

Global Tropics Hazards And Benefits Outlook

January 13, 2015

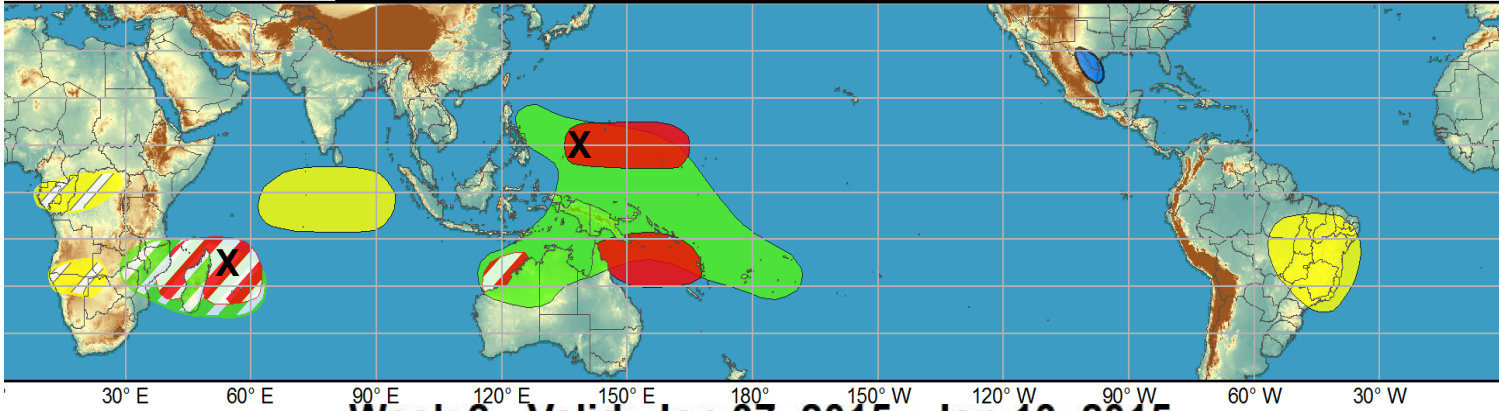
Brad Pugh

Outline

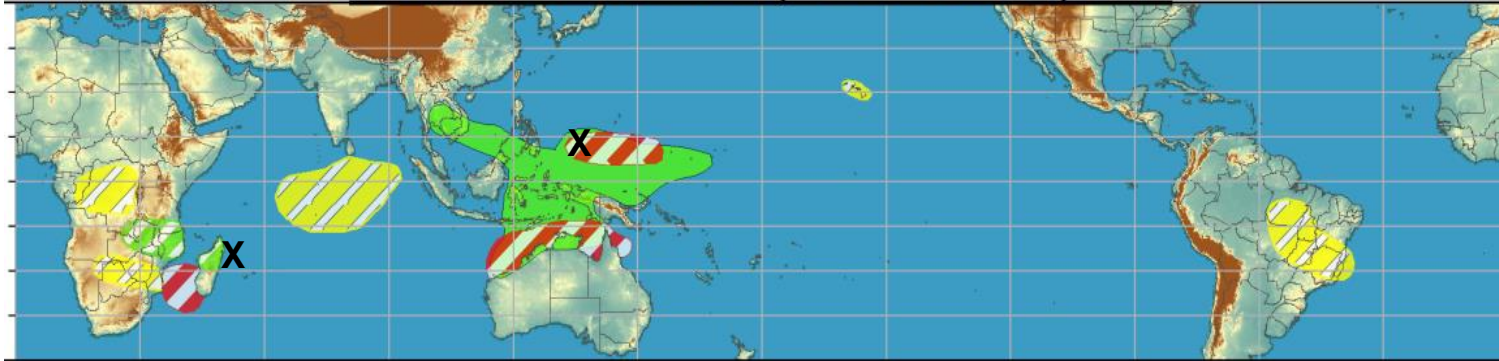
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

Week 1 - Valid: Jan 07, 2015 - Jan 13, 2015

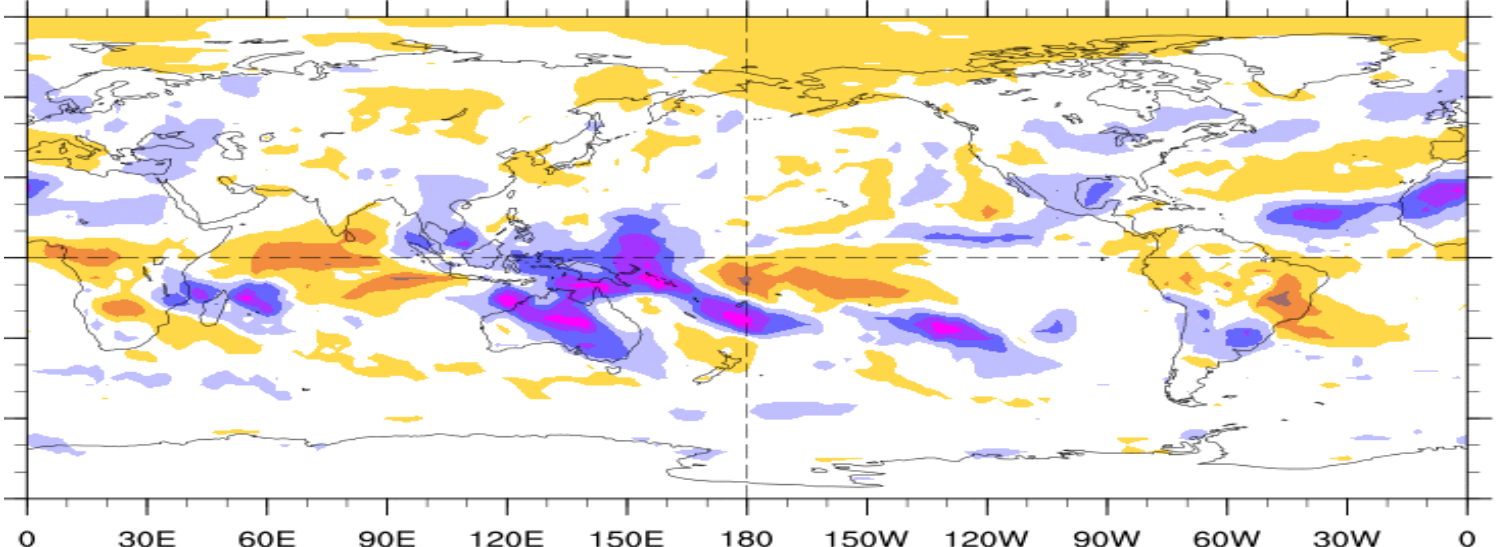


Week 2 - Valid: Jan 07, 2015 - Jan 13, 2015



7-Day Average OLR Anomaly

2015/01/05 - 2015/01/11



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO:

- Current: ENSO-neutral (lack of coupling between atmosphere and above-normal SSTs)
- Outlook: There is an approximately 50-60% chance of El Niño conditions during the next two months .

MJO and other subseasonal tropical variability:

- The MJO remains active with the enhanced convective phase over the West Pacific.
- Most dynamical model MJO index forecasts depict a continuation of a MJO signal during Week-1 followed by increasing forecast spread.

