

Global Tropics Hazards And Benefits Outlook

5/1/2018

Adam Allgood

Outline

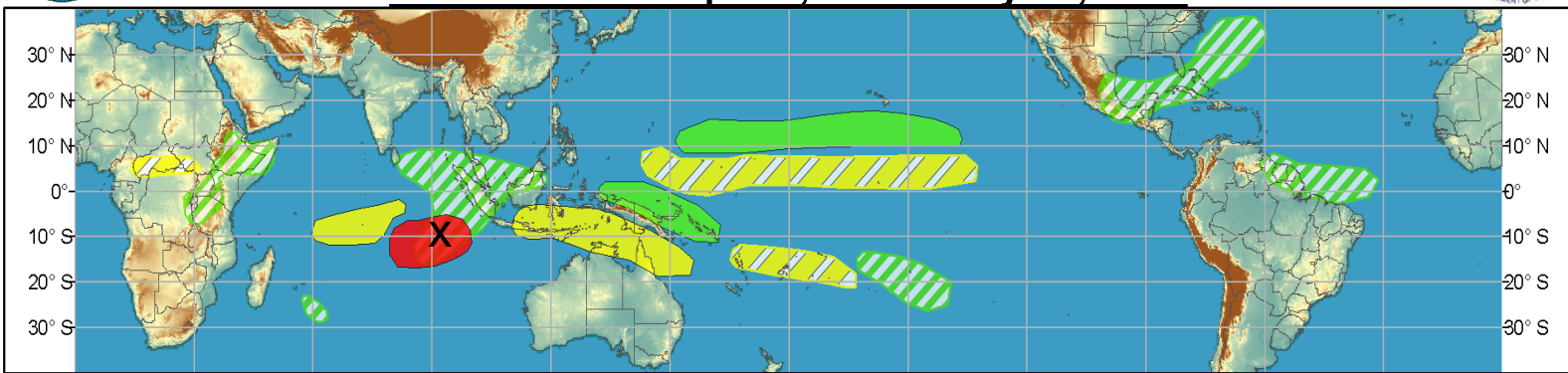
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts



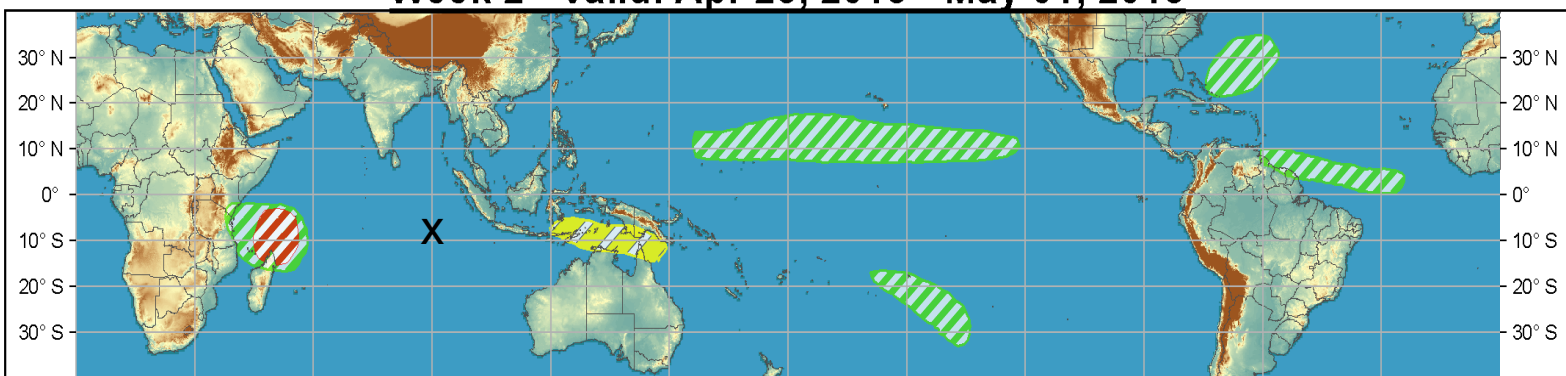
Week 1 - Valid: Apr 25, 2018 - May 01, 2018



