Global Tropics Hazards And Benefits Outlook
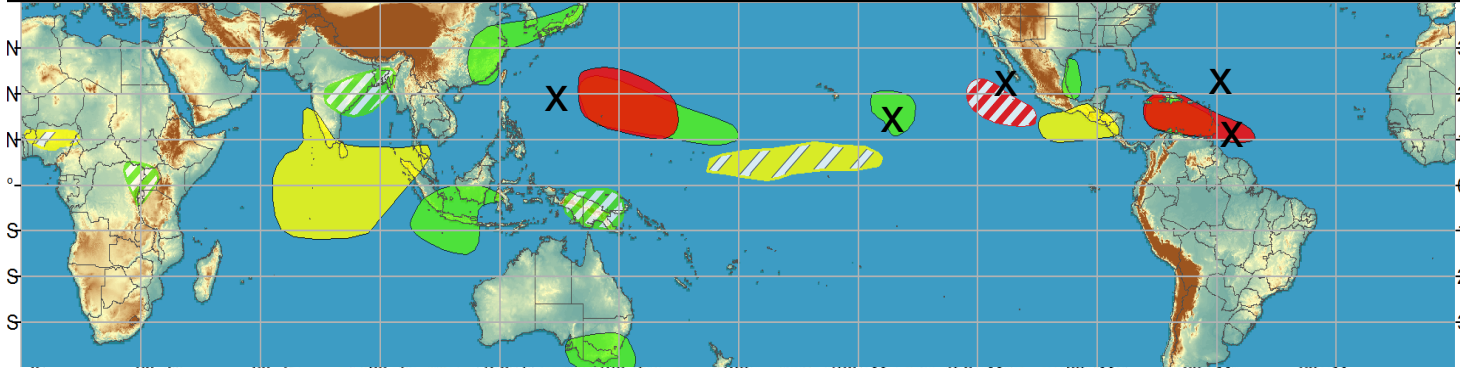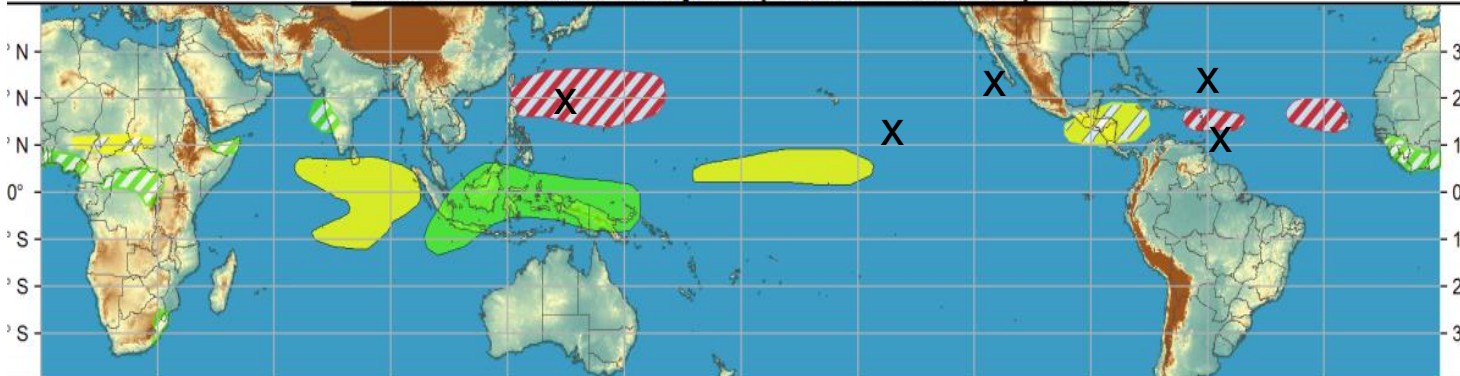## October 4, 2016

Anthony Artusa

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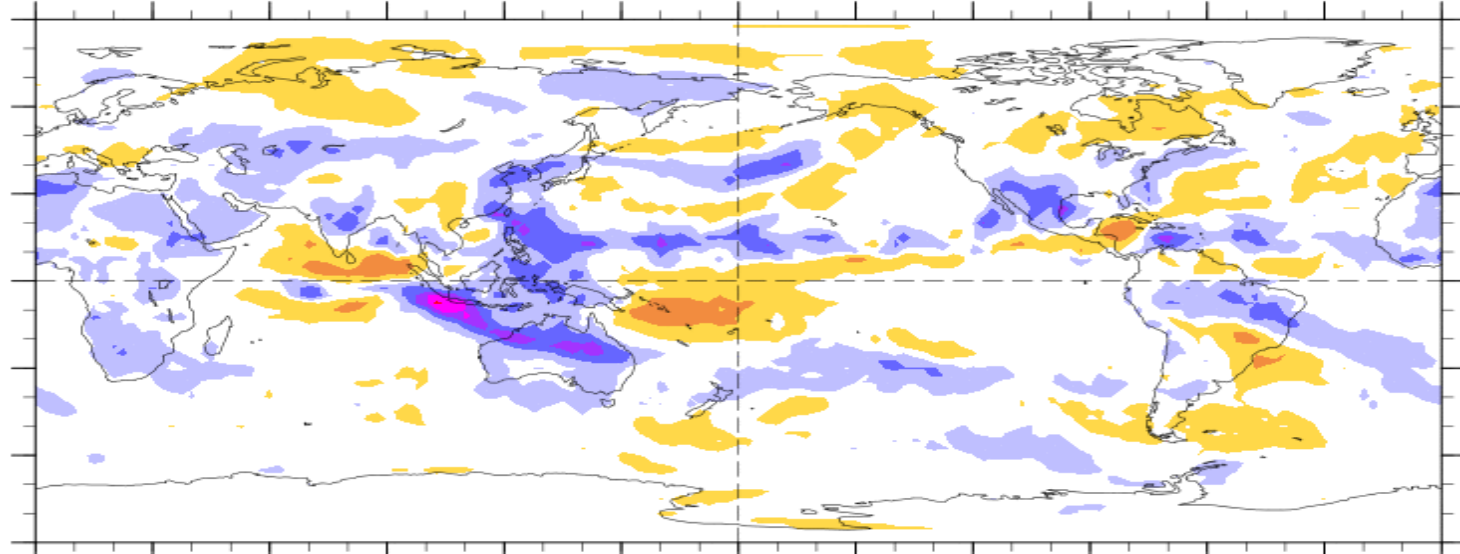
Week 1 - Valid: Sep 28, 2016 - Oct 04, 2016

Week 2 - Valid: Sep 28, 2016 - Oct 04, 2016
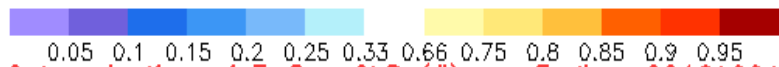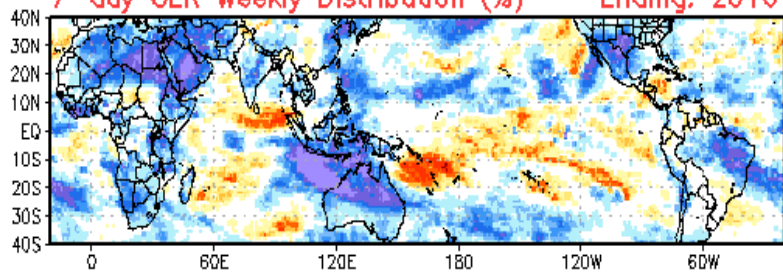

