Global Tropics Hazards And Benefits Outlook

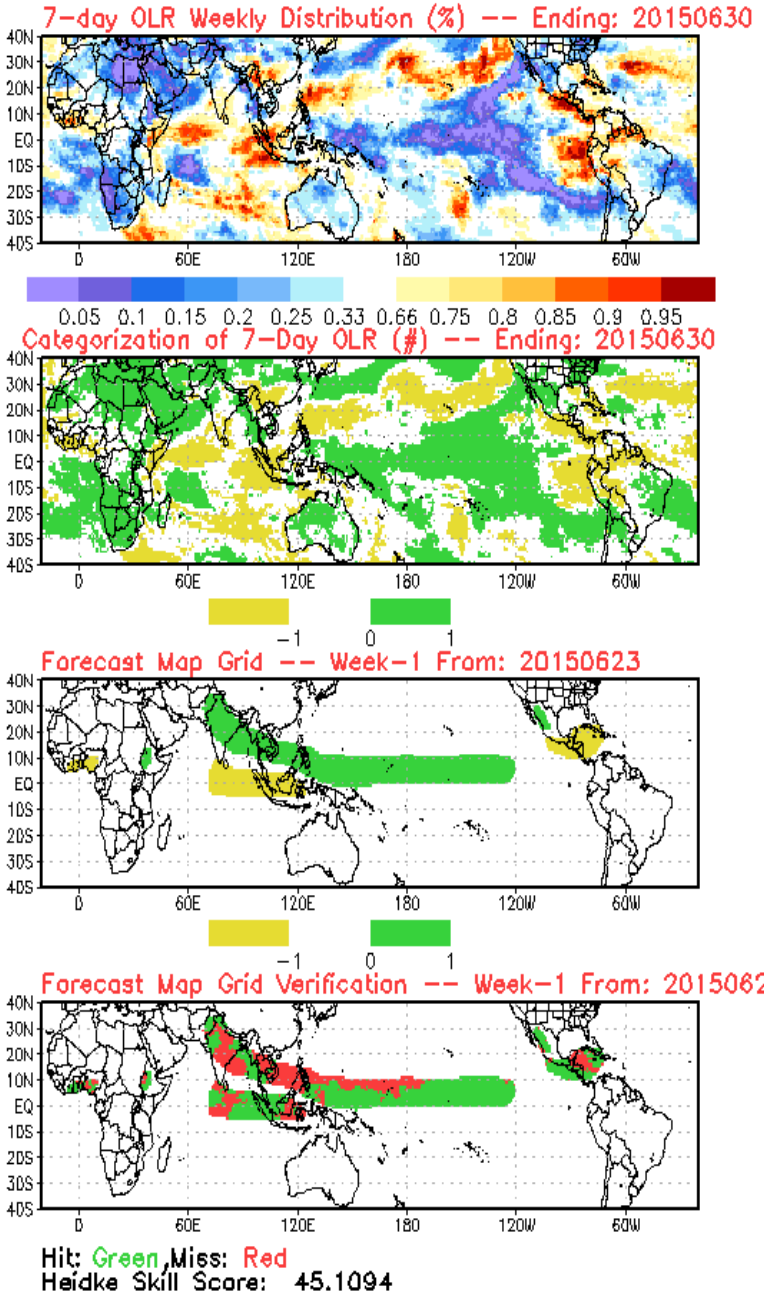
June 30, 2015

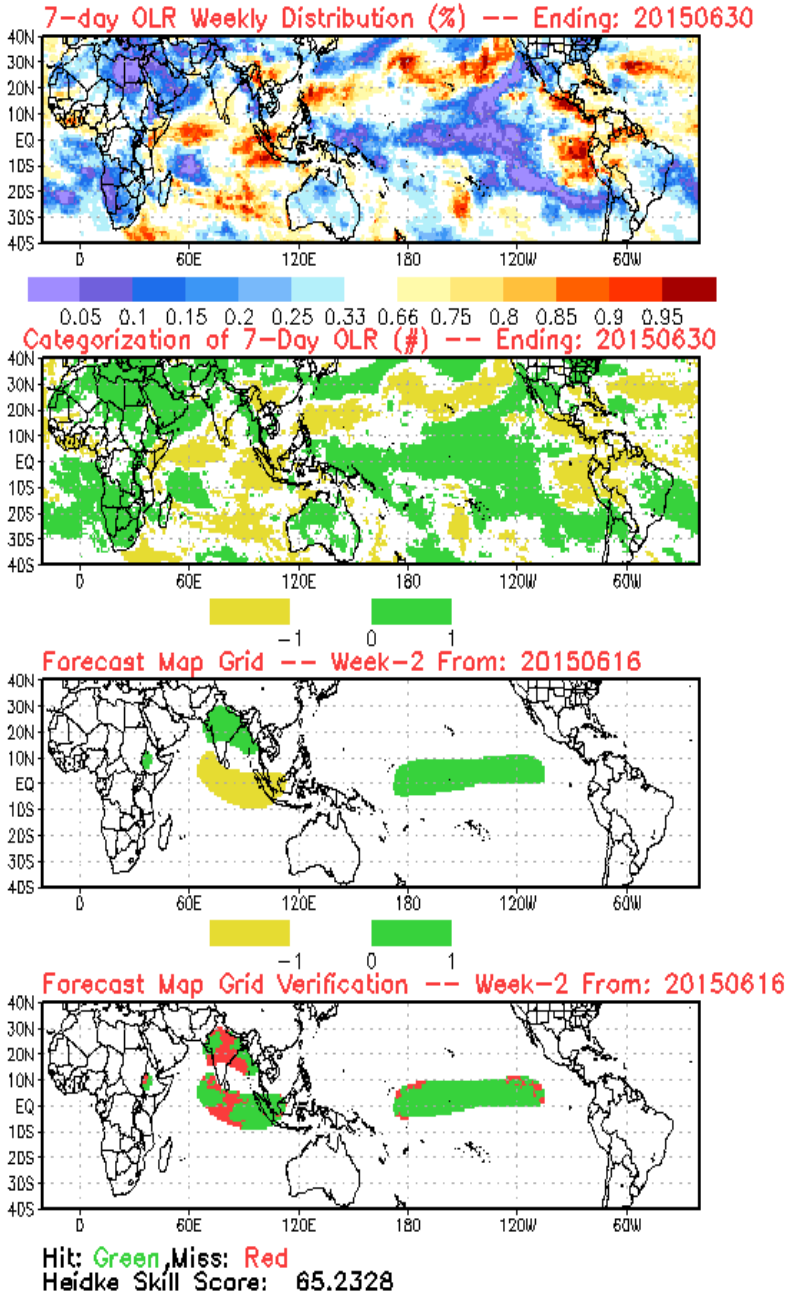
Adam Allgood

Outline

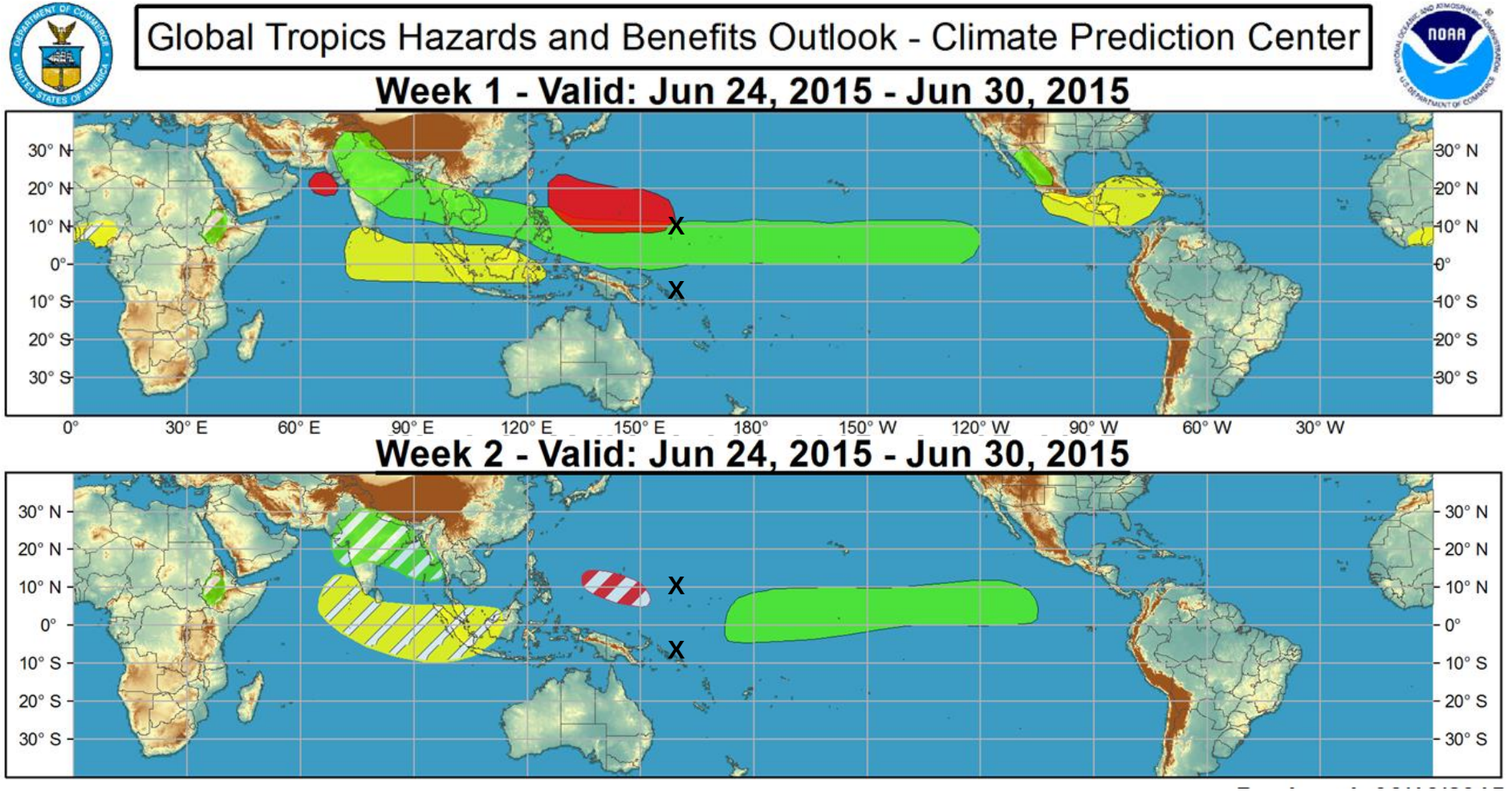
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Wet and Dry Shape Verification





Tropical Cyclone Verification



Tropical Depression 09W Chan-hom (NW Pacific)
Tropical Depression 25 (SW Pacific)

Synopsis of Climate Modes

ENSO:

• Current: **El Niño Advisory**

• Outlook: There is a greater than 90% chance that El Niño will continue through Northern Hemisphere fall 2015, and around an 85% chance it will last through the 2015-16 winter.

MJO and other subseasonal tropical variability:

• The MJO remained active during the past week, with the enhanced phase emerging over the western Pacific.

• Drying over the Indian Ocean, parts of South Asia, and the western Maritime continent was associated with the MJO. Additionally, the MJO and Kelvin Wave activity resulted in widespread Pacific convection.

