

Global Tropics Hazards And Benefits Outlook

June 21, 2016

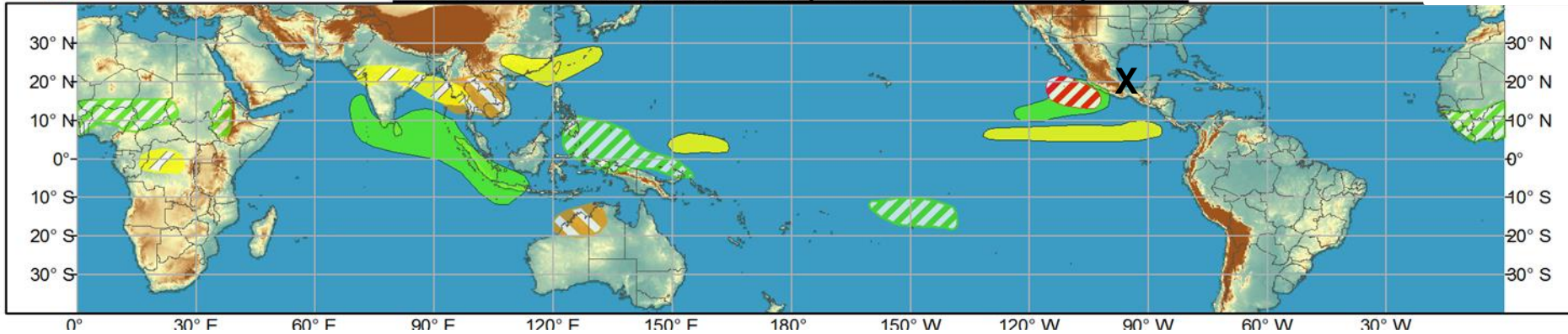
Adam Allgood

Outline

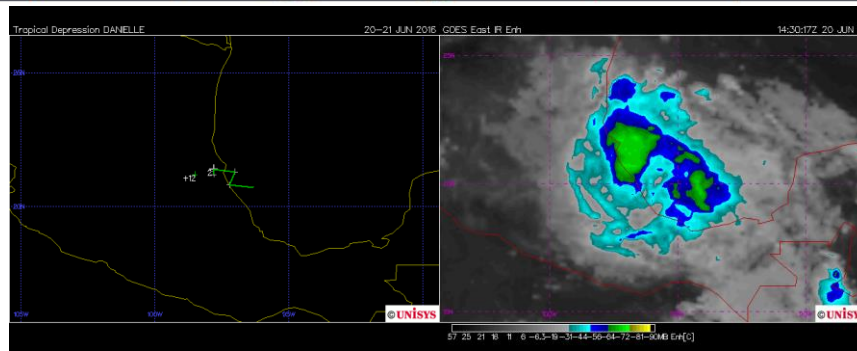
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review – Tropical Cyclones

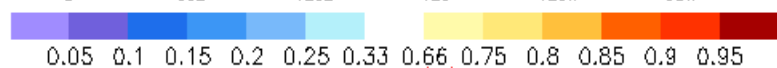
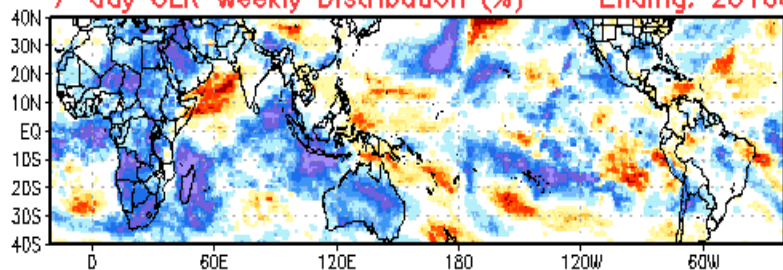
Week 1 - Valid: Jun 15, 2016 - Jun 21, 2016



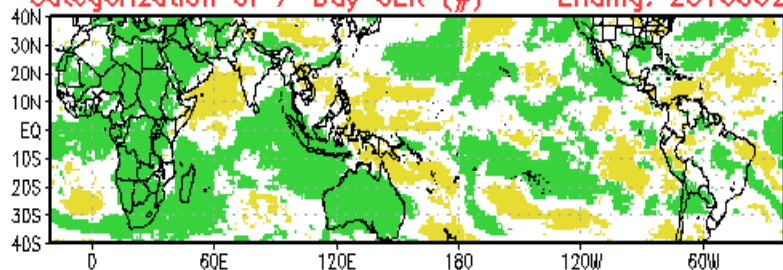
Week 2 - Valid: Jun 15, 2016 - Jun 21, 2016



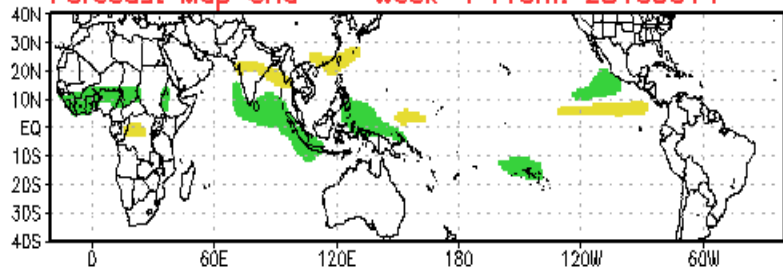
7-day OLR Weekly Distribution (%) -- Ending: 20160621



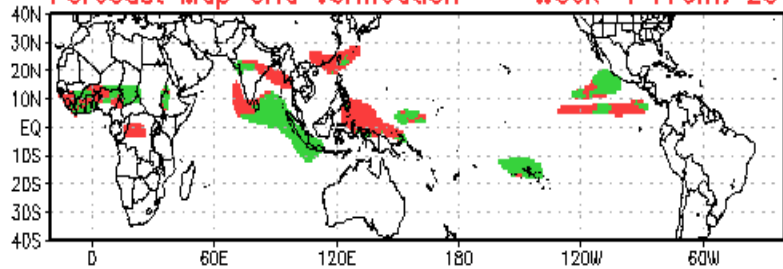
Categorization of 7-Day OLR (#) -- Ending: 20160621



Forecast Map Grid -- Week-1 From: 20160614

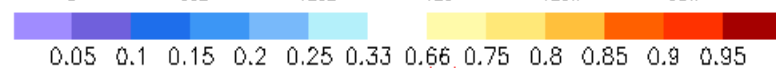
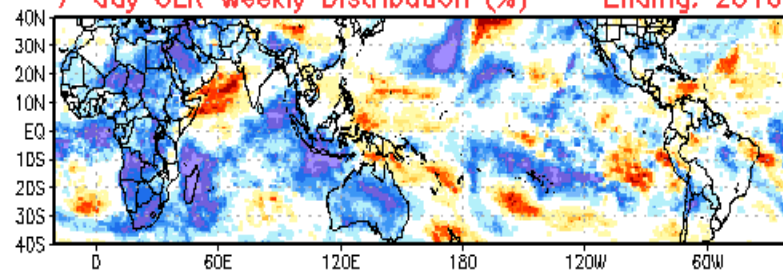


Forecast Map Grid Verification -- Week-1 From: 20160614

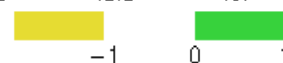
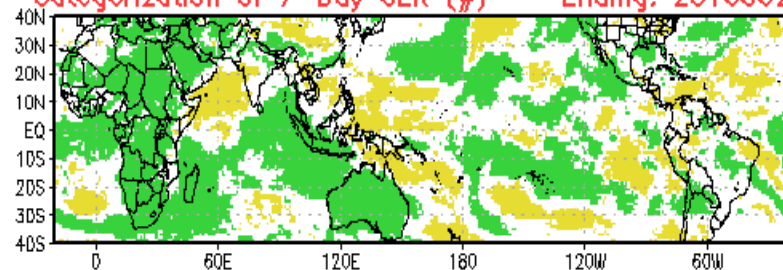


