

Global Tropics Hazards And Benefits Outlook

11/19/2019

Adam Allgood

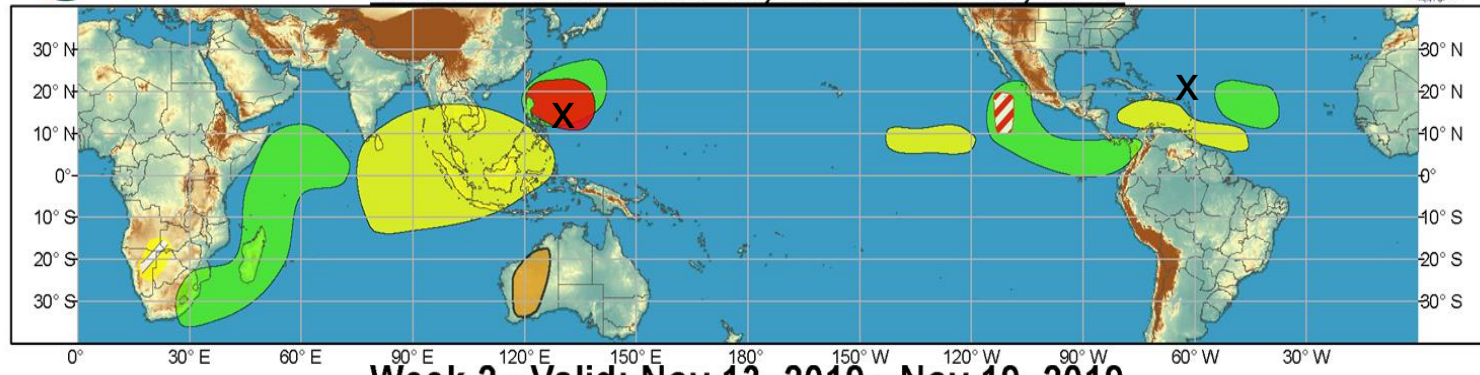
Outline

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

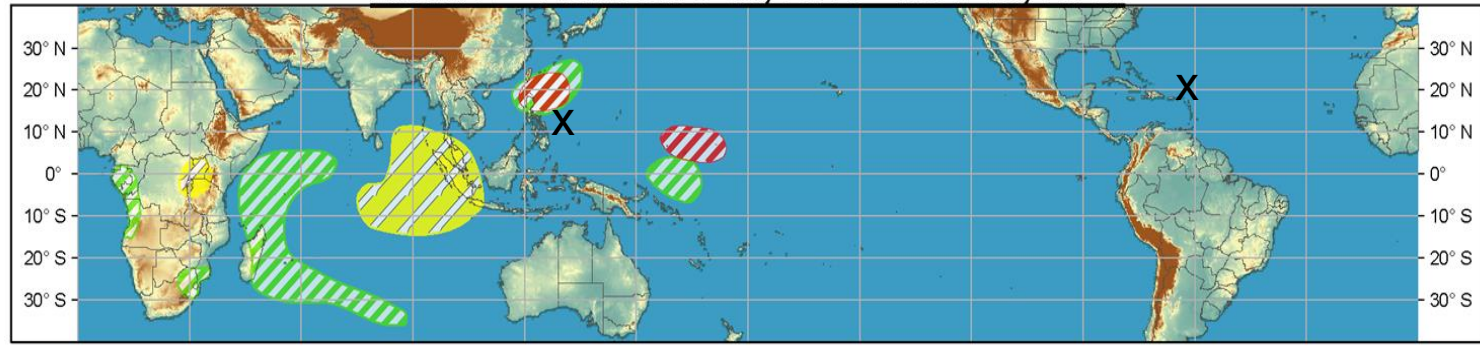
Outlook Review



Week 1 - Valid: Nov 13, 2019 - Nov 19, 2019

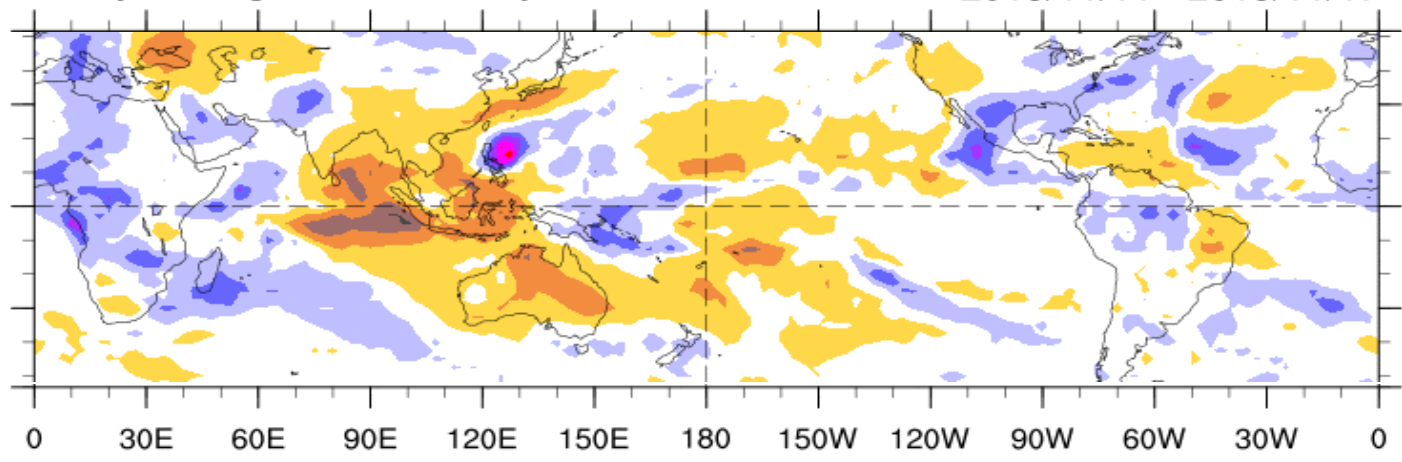


Week 2 - Valid: Nov 13, 2019 - Nov 19, 2019



7-Day Average OLR Anomaly

2019/11/11 - 2019/11/17



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (November 14, 2019 Update)

- ENSO Alert System Status: None
- ENSO-neutral is favored during the Northern Hemisphere winter 2019-20 (~70% chance), continuing through spring 2020 (60 to 65% chance).

MJO and other subseasonal tropical variability:

- The MJO propagated rapidly across the Pacific and has returned to the Western Hemisphere.
- Dynamical models indicate a weakening signal as other modes (the strong positive IOD and Rossby wave activity over the Pacific) become the dominant modes of variability.

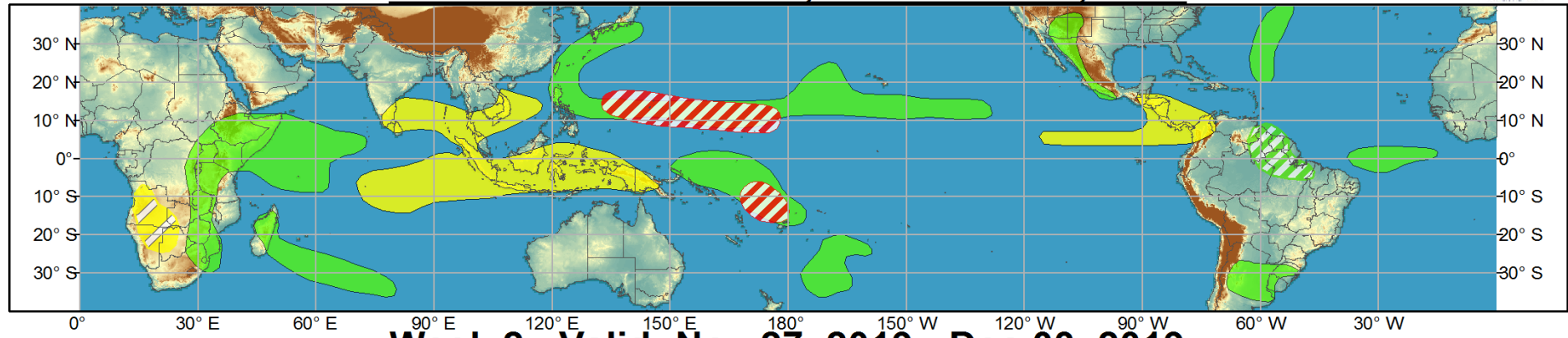
Extratropics:

- The enhanced convection over the Pacific may have contributed to a recent extension of the East Asian Jet. A return of strong convection to the western Indian Ocean will likely influence the extratropics, and may help bring troughing to the Western U.S. (colder temperatures and wetter). The pattern across the East is more uncertain.

