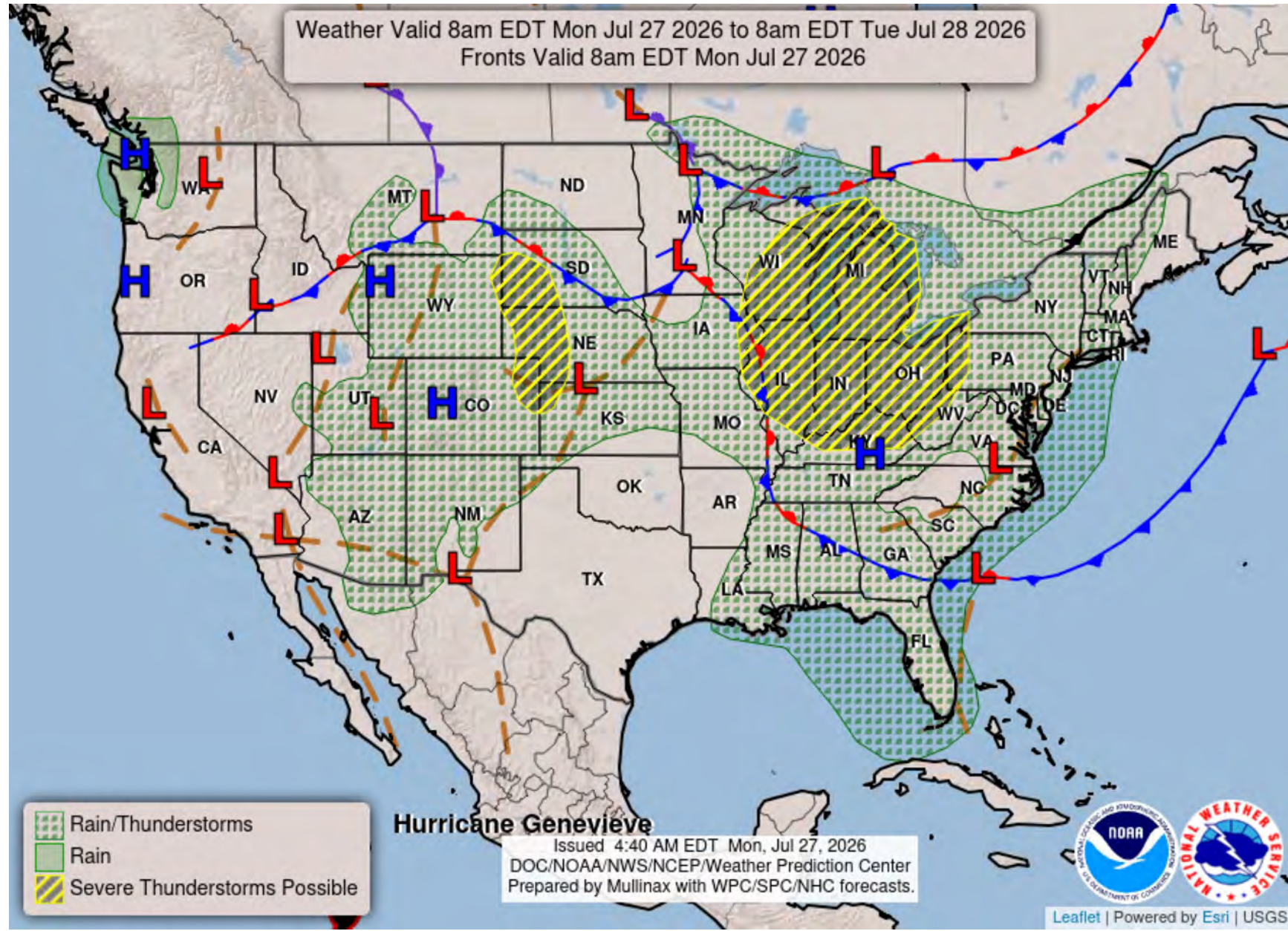


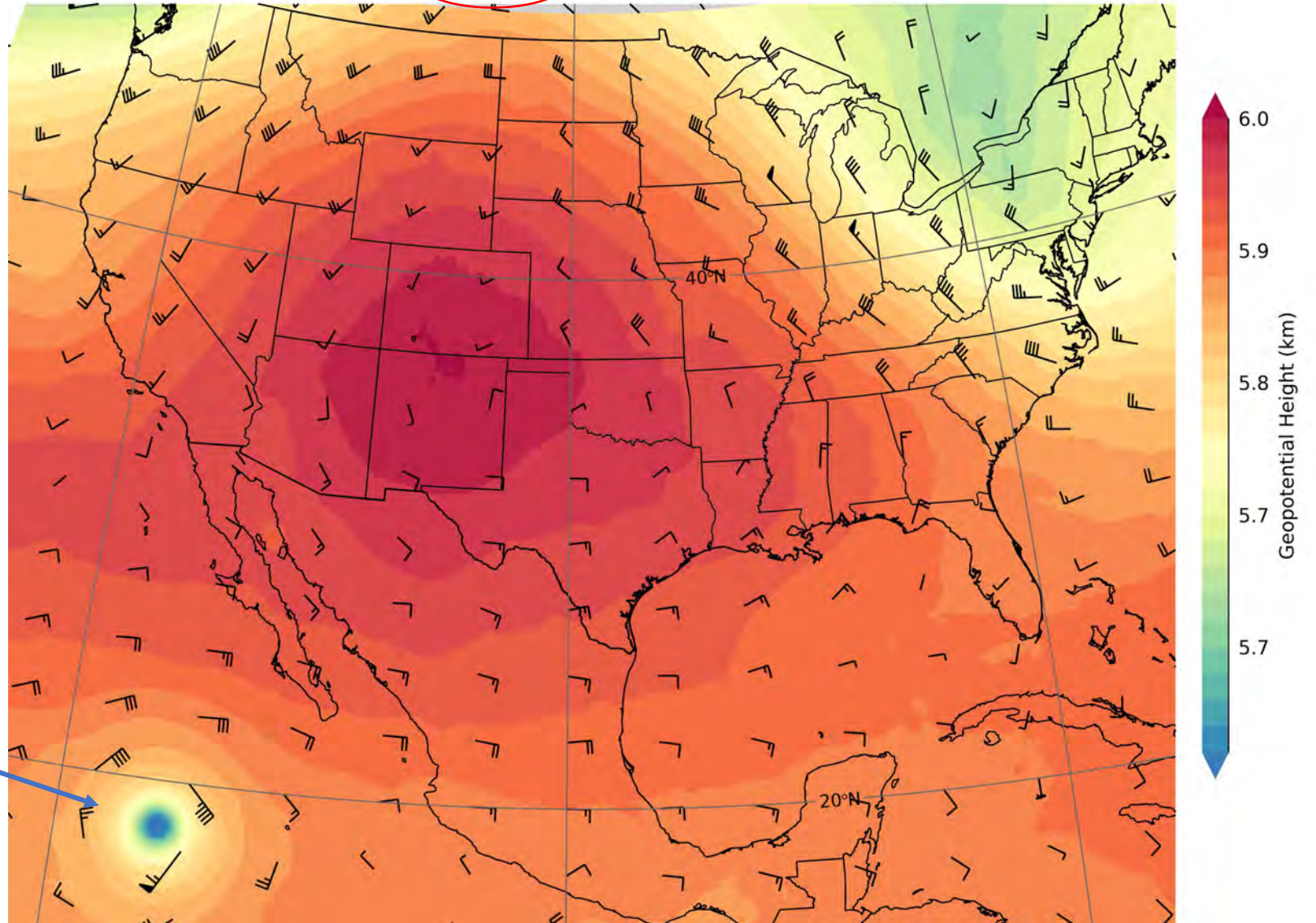
SABRE Forecast Discussion 07/27/2026

Surface high pressure region clearing out Houston area with hot temps and minimal clouds this week.



