

Global Tropics Hazards And Benefits Outlook

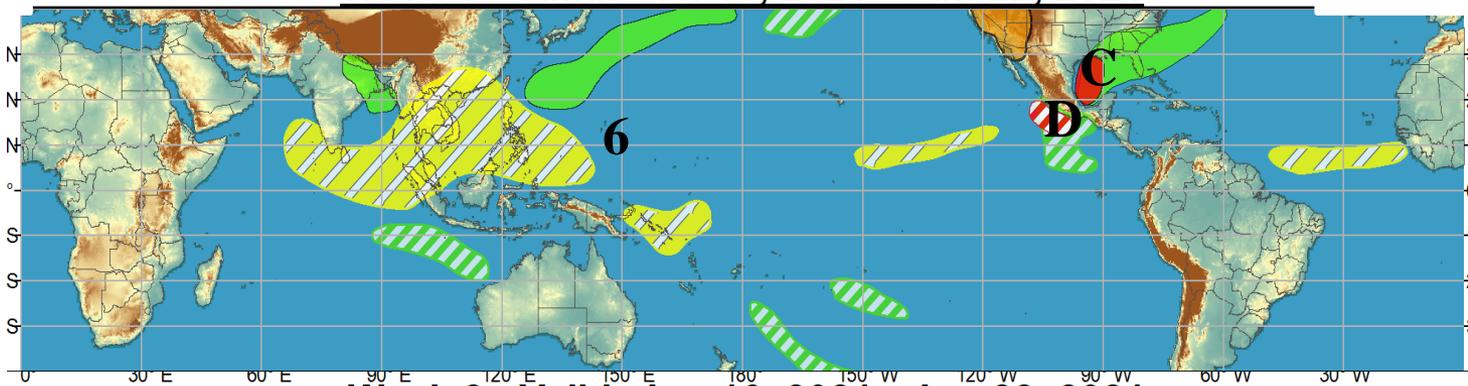
6/22/2021

Dan Harnos

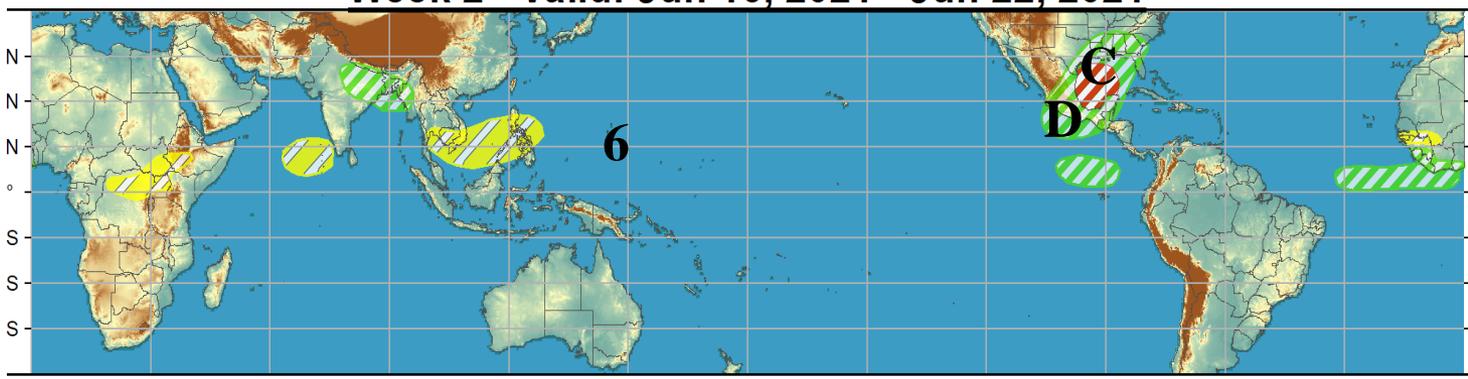
Outline

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

Week 1 - Valid: Jun 16, 2021 - Jun 22, 2021

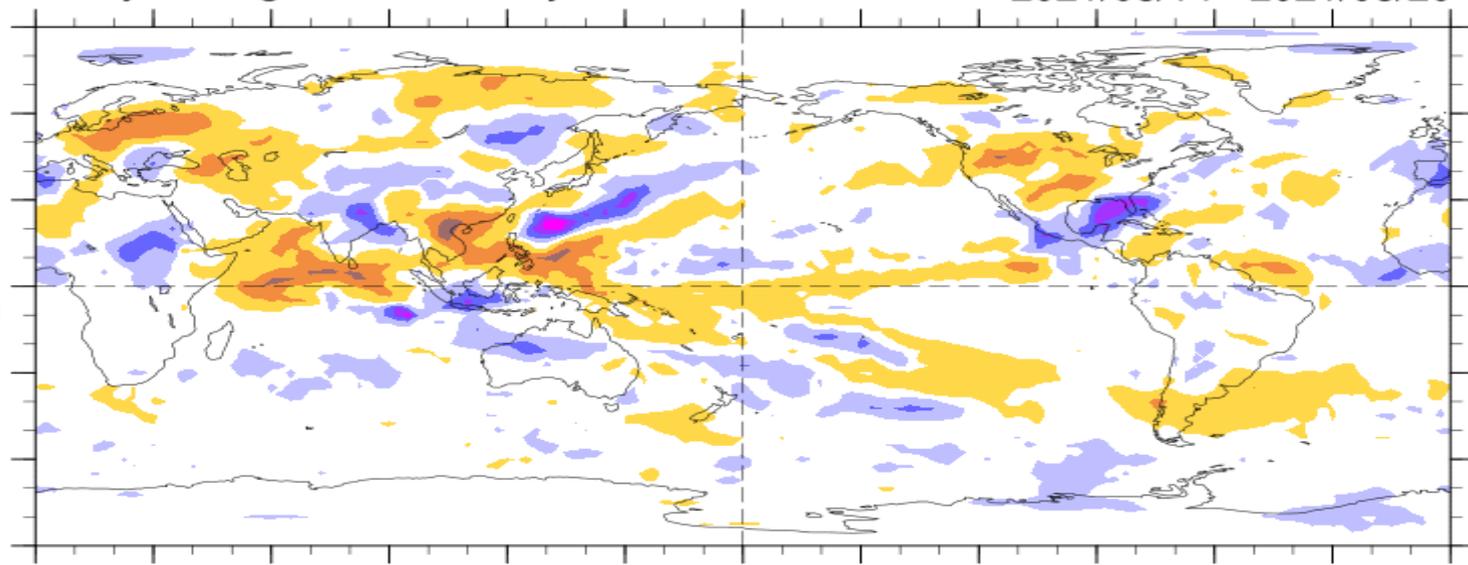


Week 2 - Valid: Jun 16, 2021 - Jun 22, 2021



7-Day Average OLR Anomaly

2021/06/14 - 2021/06/20



Outlook Review

TS Dolores

6/18-6/20

Peak: 60 knots

TS Claudette

6/18-6/22

Peak: 40 knots

TS Six

6/21-present

Peak: 35 knots

Cool shading
More clouds/rain

Warm shading
Less clouds/rain

Synopsis of Climate Modes

ENSO: (10 June, 2021 Update)

next update on 8th of July

- ENSO Alert System Status: Not Active
- ENSO-neutral conditions are favored through the Northern Hemisphere summer (78% chance for the June-August season) and fall (50% chance for the September-November season).

