

Global Tropics Hazards And Benefits Outlook

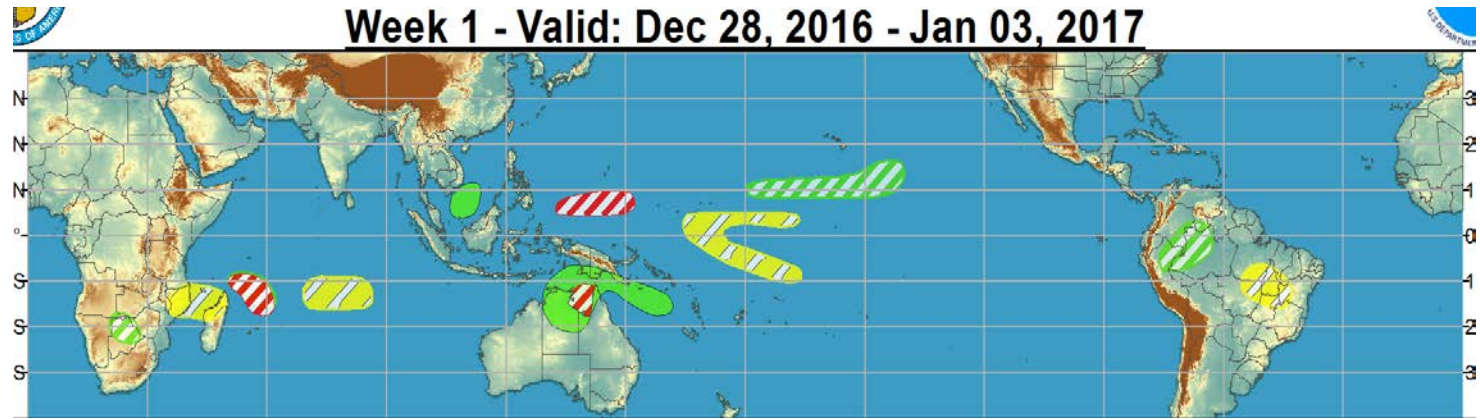
01/03/2017

Stephen Baxter

Outline

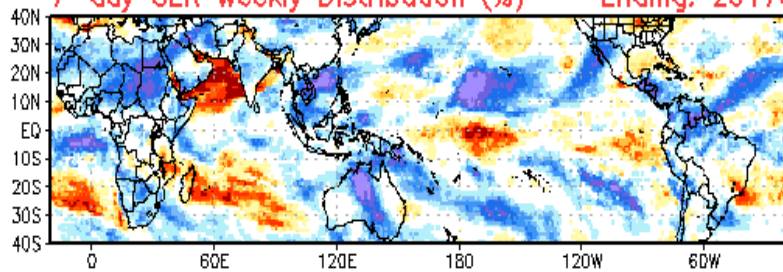
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Tropical Cyclone Outlook

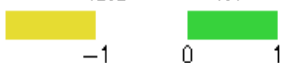
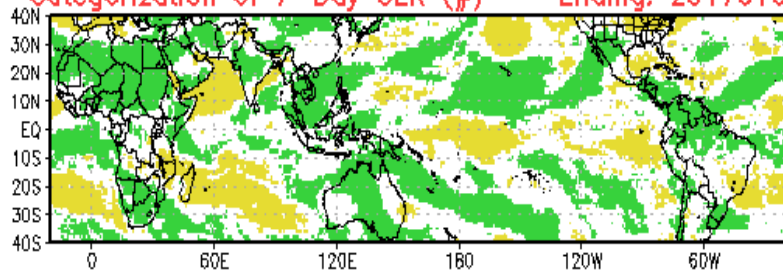


No Tropical Cyclones developed during the past week.

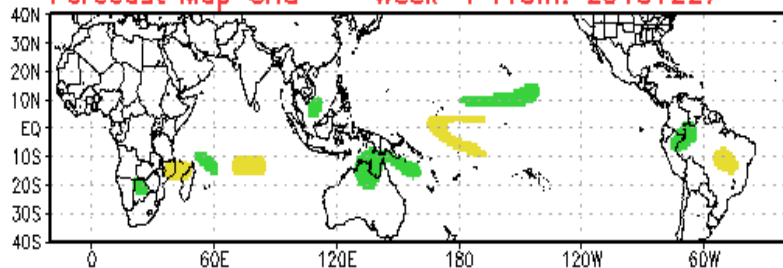
7-day OLR Weekly Distribution (%) -- Ending: 20170103



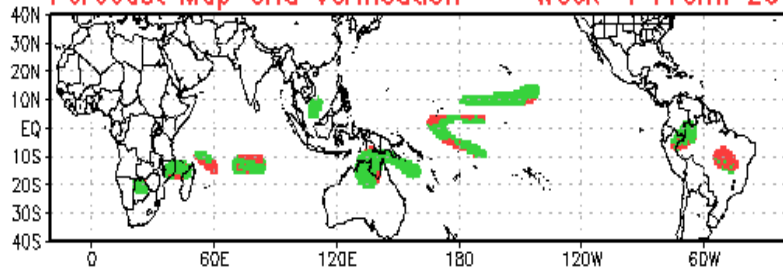
Categorization of 7-Day OLR (#) -- Ending: 20170103



Forecast Map Grid -- Week-1 From: 20161227

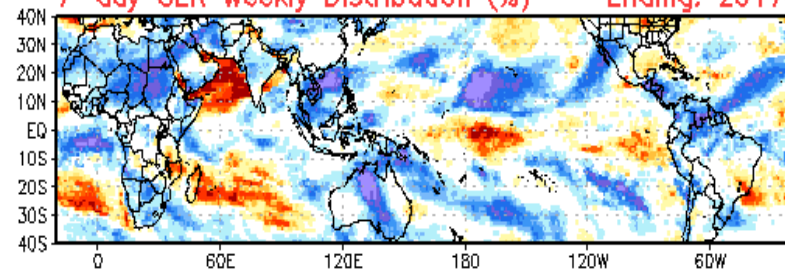


Forecast Map Grid Verification -- Week-1 From: 20161227

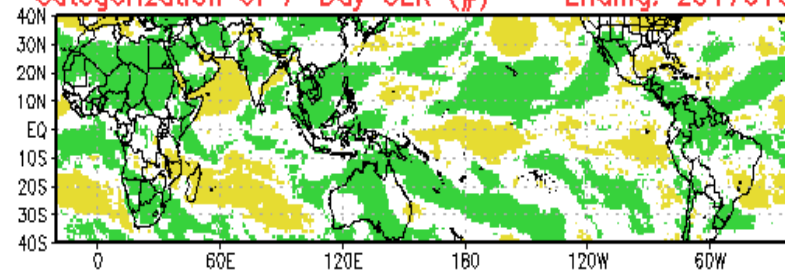


Hit: Green, Miss: Red
Heidke Skill Score: 69.2056

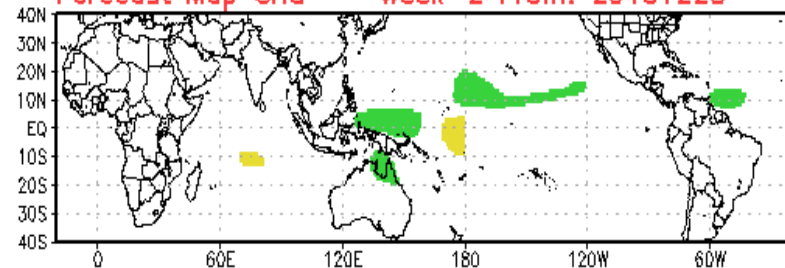
7-day OLR Weekly Distribution (%) -- Ending: 20170103