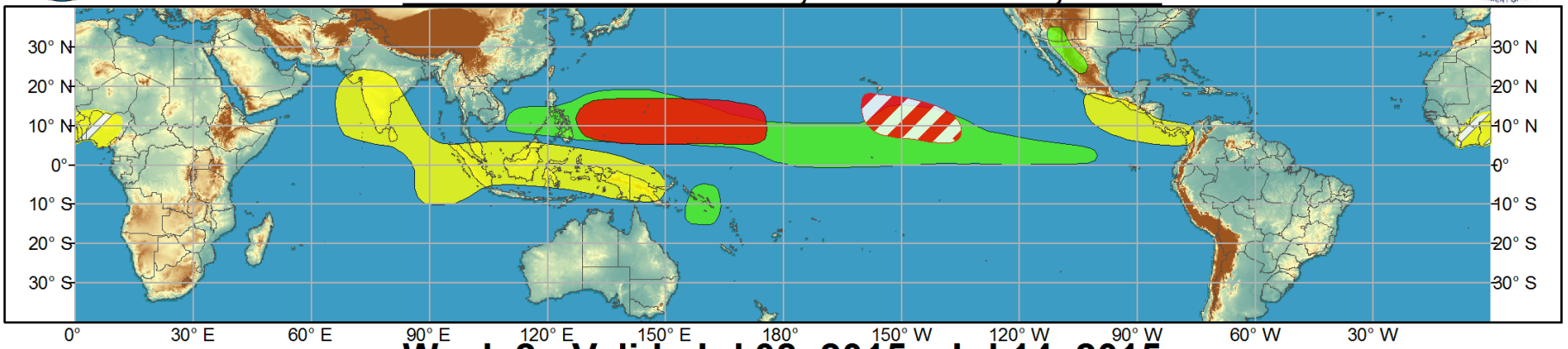
• Dynamical models favor a very high amplification of the RMM MJO Index over the western Pacific during Week-1, followed by a slow return to the base state. The ECMWF continues eastward propagation, while the GEFS ensembles do not.

Extratropics:

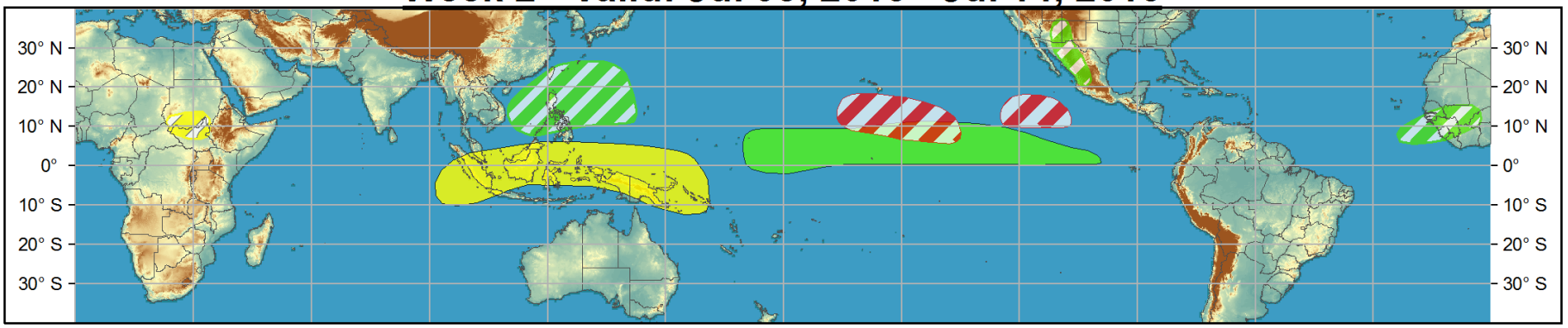
• The extended range forecast for the U.S. aligns well with lagged composites of a Phase-6 MJO event, albeit with a westward displacement of the anomaly pattern. How far east the MJO progresses will have a substantial impact on potential tropical cyclone formation over both the eastern Pacific and the Atlantic basins.

Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jul 01, 2015 - Jul 07, 2015



Week 2 - Valid: Jul 08, 2015 - Jul 14, 2015



Produced: 06/30/2015

Forecaster: Allgood

	Confidence: High	Confidence: 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.
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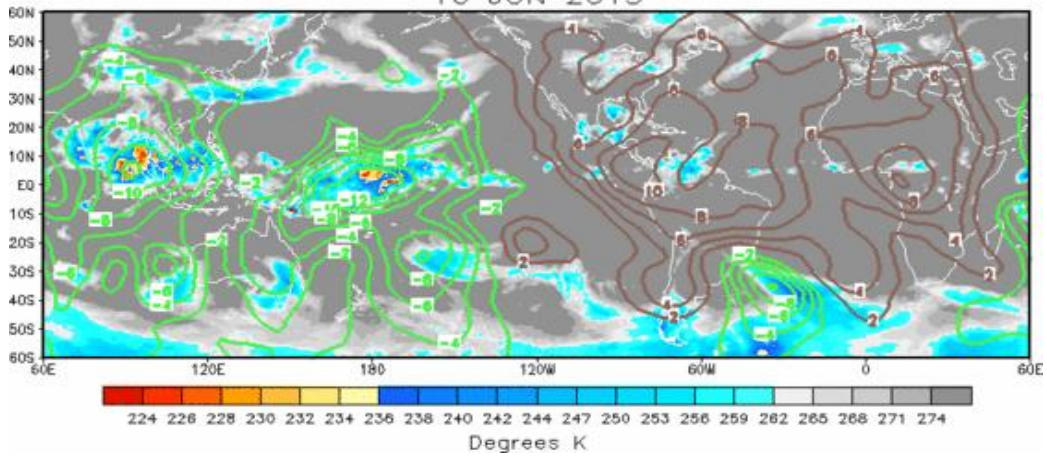
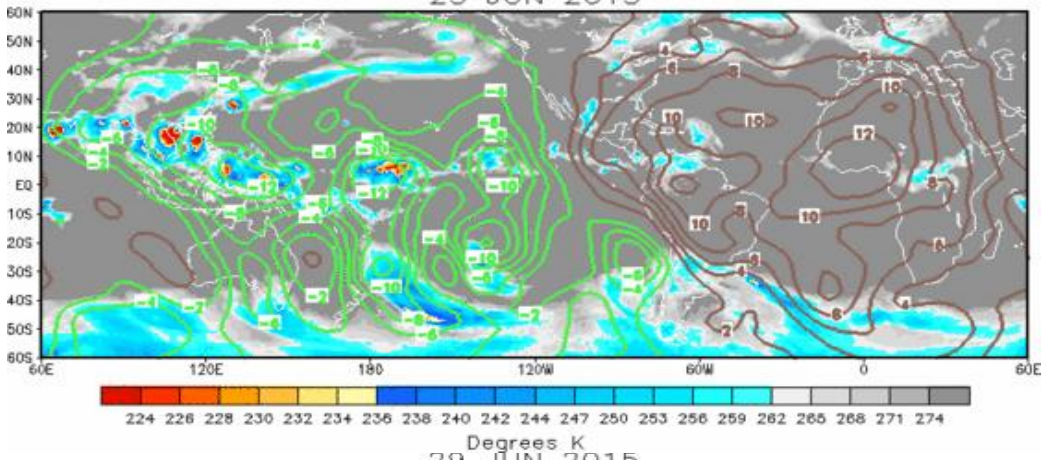
16 JUN 2015



