Global Tropics Hazards And Benefits Outlook
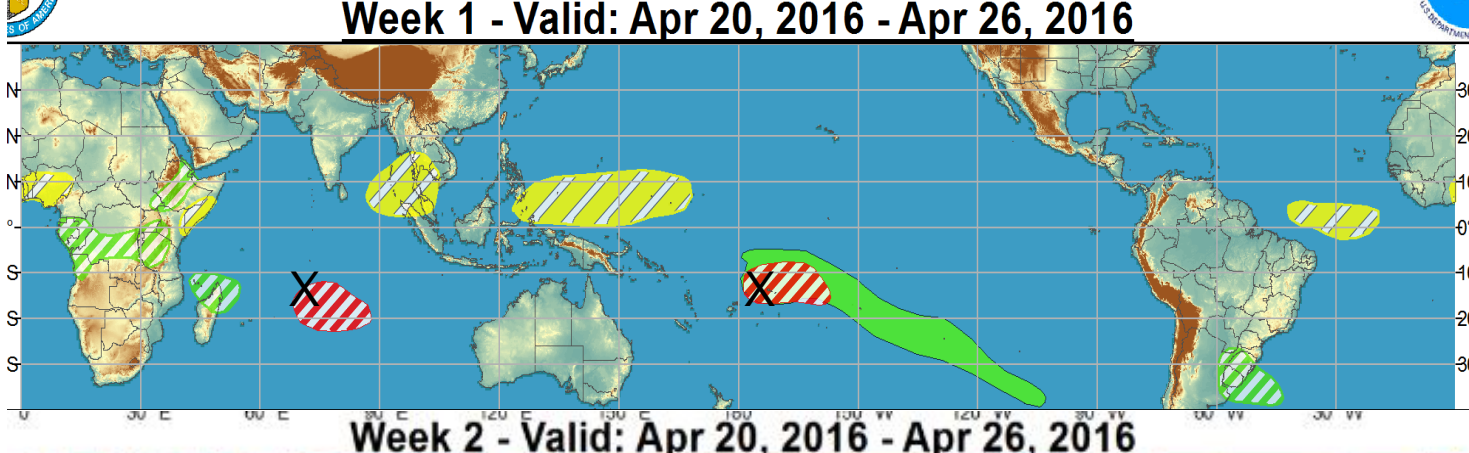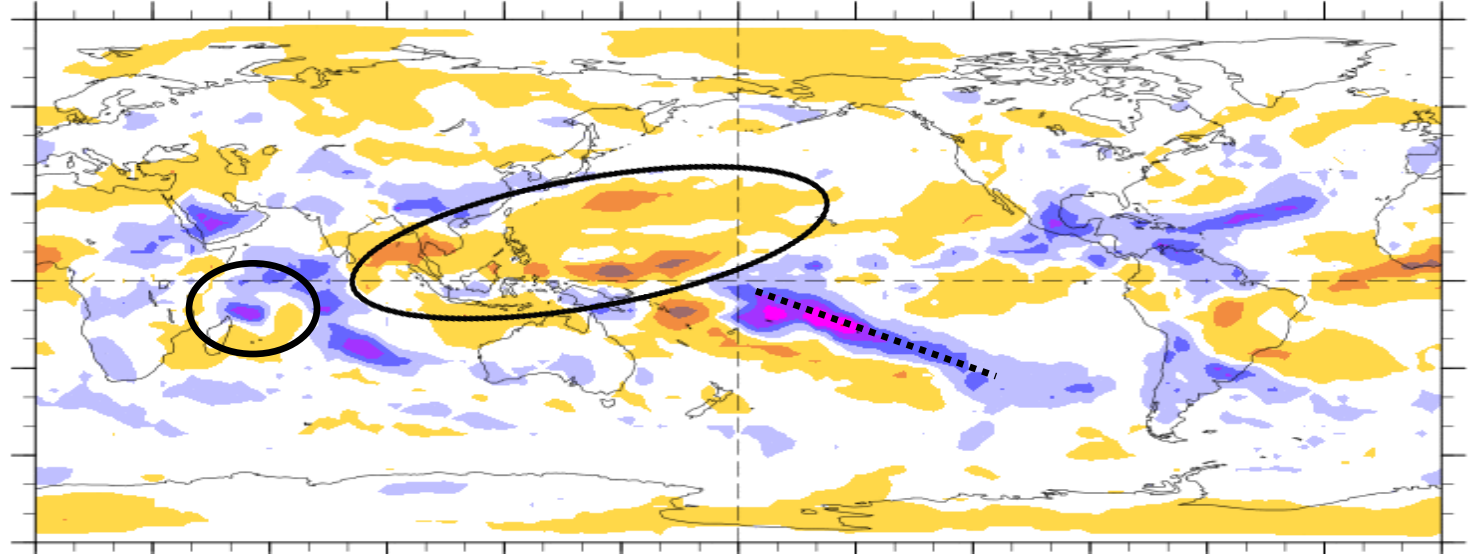## April 26, 2016

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: Apr 20, 2016 - Apr 26, 2016

Week 2 - Valid: Apr 20, 2016 - Apr 26, 2016
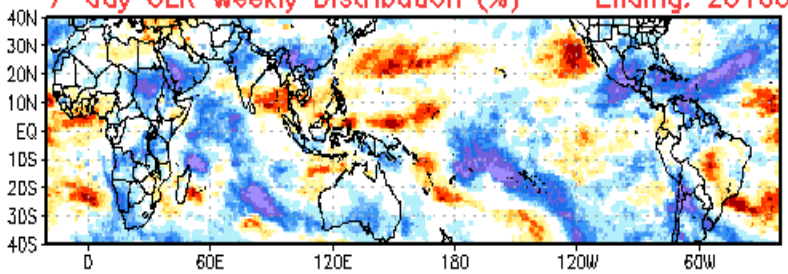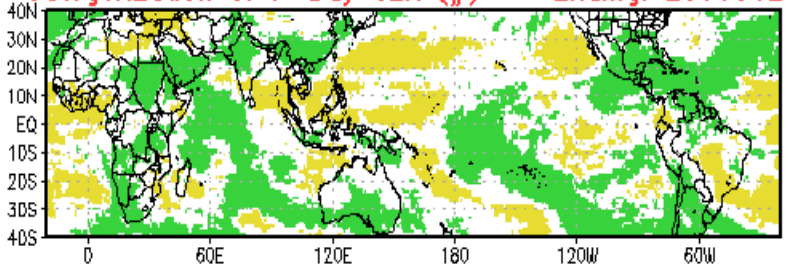
7-Day Average OLR Anomaly   2016/04/18 - 2016/04/24