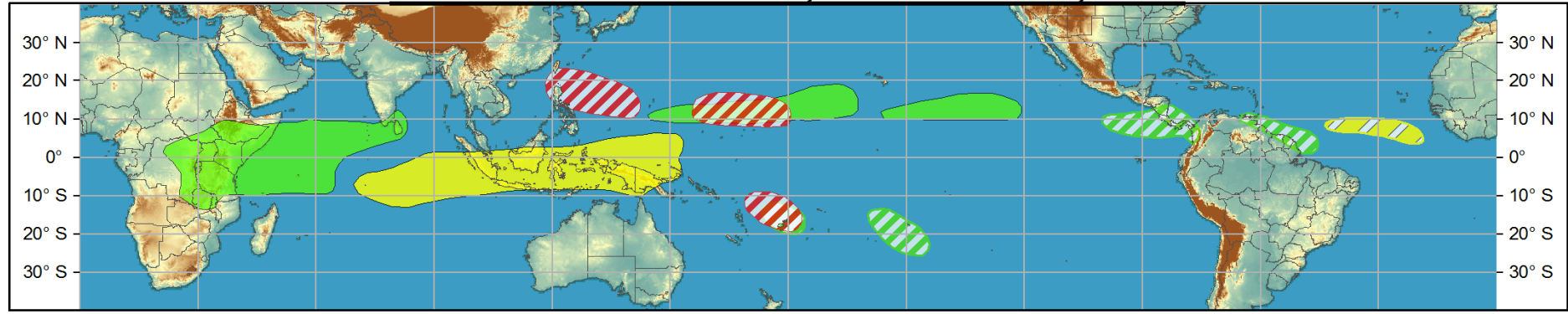


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Nov 20, 2019 - Nov 26, 2019



Week 2 - Valid: Nov 27, 2019 - Dec 03, 2019



Produced: 11/19/2019
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.

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IR Satellite & 200-hpa Velocity Potential Anomalies

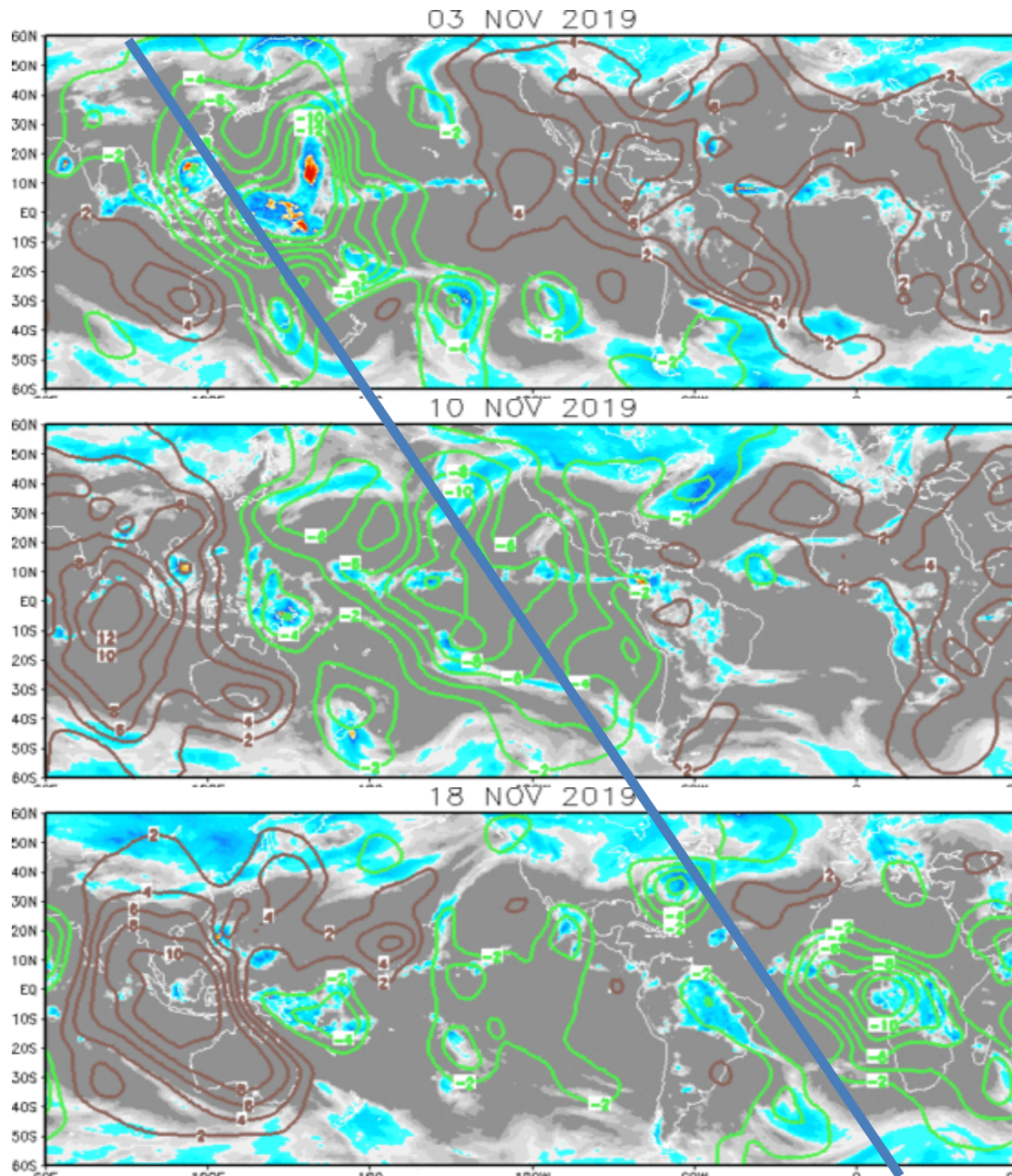
Green: Enhanced Divergence

Brown: Enhanced Convergence

Robust Wave-1 pattern showing MJO emerging over the Pacific.

Continued strong upper-level footprint as the MJO rapidly crossed the Pacific.

Ongoing West Pacific convection is beginning to interfere with the pattern. Note also the strengthening anomaly field over Africa.

