

Global Tropics Hazards And Benefits Outlook

September 27, 2016

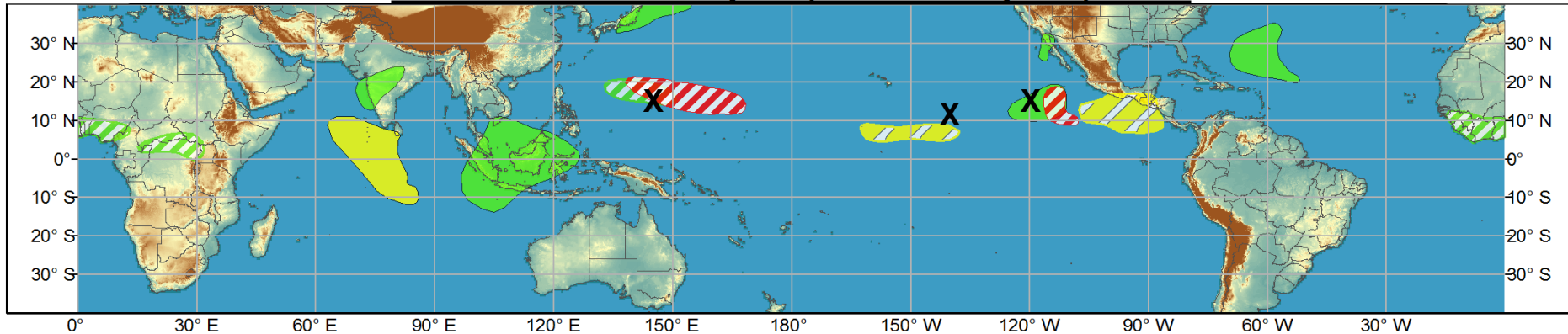
Adam Allgood

Outline

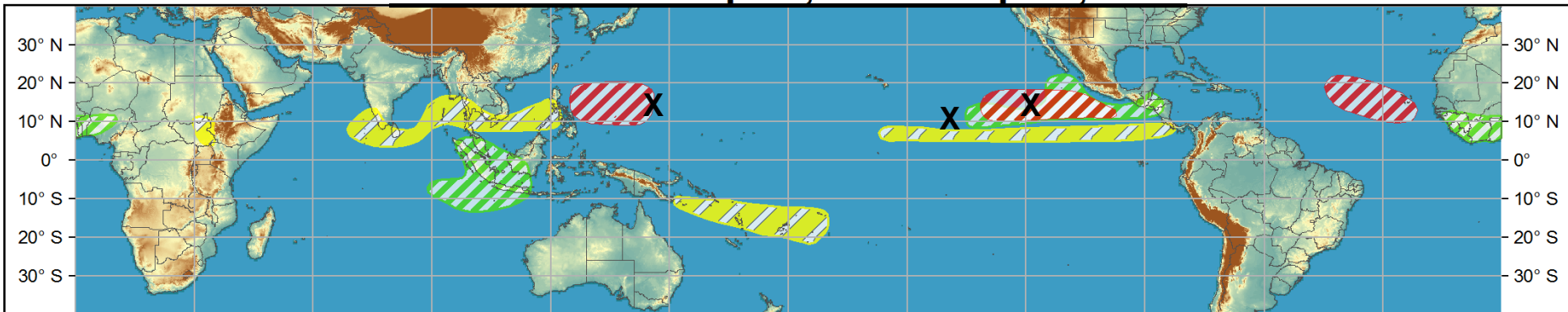
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review – Tropical Cyclones

Week 1 - Valid: Sep 21, 2016 - Sep 27, 2016



Week 2 - Valid: Sep 21, 2016 - Sep 27, 2016

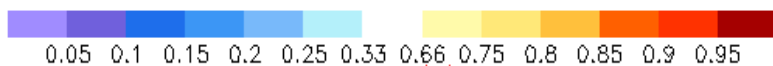
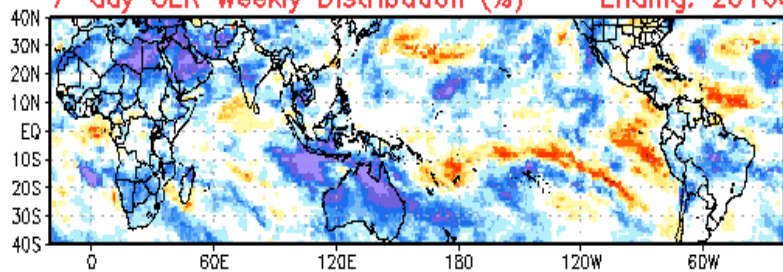


Typhoon Megi (Cat-4): Formed 23 September 2016

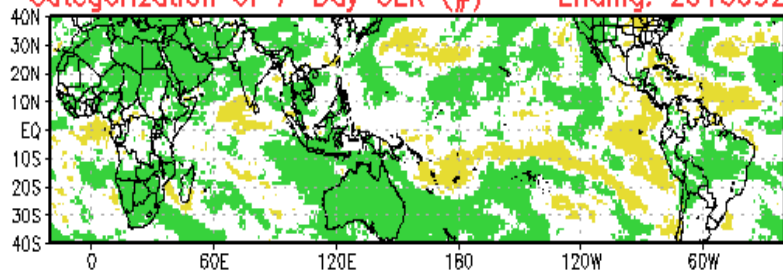
Tropical Storm Roslyn: Formed 25 September 2016

Tropical Storm Ulika: Formed 26 September 2016

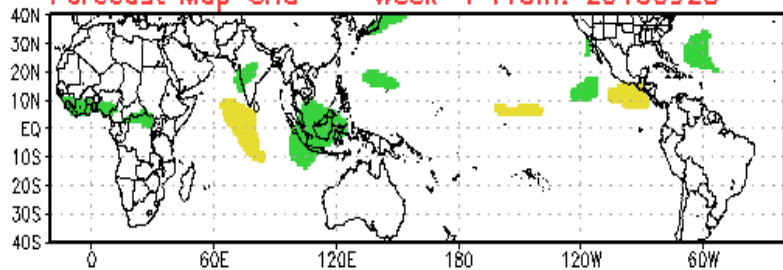
7-day OLR Weekly Distribution (%) -- Ending: 20160927



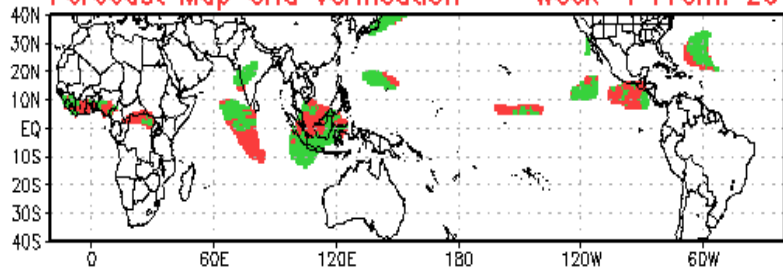
Categorization of 7-Day OLR (#) -- Ending: 20160927



Forecast Map Grid -- Week-1 From: 20160920

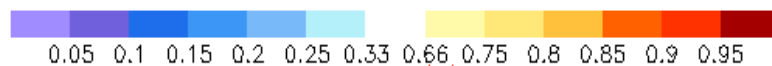
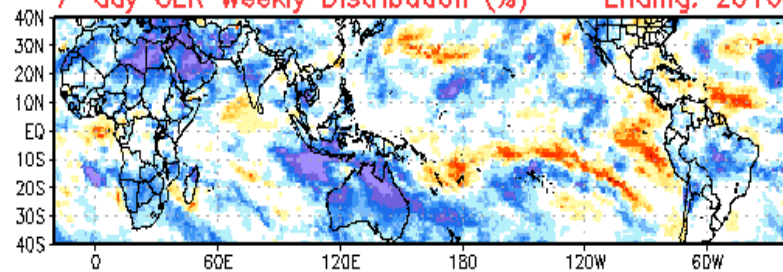


Forecast Map Grid Verification -- Week-1 From: 20160920

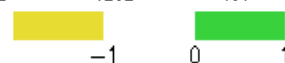
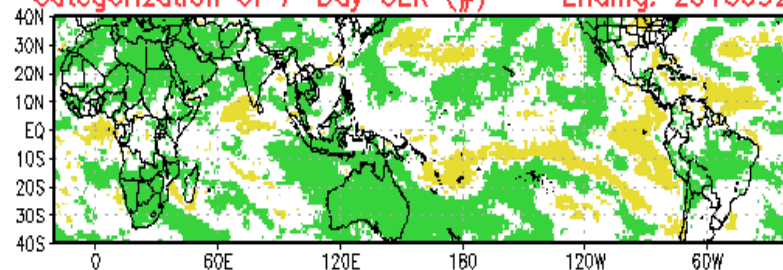


Hit: Green, Miss: Red
Heidke Skill Score: 36.6960

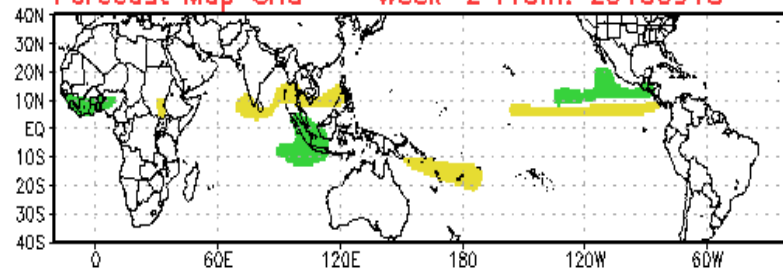
7-day OLR Weekly Distribution (%) -- Ending: 20160927



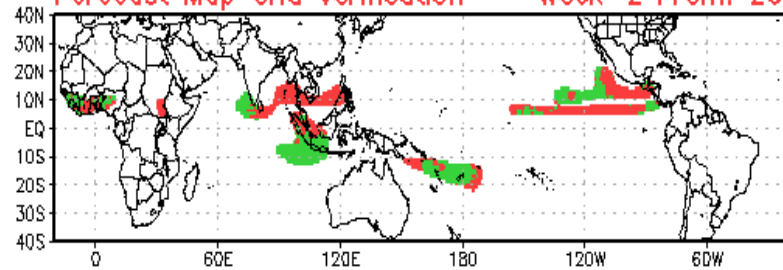
Categorization of 7-Day OLR (#) -- Ending: 20160927



Forecast Map Grid -- Week-2 From: 20160913



Forecast Map Grid Verification -- Week-2 From: 20160913



Hit: Green, Miss: Red
Heidke Skill Score: 17.6232

Synopsis of Climate Modes

ENSO:

- ENSO-Neutral conditions are slightly favored (between 55-60%) during the upcoming Northern Hemisphere fall and winter 2016-17.