Outlook Review

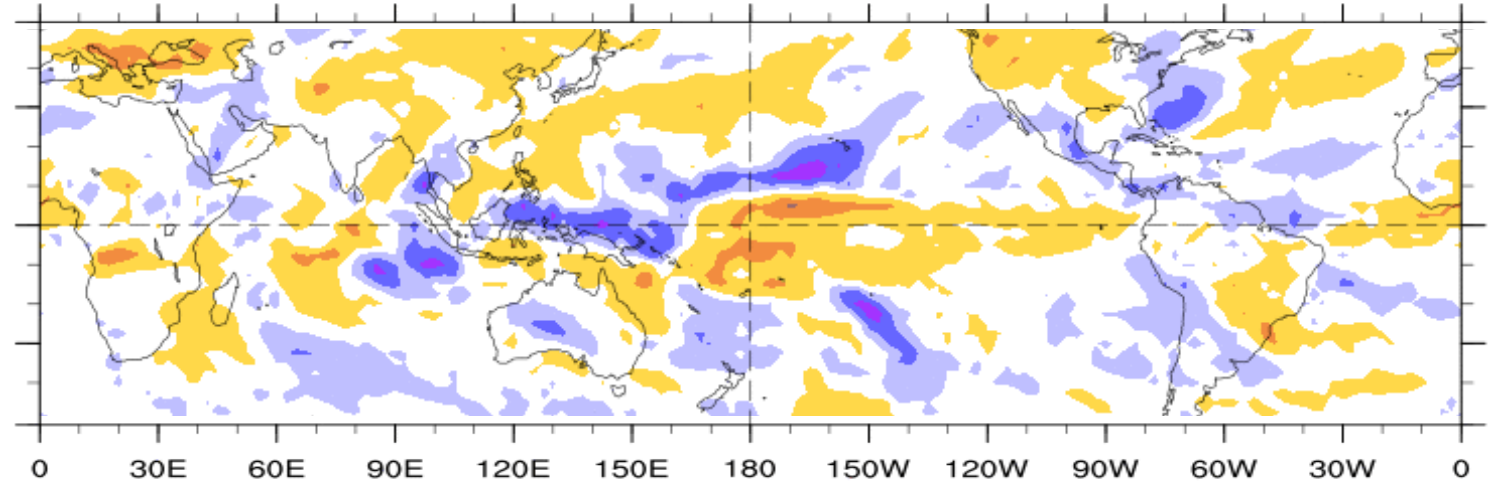


Week 2 - Valid: Apr 25, 2018 - May 01, 2018



7-Day Average OLR Anomaly

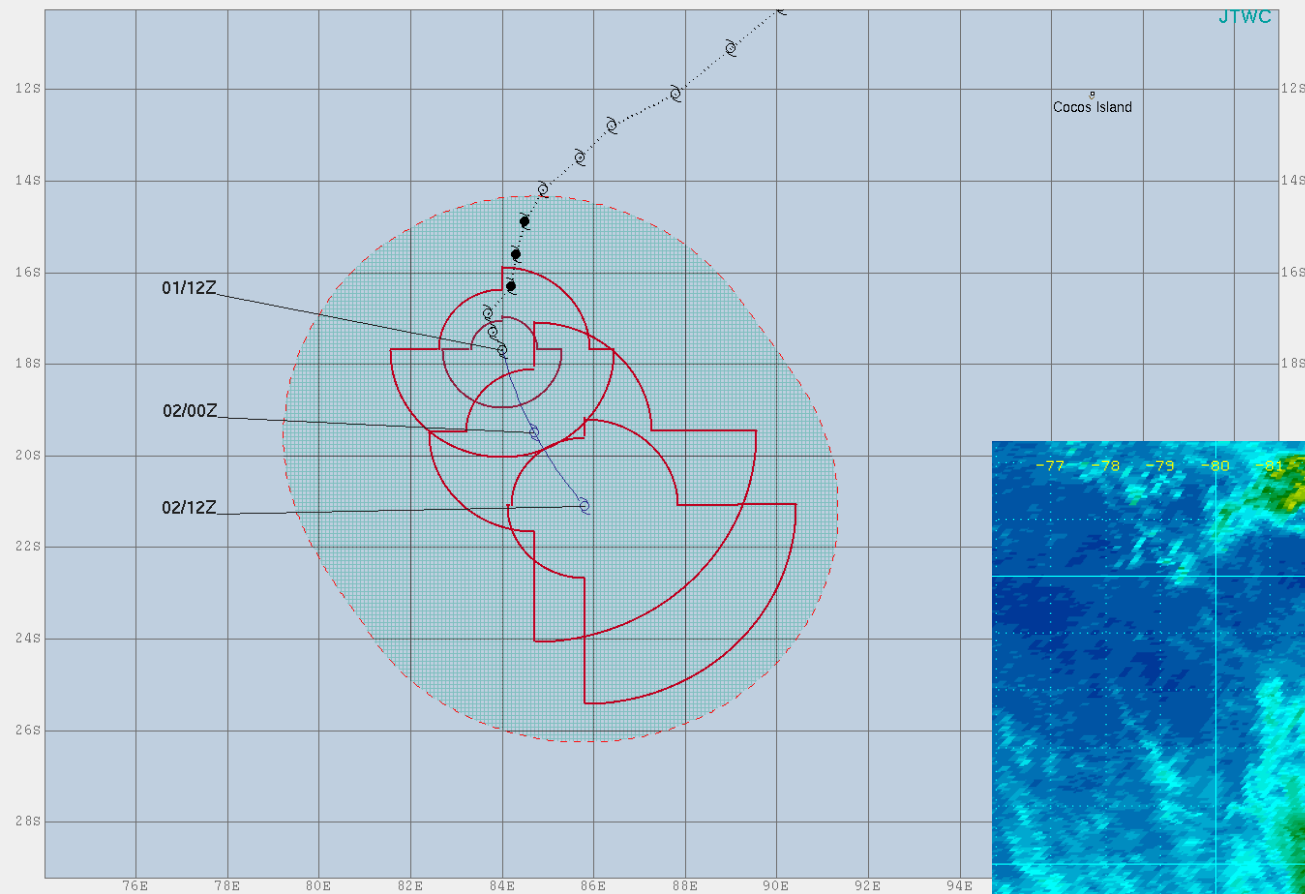
2018/04/23 - 2018/04/29



Cool shading
More clouds/rain


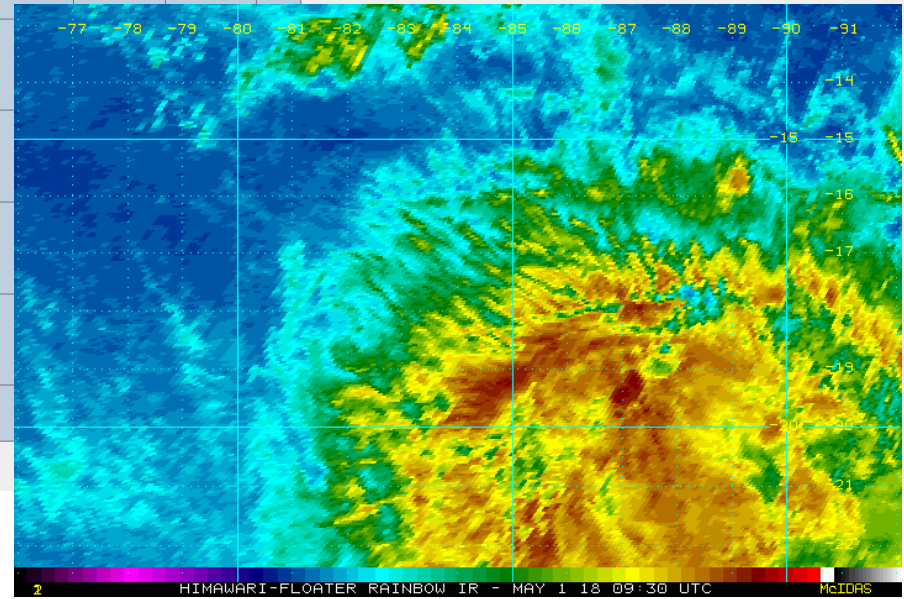
Warm shading
Less clouds/rain

Tropical Storm Flamboyant

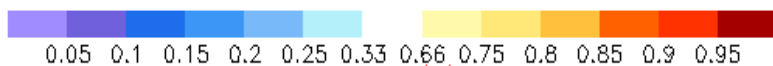
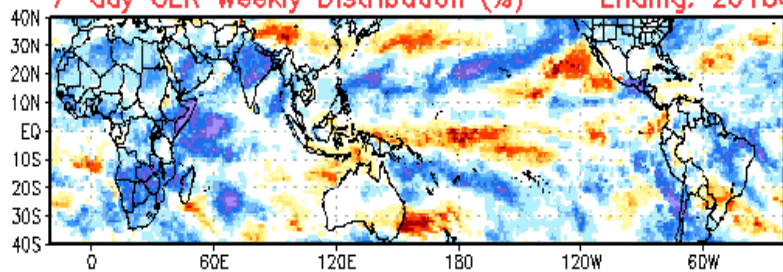


TROPICAL CYCLONE 21S (FLAMBOYANT) WARNING #14
 WTKS31 FCTW 011500
 011200Z POSIT: NEAR 17.7S 84.0E
 MOVING 155 DEGREES TRUE AT 04 KNOTS
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 20 FEET
 01/12Z, WINDS 050 KTS, GUSTS TO 065 KTS
 02/00Z, WINDS 045 KTS, GUSTS TO 055 KTS
 02/12Z, WINDS 040 KTS, GUSTS TO 050 KTS

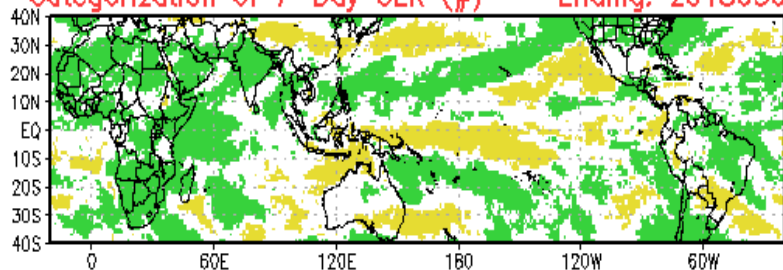
○ ○ ○ ○	LESS THAN 34 KNOTS
○ ○ ○ ●	34-63 KNOTS
● ● ● ●	MORE THAN 63 KNOTS
—	FORECAST CYCLONE TRACK
⋯	PAST CYCLONE TRACK
⊞	DENOTES 34 KNOT WIND DANGER
⊞	AREA/USN SHIP AVOIDANCE AREA
⊞	FORECAST 34/50/64 KNOT WIND RADII

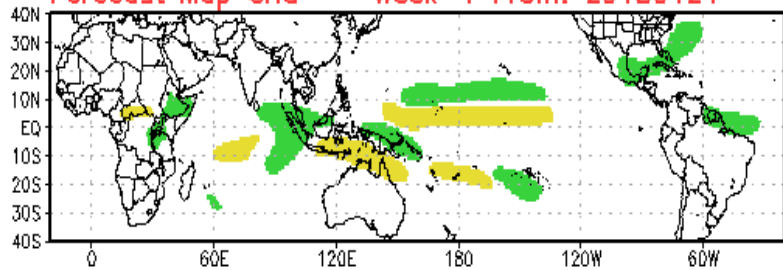
7-day OLR Weekly Distribution (%) -- Ending: 20180501



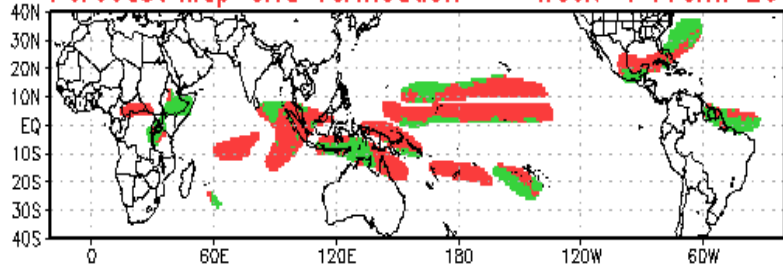
Categorization of 7-Day OLR (#) -- Ending: 20180501



Forecast Map Grid -- Week-1 From: 20180424

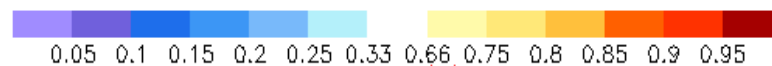
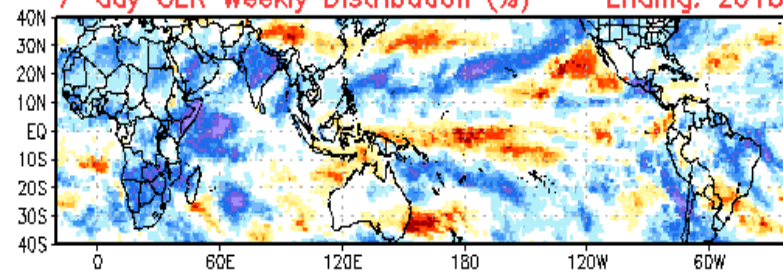


Forecast Map Grid Verification -- Week-1 From: 20180424

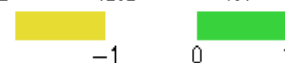
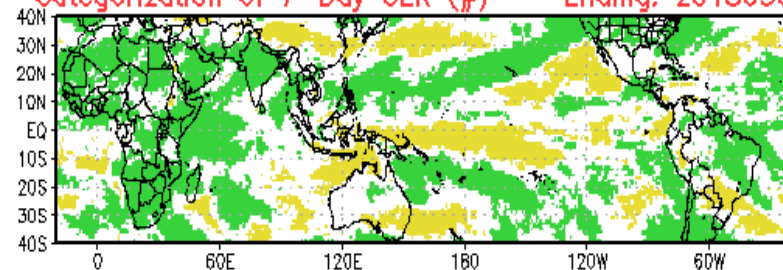


