

Global Tropics Hazards And Benefits Outlook

July 8, 2014

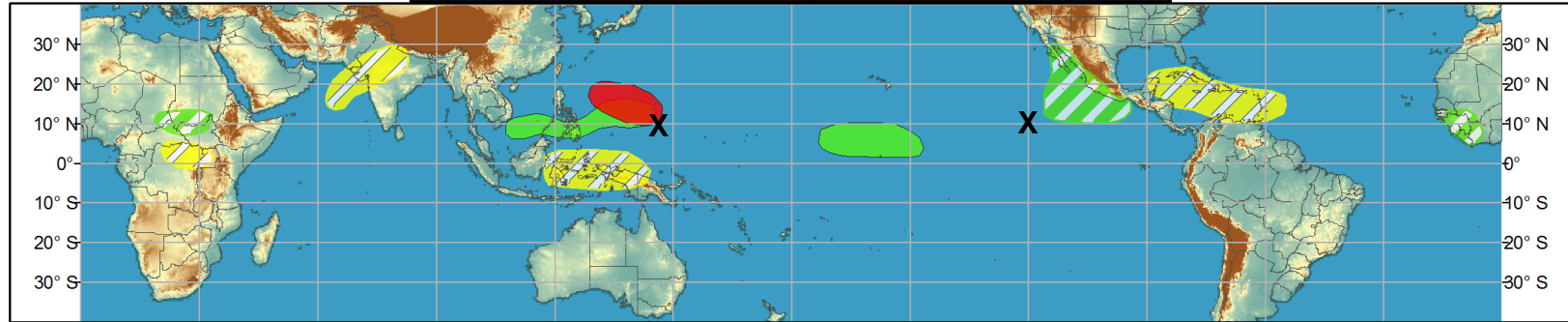
Adam Allgood

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

Week 1 - Valid: Jul 02, 2014 - Jul 08, 2014

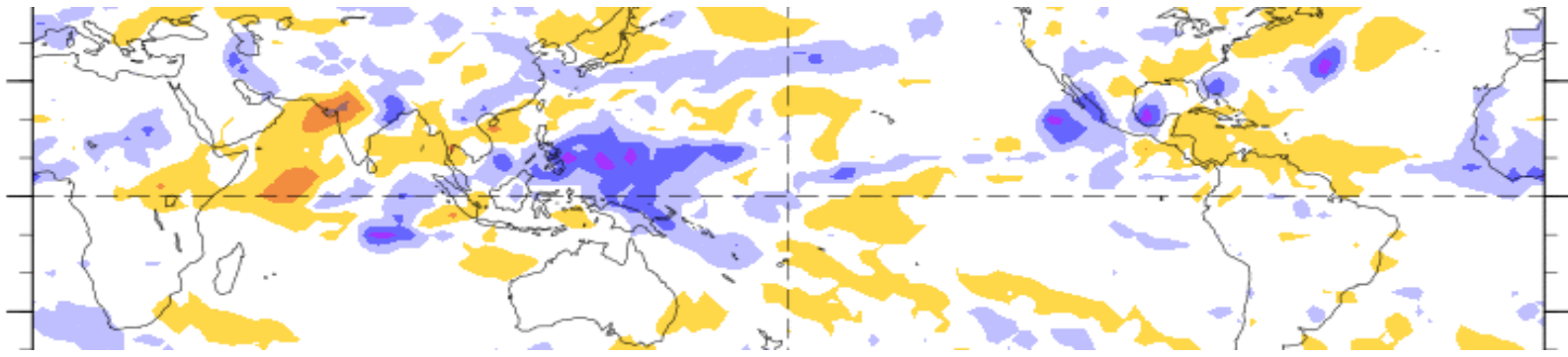


Week 2 - Valid: Jul 02, 2014 - Jul 08, 2014



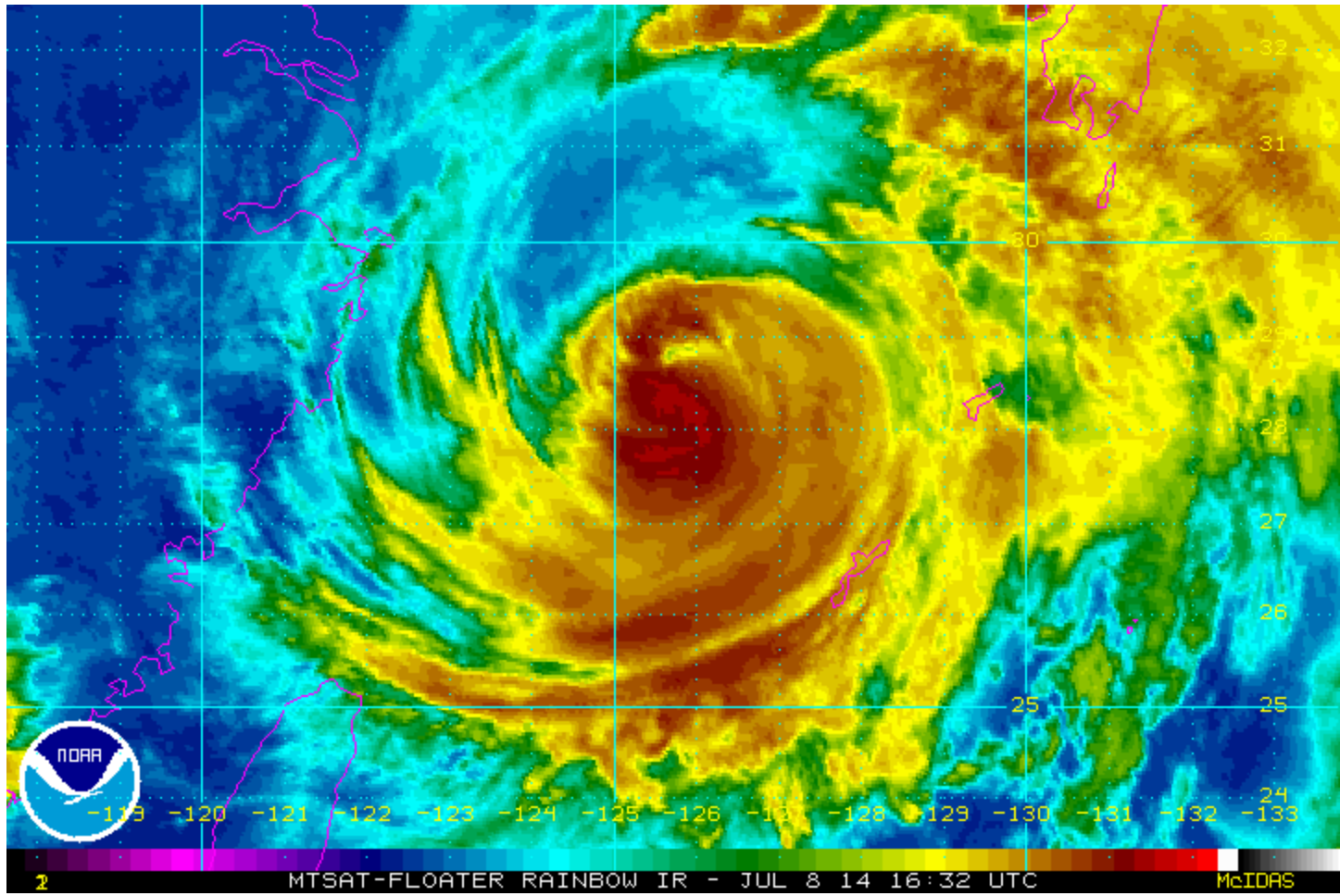
7-Day Average OLR Anomaly

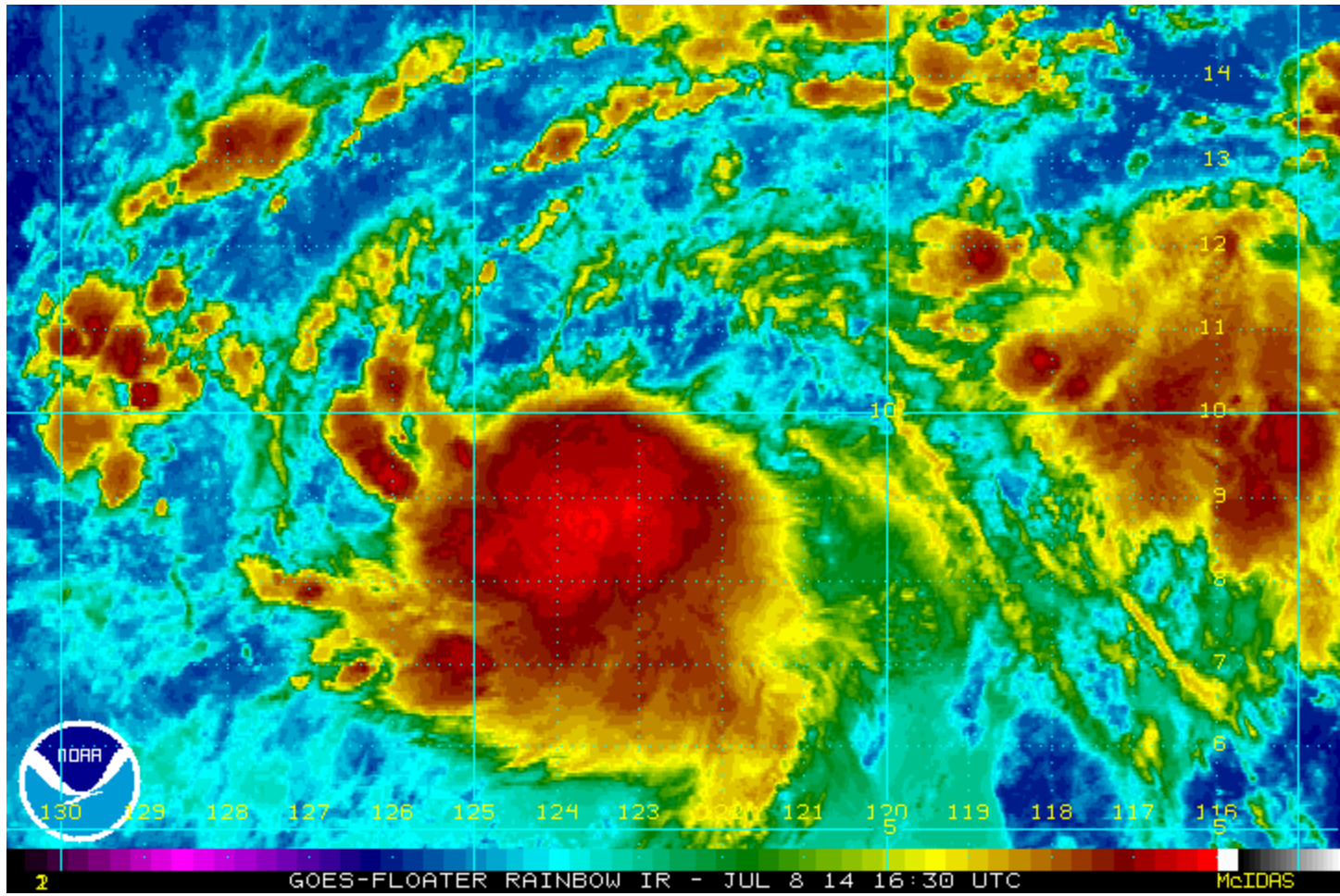
2014/06/29 - 2014/07/05



Cool shading
More clouds/rain

Warm shading
Less clouds/rain





Synopsis of Climate Modes

ENSO:

- The chance of El Niño is 70% during the Northern Hemisphere summer and reaches 80% during the fall and winter.

MJO and other subseasonal tropical variability:

- The MJO remained weak during the past week as higher frequency modes (e.g., tropical cyclones) influenced the global tropical convective pattern.
- Recently, enhanced convection over the eastern Indian Ocean and Maritime Continent has contributed to an increased subseasonal signal.
