

Global Tropics Hazards And Benefits Outlook

11/6/2018

Dan Harnos

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

TS Xavier

11/3-11/6

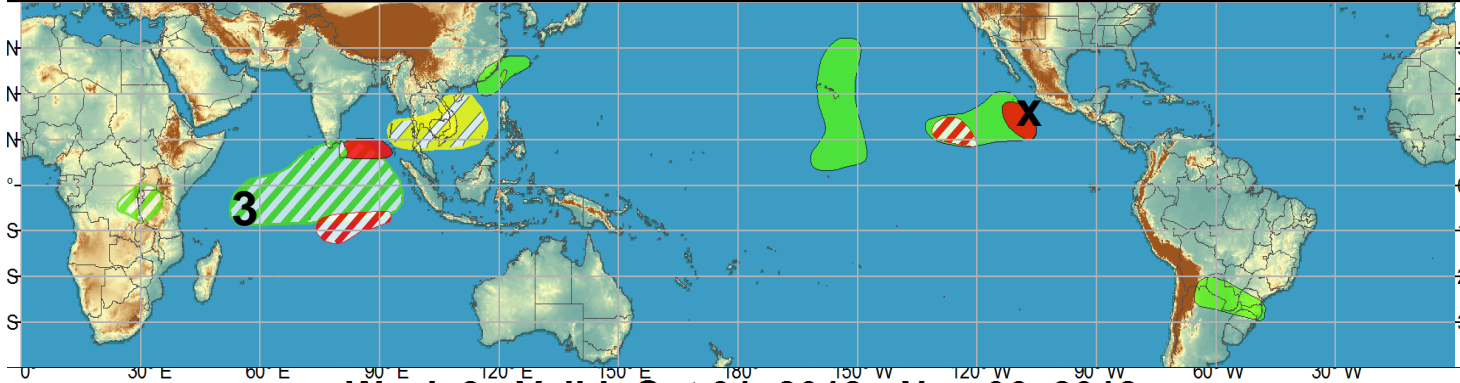
Peak winds: 50 kt

TC Three

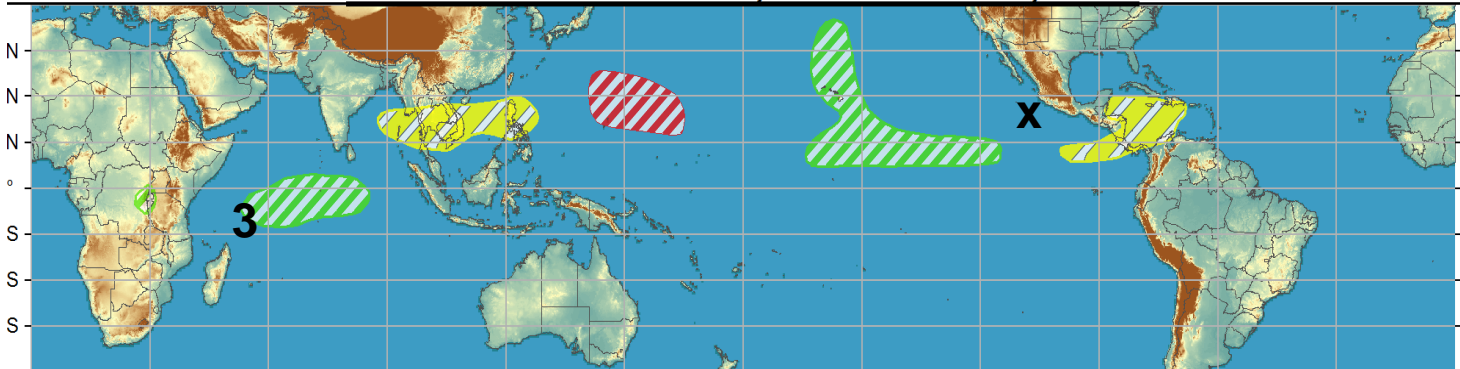
11/6-Present

Peak winds: 35 kt

Week 1 - Valid: Oct 31, 2018 - Nov 06, 2018

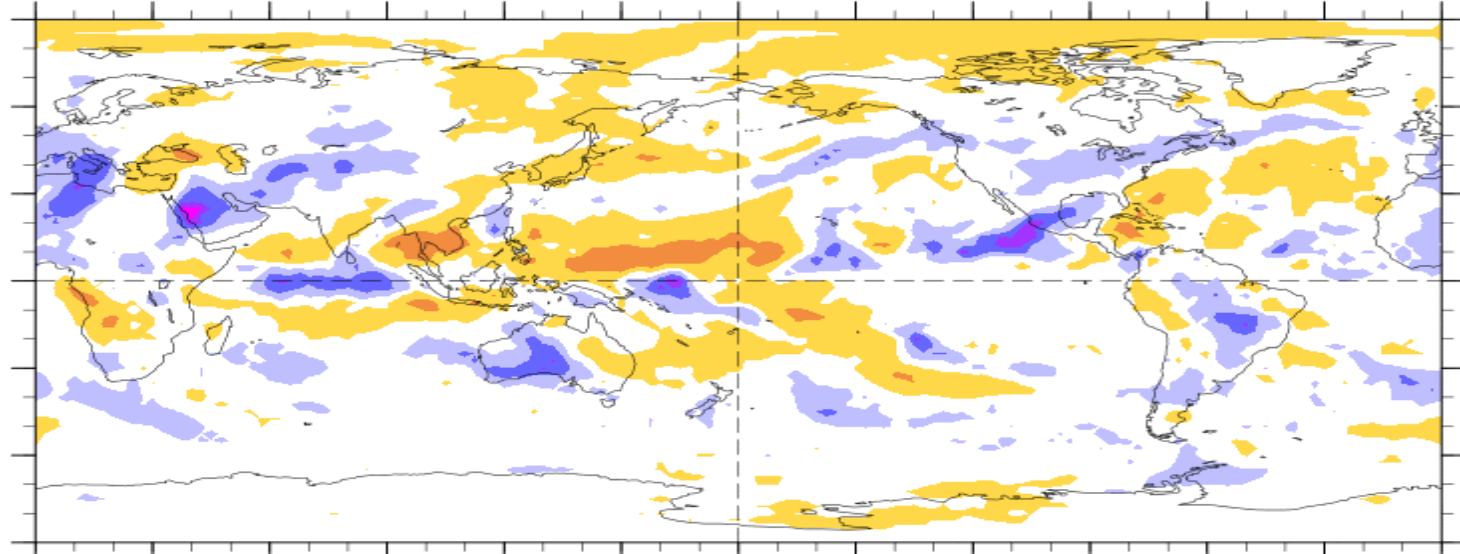


Week 2 - Valid: Oct 31, 2018 - Nov 06, 2018



7-Day Average OLR Anomaly

2018/10/29 - 2018/11/04



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (October 11, 2018 Update)

- ENSO Alert System Status: [El Niño Watch](#)
- El Niño is favored to form in the next couple of months and continue through the Northern Hemisphere winter 2018-19 (70-75% chance).

MJO and other subseasonal tropical variability:

- The MJO entered the Indian Ocean this past week, although there is some uncertainty as to whether this may be a Kelvin wave given its rapid propagation.
- Dynamical models indicate continued eastward propagation of the MJO during the next two weeks, with Phase 2/3 anticipated during Week-1 and Phase 4/5 during Week-2.

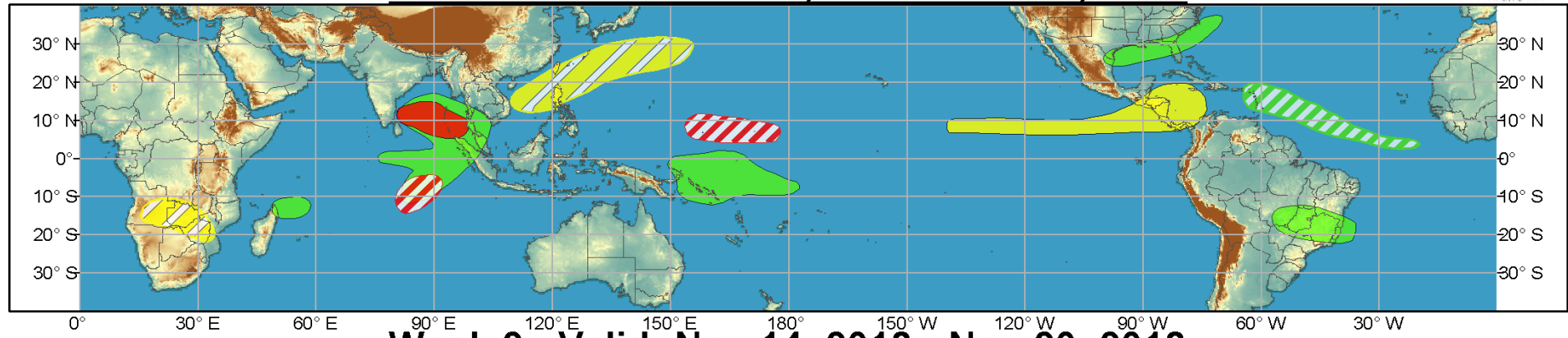
Extratropics:

- The MJO is not anticipated to influence the mid-latitudes through mid-November, but could see a larger role starting around next weekend.
- The Atlantic and East Pacific look quiet given the suppressed phase of the MJO being in the vicinity, although an uptick in Indian Ocean tropical cyclone activity during the next week in the wake of the eastward-moving intraseasonal envelope.

