

Global Tropics Hazards And Benefits Outlook

10/30/2018

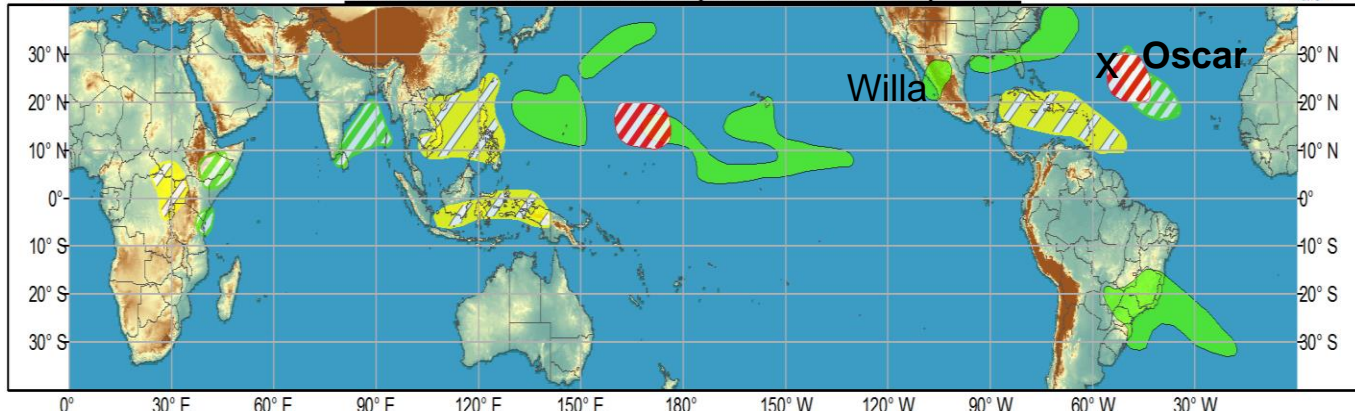
Brad Pugh

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

Week 1 - Valid: Oct 24, 2018 - Oct 30, 2018

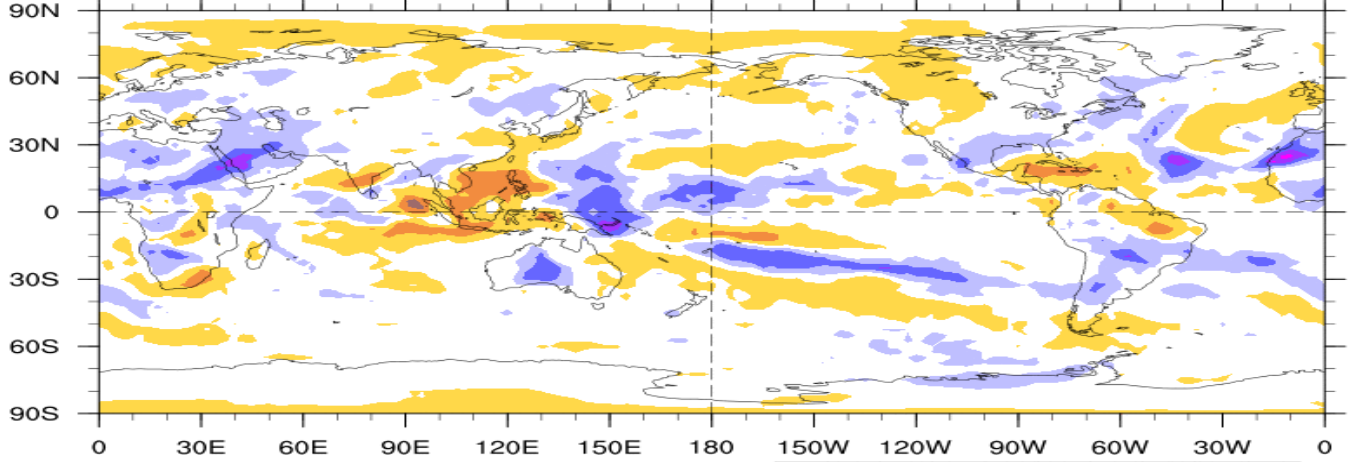


Week 2 - Valid: Oct 24, 2018 - Oct 30, 2018



7-Day Average OLR Anomaly

2018/10/22 - 2018/10/28



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

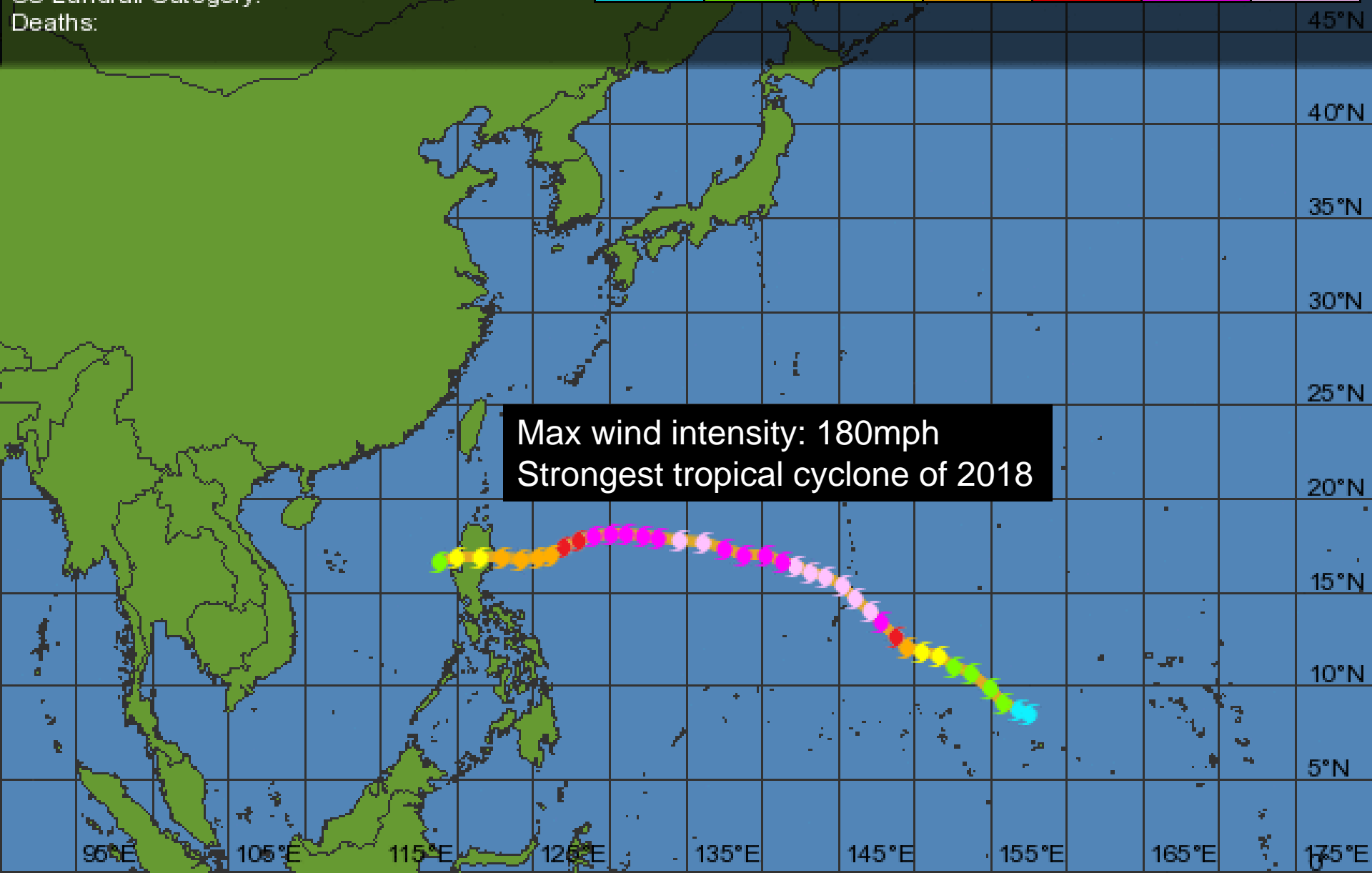
Tropical Storm Yutu

Storm Category



Dates: 11/21 - 11/30 2018
Maximum Wind Speed: 180 mph
Minimum Pressure: - mb
US Landfall Category:
Deaths:

Tropical Depression	Tropical Storm	Category 1	Category 2	Category 3	Category 4	Category 5
< 39 mph	39-73 mph	74-95 mph	96-110 mph	111-130 mph	131-155 mph	156+ mph



Max wind intensity: 180mph
Strongest tropical cyclone of 2018

Super Typhoon Yutu



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 remained weak during the past week with the low-frequency state (developing El Niño) the major influence but signs of a developing MJO.
- Dynamical models indicate a strengthening MJO with eastward propagation from the Western Hemisphere to the Indian Ocean during early to mid-November.

