Global Tropics Hazards And Benefits Outlook

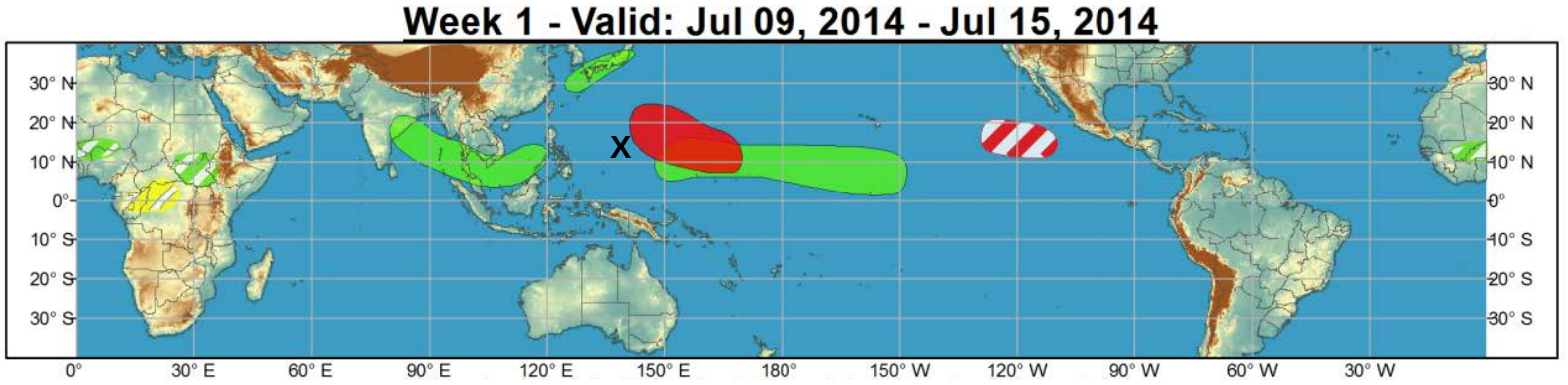
July 15, 2014

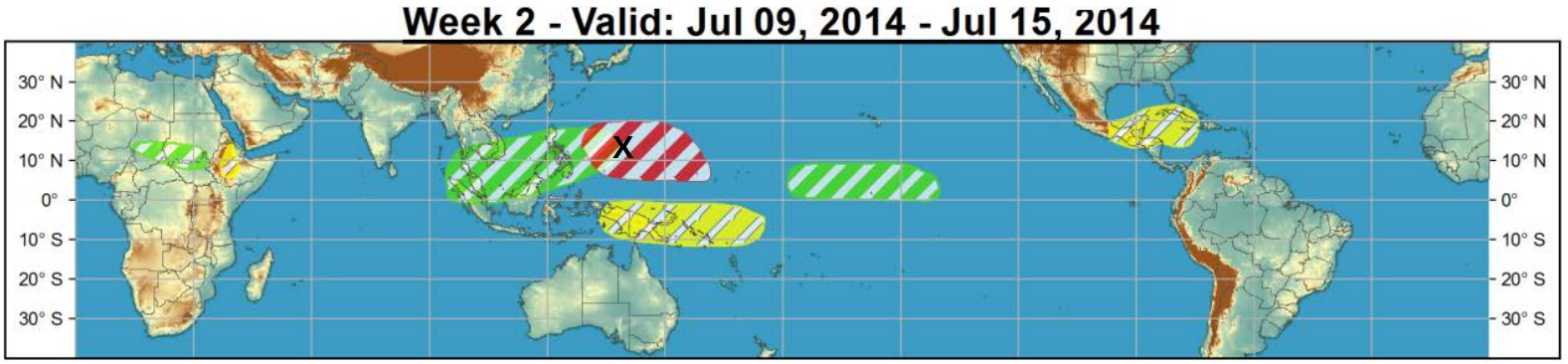
Steve Baxter

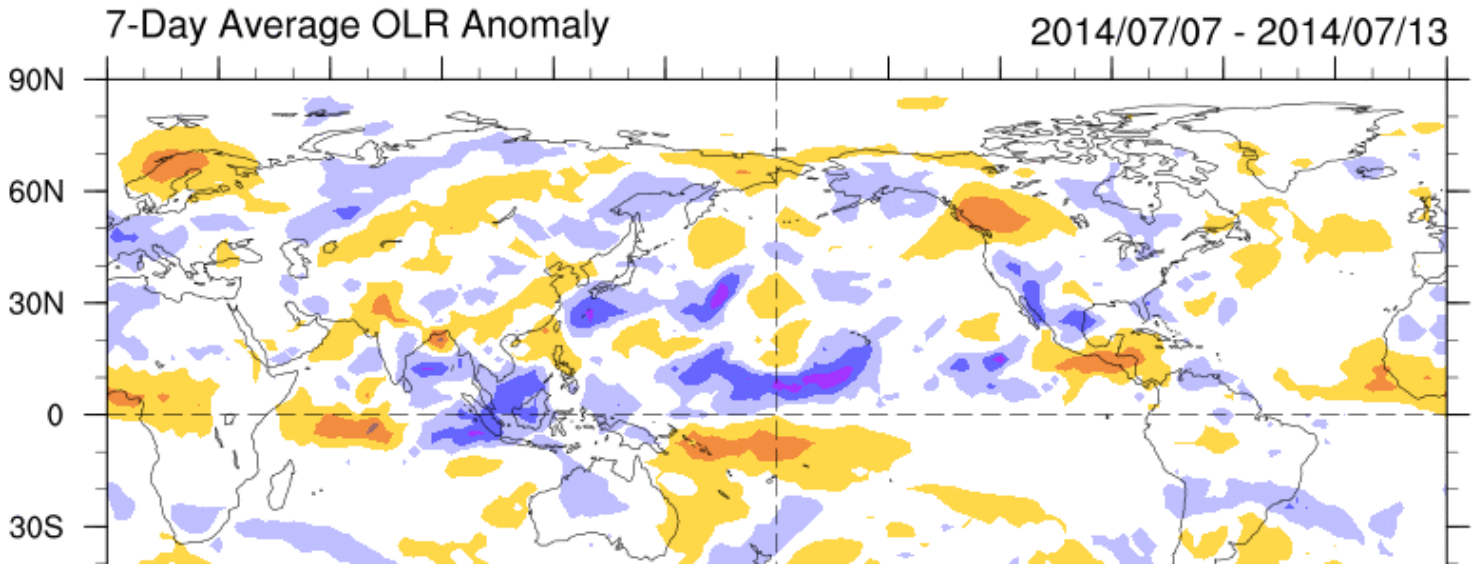
Outline

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:

• The chance of El Niño is 64% during the Northern Hemisphere summer and reaches 78% during the fall and winter.

MJO and other subseasonal tropical variability:

• The MJO remained largely incoherent during the past week. Although there has been large-scale spatial organization recently, little is readily attributable to the MJO.

• Enhanced convection over the northeastern Indian Ocean and Maritime Continent remains an important part of the subseasonal pattern, largely due to an equatorial Rossby wave.

• Models are in generally good agreement, suggesting little MJO activity moving forward.