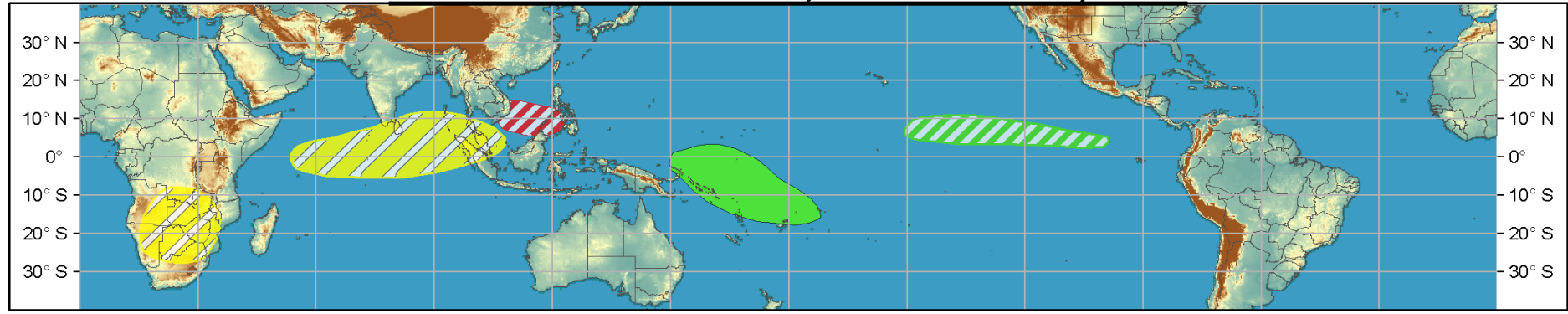


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Nov 07, 2018 - Nov 13, 2018



Week 2 - Valid: Nov 14, 2018 - Nov 20, 2018



Confidence

	High	Moderate
Tropical Cyclone Formation		
Above-average rainfall		
Below-average rainfall		
Above-normal temperatures		
Below-normal temperatures		

- Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Weekly total rainfall in the upper third of the historical range.
- Weekly total rainfall in the lower third of the historical range.
- 7-day mean temperatures in the upper third of the historical range.
- 7-day mean temperatures in the lower third of the historical range.

Produced: 11/06/2018
Forecaster: D.Harnos

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

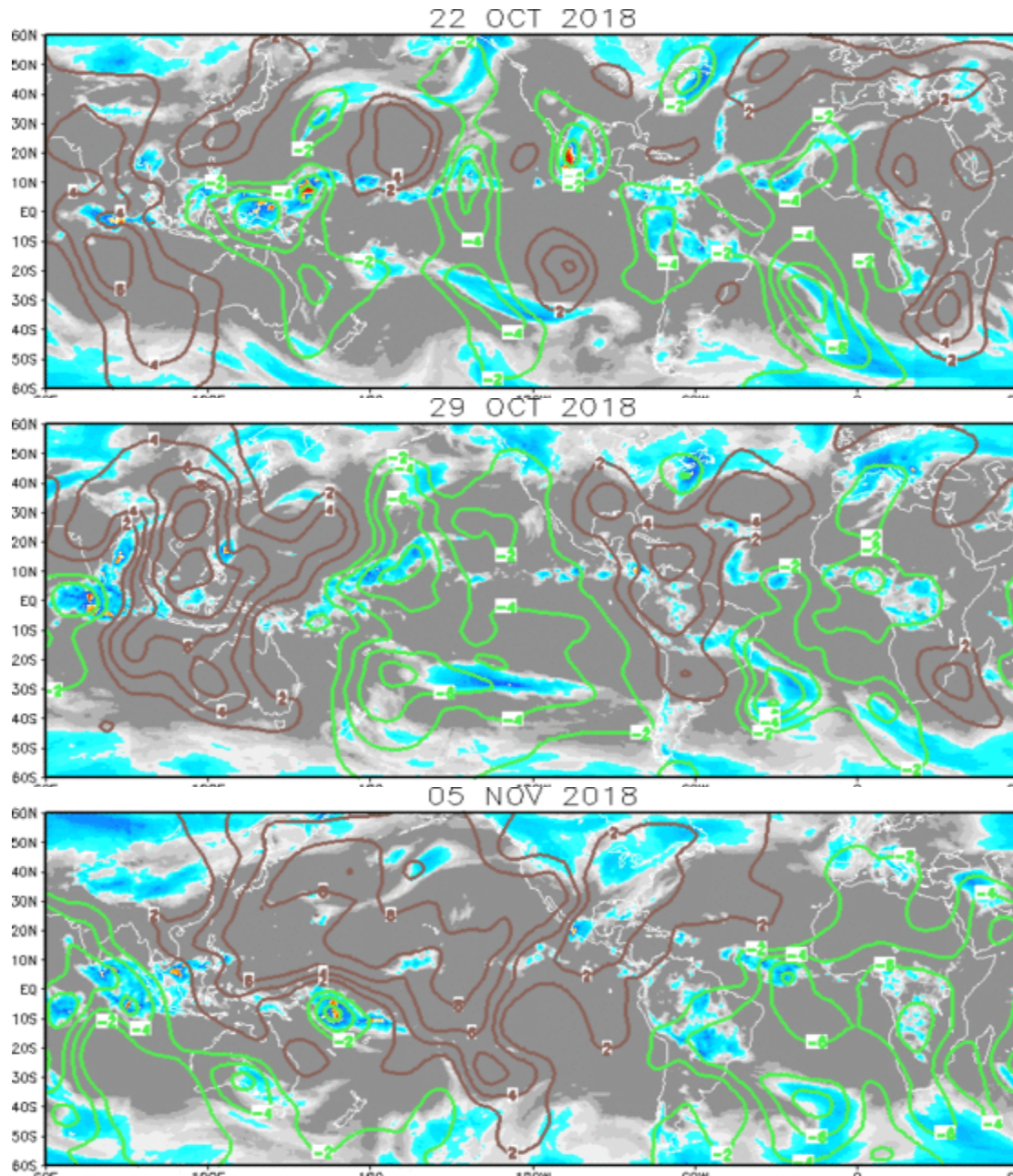
Green: Enhanced Divergence

Brown: Enhanced Convergence

MJO became incoherent during mid to late October.

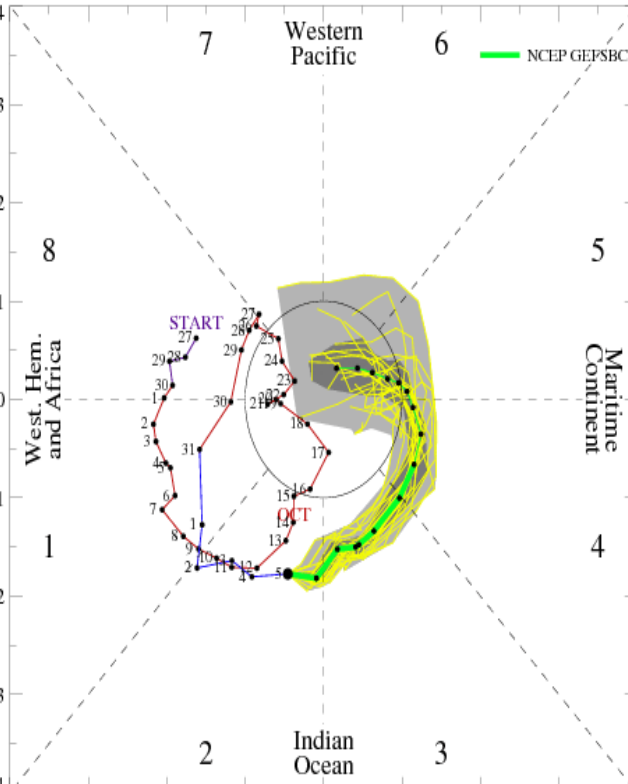
A couplet of anomalous **convergence** and **divergence** recently developed from the Maritime Continent and Pacific.