Cool shading
More clouds/rain

Warm shading
Less clouds/rain

7-day OLR Weekly Distribution (%) -- Ending: 20160426
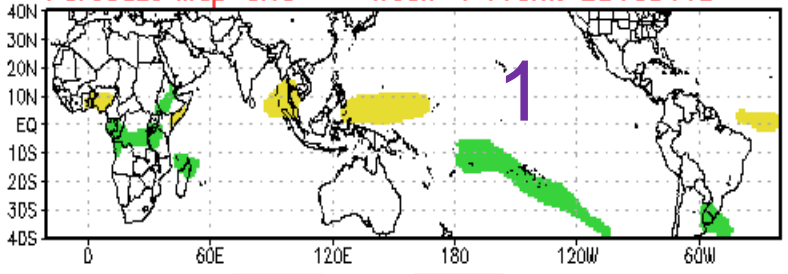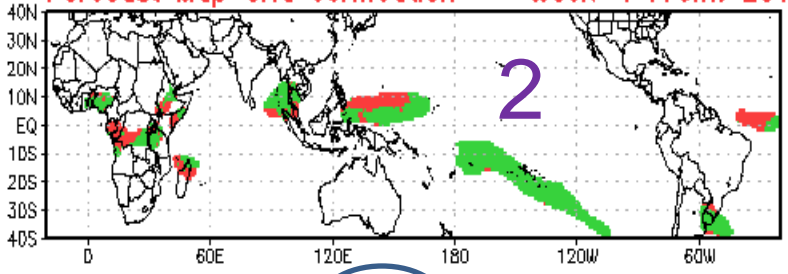
7-day OLR Weekly Distribution (%) -- Ending: 20160426

Categorization of 7-Day OLR (#) -- Ending: 20160426

Categorization of 7-Day OLR (#) -- Ending: 20160426
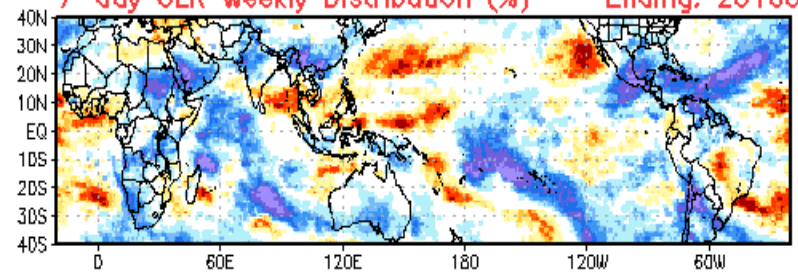
Forecast Map Grid -- Week-1 From: 20160419

Forecast Map Grid -- Week-2 From: 20160412

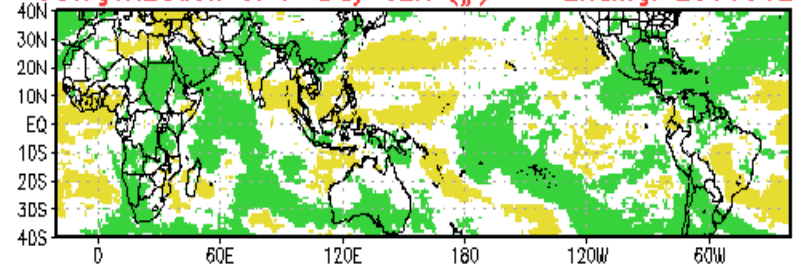Forecast Map Grid Verification -- Week-1 From: 20160419

Forecast Map Grid Verification -- Week-2 From: 20160412

Hit: Green Miss: Red
Heidke Skill Score: 57.4413

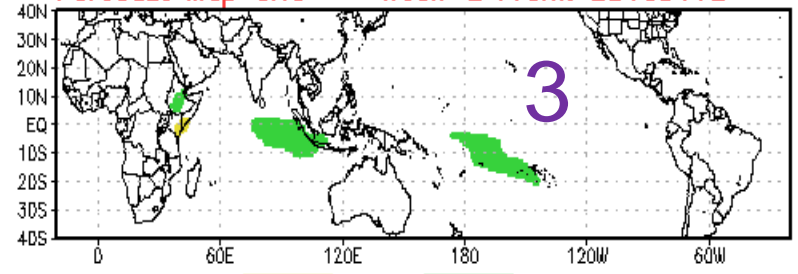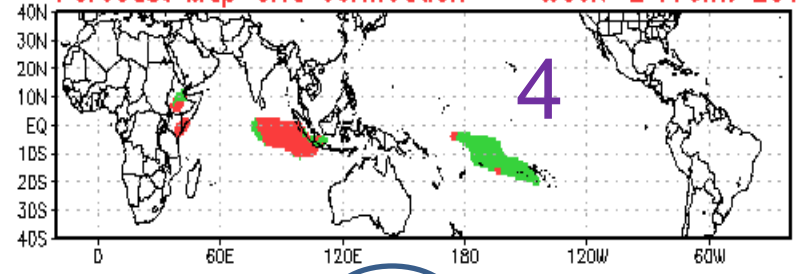Hit: Green Miss: Red
Heidke Skill Score: 29.8030

Synopsis of Climate Modes

ENSO:
•La Nina Watch in effect as of 14 April 2016

ENSO Neutral likely during late spring/early summer 2016; possible La Nina conditions to develop by late summer/early fall. El Nino is weakening, though large area of +30 C SSTs still exists over central South Pacific (0-15S, DL-150W). More than sufficient to sustain convection.

MJO and other subseasonal tropical variability:
• In general, MJO indices are indicating a very weak, incoherent pattern.

• Most dynamical model MJO index forecasts depict a weak, fairly incoherent signal during the next two weeks. The European Center predicts a wider range of possibilities, underscoring the uncertainty.
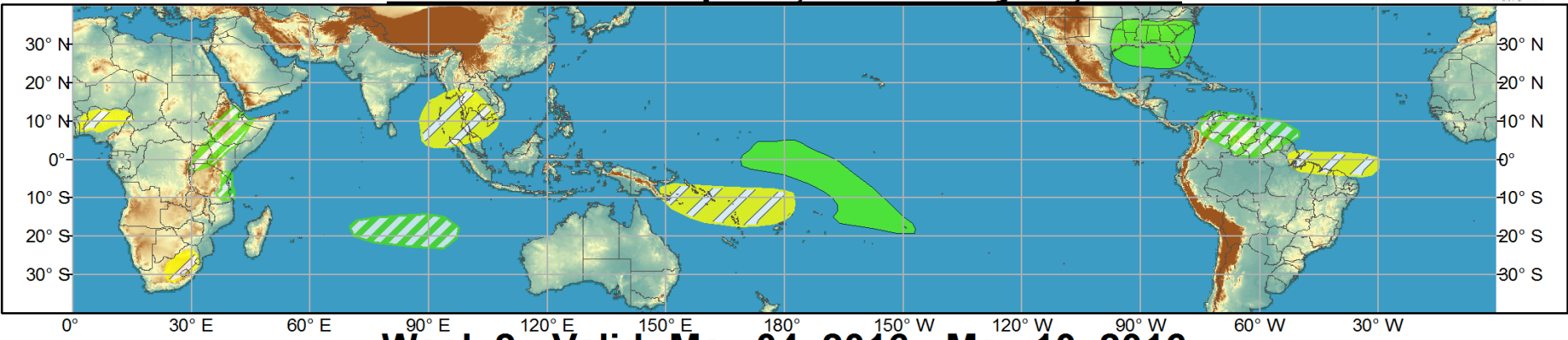
Extratropics:
• The extended range temperature and precipitation forecasts for the U.S. are not likely to be impacted by the MJO, but more likely impacted by the ongoing El Nino and mid-latitude frontal/cyclonic activity.
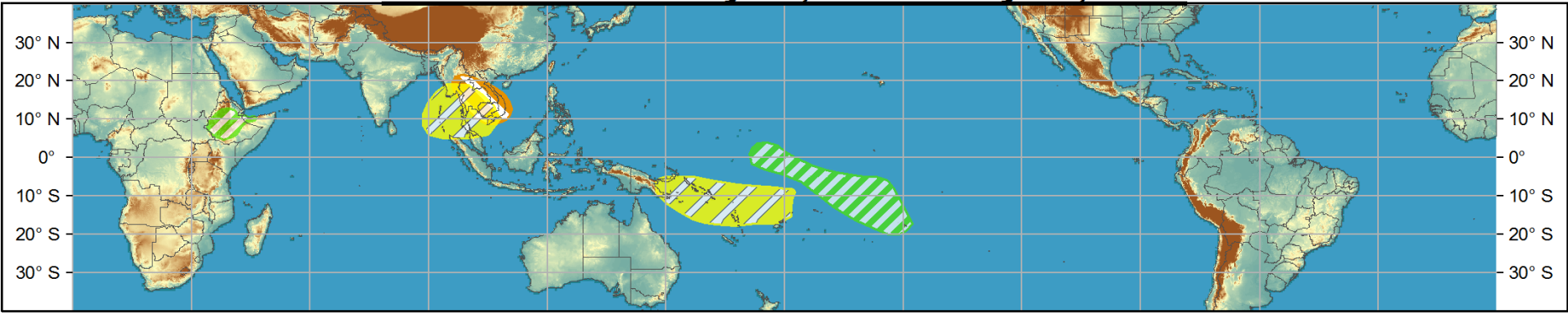
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Apr 27, 2016 - May 03, 2016