Extratropics:

• Not much in the way of North American circulation anomalies is likely attributable to tropical convective activity. There is evidence of some tropical-extratropical interaction over the Far East and northwestern Pacific.

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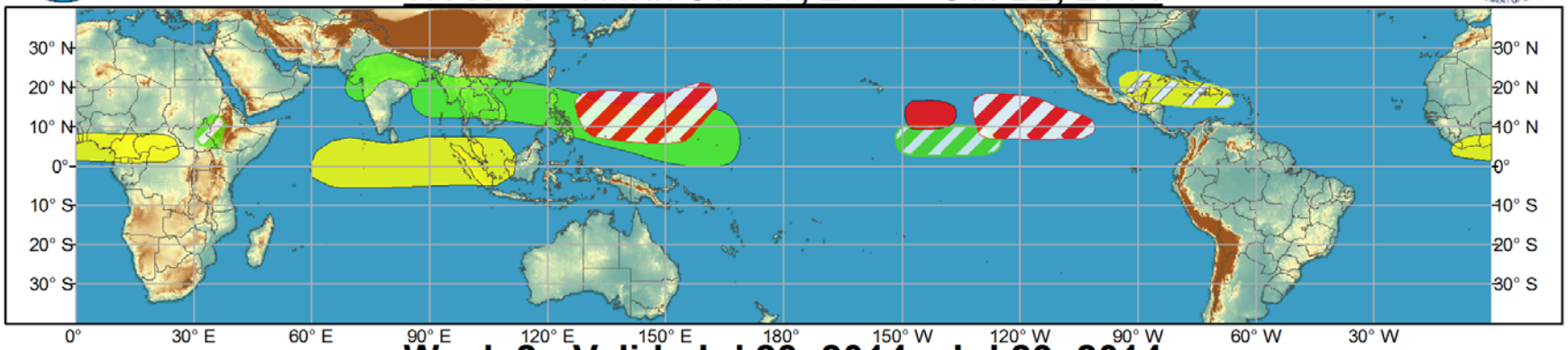
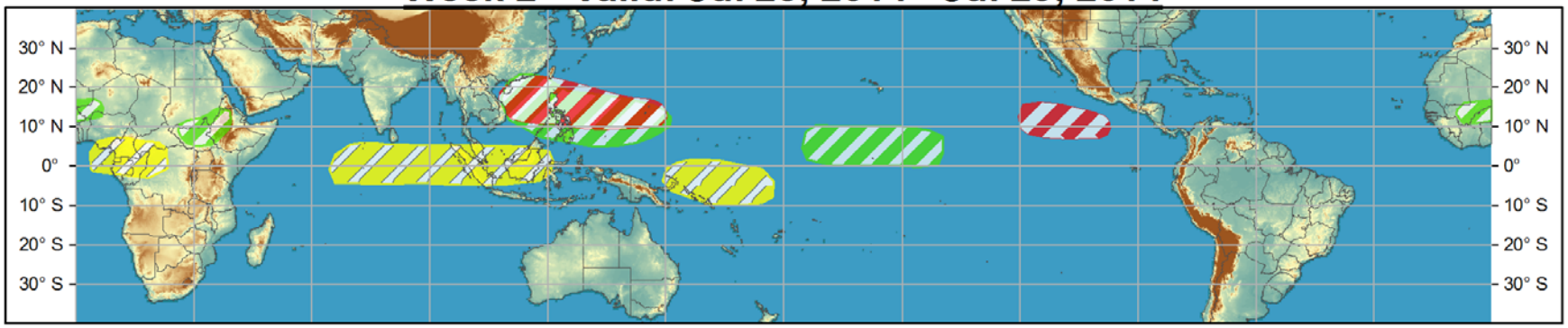


Week 2 - Valid: Jul 23, 2014 - Jul 29, 2014



Produced: 07/15/2014

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	Confidence: High	Confidence: Moderate	
Tropical Cyclone Formation			Development of a tropical cyclone (tropical depression - TD, or greater strength).
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UNIVERSITY AT ALBANY State University of New York

EARTH SYSTEM SCIENCE INTERDISCIPLINARY CENTER ESSIC UNIVERSITY OF MARYLAND

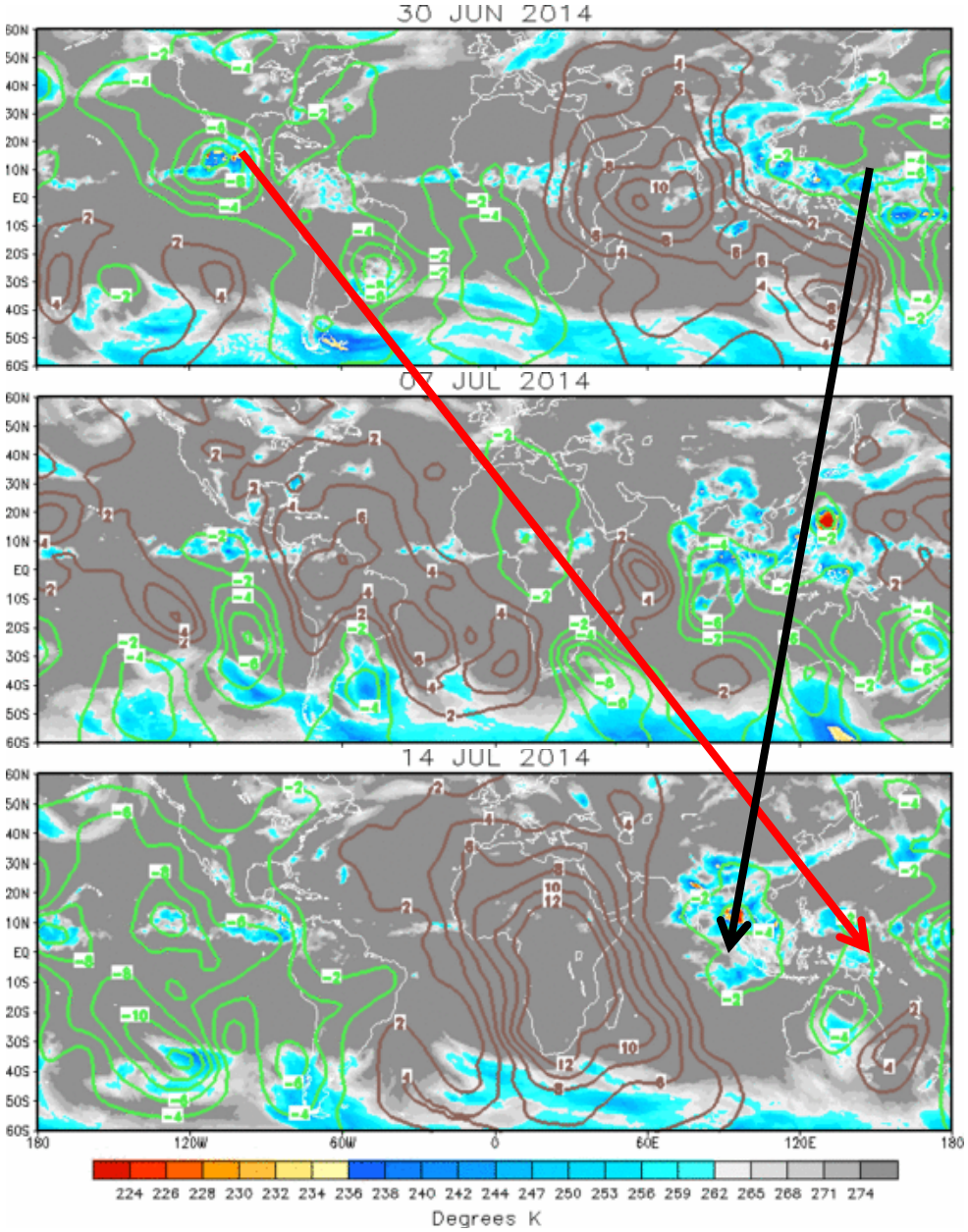
Australian Government Bureau of Meteorology