Hit: Green, Miss: Red
Heidke Skill Score: -0.0145

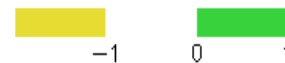
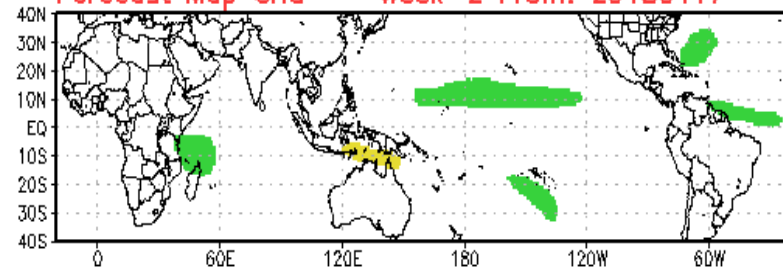
7-day OLR Weekly Distribution (%) -- Ending: 20180501



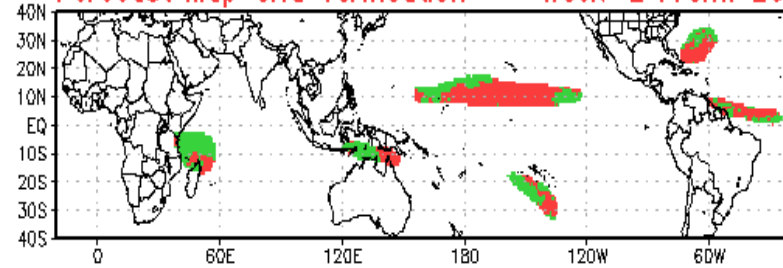
Categorization of 7-Day OLR (#) -- Ending: 20180501



Forecast Map Grid -- Week-2 From: 20180417



Forecast Map Grid Verification -- Week-2 From: 20180417



Hit: Green, Miss: Red
Heidke Skill Score: 18.3139

Synopsis of Climate Modes

ENSO:

- ENSO Alert System Status: [La Niña Advisory](#)
- La Niña is expected to transition to ENSO-neutral during April-May, with ENSO-neutral then likely (greater than 50% chance) to continue through the Northern Hemisphere summer 2018

MJO and other subseasonal tropical variability:

- The MJO remains weak, with any remnant enhanced phase now over the Pacific.
- The tropical convective anomaly pattern is noisy and low-amplitude as various modes interact with each other.
- Dynamical model MJO index forecasts generally favor a strengthening signal over the Western Hemisphere, emerging over the far western Indian Ocean by late Week-2.
- Increased forecast uncertainty due to weak incipient pattern.

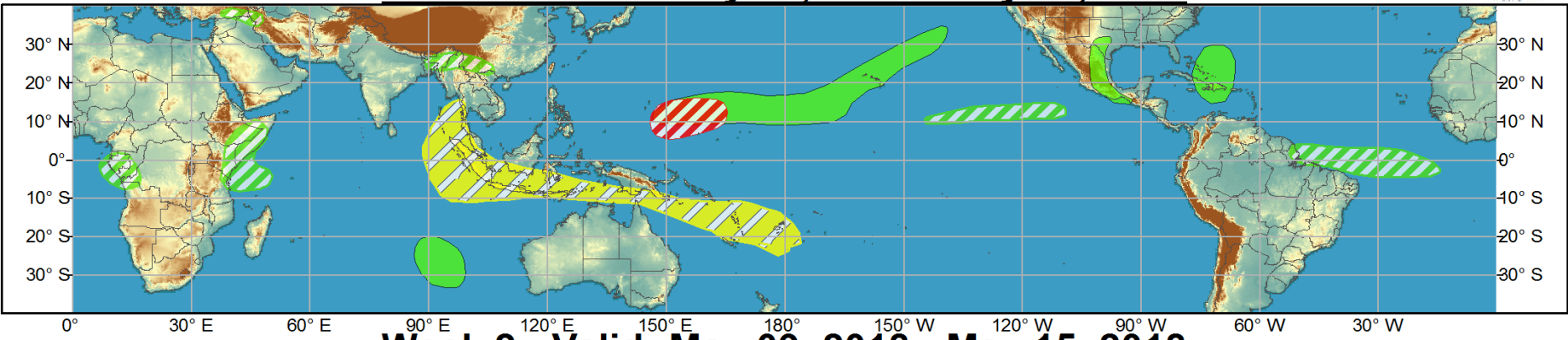
Extratropics:

- Given both the time of year and the weak signal to start with, the MJO is not anticipated to substantially impact the midlatitude pattern.

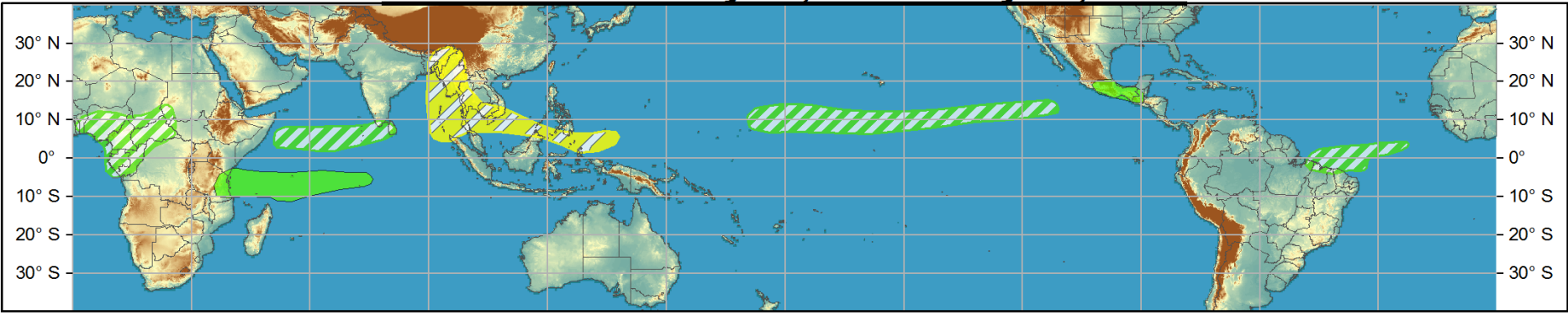


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: May 02, 2018 - May 08, 2018



Week 2 - Valid: May 09, 2018 - May 15, 2018



Produced: 05/01/2018
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.
		Below-normal temperatures 7-day mean temperatures in the lower third of the historical range.