Extratropics:

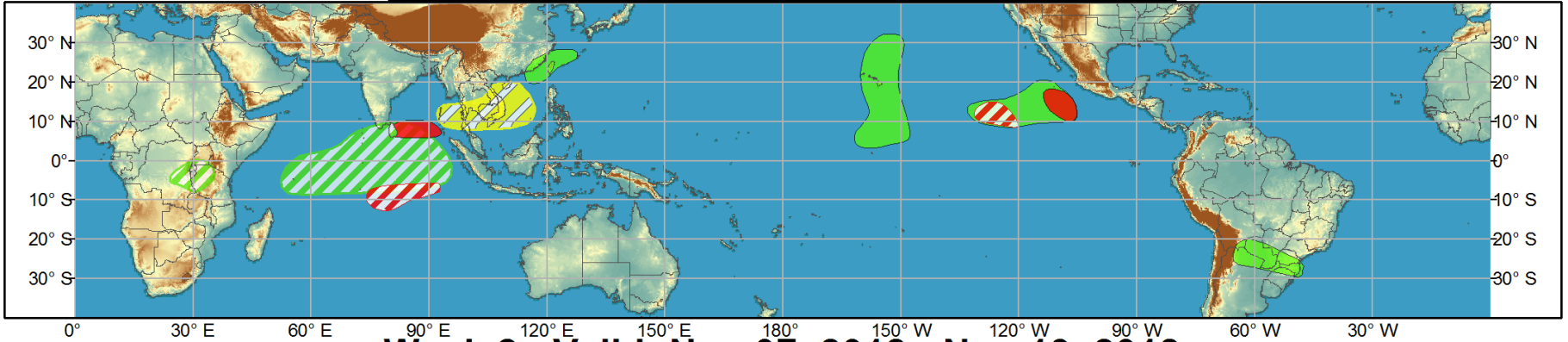
- The MJO is not anticipated to influence the mid-latitudes during early November but could have more of an influence later in the month.
- No recurving typhoons in the West Pacific and tropical cyclones that develop in the East Pacific are not expected to affect the Southwest.



Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



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



Week 2 - Valid: Nov 07, 2018 - Nov 13, 2018



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: 10/30/2018
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

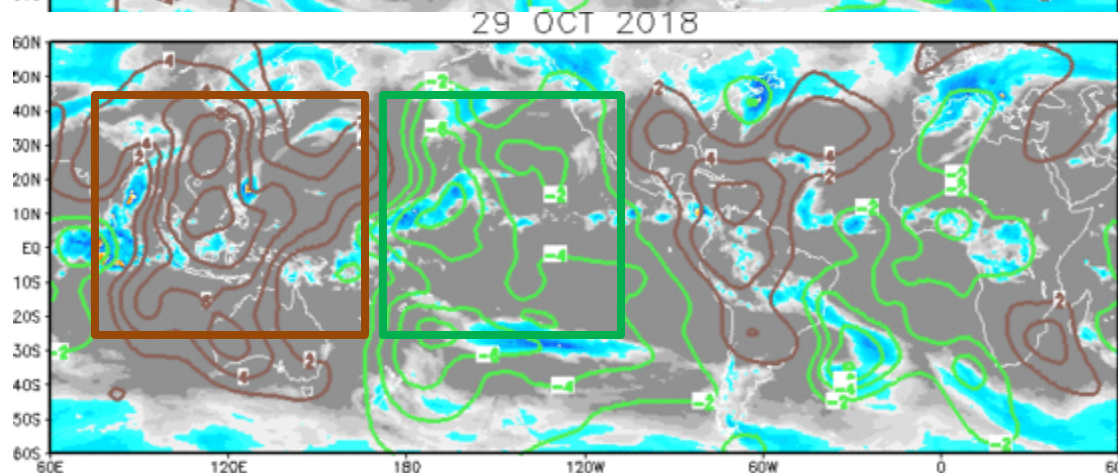
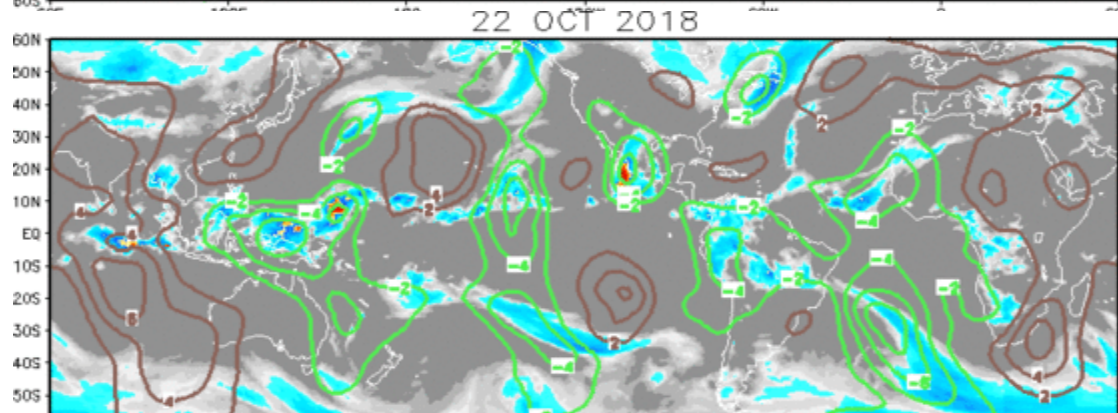
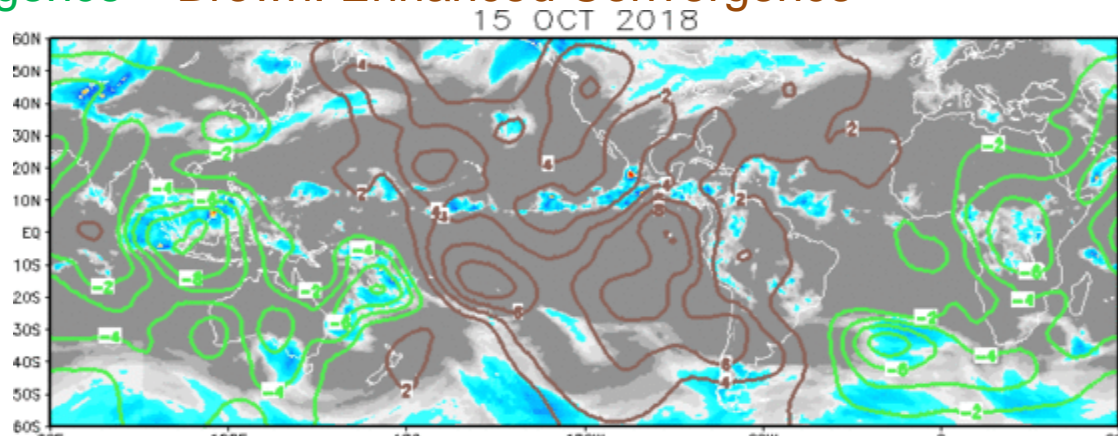
Green: Enhanced Divergence