Extratropics:

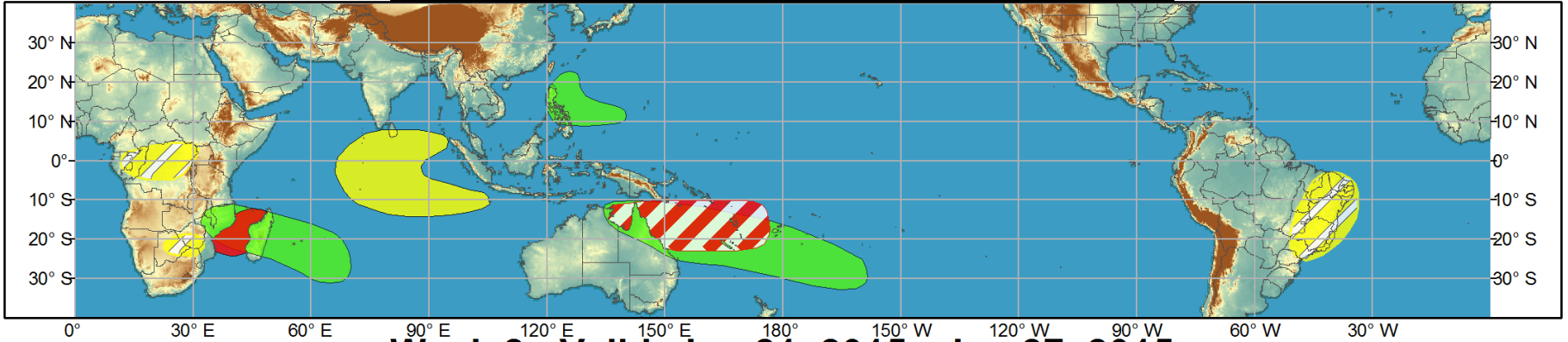
- The current phase of the MJO supports below normal 500-hpa heights across the Aleutians with downstream ridging over the Northeast Pacific.
- After a warming trend (Week-1) across the CONUS, a signal for a colder temperatures across the central U.S. later in Week-2.



Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jan 14, 2015 - Jan 20, 2015



Week 2 - Valid: Jan 21, 2015 - Jan 27, 2015



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.

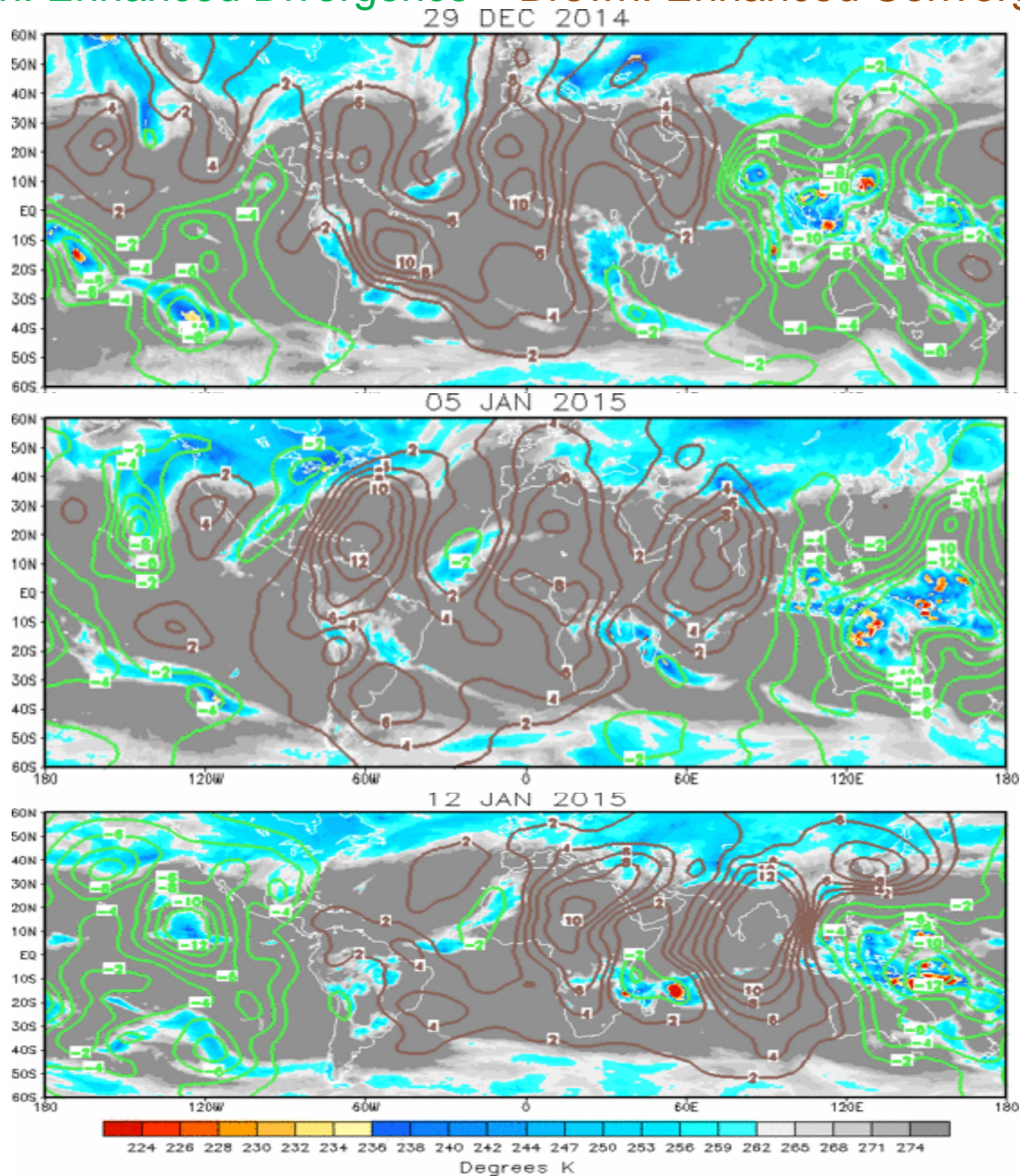
Produced: 01/13/2015
Forecaster: Pugh

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.