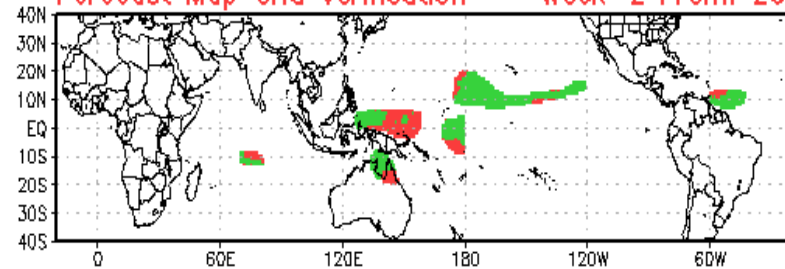
Categorization of 7-Day OLR (#) -- Ending: 20170103



Forecast Map Grid -- Week-2 From: 20161220



Forecast Map Grid Verification -- Week-2 From: 20161220



Hit: Green, Miss: Red
Heidke Skill Score: 52.8545

Synopsis of Climate Modes

ENSO:

- [La Niña Advisory](#)

La Niña conditions are present, with a transition to ENSO-neutral favored during January-March, 2017.

MJO and other subseasonal tropical variability:

- MJO remains fairly weak according to most diagnostic tools, with some enhanced convective signal centered over the eastern Indian Ocean and Maritime Continent.
- Dynamical models maintain a weak MJO signal during the next two weeks, though the ECMWF shows propagation of a weak signal into the West Pacific.
- La Niña conditions continue to play a role in anomalous tropical convection.

Extratropics:

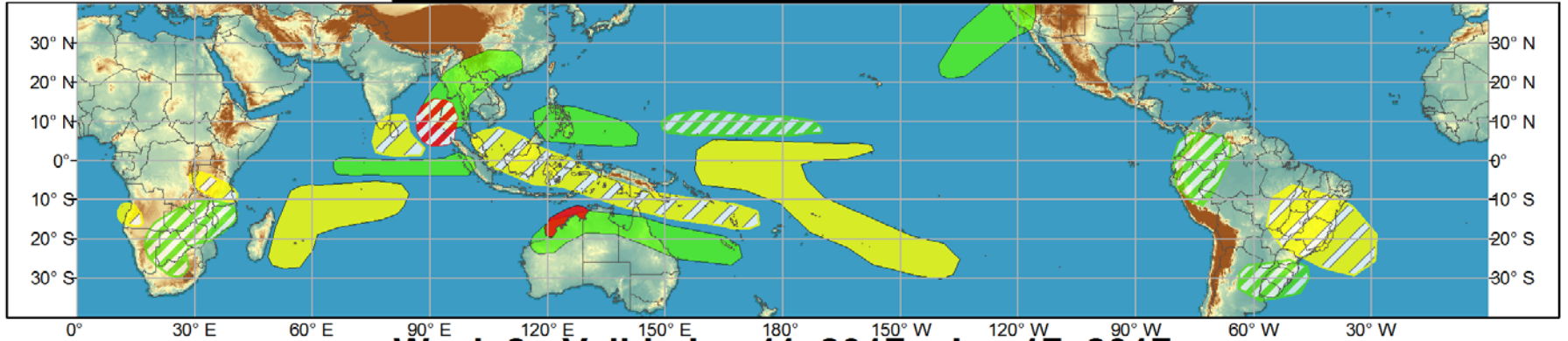
- The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by the MJO.



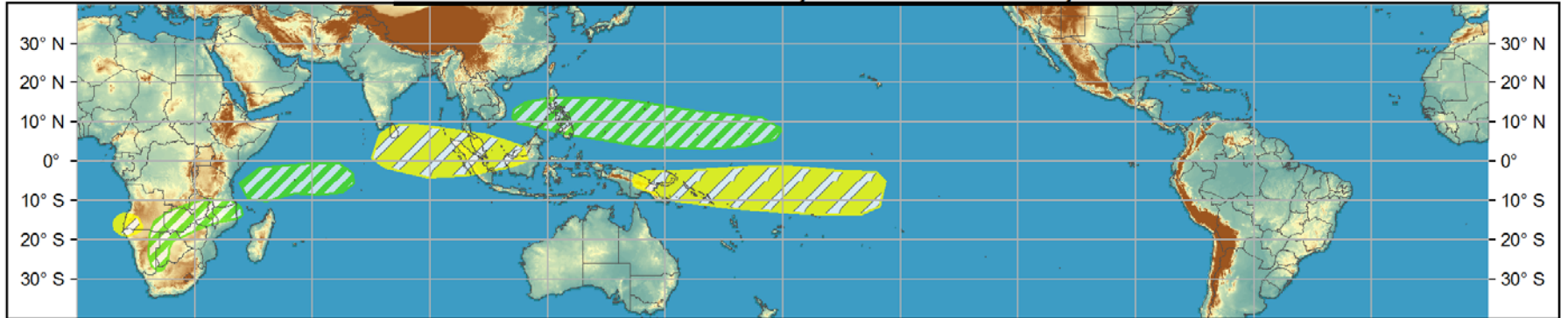
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jan 04, 2017 - Jan 10, 2017



Week 2 - Valid: Jan 11, 2017 - Jan 17, 2017



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.
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Produced: 01/03/2017