North American Monsoon

NCEP Geopotential Height 500 hPa Init: 2026072612 Valid: 2026072818

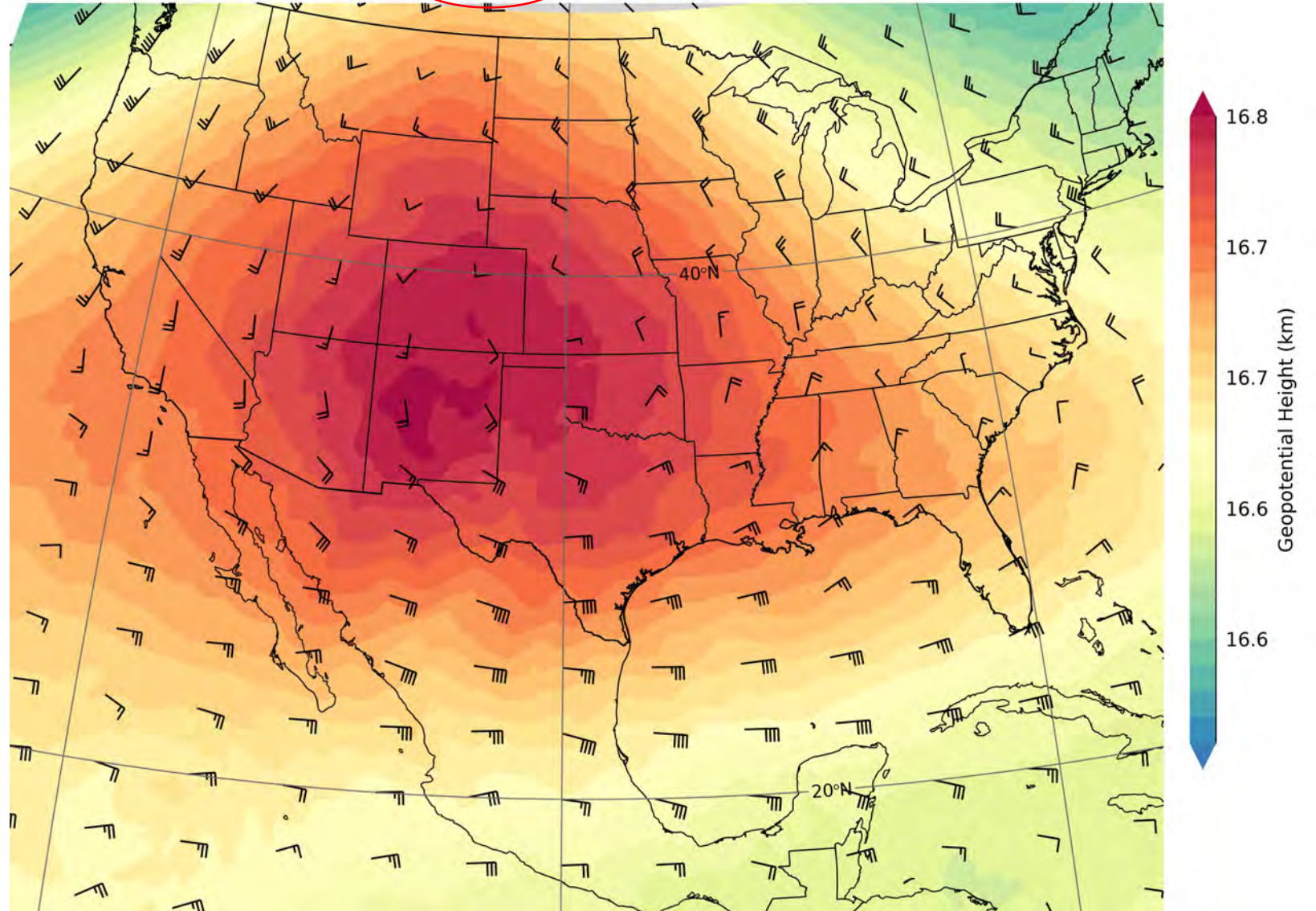


The NAM is fully in place and centered over the SW US.

Genevieve

North American Monsoon

NCEP Geopotential Height **100 hPa** Init: 2026072612 Valid: 2026072818



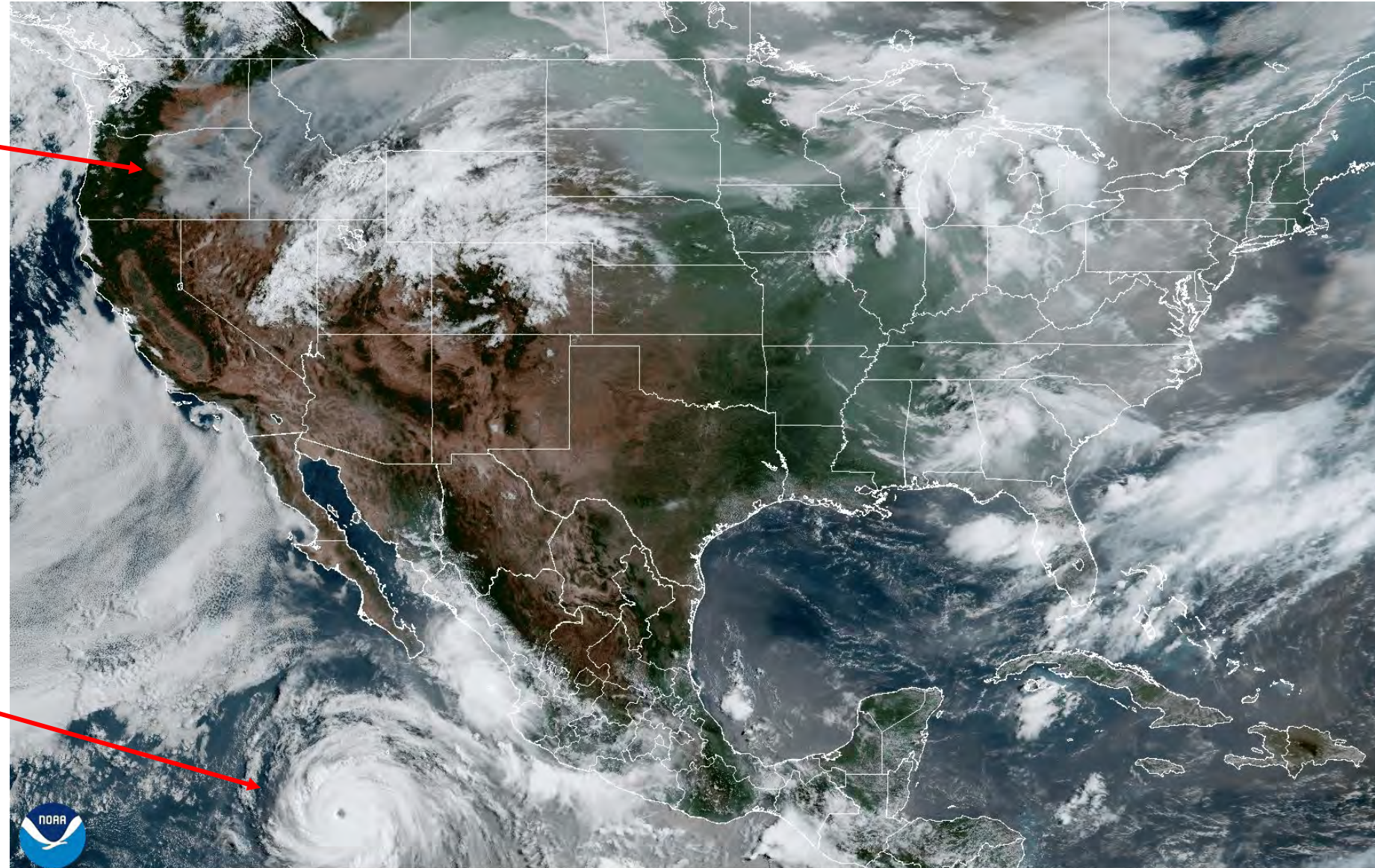
The NAM is fully in place and centered over the SW US.

Today's Visible Satellite Images

Numerous fires in the Pacific NW and Canada with smoke wrapping around NAM.

Cirrus in eastern Gulf today.

Genevieve



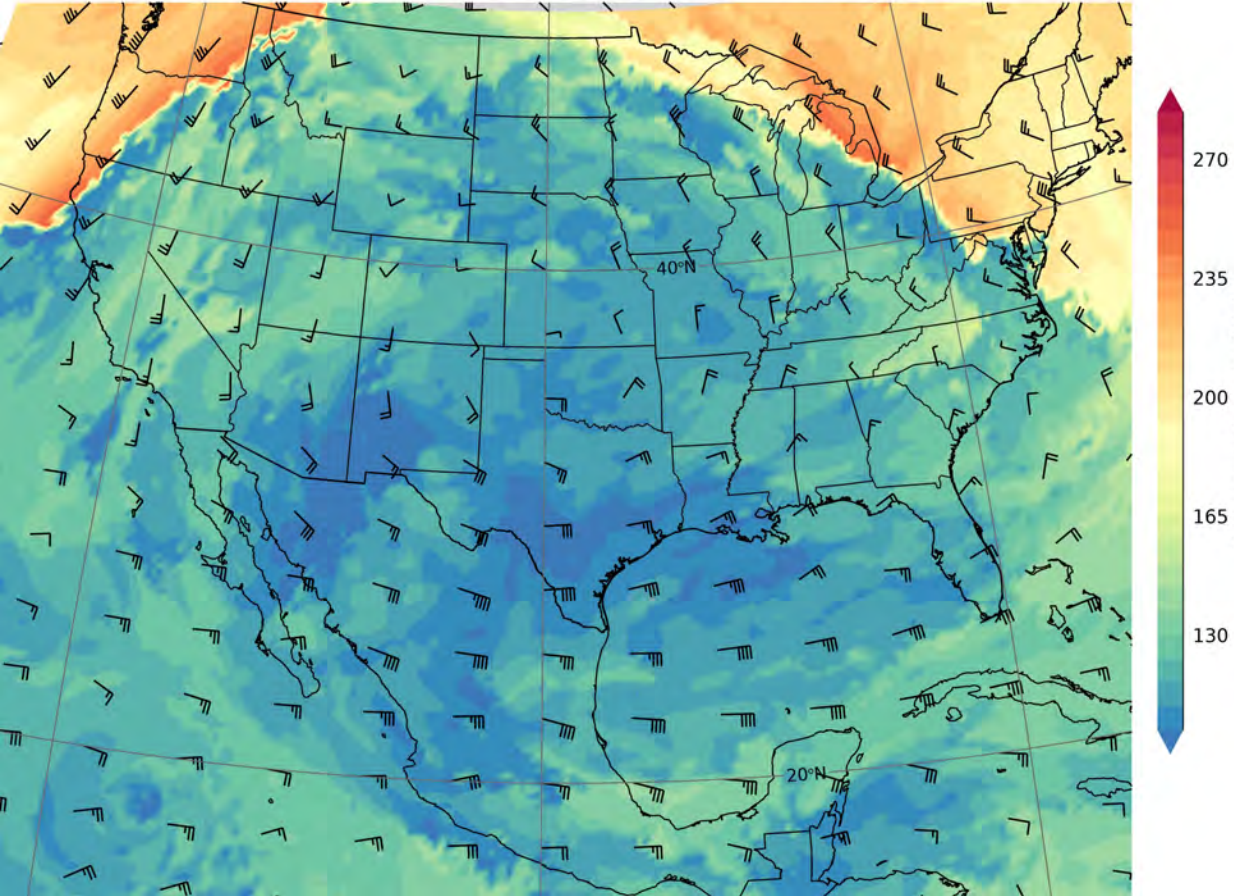
27 Jul 2026 15:40Z - NOAA/NESDIS/STAR - GOES-West - GEOCOLOR Composite - GWAS

