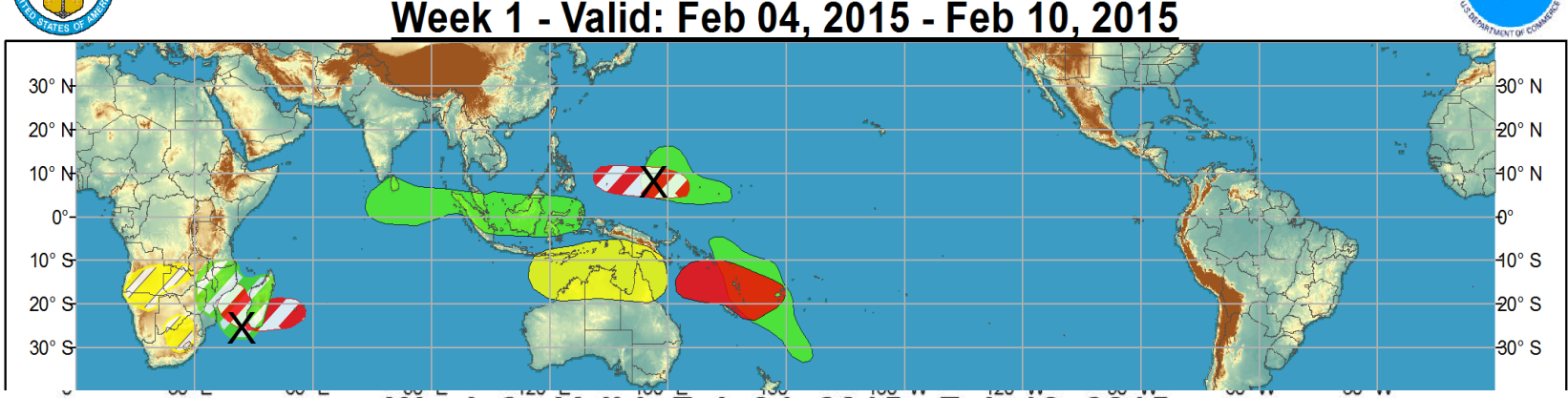
February 10, 2015

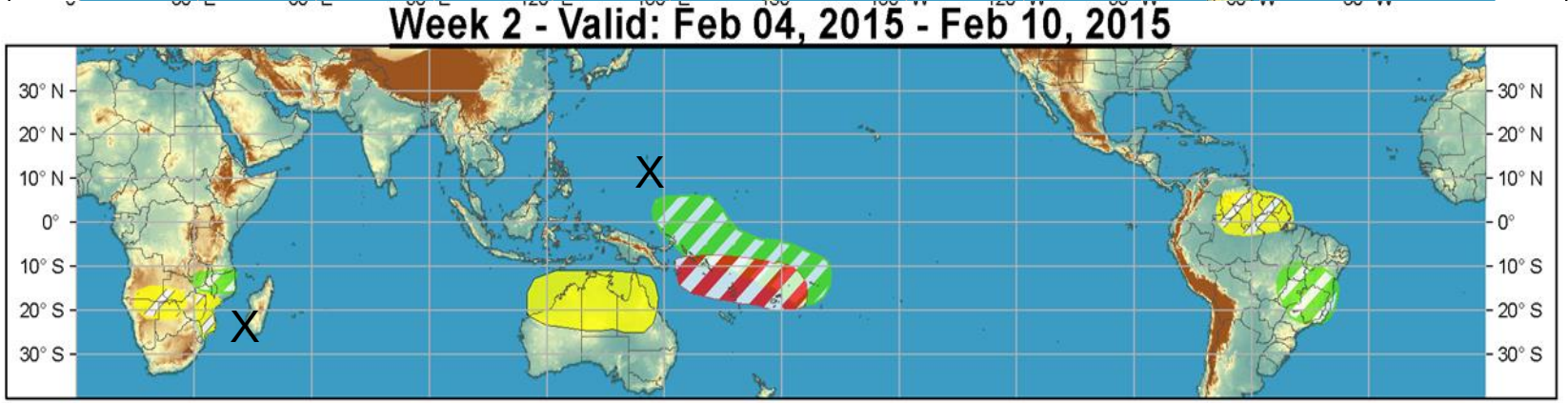
Adam Allgood

Outline

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

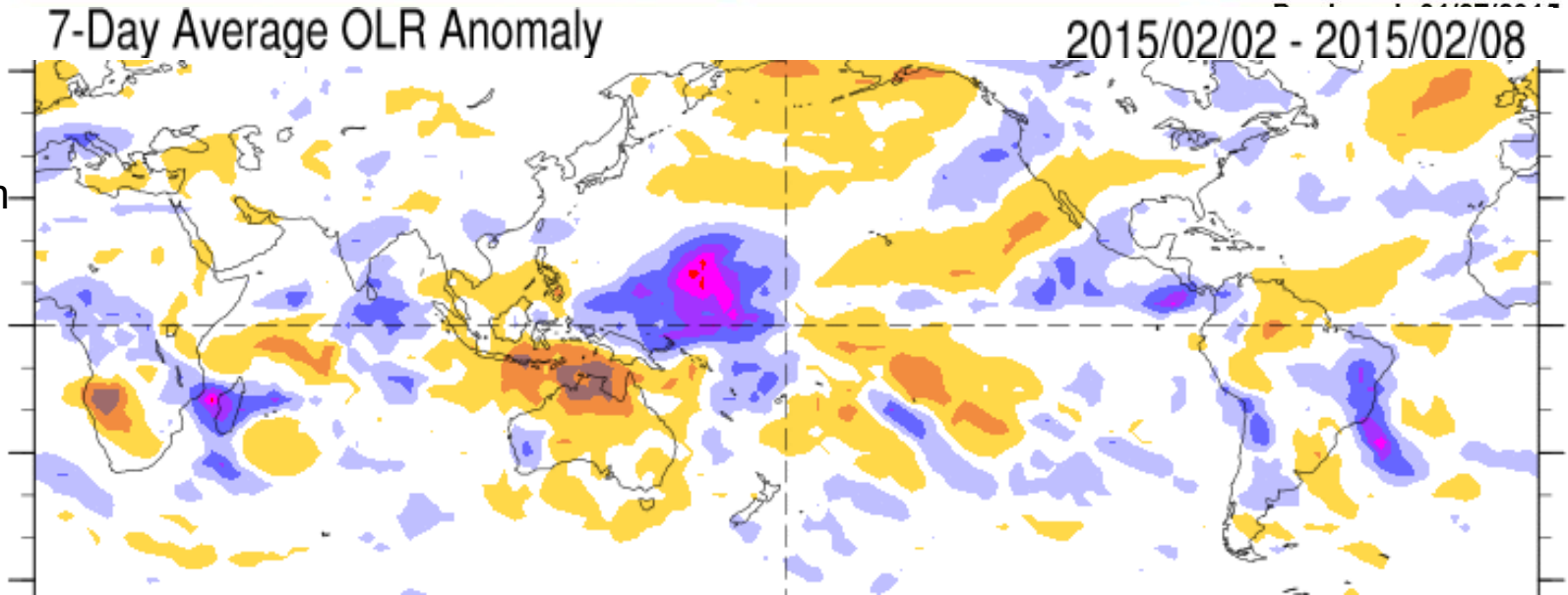
Outlook Review





Cool shading
More clouds/rain

Warm shading
Less clouds/rain



Synopsis of Climate Modes

ENSO:

• Current (Feb 5 release): ENSO-neutral (El Nino Watch)

• Synopsis: There is an approximately 50-60% chance of El Niño within the late Northern Hemisphere winter and early spring, with ENSO-neutral slightly favored thereafter.

MJO and other subseasonal tropical variability:

• The MJO was weak during the past week, although there was evidence of a signal moving across the Western Hemisphere (primarily upper-level, not reflected in the convective pattern).

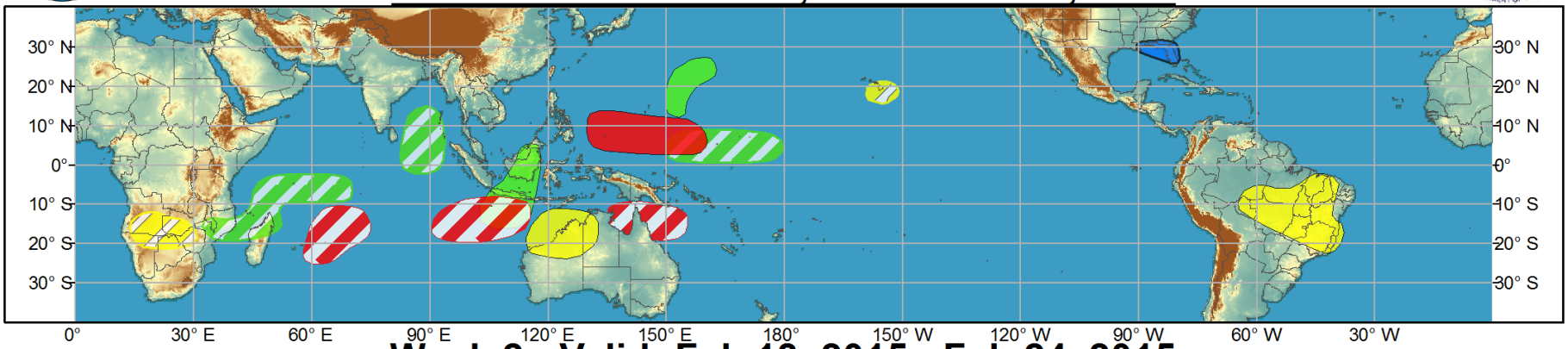
• Dynamical model MJO Index forecasts do not support continued MJO propagation to the Indian Ocean. Other modes such as strong Equatorial Rossby Wave activity over the Pacific are dominating the pattern.

