

Global Tropics Hazards And Benefits Outlook

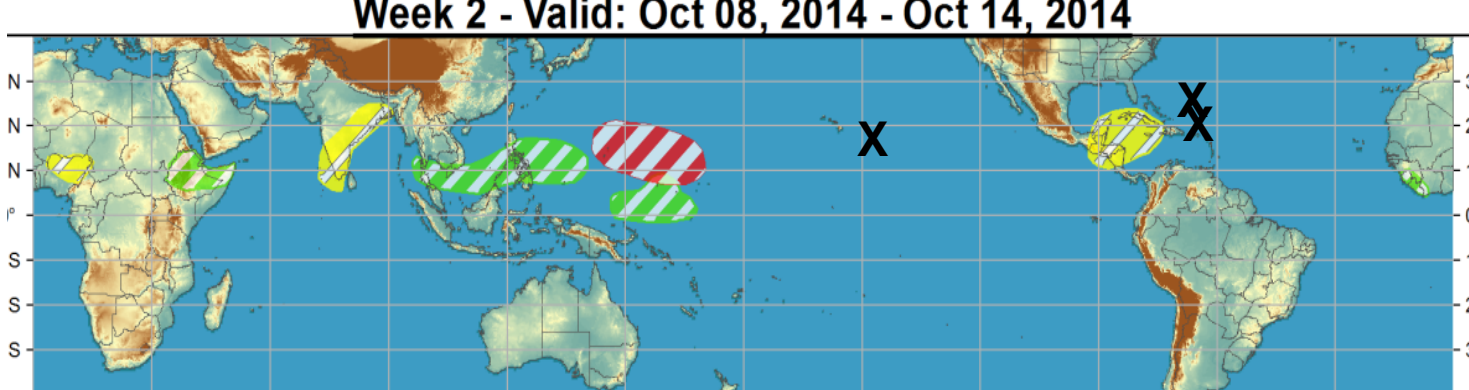
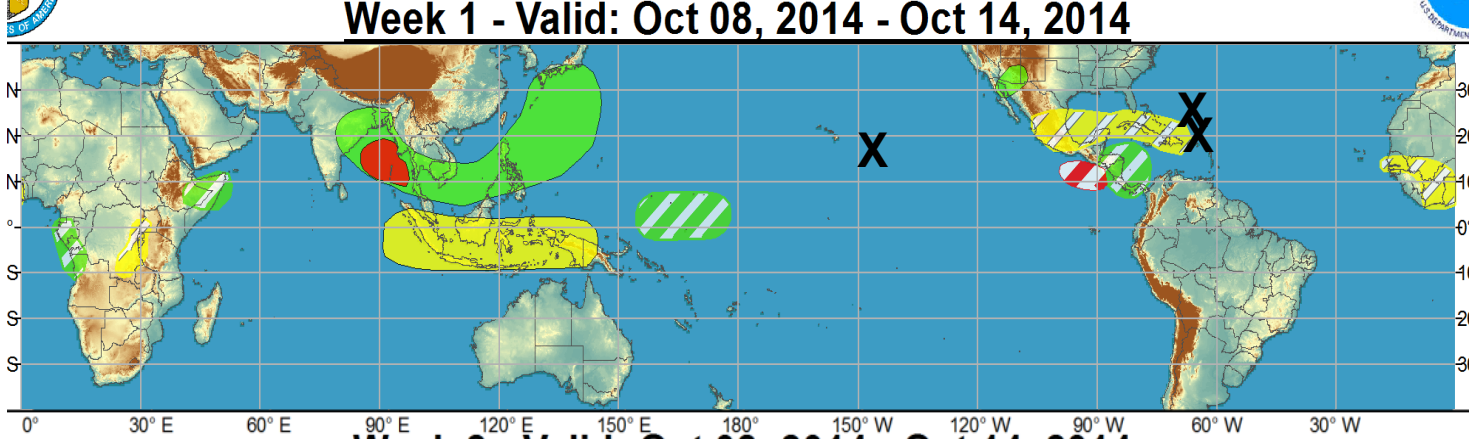
October 14, 2013

Matthew Rosencrans

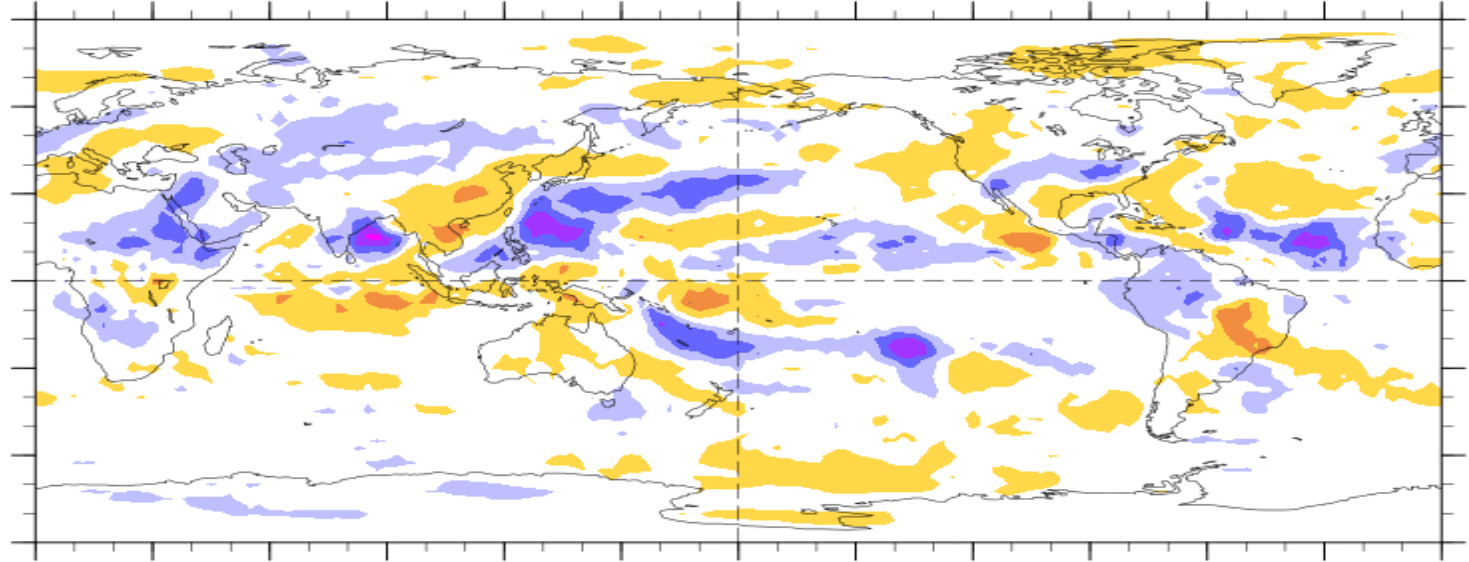
Outline

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

Outlook Review



7-Day Average OLR Anomaly 2014/10/06 - 2014/10/12



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO:

- Current: ENSO-neutral
- Outlook: The chance of El Niño is at 60-65% during the Northern Hemisphere fall and winter.

MJO and other subseasonal tropical variability:

- The MJO remained weak with atmospheric circulation not coherent with a robust MJO. Equatorial Rossby waves, Kelvin Waves, and tropical cyclones are having a larger impact on the overall pattern.
- Most dynamical model MJO index forecasts depict an amplification and eastward propagation during Week-1, with deamplification and westward movement during Week-2. Not consistent with MJO activity.

Extratropics:

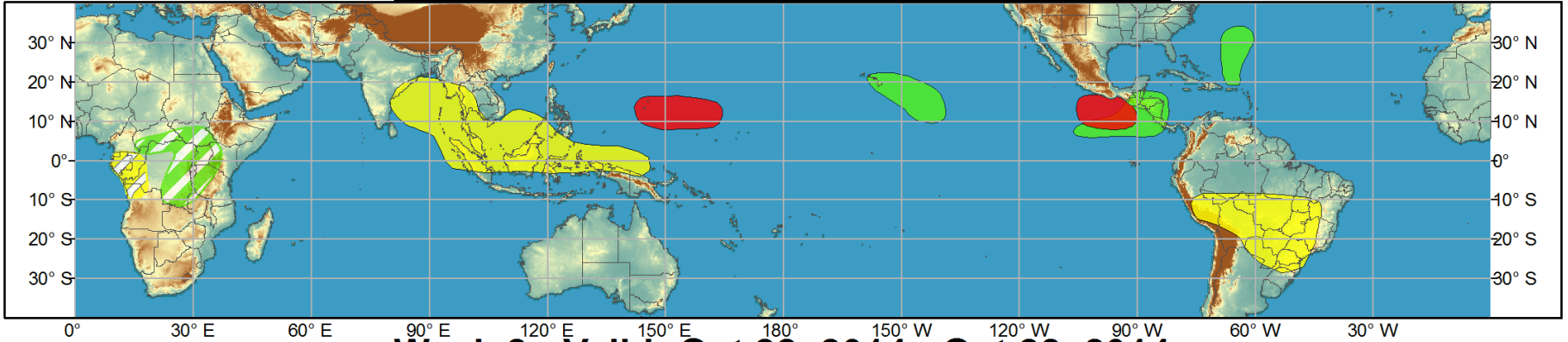
- The extended range forecast for the U.S. is not likely to be largely impacted directly by the MJO. Recurving tropical cyclones may result in amplification over the North Pacific and potential moisture influxes to the southwest US. Tropical Storm Ana is likely to impact to the Hawaiian Islands.