Upper Level Forecasts for Flight on Tuesday 07/28

Tropopause

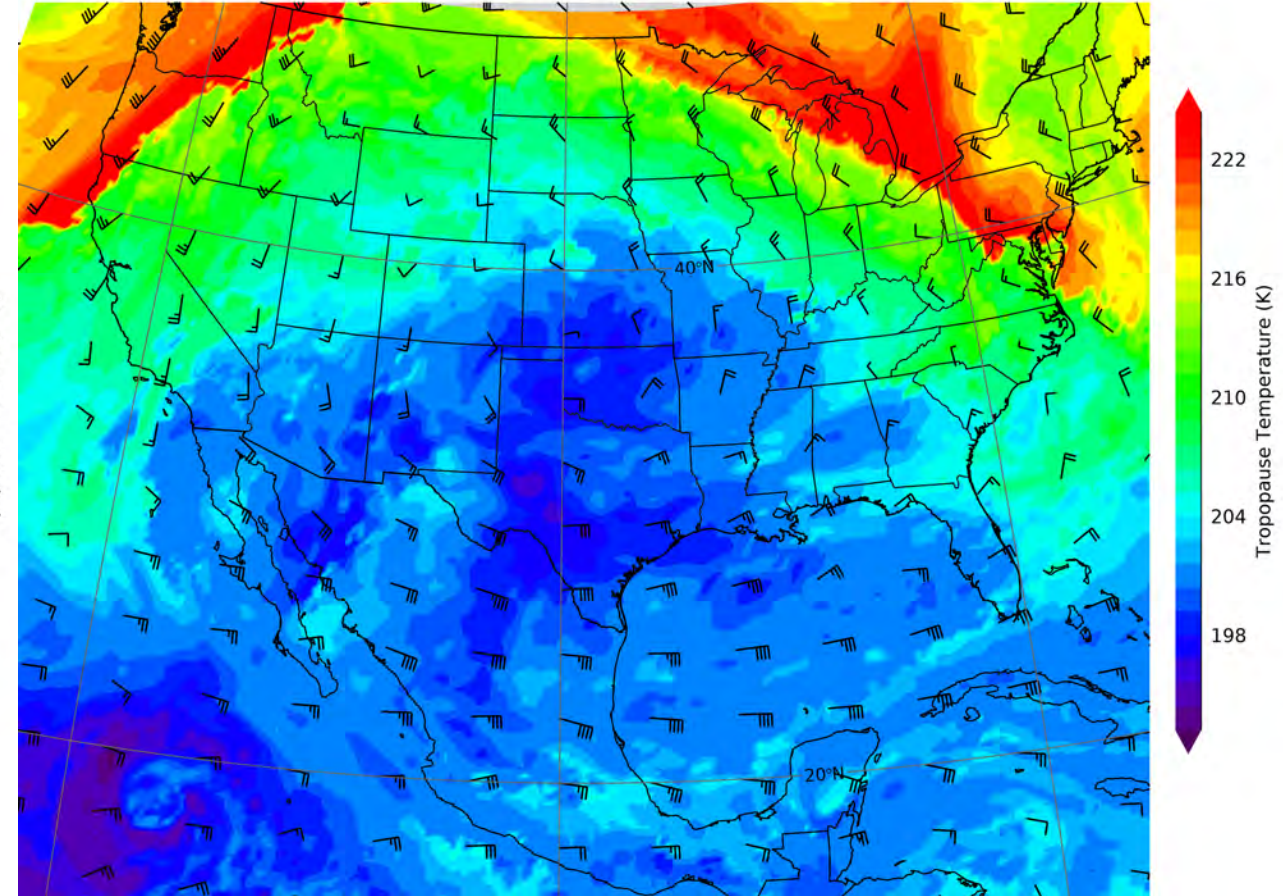
Pressure

NCEP Tropopause Pressure Init: 2026072612 Valid: 2026072818



Temperature

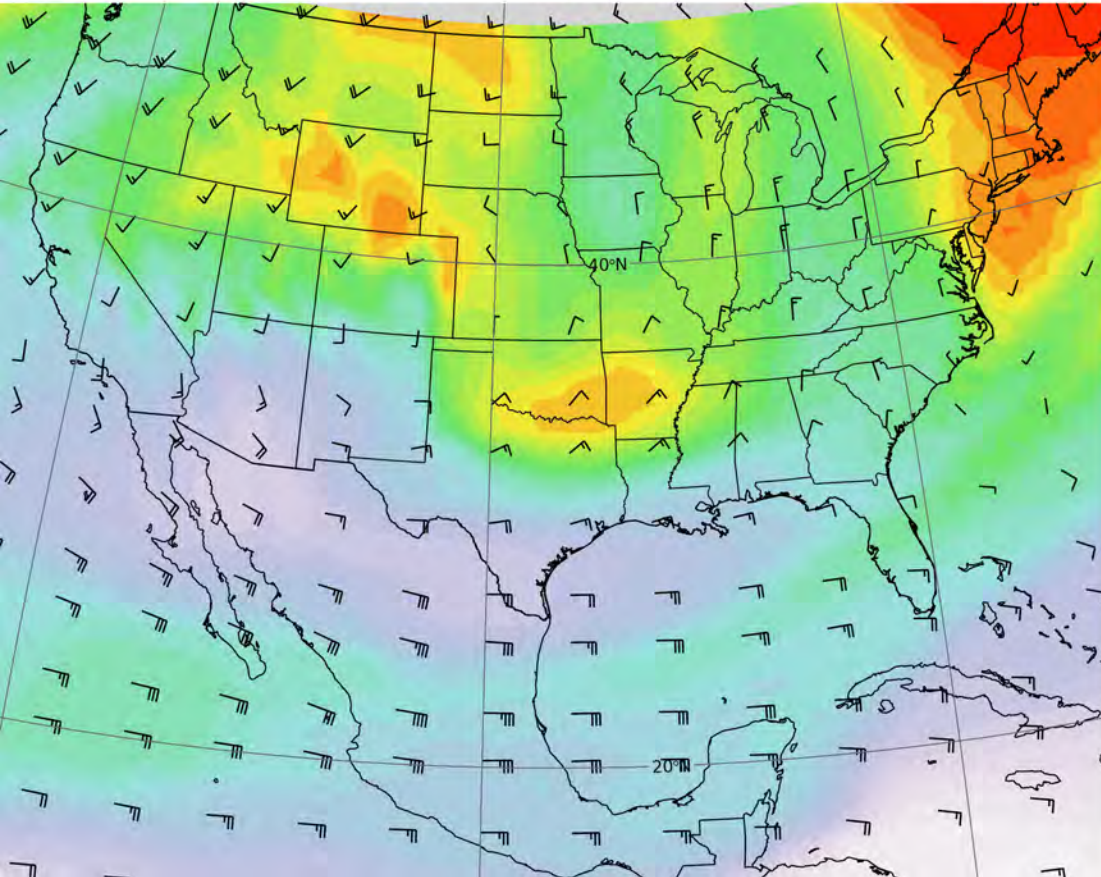
NCEP Tropopause Temperature Init: 2026072612 Valid: 2026072818



