

Global Tropics Hazards and Benefits Outlook Briefing

January 21, 2014

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NOAA / Climate Prediction Center

Outline

- Review of recent tropical conditions
- Synopsis of Climate Variability
- GTH Outlook and Forecast Discussion
- Connections to U.S. Impacts

Outlook Review



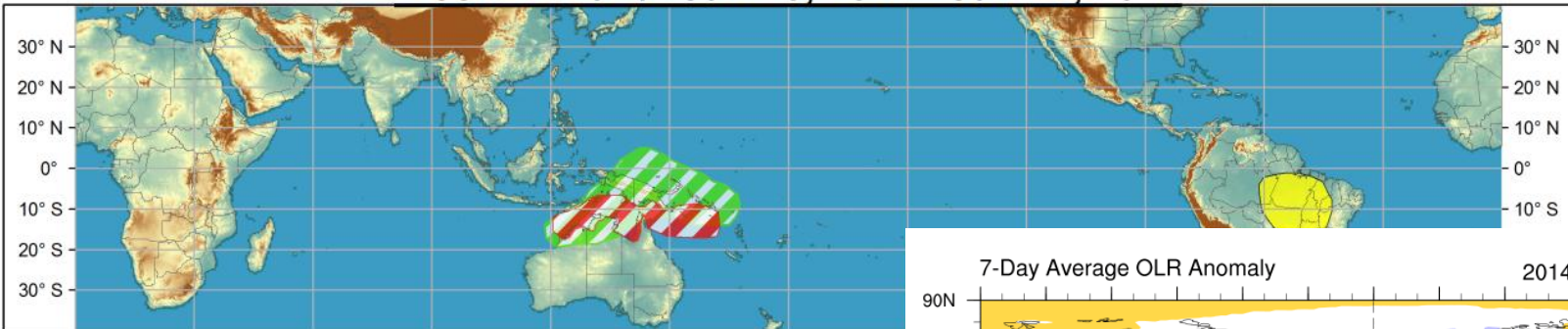
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



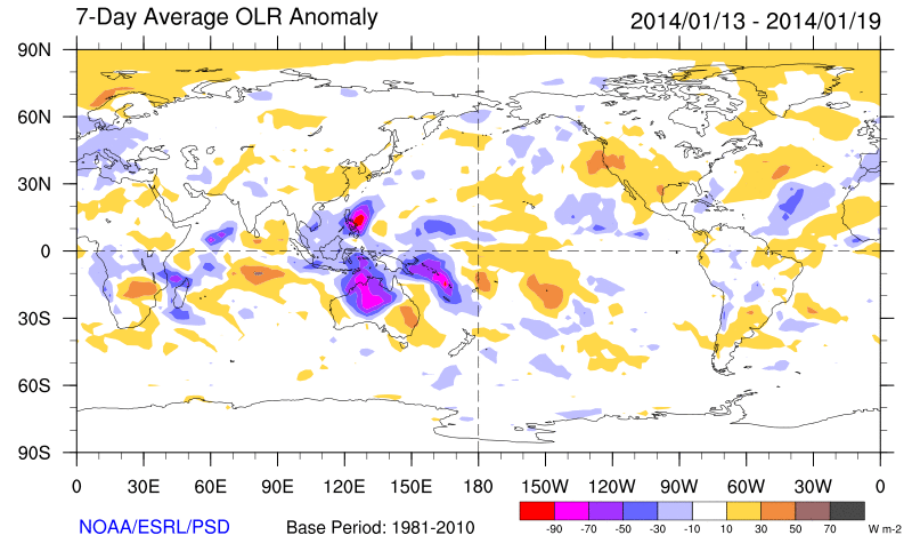
Week 1 - Valid: Jan 15, 2014 - Jan 21, 2014



Week 2 - Valid: Jan 15, 2014 - Jan 21, 2014



X → Tropical cyclone formed during the per



Synopsis of Climate Variability

ENSO:

- ENSO-neutral is expected to continue into the Northern Hemisphere summer 2014.

MJO:

- The MJO remained weak despite strong convection across parts of the West Pacific, Maritime Continent, and northern Australia. Little eastward propagation is expected.
- The MJO is not expected to contribute substantially to the pattern of anomalous convection during the outlook period.

Other types of subseasonal tropical variability:

- Atmospheric Kelvin wave activity remains ongoing but large scale persistent impacts are difficult to assess. Low-frequency variability unrelated to ENSO favors convection across parts of the eastern Maritime Continent and West Pacific.

Extratropics:

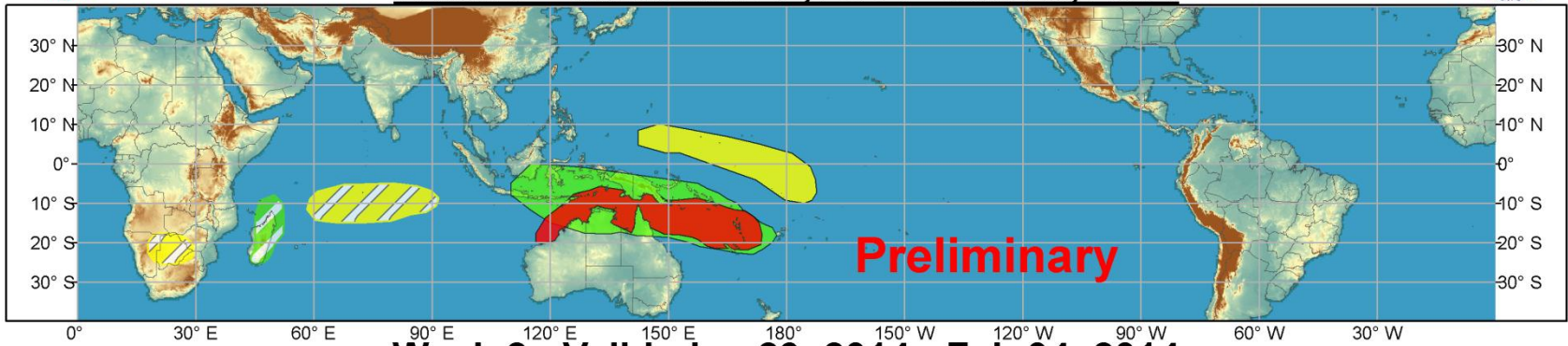
- AO and NAO favored to reside near neutral/positive over next 2 weeks, PNA forecast to go negative.
- Multiple areas of enhanced tropical convection make it difficult to confidently assess mid-latitude linkages. However, persistent convection in the far western Pacific is consistent with buildup of Arctic air in Canada.