- While the GFS does not forecast the enhanced convection over the Maritime Continent to evolve into a more robust MJO event, several models including the CFS, UKMET, and ECMWF do support eastward propagation to the West Pacific.

Extratropics:

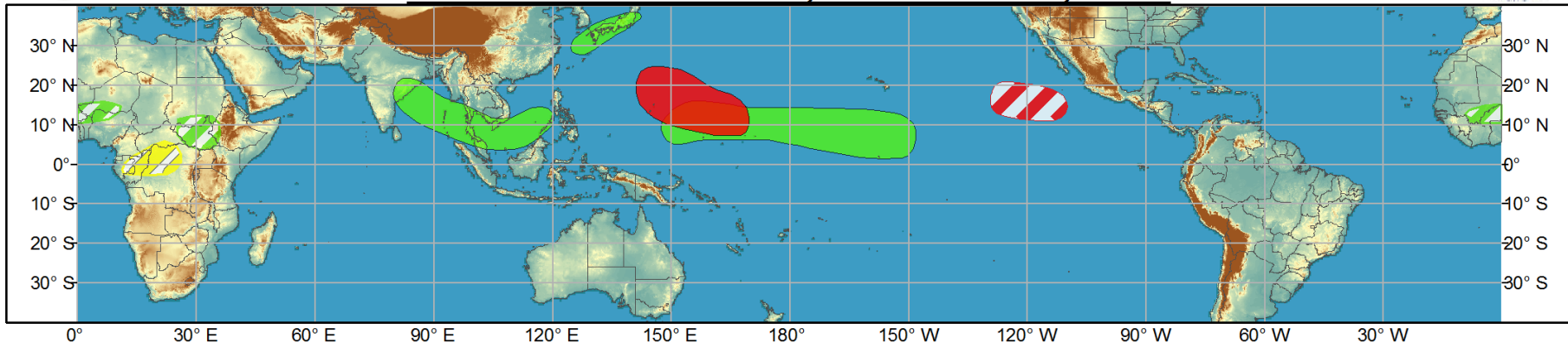
- The extended range outlook for the U.S. is consistent with a highly amplified pattern with a deep trough over the eastern half of the CONUS. It is uncertain how much impact the tropics (e.g., recurving tropical cyclones over the WPAC) would bring to this pattern.



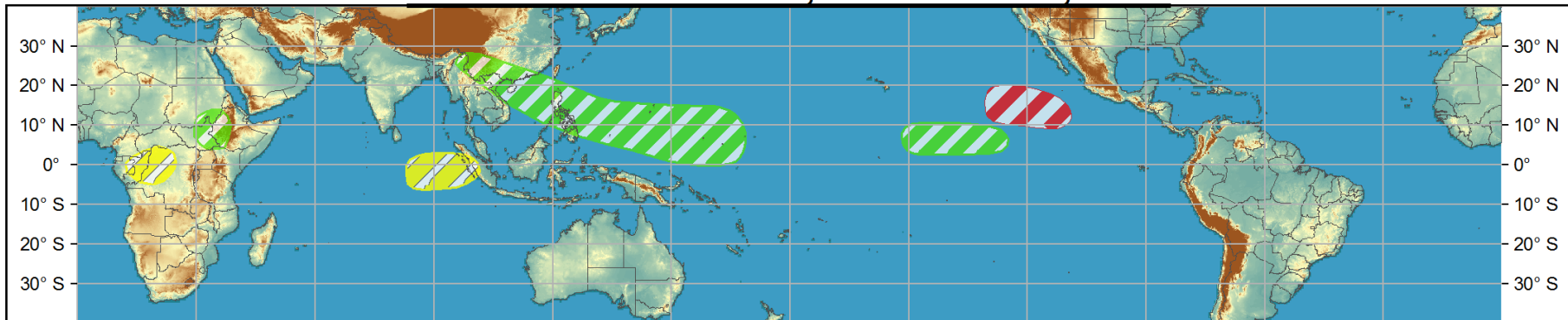
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jul 09, 2014 - Jul 15, 2014



Week 2 - Valid: Jul 16, 2014 - Jul 22, 2014



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.
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Produced: 07/08/2014

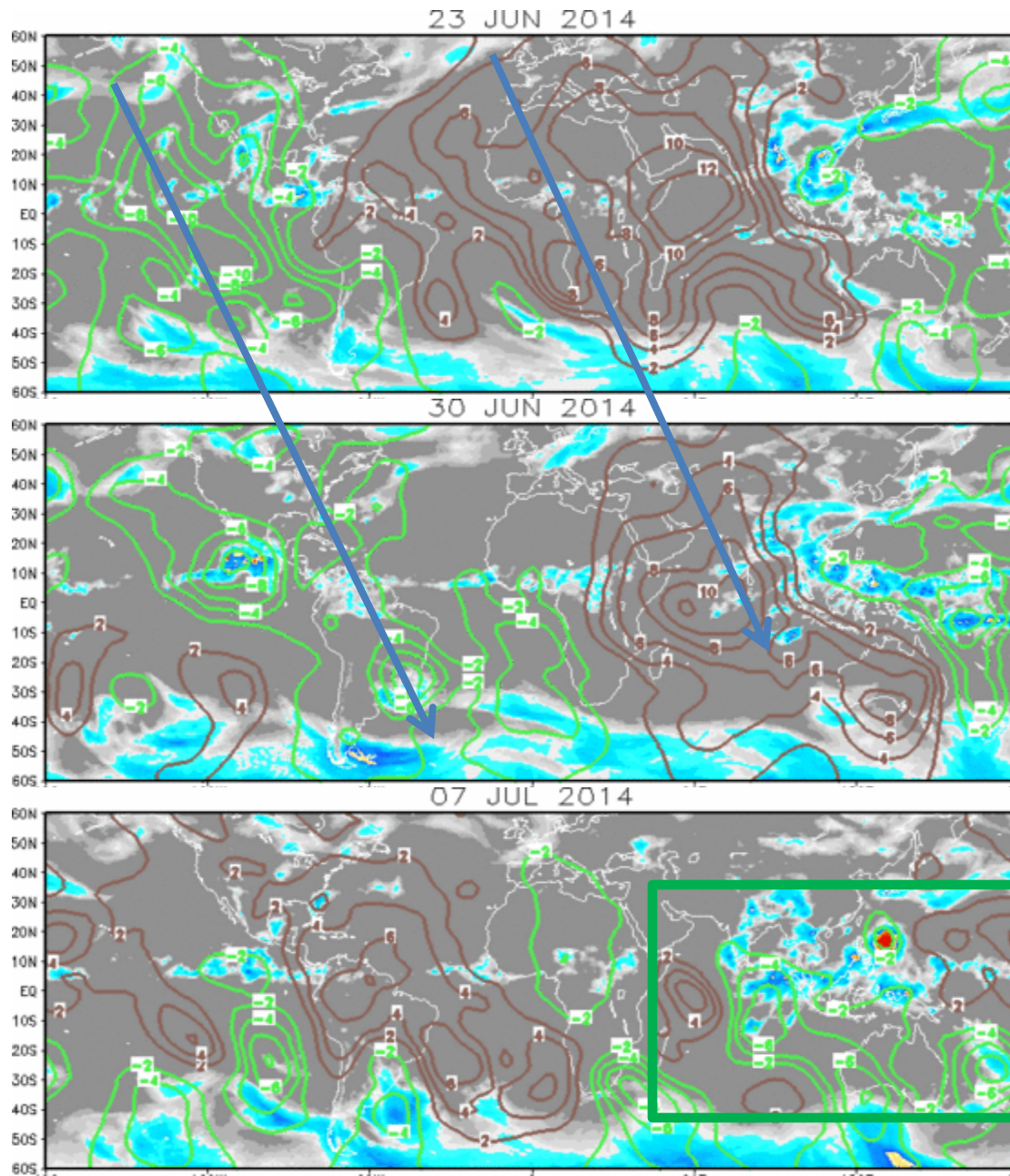
Forecaster: Allgood

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.