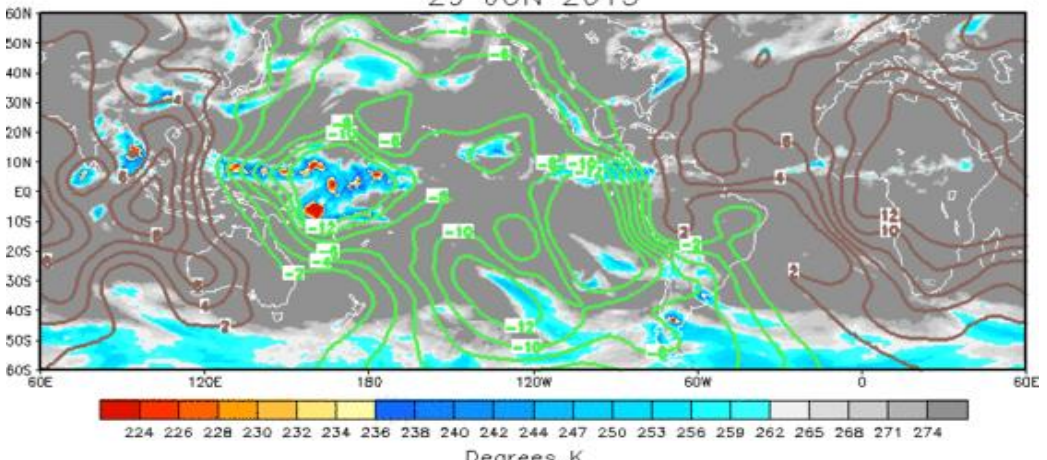
Degrees K

23 JUN 2015



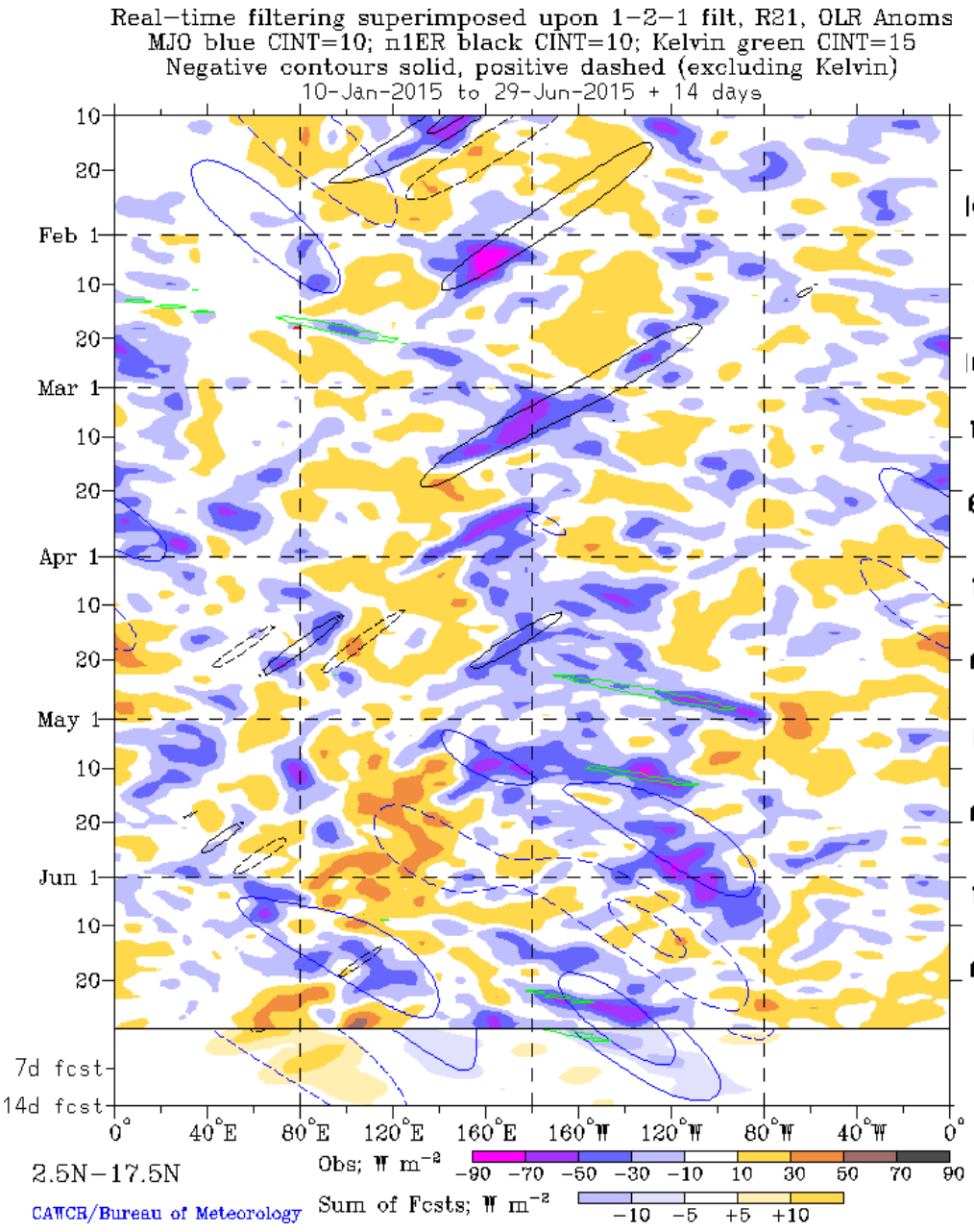
Degrees K

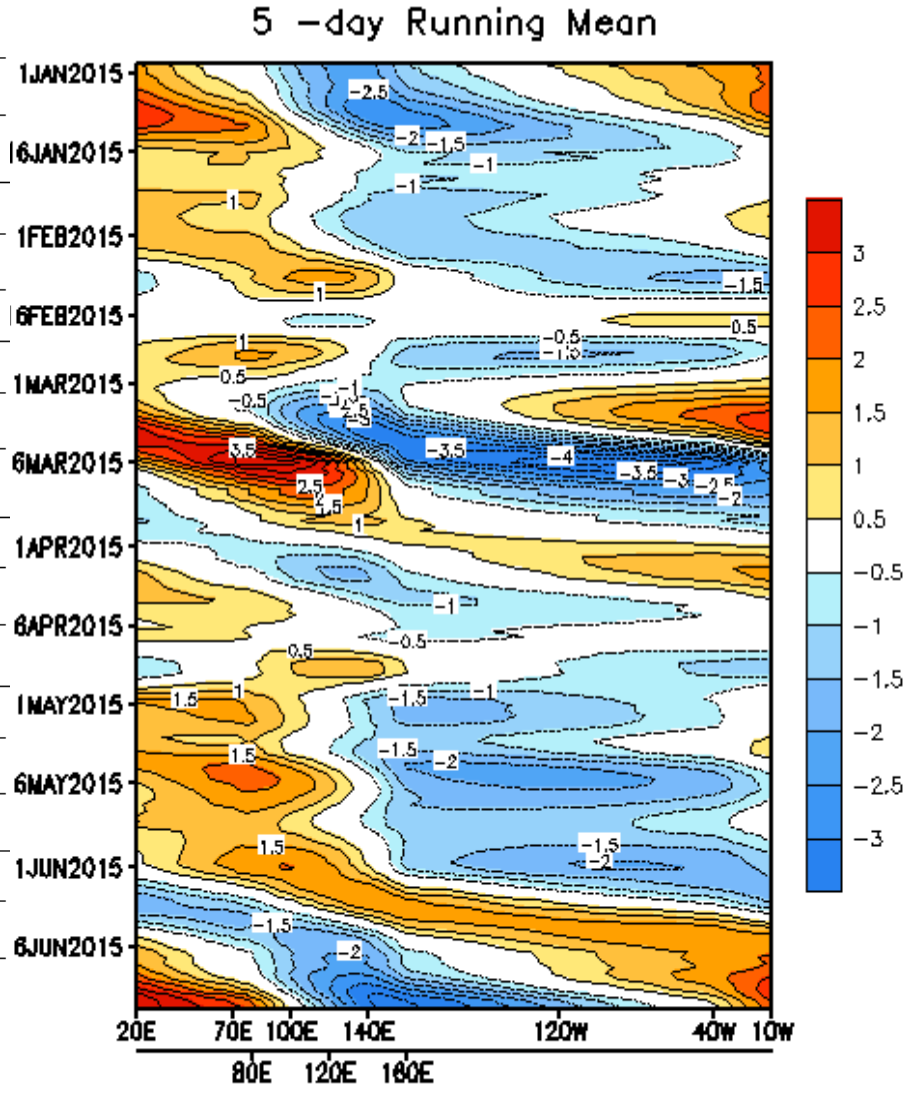
29 JUN 2015



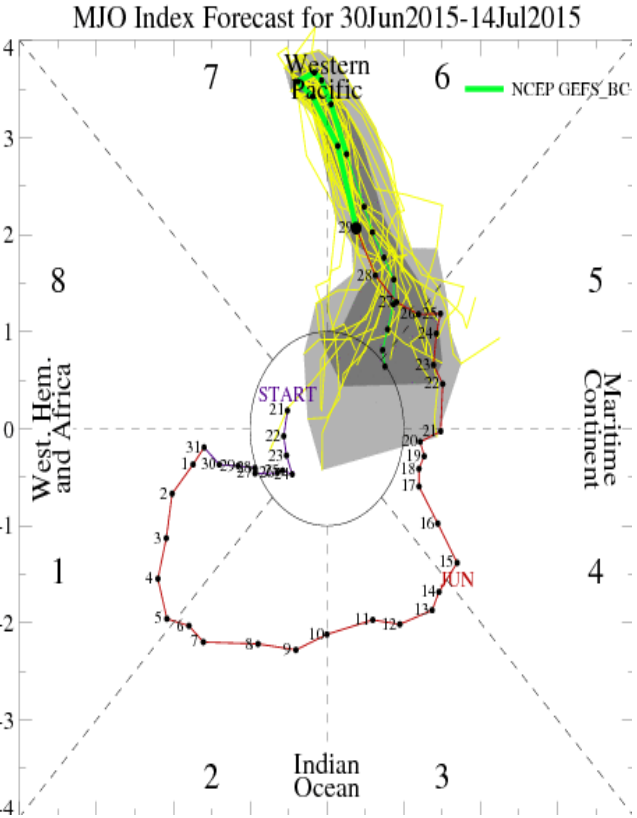
Degrees K

OLR Anomalies and the CPC Velocity Potential-Based MJO Index

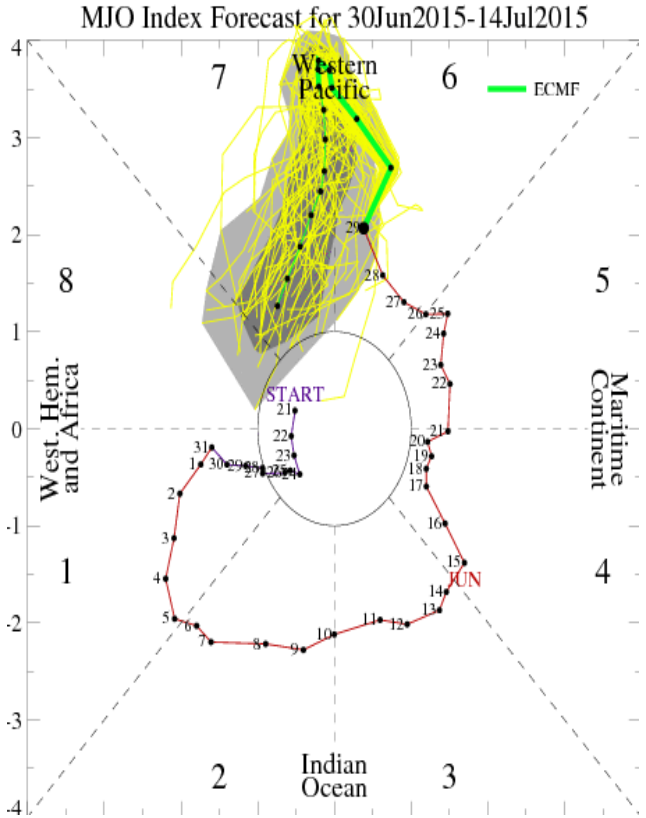




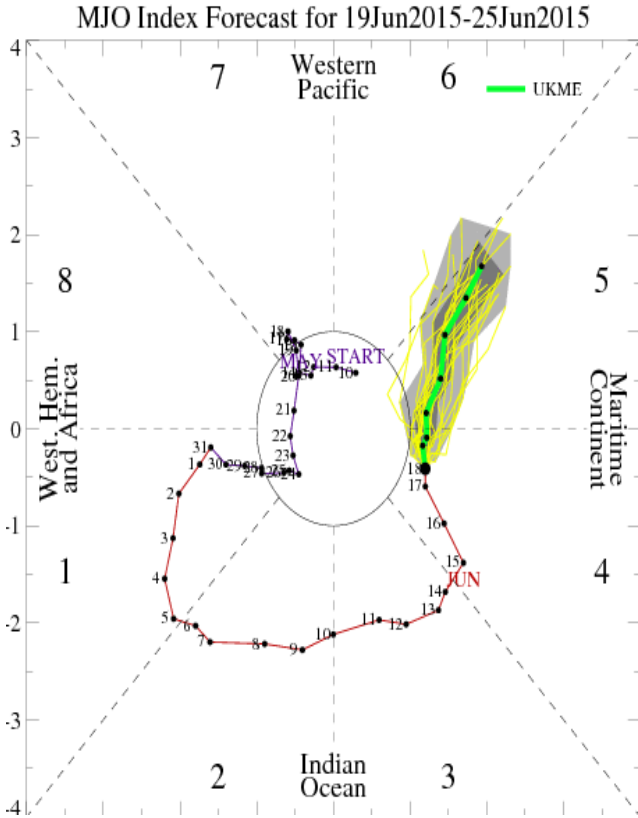
MJO Observation/Forecast



GFS



ECMWF

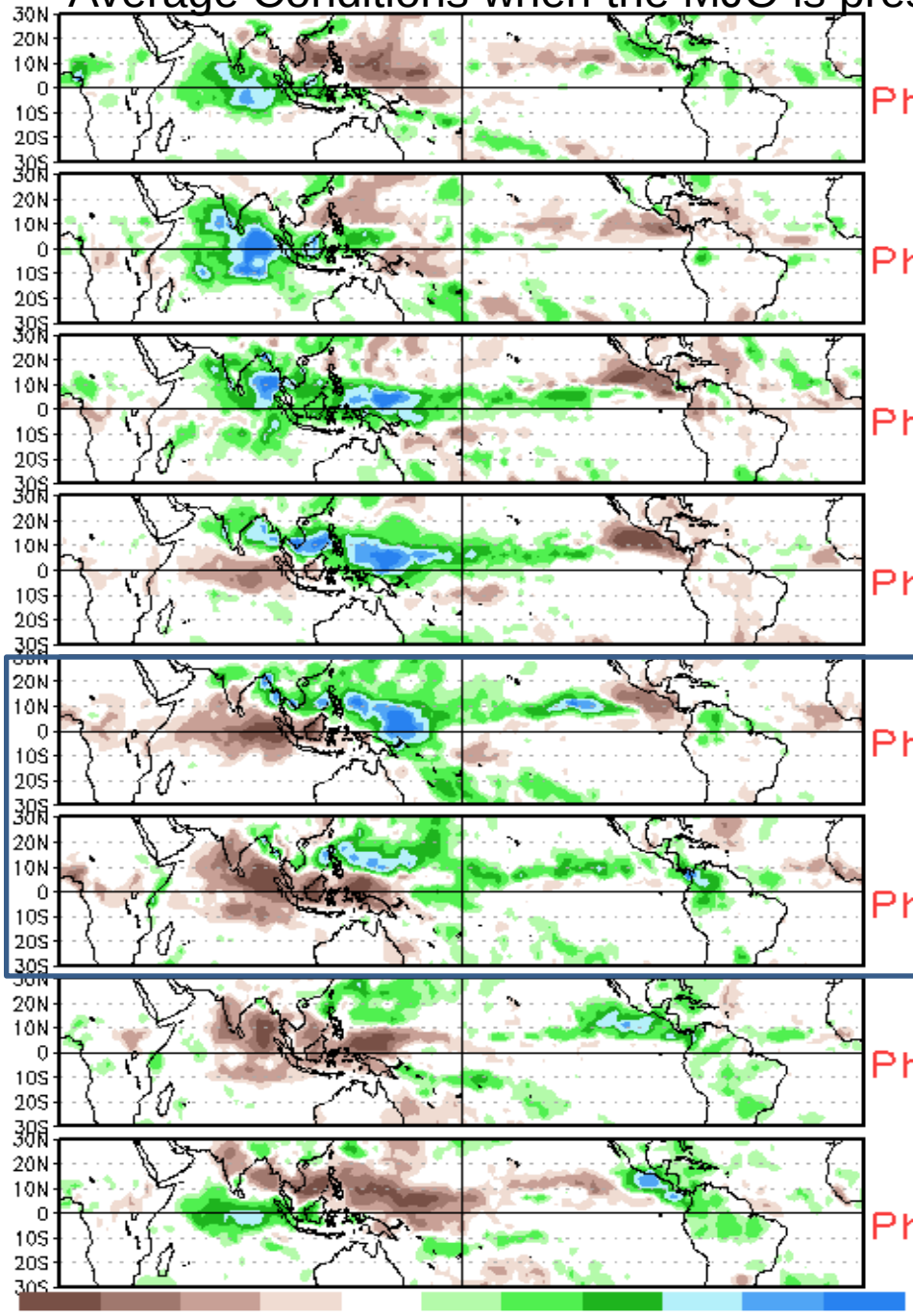


