

Global Tropics Hazards And Benefits Outlook

11/29/2016

Adam Allgood

Outline

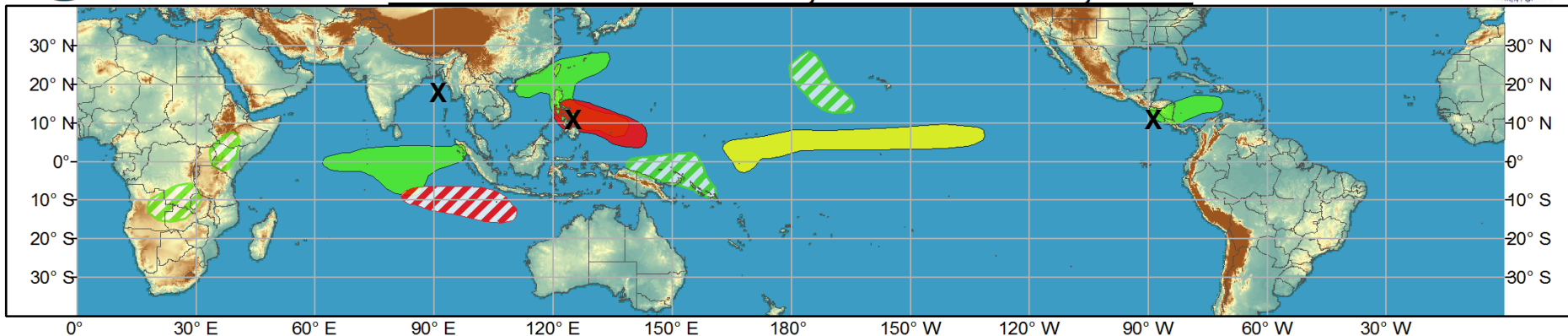
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review: Tropical Cyclone Formations

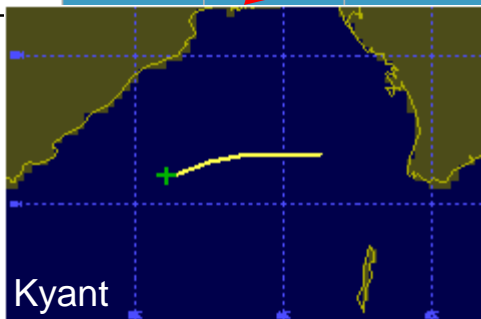
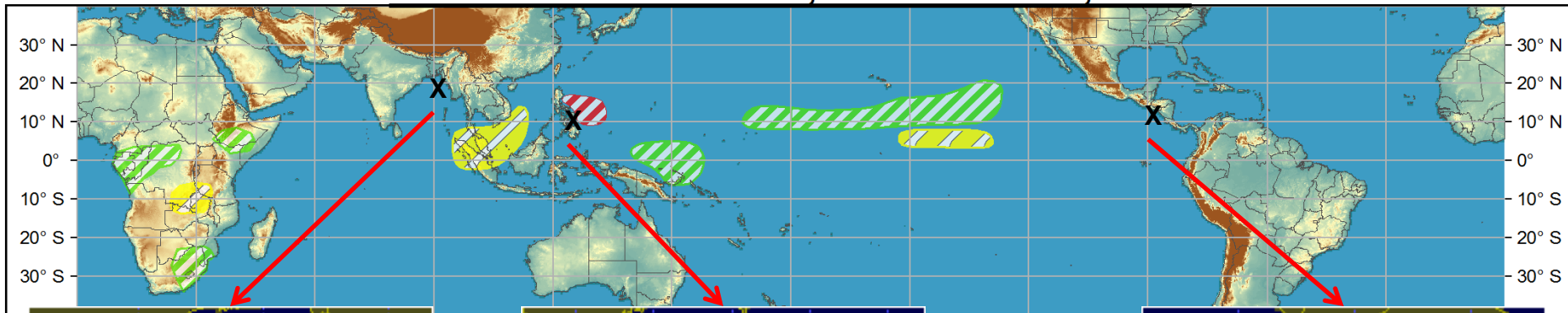


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

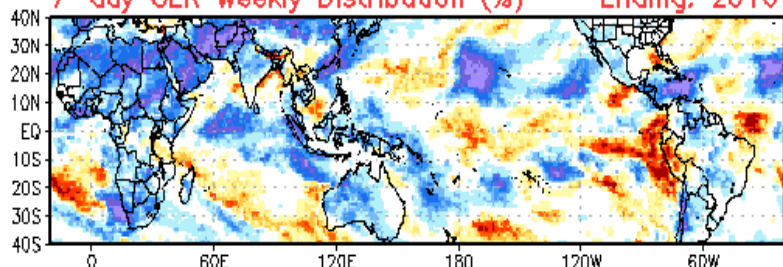
Week 1 - Valid: Nov 23, 2016 - Nov 29, 2016



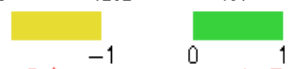
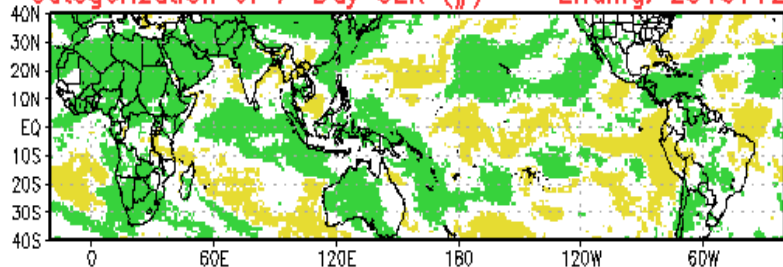
Week 2 - Valid: Nov 23, 2016 - Nov 29, 2016



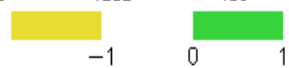
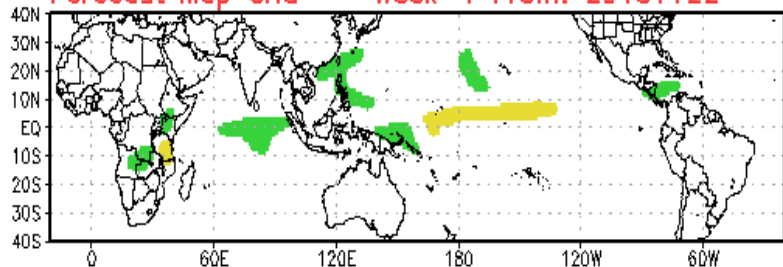
7-day OLR Weekly Distribution (%) -- Ending: 20161129



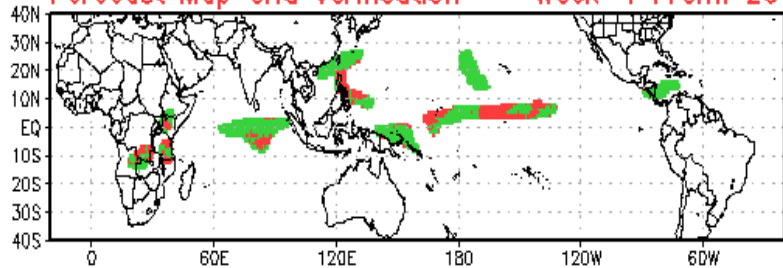
Categorization of 7-Day OLR (#) -- Ending: 20161129