Forecaster: Baxter

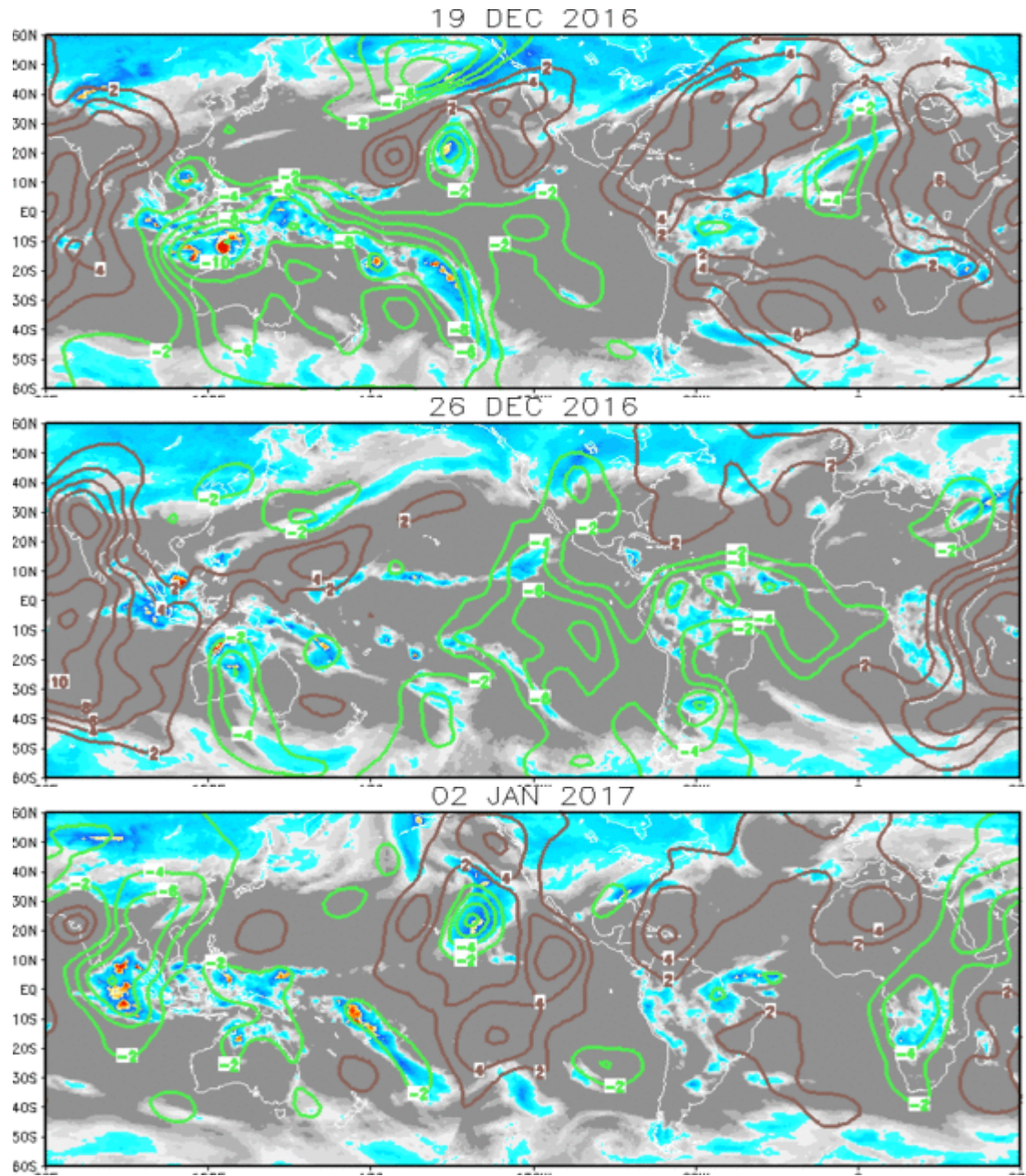
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IR Satellite & 200-hpa Velocity Potential Anomalies

Green: Enhanced Divergence

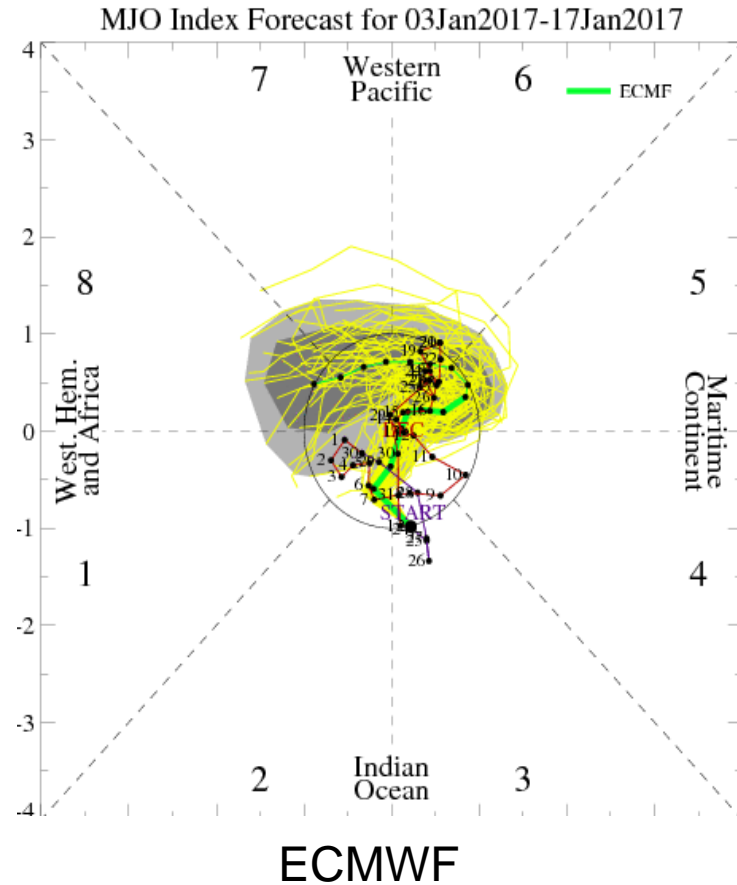
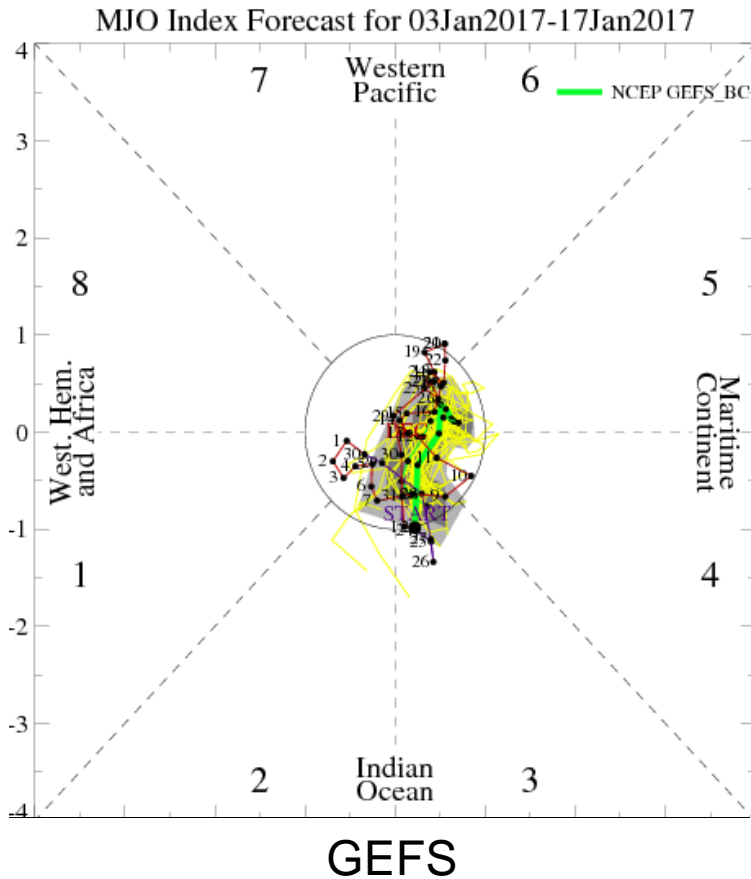
Brown: Enhanced Convergence



A fairly coherent wave-1 pattern persisted through late December, with the enhanced phase shifting eastward across the Pacific. This did not project strongly on the RMM index, however, and likely was related to an atmospheric Kelvin wave.

