

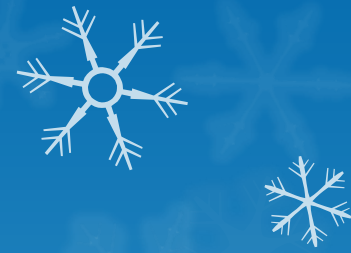
# Significant Weather Observation Program

October 27, 2022

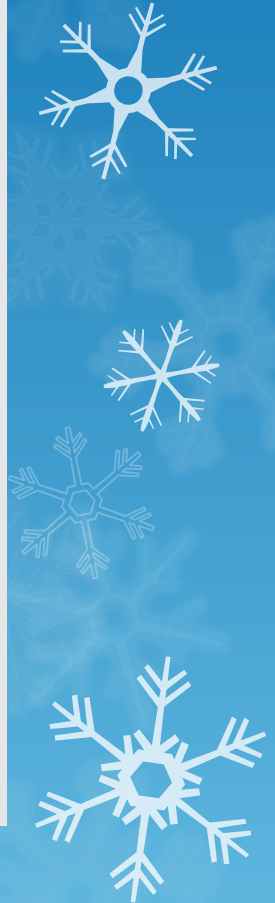
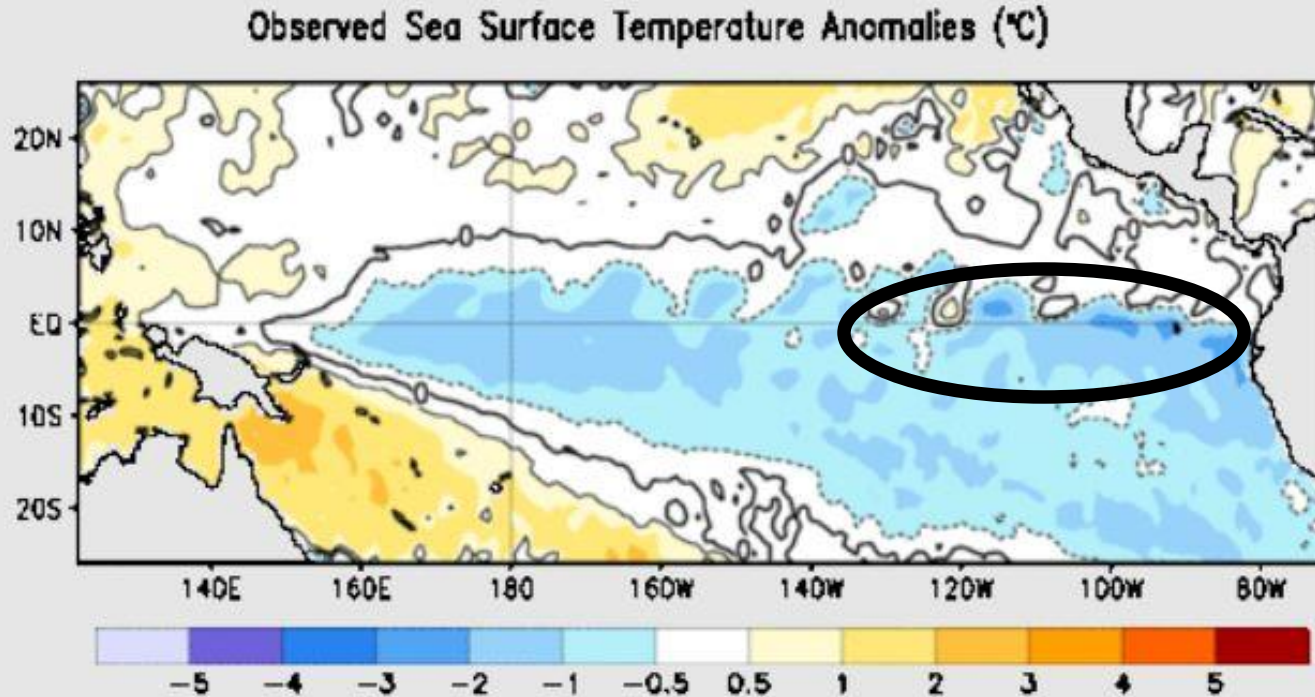
Matt Barnes