The circulation organized further into a wave-1 pattern with suppressed (enhanced) convection over the Pacific and Americas (Atlantic Ocean through Indian Ocean)



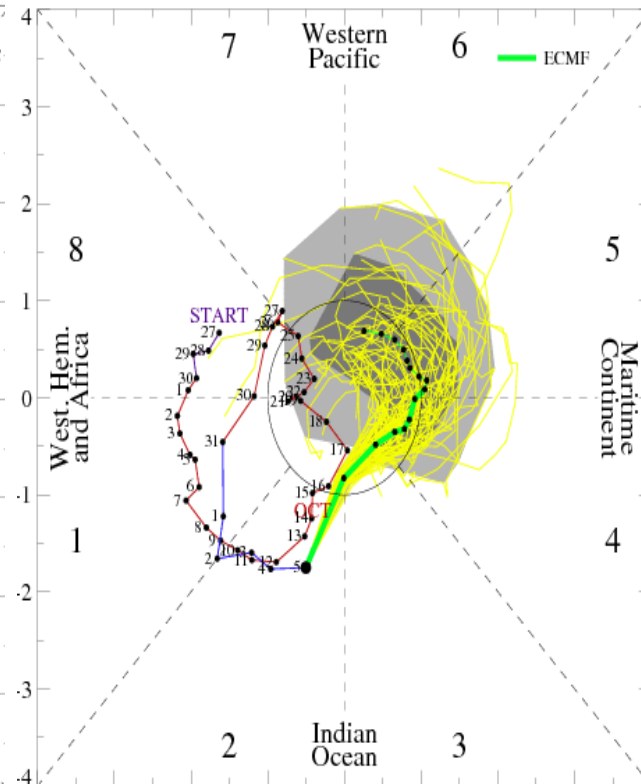
MJO Observation/Forecast

[RMM1, RMM2] forecast for Nov-06-2018 to Nov-20-2018



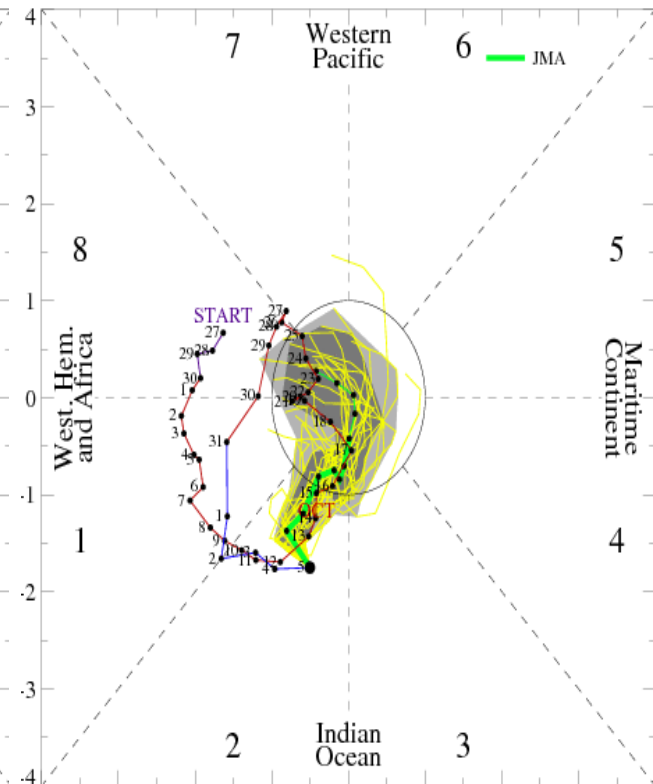
GEFS

MJO Index Forecast for 06Nov2018-20Nov2018



ECMWF

MJO Index Forecast for 06Nov2018-14Nov2018

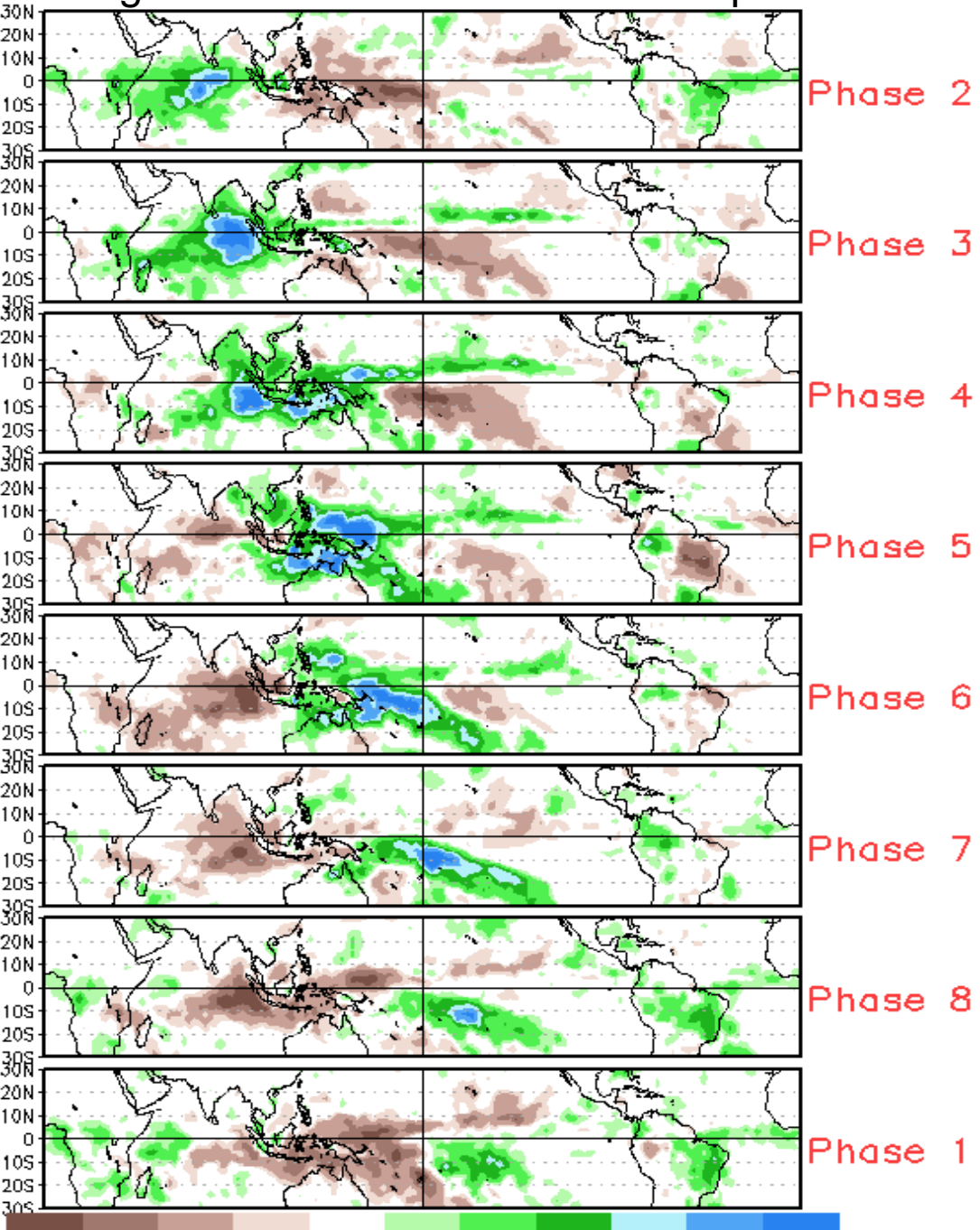


JMA

RMM index forecast ensemble means show continued eastward propagation at a fairly rapid speed early, followed by a slow down late.

- The late slow down is likely tied to differences in phase speed among the members being averaged to near zero.
- The building El Niño event in the Pacific biases these graphics towards Phases 7 and 8 (away from 3 and 4), resulting in skepticism for the weakening forecast in Phase 3/4 by the ECMWF.