Hit: Green, Miss: Red
Heidke Skill Score: 26.9423

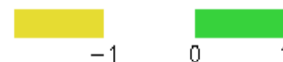
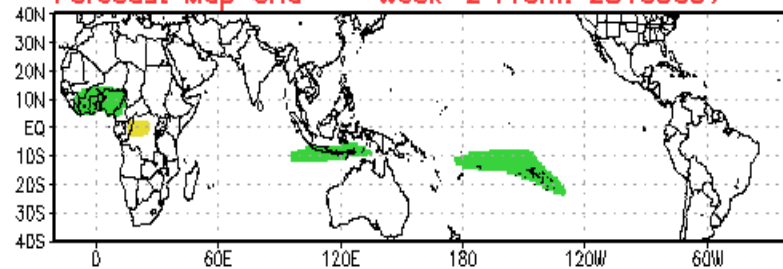
7-day OLR Weekly Distribution (%) -- Ending: 20160621



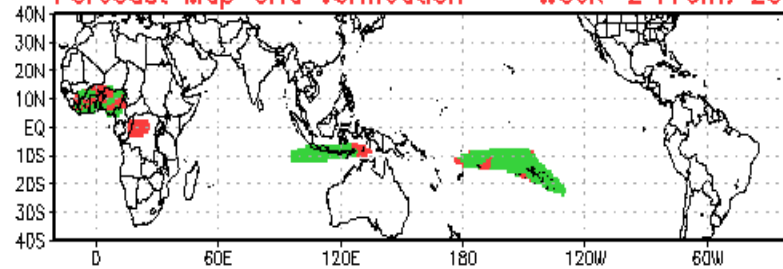
Categorization of 7-Day OLR (#) -- Ending: 20160621



Forecast Map Grid -- Week-2 From: 20160607



Forecast Map Grid Verification -- Week-2 From: 20160607



Hit: Green, Miss: Red
Heidke Skill Score: 60.9926

Synopsis of Climate Modes

ENSO:

- ENSO Alert System Status: [Final El Niño Advisory / La Niña Watch](#)
- ENSO-neutral conditions are present and La Niña is favored to develop during the Northern Hemisphere summer 2016, with about a 75% chance of La Niña during the fall and winter 2016-17.

MJO and other subseasonal tropical variability:

- The RMM index and upper-level VP pattern indicates continued MJO activity, with the enhanced phase now over the Maritime Continent. Kelvin Wave Activity is also apparent within the enhanced envelope.
- There is a lower frequency signal favoring suppressed convection over the West Pacific that is interfering with the MJO signal. This adds uncertainty regarding the future MJO evolution.
- Most dynamical model MJO index forecasts weaken the signal during the next two weeks, particularly the GFS.

Extratropics:

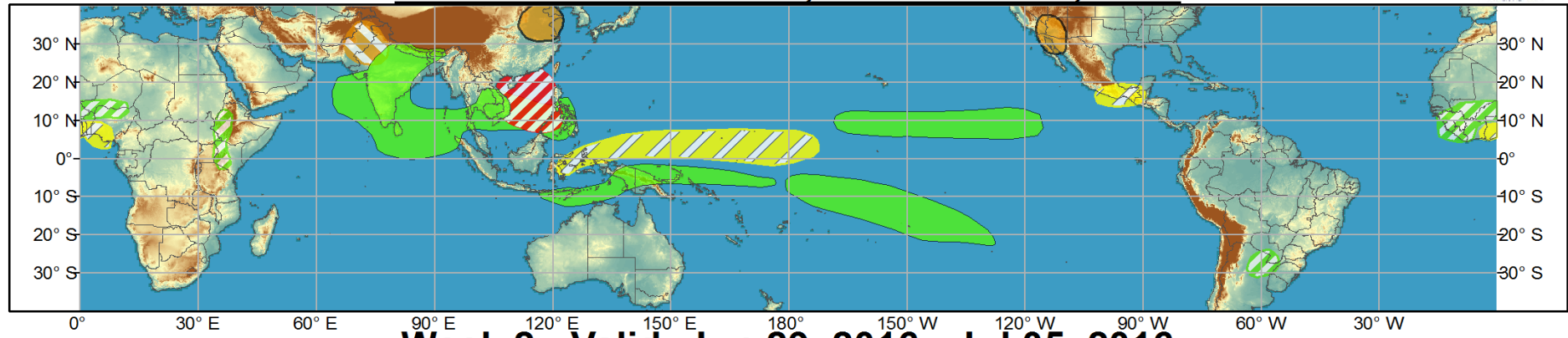
- The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by the MJO, but Kelvin Wave activity propagating over the Pacific (Western Hemisphere) during Week-1 (Week-2) may promote a favorable environment for TC development over the East Pacific (Bay of Campeche or far western Caribbean).



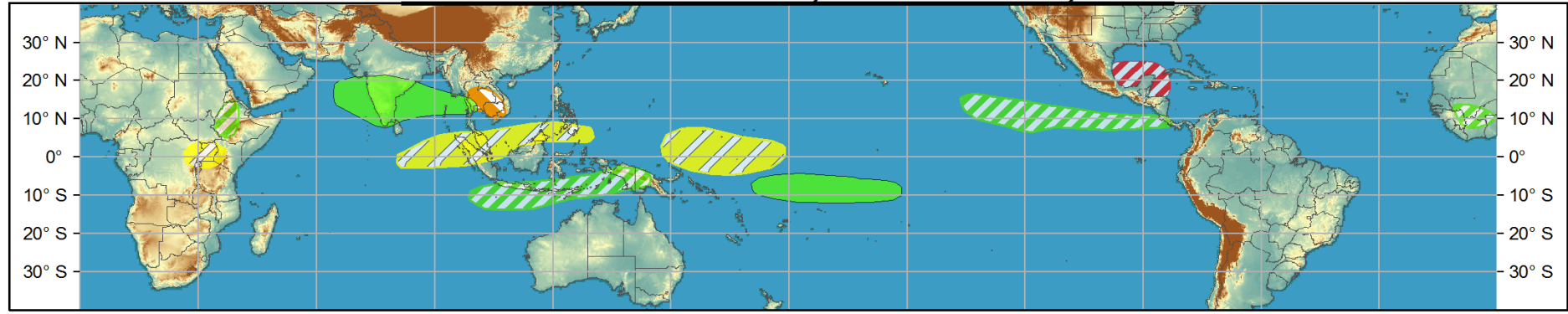
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jun 22, 2016 - Jun 28, 2016



