

**APPENDIX A**

**WEATHER MAPS AND GRAPHS**

**EXCEPTIONAL EVENTS DEMONSTRATION FOR 2022 PM<sub>2.5</sub>  
EXCEEDANCES AT HARRISON COUNTY, TRAVIS COUNTY, AND  
KLEBERG COUNTY**

**February 7, 2025**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. BOX 13087  
AUSTIN, TEXAS 78711-3087**

## APPENDIX A: WEATHER MAPS AND GRAPHS

### A.1: GROUP 1 - JANUARY 1, 2022

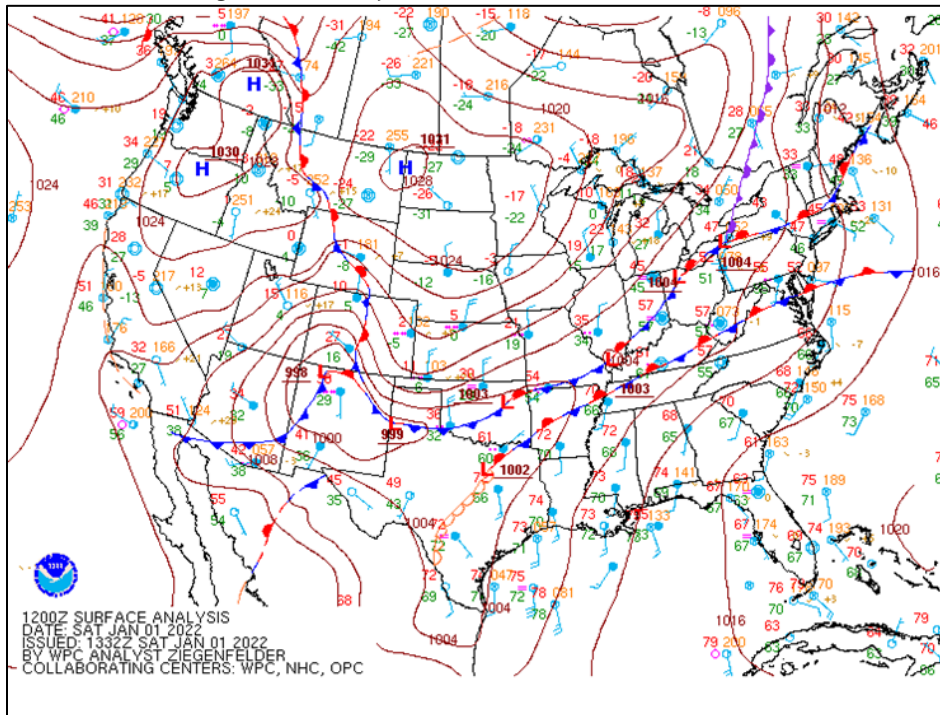


Figure A-1: National Weather Service Weather Prediction Center (January 1, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CST

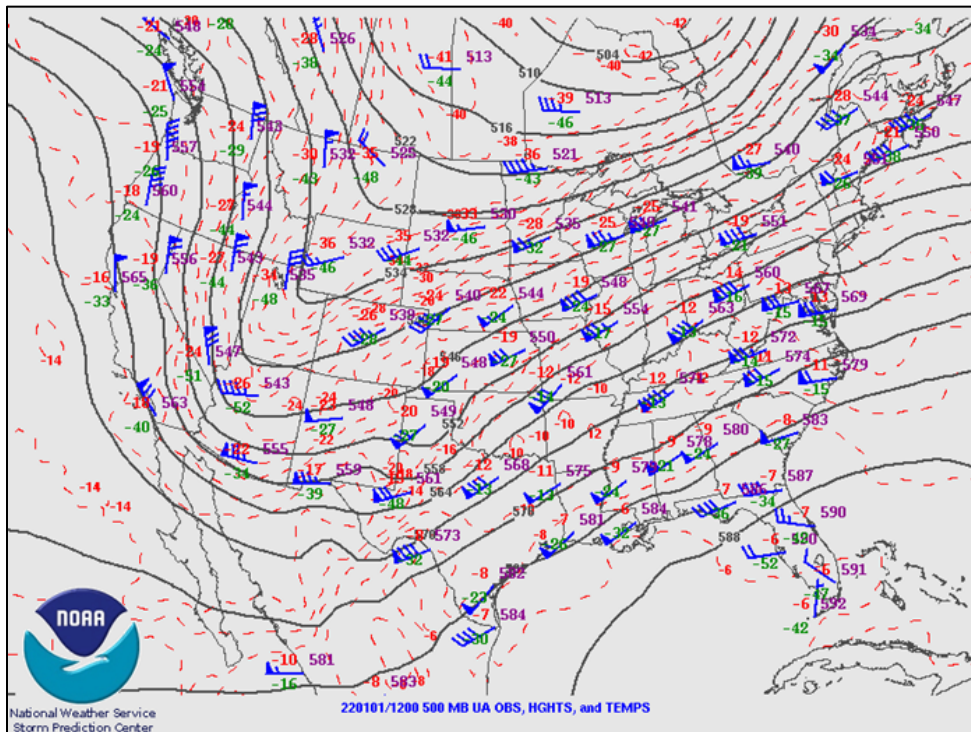
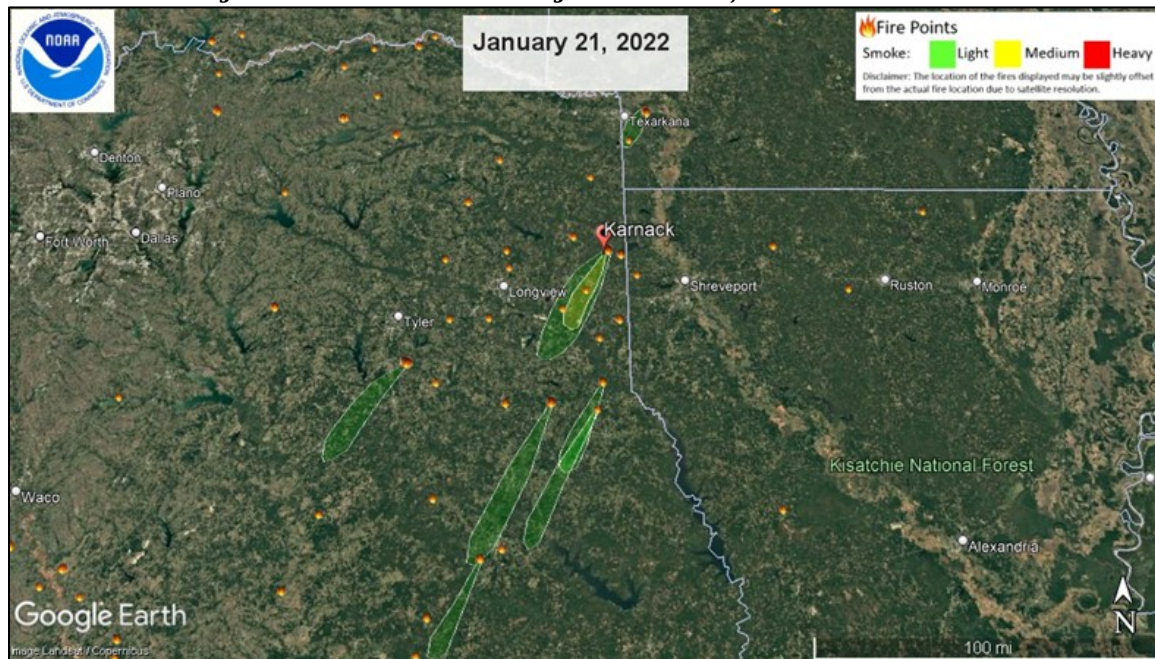


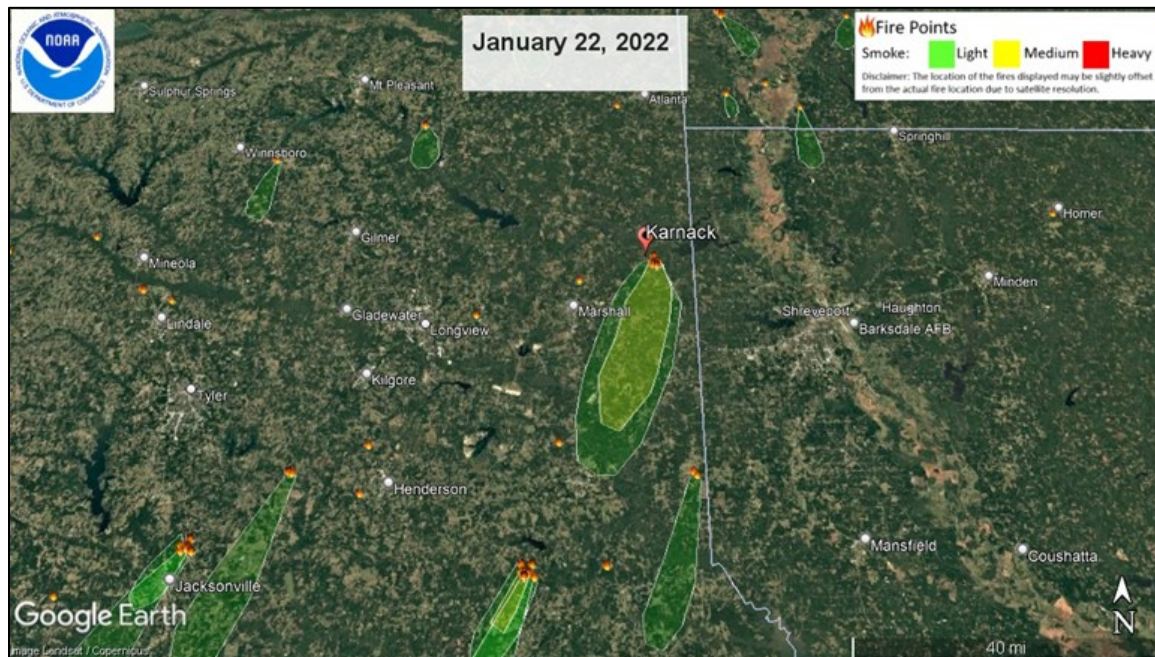
Figure A-2: National Weather Service, Storm Prediction Center (January 1, 2022) 500 MB Analysis (12Z) 6:00 a.m. CST