MJO and other subseasonal tropical variability:

- The MJO weakened during the past week, although some indicators continue to show an enhanced convective envelope over the Maritime Continent.
- Convection over the far eastern Indian Ocean and Maritime Continent is partly due to the negative IOD phase. The low frequency state also favors suppressed convection near the equatorial Pacific.
- Kelvin waves activity originating from the Maritime Continent may affect East Pacific TC development. Some dynamical models depict a more coherent subseasonal signal emerging over the East Pacific during Week-2

Extratropics:

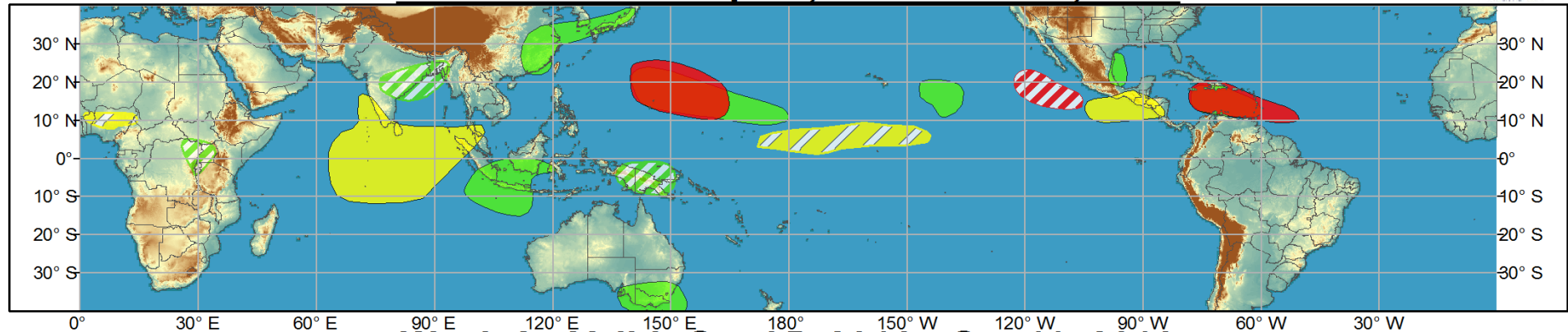
- MJO influence does not appear to be a significant factor in the mid-latitude flow across North America. The primary tropical-extratropical impacts during the next two weeks will likely result from tropical cyclones.



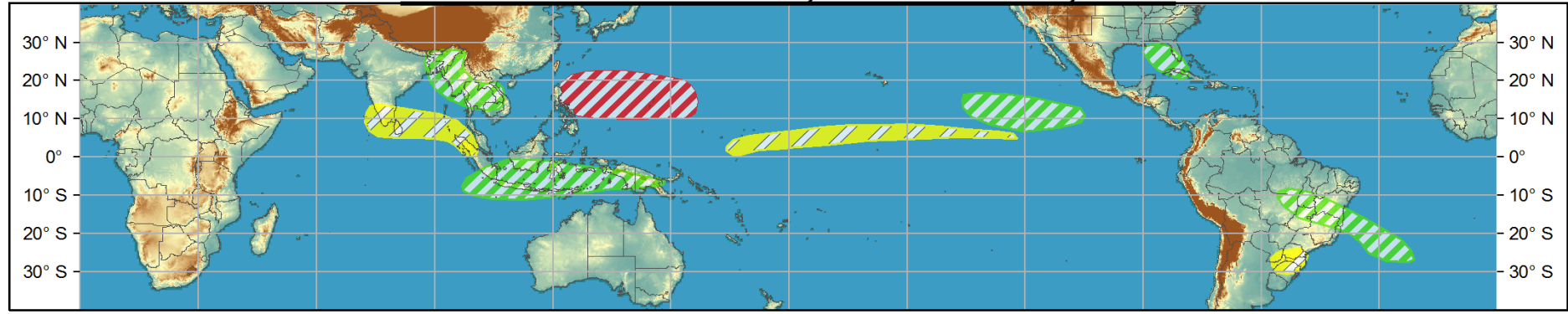
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Sep 28, 2016 - Oct 04, 2016



Week 2 - Valid: Oct 05, 2016 - Oct 11, 2016



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: 09/27/2016
Forecaster: Allgood

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.

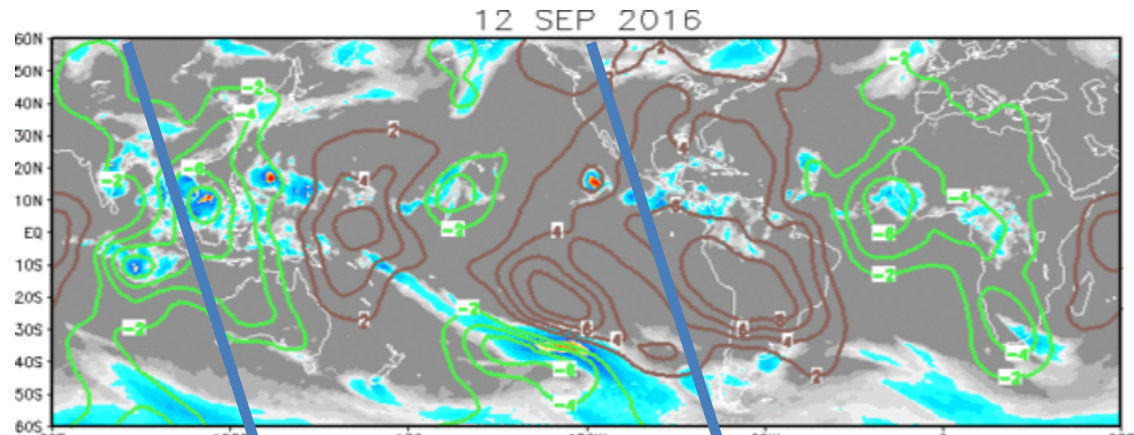


IR Satellite & 200-hpa Velocity Potential Anomalies

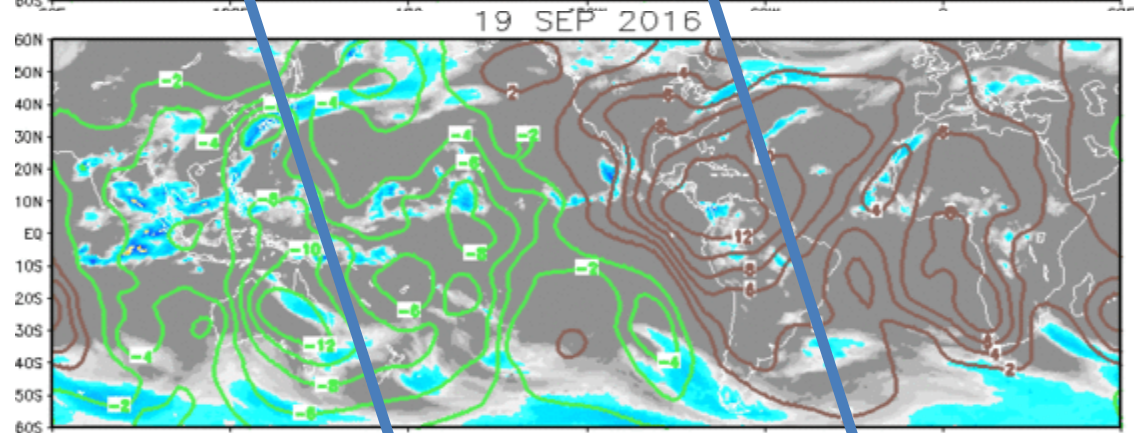
Green: Enhanced Divergence

Brown: Enhanced Convergence

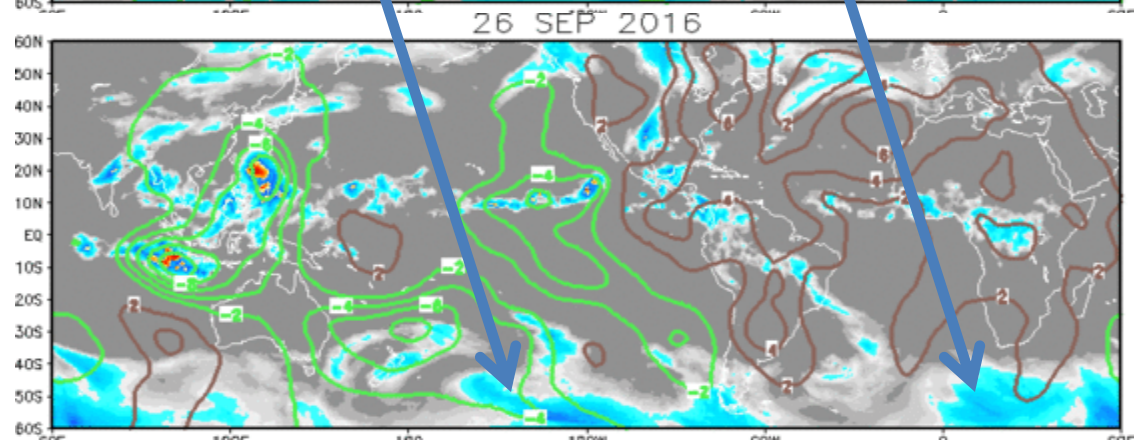
Wave-2 pattern, with strongest divergence (convergence) anomalies over the Indian Ocean (East Pacific)