Week 2 - Valid: Jun 29, 2016 - Jul 05, 2016



Produced: 06/21/2016
Forecaster: Allgood

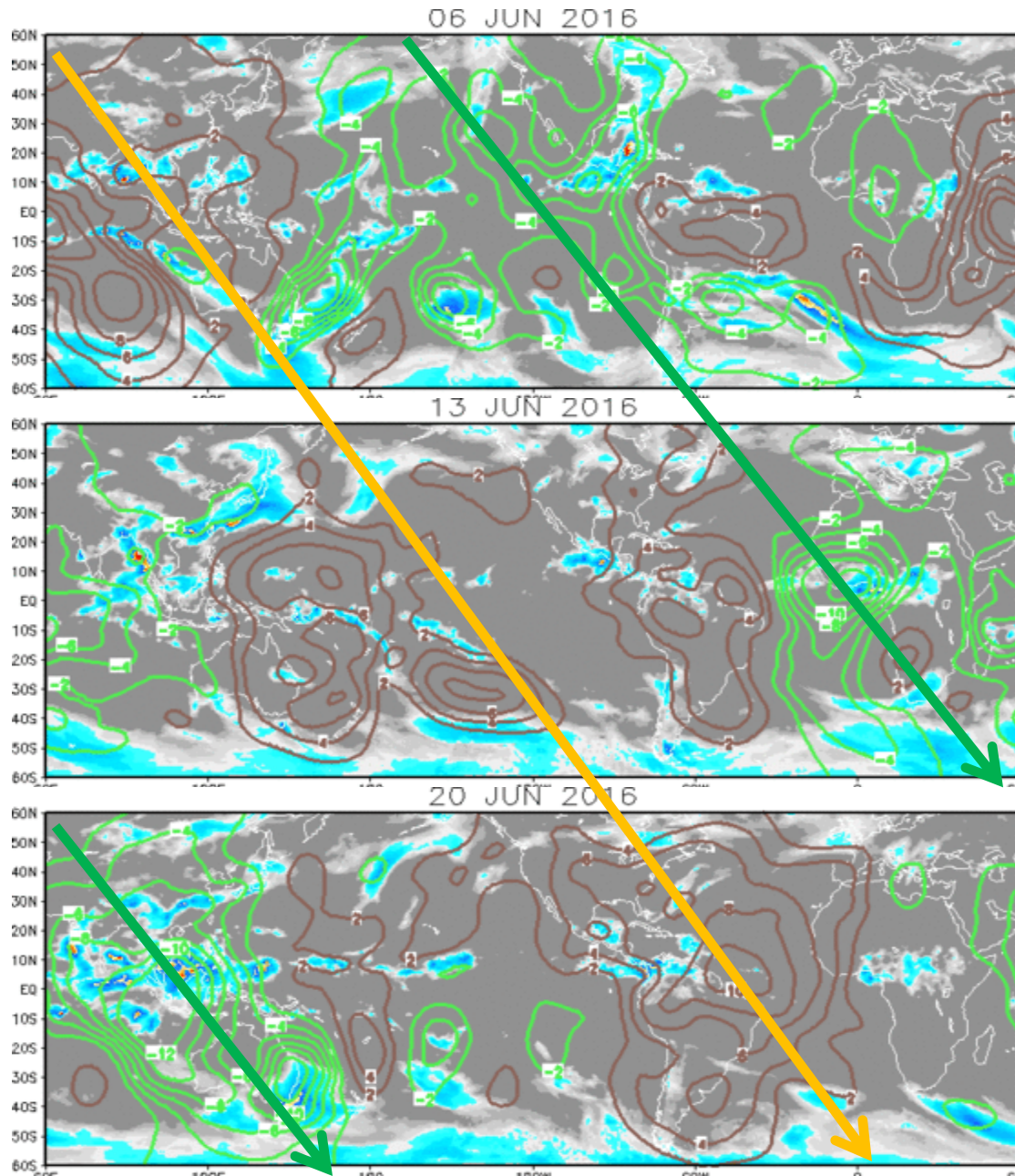
Confidence		
High	Moderate	
		Tropical Cyclone Formation Development of a tropical cyclone (tropical depression - TD, or greater strength).
		Above-average rainfall Weekly total rainfall in the upper third of the historical range.
		Below-average rainfall Weekly total rainfall in the lower third of the historical range.
		Above-normal temperatures 7-day mean temperatures in the upper third of the historical range.
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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

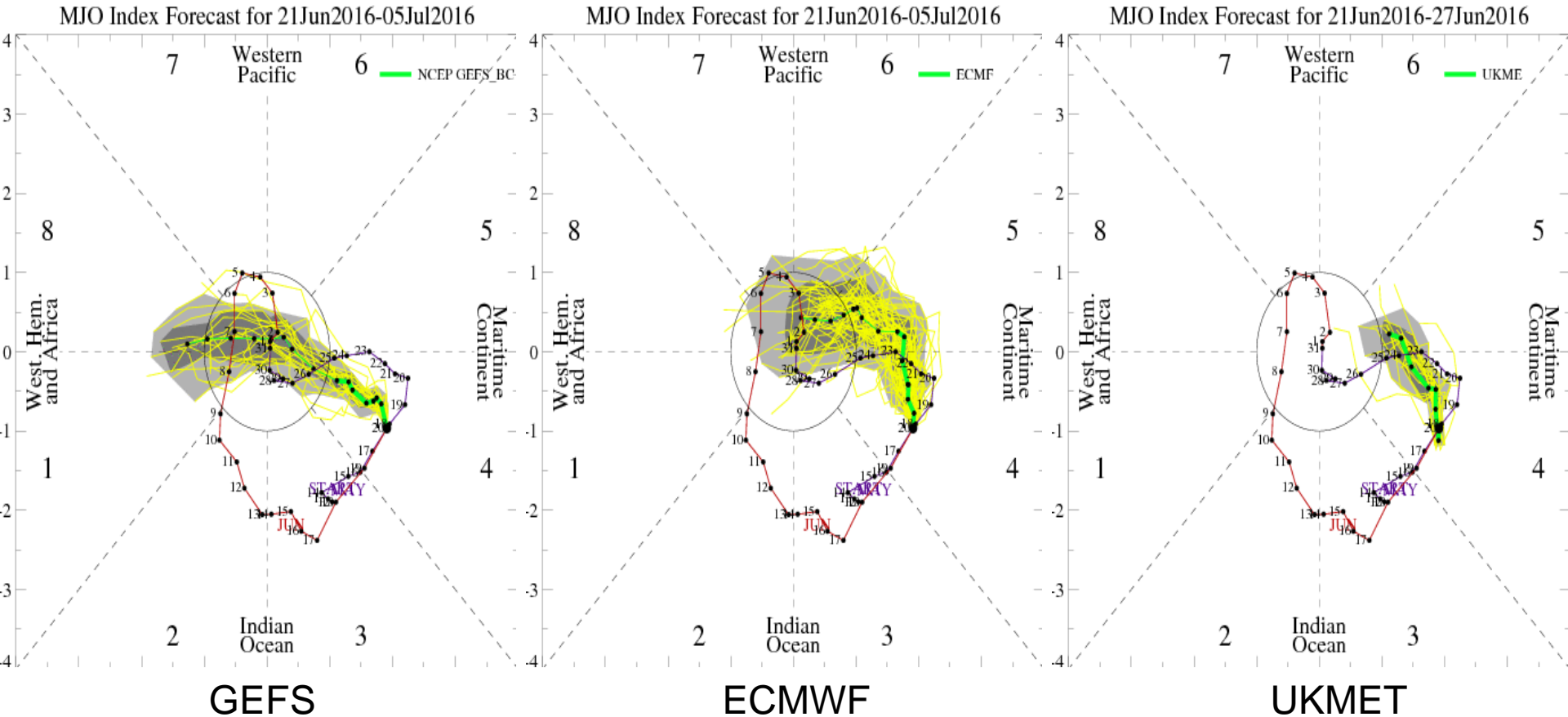
Green: Enhanced Divergence Brown: Enhanced Convergence



Eastward (fast)
MJO
propagation
evident in the
upper-level
pattern.

Enhanced
convection over
the South Pacific
due to warm
SSTs.