Forecast Map Grid -- Week-1 From: 20161122

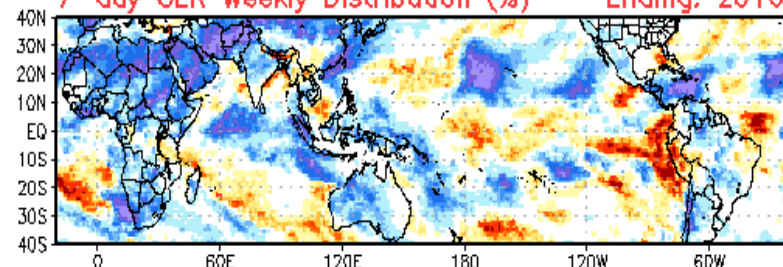


Forecast Map Grid Verification -- Week-1 From: 20161122

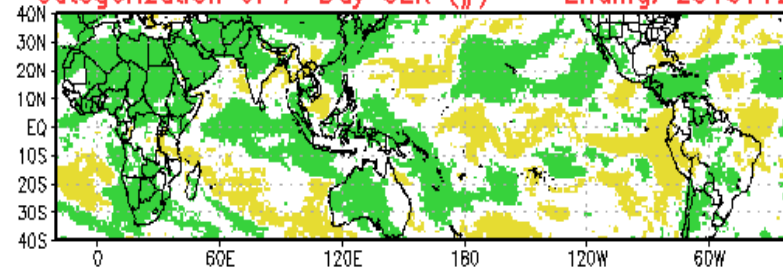


Hit: Green, Miss: Red
Heidke Skill Score: 58.2874

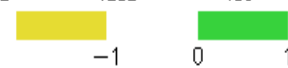
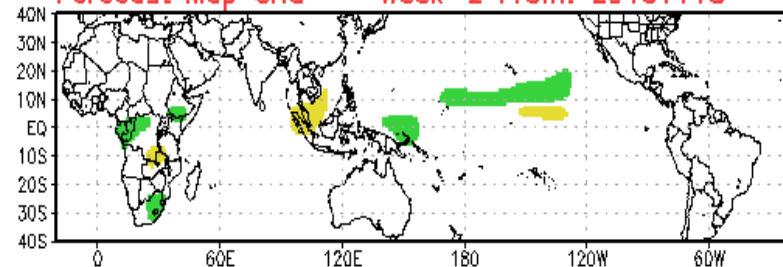
7-day OLR Weekly Distribution (%) -- Ending: 20161129



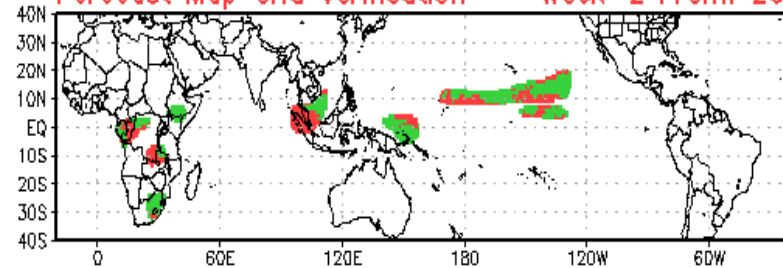
Categorization of 7-Day OLR (#) -- Ending: 20161129



Forecast Map Grid -- Week-2 From: 20161115



Forecast Map Grid Verification -- Week-2 From: 20161115



Hit: Green, Miss: Red
Heidke Skill Score: 39.0503

Synopsis of Climate Modes

ENSO:

- ENSO Alert System Status: [La Niña Advisory](#)
- La Niña conditions are present and slightly favored to persist (~55% chance) through winter 2016-17.

MJO and other subseasonal tropical variability:

- The MJO has weakened during the past week.
- There are two centers of activity: 1) Eastern Indian Ocean and western Maritime Continent (Kelvin wave), and 2) West Pacific near New Guinea (Kelvin wave and possibly Rossby wave interaction)
- West Pacific activity is likely destructively interfering with the fast intraseasonal signal that was observed during the past few weeks. Future evolution of the pattern is highly uncertain.

Extratropics:

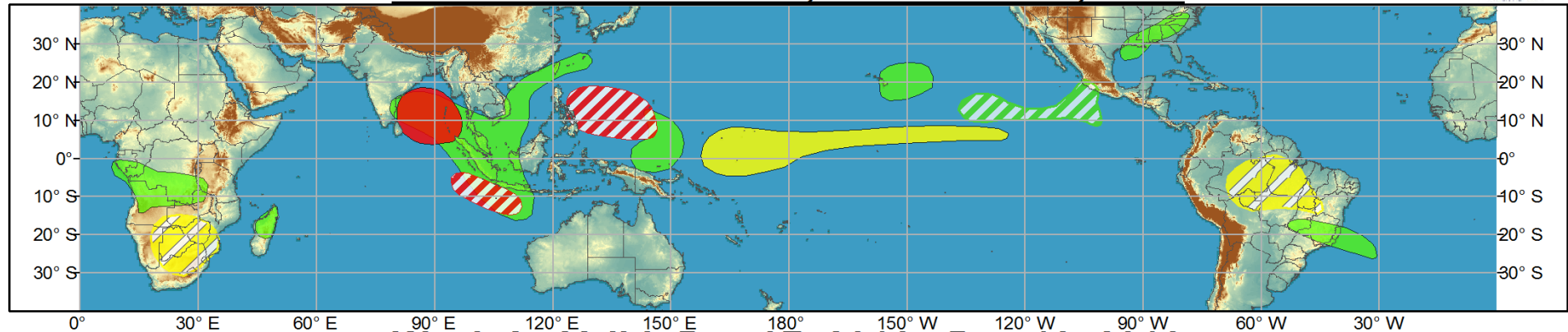
- Tropical convection can have a substantial impact on the extratropics this time of year, but impacts from the two observed competing signals are opposite each other, so downstream impacts would be affected by which signal is more dominant/has a more robust extratropical response.



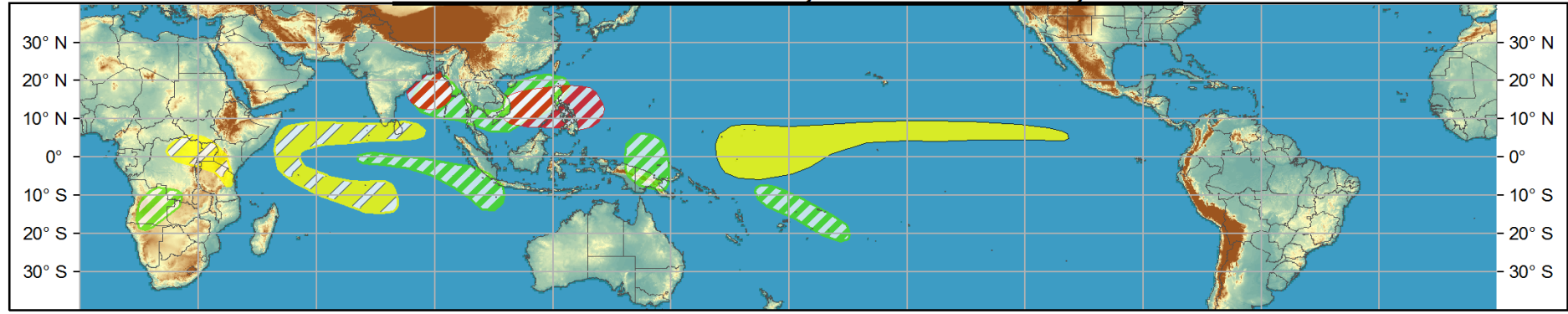
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Nov 30, 2016 - Dec 06, 2016



Week 2 - Valid: Dec 07, 2016 - Dec 13, 2016



Confidence

High Moderate

- Tropical Cyclone Formation** (Red) (Red Hatched) Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Above-average rainfall** (Green) (Green Hatched) Weekly total rainfall in the upper third of the historical range.
- Below-average rainfall** (Yellow) (Yellow Hatched) Weekly total rainfall in the lower third of the historical range.
- Above-normal temperatures** (Orange) (Orange Hatched) 7-day mean temperatures in the upper third of the historical range.
- Below-normal temperatures** (Blue) (Blue Hatched) 7-day mean temperatures in the lower third of the historical range.

Produced: 11/29/2016
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.

