

# Global Tropics Hazards And Benefits Outlook

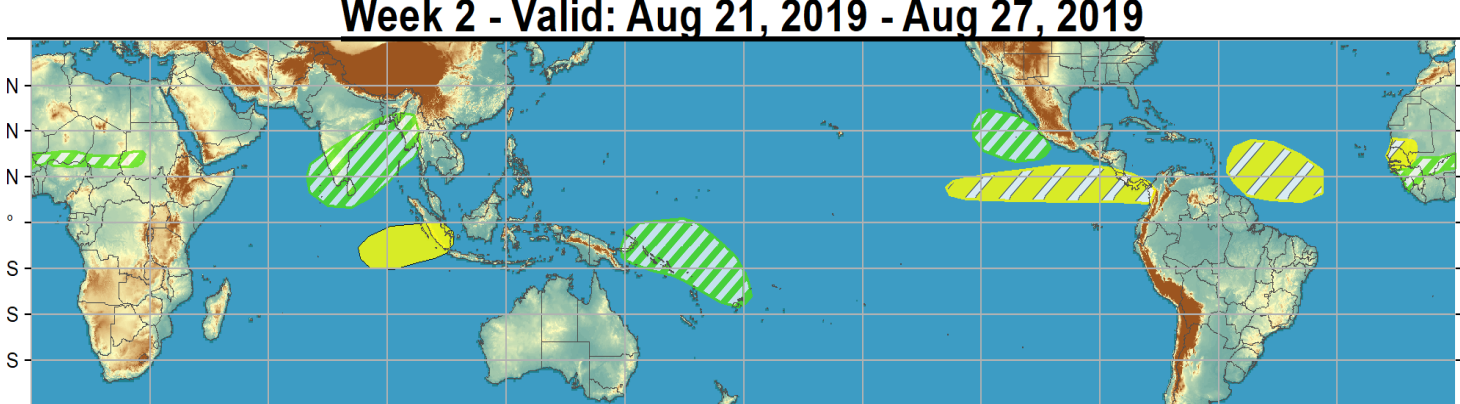
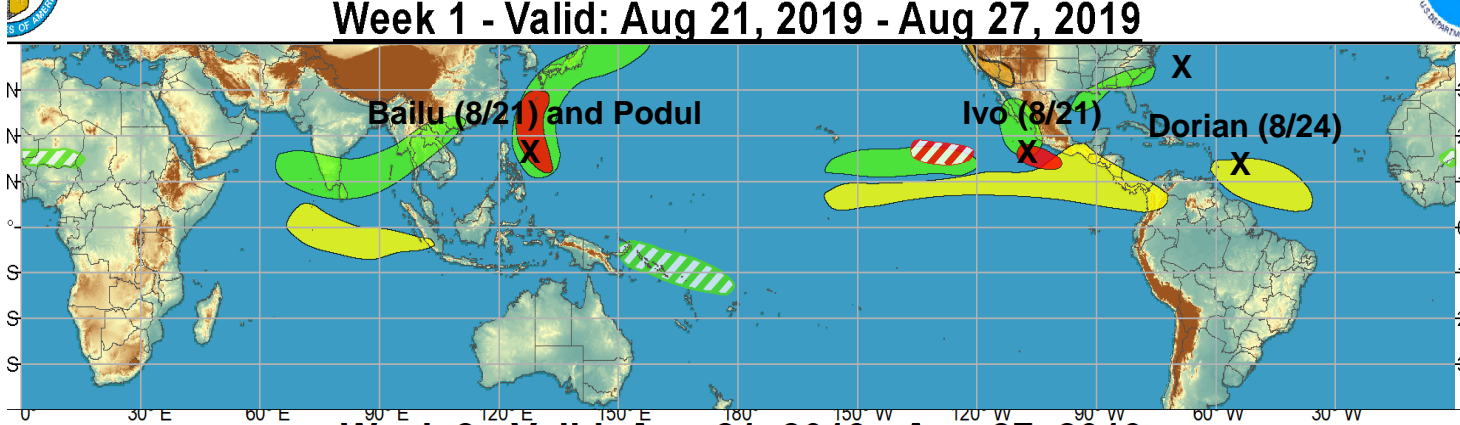
8/27/2019

Brad Pugh

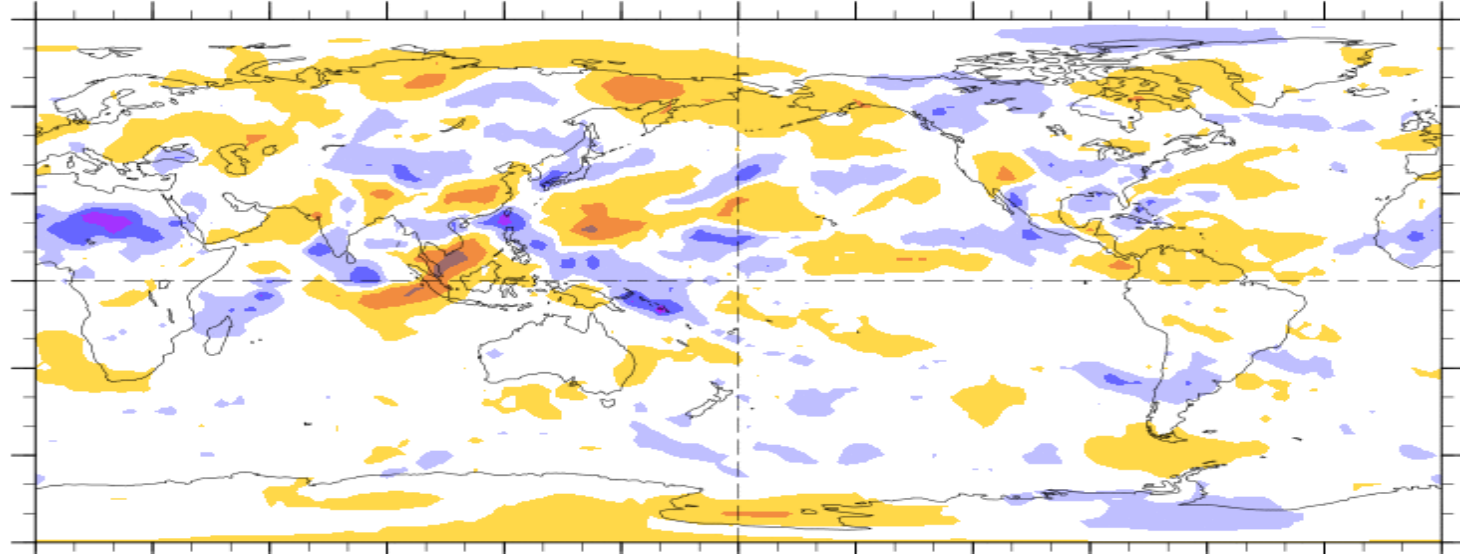
## Outline

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

# Outlook Review



7-Day Average OLR Anomaly 2019/08/18 - 2019/08/24



Cool shading  
More clouds/rain

Warm shading  
Less clouds/rain

# Synopsis of Climate Modes

**ENSO:** (as of August 12, 2019 – next update on Thursday, September 12th)

- ENSO Alert System Status: [Final El Niño Advisory](#)
- ENSO-neutral conditions are present, and is most likely to continue through Northern Hemisphere Winter 2019-2020 (50-55% chance).

**MJO and other subseasonal tropical variability:**

- The MJO remains weak.
- The MJO may become more organized during Week-2 with the enhanced phase over the Maritime Continent.