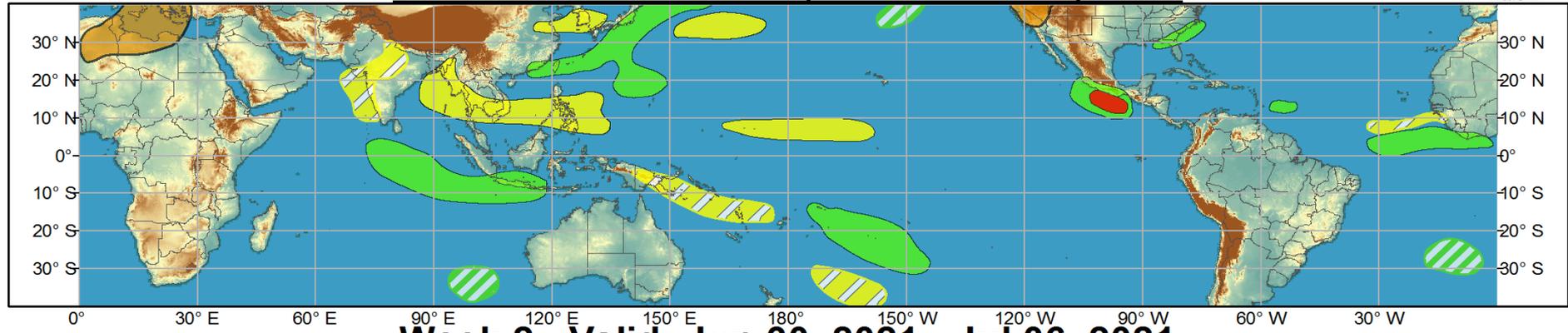
MJO and other subseasonal tropical variability:

- Two centers of action are enhancing convection near the Date Line and Prime Meridian. Both of these regions appear to be atmospheric Kelvin waves.
- Model guidance shows a focus on the Kelvin wave approaching the Prime Meridian as the dominant player the next two weeks.
- The aforementioned Kelvin wave activity would support increased tropical cyclone formation odds over the East Pacific through the early July and over the West Pacific beginning in July.



Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Jun 23, 2021 - Jun 29, 2021



Week 2 - Valid: Jun 30, 2021 - Jul 06, 2021



Produced: 06/22/2021
Forecaster: Harnos

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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IR Satellite & 200-hpa Velocity Potential Anomalies

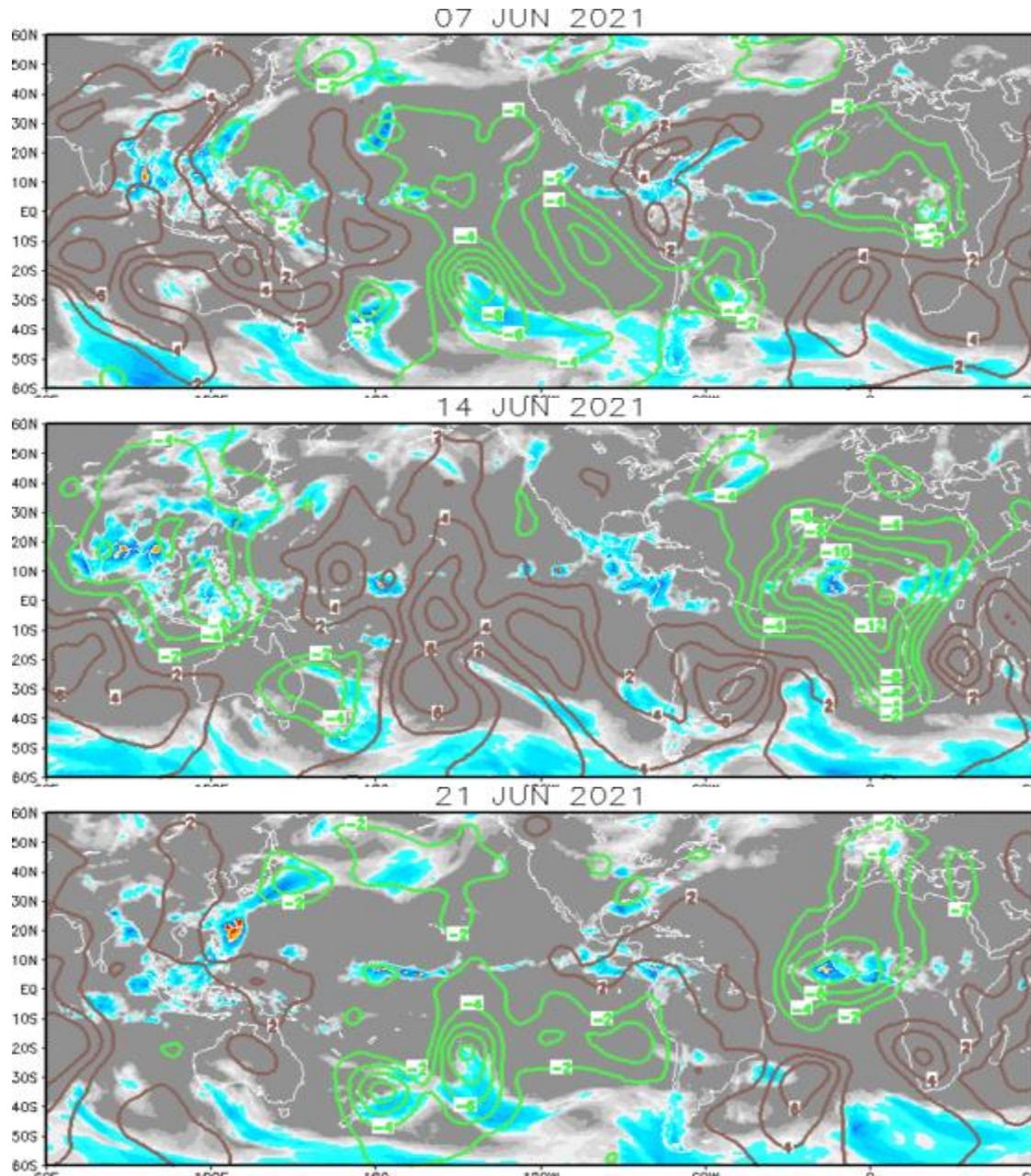
Green: Enhanced Divergence

Brown: Enhanced Convergence

Wave-2 structure with one center over the Pacific and another near the Prime Meridian.

Rapid eastward progression, with the Pacific Center shifting over Africa and the African center shifting over the Maritime Continent.

Eastward progression from mid-June, but most noteworthy is the decay in how strong signals are along the equator.



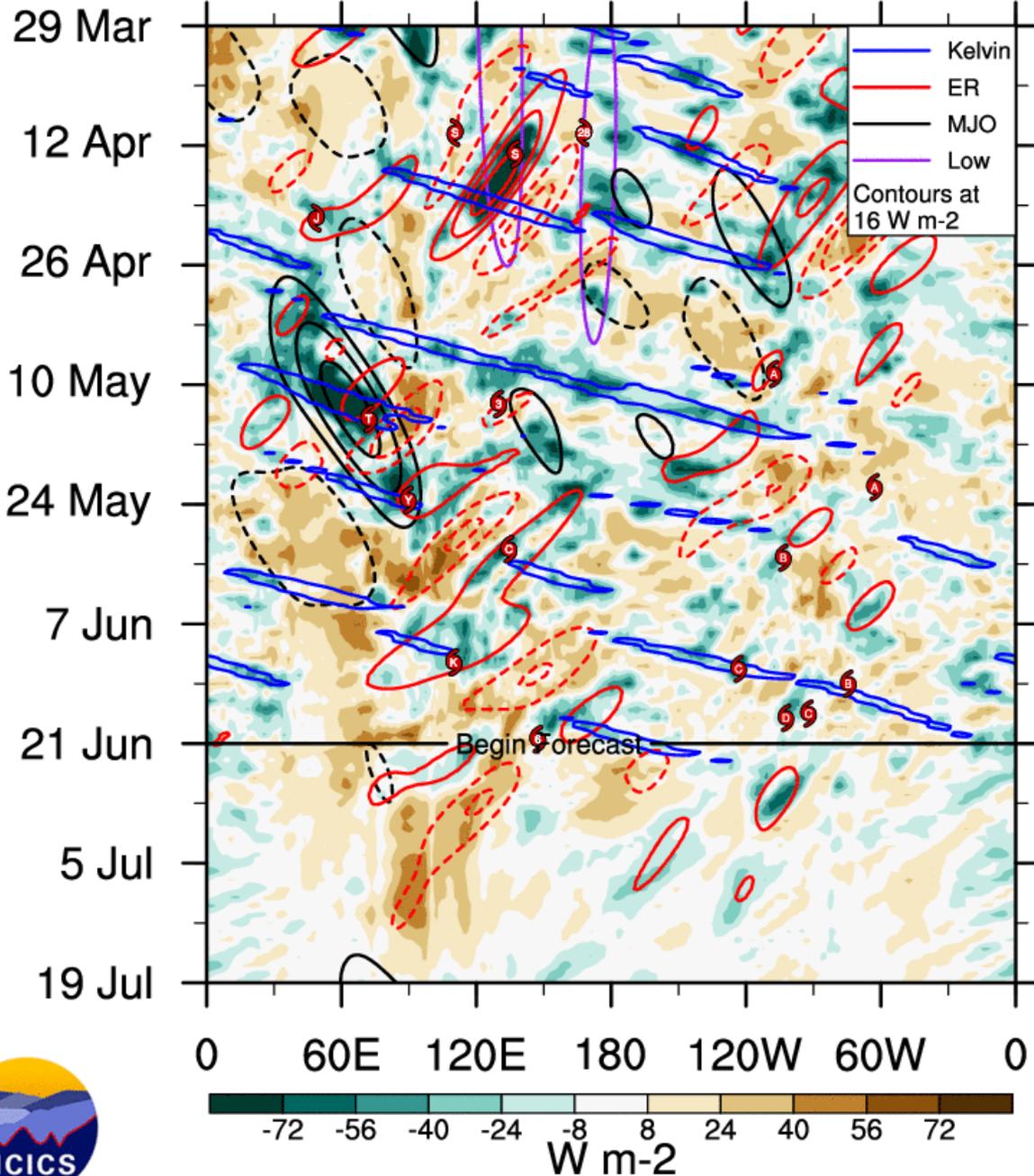
Kelvin wave activity is currently analyzed near 180° and approaching the Prime Meridian.