Trace Gases

Ozone

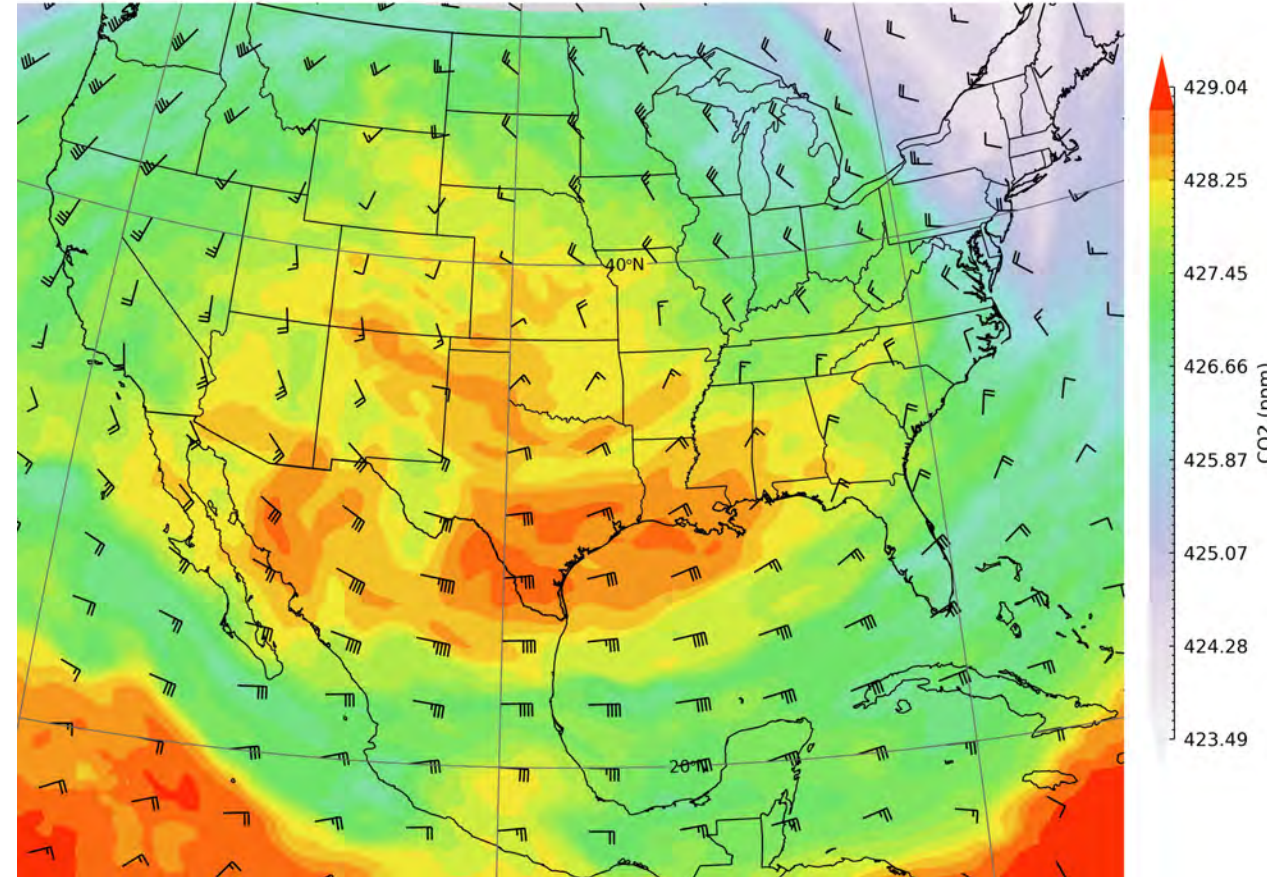
WACCM Ozone 85 hPa Init: 2026072600 Valid: 2026072818



Relatively low ozone mixing ratios in lower strat with indication of wrapping of lower strat values around the NAM.

CO₂

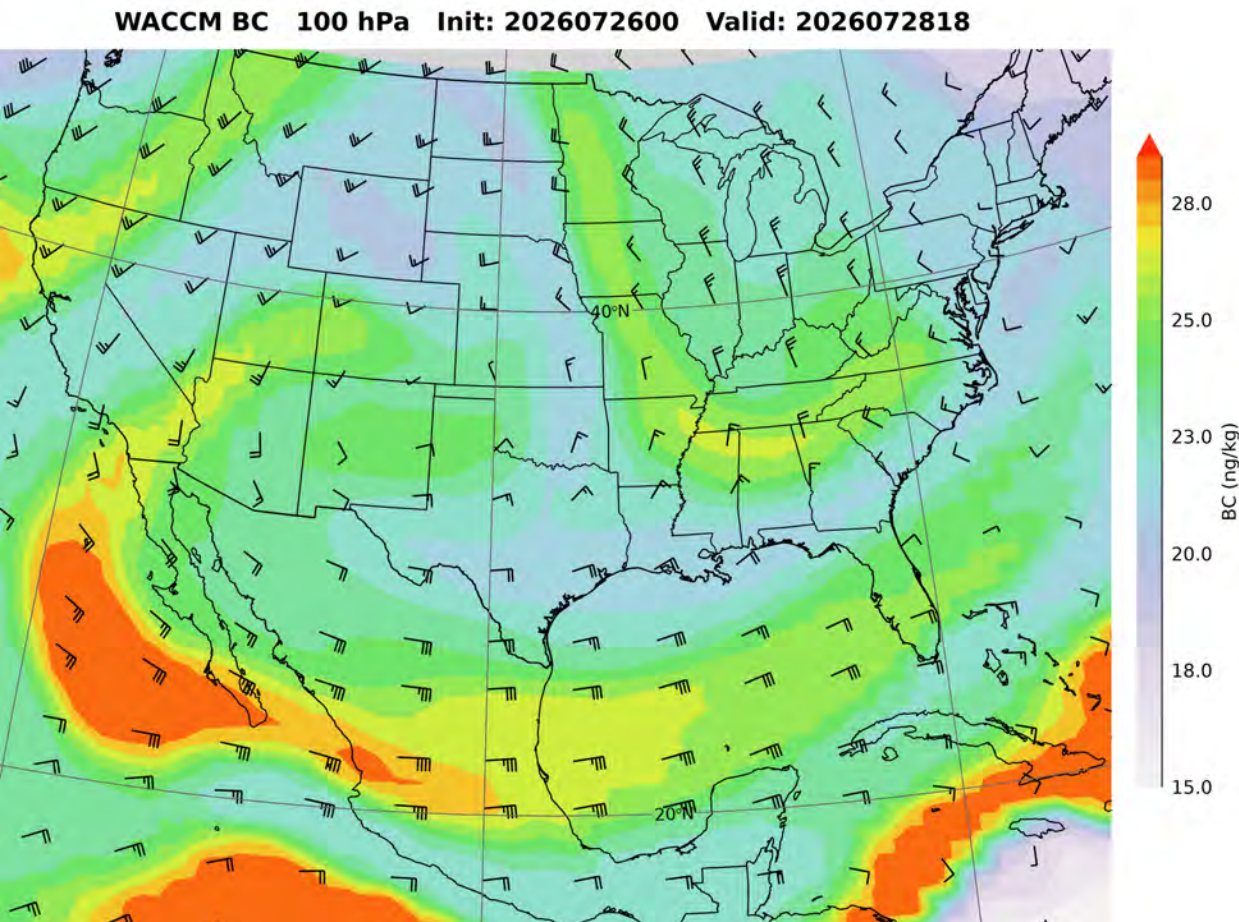
GEOS CO2 85 hPa Init: 2026072609 Valid: 2026072818



CO₂ has generally the opposite pattern of ozone as expected.