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

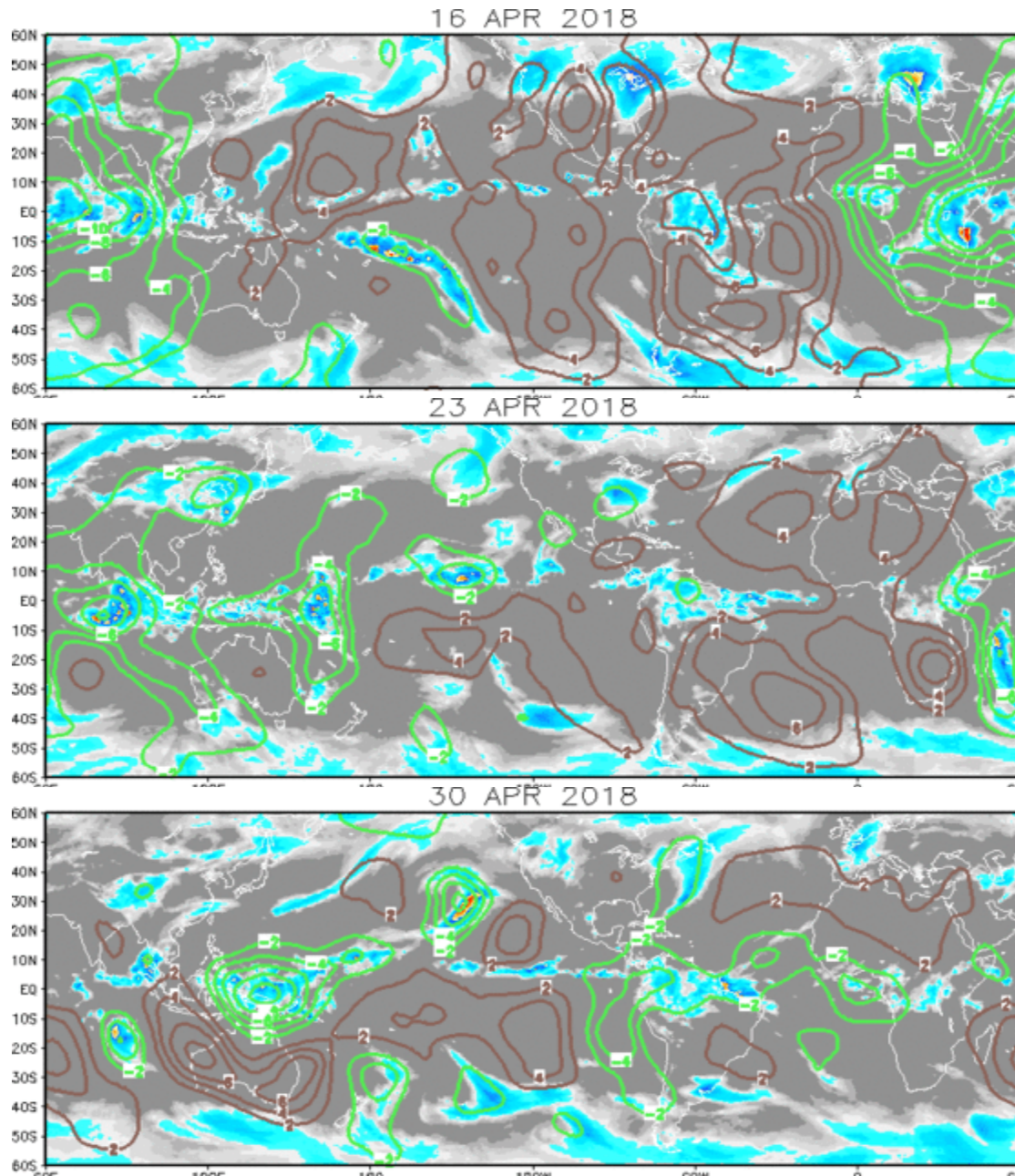
Green: Enhanced Divergence

Brown: Enhanced Convergence

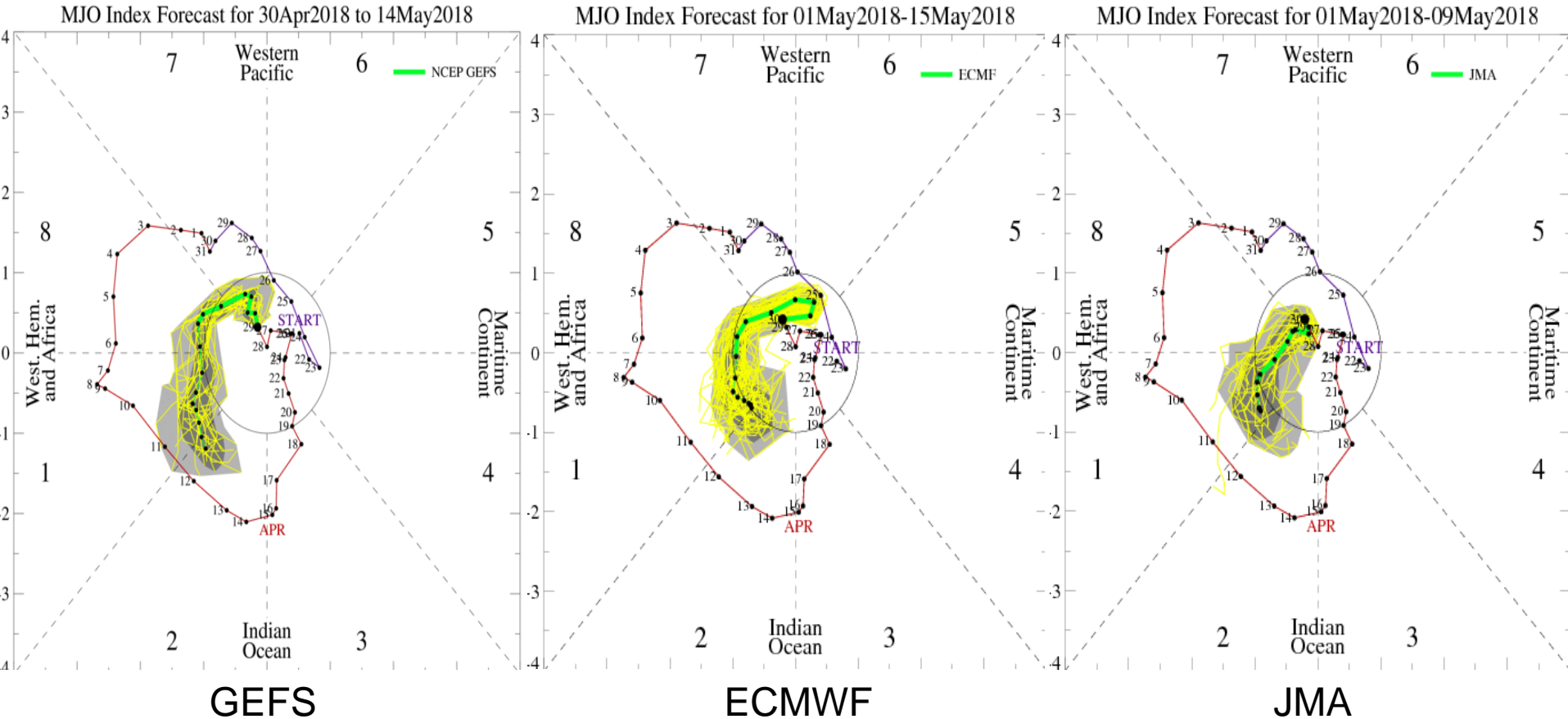
Robust Wave-1 asymmetry indicative of a healthy Indian Ocean event.

The anomaly field becomes much weaker during late April.

By the end of April, the field is weak and noisy, with the highest amplitude signal over the West Pacific.

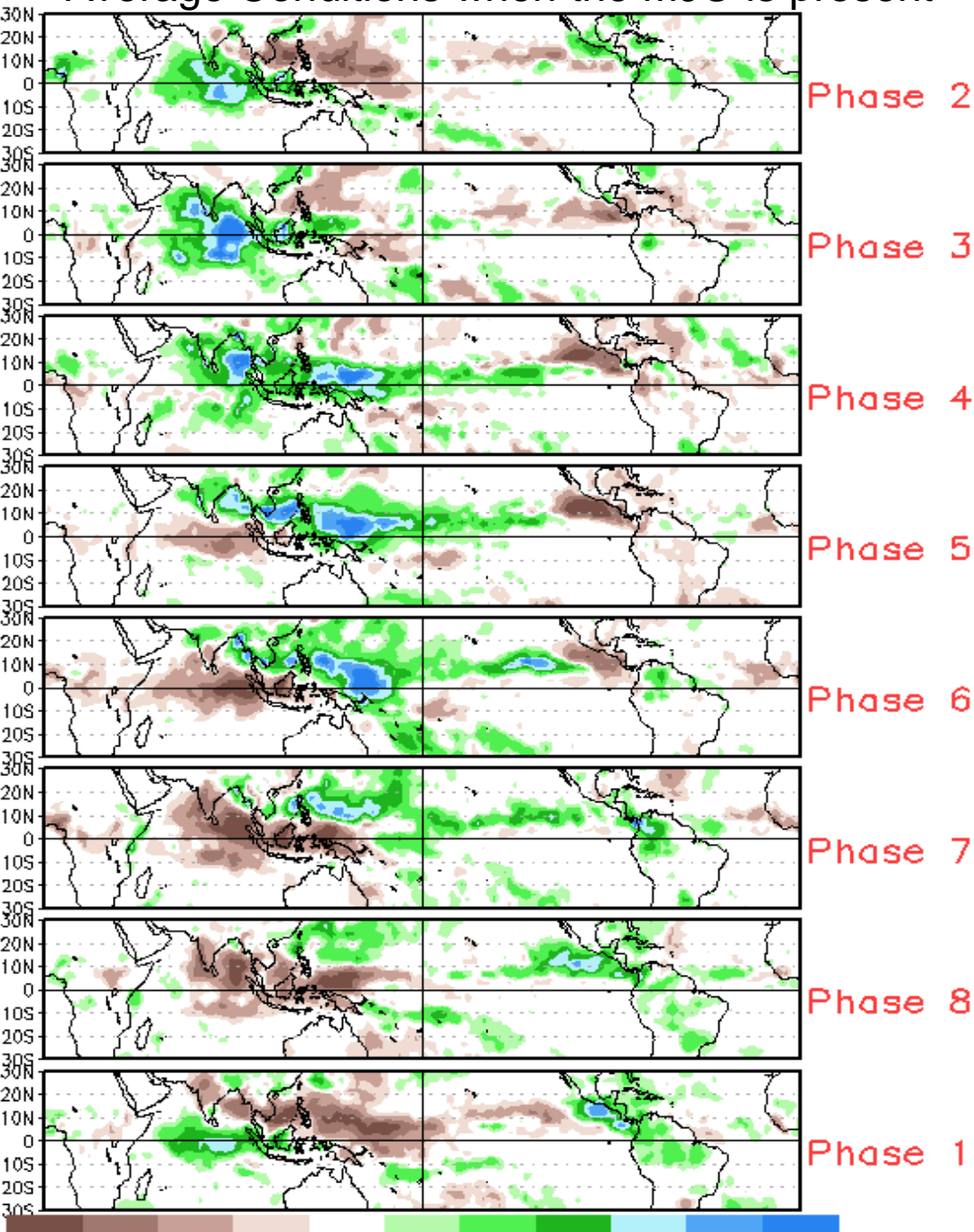


MJO Observation/Forecast



Broad dynamical model agreement depicting an emerging MJO signal over the Western Hemisphere during the period, approaching the far western Indian Ocean by the end of Week-2.