cics.nc

NPS PRAESTANTIA PER SCIENTIAM

IR Satellite & 200-hpa Velocity Potential Anomalies

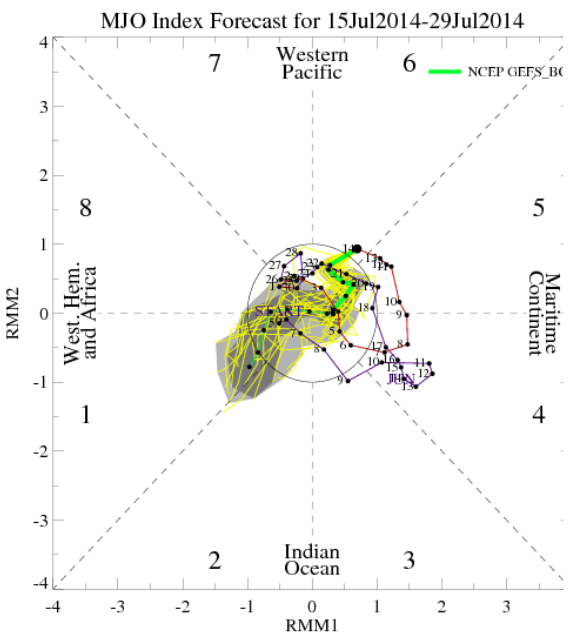
Green: Enhanced Divergence Brown: Enhanced Convergence



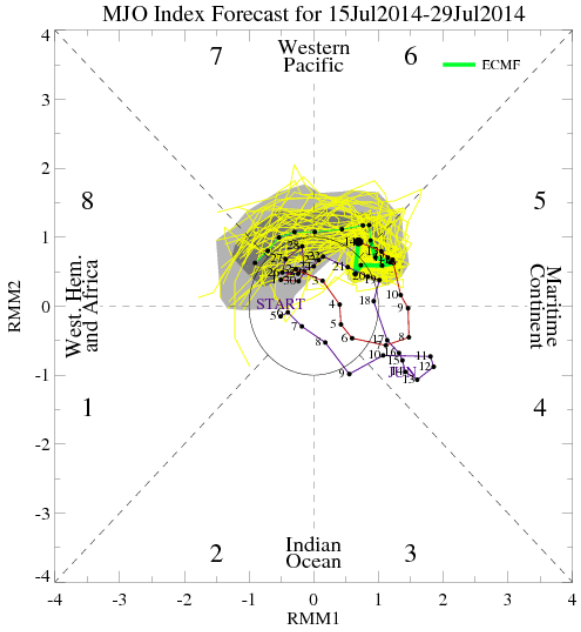
Eastward propagation due to atmospheric Kelvin wave. (Red arrow)

Westward propagation due to an equatorial Rossby wave. (Black arrow)