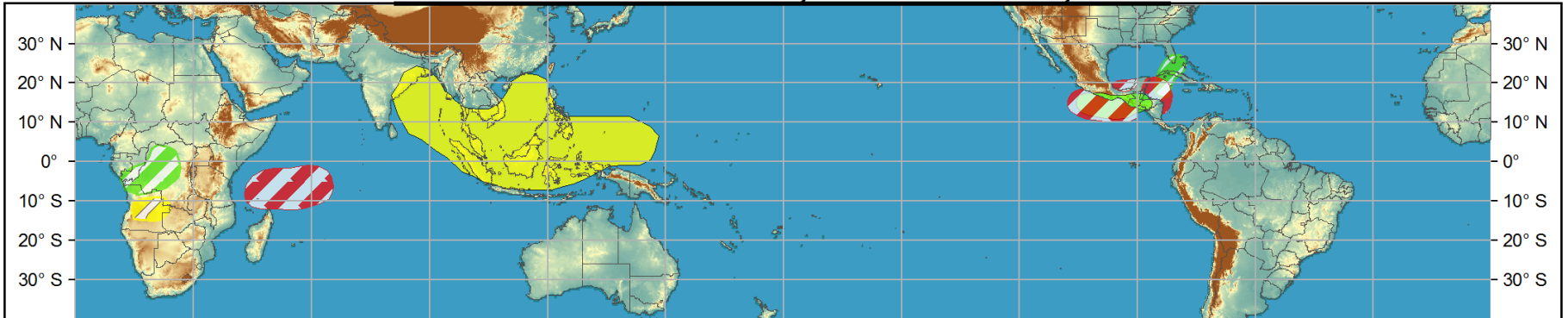
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



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

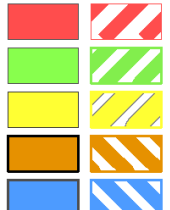


Week 2 - Valid: Oct 22, 2014 - Oct 28, 2014



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: 10/14/2014

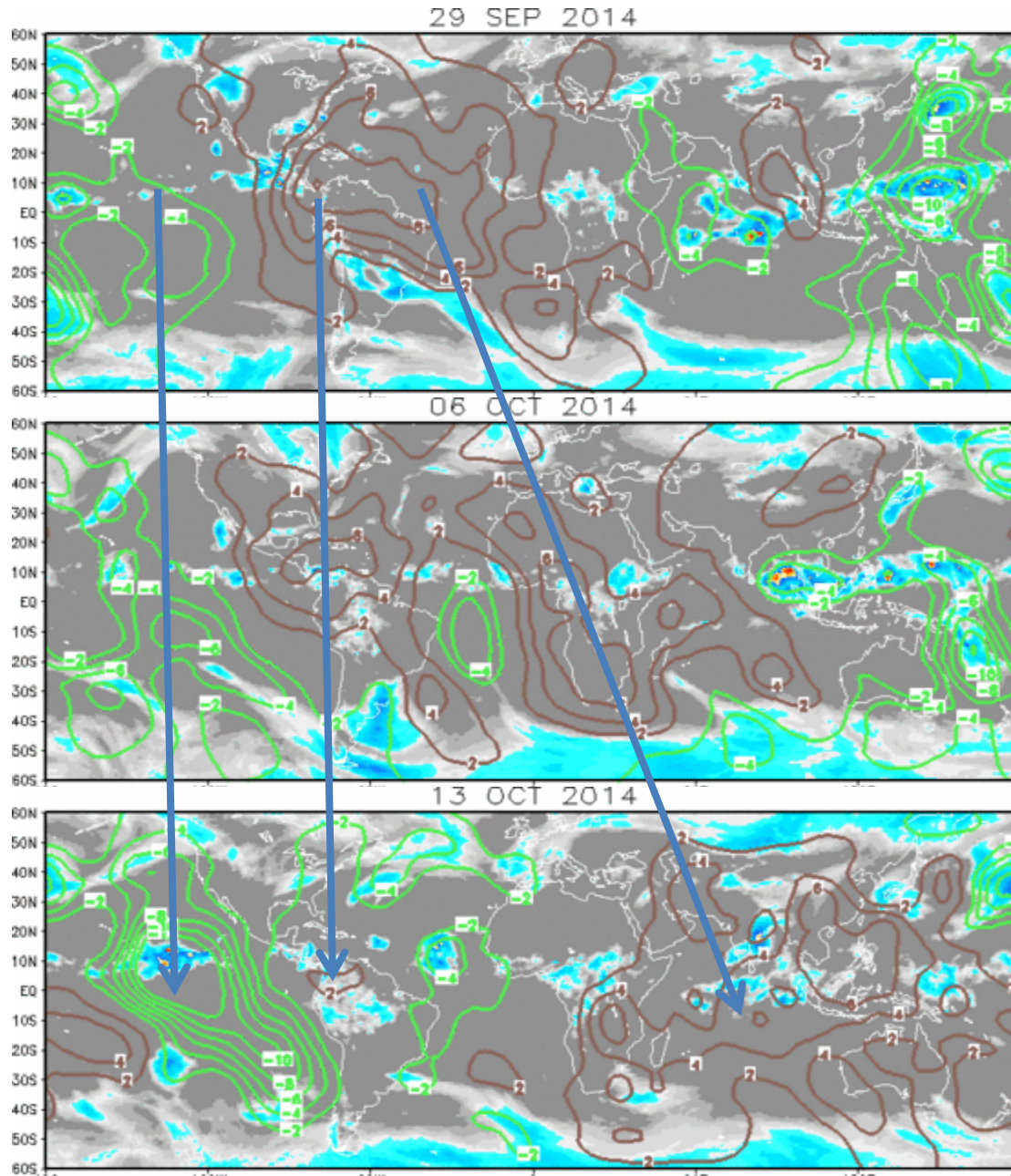
Forecaster: Rosencrans

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

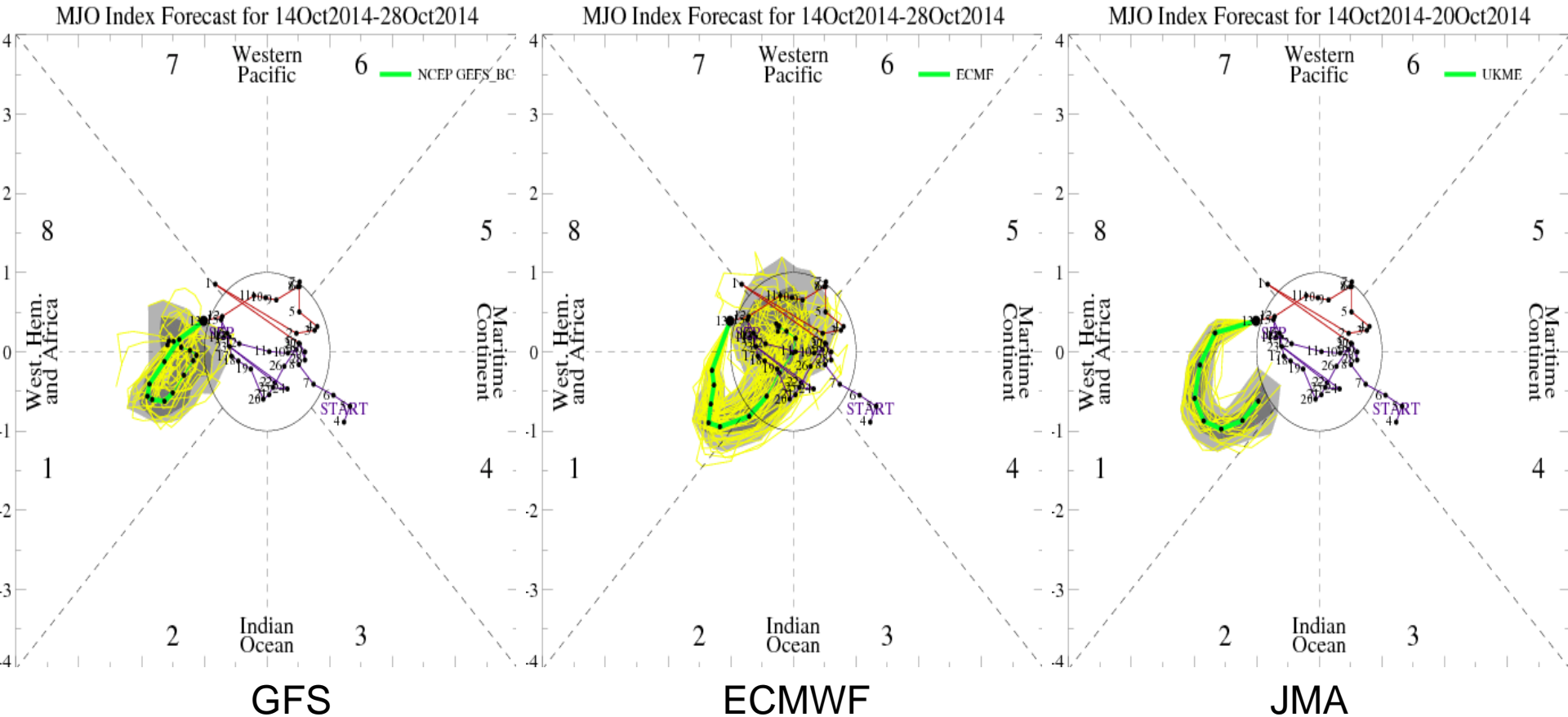
Green: Enhanced Divergence Brown: Enhanced Convergence



Base state
and transient
features.

Not coherent
with MJO
activity.