Brown: Enhanced Convergence

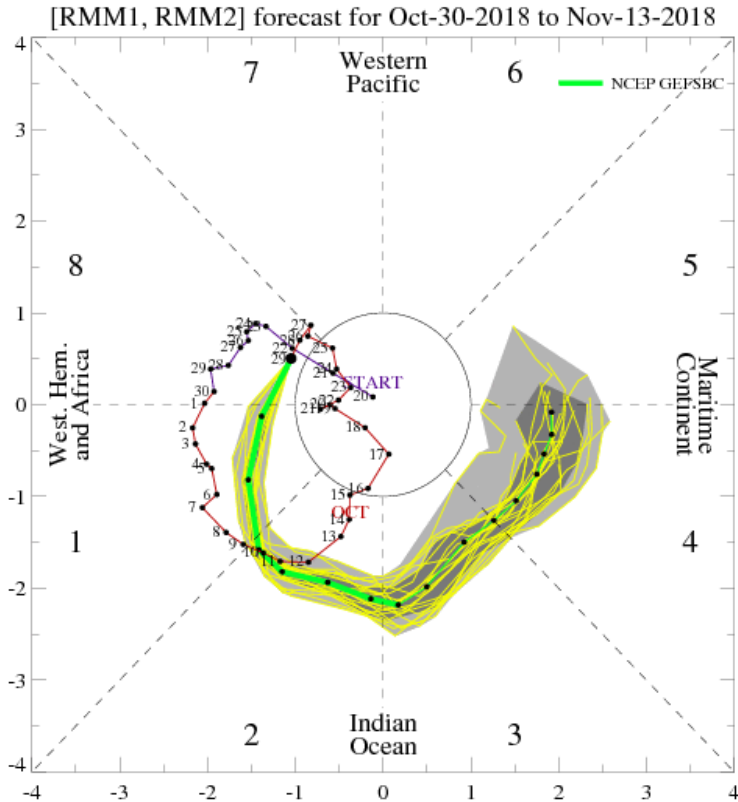
Continued organized MJO event
apparent in upper-levels.

MJO became incoherent during
mid to late October.

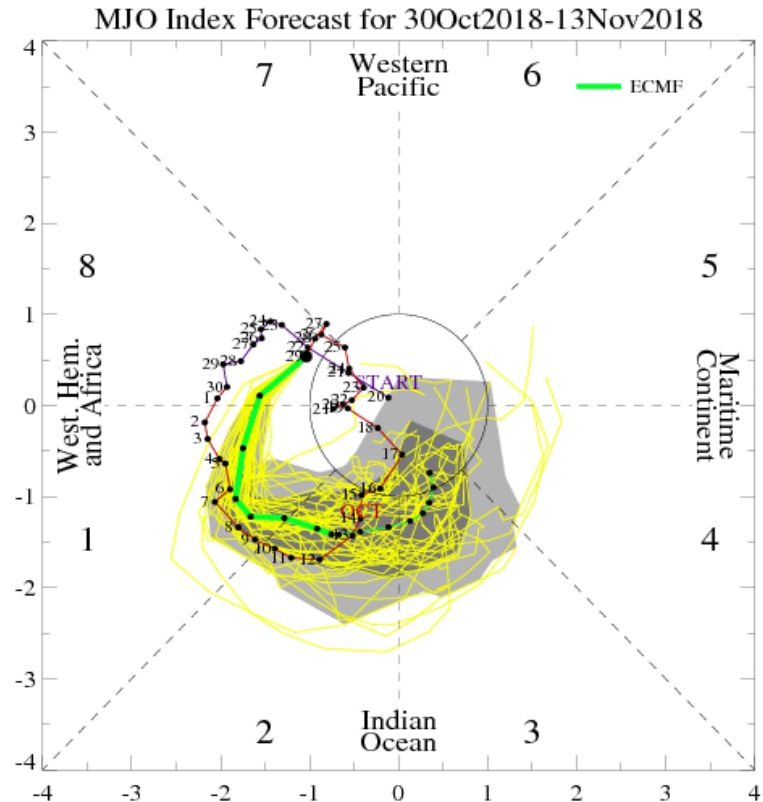
A couplet of anomalous
convergence and **divergence**
recently developed from the
Maritime Continent and Pacific.



MJO Observation/Forecast

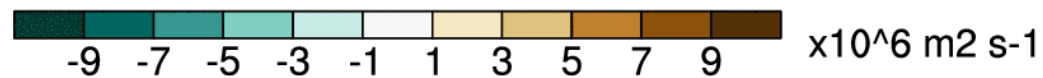
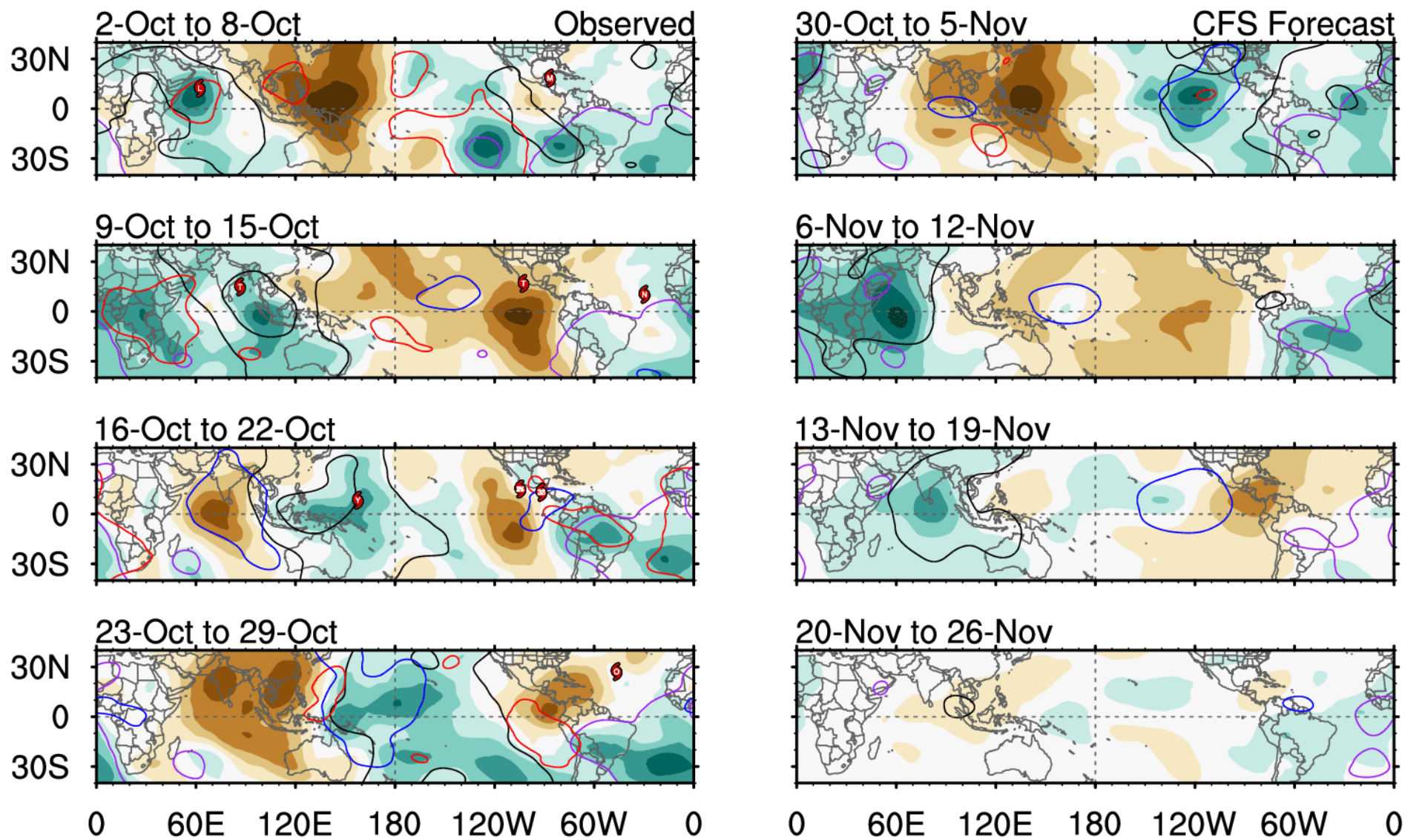


GFS



ECMWF

- GFS and ECMWF models are in good agreement for fast eastward propagation from Phases 8/1 to 3/4 by late Week-2.
- GFS model may have too much influence from a kelvin wave.