Average Conditions when the MJO is present

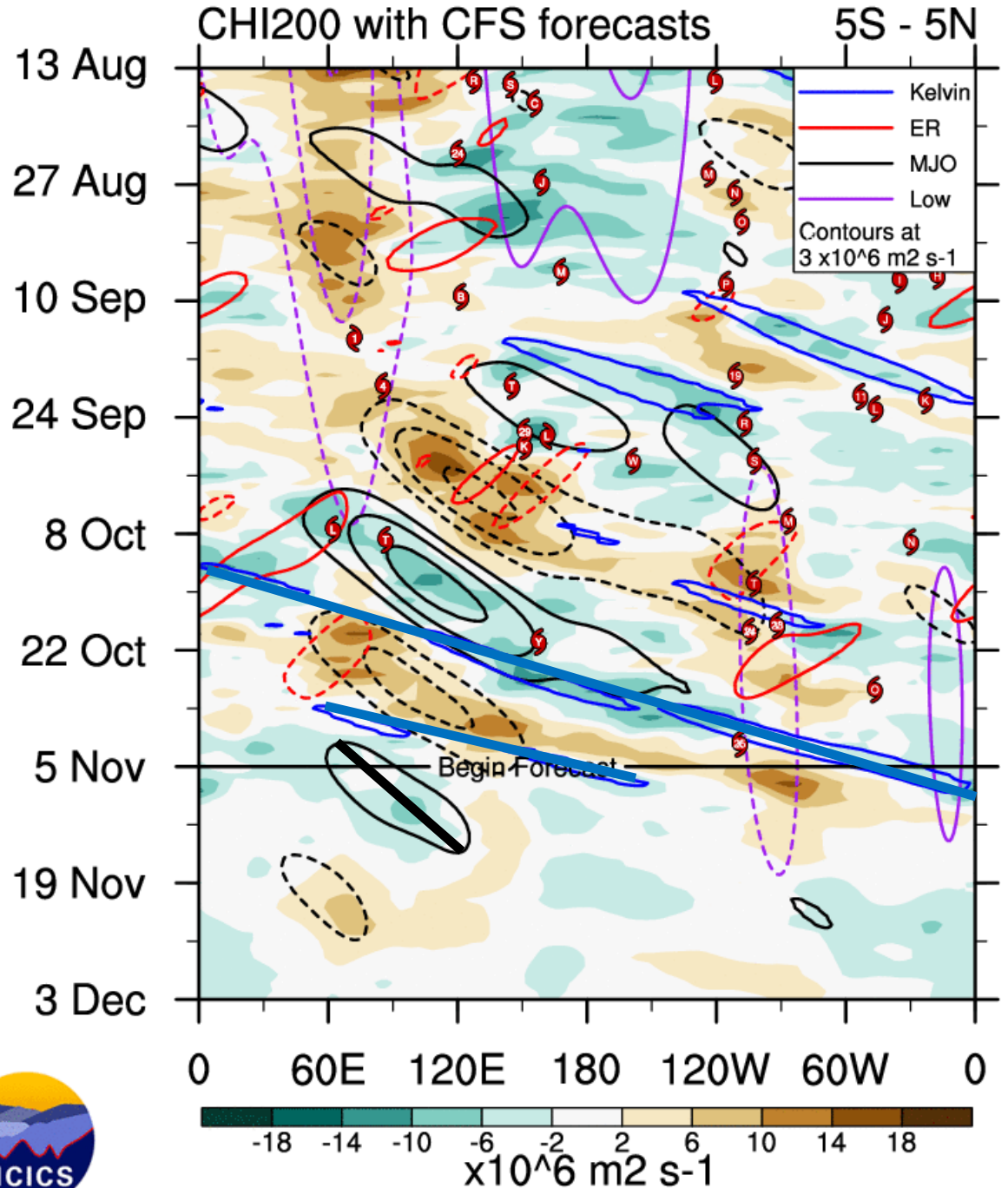


CAVEAT: These panels are representative of robust MJO events.

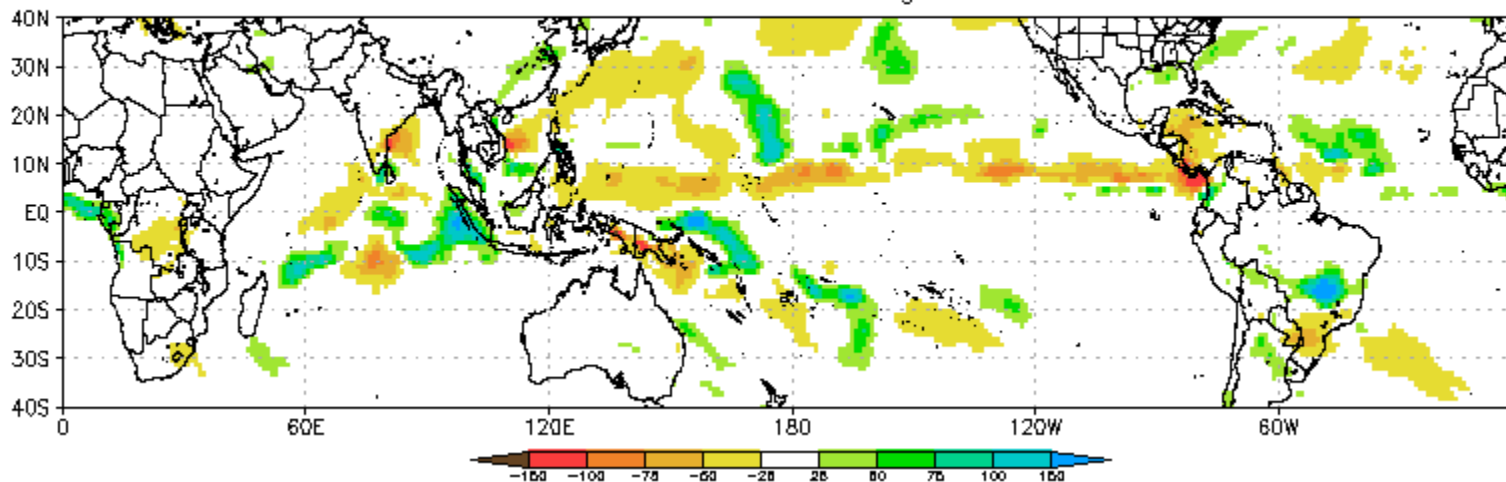
MJO and **Kelvin wave** contributions to the circulation pattern.

Low-frequency pattern with some influence over the Western Hemisphere. Also an impact exists near 150°E-180°, but it is not showing up in this field.

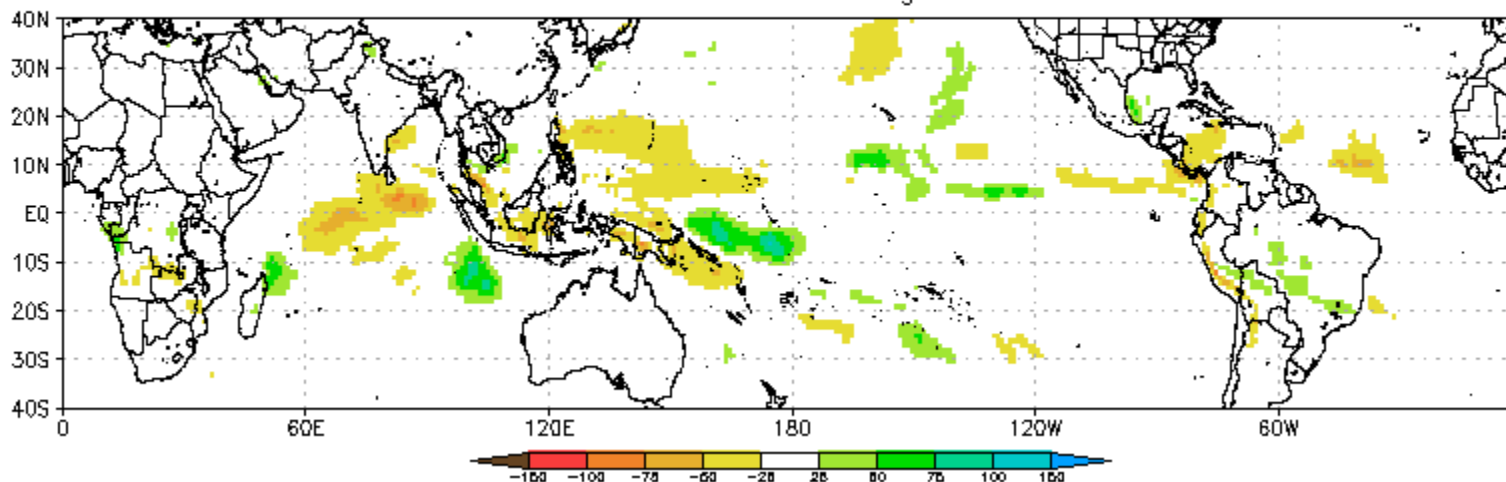
Rossby waves are also not highlighted in this field, but very active over the Indian Ocean and West Pacific.