**A.2: GROUP 2 - JANUARY 21 THROUGH JANUARY 23, 2022**



**Figure A-3: NOAA HMS Fire and Smoke Map on January 21, 2022**



**Figure A-4: NOAA HMS Fire and Smoke Map on January 22, 2022**



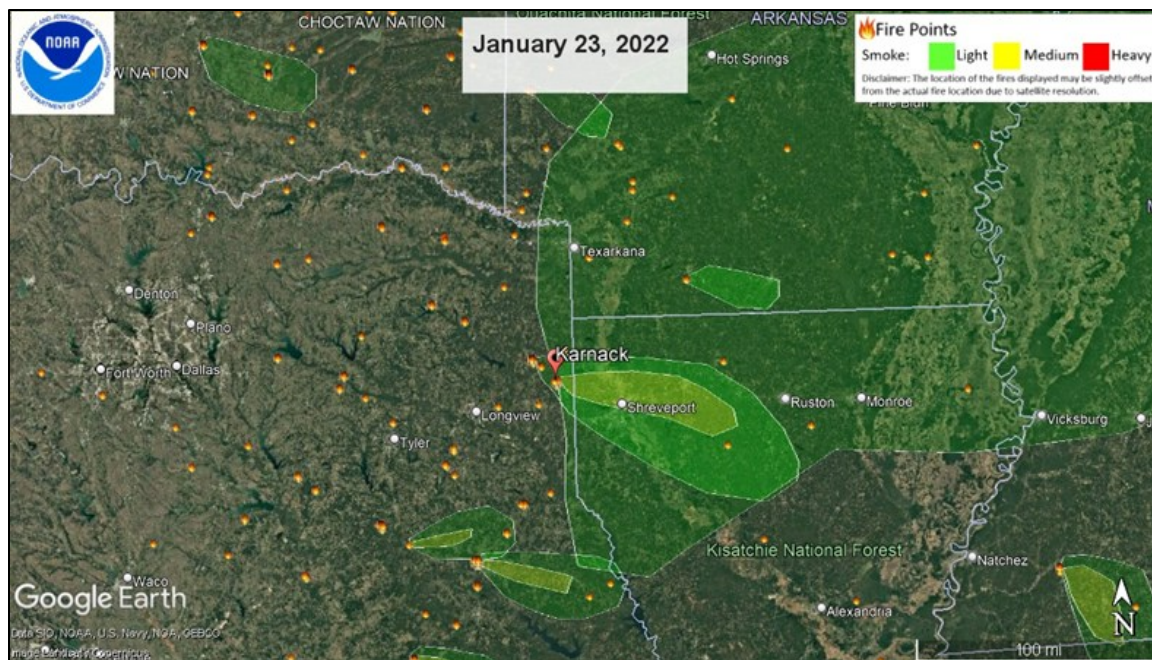


Figure A-5: NOAA HMS Fire and Smoke Map on January 23, 2022

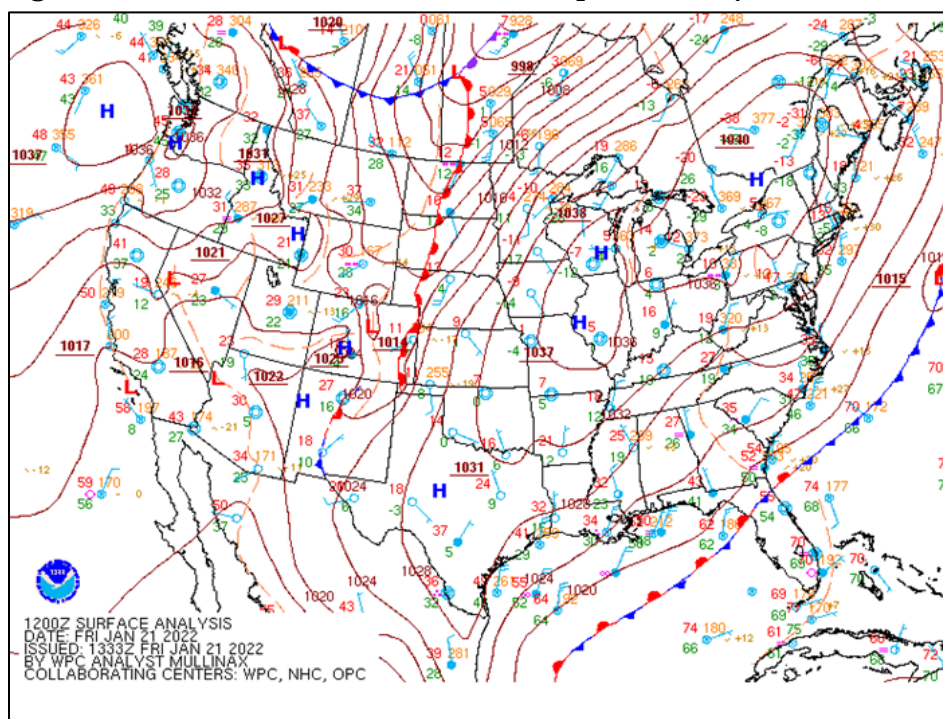


Figure A-6: National Weather Service Weather Prediction Center (January 21, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CST



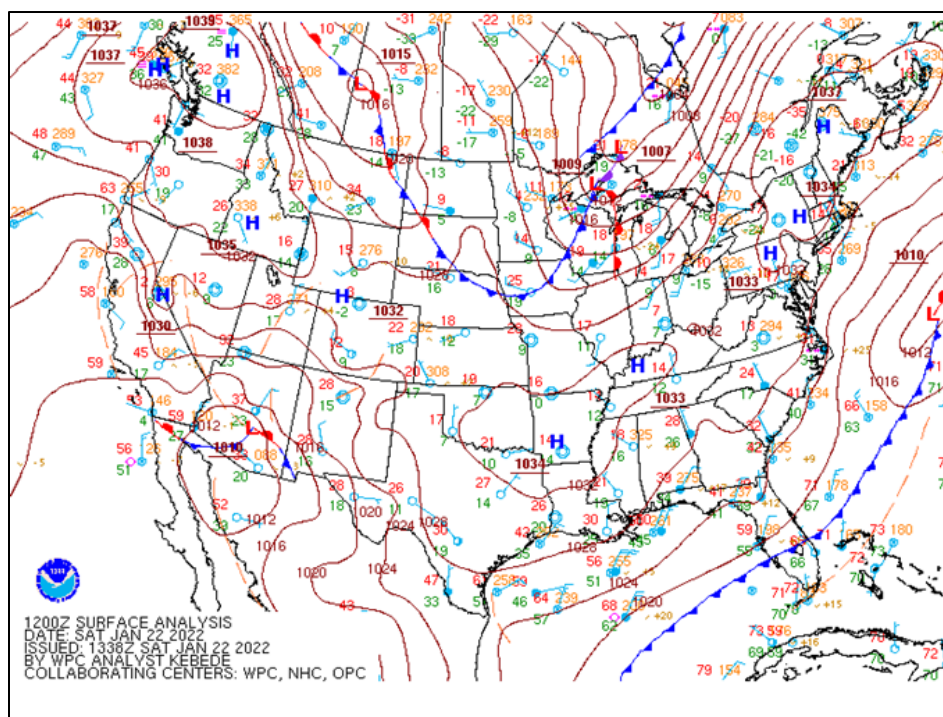


Figure A-7: National Weather Service Weather Prediction Center (January 22, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CST

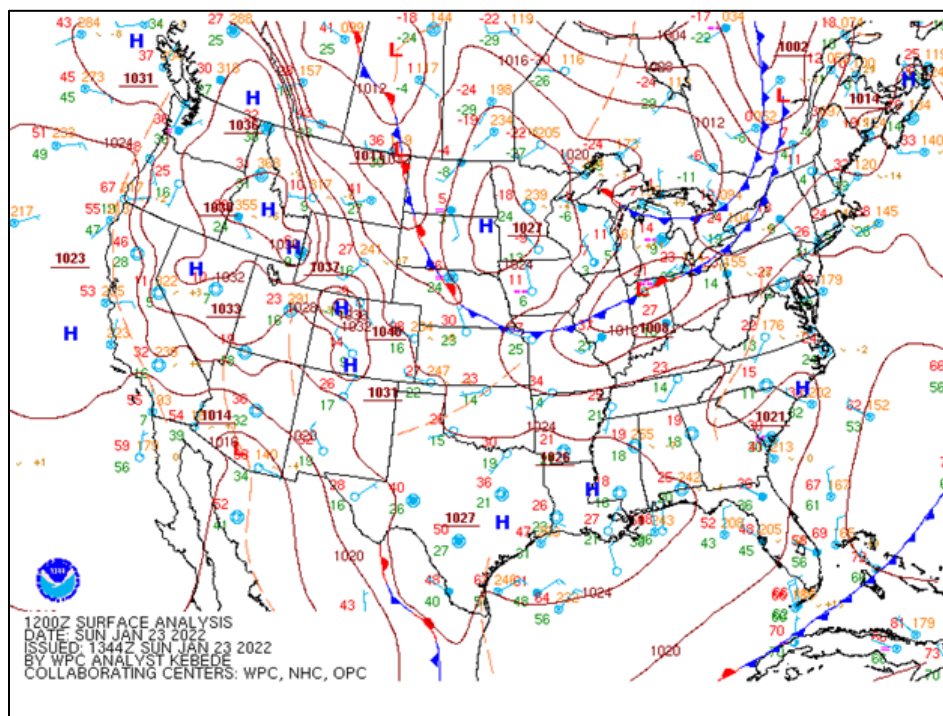
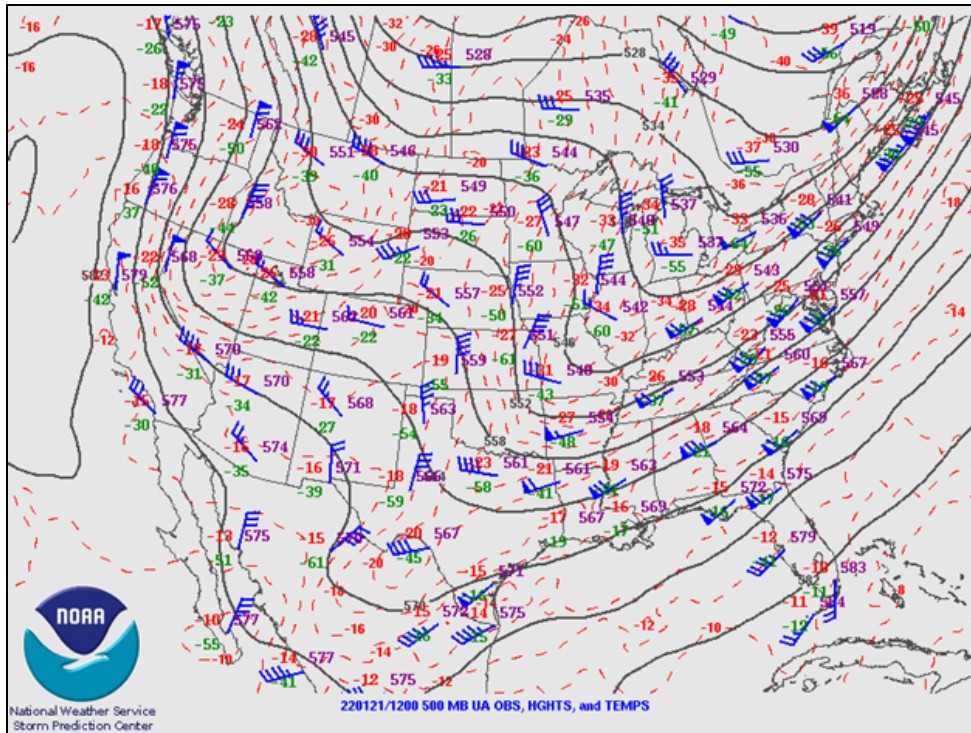
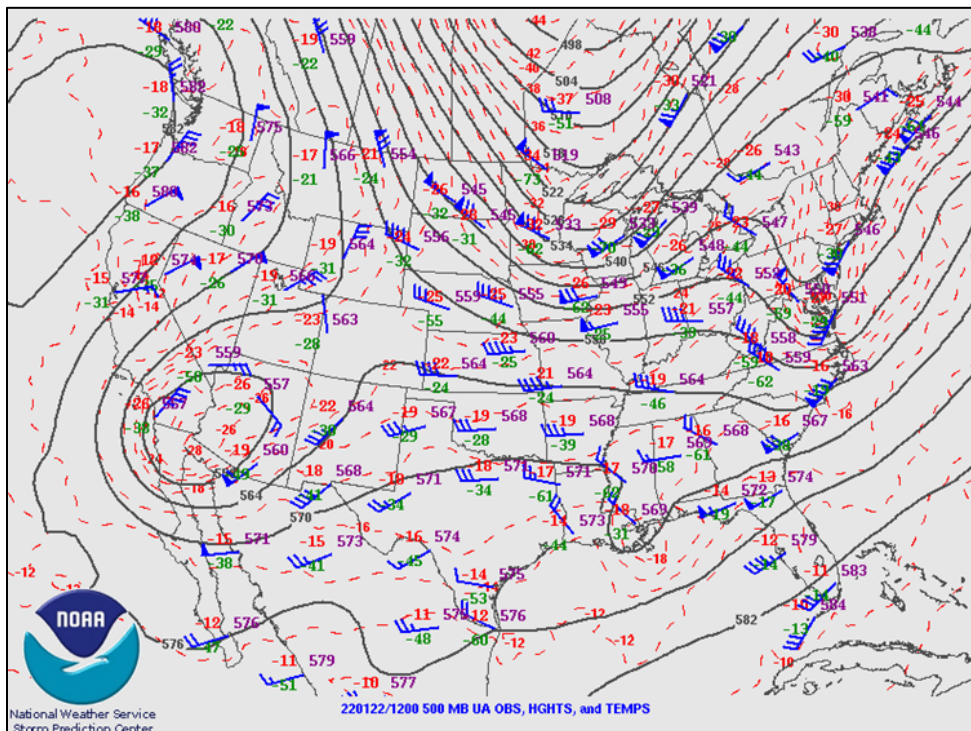