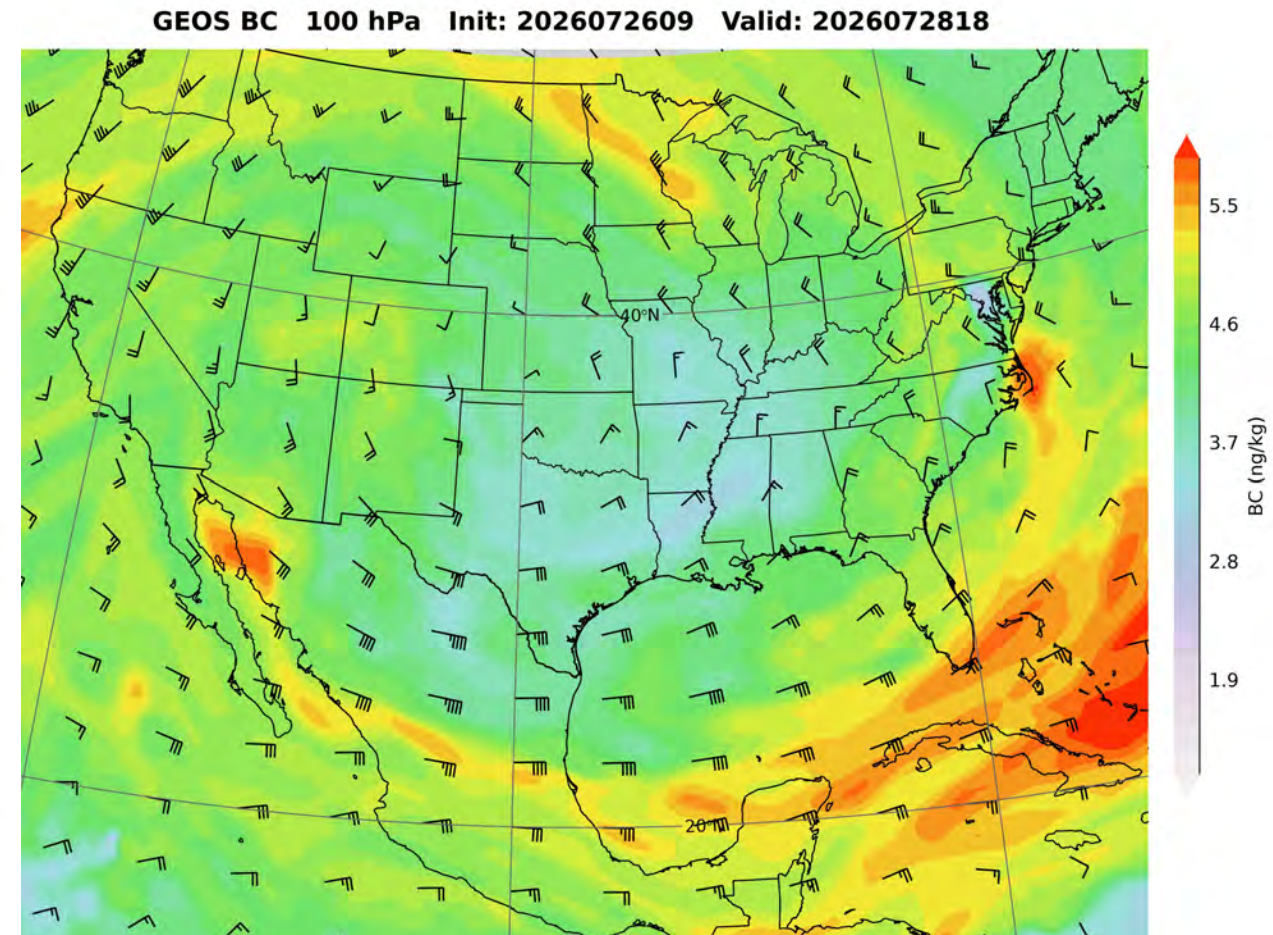
Aerosols

WACCM BC



Relatively high BC wrapping around the NAM over the Gulf.

GEOS BC

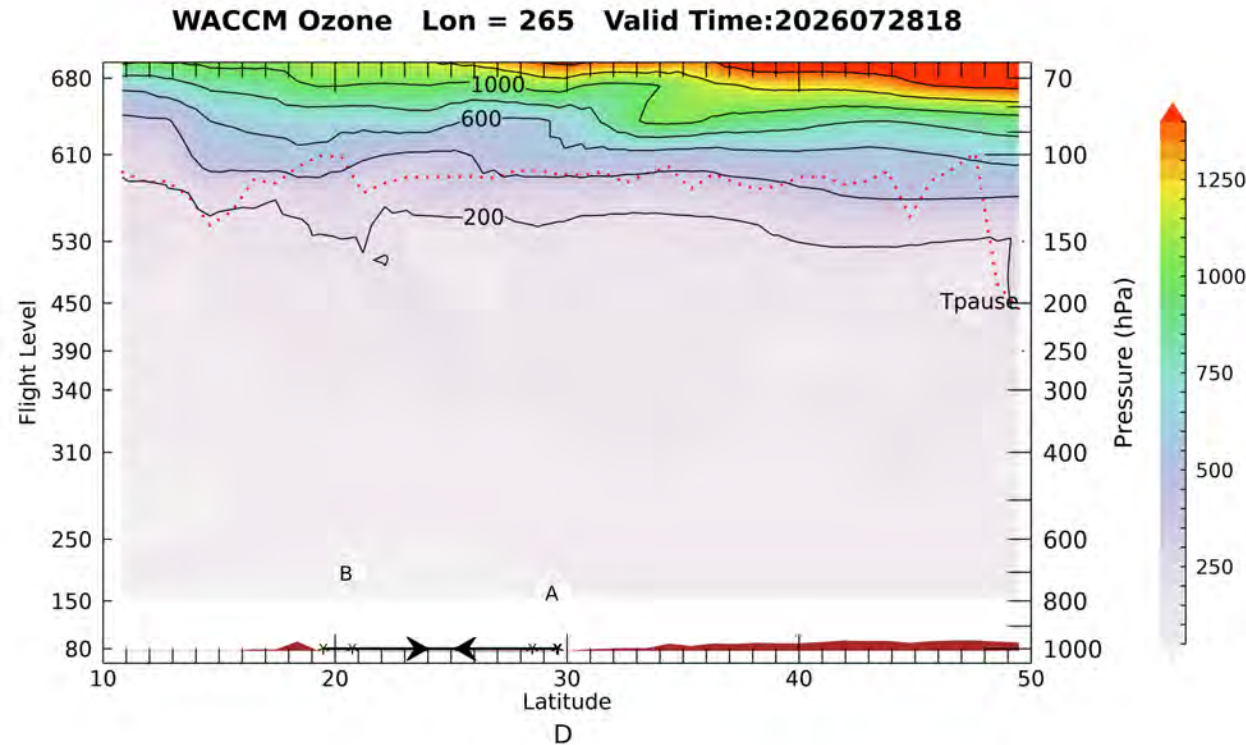


Broadly similar pattern in GEOS but details and absolute values differ.