# Winter 2022-2023 Outlook

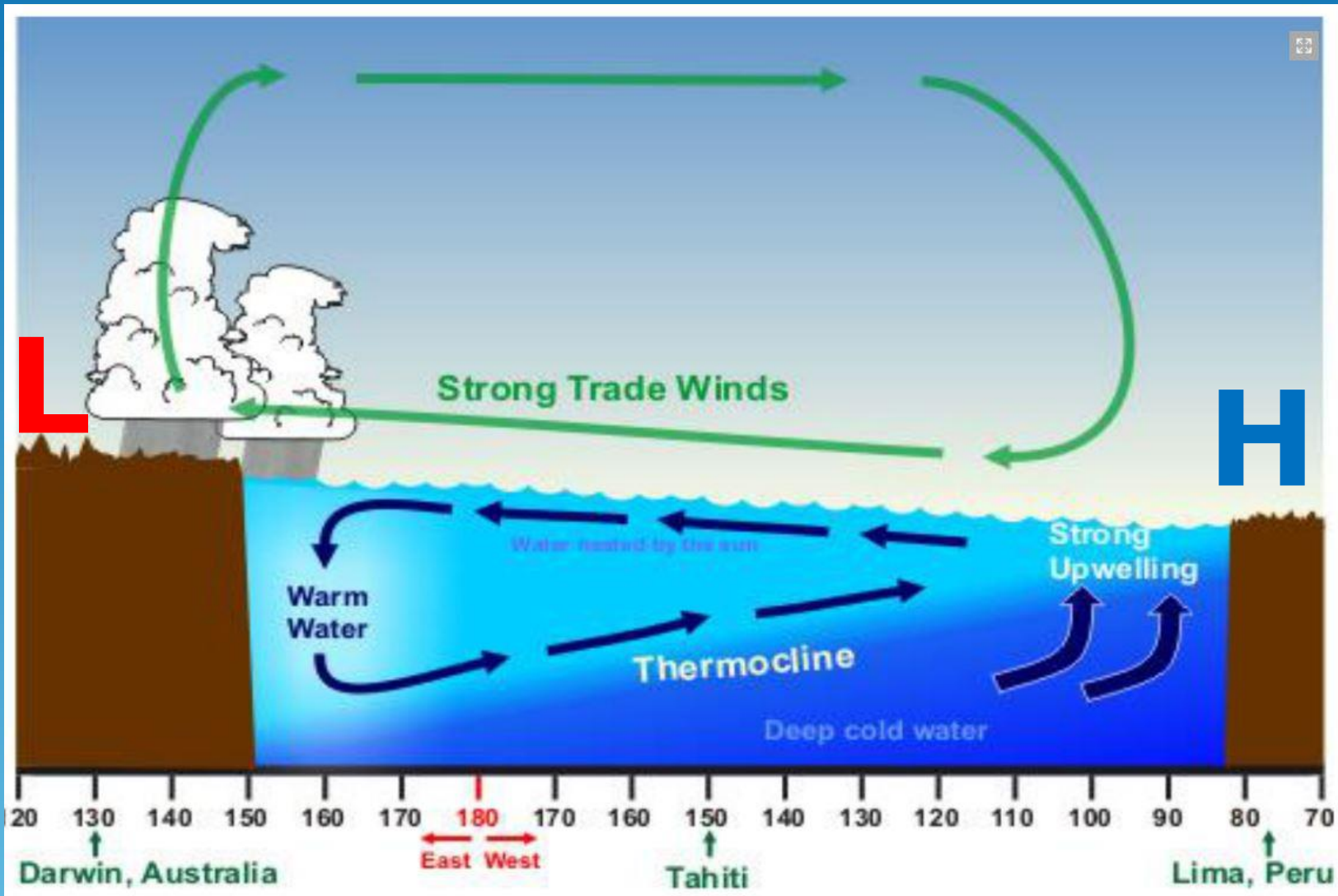


We're heading into another **La Nina** winter