Rossby wave activity is apparent over both hemispheres, with many regions of westward-moving variability showing up.

Little no sign of the **MJO** or **low frequency** variability.

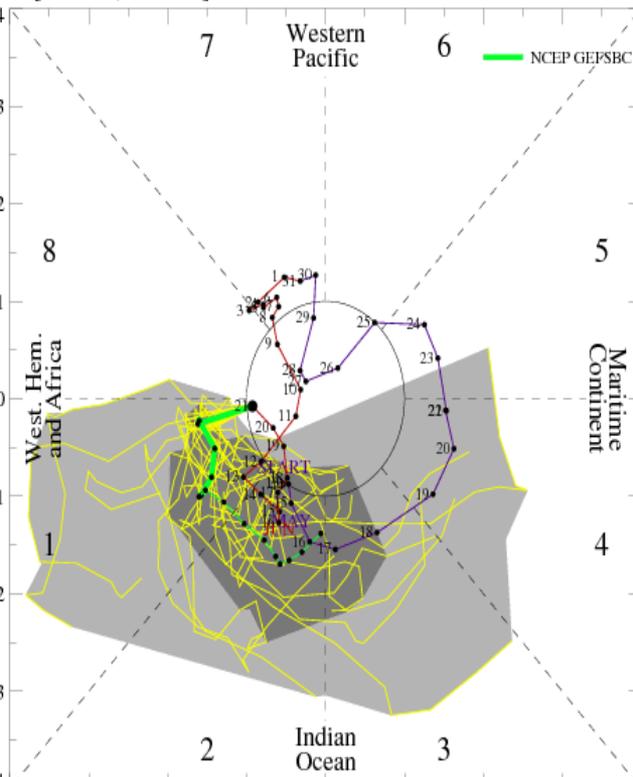


OLR with CFS forecasts 5N - 15N

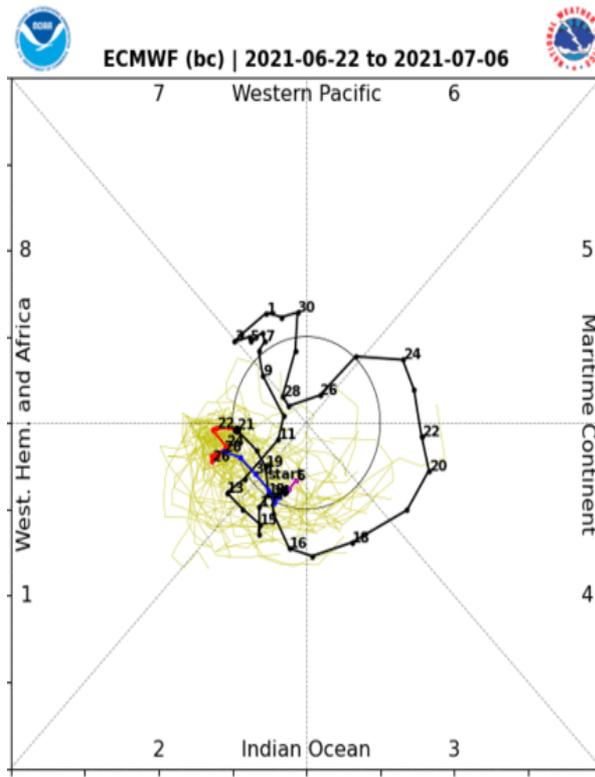


MJO Observation/Forecast

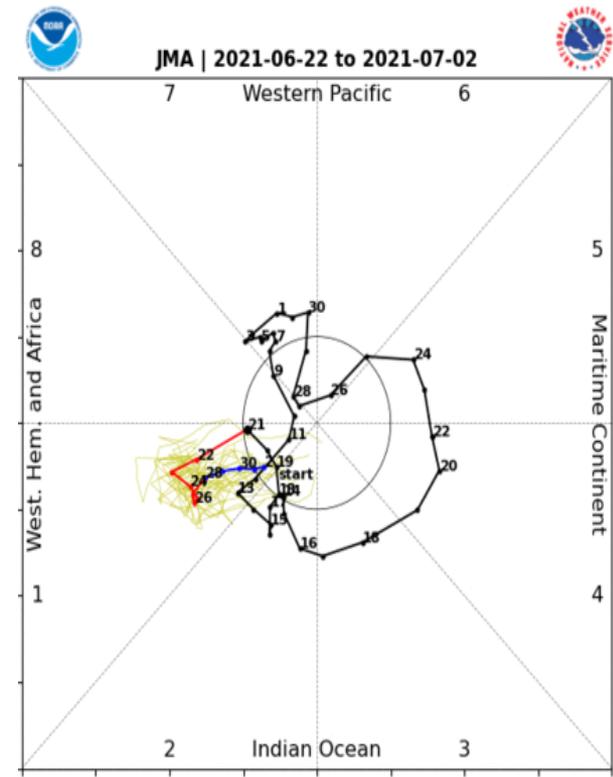
[RMM1, RMM2] forecast for Jun-22-2021 to Jul-06-2021



