

Global Tropics Hazards And Benefits Outlook

10/08/2019

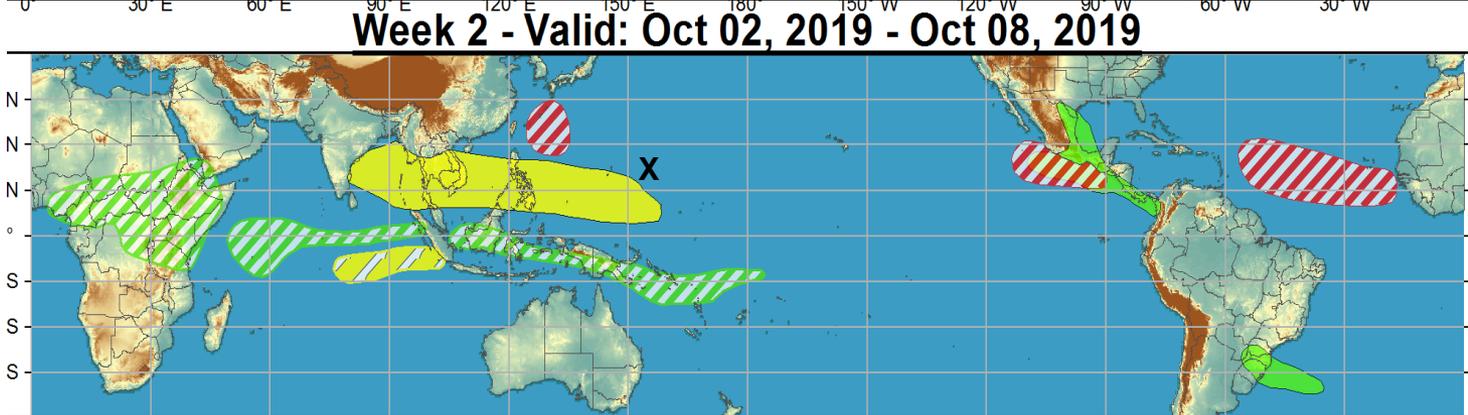
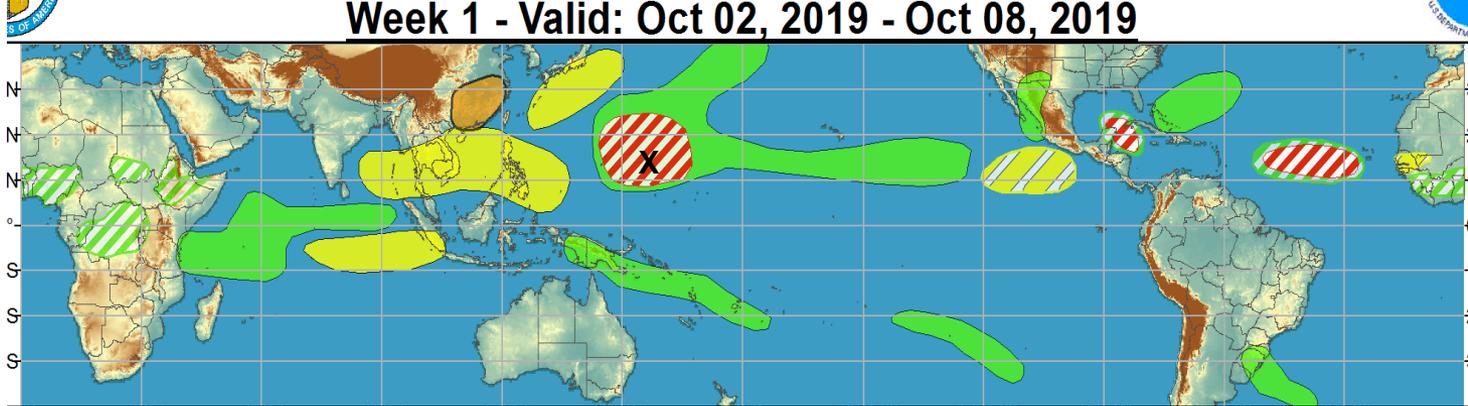
Dan Harnos

Outline

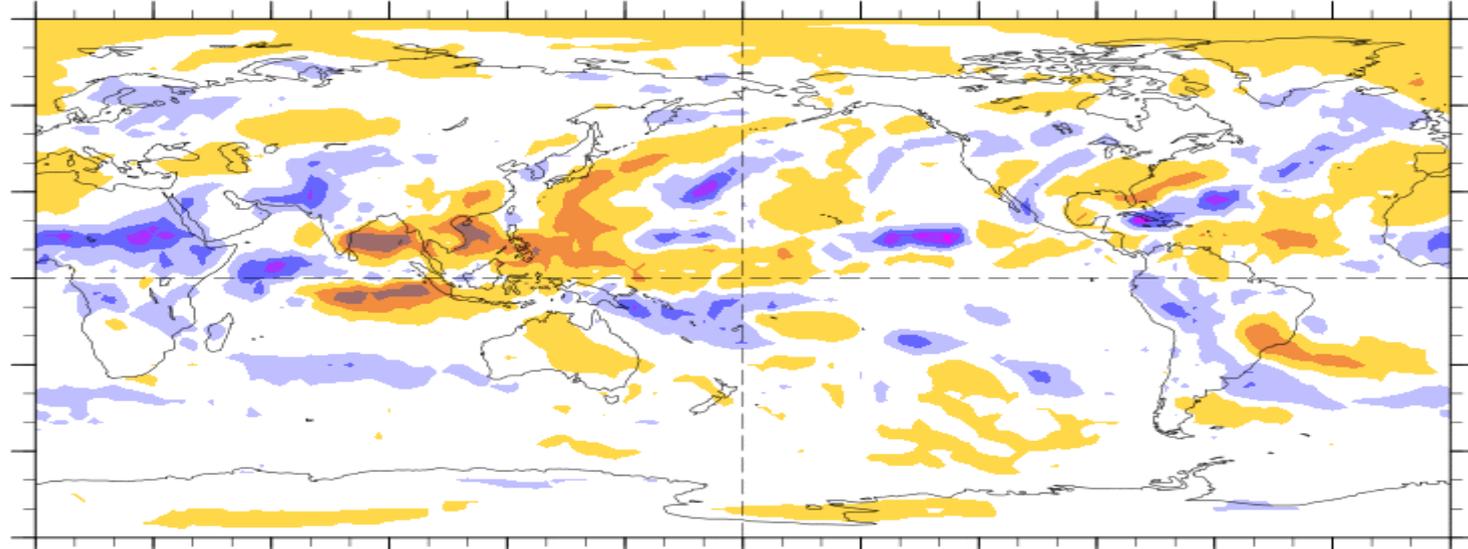
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

- Hagibis (5 Oct)
- Peak 140 kts (Cat 5) only 2 days after forming.



7-Day Average OLR Anomaly 2019/09/30 - 2019/10/06



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (September 12, 2019 Update)

Next update: this Thursday

- ENSO Alert System Status: Not Active
- ENSO-neutral is favored during the Northern Hemisphere fall 2019 (~75% chance), continuing through spring 2020 (55-60% chance).

MJO and other subseasonal tropical variability:

- Limited support exists for an active MJO event right now.
- The Indian Ocean Dipole's positive phase appears to be driving much of the tropical variability at present, and is responsible for the RMM index depicting a stationary MJO over the Western Hemisphere/Africa during the last 2-3 weeks.
- Model guidance does suggest some possibility of an active MJO emerging over the Indian Ocean during Week-2, although this needs to be taken with some caution.