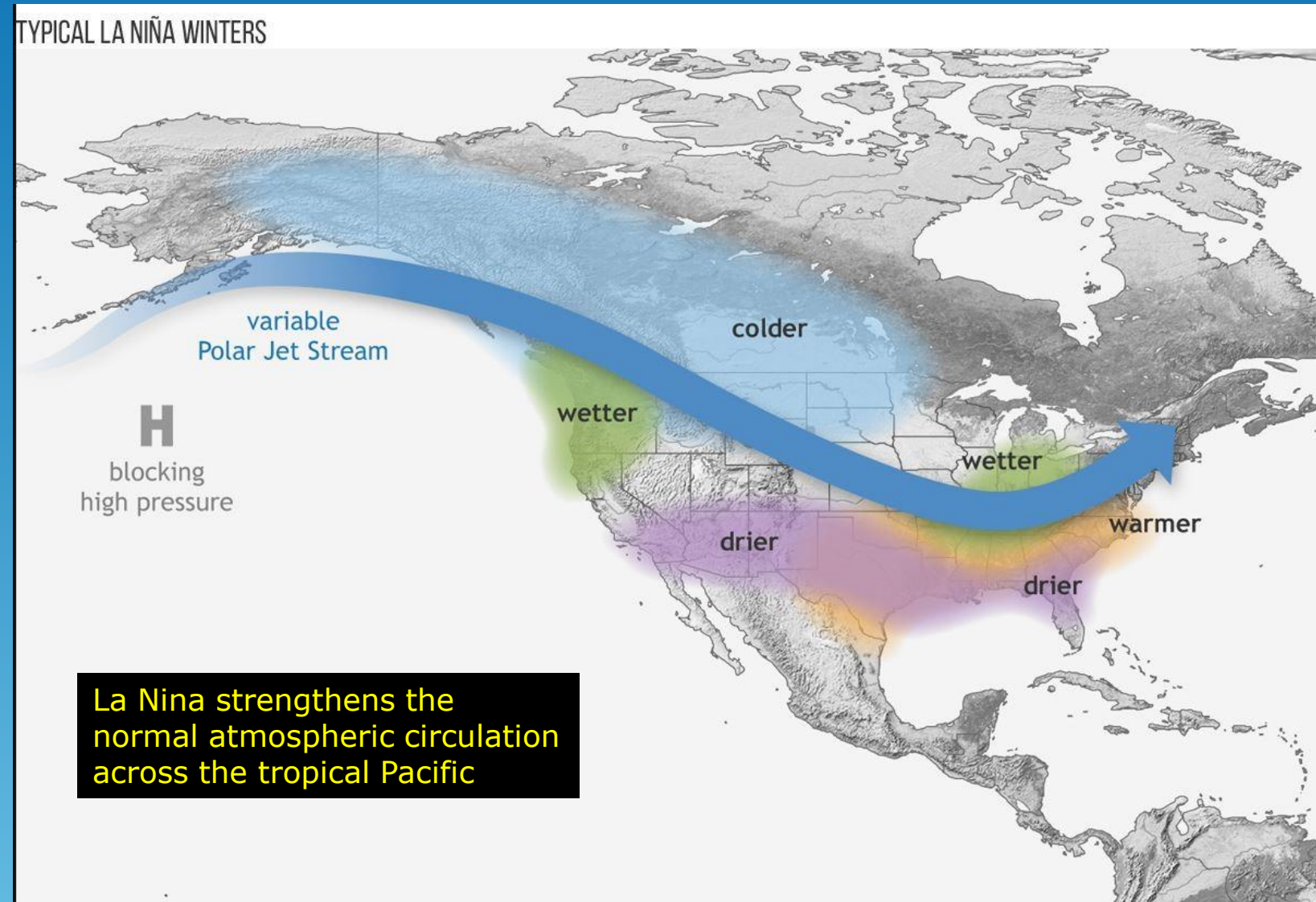
Below normal sea surface temperatures in the Equatorial Pacific