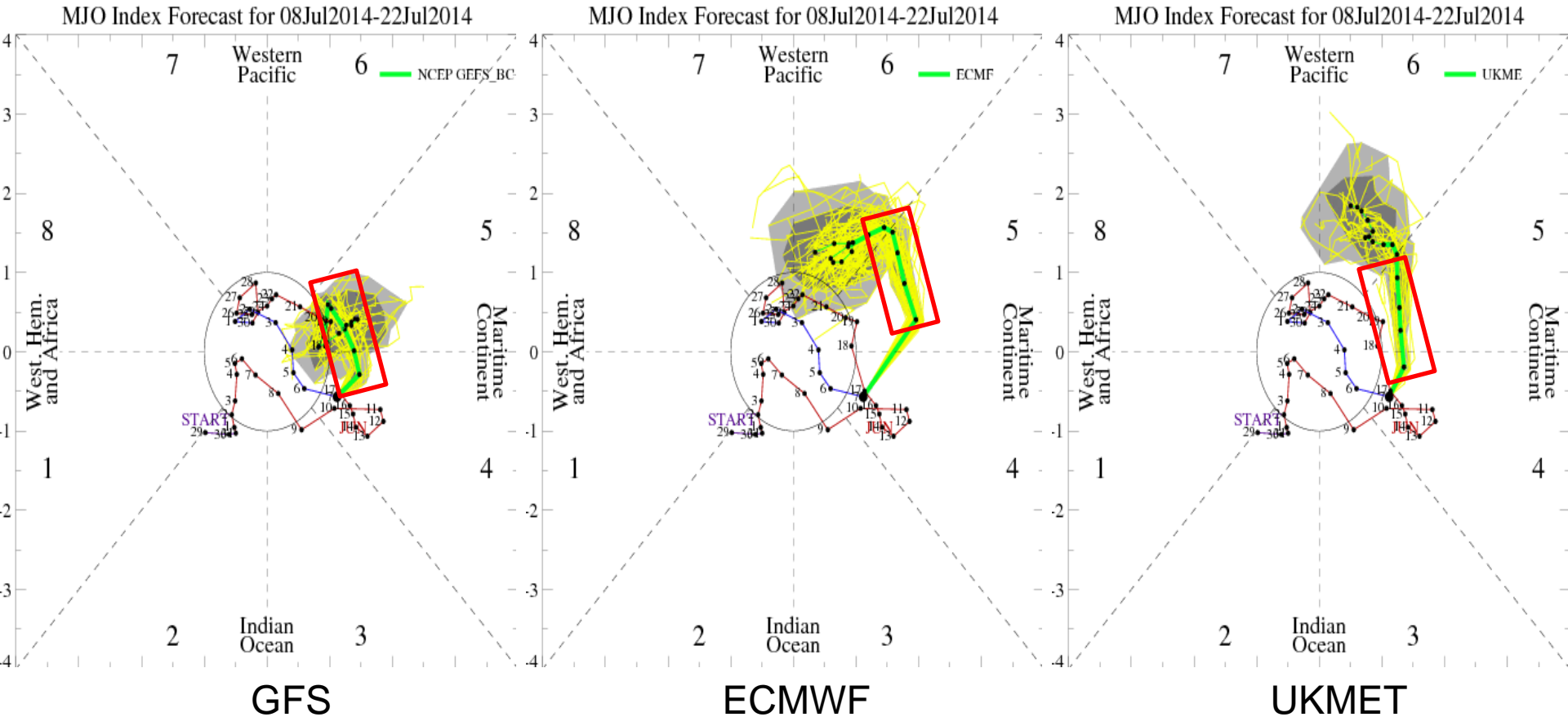


IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence Brown: Enhanced Convergence