UKMET

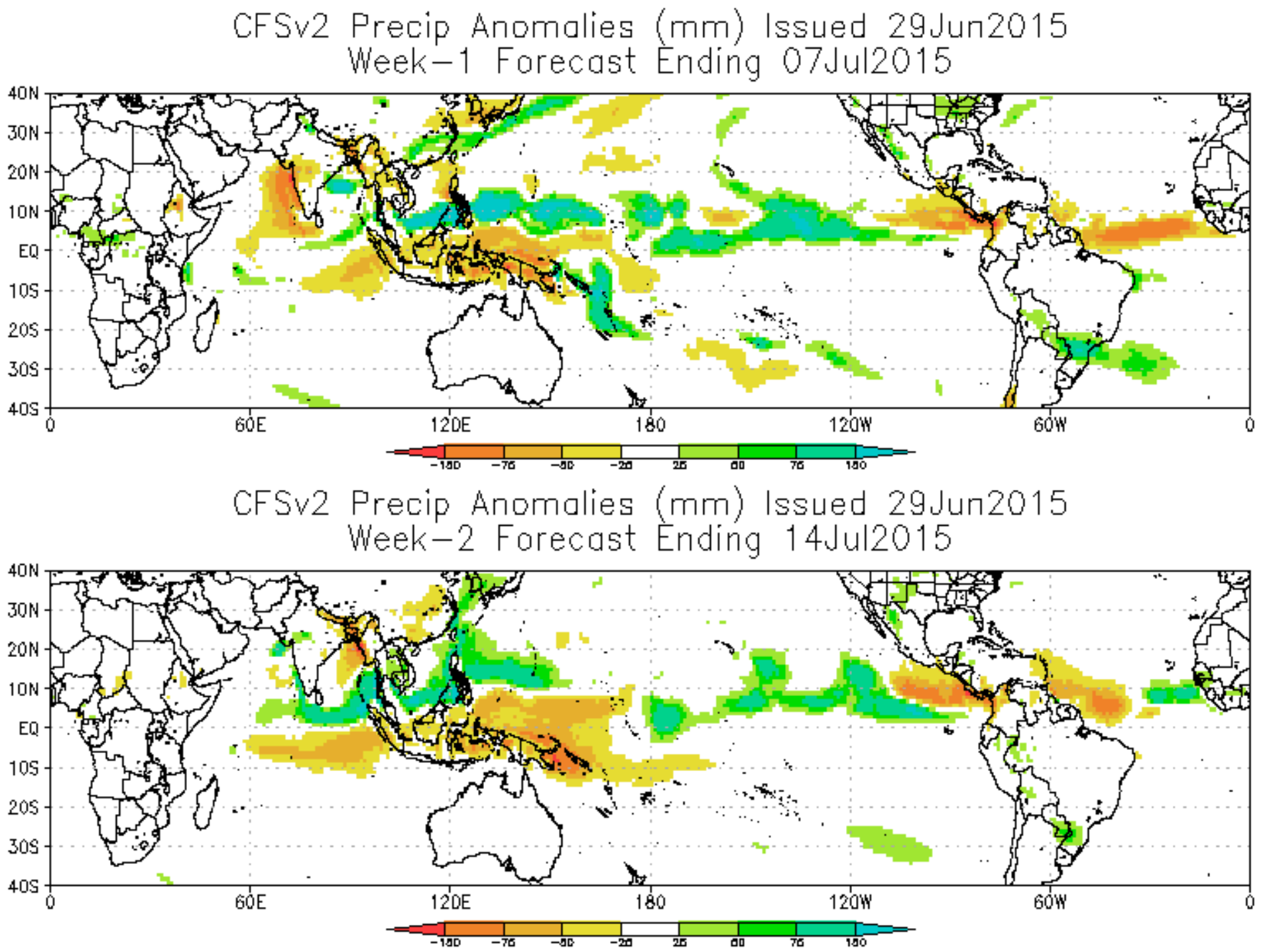
The GFS and ECMWF ensembles both depict a very strong amplification of the signal over the western Pacific (due to TC activity and a strong westerly wind burst along the equator near the Date Line).

The ECMWF depicts further eastward propagation, while the GFS is stationary.

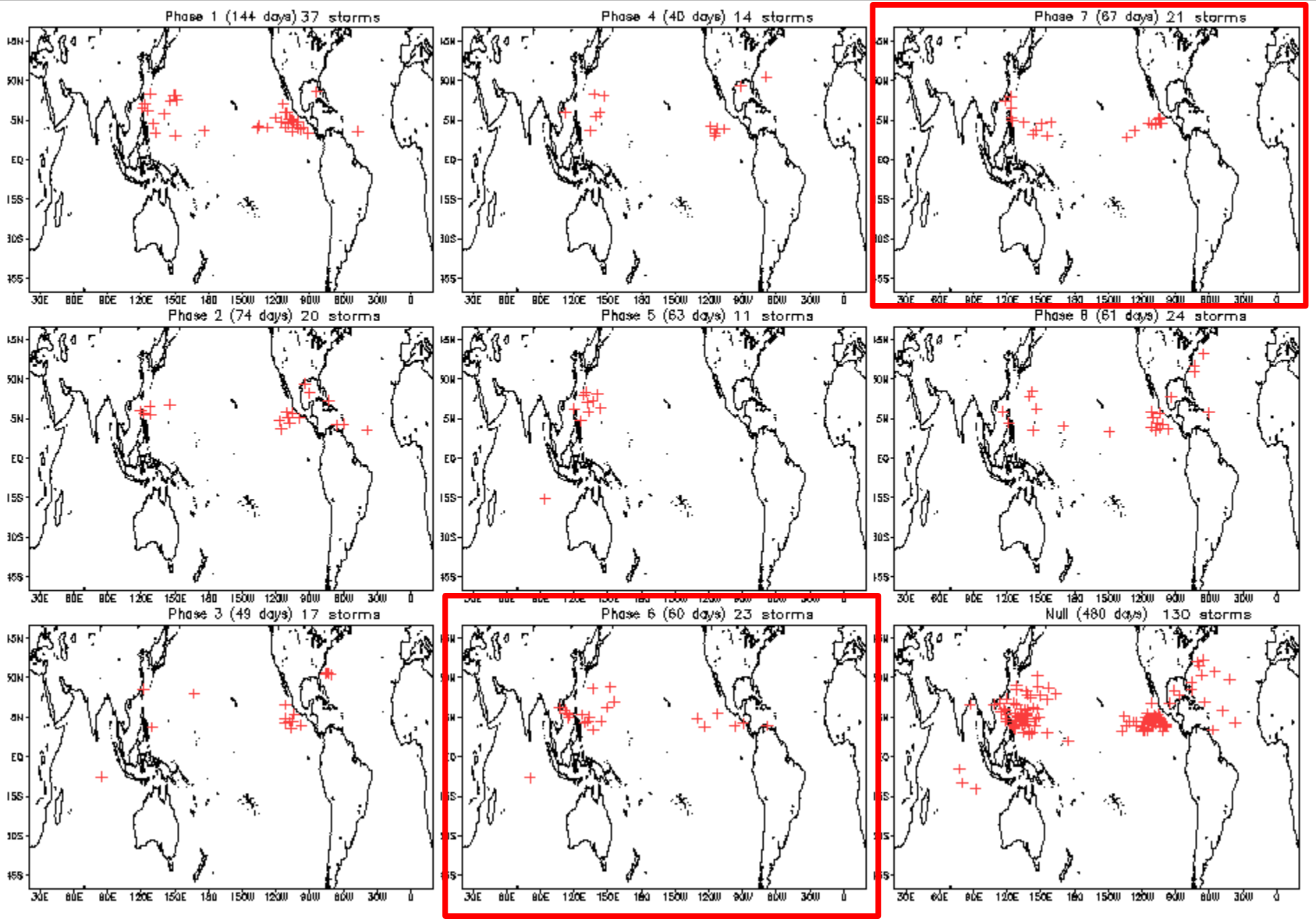
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