MJO Observation/Forecast



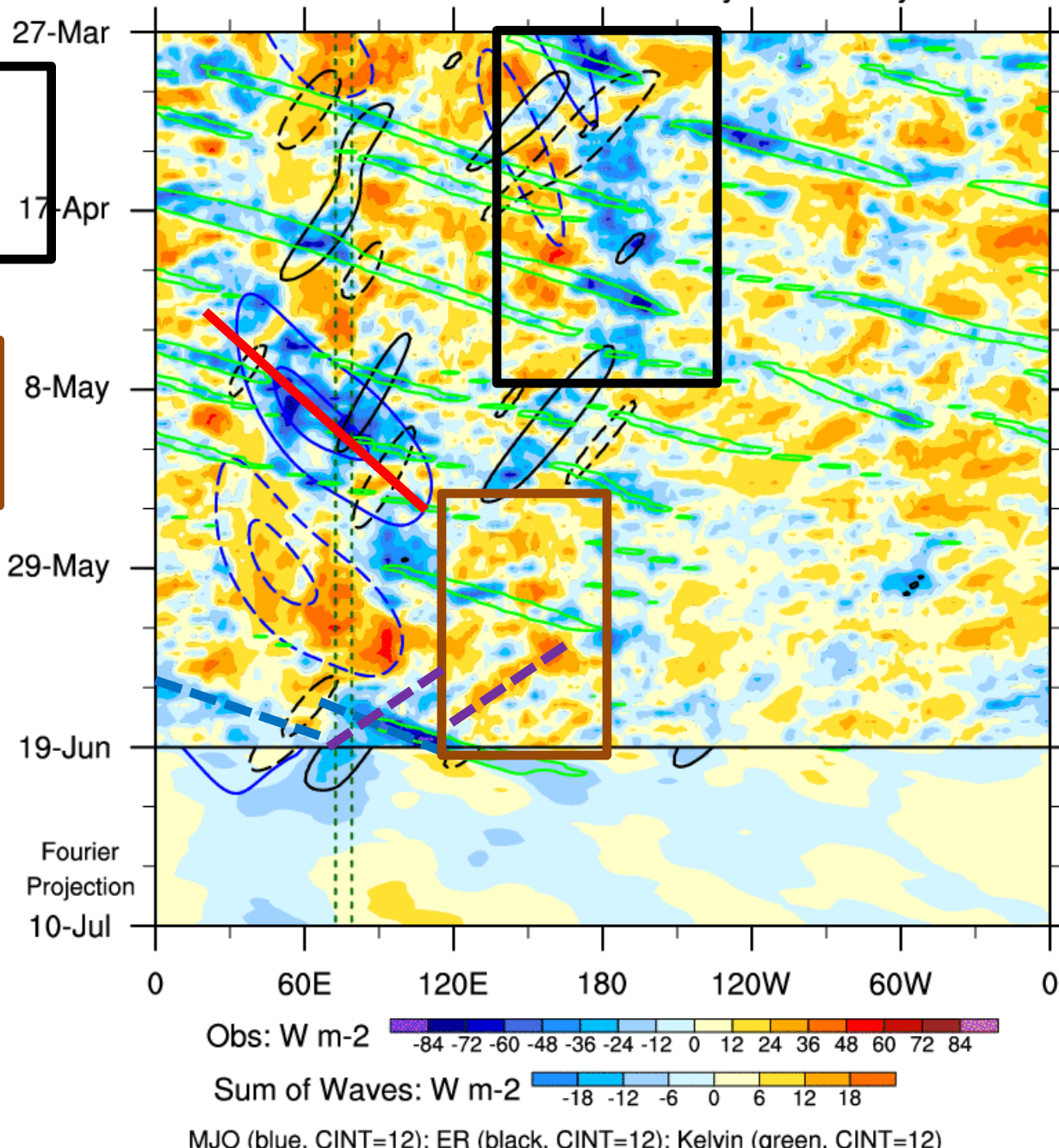
NOAA CDR HIRS OLR anomalies: 7.5°S - 7.5°N

27-Mar-2016 to 19-Jun-2016 + 21-day Fourier Projection

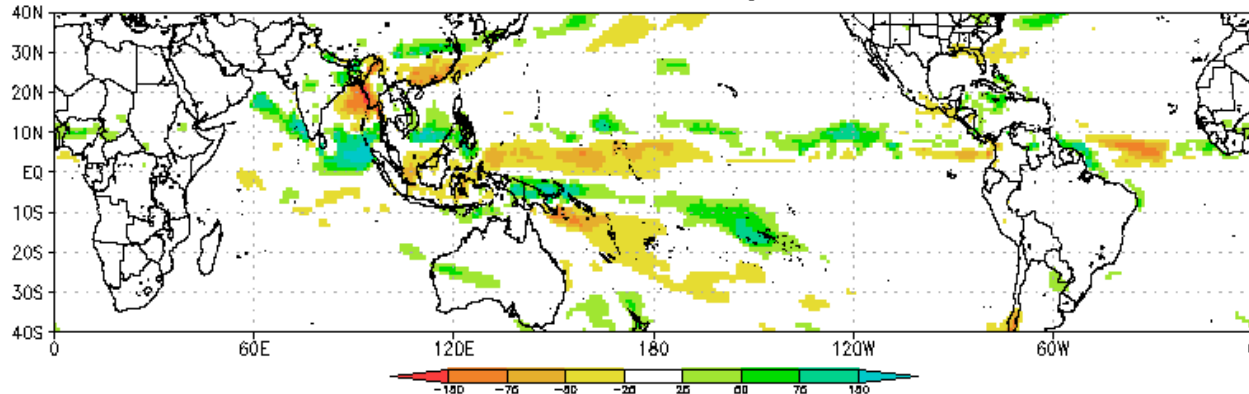
El Niño base state weakened during the boreal Spring months.

Note persistent suppressed convection over the West Pacific

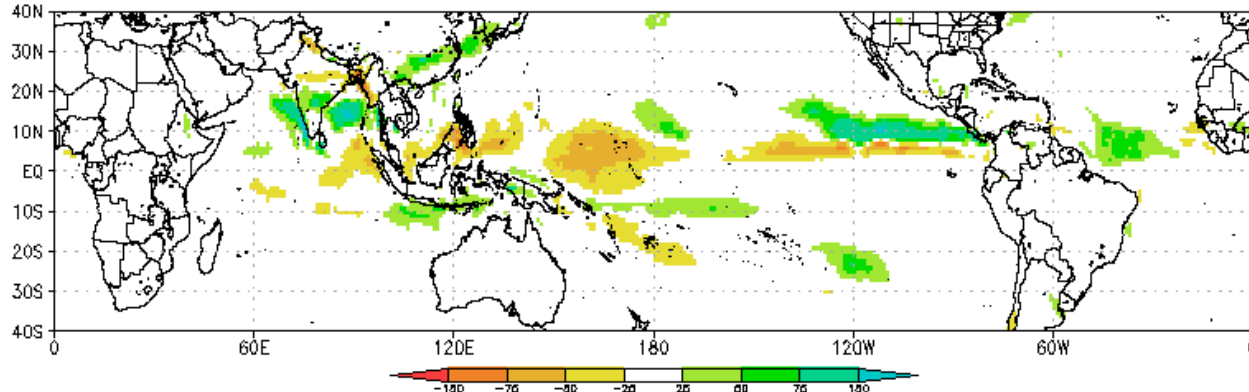
MJO signal is less apparent in the OLR field – the enhanced convection appears to be interactions between Kelvin Waves and Rossby Waves



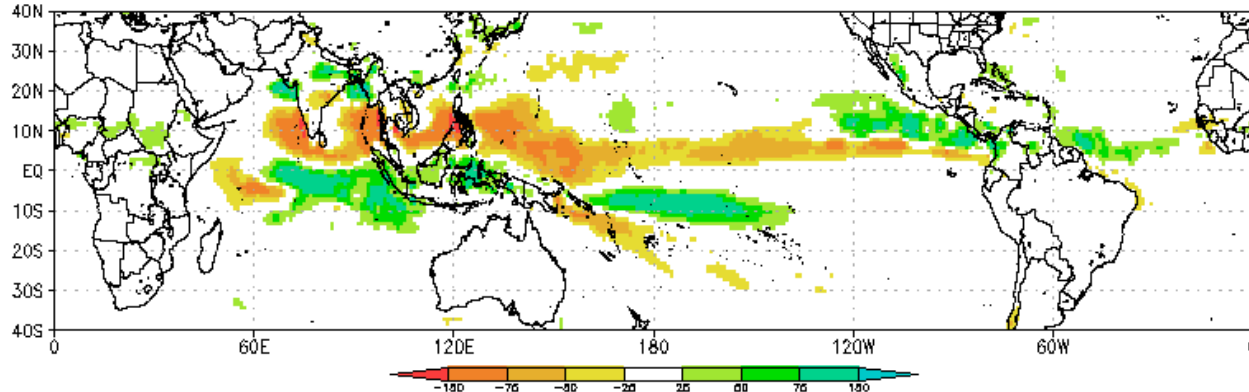
CFSv2 Precip Anomalies (mm) Issued 20Jun2016
Week-1 Forecast Ending 28Jun2016