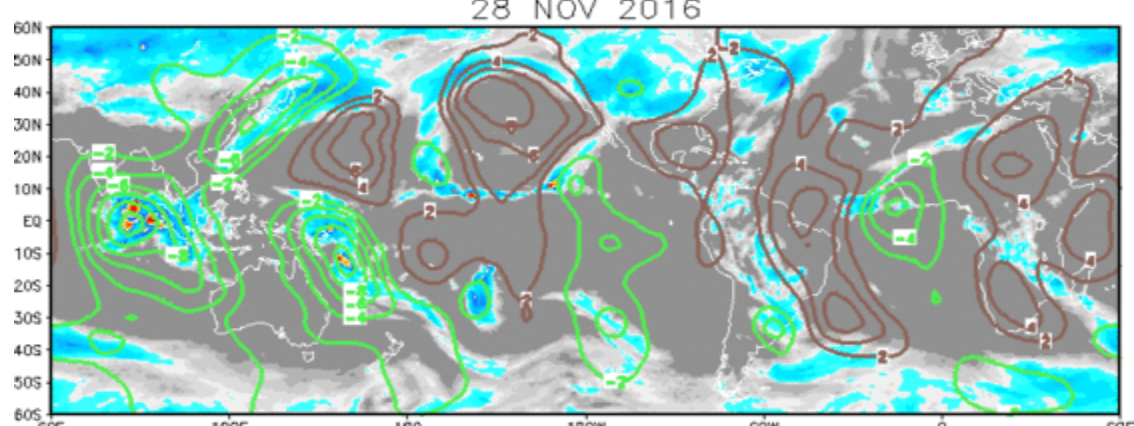
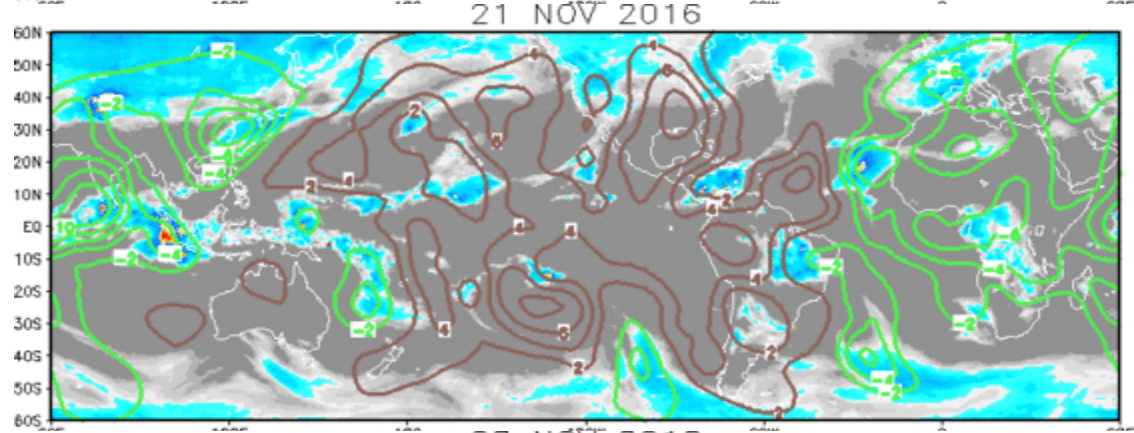
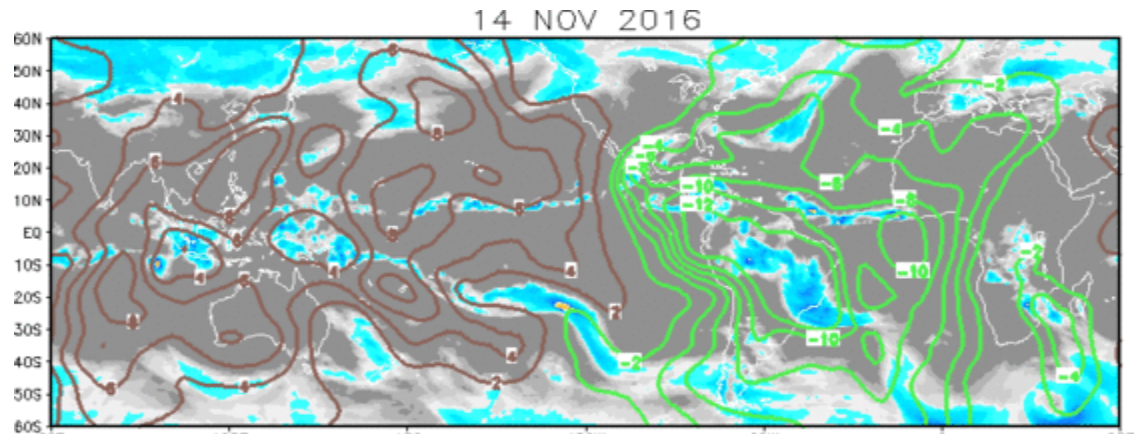


IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence

Brown: Enhanced Convergence

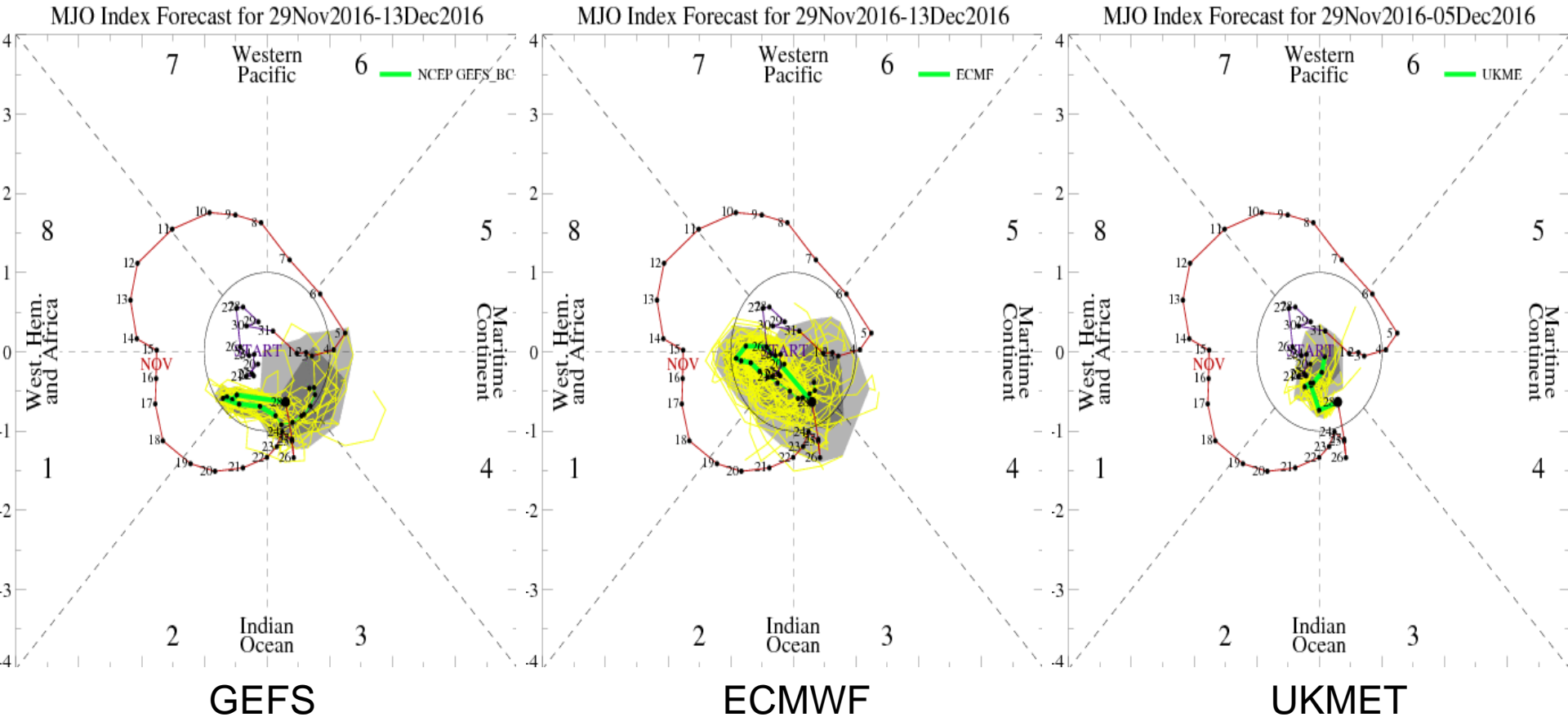
Robust Wave-1 pattern
consistent with Western
Hemisphere MJO



Convection fires over the
central Indian Ocean as the
MJO RMM index enters
Phase 2.

Breakdown of the pattern, with
two distinct centers of enhanced
convection, weak pattern
elsewhere.

MJO Observation/Forecast



GEFS: Generally weak signal, but some hints of eastward propagation over the Maritime Continent by Week-2.

ECMWF: Weaker and slower than GEFS.

