

Global Tropics Hazards And Benefits Outlook

8/31/2021

Nick Novella

Outline

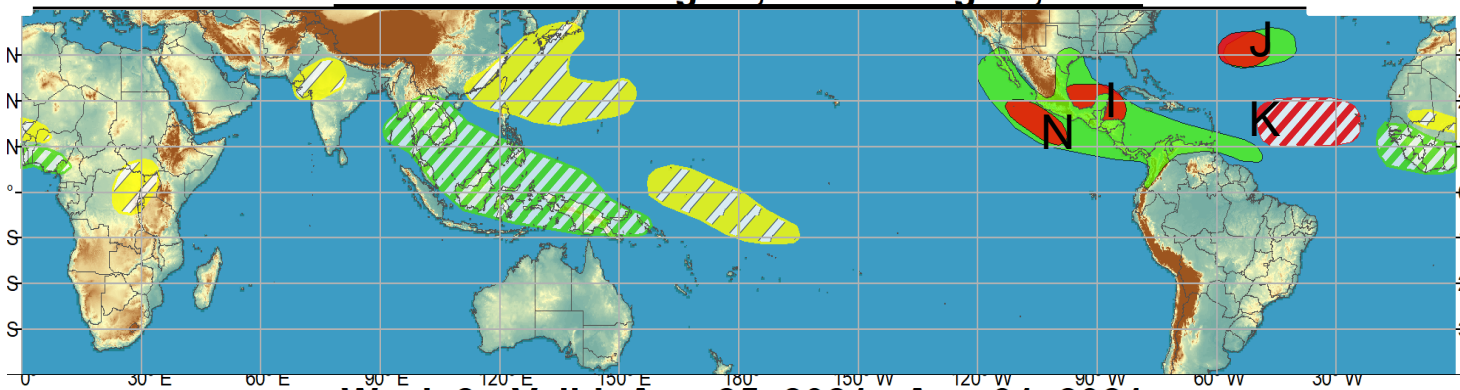
1. Review of Recent Conditions
2. Synopsis of Climate Modes
3. GTH Outlook and Forecast Discussion
4. Connections to U.S. Impacts

Outlook Review

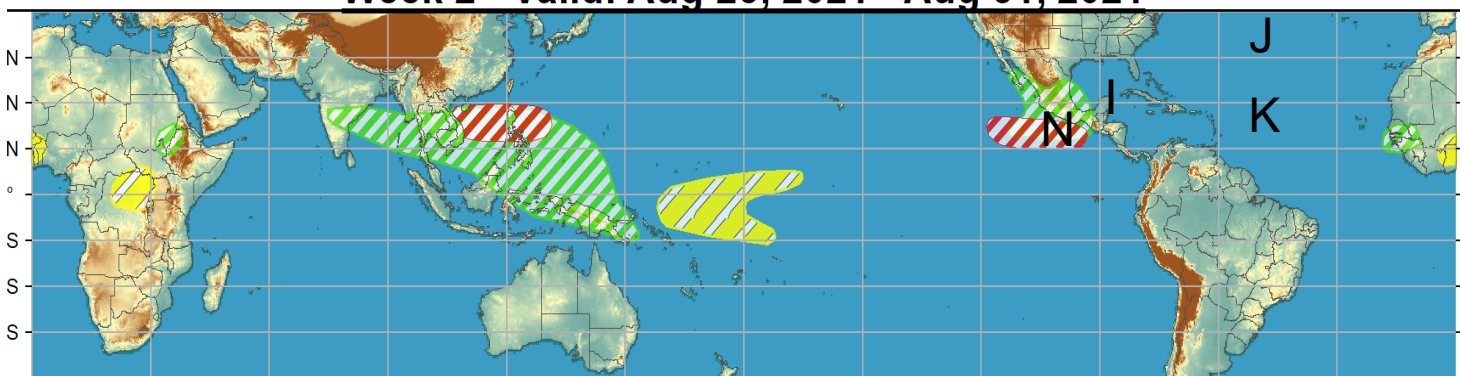
TC formed since 8/25

- Ida (8/26)
- Nora (8/25)
- Kate (8/27)
- Julian (8/28)