# How Does La Nina Work?

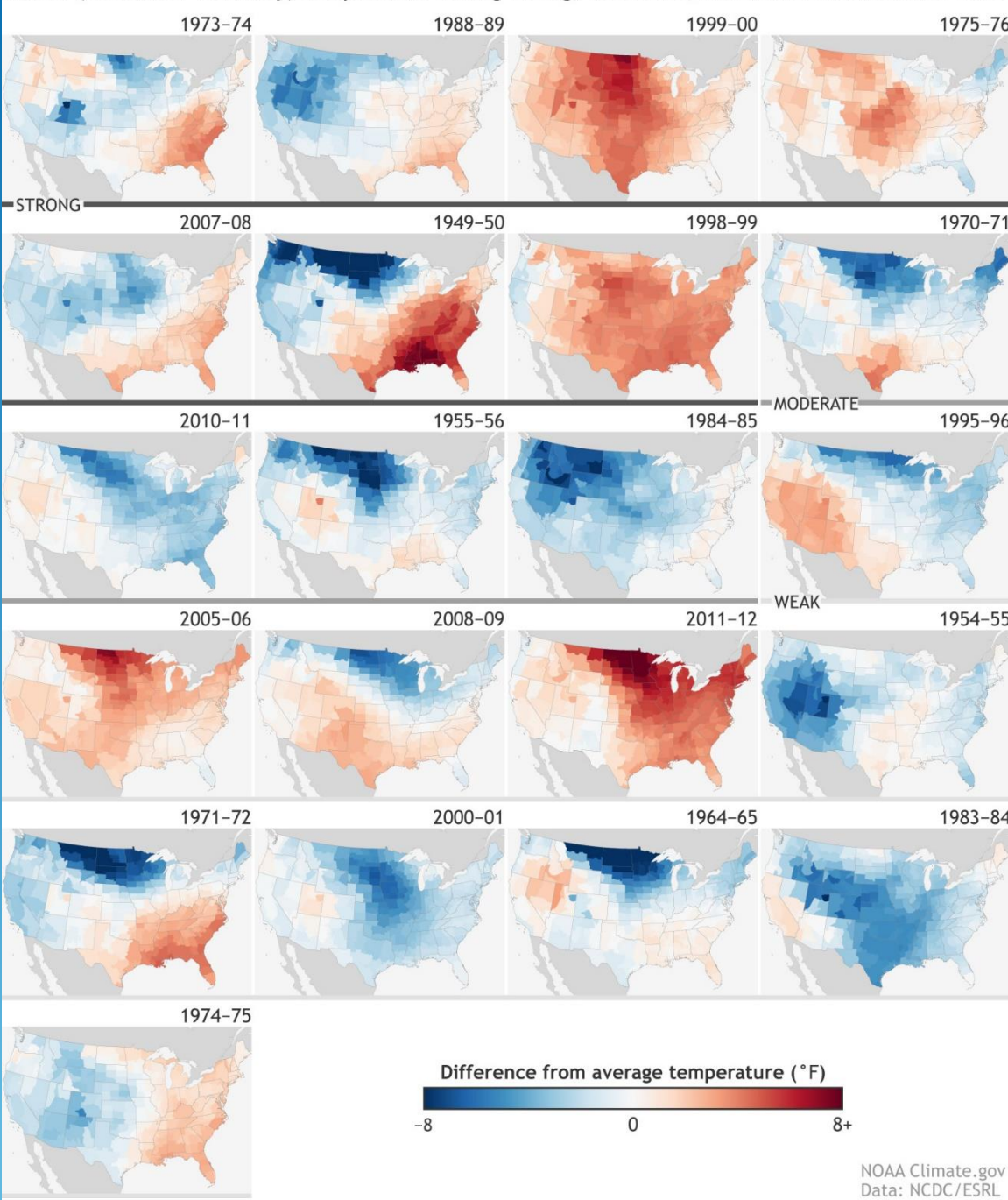




# Typical La Nina Winter Pattern



Winter (December-February) temperature during strong, moderate, and weak La Niñas since 1950



**KEY POINT:**  
Other shorter-term atmospheric circulations play a much larger role in our winter weather than La Nina

# Other Influencing Factors

- **Arctic Oscillation (AO):** pressure pattern over the Arctic (Will cold air come south?)

When AO is negative: Higher pressure over the North Pole drives cold airmasses southward

- **North Atlantic Oscillation (NAO):** pressure pattern over North Atlantic (What trajectory will the cold air take?)