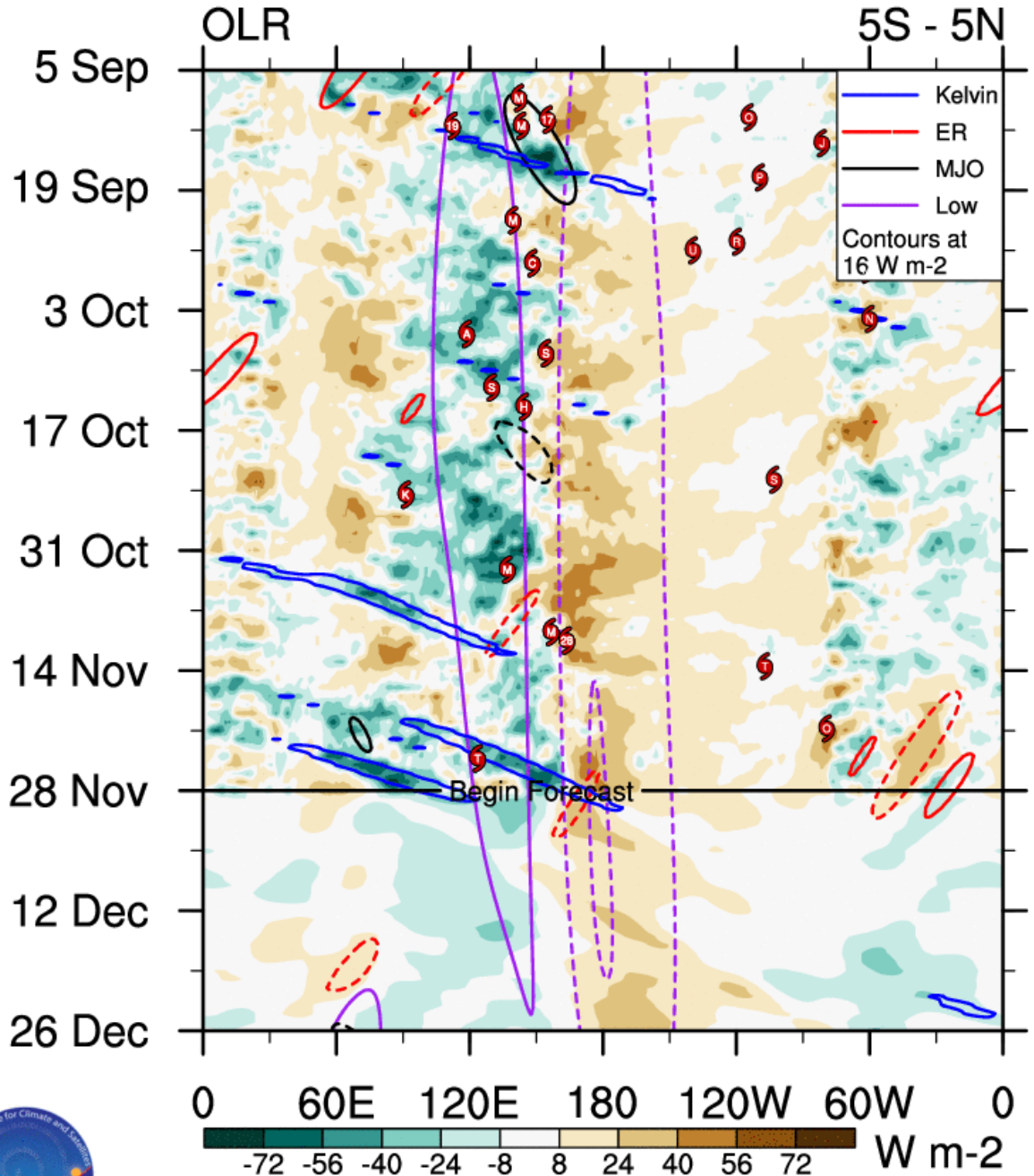
UKMET: No MJO activity

Low frequency (La Niña) state evident as enhanced (suppressed) convection over the Maritime Continent (central Pacific).

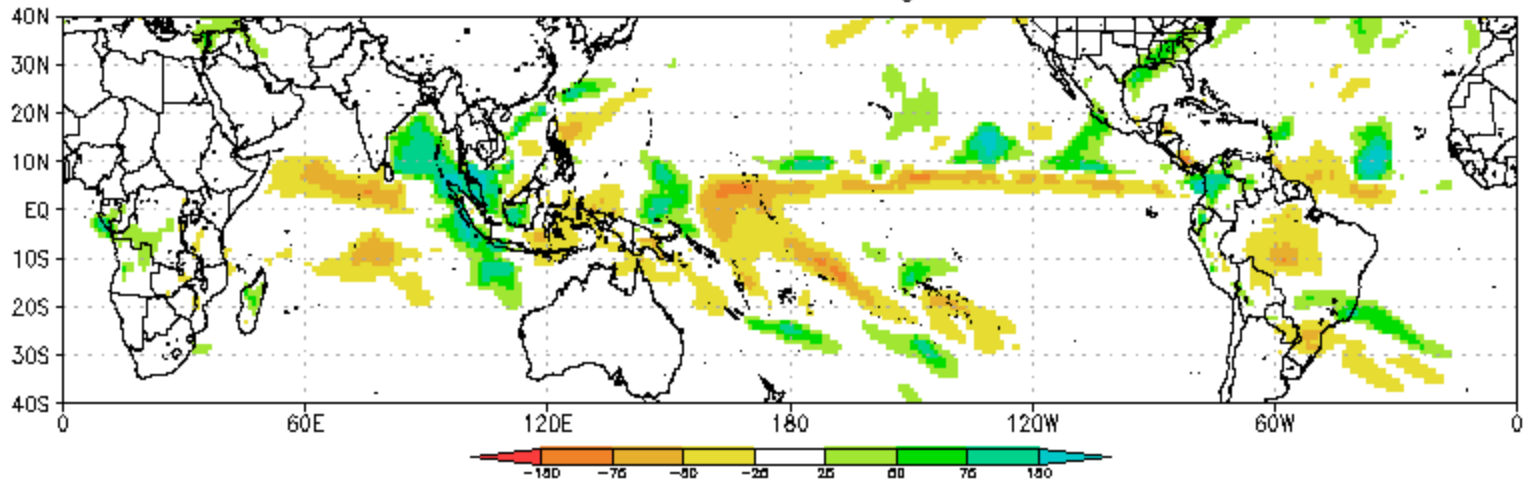
Frequent Kelvin wave activity noted, occasionally interfering with the base state.

Rossby wave activity frequently initiated at the eastern edge of the enhanced convective envelope.

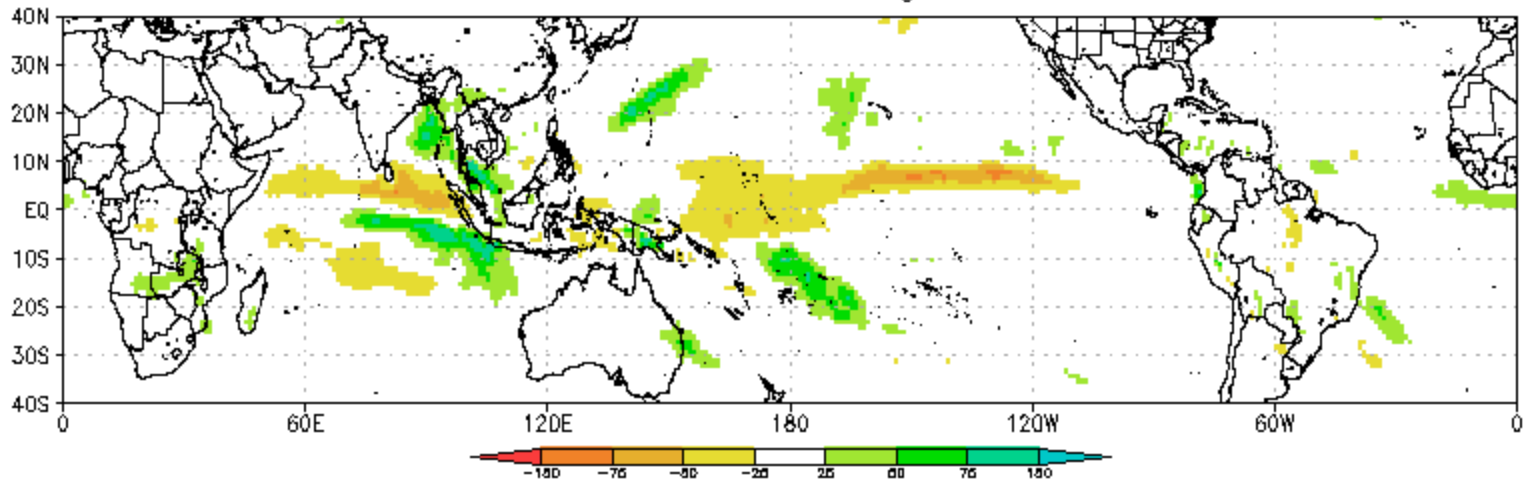
Note robust double-barrelled KWs now over MT and WPac.