**Tropical cyclone development:**

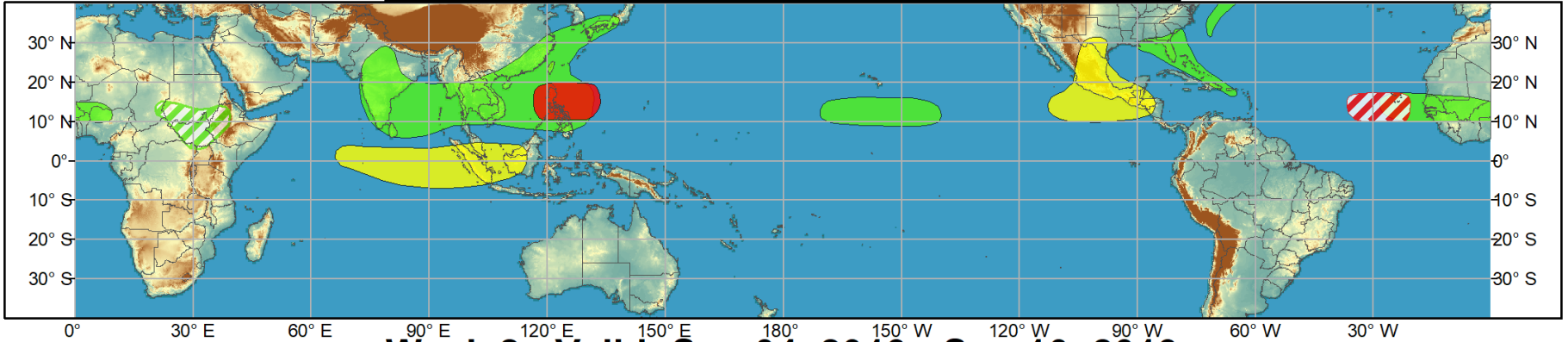
- Multiple tropical cyclones likely to form either east of the Philippines or the South China Sea. Will need to closely monitor any recurving TCs in the West Pacific that would affect pattern over North America.
- Peak of Atlantic hurricane season occurs in early to mid-September.



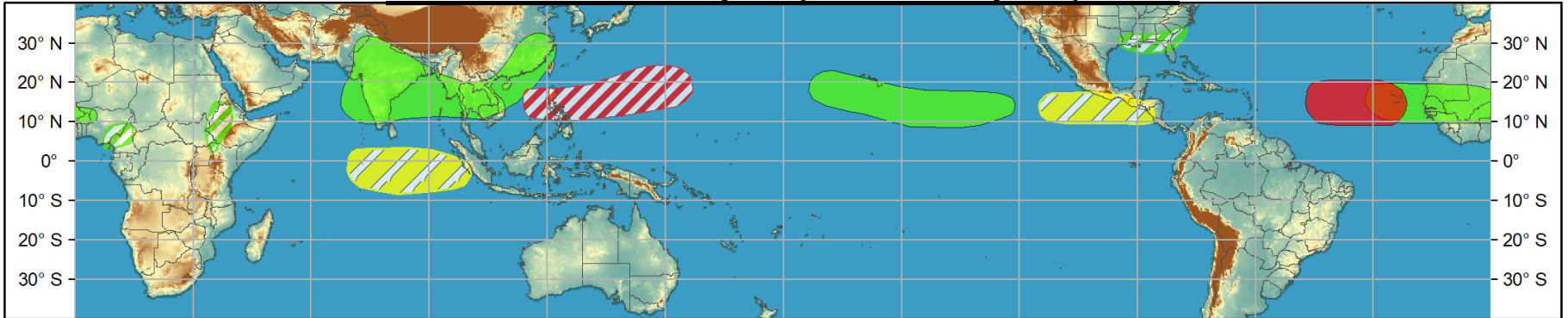
# Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



## Week 1 - Valid: Aug 28, 2019 - Sep 03, 2019



## Week 2 - Valid: Sep 04, 2019 - Sep 10, 2019



**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: 08/27/2019  
Forecaster: Pugh

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

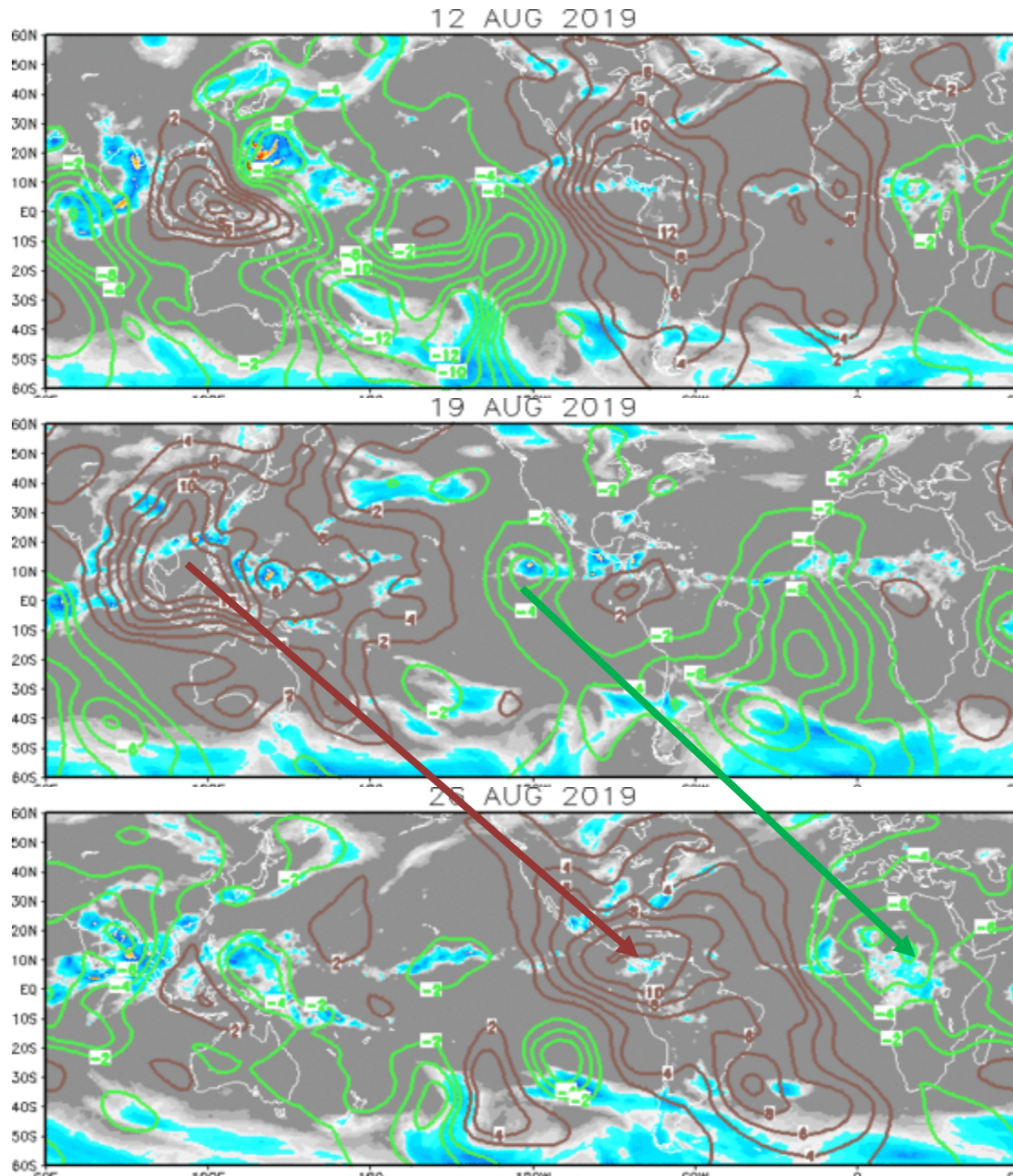
Green: Enhanced Divergence

Brown: Enhanced Convergence

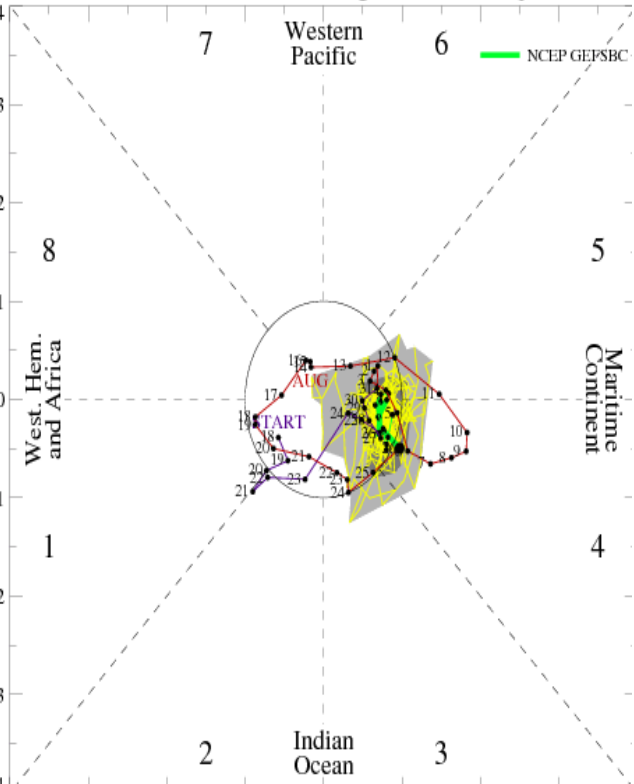
Incoherent pattern with more regional anomalies.