Week 1 - Valid: Aug 25, 2021 - Aug 31, 2021

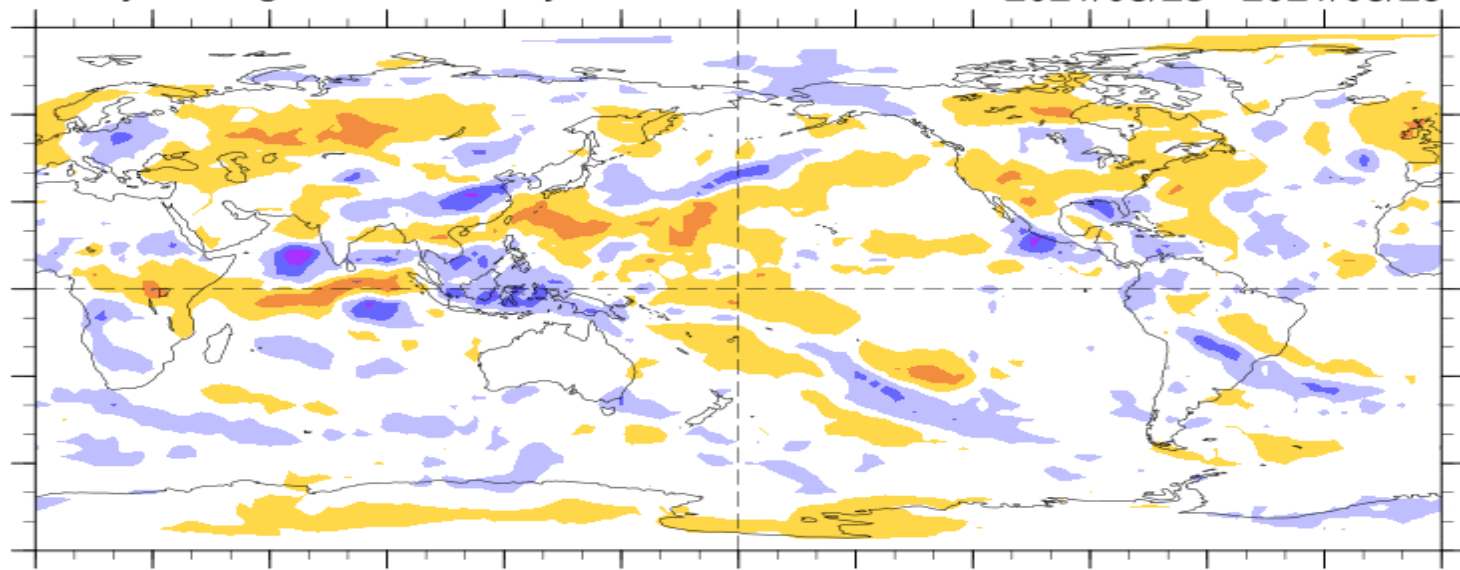


Week 2 - Valid: Aug 25, 2021 - Aug 31, 2021



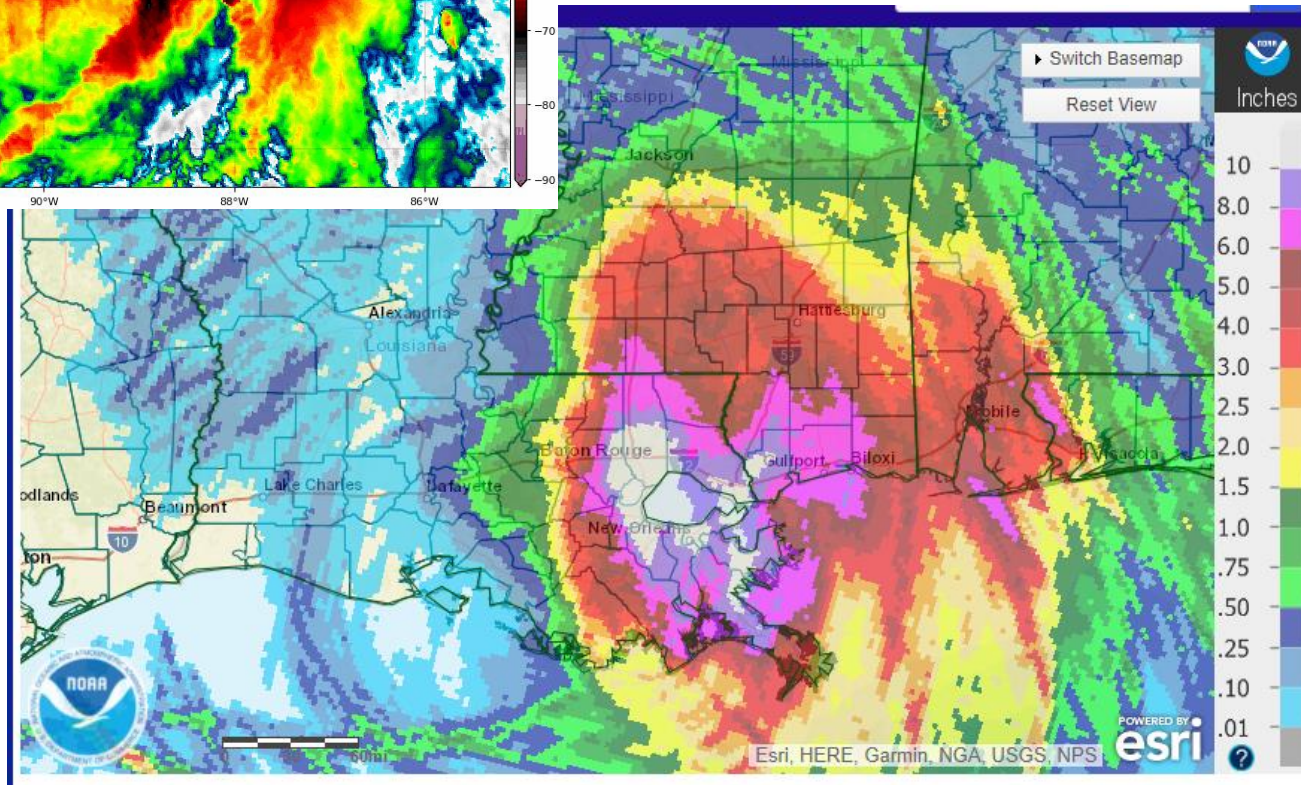
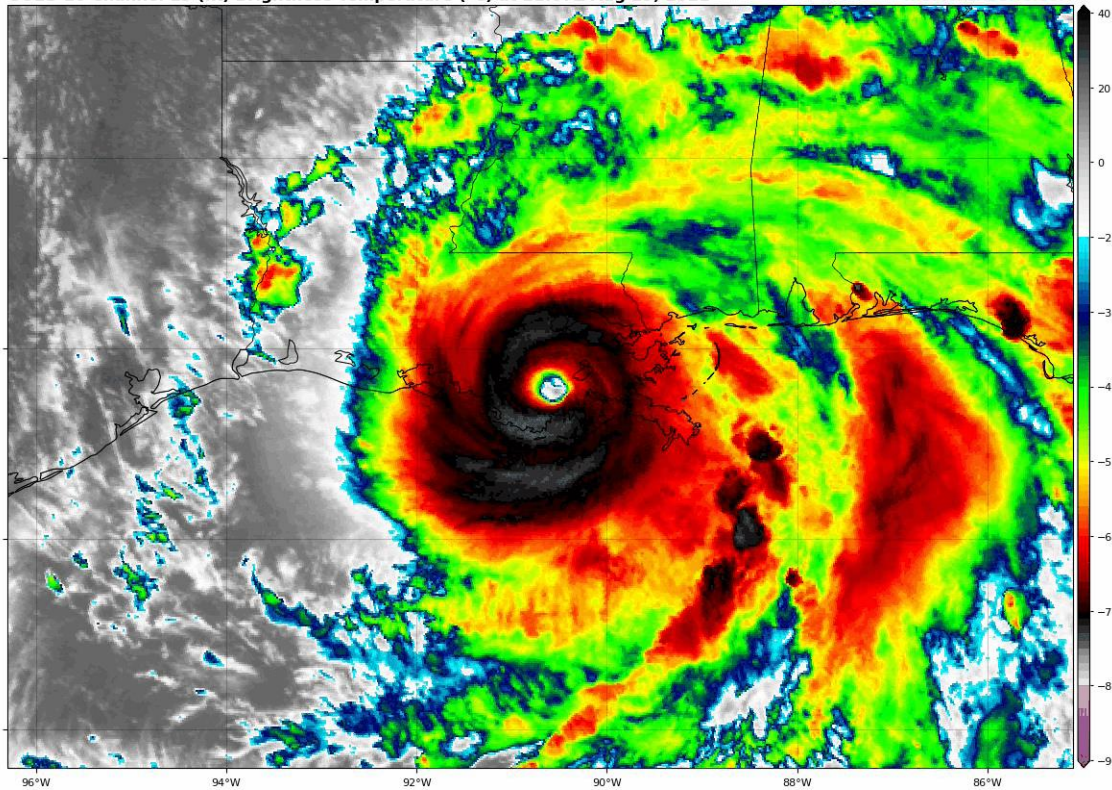
7-Day Average OLR Anomaly

2021/08/23 - 2021/08/29



Cool shading
More clouds/rain

Warm shading
Less clouds/rain



Ida made landfall @
130kts ~17z 8/29

Synopsis of Climate Modes

ENSO: (August 12, 2021 Update)

- ENSO Alert System Status: [La Niña Watch](#)
- ENSO-neutral is favored for the remainder of the Northern Hemisphere summer and probabilities of La Niña increasing to 60 percent by September-October-November.

MJO and other subseasonal tropical variability:

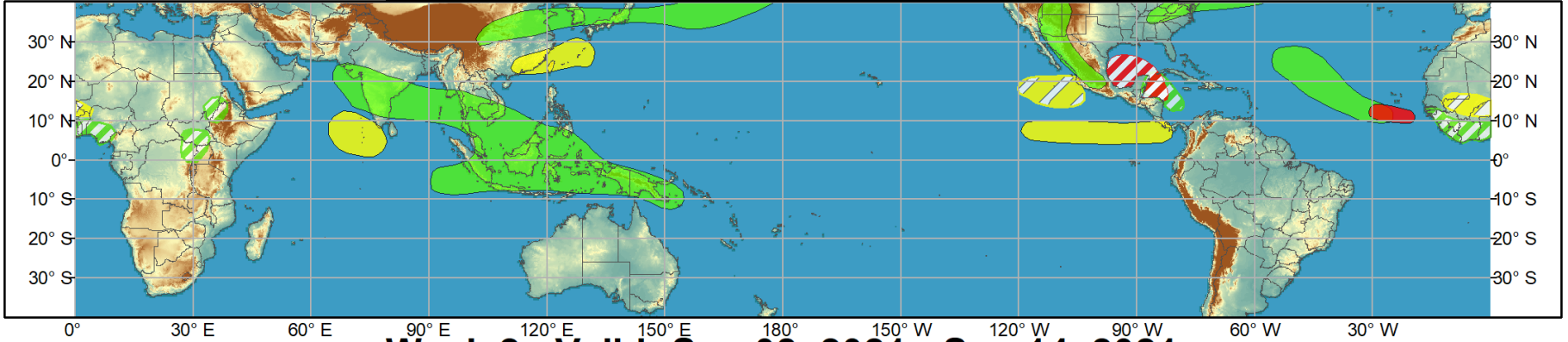
- The MJO continues to be disorganized following a period of interference with other modes of tropical variability. RMM index observations show that the intraseasonal signal has remained in phase 2 since mid-August.
- There are indications in the RMM dynamical models forecasts for renewed eastward propagation of the MJO, but differ in regards to its evolution and strength.
- There continues to be model support for tropical cyclone development in the eastern Pacific and Atlantic through mid-September.



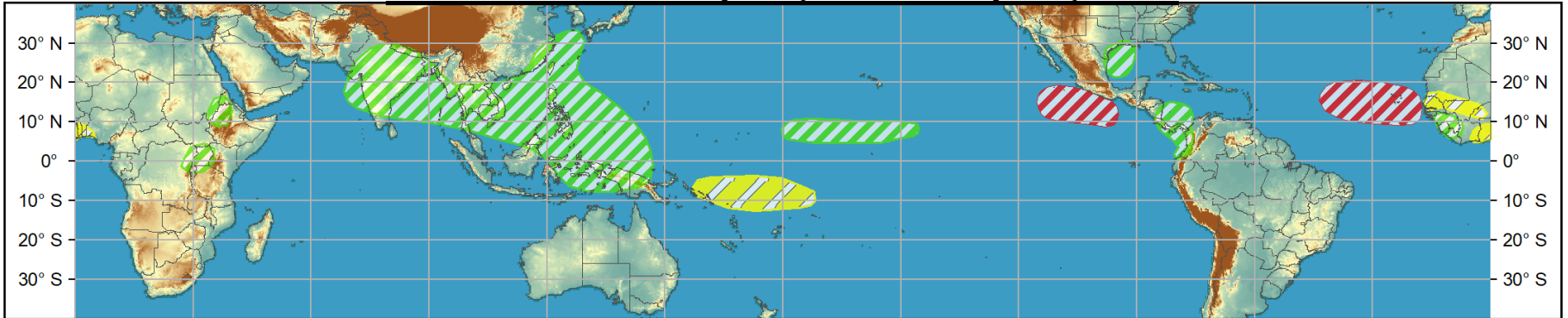
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Sep 01, 2021 - Sep 07, 2021



Week 2 - Valid: Sep 08, 2021 - Sep 14, 2021



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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Produced: 08/31/2021
Forecaster: Novella

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IR Satellite & 200-hpa Velocity Potential Anomalies