Figure A-8: National Weather Service Weather Prediction Center (January 23, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CST



**Figure A-9: National Weather Service, Storm Prediction Center (January 21, 2022) 500 MB Analysis (12Z) 6:00 a.m. CST**



**Figure A-10: National Weather Service, Storm Prediction Center (January 22, 2022) 500 MB Analysis (12Z) 6:00 a.m. CST**



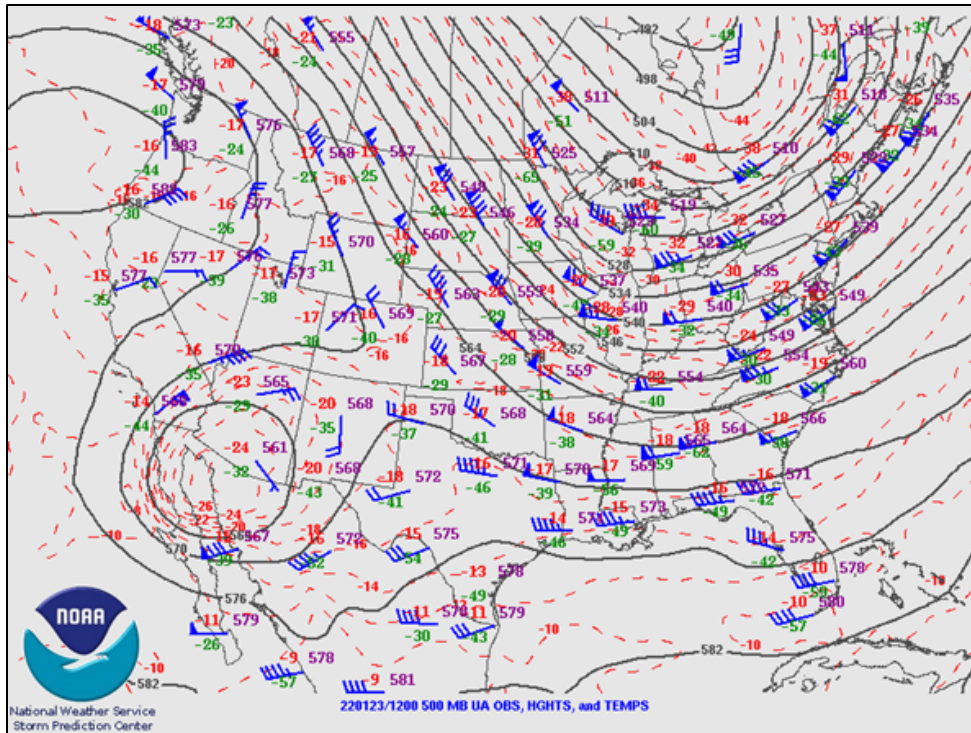


Figure A-11: National Weather Service, Storm Prediction Center (January 23, 2022) 500 MB Analysis (12Z) 6:00 a.m. CST

### A.3: GROUP 3 - MARCH 25, 2022



Figure A-12: NOAA HMS Fire and Smoke Map on March 25, 2022

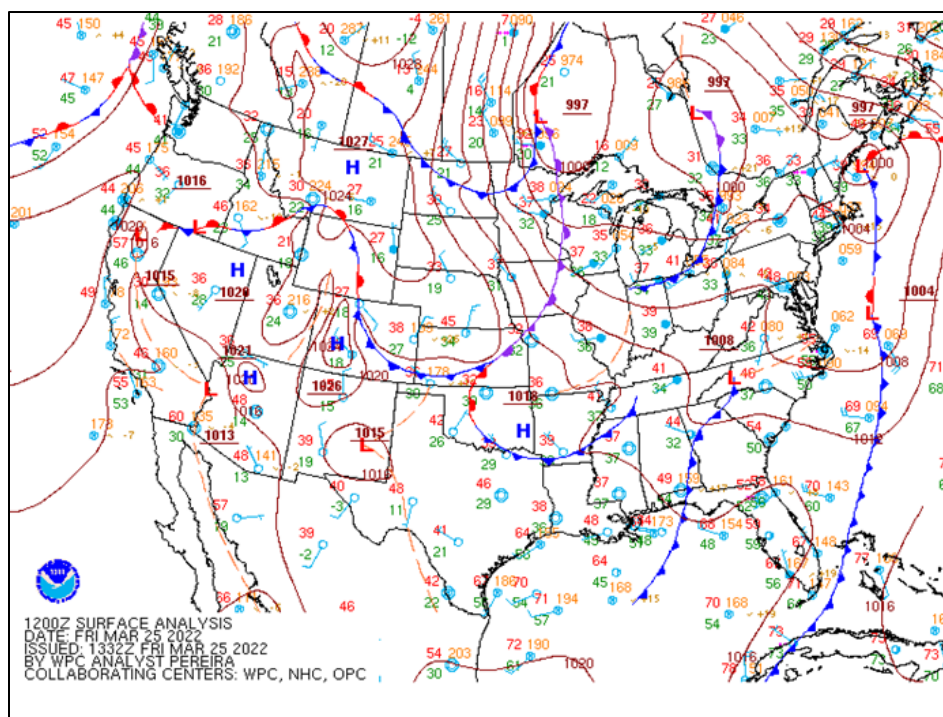


Figure A-13: National Weather Service Weather Prediction Center (March 25, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

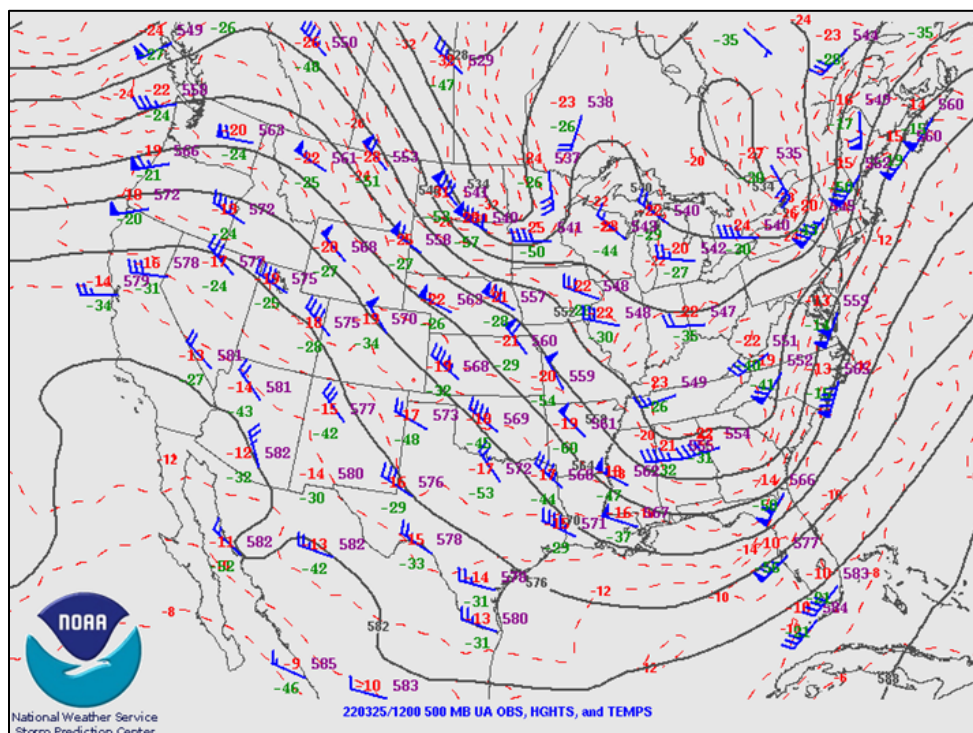


Figure A-14: National Weather Service, Storm Prediction Center (March 25, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT



#### A.4: GROUP 4 - APRIL 11, APRIL 12, AND APRIL 13, 2022

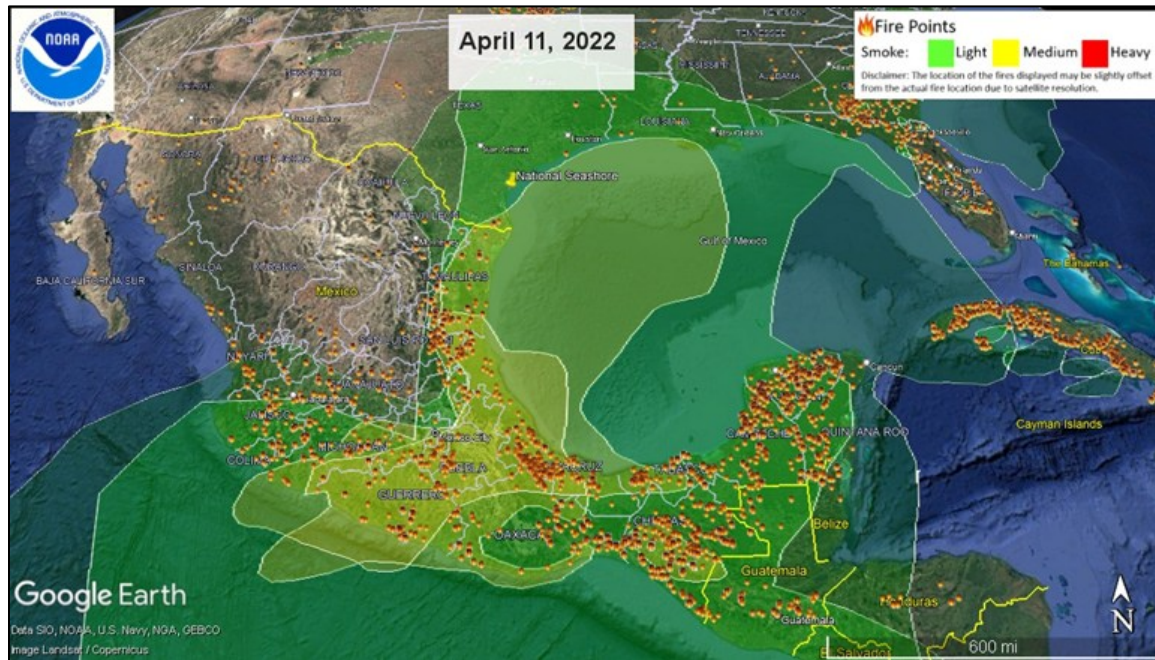


Figure A-15: NOAA HMS Fire and Smoke Map on April 11, 2022

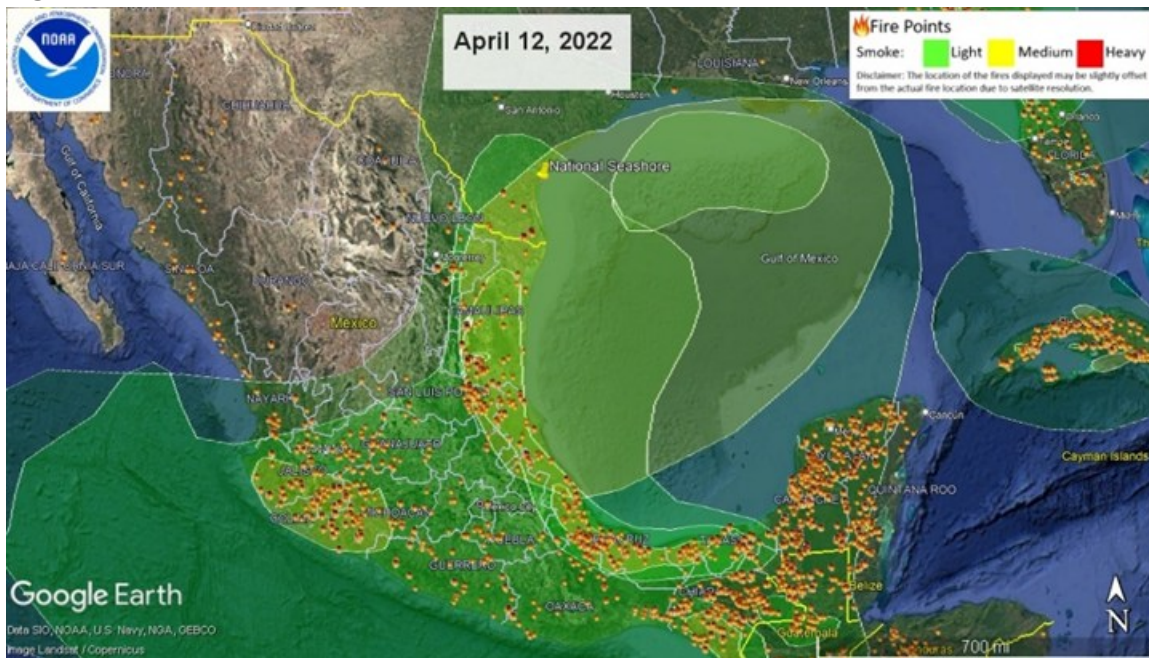


Figure A-16: NOAA HMS Fire and Smoke Map on April 12, 2022



Figure A-17: NOAA HMS Fire and Smoke Map on April 13, 2022

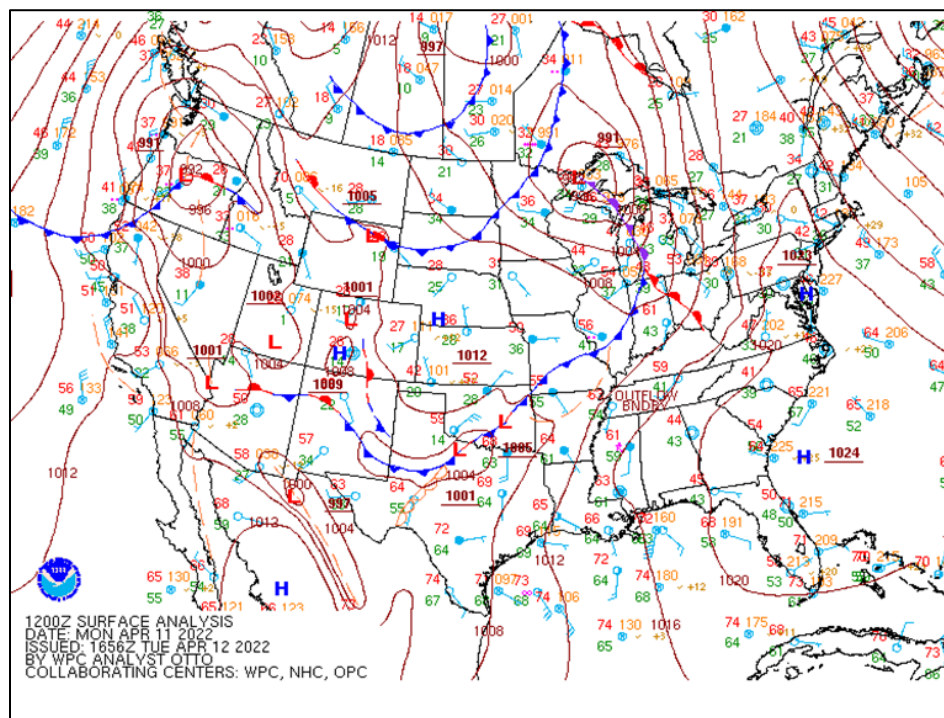


Figure A-18: National Weather Service Weather Prediction Center (April 11, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT



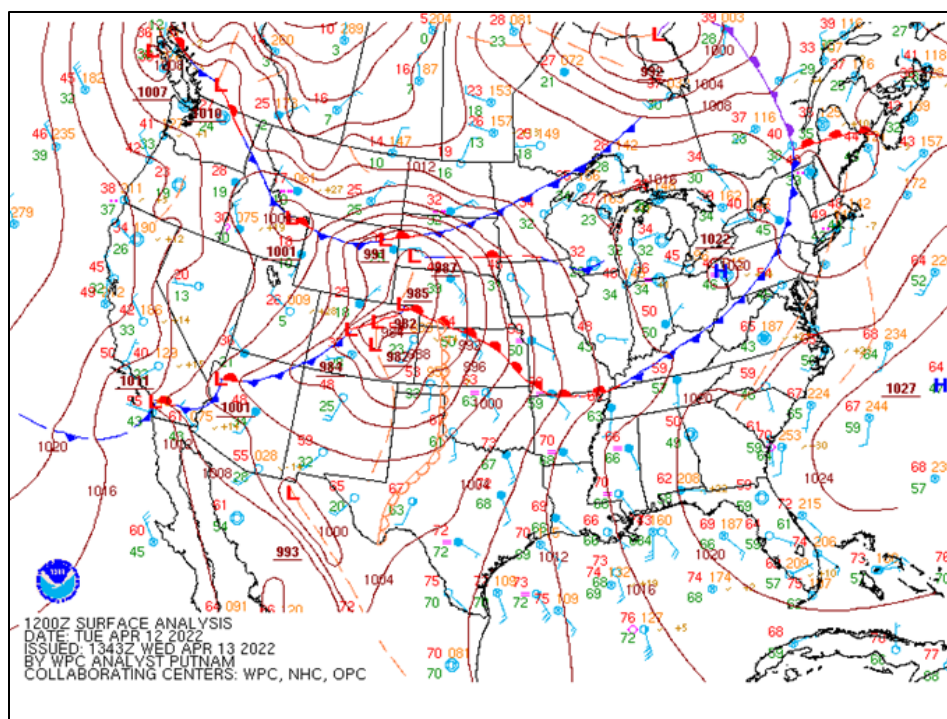


Figure A-19: National Weather Service Weather Prediction Center (April 12, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

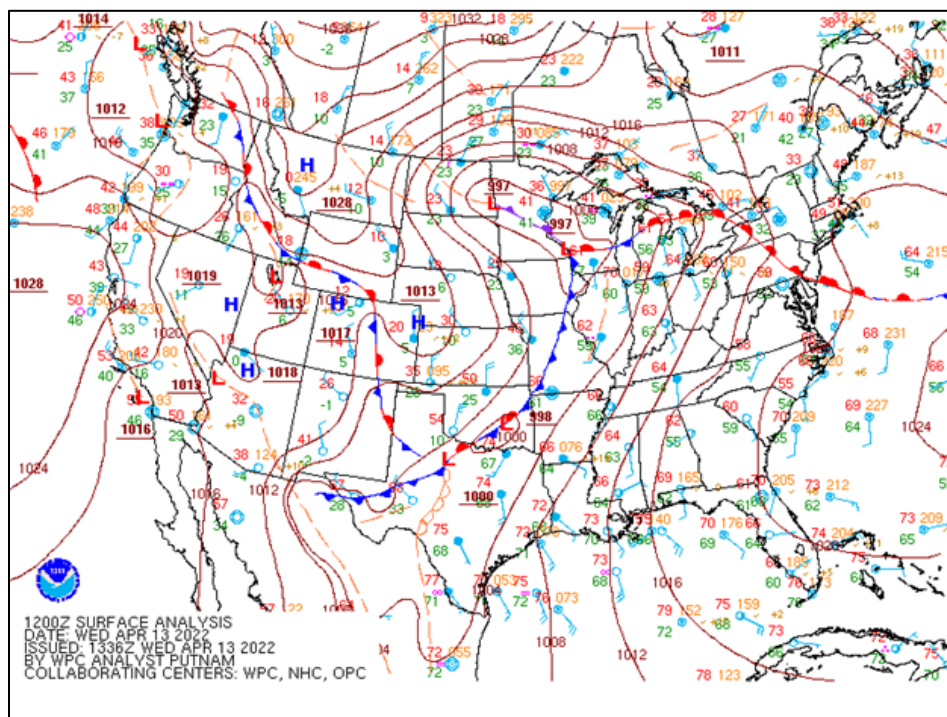


Figure A-20: National Weather Service Weather Prediction Center (April 13, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