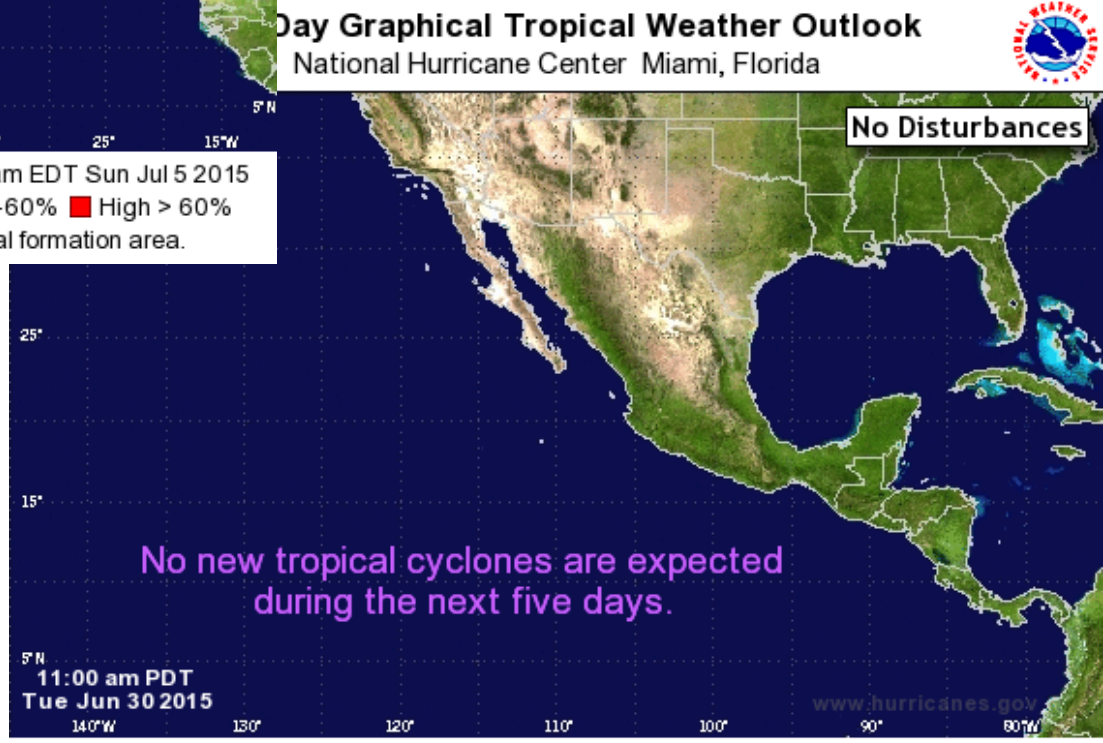

CFSv2 Precip Anomalies (mm) Issued 29Jun2015
Week-1 Forecast Ending 07Jul2015
40N
30N
20N
10N
EQ
10S
20S
30S
40S
0
60E
120E
180
120W
60W
0
-150
-75
-50
-25
25
50
75
150
CFSv2 Precip Anomalies (mm) Issued 29Jun2015
Week-2 Forecast Ending 14Jul2015
40N
30N
20N
10N
EQ
10S
20S
30S
40S
0
60E
120E
180
120W
60W
0
-150
-75
-50
-25
25
50
75
150

July Tropical Storm Formation by MJO phase



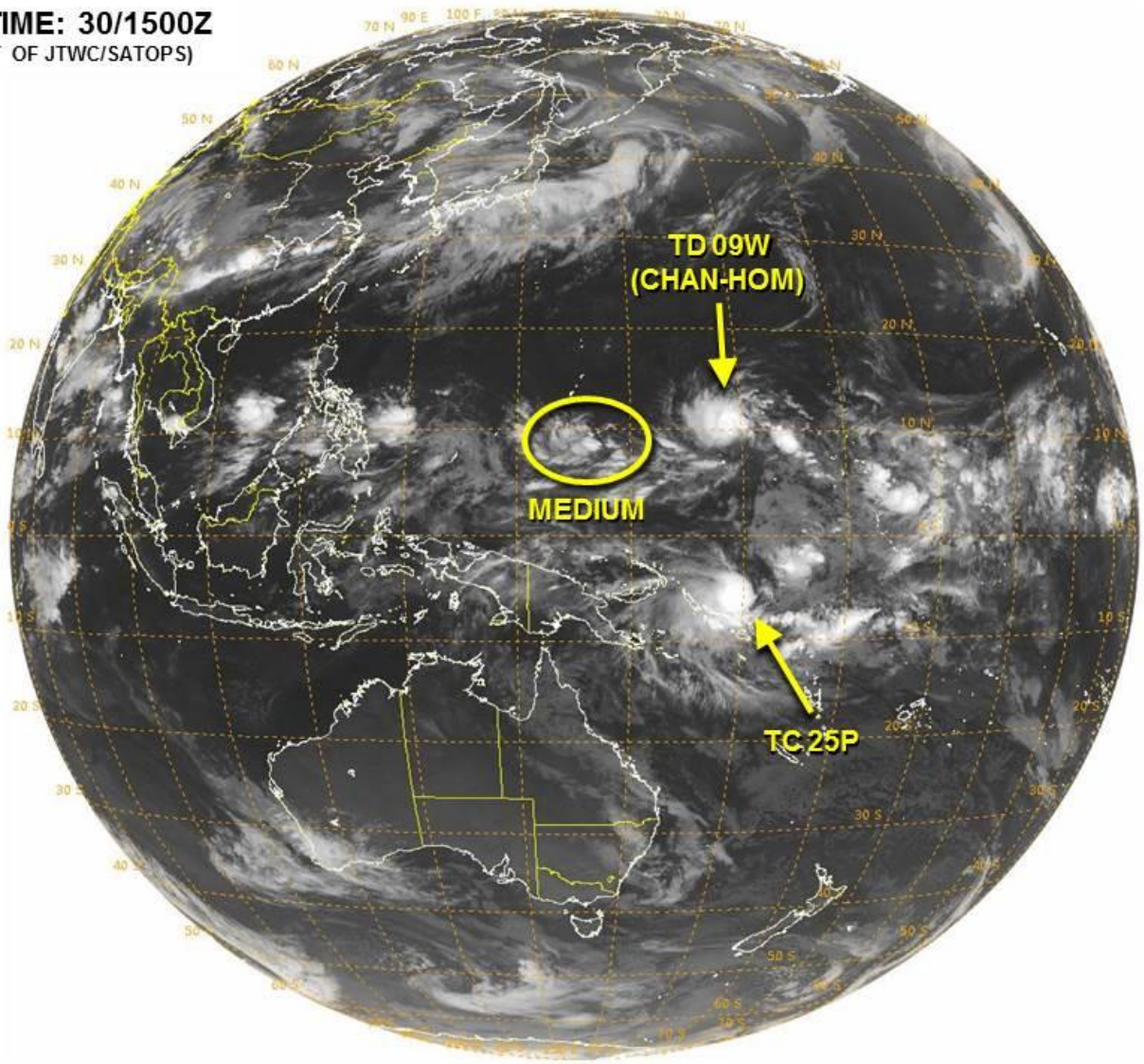
Graphical Tropical Weather Outlooks

Tropical Cyclone Formation Potential for the 5-Day Period Ending 8:00 am EDT Sun Jul 5 2015
Chance of Cyclone Formation in 5 Days: Low < 40% Medium 40-60% High > 60%
X indicates current disturbance location; shading indicates potential formation area.



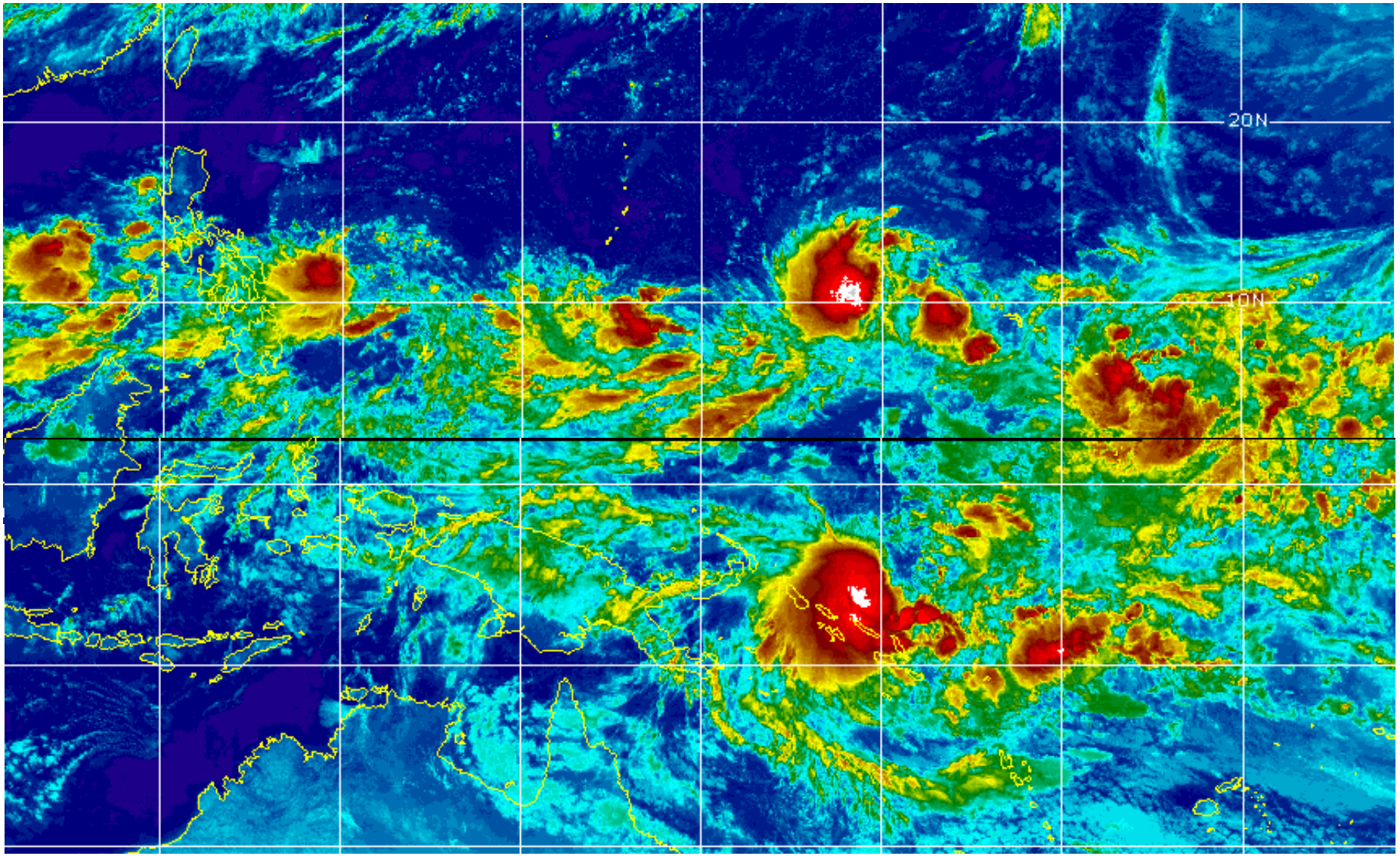
Tropical Cyclone Formation Potential for the 5-Day Period Ending 11:00 am PDT Sun Jul 5 2015
Chance of Cyclone Formation in 5 Days: Low < 40% Medium 40-60% High > 60%
X indicates current disturbance location; shading indicates potential formation area.