CFSv2 Precip Anomalies (mm) Issued 20Jun2016
Week-2 Forecast Ending 05Jul2016

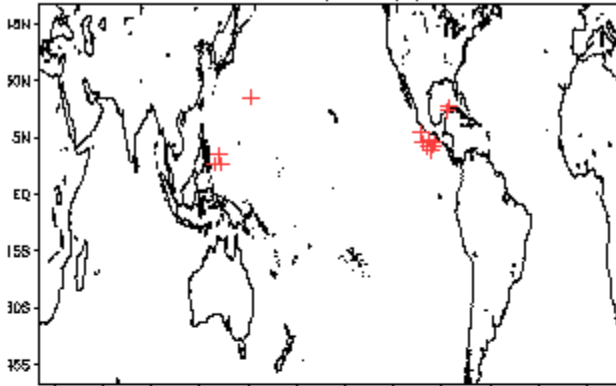


CFSv2 Precip Anomalies (mm) Issued 20Jun2016
Week-3/4 Forecast Ending 19Jul2016

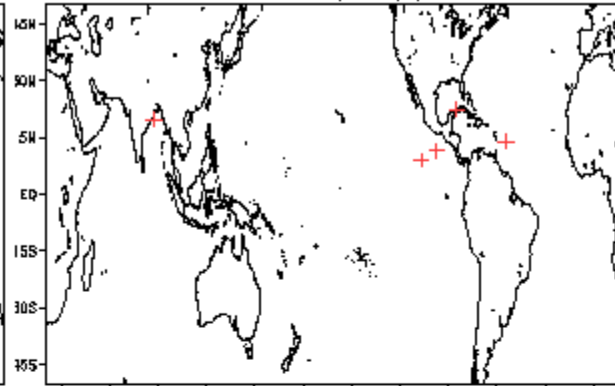


June Tropical Storm Formation by MJO phase

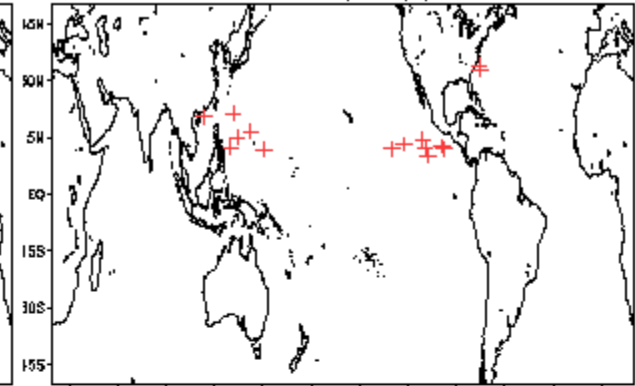
Phase 1 (104 days) 14 storms



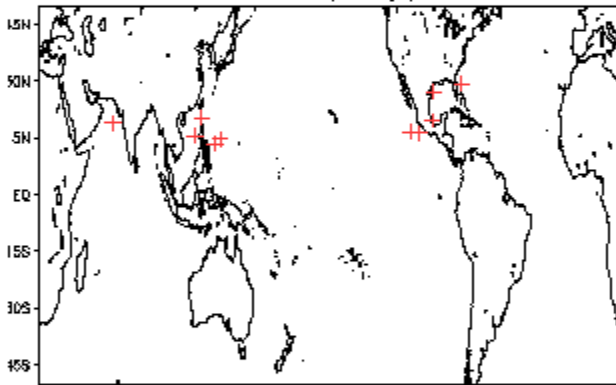
Phase 4 (80 days) 6 storms



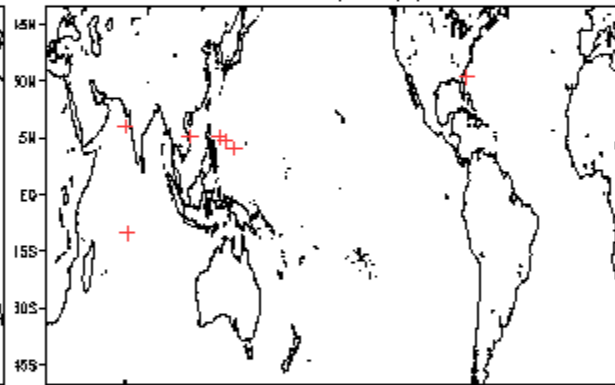
Phase 7 (45 days) 16 storms



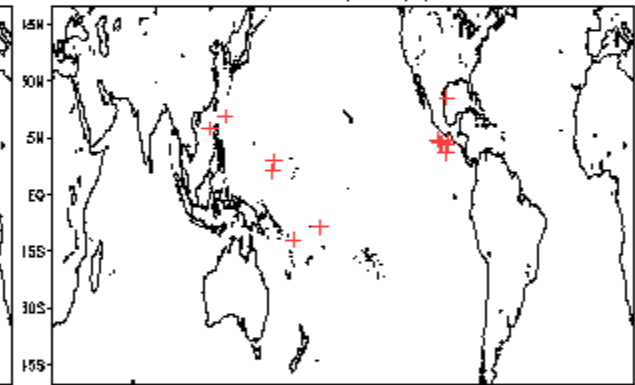
Phase 2 (82 days) 11 storms



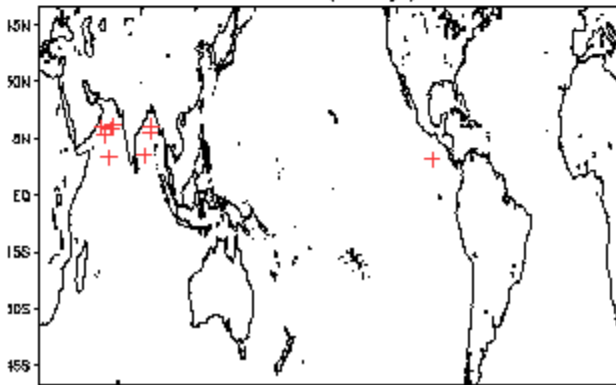
Phase 5 (77 days) 8 storms



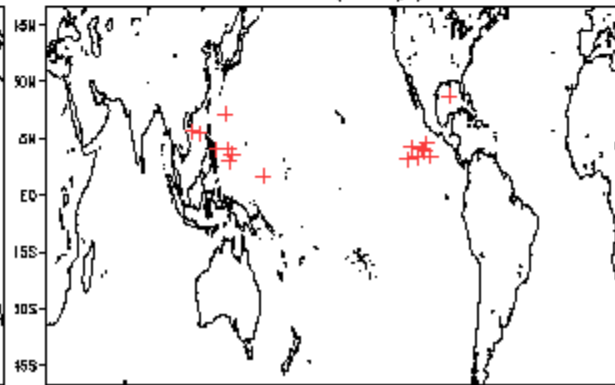
Phase 8 (70 days) 15 storms