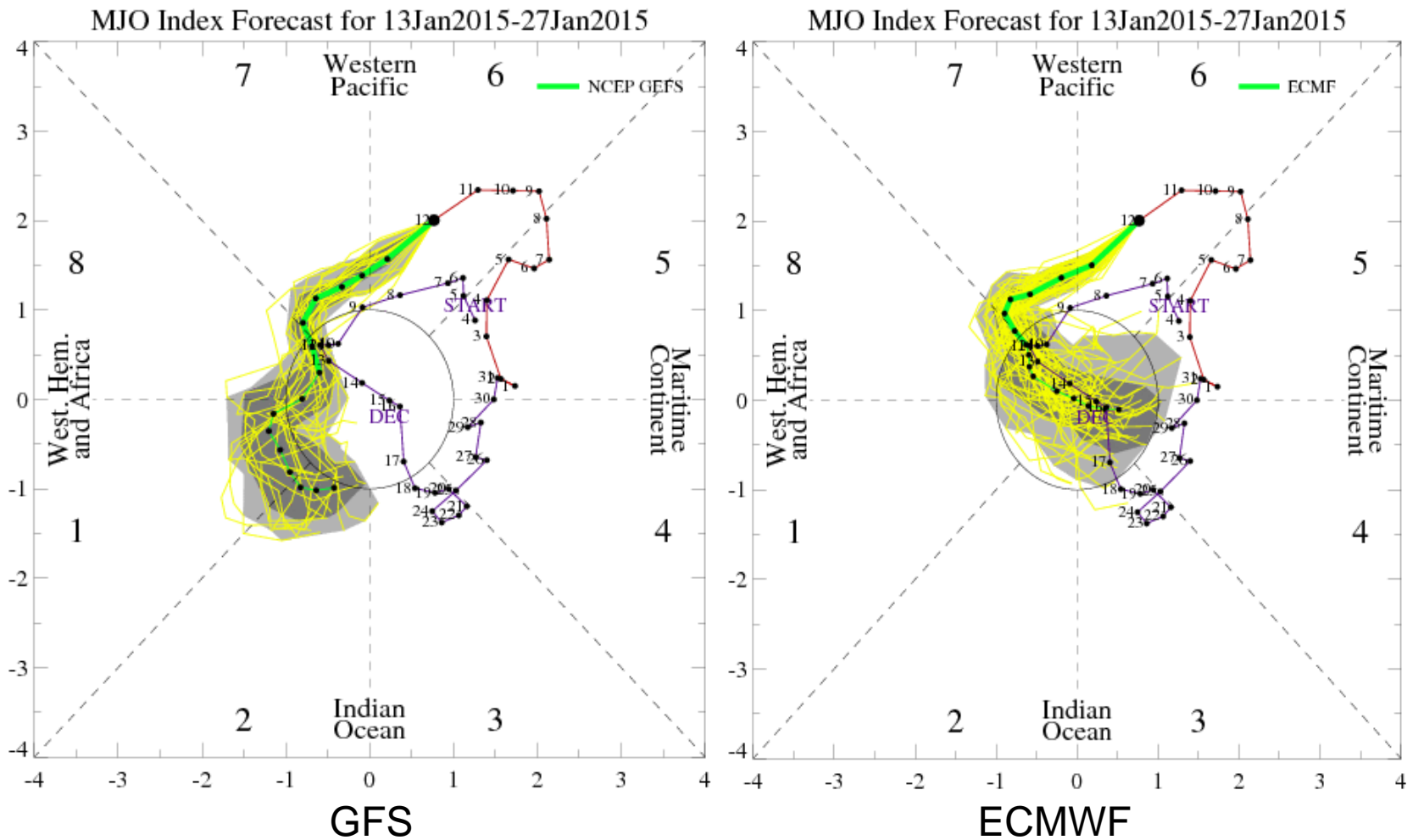


IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

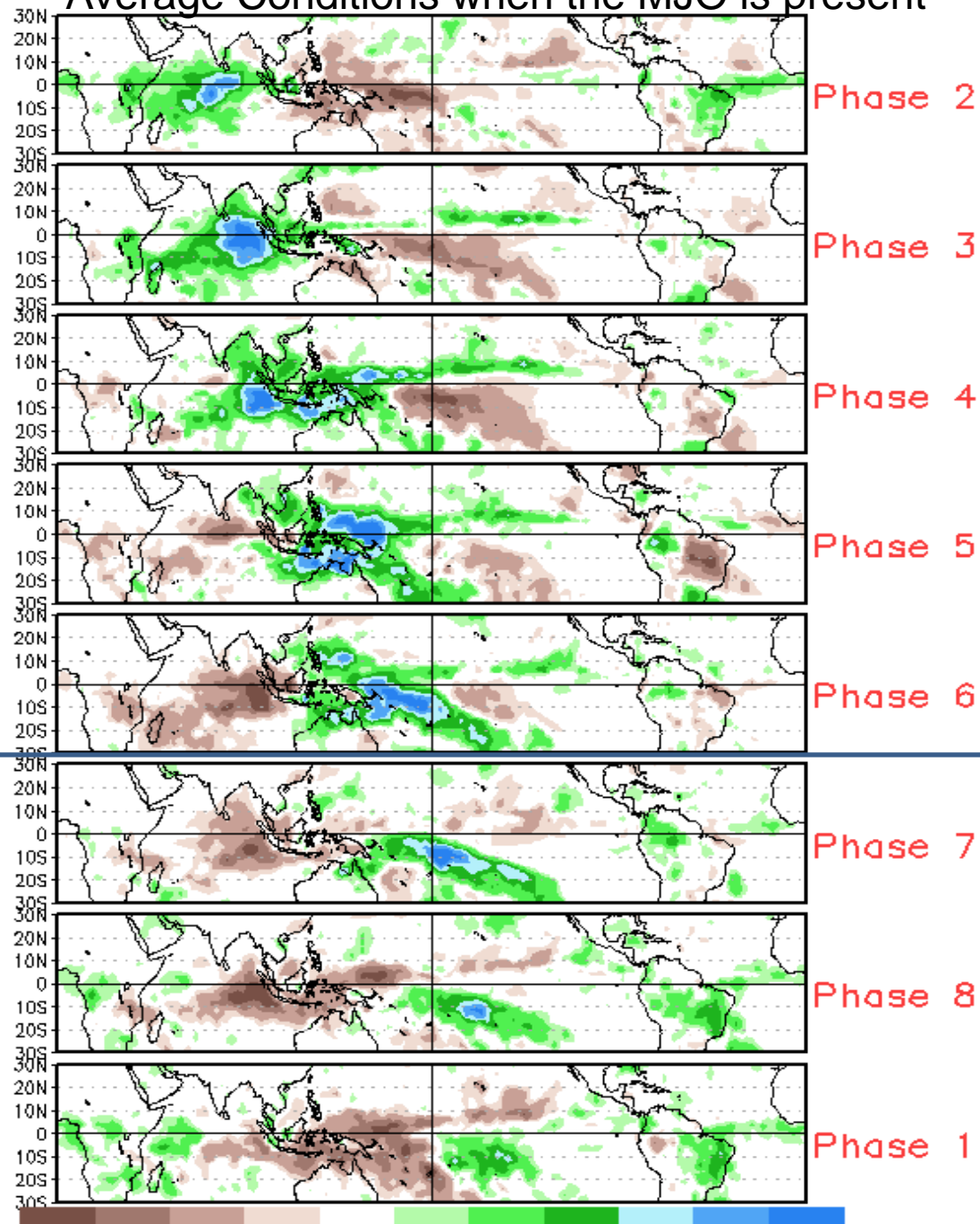


MJO Observation/Forecast



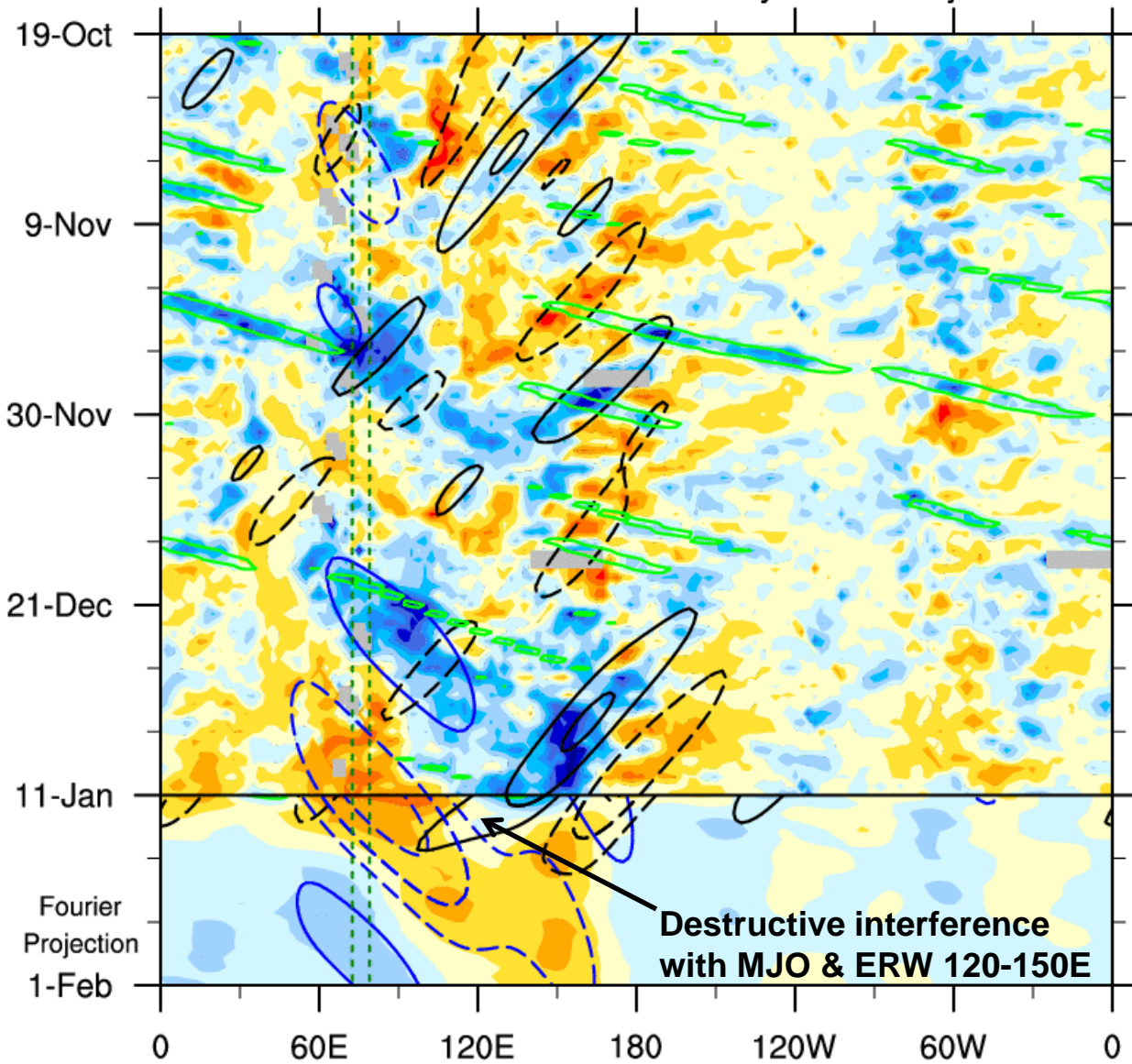
Wheeler-Hendon based analyses of GFS model forecast indicates a persistent MJO although a smaller amplitude.

Average Conditions when the MJO is present



OLR anomalies: 7.5°S - 7.5°N