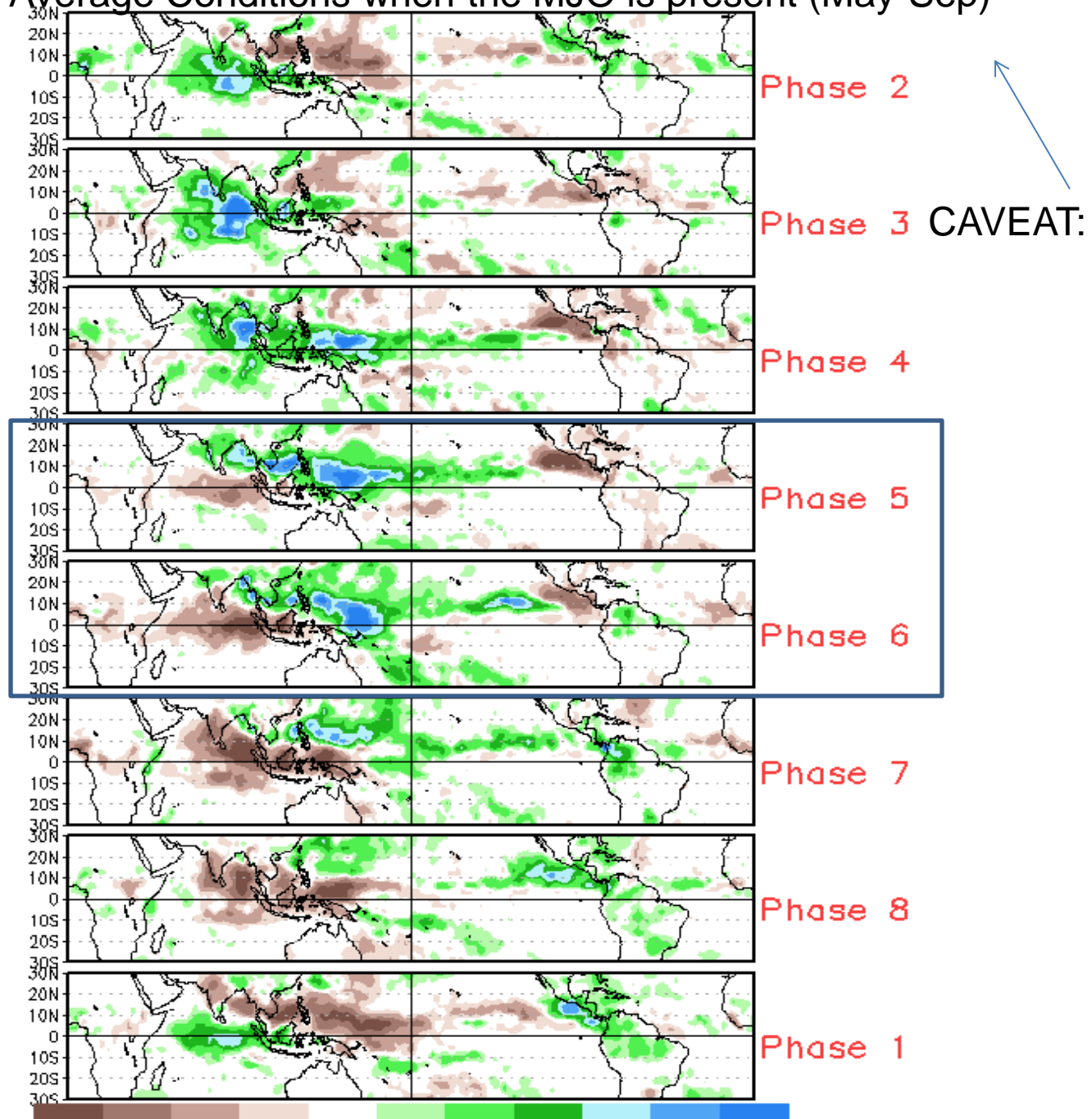


MJO Observation/Forecast

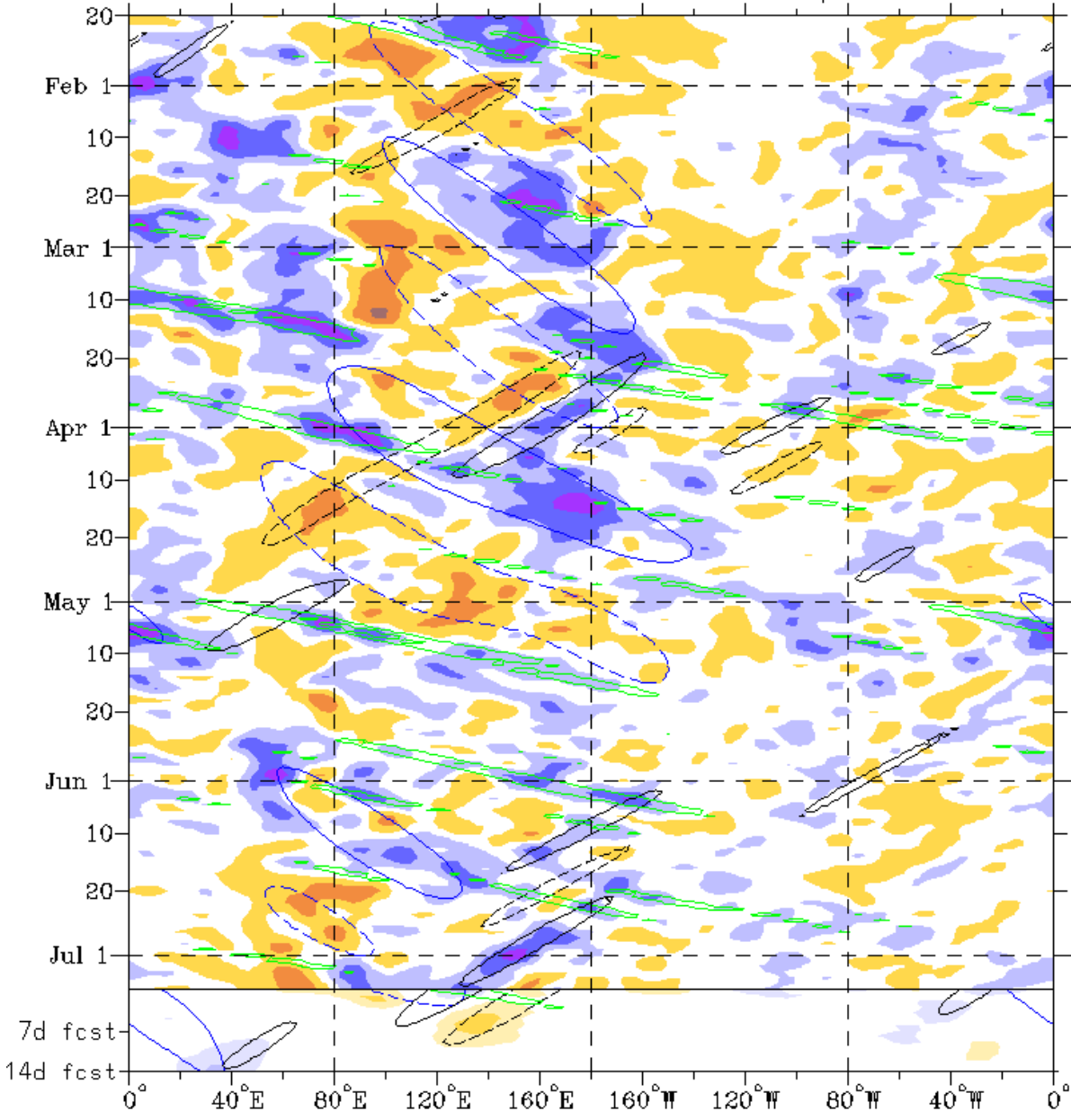


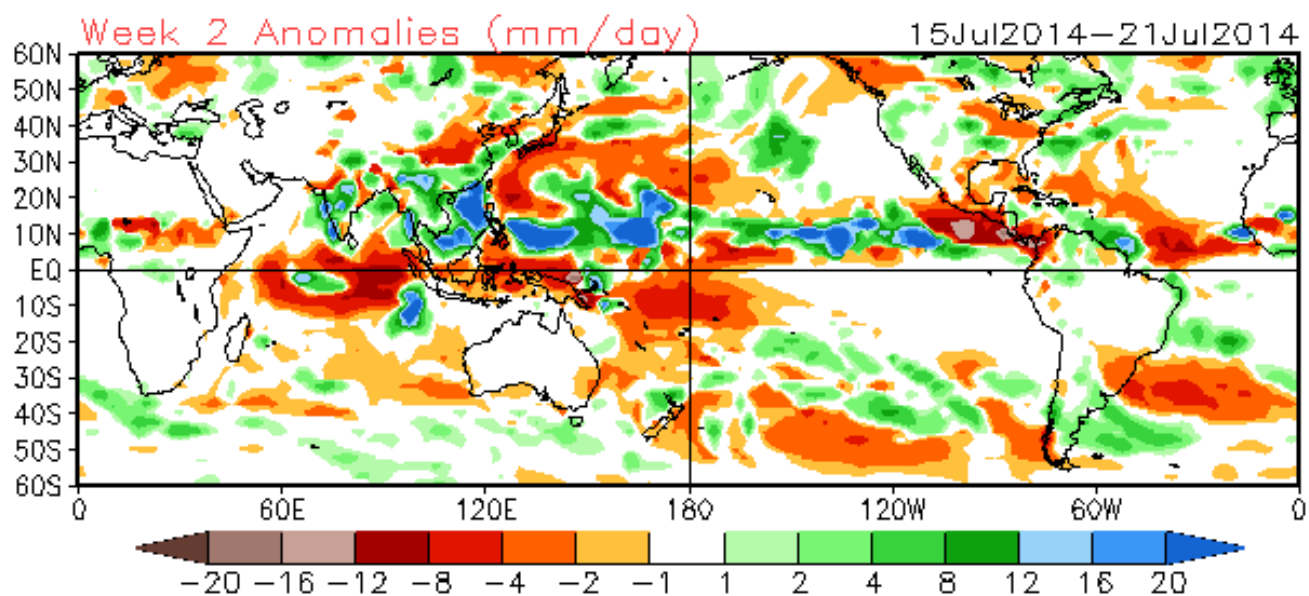
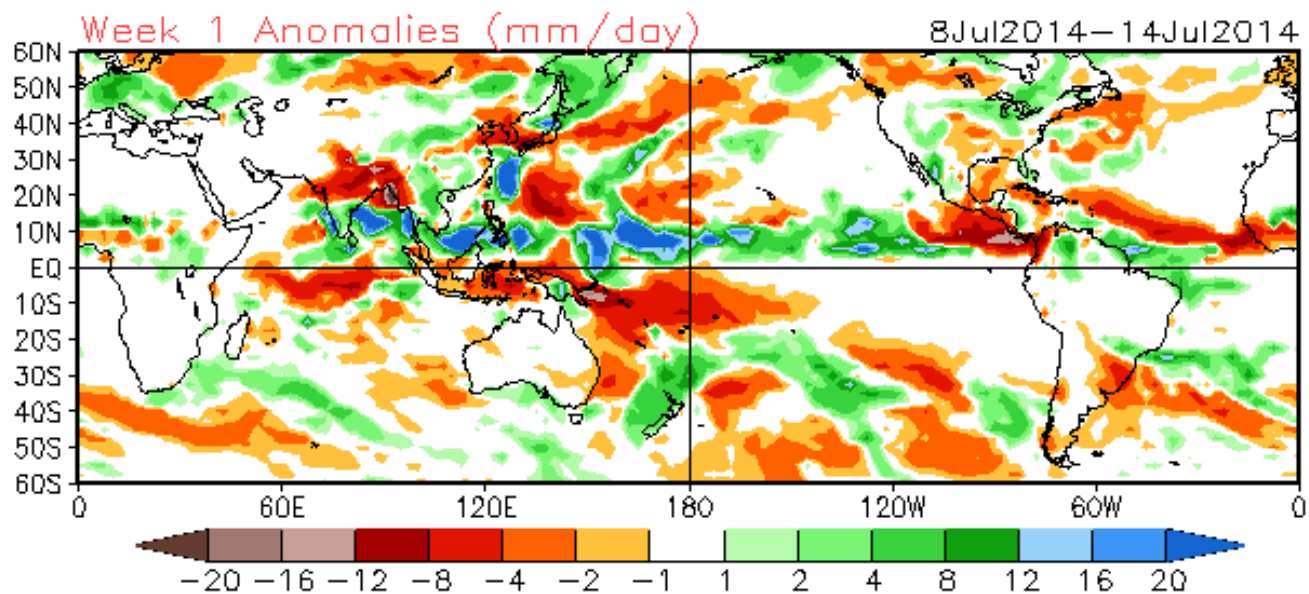
- The GFS, ECMWF, and UKMET MJO Index Forecasts all show rapid (Kelvin Wave) propagation over the Maritime Continent during Week-1 (red boxes).
- The ECMWF and UKMET show slower (more MJO-like) propagation over the WPAC during Week-2.
- The GFS weakens the signal and doesn't have eastward propagation in Week-2.

Average Conditions when the MJO is present (May-Sep)



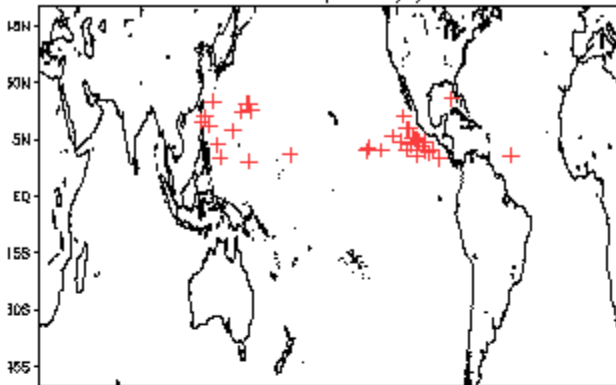
Enhanced convection over the Maritime Continent is associated with interactions between an equatorial Rossby Wave and a Kelvin Wave.



