

Global Tropics Hazards And Benefits Outlook

4/13/2021

Nick Novella

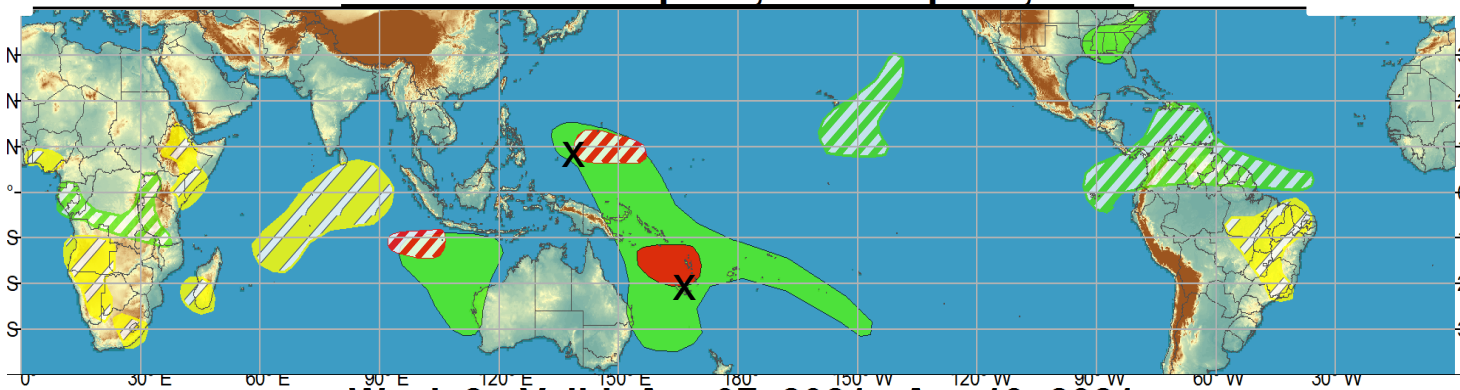
Outline

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

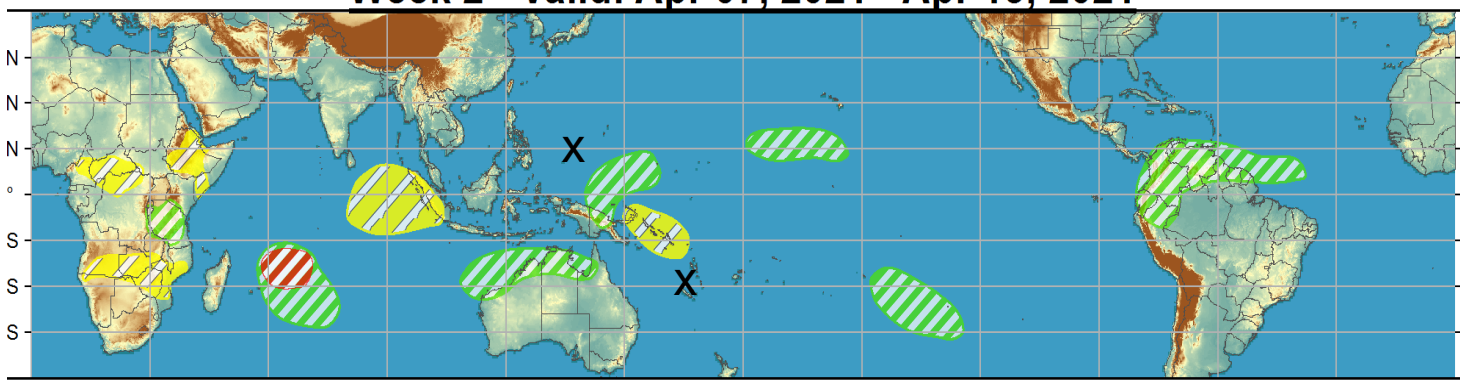
Outlook Review

X = tropical cyclone development

Week 1 - Valid: Apr 07, 2021 - Apr 13, 2021

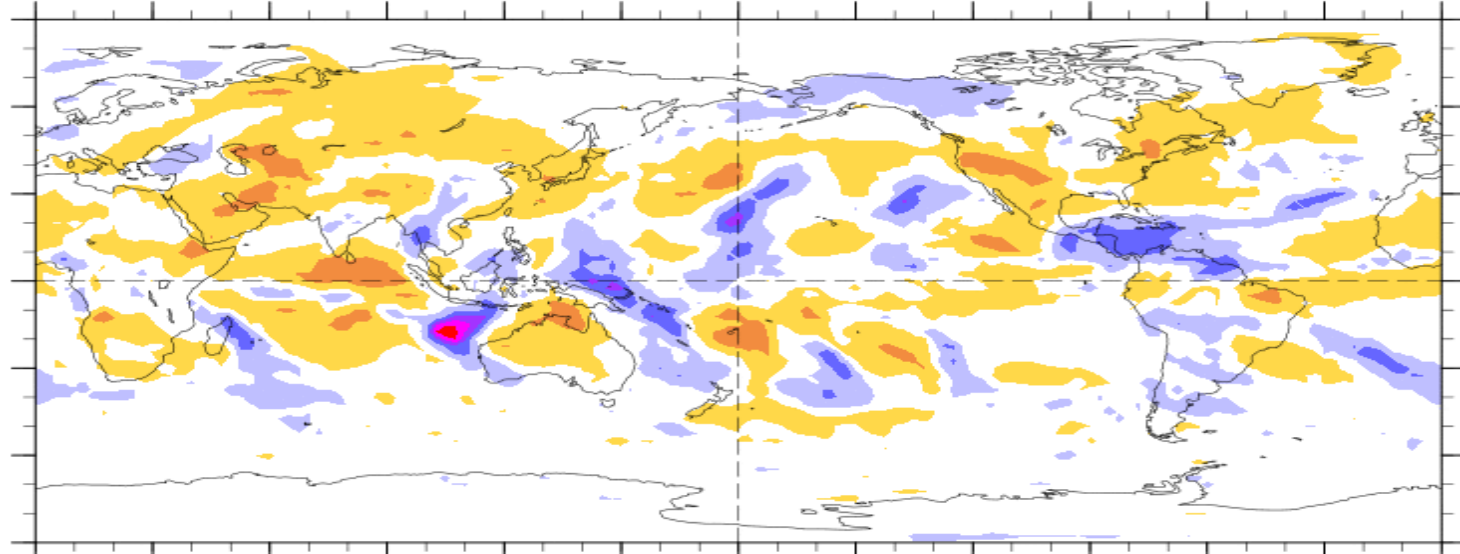


Week 2 - Valid: Apr 07, 2021 - Apr 13, 2021



7-Day Average OLR Anomaly

2021/04/05 - 2021/04/11



Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (March 11, 2021 Update)

next update on May 13, 2021

- ENSO Alert System Status: [La Niña Advisory](#)
- A transition from La Niña to ENSO-Neutral is likely in the next month or so, with an 80% chance of ENSO-neutral during May-July 2021.

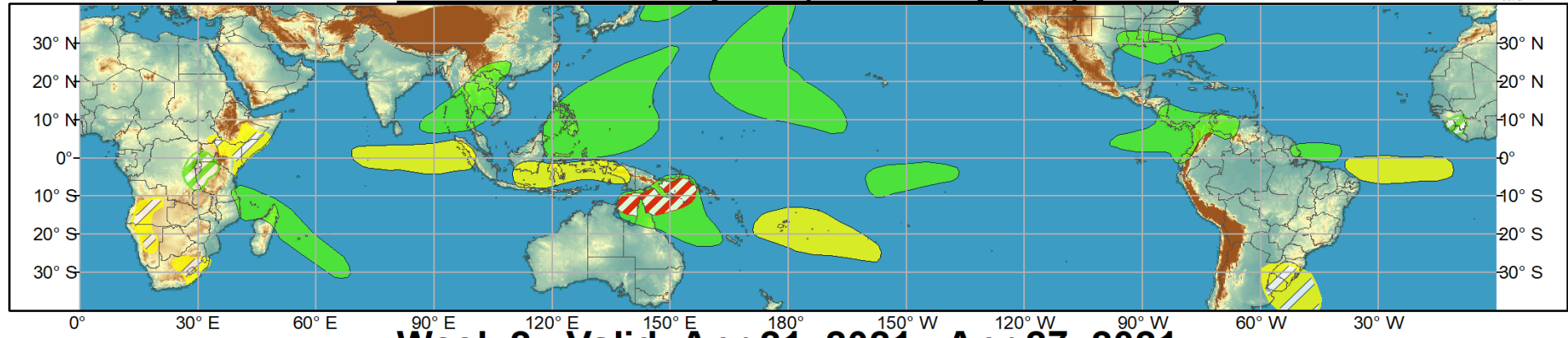
MJO and other subseasonal tropical variability:

- The MJO has been active since early March as its enhanced (suppressed) phase shifted east from the Maritime Continent into the West Pacific (Indian Ocean) since early April.
- Dynamical models favor continued eastward propagation through the Pacific (week-1), and into the Western Hemisphere (week-2).
- The strengthening of anomalous lower-level westerlies across the Maritime Continent and West Pacific point to the initiation of a westerly wind burst event, favorable for TC formation in the Pacific.
- The current and predicted state of the MJO would favor below normal temperatures across parts of the central and eastern CONUS.