Week 2 - Valid: May 04, 2016 - May 10, 2016

Produced: 04/26/2016
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.
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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.
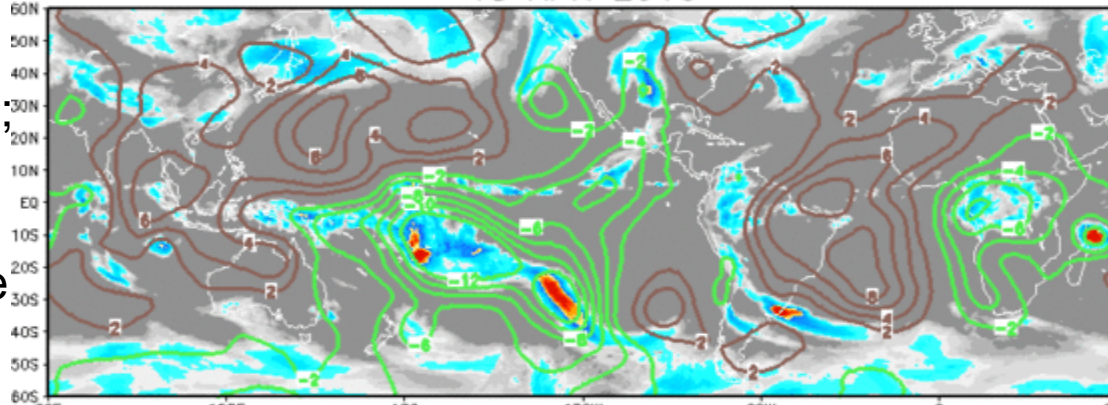
IR Satellite & 200-hpa Velocity Potential Anomalies

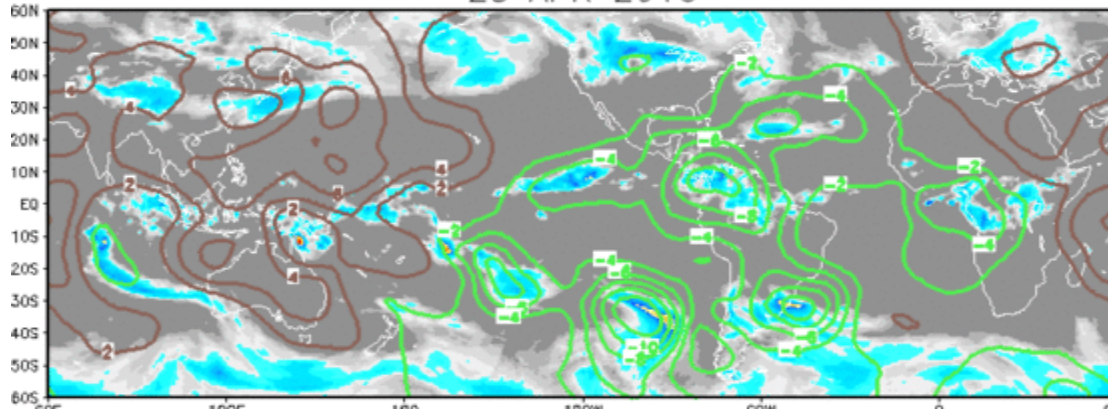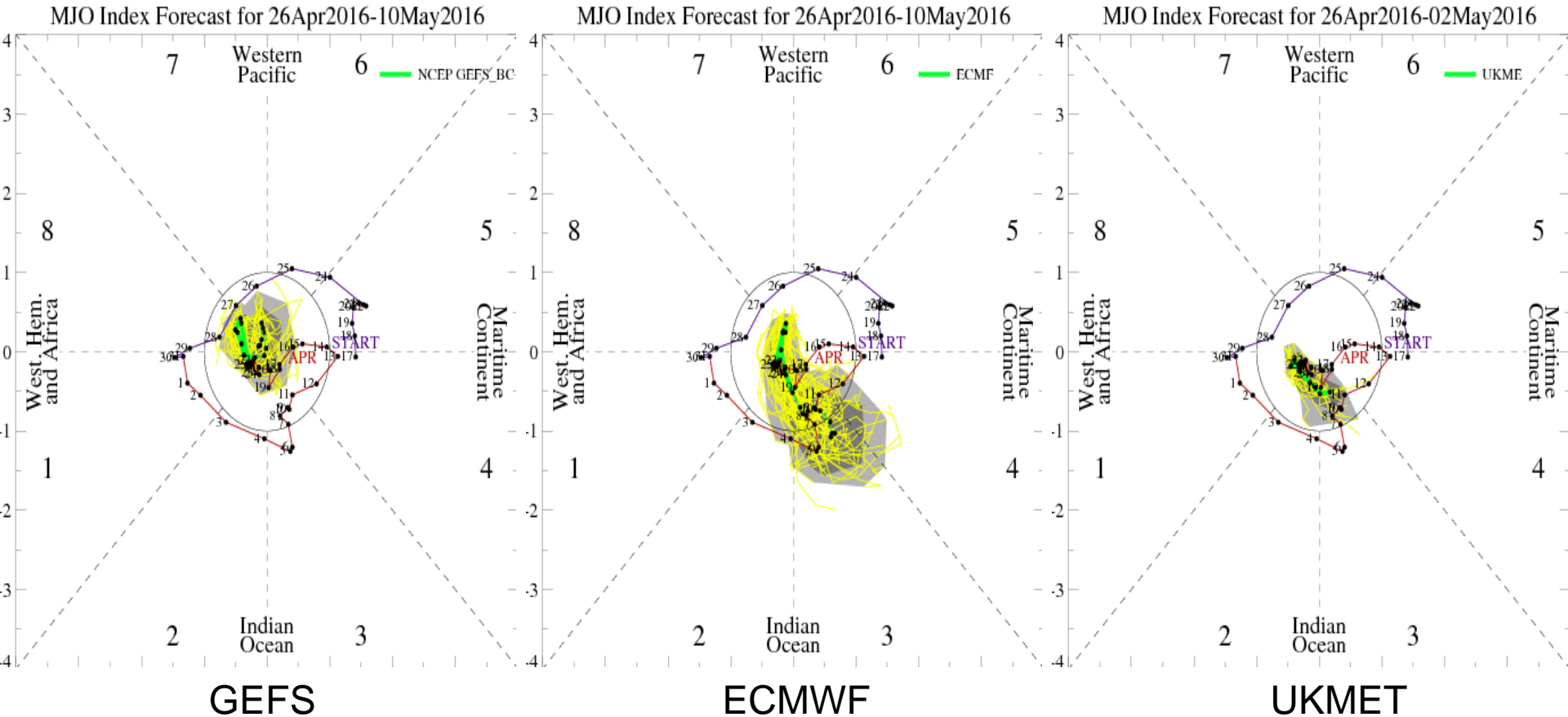Green: Enhanced Divergence   Brown: Enhanced Convergence
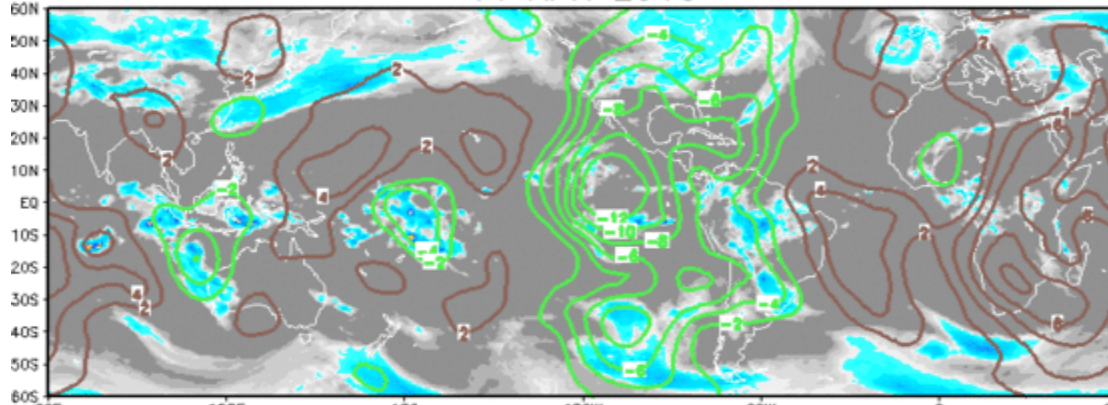
Enhanced upper-level divergence northeast and east of Australia; tied to SPCZ