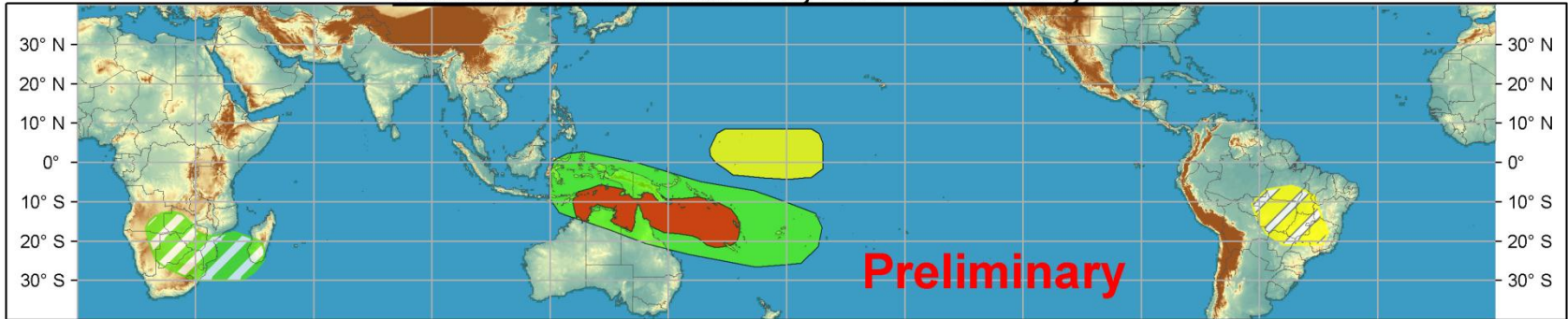
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jan 22, 2014 - Jan 28, 2014



Week 2 - Valid: Jan 29, 2014 - Feb 04, 2014



Produced: 01/21/2014

Forecaster: Baxter

Confidence
High Moderate

- Tropical Cyclone Formation** Development of a tropical cyclone that eventually reaches tropical storm/cyclone 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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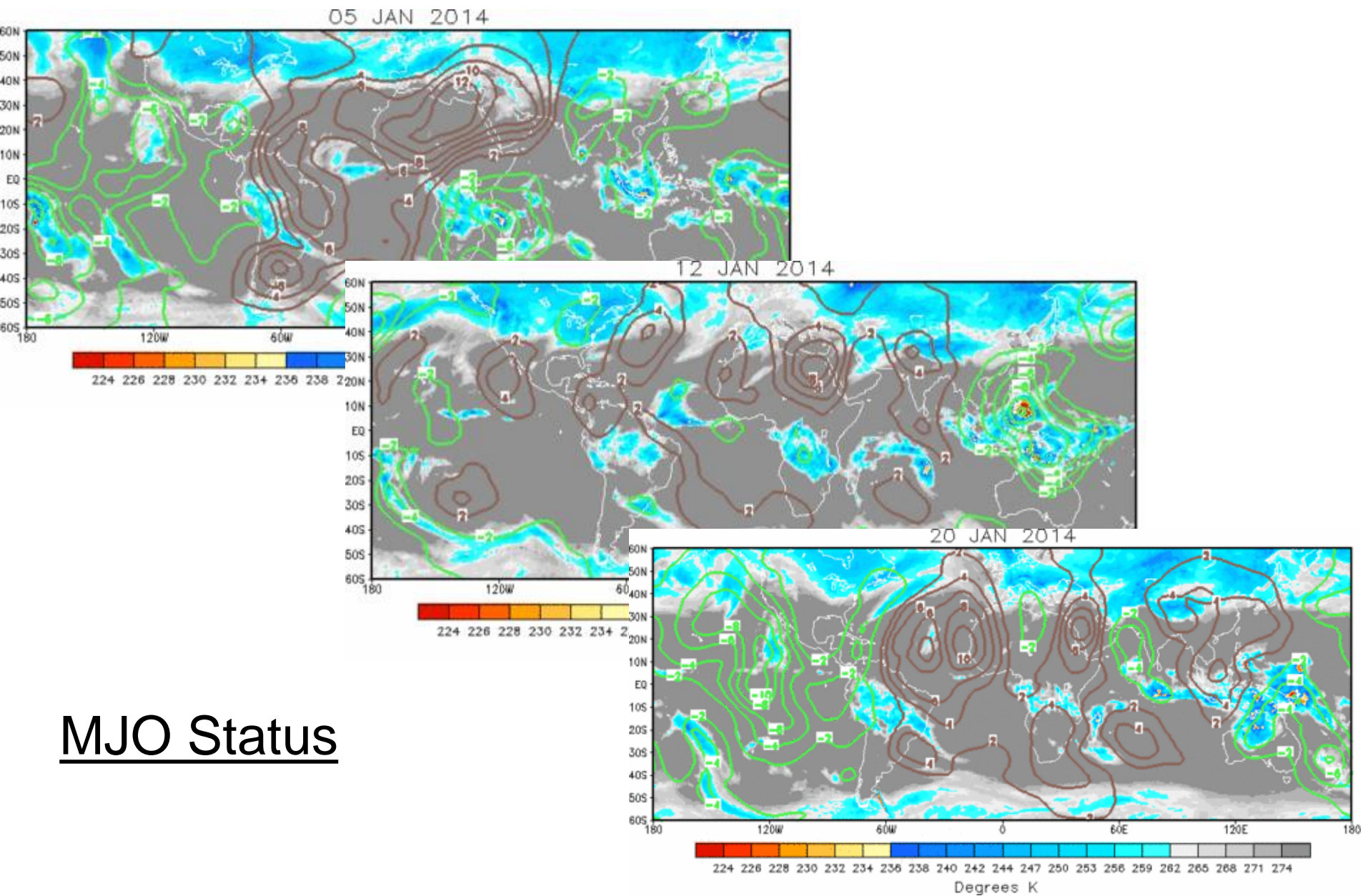
Product is updated once per week. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