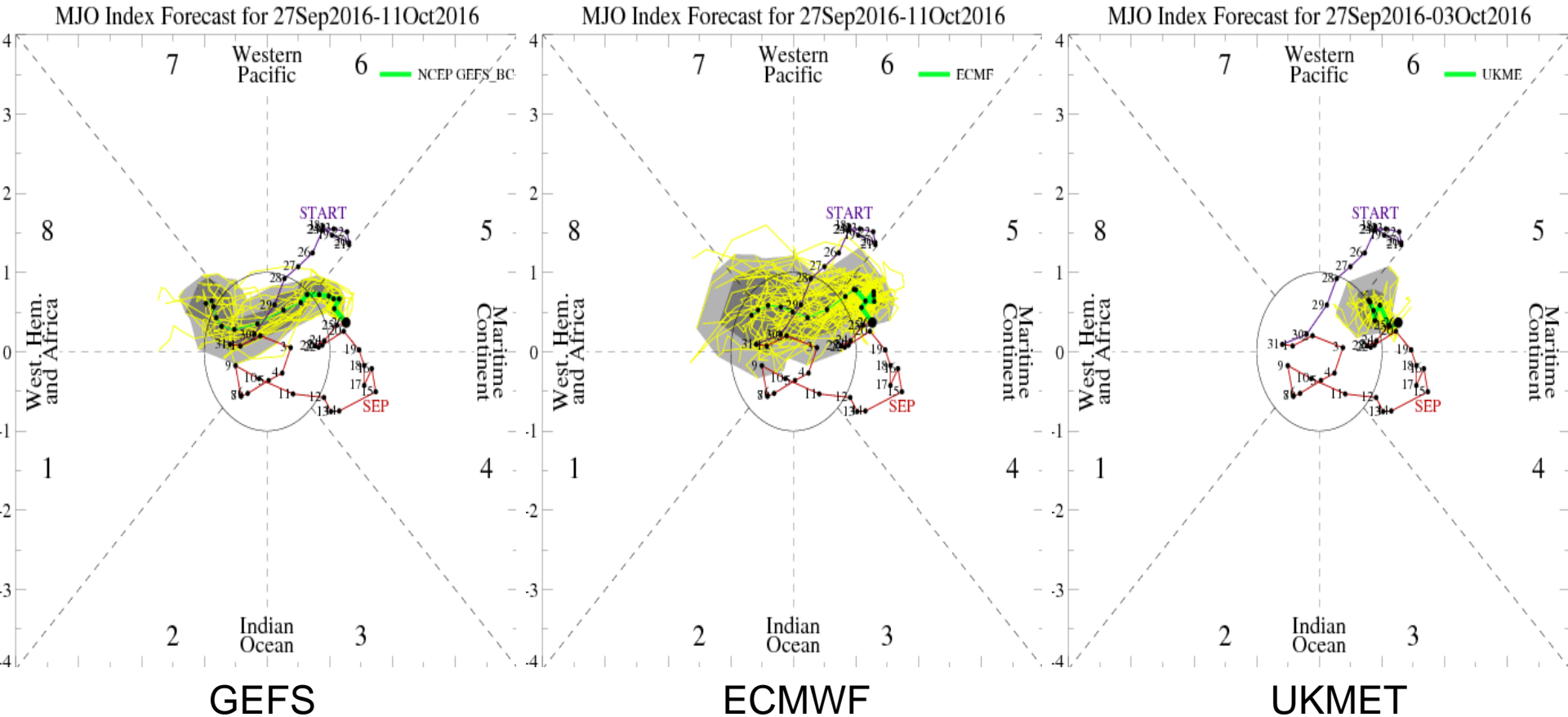
A more coherent Wave-1 pattern emerged, enhanced phase over the Maritime Continent.



The pattern is slightly less coherent, with the strongest divergence anomalies persisting over the eastern I.O./Maritime Continent.



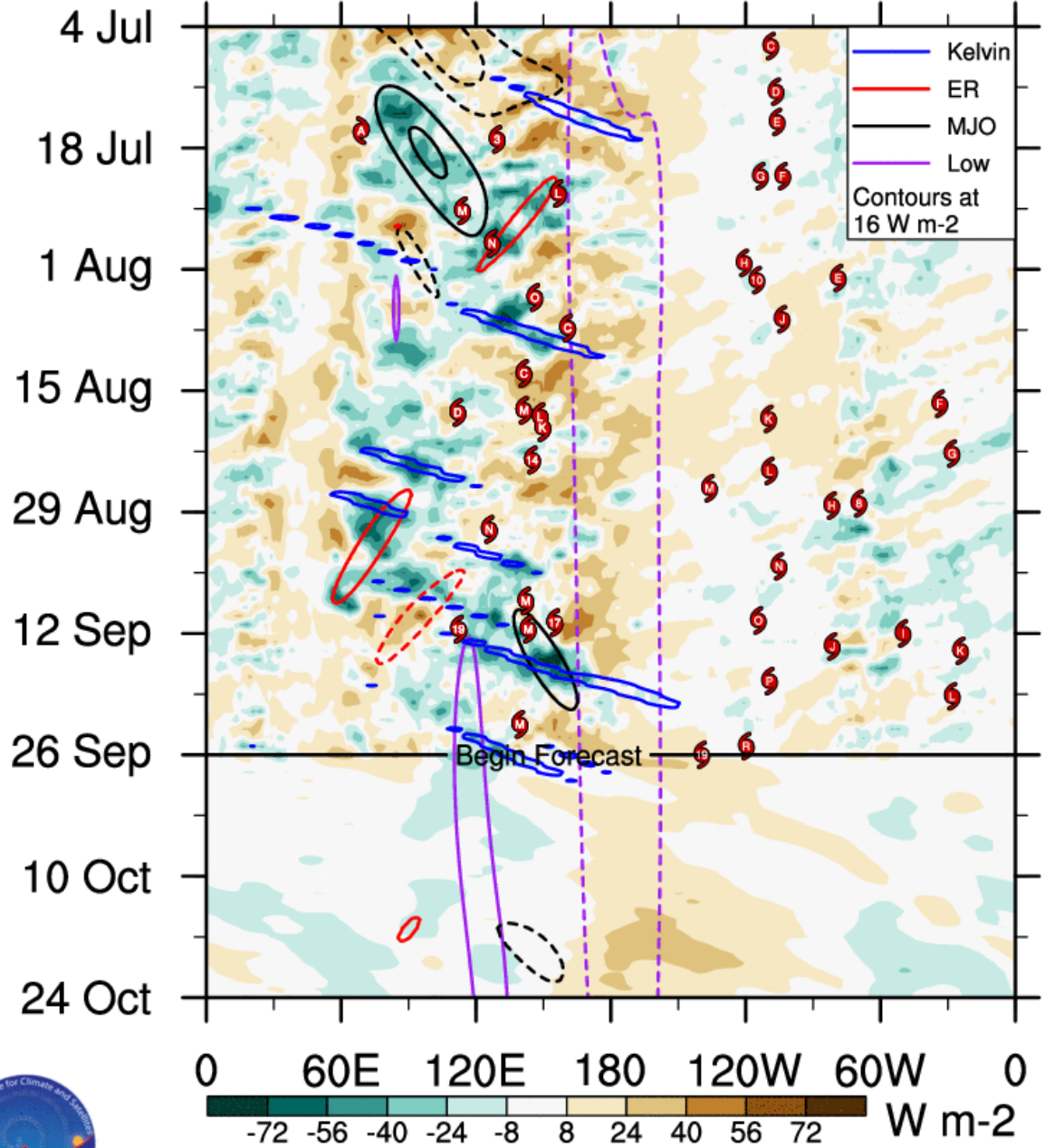
MJO Observation/Forecast



CFS and ECMWF are in pretty good agreement, depicting a weak signal during Week-1, with possible emergence of a signal over the East Pacific by the end of Week-2.

OLR

5S - 5N

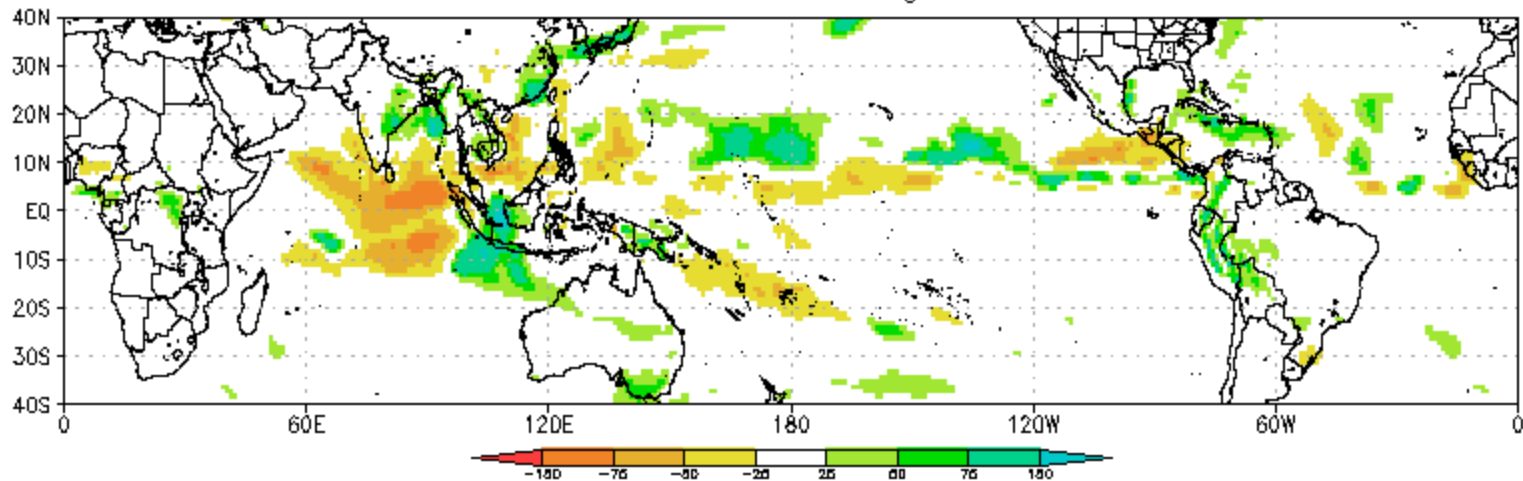


Low frequency signal
apparent over eastern
IO/Maritime Continent.