GEFS



ECMWF



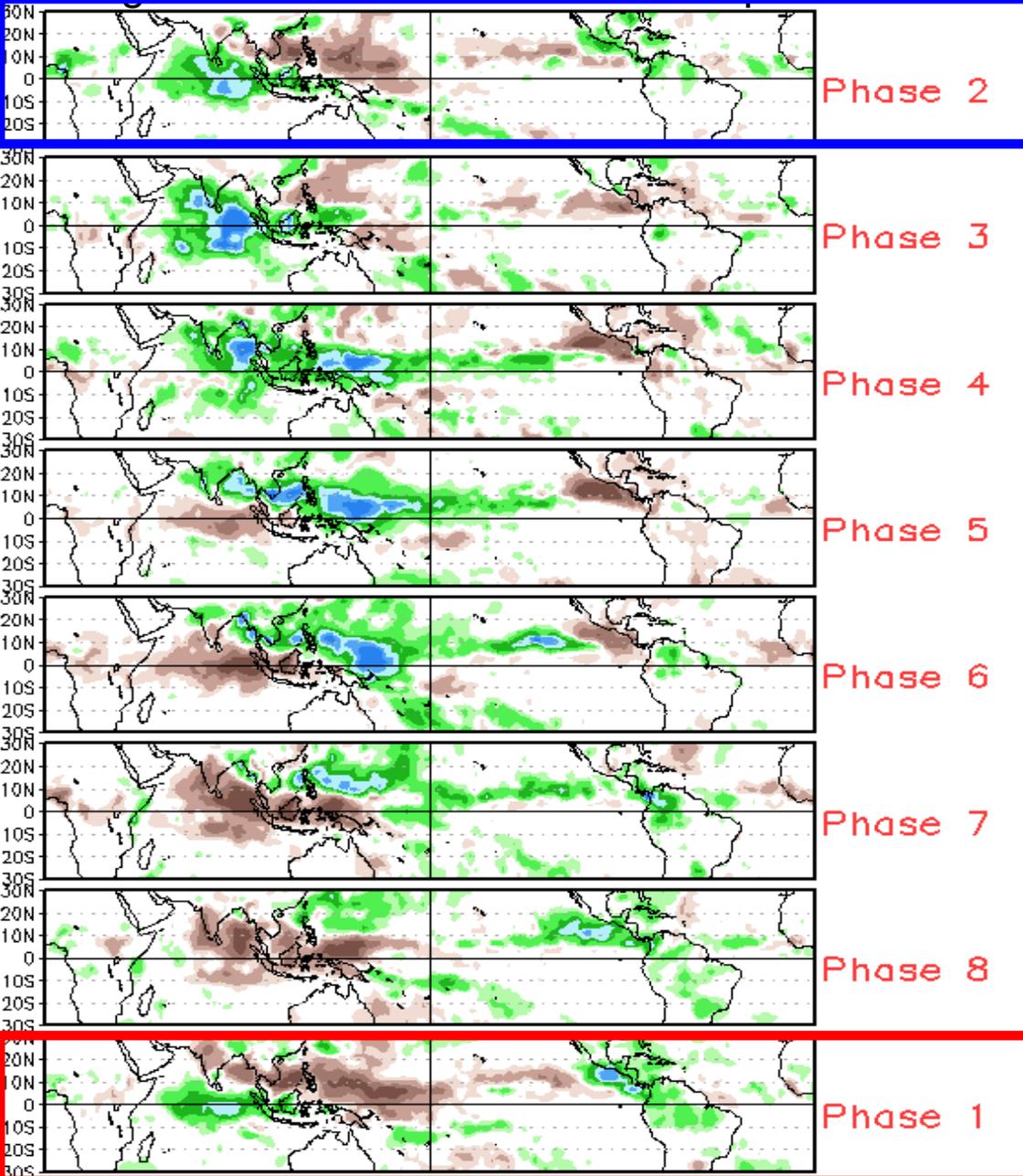
JMA

GEFS: Large spread (concludes in Phases 1 to 4 at large amplitudes)! General eastward progression toward the Indian Ocean the next two weeks.

ECMWF: Tighter spread compared to the GEFS, bringing the signal to the Indian Ocean by Week-2.

JMA: Very slow progression, with the signal generally hung up over Africa.

Average Conditions when the MJO is present



Week-1: Phase 1

Week-2: Phase 2

May-Sep Precipitation (mm/day)

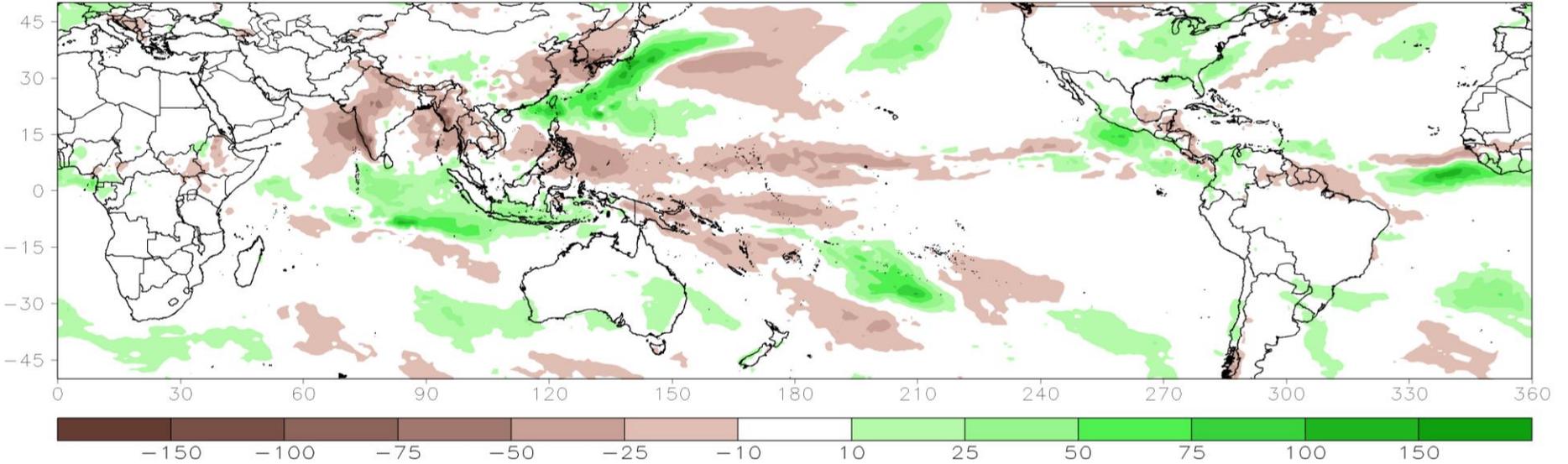
-3 -2 -1 -0.5 0.5 1 2 3 4 5

CAVEAT: These panels are representative of robust MJO events.

CONS 00z: Week1 Total Rainfall Anomaly (mm)