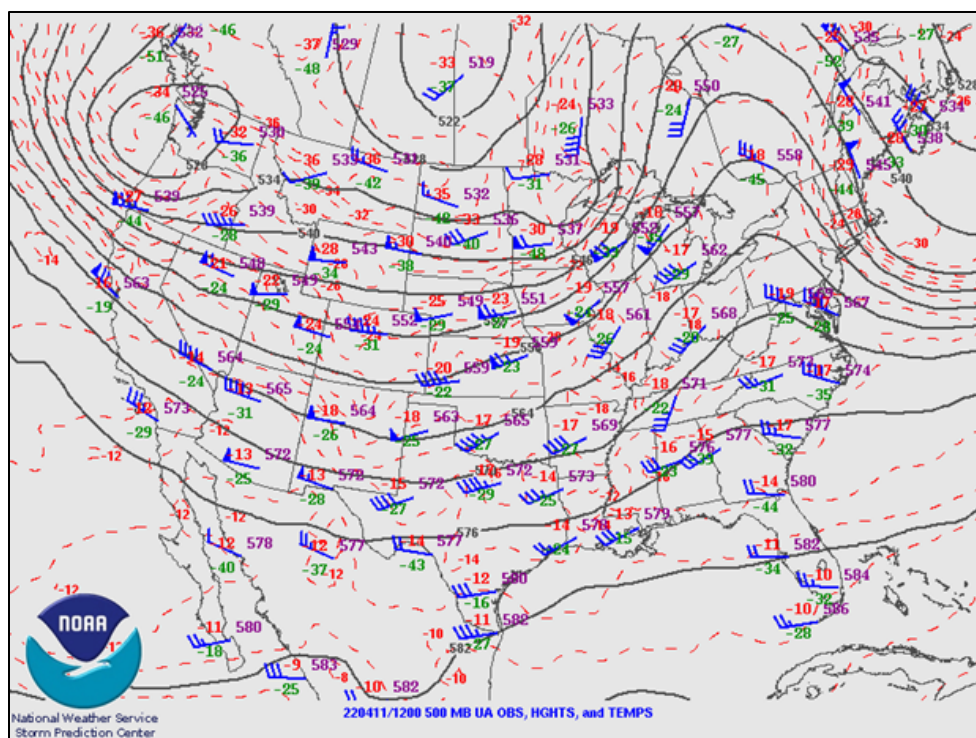


Figure A-21: National Weather Service, Storm Prediction Center (April 11, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT

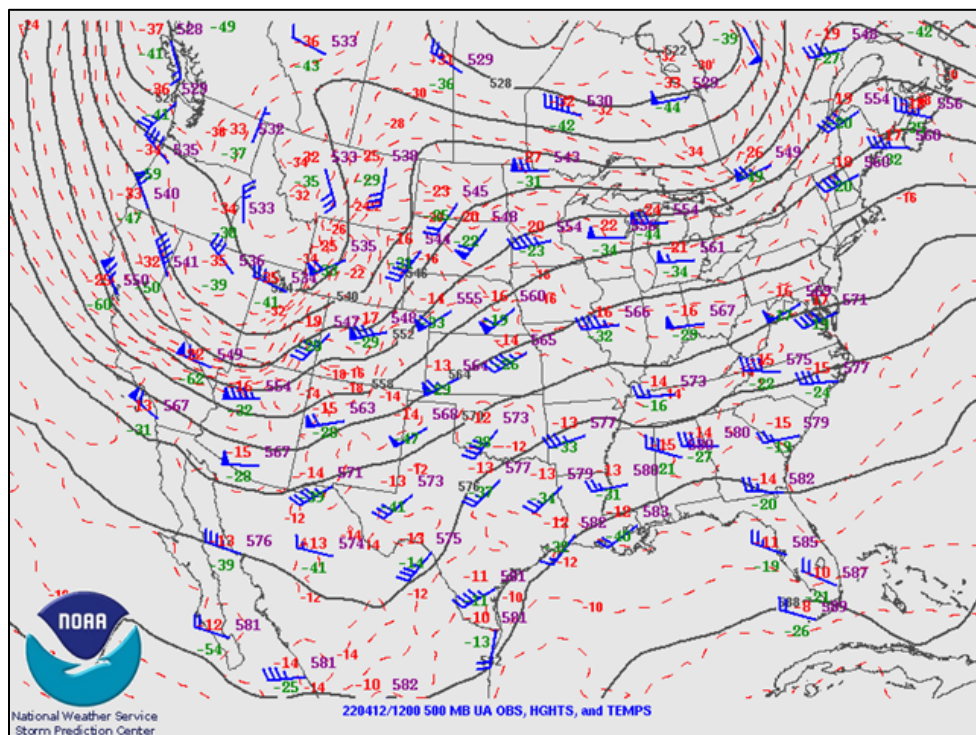


Figure A-22: National Weather Service, Storm Prediction Center (April 12, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT



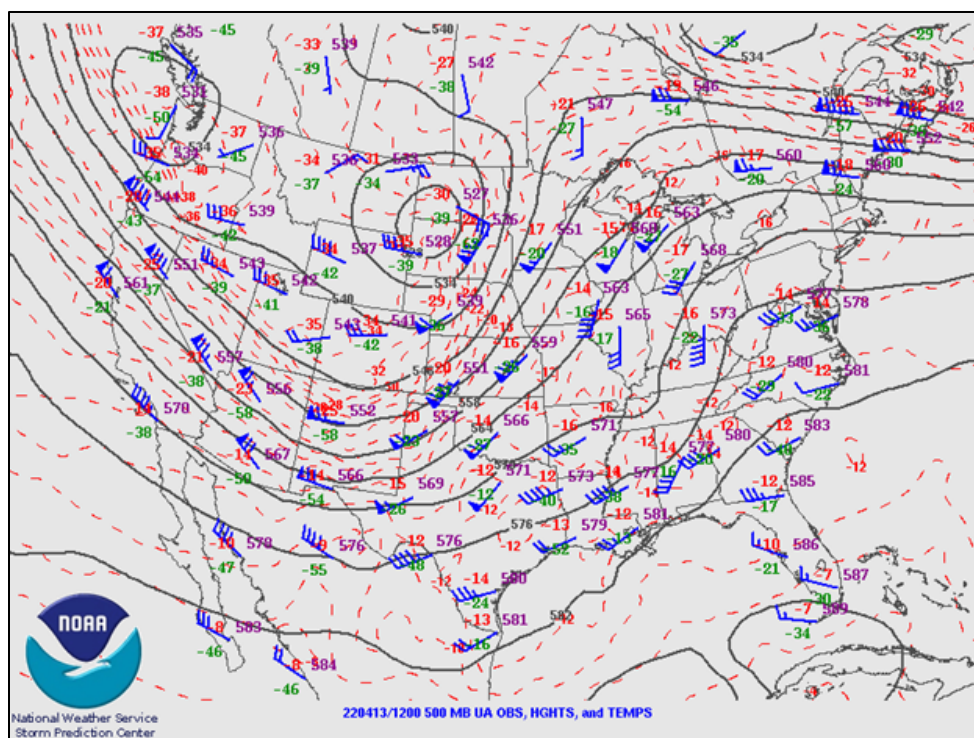


Figure A-23: National Weather Service, Storm Prediction Center (April 13, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT

#### A.5: GROUP 5 - MAY 6 AND MAY 7, 2022

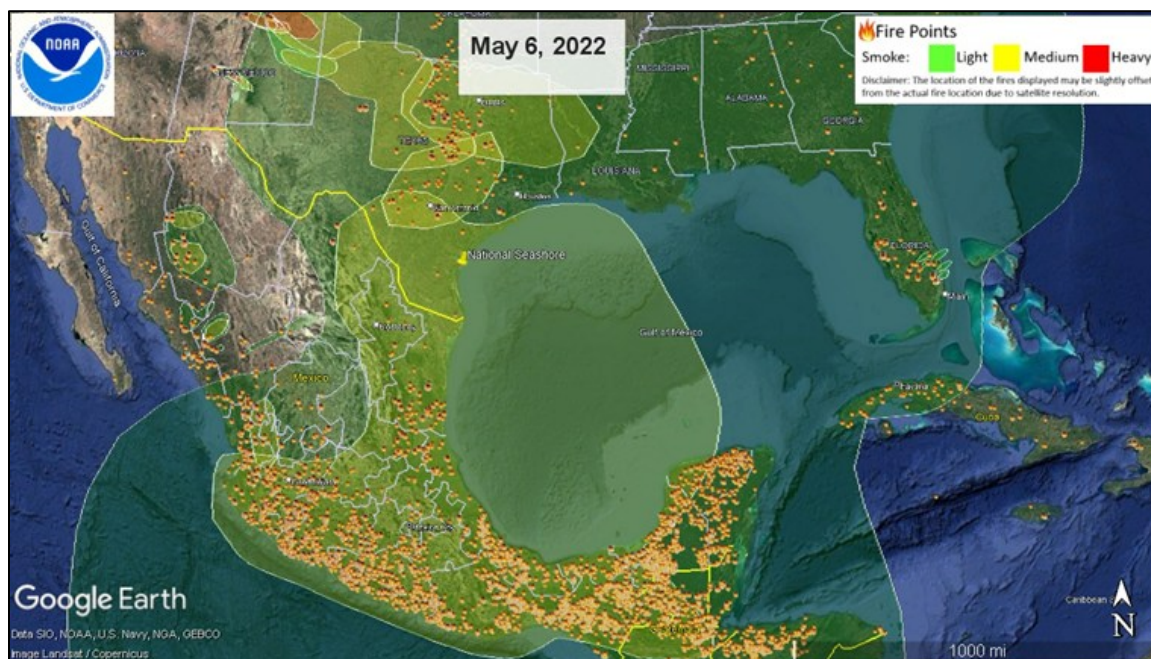


Figure A-24: NOAA HMS Fire and Smoke Map on May 6, 2022

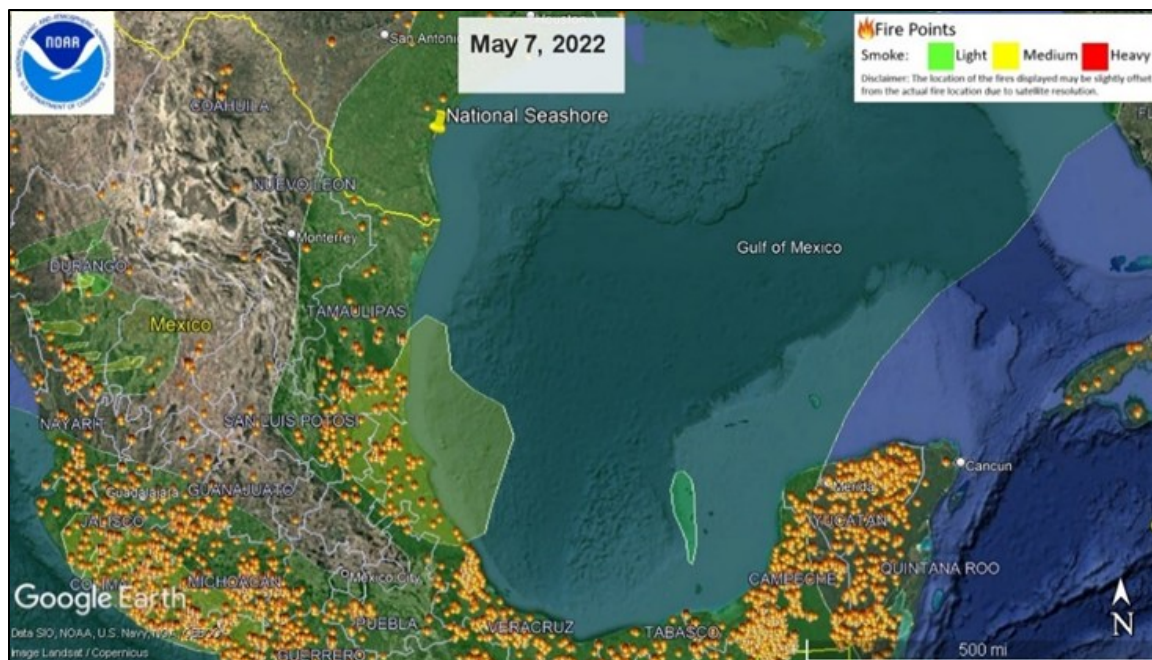
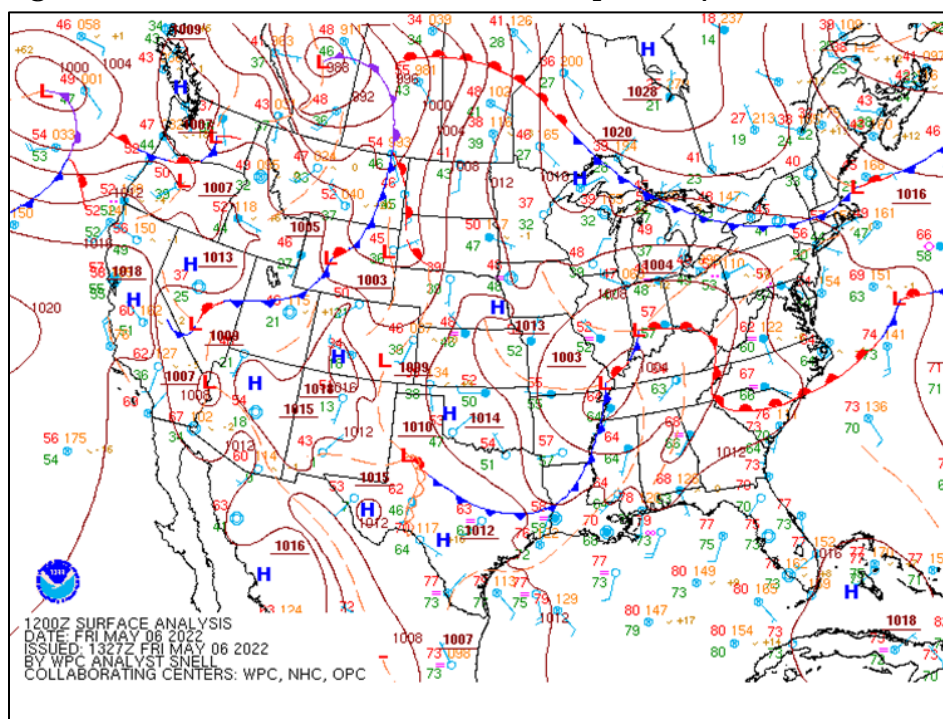


Figure A-25: NOAA HMS Fire and Smoke Map on May 7, 2022





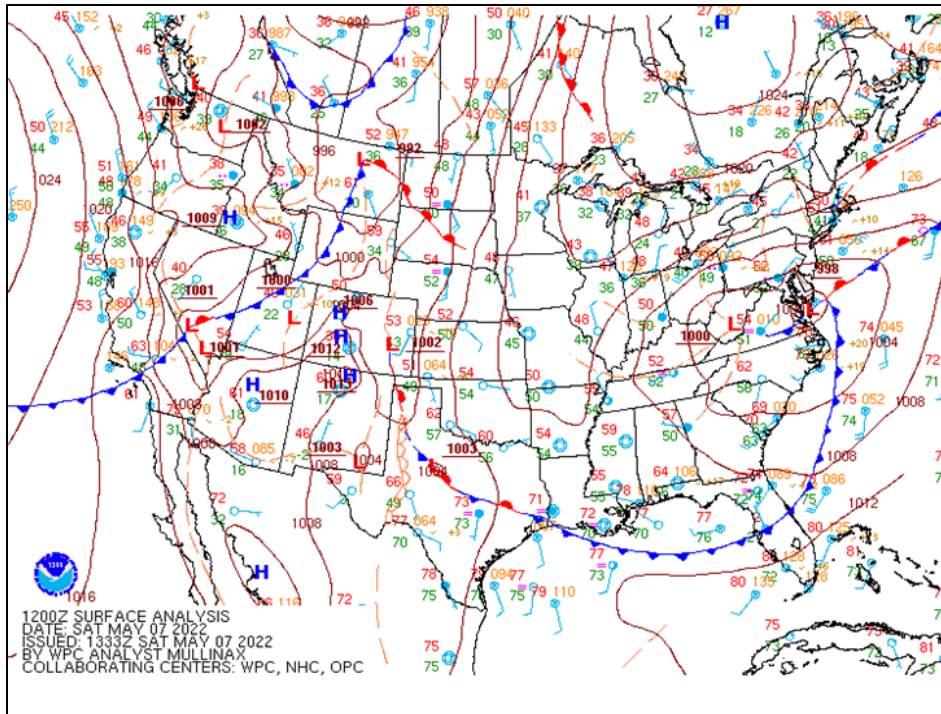


Figure A-27: National Weather Service Weather Prediction Center (May 7, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

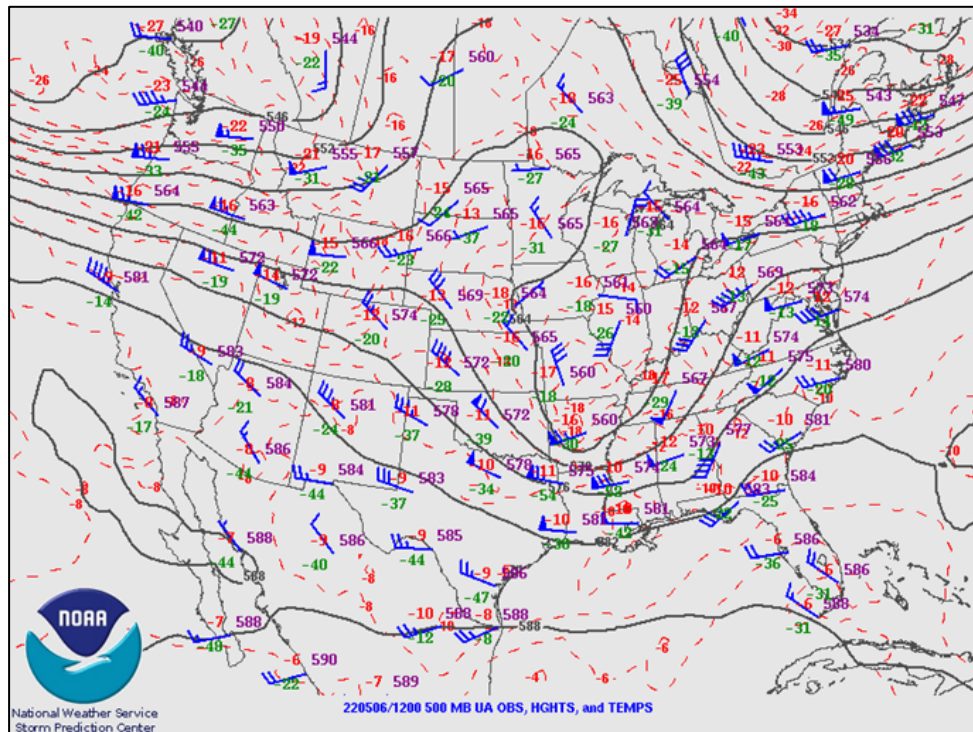


Figure A-28: National Weather Service, Storm Prediction Center (May 6, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT

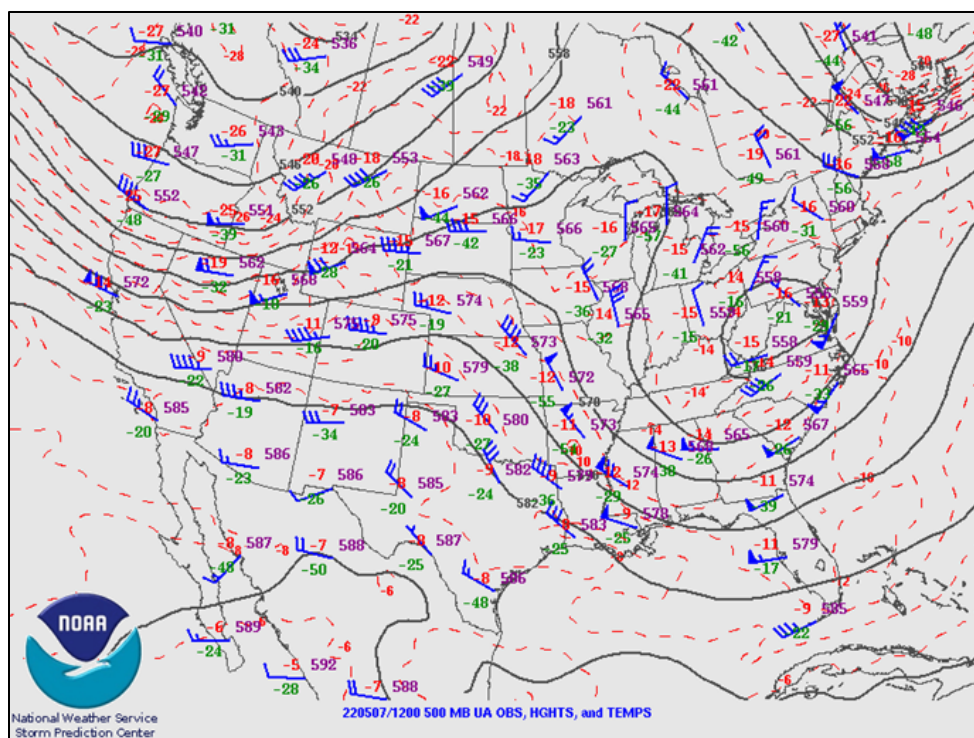


Figure A-29: National Weather Service, Storm Prediction Center (May 7, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT

#### A.6: GROUP 6 - MAY 20, 2022

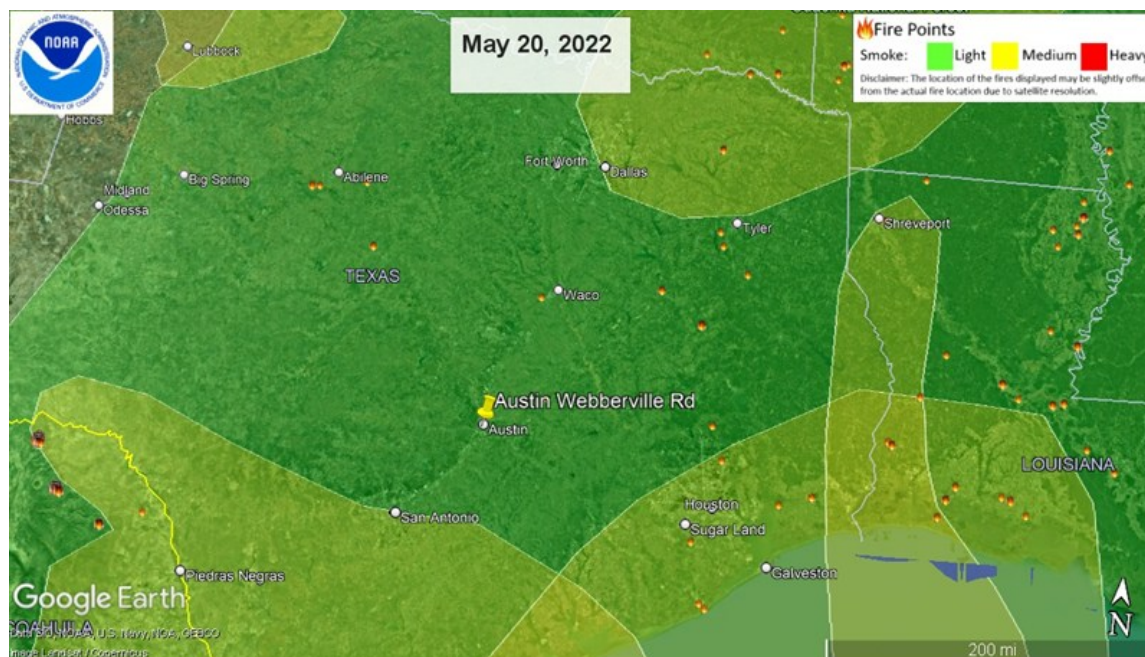


Figure A-30: NOAA HMS Fire and Smoke Map on May 20, 2022



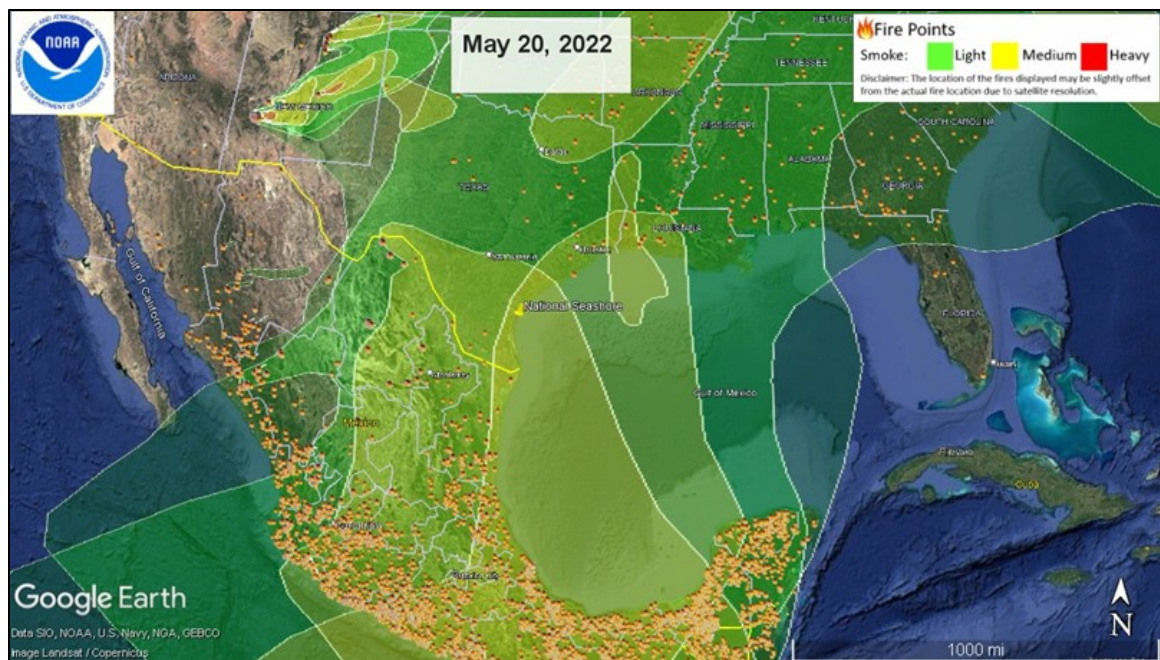


Figure A-31: NOAA HMS Fire and Smoke Map on May 20, 2022

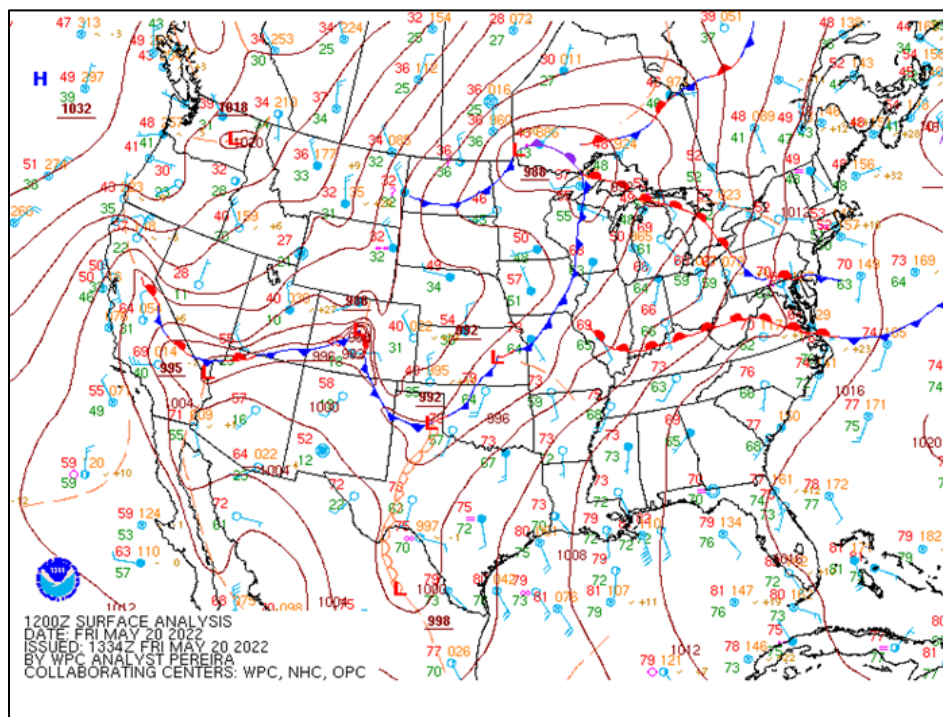


Figure A-32: National Weather Service Weather Prediction Center (May 20, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

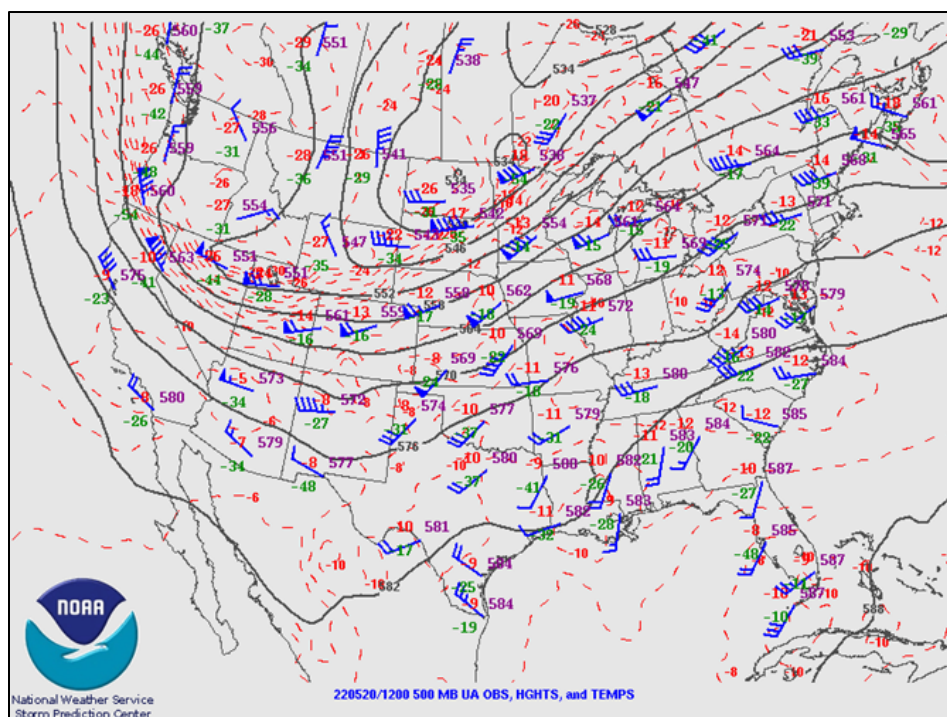
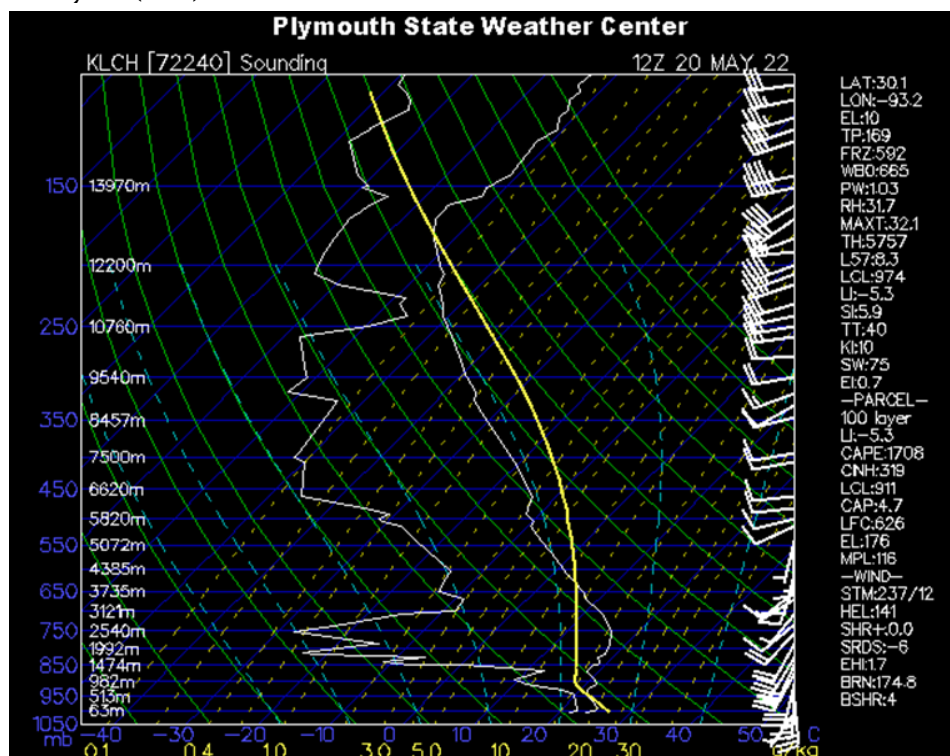