Recently, the pattern broke down, with enhanced convection most strongly associated with the low-frequency state and a Kelvin wave over the eastern Indian Ocean.

MJO Observation/Forecast

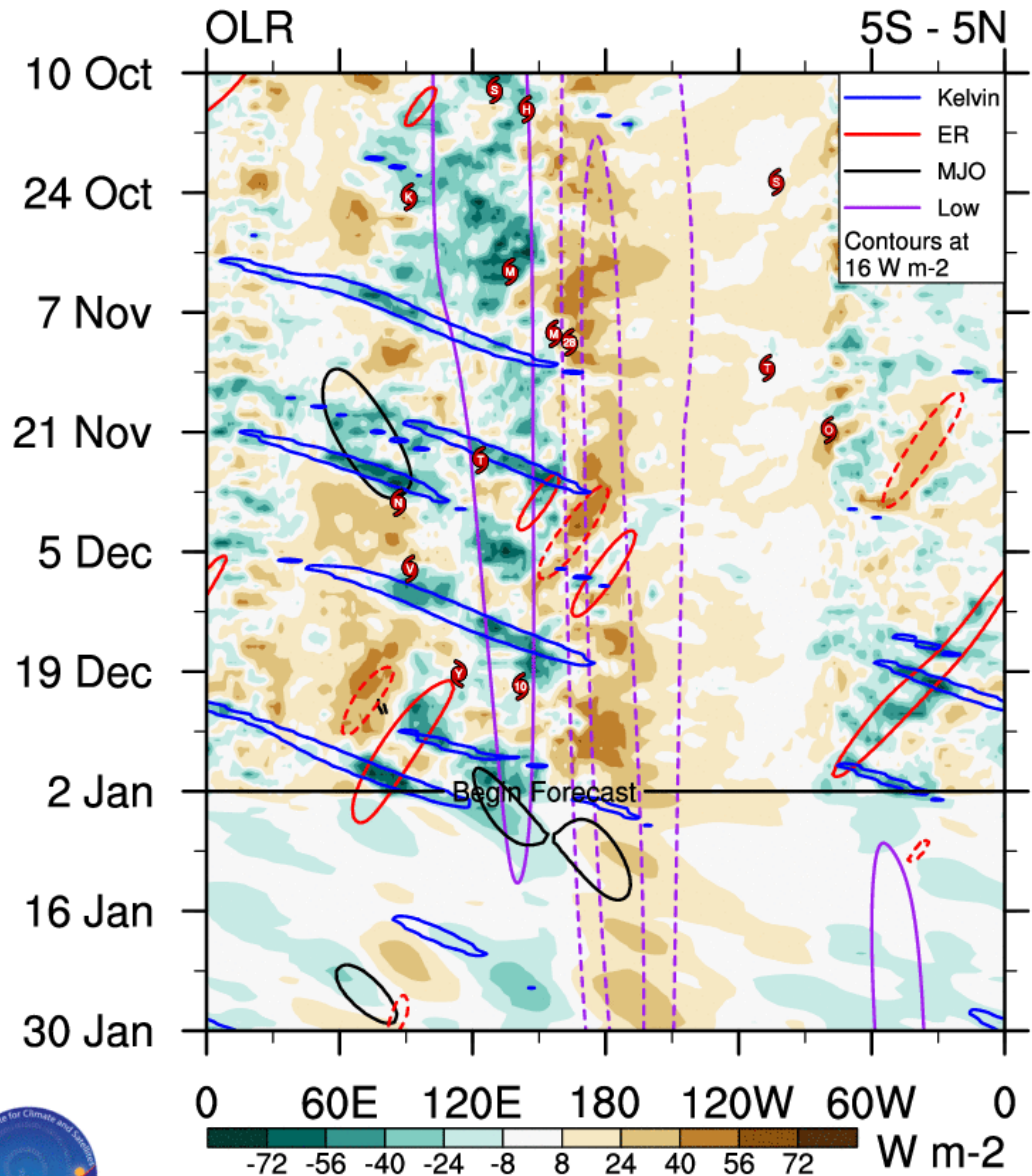


Wheeler-Hendon based analyses of model forecasts show some differences between the ECMWF and GEFS systems.

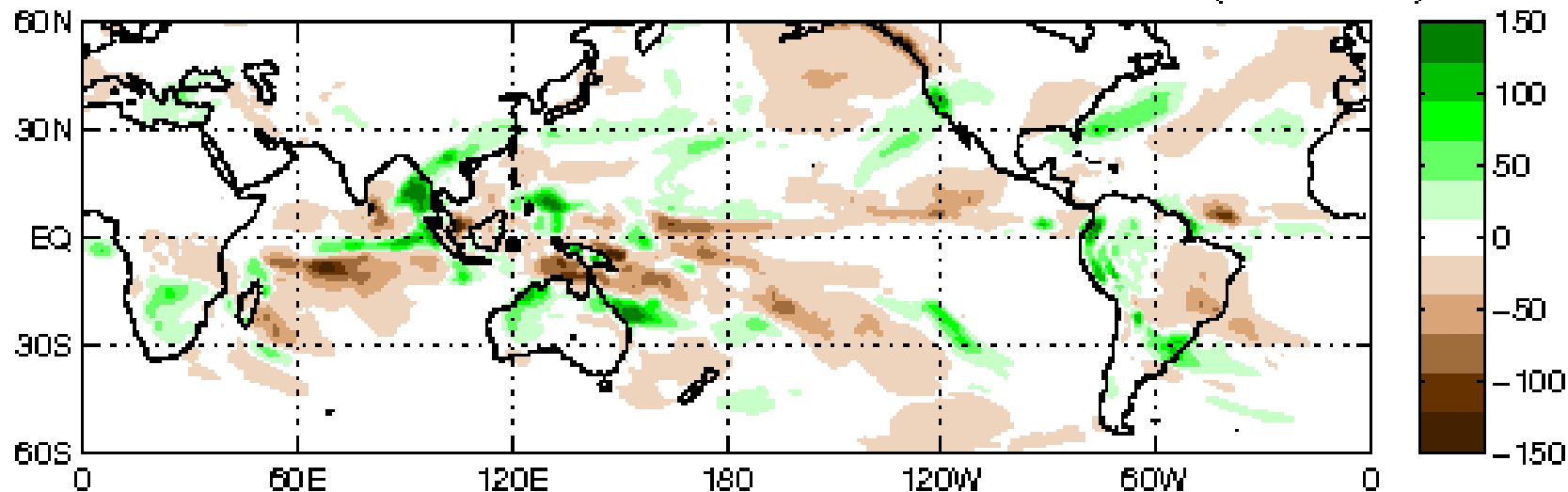
Everything against
backdrop of **low
frequency** La Niña
base state.