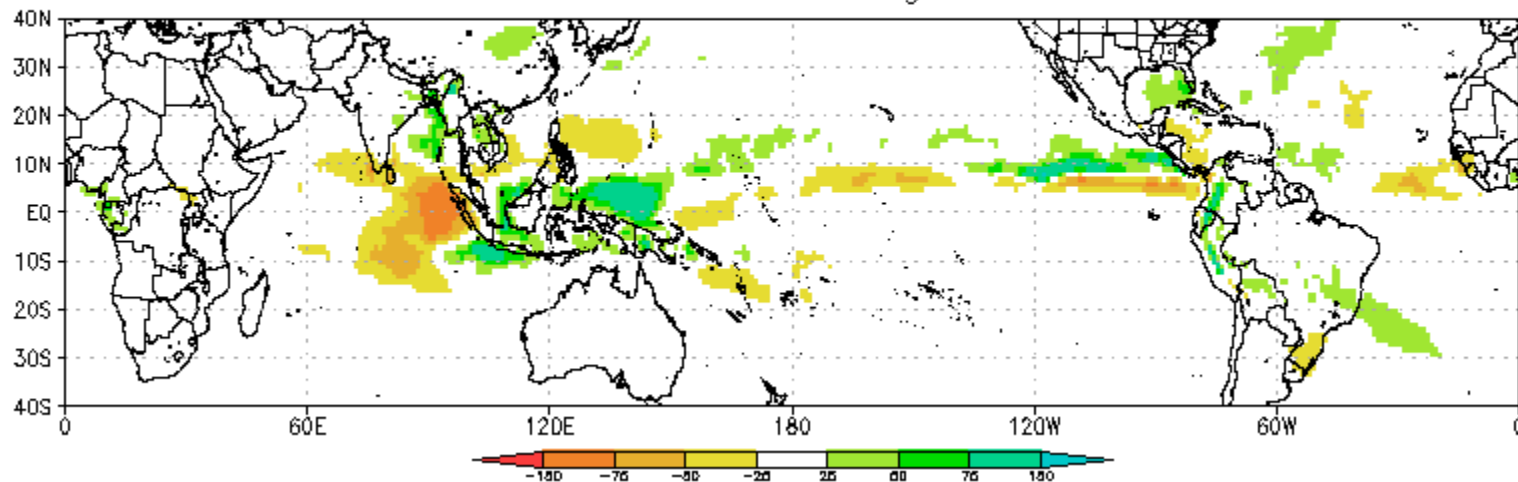
Kelvin Wave activity
crossing the Pacific,
briefly interrupting the low
frequency suppressed
signal.



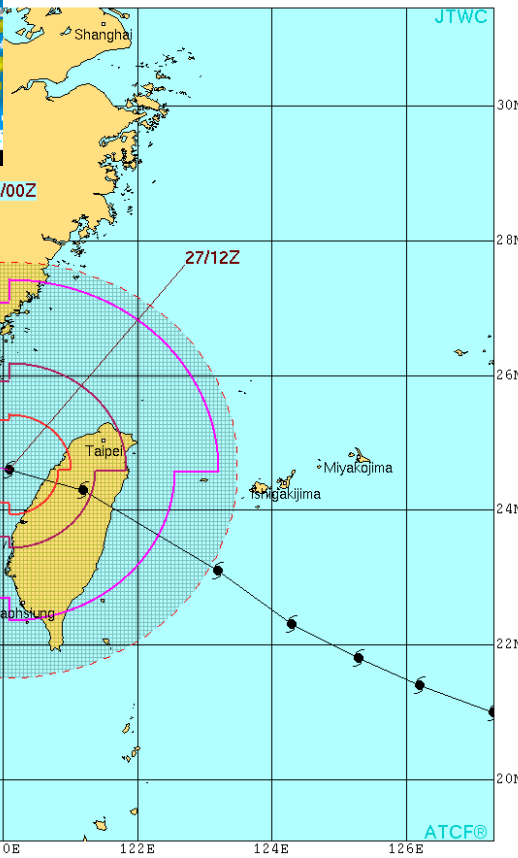
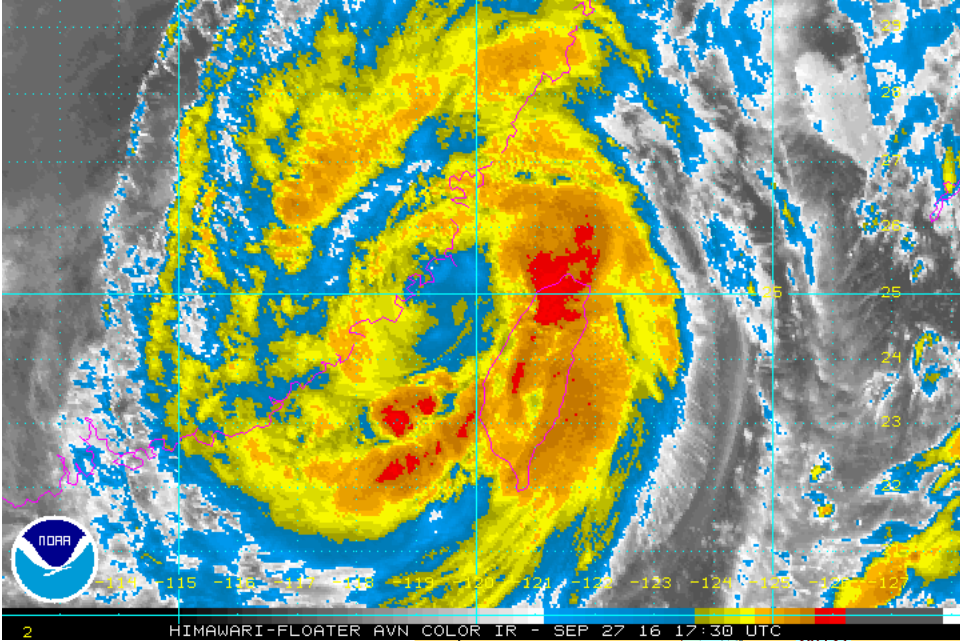
CFSv2 Precip Anomalies (mm) Issued 26Sep2016
Week-1 Forecast Ending 04Oct2016



CFSv2 Precip Anomalies (mm) Issued 26Sep2016
Week-2 Forecast Ending 11Oct2016



Typhoon Megi



TYPHOON 20W (MEGI) WARNING #19
 WPN31 PGTW 271500
 271200Z POSIT: NEAR 24.6N 120.1E
 MOVING 285 DEGREES TRUE AT 10 KNOTS
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 28 FEET
 27/12Z, WINDS 090 KTS, GUSTS TO 110 KTS
 28/00Z, WINDS 055 KTS, GUSTS TO 070 KTS
 28/12Z, WINDS 035 KTS, GUSTS TO 045 KTS
 29/00Z, WINDS 020 KTS, GUSTS TO 030 KTS

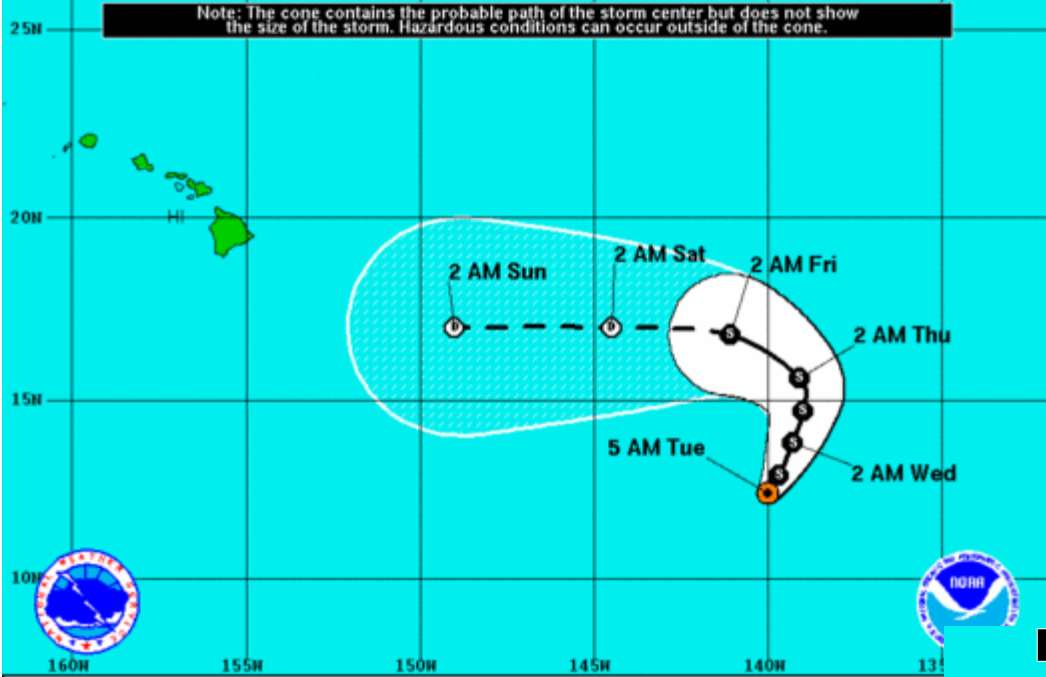
CPA TO:	NM	DTG
HONG_KONG	196	28/16Z

BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
HONG_KONG	066	353	0
TAIPEI	249	82	0
KAOHSIUNG	355	121	0

○ LESS THAN 34 KNOTS
 ◌ 34-63 KNOTS
 ● MORE THAN 63 KNOTS
 ● PAST 6 HOURLY CYCLONE POSITS IN BLACK
 ● FORECAST CYCLONE POSITS IN COLOR



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 Ulika
 Tuesday September 27, 2016
 5 AM HST Advisory 5
 NWS Central Pacific Hurricane Center

Current Information: ●
 Center Location 12.4 N 140.0 W
 Max Sustained Wind 50 mph
 Movement NE at 5 mph