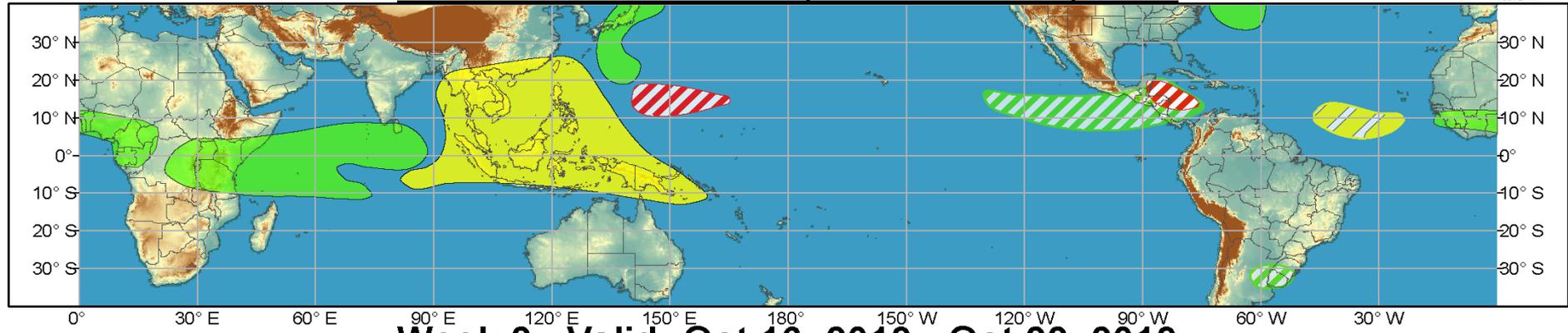
Extratropics:

- Tropical teleconnections to North America appear unlikely during the next two weeks. The remnants of Typhoon Hagibis could play a role in influencing western North America during Week-2 in the form of storminess for Alaska and atmospheric river activity into the Pacific Northwest.

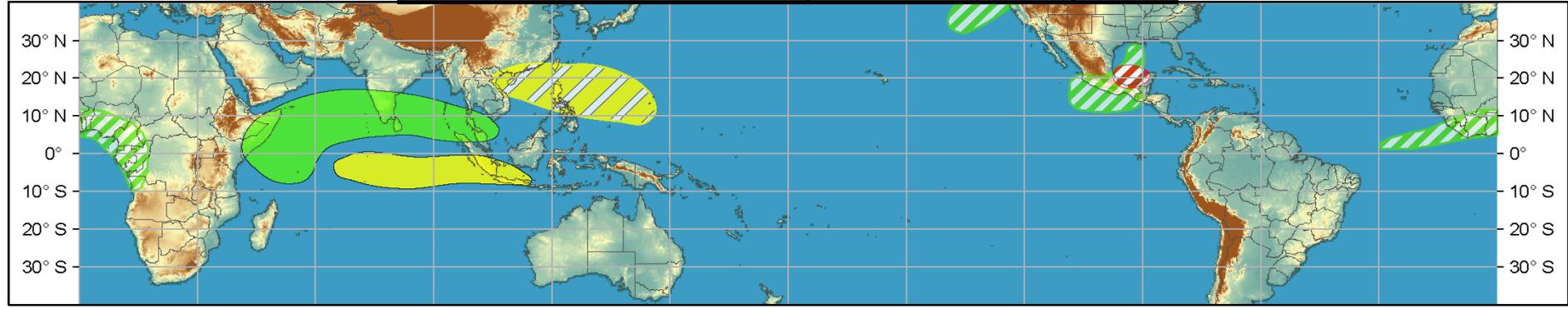


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Oct 09, 2019 - Oct 15, 2019



Week 2 - Valid: Oct 16, 2019 - Oct 22, 2019



Produced: 10/08/2019

Forecaster: Harnos

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.
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IR Satellite & 200-hpa Velocity Potential Anomalies

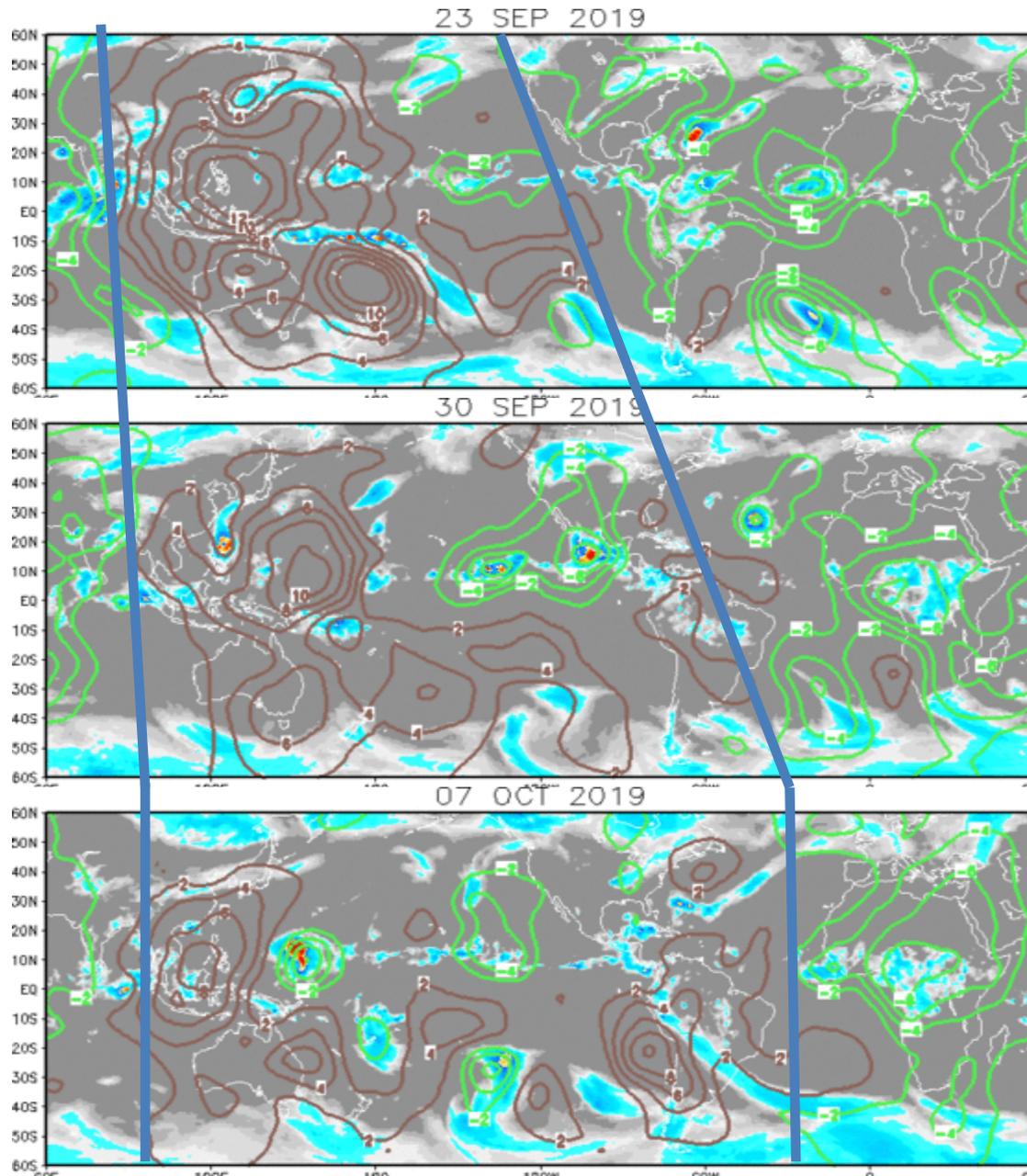
Green: Enhanced Divergence

Brown: Enhanced Convergence

Wave-1 pattern with enhanced (suppressed) convection over the Western (Eastern Hemisphere)

Fairly stationary pattern, indicative of low-frequency influences rather than the MJO

The pattern weakened some over the Pacific and Americas, but remained stationary.