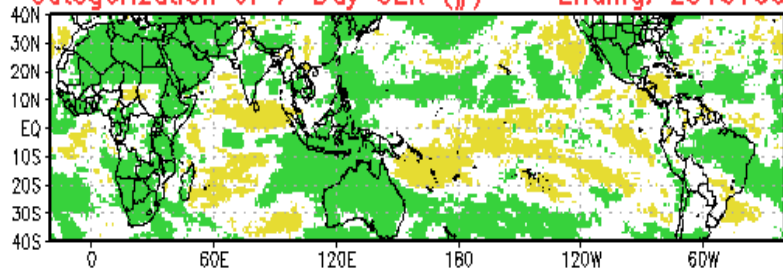7-Day Average OLR Anomaly — 2016/09/26 - 2016/10/02

Cool shading
More clouds/rain
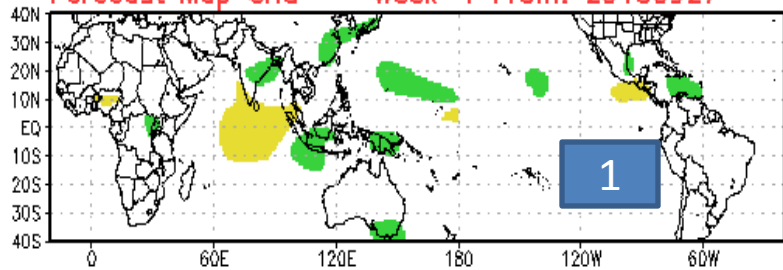
Warm shading
Less clouds/rain
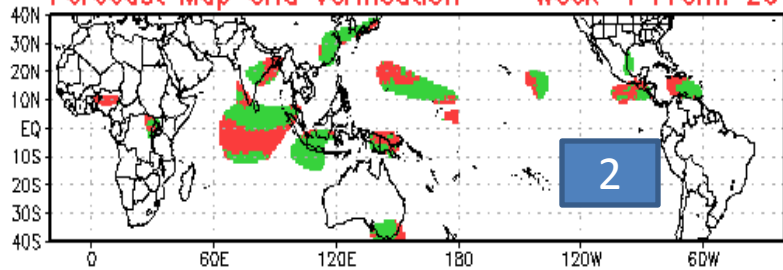
7-day OLR Weekly Distribution (%) -- Ending: 20161004
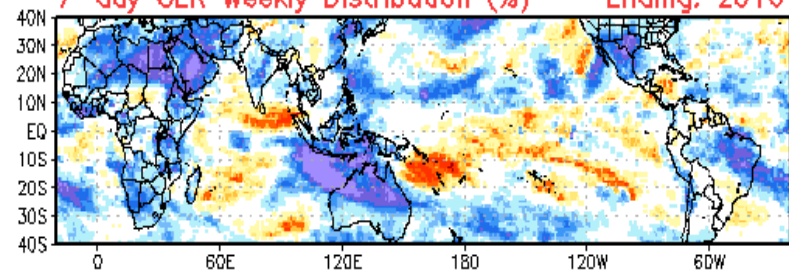
Categorization of 7-Day OLR (#) -- Ending: 20161004

-1   0   1

Forecast Map Grid -- Week-1 From: 20160927

Forecast Map Grid -- Week-2 From: 20160920

-1   0   1

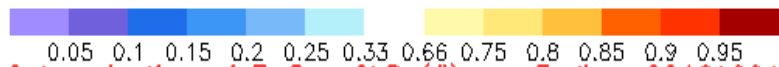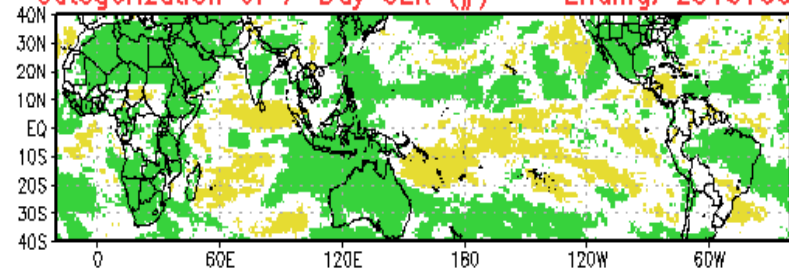**Forecast Map Grid Verification -- Week-1 From: 20160927**
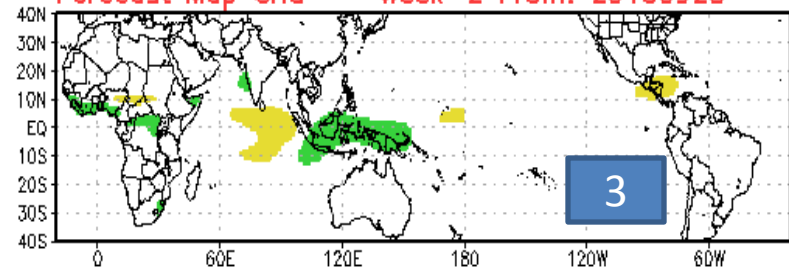
Forecast Map Grid Verification -- Week-2 From: 20160920

Hit: Green, Miss: Red
Heidke Skill Score: 38.0648

Hit: Green, Miss: Red
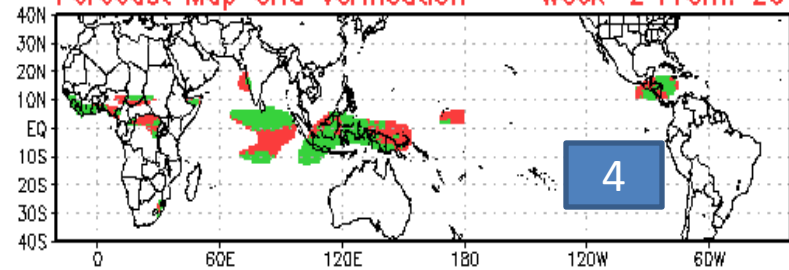Heidke Skill Score: 39.9440

Synopsis of Climate Modes

ENSO:

• **Not Active**

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

MJO and other subseasonal tropical variability:

• Weak intra-seasonal signal over the Maritime Continent

• Dynamical models indicate weakening in place during Week-1, then eastward propagation in Week-2. There is considerable uncertainty in the amplitude and phase of the signal.

• Kelvin waves also influencing the pattern.