CFS Precipitation Anomalies (mm) Issued 05Nov2018
Week-1 Forecast Ending 13Nov2018

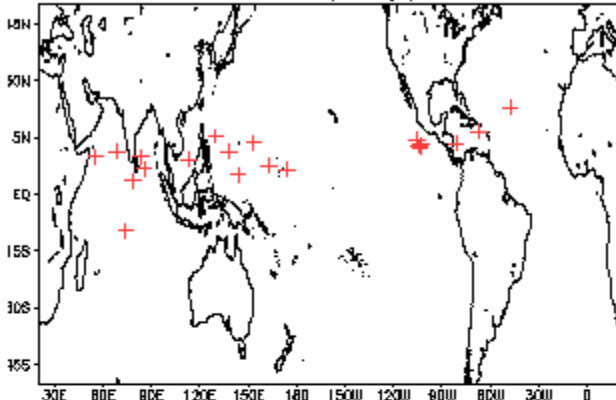


CFS Precipitation Anomalies (mm) Issued 05Nov2018
Week-2 Forecast Ending 20Nov2018

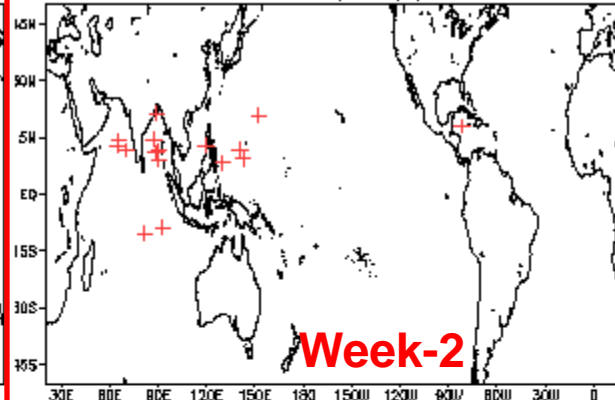


November Tropical Storm Formation by MJO phase

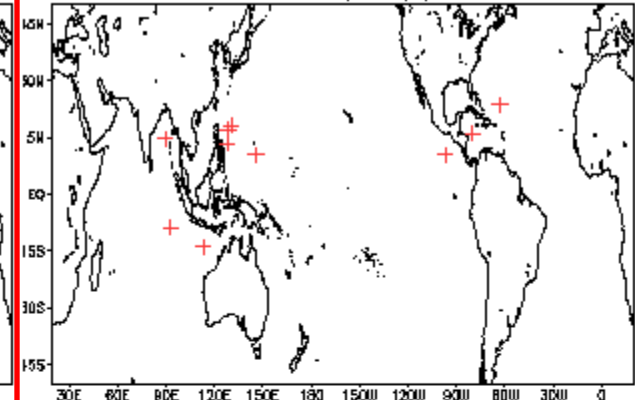
Phase 1 (65 days) 21 storms



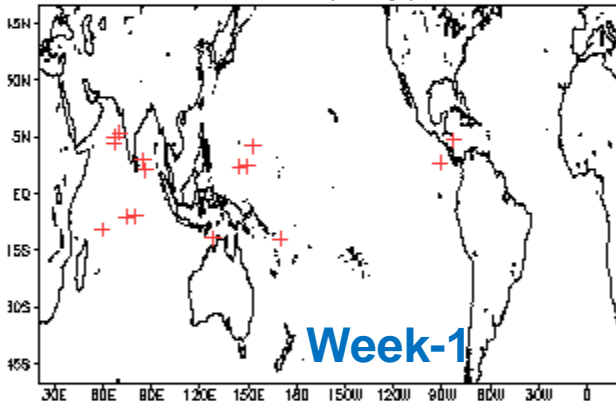
Phase 4 (77 days) 17 storms



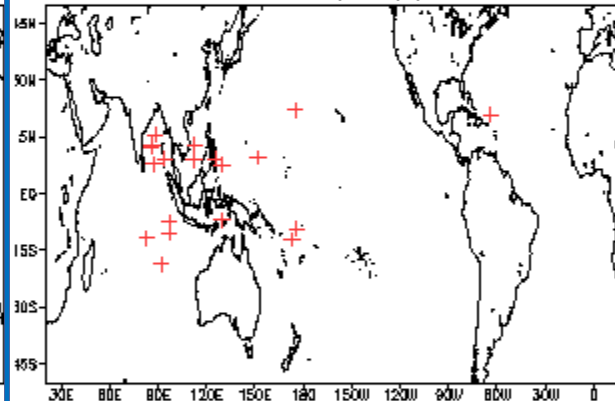
Phase 7 (68 days) 11 storms



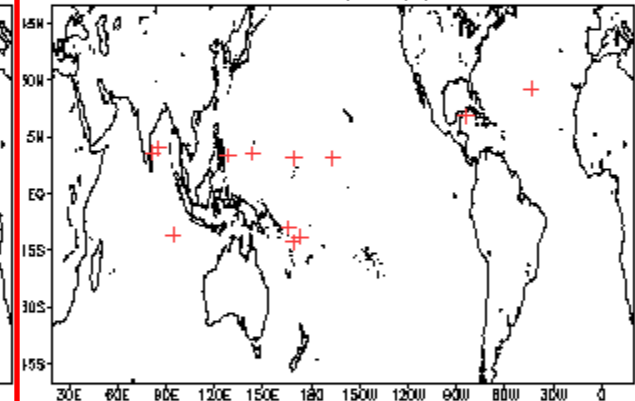
Phase 2 (88 days) 16 storms



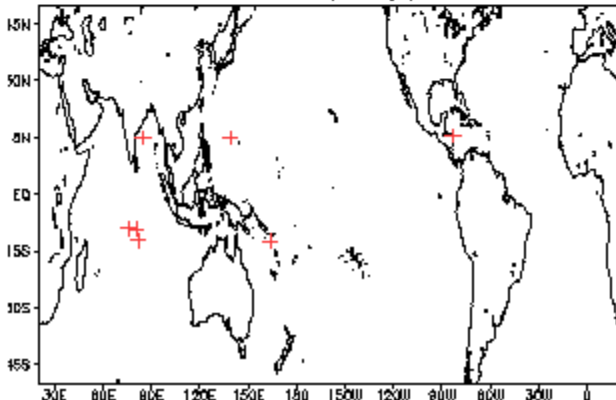
Phase 5 (72 days) 20 storms



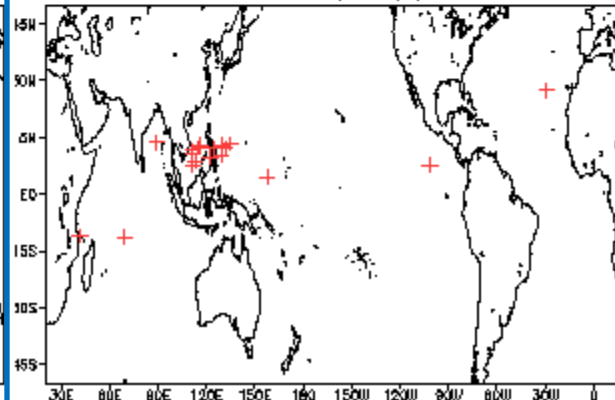
Phase 8 (60 days) 14 storms



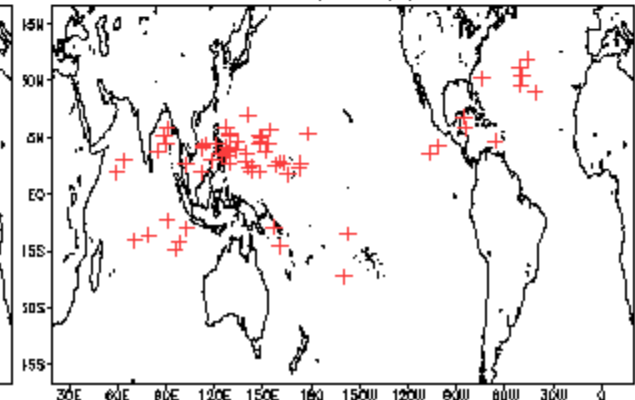
Phase 3 (89 days) 8 storms



Phase 6 (91 days) 19 storms



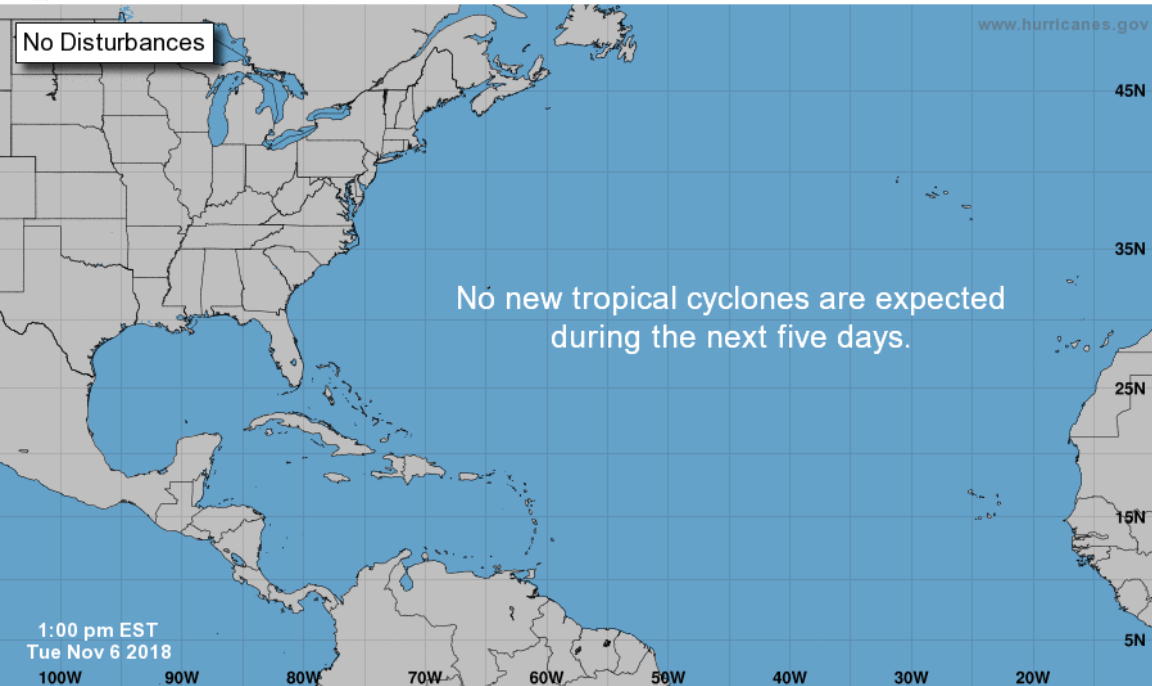
Null (380 days) 65 storms