19-Oct-2014 to 11-Jan-2015 + 21-day Fourier Projection



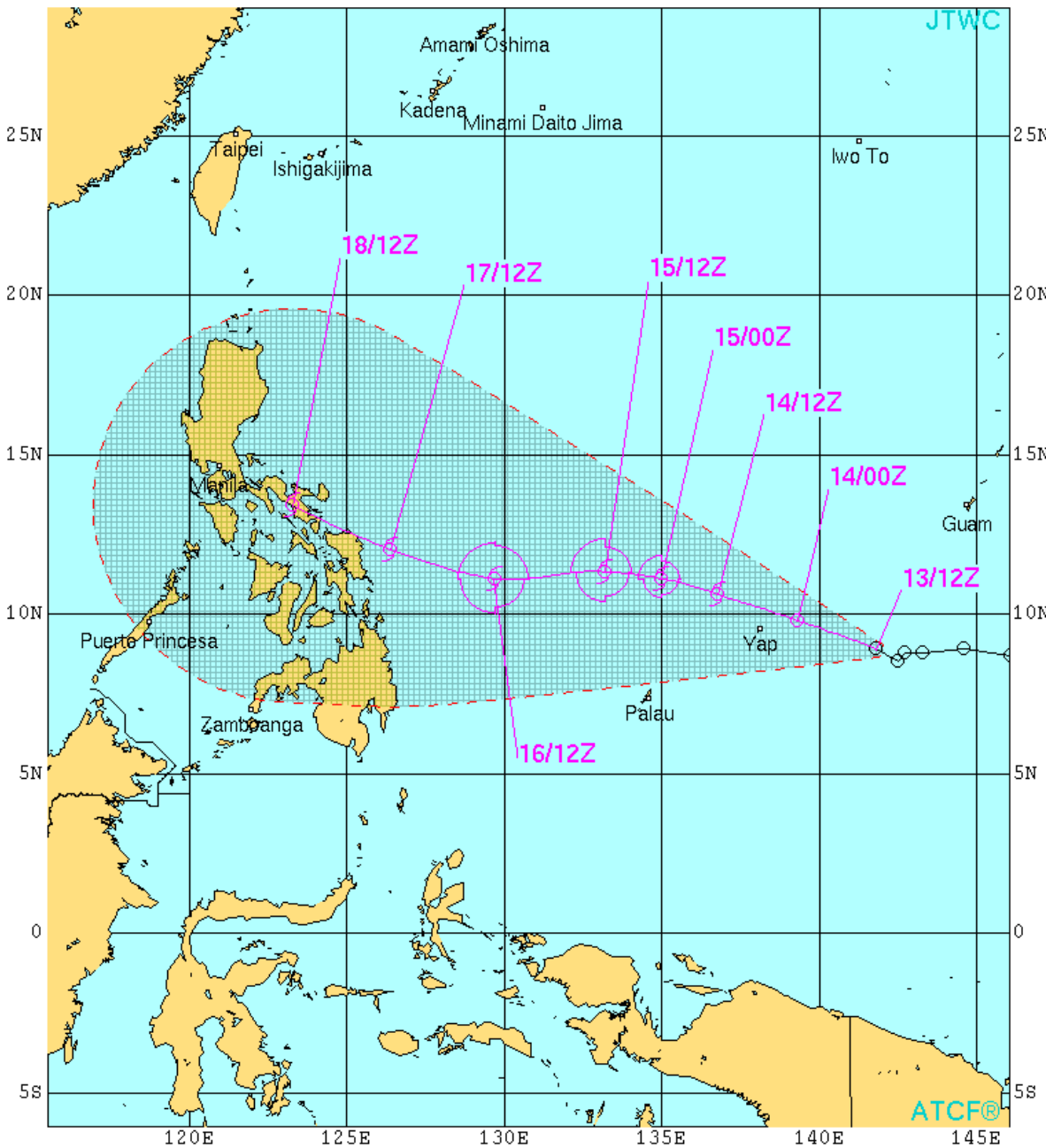
MJO active over the West Pacific; Equatorial Rossby Wave (ERW) also evident

Destructive interference with MJO & ERW 120-150E

Obs: W/m² -84 -72 -60 -48 -36 -24 -12 0 12 24 36 48 60 72 84

Sum of Waves: W/m² -18 -12 -6 0 6 12 18

MJO (blue, CINT=12); ER (black, CINT=12); Kelvin (green, CINT=12)