Extratropics:

• The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by the MJO, but more likely to be impacted by tropical cyclones (possibly Hawaii).
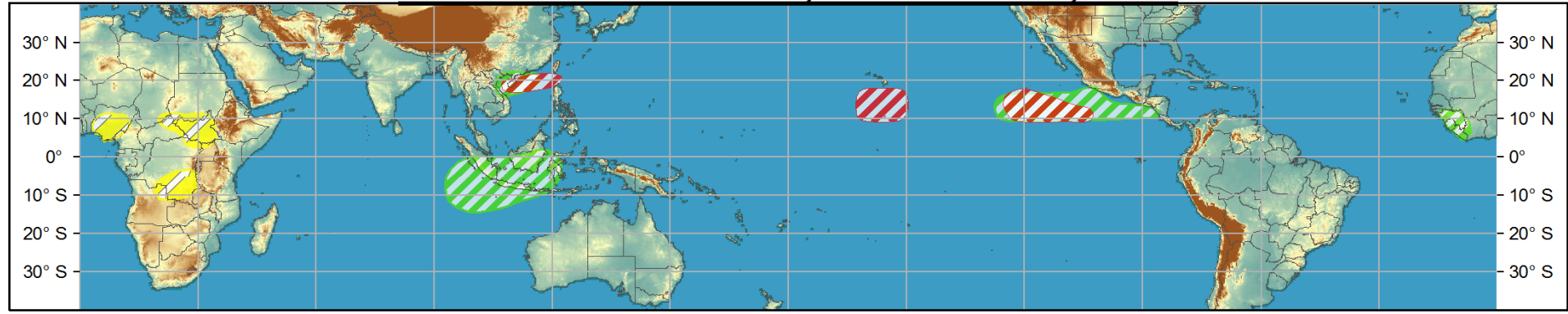
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Oct 05, 2016 - Oct 11, 2016

Week 2 - Valid: Oct 12, 2016 - Oct 18, 2016

Produced: 10/04/2016
Forecaster: Artusa
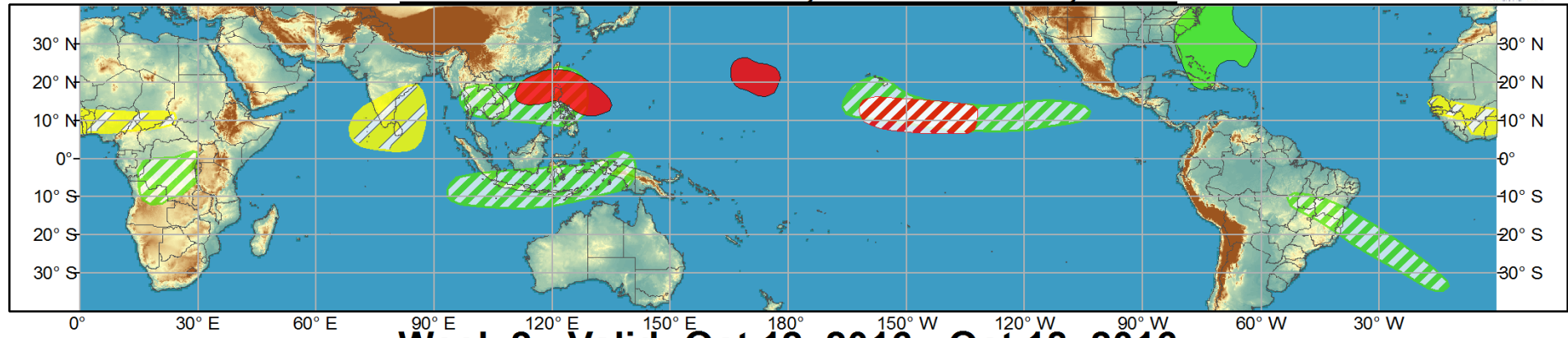
Confidence
High Moderate

|			
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.

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.
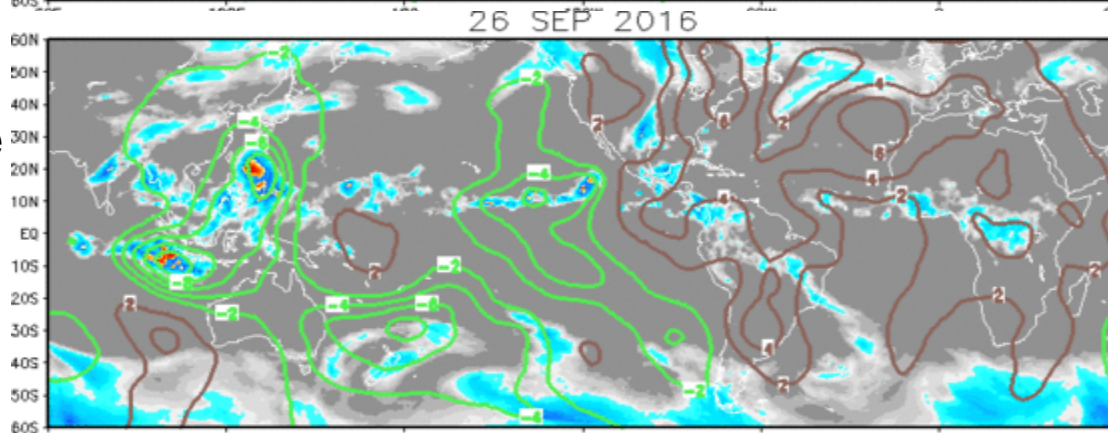
IR Satellite & 200-hpa Velocity Potential Anomalies
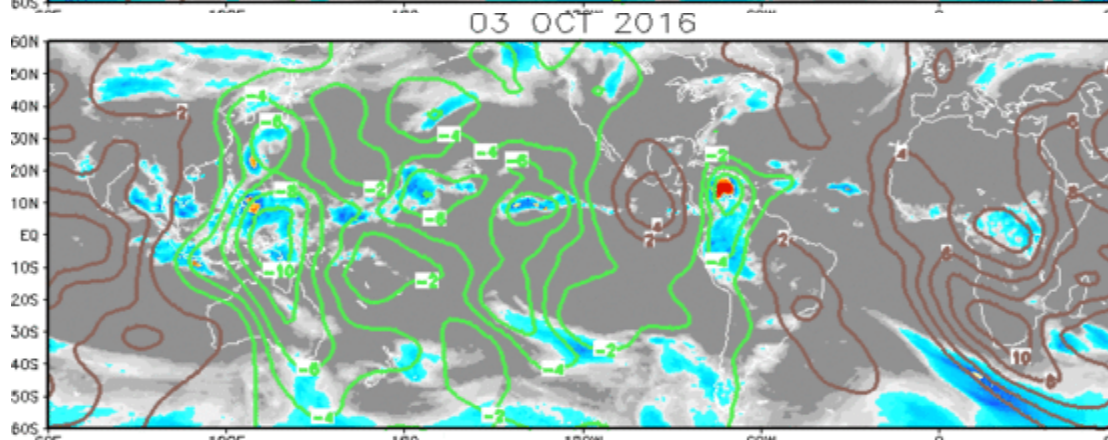
Green: Enhanced Divergence   Brown: Enhanced Convergence
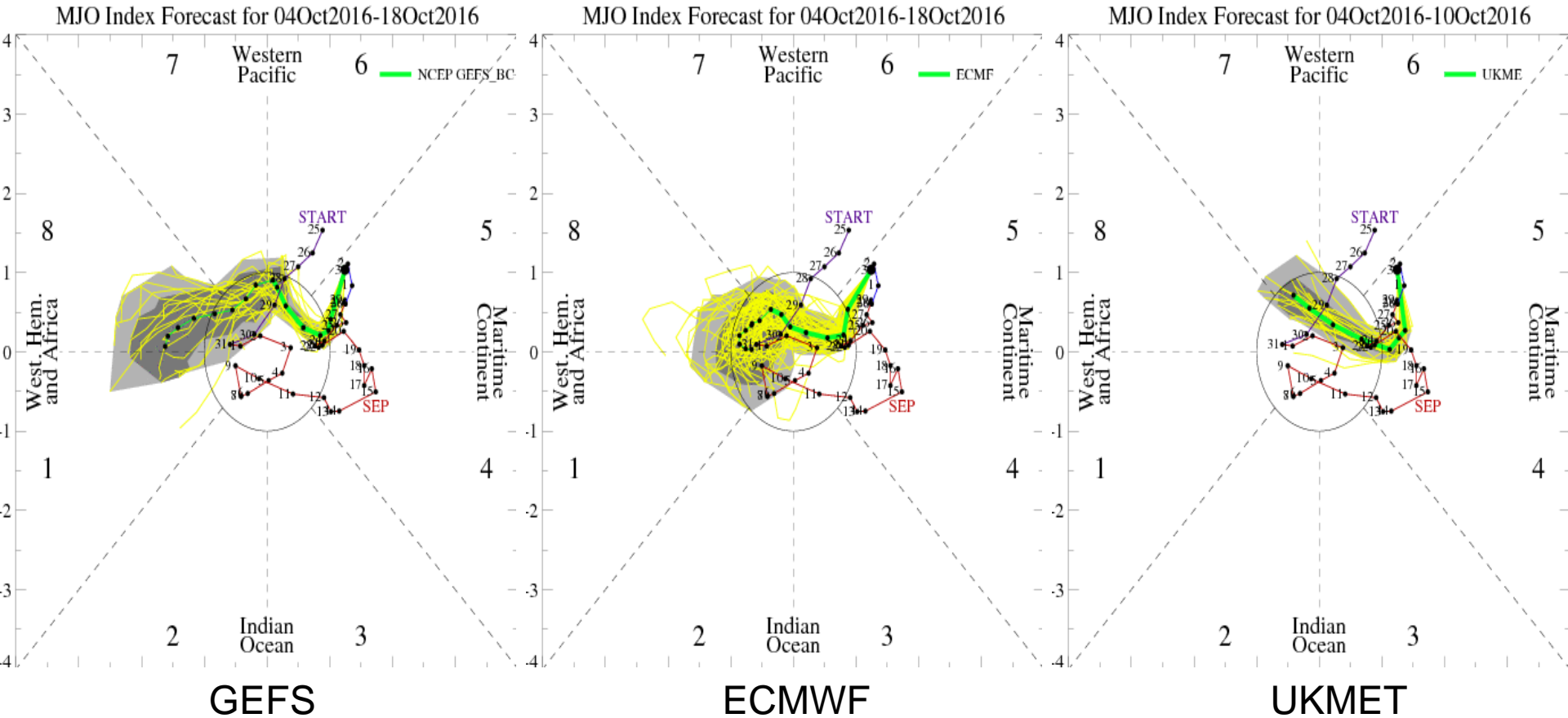
Wave-1 pattern
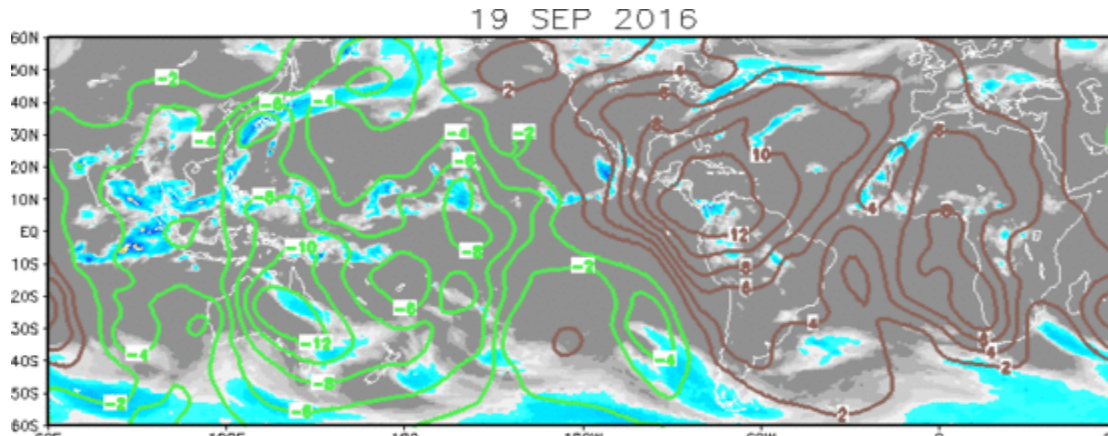
Breakdown of the signal into higher wavenumber modes.