Kelvin wave
crossed the Indian
Ocean over the past
week.

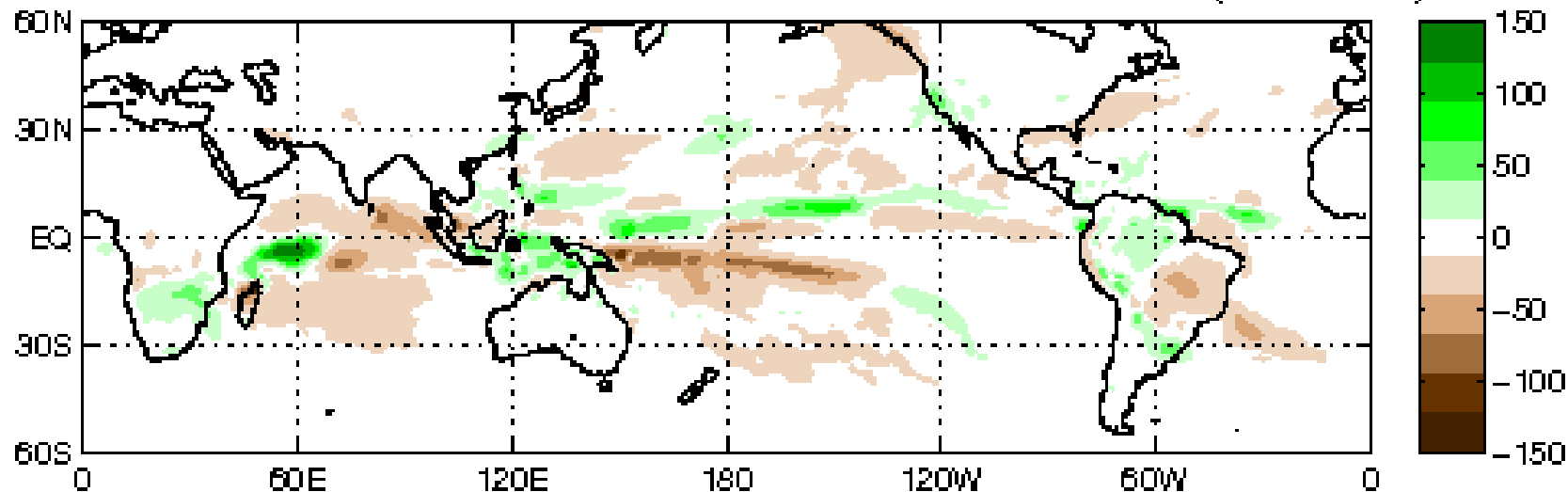
Some **MJO**
timescale anomalies
are being identified
over the Maritime
Continent.

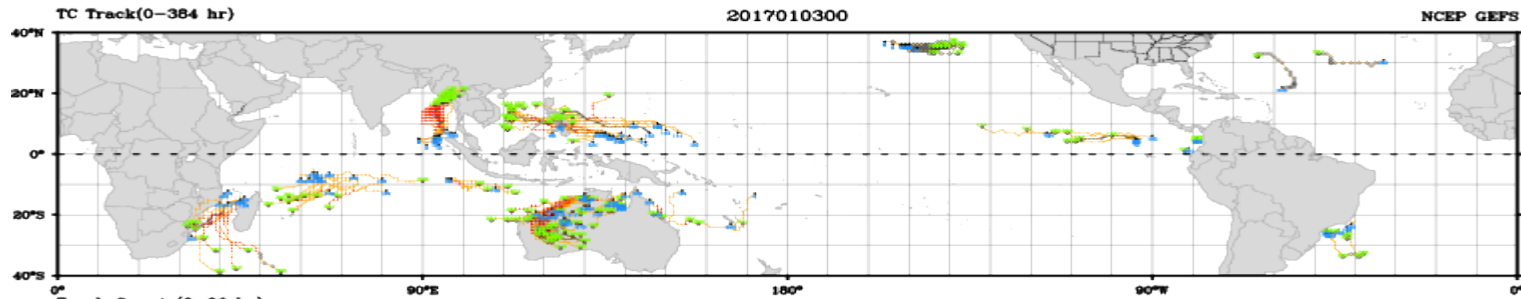


CFS: Anom. PREC Week: 1: 04-Jan-2017 to 10-Jan-2017 (mm/week)



CFS: Anom. PREC Week: 2: 11-Jan-2017 to 17-Jan-2017 (mm/week)