IR Satellite & 200-hpa Velocity Potential Anomalies

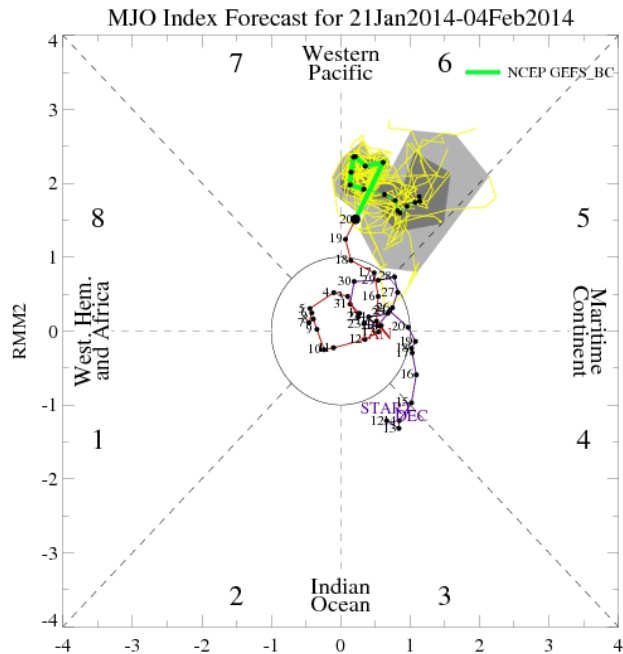
Green: Enhanced Divergence

Brown: Enhanced Convergence

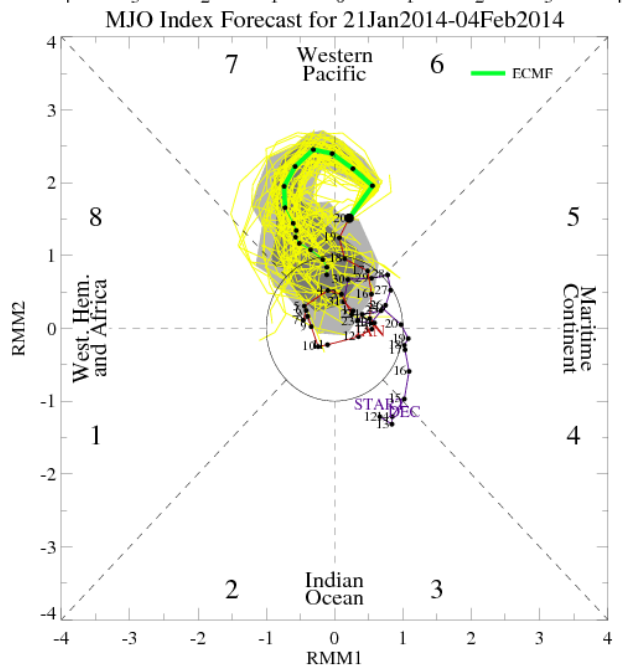


MJO Status

MJO Index Model Forecasts



NCEP

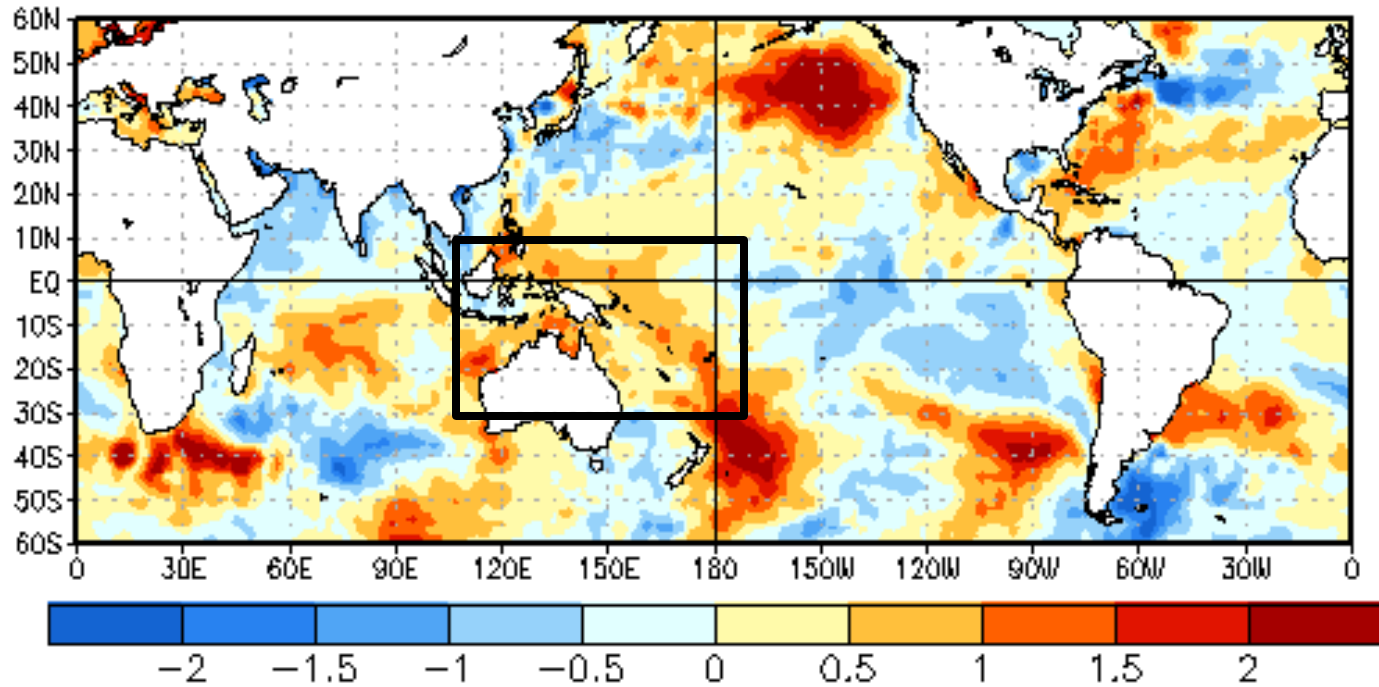


ECMWF

- The triangular areas indicate the location of the MJO enhanced convective phase
- Counter-clockwise motion is indicative of eastward propagation. Large dot most recent day.
- Distance from center proportional to strength
- Line colors distinguish different months
- Forecast is the green (mean) and yellow lines