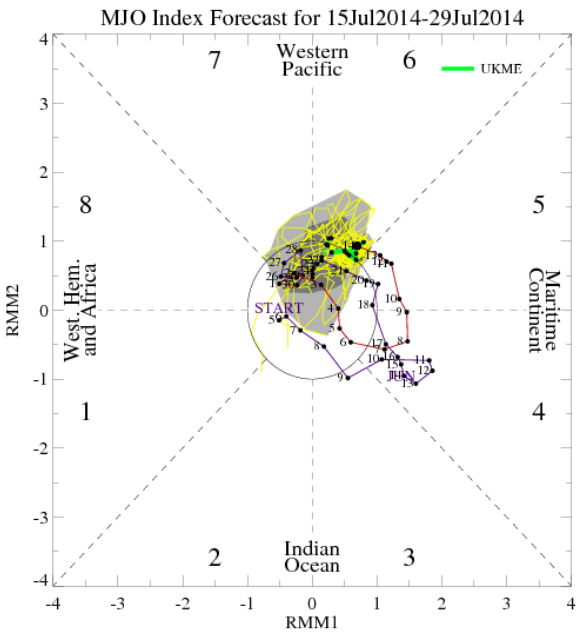
MJO Observation/Forecast



GFS



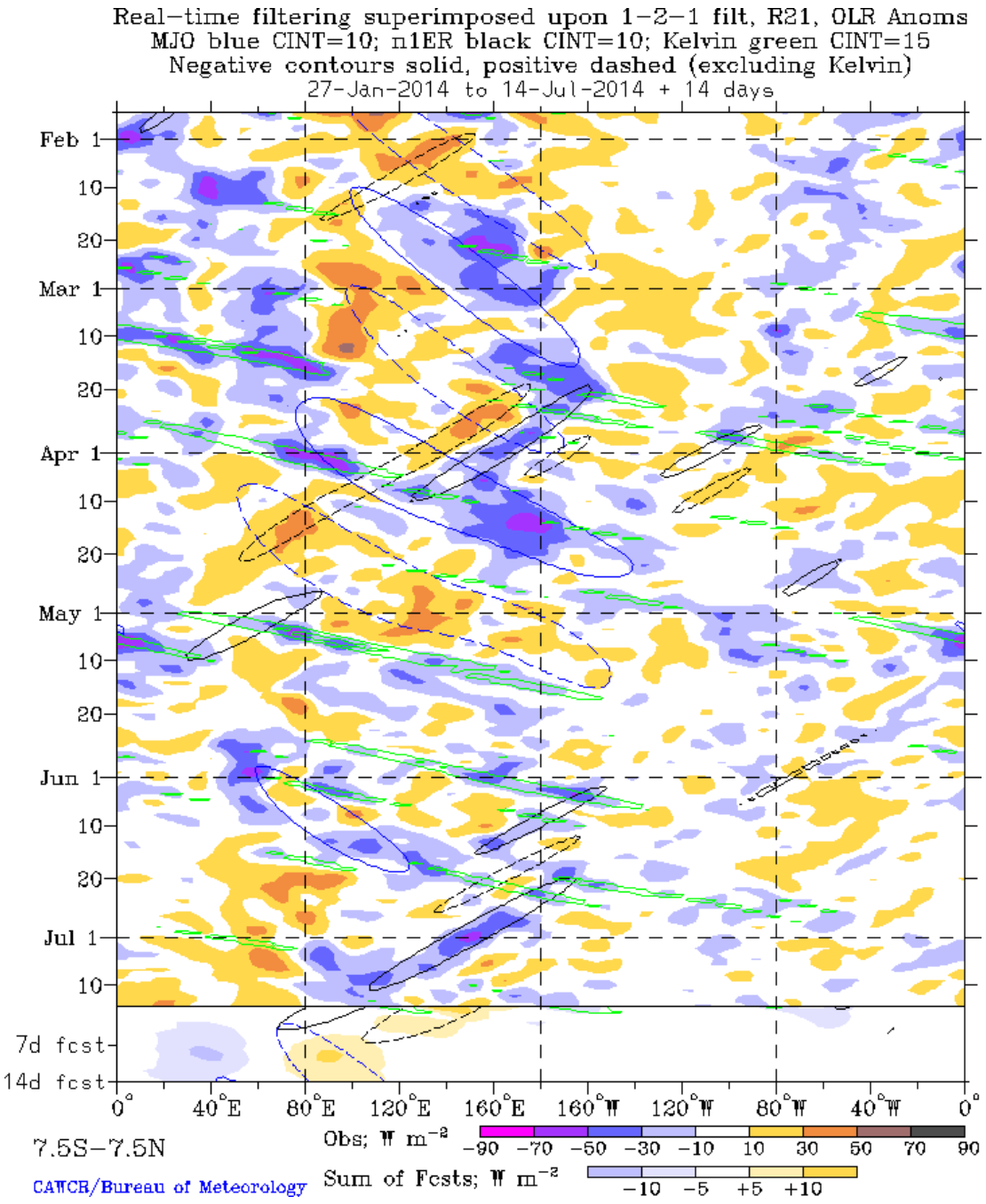
ECMWF



UKMET

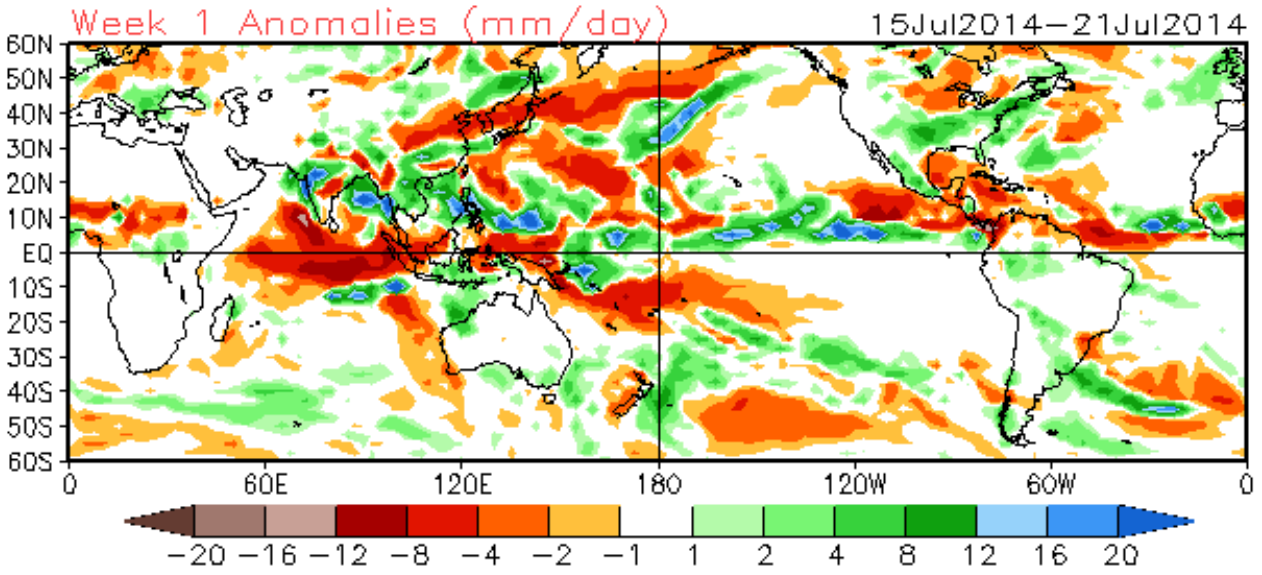
- The GFS, ECMWF, and UKMET MJO Index Forecasts all show weak MJO activity
- The GFS ensemble keys in more on the westward moving modes, while the ECMWF shows propagation more in line with MJO, but also the low-frequency state.
- The UKMET offers a compromise between the two.

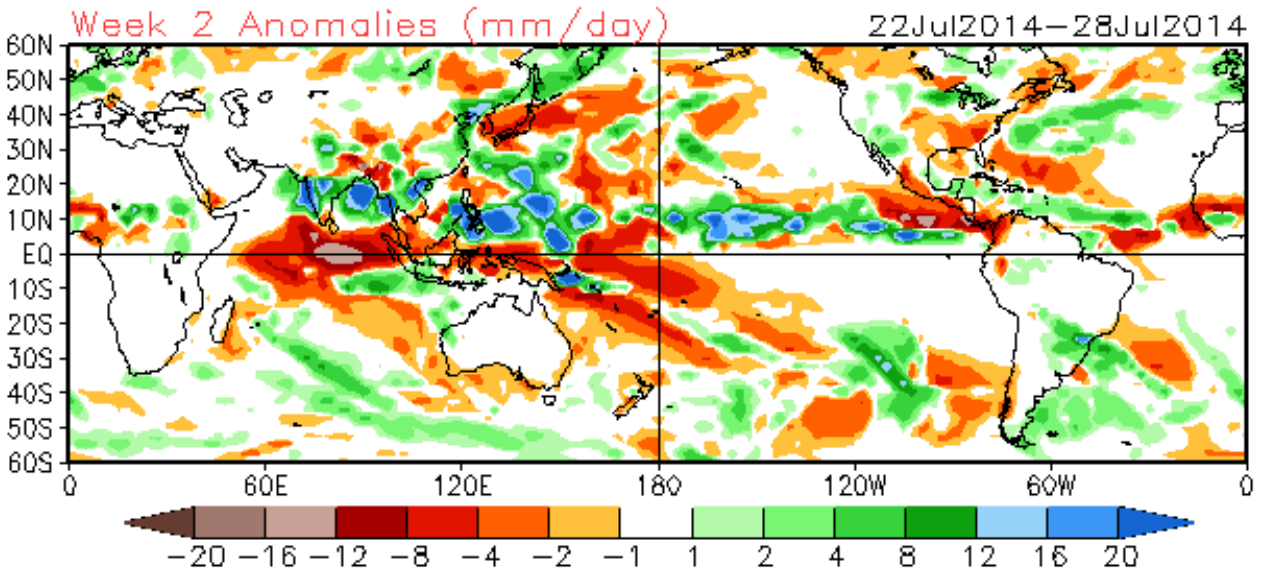
Enhanced convection over the northern Indian Ocean and Maritime Continent is associated with interactions between an equatorial Rossby Wave and a Kelvin Wave.