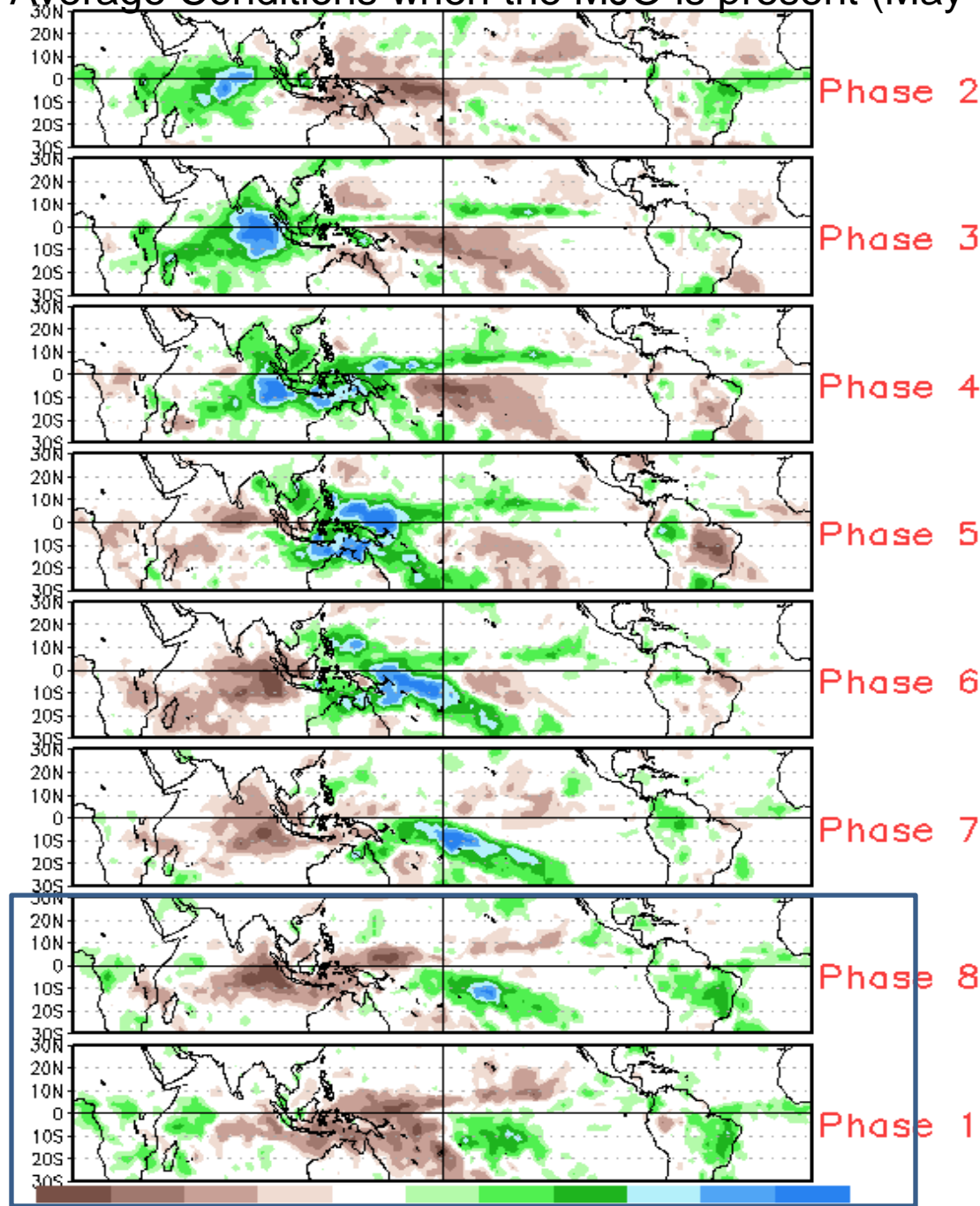
MJO Observation/Forecast



Wheeler-Hendon based analyses of model forecasts indicate a strengthening projection of other modes onto the MJO.

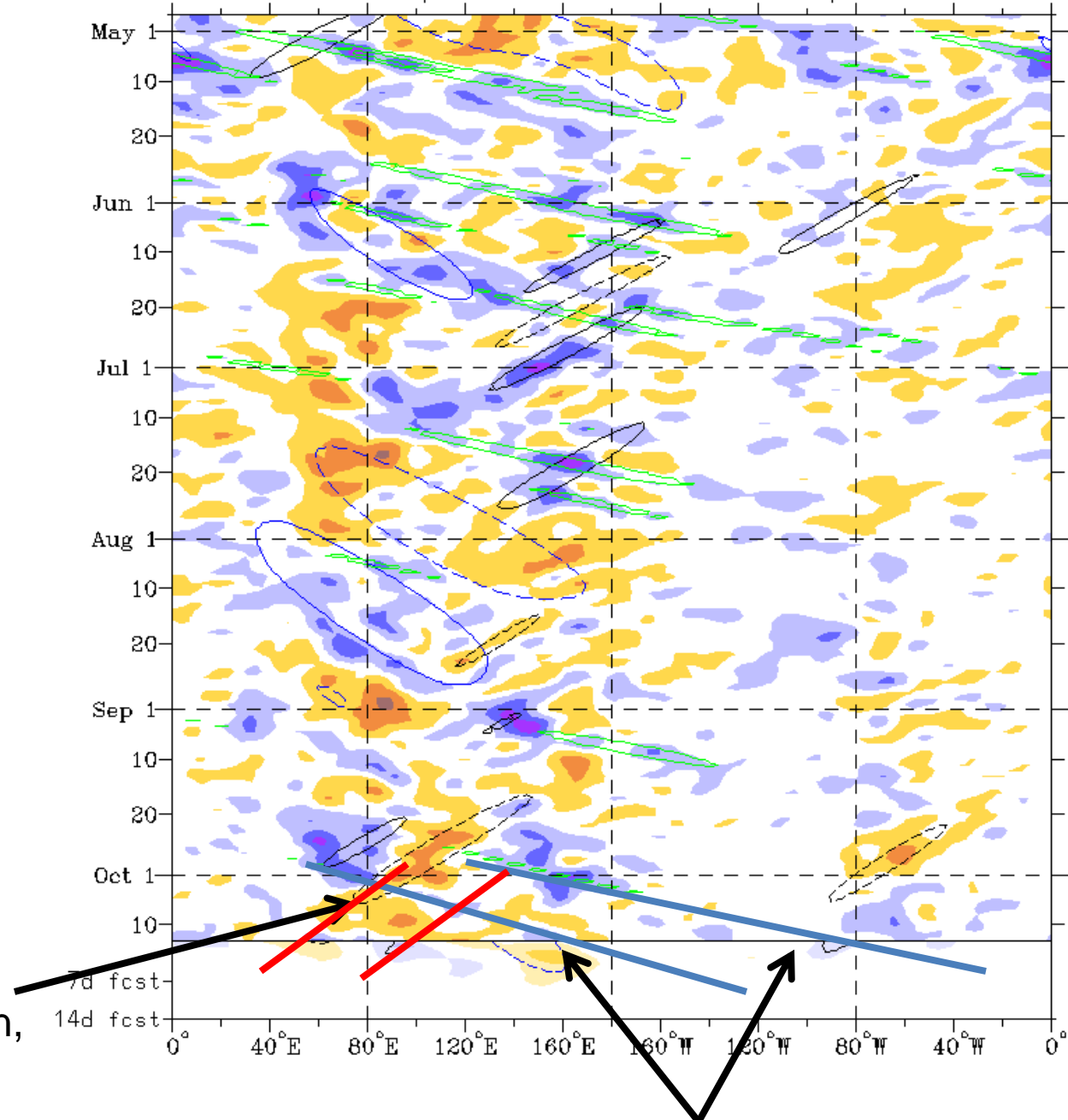
Models indicate convection aligns with MJO phase 8-1.

Average Conditions when the MJO is present (May-Sep)



CAVEAT: These panels are representative of robust MJO events.



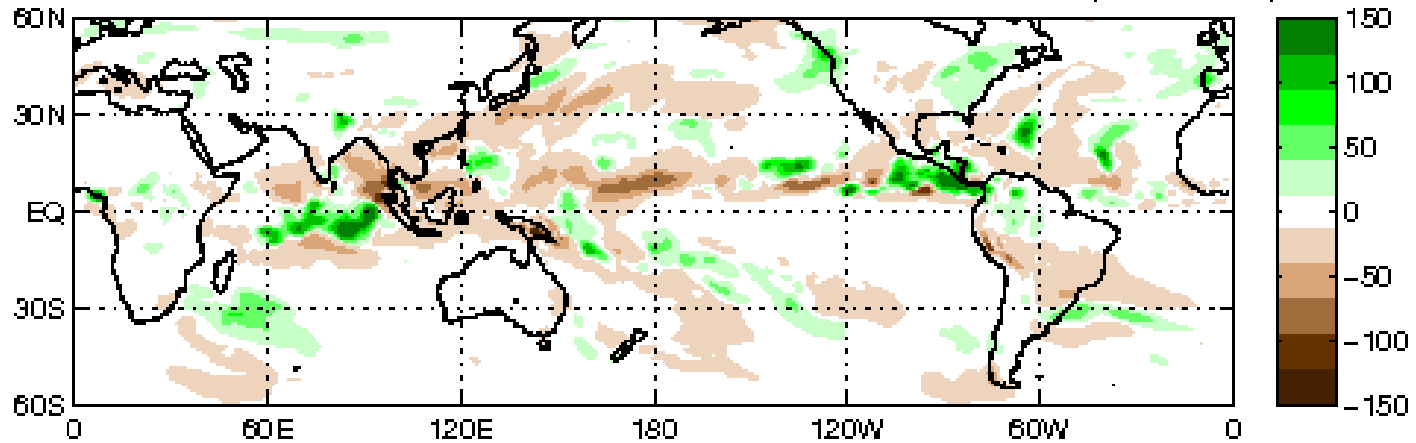


Evolving ENSO contributing.

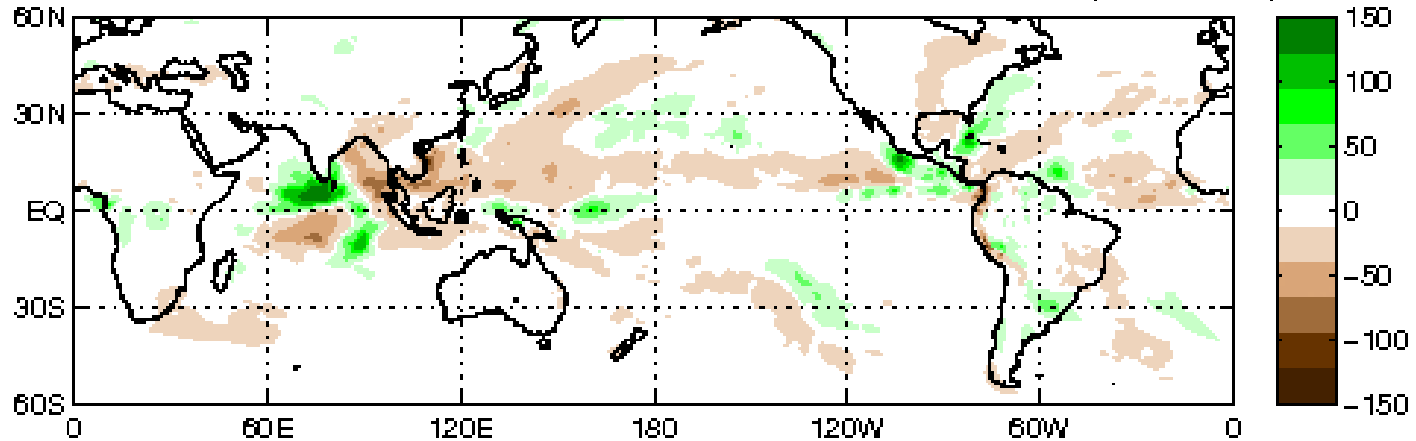
Equatorial Rossby Waves to impact Africa, the Indian Ocean, and the East Pacific.