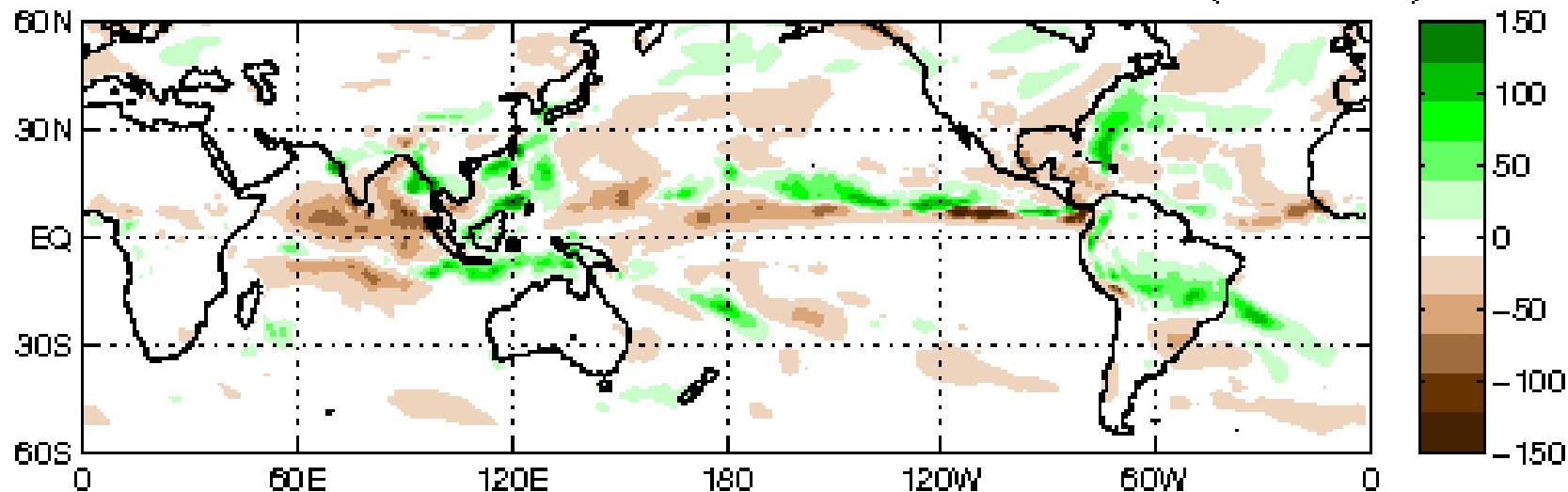Upper-level DIV (MC to Americas) & Upper- level CON (ATL to IO)