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

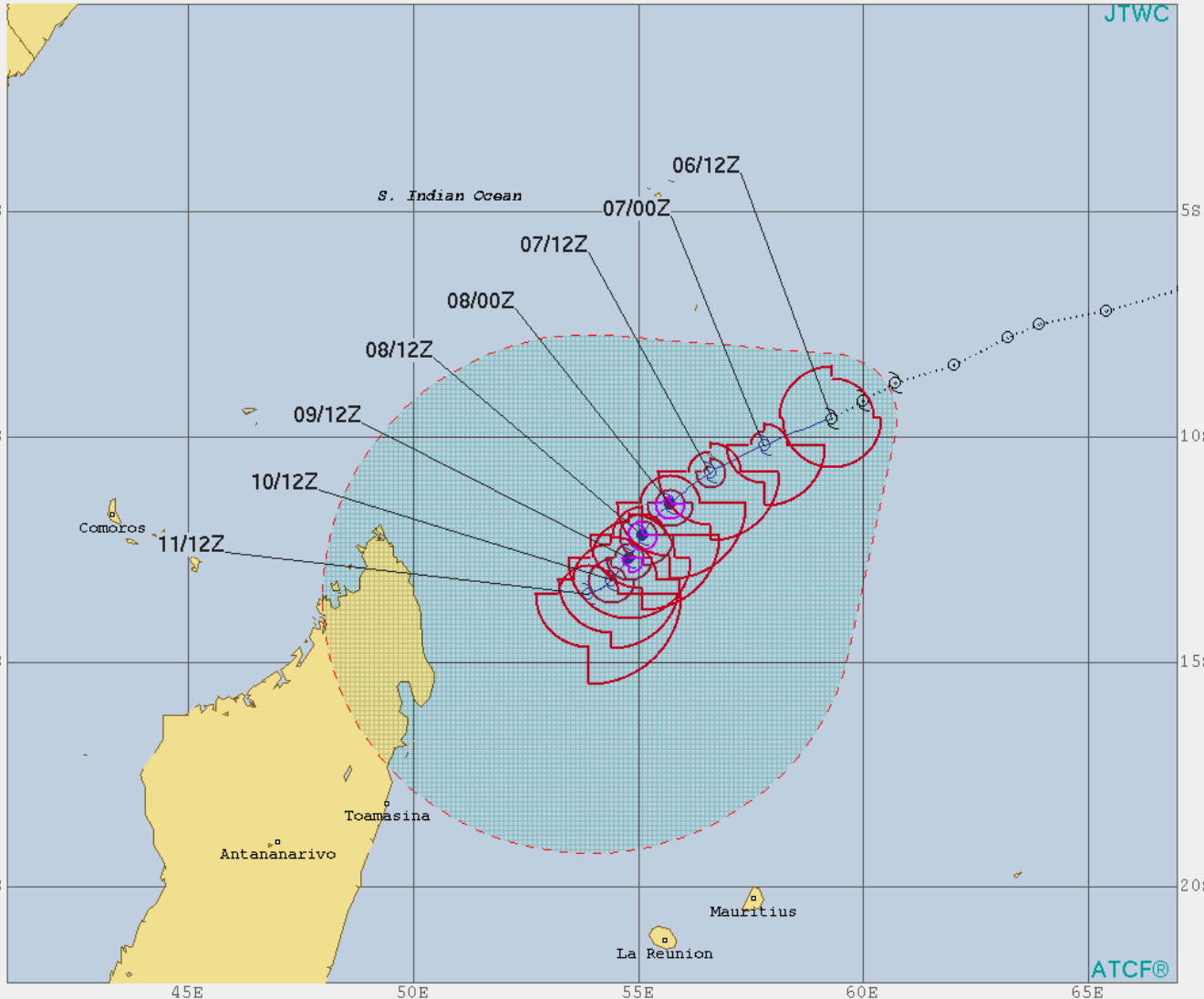
National Hurricane Center Miami, Florida



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Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

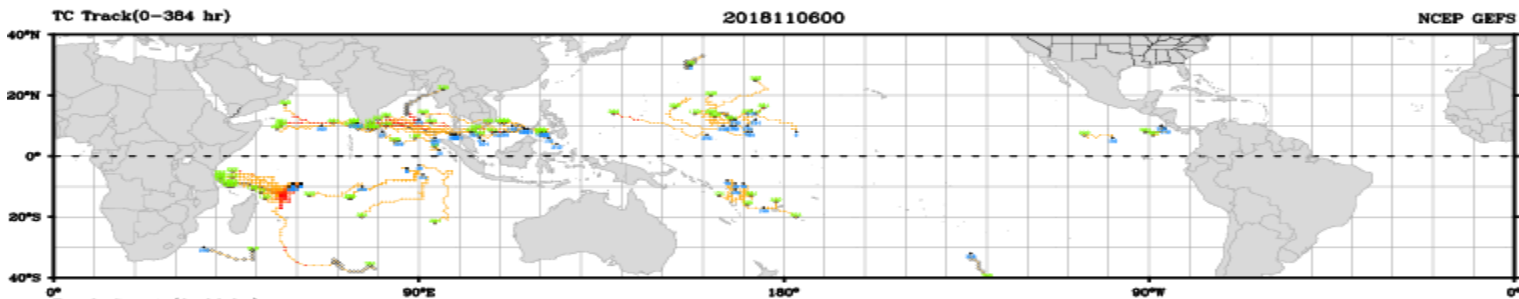
Post-Tropical Cyclone or Remnants



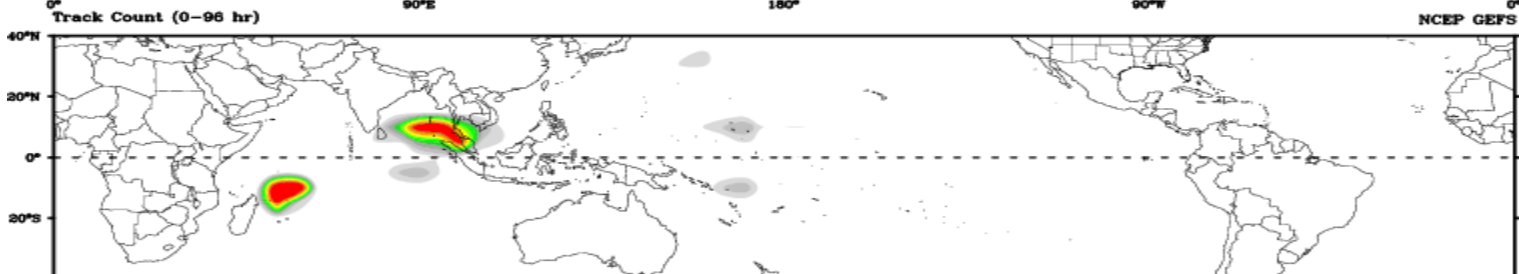
TROPICAL CYCLONE 03S (THREE) WARNING #3
 WTXS31 PGTW 061500
 061200Z POSIT: NEAR 9.6S 59.3E
 MOVING 240 DEGREES TRUE AT 08 KNOTS
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 13 FEET
 06/12Z, WINDS 035 KTS, GUSTS TO 045 KTS
 07/00Z, WINDS 045 KTS, GUSTS TO 055 KTS
 07/12Z, WINDS 055 KTS, GUSTS TO 070 KTS
 08/00Z, WINDS 065 KTS, GUSTS TO 080 KTS
 08/12Z, WINDS 075 KTS, GUSTS TO 090 KTS
 09/12Z, WINDS 070 KTS, GUSTS TO 085 KTS
 10/12Z, WINDS 055 KTS, GUSTS TO 070 KTS
 11/12Z, WINDS 035 KTS, GUSTS TO 045 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