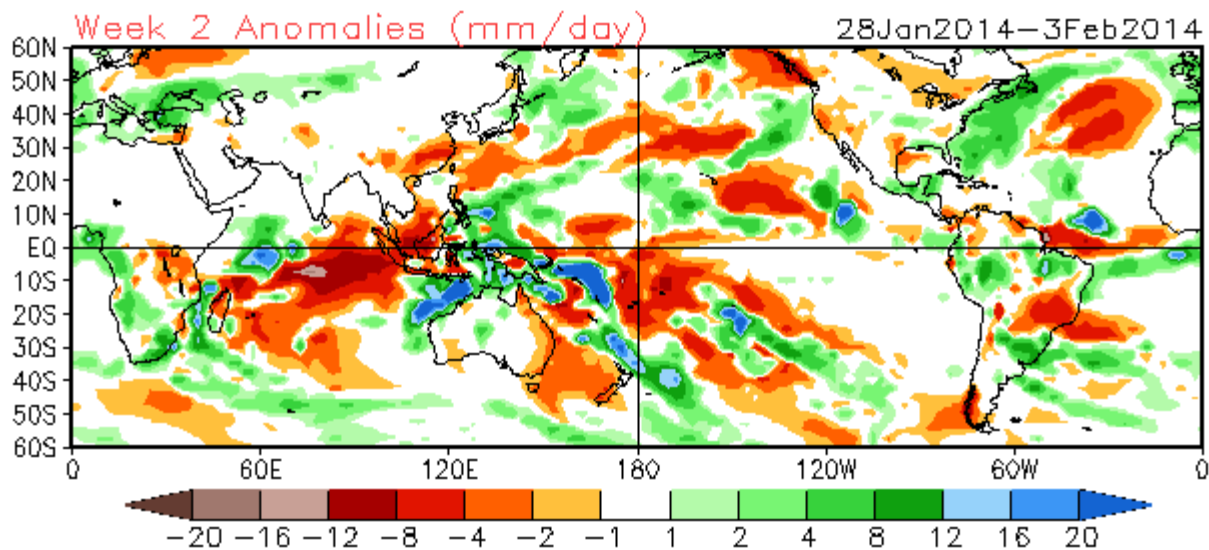
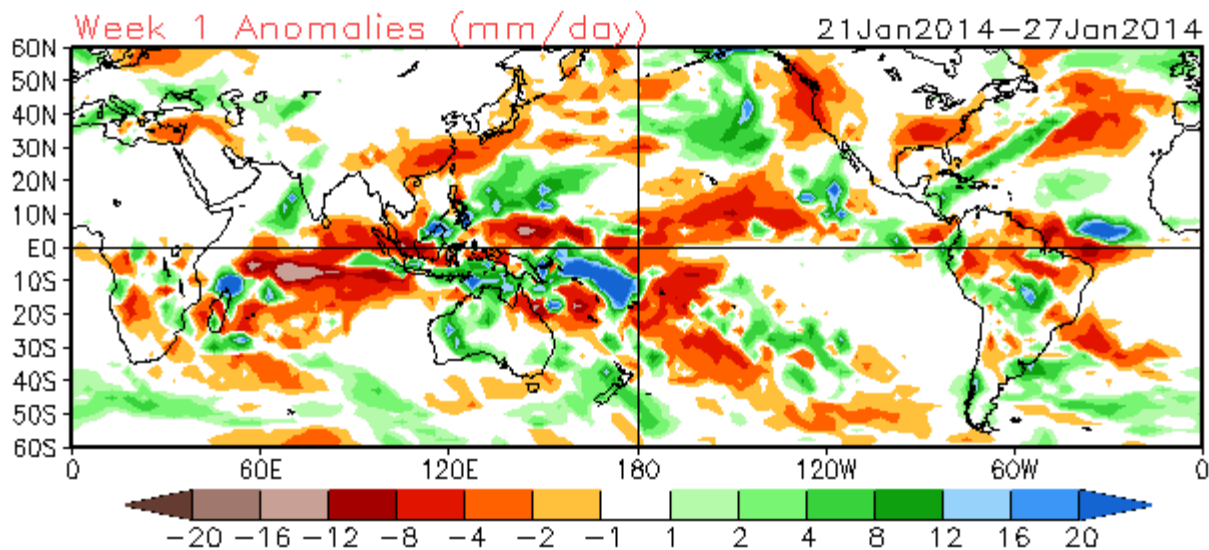
SST Anomalies (°C)

08 JAN 2014



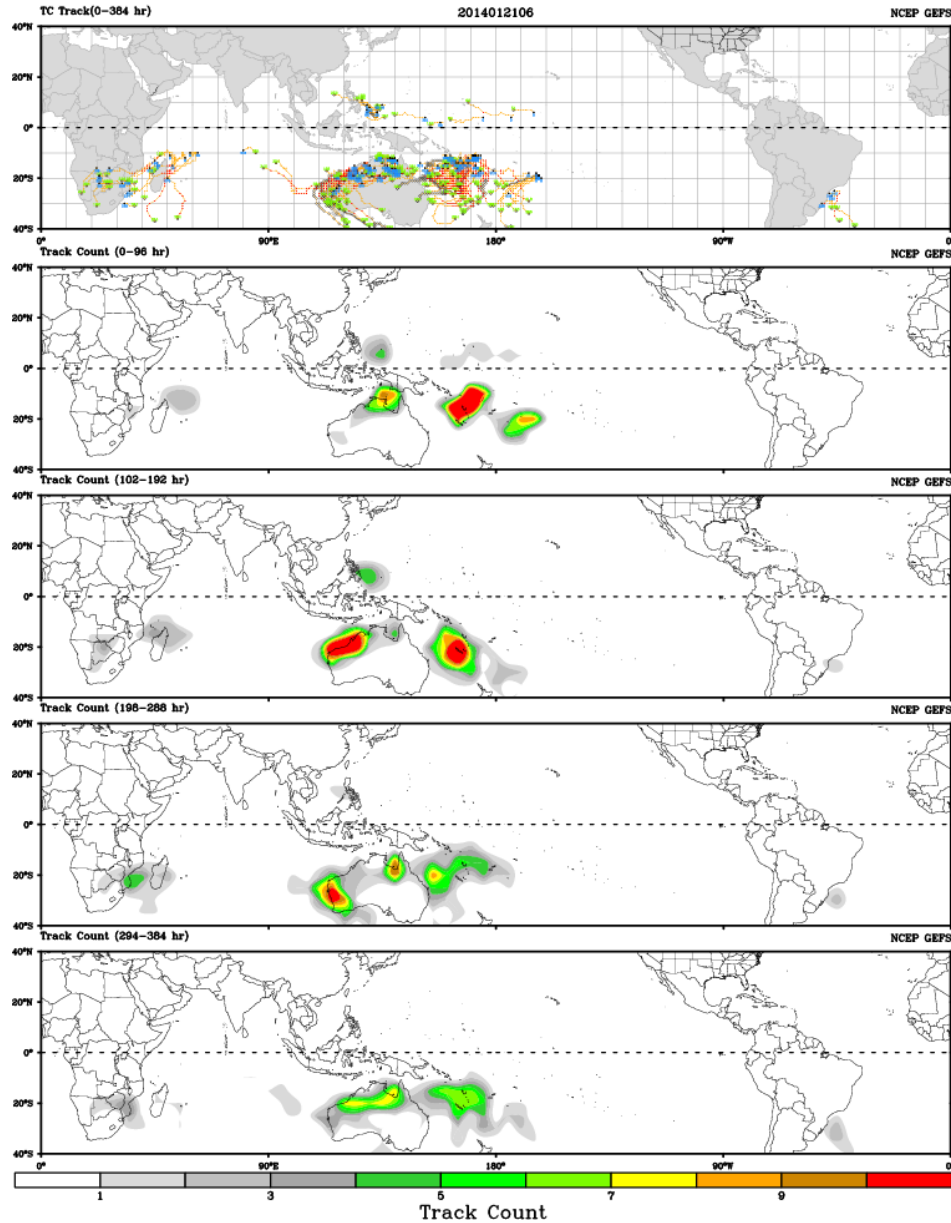
Continuation of very warm waters – many areas > 30C