Extratropics:

• The MJO is not anticipated to have a significant impact on the U.S. extended range forecast. Upper-level outflow to the mid-latitudes from enhanced convection over the West Pacific, coupled with potential impacts from the re-curvature of Higos may affect the downstream pattern during Week-2. The extended range forecast for the U.S. is generally consistent with these influences.

Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Feb 11, 2015 - Feb 17, 2015



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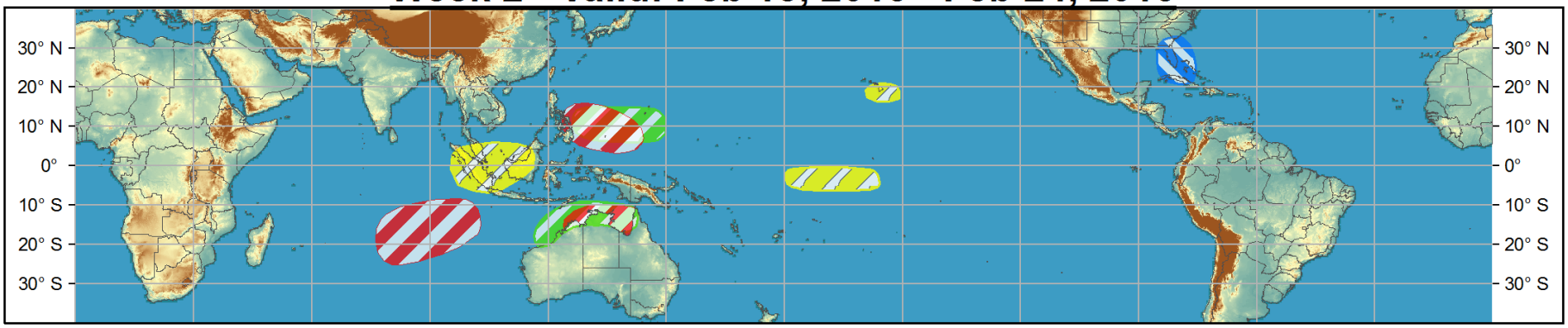

Produced: 02/10/2015

Forecaster: Allgood

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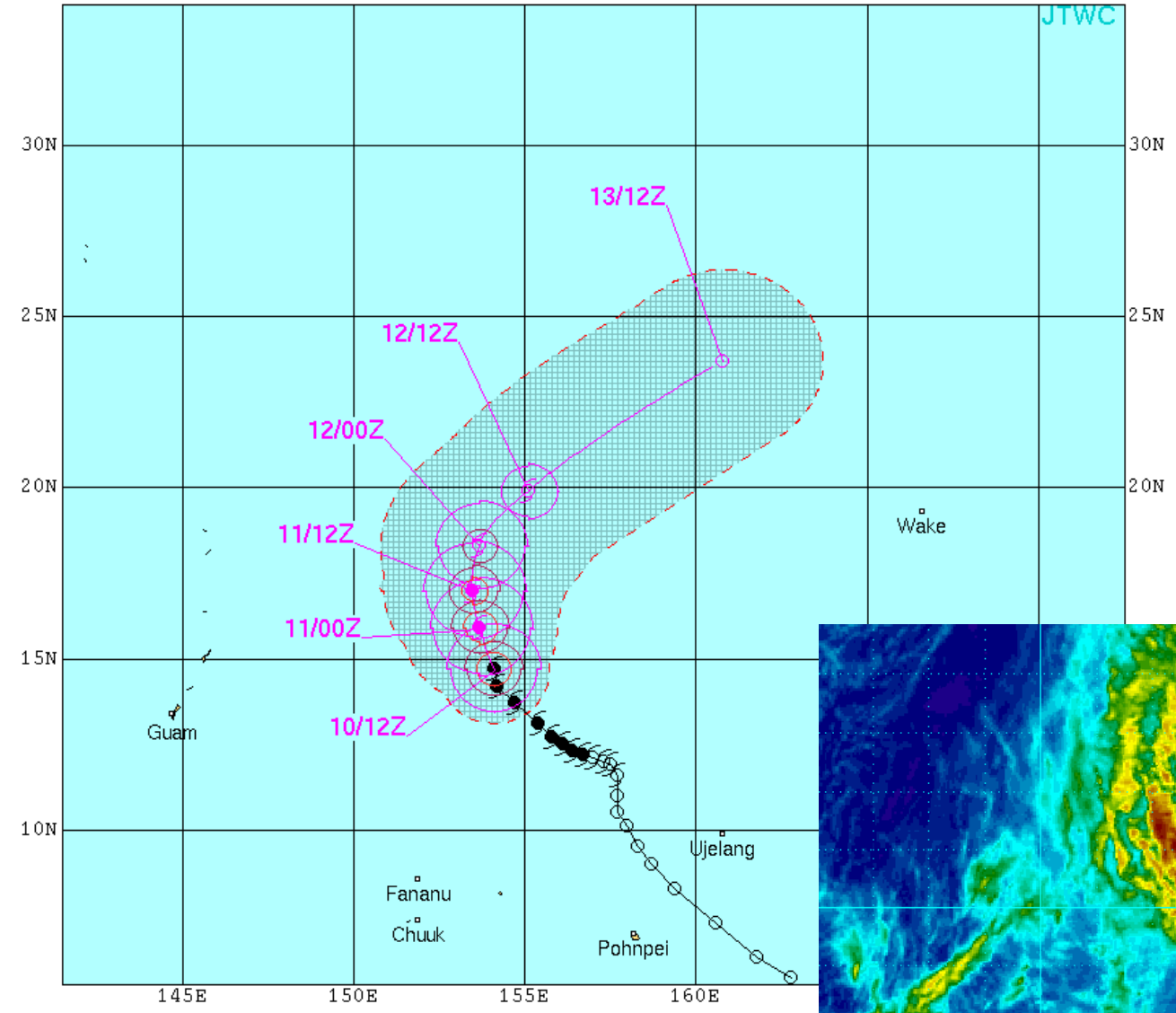
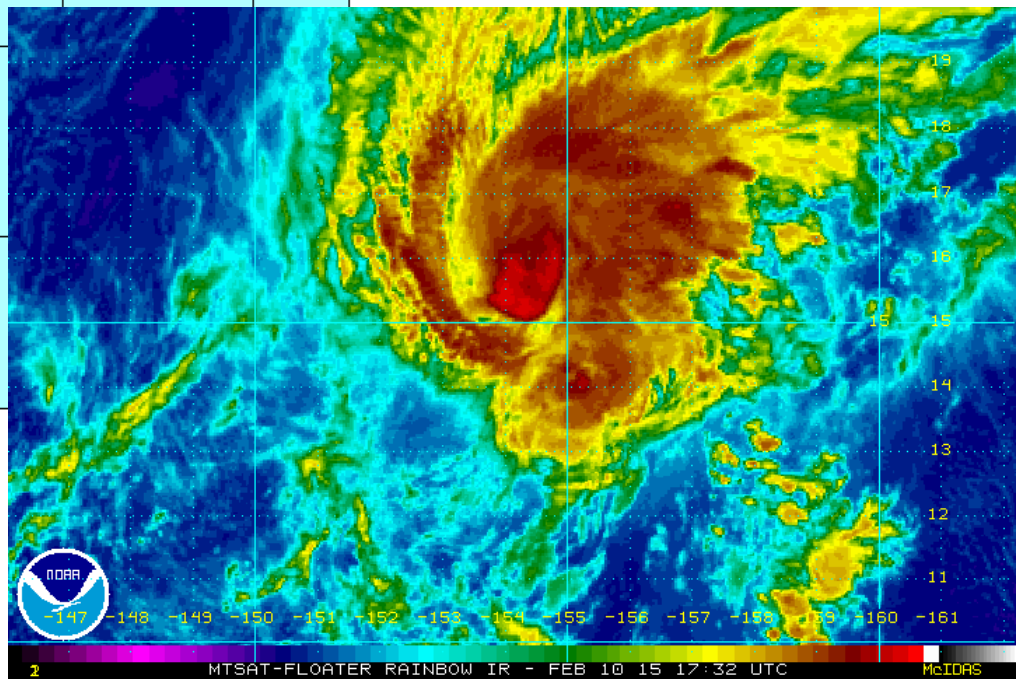
NPS PRAESTANTIA PER SCIENTIAM



TYPHOON 02W (HIGOS) WARNING #14
WTPN31 PGTW 101500
101200Z POSIT: NEAR 14.7N 154.1E
MOVING 350 DEGREES TRUE AT 05 KNOTS
MAXIMUM SIGNIFICANT WAVE HEIGHT: 25 FEET
10/12Z, WINDS 100 KTS, GUSTS TO 125 KTS
11/00Z, WINDS 090 KTS, GUSTS TO 110 KTS
11/12Z, WINDS 075 KTS, GUSTS TO 090 KTS
12/00Z, WINDS 060 KTS, GUSTS TO 075 KTS
12/12Z, WINDS 045 KTS, GUSTS TO 055 KTS
13/12Z, WINDS 015 KTS, GUSTS TO 025 KTS