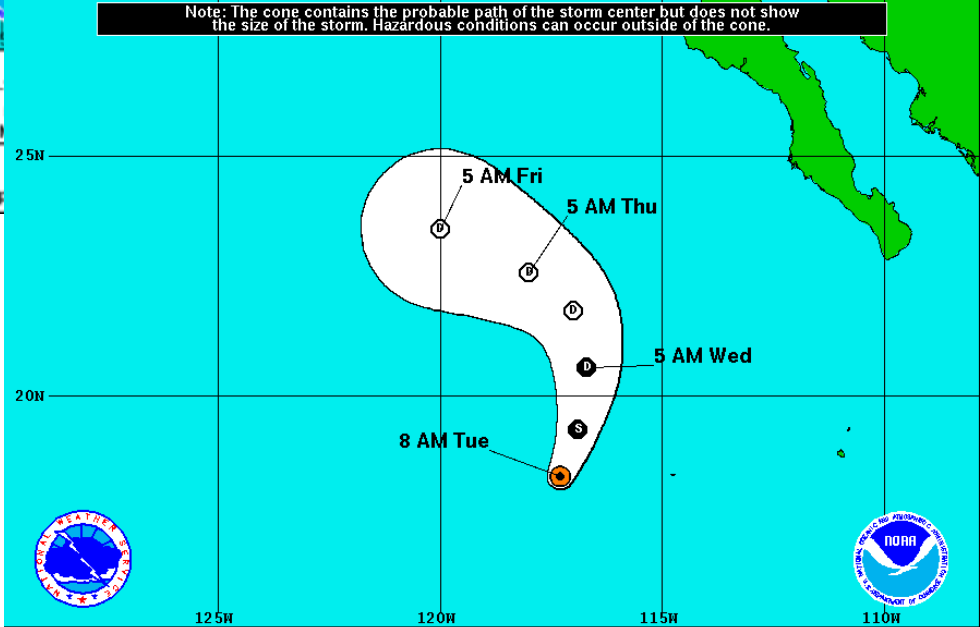
Forecast Positions:
 ● Tropical Cyclone ○ Post-Sustained Winds: D < 39 S 39-73 mph H 74-110 mph I

Potential Track Area:
 Day 1-3 Day 4-5

Watches:
 Hurricane Trop.Storm

Warnings:
 Hurricane Trop.

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 Roslyn
 Tuesday September 27, 2016
 8 AM PDT Advisory 9
 NWS National Hurricane Center

Current Information: ●
 Center Location 18.3 N 117.3 W
 Max Sustained Wind 45 mph
 Movement NE at 7 mph

Forecast Positions:
 ● Tropical Cyclone ○ Post-Tropical Sustained Winds: D < 39 mph S 39-73 mph H 74-110 mph M > 110mph

Potential Track Area:
 Day 1-3 Day 4-5

Watches:
 Hurricane Trop.Storm

Warnings:
 Hurricane Trop.Storm

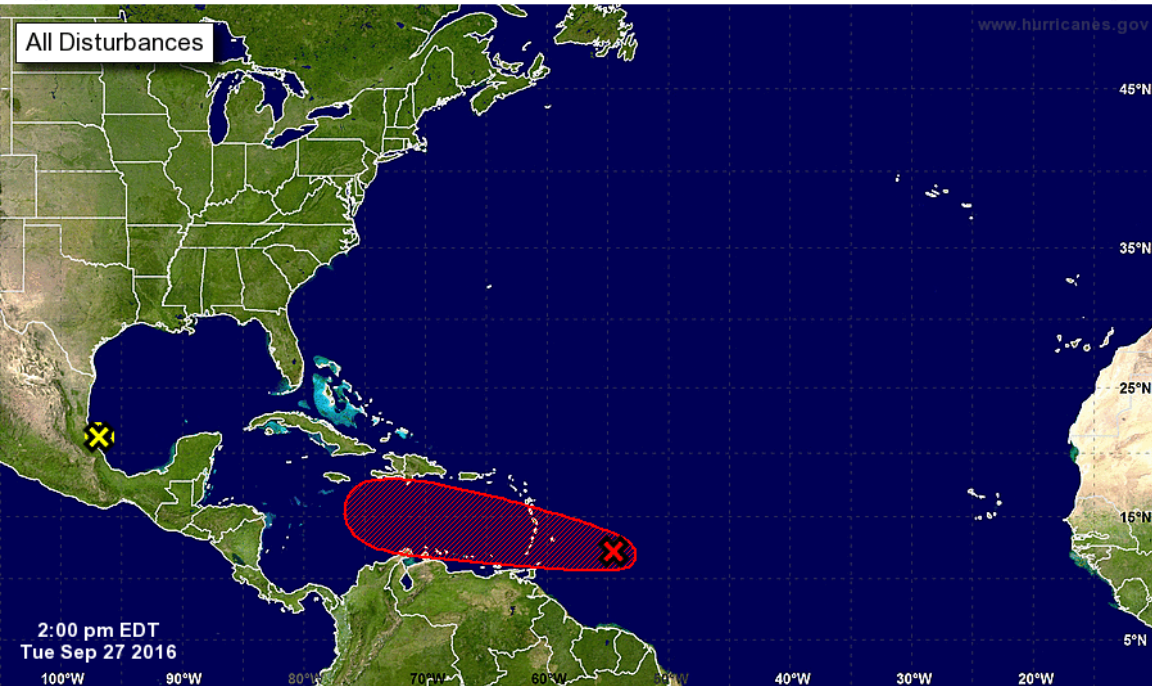


Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



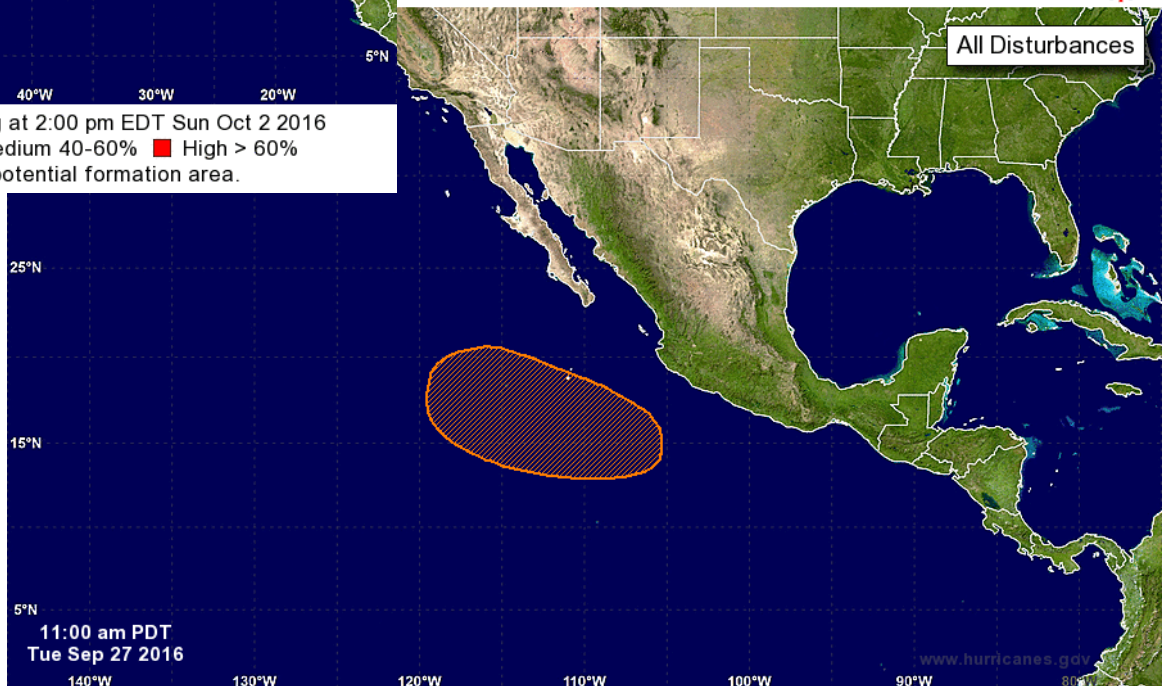
Graphical Tropical Weather Outlook



Tropical Cyclone Formation Potential for the Five-Day Period Ending at 2:00 pm EDT Sun Oct 2 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.

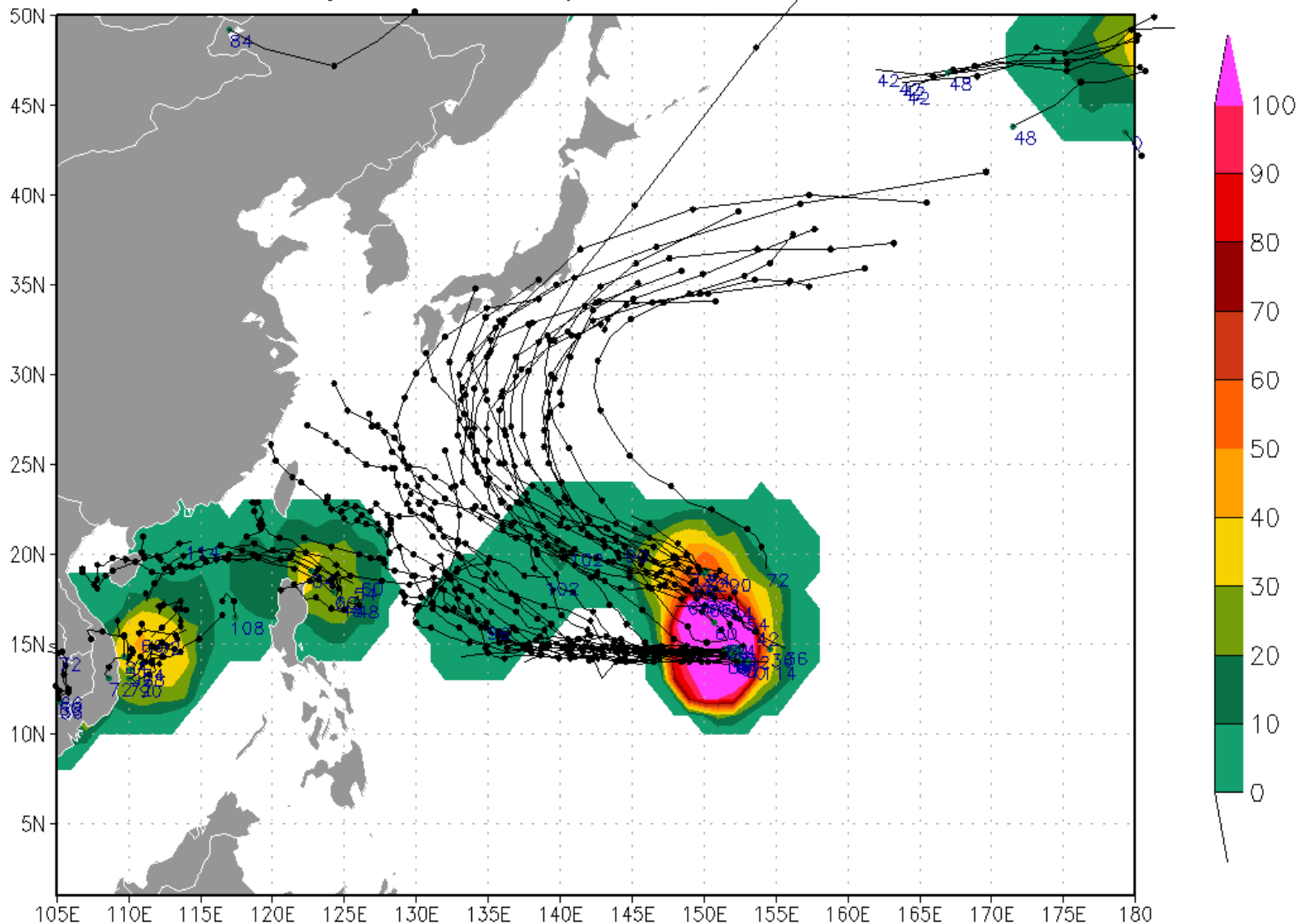
Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Tropical Cyclone Formation Potential for the Five-Day Period Ending at 11:00 am PDT Sun Oct 2 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.