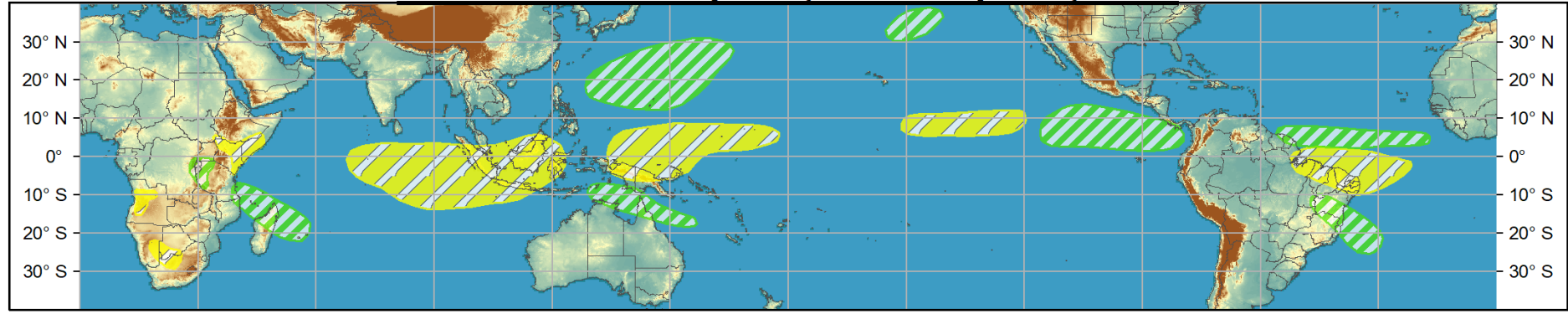


Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Apr 14, 2021 - Apr 20, 2021



Week 2 - Valid: Apr 21, 2021 - Apr 27, 2021



Produced: 04/13/2021
Forecaster: Novella

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.

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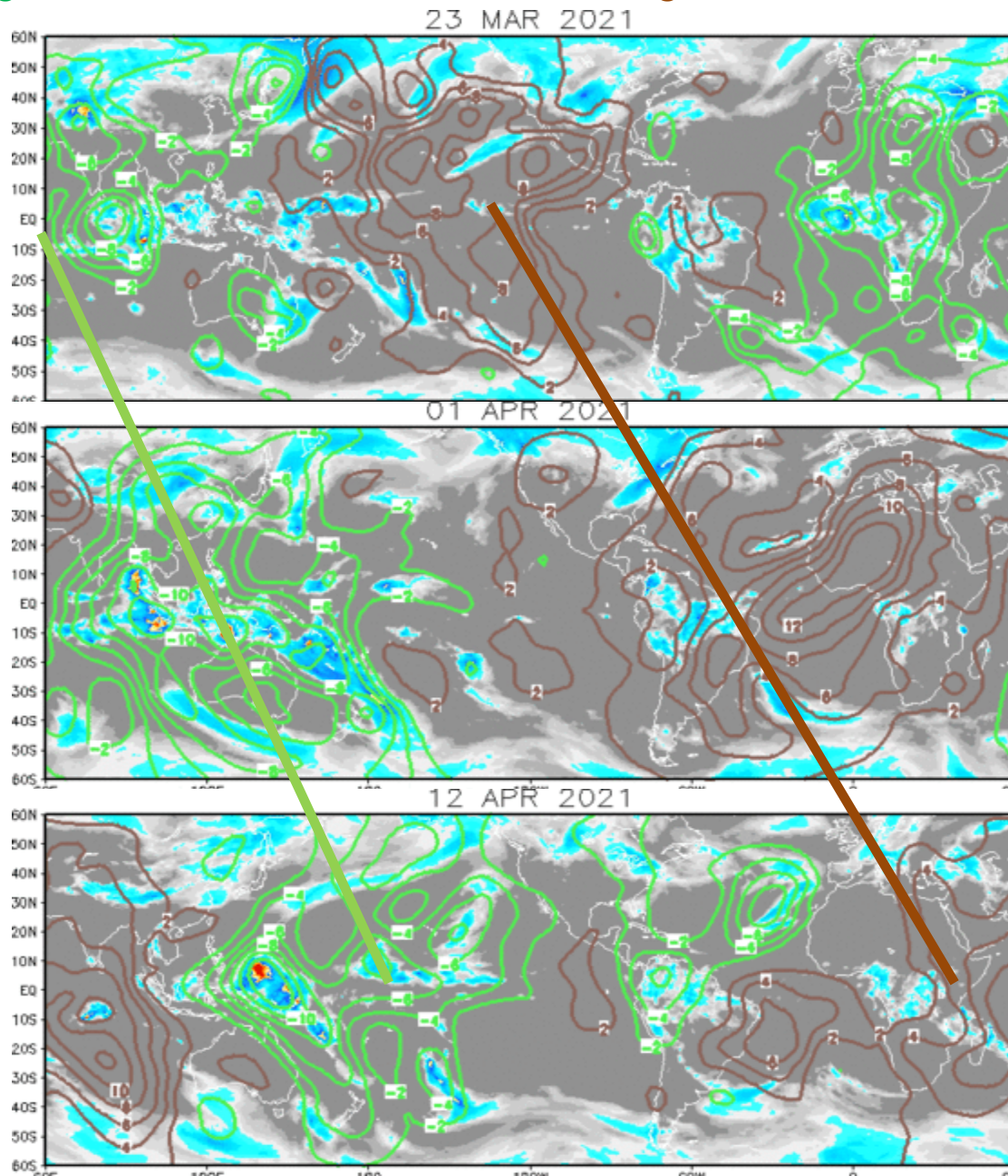


IR Satellite & 200-hpa Velocity Potential Anomalies

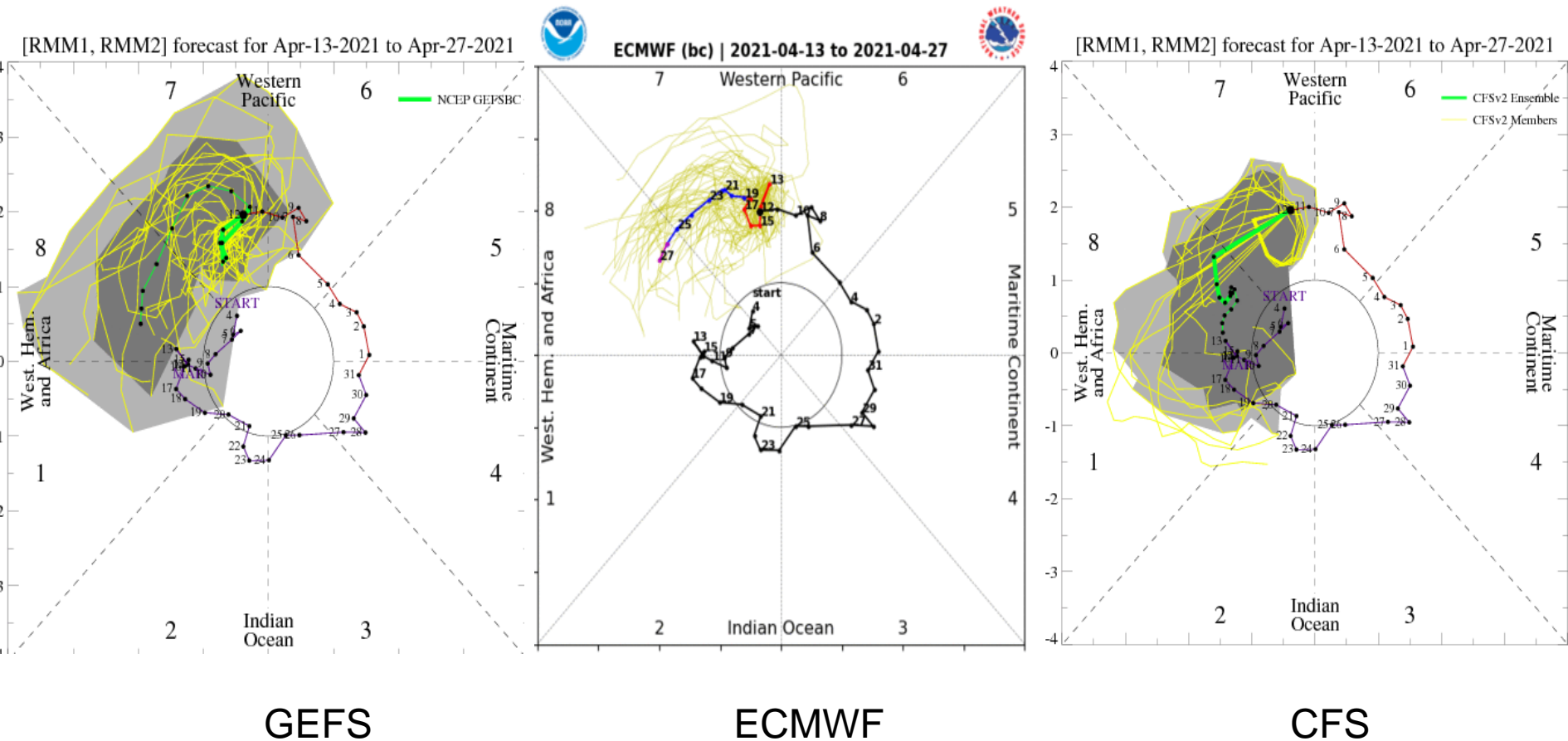
Green: Enhanced Divergence

Brown: Enhanced Convergence

The large scale convective field has propagated eastward since March, consistent with a well-established MJO.