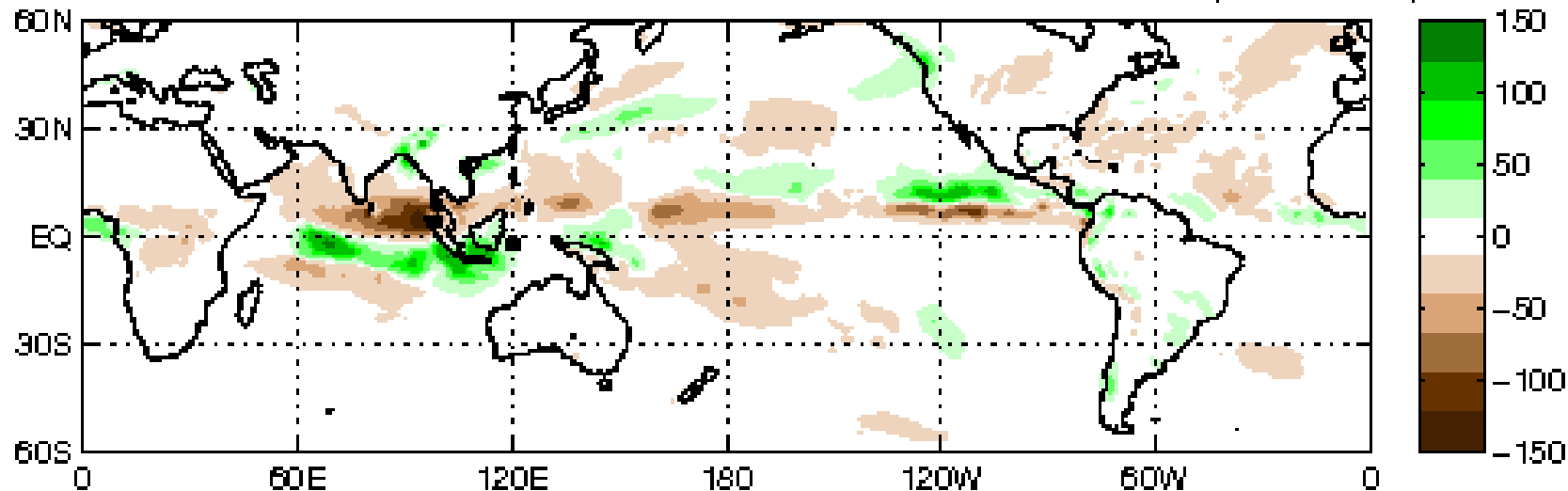# MJO Observation/Forecast

GEFS   ECMWF   UKMET

Wheeler-Hendon based analyses of model forecasts indicate a weakening signal in place for Week-1, then slight strengthening and eastward propagation during Week-2.

CFS: Anom. PREC Week: 1: 05-Oct-2016 to 11-Oct-2016 (mm/week)

CFS: Anom. PREC Week: 2: 12-Oct-2016 to 18-Oct-2016 (mm/week)

Five-Day Graphical Tropical Weather Outlook
National Hurricane Center Miami, Florida

Graphical Tropical Weather Outlooks

All Disturbances
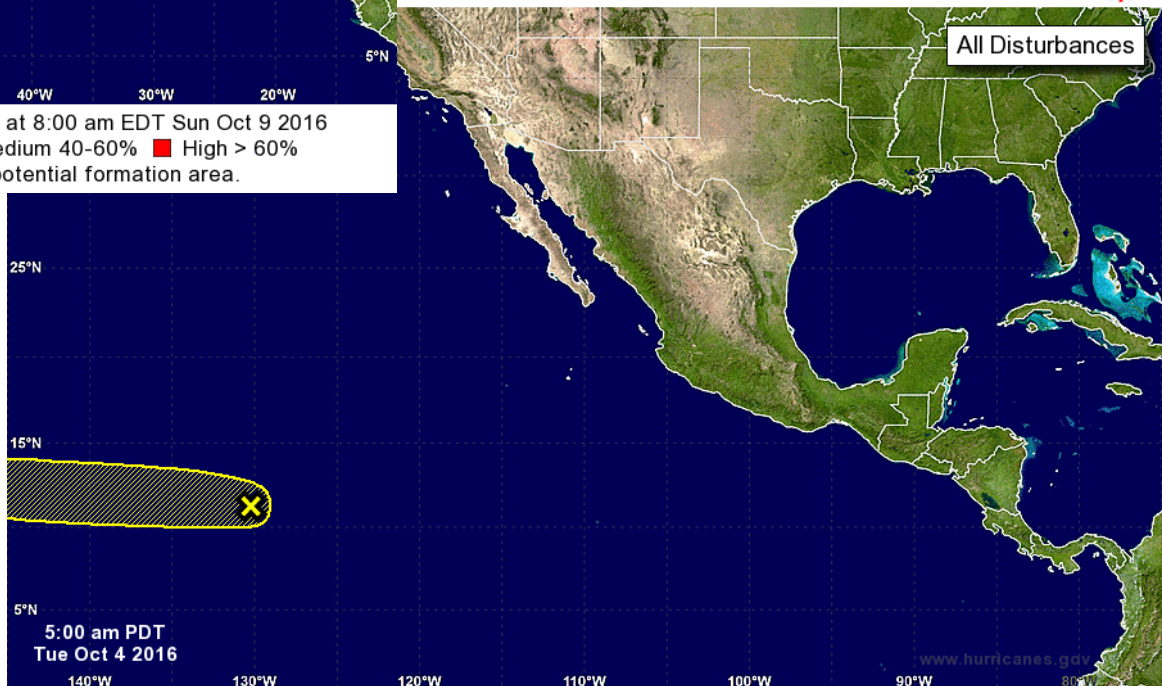
www.hurricanes.gov

Nicole

8:00 am EDT
Tue Oct 4 2016

Tropical Cyclone Formation Potential for the Five-Day Period Ending at 8:00 am EDT Sun Oct 9 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.
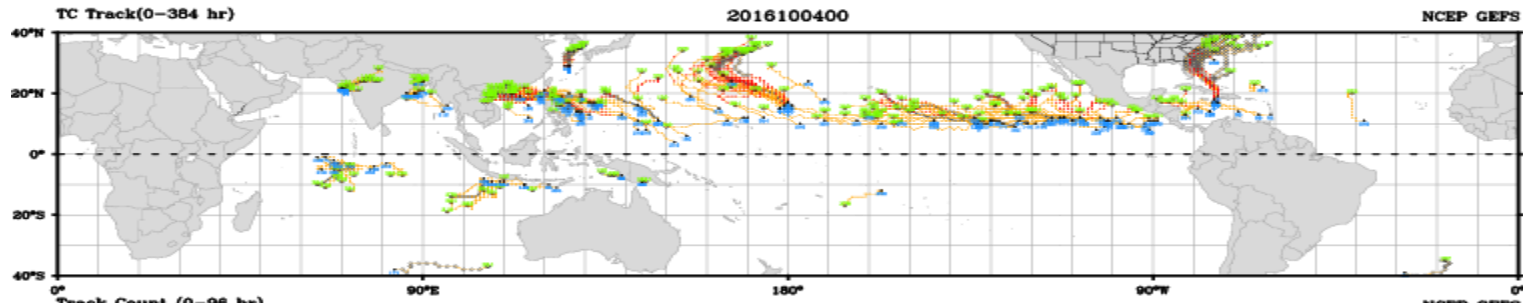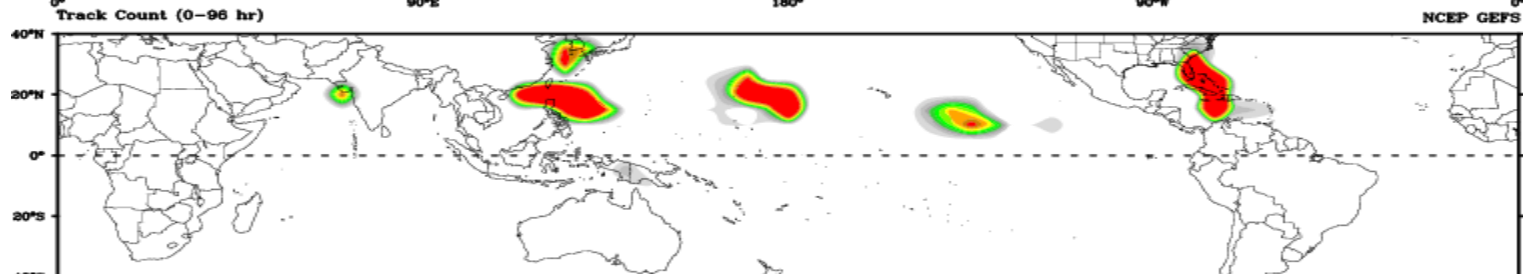
Graphical Tropical Weather Outlook
ional Hurricane Center Miami, Florida