CFSv2 Weeks 1 & 2 Precipitation

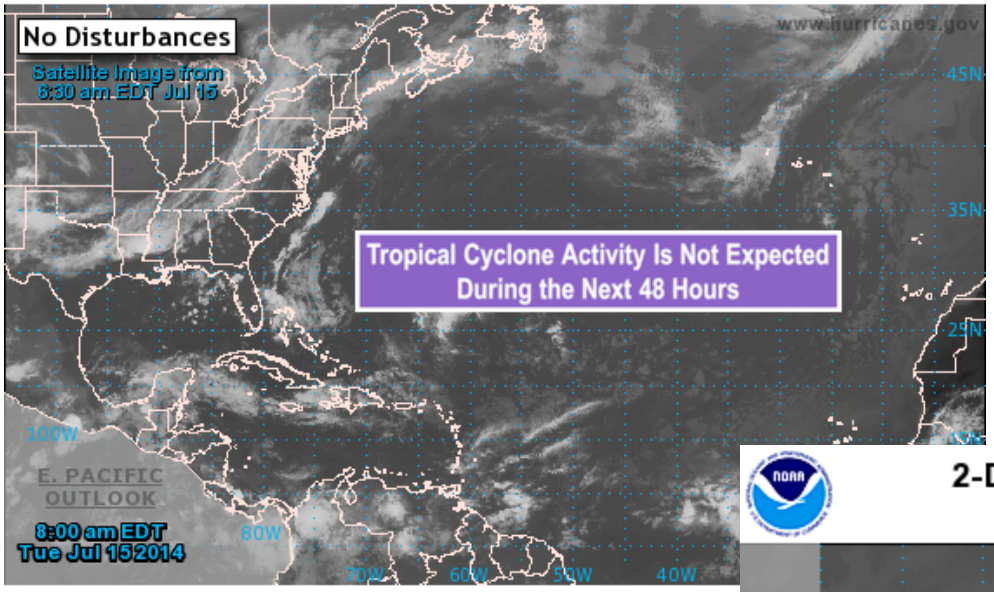
16 Member Ensemble Mean Forecast from 14Jul2014





2-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Current Disturbances and 2-Day Cyclone Formation Chance: < 30%
Tropical or Sub-Tropical Cyclone: Depression Storm
Post-Tropical Cyclone Remnants

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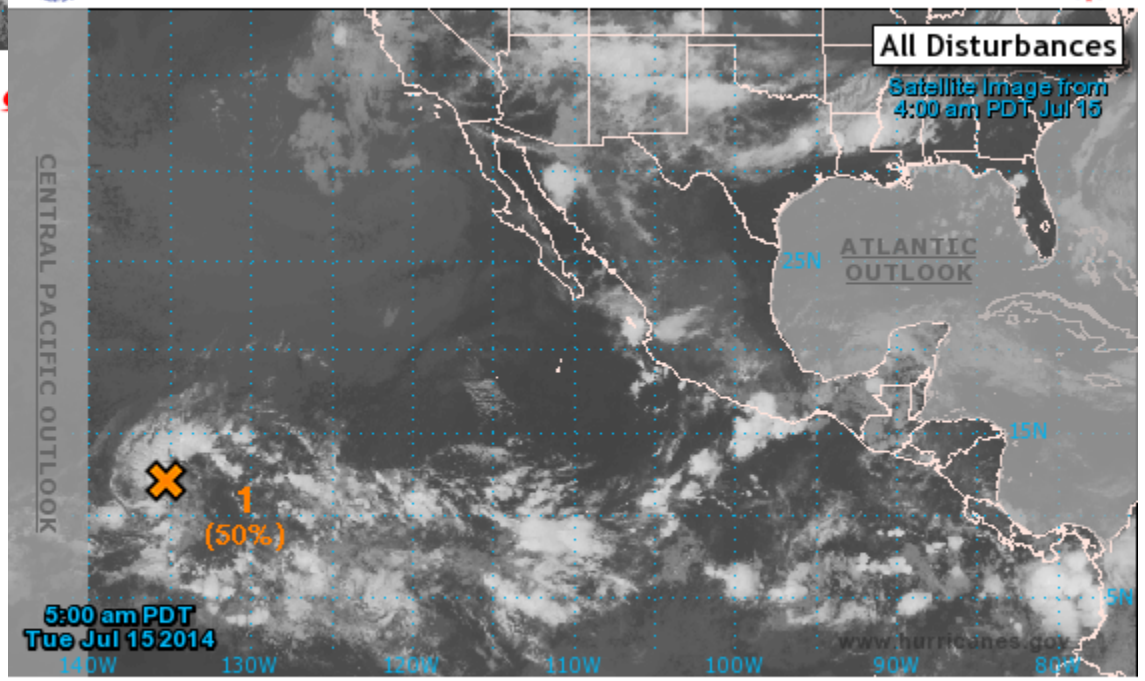
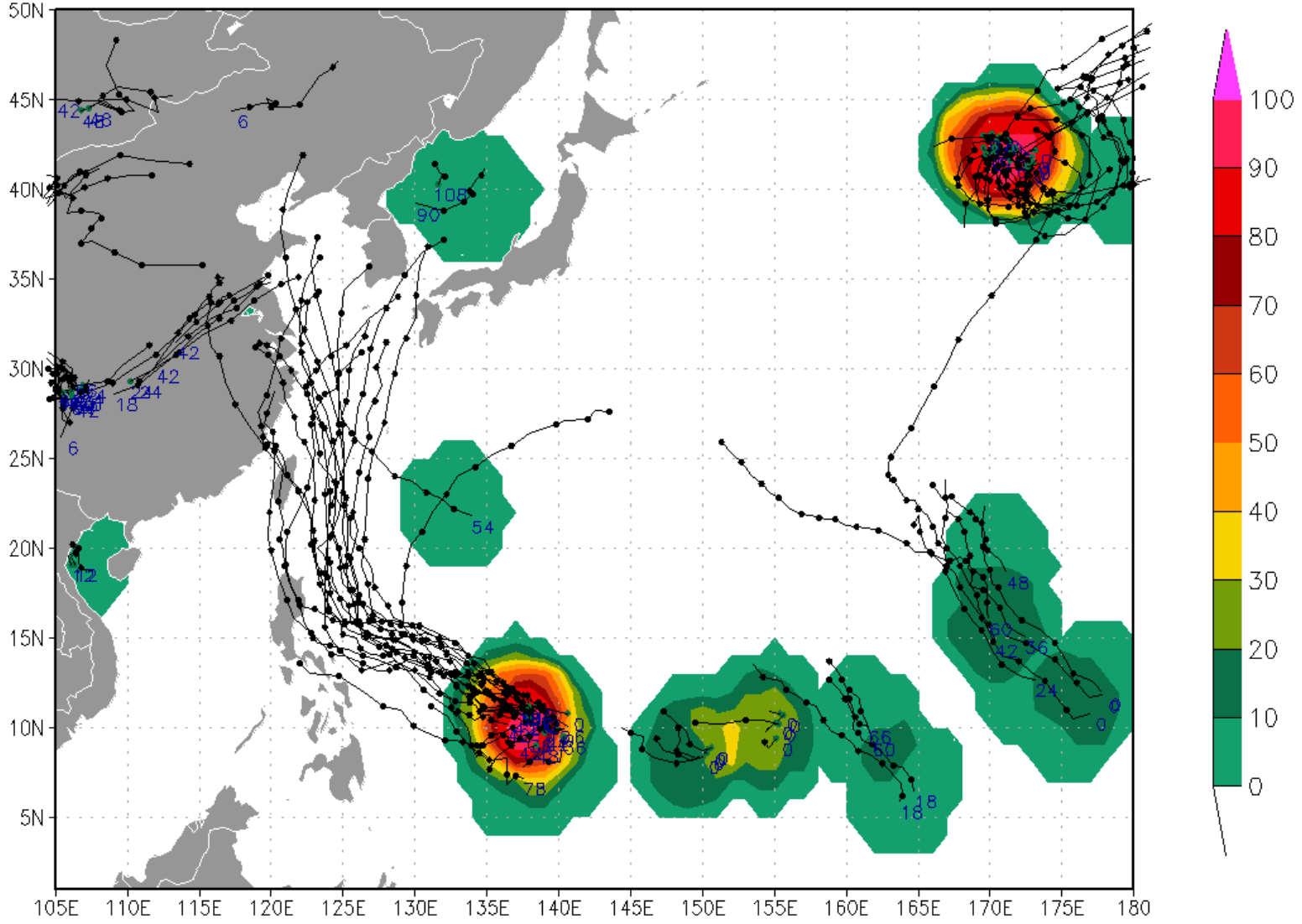