Kelvin Wave to impact ePAC and ATL.

CFS: Anom. PREC Week: 1: 14-Oct-2014 to 20-Oct-2014 (mm/week)

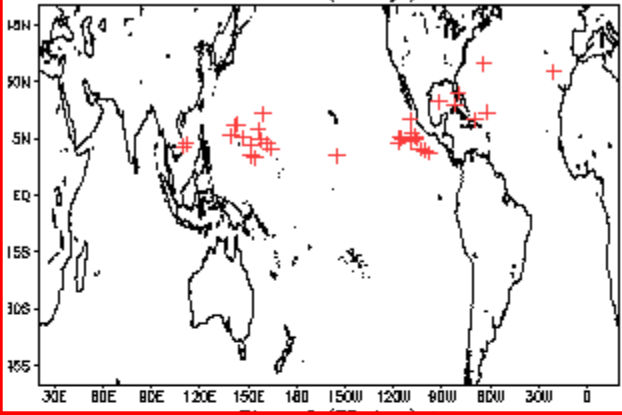


CFS: Anom. PREC Week: 2: 21-Oct-2014 to 27-Oct-2014 (mm/week)

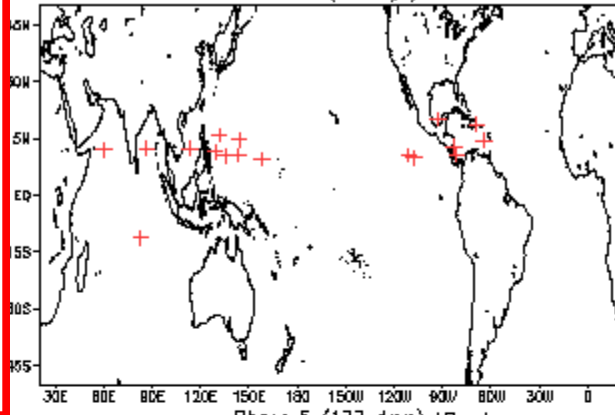


October Tropical Storm Formation by MJO phase

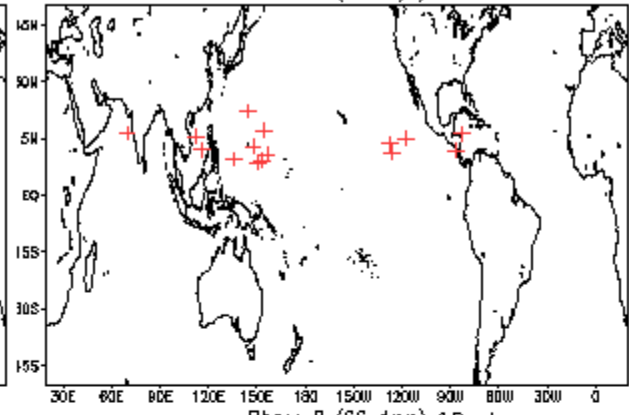
Phase 1 (84 days) 34 storms



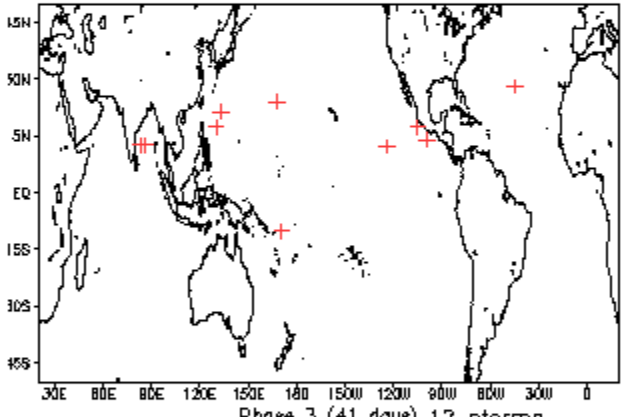
Phase 4 (85 days) 18 storms



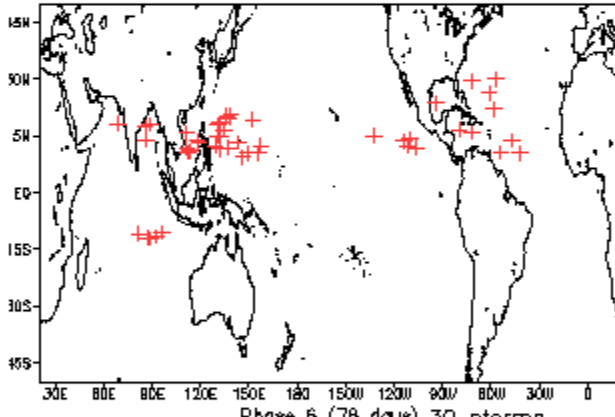
Phase 7 (48 days) 16 storms



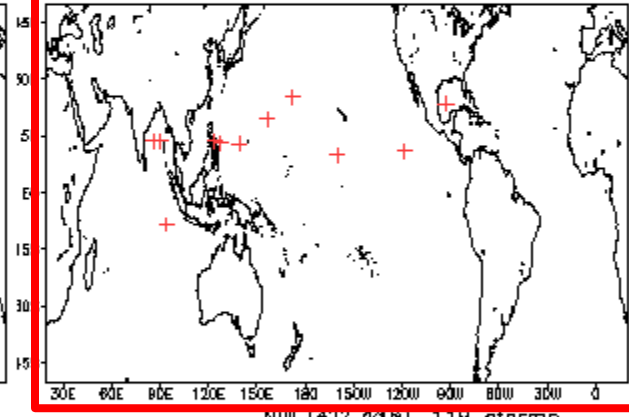
Phase 2 (78 days) 11 storms



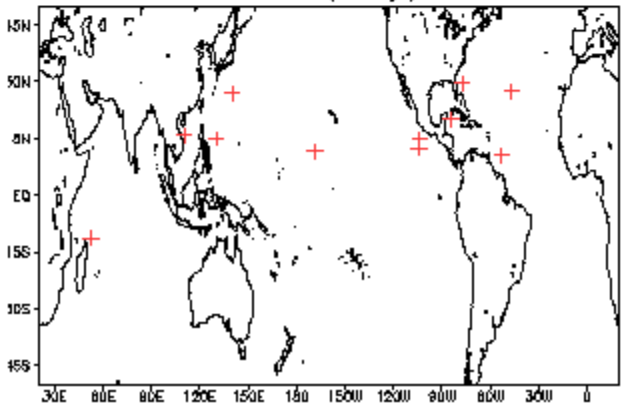
Phase 5 (133 days) 48 storms



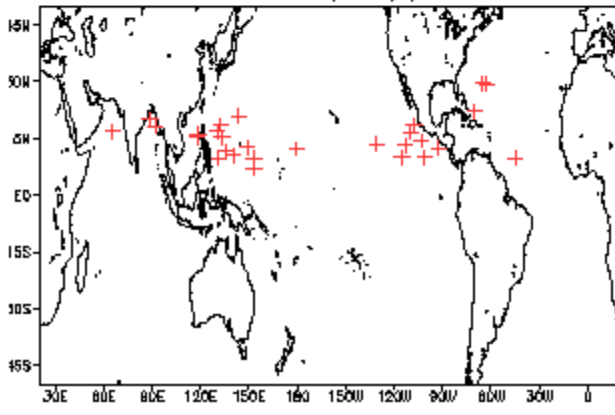
Phase 8 (88 days) 12 storms



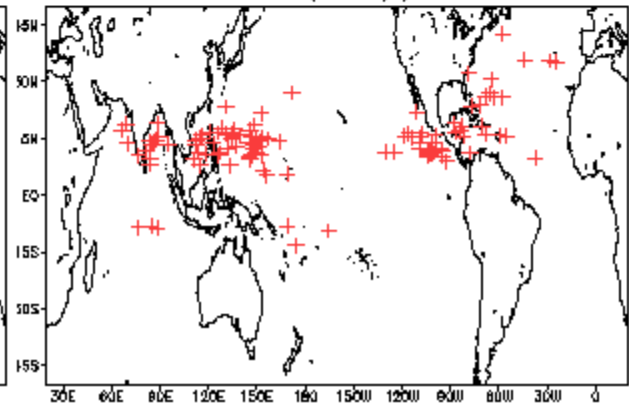
Phase 3 (41 days) 12 storms



Phase 6 (78 days) 30 storms



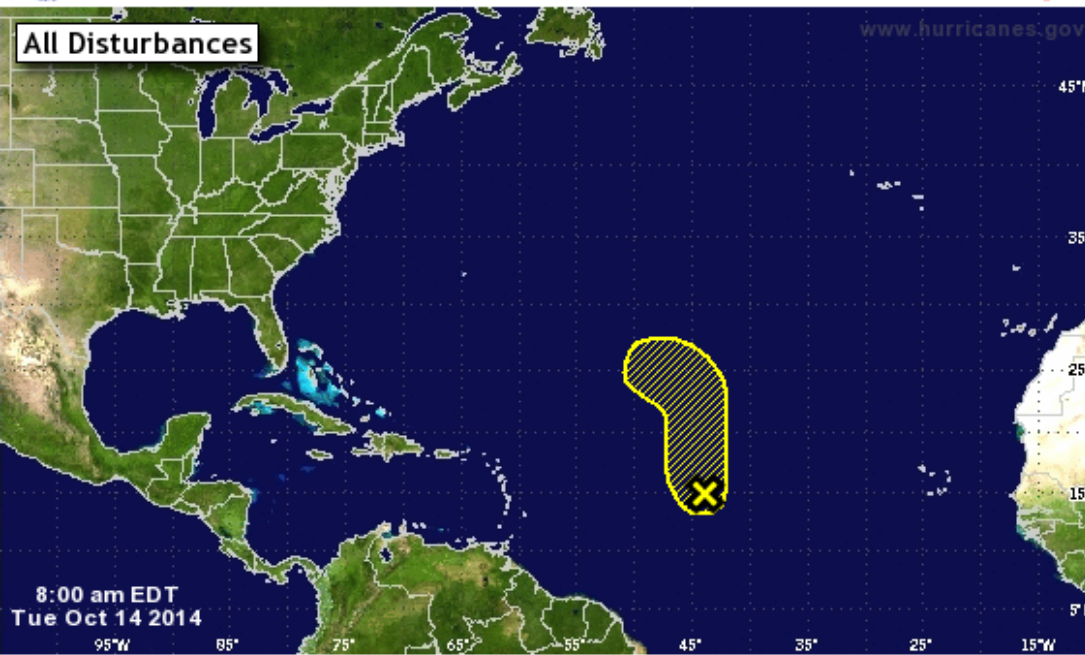
Null (+22 days) 119 storms





Experimental 5-Day Graphical Tropical Weather Outlook

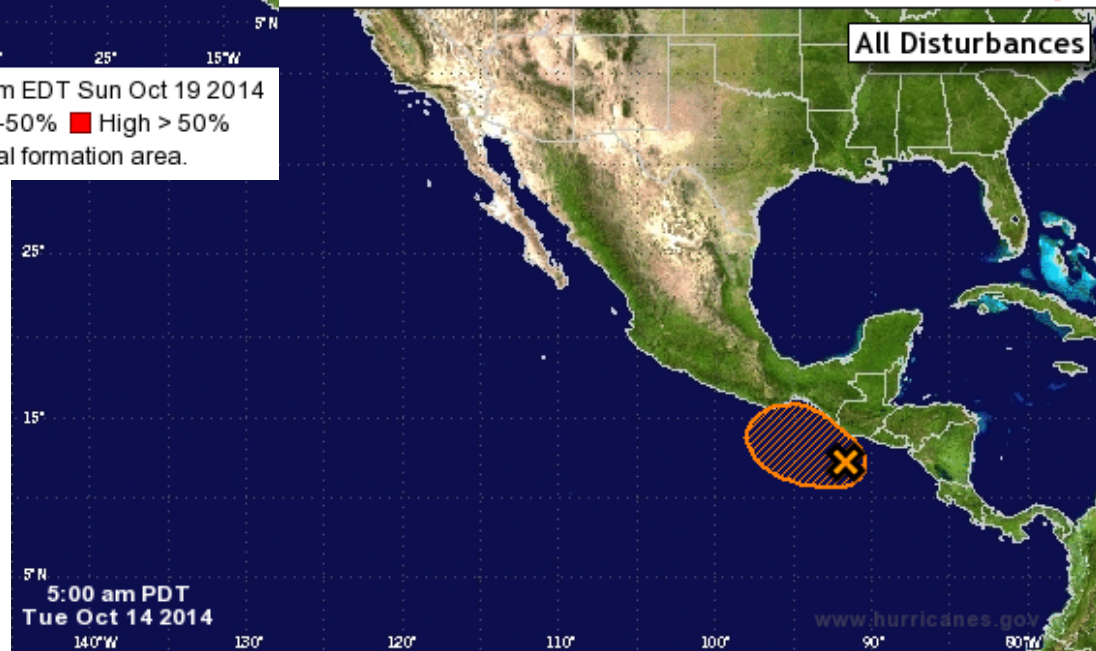
National Hurricane Center Miami, Florida



Tropical Cyclone Formation Potential for the 5-Day Period Ending 8:00 am EDT Sun Oct 19 2014
 Chance of Cyclone Formation in 5 Days: ■ Low < 30% ■ Medium 30-50% ■ High > 50%