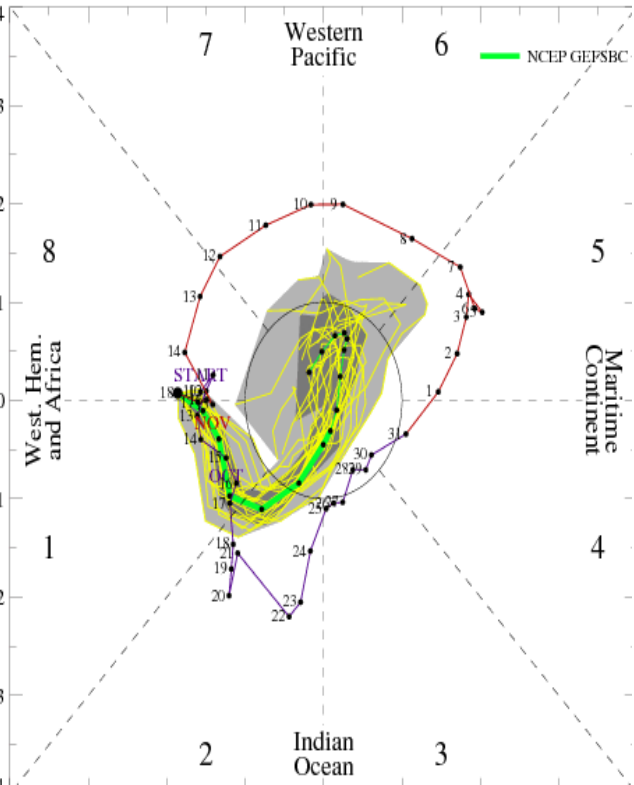


MJO Observation/Forecast

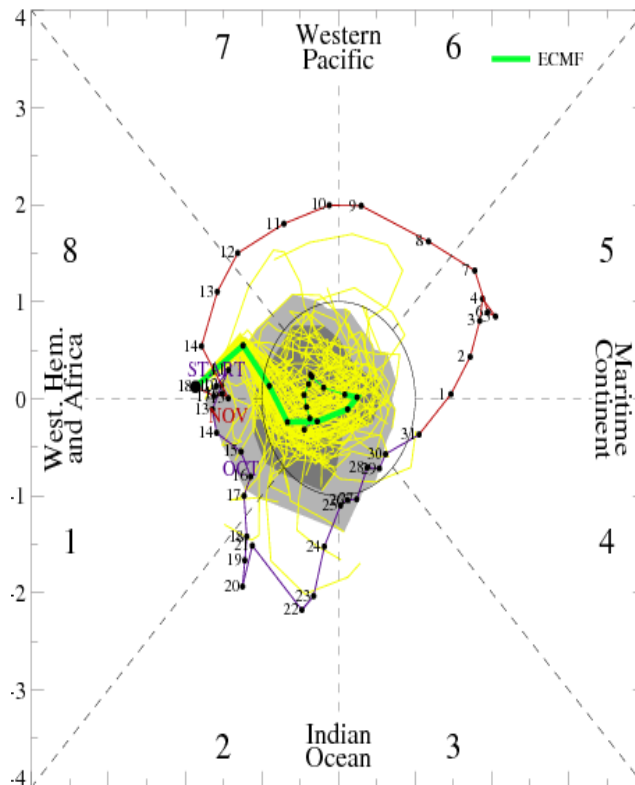
[RMM1, RMM2] forecast for Nov-19-2019 to Dec-03-2019

MJO Index Forecast for 19Nov2019-03Dec2019

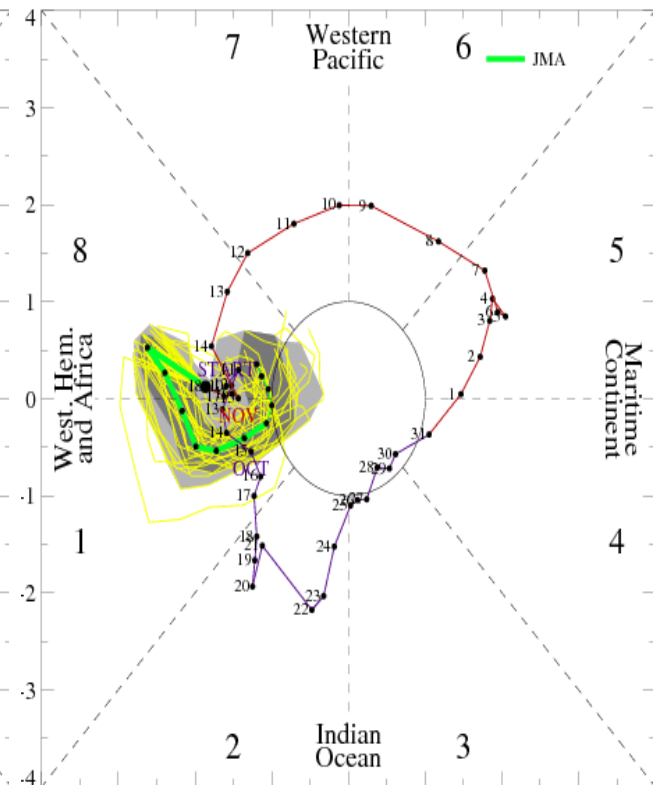
MJO Index Forecast for 19Nov2019-27Nov2019