CFSv2 Precip Anomalies (mm) Issued 28Nov2016
Week-1 Forecast Ending 06Dec2016



CFSv2 Precip Anomalies (mm) Issued 28Nov2016
Week-2 Forecast Ending 13Dec2016





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



Graphical Tropical Weather Outlook

1:00 pm EST
Tue Nov 29 2016

100°W 90°W 80°W 70°W 60°W 40°W 30°W 20°W

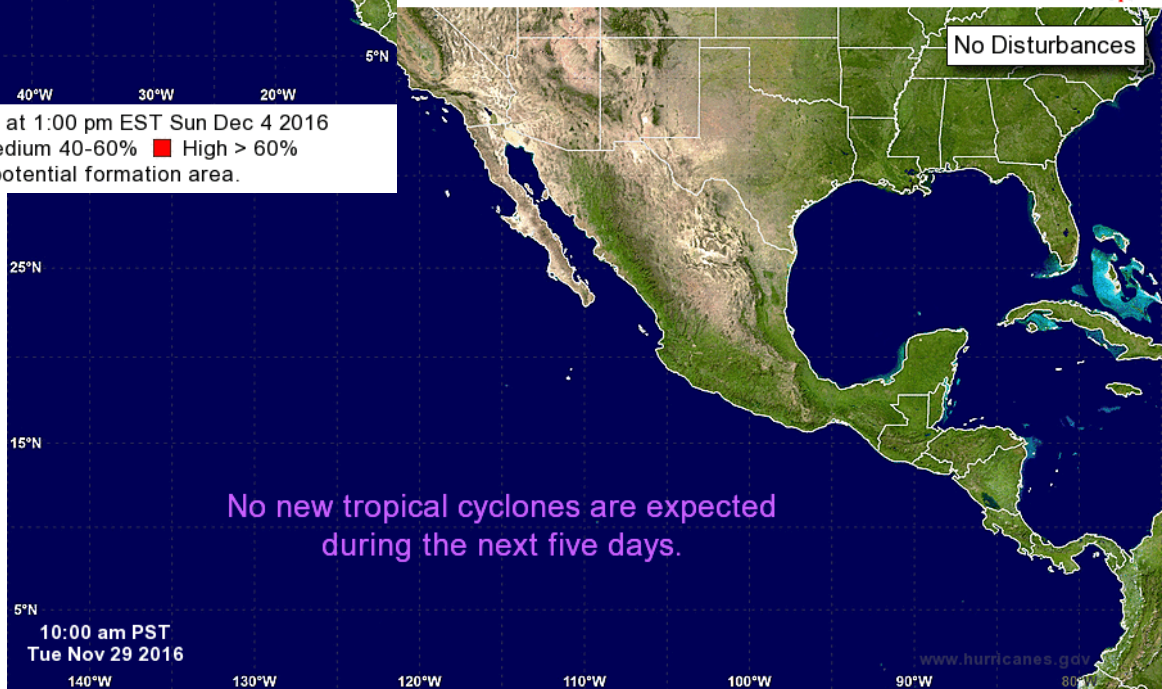
Tropical Cyclone Formation Potential for the Five-Day Period Ending at 1:00 pm EST Sun Dec 4 2016

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



No Disturbances

10:00 am PST
Tue Nov 29 2016

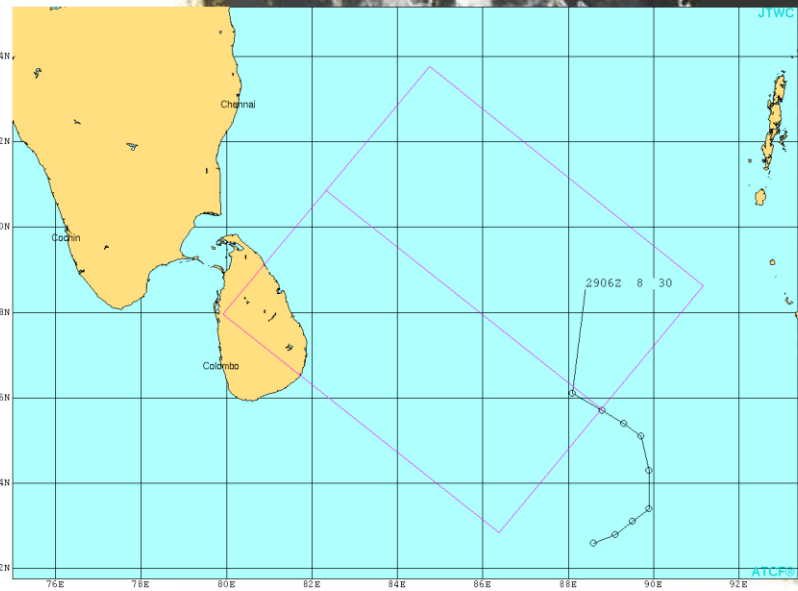
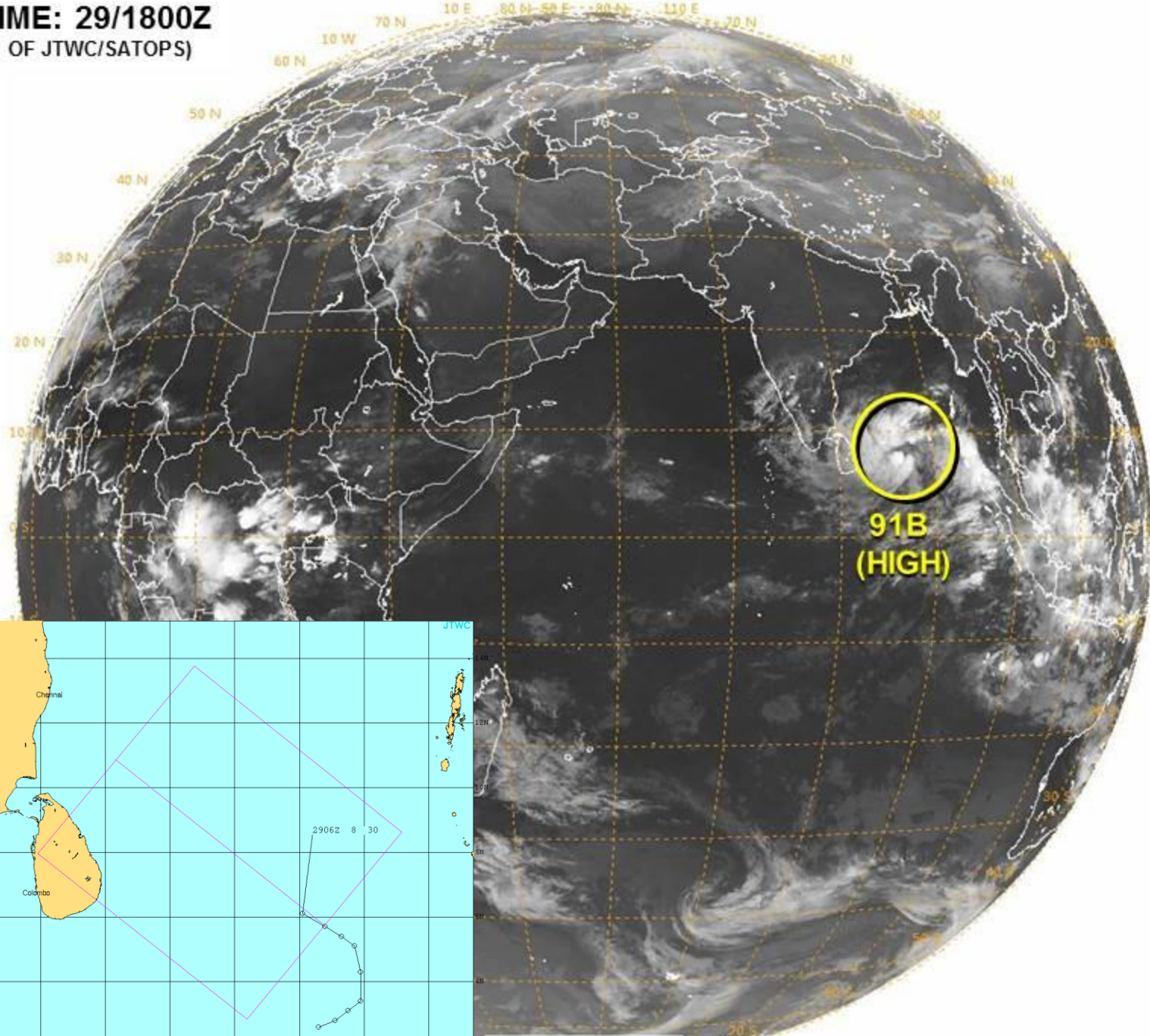
140°W 130°W 120°W 110°W 100°W 90°W