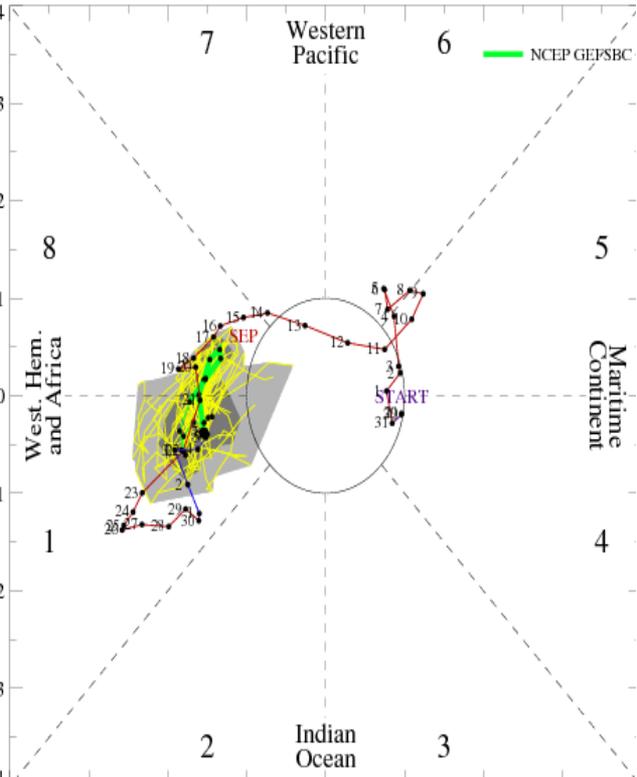


MJO Observation/Forecast

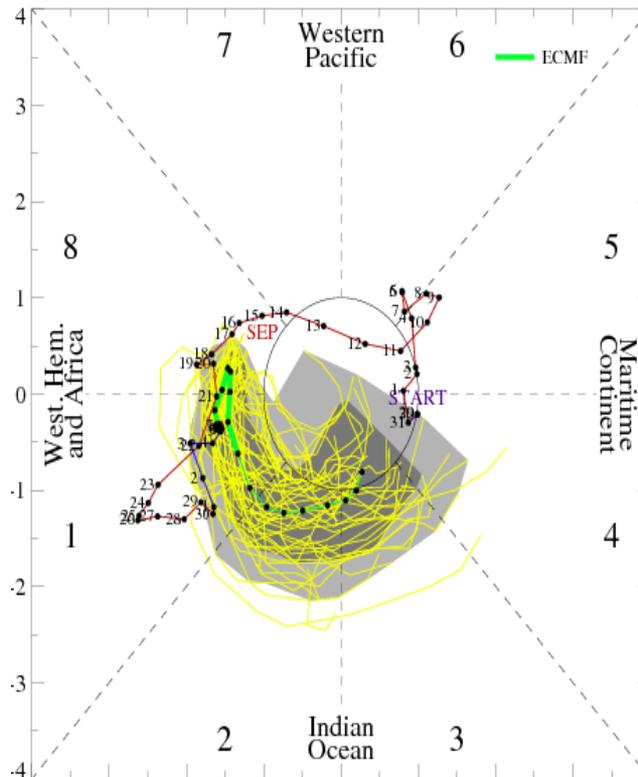
[RMM1, RMM2] forecast for Oct-08-2019 to Oct-22-2019

MJO Index Forecast for 08Oct2019-22Oct2019

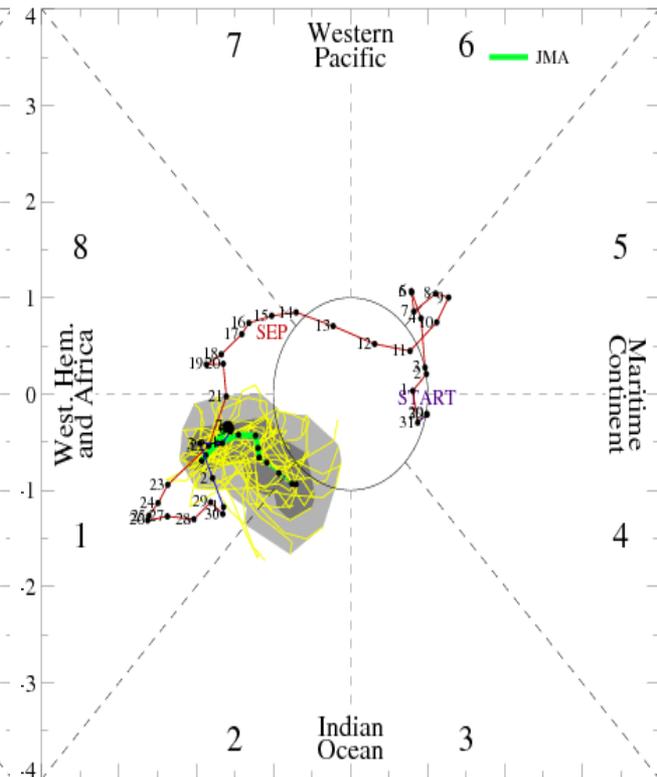
MJO Index Forecast for 08Oct2019-16Oct2019



GEFS



ECMWF



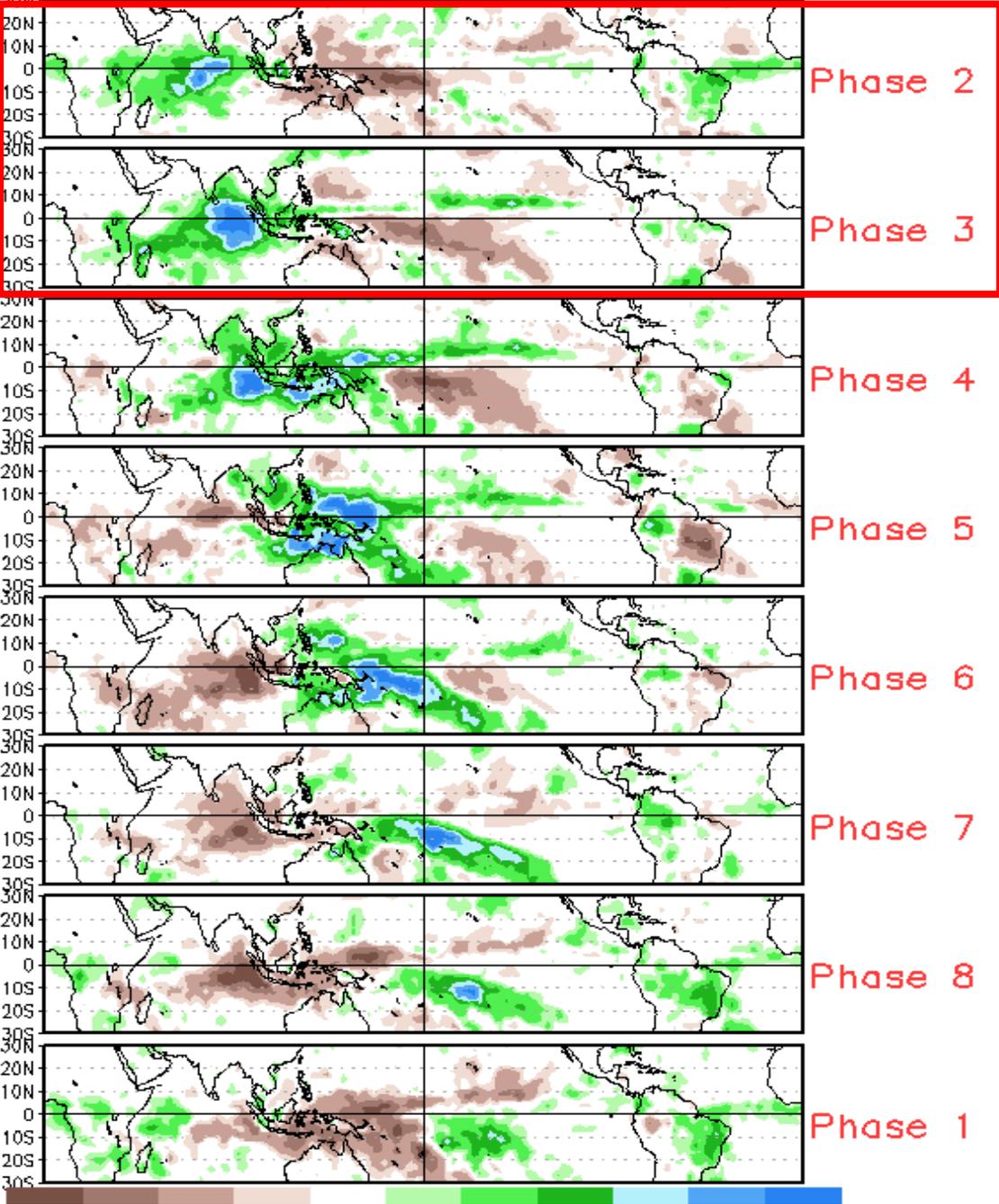
JMA

GEFS: Continued emphasis of the low frequency state (Indian Ocean Dipole).