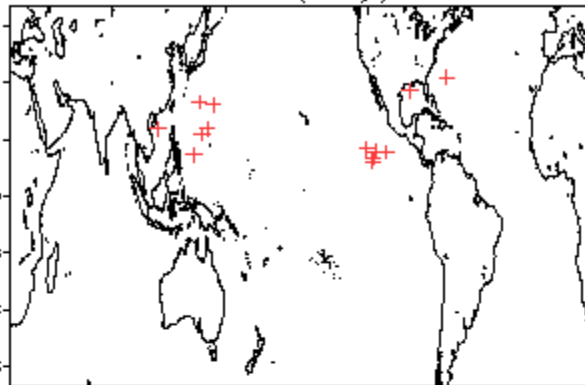


July Tropical Storm Formation by MJO phase

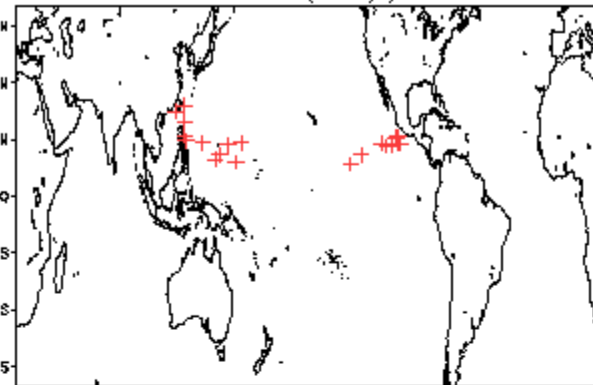
Phase 1 (144 days) 37 storms



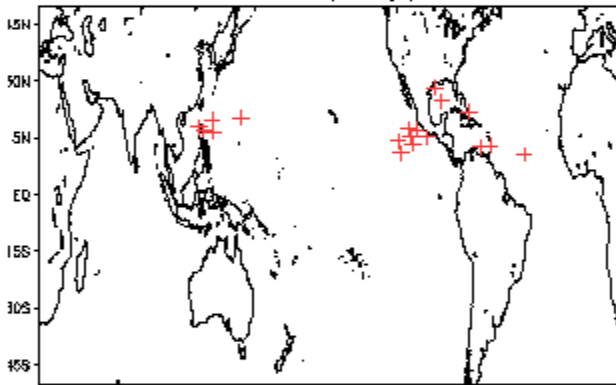
Phase 4 (40 days) 14 storms



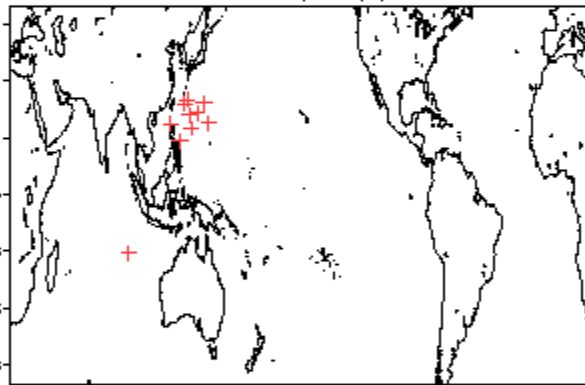
Phase 7 (87 days) 21 storms



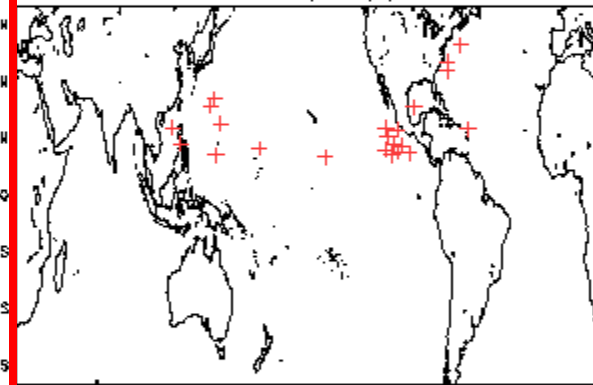
Phase 2 (74 days) 20 storms



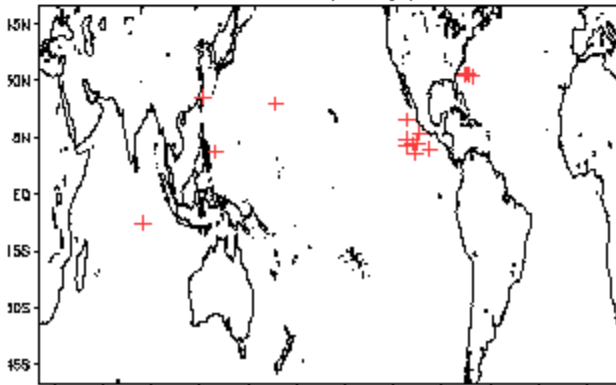
Phase 5 (63 days) 11 storms



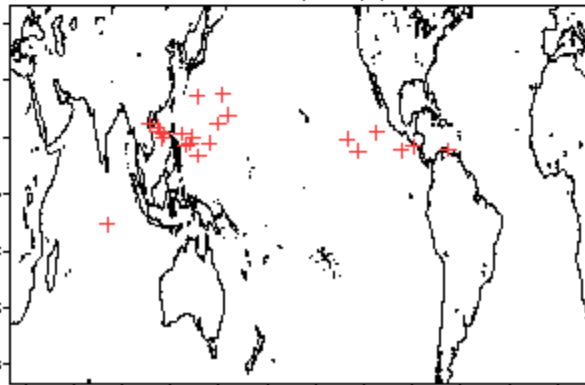
Phase 8 (61 days) 24 storms



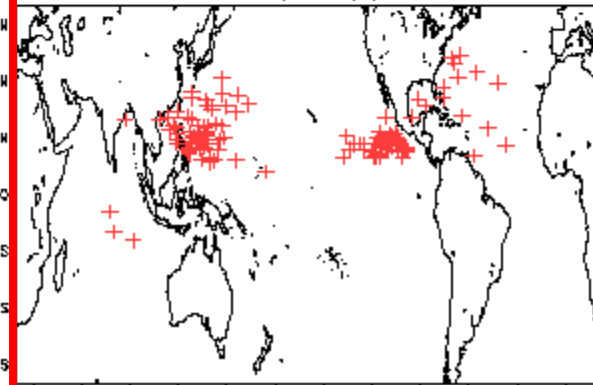
Phase 3 (49 days) 17 storms