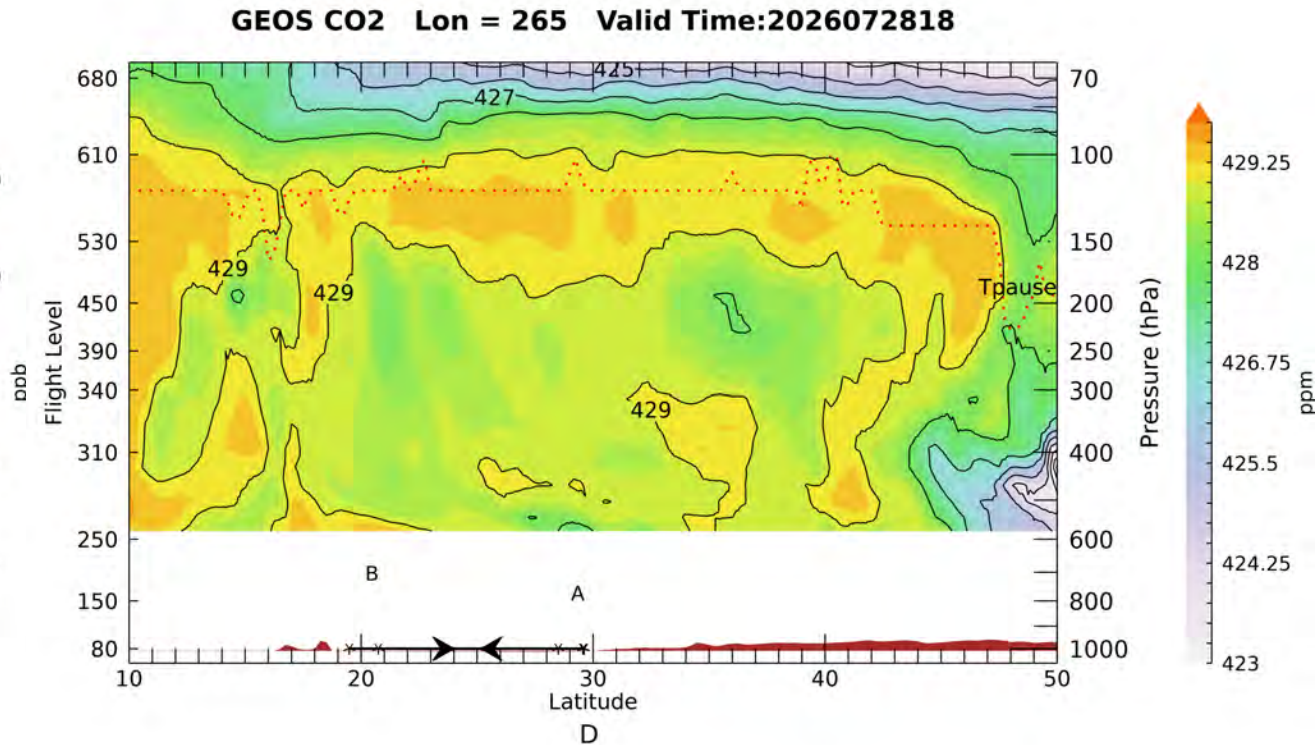
Trace Gas Latitude Curtains at 95W

Ozone

CO₂



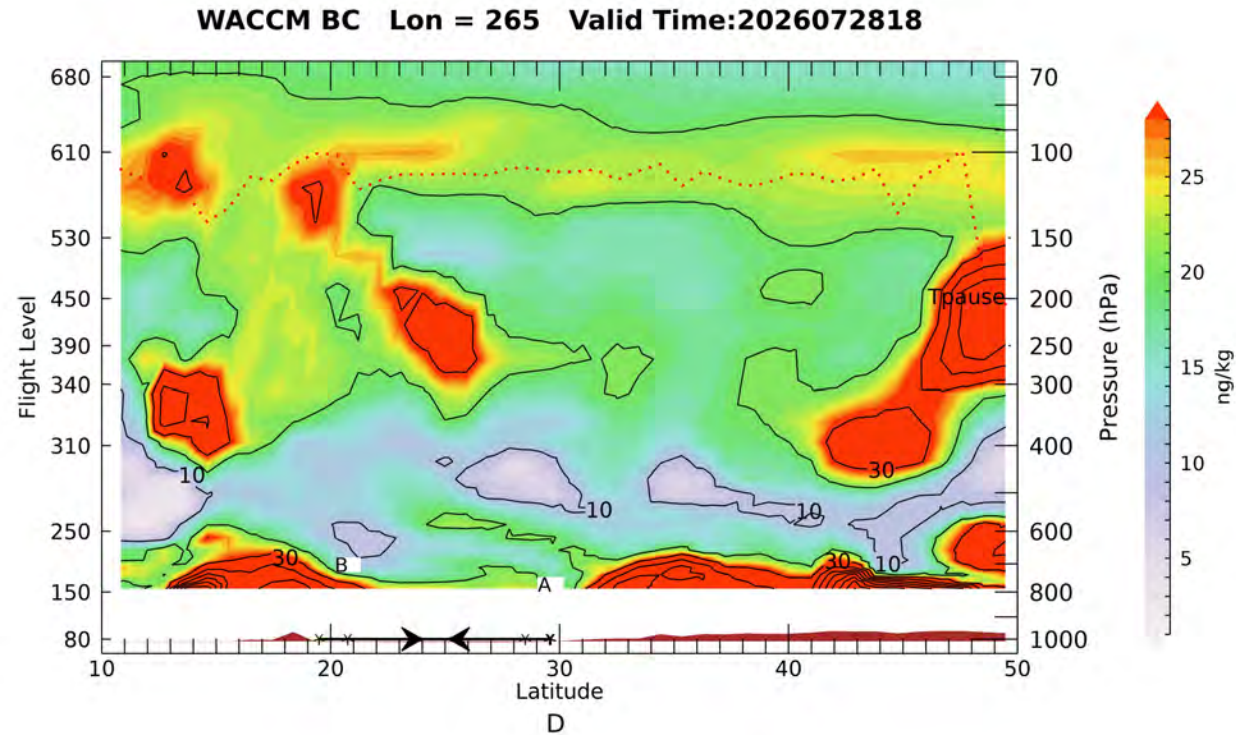
Weak ozone gradient in lower stratosphere up to at least 50N.



Interesting pattern in CO₂ with relatively large mixing ratios in tropopause region.

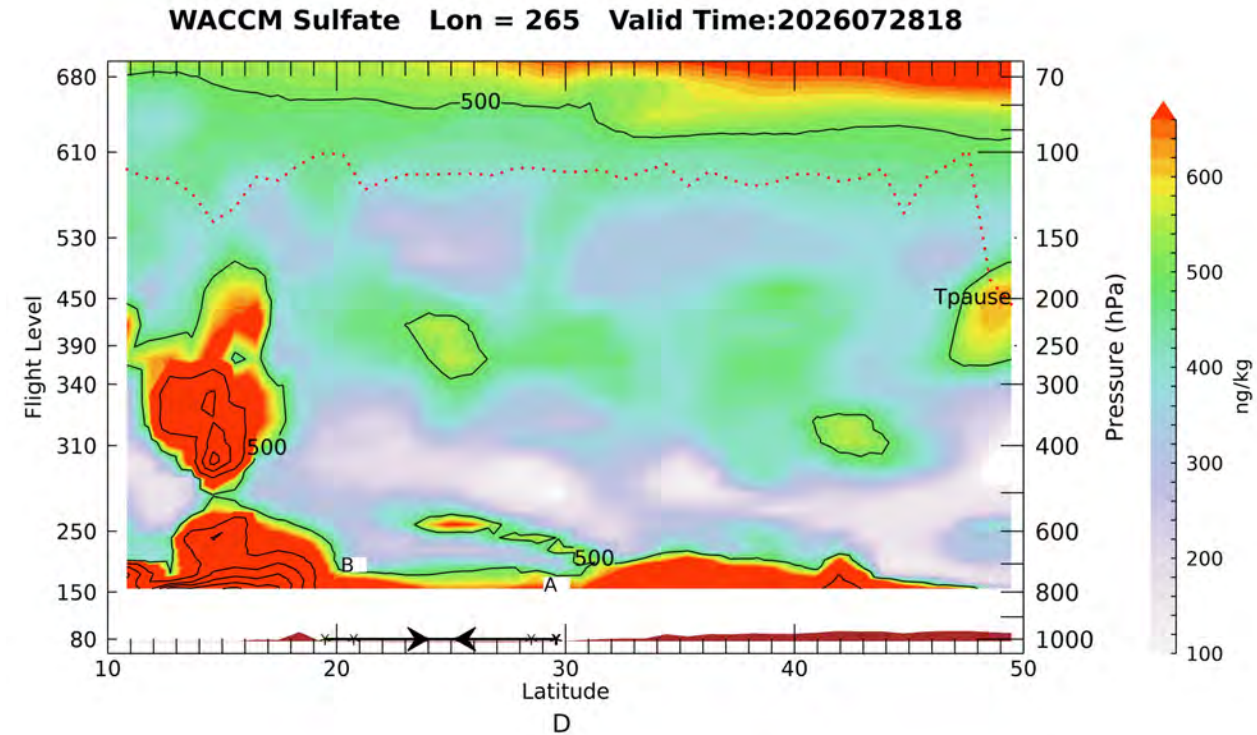
Aerosol Latitude Curtains at 95W

BC



Largest BC values in tropopause region forecast to be south of Houston wrapping around the NAM.

Sulfate



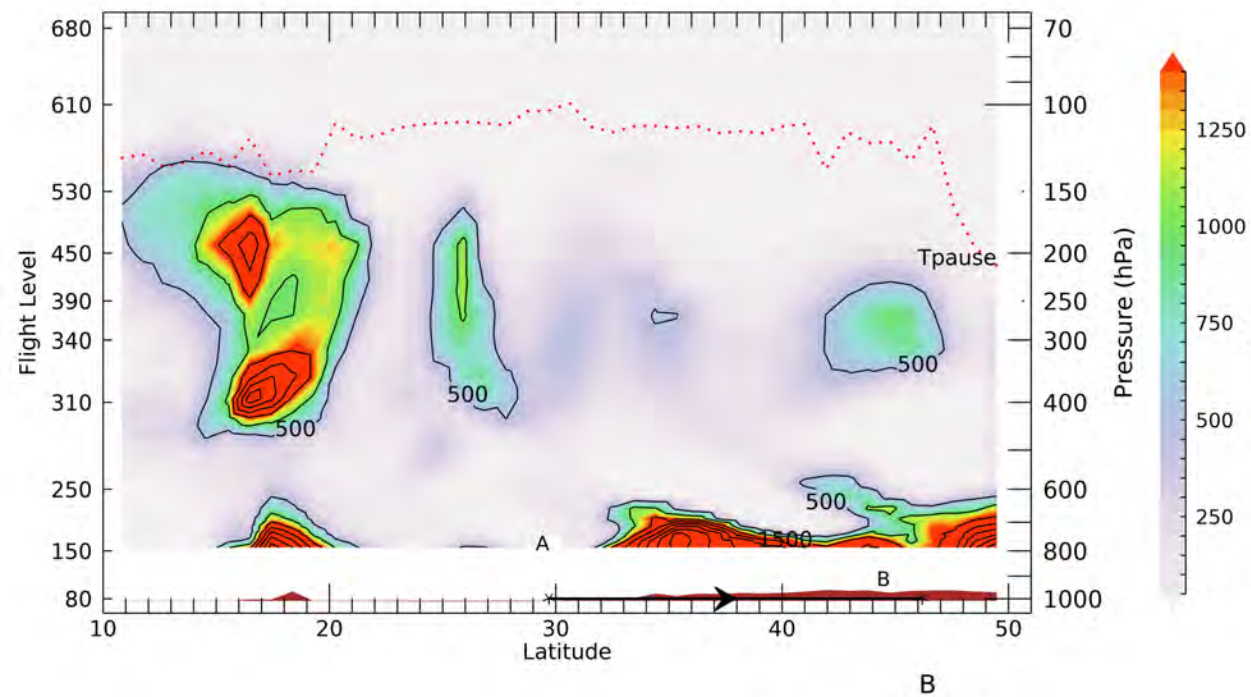
Sulfate pattern generally follows BC but with expected larger values in lower strat.