Tropical Cyclone Formation Potential for the Five-Day Period Ending at 10:00 am PST Sun Dec 4 2016

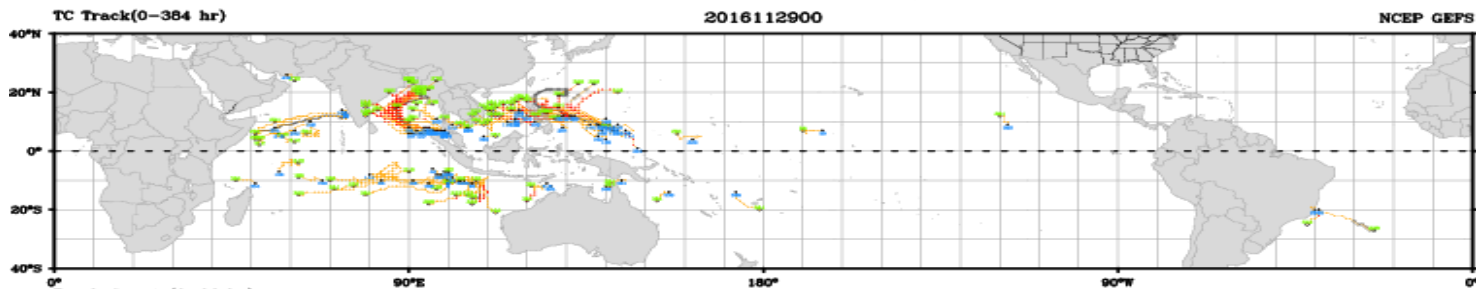
Chance of Cyclone Formation in Five Days: ■ Low < 40% ■ Medium 40-60% ■ High > 60%

X indicates current disturbance location; shading indicates potential formation area.

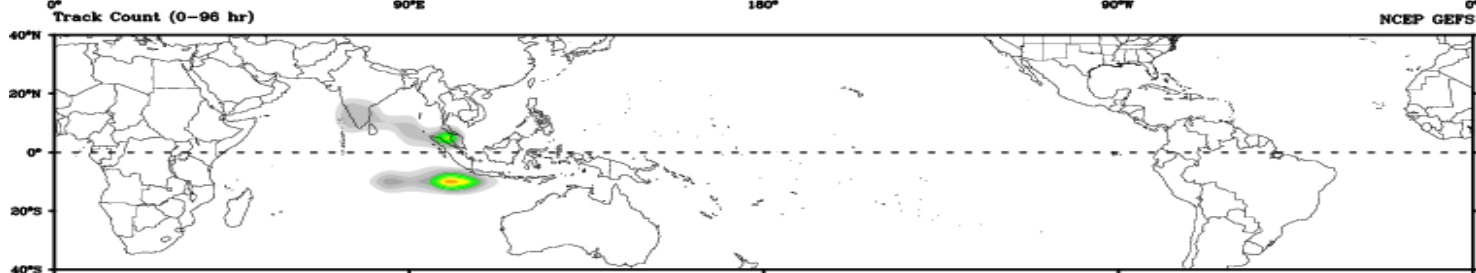
VALID TIME: 29/1800Z
(PRODUCT OF JTWC/SATOPS)