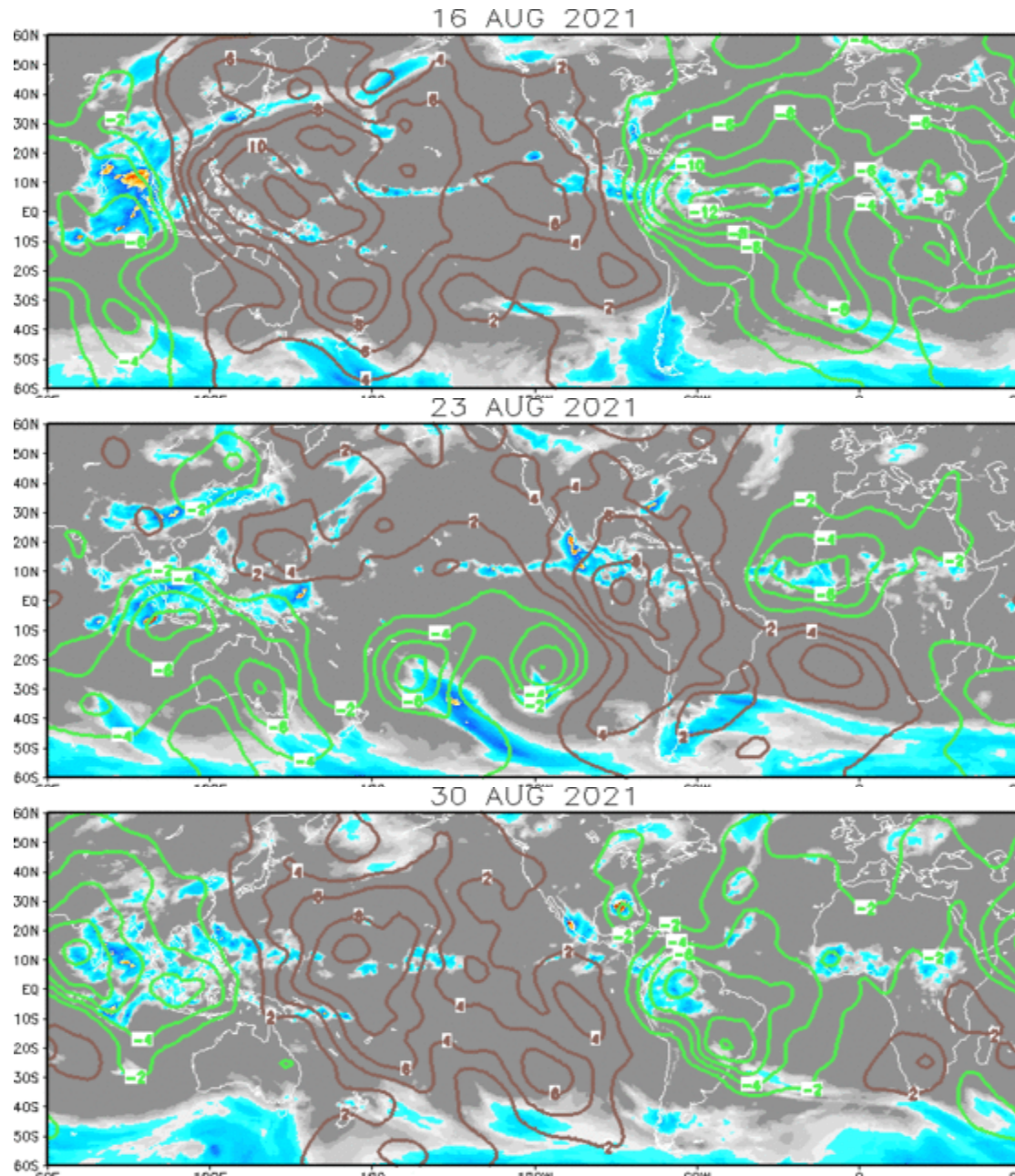
Green: Enhanced Divergence

Brown: Enhanced Convergence

Anomalous upper-level divergence persists over the tropical Atlantic and Africa, but anomalous upper-level convergence shifting east of the Date Line.

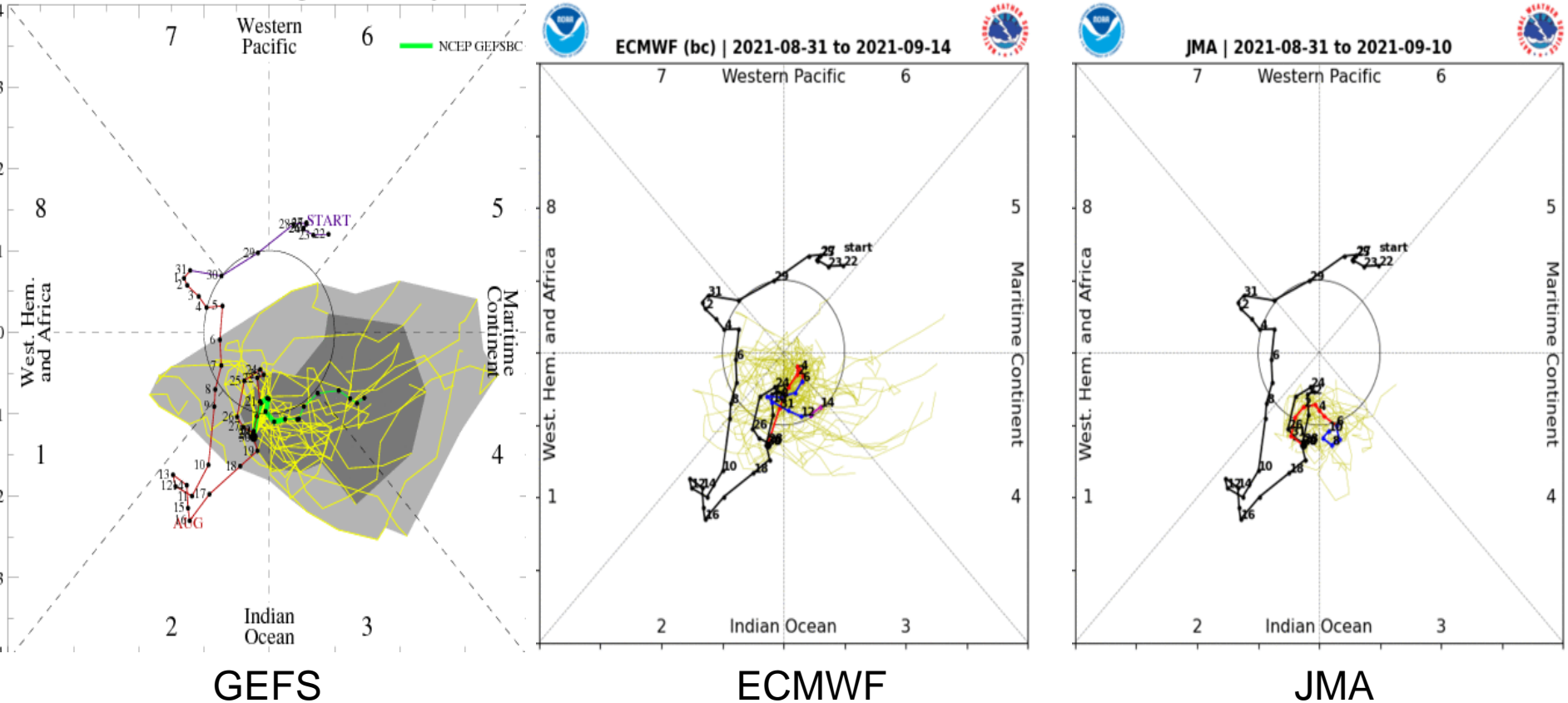
Spatial wave-1 pattern became less coherent by late August, consistent with a weakening MJO.

Upper-level pattern shows two centers of action associated with the stalled main convective envelope over Indian Ocean and a Kelvin Wave over the Americas / Atlantic



MJO Observation/Forecast

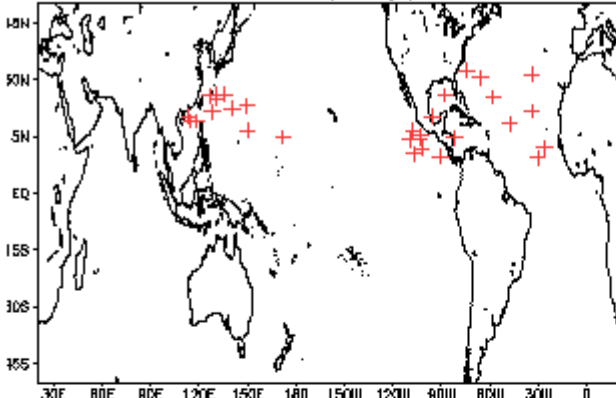
[RMM1, RMM2] forecast for Aug-31-2021 to Sep-14-2021



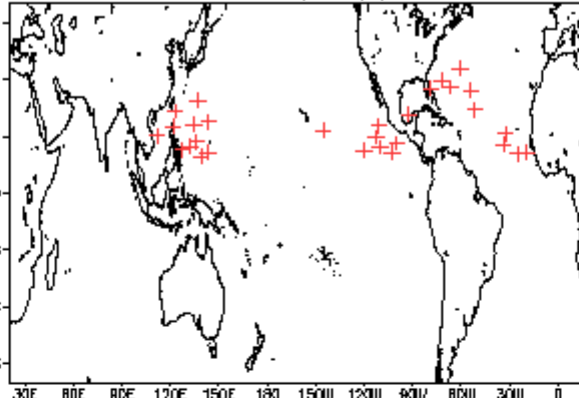
Some models point to the resumption of an eastward propagating signal across the Indian Ocean (week-1) and into the Maritime Continent (week-2) at a low amplitude. However, other models are less supportive of this realization, maintaining a slower and weaker signal over the Indian Ocean during the next two weeks.