Aerosol Latitude Curtains at 95W

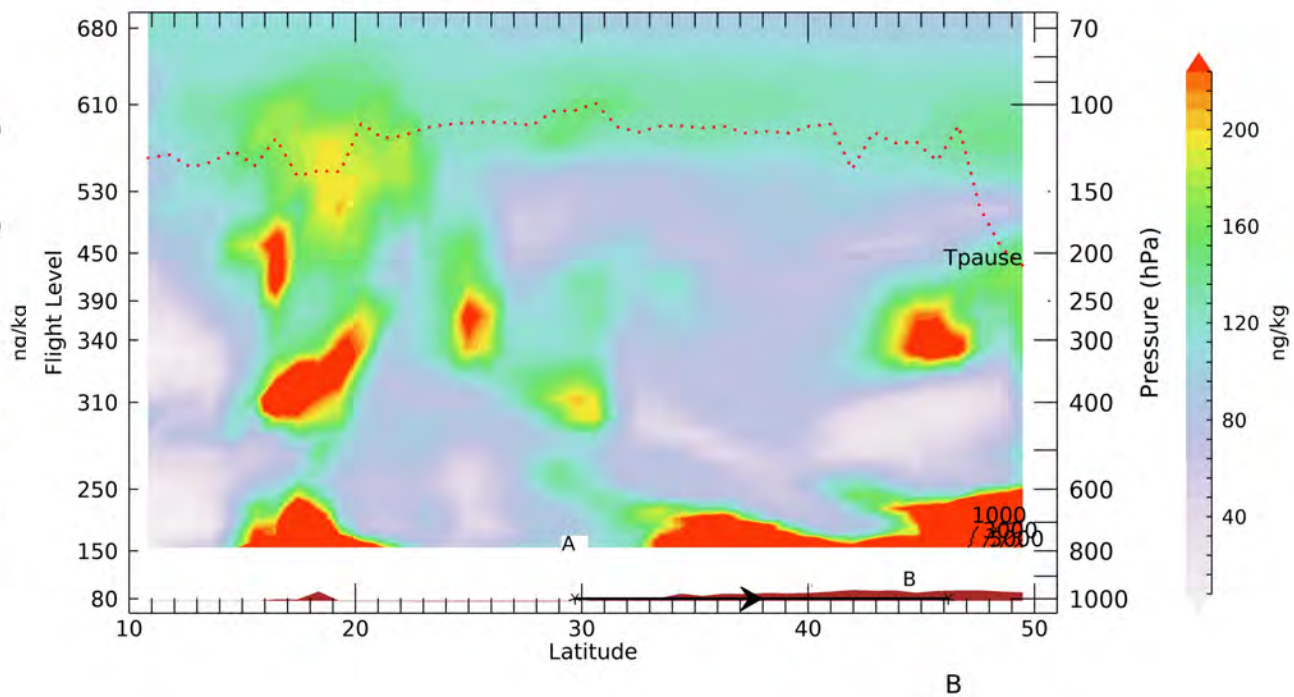
SOA

POA

SOA Lon = 265 Valid Time:2026072818



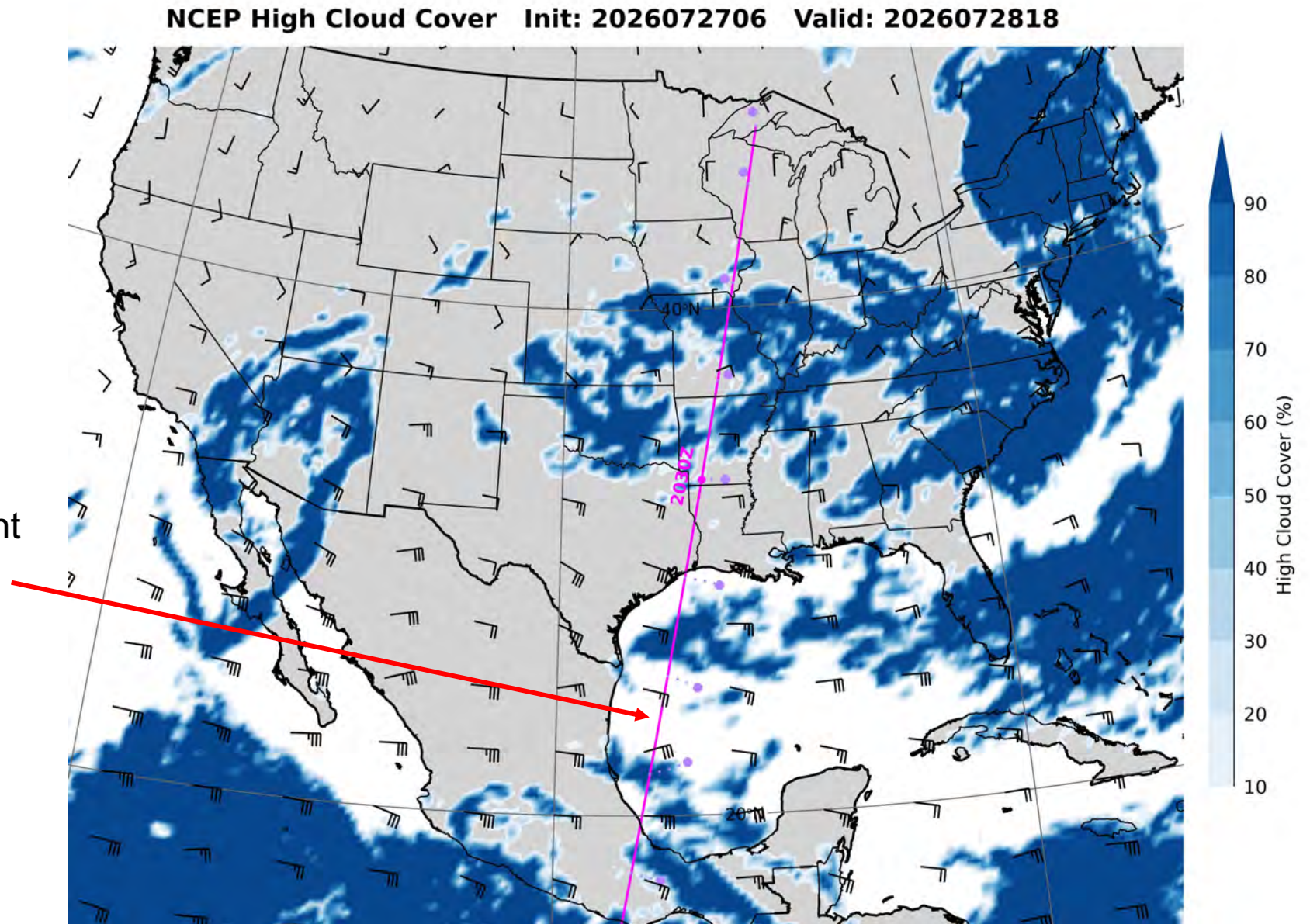
POA Lon = 265 Valid Time:2026072818



High Clouds and EarthCARE Track

Expect some cirrus in the western Gulf.

EarthCARE track nearly right over Houston and western Gulf.



Flight Plan 07/28

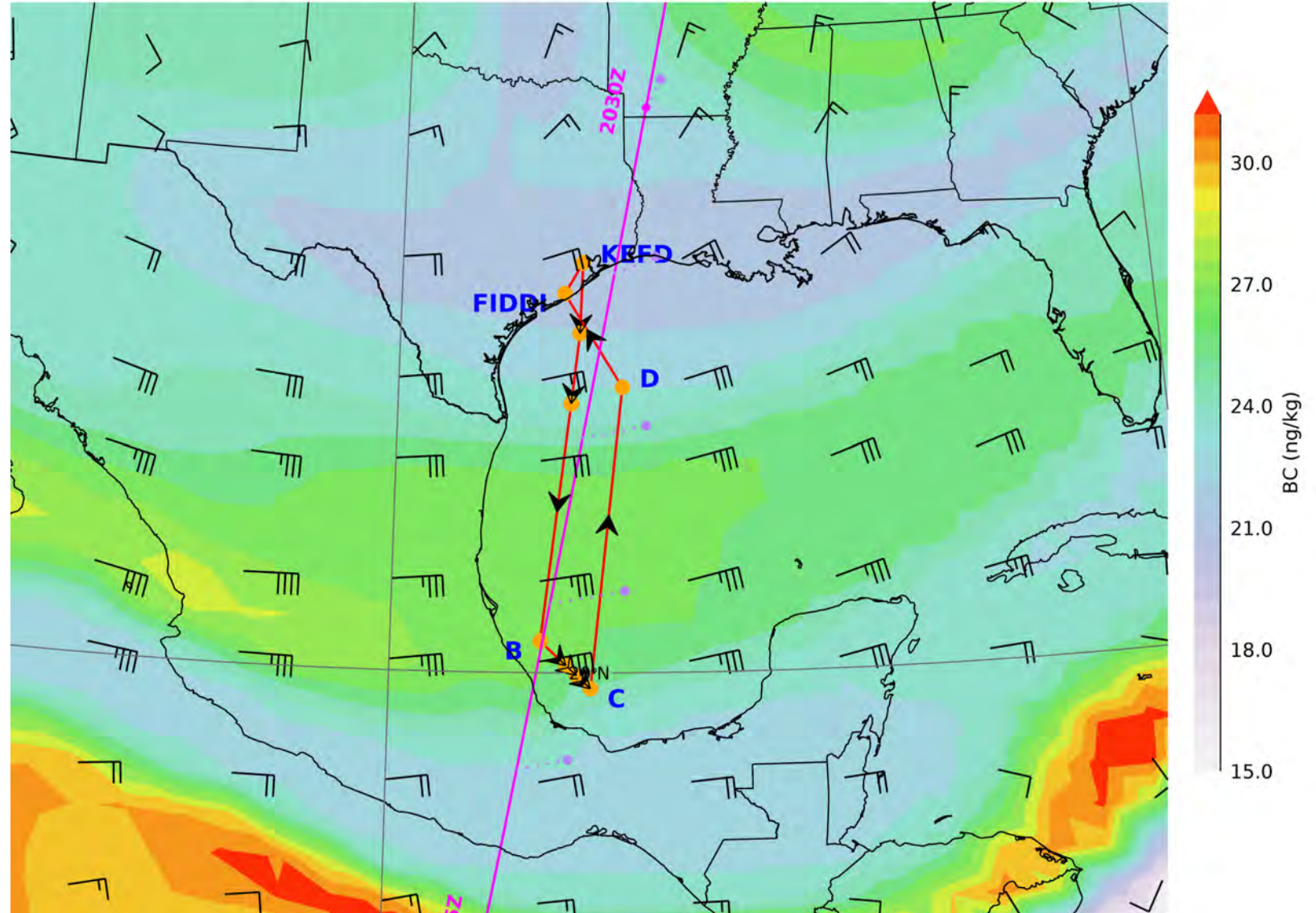
WACCM BC 100 hPa Init: 2026072600 Valid: 2026072818

South over the western Gulf

Flight time ~3.5 hours

Main goals:

- Sample UTLS air wrapped around NAM with profile at southern end of track.
- Fly along EarthCARE track shifted upwind.
- Find cirrus to sample near 45kft.