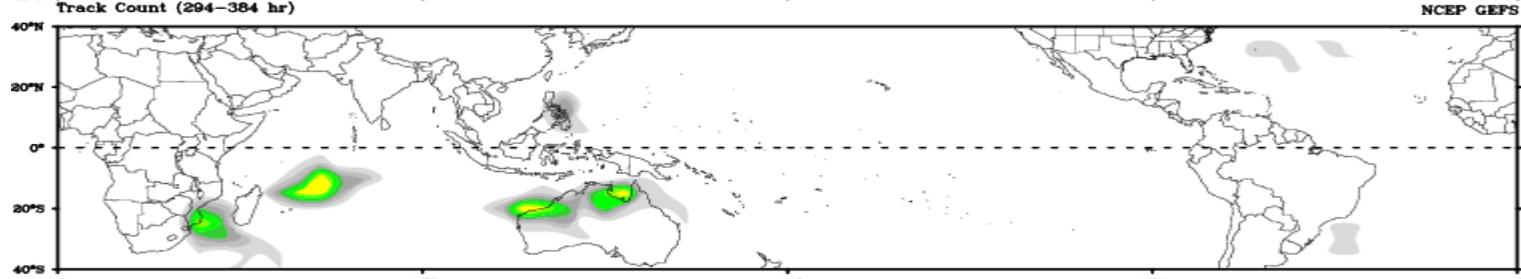
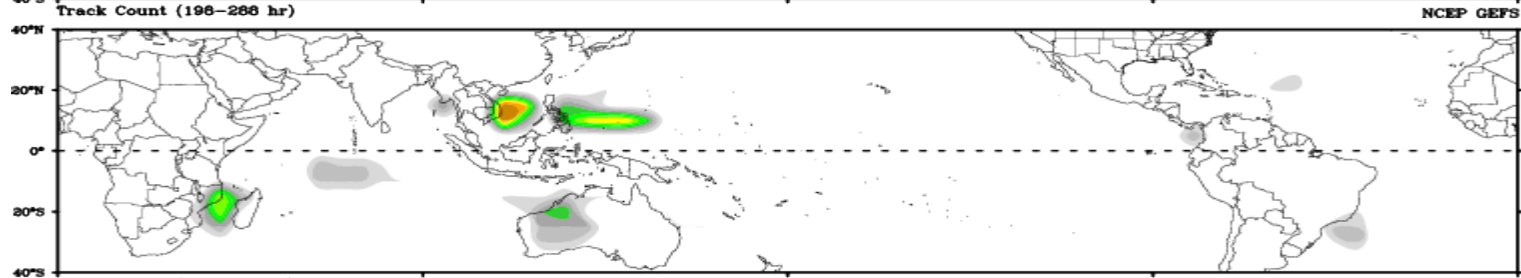
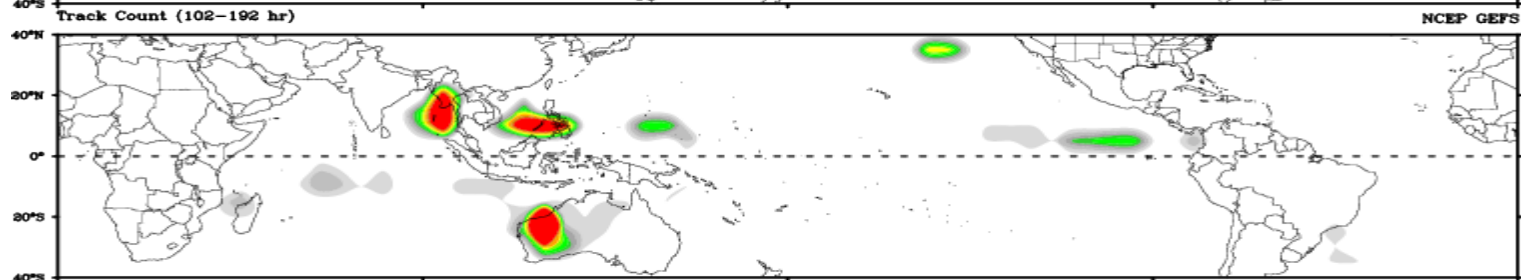
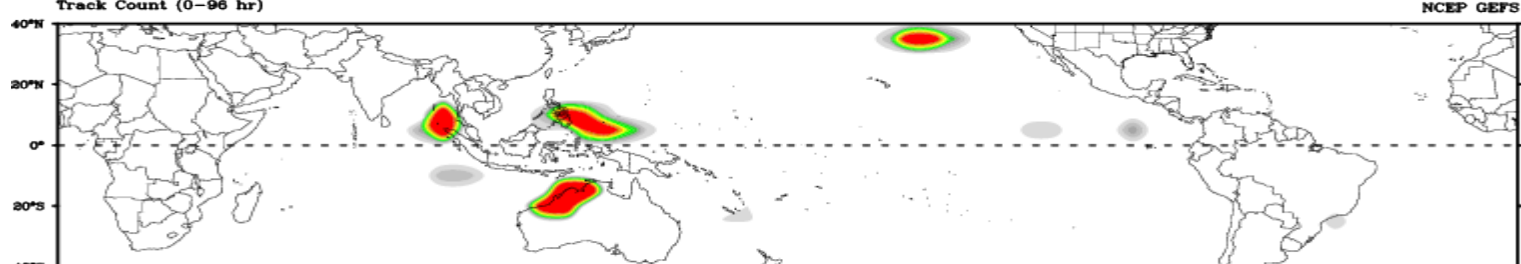