NCEP Climate Forecast System – Weeks 1+2 Precipitation Anomalies



Ensemble GFS – Tropical Cyclone Guidance

CWB TC Tracker for NCEP GEFS (Fuzzy_AllCriteria)



Days 1-4

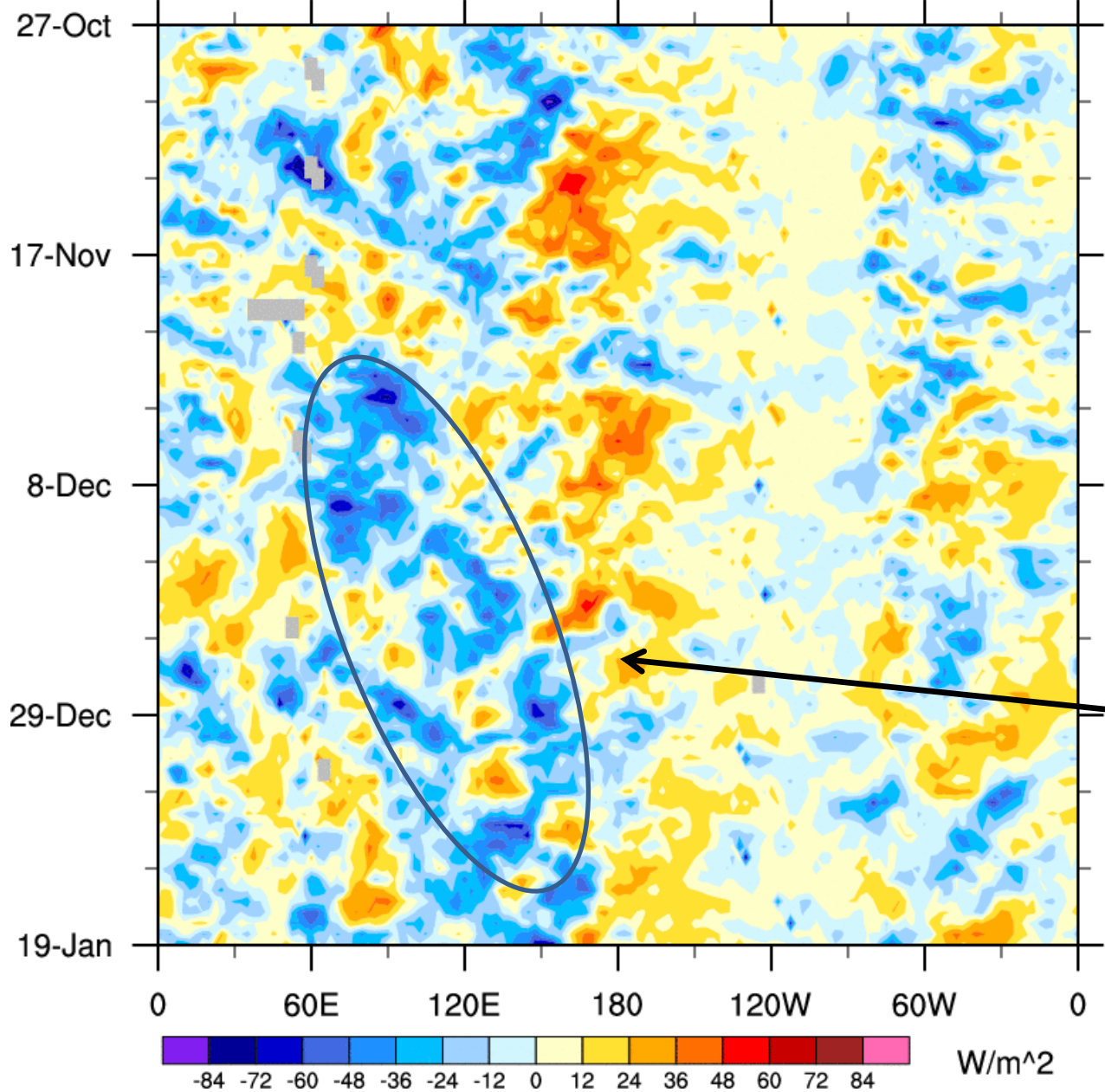
Days 5-8

Days 9-12

Days 13-16