 X indicates current disturbance location; shading indicates potential formation area.

Experimental 5-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida

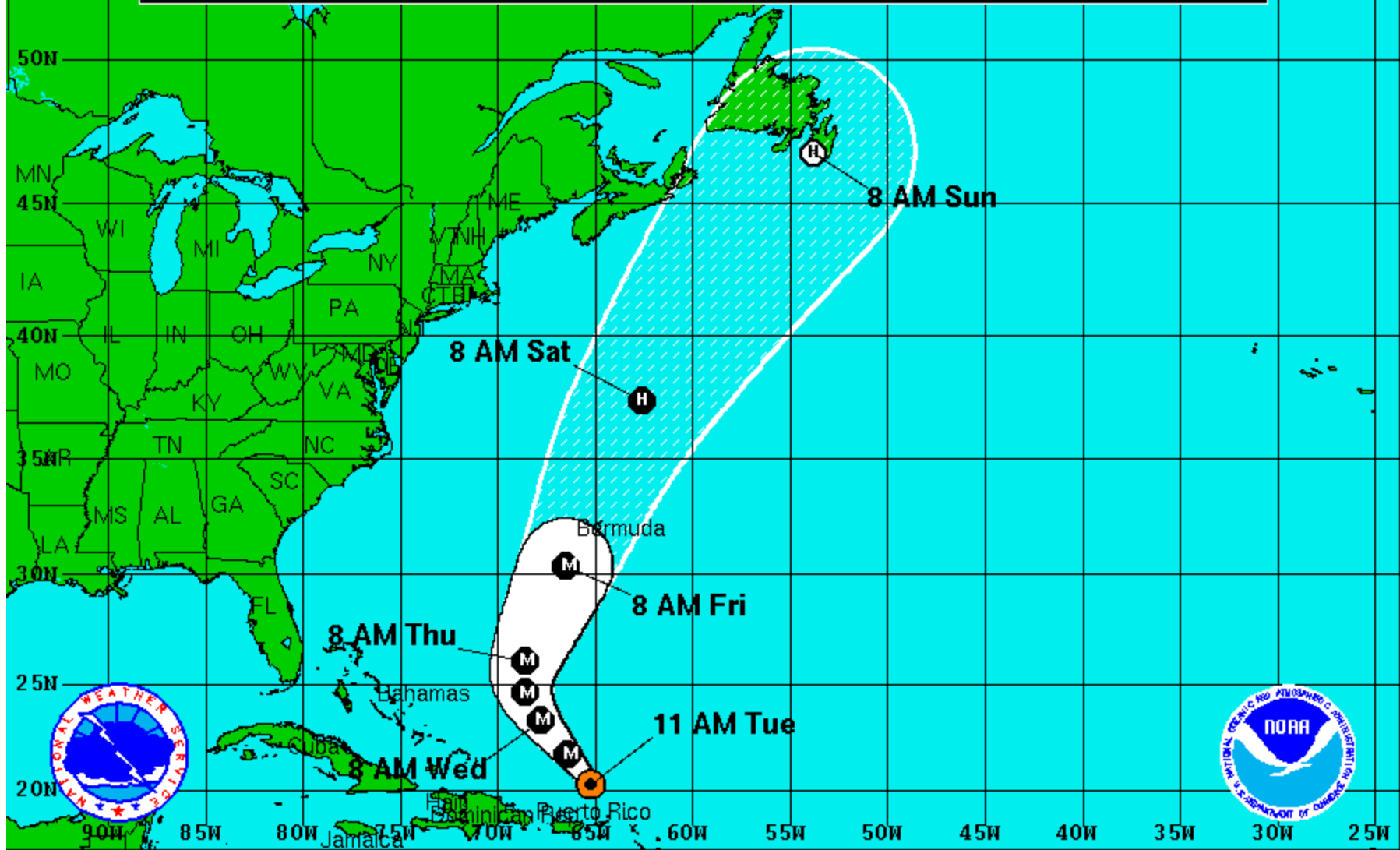


Tropical Cyclone Formation Potential for the 5-Day Period Ending 5:00 am PDT Sun Oct 19 2014
 Chance of Cyclone Formation in 5 Days: ■ Low < 30% ■ Medium 30-50% ■ High > 50%
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All Disturbances

All Disturbances

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Hurricane Gonzalo

Tuesday October 14, 2014
 11 AM EDT Advisory 9
 NWS National Hurricane Center

Current Information: ●
 Center Location 20.3 N 65.2 W
 Max Sustained Wind 110 mph
 Movement NW at 13 mph

Forecast Positions:
 ● Tropical Cyclone ○ Post-Tropical
 Sustained Winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110mph

Potential Track Area:

▭ Day 1-3 ▭ Day 4-5

Watches:

▭ Hurricane ▭ Trop.Storm

Warnings:

▭ Hurricane ▭ Trop.Storm

25N

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.

Nihoa

20N

15N

10N

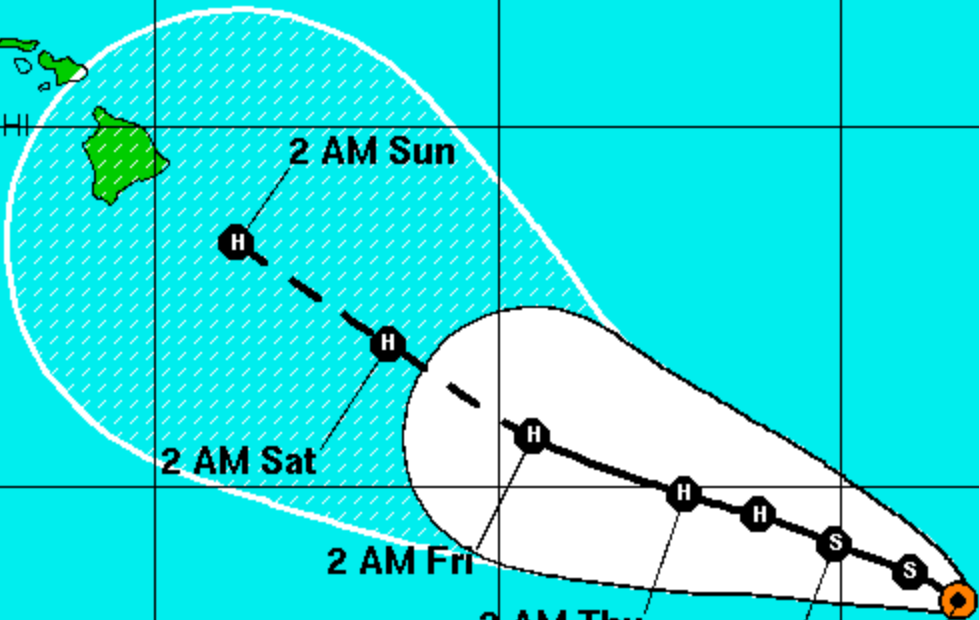
160W

155W

150W

145W

140W



Tropical Storm Ana

Tuesday October 14, 2014

5 AM HST Advisory 4

NWS Central Pacific Hurricane Center

Current Information:

Center Location 13.4 N 143.3 W

Max Sustained Wind 50 mph

Movement NW at 5 mph

Forecast Positions:

Tropical Cyclone Post-Tropical

Sustained Winds: D < 39 mph

S 39-73 mph H 74-110 mph M > 110mph

Potential Track Area:

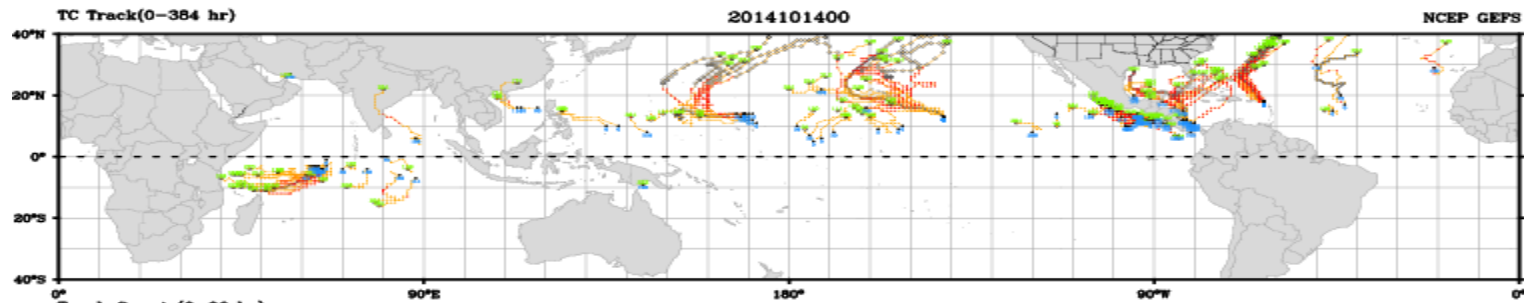
Day 1-3 Day 4-5

Watches:

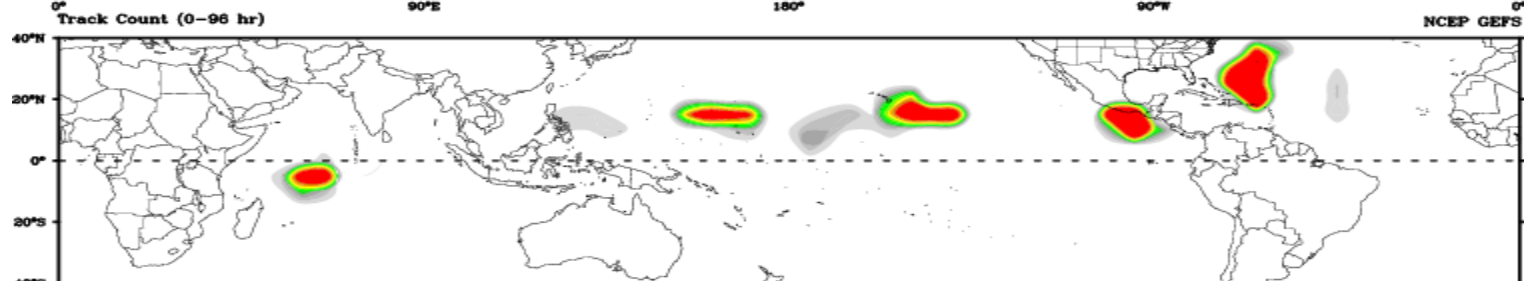
Hurricane Trop.Storm

Warnings:

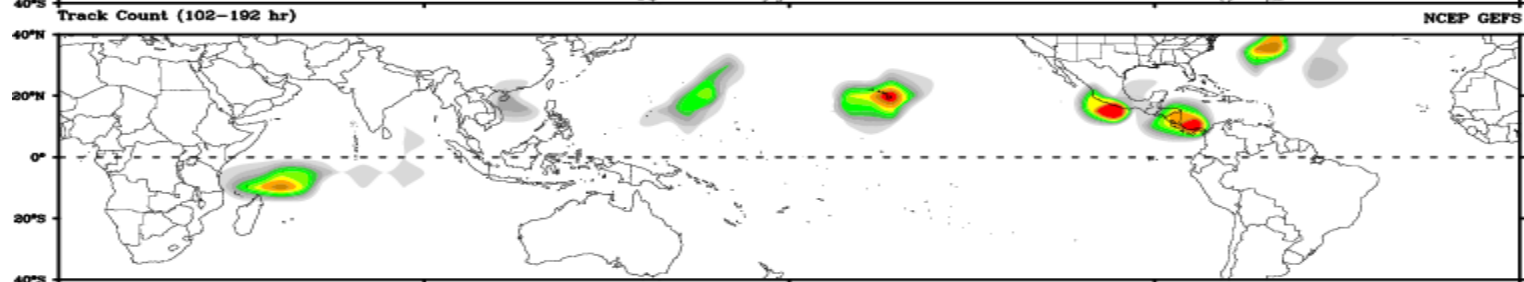
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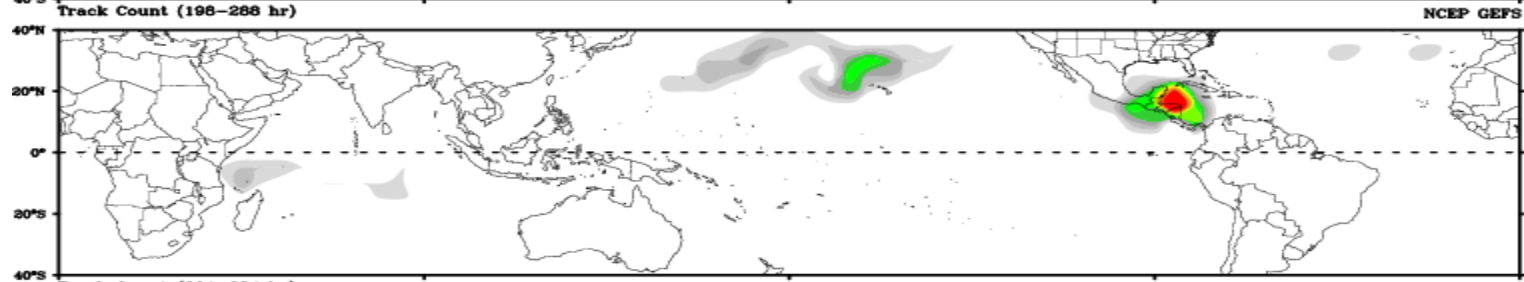
Days 1-4