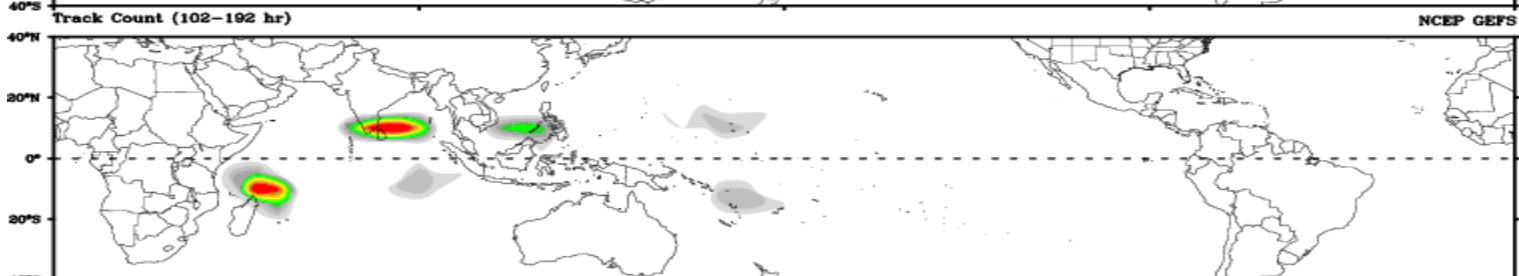




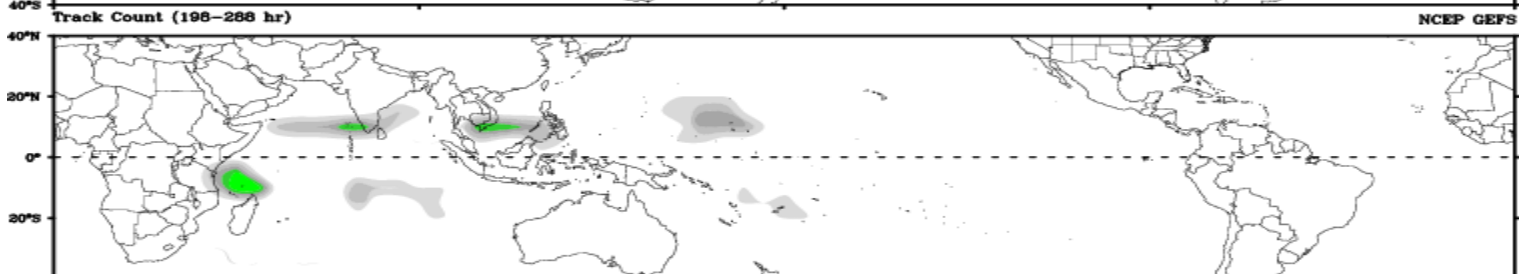
Days 1-4



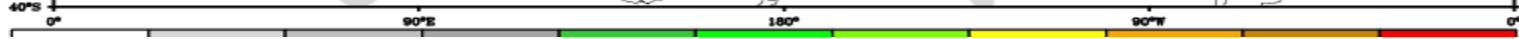
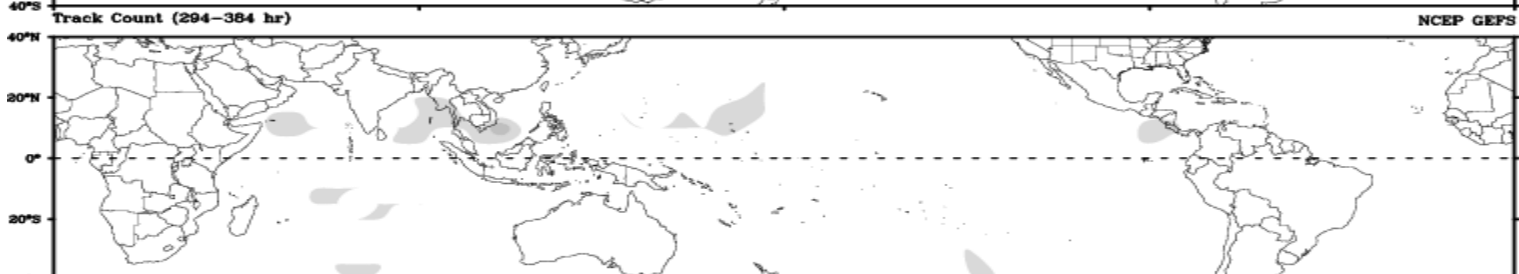
Day 5-8