Current Disturbances and 2-Day Cyclone Formation Chance: < 30% 30-50% > 50%
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane
Post-Tropical Cyclone Remnants

NCEP Ensemble-based Probability (%) of TC genesis
for forecasts during the 00-120h period from initial time = 2014071500



● = position at 00 or 12 UTC

Forecast hour shown at beginning of each track
is first lead time the storm was detected in model

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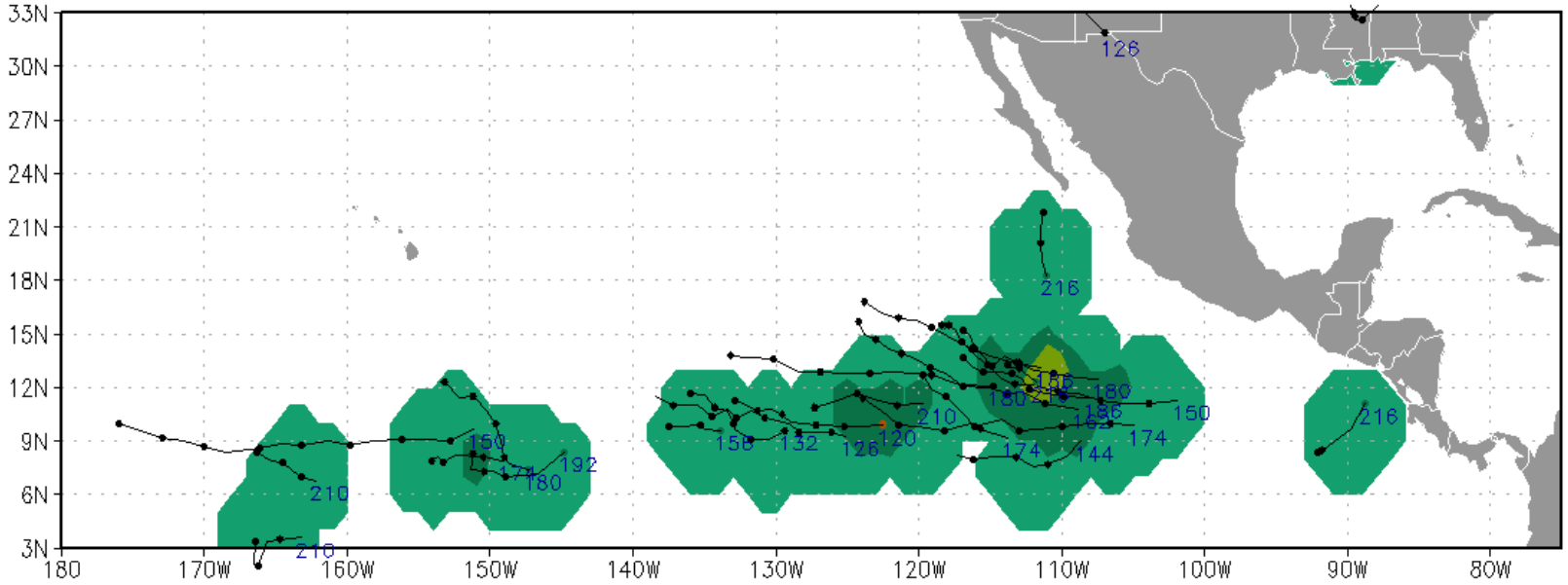

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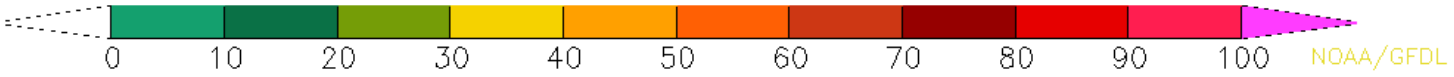