September Tropical Storm Formation by MJO phase

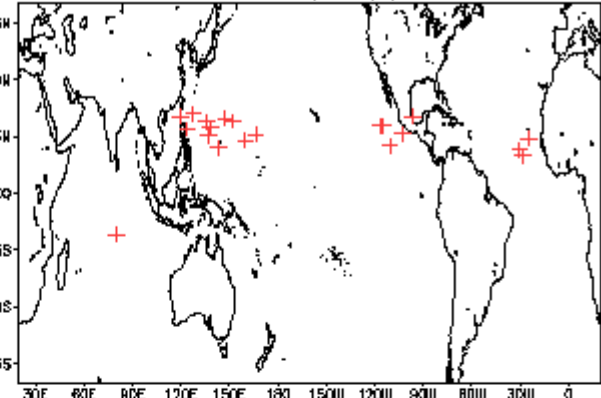
Phase 1 (81 days) 31 storms



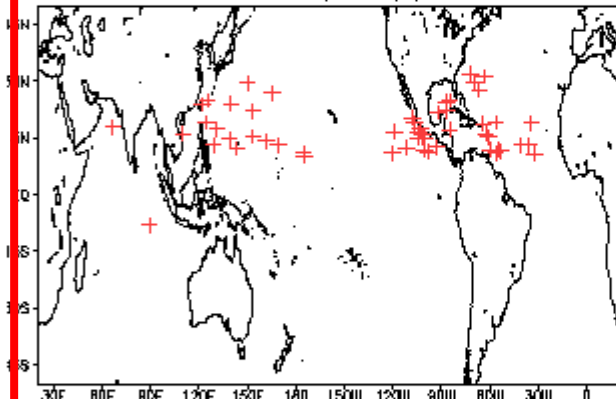
Phase 4 (70 days) 30 storms



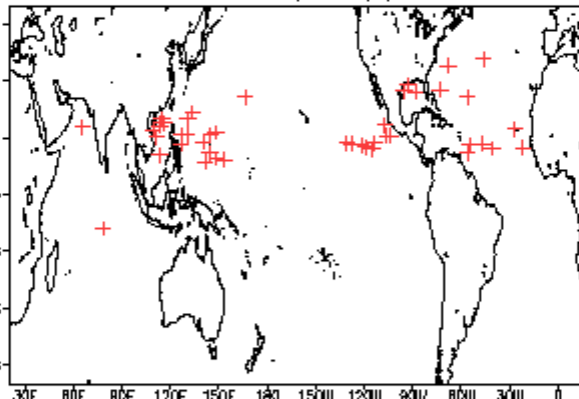
Phase 7 (38 days) 22 storms



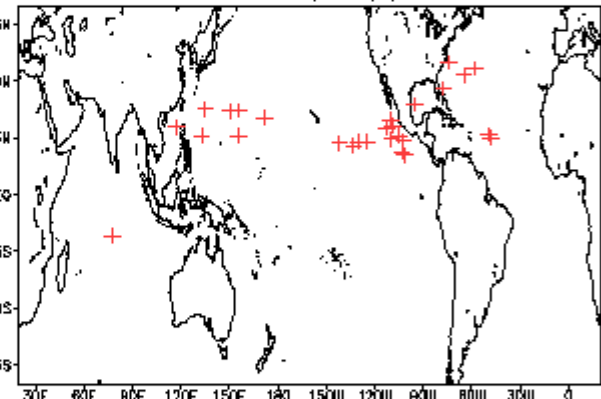
Phase 2 (122 days) 56 storms



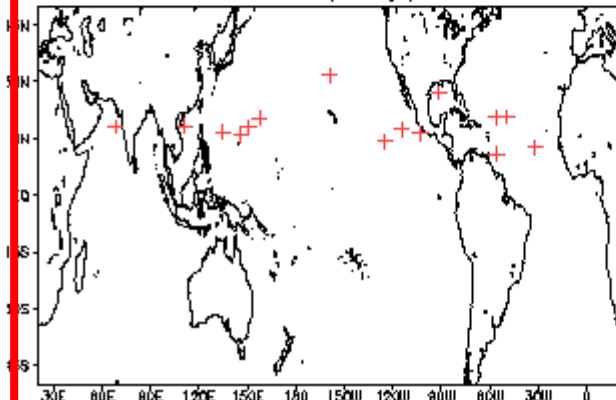
Phase 5 (106 days) 45 storms



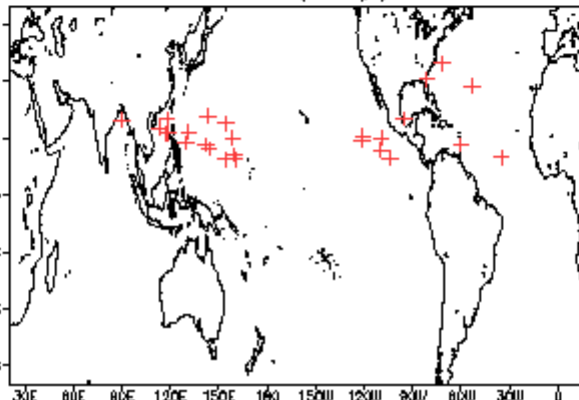
Phase 8 (67 days) 29 storms



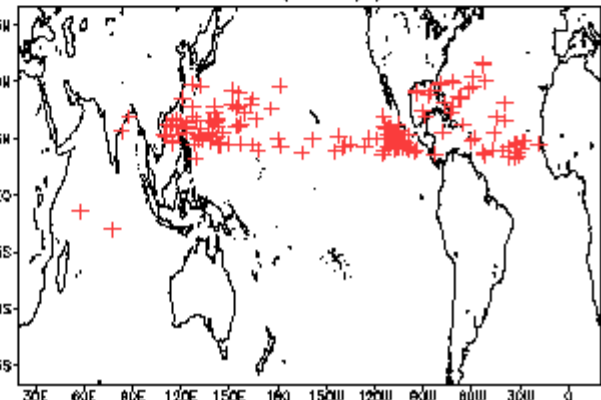
Phase 3 (51 days) 16 storms

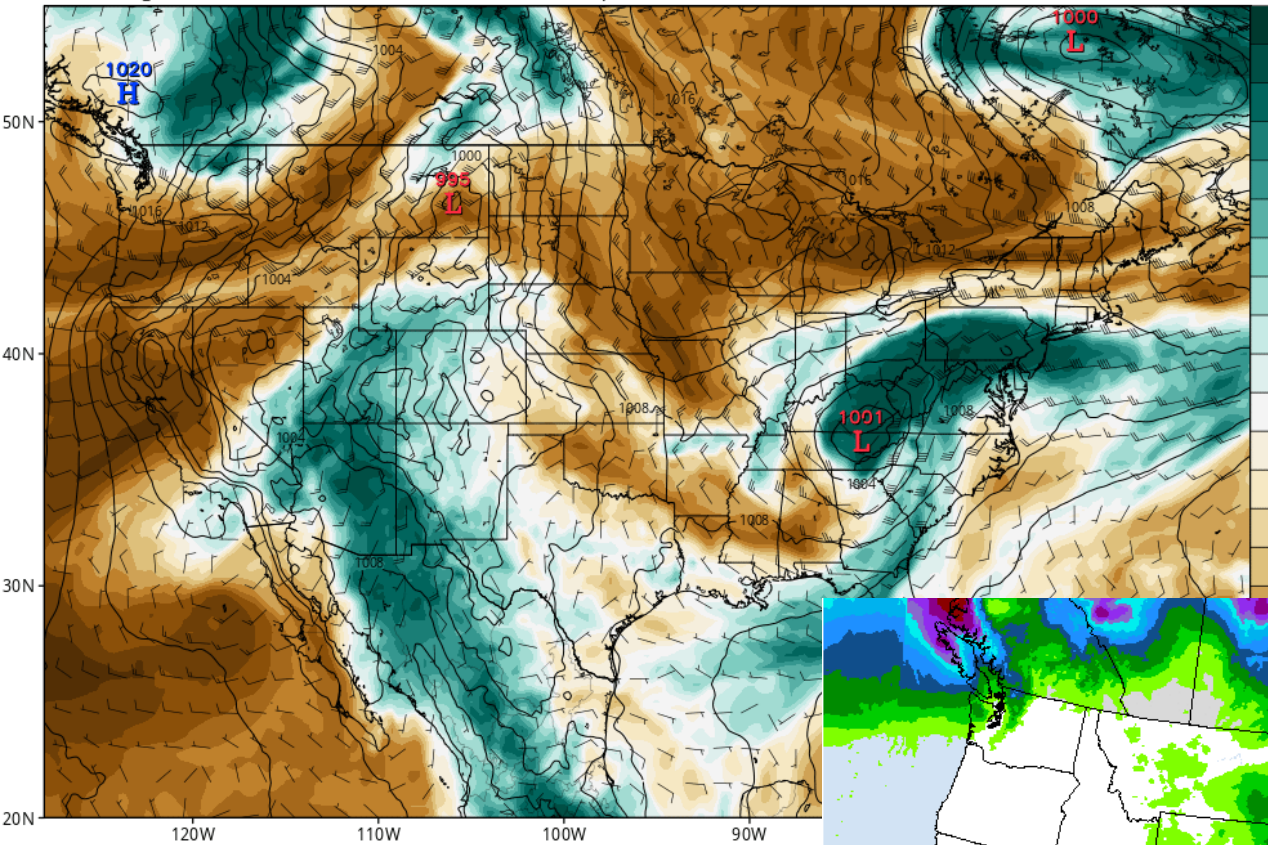


Phase 6 (61 days) 27 storms

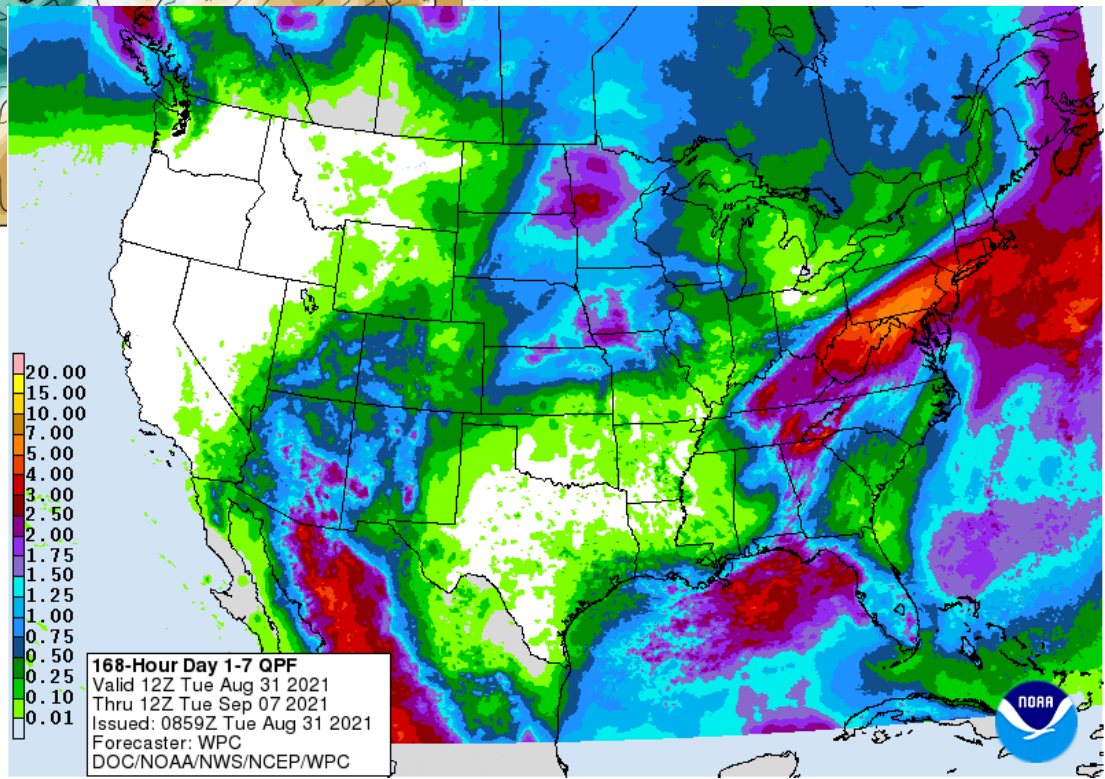


Null (393 days) 169 storms





Week-1 impacts from
Nora and Ida