Upper-level divergence over eastern Pacific and the Americas; also over eastern Indian Ocean /western Maritime Continent & central Pacific

Wave-1 pattern with 200-hPa divergence over the WH; convergence over the EH.

MJO Observation/Forecast

MJO Index Forecast for 26Apr2016-10May2016 — GEFS

MJO Index Forecast for 26Apr2016-10May2016 — ECMWF

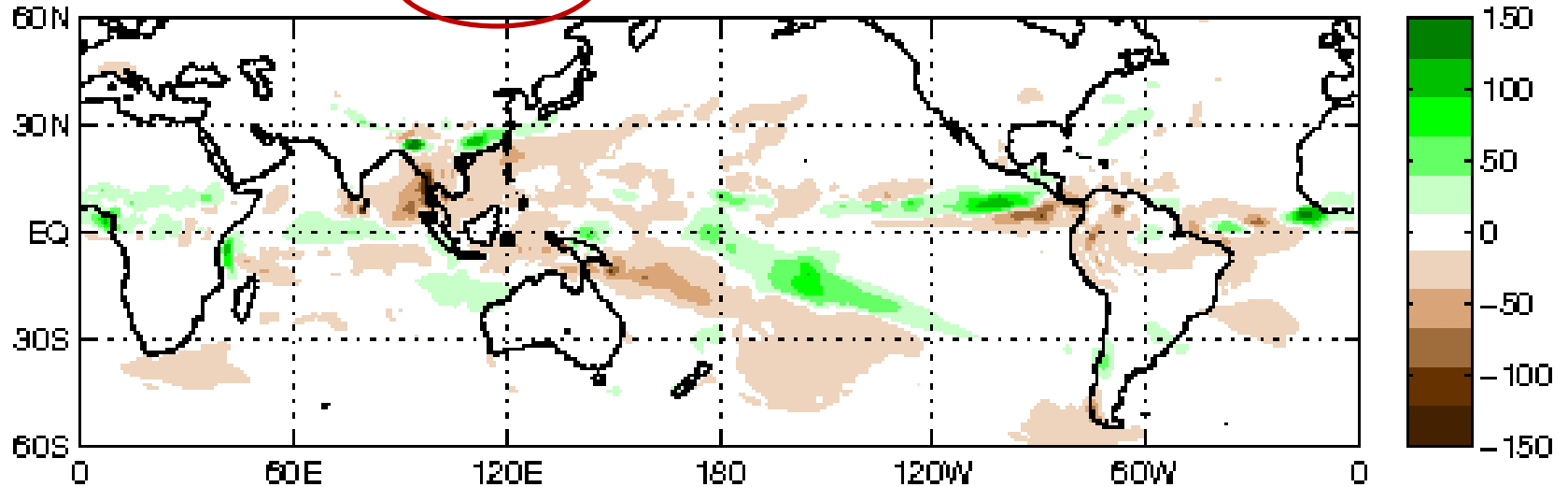MJO Index Forecast for 26Apr2016-02May2016 — UKMET

Wheeler-Hendon based analyses of model forecasts indicate a weak signal (GEFS, UKMET) during the next 1-2 weeks, with a stronger signal indicated by the ECMWF over the eastern Indian Ocean during Week-2.