More Wave-1 pattern developed but fast eastward propagation (Kelvin wave).

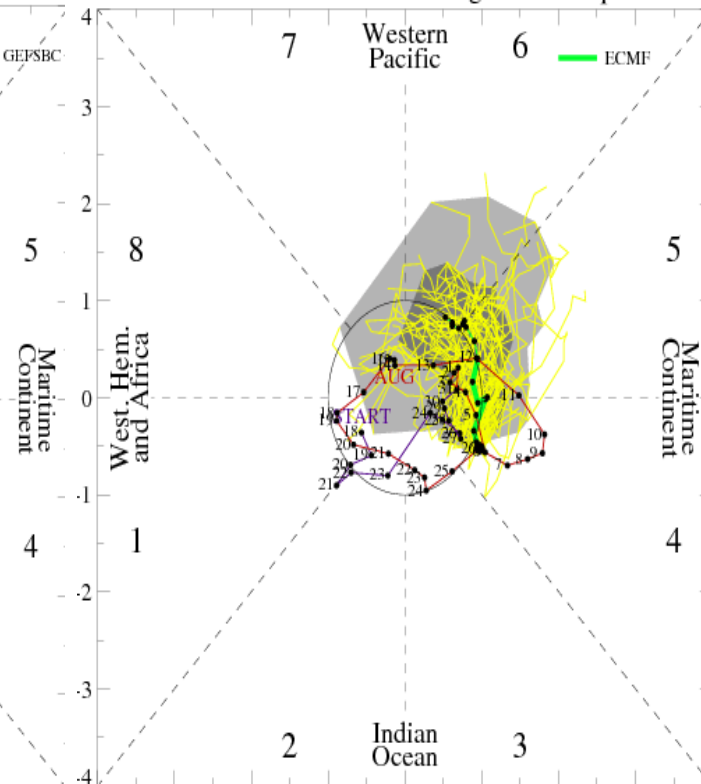
Enhanced upper-level divergence overspreading Indian Ocean.



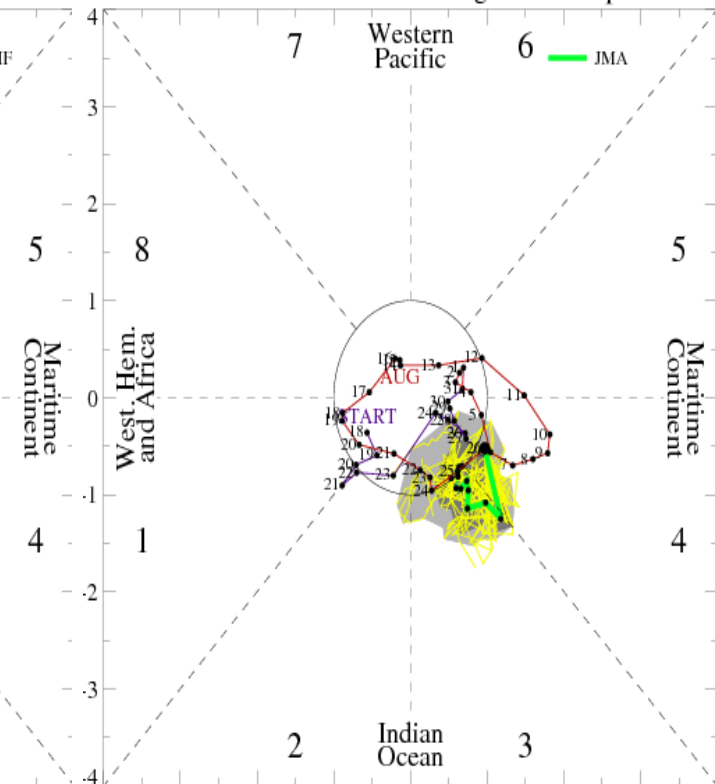
[RMM1, RMM2] forecast for Aug-27-2019 to Sep-10-2019



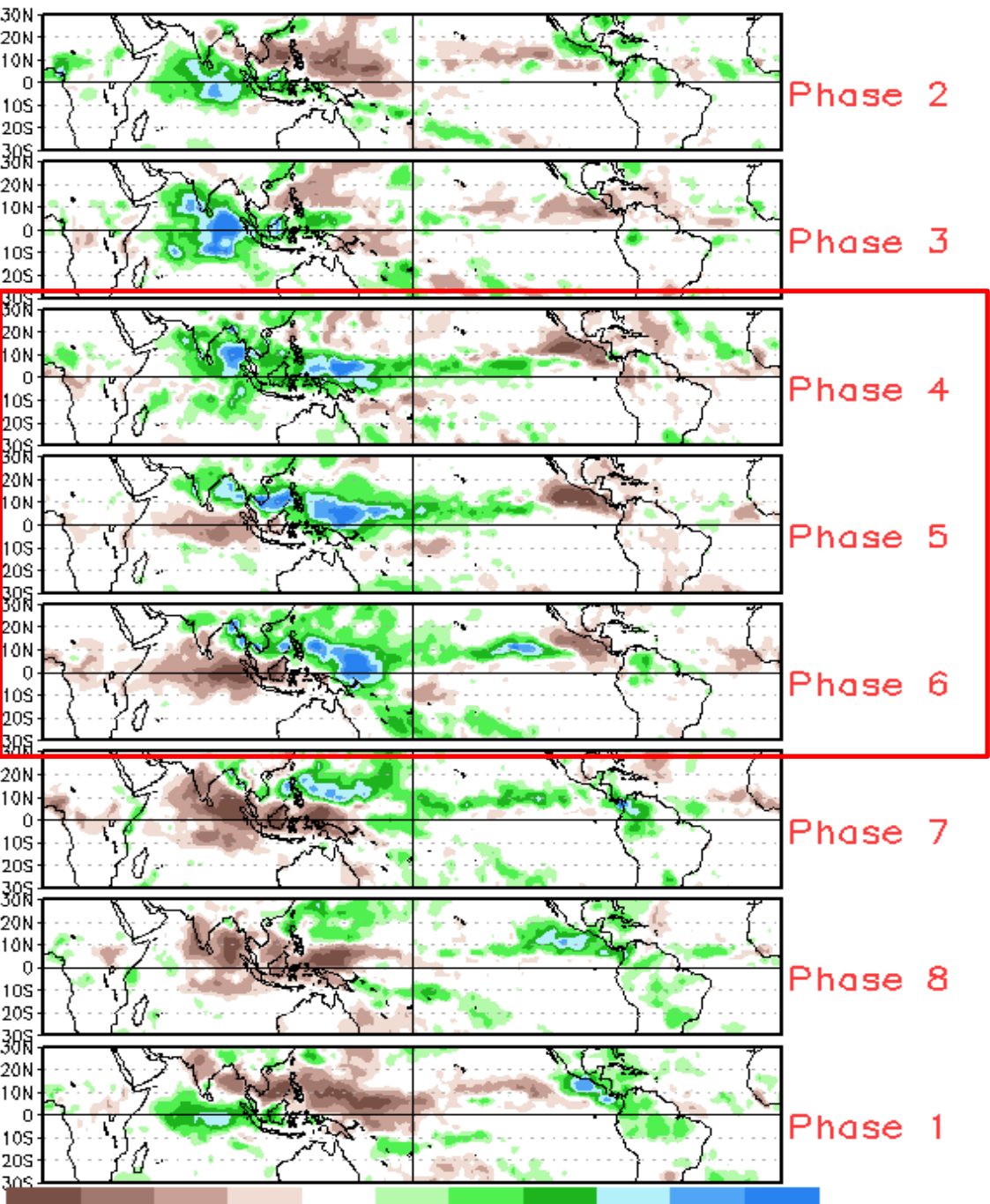
MJO Index Forecast for 27Aug2019-10Sep2019