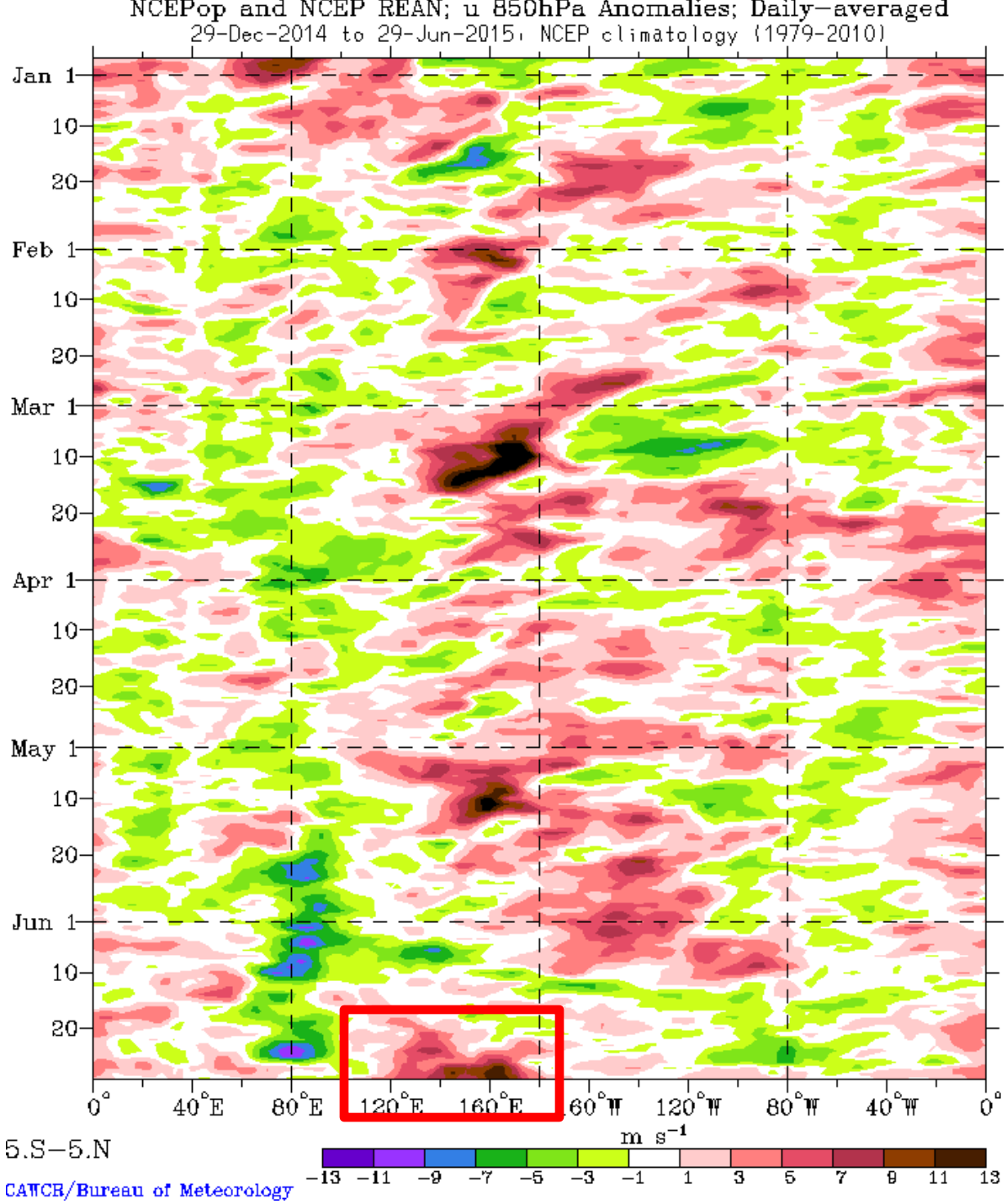
VALID TIME: 30/1500Z
(PRODUCT OF JTWC/SATOPS)



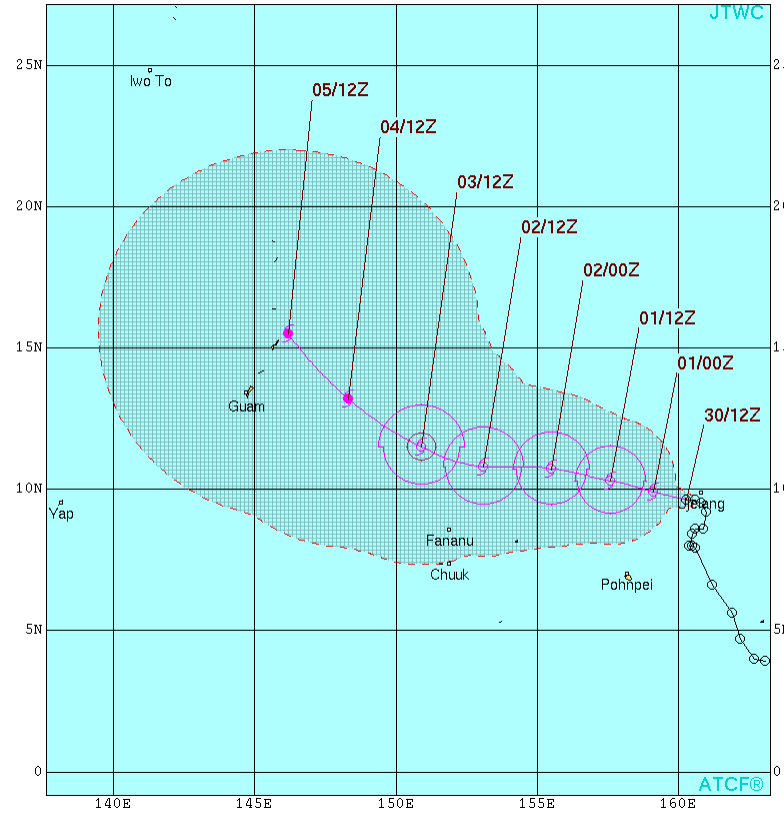
West Pacific Infrared Satellite Imagery

Approx. 1630 UTC 30 June





Huge westerly wind burst, will be further aided by twin TCs.

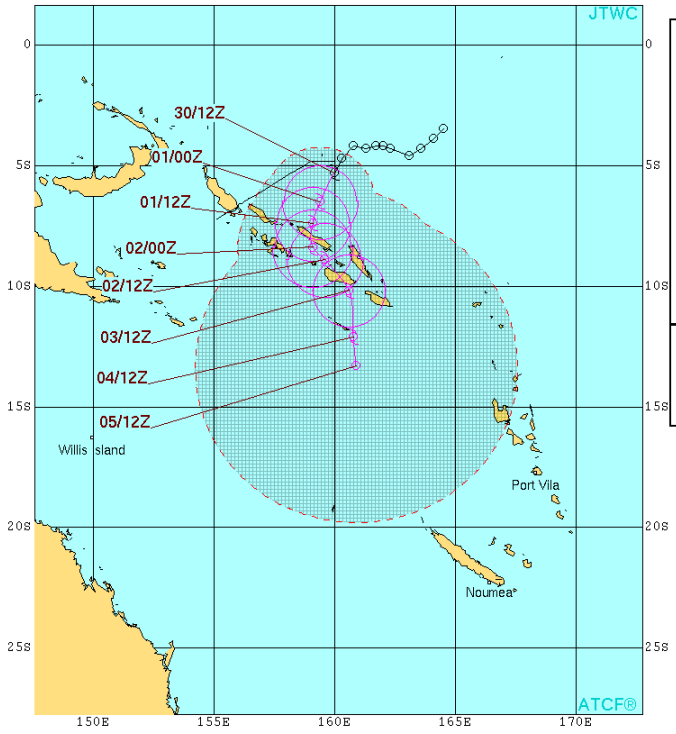


TROPICAL DEPRESSION 09W (CHAN-HOM) WARNING #1
WTPN31 PGTW 301500
301200Z POSIT: NEAR 9.6N 160.3E
MOVING 270 DEGREES TRUE AT 03 KNOTS
MAXIMUM SIGNIFICANT WAVE HEIGHT: 8 FEET
30/12Z, WINDS 030 KTS, GUSTS TO 040 KTS
01/00Z, WINDS 035 KTS, GUSTS TO 045 KTS
01/12Z, WINDS 040 KTS, GUSTS TO 050 KTS
02/00Z, WINDS 045 KTS, GUSTS TO 055 KTS
02/12Z, WINDS 050 KTS, GUSTS TO 065 KTS
03/12Z, WINDS 060 KTS, GUSTS TO 075 KTS
04/12Z, WINDS 070 KTS, GUSTS TO 085 KTS
05/12Z, WINDS 080 KTS, GUSTS TO 100 KTS

CPA TO:	NM	DTG
POHNPEI	188	01/01Z
PAKIN	182	01/04Z
SAPWUAFIK	266	01/05Z
OROLUK	181	02/00Z
LUKUNOR	309	02/07Z
CHUUK	207	02/16Z
PULUWAT	287	03/10Z
SATAWAL	324	03/21Z
LAMOTREK	341	04/00Z
FARAULEP	355	04/11Z
HAGATNA	144	05/05Z
ANDERSEN_AFB	128	05/06Z
WFO_GUAM	137	05/06Z
NAVSTA_GUAM	150	05/07Z
ROTA	96	05/08Z
TINIAN	46	05/11Z
AGRIHAN	200	05/12Z
ALAMAGAN	128	05/12Z
ANATAHAN	61	05/12Z
PAGAN	158	05/12Z
SAIPAN	29	05/12Z

BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
CHUUK	063	377	24
ENEWETAK	253	302	24
LUKU			
MOKJ			
OROI			
PAKJ			
PINC			
POHN			
SAPV			
UJEI			