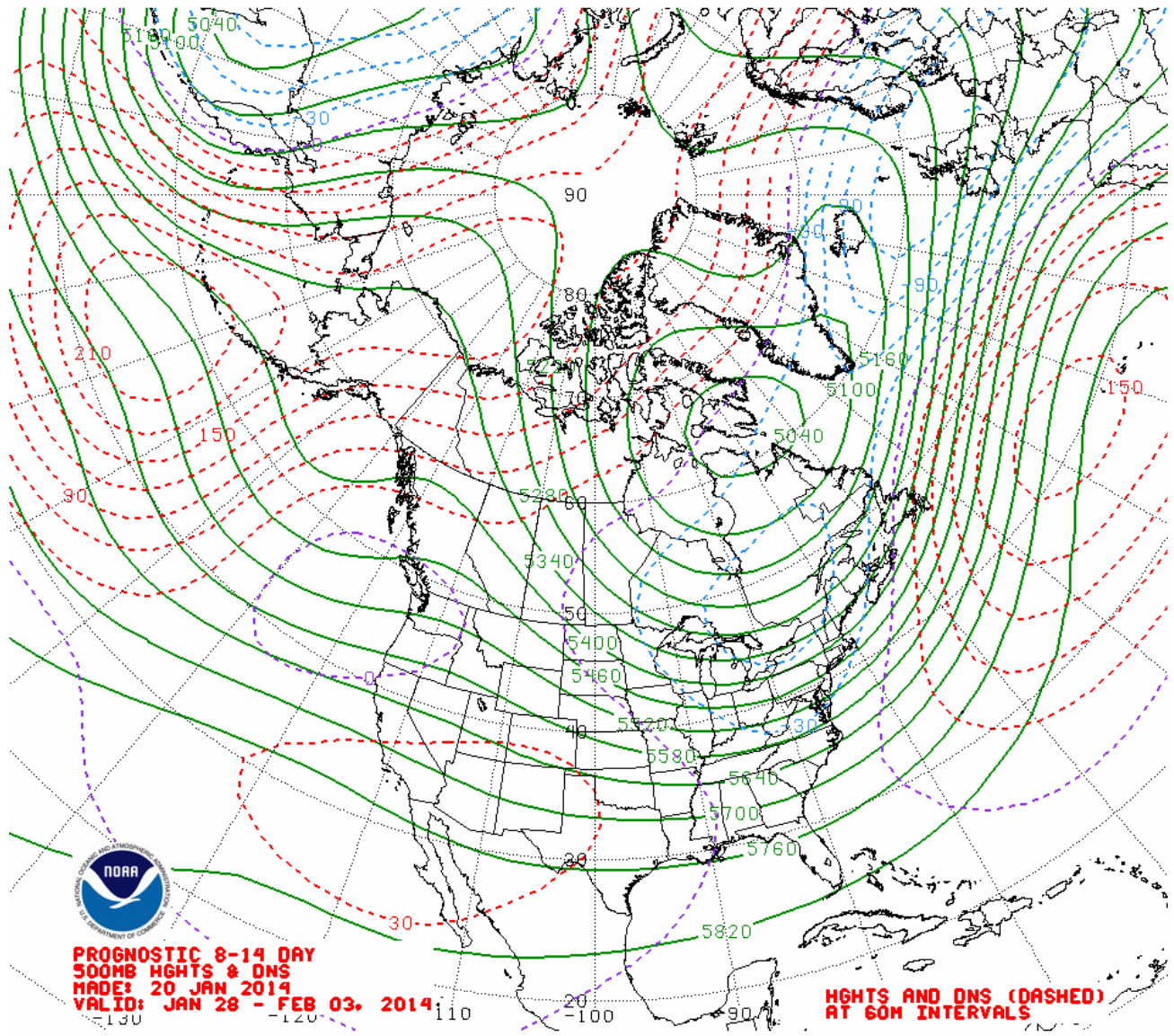
OLR anomalies: 7.5°S - 7.5°N

27-Oct-2013 to 19-Jan-2014



Low frequency mode shifting east.

Northern Hemisphere 500-hPa Heights and Anomalies

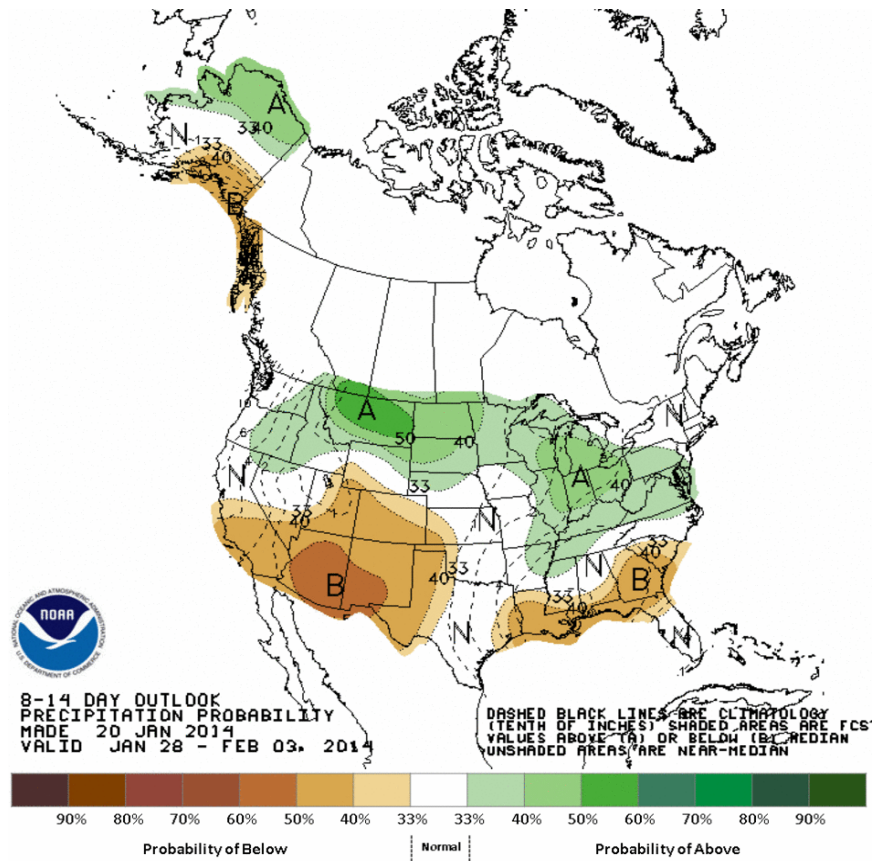
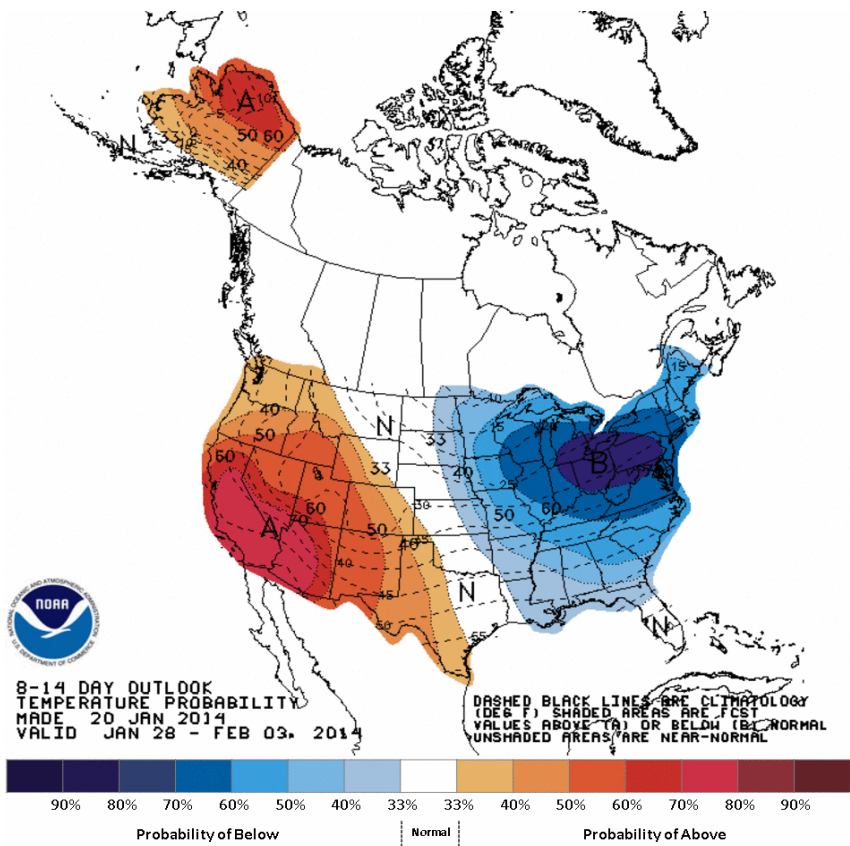