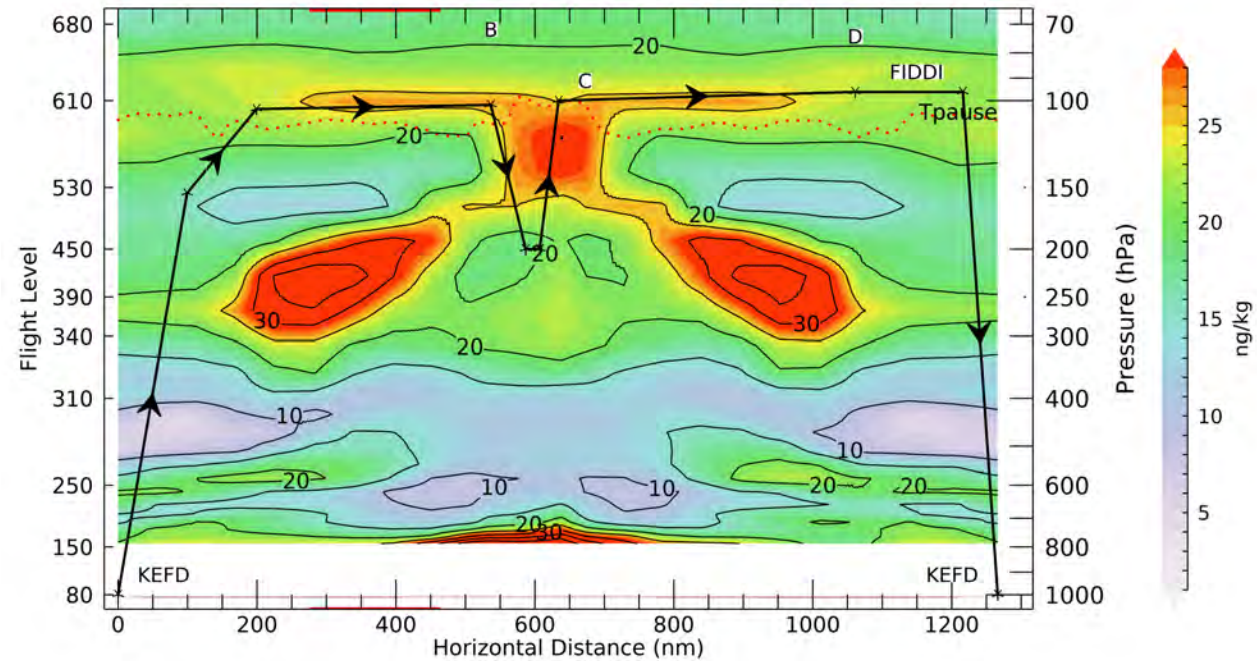


Flight Plan Curtains 07/28

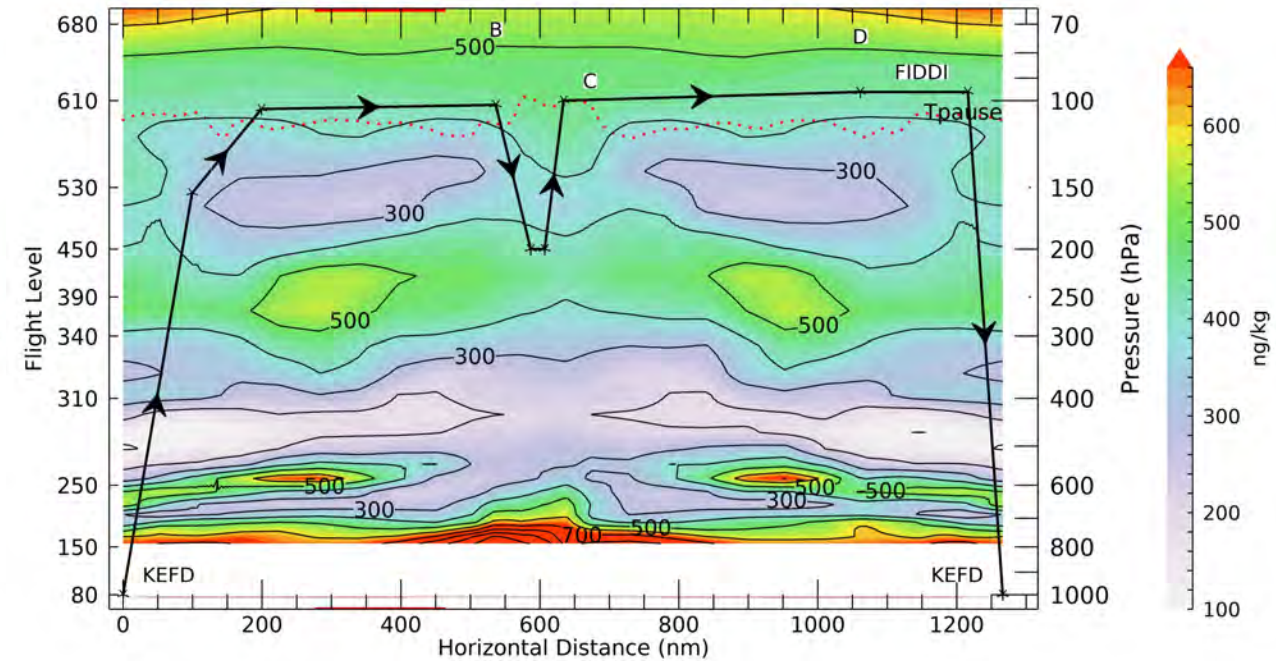
BC

Sulfate

WACCM BC Init:2026072600 Valid Time:2026072818



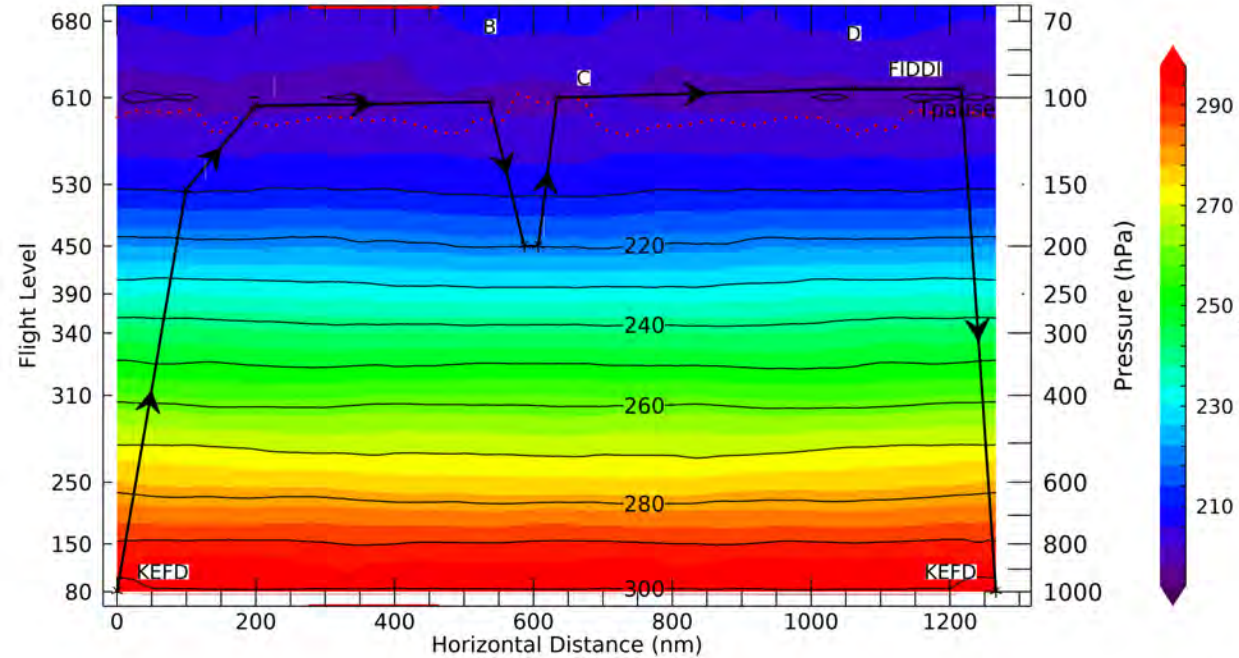
WACCM Sulfate Init:2026072600 Valid Time:2026072818



Flight Plan Curtains 07/28

Temperature

NCEP Temperature Init:2026072706 Valid Time:2026072818



Clouds

NCEP Cloud Cover Init:2026072706 Valid Time:2026072818