NCEP Ensemble-based Probability (%) of TC genesis for forecasts during the 00–120h period from initial time = 2016092706

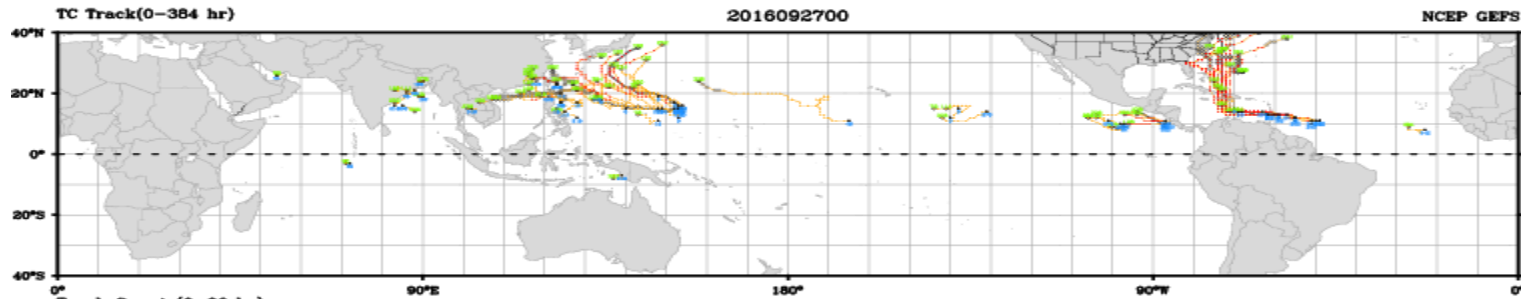


● = position at 00 or 12 UTC

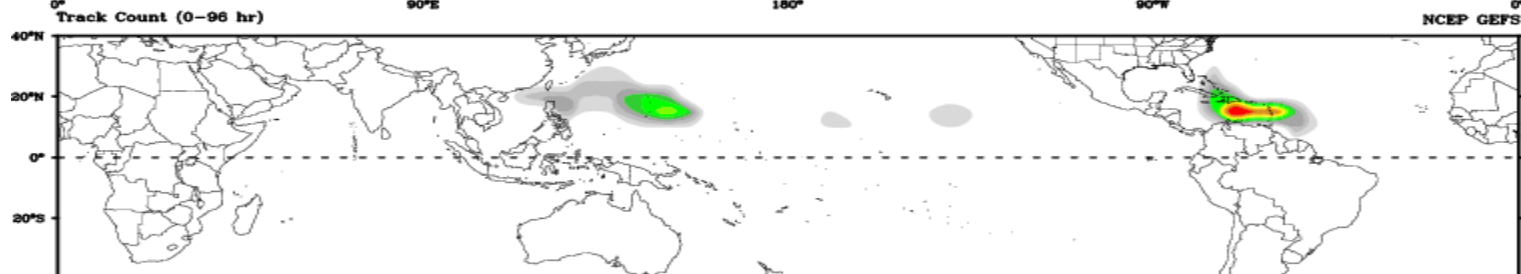
Forecast hour shown at beginning of each track
is first lead time the storm was detected in model