Mean height in Green
Higher than normal heights in red
Lower than normal heights in blue

**PROGNOSTIC 8-14 DAY
500MB HGHTS & DNS
MADE: 20 JAN 2014
VALID: JAN 28 - FEB 03, 2014**

**HGHTS AND DNS (DASHED)
AT 60M INTERVALS**

Days 8-14 Temperature and Precipitation Outlooks



CFS February Forecasts

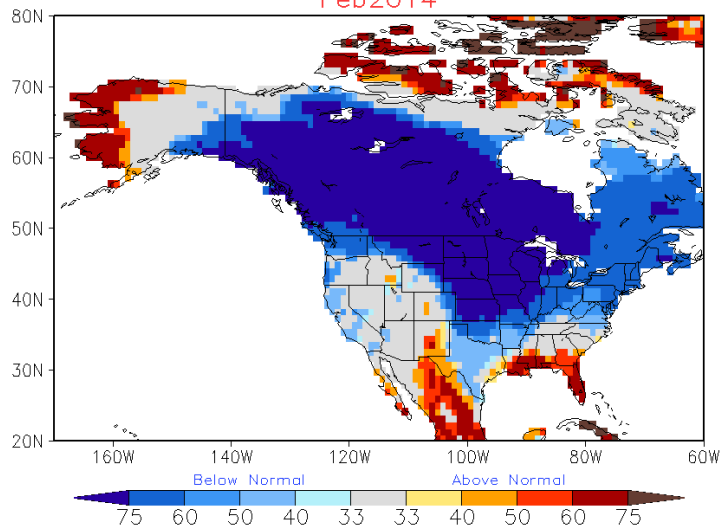


NWS/NCEP/CPC

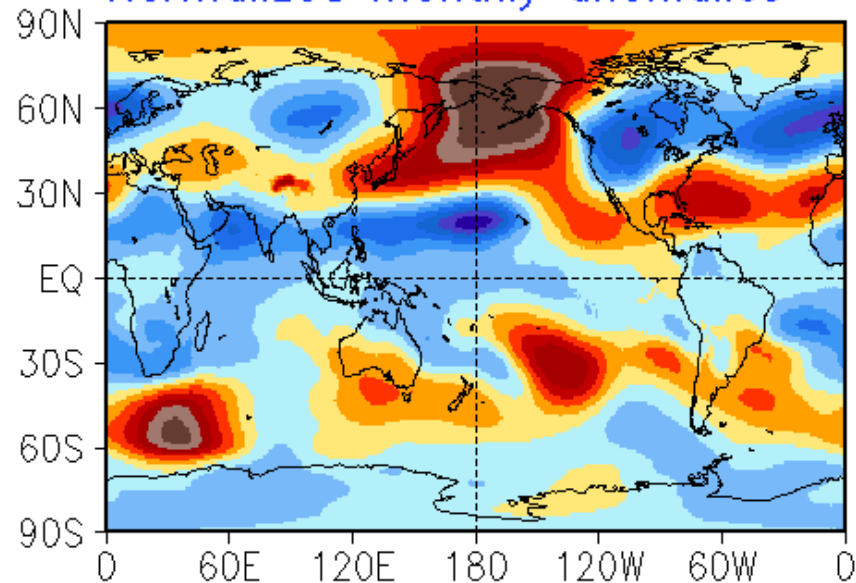
Last update: Tue Jan 21 2014

Initial conditions: 06Z20Jan2014-00Z21Jan2014(16 members)

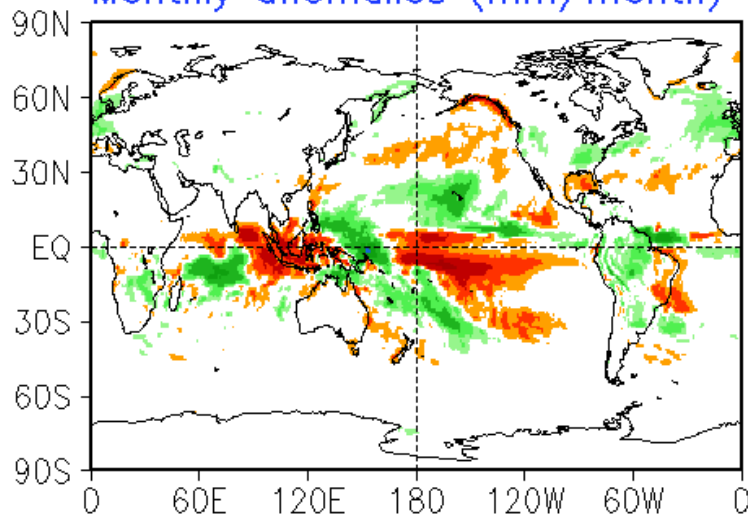
CFSv2 monthly T2m probability forecast
Feb2014



Normalized monthly anomalies



Monthly anomalies (mm/month)