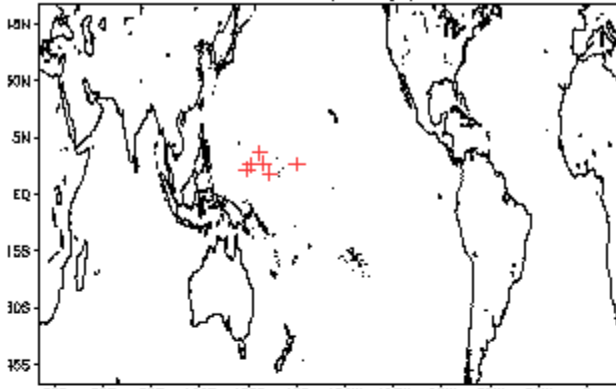CFS: Anom. PREC Week: 1: 27-Apr-2016 to 03-May-2016 (mm/week)
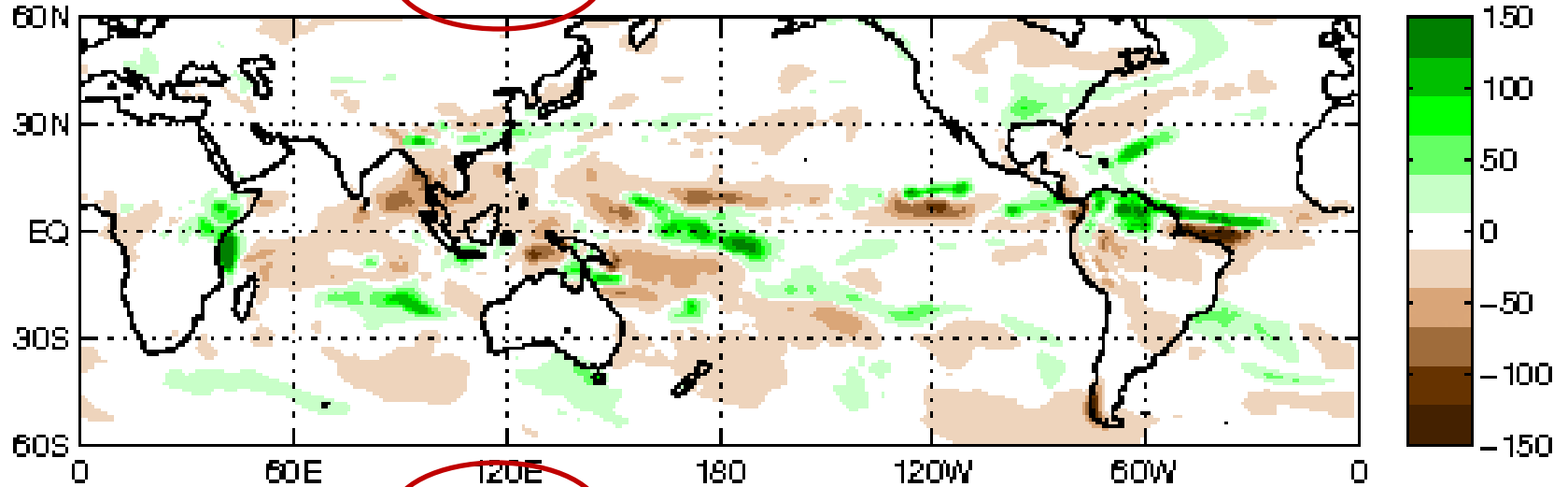
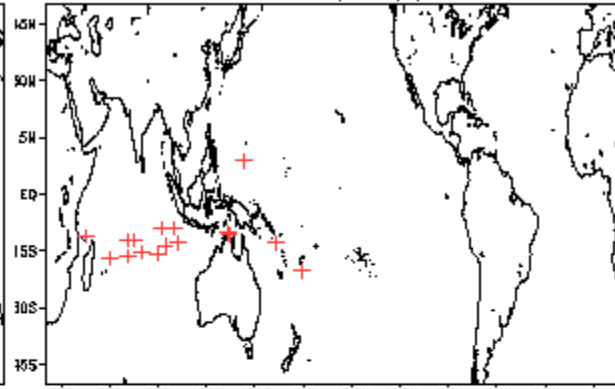CFS: Anom. PREC Week: 2: 04-May-2016 to 10-May-2016 (mm/week)
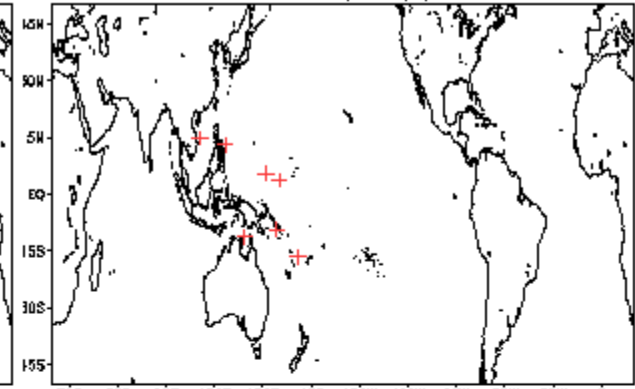
April Tropical Storm Formation by MJO phase

CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)