TROPICAL DEPRESSION 01W (ONE) WARNING #1
 WTPN31 PGTW 131500
 131200Z POSIT: NEAR 8.9N 141.8E
 MOVING 300 DEGREES TRUE AT 08 KNOTS
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 10 FEET
 13/12Z, WINDS 025 KTS, GUSTS TO 035 KTS
 14/00Z, WINDS 030 KTS, GUSTS TO 040 KTS
 14/12Z, WINDS 035 KTS, GUSTS TO 045 KTS
 15/00Z, WINDS 040 KTS, GUSTS TO 050 KTS
 15/12Z, WINDS 045 KTS, GUSTS TO 055 KTS
 16/12Z, WINDS 050 KTS, GUSTS TO 065 KTS
 17/12Z, WINDS 055 KTS, GUSTS TO 070 KTS
 18/12Z, WINDS 040 KTS, GUSTS TO 050 KTS

CPA TO:	NM	DTG
SOROL	67	13/17Z
FAIS	24	13/19Z
ULITHI	11	13/23Z
NGULU	119	14/05Z
YAP	40	14/05Z
KAYANGEL	179	14/21Z
KOROR	230	14/22Z
ANGAUR	256	14/23Z
SONSOROL	355	16/00Z
ZAMBOANGA	380	18/00Z
CLARK_AB	190	18/12Z
MANILA	152	18/12Z
PUERTO_PRINCESA	349	18/12Z
SUBIC_BAY	198	18/12Z

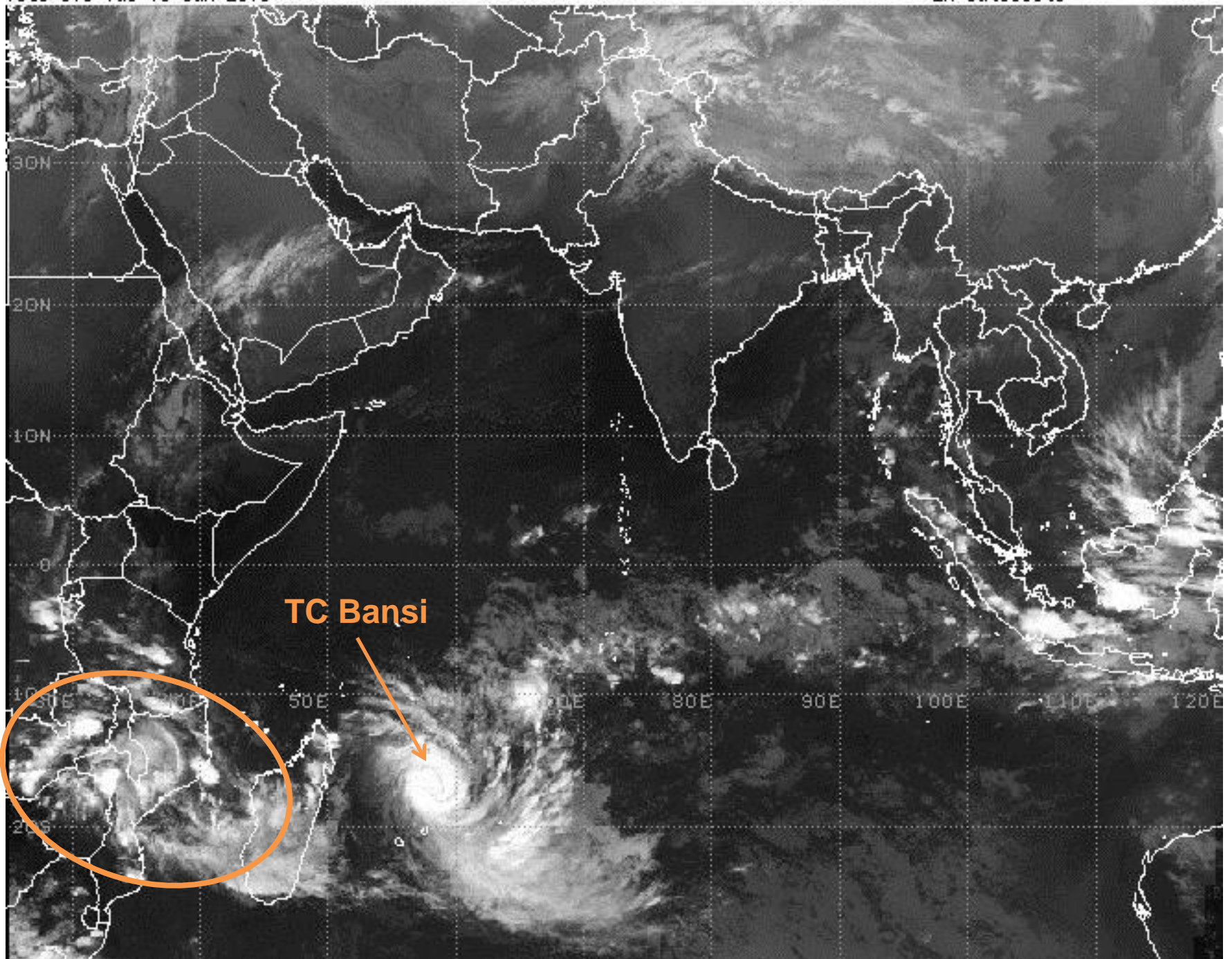
BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
ANGAUR	035	270	24
FAIS	283	224	24
KAYANGEL	039	195	24
KOROR	036	244	24
NGULU	343	144	24
SOROL	304	257	24
ULITHI	285	171	24
YAP	311	101	24

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

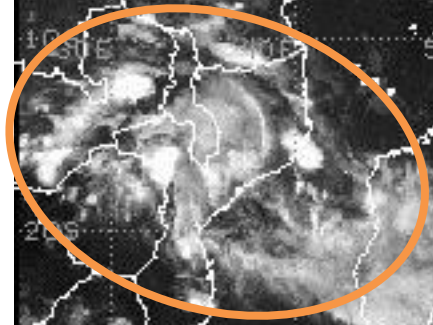
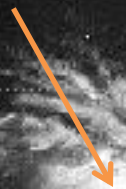