2016092700

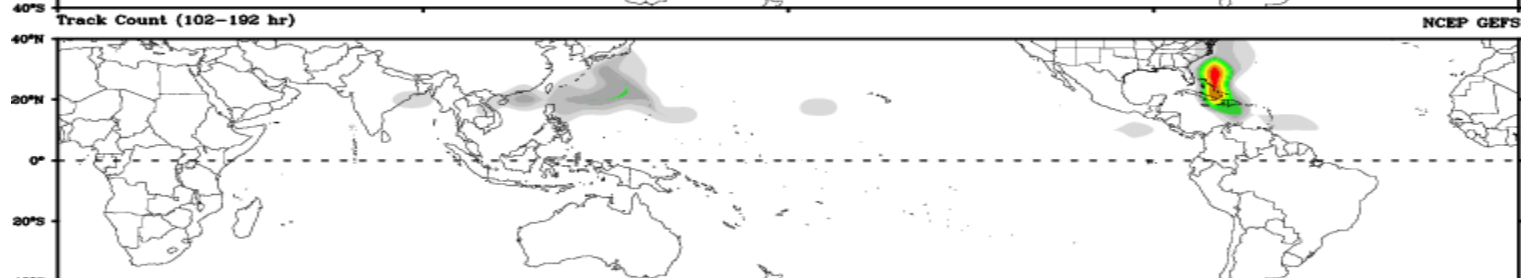
NCEP GEFS



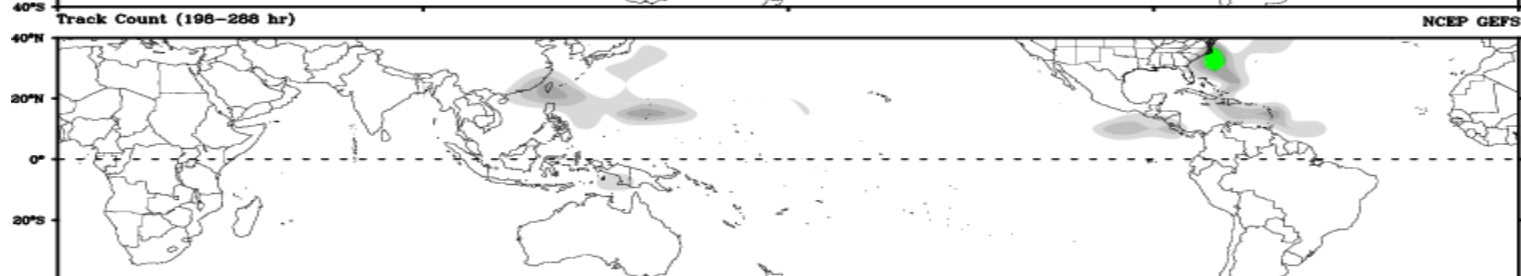
Days 1-4



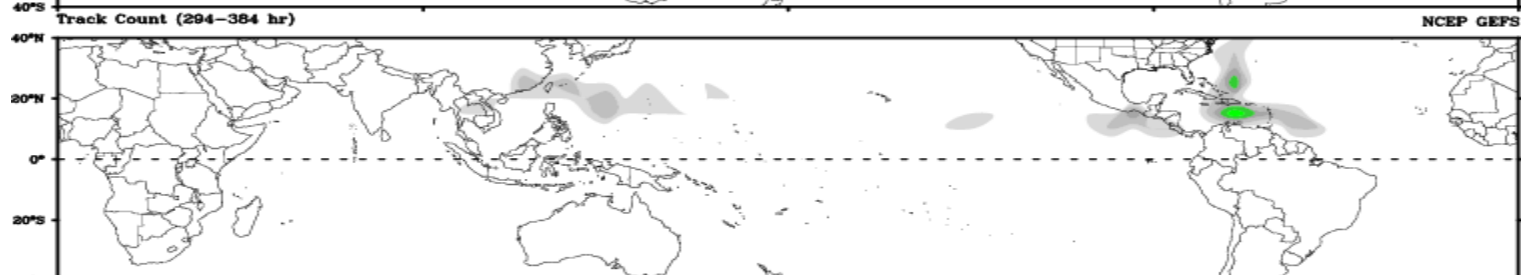
Day 5-8



Day 9-12

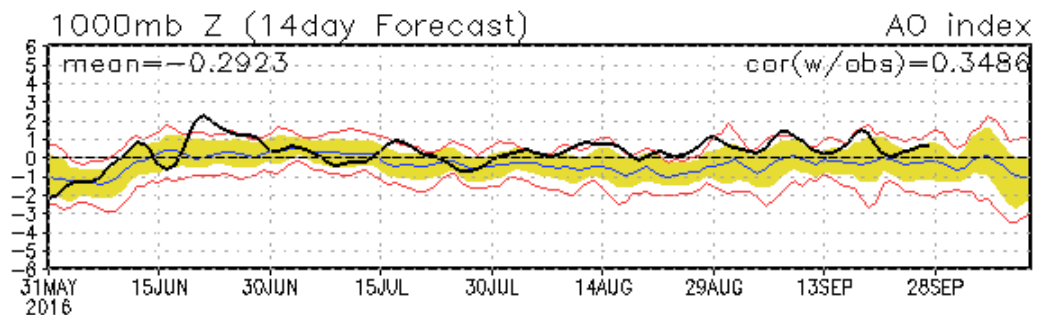
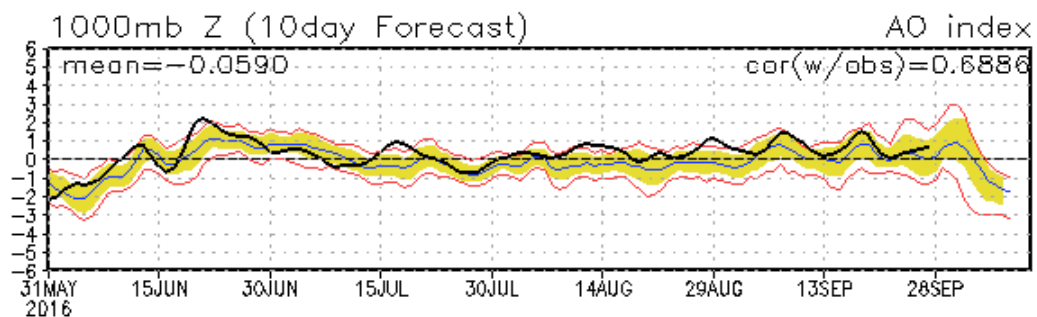
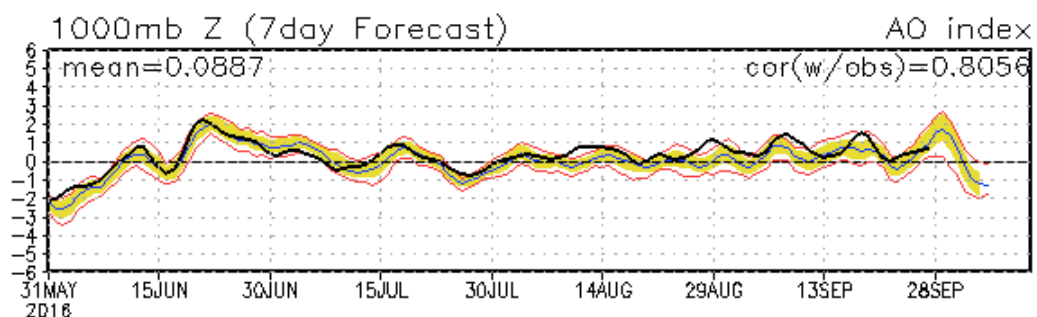
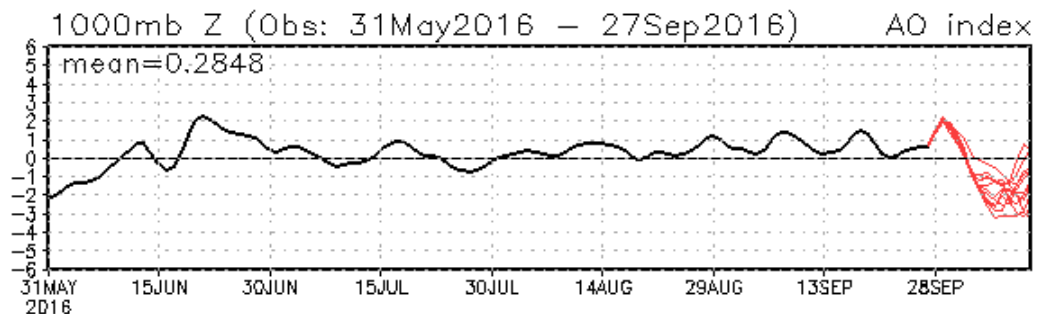