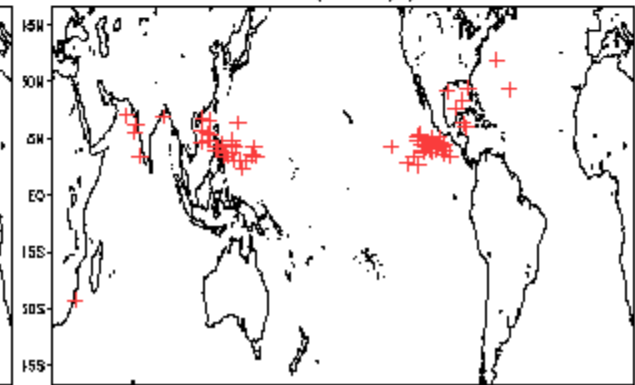
Phase 3 (57 days) 10 storms



Phase 6 (82 days) 17 storms



Null (423 days) 71 storms





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



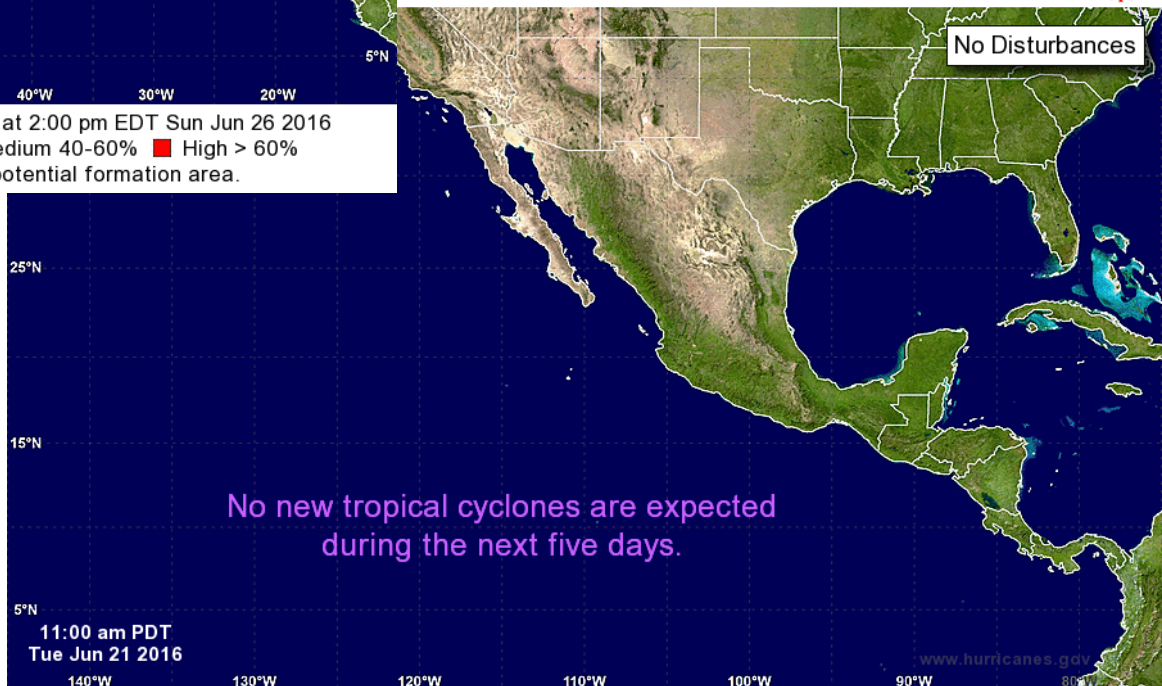
2:00 pm EDT
Tue Jun 21 2016

Tropical Cyclone Formation Potential for the Five-Day Period Ending at 2:00 pm EDT Sun Jun 26 2016
 Chance of Cyclone Formation in Five Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%
 X indicates current disturbance location; shading indicates potential formation area.

Graphical Tropical Weather Outlooks

Graphical Tropical Weather Outlook

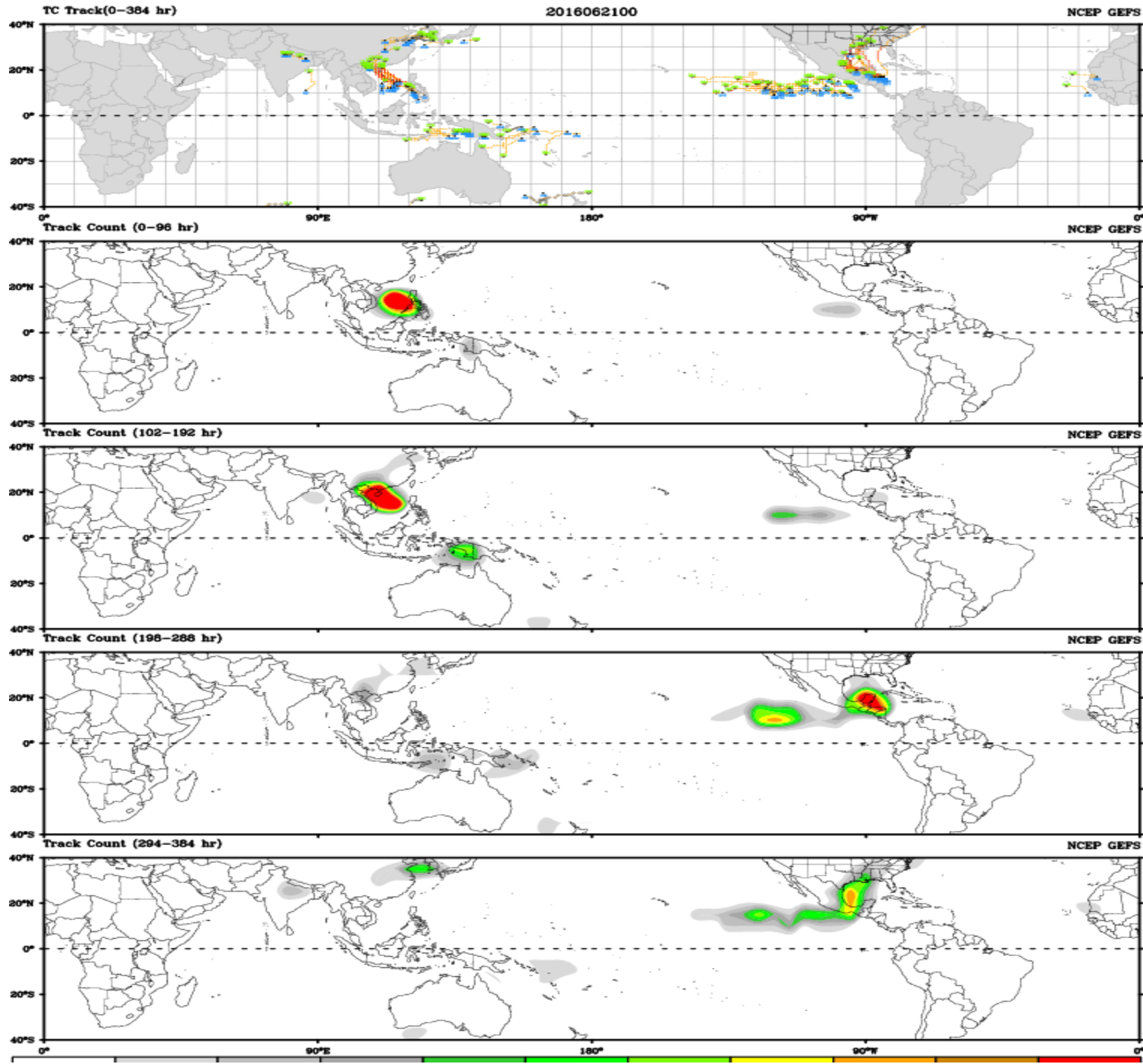
National Hurricane Center Miami, Florida