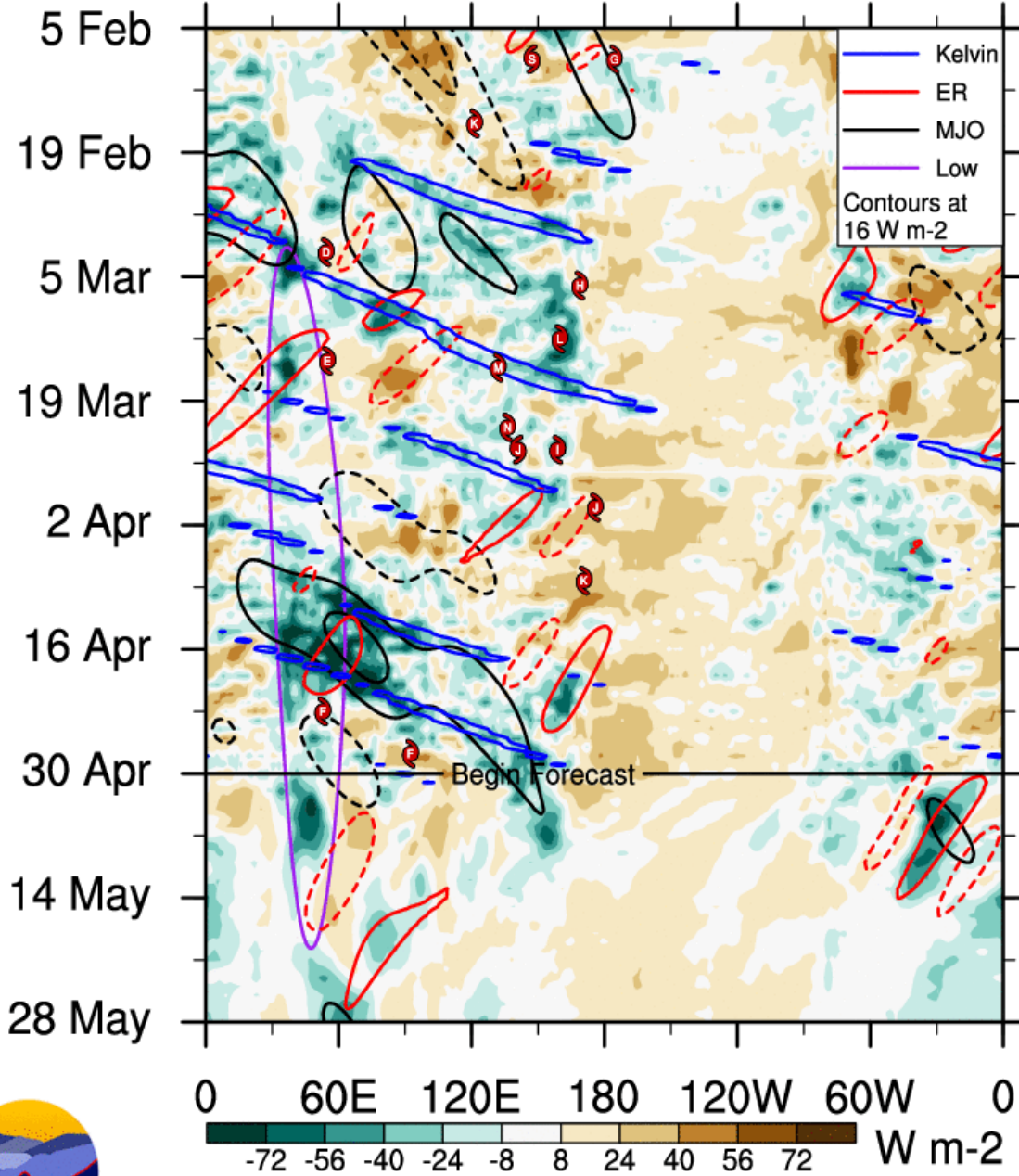
Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

OLR with CFS forecasts

5S - 5N



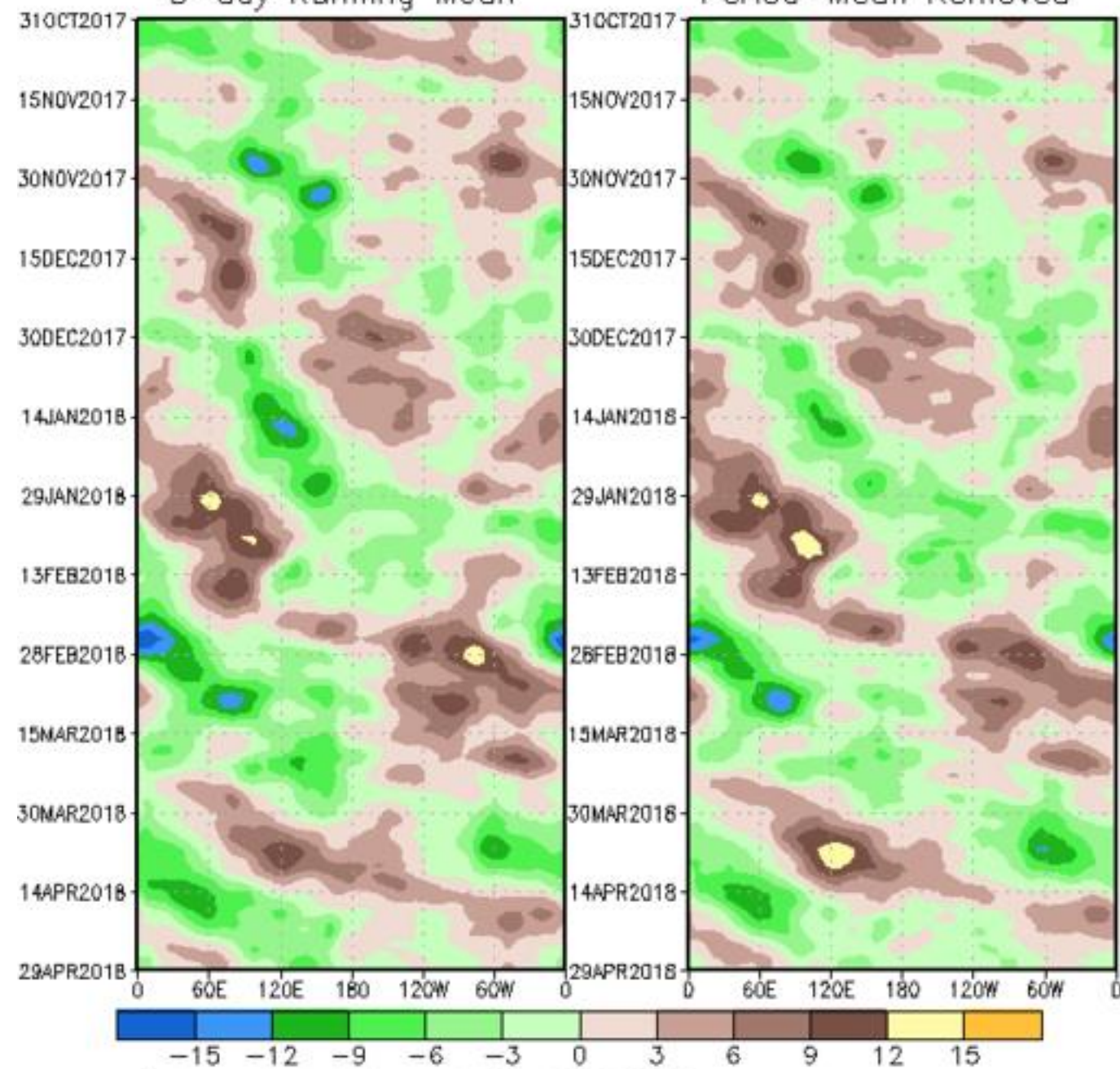
Robust April MJO event has been pulverized in the West Pacific, with slower-moving convection north of New Guinea (interaction with Rossby waves?) and faster moving Kelvin waves.