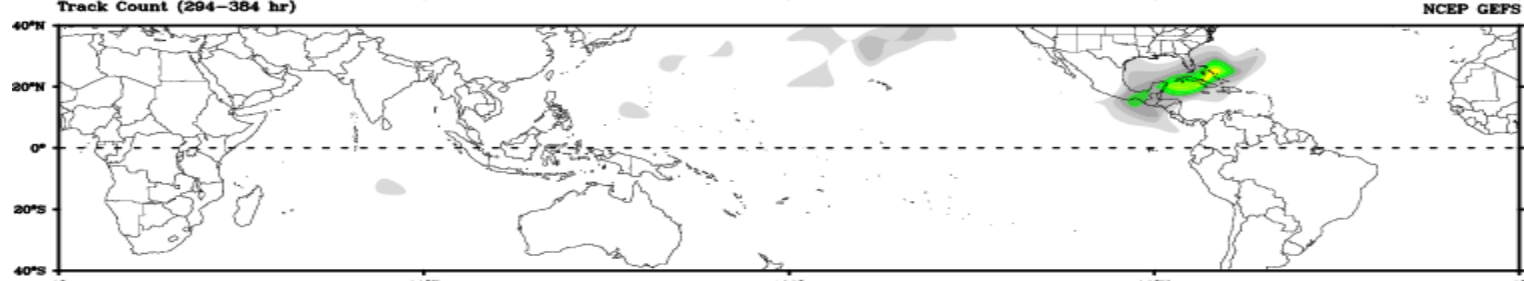
Day 5-8

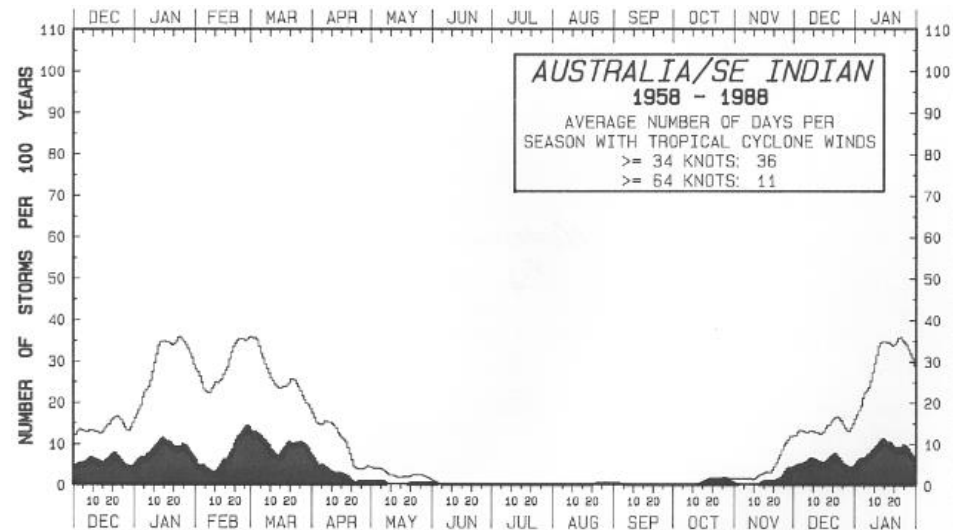
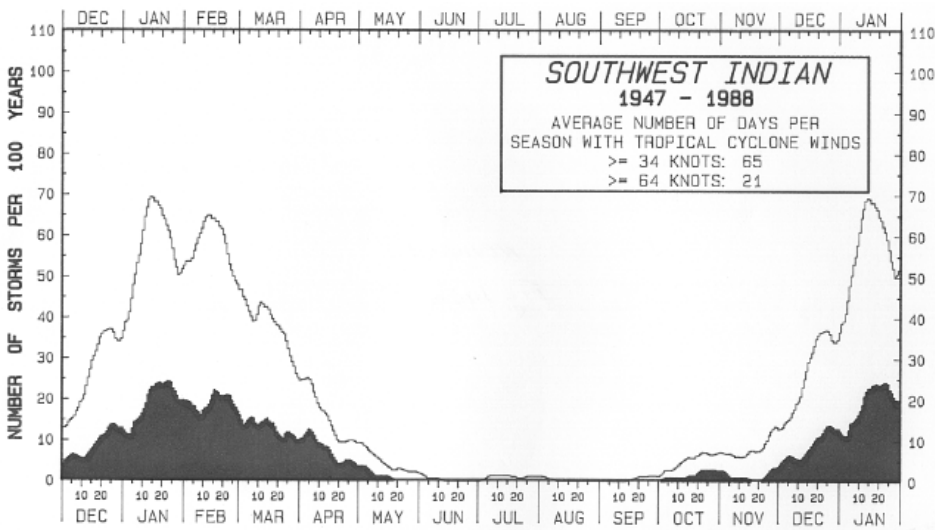
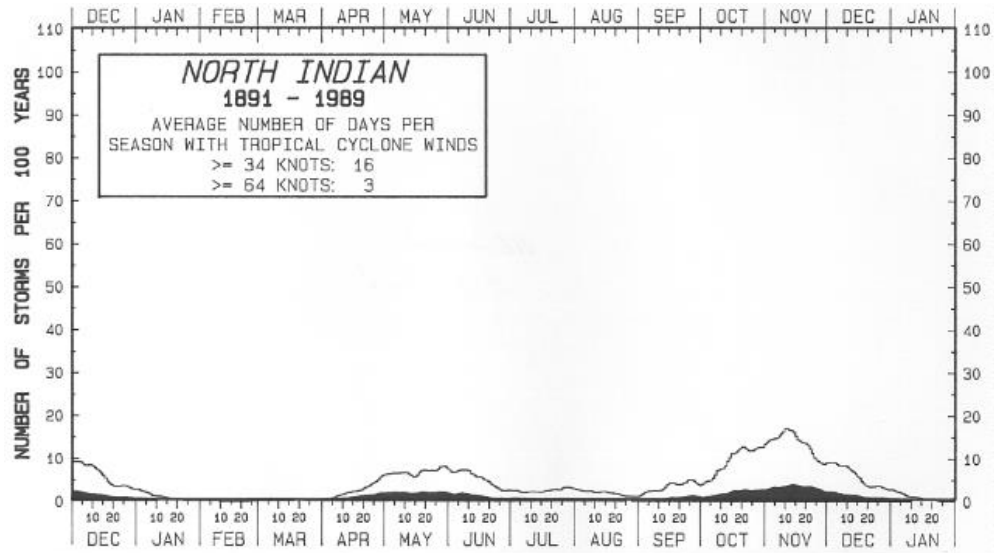