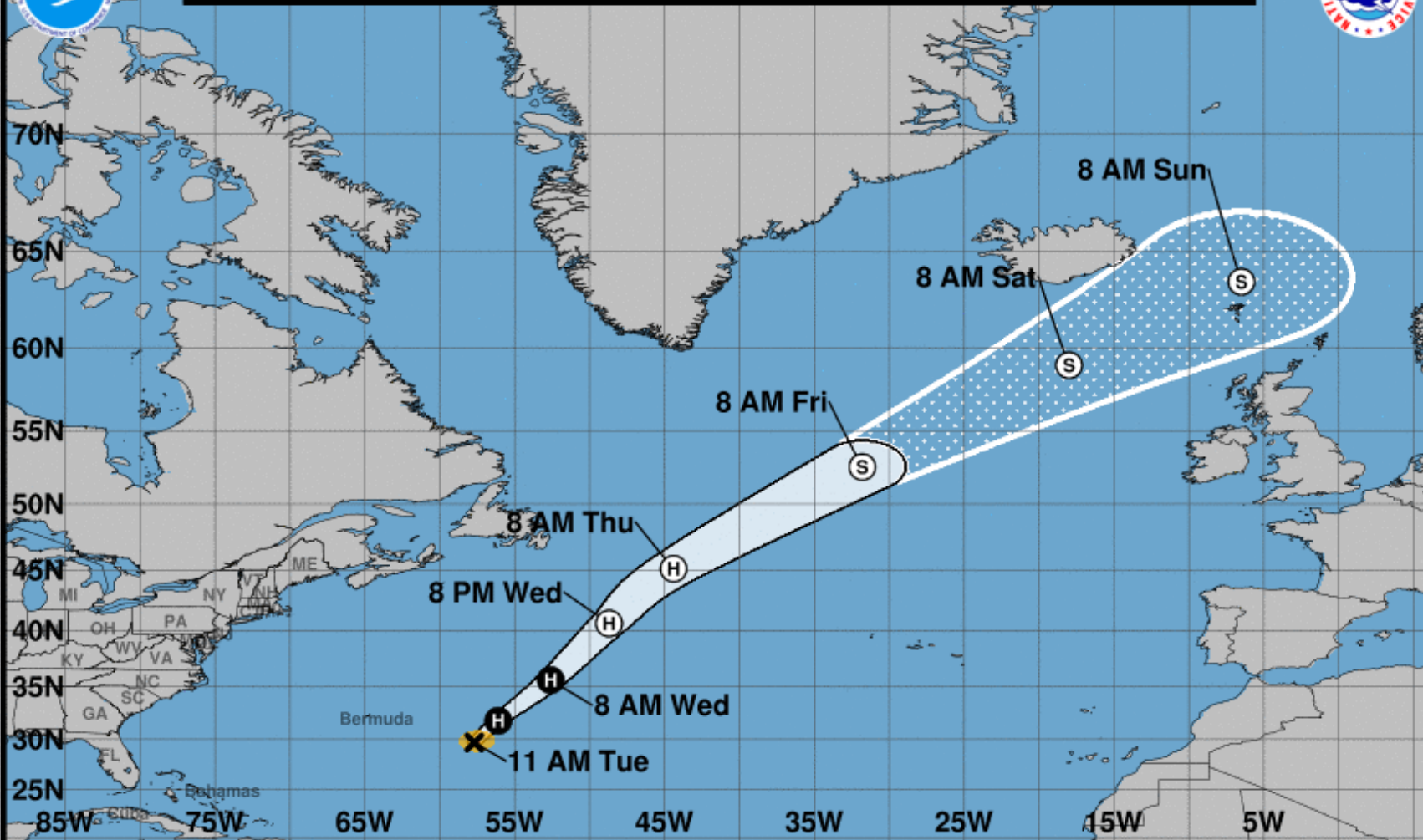


— MJO — Kelvin x2
 — Low — ER
 Contours at $-2, -6 \times 10^6 \text{ m}^2 \text{ s}^{-1}$

7-day CHI200 with CFS forecasts



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.

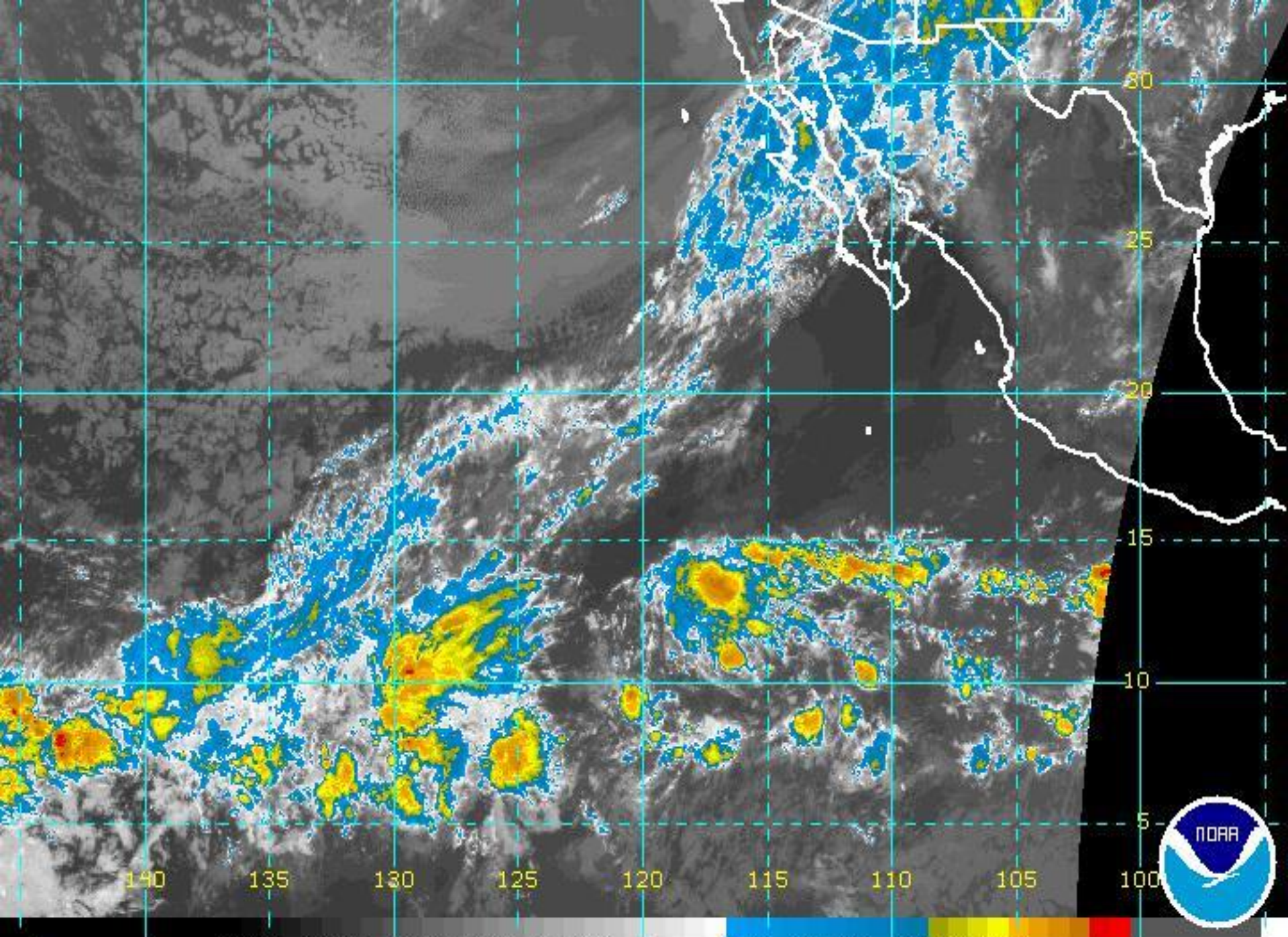


Hurricane Oscar
 Tuesday October 30, 2018
 11 AM AST Advisory 15
 NWS National Hurricane Center

Current information: x
 Center location 29.7 N 57.7 W
 Maximum sustained wind 100 mph
 Movement NNE at 14 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 (solid line), Day 4-5 (dotted line)
Watches: Hurricane (pink), Trop Stm (yellow)
Warnings: Hurricane (red), Trop Stm (blue)
Current wind extent: Hurricane (brown), Trop Stm (orange)