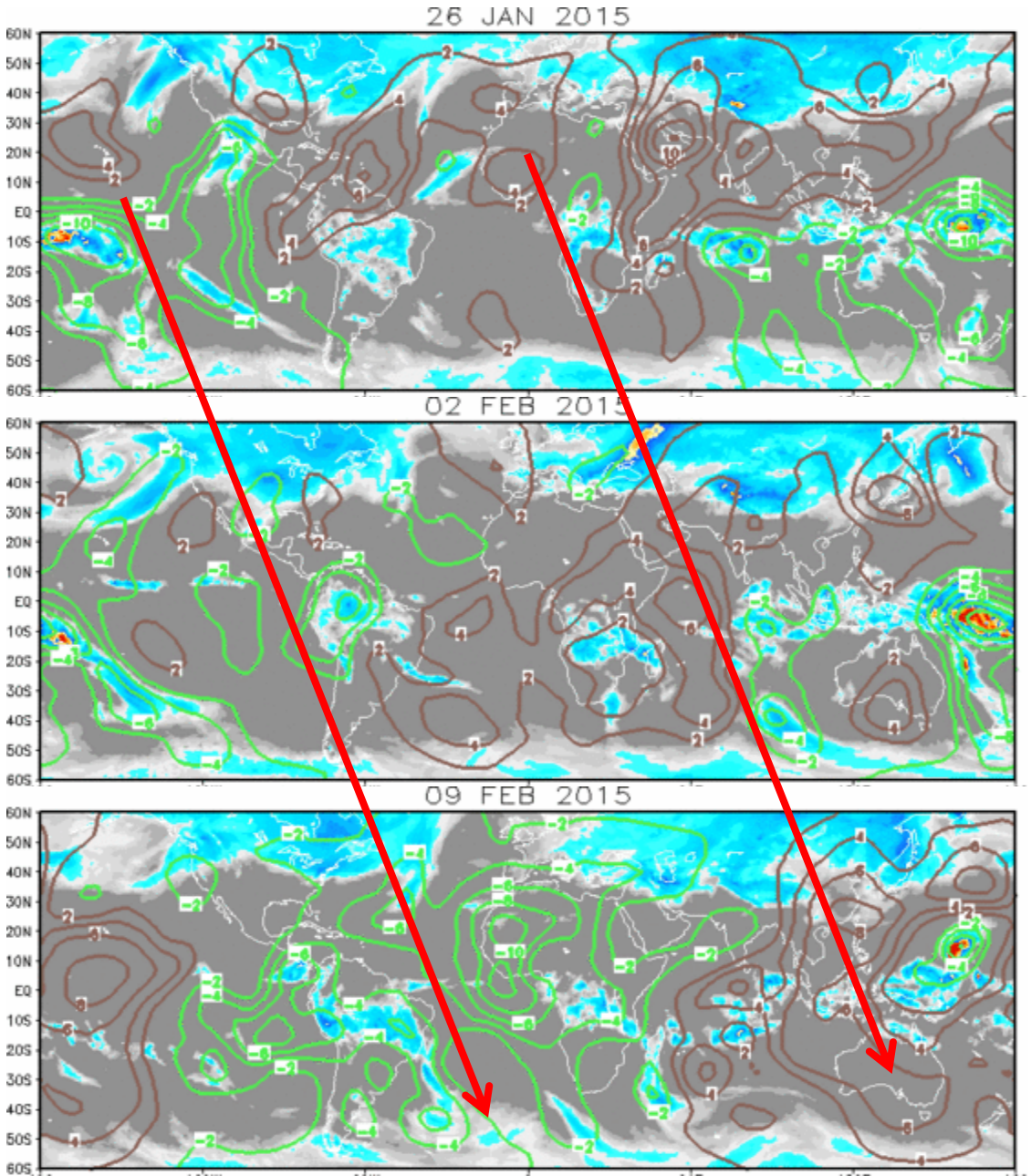
CPA TO:	NM	DTG
MINAMI_TORI_SHIMA	237	12/20Z

o LESS THAN 34 KNOTS
6 34-63 KNOTS
6 MORE THAN 63 KNOTS
PAST 6 HOURLY CYCLONE POSITS IN BLACK
FORECAST CYCLONE POSITS IN COLOR



IR Satellite & 200-hpa Velocity Potential Anomalies

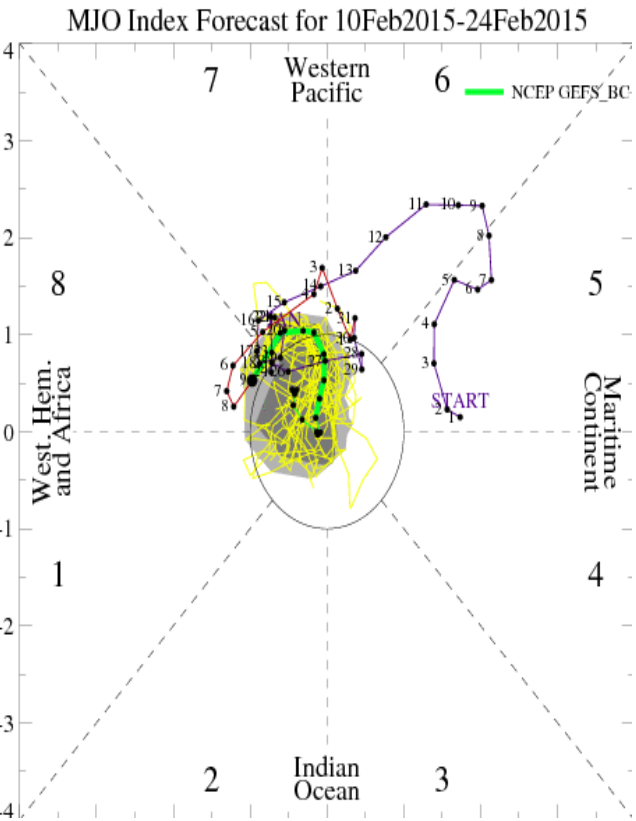
Green: Enhanced Divergence Brown: Enhanced Convergence



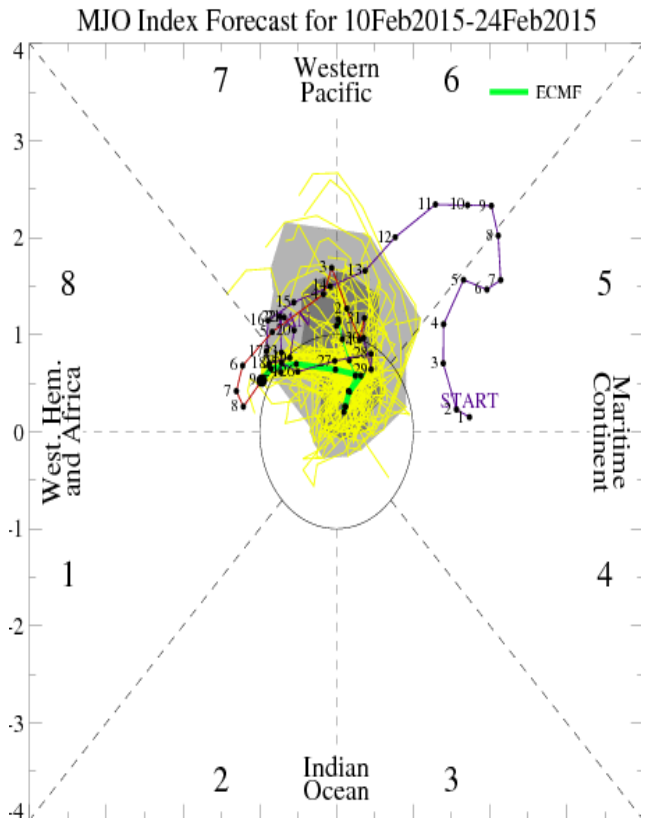
Some eastward propagation of upper-level VP anoms evident.

Little in the way of canonical convective response.