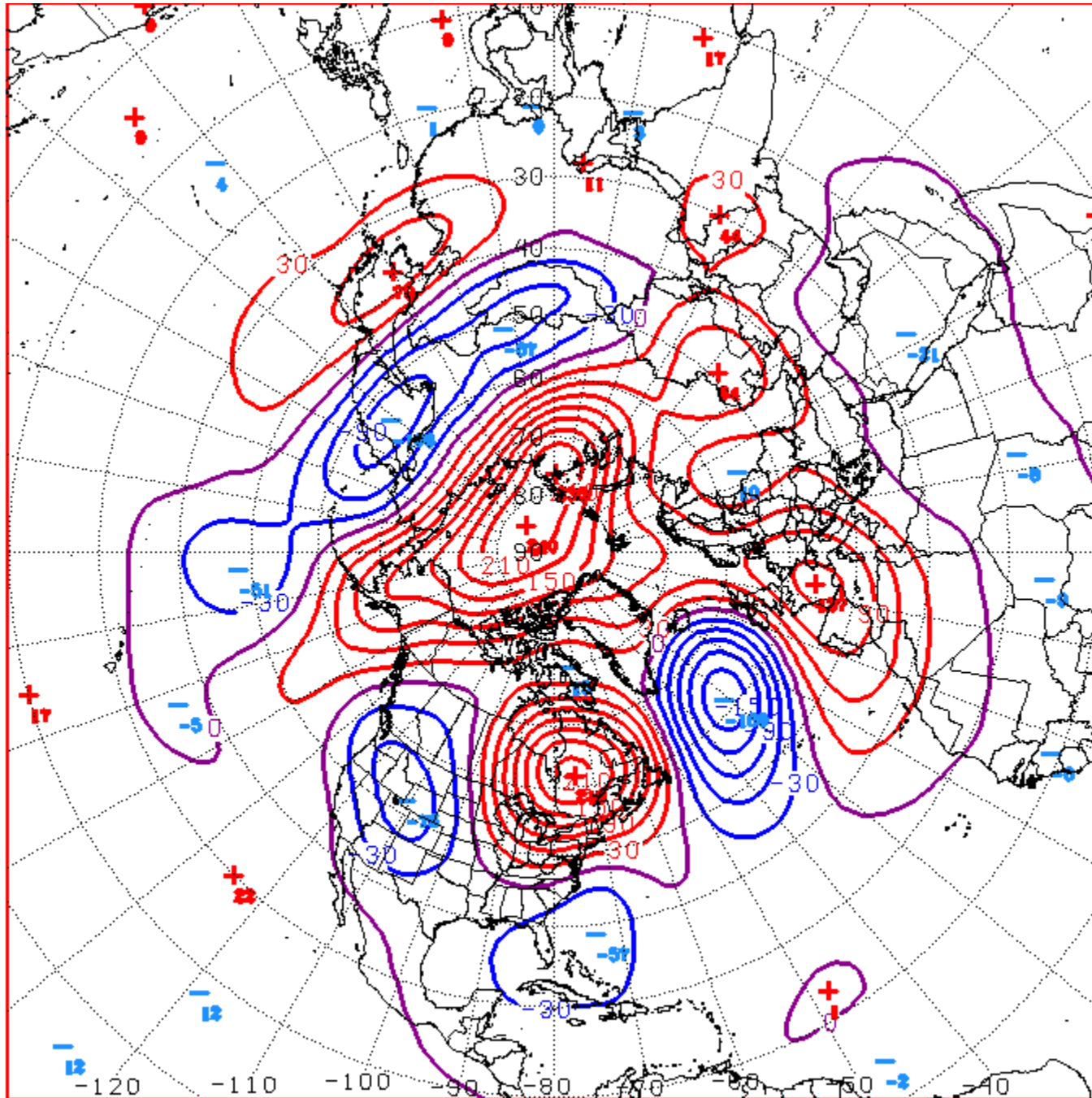
Day 13-15



Connections to U.S. Impacts

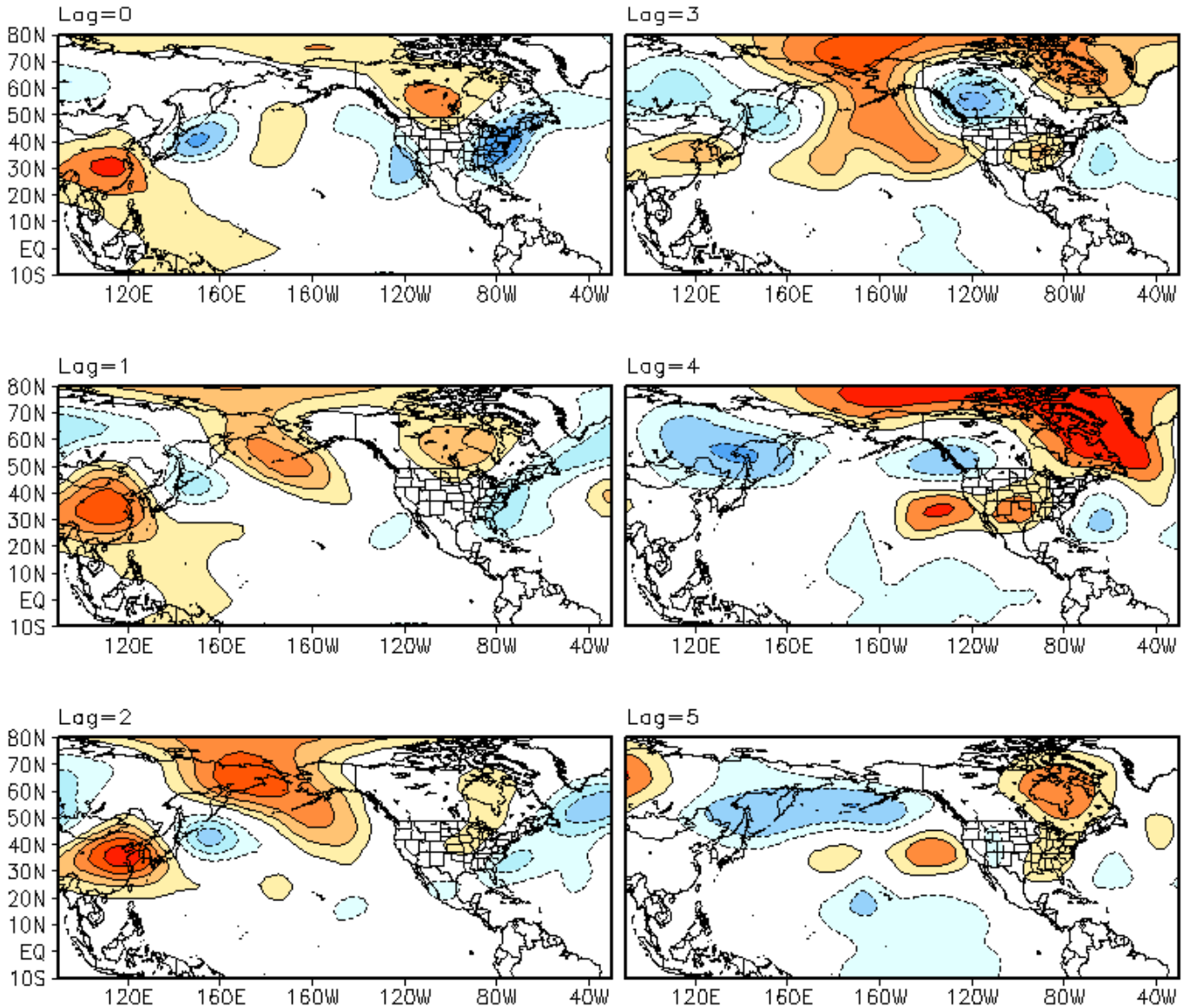
AO: Observed & ENSM forecasts



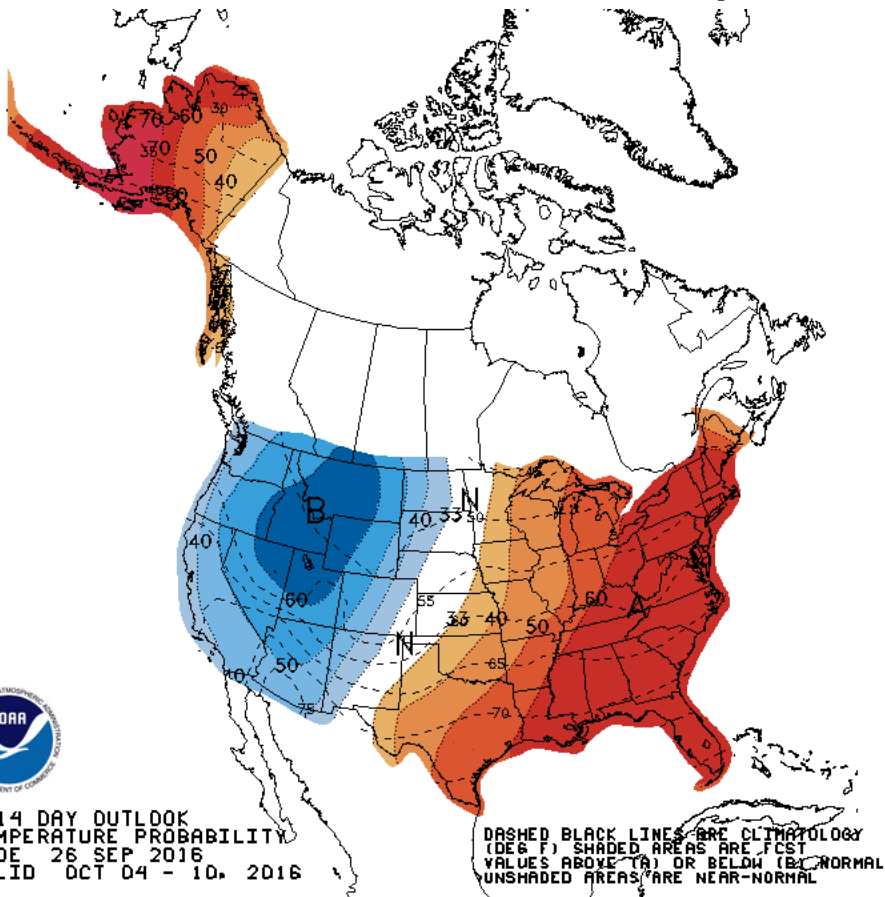


D+8 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE SEP 27 2016 1347 UTC CNTD OCT 05 2016

RMM Phase 5 200-hPa Height Lagged Composite (son)

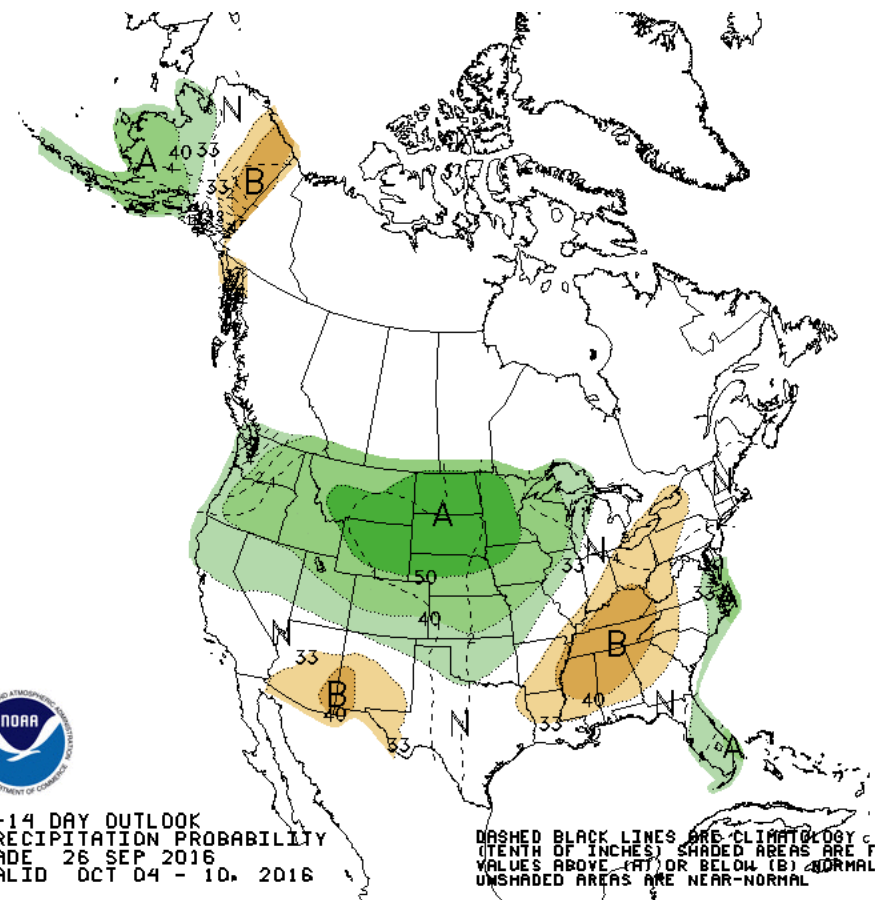
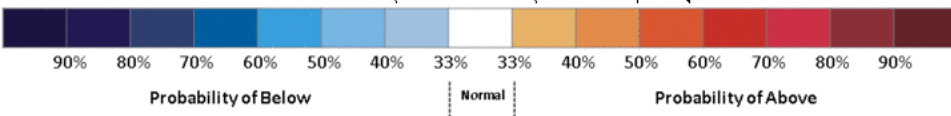


Week 2 – Temperature and Precipitation



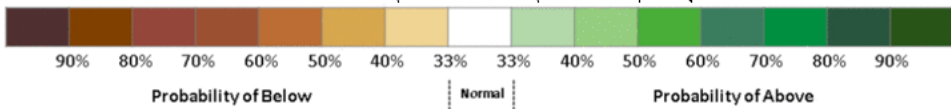
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 26 SEP 2016
VALID OCT 04 - 10, 2016

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 26 SEP 2016
VALID OCT 04 - 10, 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.

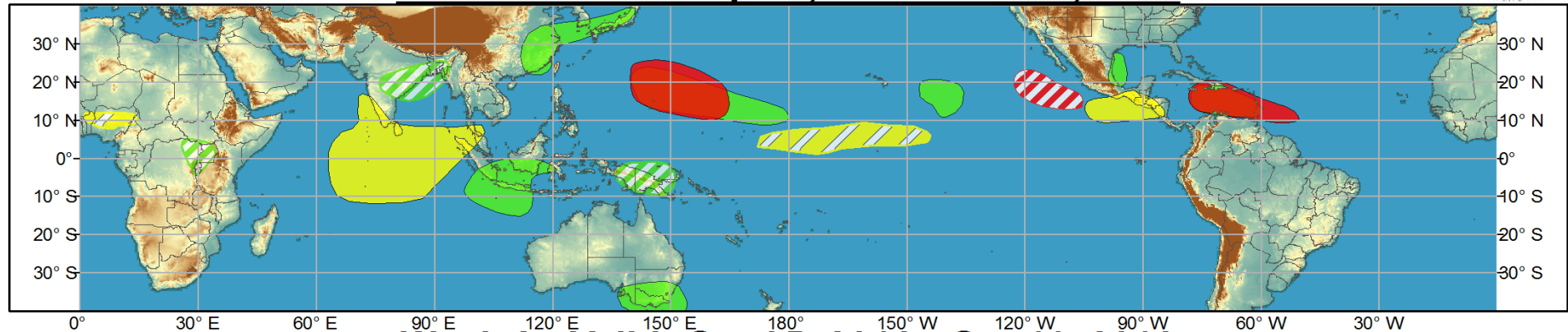




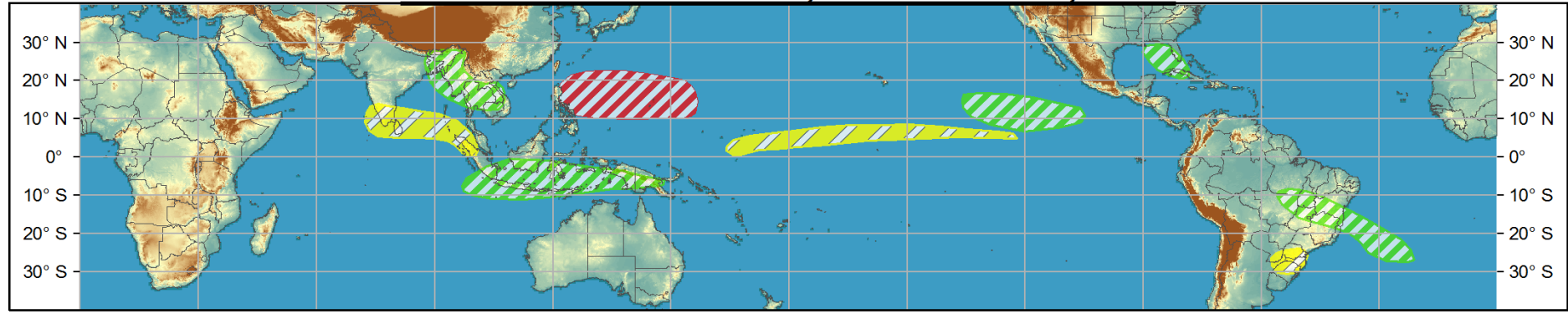
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Sep 28, 2016 - Oct 04, 2016



Week 2 - Valid: Oct 05, 2016 - Oct 11, 2016



	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.

Produced: 09/27/2016
Forecaster: Allgood

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.