MJO Index Forecast for 27Aug2019-04Sep2019

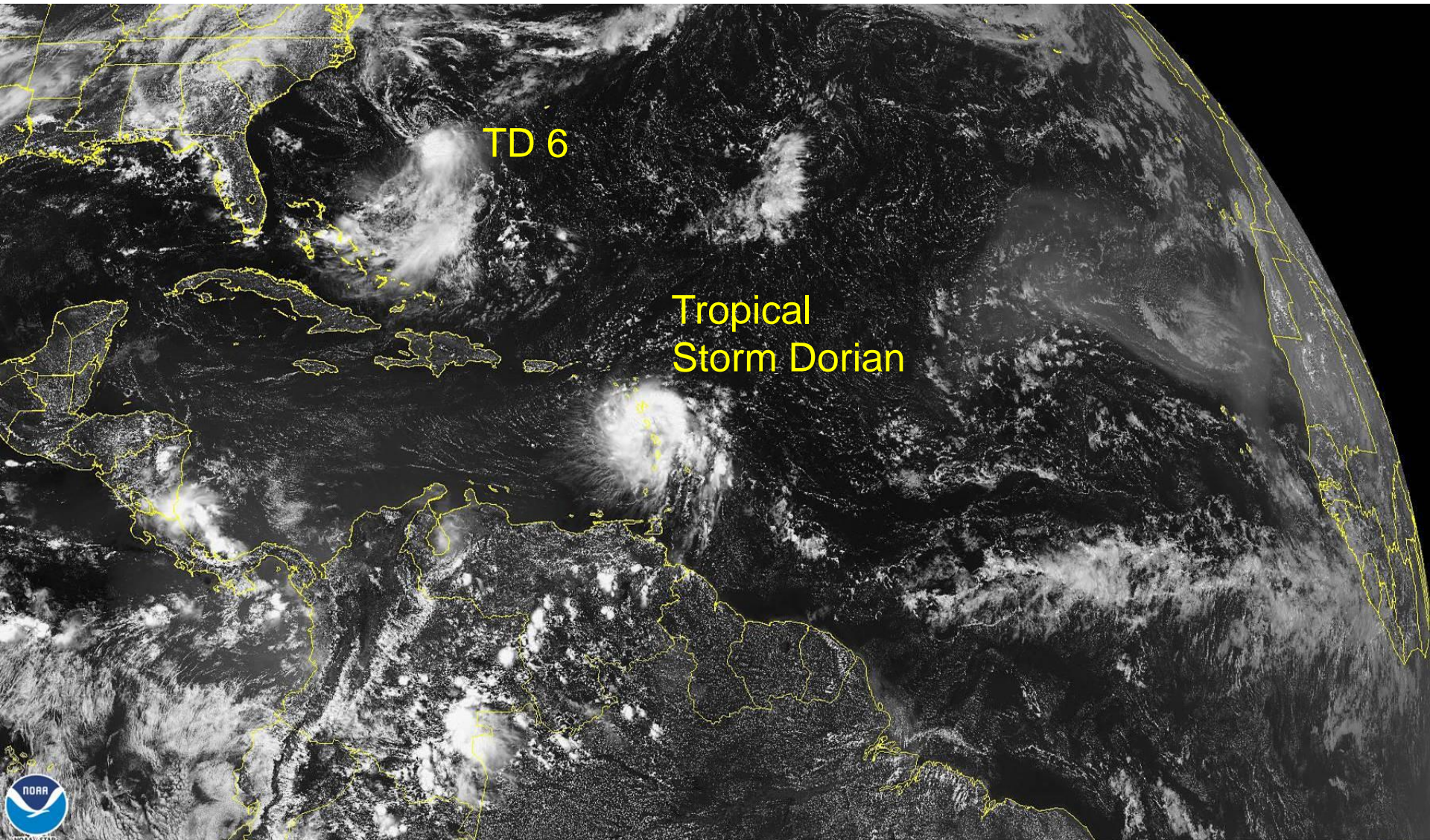


- GFS and JMA indicate a continued weak MJO.
- ECMWF ensemble mean (green line) and most of its ensemble members depict a MJO propagating east from the Maritime Continent (phases 4 and 5) to the West Pacific (phase 6).





Visible Satellite Image: 1:10pm EDT

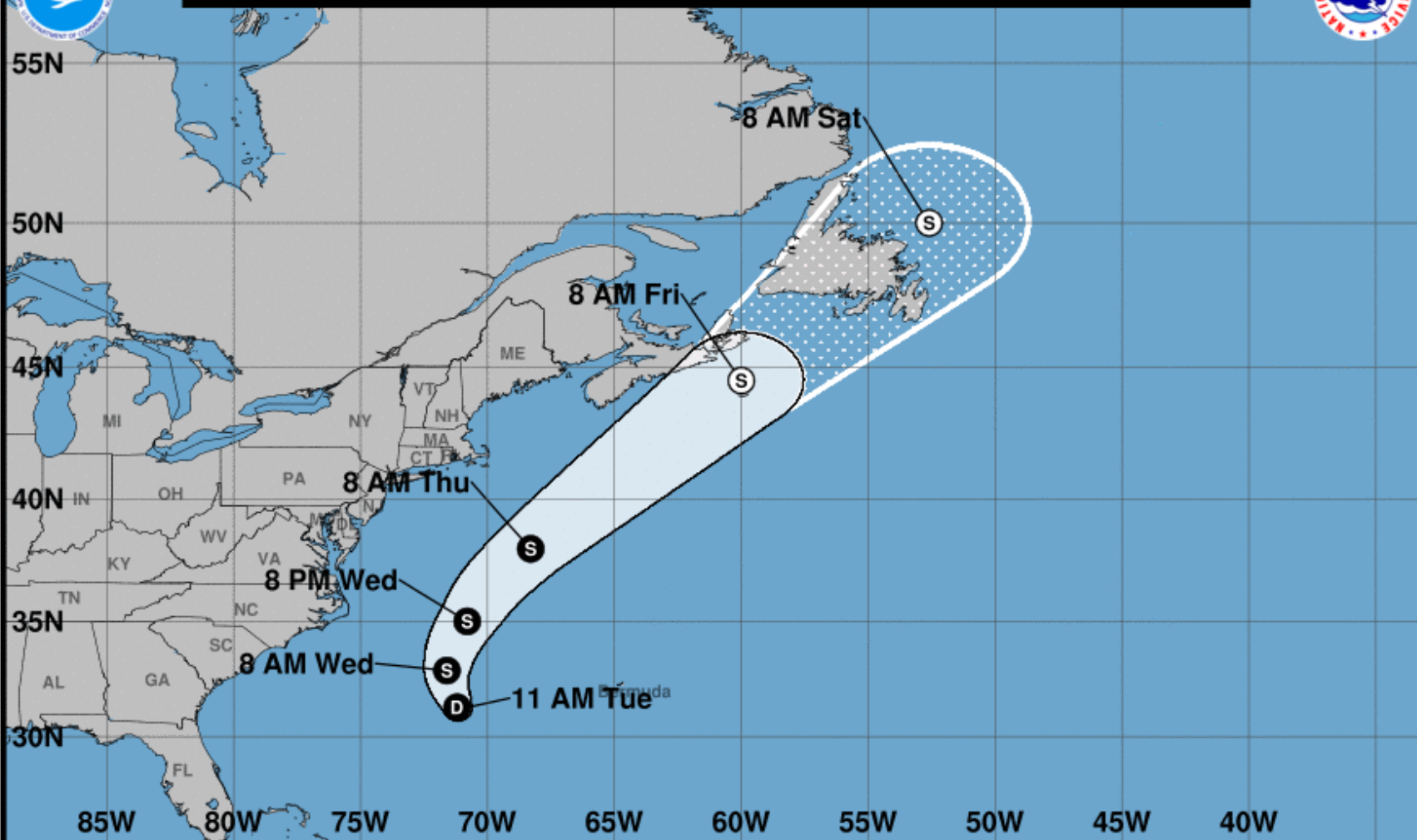


27 Aug 2019 17:10Z NOAA/NESDIS/STAR GOES-East Band 02





Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



### Tropical Depression Six

Tuesday August 27, 2019  
 11 AM EDT Advisory 4  
 NWS National Hurricane Center

### Current information: x

Center location 31.2 N 71.2 W  
 Maximum sustained wind 35 mph  
 Movement N at 2 mph

### Forecast positions:

● Tropical Cyclone ○ Post/Potential TC  
 Sustained winds: D < 39 mph  
 S 39-73 mph H 74-110 mph M > 110 mph