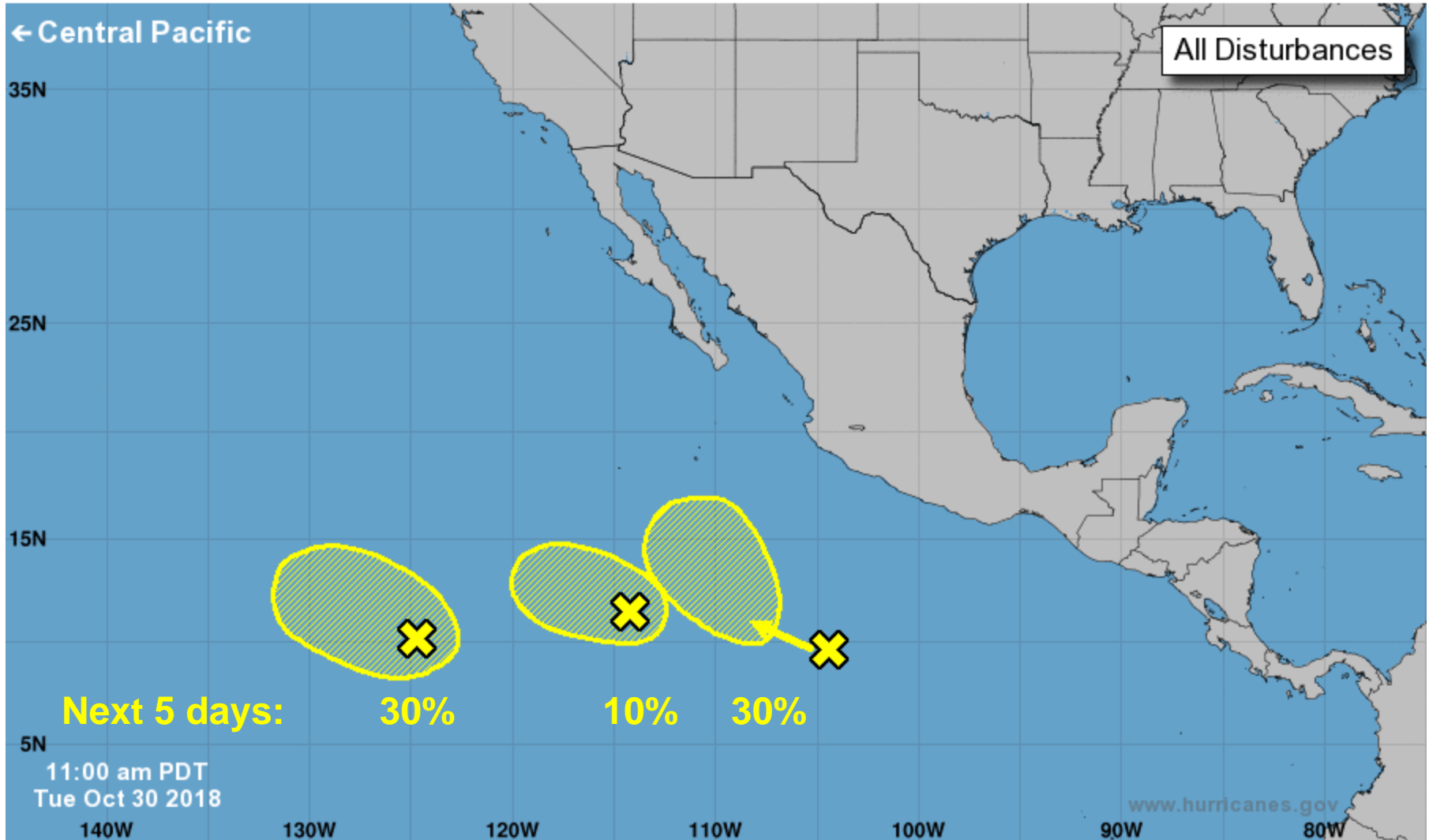


GOES-WEST AVN COLOR IR CH. 4 - OCT 30 18 15:30 UTC



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



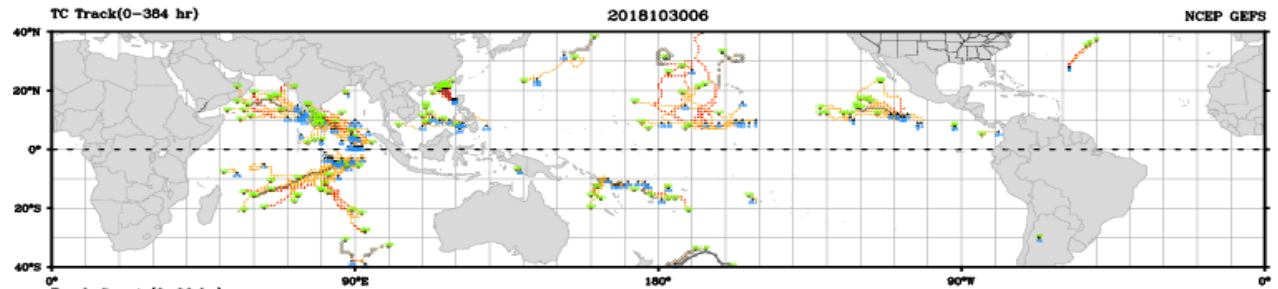
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