ECMWF: IOD emphasis early, before eastward propagating (MJO?) signal by Week-2.

JMA: Very slow eastward propagation over the next week.

Average Conditions when the MJO is present



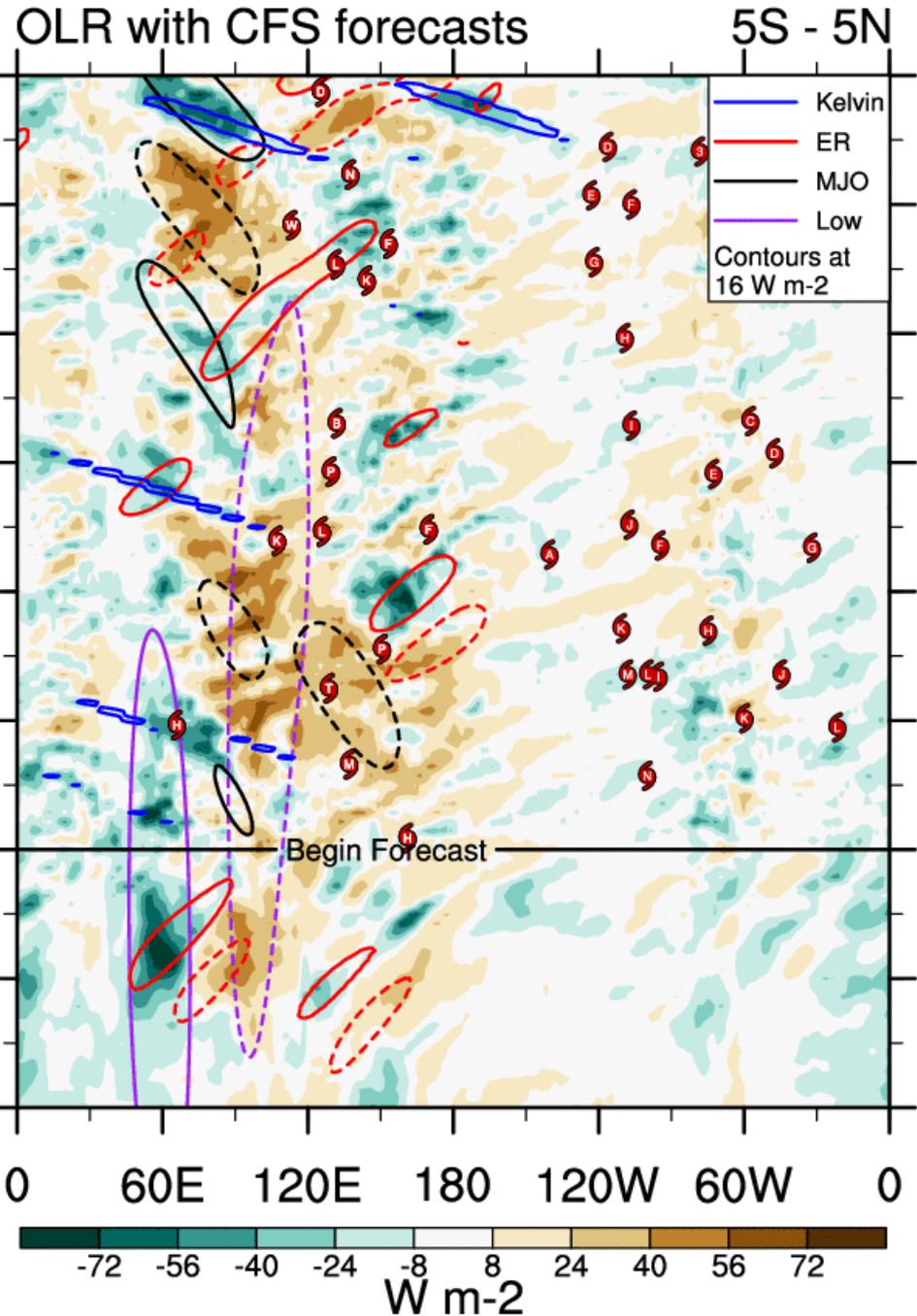
Week-2?

CAVEAT: These panels are representative of robust MJO events.

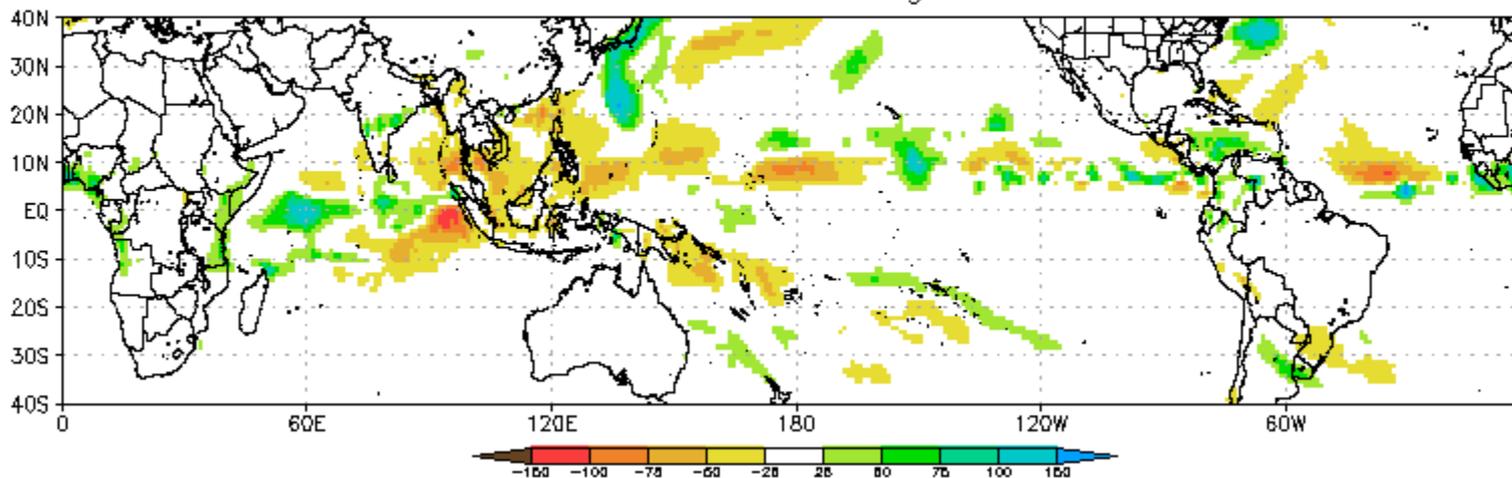
Low frequency (+IOD) continues to dominate the Eastern Hemisphere.

Eastward moving feature showing up near 60E the next two-weeks, possibly tied to the **MJO**?