Days 1-4

Day 5-8

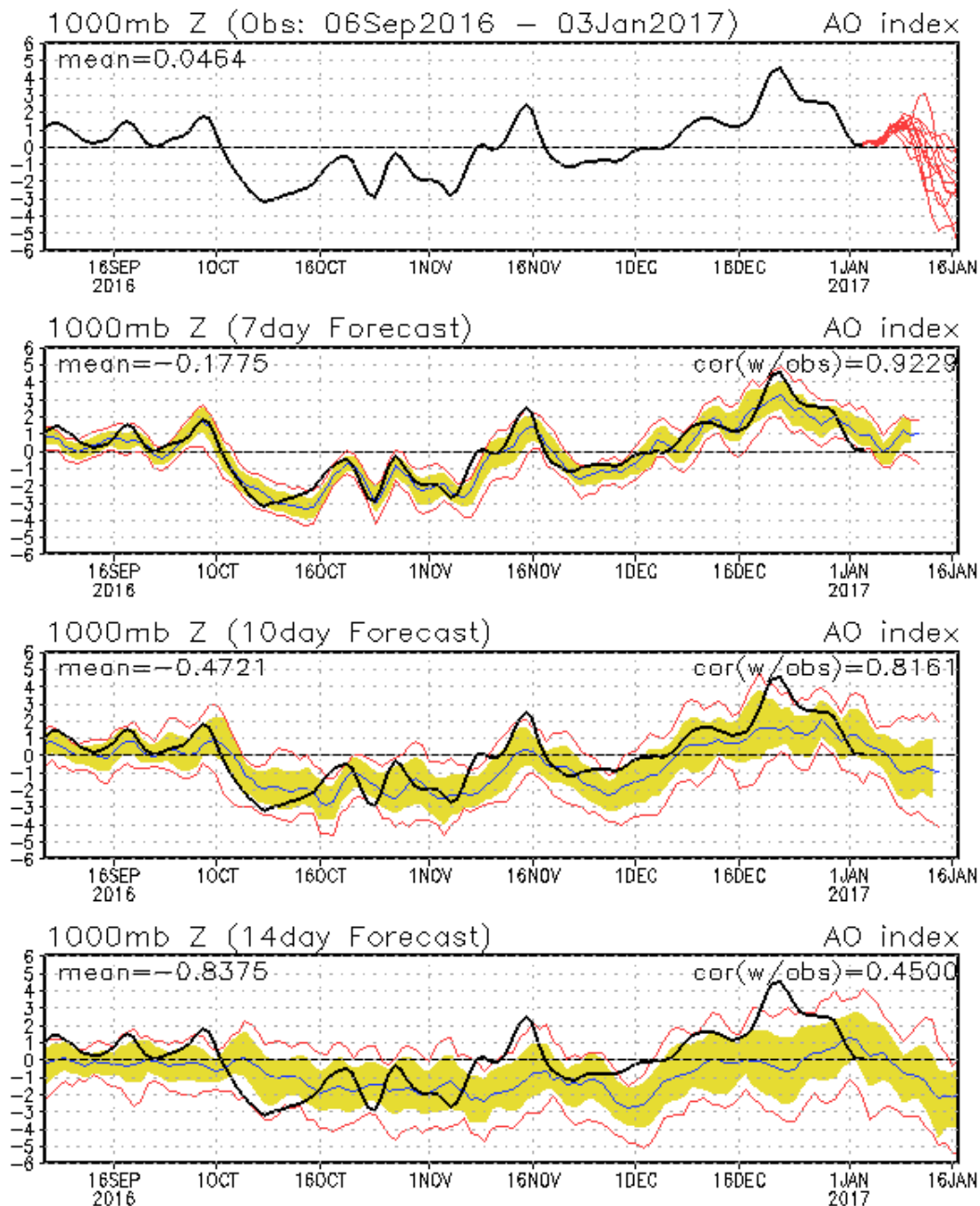
Day 9-12

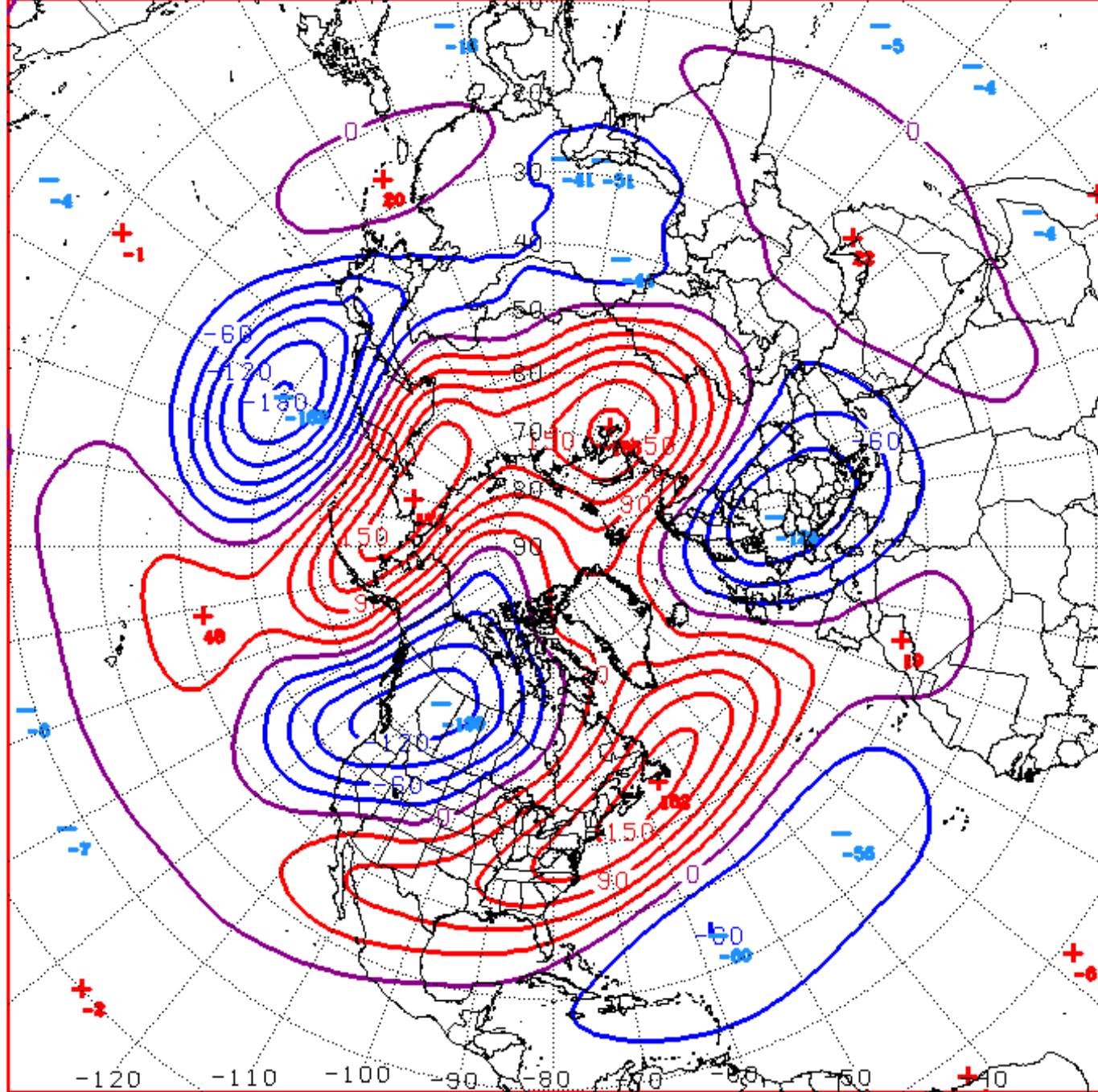
Day 13-15



Connections to U.S. Impacts

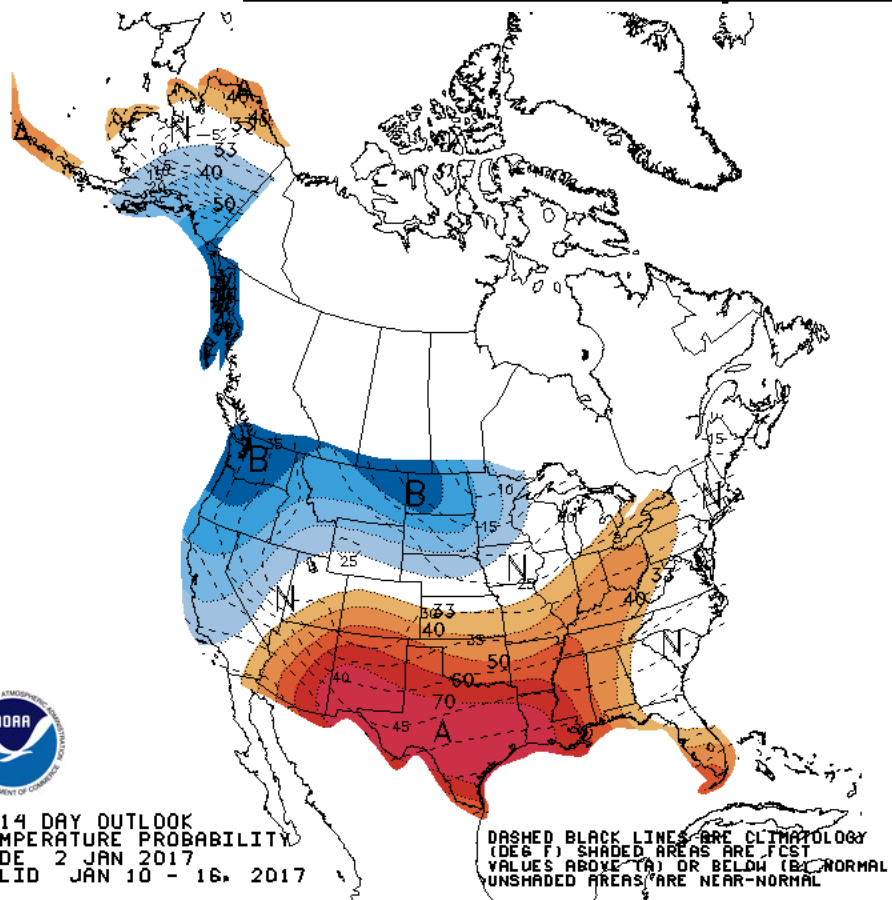
AO: Observed & ENSM forecasts





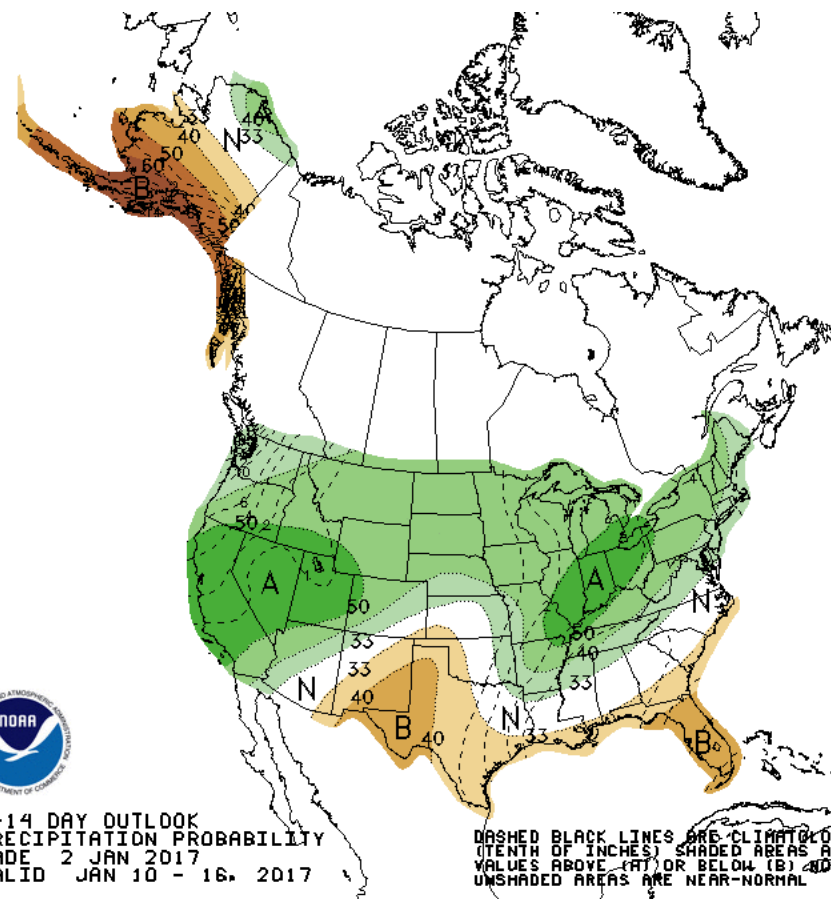
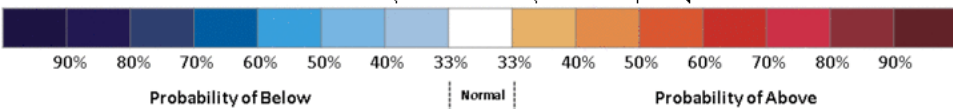
D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE JAN 03 2017 1015 UTC CNTD JAN 14 2017

Week 2 – Temperature and Precipitation



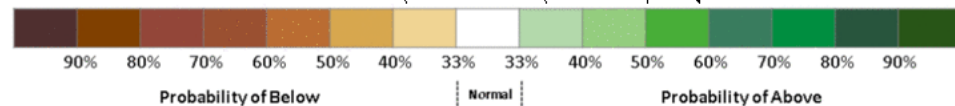