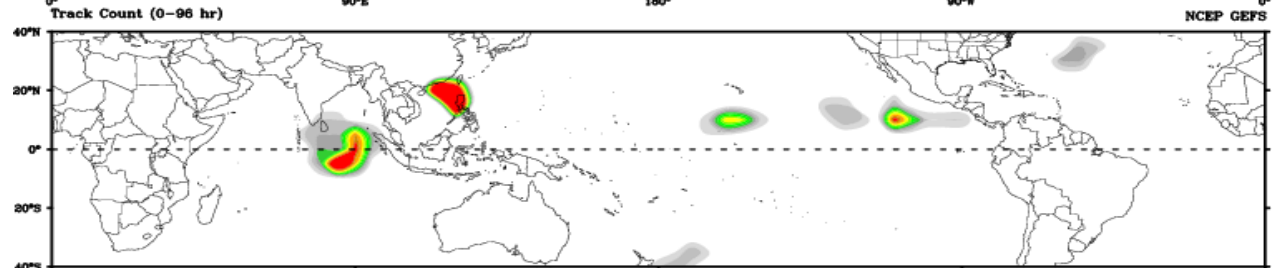
Post-Tropical Cyclone or Remnants

2018103006

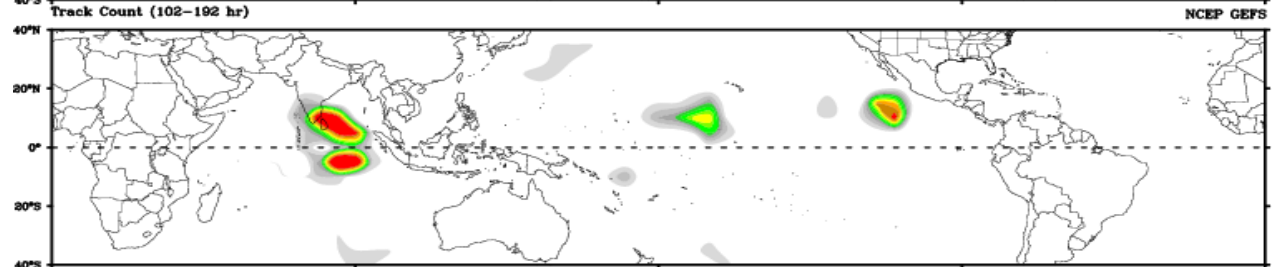
NCEP GEFS



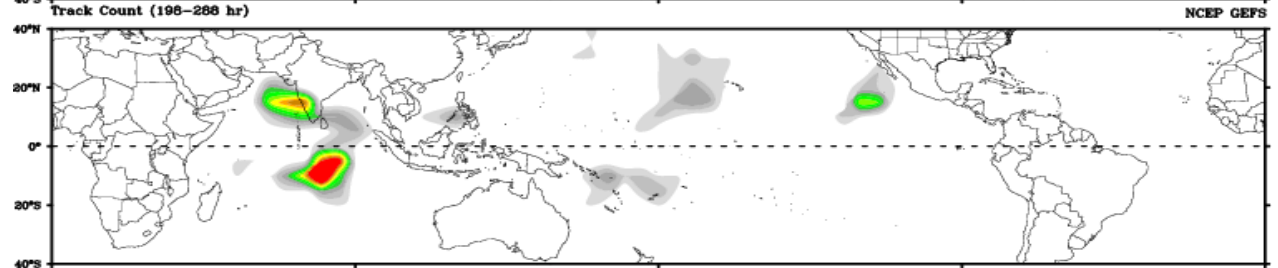
Days 1-4



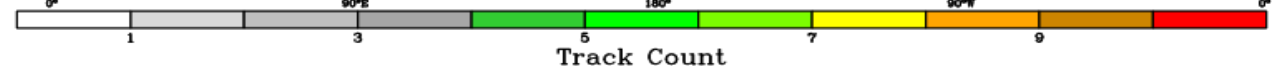
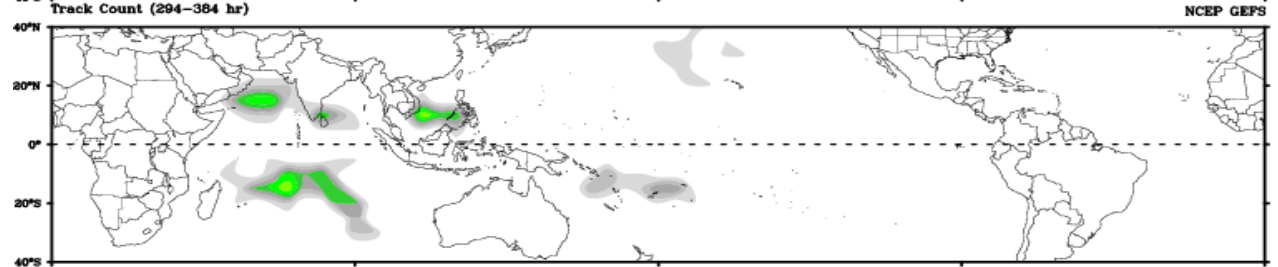
Days 5-8