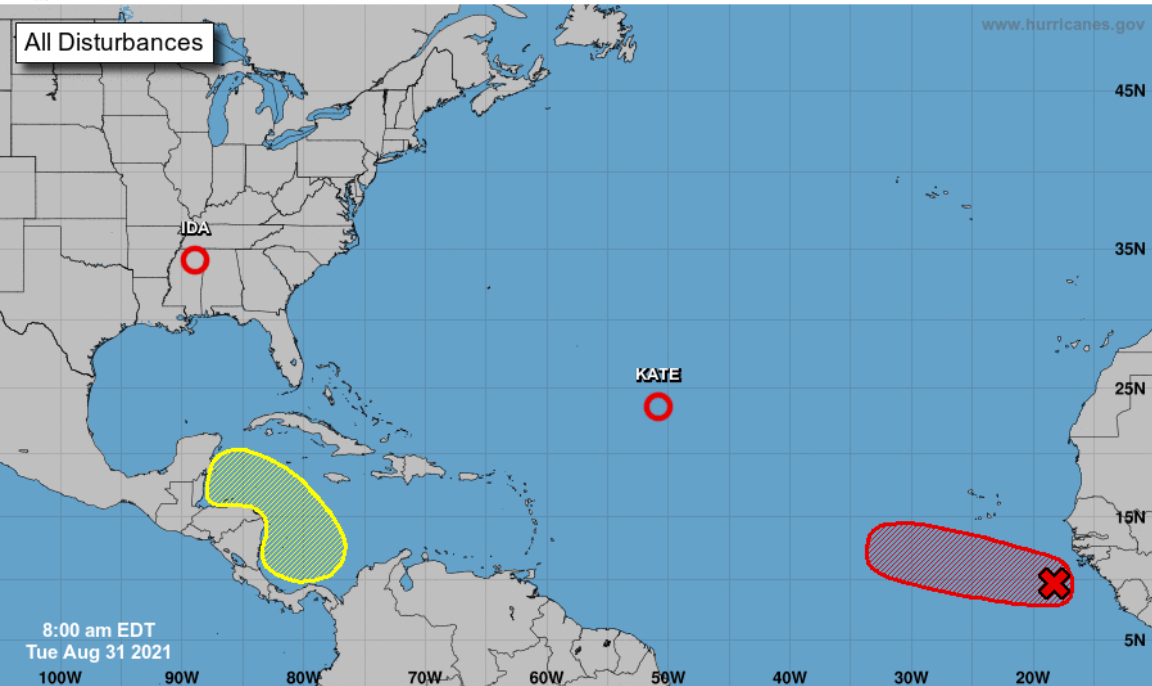


168-Hour Day 1-7 QPF
Valid 12Z Tue Aug 31 2021
Thru 12Z Tue Sep 07 2021
Issued: 0859Z Tue Aug 31 2021
Forecaster: WPC
DOC/NOAA/NWS/NCEP/WPC



Five-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



8:00 am EDT
Tue Aug 31 2021

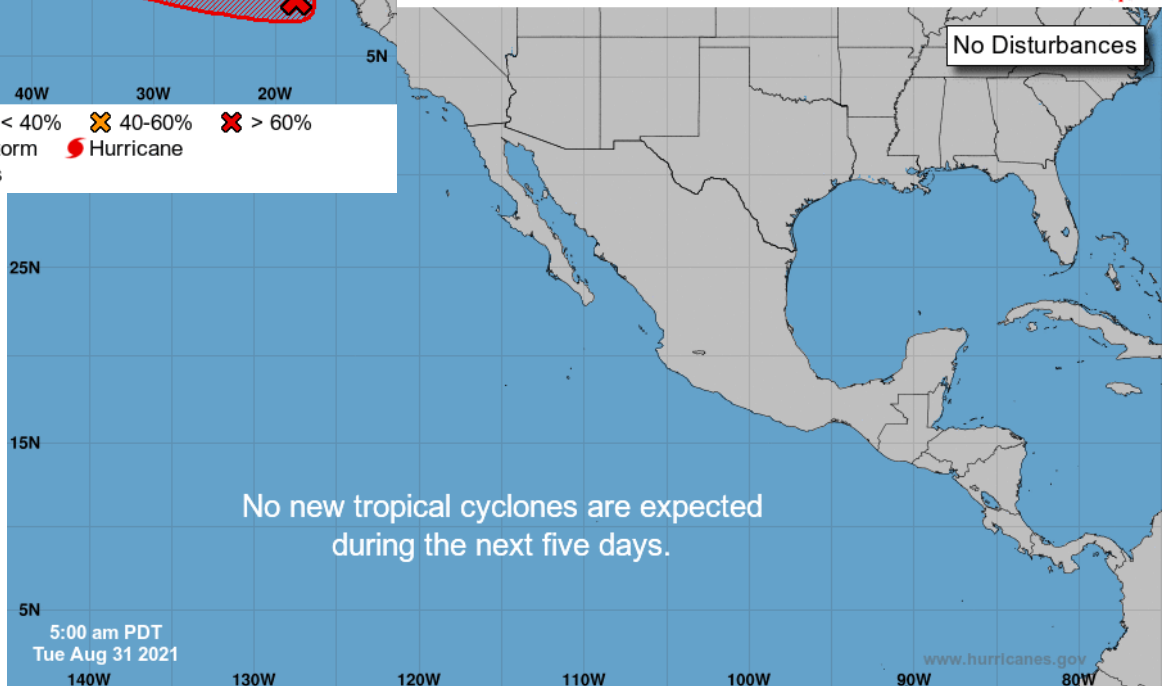
Current Disturbances and Five-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



No Disturbances

No new tropical cyclones are expected during the next five days.

5:00 am PDT
Tue Aug 31 2021

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

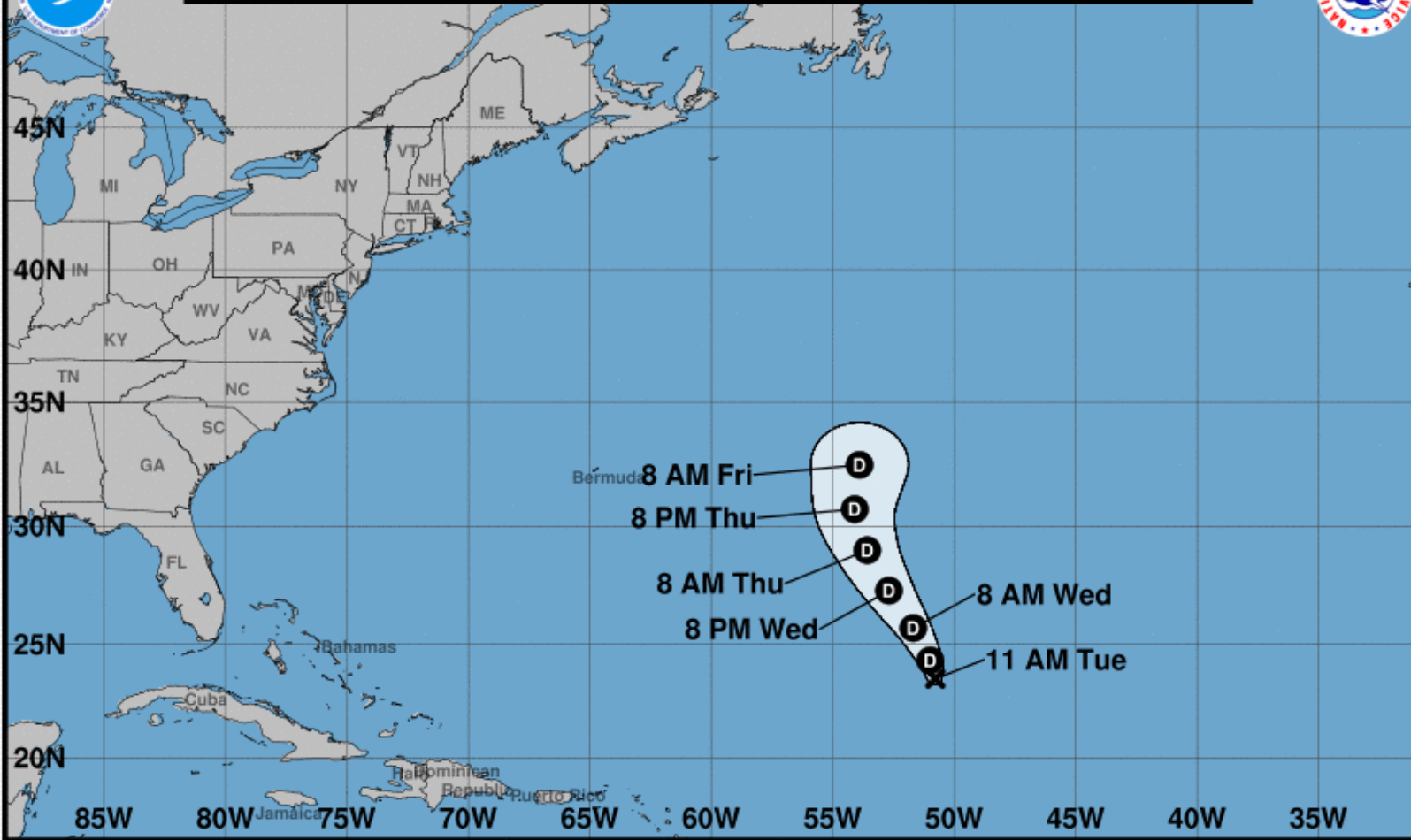
Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants

www.hurricanes.gov



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.