200-hPa Velocity Potential Anomaly: 5N-5S

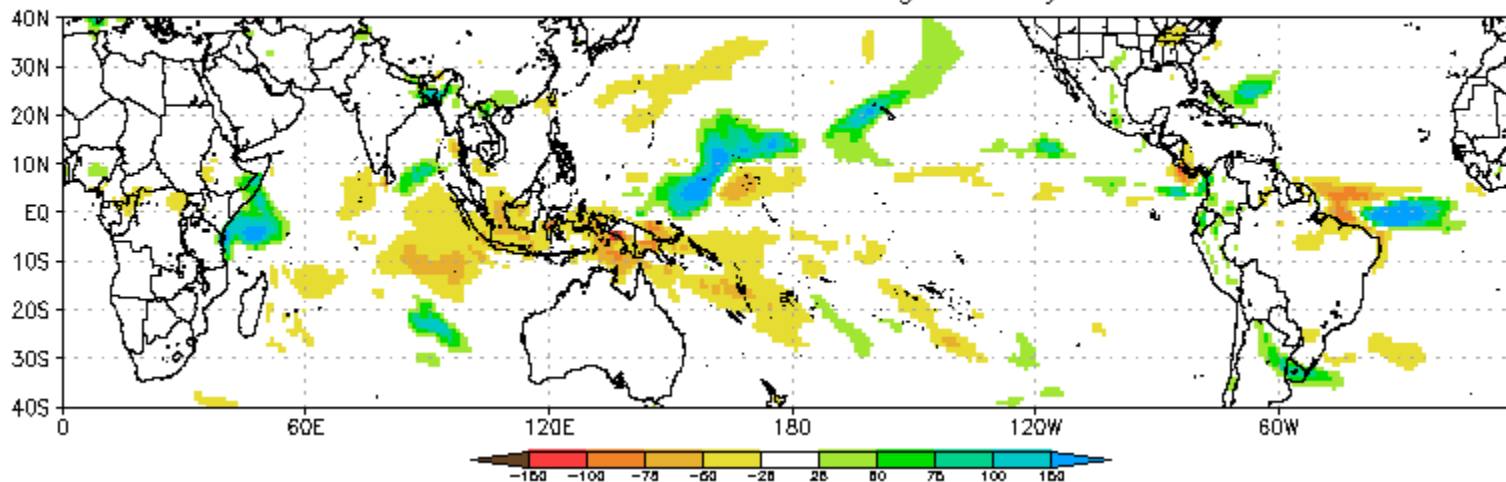
5-day Running Mean

Period-Mean Removed

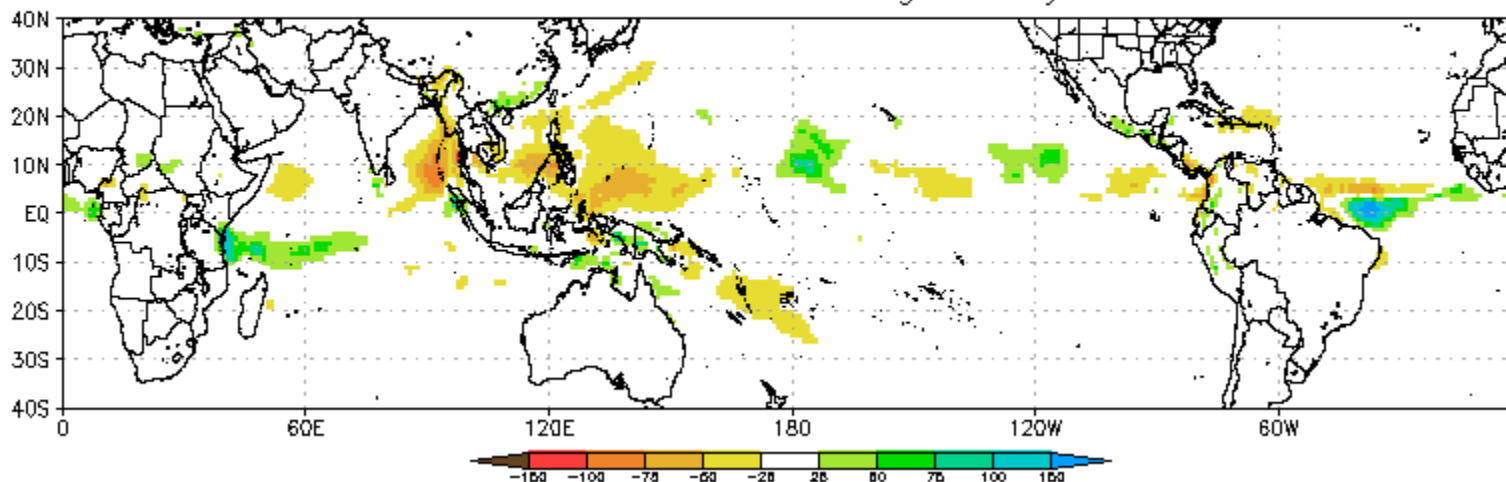


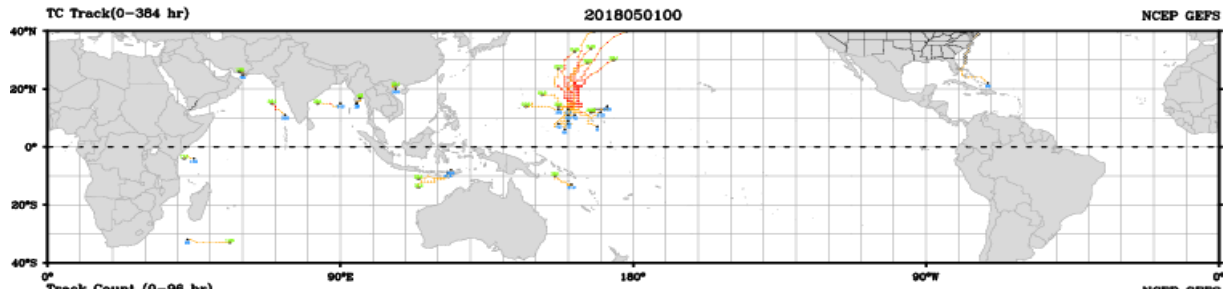
Data updated through 29 APR 2018

CFS Precipitation Anomalies (mm) Issued 30Apr2018
Week-1 Forecast Ending 08May2018

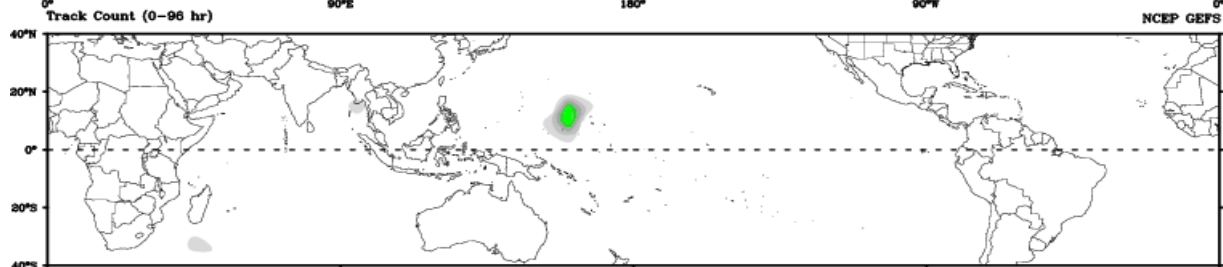


CFS Precipitation Anomalies (mm) Issued 30Apr2018
Week-2 Forecast Ending 15May2018

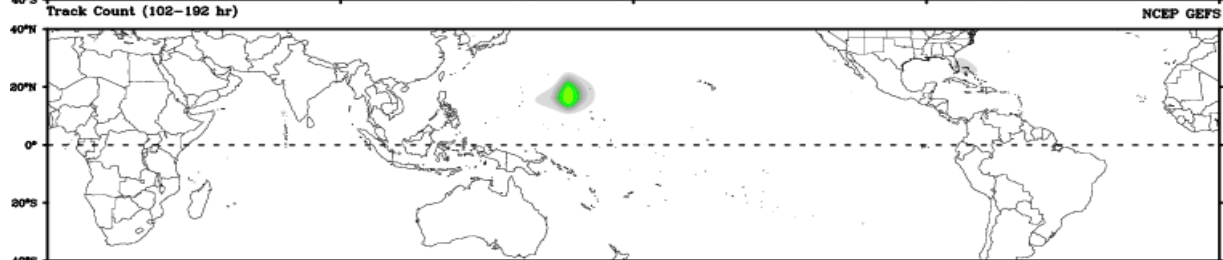




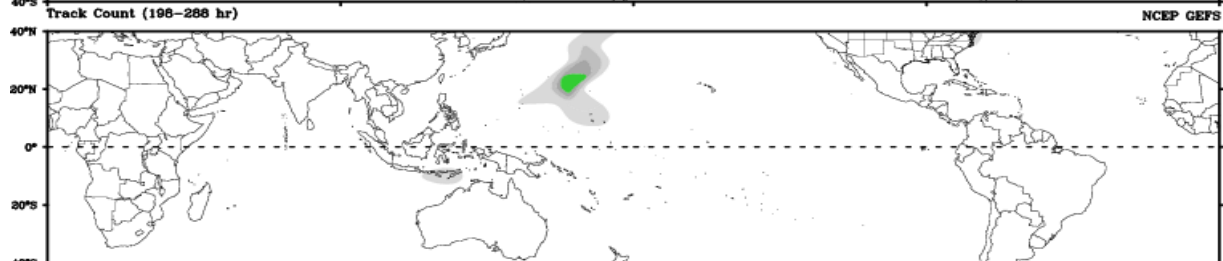
Days 1-4



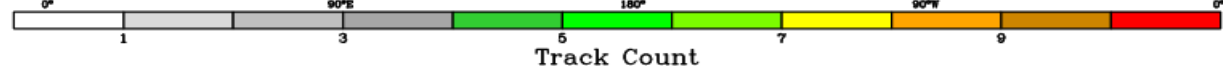
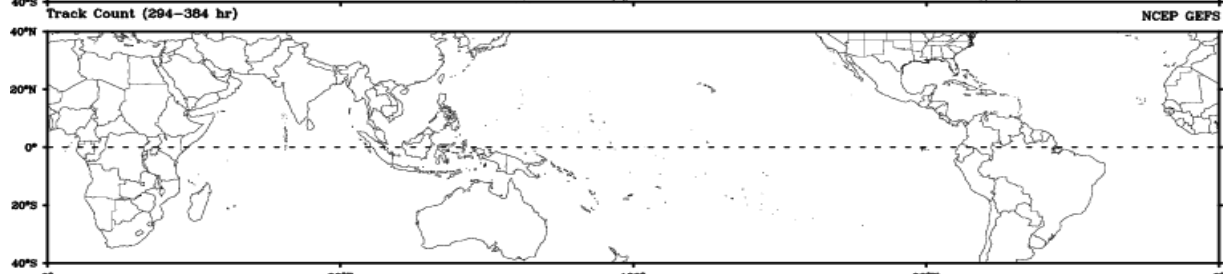
Days 5-8