All Disturbances

5:00 am PDT
Tue Oct 4 2016

www.hurricanes.gov

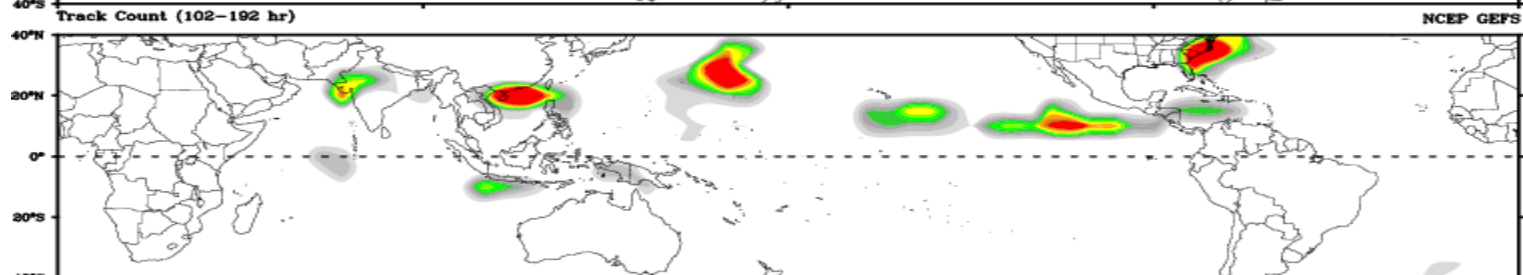Tropical Cyclone Formation Potential for the Five-Day Period Ending at 5:00 am PDT Sun Oct 9 2016
Chance of Cyclone Formation in Five Days: ☐ Low < 40% ☐ Medium 40-60% ☐ High > 60%
X indicates current disturbance location; shading indicates potential formation area.
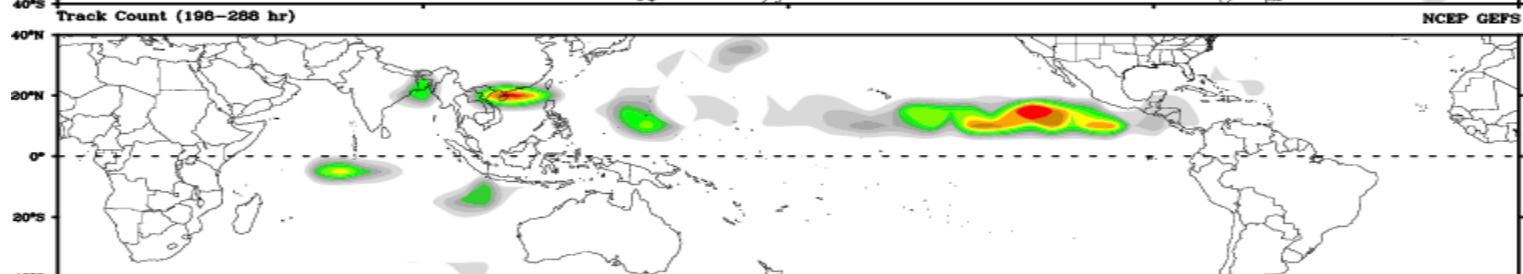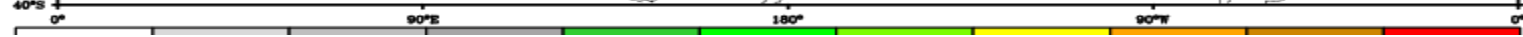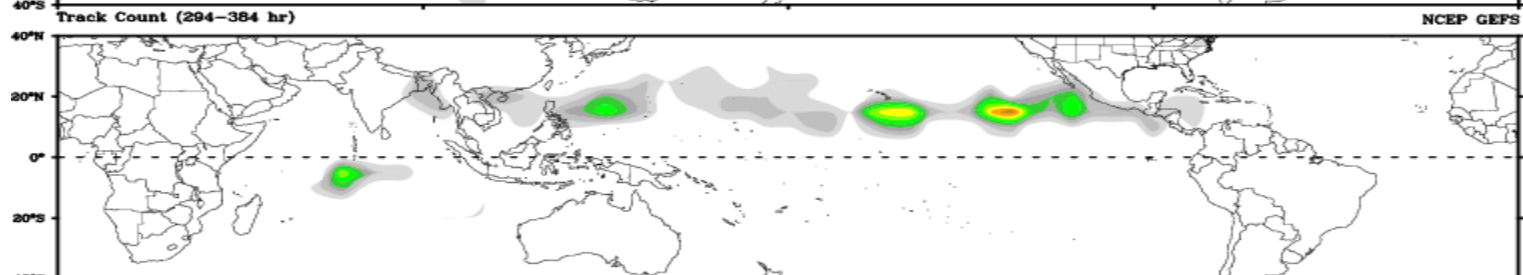
CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)