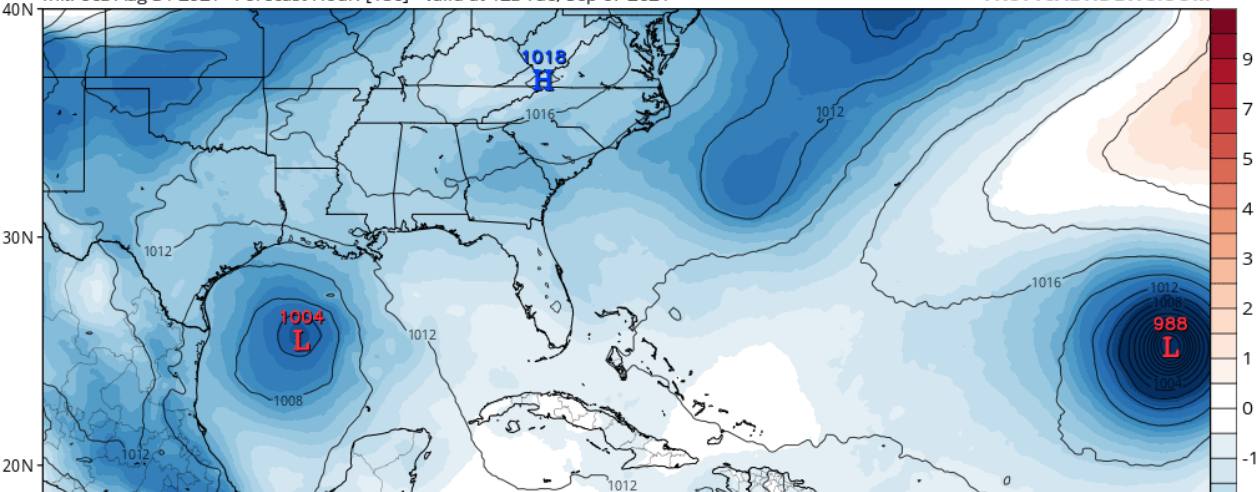
<p>Tropical Depression Kate Tuesday August 31, 2021 11 AM AST Advisory 14 NWS National Hurricane Center</p>	<p>Current information: x Center location 23.5 N 50.8 W Maximum sustained wind 35 mph Movement N at 5 mph</p>	<p>Forecast positions: ● Tropical Cyclone ○ Post/Potential TC Sustained winds: D < 39 mph S 39-73 mph H 74-110 mph M > 110 mph</p>
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<p>Potential track area: Day 1-3 Day 4-5</p>	<p>Watches: Hurricane Trop Stm</p>	<p>Warnings: Hurricane Trop Stm</p>	<p>Current wind extent: Hurricane Trop Stm</p>
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GEM MSLP and Anomaly (hPa) (based on CFSR 1981-2010 Climatology)

Init: 00z Aug 31 2021 Forecast Hour: [180] valid at 12z Tue, Sep 07 2021

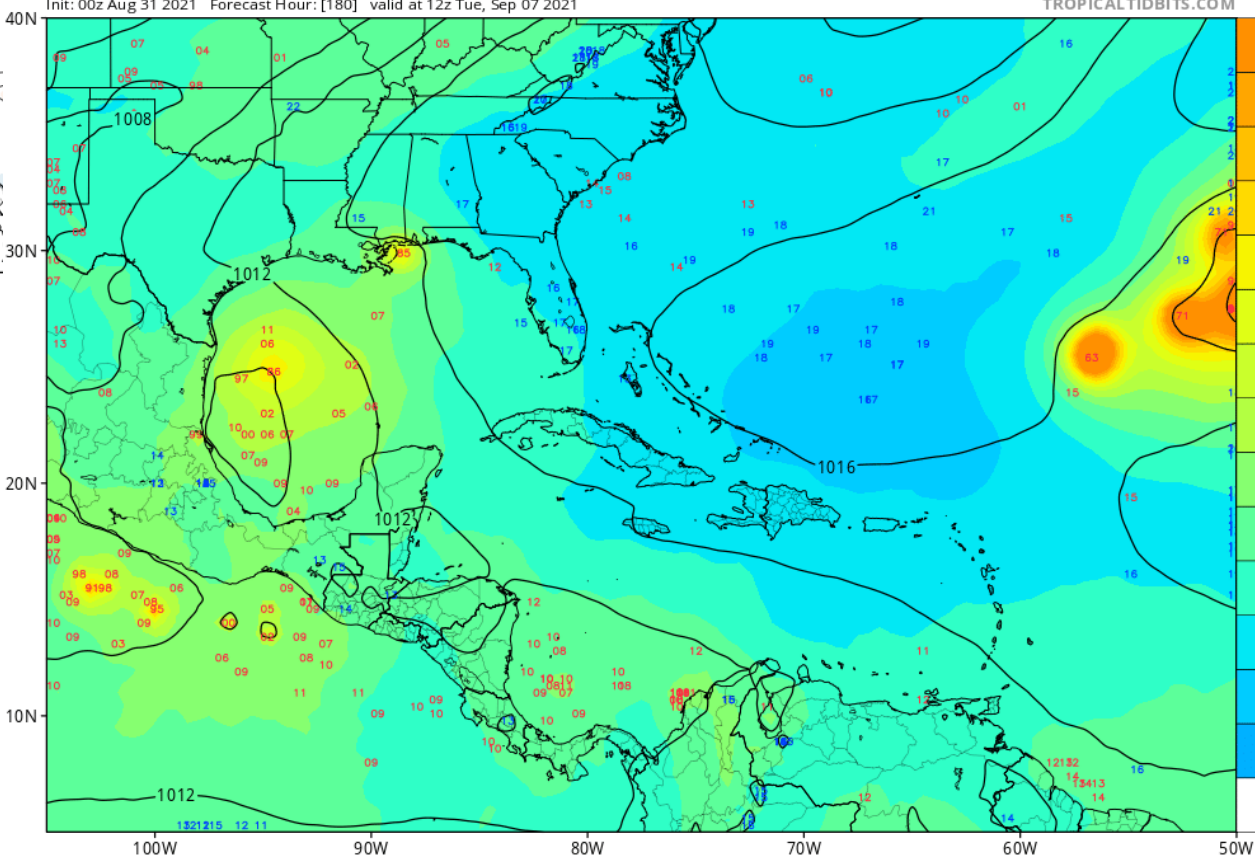
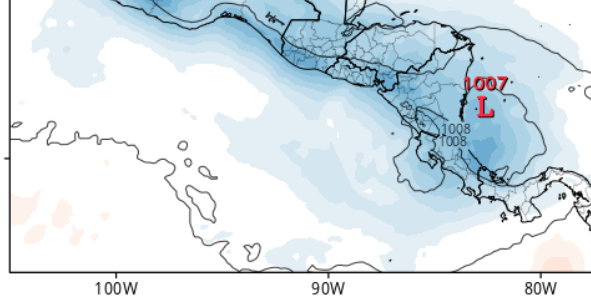
TROPICALTIDBITS.COM



GEFS Mean MSLP (mb), Ensemble Member Pressure Centers (Lows: red | Highs: blue), & Normalized Spread (σ)

Init: 00z Aug 31 2021 Forecast Hour: [180] valid at 12z Tue, Sep 07 2021

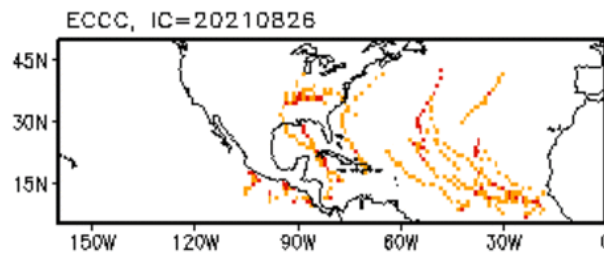
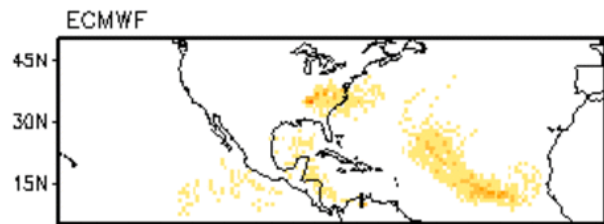
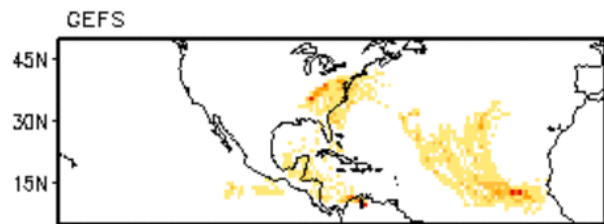
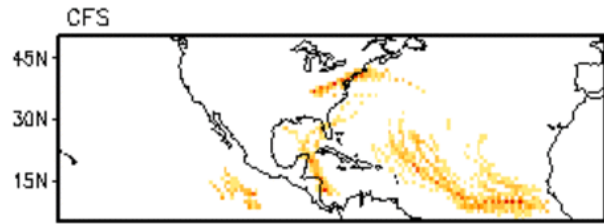
TROPICALTIDBITS.COM