1645 UTC Tue 13 Jan 2015

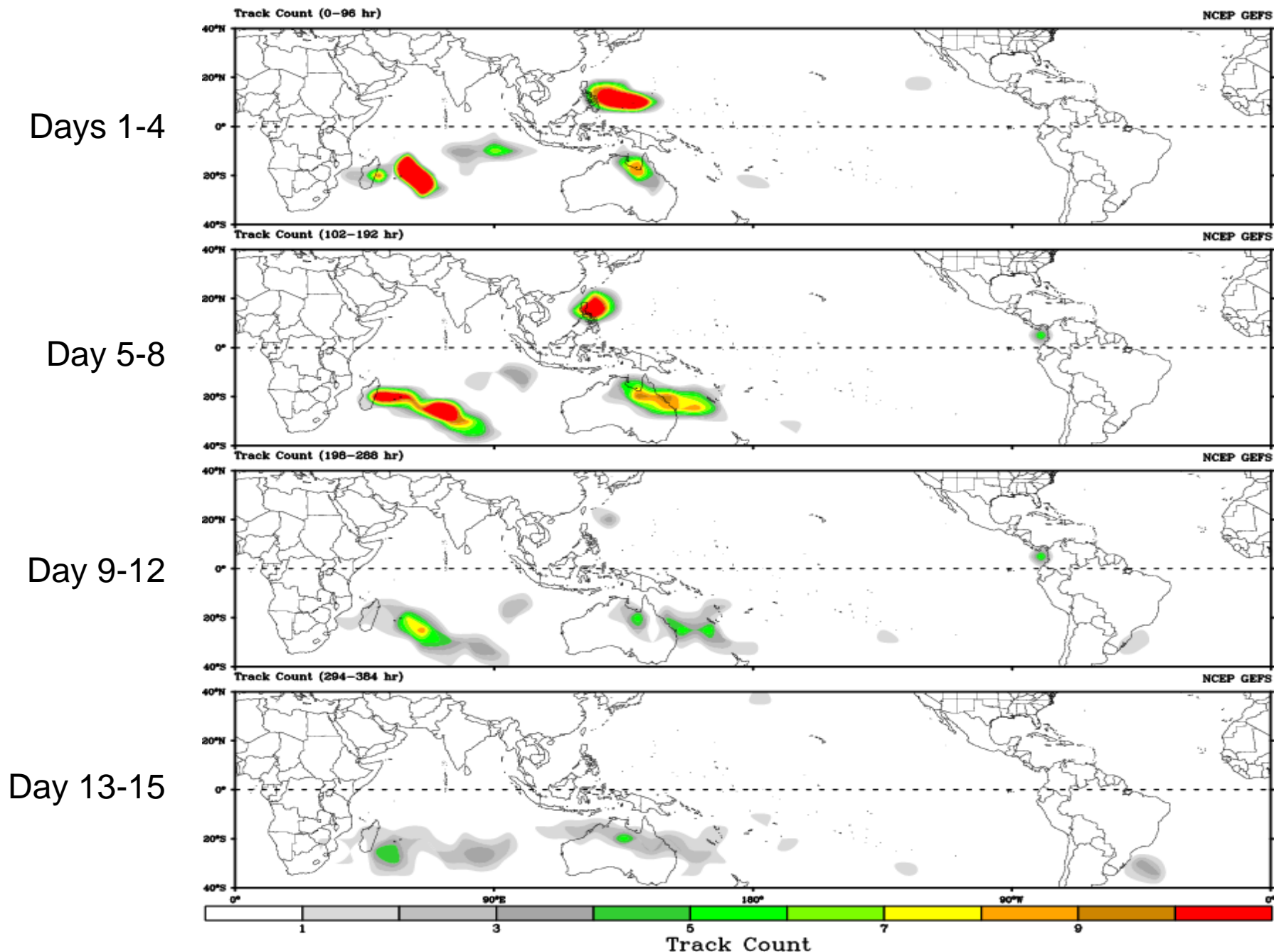
IR Satellite



TC Banasi



Favored Areas for TC Development: NCEP GEFS

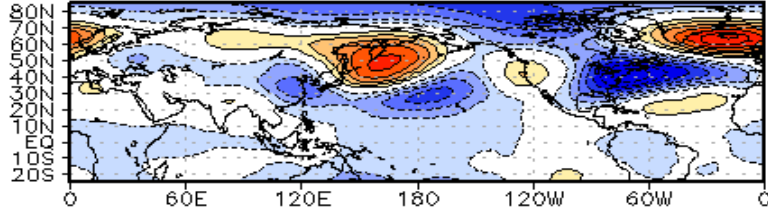
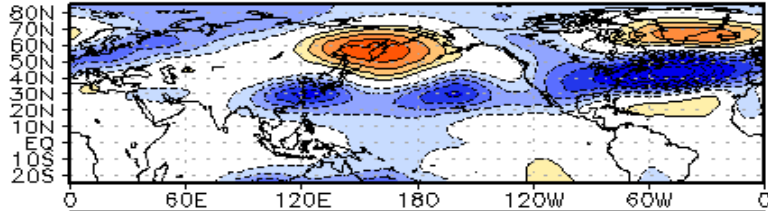
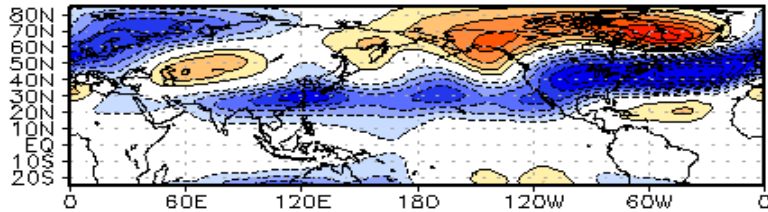
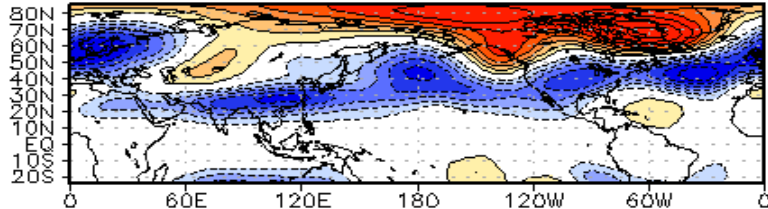
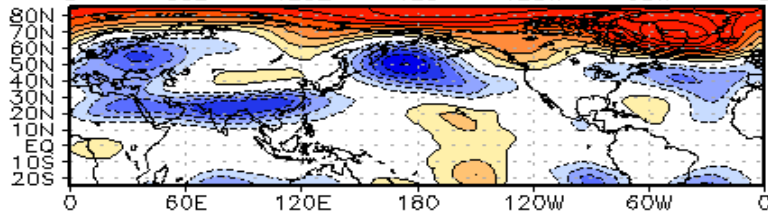
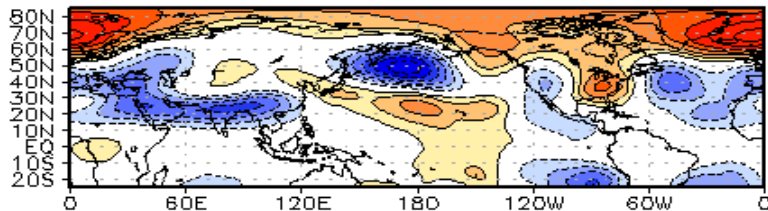


Connections to U.S. Impacts

Lagged composites from MJO

5-day intervals

WHMJO Phase 7 z200 Lagged Composite (djf)