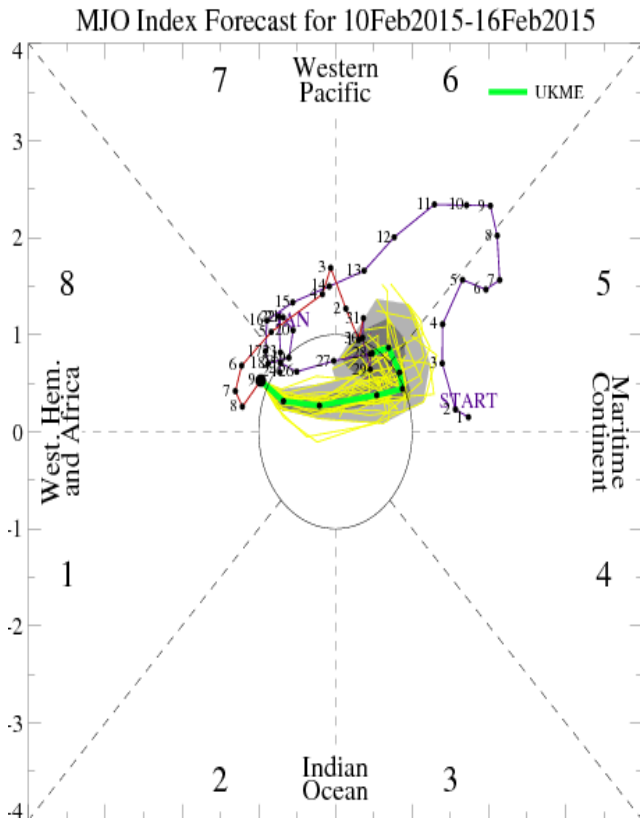
MJO Observation/Forecast



GFS



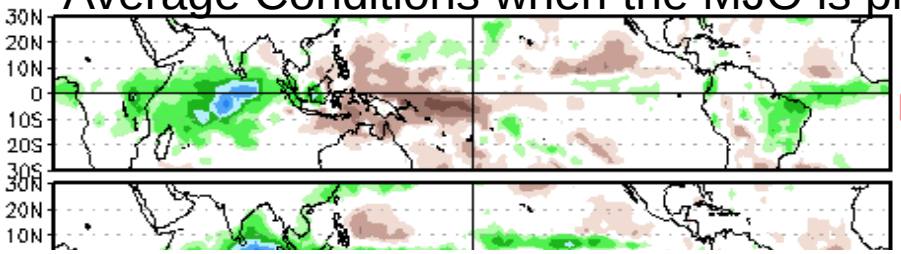
ECMWF

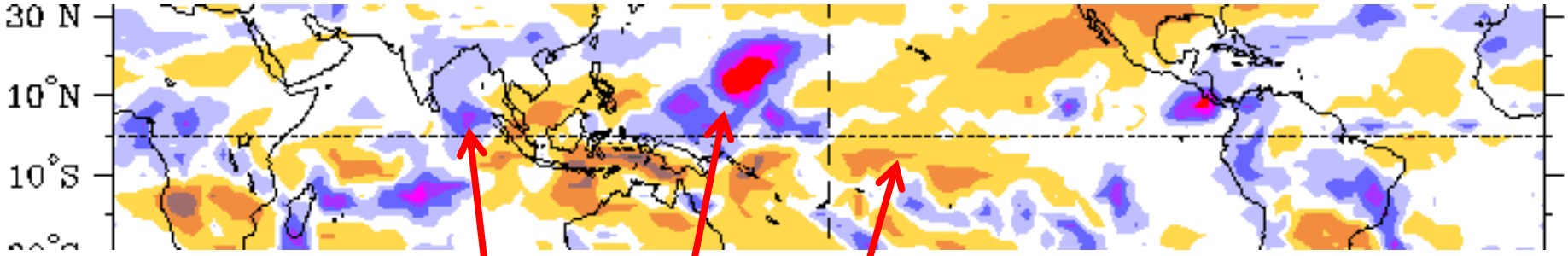


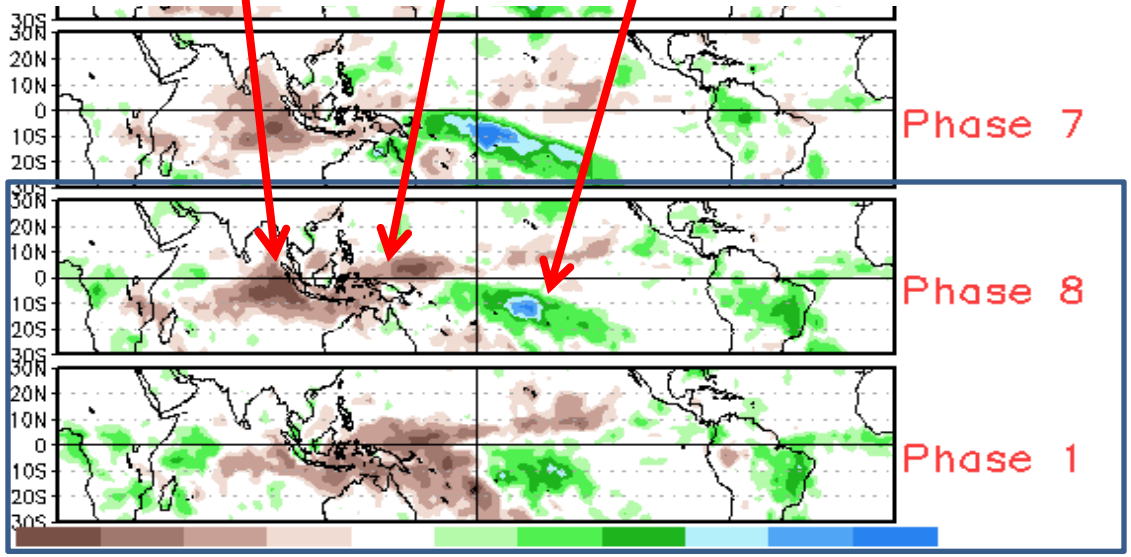
UKMET

Wheeler-Hendon based analyses of model forecasts are inconsistent with robust MJO activity as enhanced convection over the West Pacific/Maritime Continent (ERW and TC impacts) influences the pattern.