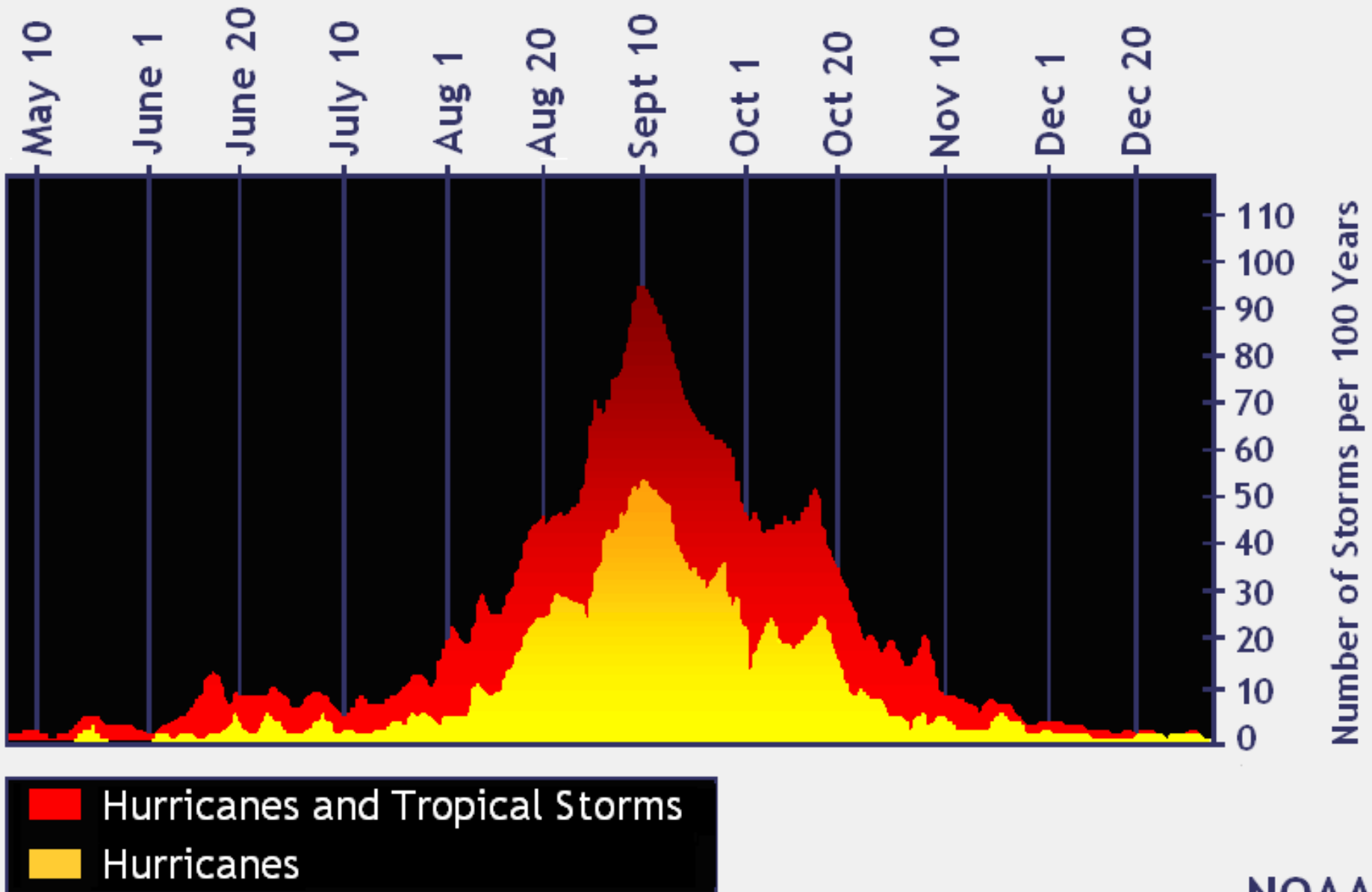
Days 9-12



Days 13-15

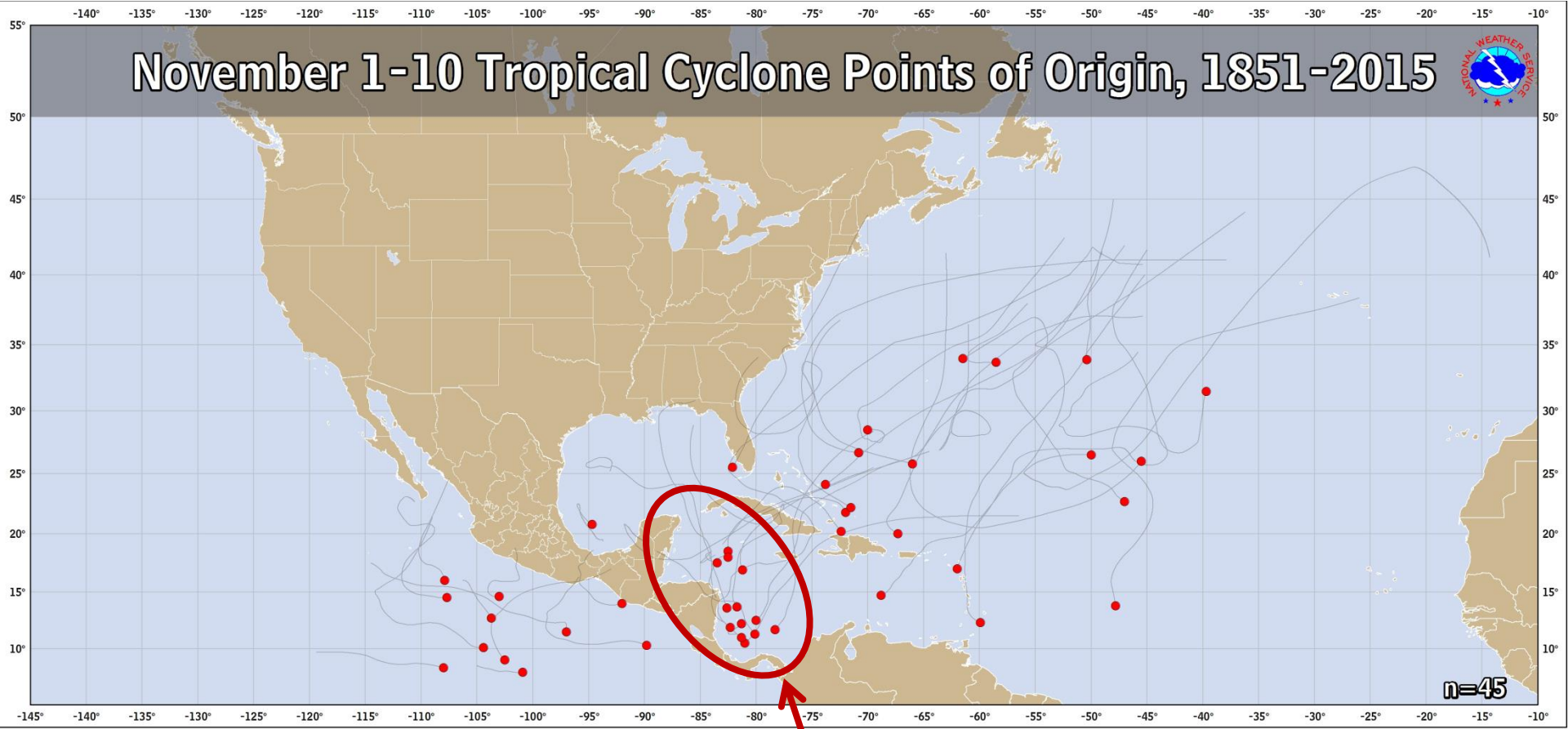


Atlantic Basin Climatology





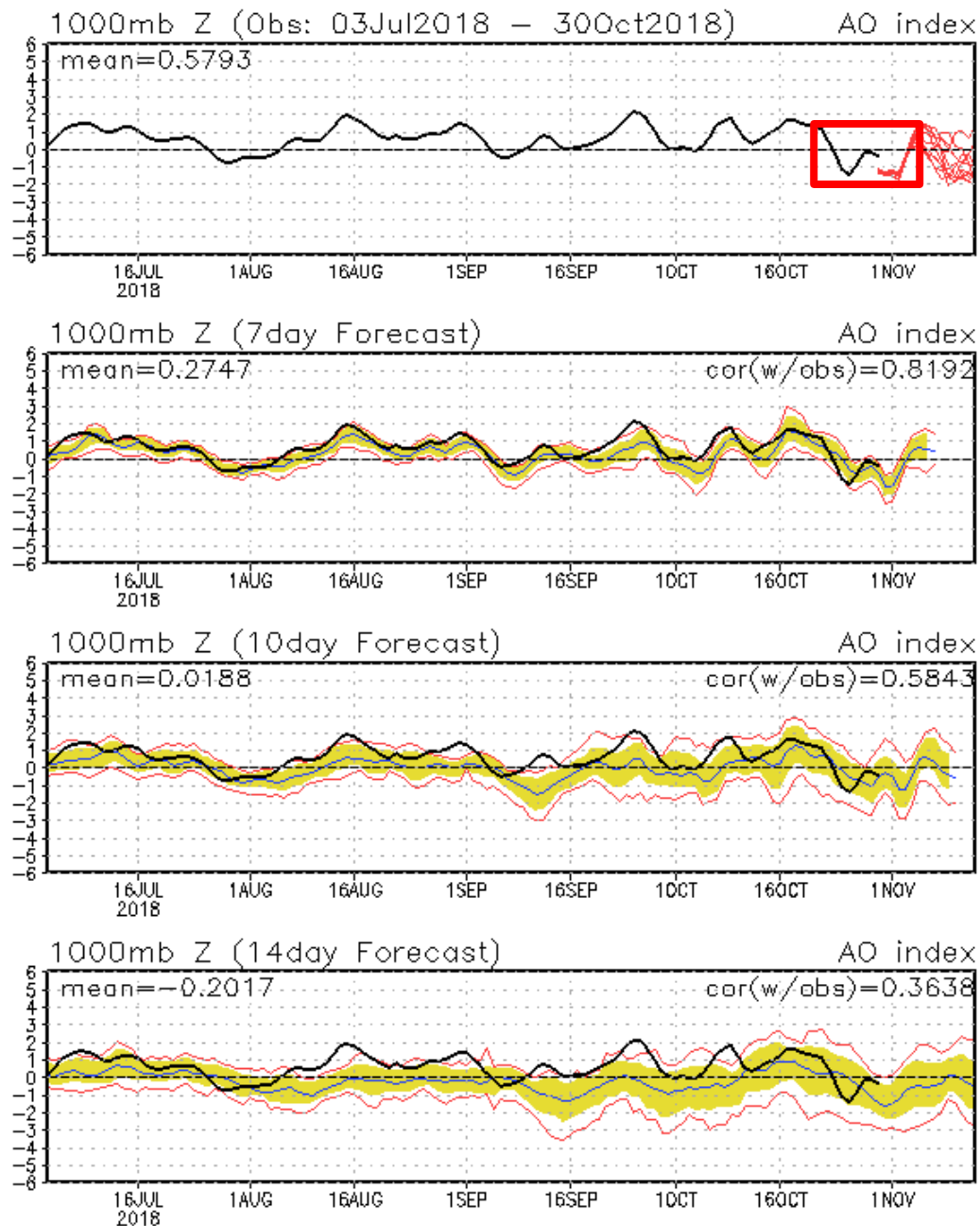
November 1-10 Tropical Cyclone Points of Origin, 1851-2015



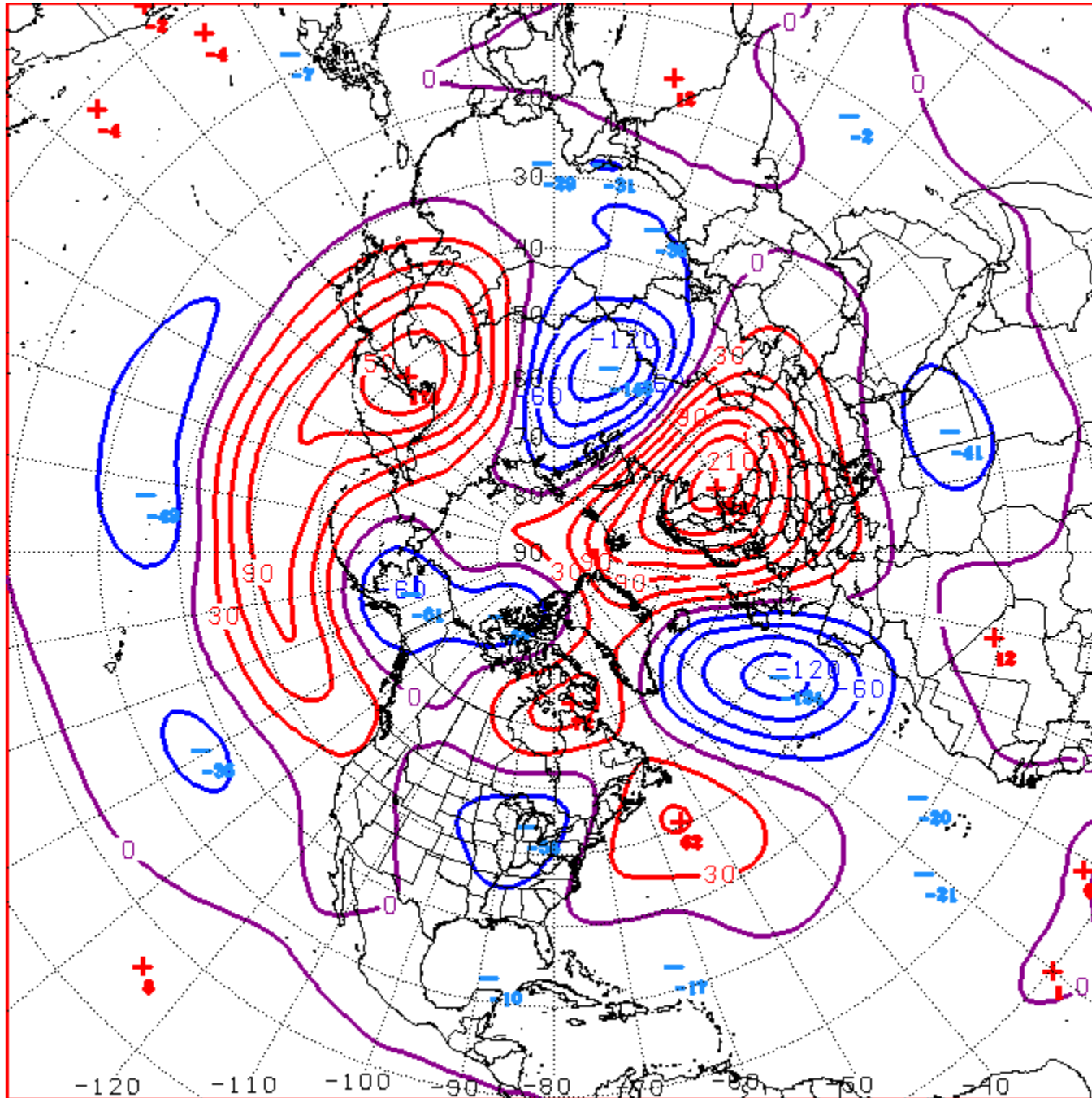
No sign of TC development in the typical hot spot during early Nov