TC Track(0−384 hr)   2016042600   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
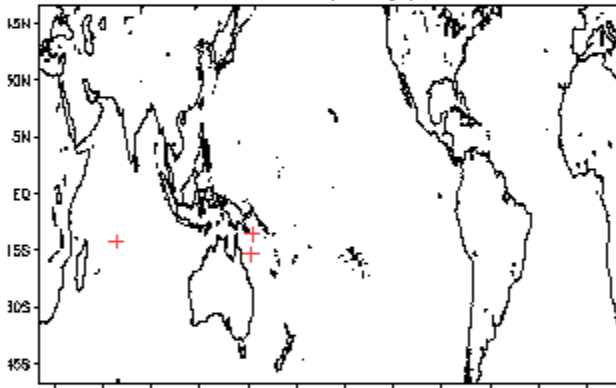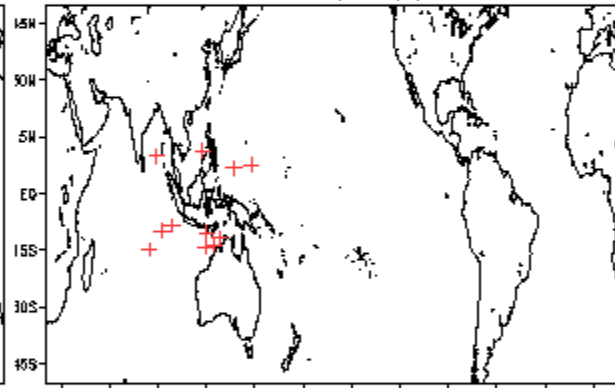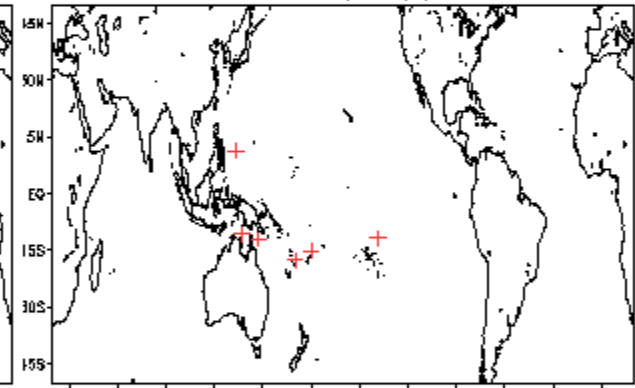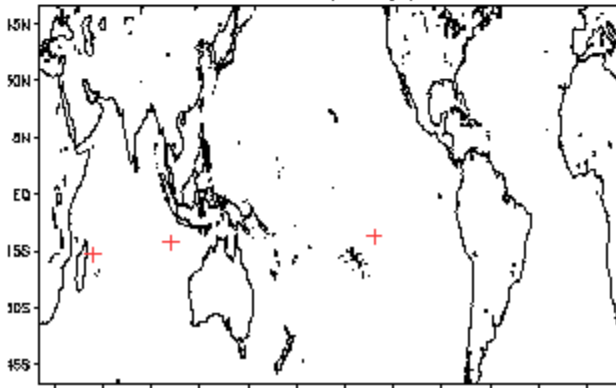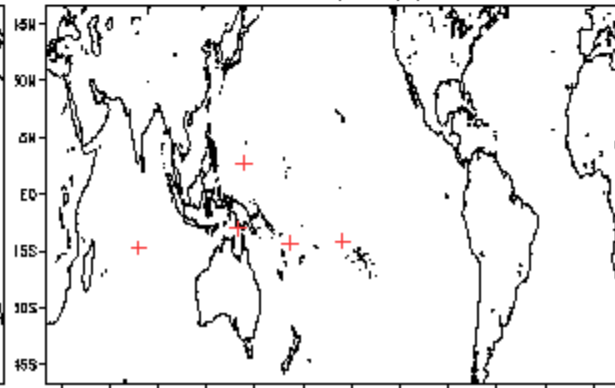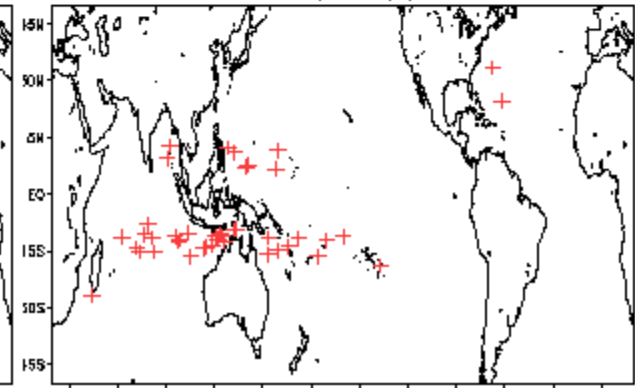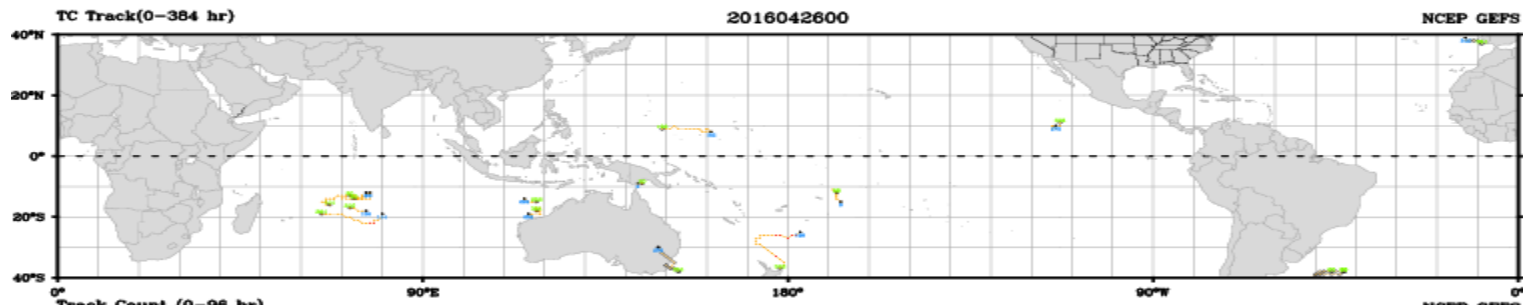
Day 13-15

Connections to U.S. Impacts

AO: Observed & ENSM forecasts

1000mb Z (Obs: 29Dec2015 − 26Apr2016)   AO index
mean=−0.4149

1000mb Z (7day Forecast)   AO index
mean=−0.5977   cor(w/obs)=0.6916

1000mb Z (10day Forecast)   AO index
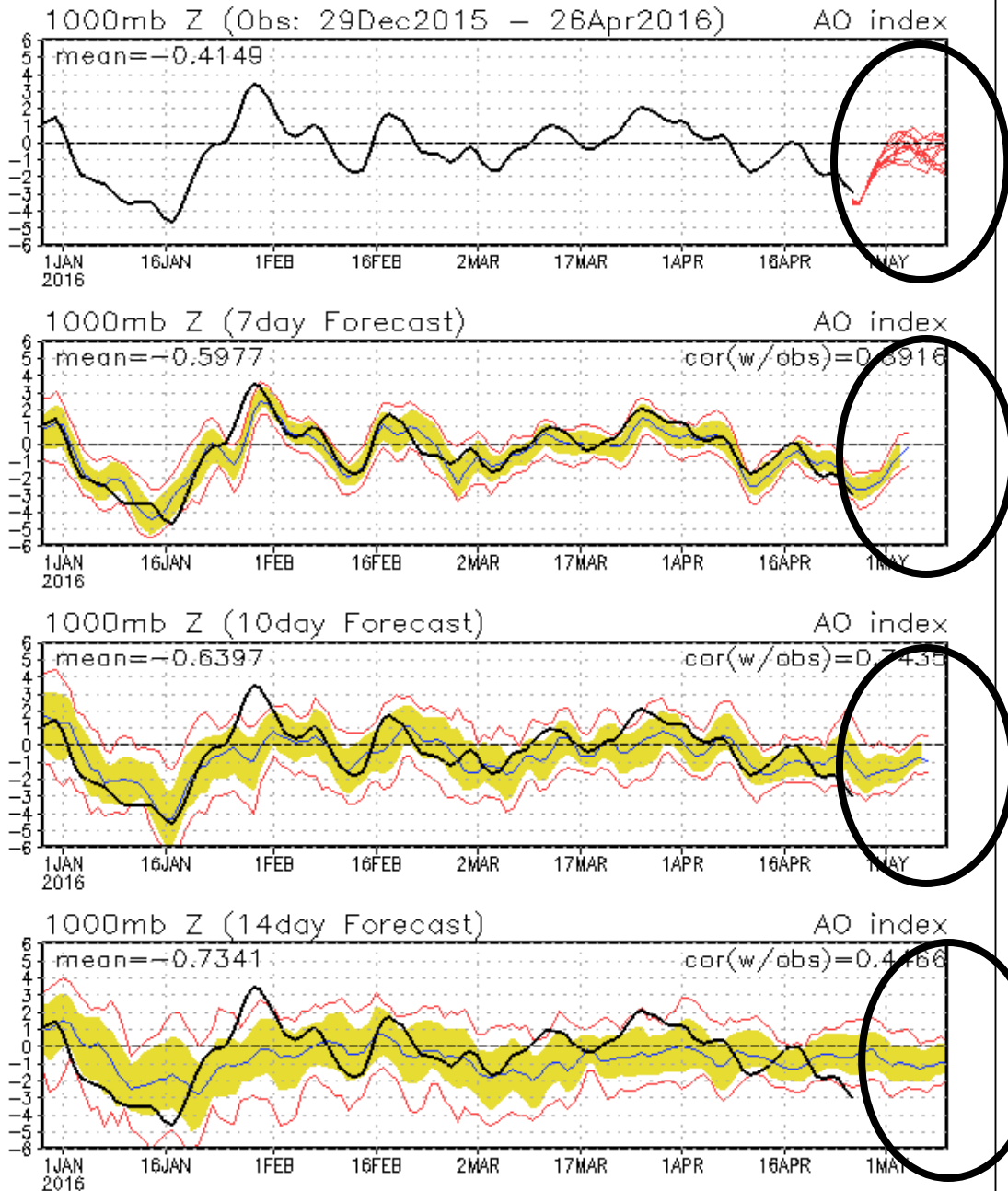mean=−0.6397   cor(w/obs)=0.7435