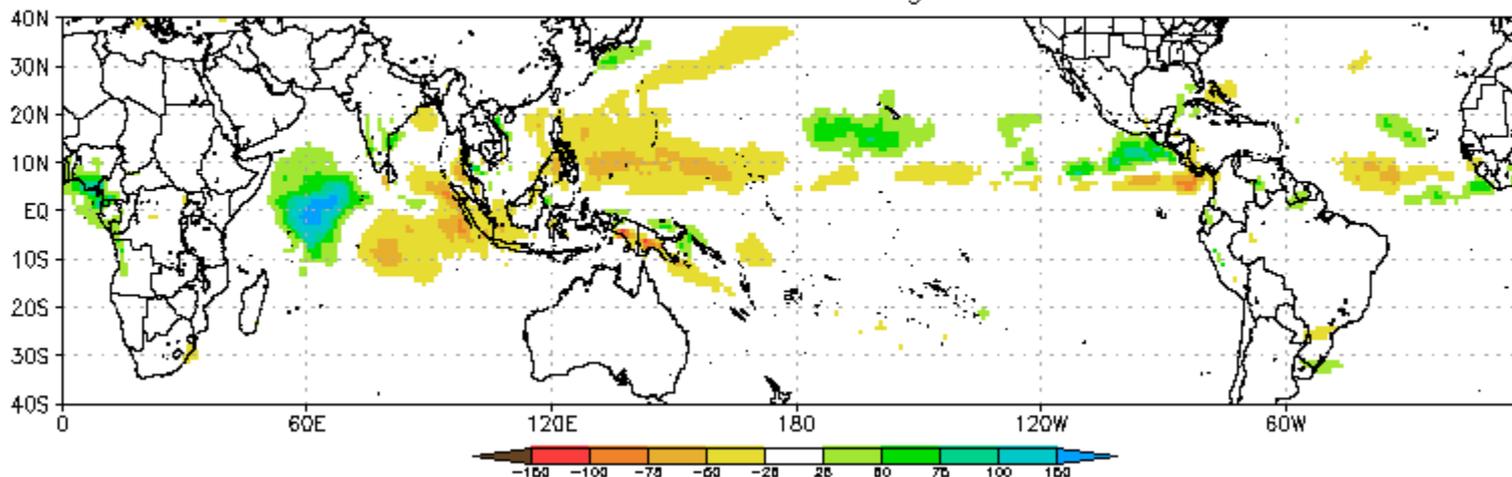
Signs of continued **Rossby** wave activity over the Atlantic, West Pacific, and Indian Ocean.

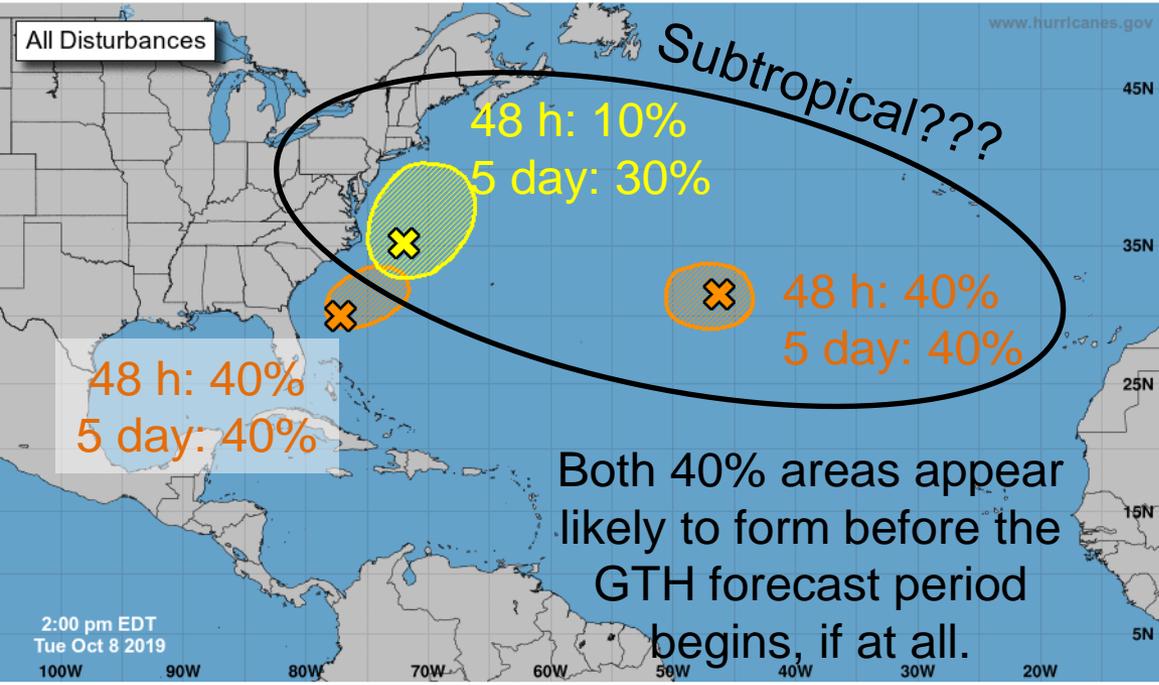


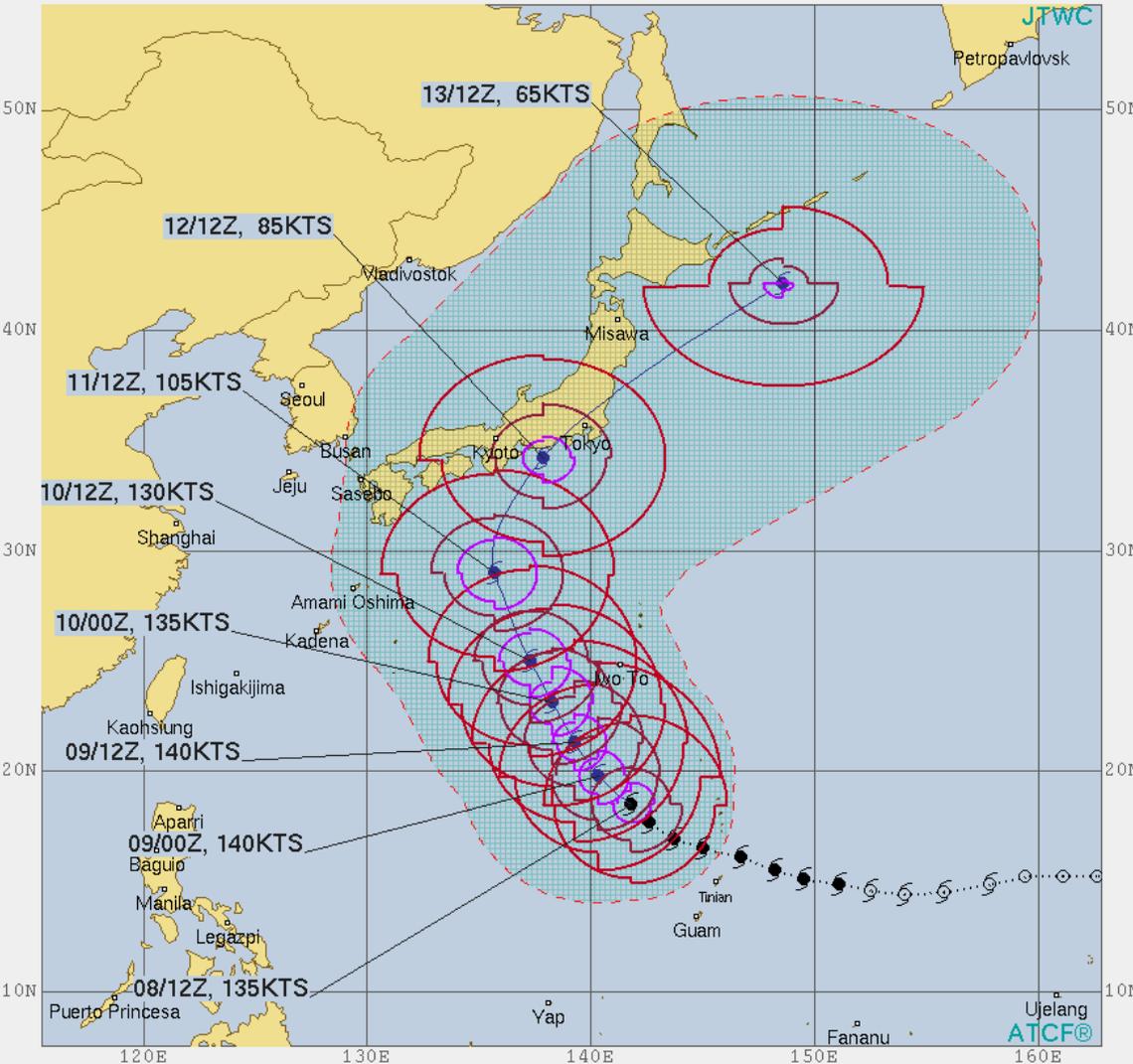
CFS Precipitation Anomalies (mm) Issued 07Oct2019
Week-1 Forecast Ending 15Oct2019