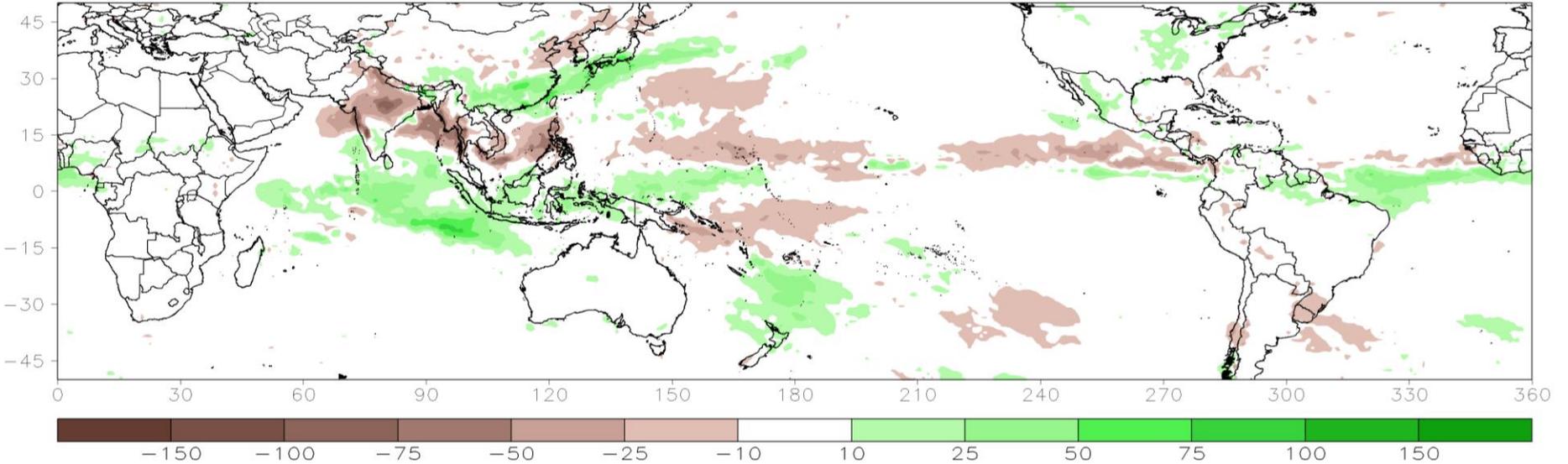
CFS, GEFS, ECMWF, Canadian blend

Valid: 23Jun2021-29Jun2021

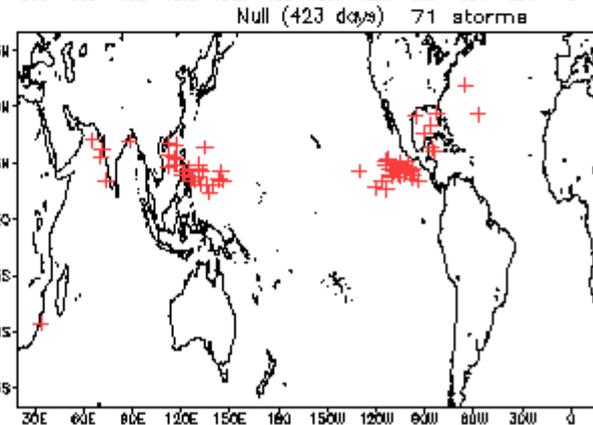
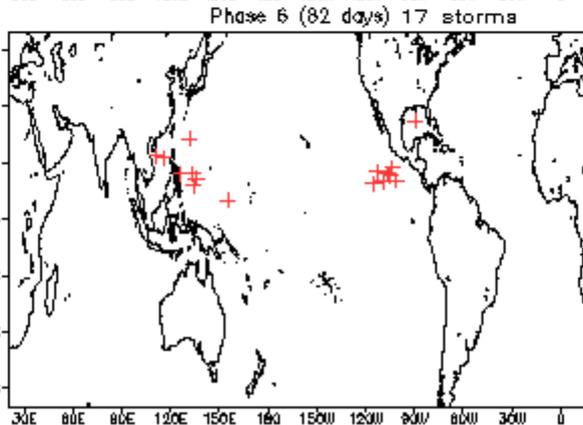
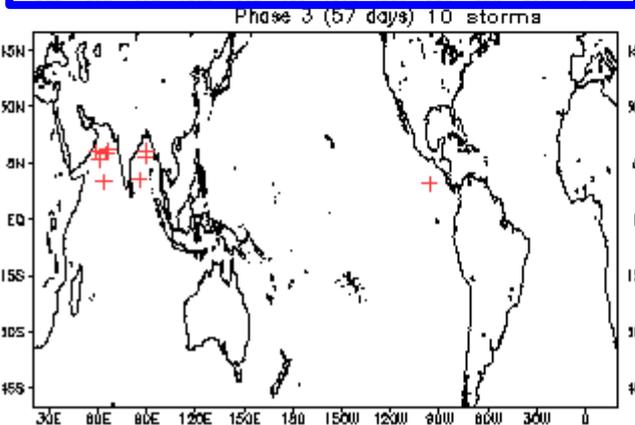
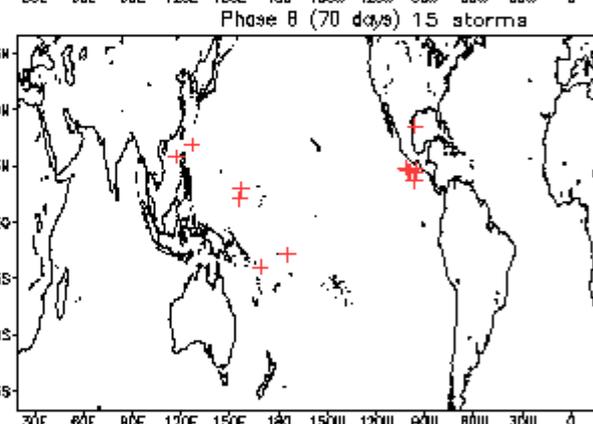
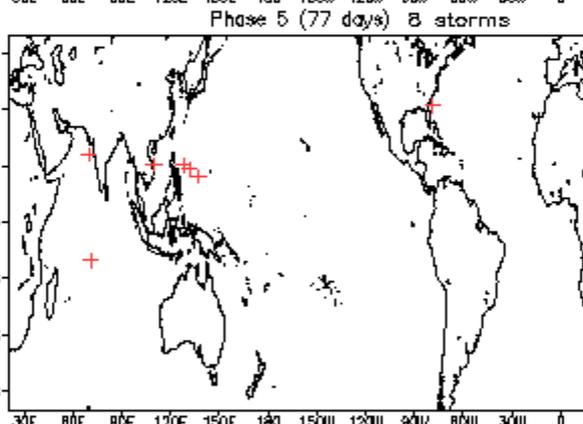
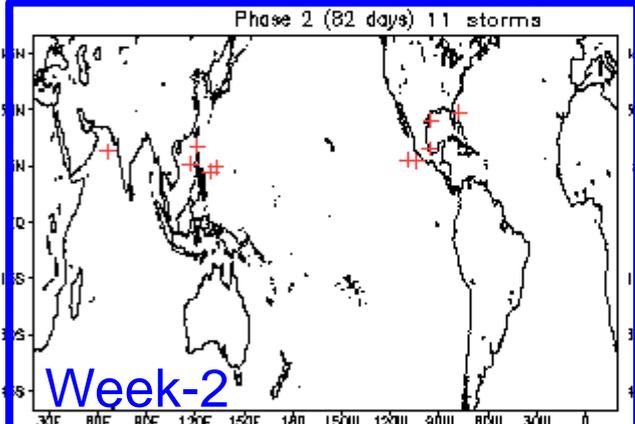
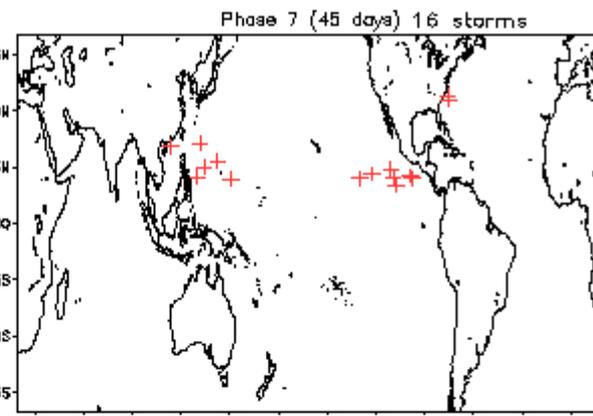
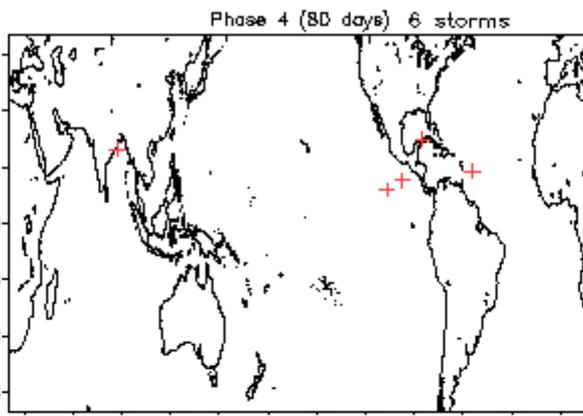
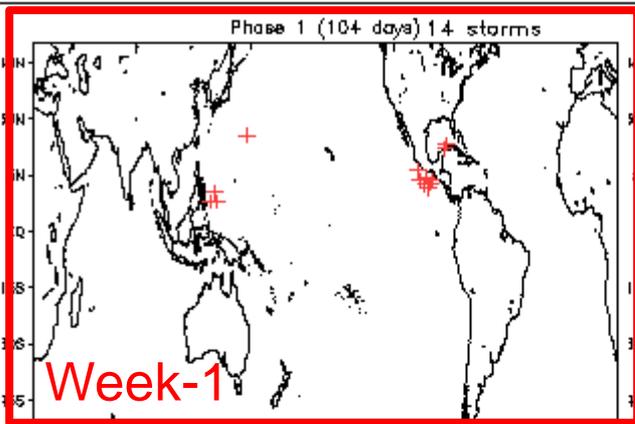


CONS 00z: Week2 Total Rainfall Anomaly (mm)

Valid: 30Jun2021-06Jul2021



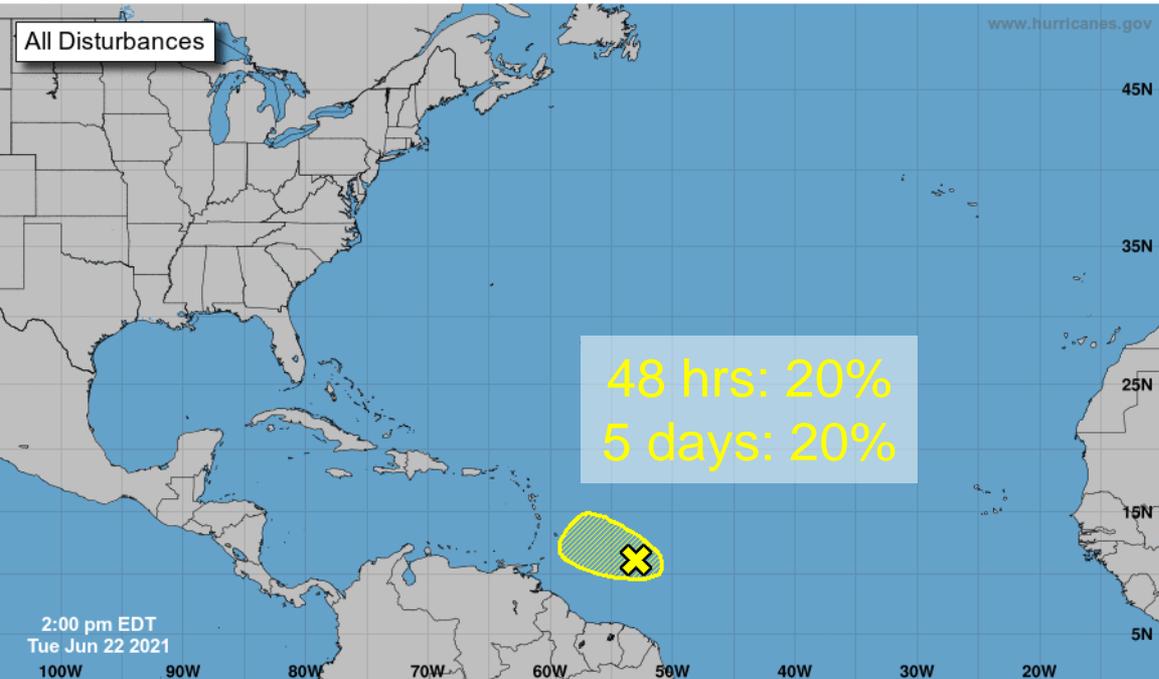
June Tropical Storm Formation by MJO phase





Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



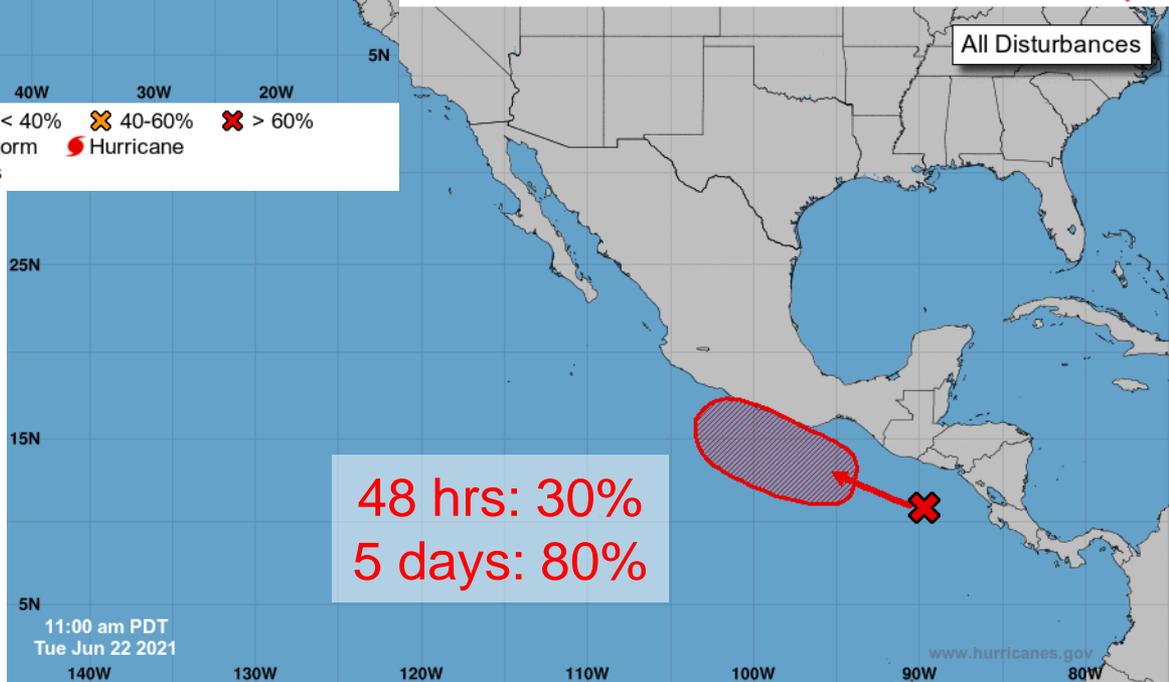
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

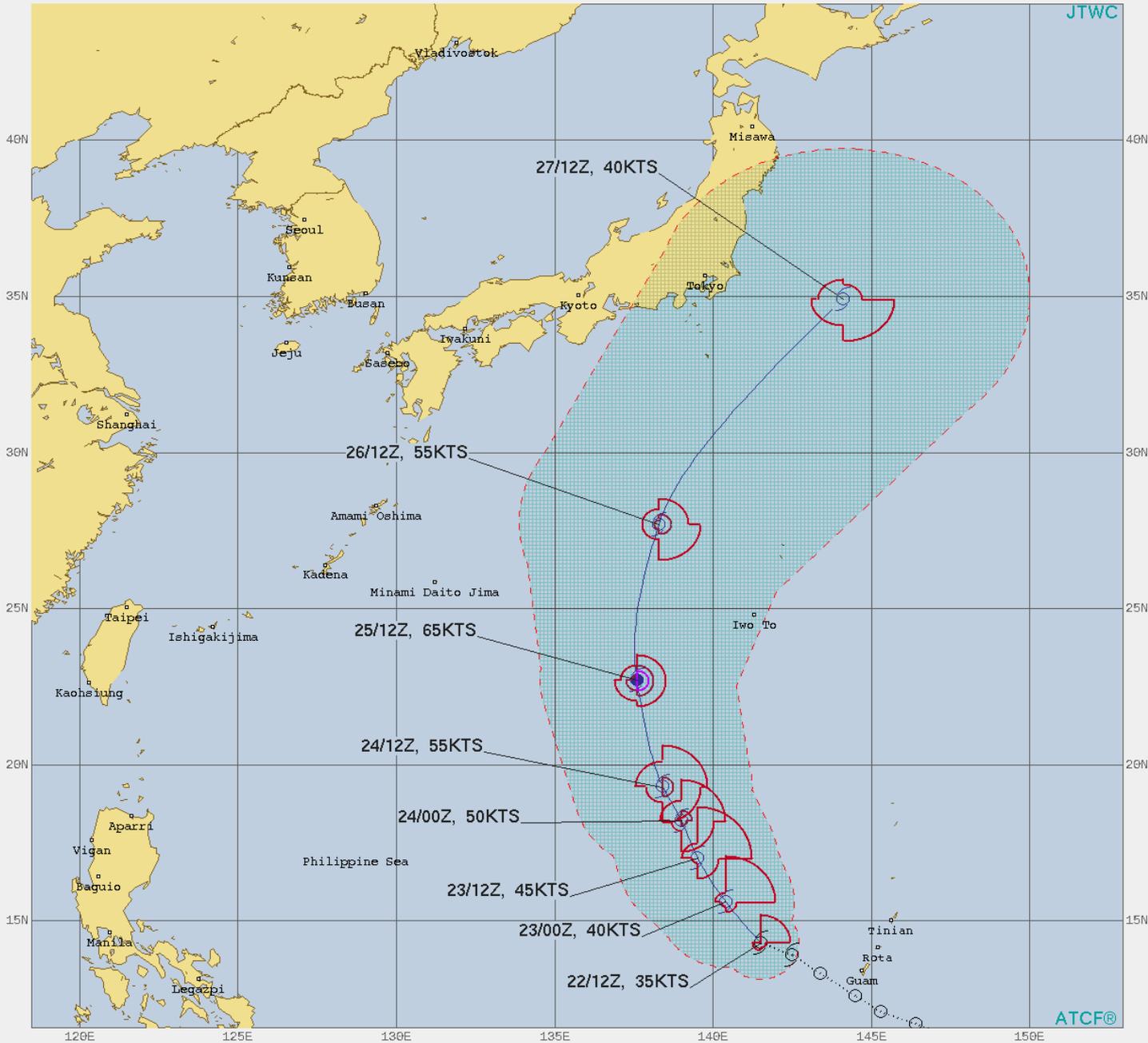
National Hurricane Center Miami, Florida



Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants



JTWC

TROPICAL STORM 06W (SIX) WARNING #7
 WTPN31 PGTW 221500
 221200Z POSIT: NEAR 14.3N 141.5E
 MOVING 295 DEGREES TRUE AT 10 KNOTS
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 13 FEET
 22/12Z, WINDS 035 KTS, GUSTS TO 045 KTS
 23/00Z, WINDS 040 KTS, GUSTS TO 050 KTS
 23/12Z, WINDS 045 KTS, GUSTS TO 055 KTS
 24/00Z, WINDS 050 KTS, GUSTS TO 065 KTS
 24/12Z, WINDS 055 KTS, GUSTS TO 070 KTS
 25/12Z, WINDS 065 KTS, GUSTS TO 080 KTS
 26/12Z, WINDS 055 KTS, GUSTS TO 070 KTS
 27/12Z, WINDS 040 KTS, GUSTS TO 050 KTS