When NAO is negative: a highly amplified upper pattern develops that allows cold airmasses to drop due southward into the eastern U.S.

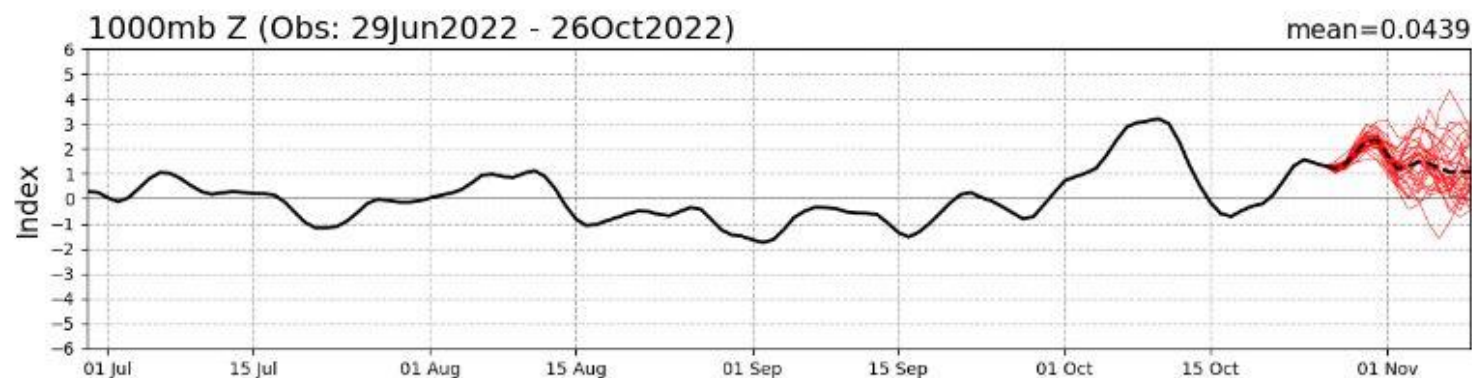
To monitor the latest AO and NAO phases, go to:

**<https://www.cpc.ncep.noaa.gov/>**

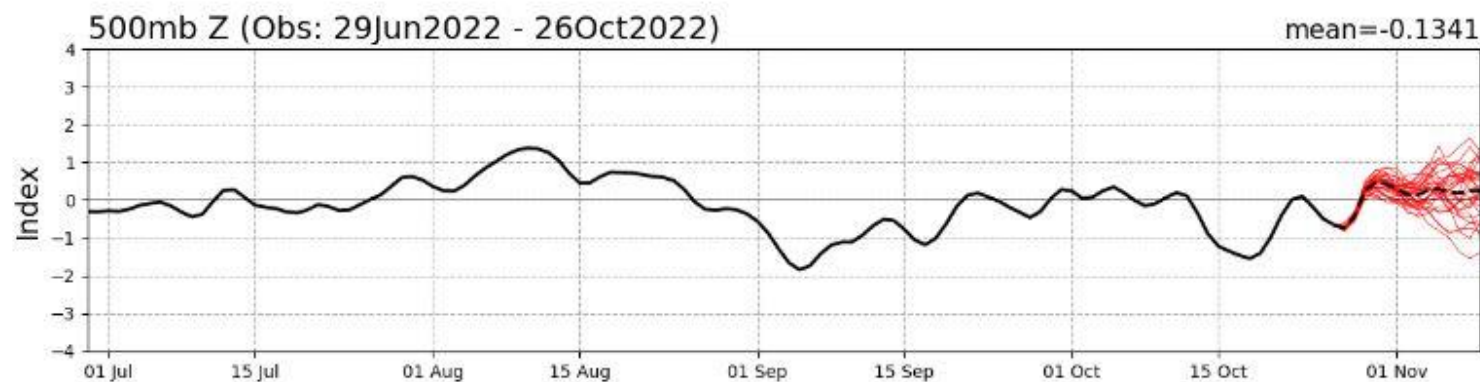


# Current Phases

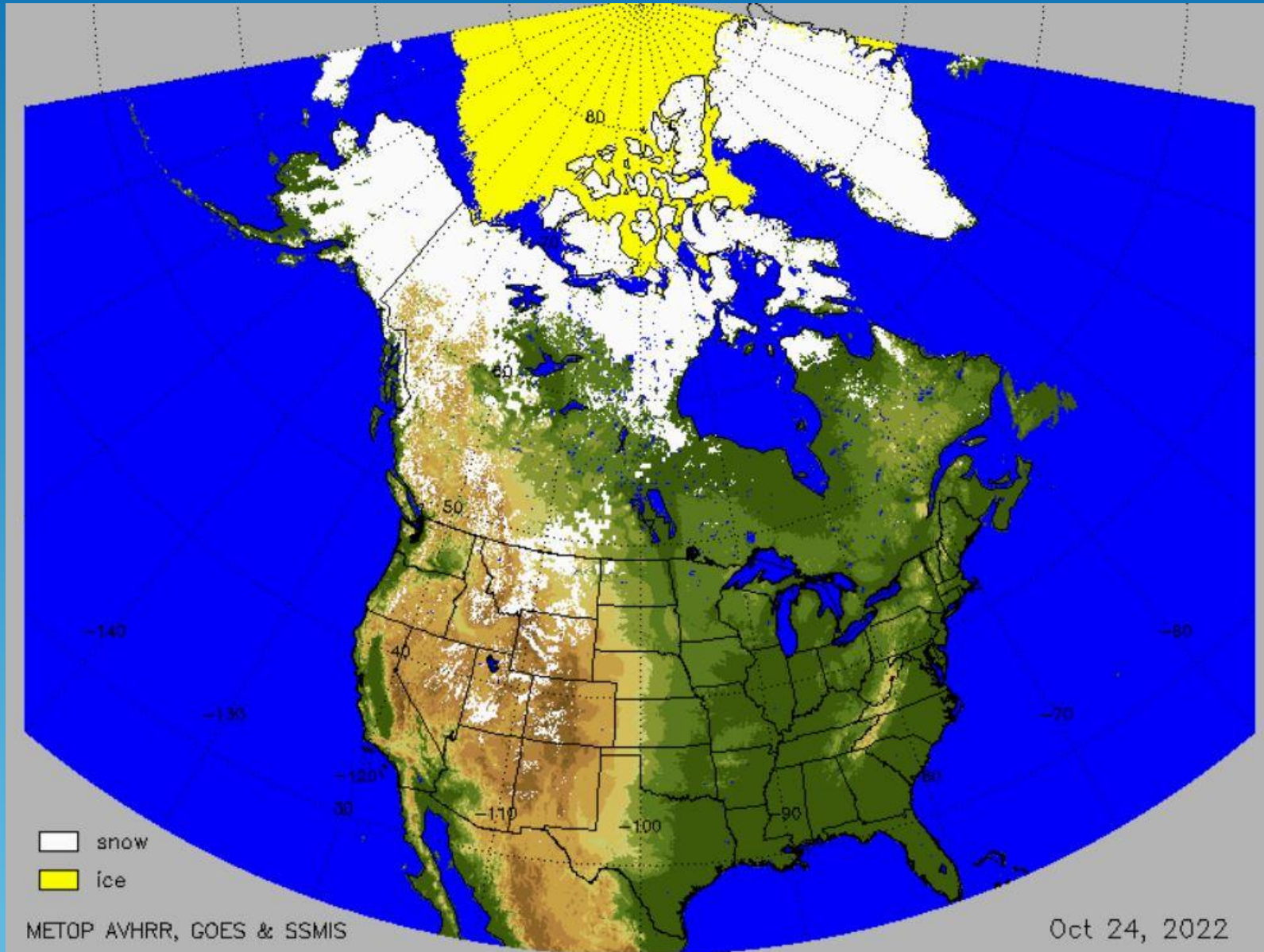
## AO Index: Observed & GEFS Forecasts



## NAO Index: Observed & GEFS Forecasts



# Other Influencing Factors



■ snow  