CFS Precipitation Anomalies (mm) Issued 07Oct2019
Week-2 Forecast Ending 22Oct2019





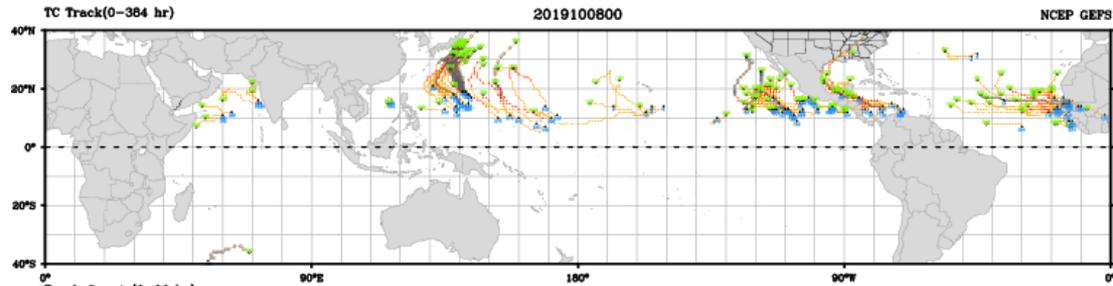


SUPER TYPHOON 20W (HAGIBIS) WARNING #14
 WTPN31 PGTW 081500
 081200Z POSIT: NEAR 18.5N 141.8E
 MOVING 315 DEGREES TRUE AT 11 KNOTS
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 57 FEET
 08/12Z, WINDS 135 KTS, GUSTS TO 165 KTS
 09/00Z, WINDS 140 KTS, GUSTS TO 170 KTS
 09/12Z, WINDS 140 KTS, GUSTS TO 170 KTS
 10/00Z, WINDS 135 KTS, GUSTS TO 165 KTS
 10/12Z, WINDS 130 KTS, GUSTS TO 160 KTS
 11/12Z, WINDS 105 KTS, GUSTS TO 130 KTS
 12/12Z, WINDS 085 KTS, GUSTS TO 105 KTS
 13/12Z, WINDS 065 KTS, GUSTS TO 080 KTS

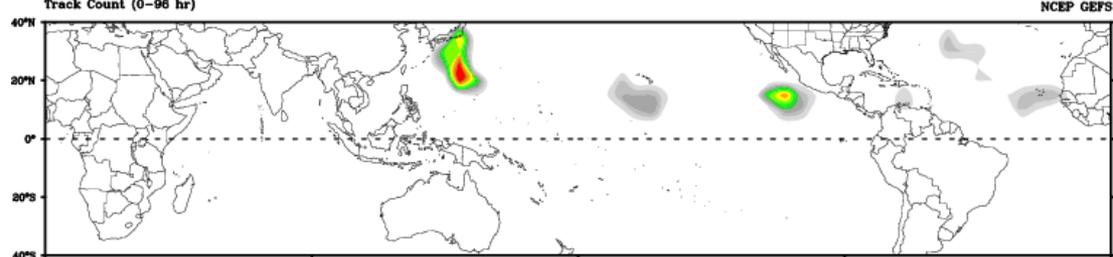
CPA TO:	NM	DTG
IWO TO	192	10/02Z
CHICHI JIMA	292	10/13Z
OKIDAITO JIMA	317	10/21Z
MINAMIDAITO JIMA	288	11/02Z
CAMP KENGUN	274	12/00Z
SASEBO	337	12/00Z
IWAKUNI	246	12/04Z
R2RS	164	12/12Z
CAMP FUJI	2	12/16Z
ATSUGI	9	12/17Z
CAMP ZAMA	9	12/17Z
YOKOSUKA	28	12/17Z
YOKOTA AB	12	12/18Z
NARITA AIRPORT	36	12/19Z
SHARIKI	189	13/02Z
MISAWA	149	13/03Z

BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
HAGATNA	331	357	0
AGRIHAN	266	222	0
ALAMAGAN	284	234	0
ANATAHAN	300	256	0
ANDERSEN_AFB	329	344	0
IWO TO	176	379	0
NAVSTA_GUAM	333	346	0
PAGAN	277	229	0
ROTA	324	329	0
SAIPAN	311	303	0
TINIAN	314	303	0
WFO_GUAM	330	346	0

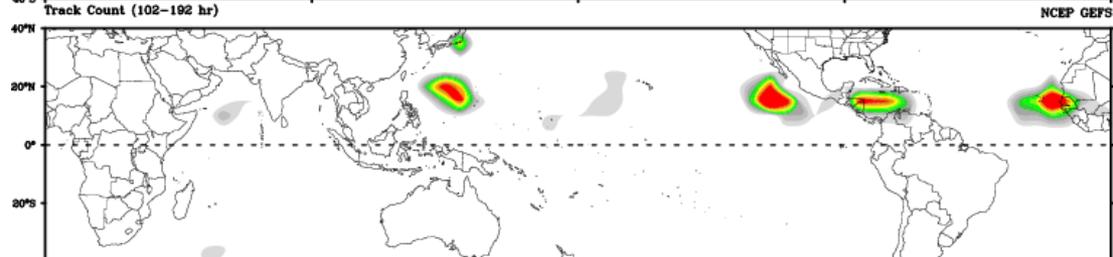
- LESS THAN 34 KNOTS
- 34-63 KNOTS
- MORE THAN 63 KNOTS
- FORECAST CYCLONE TRACK
- PAST CYCLONE TRACK
- DENOTES 34 KNOT WIND DANGER AREA/USN SHIP AVOIDANCE AREA
- FORECAST 34/50/64 KNOT WIND RADII (WINDS VALID OVER OPEN OCEAN ONLY)



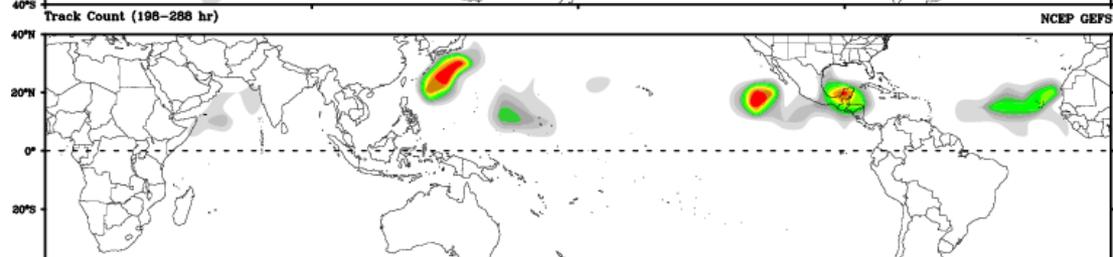
Days 1-4



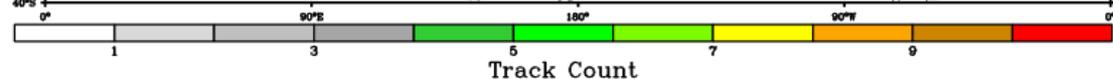
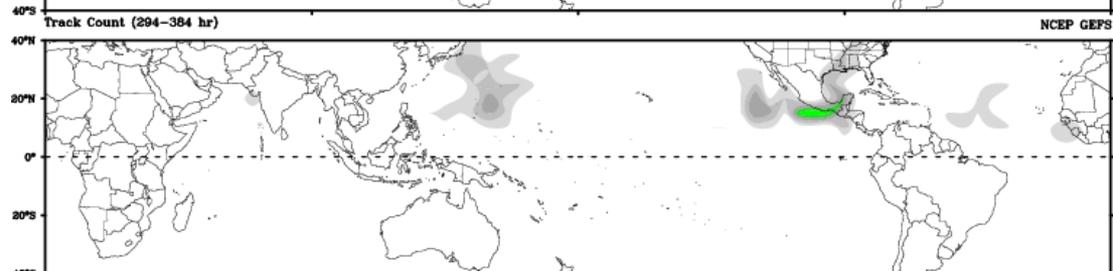
Day 5-8