Average Conditions when the MJO is present

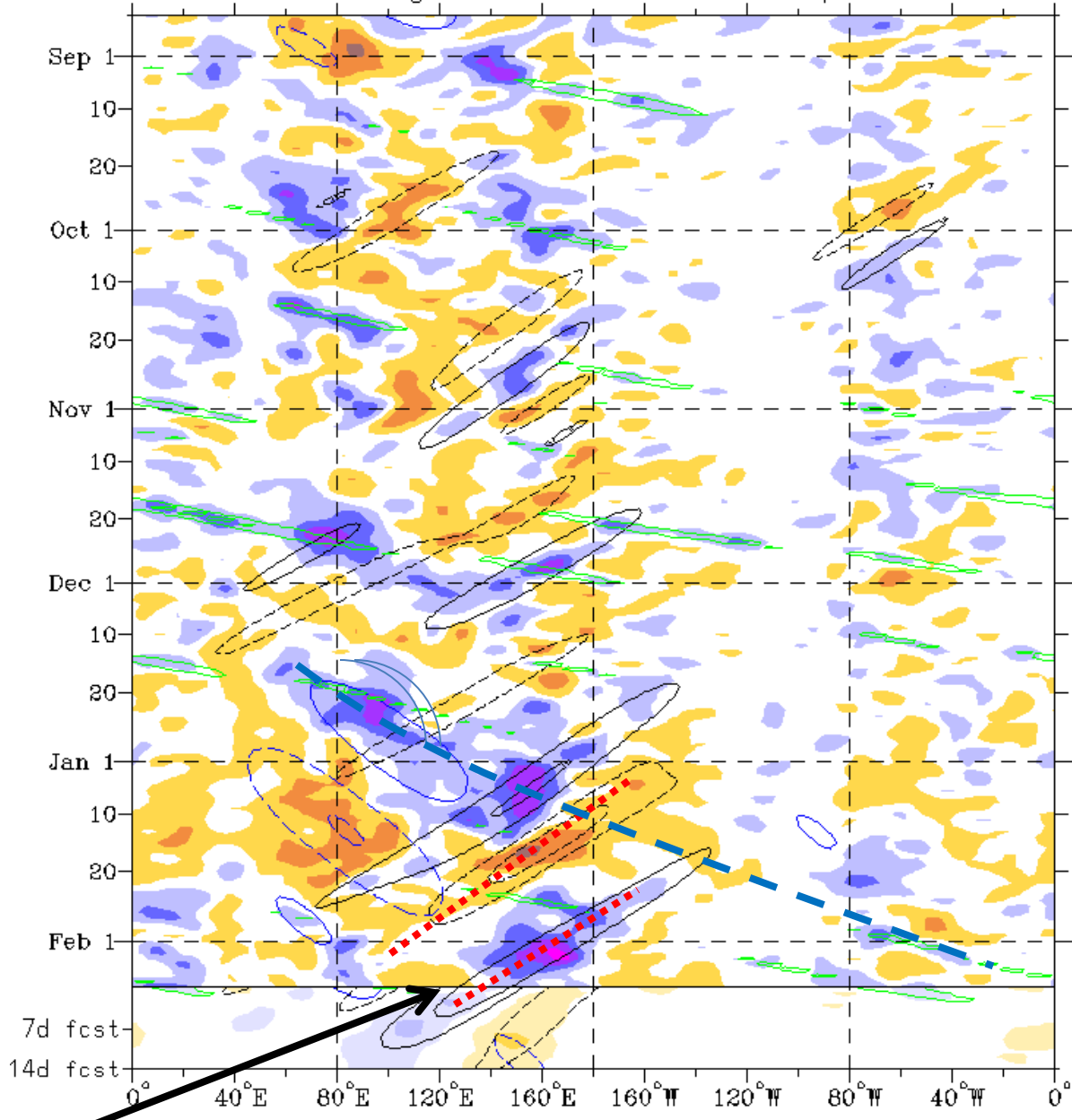




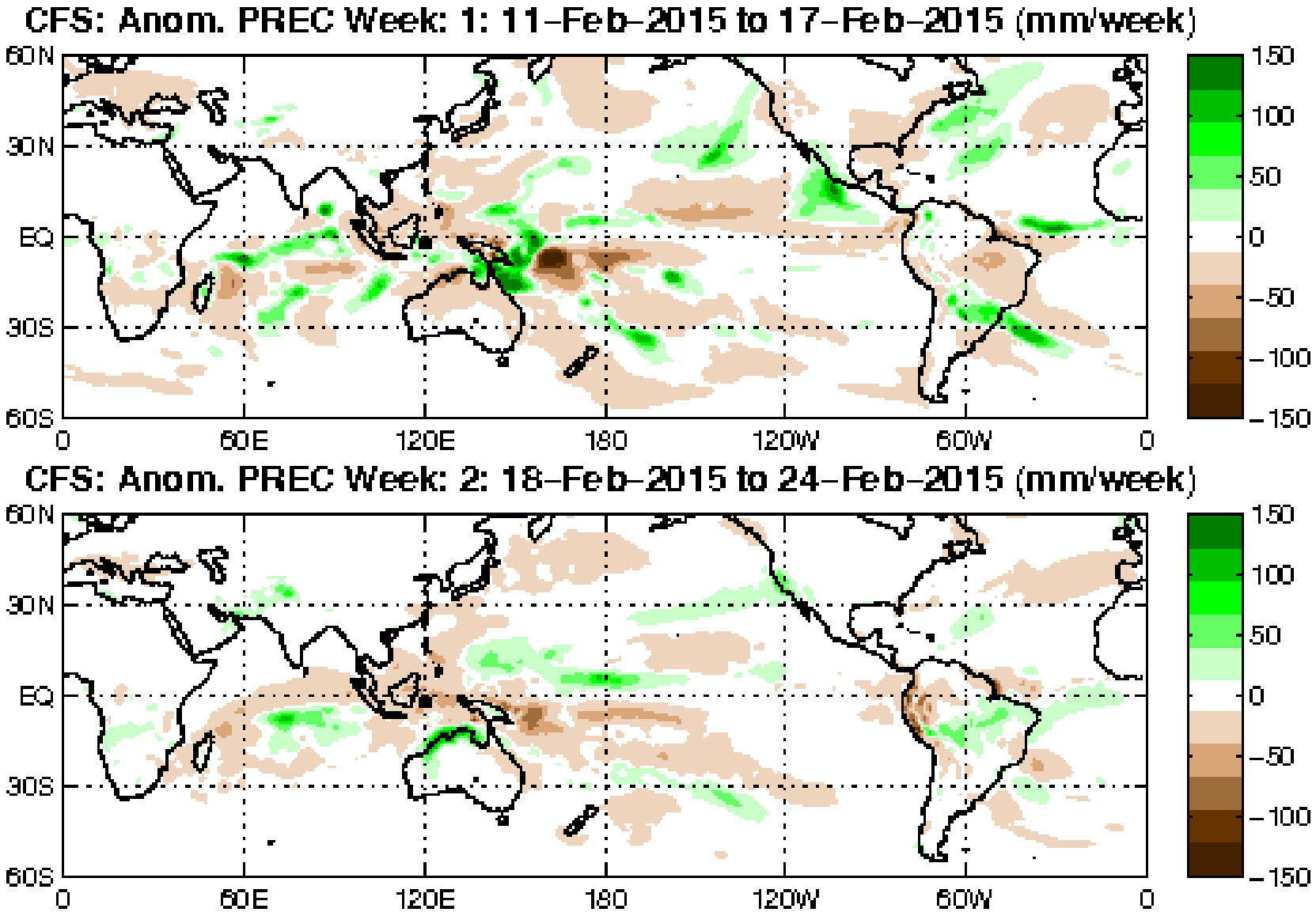


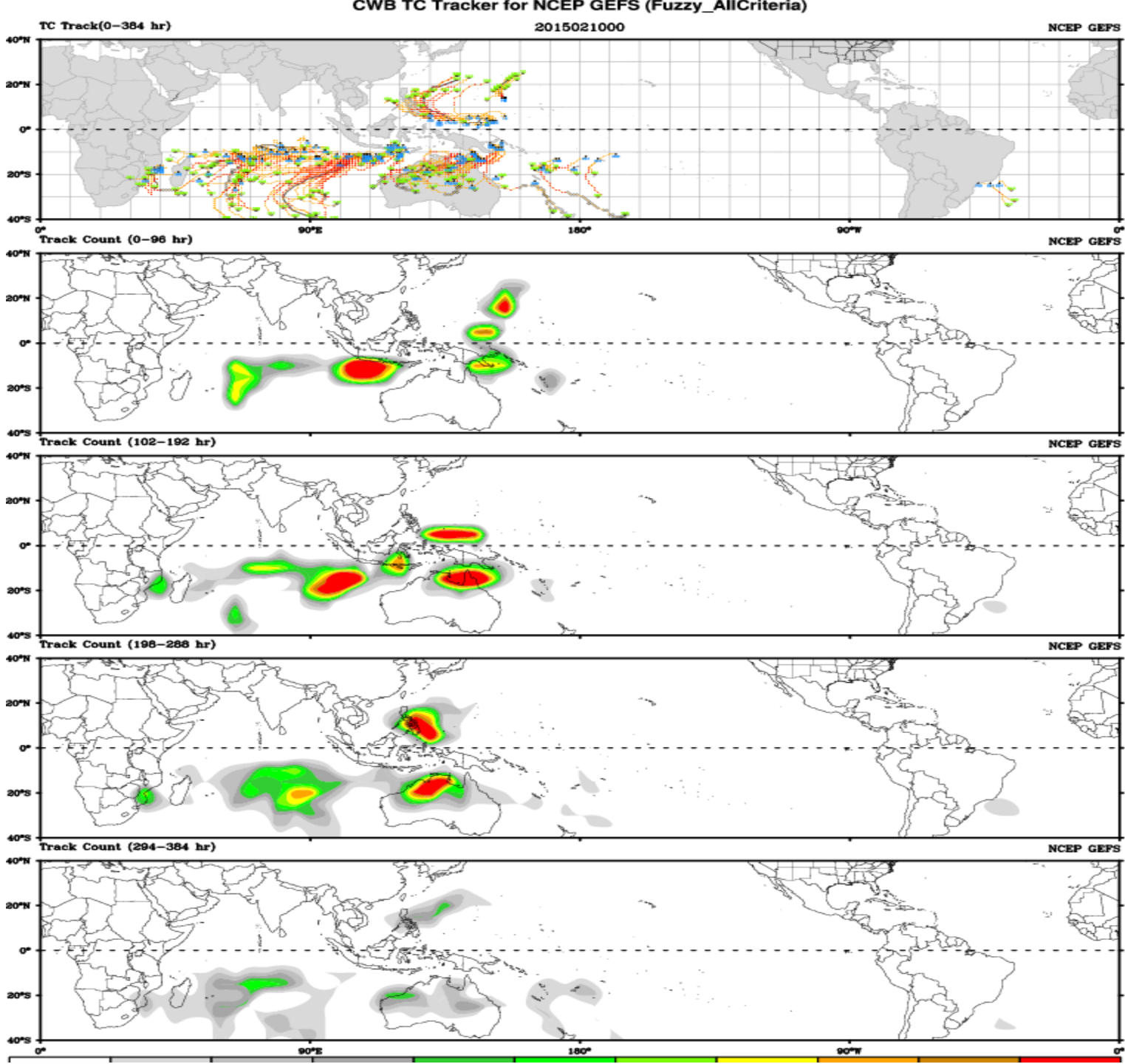
Current convective pattern not consistent with canonical MJO activity.

CAVEAT: These panels are representative of robust MJO events.



Equatorial Rossby Waves are impacting the West Pacific and Maritime Continent and destructively interfering with the remnant MJO signal.


CFS: Anom. PREC Week: 1: 11-Feb-2015 to 17-Feb-2015 (mm/week)
60N
30N
EQ
30S
60S
0
60E
120E
180
120W
60W
0
150
100
50
0
-50
-100
-150
CFS: Anom. PREC Week: 2: 18-Feb-2015 to 24-Feb-2015 (mm/week)
60N
30N
EQ
30S
60S
0
60E
120E
180
120W
60W
0
150
100
50
0
-50
-100
-150