○ LE
◌ 34
● MOI
PAST
FORE

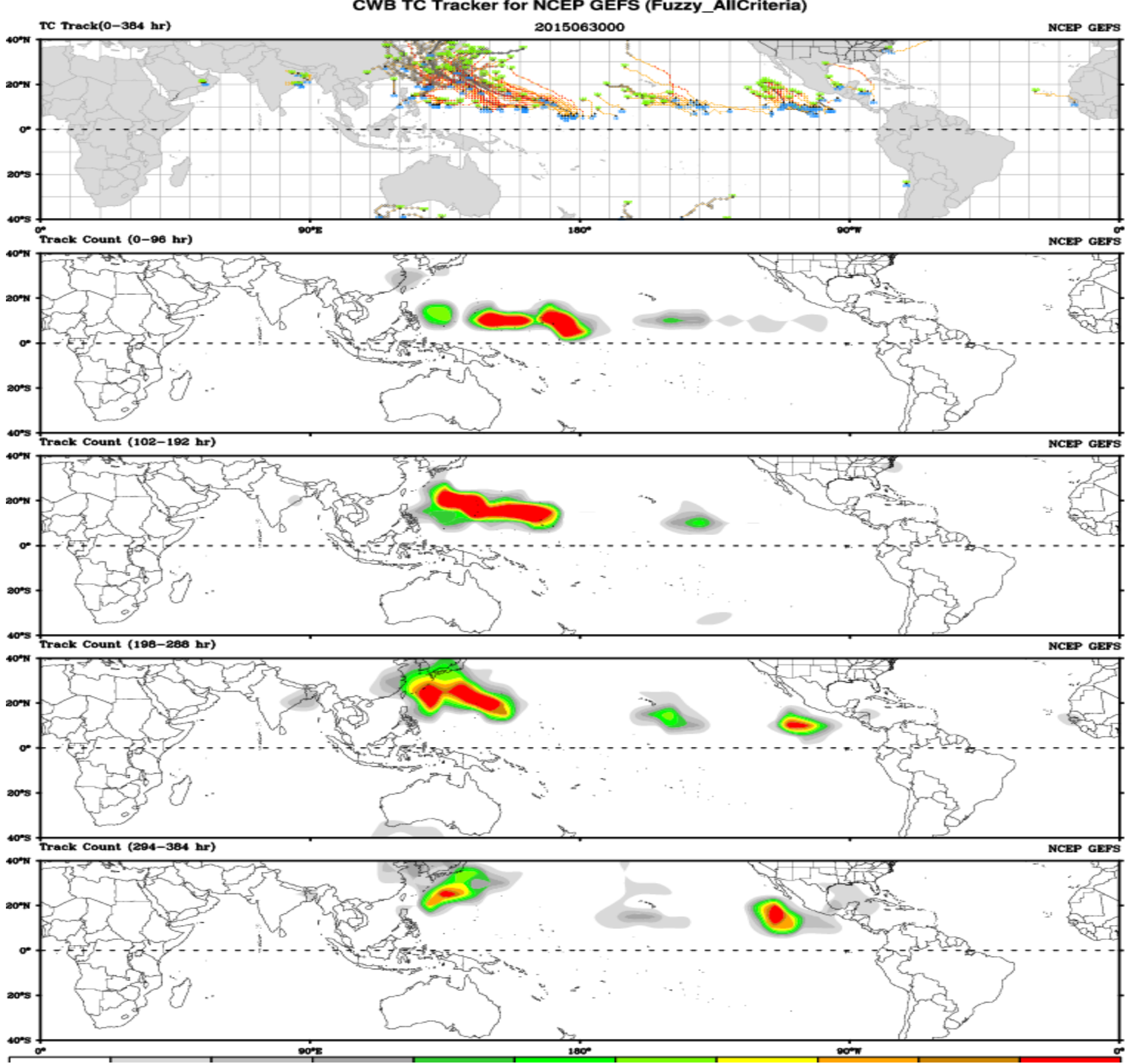


TROPICAL CYCLONE 25P (TWENTYFIVE) WARNING #1A
*** AMENDED ***
WTPS31 PGTW 301500 AMD
301200Z POSIT: NEAR 5.3S 160.0E
MOVING 205 DEGREES TRUE AT 07 KNOTS
MAXIMUM SIGNIFICANT WAVE HEIGHT: 8 FEET
30/12Z, WINDS 035 KTS, GUSTS TO 045 KTS
01/00Z, WINDS 040 KTS, GUSTS TO 050 KTS
01/12Z, WINDS 050 KTS, GUSTS TO 065 KTS
02/00Z, WINDS 055 KTS, GUSTS TO 070 KTS
02/12Z, WINDS 050 KTS, GUSTS TO 065 KTS
03/12Z, WINDS 045 KTS, GUSTS TO 055 KTS
04/12Z, WINDS 040 KTS, GUSTS TO 050 KTS
05/12Z, WINDS 030 KTS, GUSTS TO 040 KTS