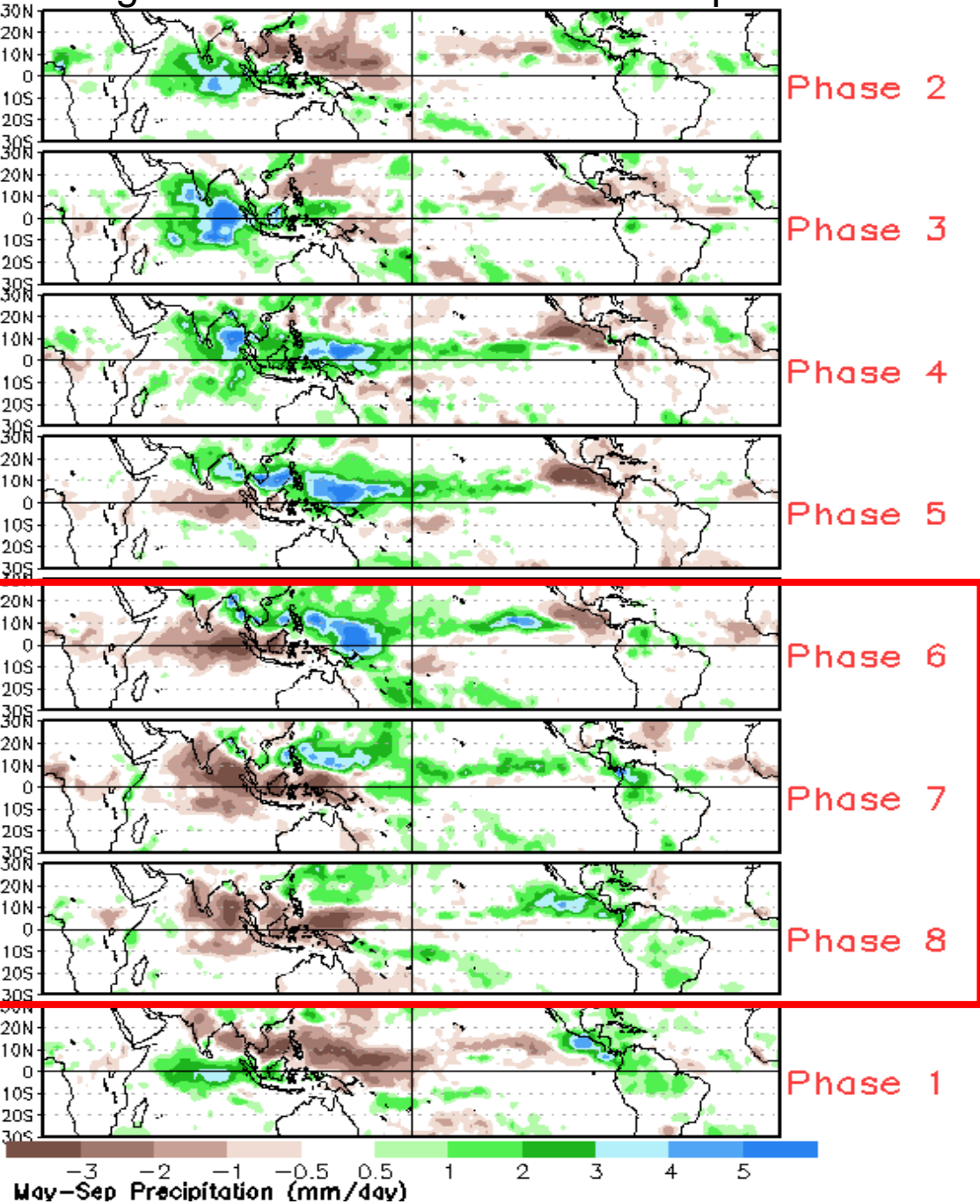


MJO Observation/Forecast



Dynamical models are in general agreement with continued eastward propagation of the MJO through the Pacific and into the Western Hemisphere, with some differences w.r.t. evolution and amplitude.

Average Conditions when the MJO is present

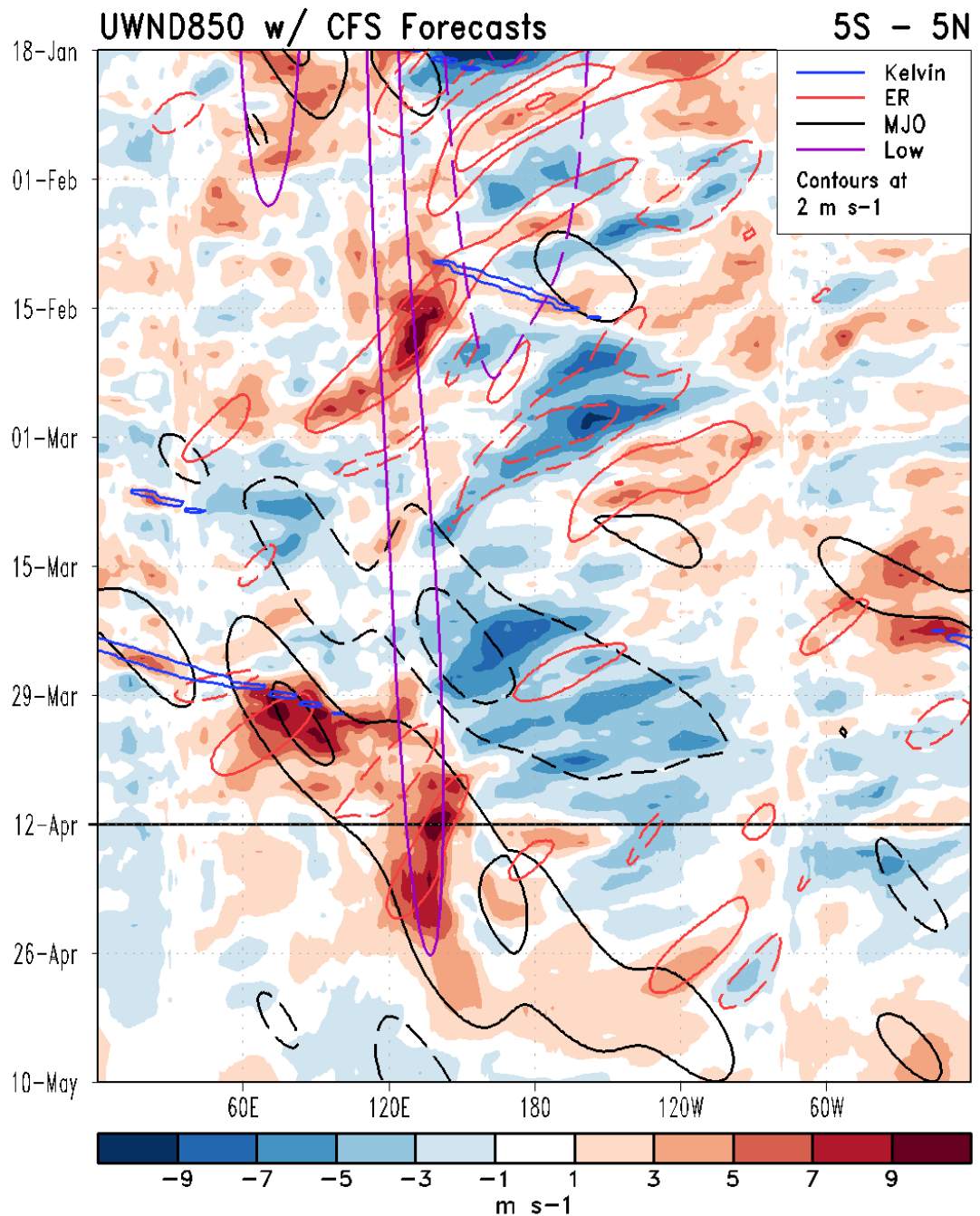


CAVEAT: These panels are representative of robust MJO events.