Phase 6 (60 days) 23 storms



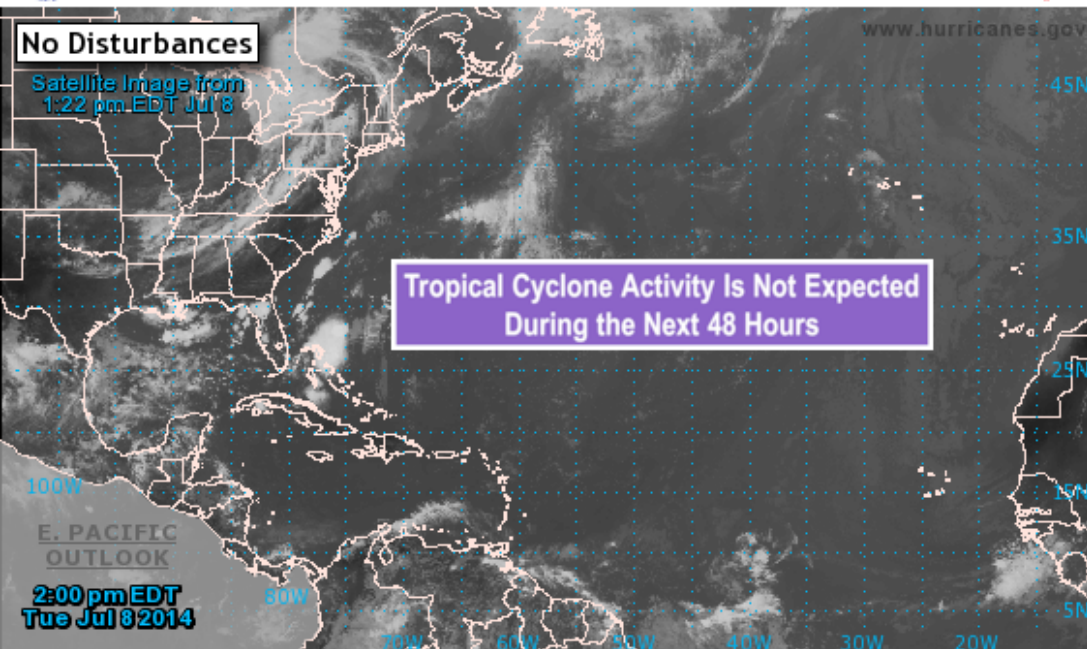
Null (480 days) 130 storms





2-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



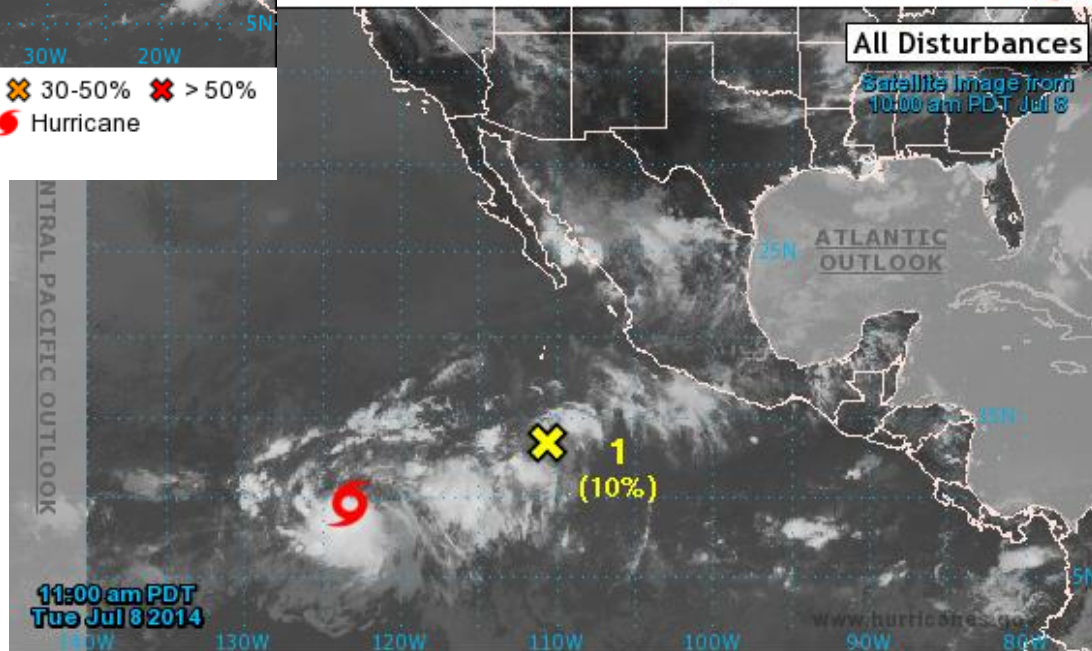
Current Disturbances and 2-Day Cyclone Formation Chance: < 30% 30-50% > 50%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone Remnants

2-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



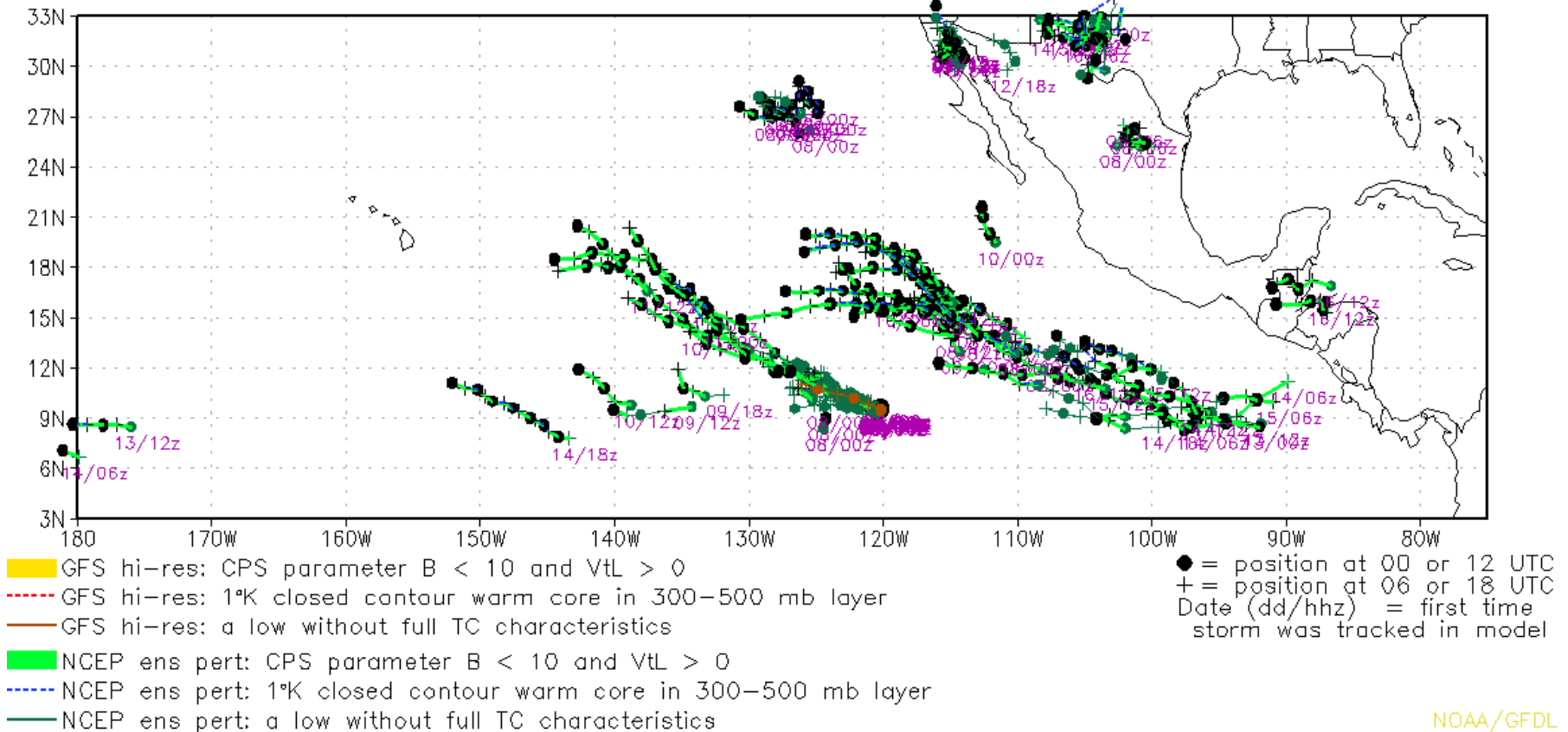
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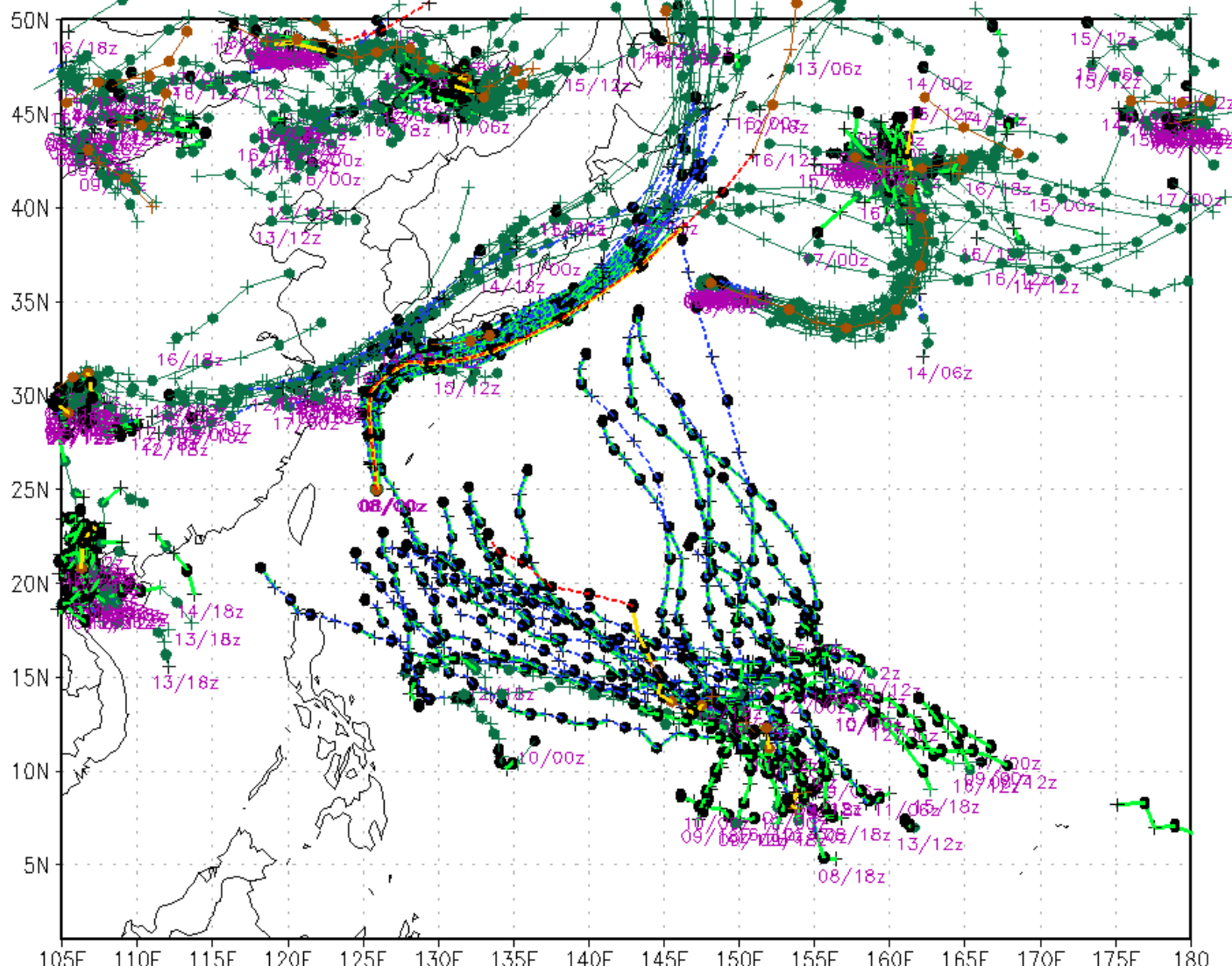
NCEP Ensemble Perturbation Forecast Storm Tracks