Connections to U.S. Impacts

AO: Observed & ENSM forecasts



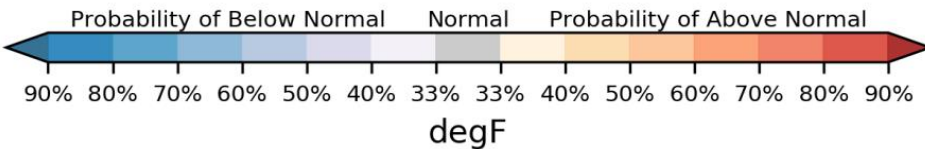
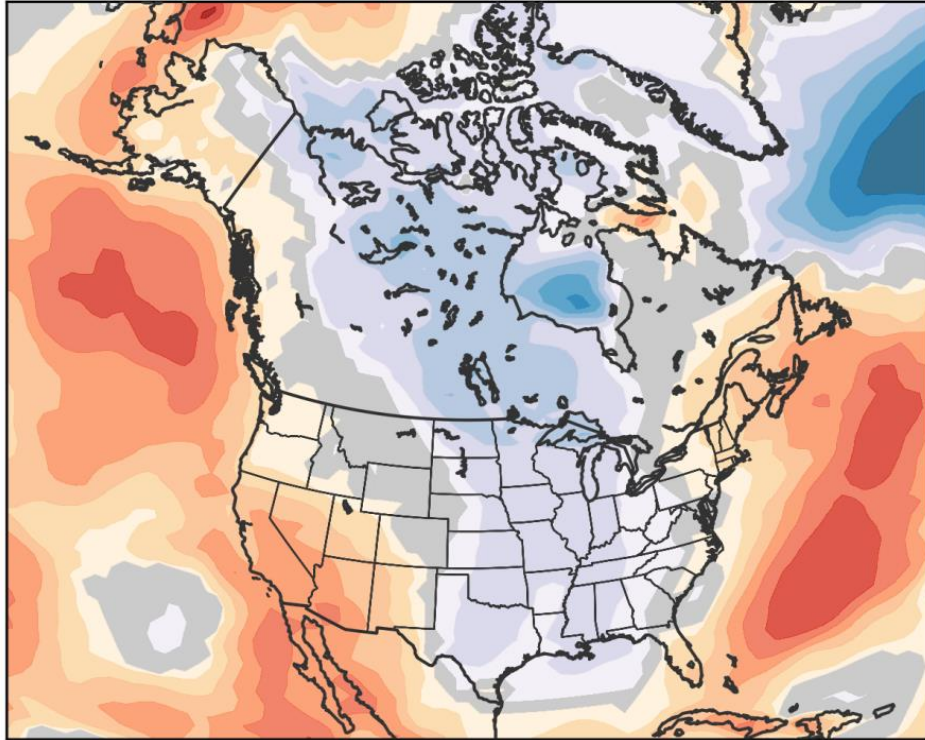
Major pattern change at mid to high latitudes of Northern Hemisphere



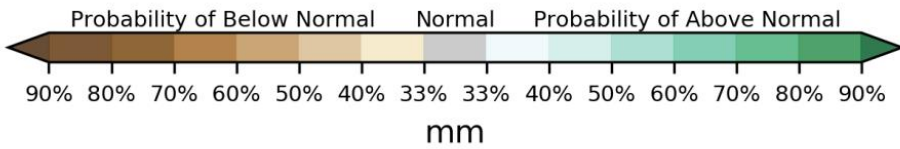
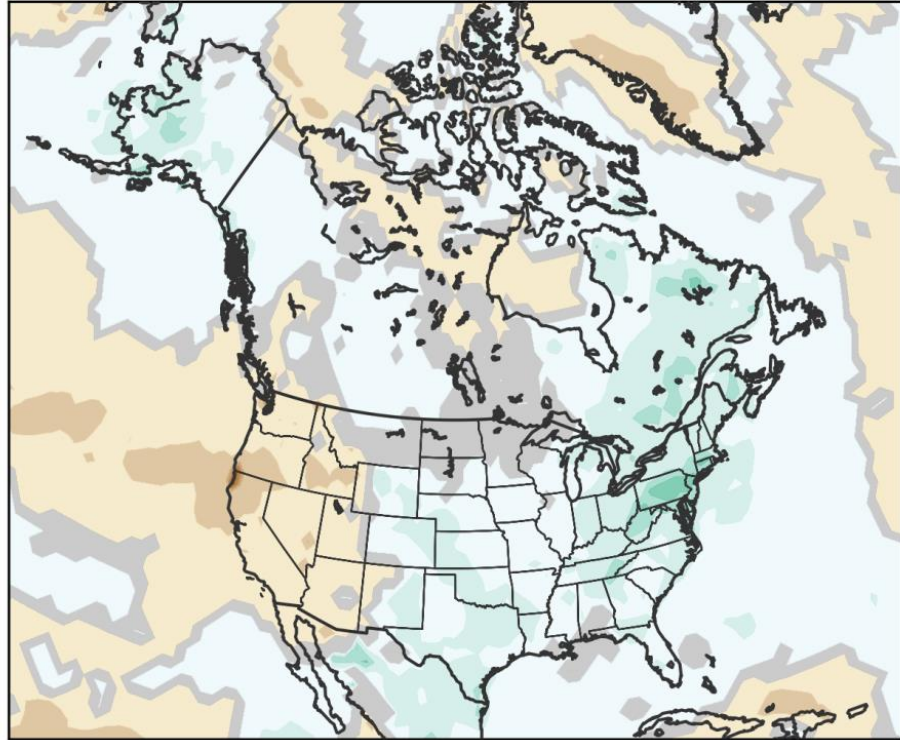
D+11 500 MB ANOMALIES FROM 06Z ENSM
CPC MAP MADE OCT 30 2018 1151 UTC CNTD NOV 10 2018

Week 2 – Temperature and Precipitation

Consolidated 8-14day tmean issued 20181030
valid 20181107 - 20181113



Consolidated 8-14day precip issued 20181030
valid 20181107 - 20181113

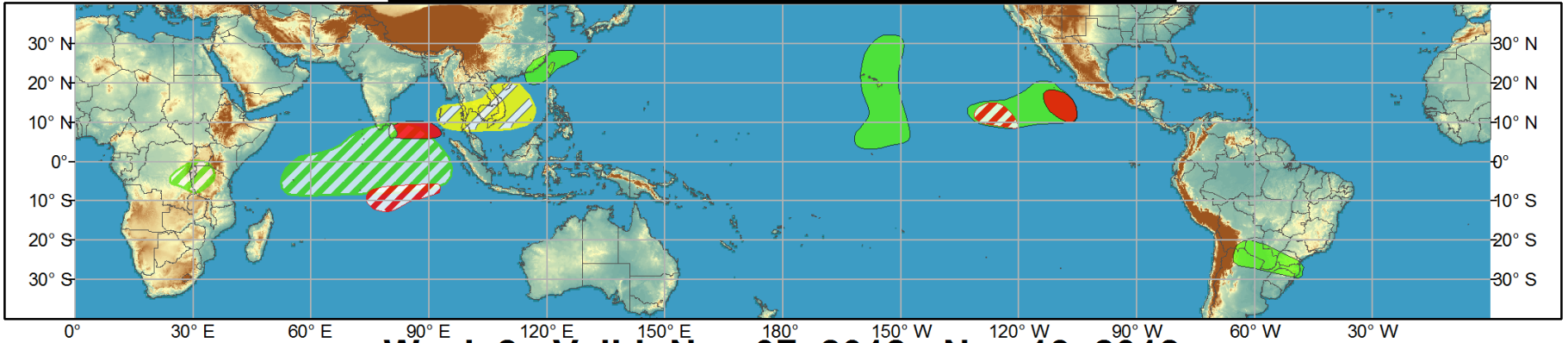




Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



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



Week 2 - Valid: Nov 07, 2018 - Nov 13, 2018



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: 10/30/2018
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.