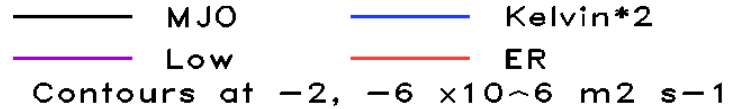
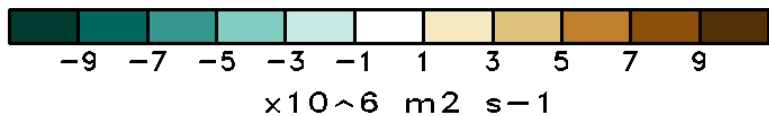
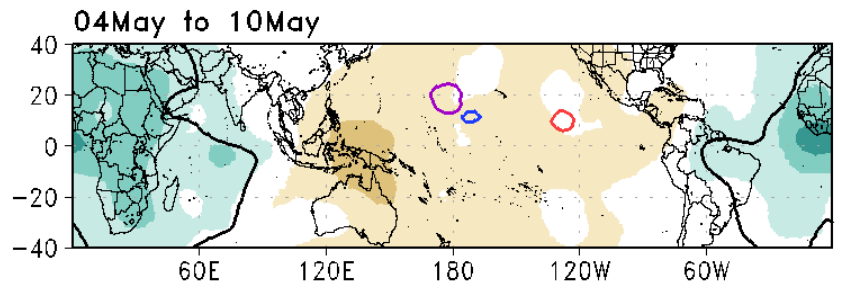
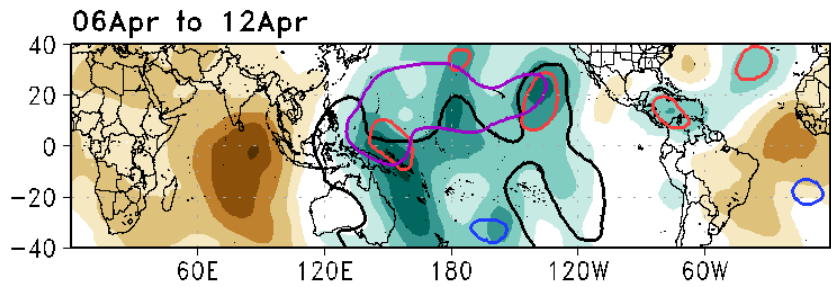
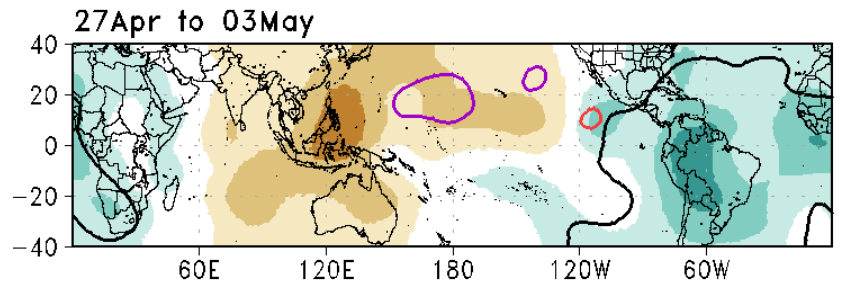
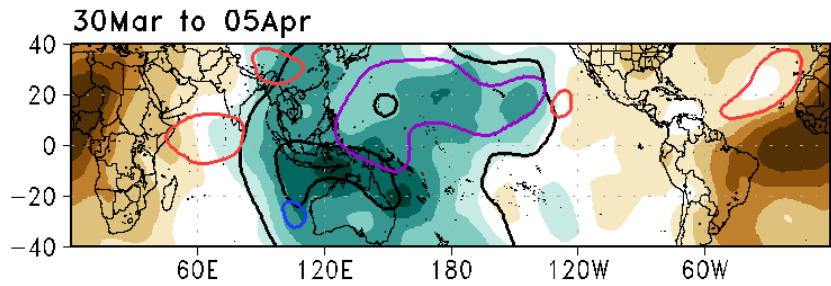
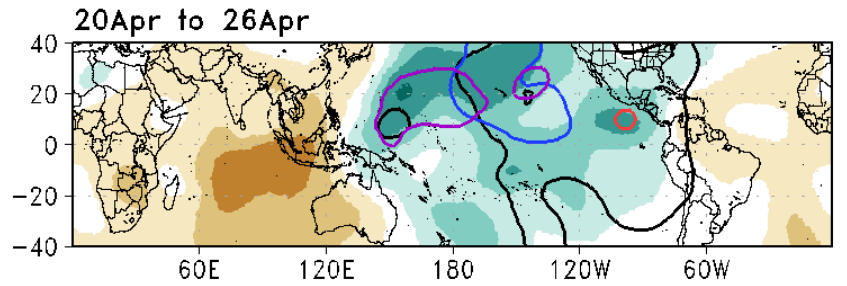
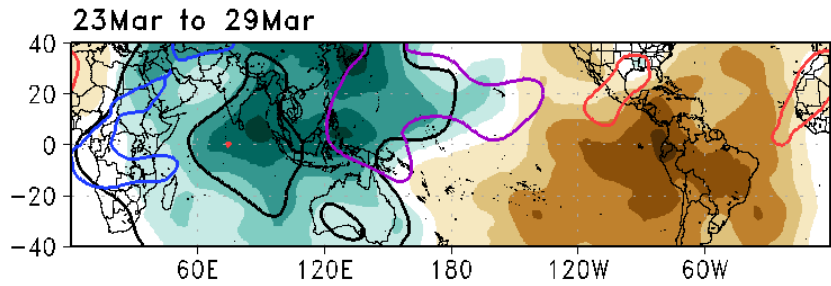
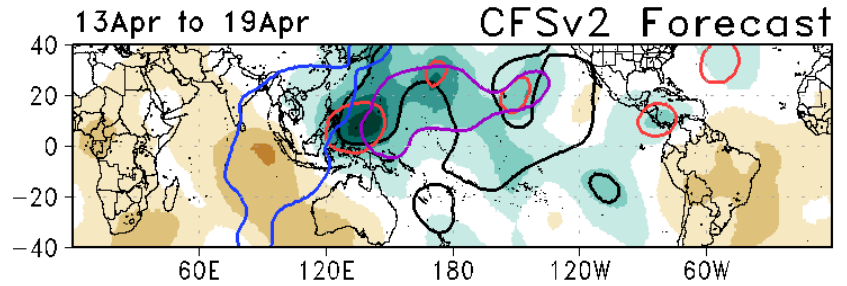
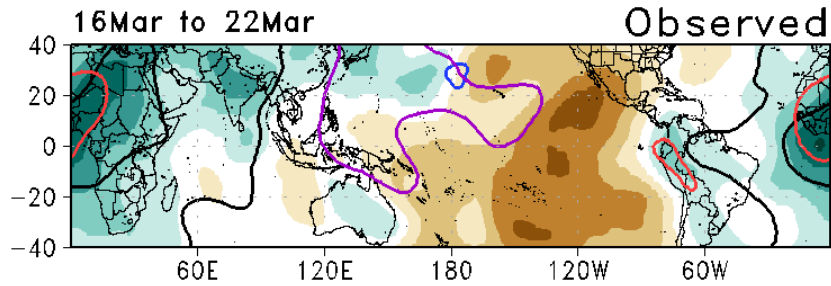
MJO activity is coming through the filtering near the Equator in the LL wind field.

Low frequency contours depict ENSO conditions.

Rossby wave activity is seen near WWB's.