### Potential track area:

Day 1-3 Day 4-5

### Watches:

Hurricane Trop Stm

### Warnings:

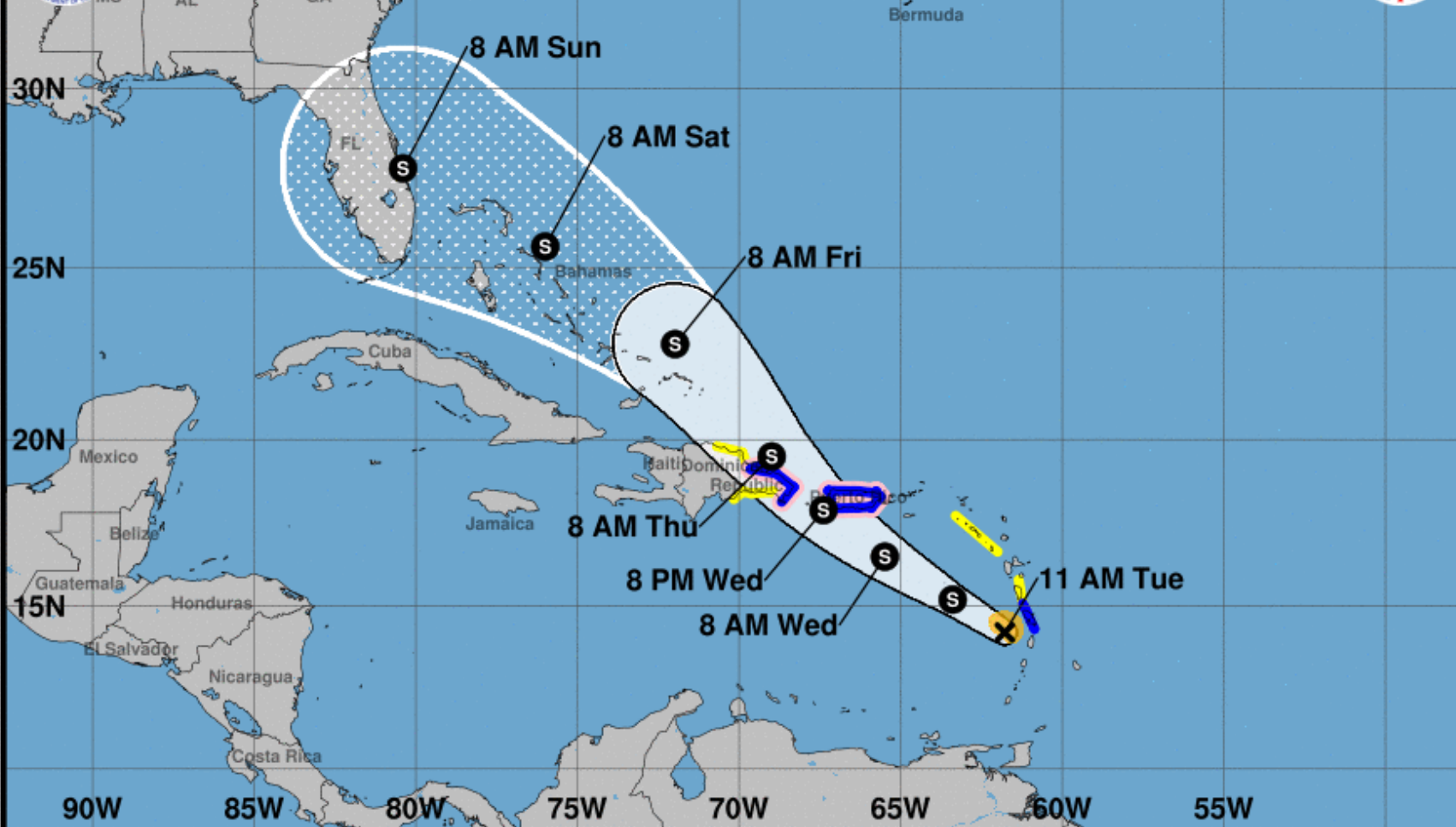
Hurricane Trop Stm

### Current wind extent:

Hurricane Trop Stm



Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



### Tropical Storm Dorian

Tuesday August 27, 2019  
 11 AM AST Advisory 13  
 NWS National Hurricane Center

### Current information: x

Center location 14.2 N 61.8 W  
 Maximum sustained wind 50 mph  
 Movement WNW at 13 mph

### Forecast positions:

● Tropical Cyclone ○ Post/Potential TC  
 Sustained winds: D < 39 mph  
 S 39-73 mph H 74-110 mph M > 110 mph

### Potential track area:

Day 1-3 Day 4-5

### Watches:

Hurricane Trop Stm

### Warnings:

Hurricane Trop Stm

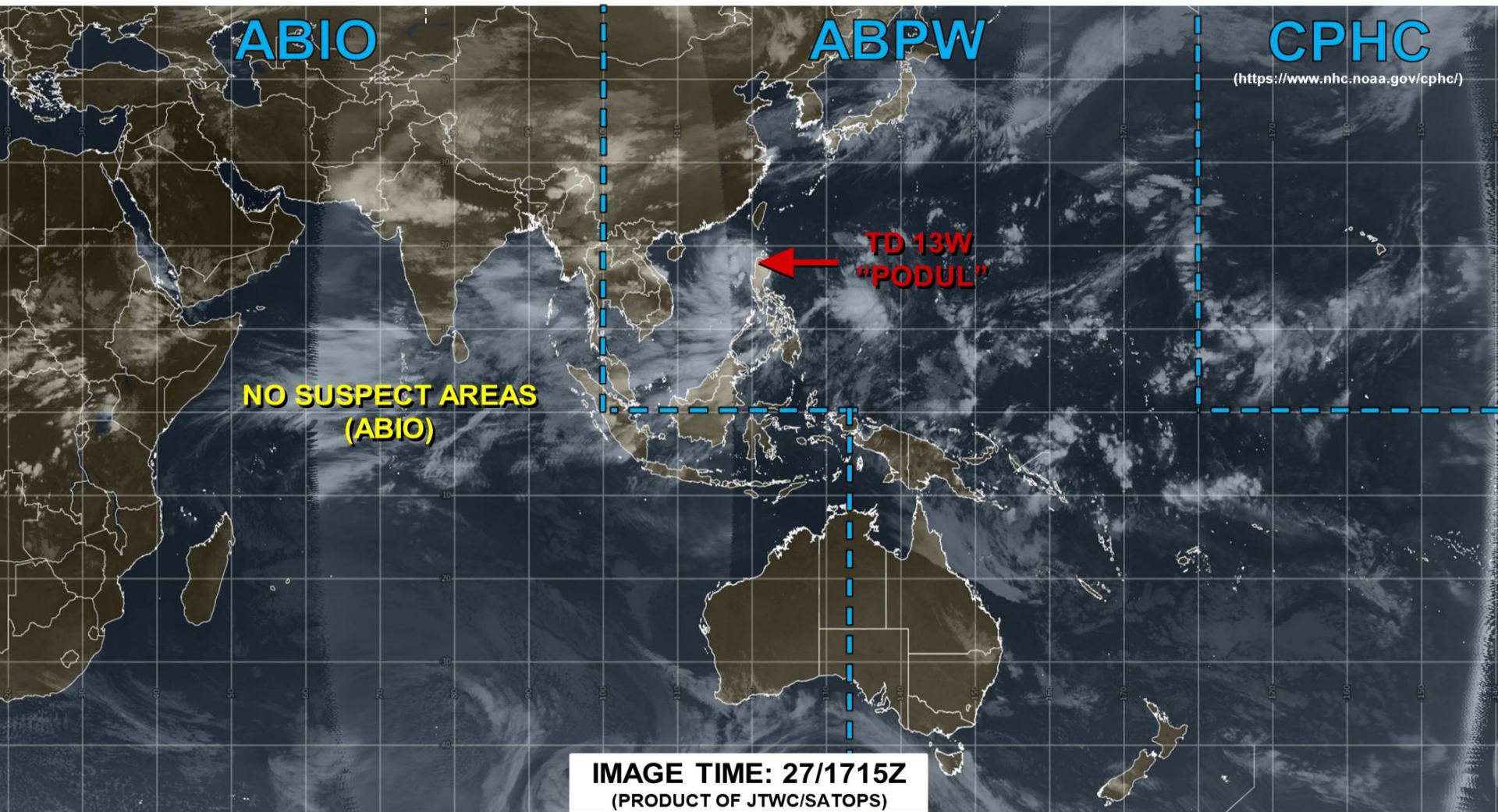
### Current wind extent:

Hurricane Trop Stm





# JOINT TYPHOON WARNING CENTER



**LOW**

TC formation unlikely within 24 hours

**MEDIUM**

TC development likely, but expected to occur beyond 24 hours

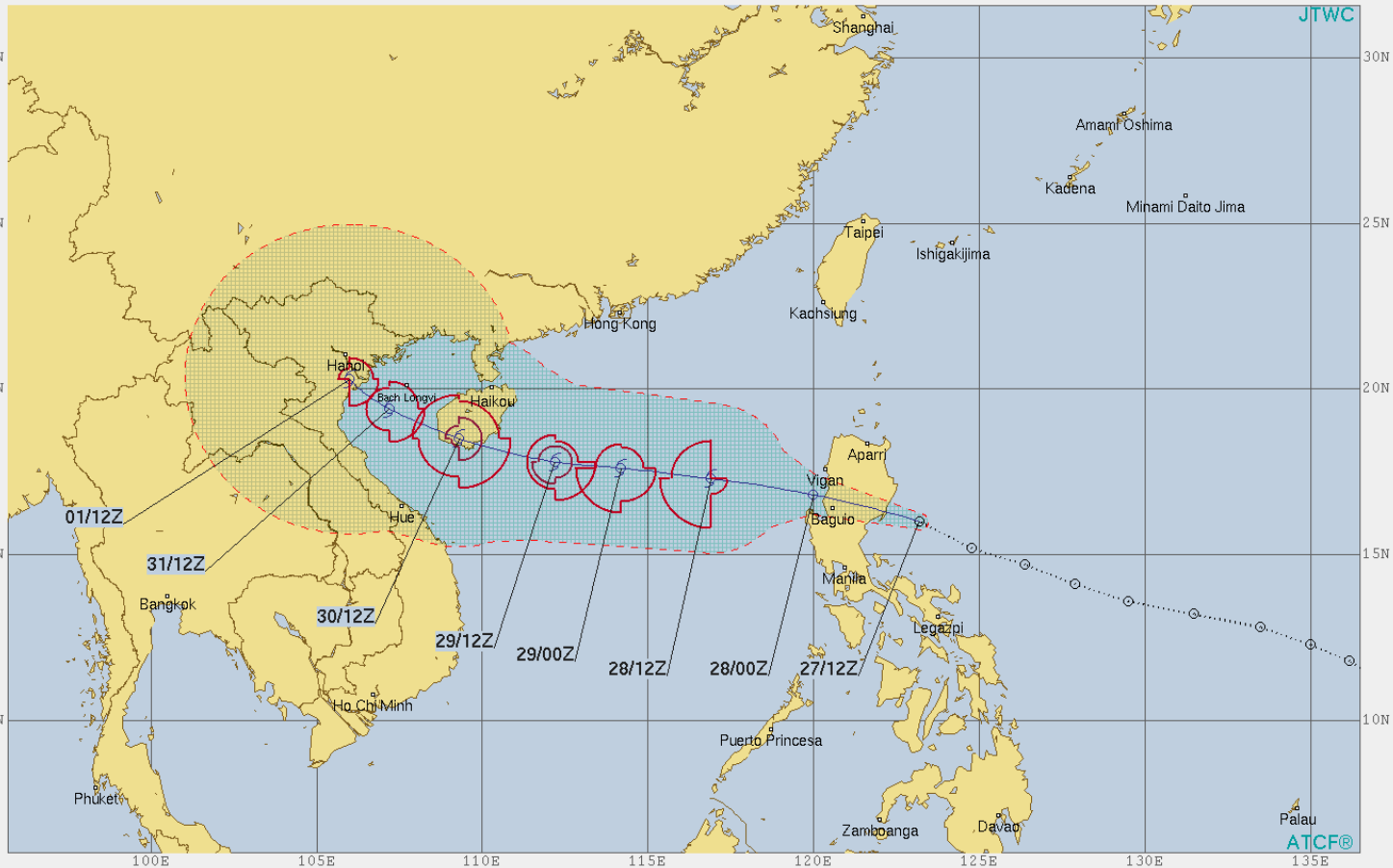
**HIGH**

TC development likely within 24 hours (Reference TCFA)

 Tropical Cyclone (Reference Warning)



# Joint Typhoon Warning Center



TROPICAL DEPRESSION 13W (PODUL) WARNING #5  
 WTPN31 PGTW 271500  
 271200Z POSIT: NEAR 16.0N 123.2E  
 MOVING 300 DEGREES TRUE AT 17 KNOTS  
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 12 FEET  
 27/12Z, WINDS 030 KTS, GUSTS TO 040 KTS  
 28/00Z, WINDS 030 KTS, GUSTS TO 040 KTS  
 28/12Z, WINDS 035 KTS, GUSTS TO 045 KTS  
 29/00Z, WINDS 040 KTS, GUSTS TO 050 KTS  
 29/12Z, WINDS 050 KTS, GUSTS TO 065 KTS  
 30/12Z, WINDS 050 KTS, GUSTS TO 065 KTS  
 31/12Z, WINDS 045 KTS, GUSTS TO 055 KTS  
 01/12Z, WINDS 040 KTS, GUSTS TO 050 KTS

CPA TO:	NM	DTG
HANOI	42	01/12Z
MANILA	114	27/18Z
CLARK AB	85	27/20Z
SUBIC BAY	114	27/21Z
KAOHSIUNG	345	28/03Z
HONG KONG	281	29/02Z
DA NANG	160	30/13Z

BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
CLARK AB	072	158	0
MANILA	056	153	0
SUBIC BAY	067	188	0