■ ice

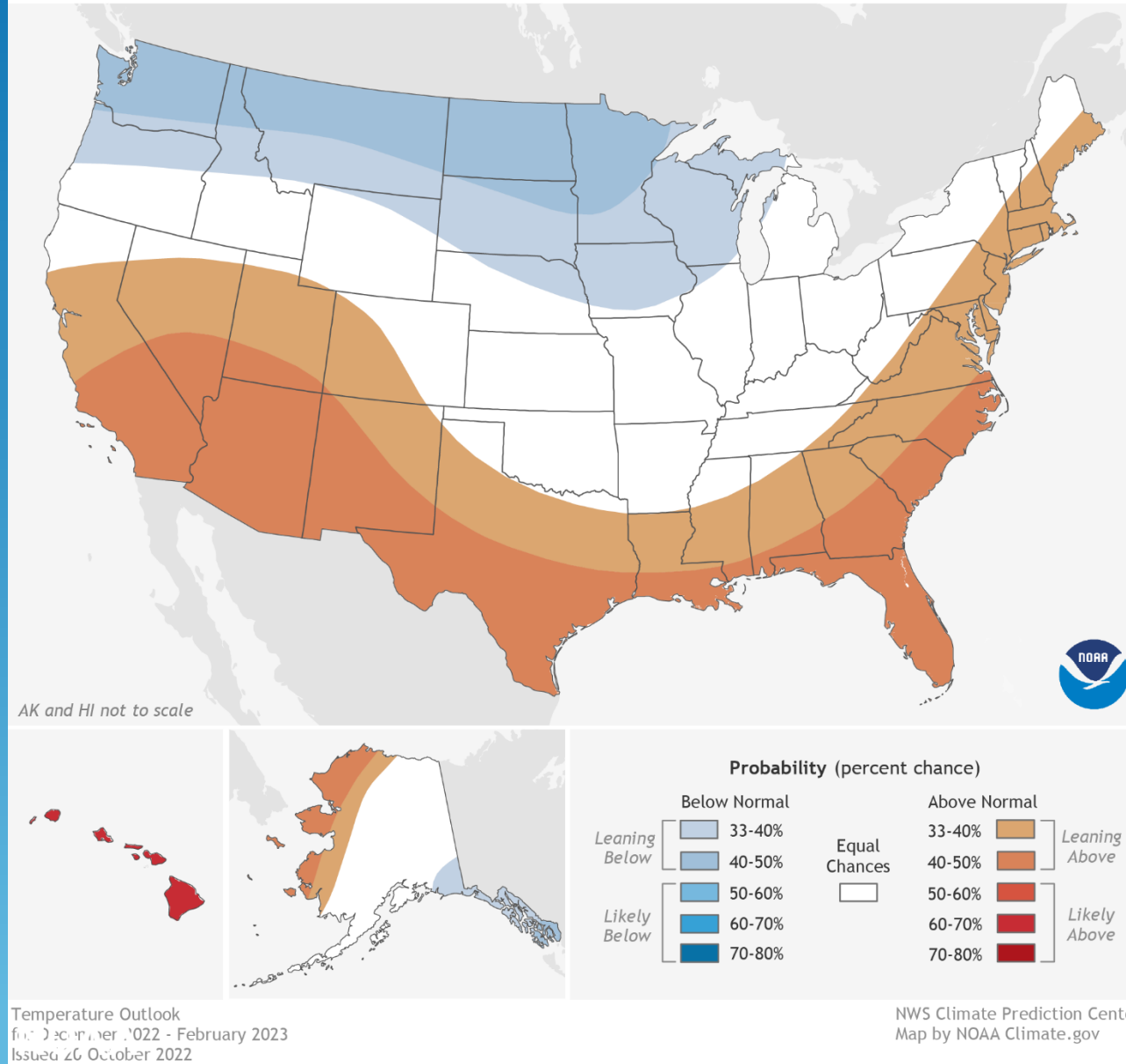
METOP AVHRR, GOES & SSMIS

Oct 24, 2022



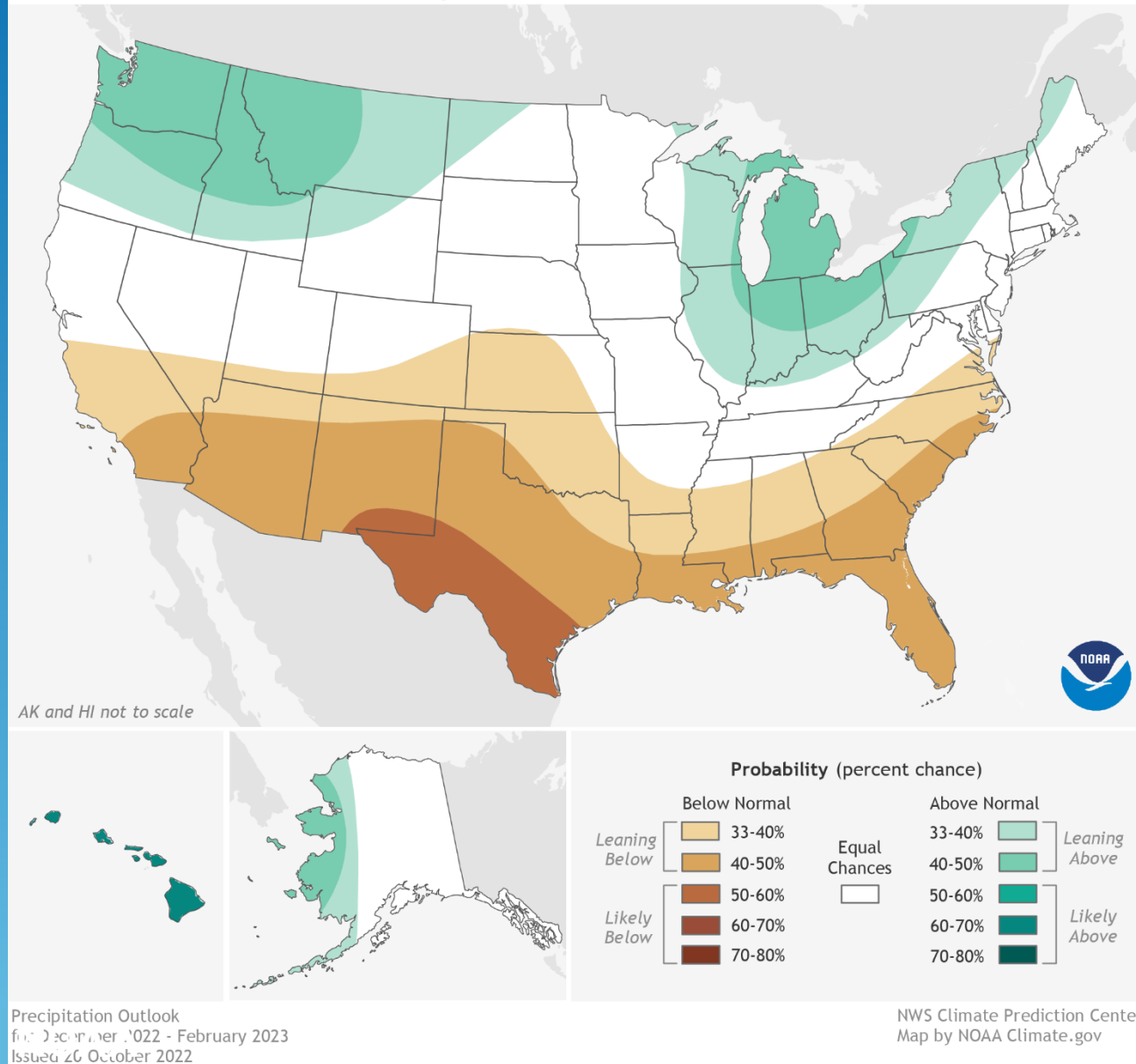
# Winter 2022-2023 Outlook

## Winter 2022-23: U.S. Temperature Outlook



# Winter 2022-2023 Outlook

## Winter 2022-23: U.S. Precipitation Outlook



# The Bottom Line

- Look for plenty of the usual “ups and downs” of winter
- Trend toward above normal precipitation. More snow?
- There will be heavy snow and ice events...so the main take-away is to be prepared for anything