For forecast with initial time = 2014070800



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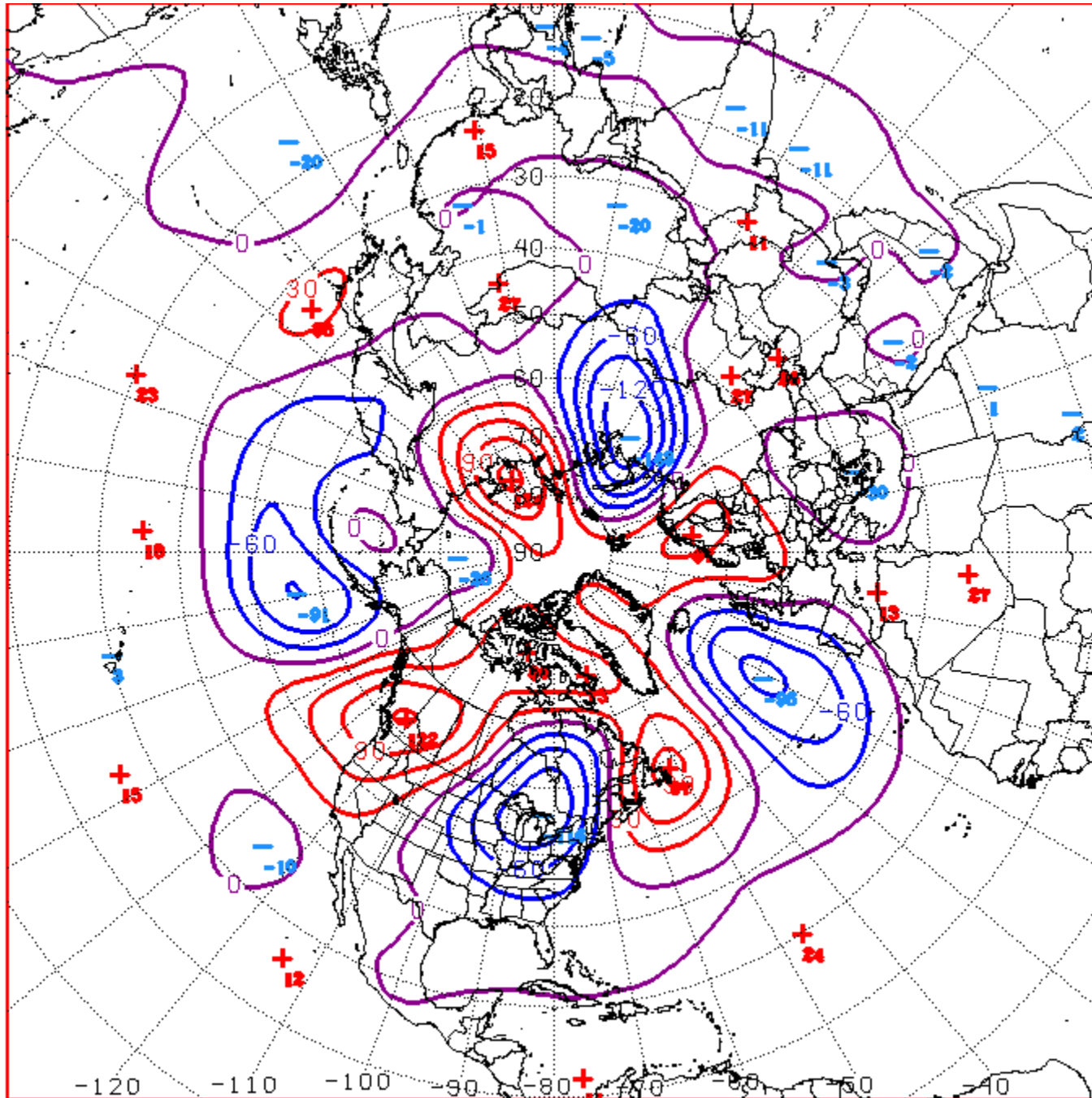
For forecast with initial time = 2014070800



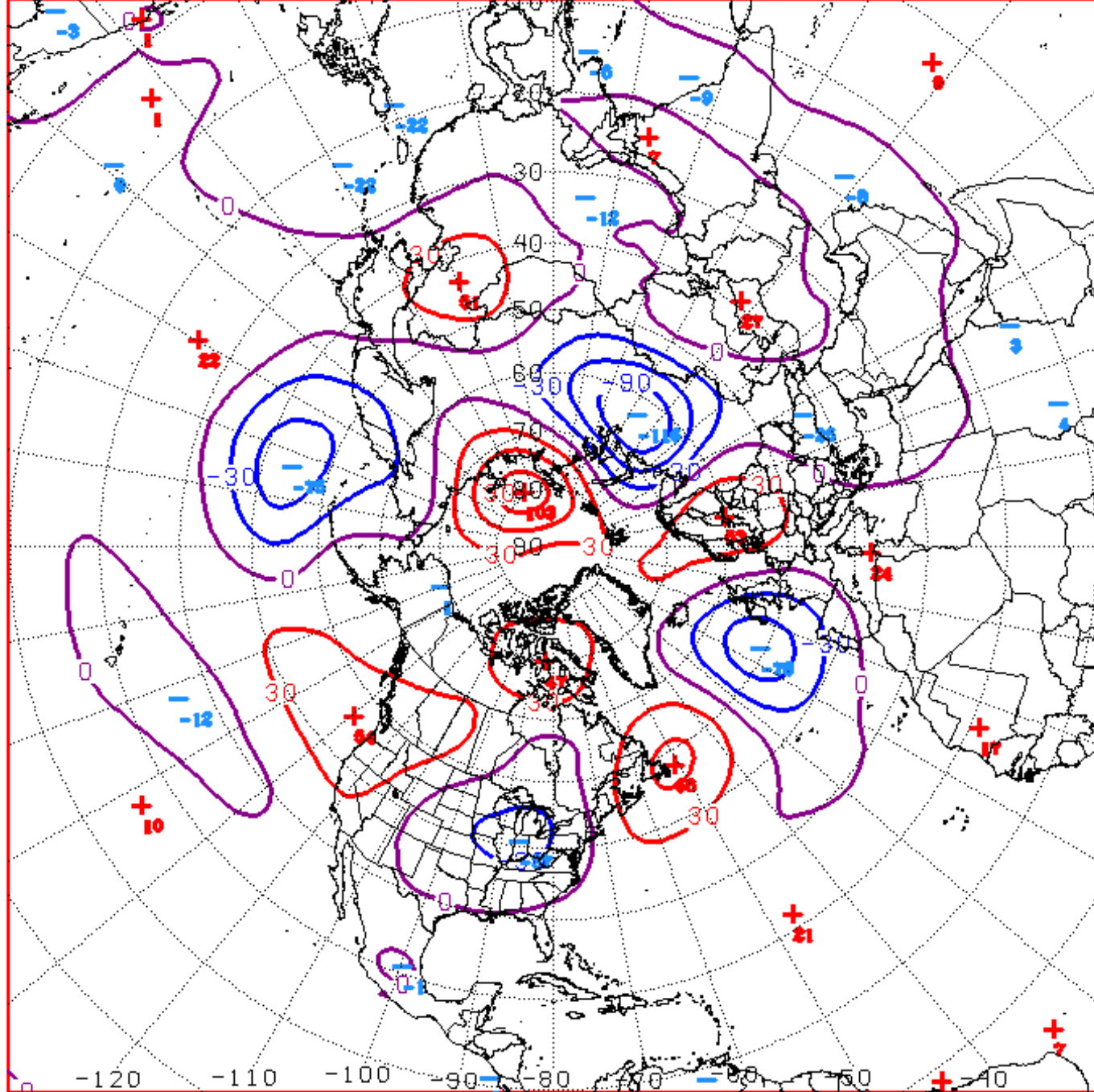
- GFS hi-res: CPS parameter B < 10 and VtL > 0
- - - GFS hi-res: 1°K closed contour warm core in 300–500 mb layer
- GFS hi-res: a low without full TC characteristics
- NCEP ens pert: CPS parameter B < 10 and VtL > 0
- - - NCEP ens pert: 1°K closed contour warm core in 300–500 mb layer
- NCEP ens pert: a low without full TC characteristics

● = position at 00 or 12 UTC
 + = position at 06 or 18 UTC
 Date (dd/hhz) = first time storm was tracked in model