Day 9-12



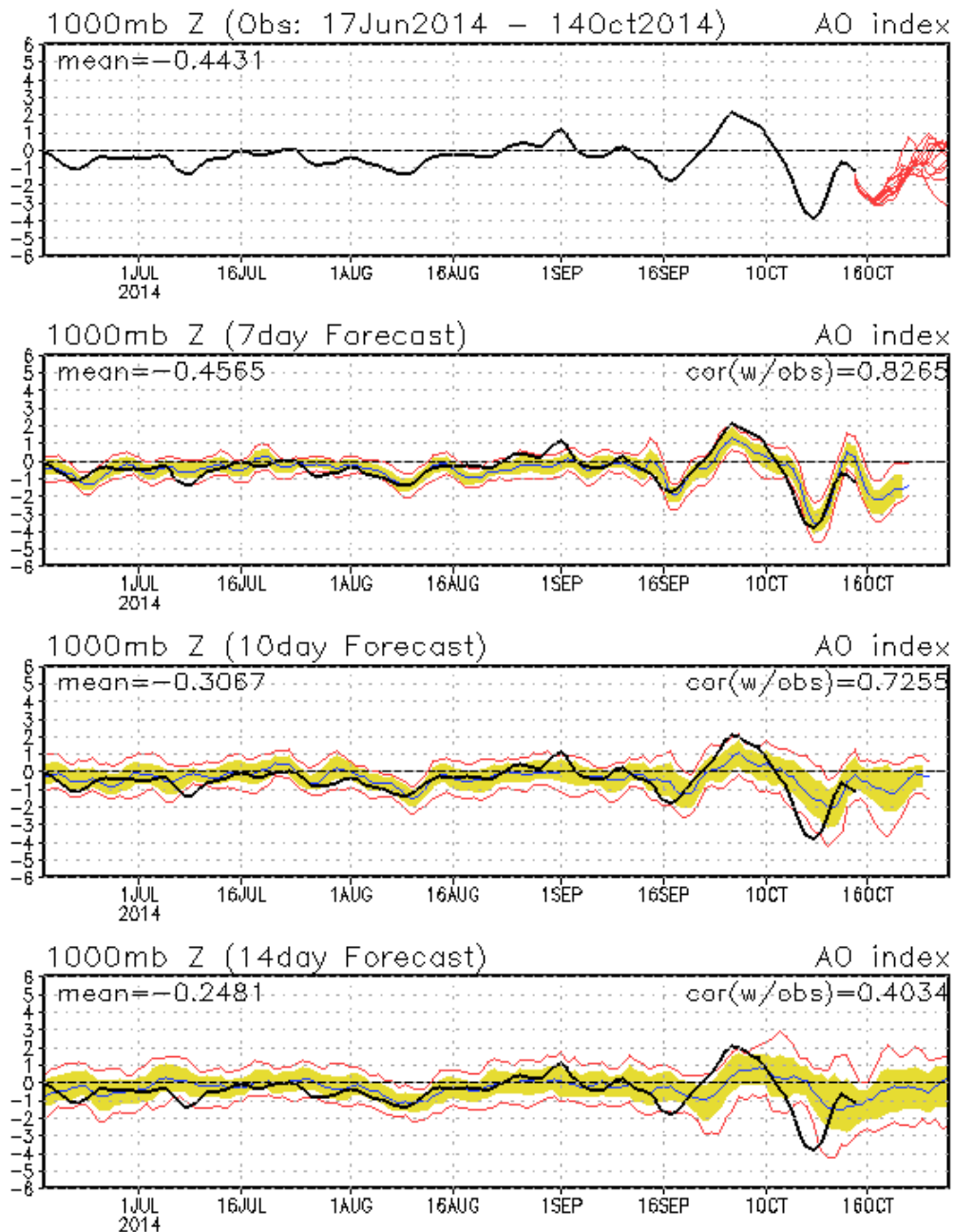
Day 13-15

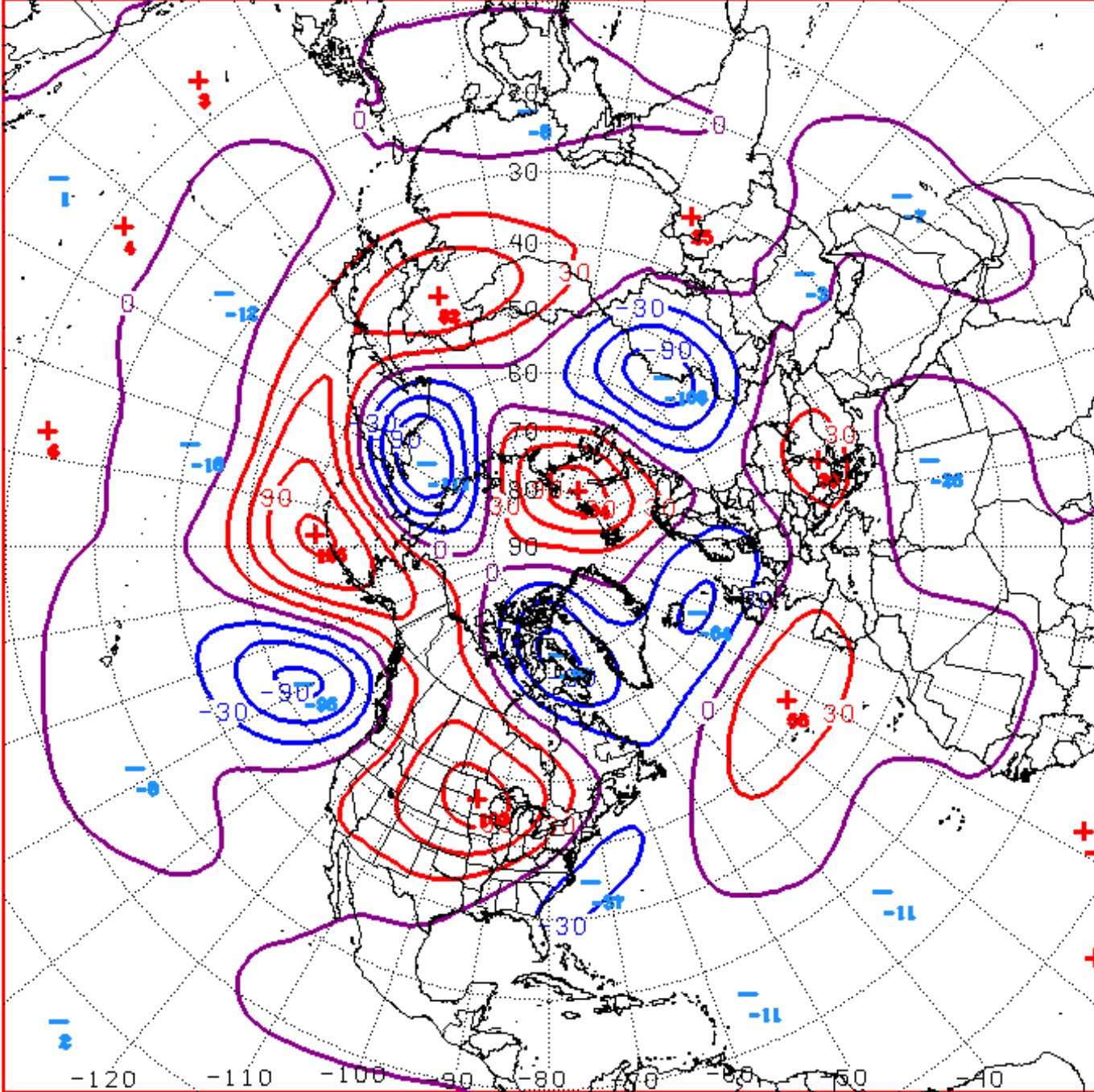




Connections to U.S. Impacts

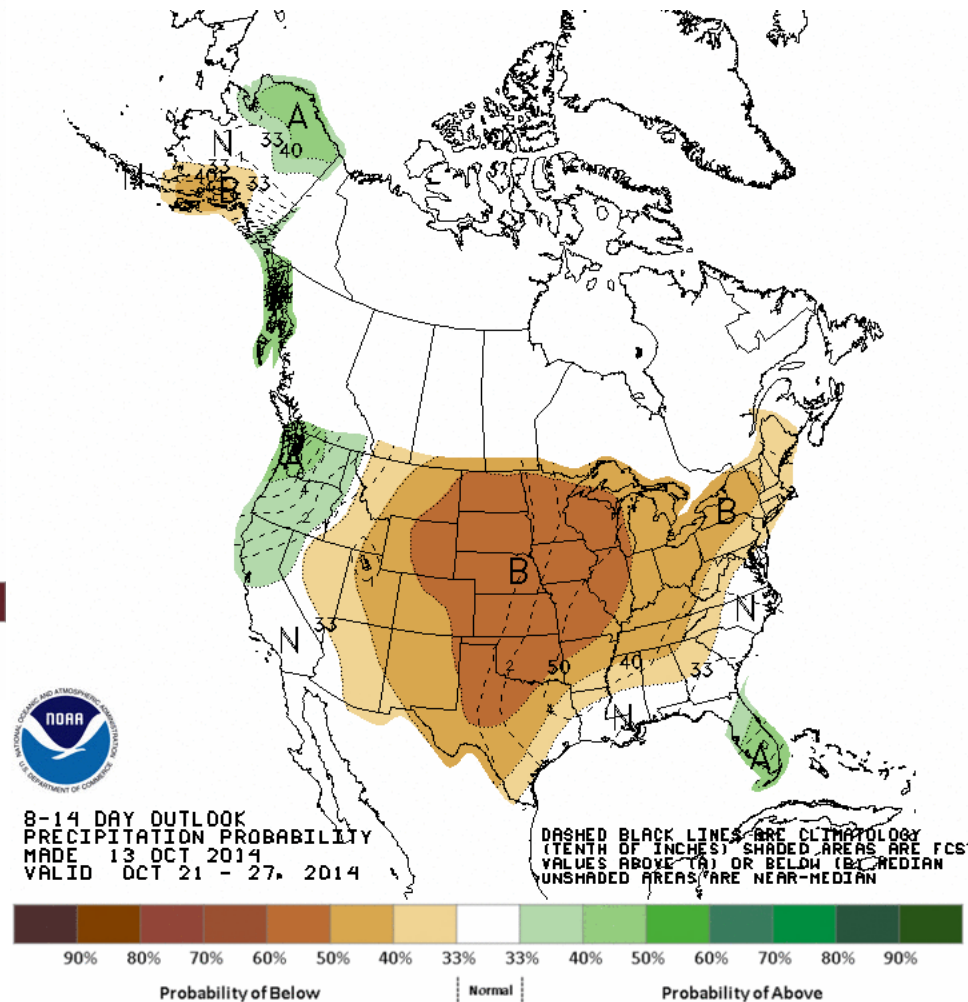
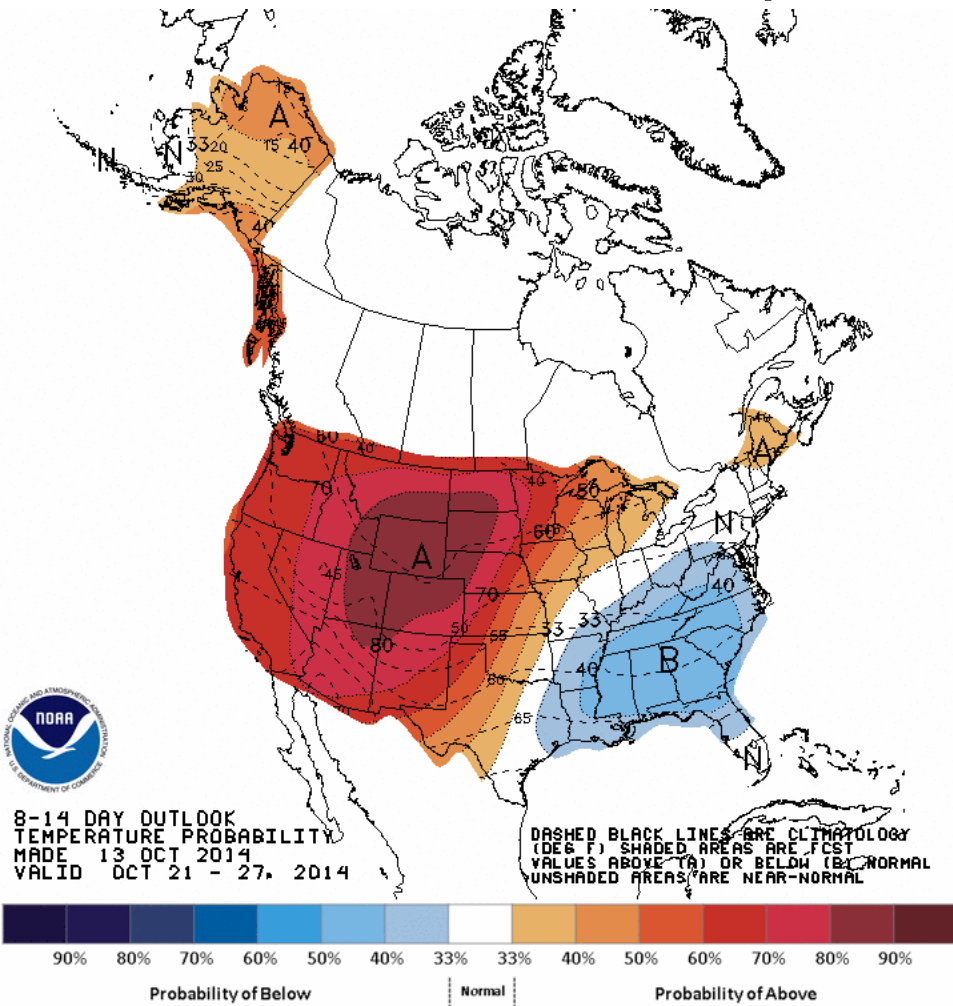
AO: Observed & ENSM forecasts





D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE OCT 14 2014 1102 UTC CNTD OCT 25 2014

Week 2 – Temperature and Precipitation

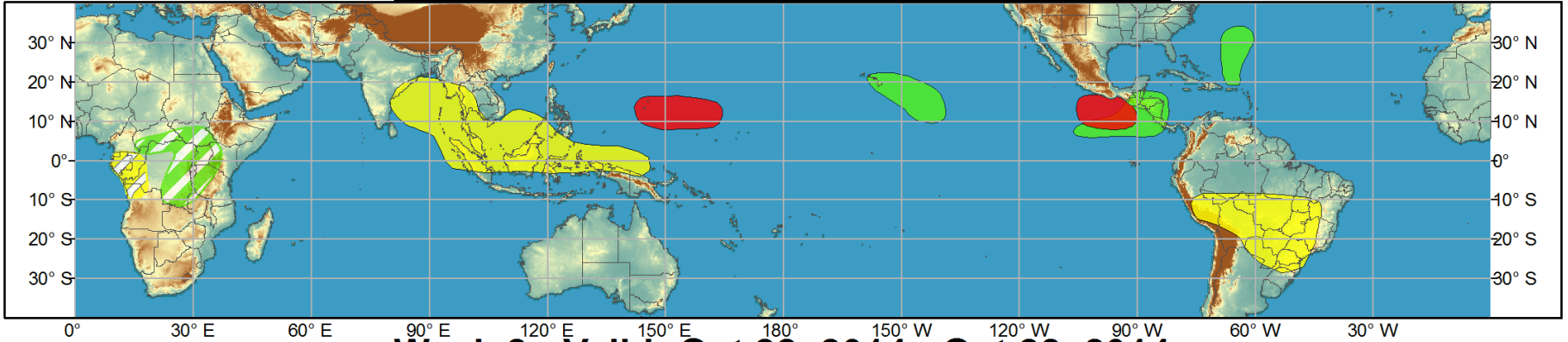




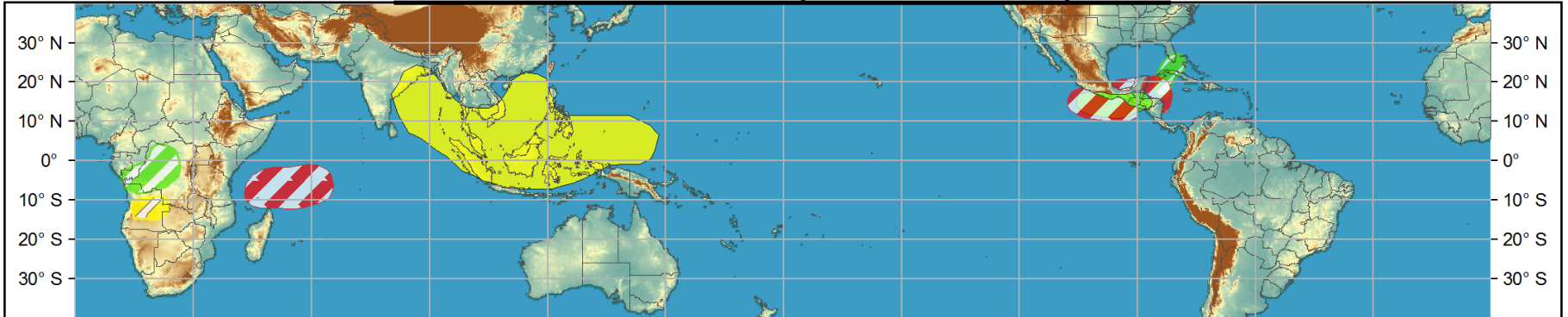
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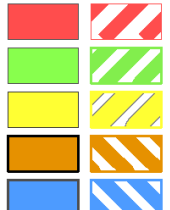


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