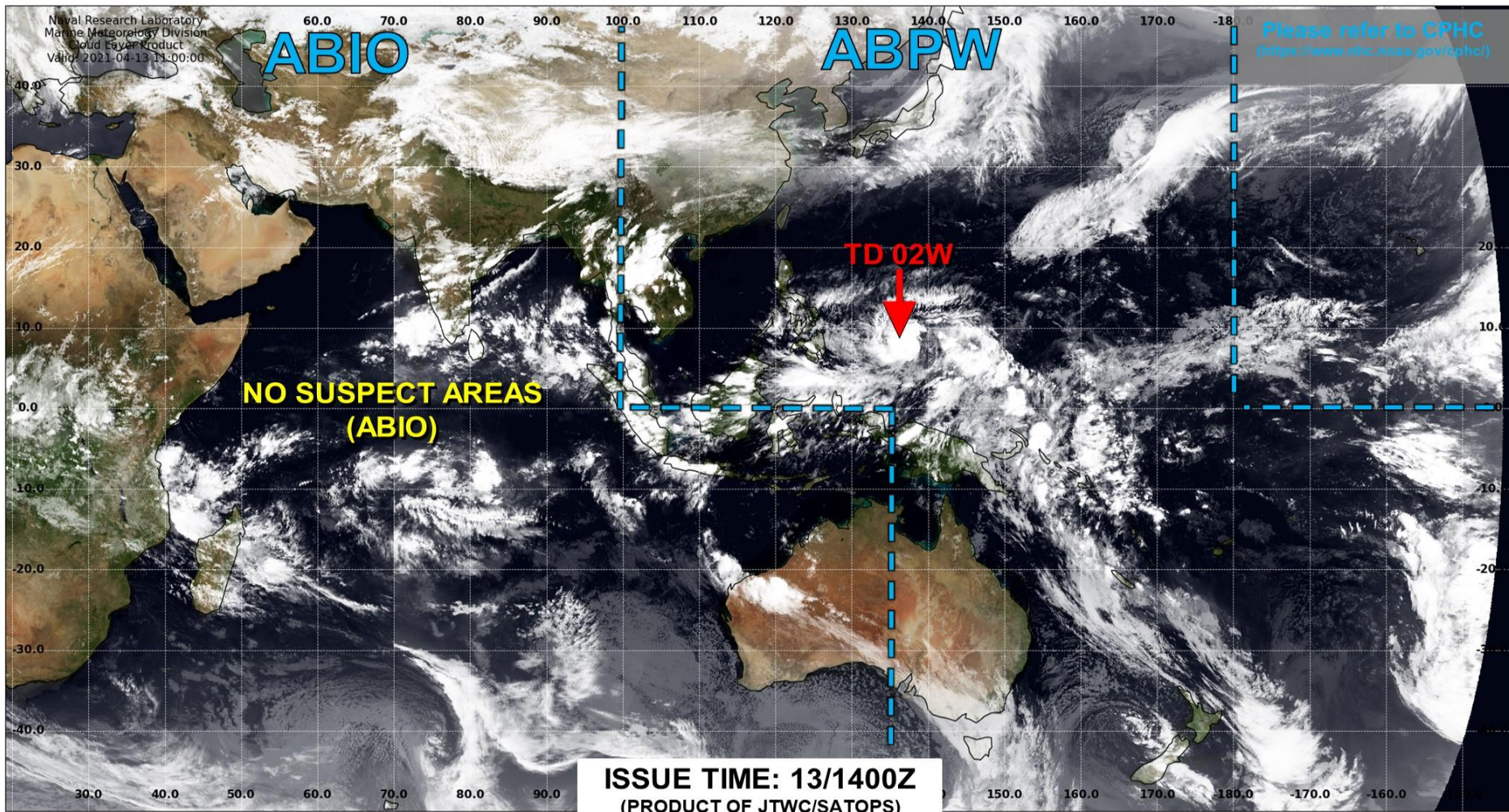


CHI200 7-Day Means





JOINT TYPHOON WARNING CENTER



LOW

TC development unlikely within 24 hours

MEDIUM

TC development likely, but expected to occur beyond 24 hours

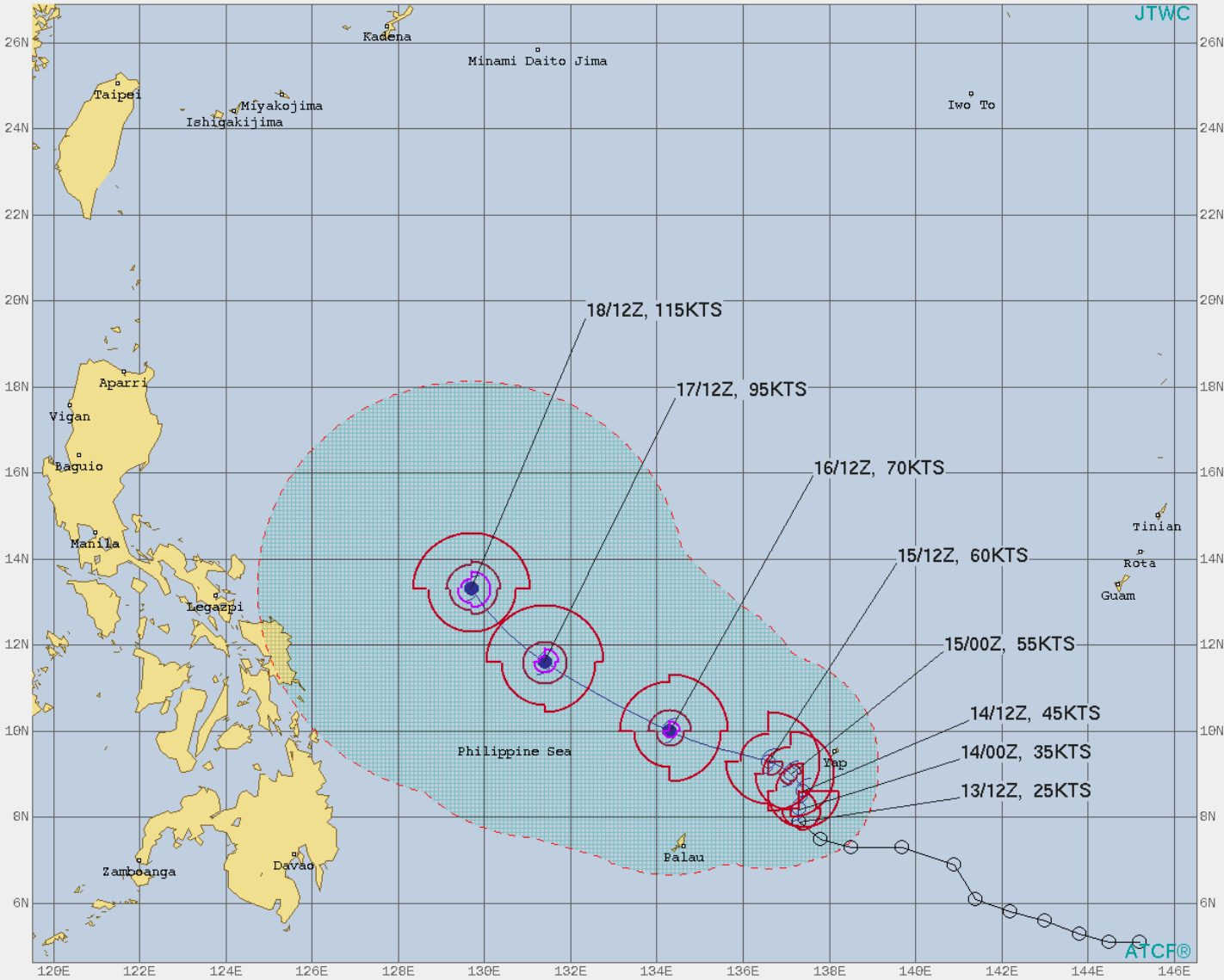
HIGH

TC development likely within 24 hours (Reference TCFA)

SUB TROPICAL

Monitoring for potential transition to TC. Invest label color denotes tropical transition probability

Tropical Cyclone (Reference Warning)



TROPICAL DEPRESSION 02W (TWO) WARNING #1
 WTPN31 PGTW 131500
 131200Z POSIT: NEAR 7.9N 137.3E
 MOVING 310 DEGREES TRUE AT 06 KNOTS
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 11 FEET
 13/12Z, WINDS 025 KTS, GUSTS TO 035 KTS
 14/00Z, WINDS 035 KTS, GUSTS TO 045 KTS
 14/12Z, WINDS 045 KTS, GUSTS TO 055 KTS
 15/00Z, WINDS 055 KTS, GUSTS TO 070 KTS
 15/12Z, WINDS 060 KTS, GUSTS TO 075 KTS
 16/12Z, WINDS 070 KTS, GUSTS TO 085 KTS
 17/12Z, WINDS 095 KTS, GUSTS TO 115 KTS
 18/12Z, WINDS 115 KTS, GUSTS TO 140 KTS

OPA TO:	NM	DTG
NGULU	9	04/14/05Z
WOLEAI	392	04/14/09Z
SOROL	179	04/14/10Z
FAIS	197	04/14/13Z
ULITHI	151	04/14/15Z
YAP	64	04/14/19Z
KAYANGEL	100	04/16/04Z
KOROR	151	04/16/04Z
ANGAUR	177	04/16/05Z
SONSOROL	308	04/16/12Z