11:00 am PDT
Sun Jun 26 2016

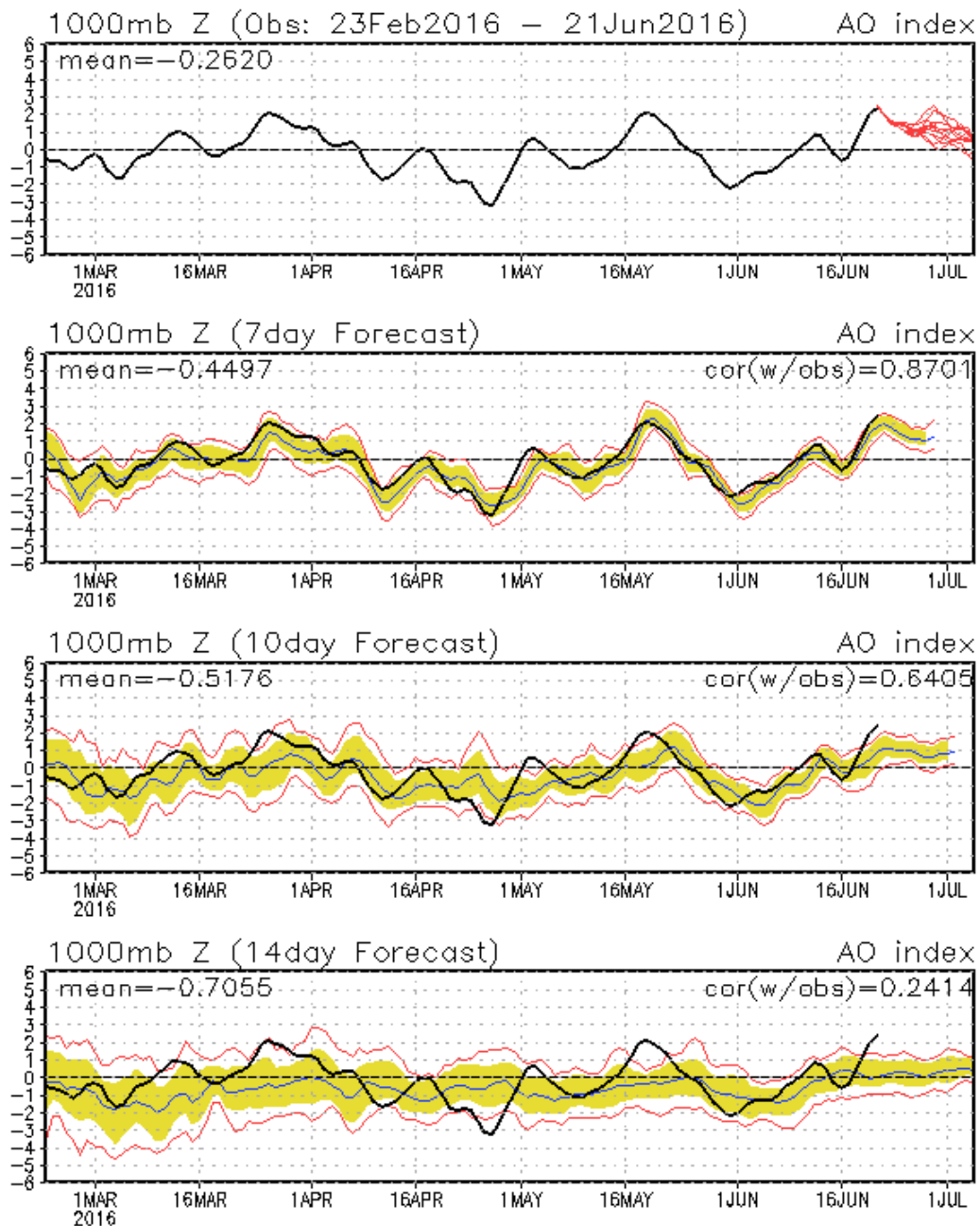
Tropical Cyclone Formation Potential for the Five-Day Period Ending at 11:00 am PDT Sun Jun 26 2016
 Chance of Cyclone Formation in Five Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%
 X indicates current disturbance location; shading indicates potential formation area.

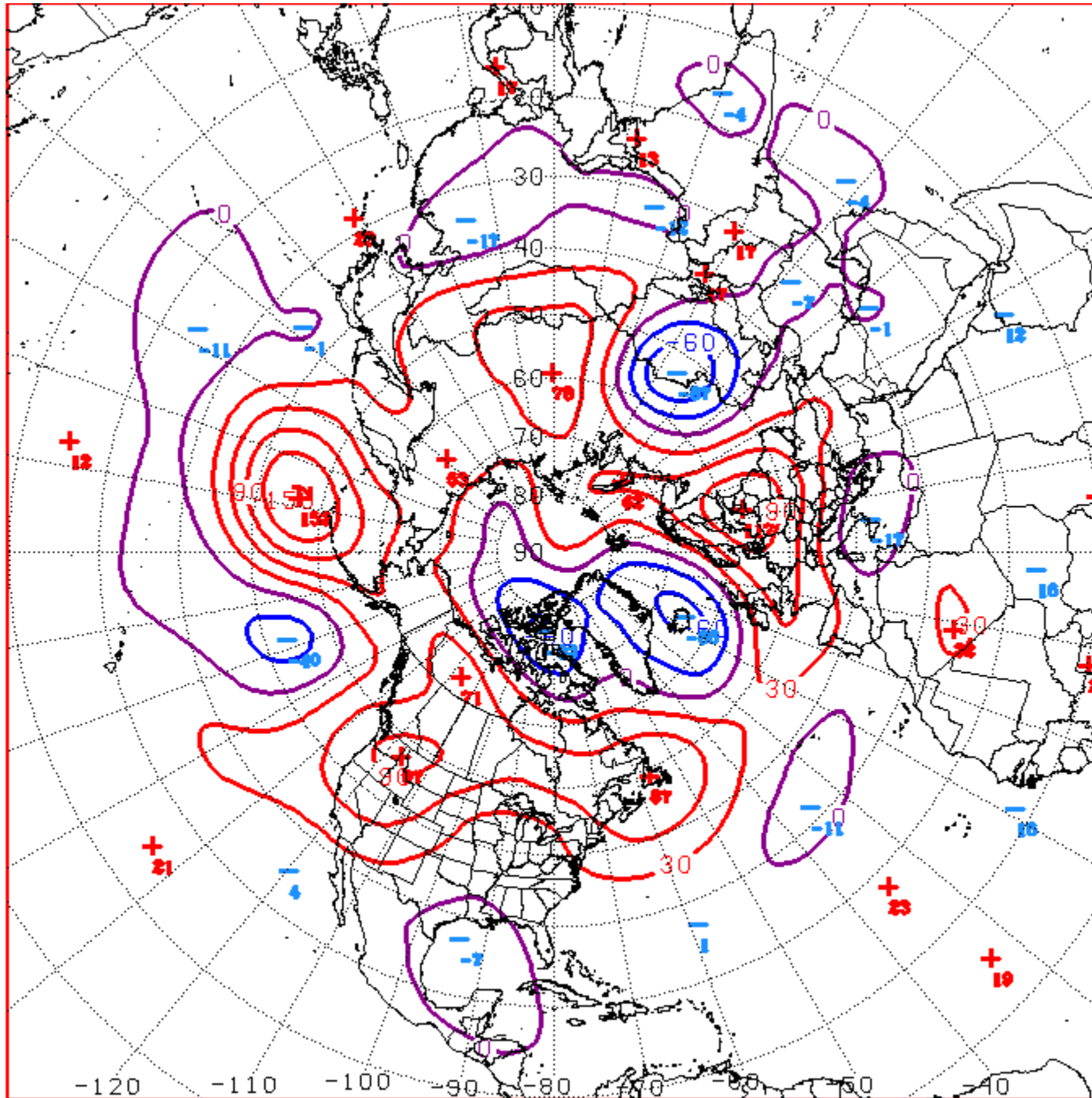
CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)