TC Track(0–384 hr)   2016100400   NCEP GEFS

Track Count (0–96 hr)   NCEP GEFS

Days 1-4

Track Count (102–192 hr)   NCEP GEFS

Day 5-8

Track Count (198–288 hr)   NCEP GEFS

Day 9-12

Track Count (294–384 hr)   NCEP GEFS
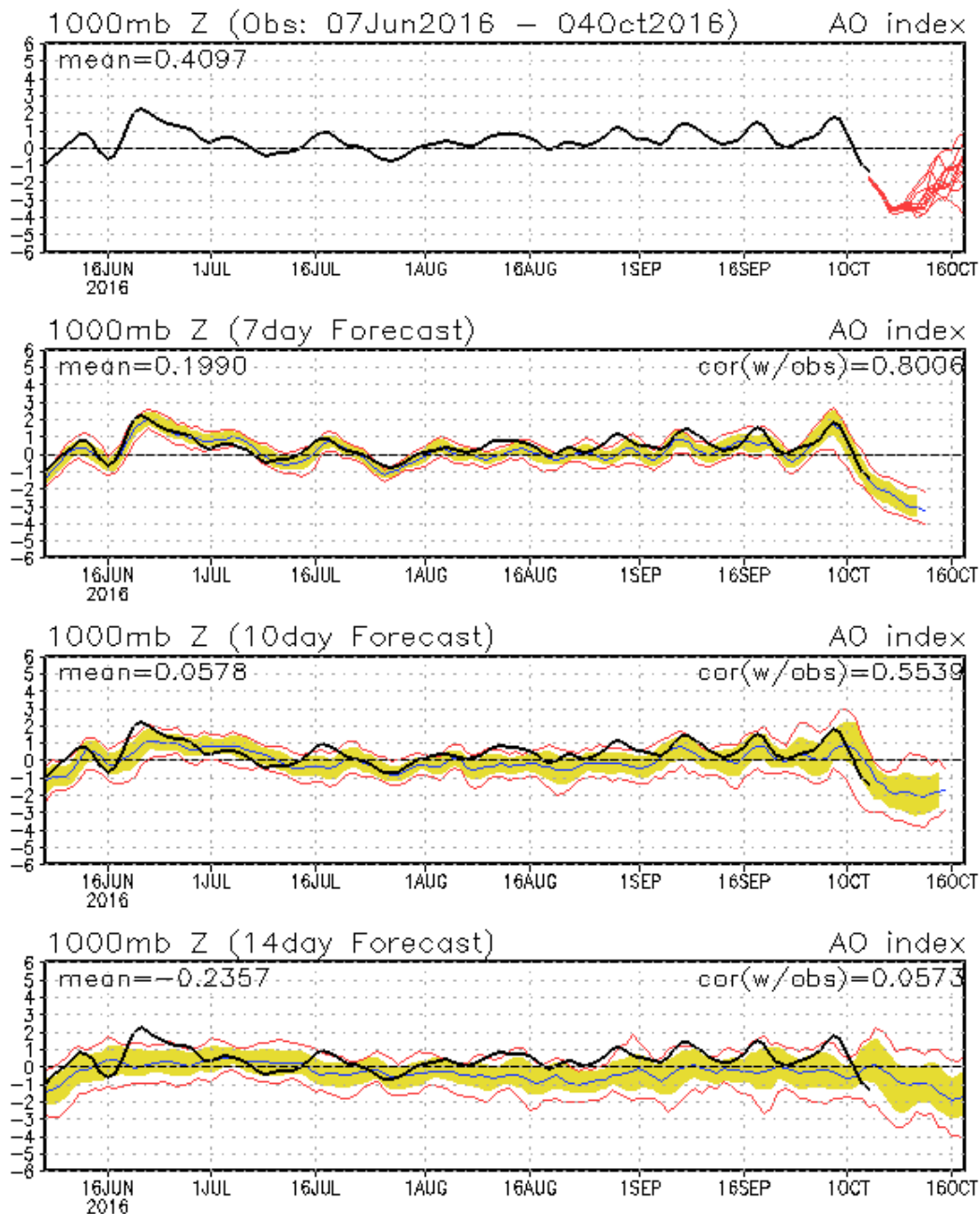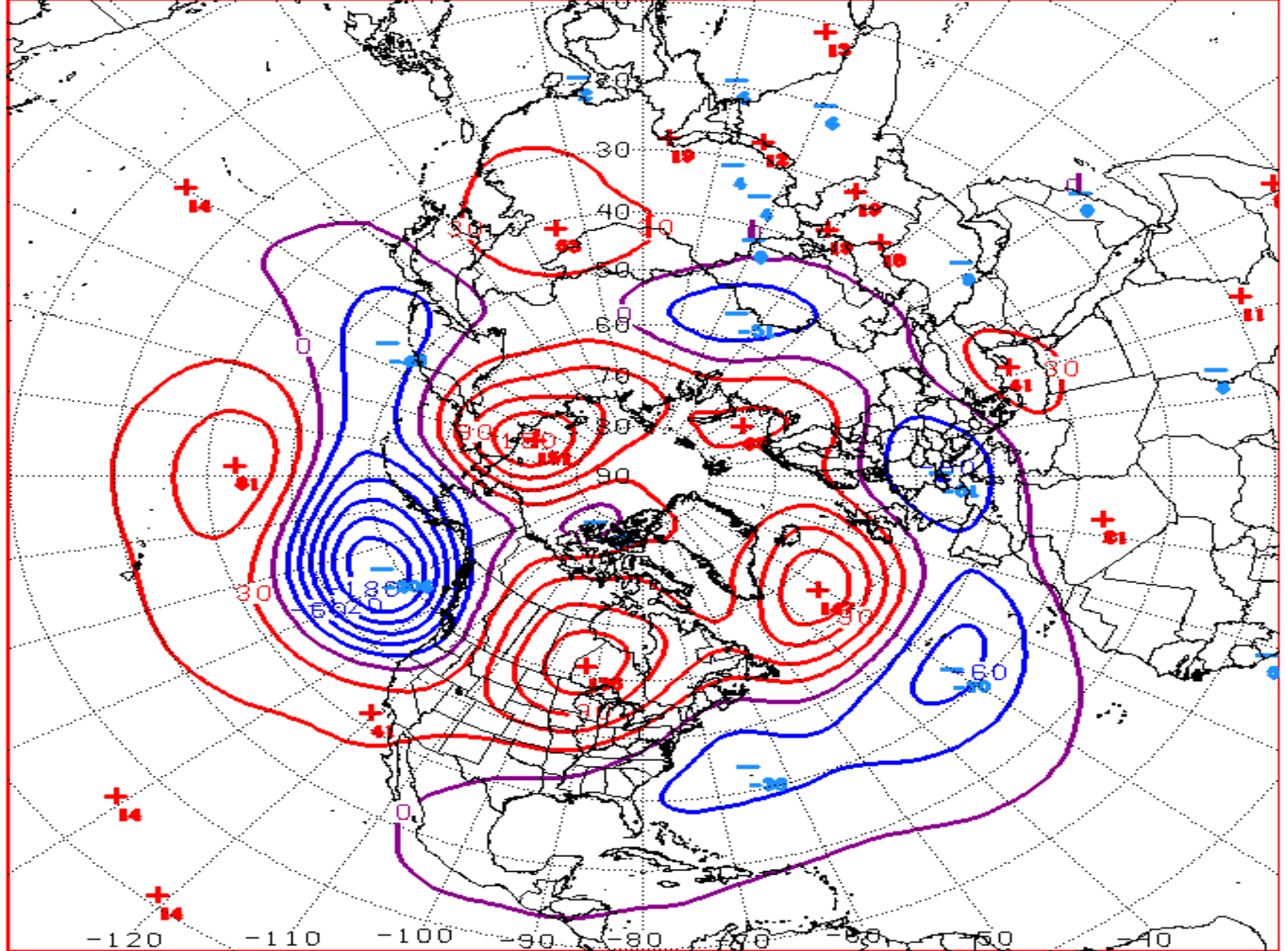
Day 13-15