GEFS



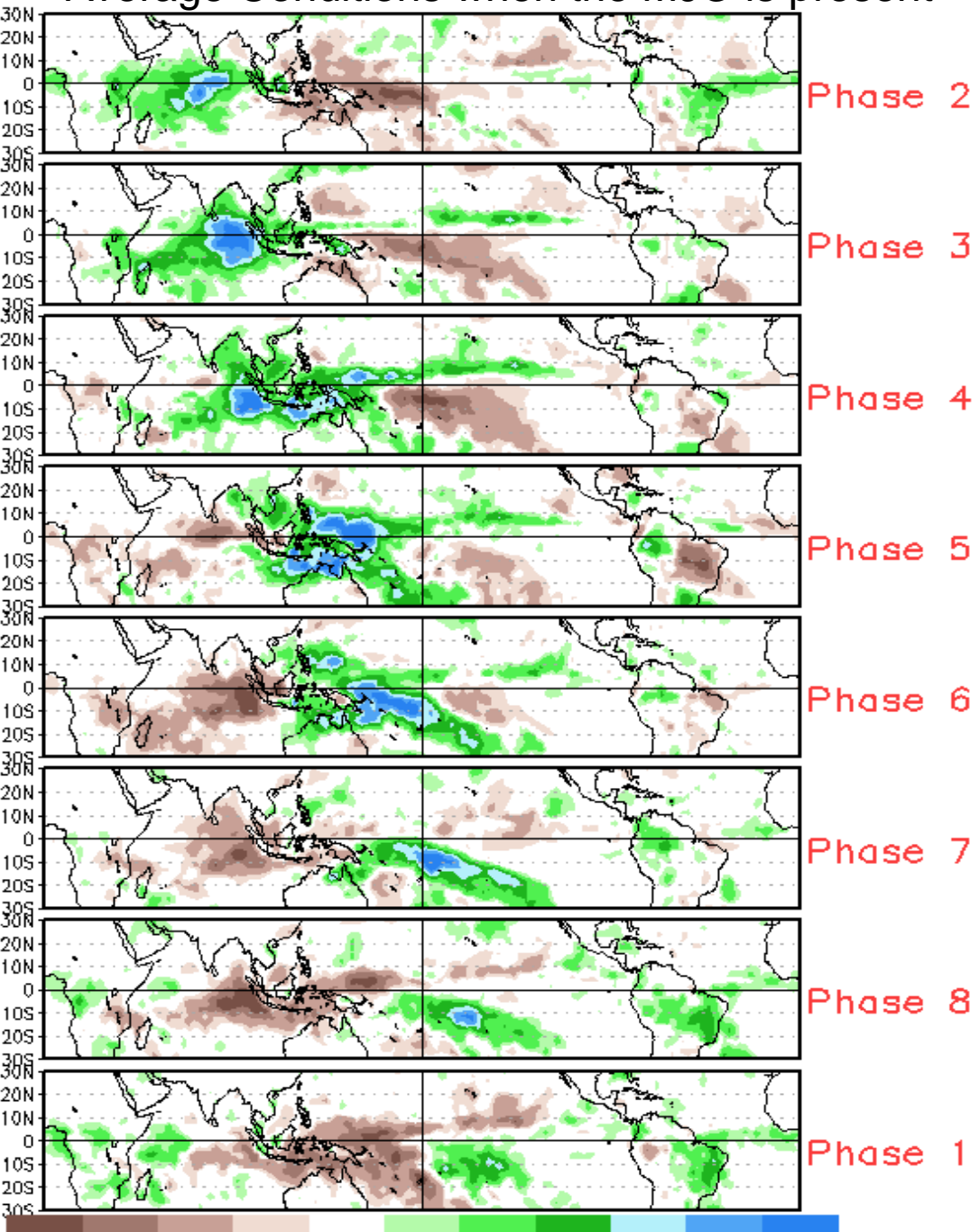
ECMWF



JMA

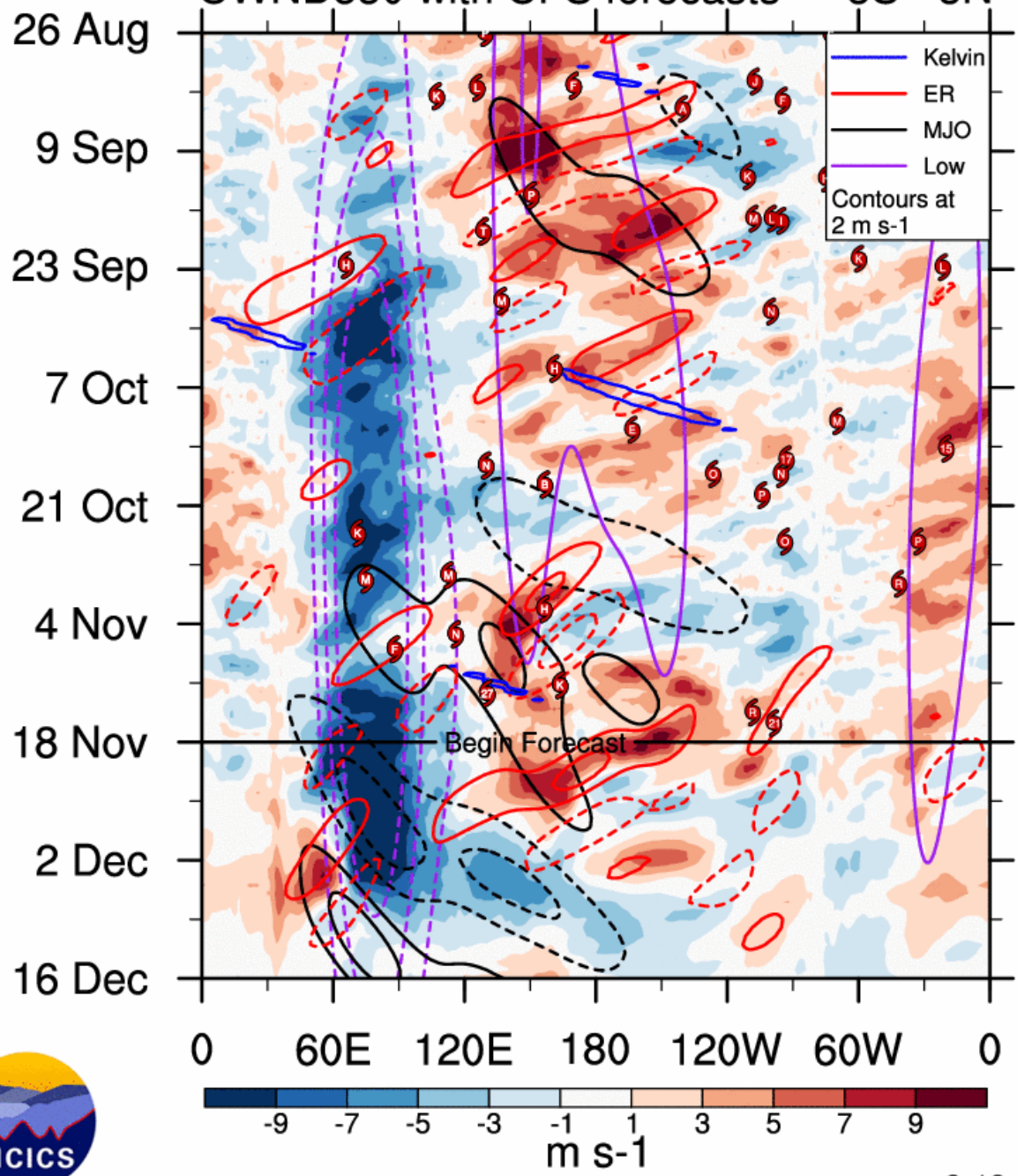
Wheeler-Hendon based analyses of model forecasts indicate a weakening MJO signal.

Average Conditions when the MJO is present



CAVEAT: These panels are representative of robust MJO events.

UWND850 with CFS forecasts 5S - 5N



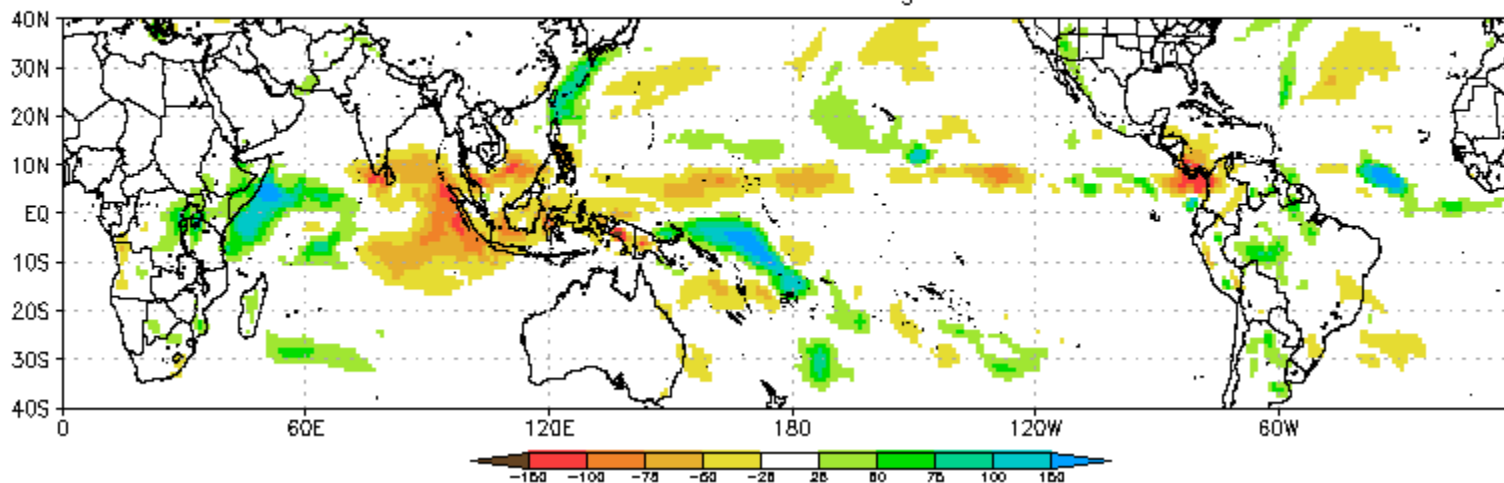
IOD signal strongly apparent in the low-level wind field.

The MJO briefly disrupted the pattern in early November.