1000mb Z (14day Forecast)   AO index
mean=−0.7341   cor(w/obs)=0.4466
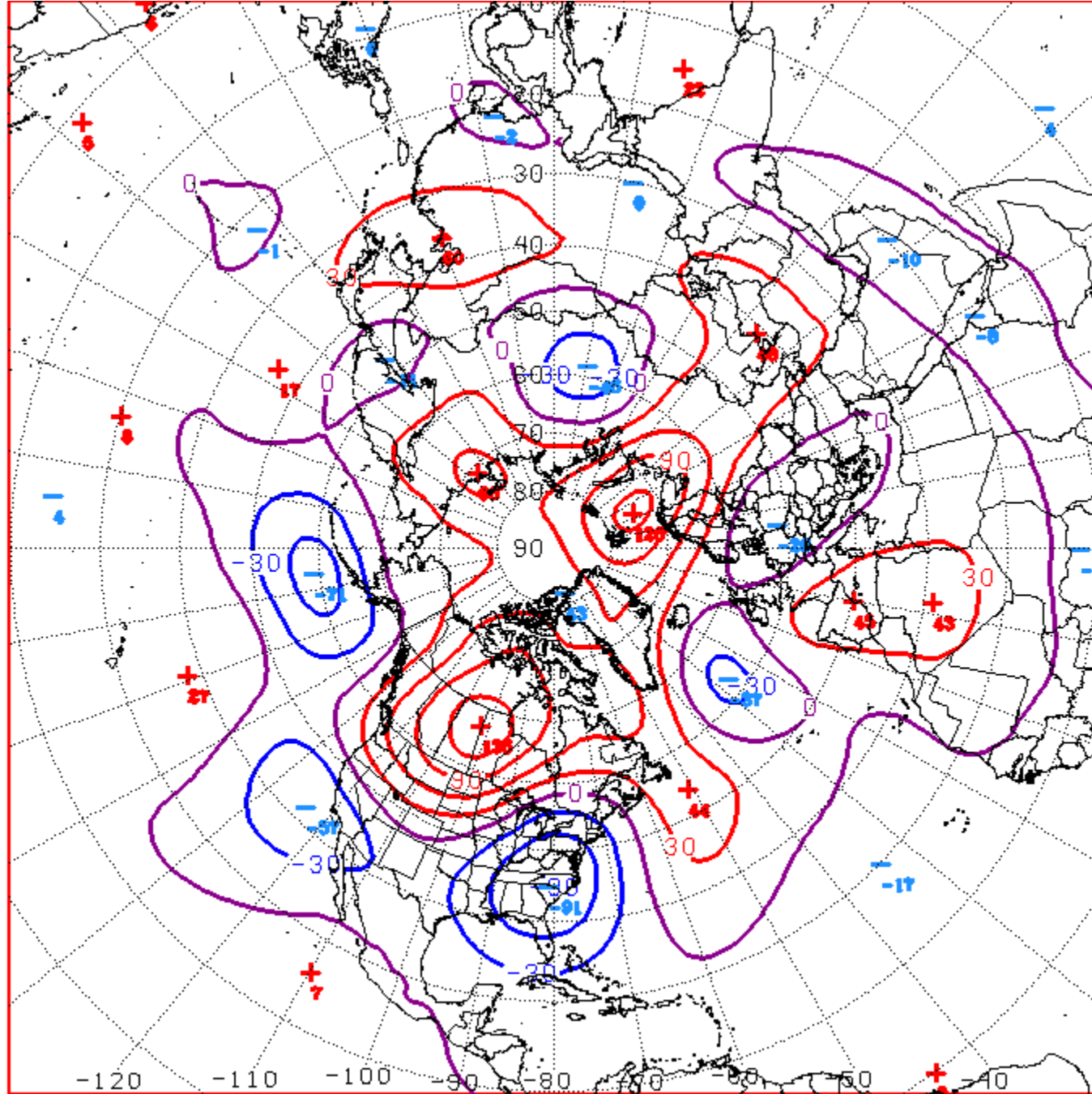
D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE APR 26 2016 1255 UTC CNTD MAY 07 2016
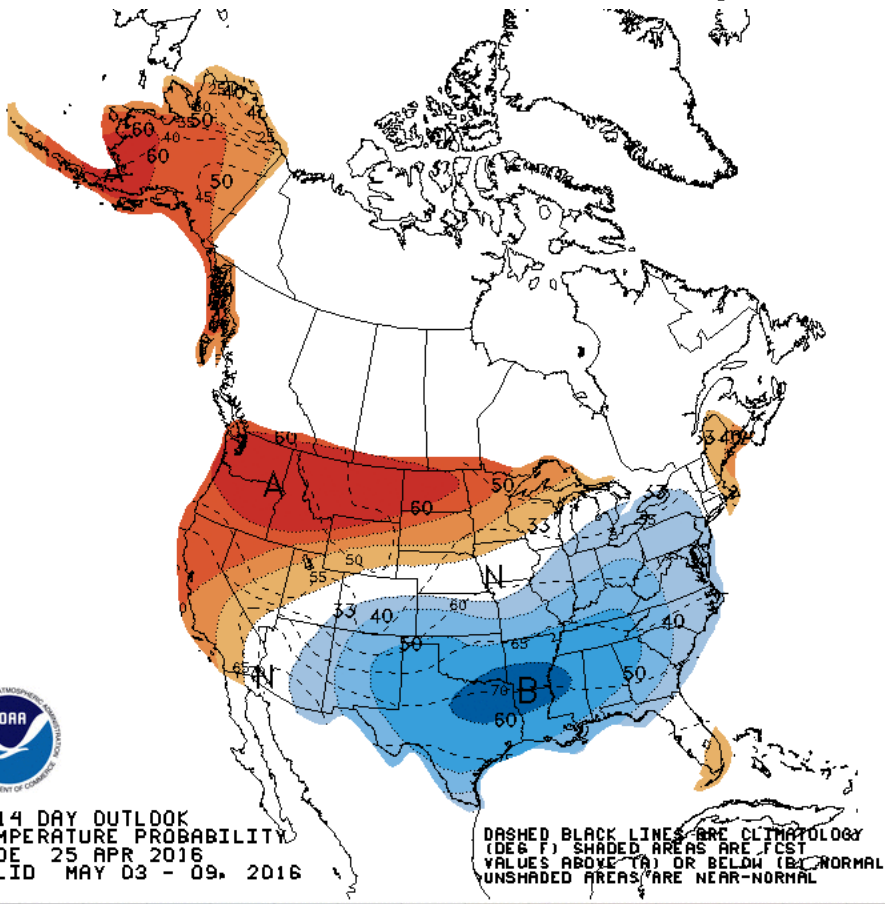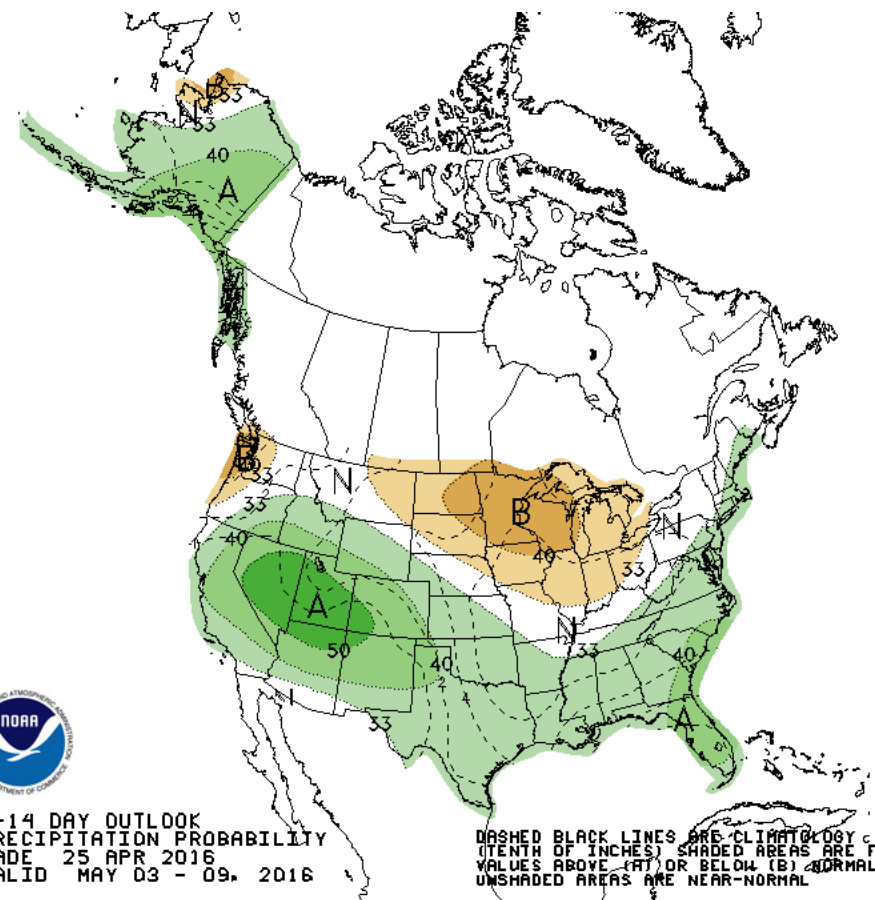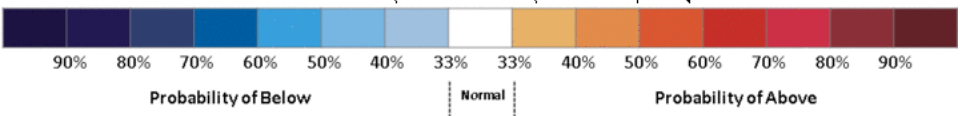
Week 2 – Temperature and Precipitation