+5-days

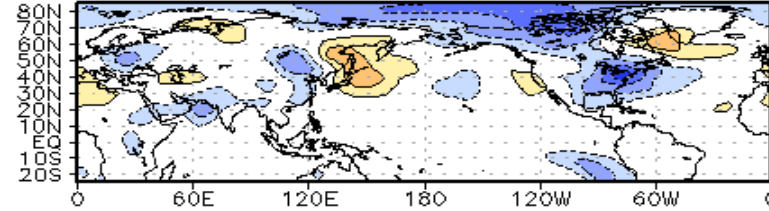
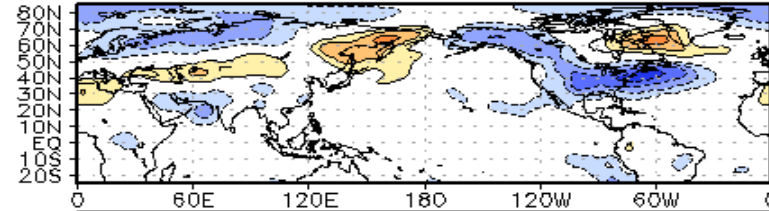
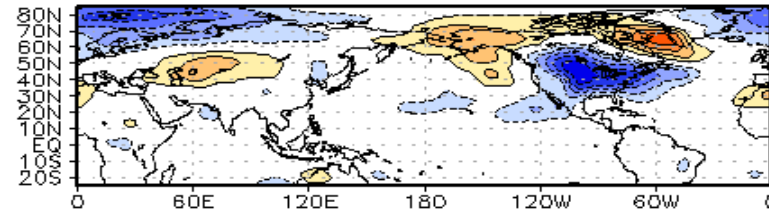
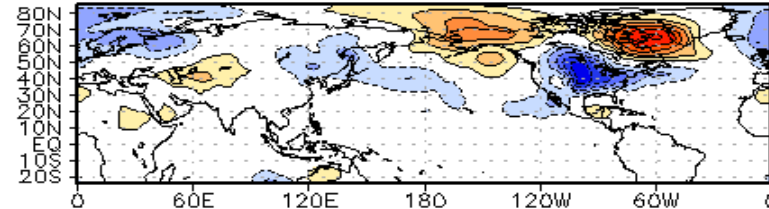
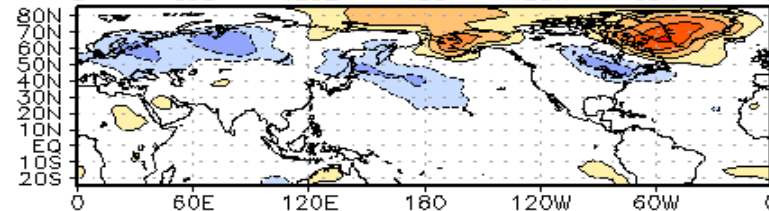
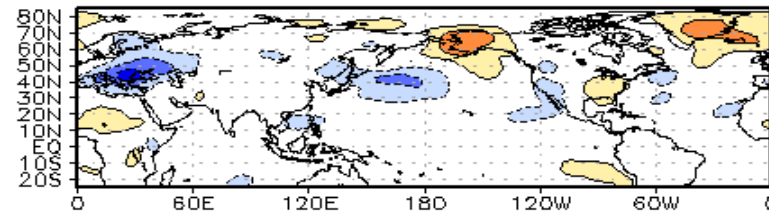
+10-days