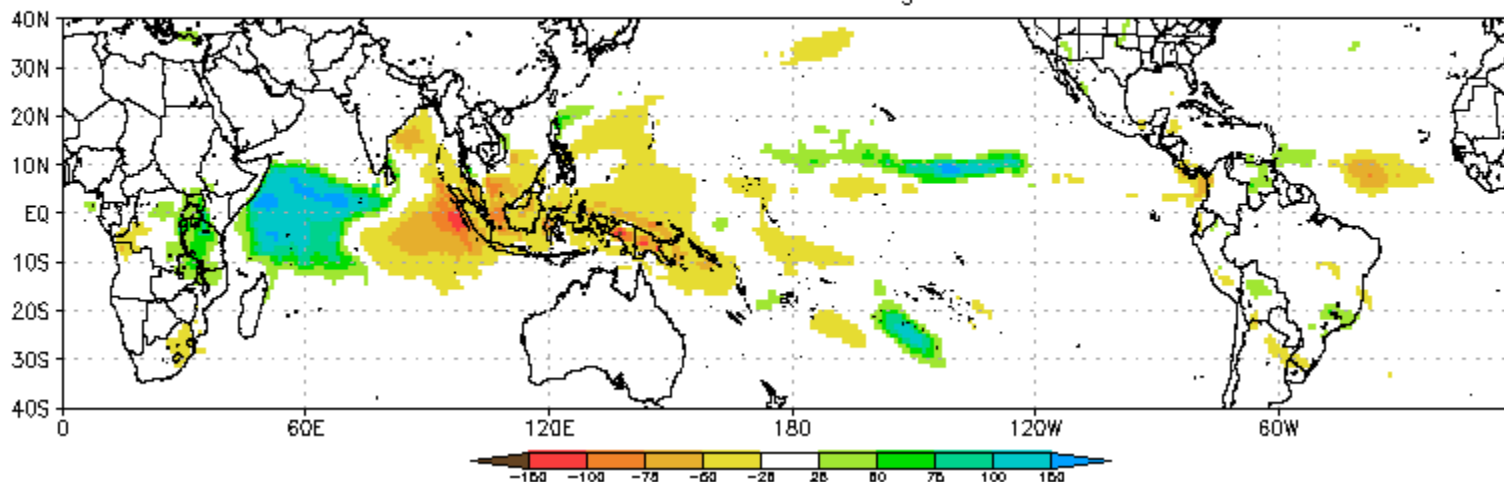
The CFS depicts a return to a very strong IOD signal, with Rossby wave activity over the Pacific.



CFS Precipitation Anomalies (mm) Issued 18Nov2019
Week-1 Forecast Ending 26Nov2019



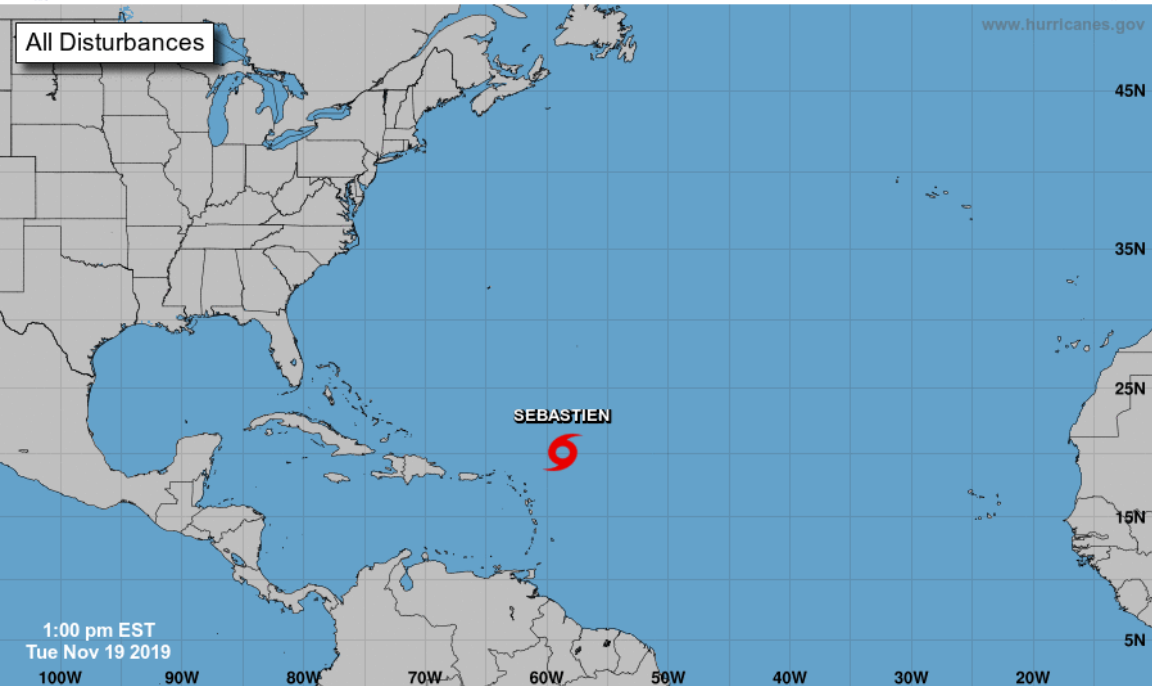
CFS Precipitation Anomalies (mm) Issued 18Nov2019
Week-2 Forecast Ending 03Dec2019





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



No new tropical cyclones are expected during the next five days.

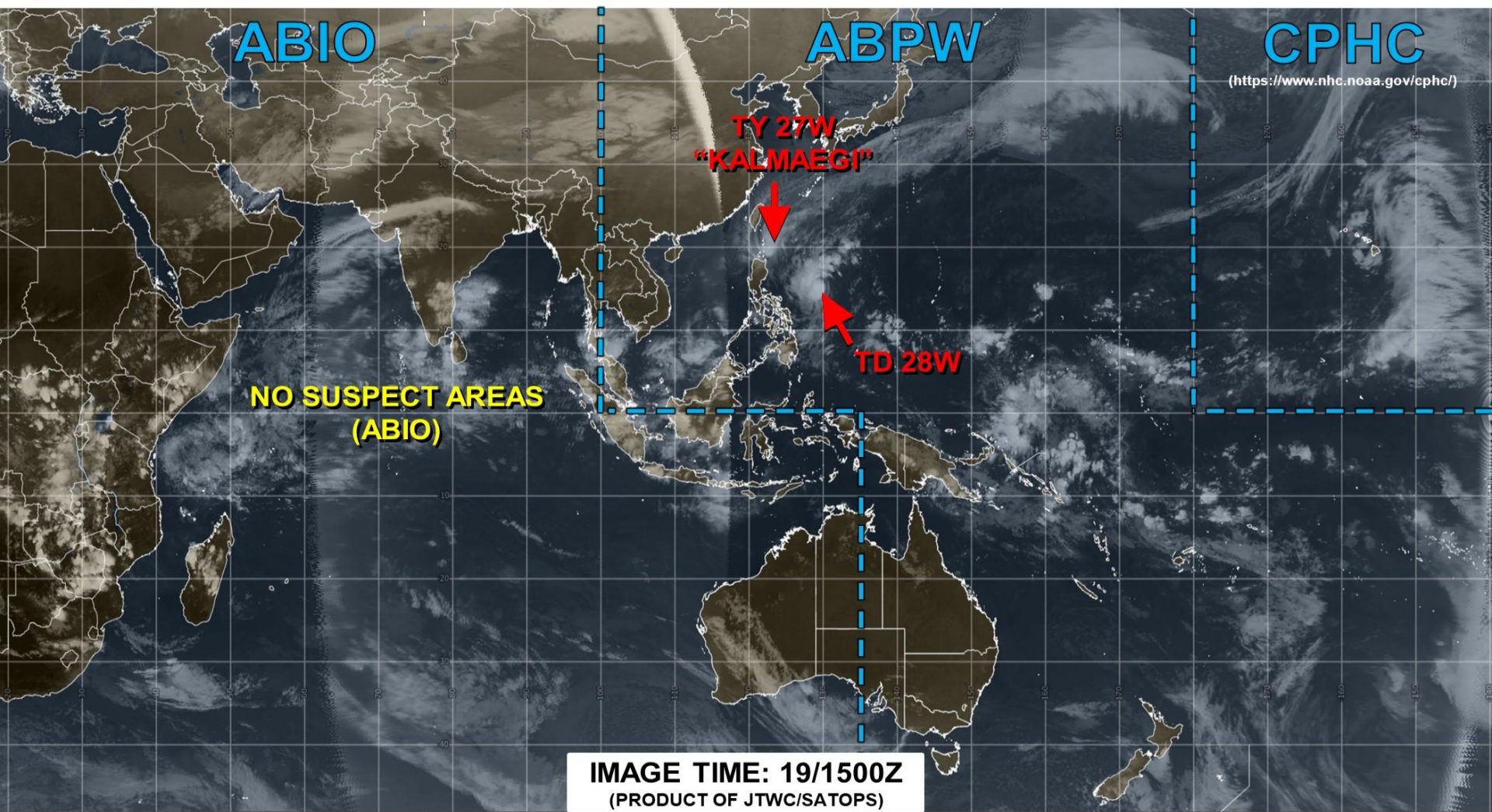
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