LESS THAN 34 KNOTS  
 34-63 KNOTS  
 MORE THAN 63 KNOTS  

 FORECAST CYCLONE TRACK  

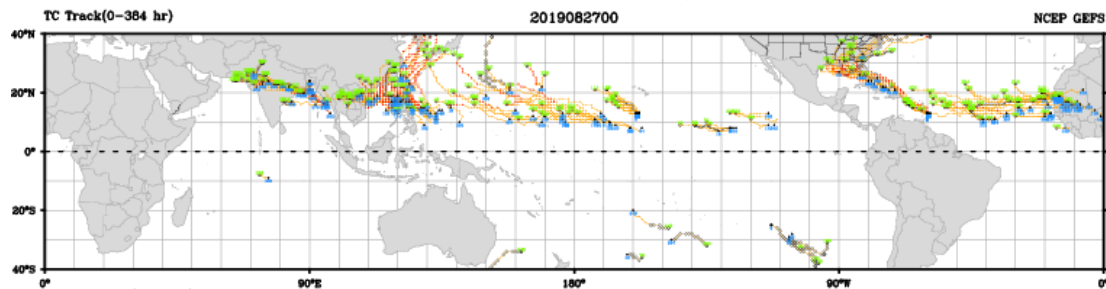
 PAST CYCLONE TRACK  

 DENOTES 34 KNOT WIND DANGER AREA/USN SHIP AVOIDANCE AREA  

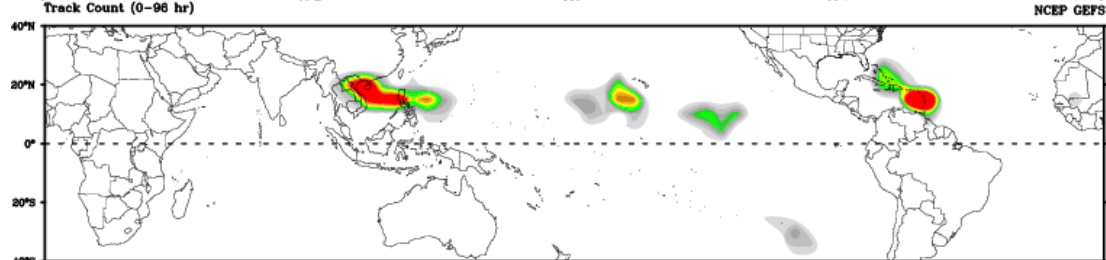
 FORECAST 34/50/64 KNOT WIND RADII



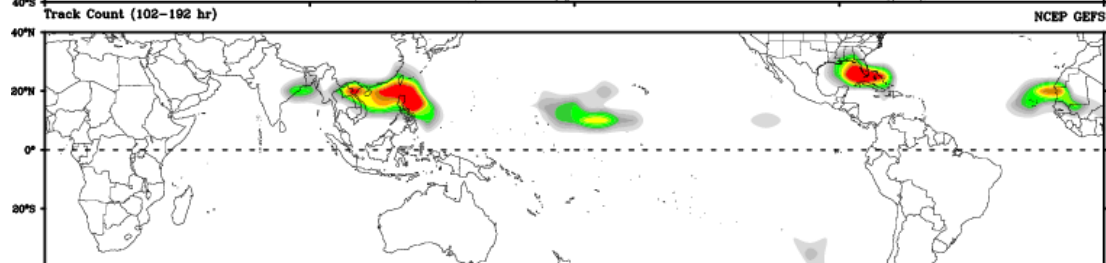
ATCF®



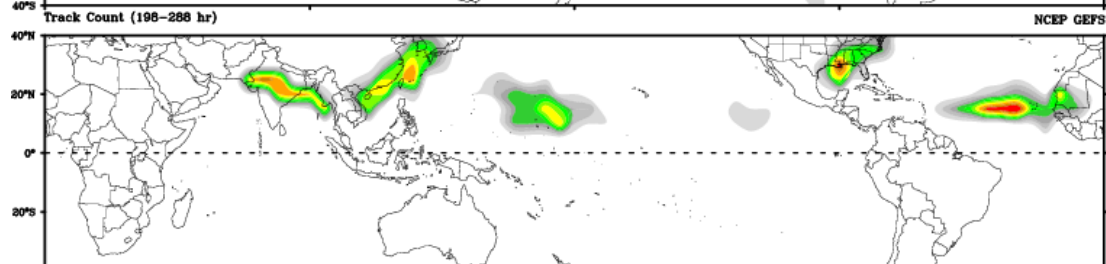
Days 1-4



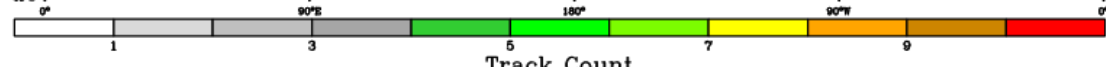
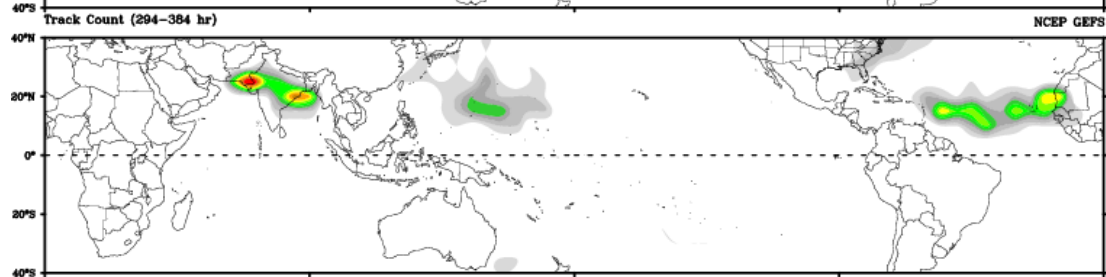
Day 5-8