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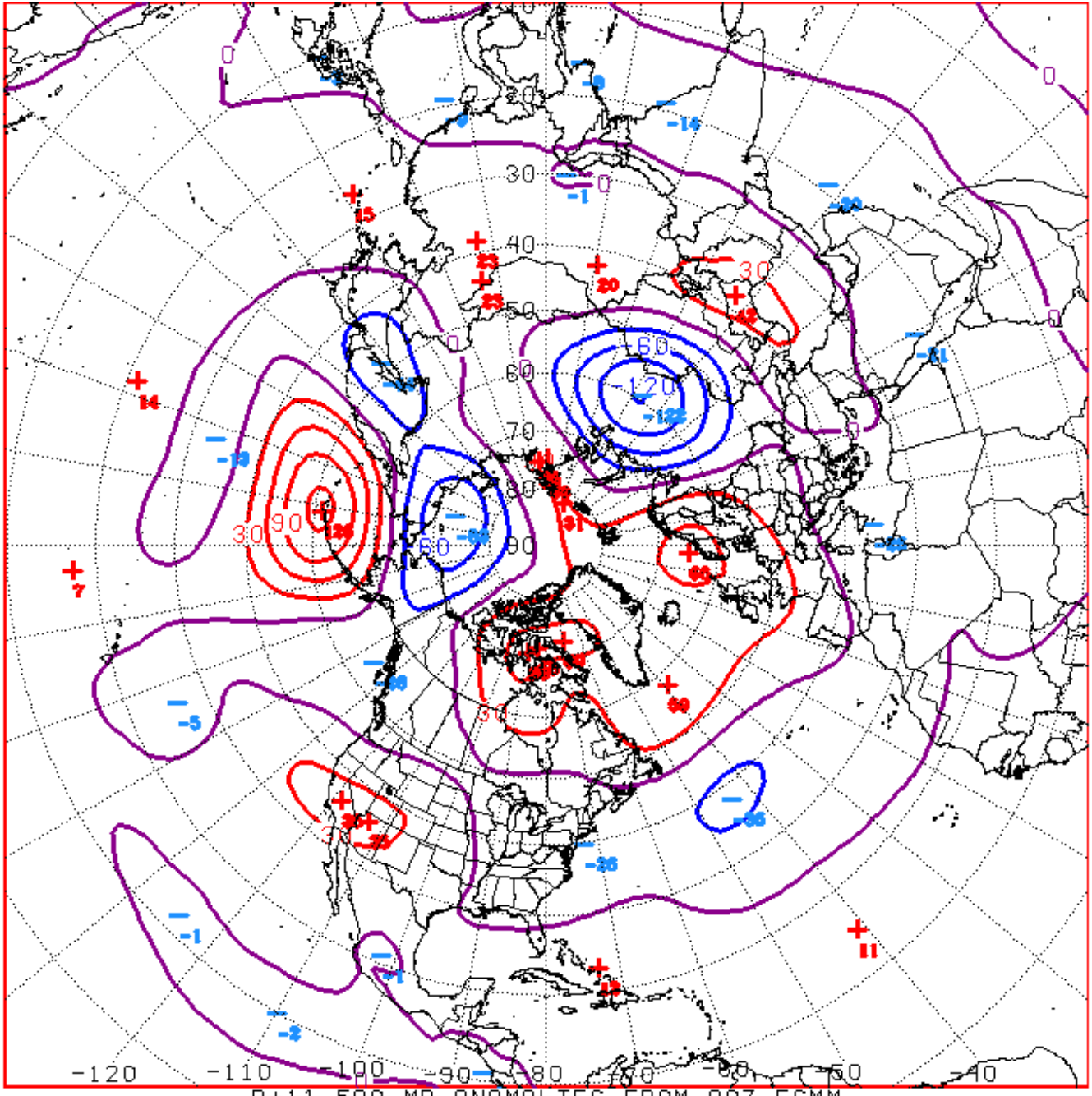
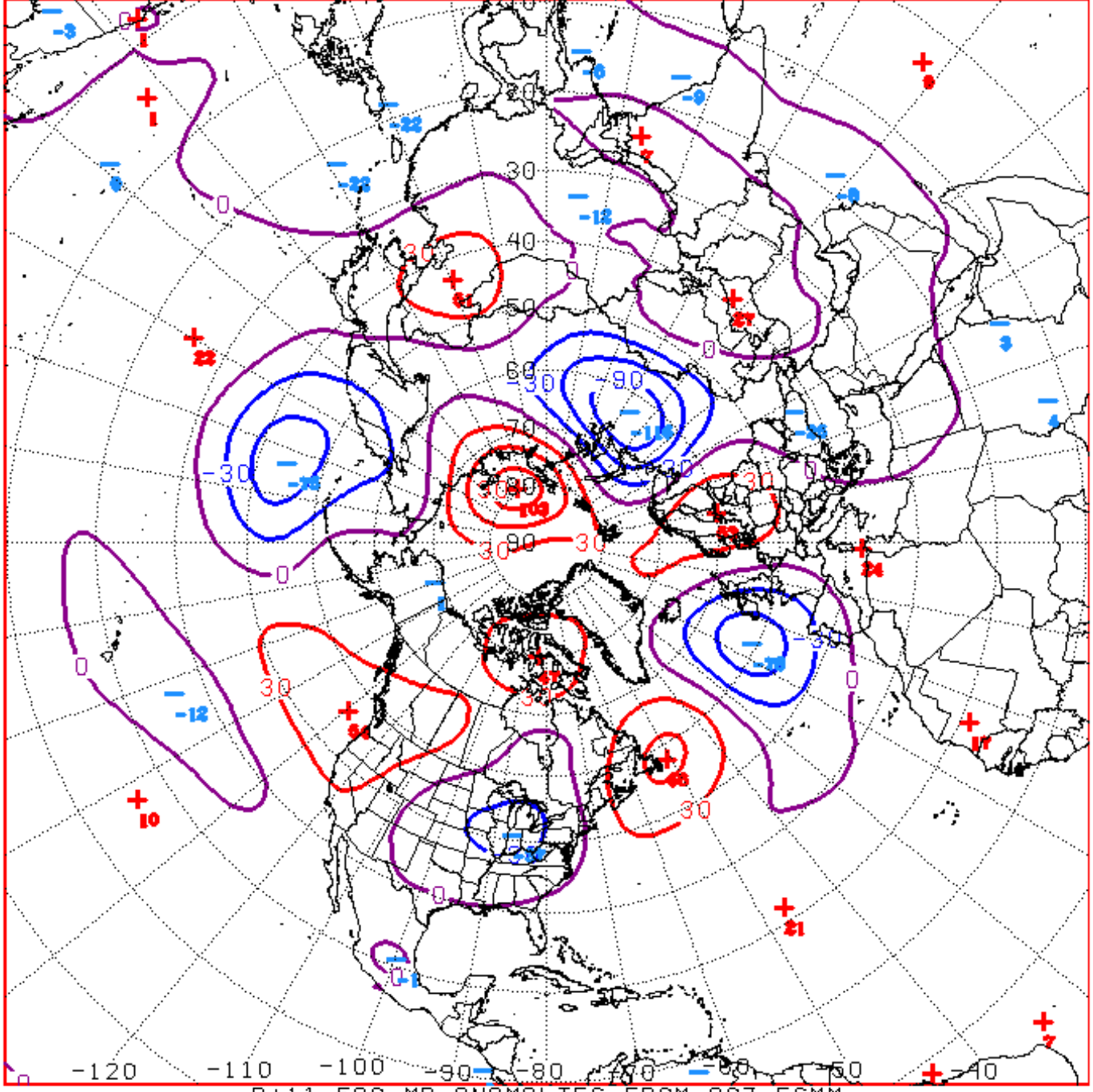


D+11 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE JUL 15 2014 1044 UTC CNTD JUL 26 2014