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JOINT TYPHOON WARNING CENTER



ABIO

ABPW

CPHC

(<https://www.nhc.noaa.gov/cphc/>)

**TY 27W
"KALMAEGI"**

TD 28W

**NO SUSPECT AREAS
(ABIO)**

**IMAGE TIME: 19/1500Z
(PRODUCT OF JTWC/SATOPS)**

LOW

TC development unlikely within 24 hours

MEDIUM

TC development likely, but expected to occur beyond 24 hours

HIGH

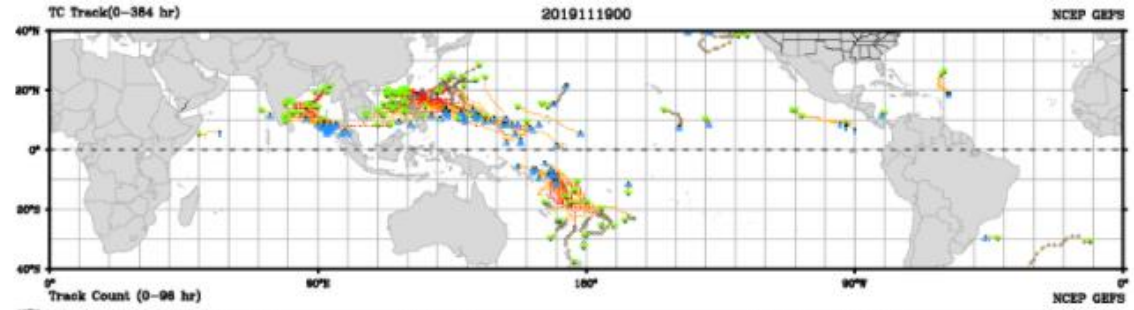
TC development likely within 24 hours (Reference TCFA)

SUB TROPICAL

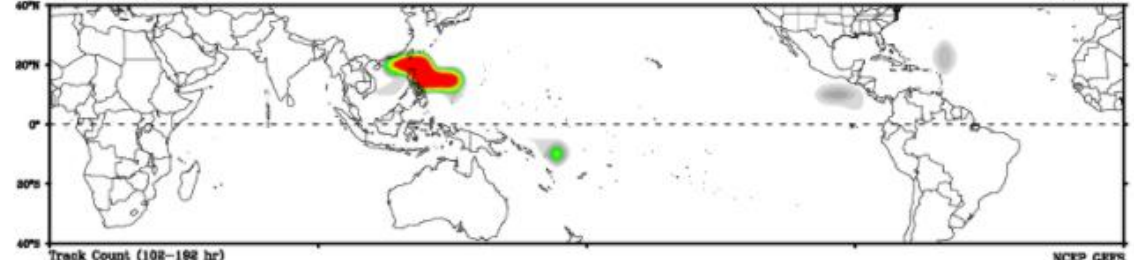
Monitoring for potential transition to TC. Invest color denotes tropical transition probability

Tropical Cyclone (Reference Warning)

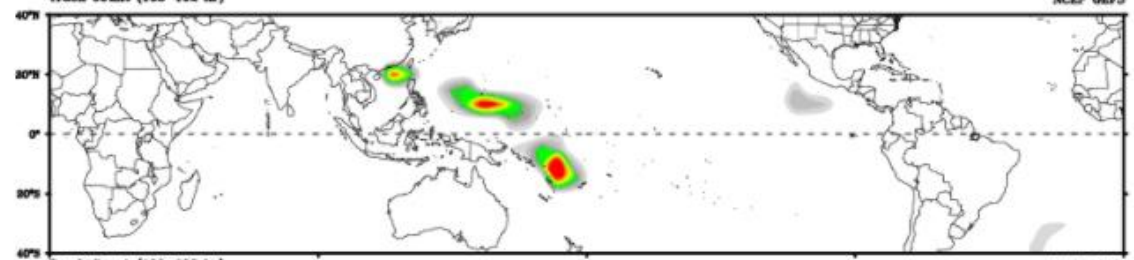
Days 1-



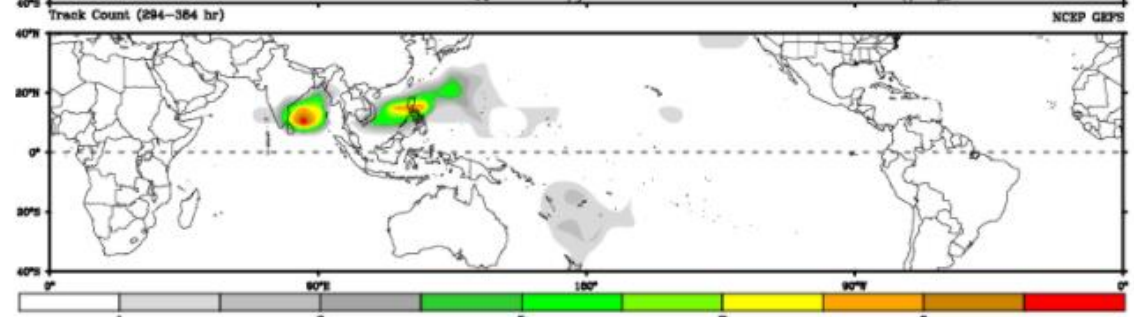
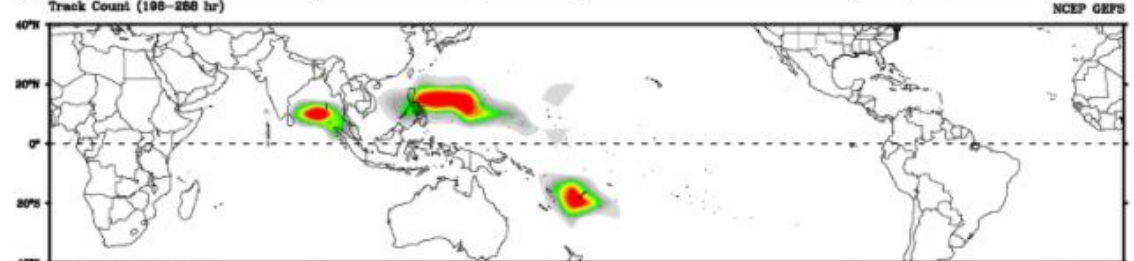
Day 5-