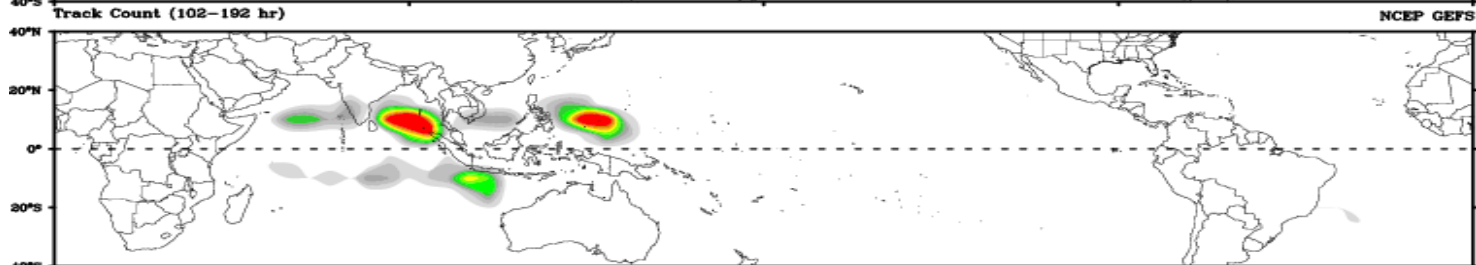
(C) EUMETSAT 2016



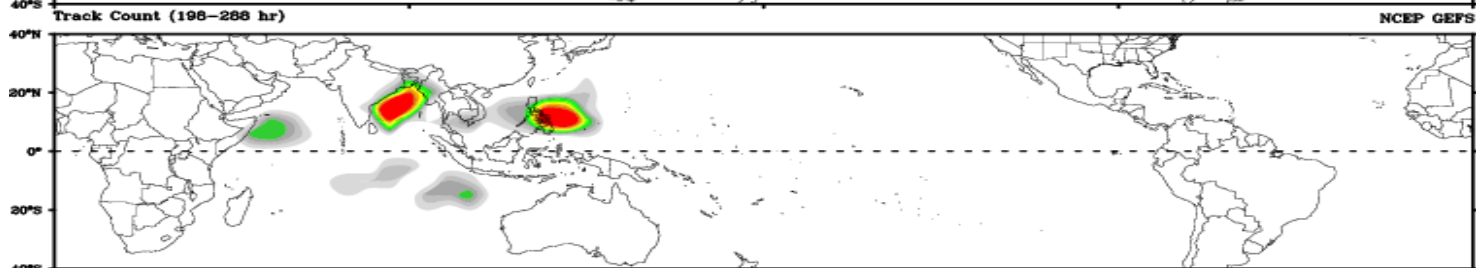
Days 1-4



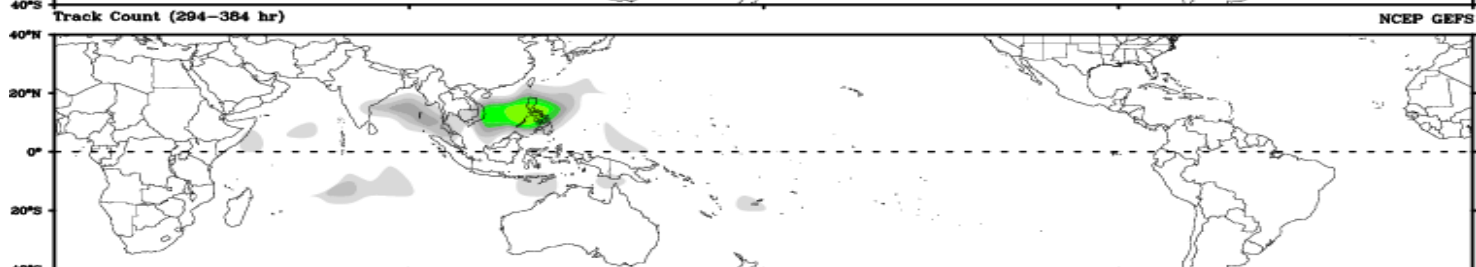
Day 5-8



Day 9-12

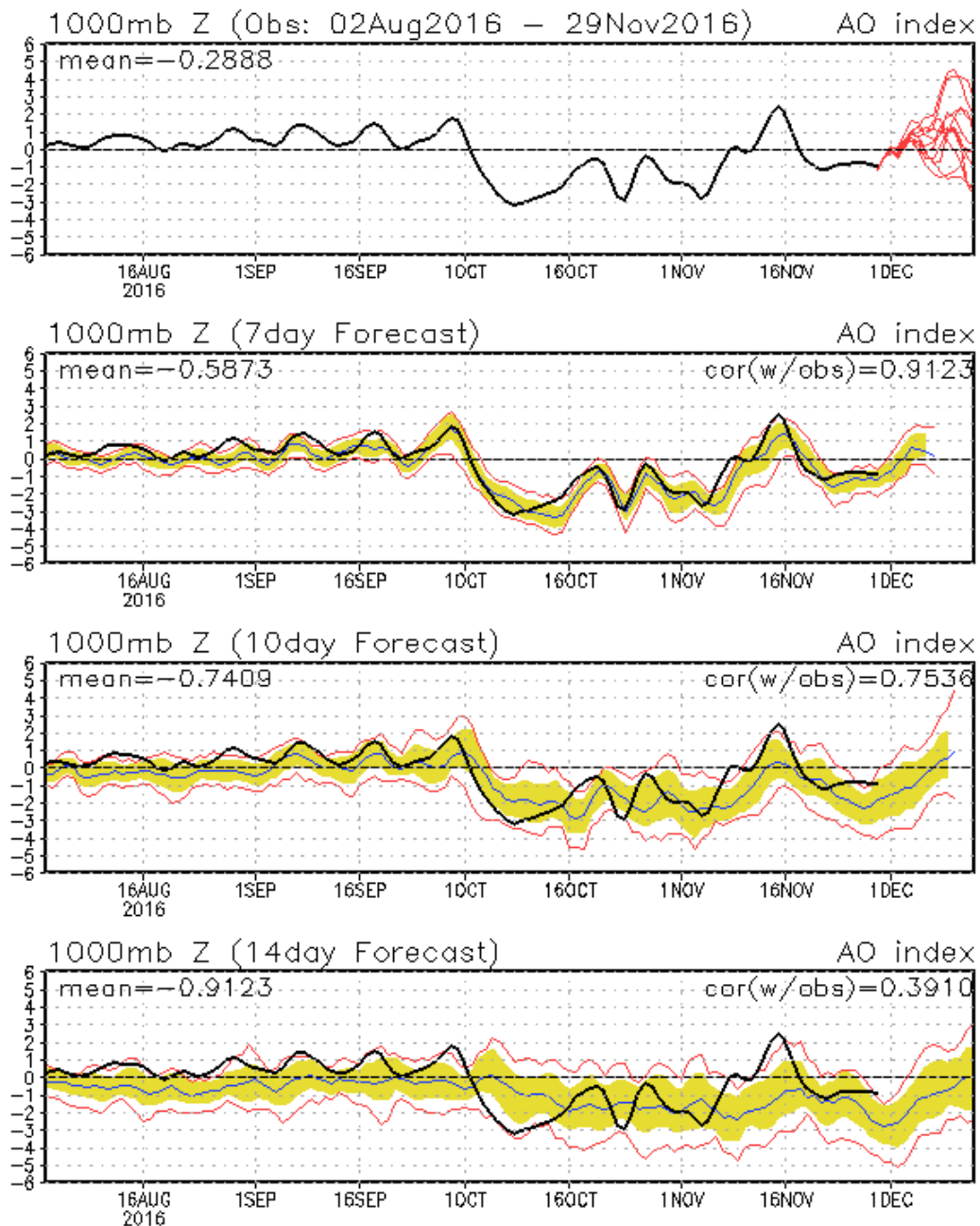


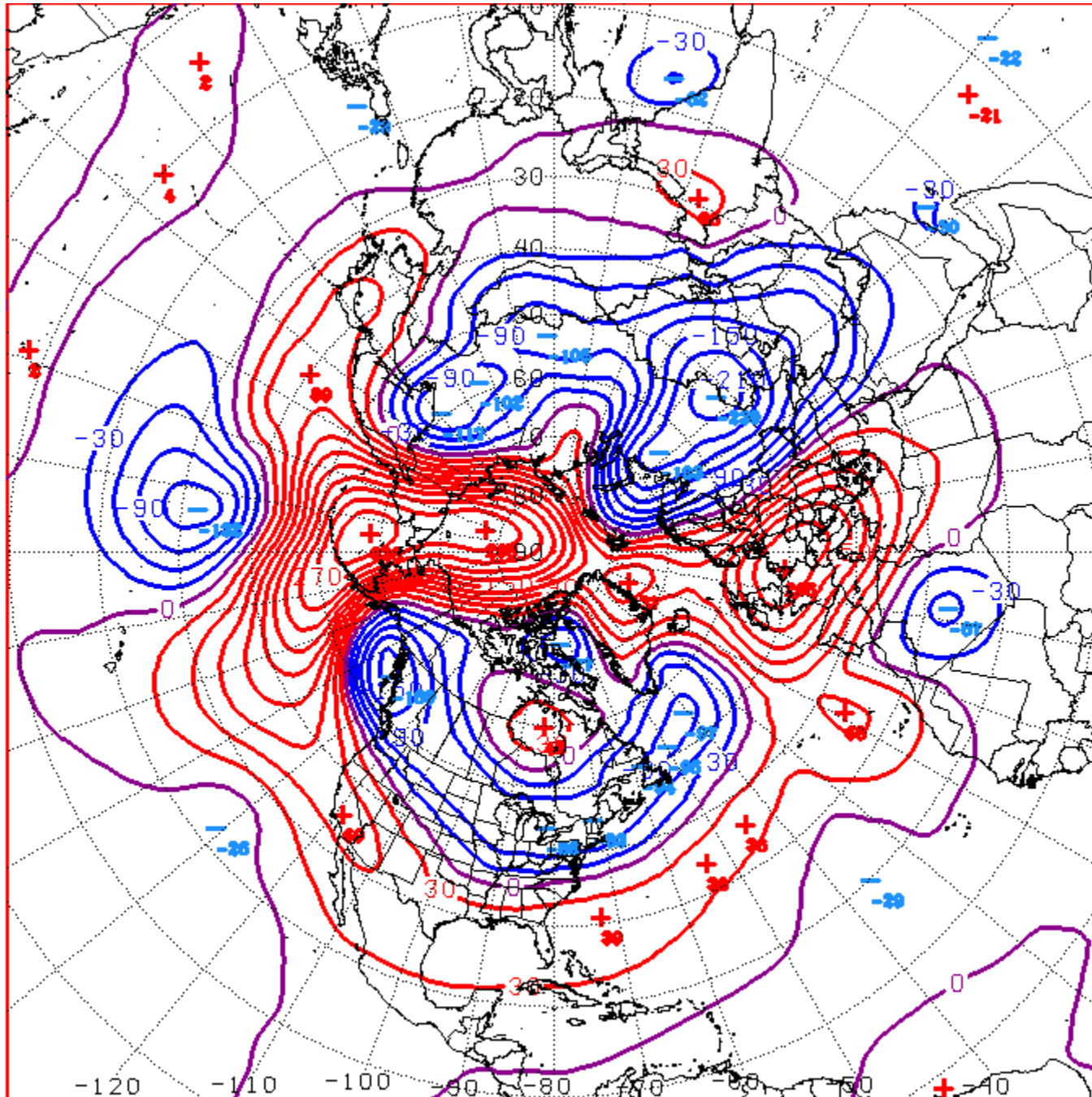
Day 13-15



Connections to U.S. Impacts

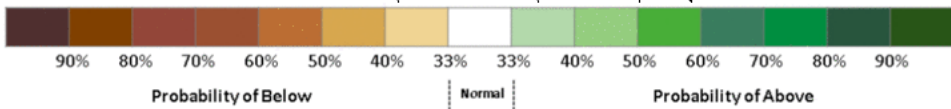
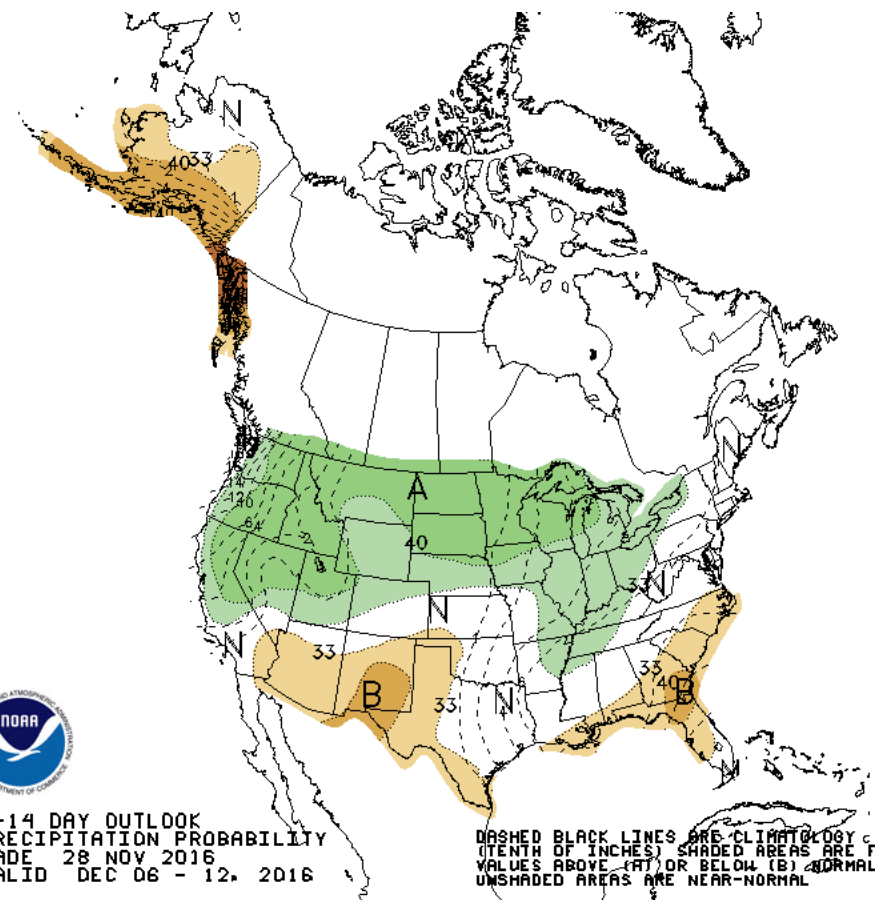
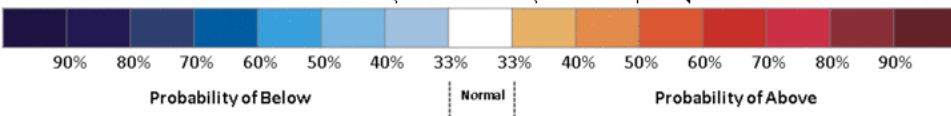
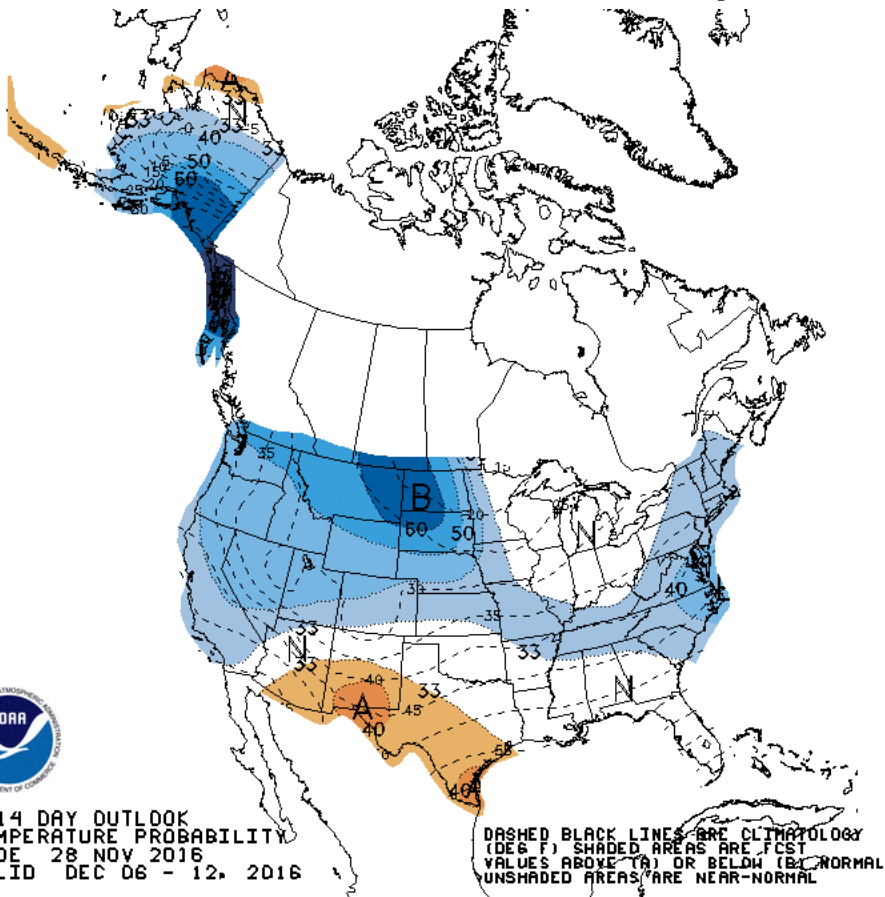