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 2 JAN 2017
VALID JAN 10 - 16, 2017

DASHED BLACK LINES ARE CLIMATE
(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 2 JAN 2017
VALID JAN 10 - 16, 2017

DASHED BLACK LINES ARE CLIMATE
(TENTH OF INCHES) SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
UNSHADED AREAS ARE NEAR-NORMAL

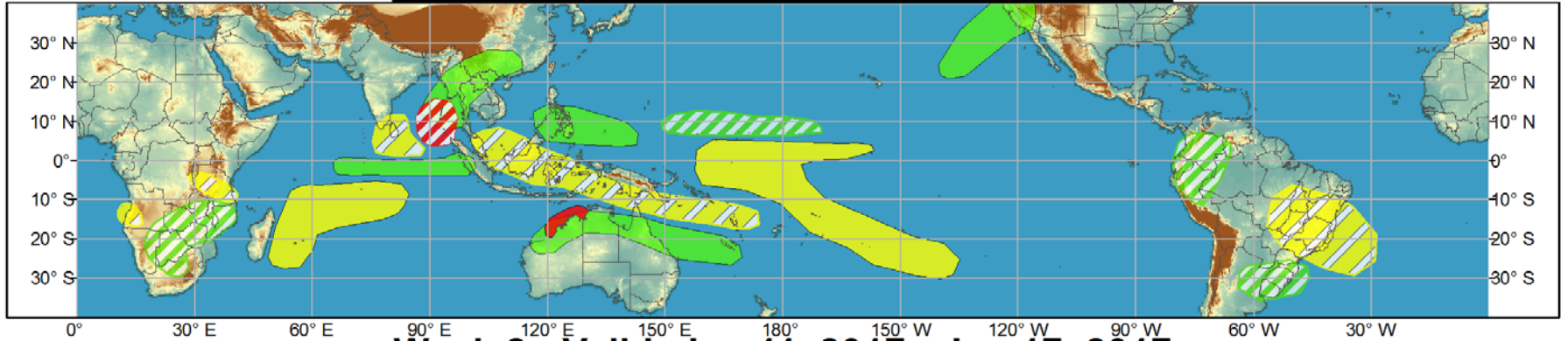




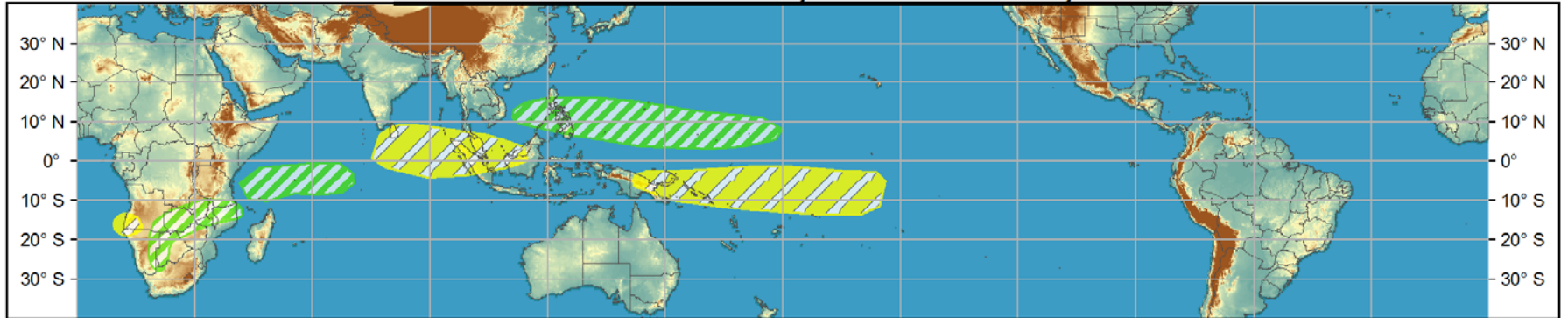
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