Day 9-

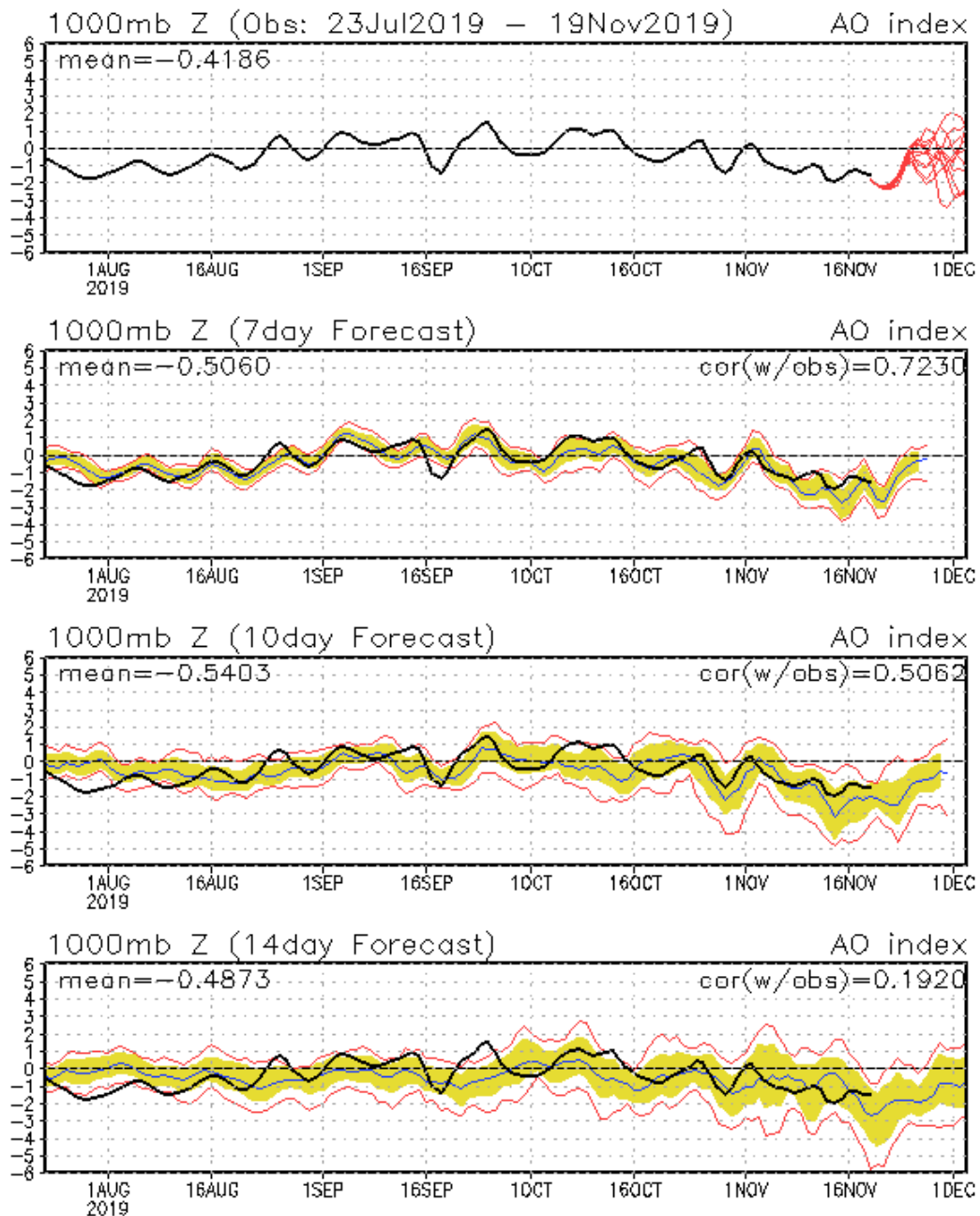


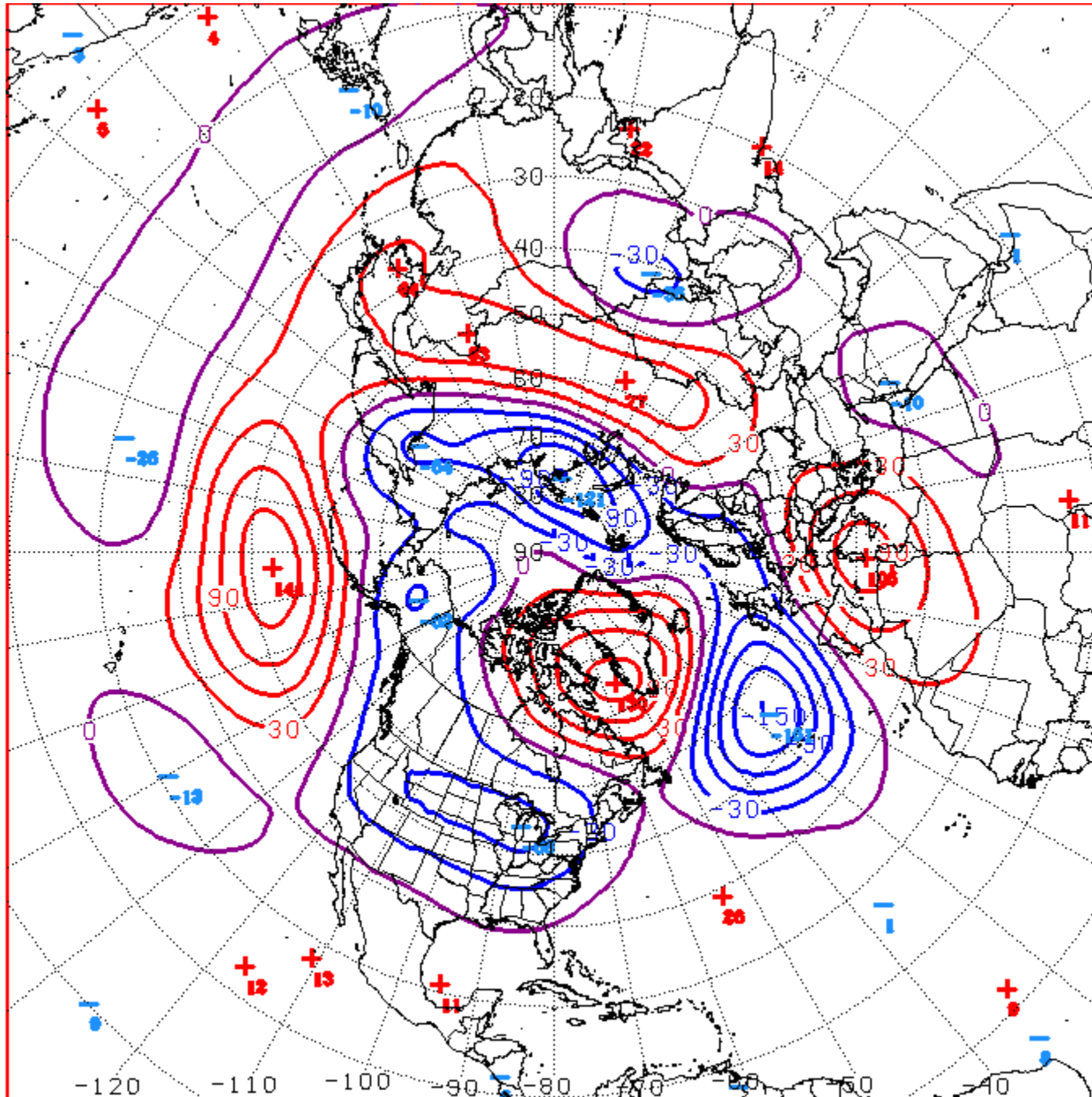
Day 13-1



Connections to U.S. Impacts

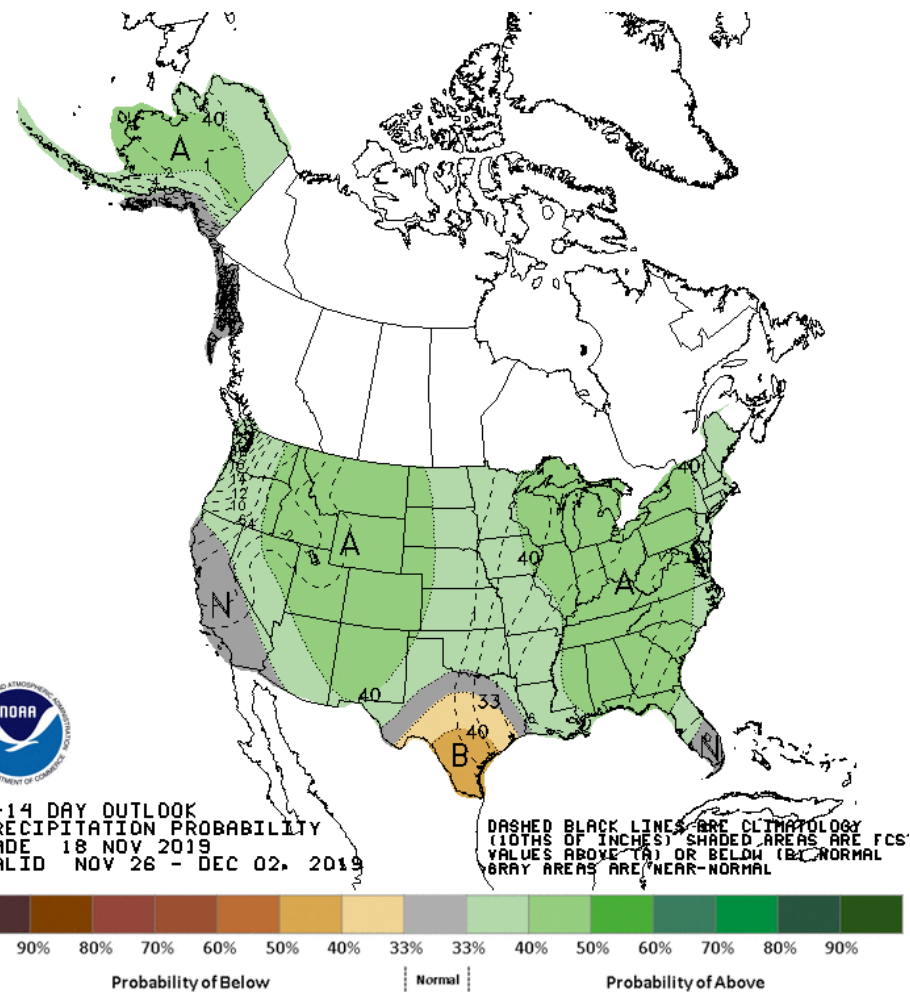
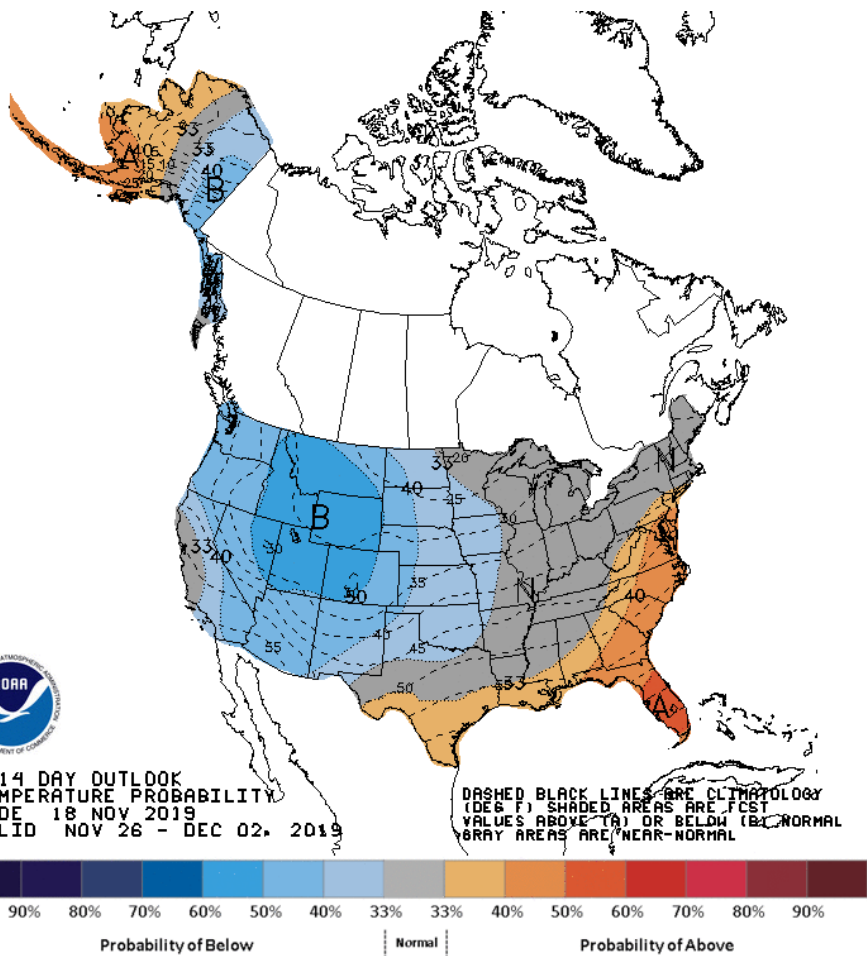