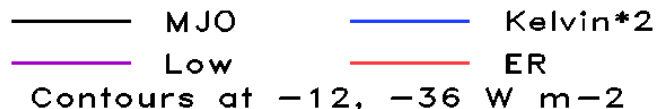
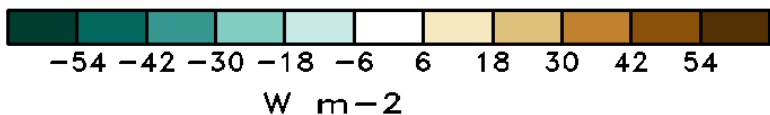
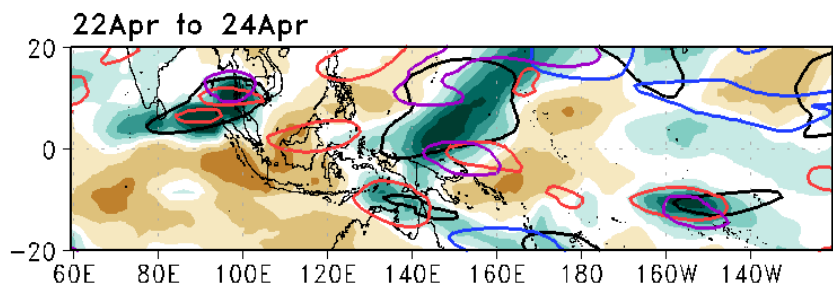
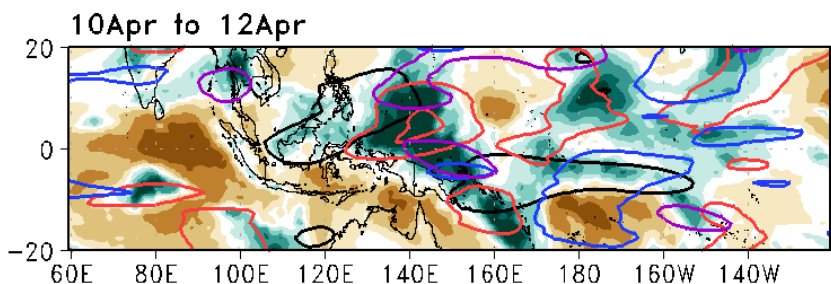
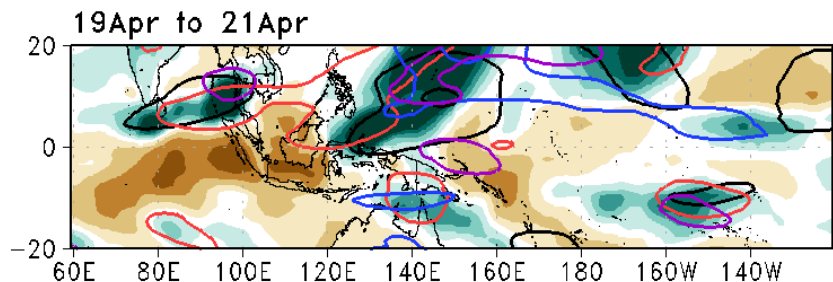
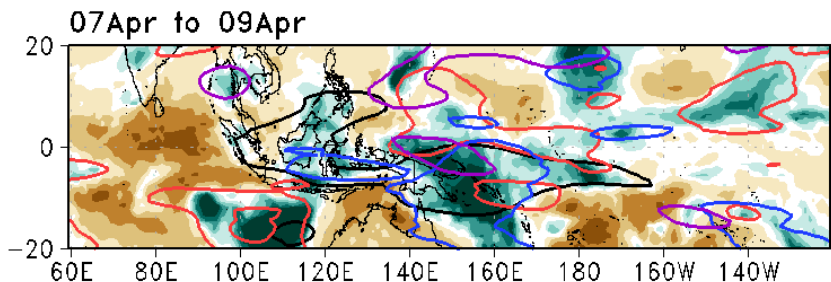
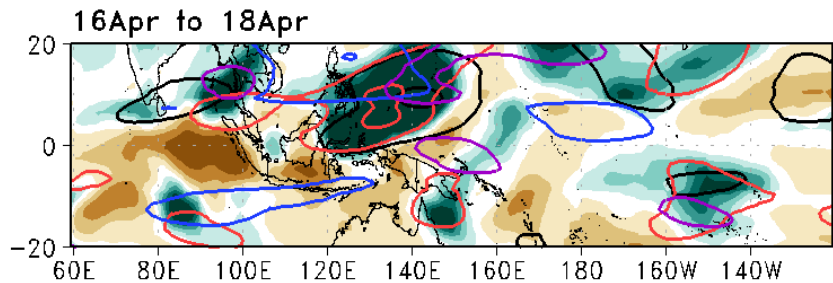
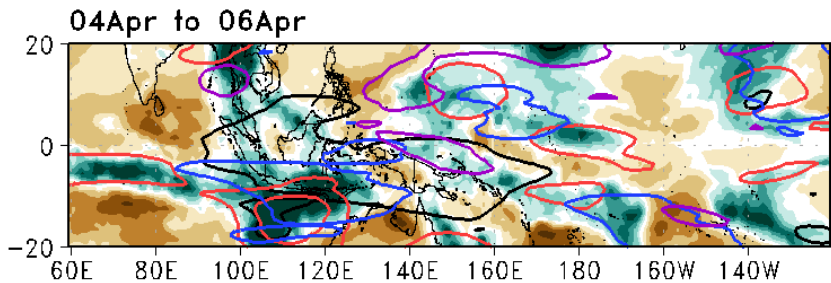
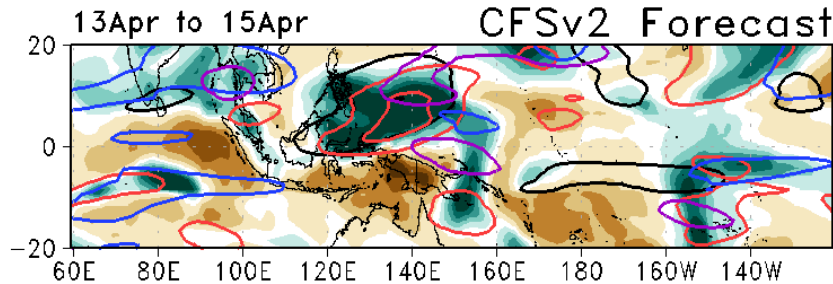
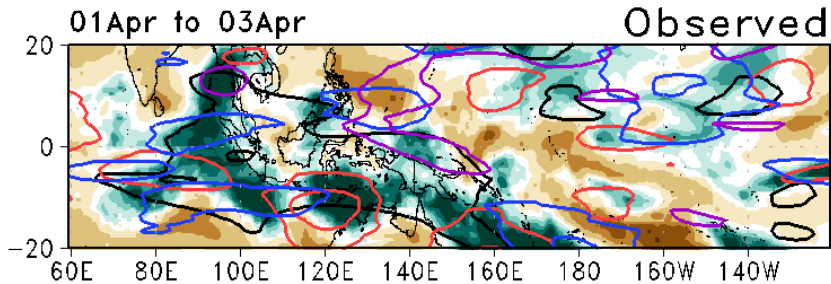
BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
ANGAUR	072	194	0
EURIPITIK	282	347	0
FAIS	239	221	0
KAYANGEL	094	155	0
KOROR	078	176	0
NGULU	206	27	0
SONSOROL	063	342	0
SOROL	265	185	0
ULITHI	229	182	0
WOLEAI	275	394	0
YAP	206	107	0

- ○ ○ ○ ○ LESS THAN 34 KNOTS
- 34-63 KNOTS
- ● ● MORE THAN 63 KNOTS
- FORECAST CYCLONE TRACK
- PAST CYCLONE TRACK
- DENOTES 34 KNOT WIND DANGER AREA/USN SHIP AVOIDANCE AREA
- ○ ○ ○ ○ FORECAST 34/50/64 KNOT WIND RADII (WINDS VALID OVER OPEN OCEAN ONLY)