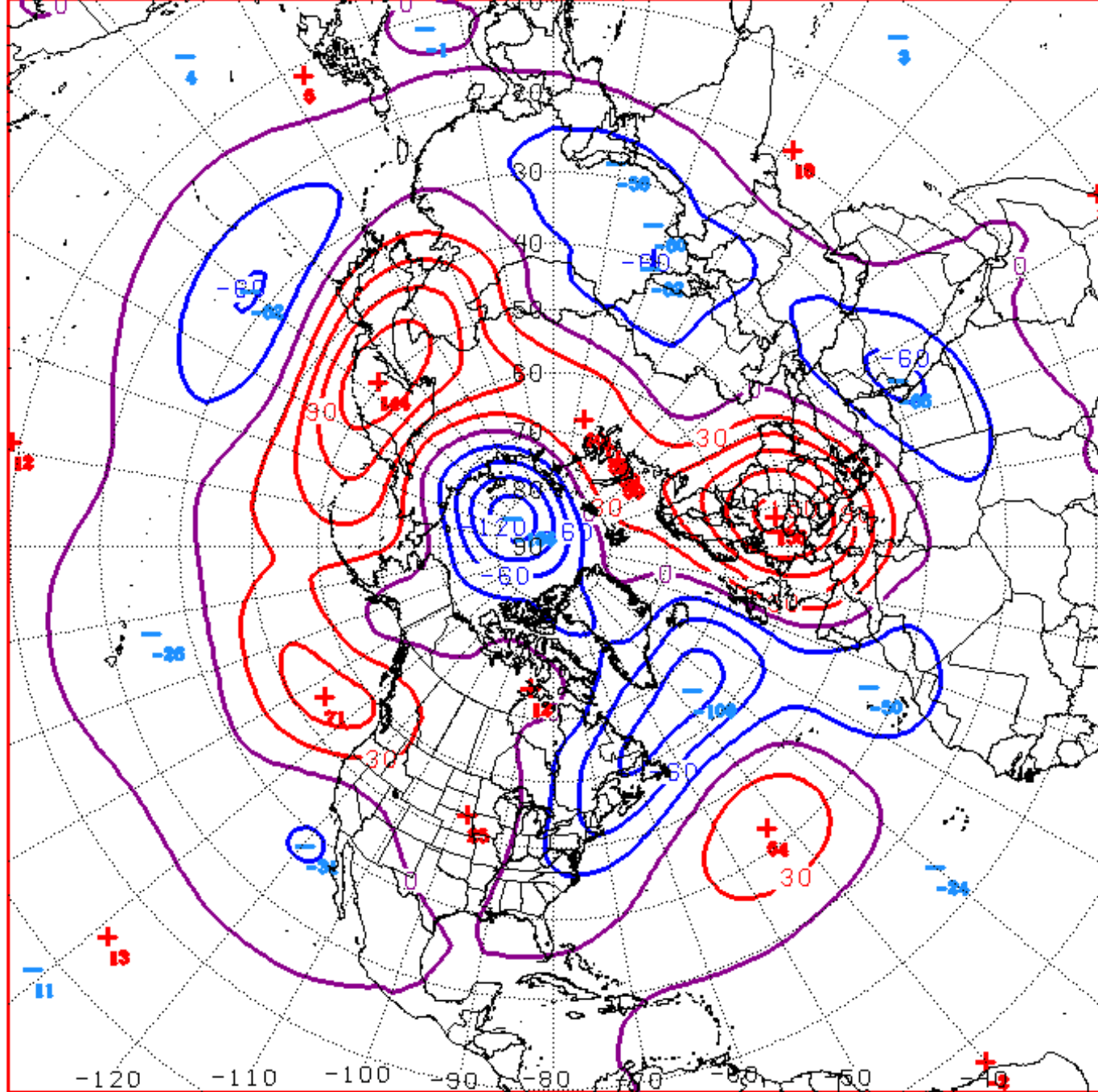
Day 9-12



Day 13-15

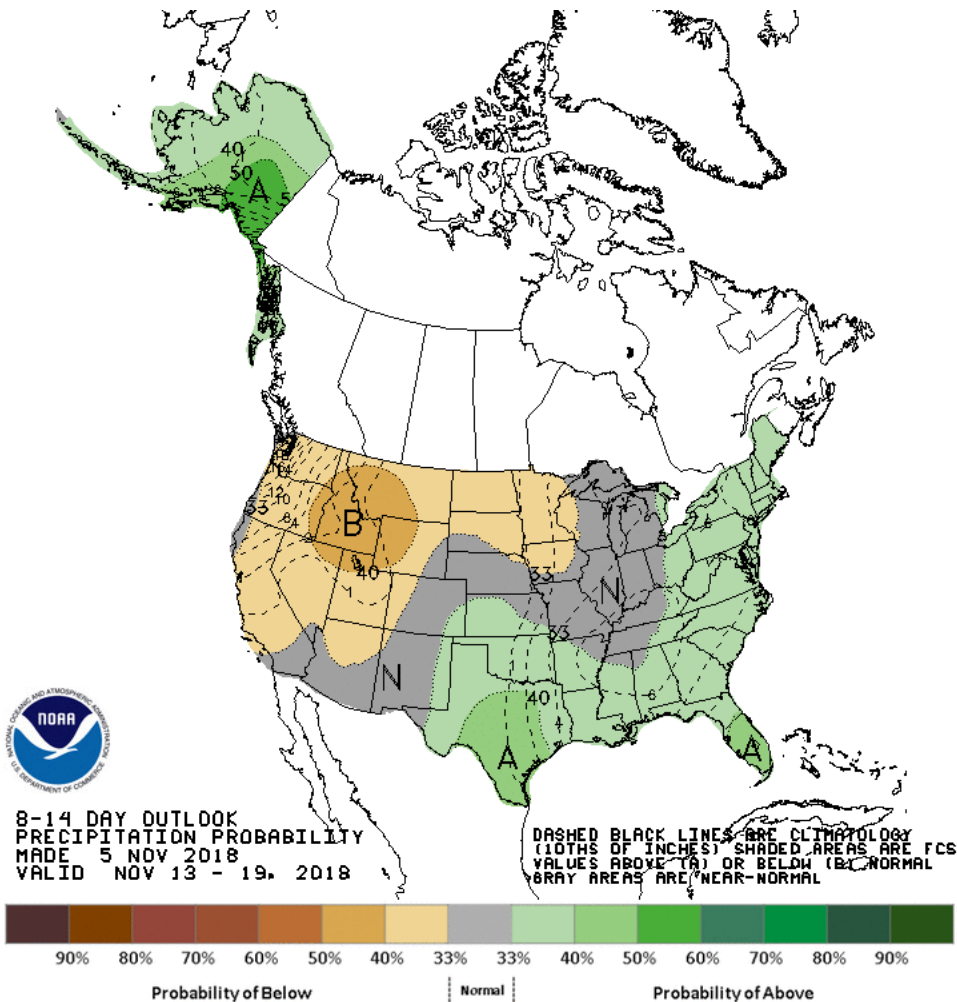
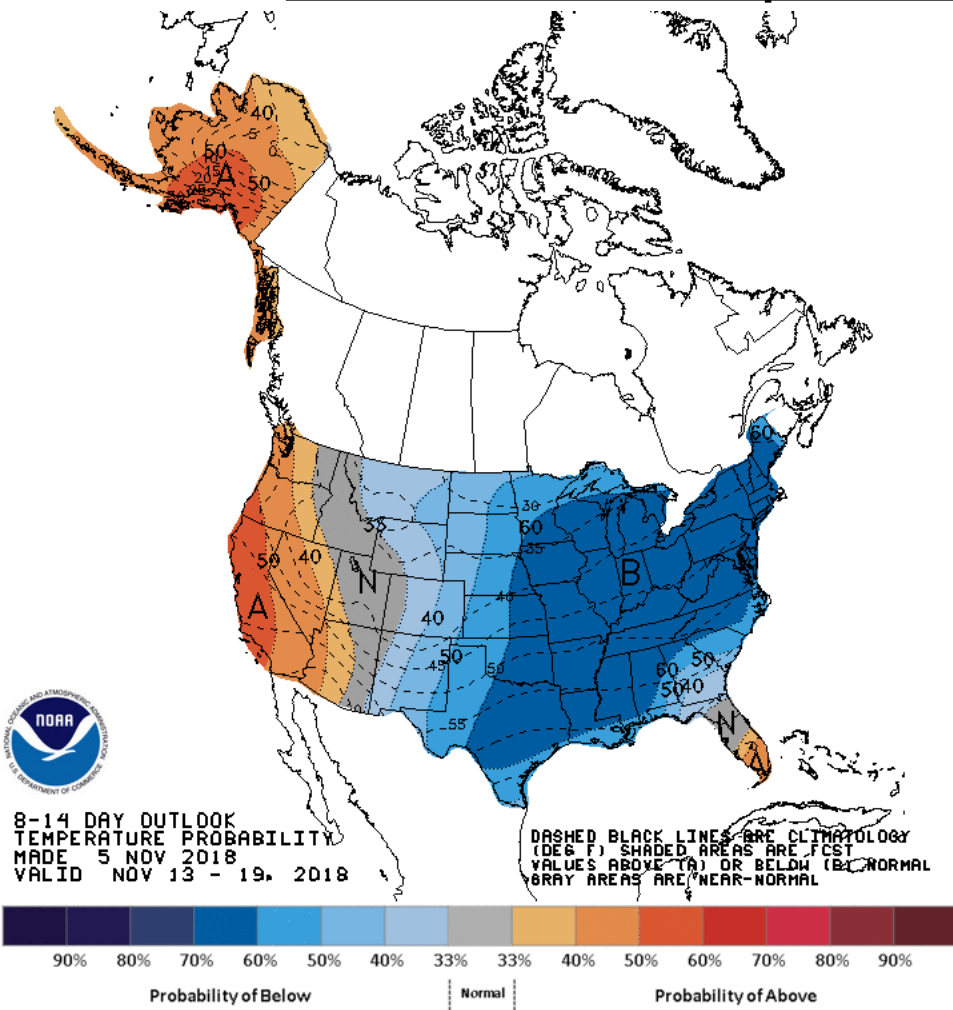


Connections to U.S. Impacts



D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE NOV 06 2018 1301 UTC CNTD NOV 17 2018

Week 2 – Temperature and Precipitation

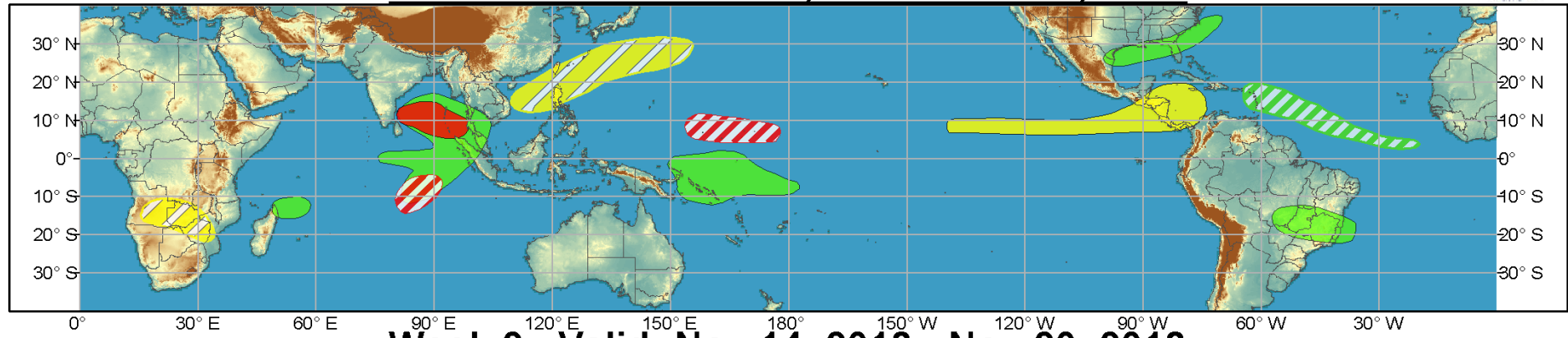


Today: Likely trending drier for precipitation for areas east of the Plains in Week-2.

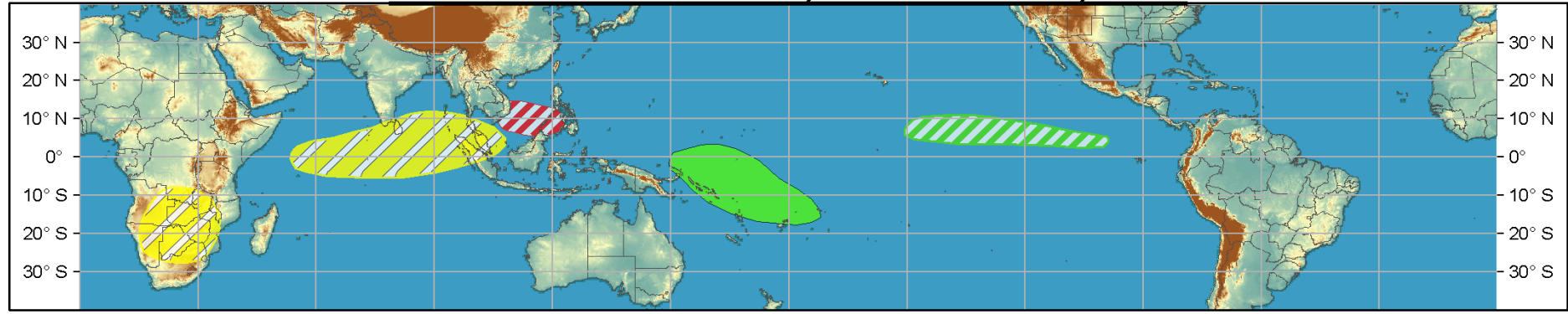


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- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
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- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
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