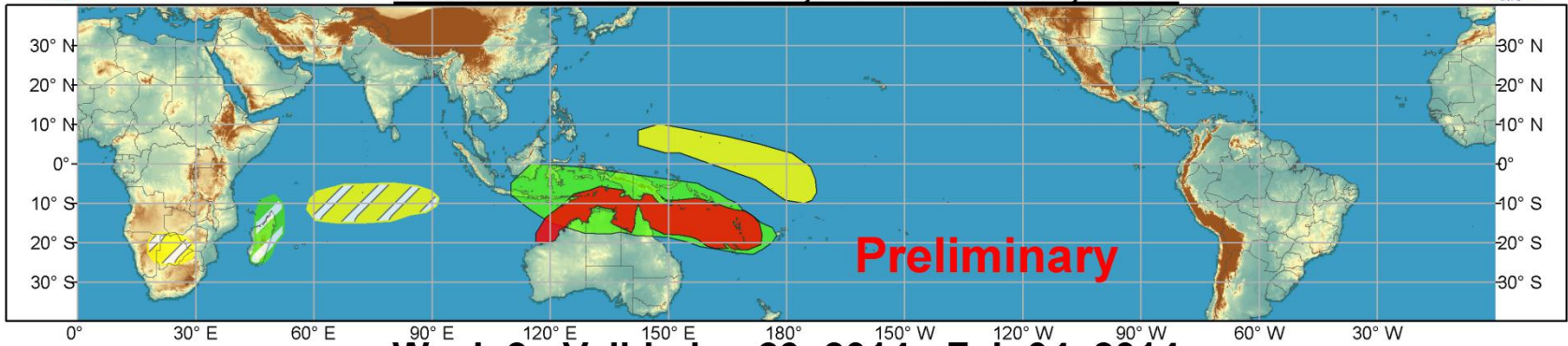




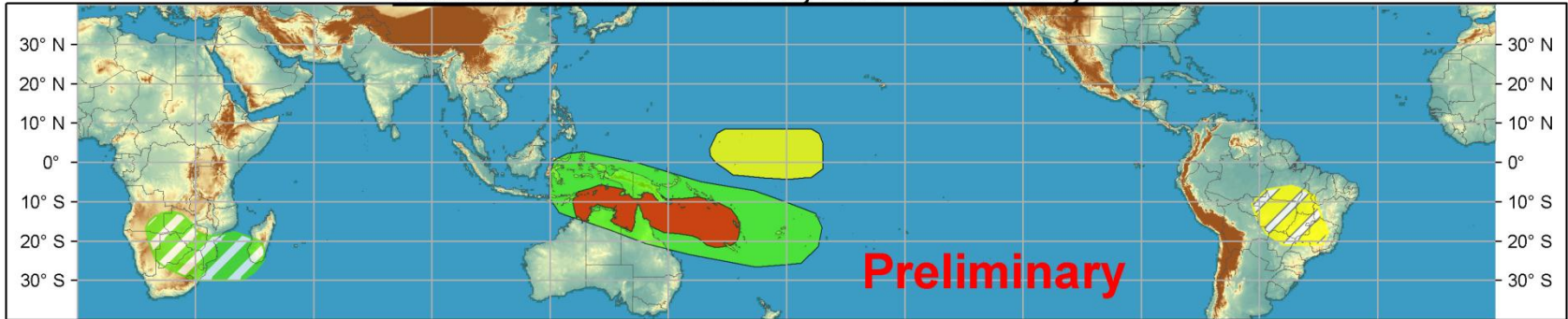
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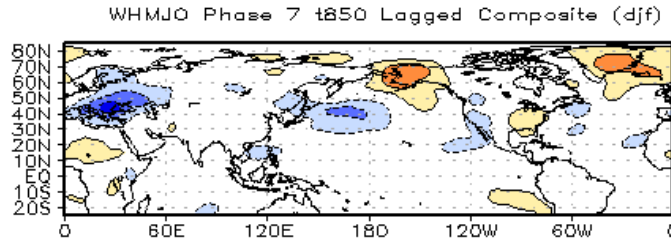
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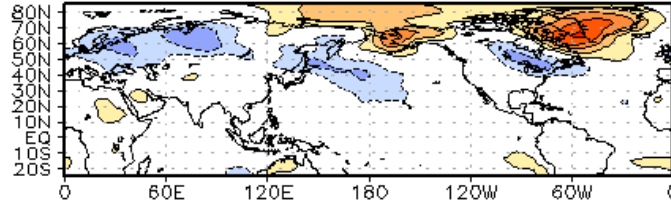
Lagged 850-hPa Temperature Composite

Phase 7

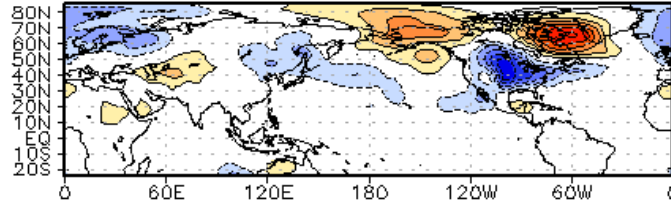
T = 0



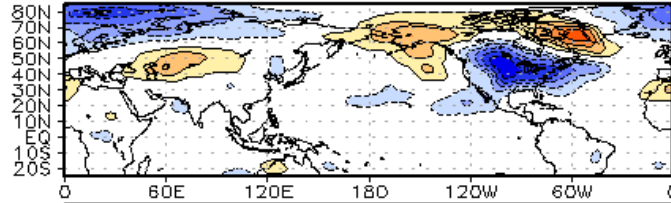
T + 5



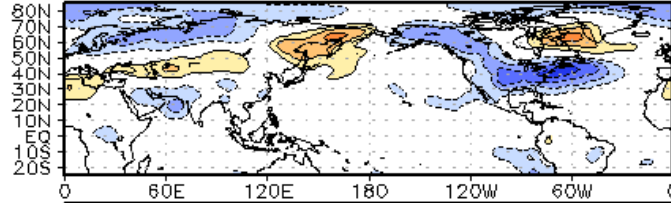
T + 10



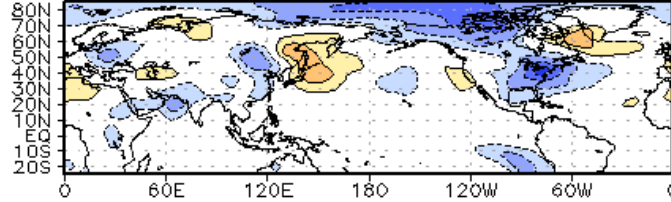
T + 15



T + 20



T + 25



Average Conditions when the MJO is present (Nov-Mar)