8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 25 APR 2016
VALID MAY 03 - 09, 2016

DASHED BLACK LINES ARE CLIMATOLOGY
(DEG F) SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
UNSHADED AREAS ARE NEAR-NORMAL

8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
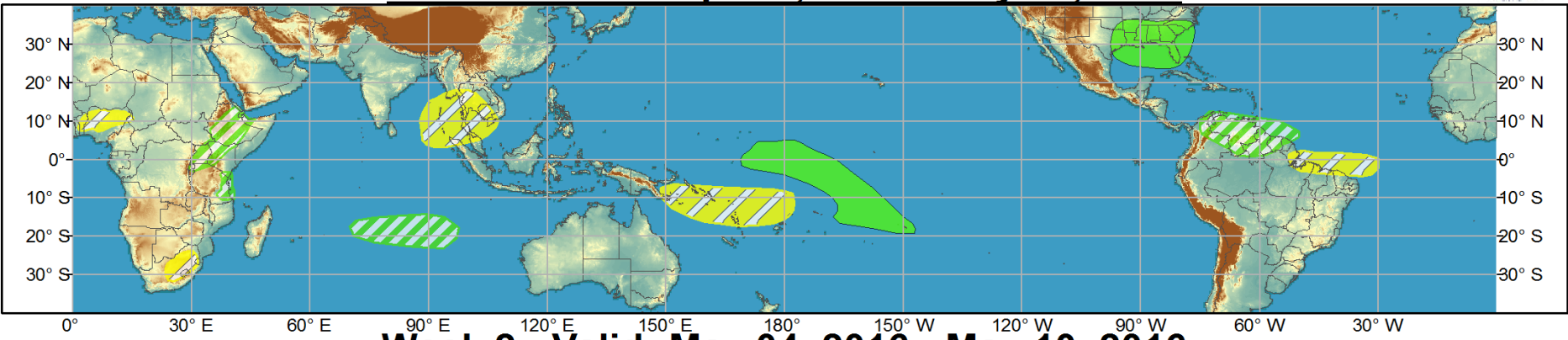MADE 25 APR 2016
VALID MAY 03 - 09, 2016

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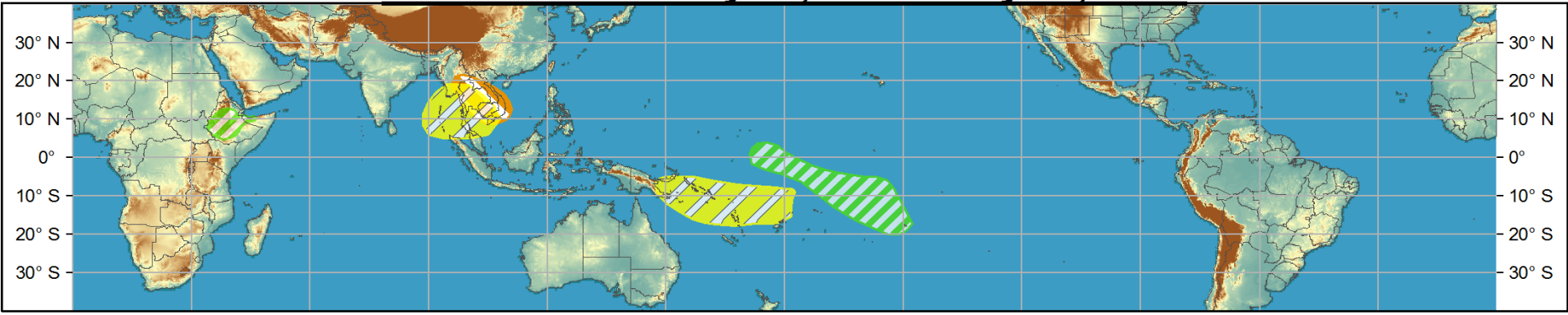UNSHADED AREAS ARE NEAR-NORMAL

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