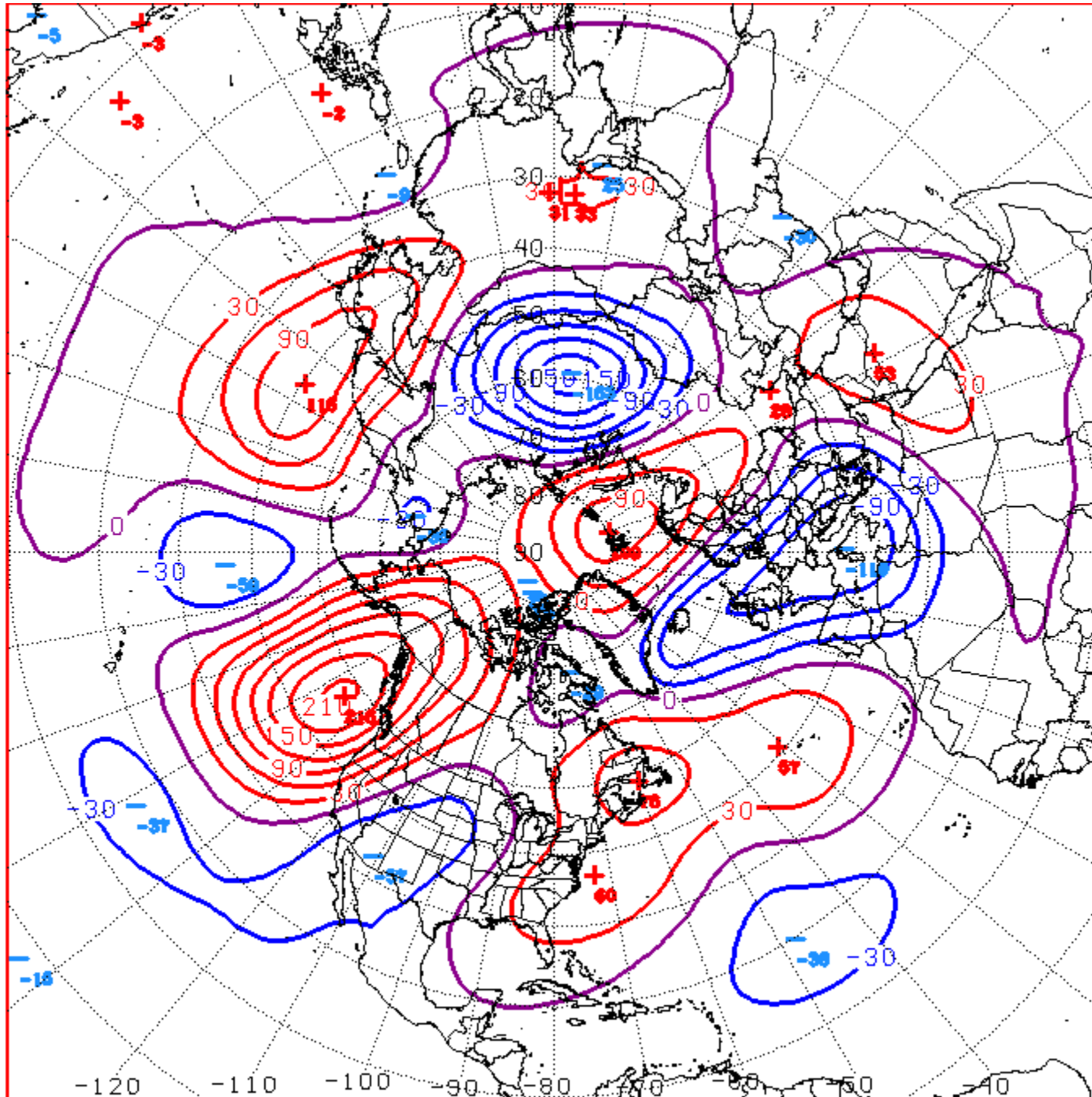
+15-days

+20-days

+25-days

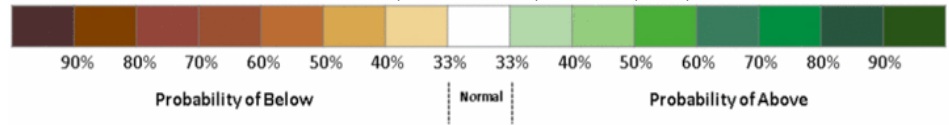
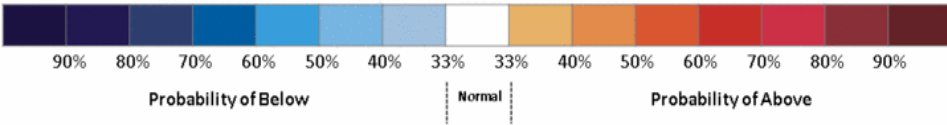
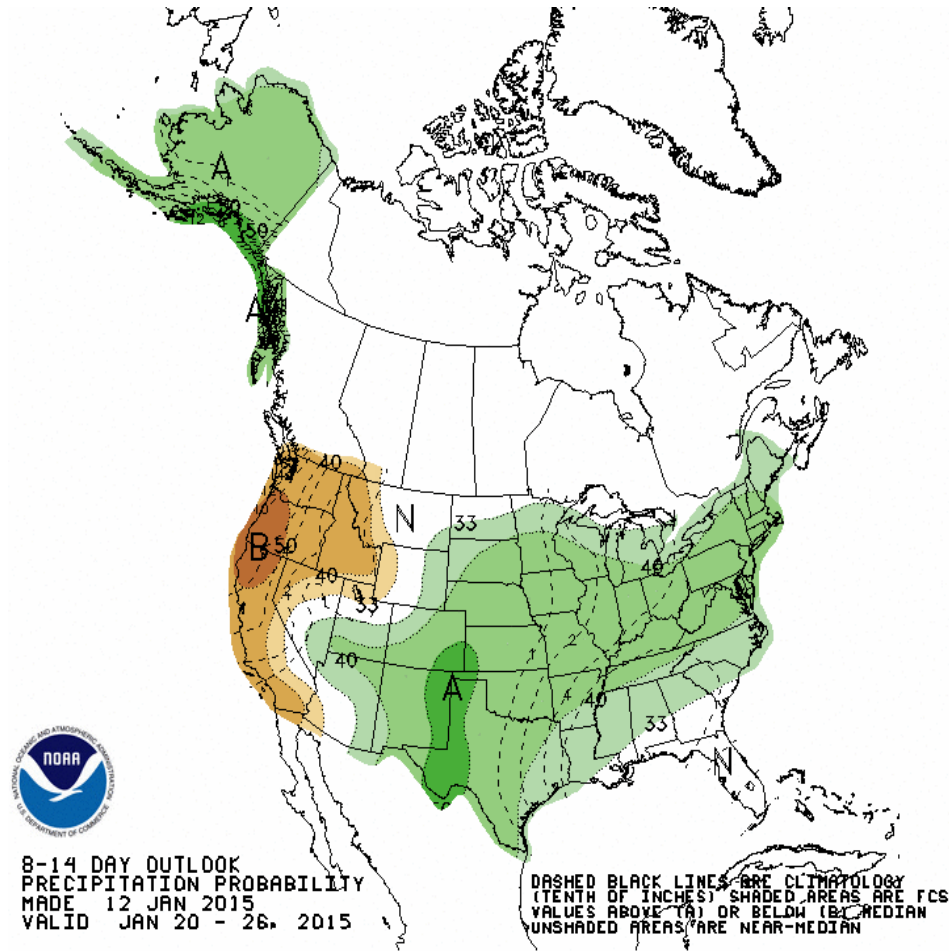
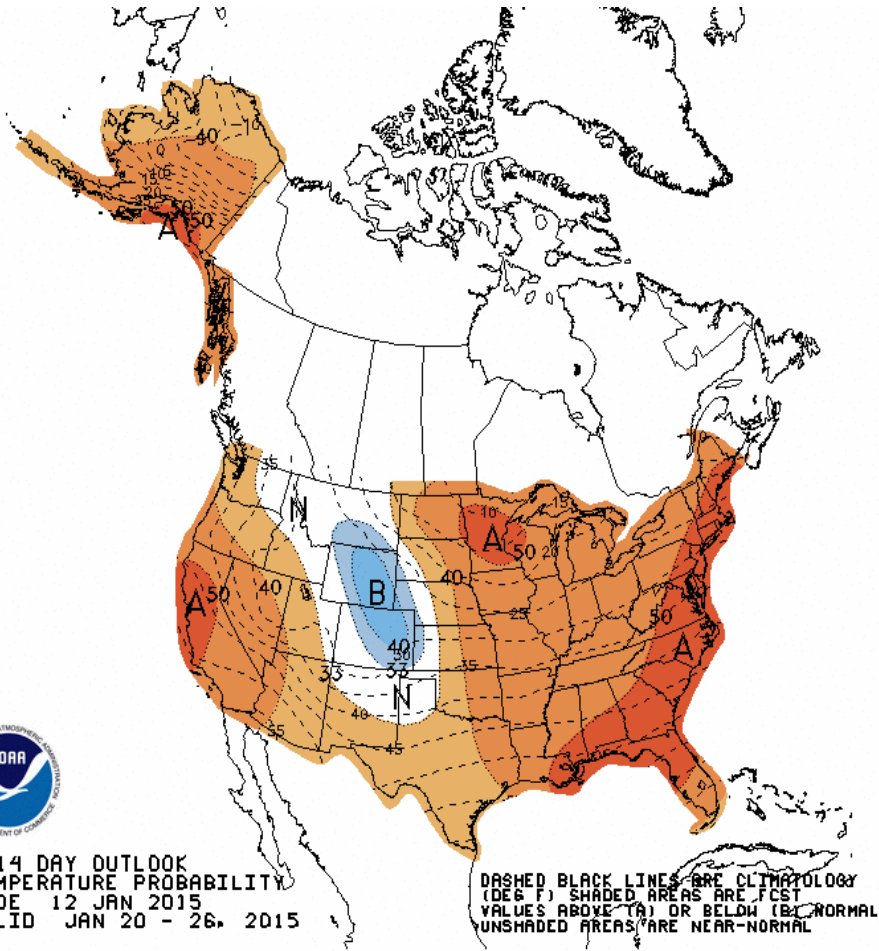
WHMJO Phase 7 t850 Lagged Composite (djf)





D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE JAN 13 2015 1045 UTC CNTD JAN 24 2015

Week 2 – Temperature and Precipitation

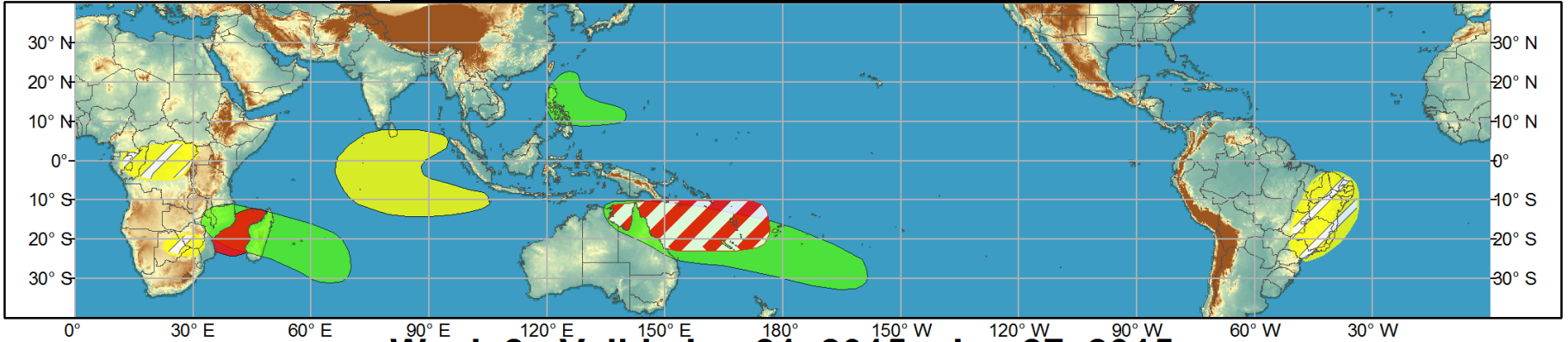




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