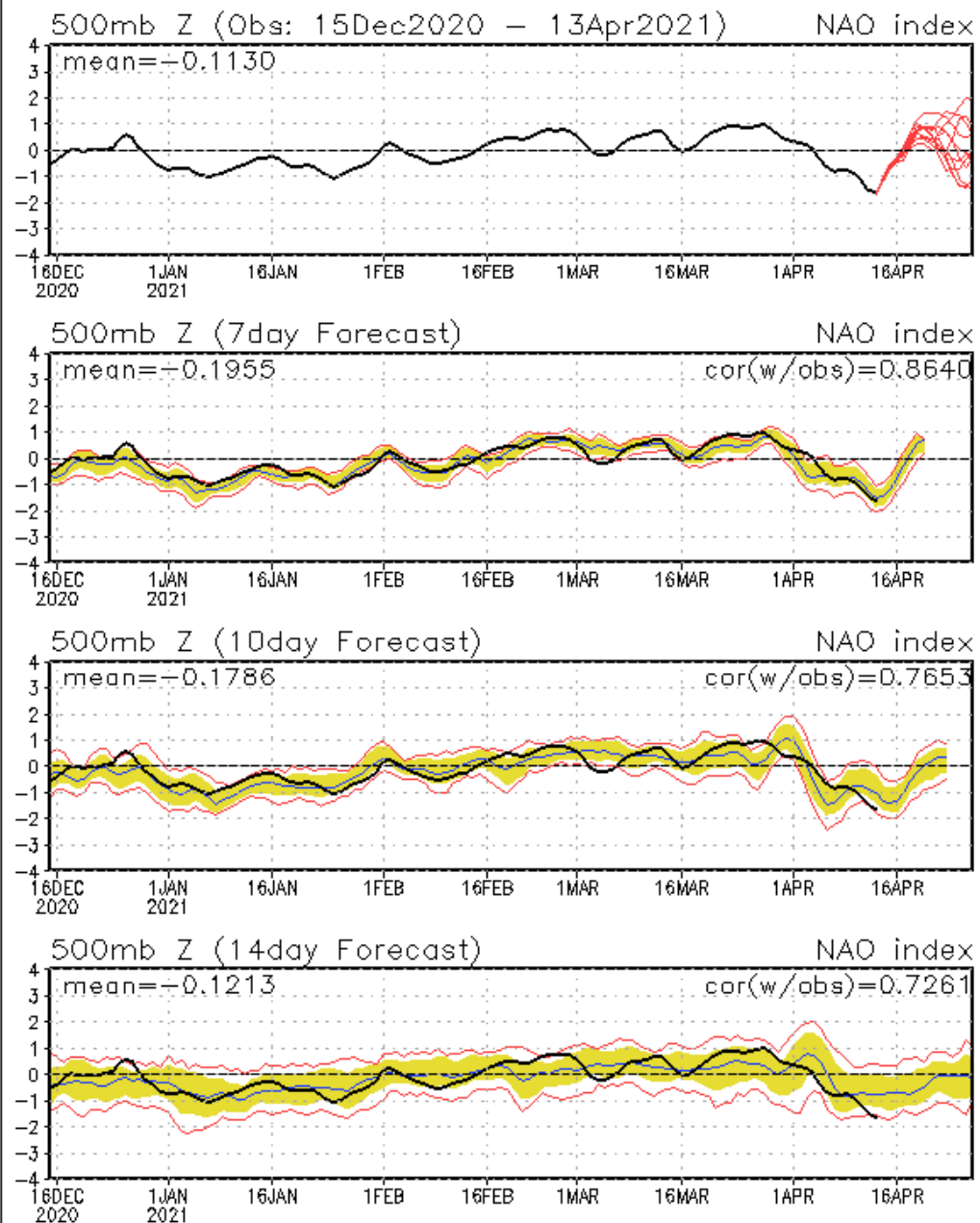
ATCF®

OLR 3-Day Means

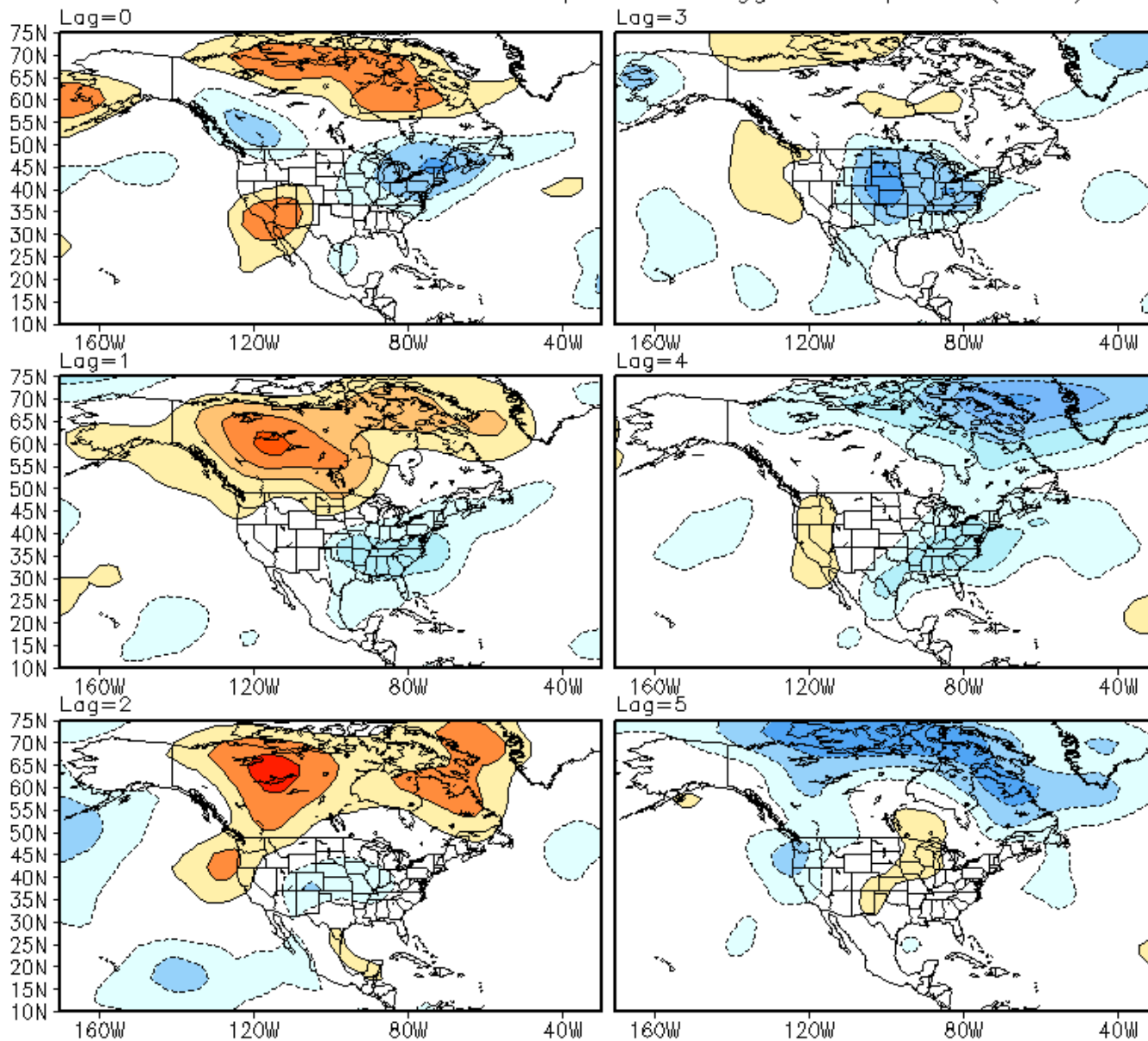


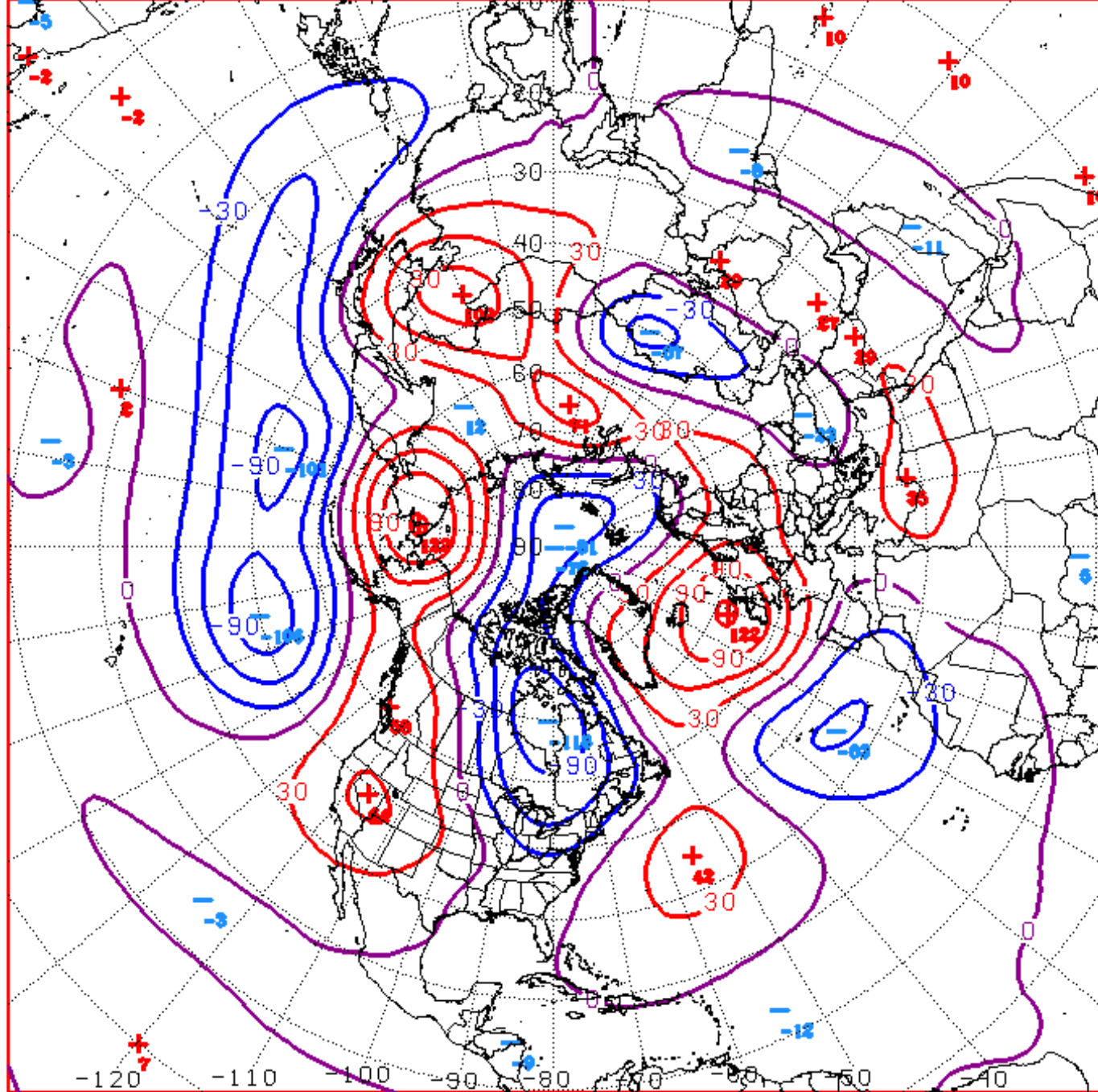
Connections to U.S. Impacts

NAO: Observed & ENSM forecasts



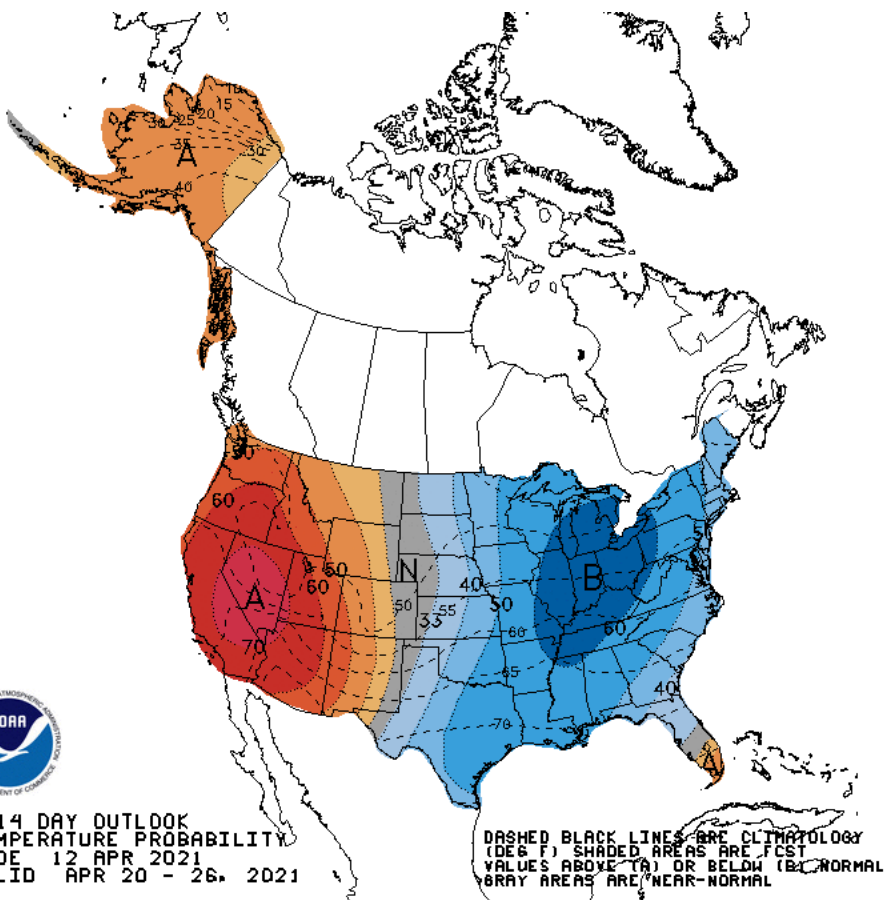
RMM Phase 7 850-hPa Temperature Lagged Composite (mam)





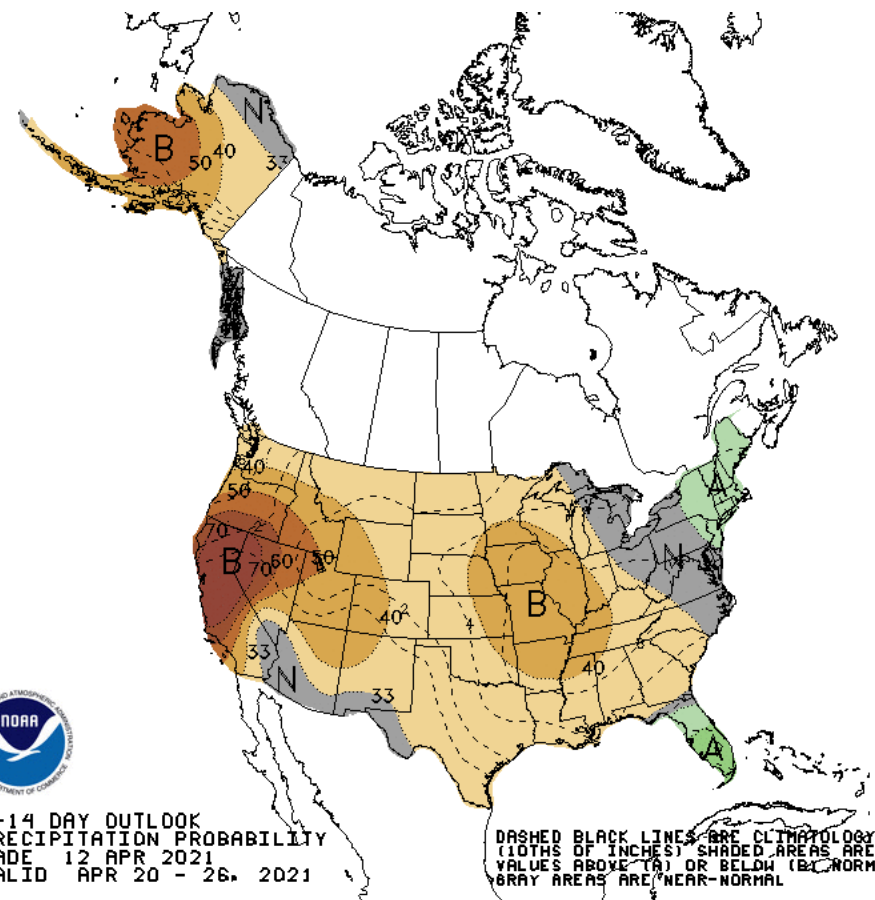
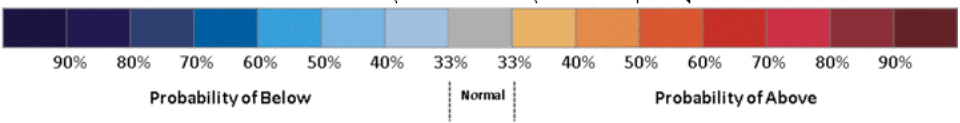
D+11 500 MB ANOMALIES FROM ALZ ENSM
 CPC MAP MADE APR 13 2021 1403 UTC CNTD APR 24 2021

Yesterday's Week-2 Outlooks