CPA TO:	NM	DTG
IWO_TO	199	06/26/02Z
CHICHI_JJIMA	207	06/26/15Z
CAMP_FUJII	215	06/27/07Z
ATSUGI	203	06/27/08Z
CAMP_ZAMA	203	06/27/08Z
YOKOSUKA	184	06/27/08Z
YAKOTA_AB	214	06/27/08Z
NARITA_AIRPORT	175	06/27/09Z

BEARING AND DISTANCE	DIR	DIST (NM)	TAU (HRS)
ANATAHAN	243	274	0
ANDERSEN_AFB	282	202	0
FAIS	012	276	0
HAGATNA	288	201	0
NAVSTA_GUAM	287	188	0
ROTA	274	216	0
SAIPAN	259	248	0
TINIAN	261	242	0
ULITHI	023	287	0
WFO_GUAM	284	198	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®

Storm Track Density Distribution, IC=20210621
Week 1 Forecast: 0623-0629

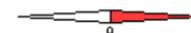
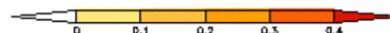
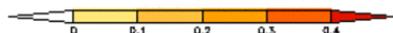
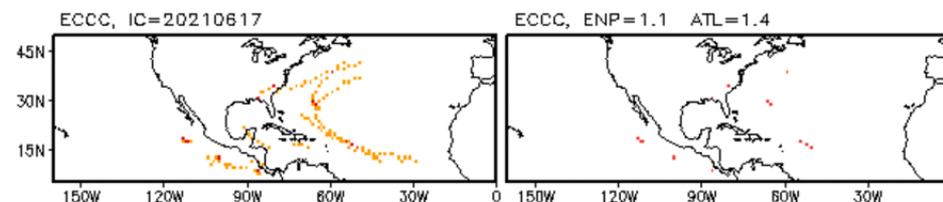
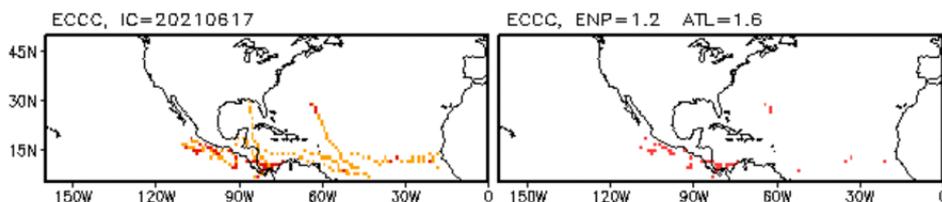
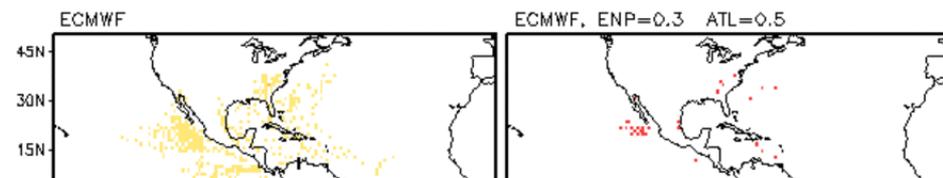
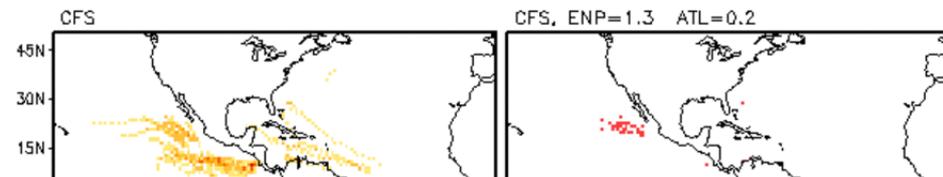
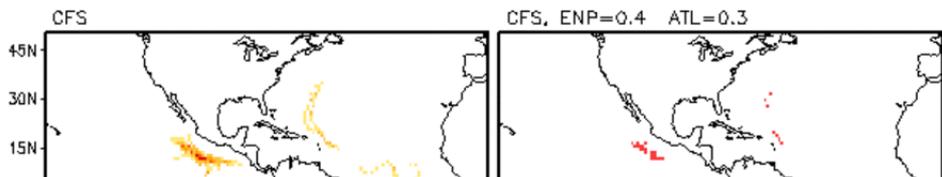
Storm Track Density Distribution, IC=20210621
Week 2 Forecast: 0630-0706