Days 1-4

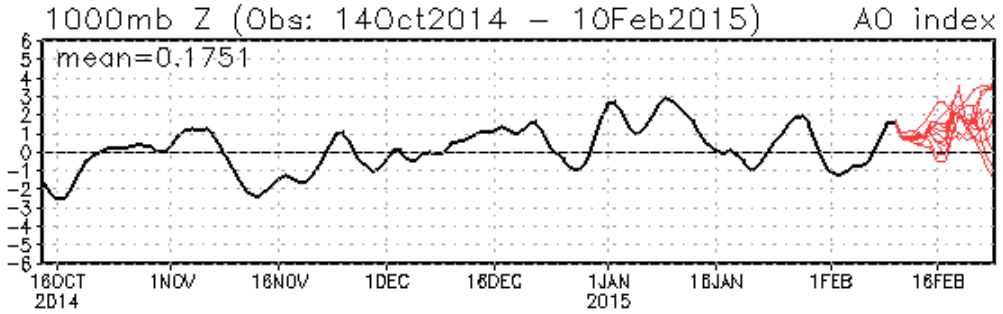
Day 5-8

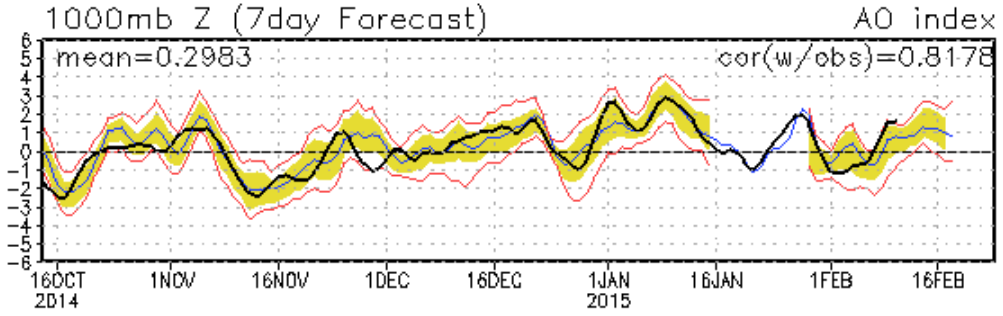
Day 9-12

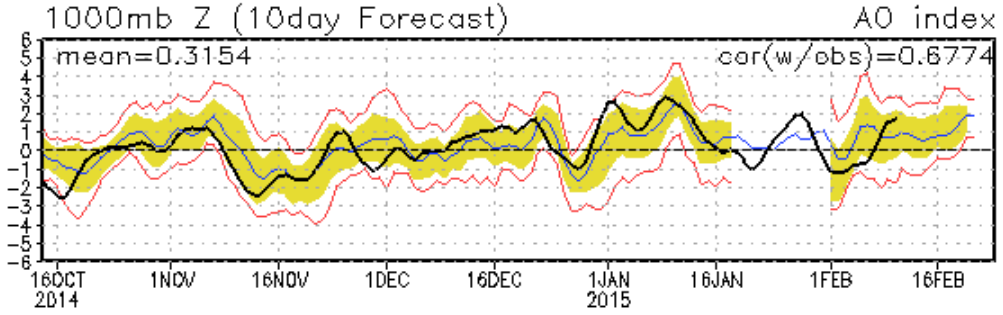
Day 13-15

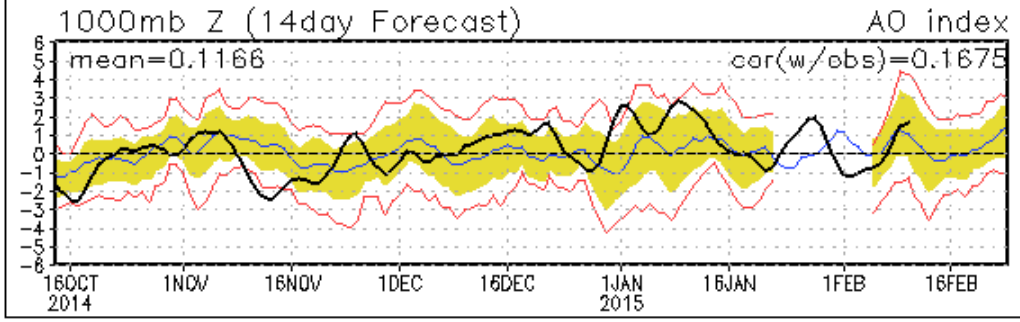
Connections to U.S. Impacts

AO: Observed & ENSM forecasts

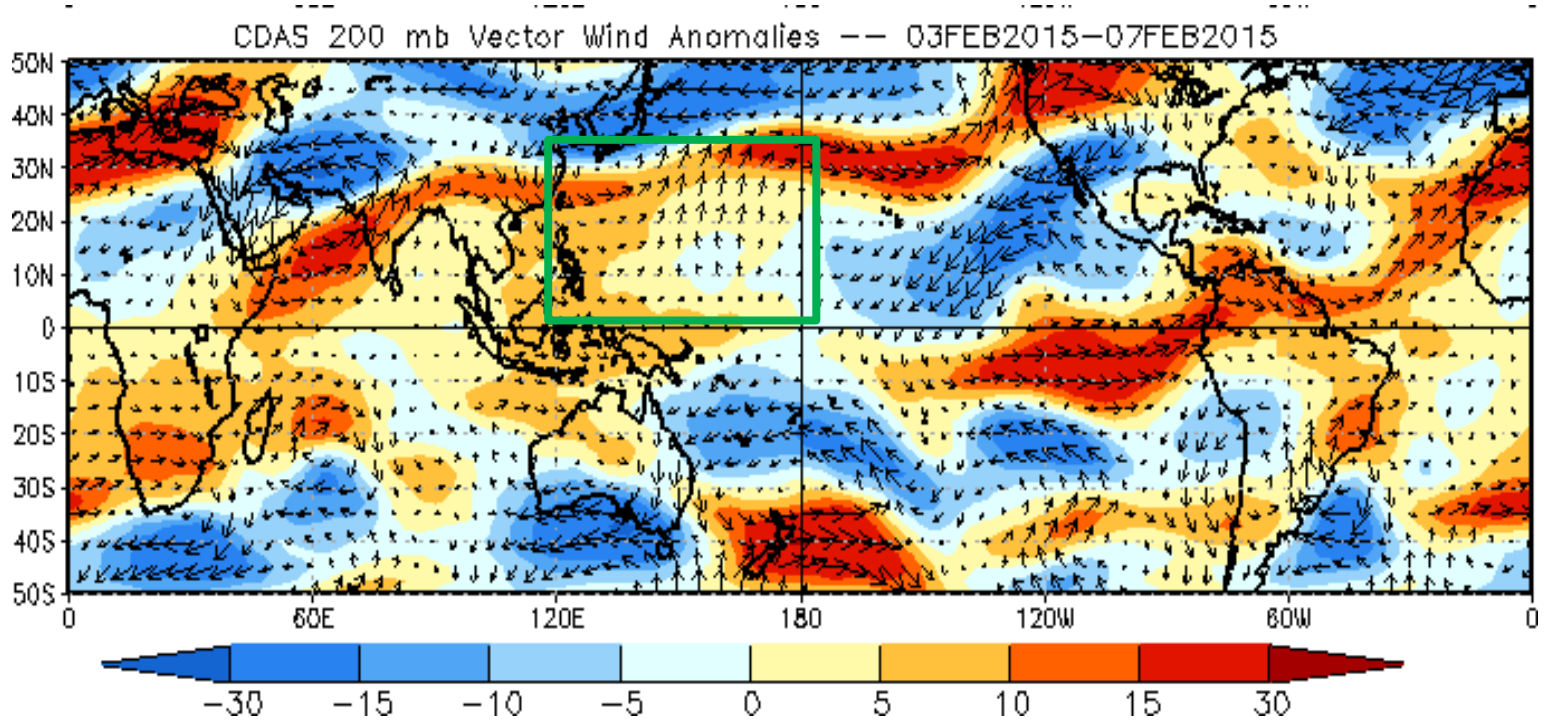