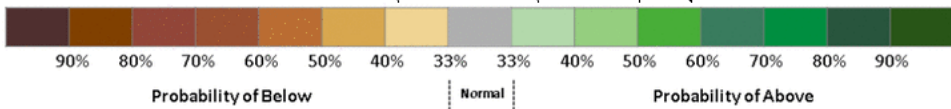
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 12 APR 2021
VALID APR 20 - 26, 2021

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



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 12 APR 2021
VALID APR 20 - 26, 2021

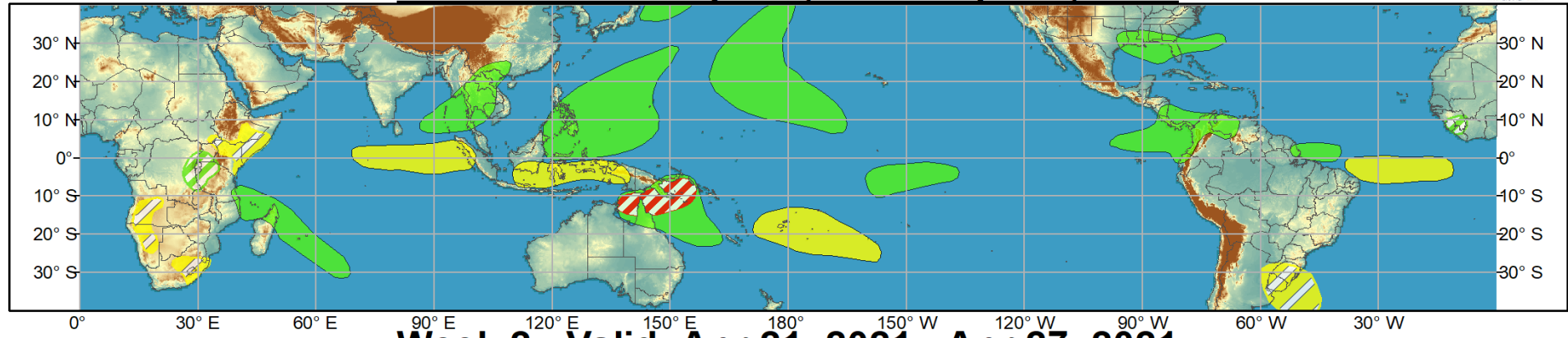
DASHED BLACK LINES ARE CLIMATOLOGY (10THS OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



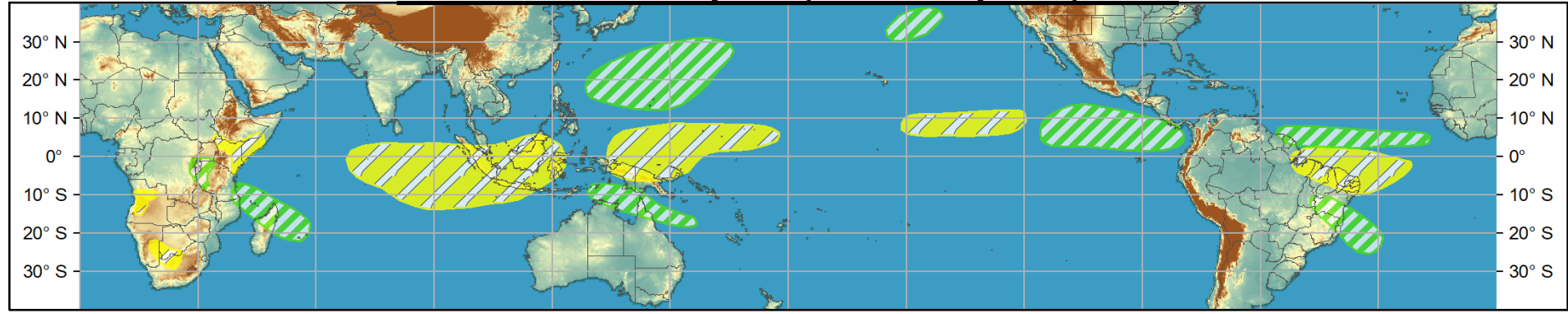


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