Connections to U.S. Impacts

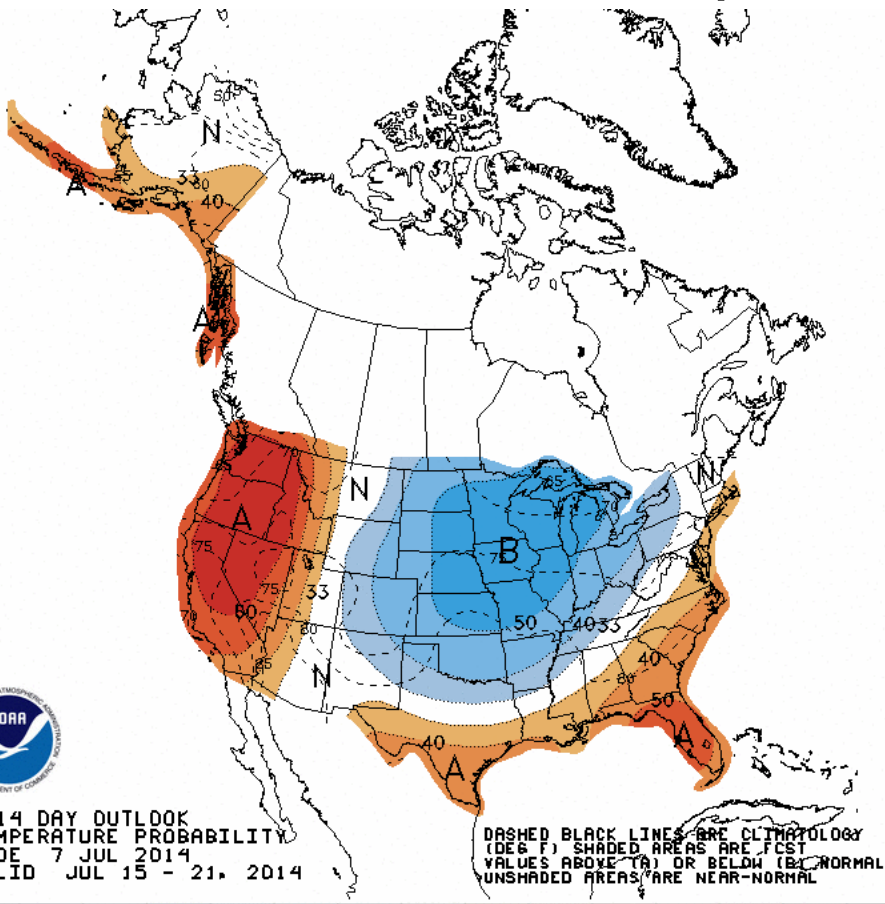


D+8 500 MB ANOMALIES FROM 00Z ECMM
CPC MAP MADE JUL 08 2014 1059 UTC CNTD JUL 16 2014



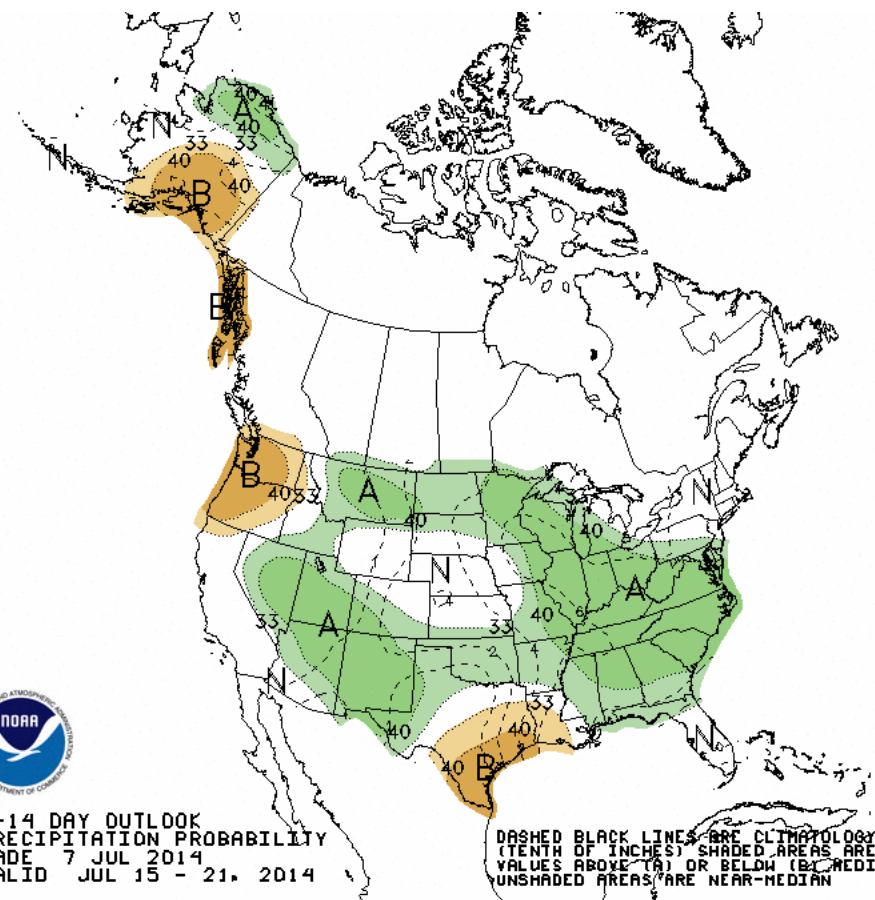
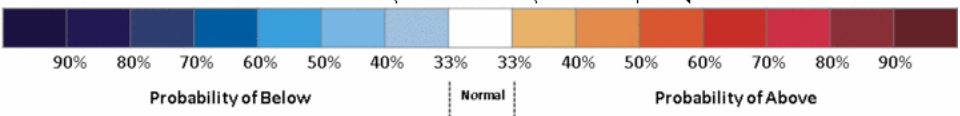
D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE JUL 08 2014 1101 UTC CNTD JUL 19 2014

Week 2 – Temperature and Precipitation



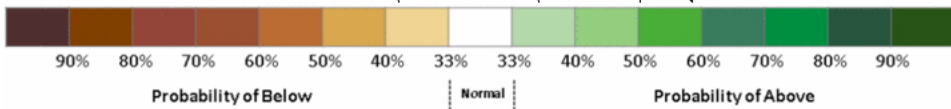
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 7 JUL 2014
VALID JUL 15 - 21, 2014

DASHED BLACK LINES ARE CLIMATOLOGY (DEG F). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. UNSHADED AREAS ARE NEAR-NORMAL.



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 7 JUL 2014
VALID JUL 15 - 21, 2014

DASHED BLACK LINES ARE CLIMATOLOGY (TENTH OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) MEDIAN. UNSHADED AREAS ARE NEAR-MEDIAN.

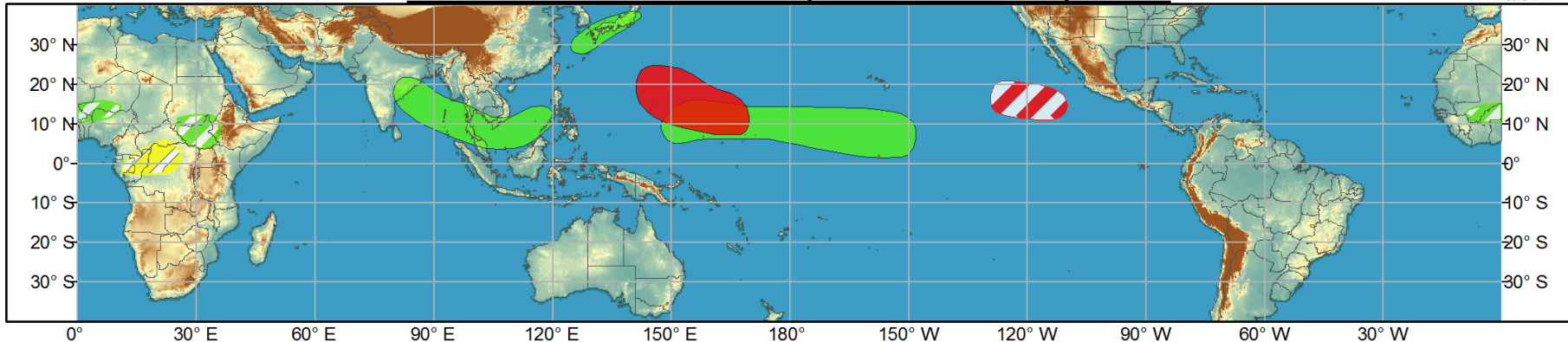




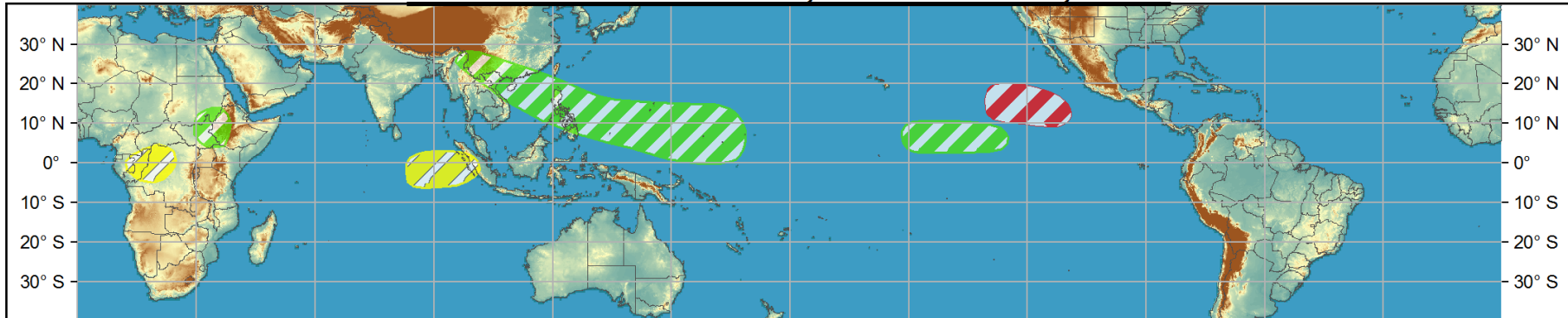
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