Storm Track Density Distribution, IC=20210830

Week 1 Forecast: 0901-0907

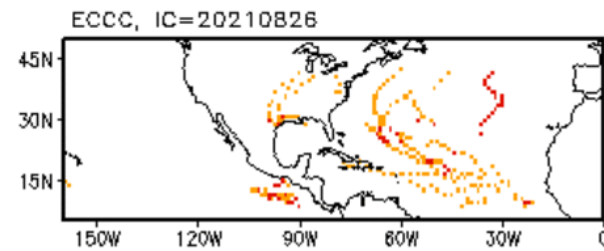
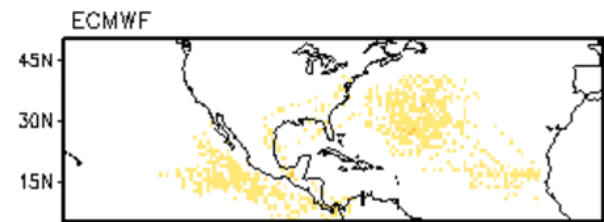
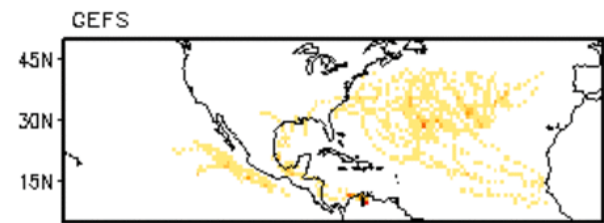
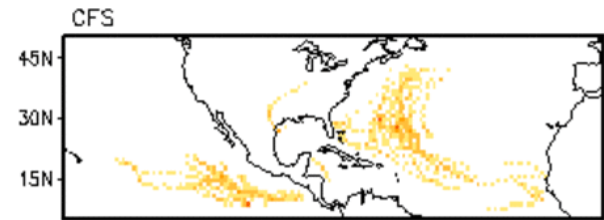
TRACK DENSITY



Storm Track Density Distribution, IC=20210830

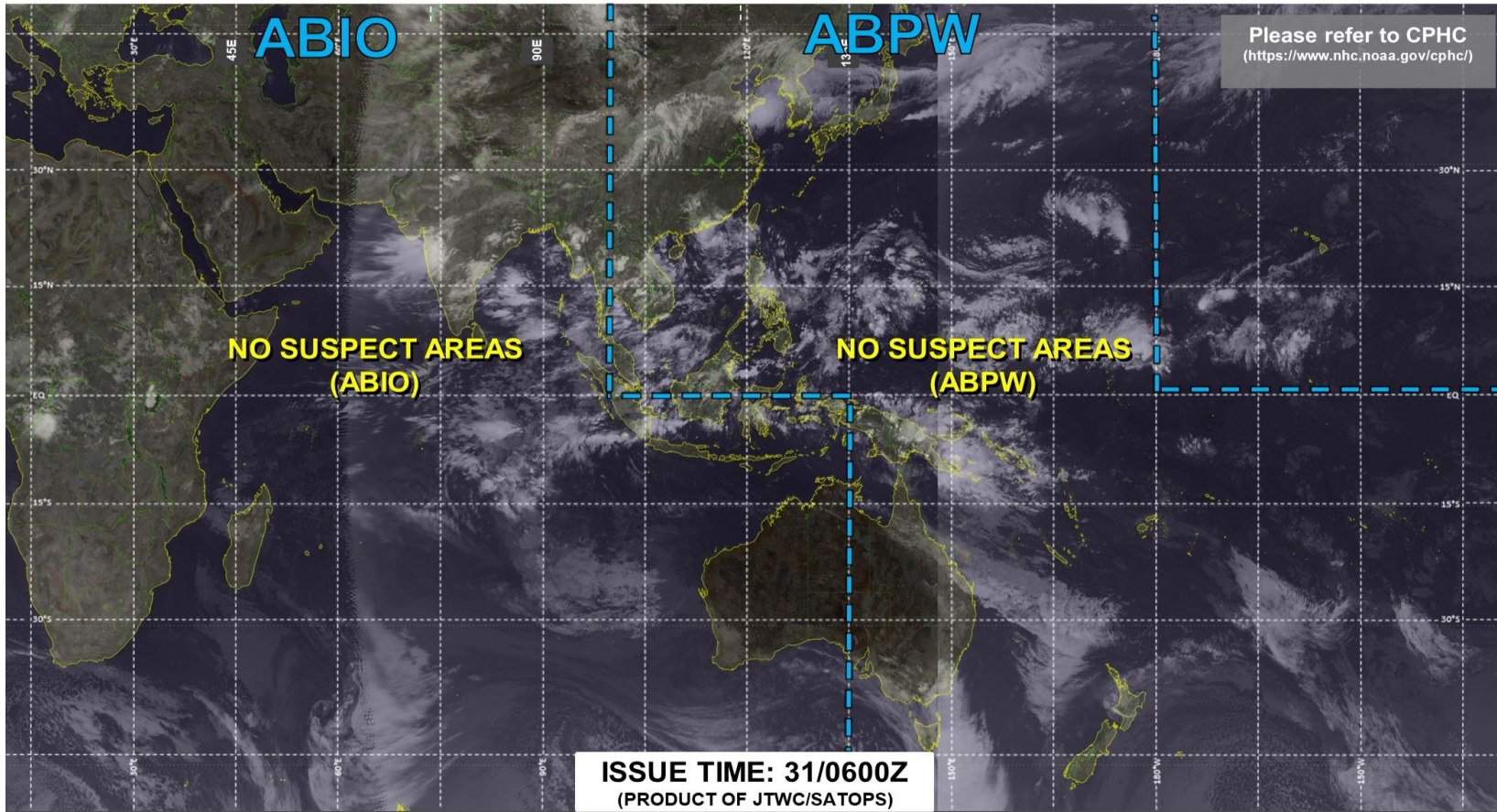
Week 2 Forecast: 0908-0914

TRACK DENSITY





JOINT TYPHOON WARNING CENTER



TC development unlikely within 24 hours



TC development likely, but expected to occur beyond 24 hours



TC development likely within 24 hours (Reference TCFA)

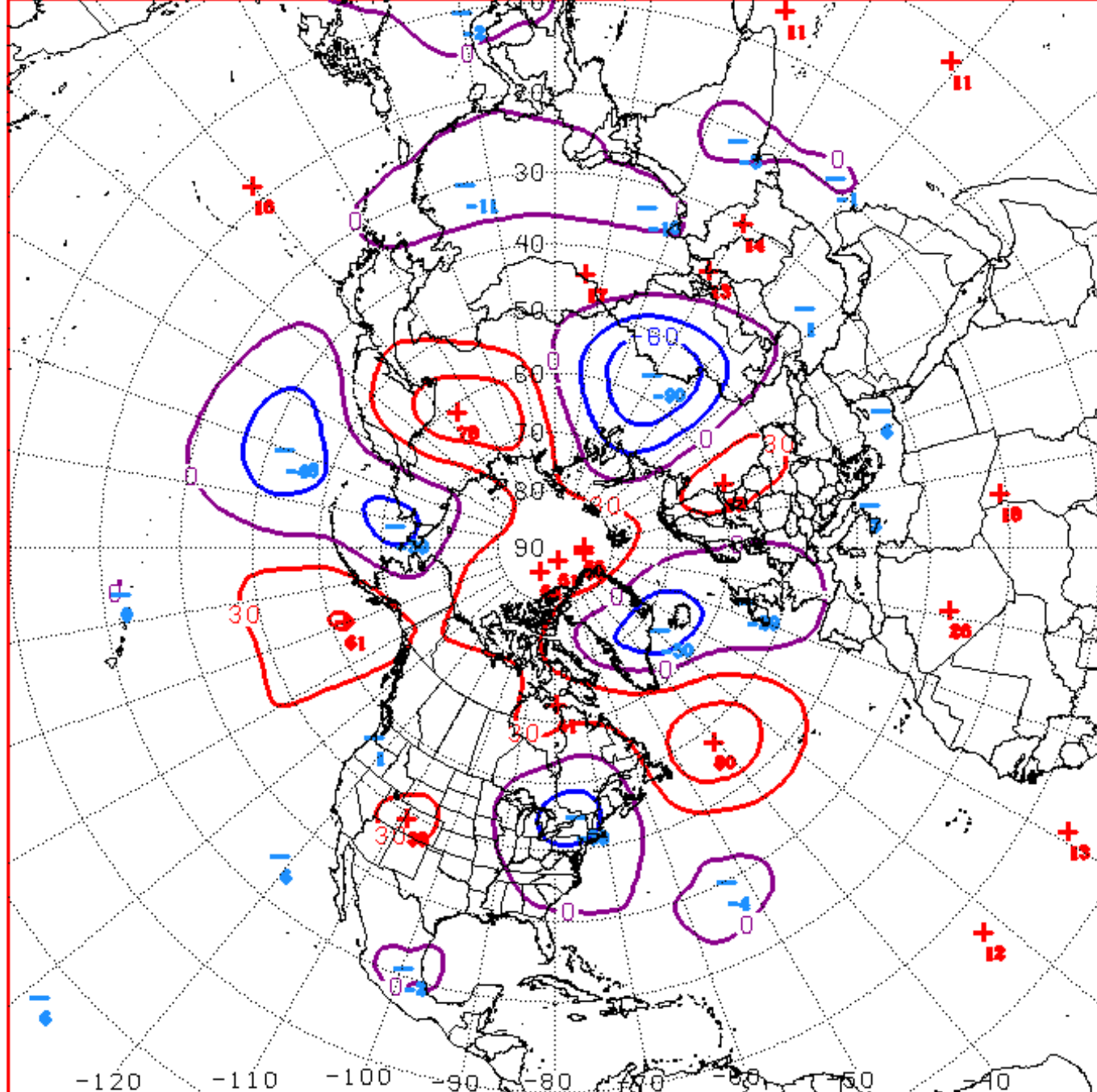


Monitoring for potential transition to TC. Invest label color denotes tropical transition probability