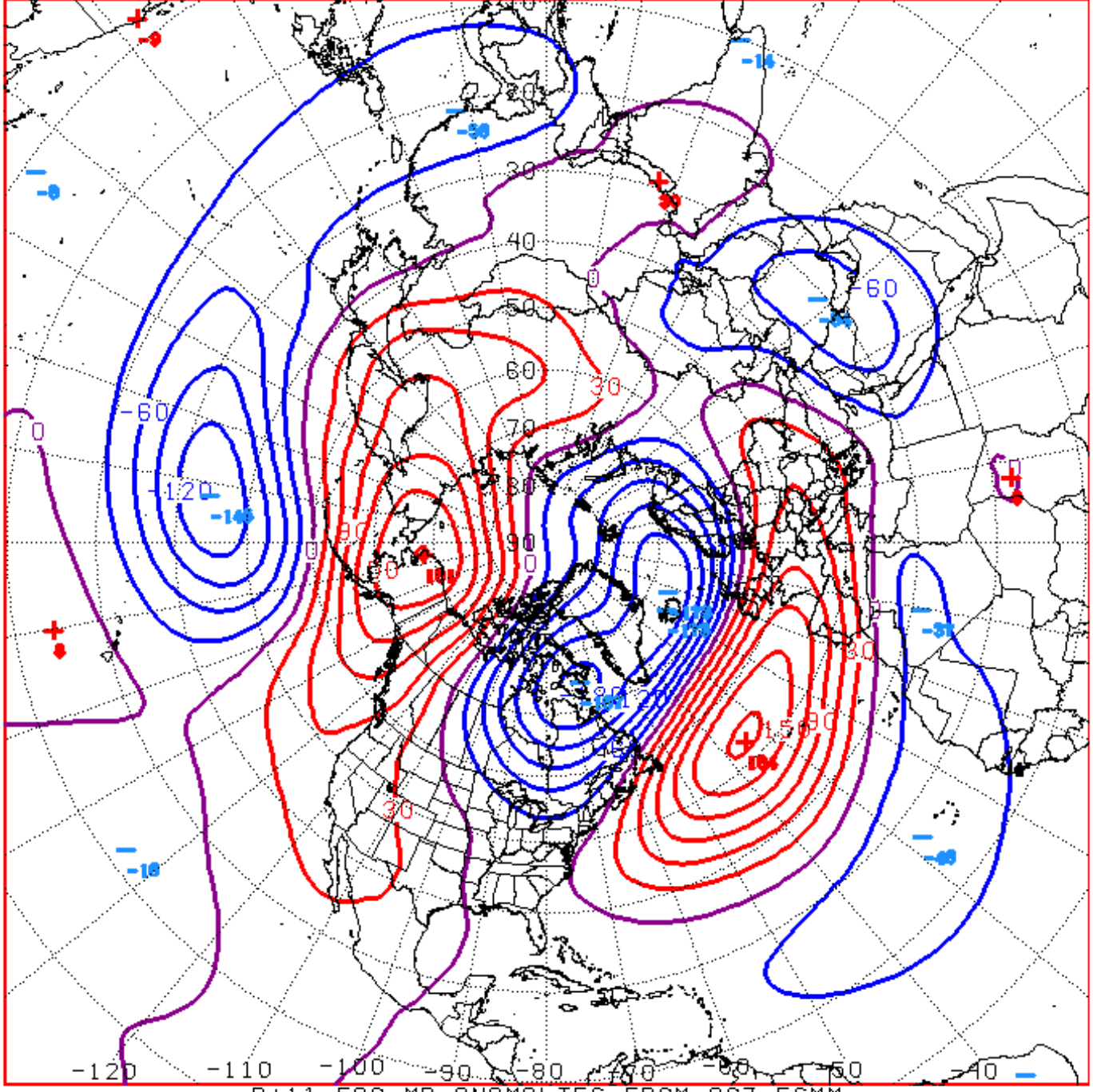






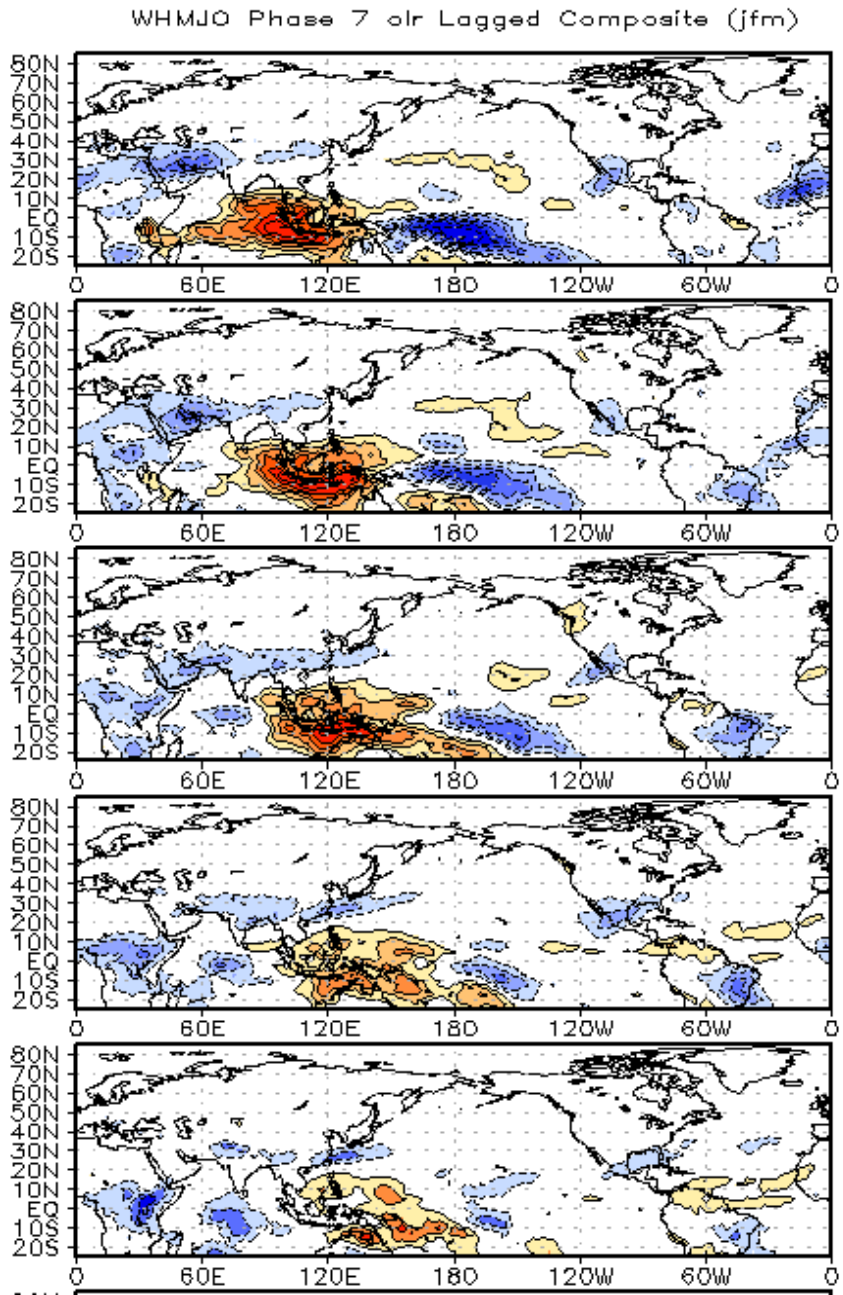
200-hPa wind anomalies show tropical/extratropical influences (outflow poleward of enhanced convection) over the West Pacific.





D+11 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE FEB 10 2015 1043 UTC CNTD FEB 21 2015