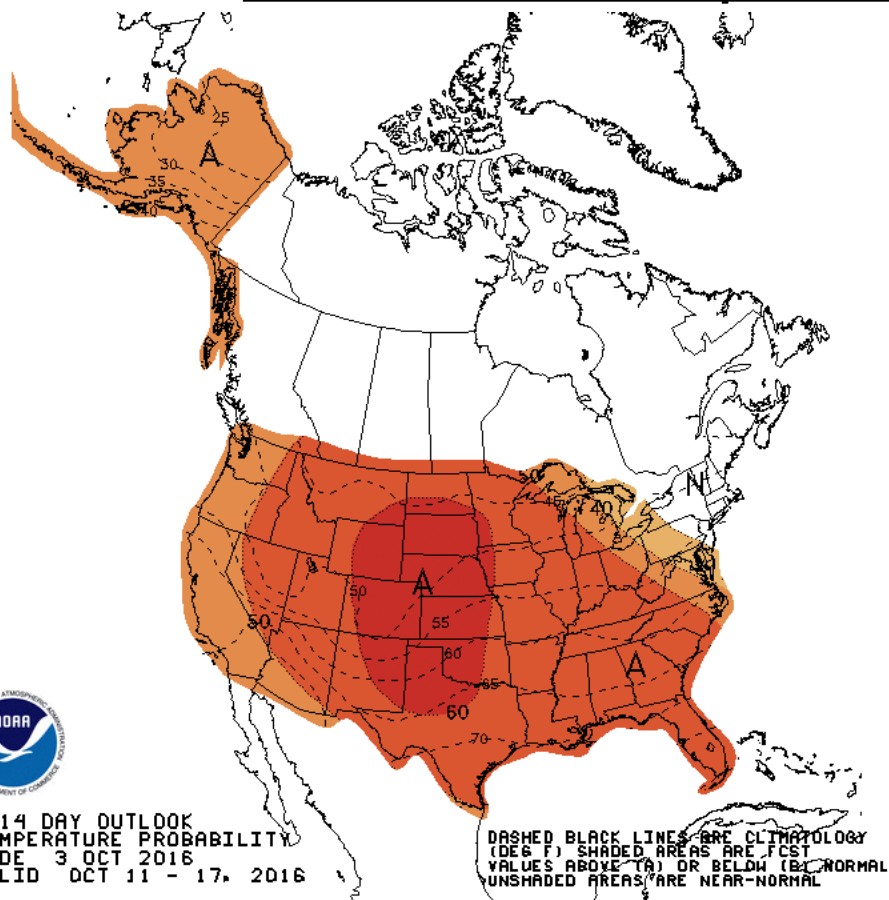# Connections to U.S. Impacts
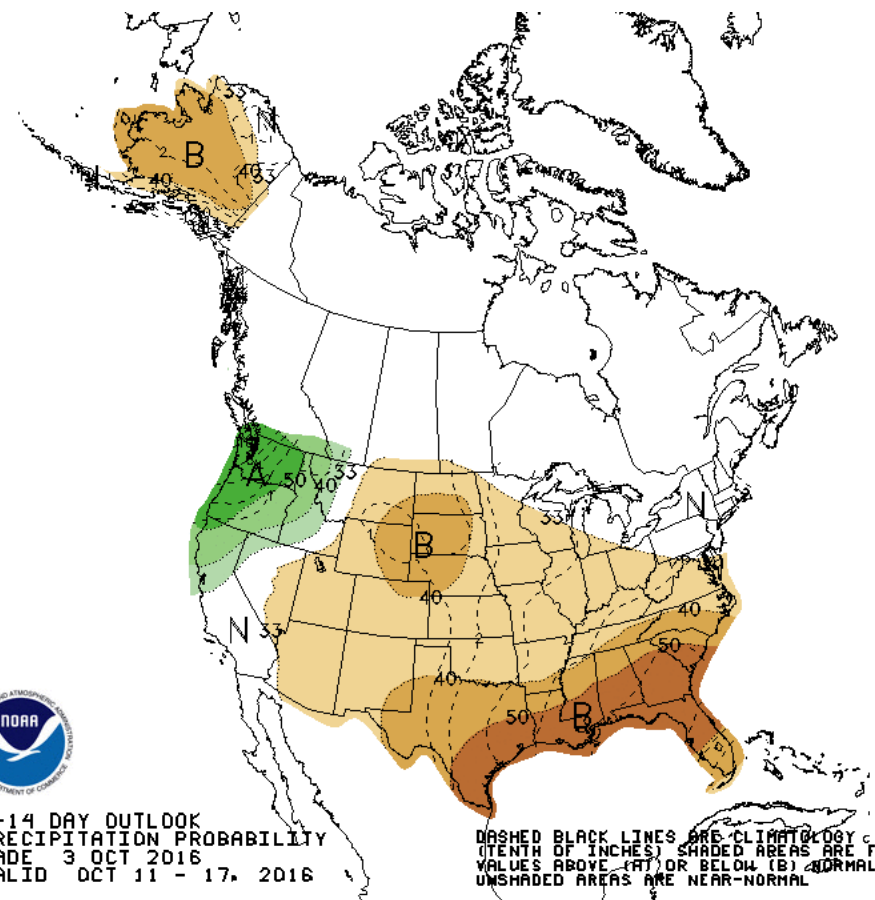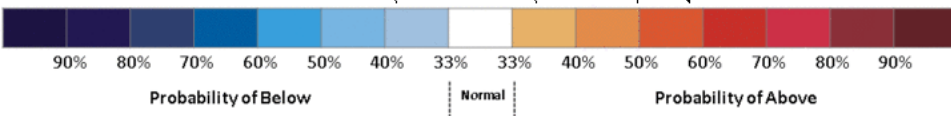
AO: Observed & ENSM forecasts

D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE OCT 04 2016 1347 UTC CNTD OCT 15 2016

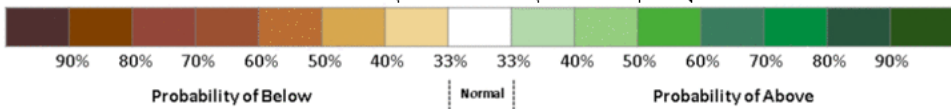# Week 2 – Temperature and Precipitation

Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Oct 05, 2016 - Oct 11, 2016

Week 2 - Valid: Oct 12, 2016 - Oct 18, 2016

Produced: 10/04/2016
Forecaster: Artusa

Confidence
High   Moderate

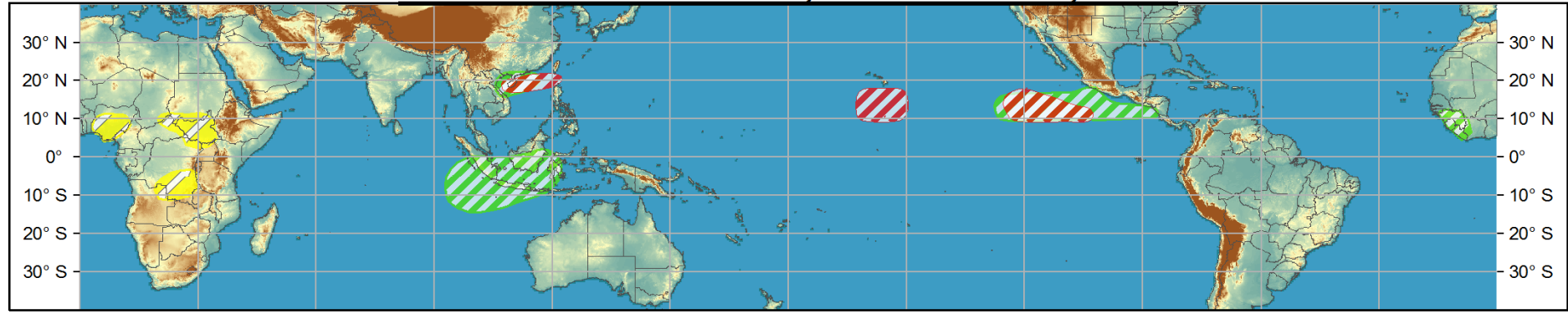| Category			Description
Tropical Cyclone Formation	🟥	▨	Development of a tropical cyclone (tropical depression - TD, or greater strength).
Above-average rainfall	🟩	▨	Weekly total rainfall in the upper third of the historical range.
Below-average rainfall	🟨	▨	Weekly total rainfall in the lower third of 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.

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中央氣象局 Central Weather Bureau   UNIVERSITY AT ALBANY State University of New York   EARTH SYSTEM SCIENCE INTERDISCIPLINARY CENTER ESSIC UNIVERSITY OF MARYLAND   Australian Government Bureau of Meteorology   cics.nc   NPS PRAESTANTIA PER SCIENTIAM