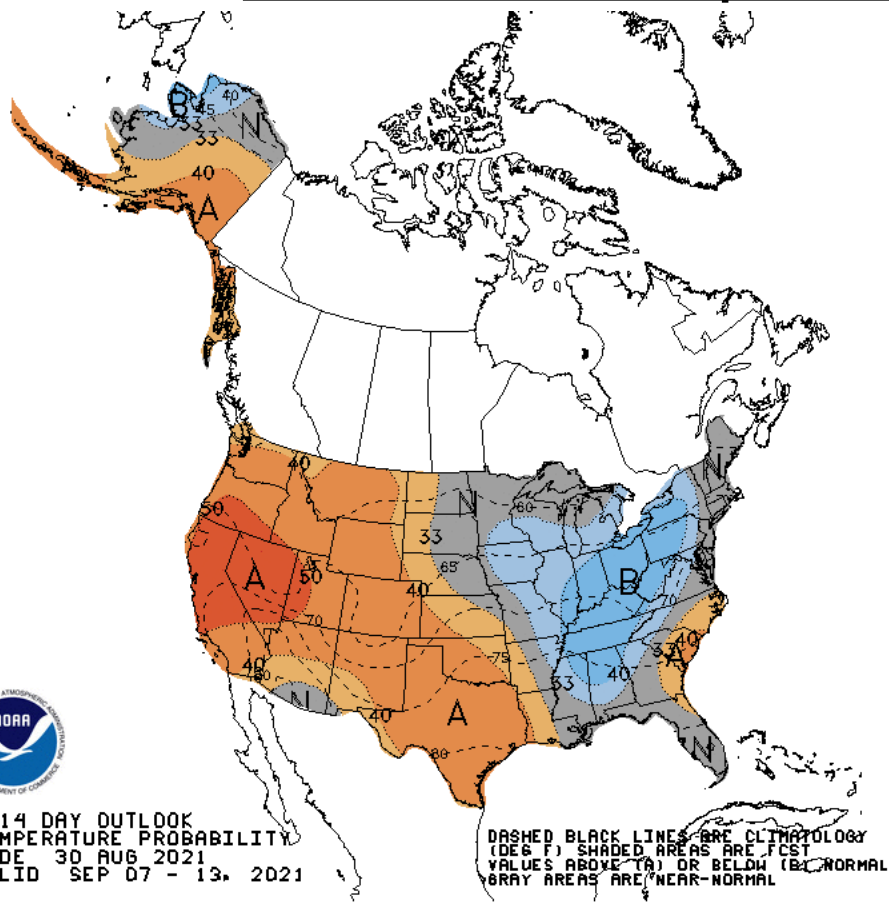
Tropical Cyclone (Reference Warning)

Connections to U.S. Impacts



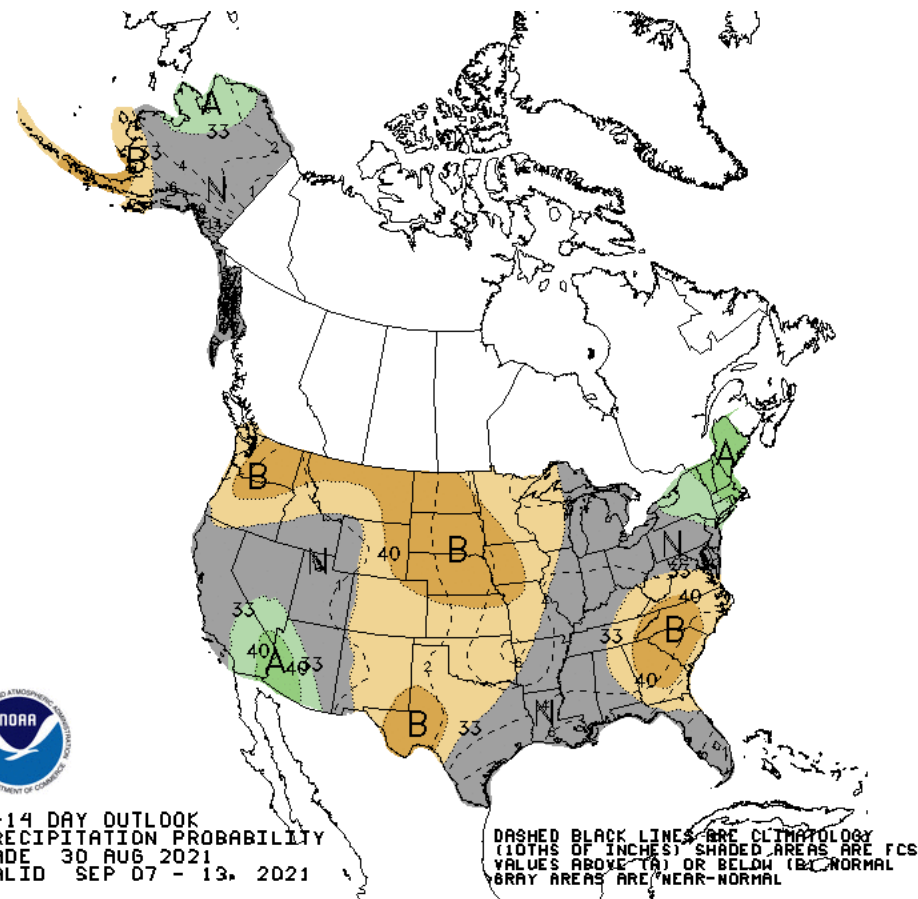
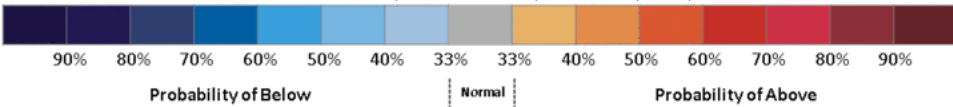
D+11 500 MB ANOMALIES FROM ALZ ENSM
CPC MAP MADE AUG 31 2021 1357 UTC CNTD SEP 11 2021

Week 2 – Temperature and Precipitation



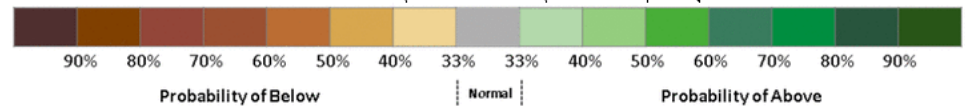
8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 30 AUG 2021
VALID SEP 07 - 13, 2021

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 30 AUG 2021
VALID SEP 07 - 13, 2021

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

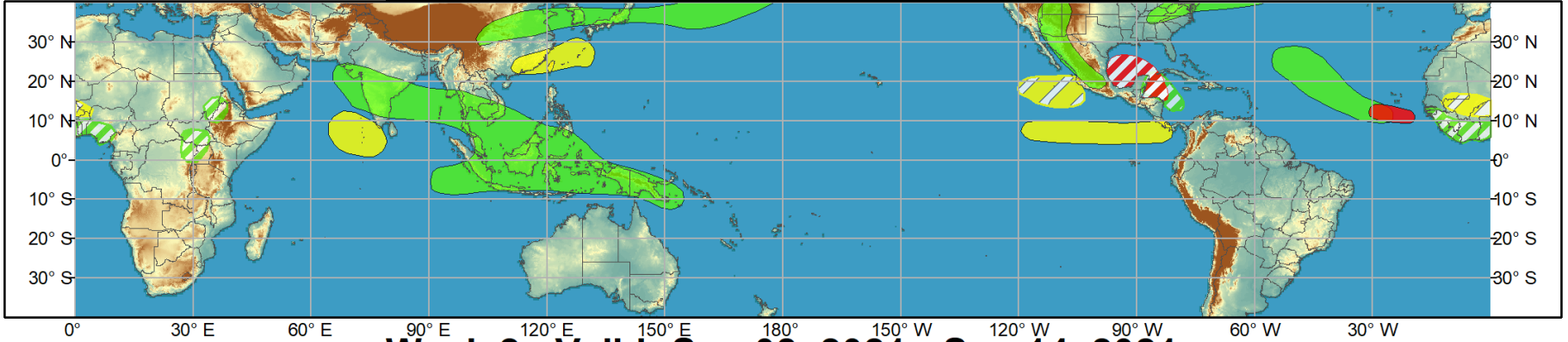




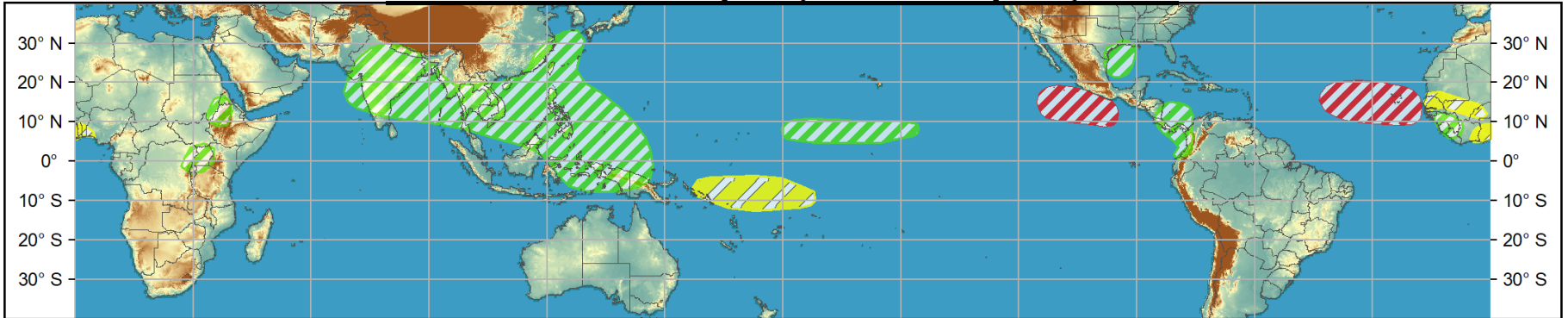
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