Connections to U.S. Impacts

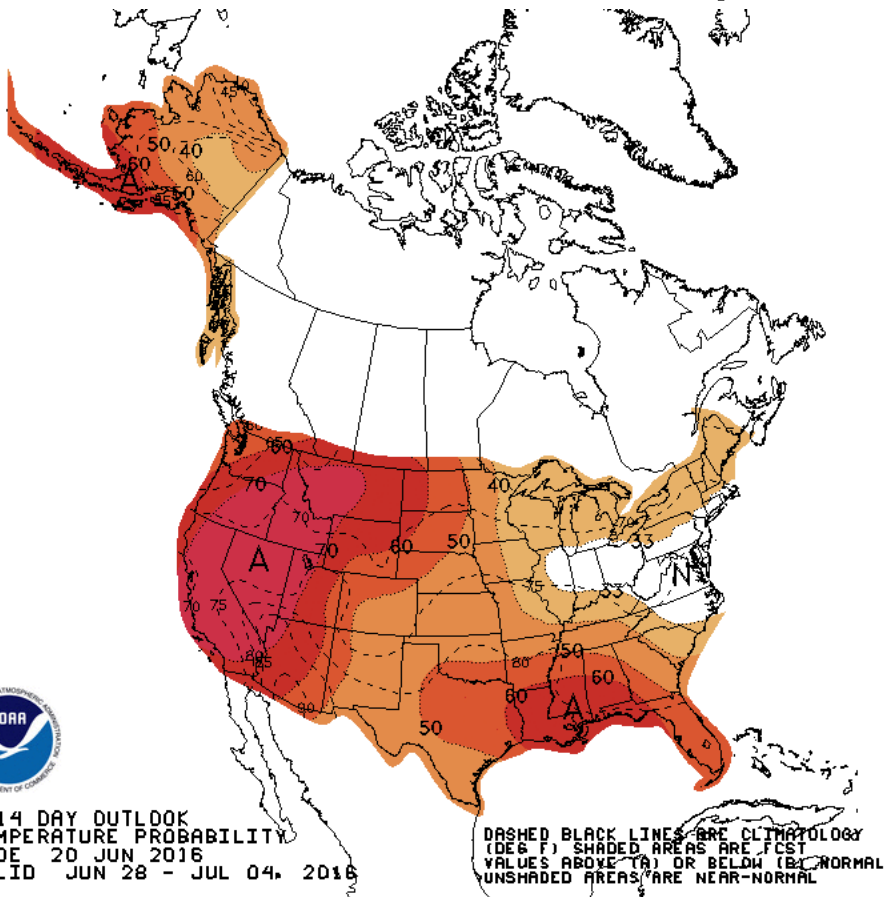
AO: Observed & ENSM forecasts





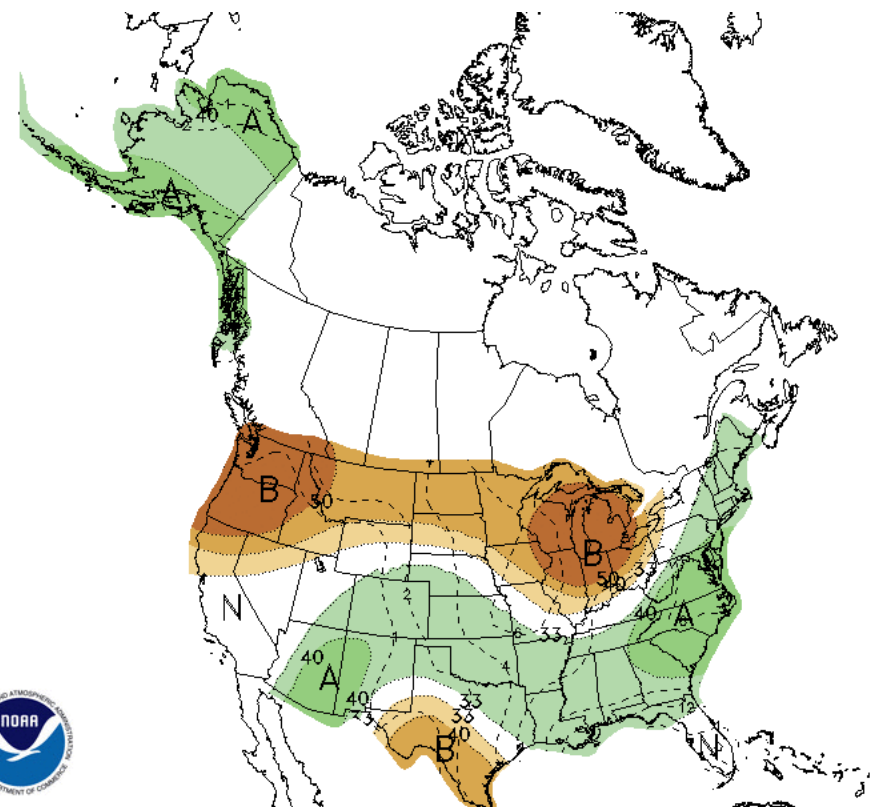
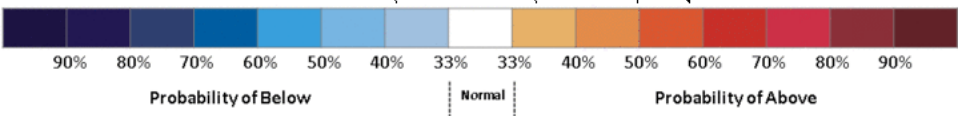
D+11 500 MB ANOMALIES FROM 06Z ENSM
CPC MAP MADE JUN 21 2016 1227 UTC CNTD JUL 02 2016

Week 2 – Temperature and Precipitation



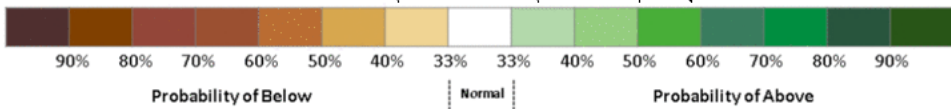
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 20 JUN 2016
VALID JUN 28 - JUL 04, 2016

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 20 JUN 2016
VALID JUN 28 - JUL 04, 2016

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

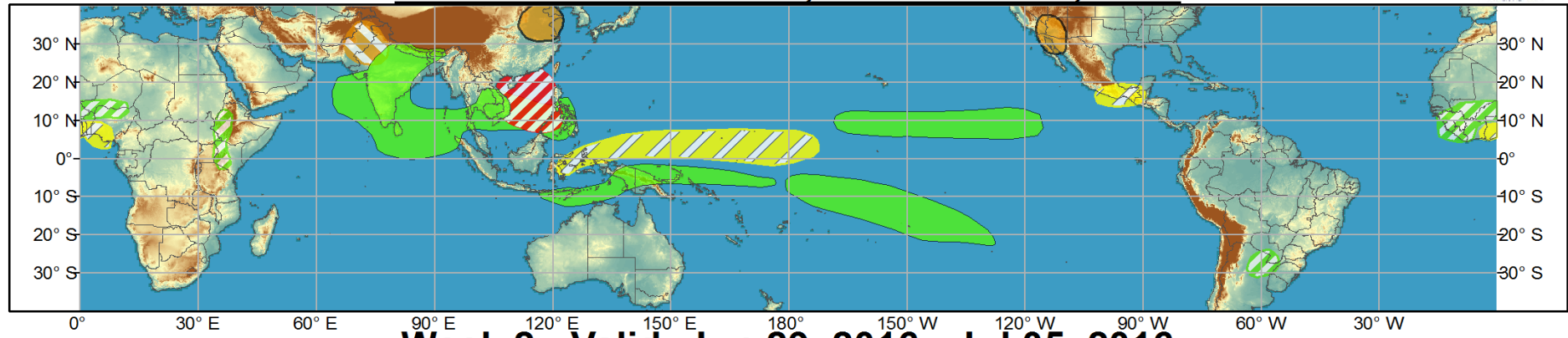




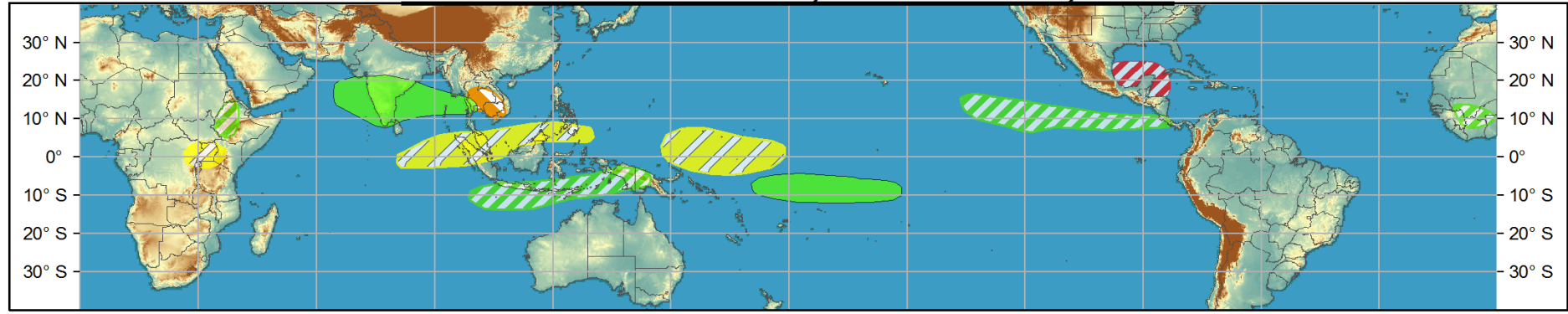
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