D+11 500 MB ANOMALIES FROM 00Z ECMM
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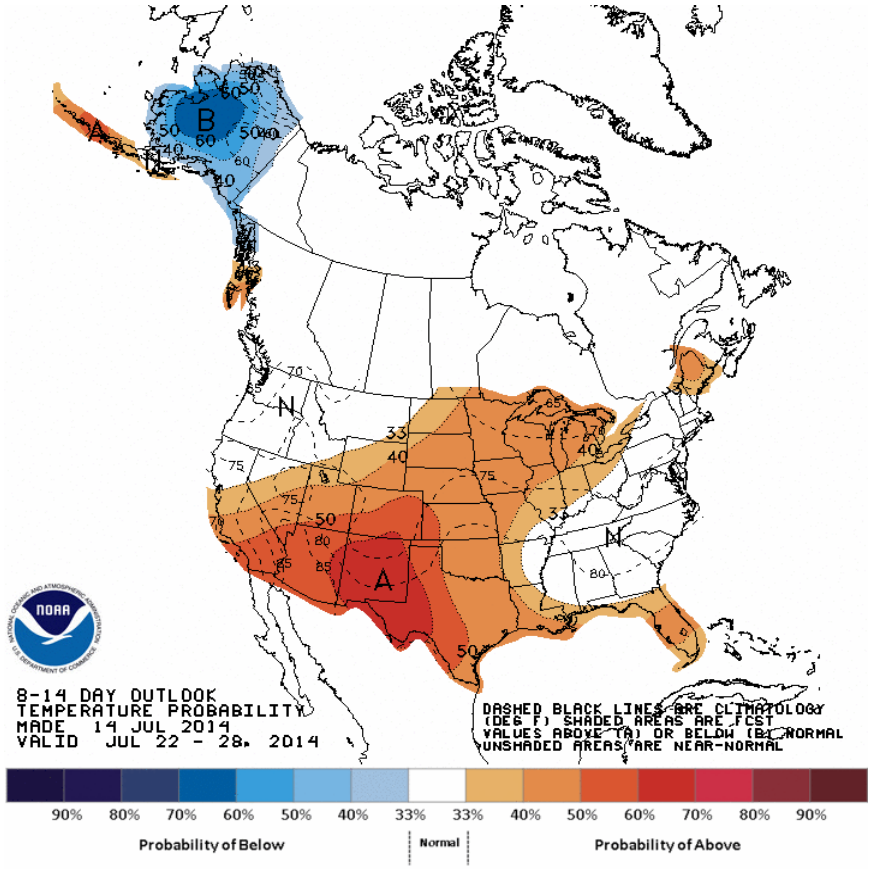
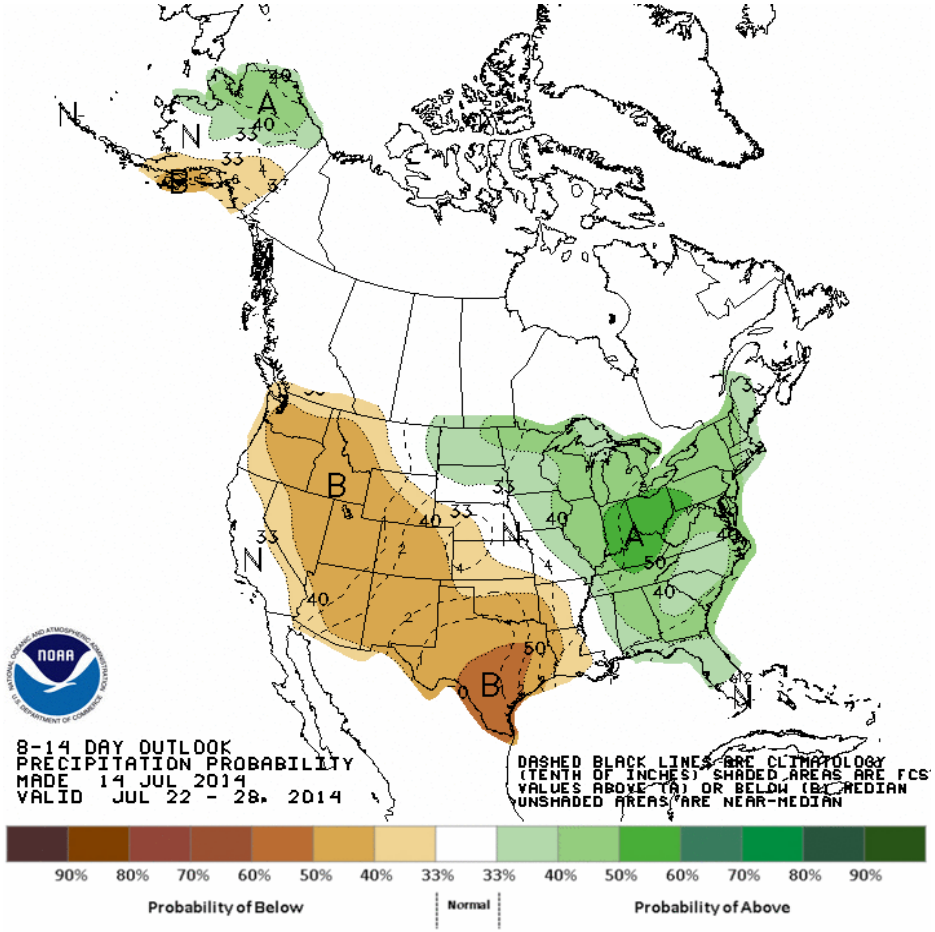
Week 2 – Temperature and Precipitation





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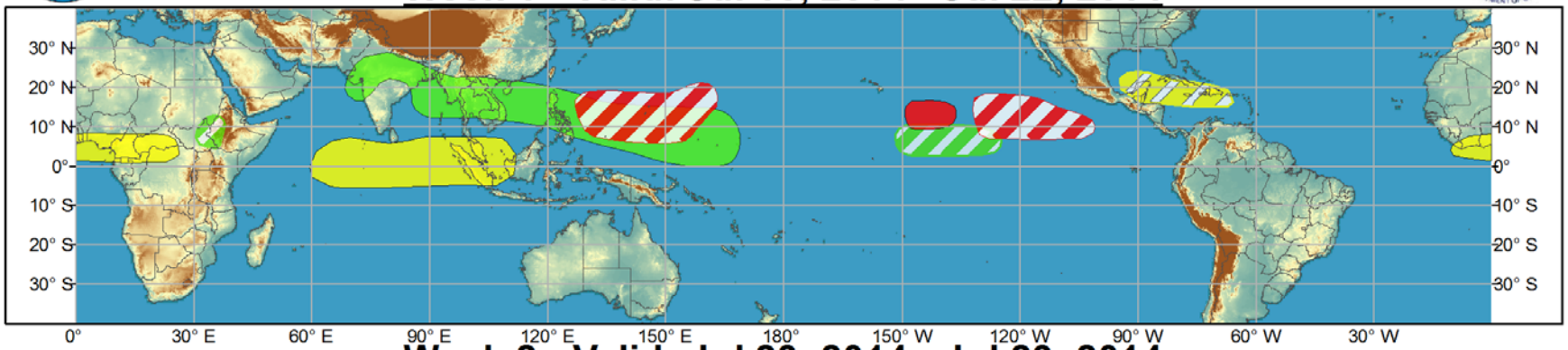

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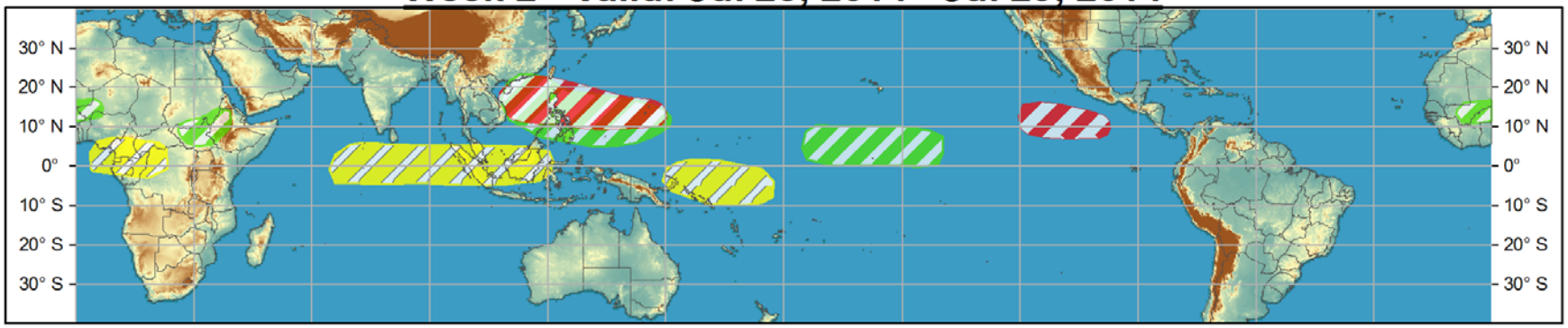

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NPS PRAESTANTIA PER SCIENTIAM