CPA TO:	NM	DTG
HONIARA	8	02/21Z

BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
HONIARA	338	129	24

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



Days 1-4

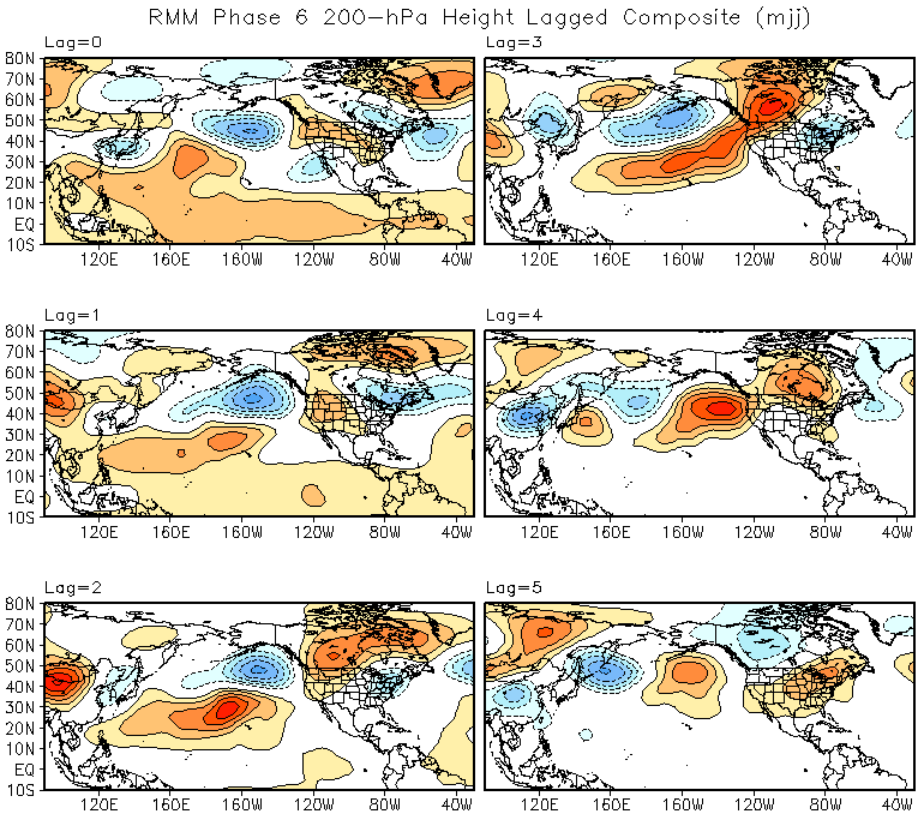
Day 5-8

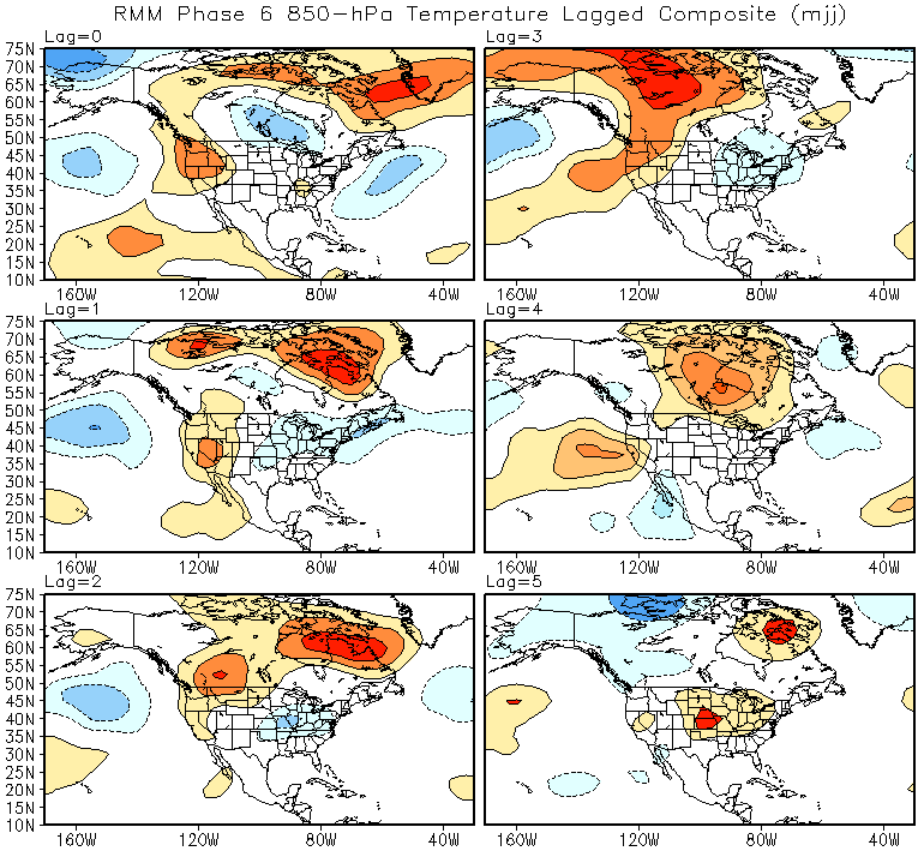
Day 9-12

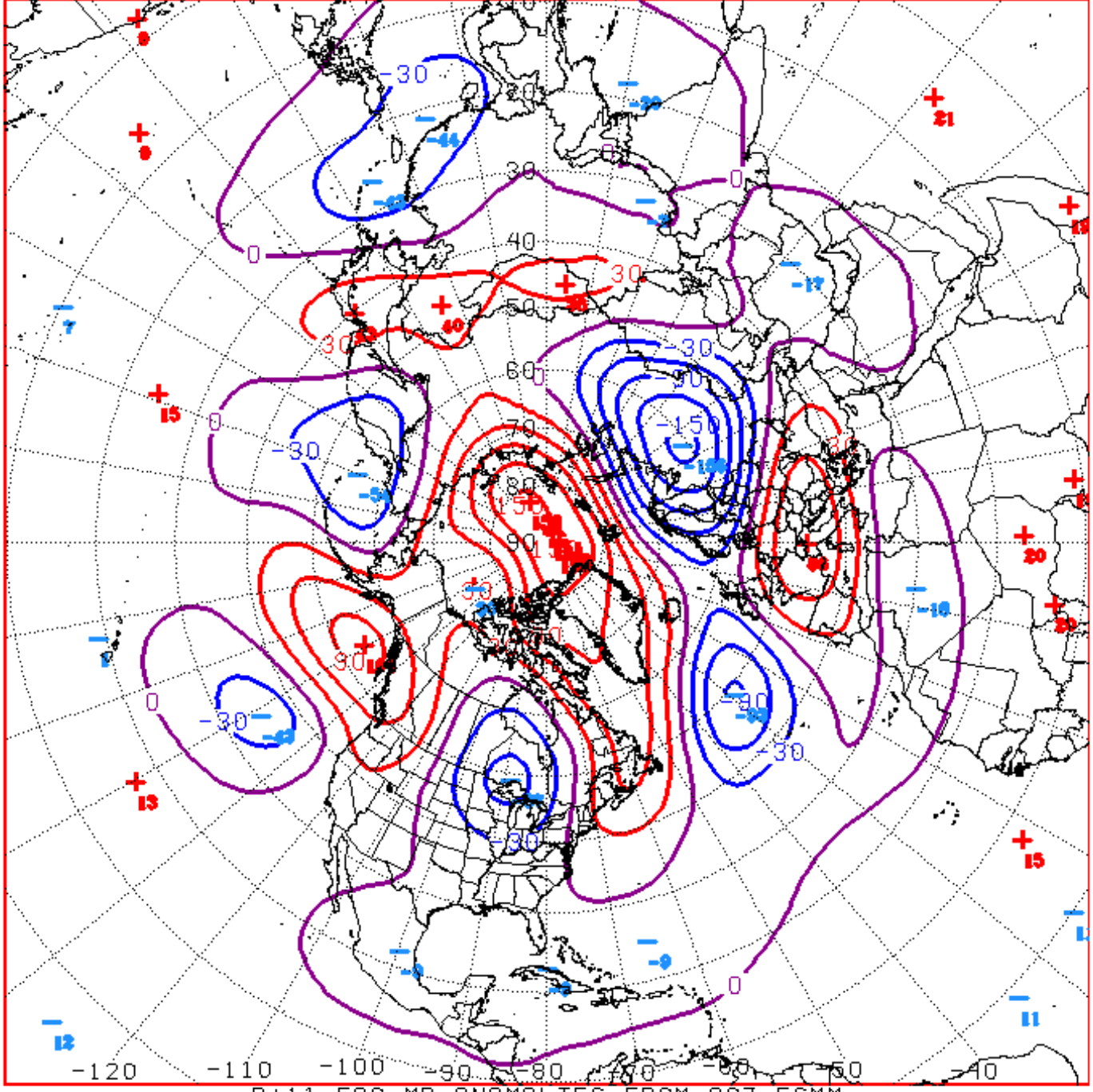
Day 13-15

Connections to U.S. Impacts

Lagged Composites Based on Phase-7 MJO

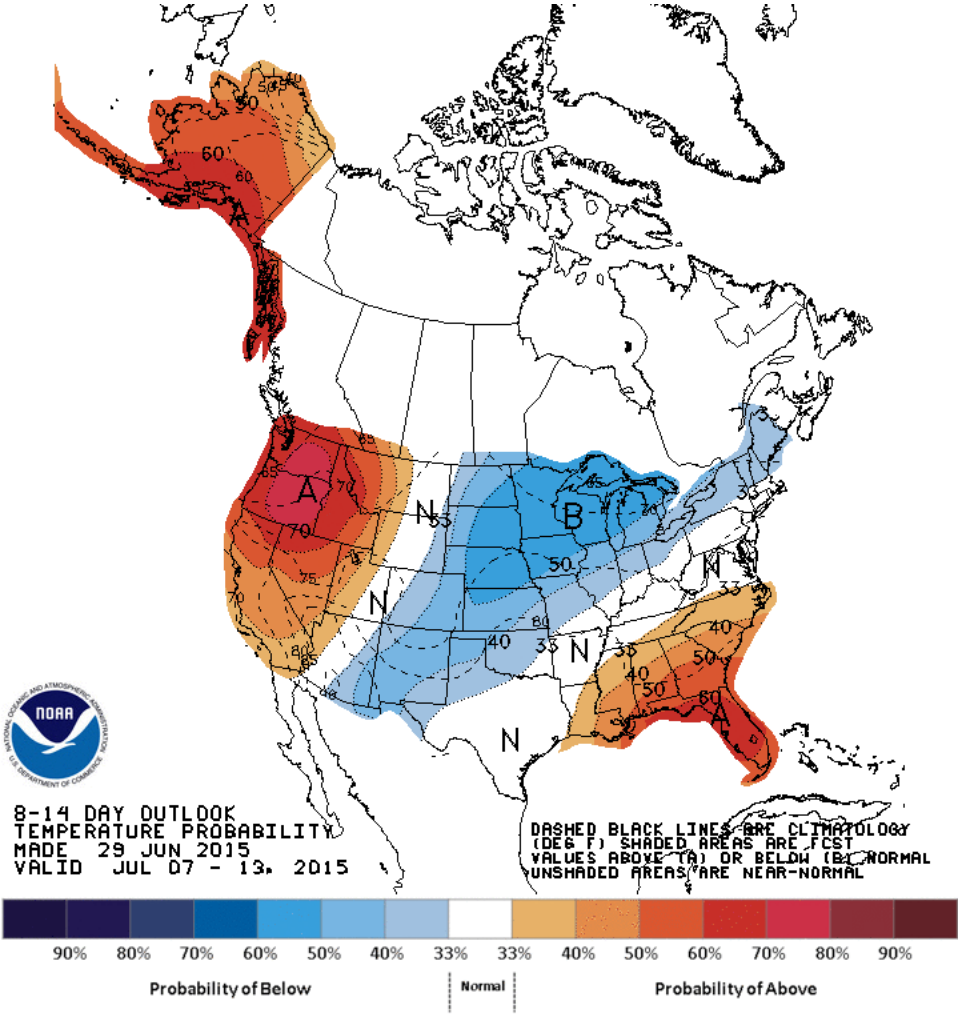


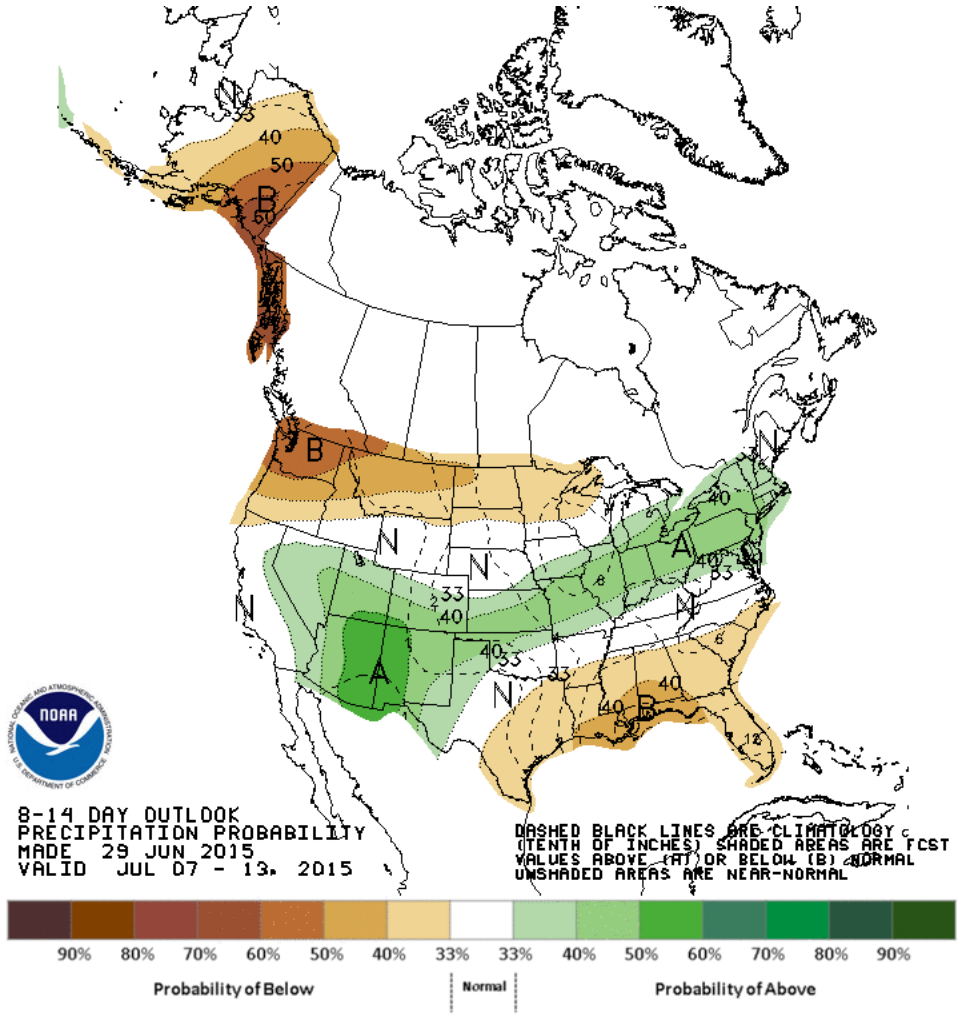




D+11 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE JUN 30 2015 1028 UTC CNTD JUL 11 2015

Week 2 – Temperature and Precipitation





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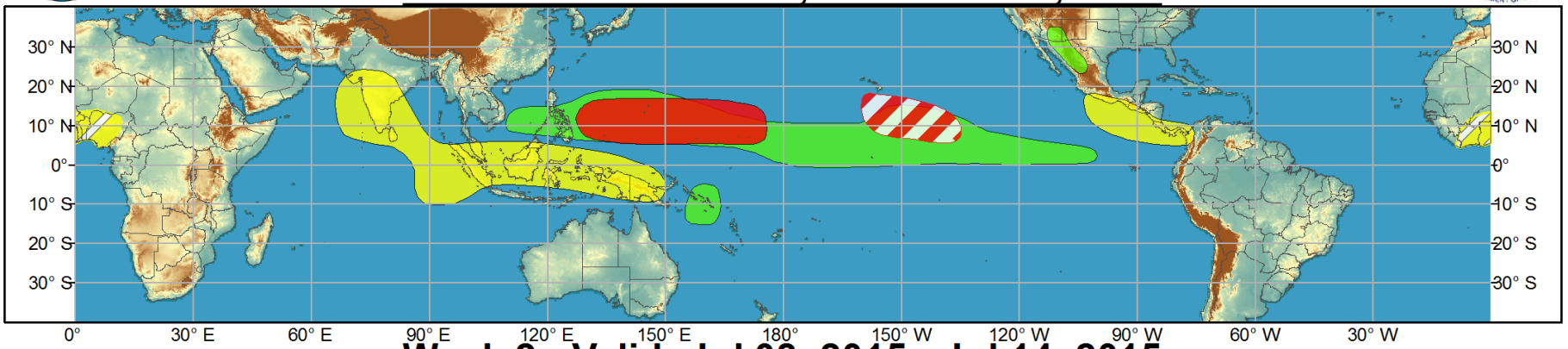

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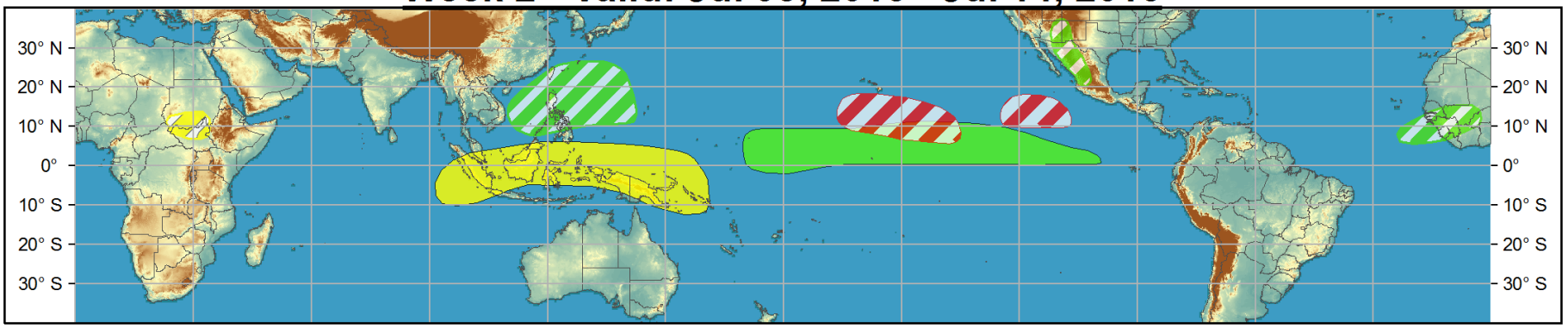

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