Day 9-12

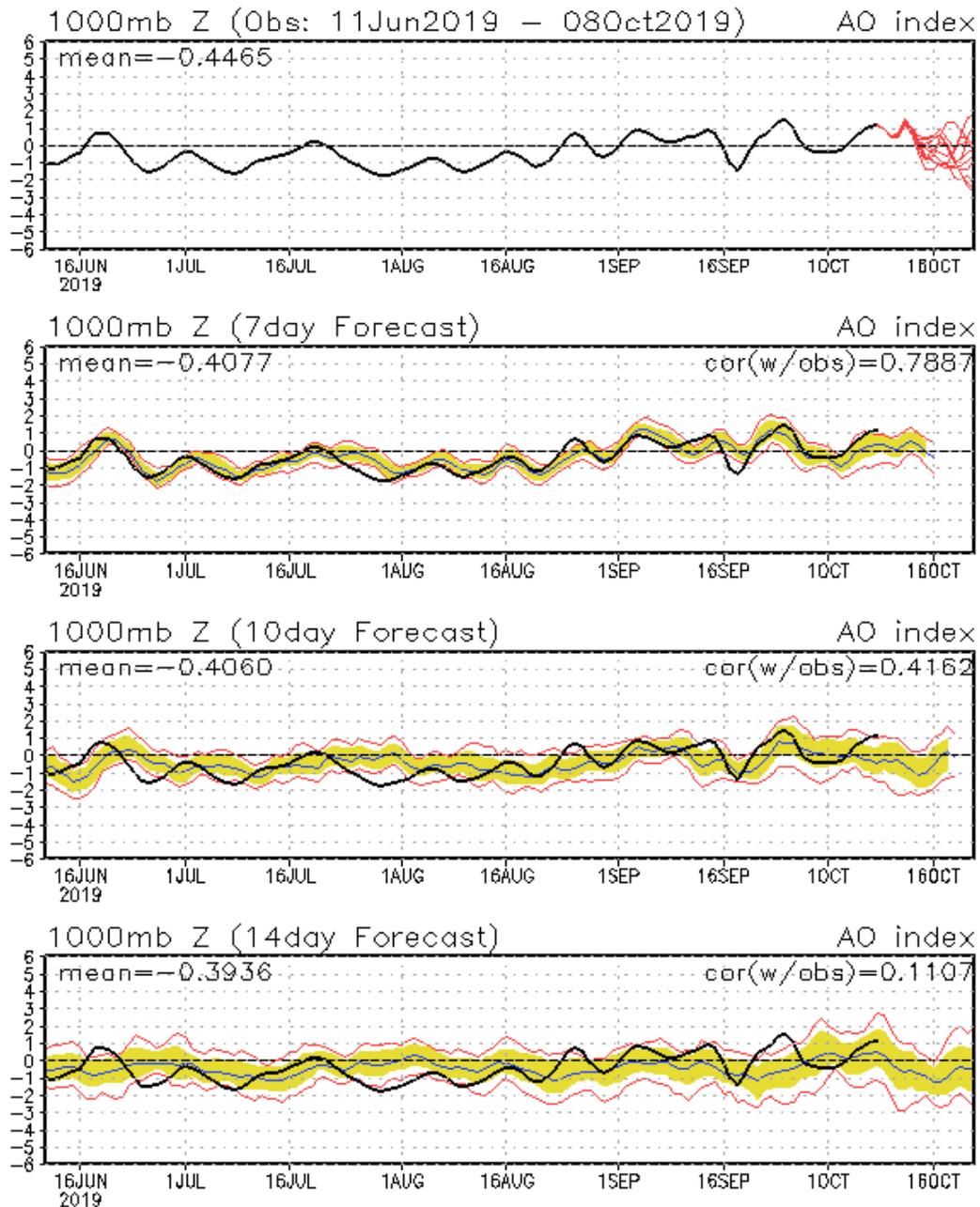


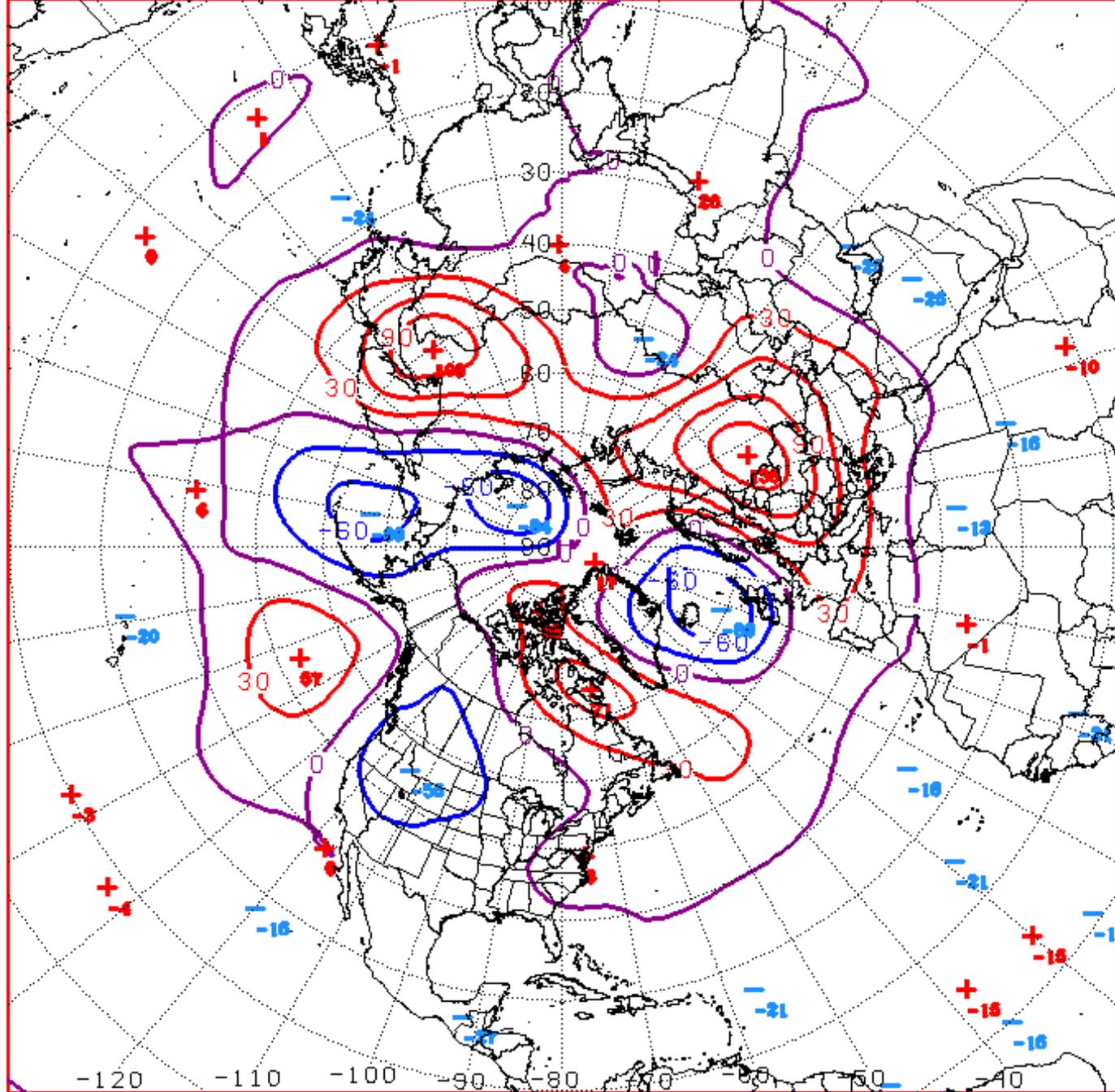
Day 13-15



Connections to U.S. Impacts

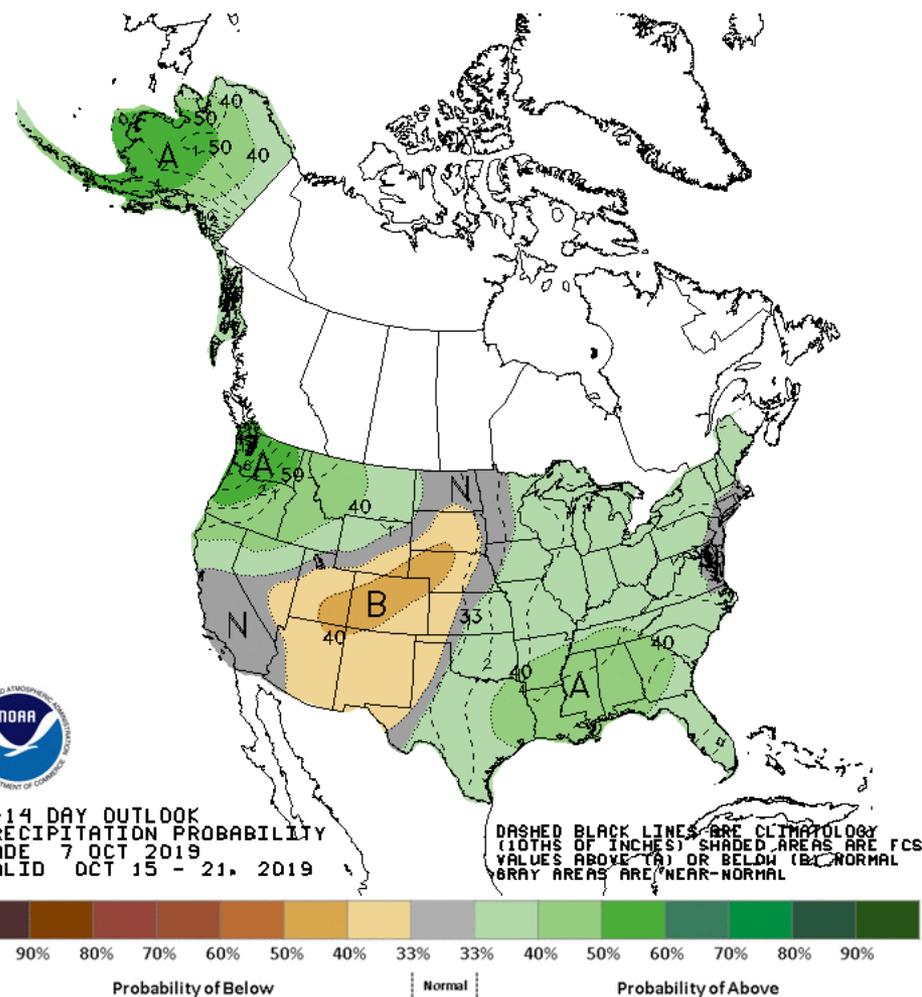
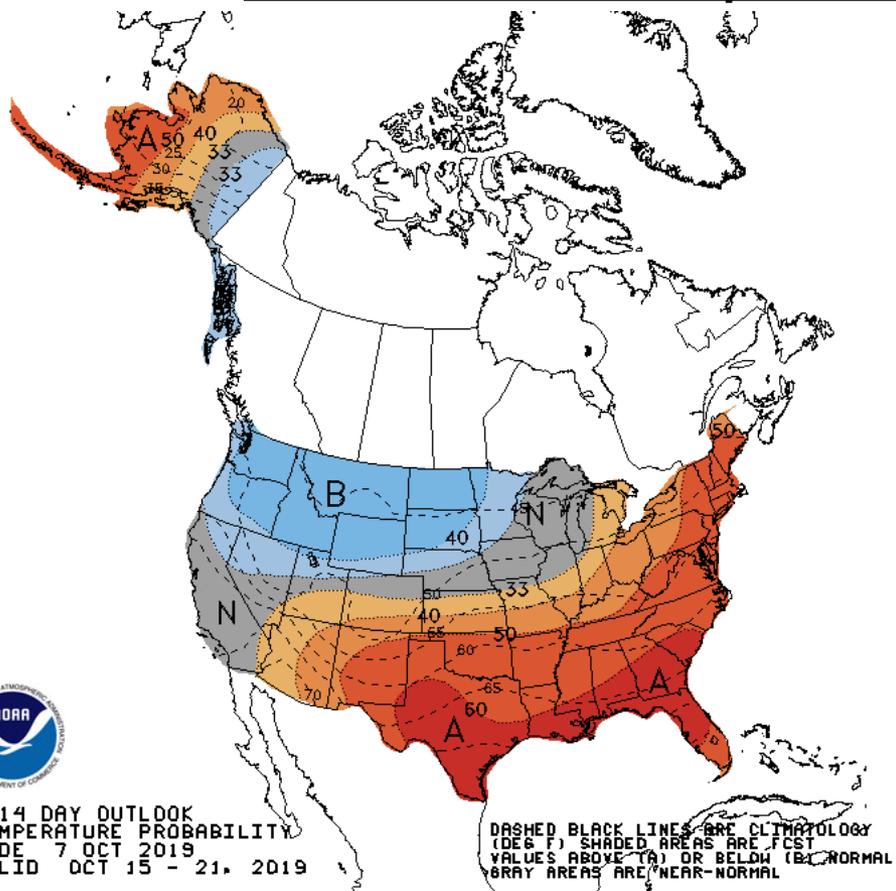