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE NOV 19 2019 1044 UTC CNTD NOV 30 2019

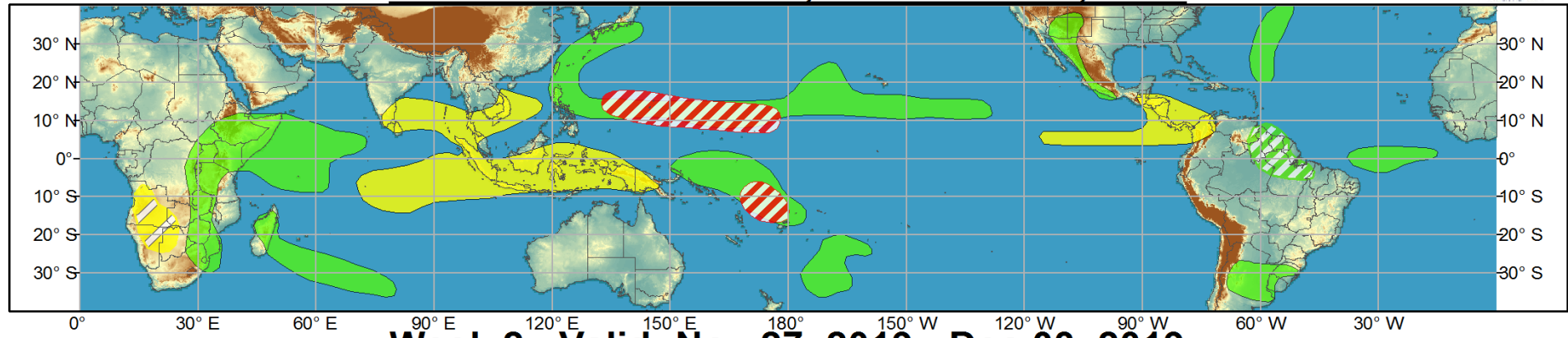
Week 2 – Temperature and Precipitation



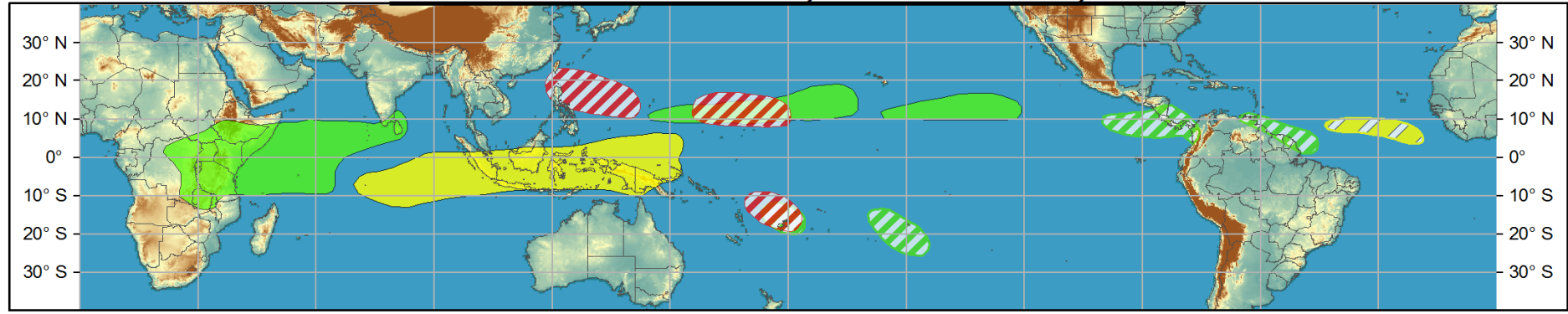


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