Days 9-12

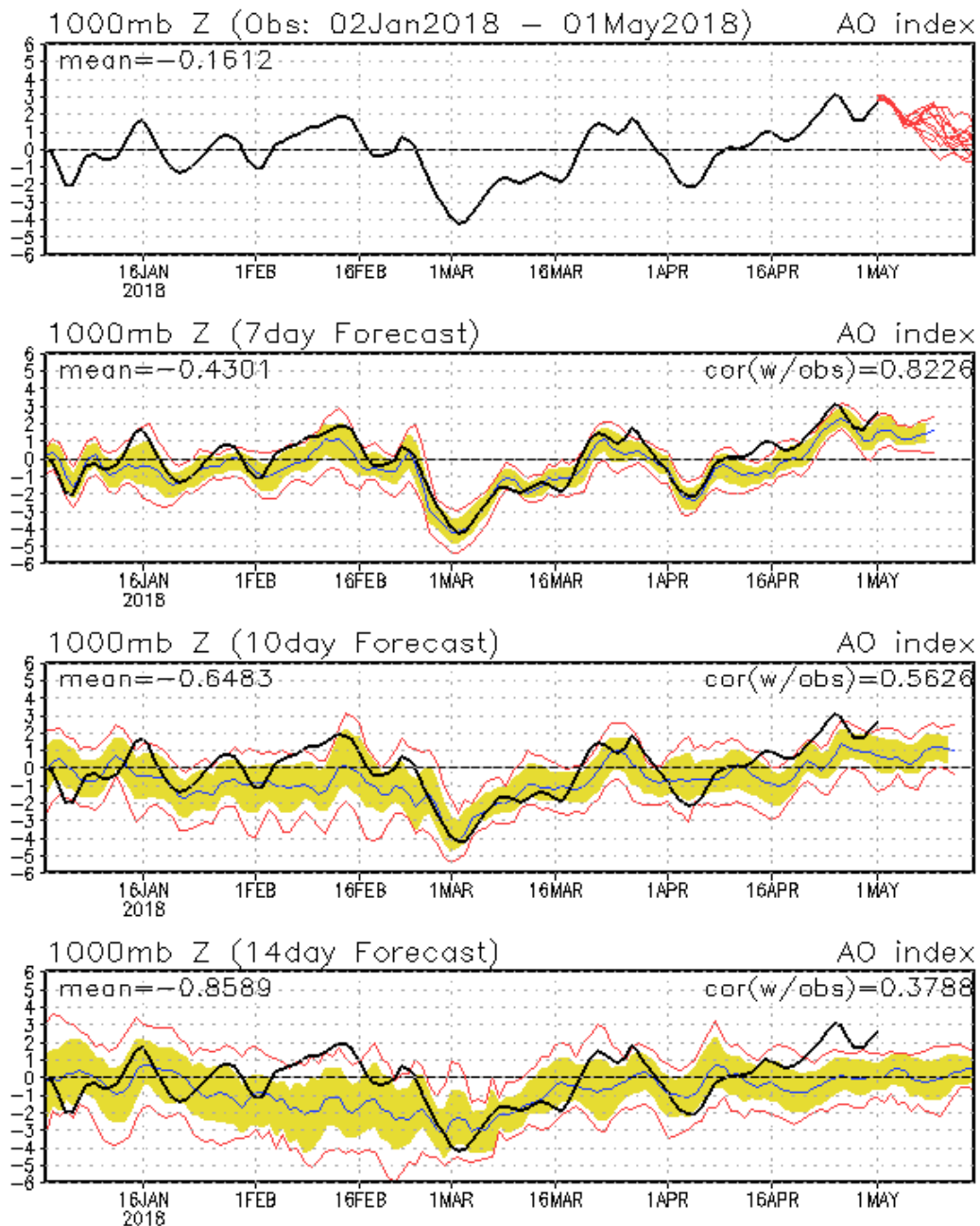


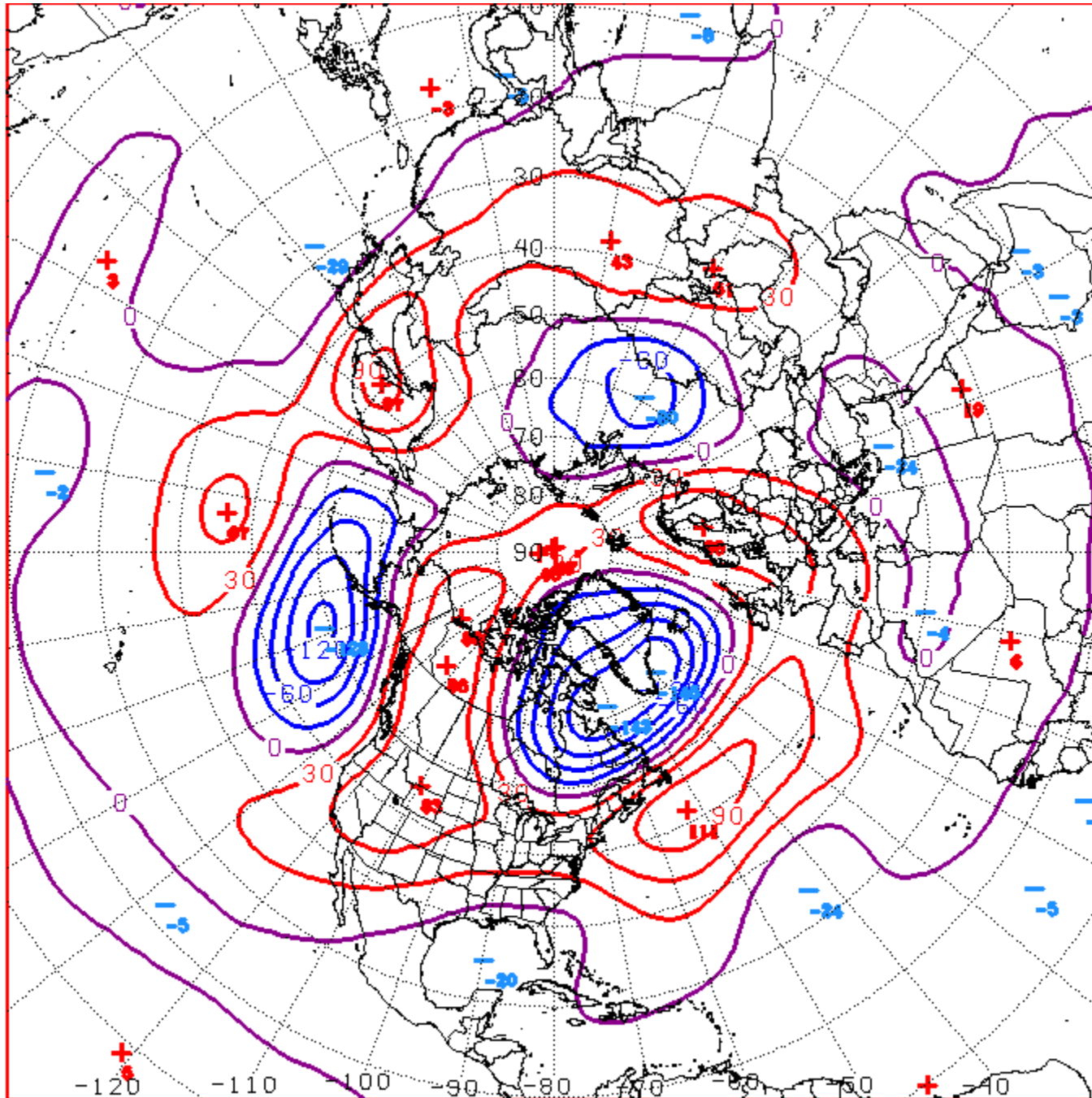
Days 13-15



Connections to U.S. Impacts

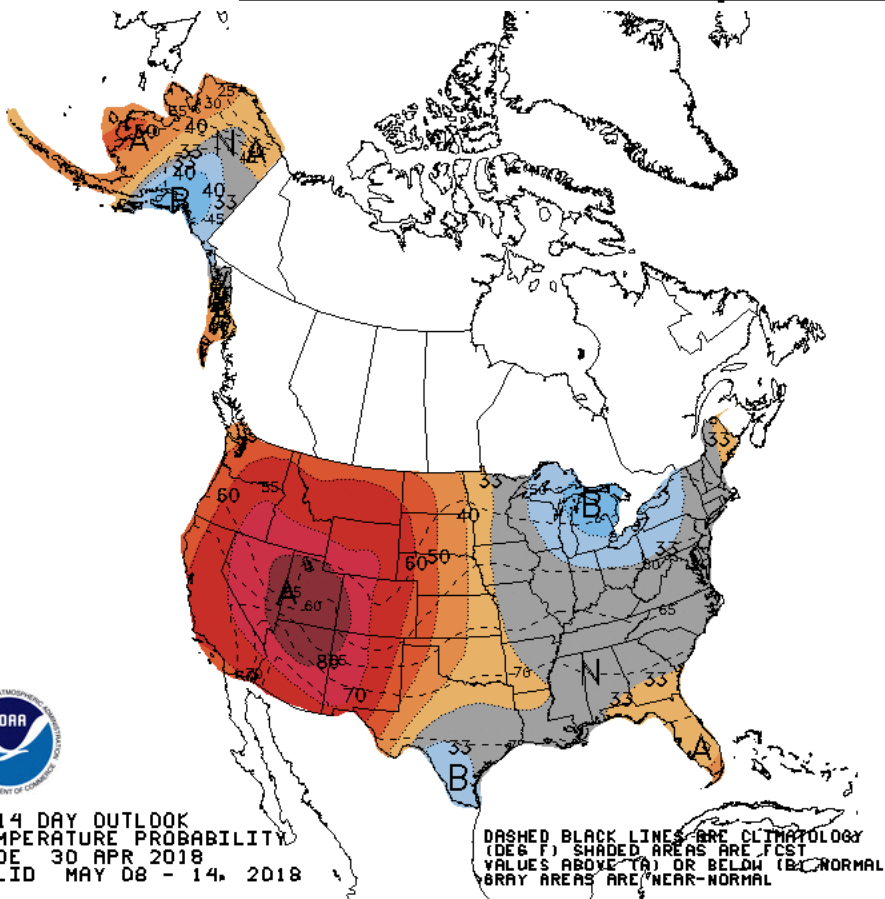
AO: Observed & ENSM forecasts





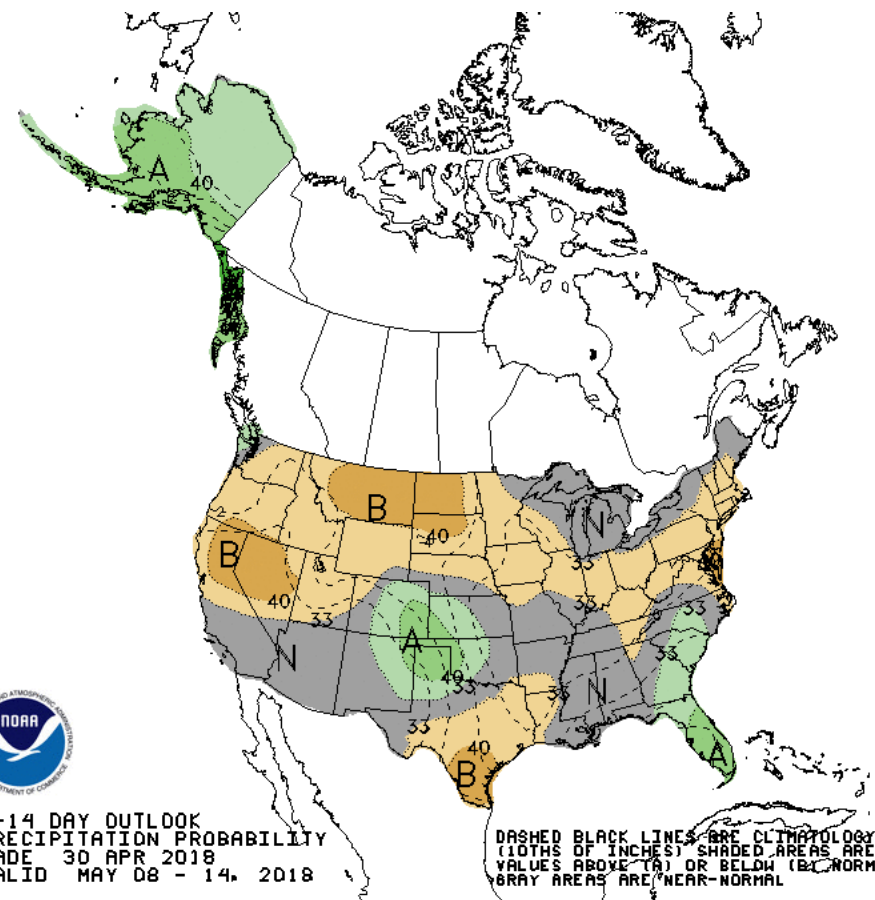
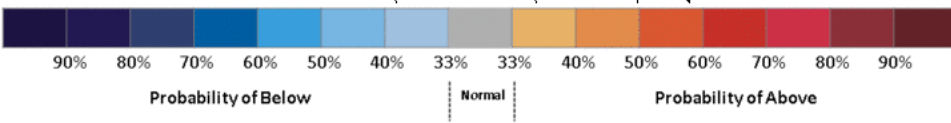
D+11 500 MB ANOMALIES FROM 06Z ENSM
 CPC MAP MADE MAY 01 2018 1153 UTC CNTD MAY 12 2018

Week 2 – Temperature and Precipitation



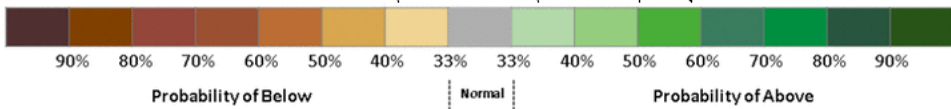
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 30 APR 2018