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM 12Z GFS
CPC MAP MADE NOV 29 2016 1705 UTC CNTD DEC 10 2016

Week 2 – Temperature and Precipitation

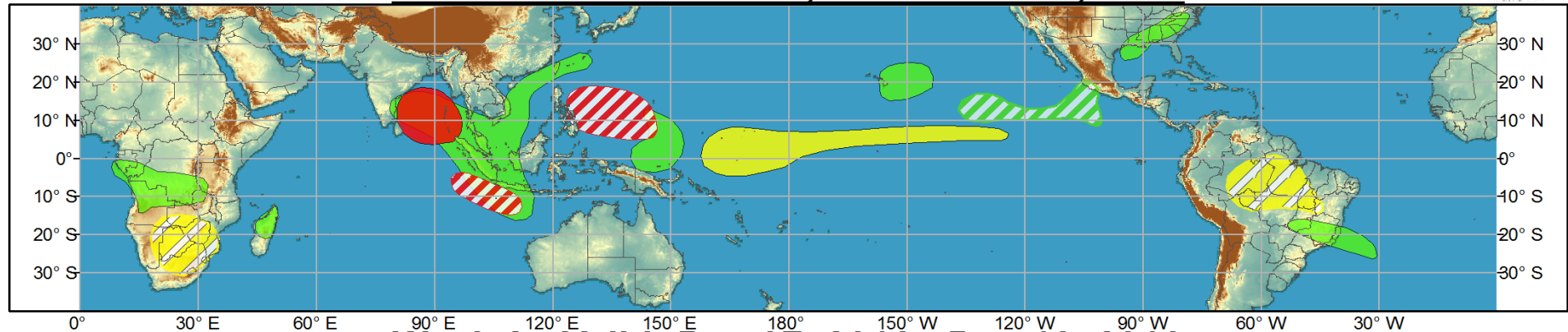




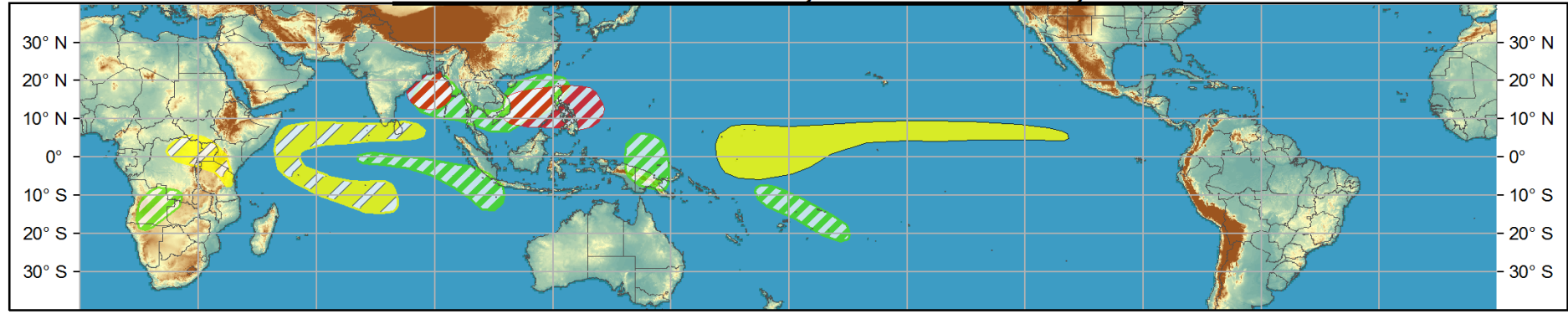
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Nov 30, 2016 - Dec 06, 2016



Week 2 - Valid: Dec 07, 2016 - Dec 13, 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: 11/29/2016
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.