TRACK DENSITY

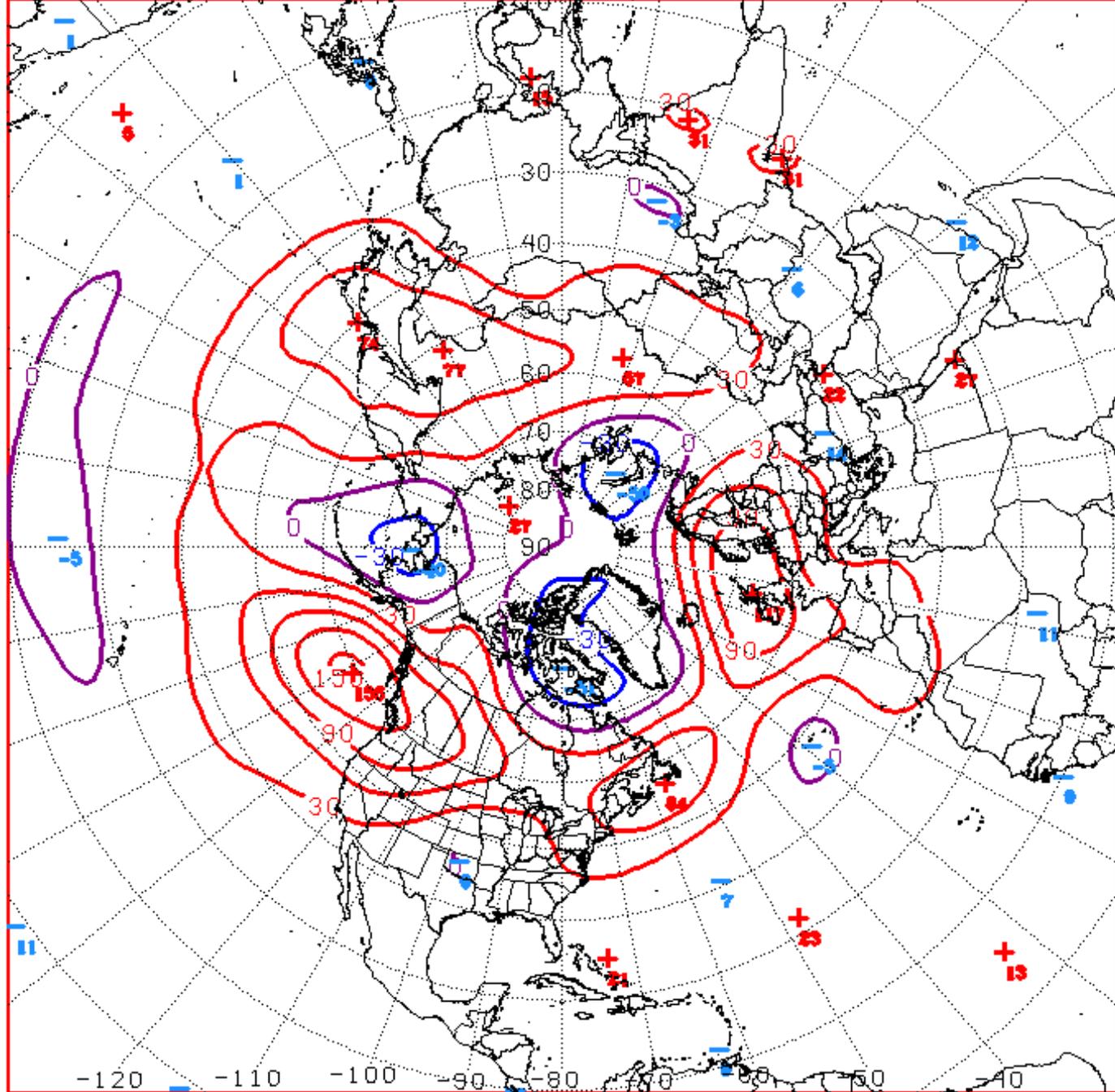
FILTERED

TRACK DENSITY

FILTERED

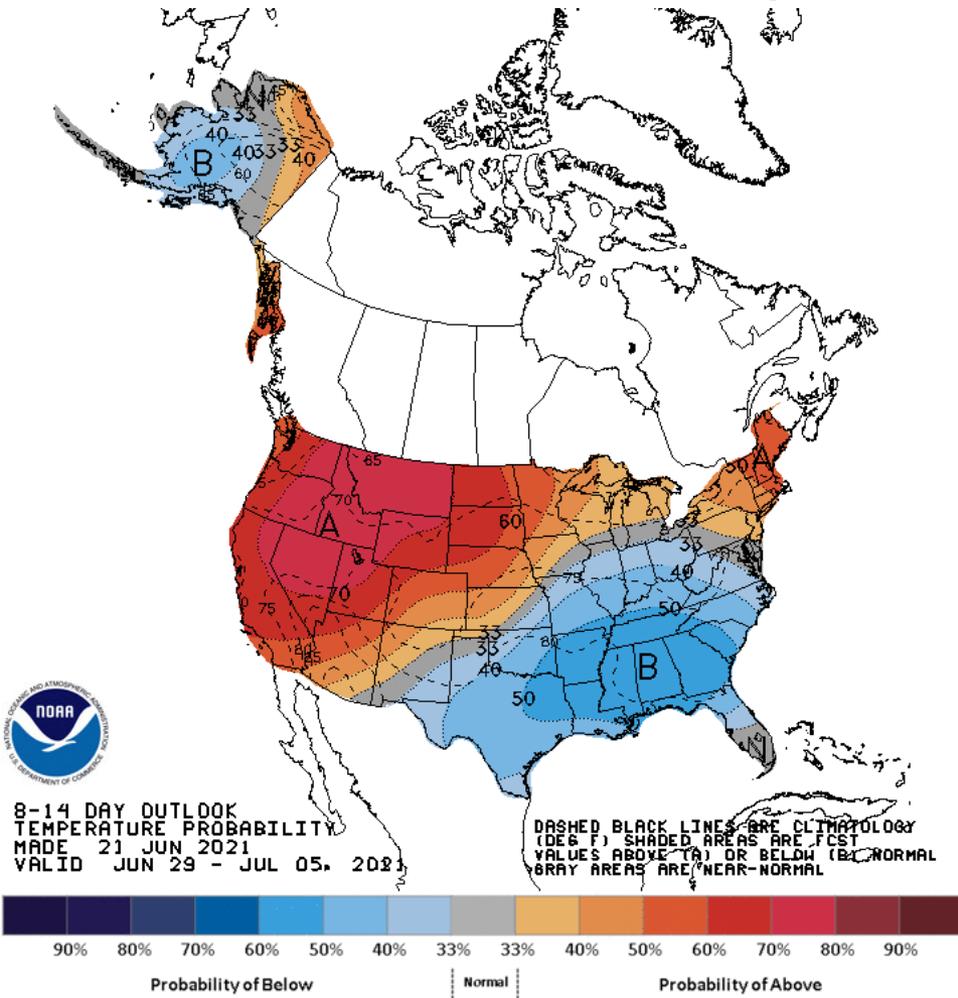


Connections to U.S. Impacts

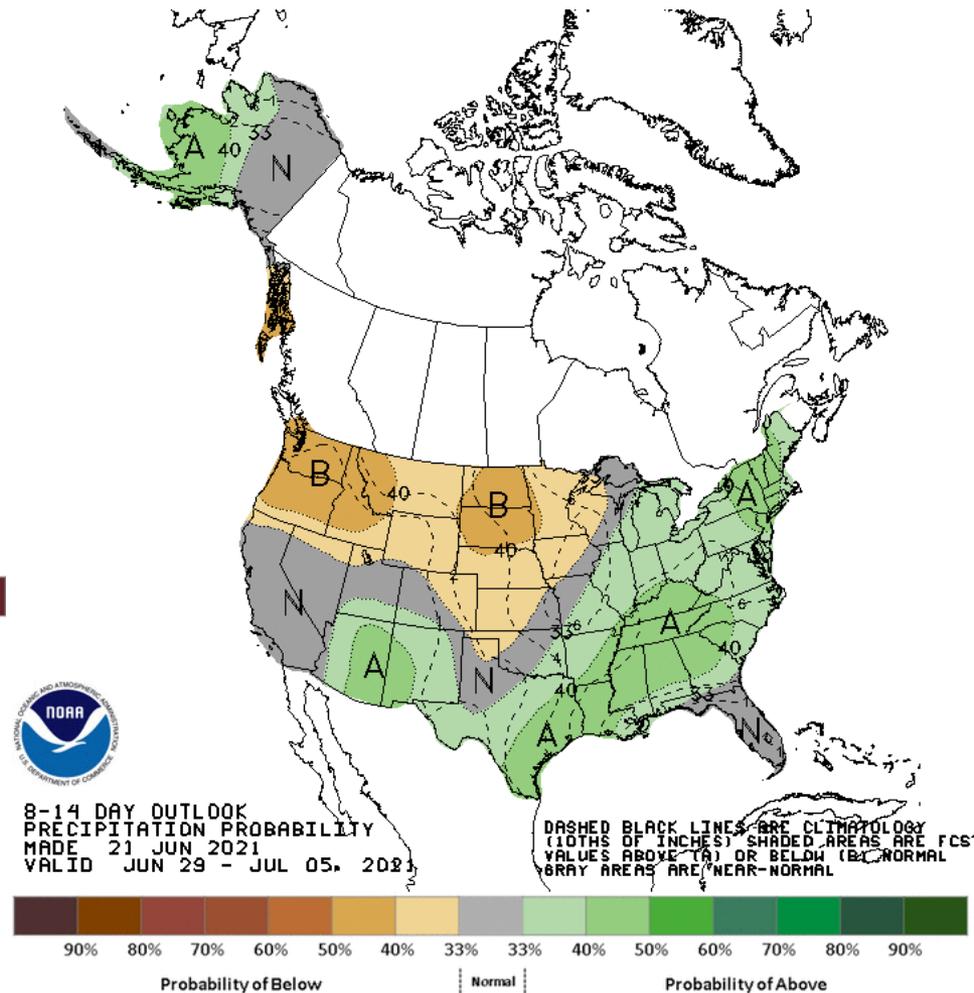


D+11 500 MB ANOMALIES FROM 00Z ECMM
 CPC MAP MADE JUN 22 2021 1024 UTC CNTD JUL 03 2021

Week 2 – Temperature and Precipitation



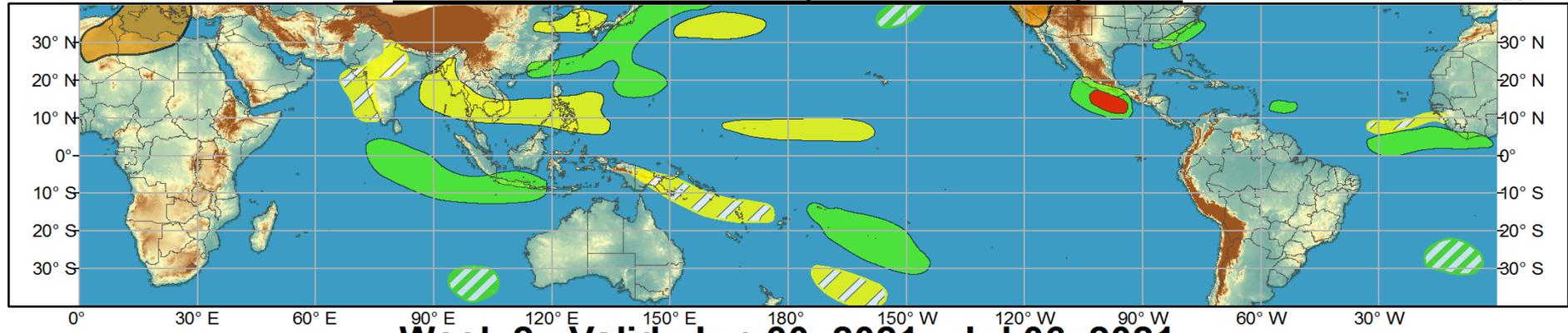
Above-normal temperatures chances are likely to increase today over the Southwest and Lower Mississippi Valley.





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