VALID MAY 08 - 14, 2018

DASHED BLACK LINES ARE CLIMATE
(DEG F) SHADED AREAS ARE FCS
VALUES ABOVE (A) OR BELOW (B) NORMAL
GRAY AREAS ARE NEAR-NORMAL



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 30 APR 2018
VALID MAY 08 - 14, 2018

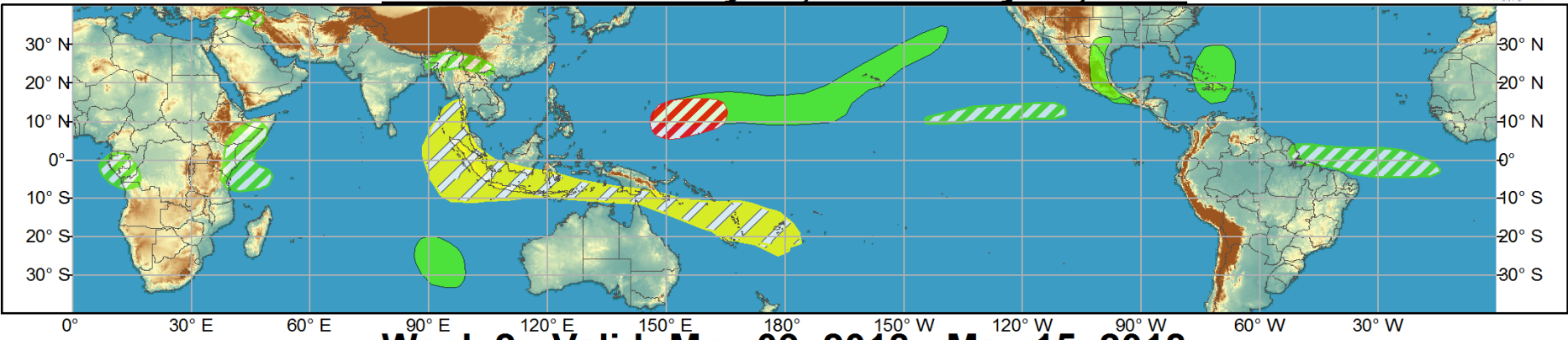
DASHED BLACK LINES ARE CLIMATE
(TENTHS OF INCHES) SHADED AREAS ARE FCS
VALUES ABOVE (A) OR BELOW (B) NORMAL
GRAY AREAS ARE NEAR-NORMAL



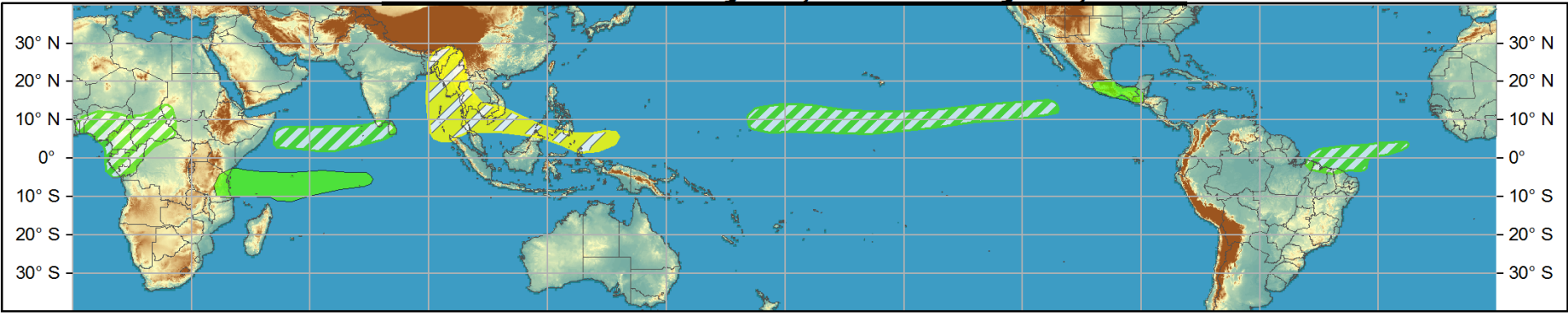


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