Day 9-12

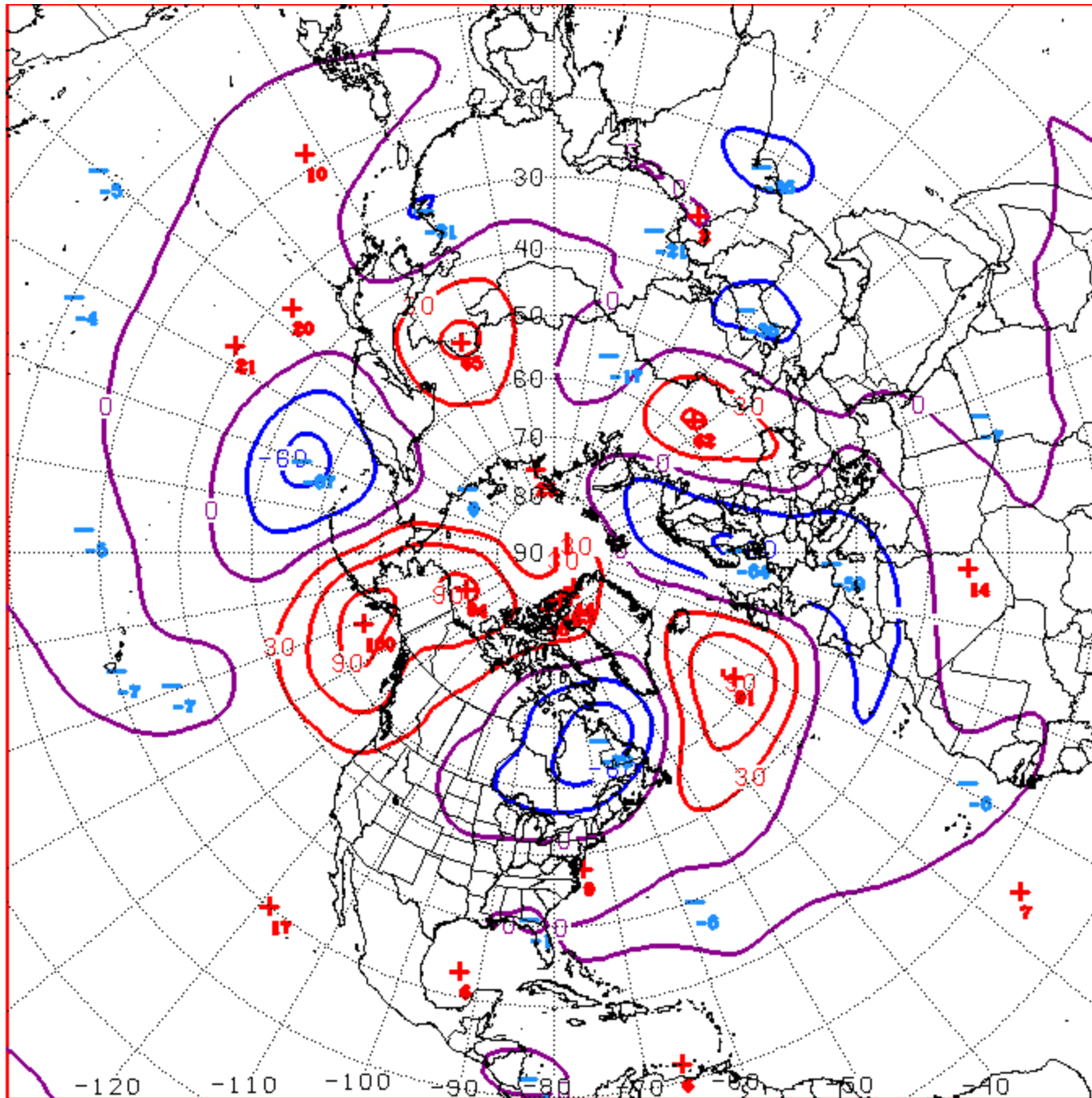


Day 13-15



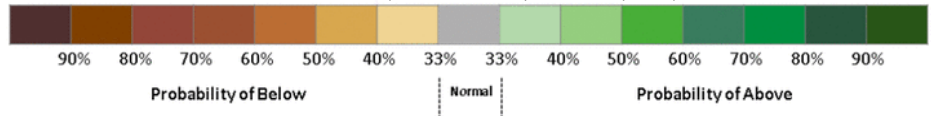
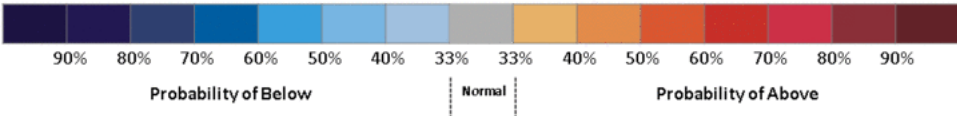
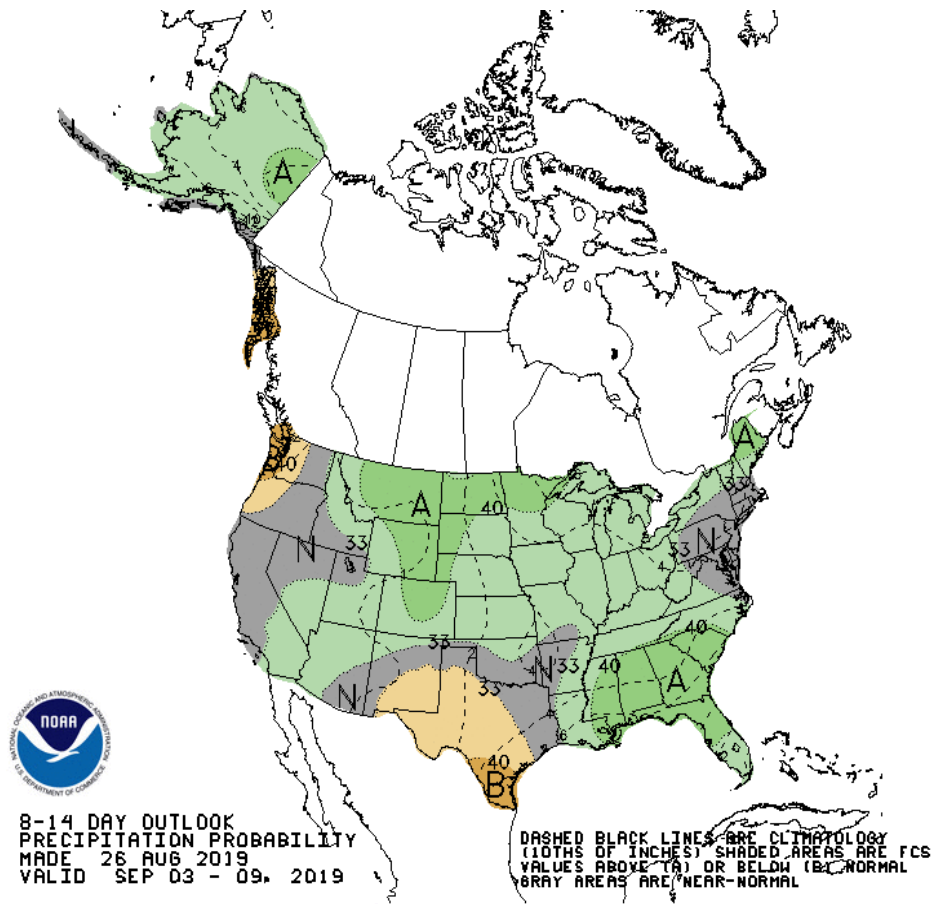
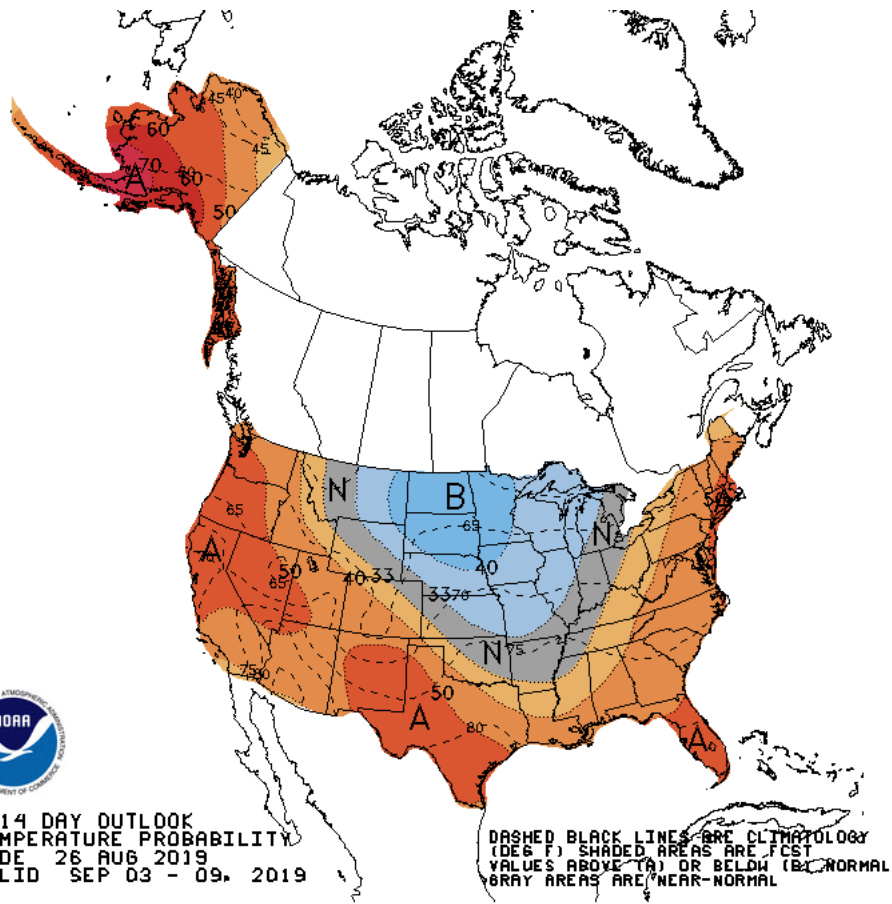
# Connections to U.S. Impacts





D+11 500 MB ANOMALIES FROM 00Z ENSM  
 CPC MAP MADE AUG 27 2019 0601 UTC CNTD SEP 07 2019

# Week 2 – Temperature and Precipitation

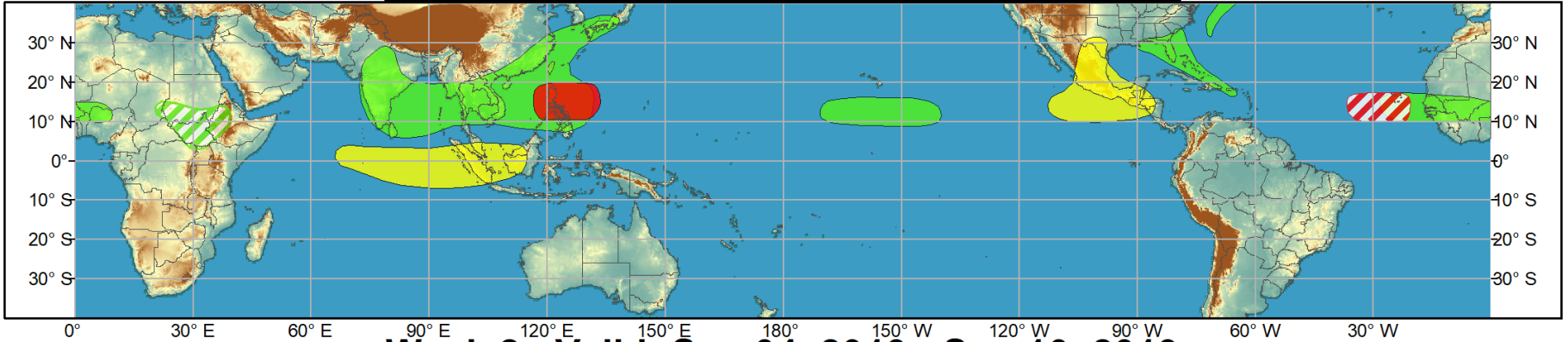




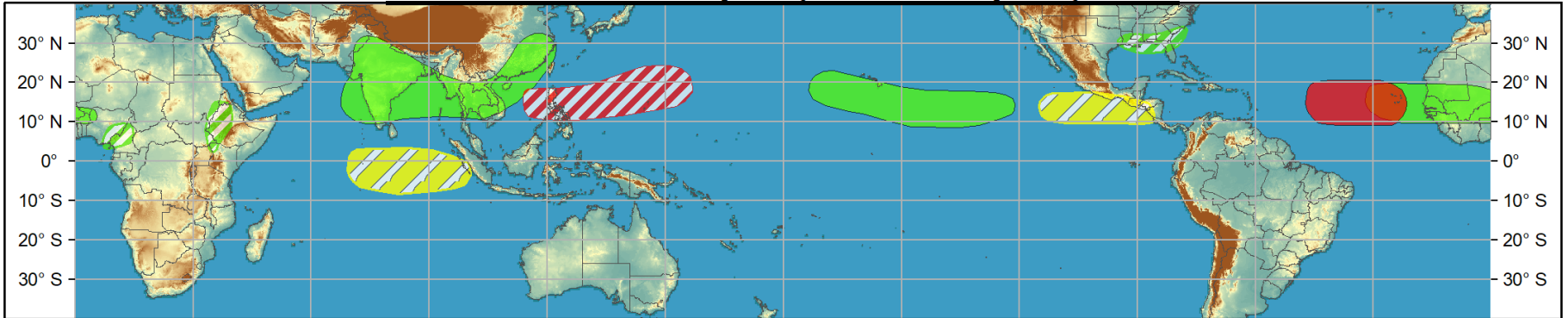
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