Lagged composites from MJO
5-day intervals

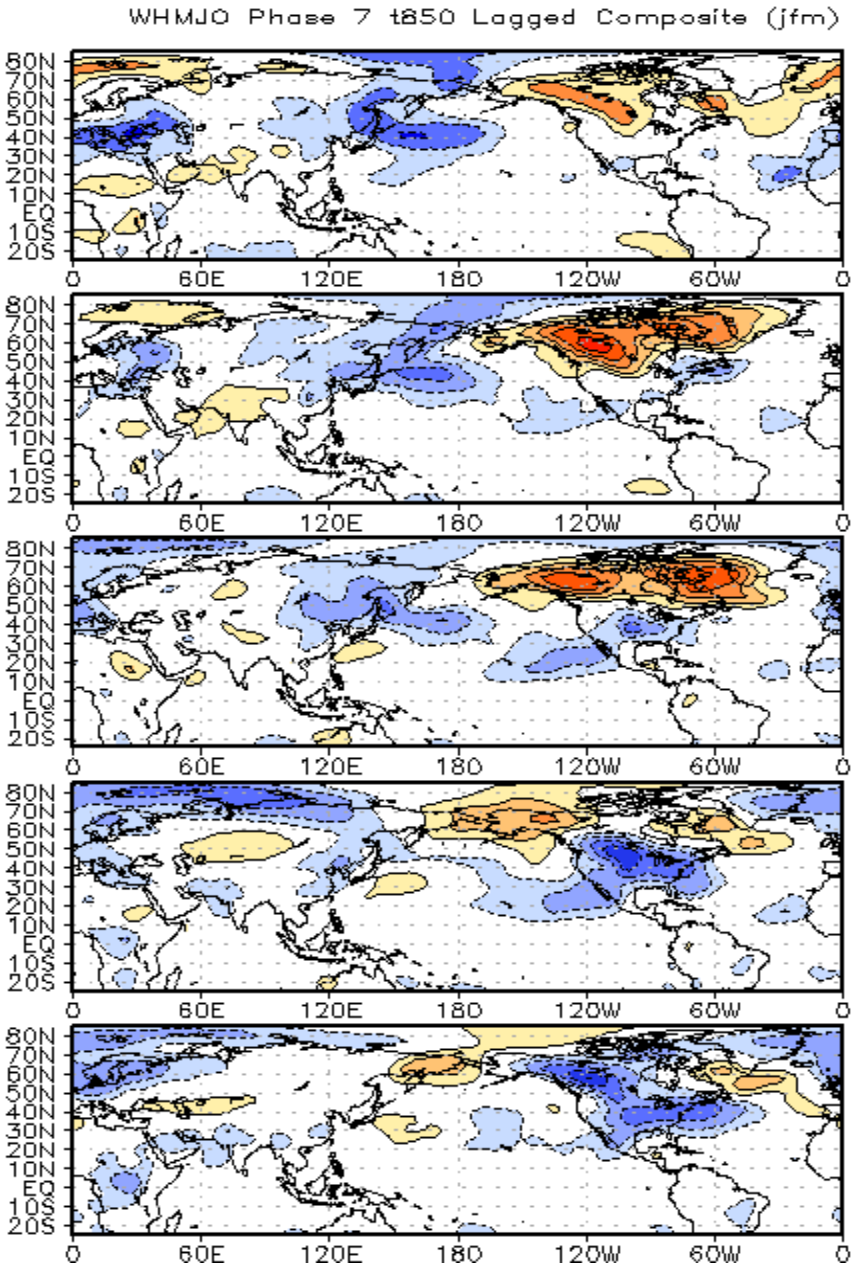


+5-day

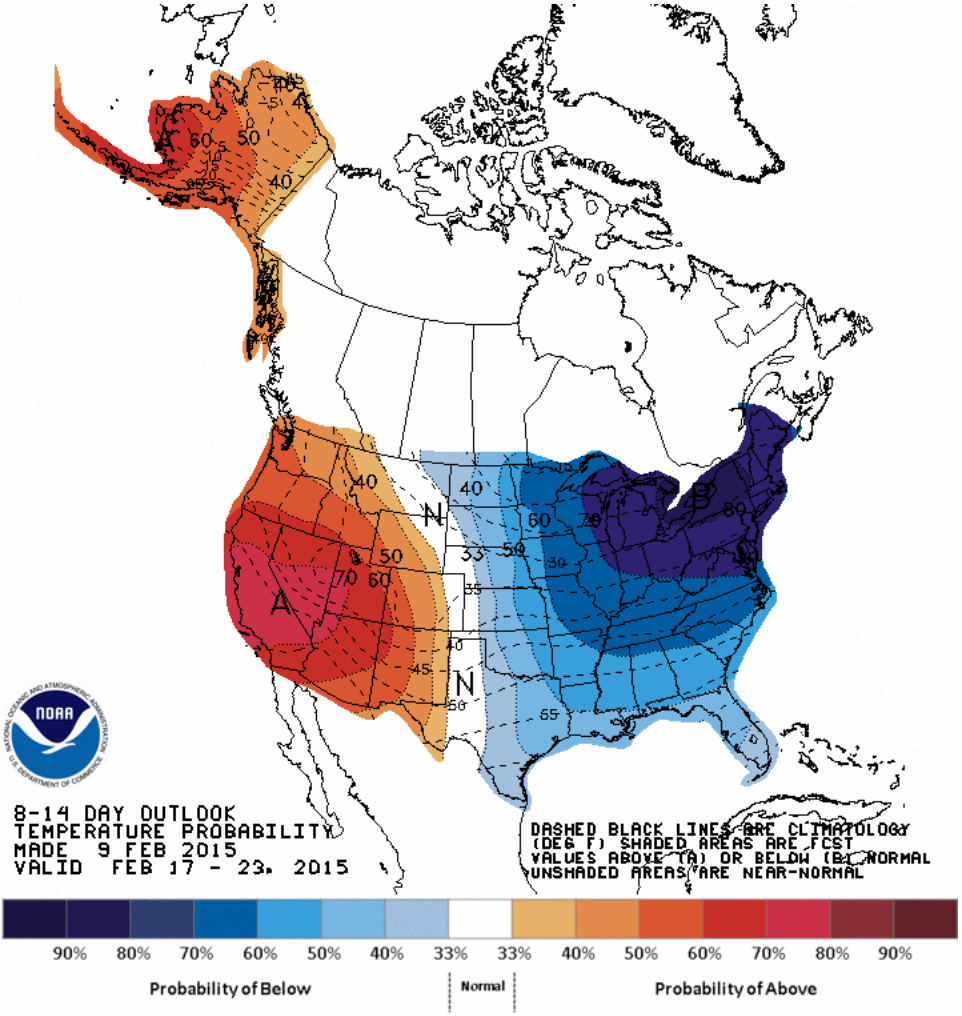
+10-day

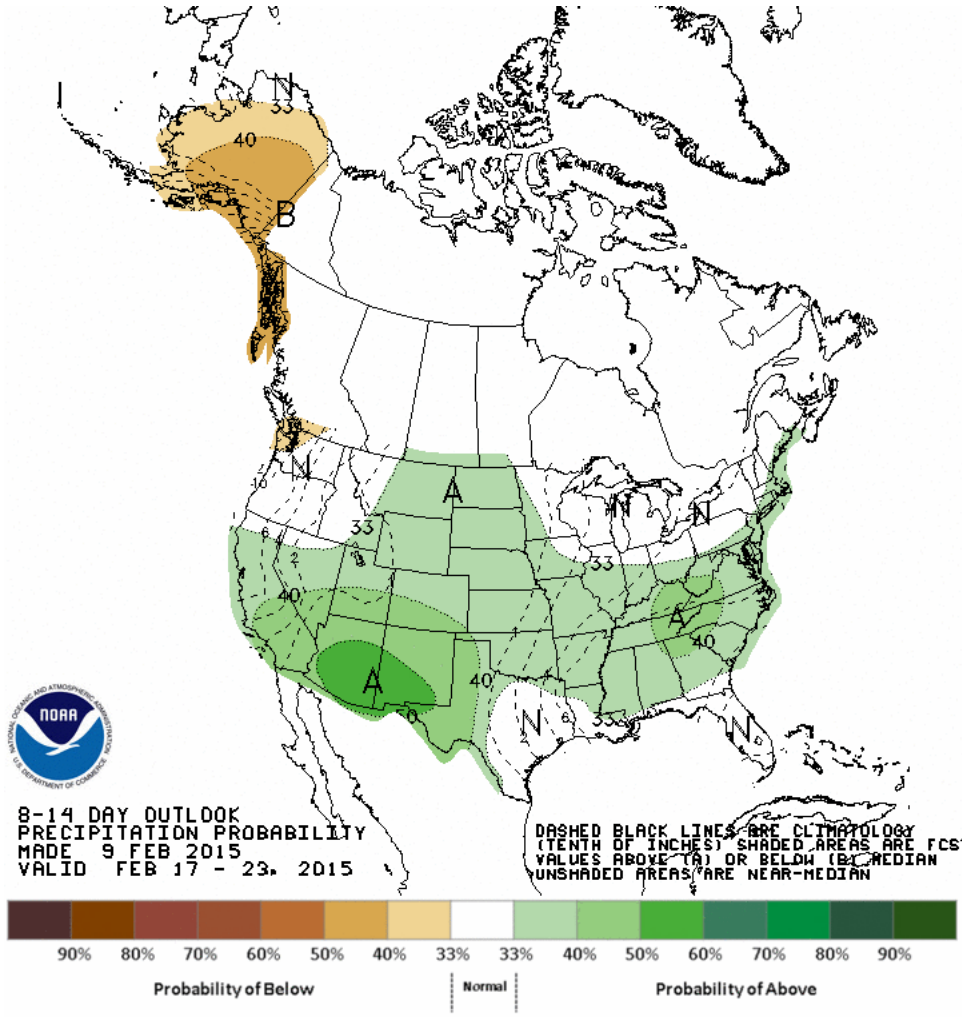
+15-day

+20-day



Week 2 – Temperature and Precipitation





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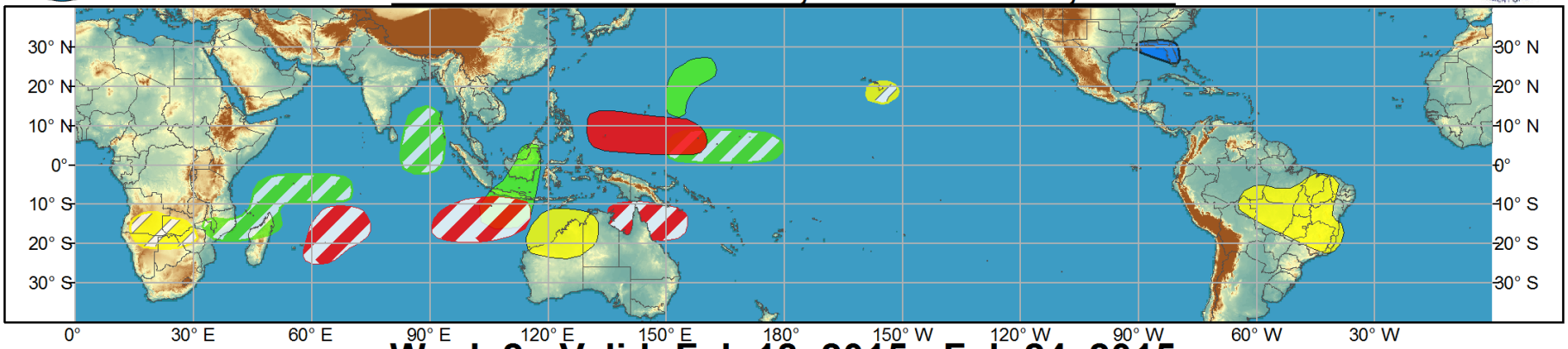

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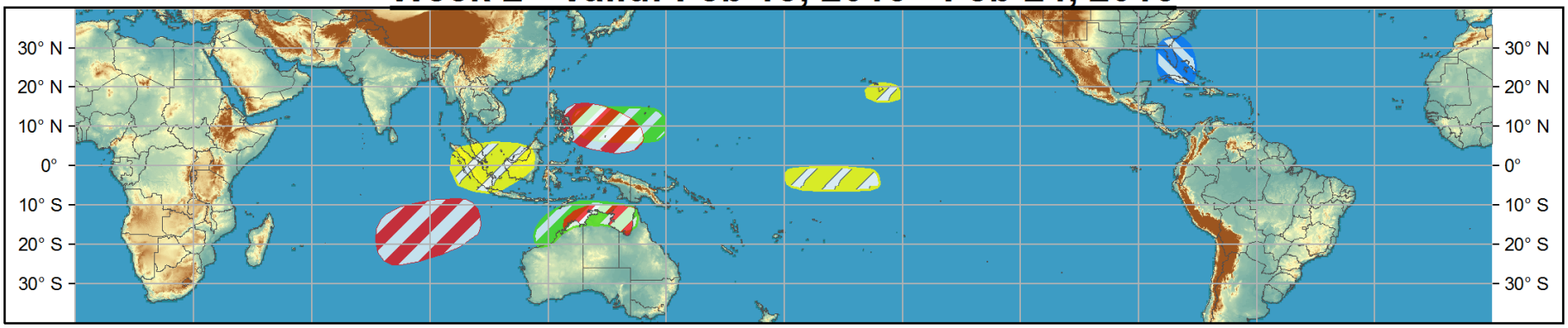

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