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE OCT 08 2019 1322 UTC CNTD OCT 19 2019

Week 2 – Temperature and Precipitation



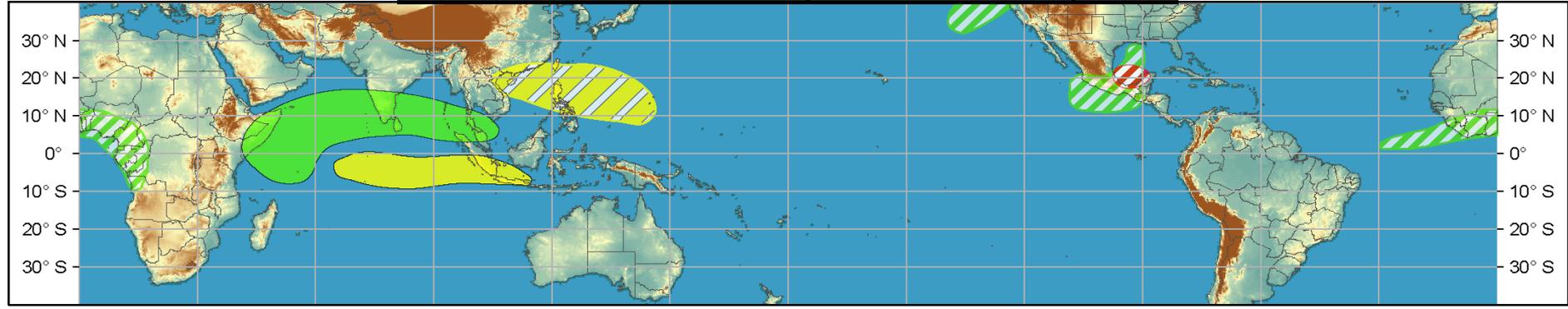


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