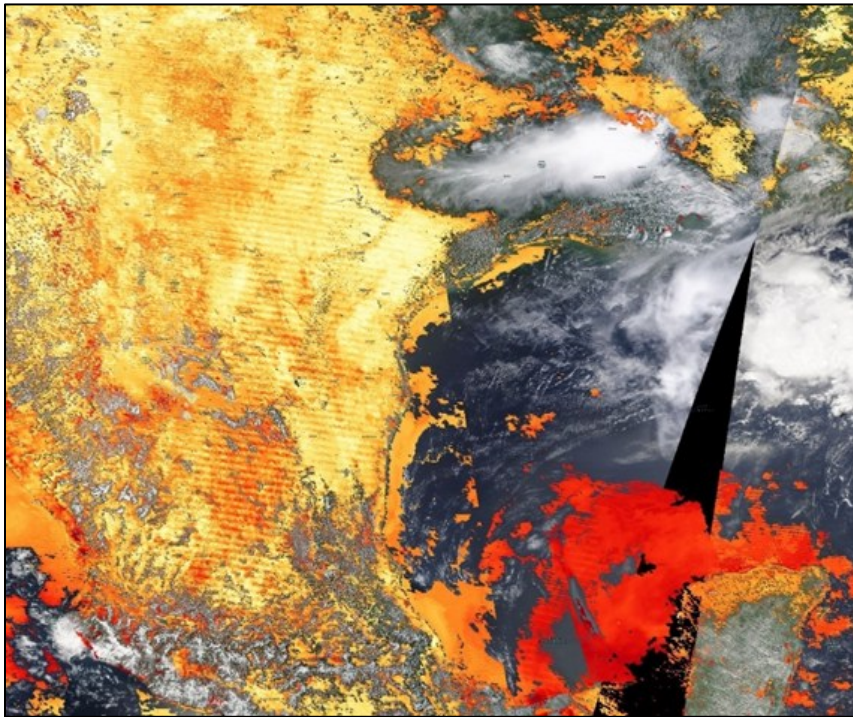
Figure A-33: National Weather Service, Storm Prediction Center (May 20, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT



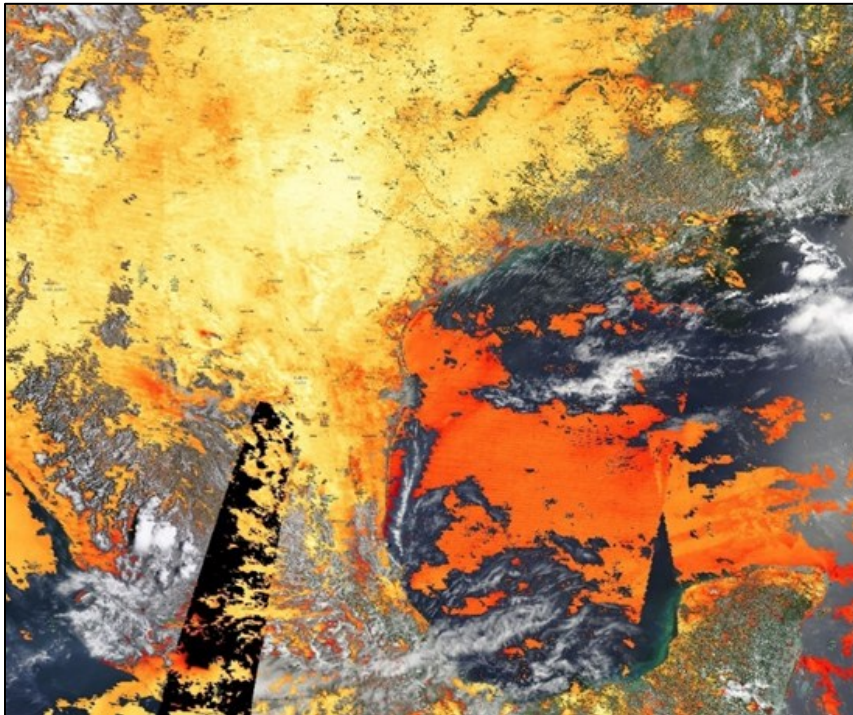
Figures A-34: A sounding for Lake Charles for May 20, 2022, 12Z. from <https://vortex.plymouth.edu/>



**A.7: GROUP 7 - JUNE 11, 2022 THROUGH JUNE 17, 2022**



**Figure A-35: MAIAC combined Aerosol Optical Depth Image on June 11, 2022**



**Figure A-36: MAIAC combined Aerosol Optical Depth Image on June 12, 2022**

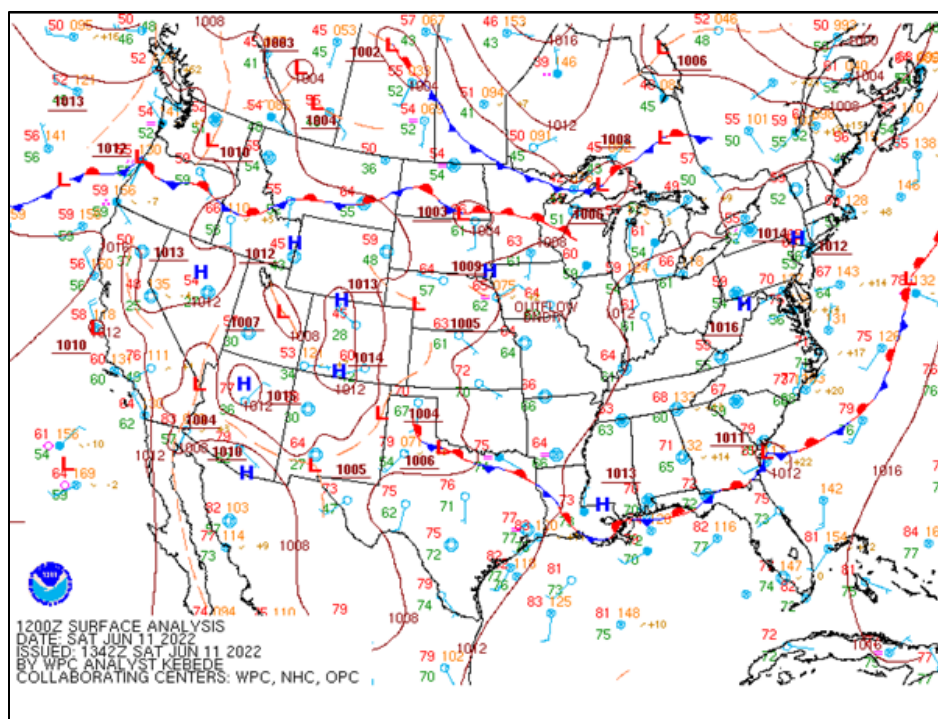


Figure A-37: National Weather Service Weather Prediction Center (June 11, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

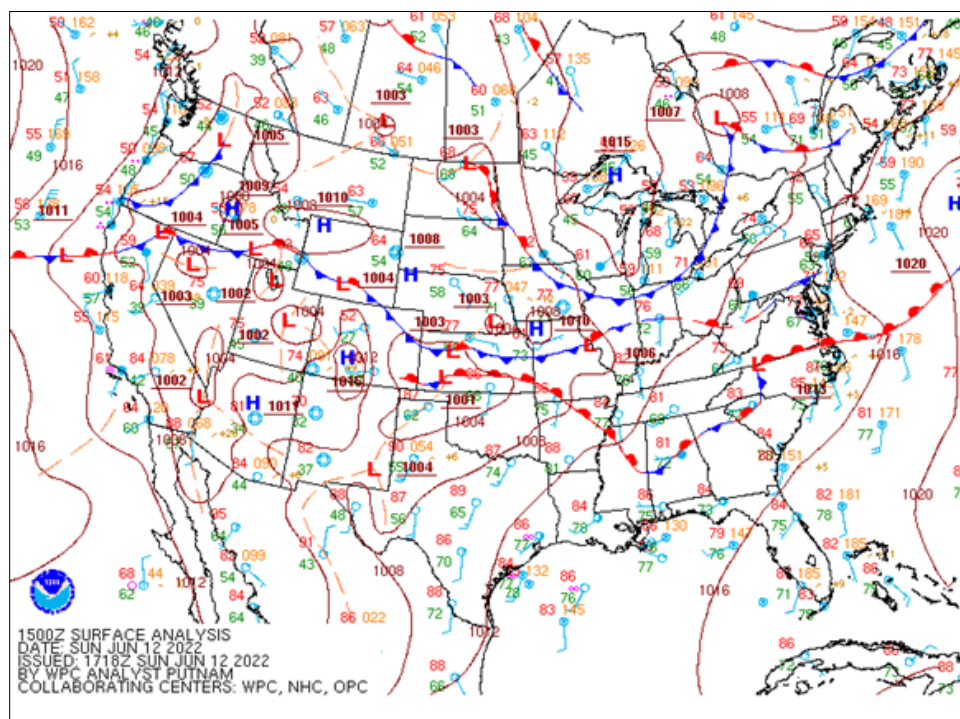
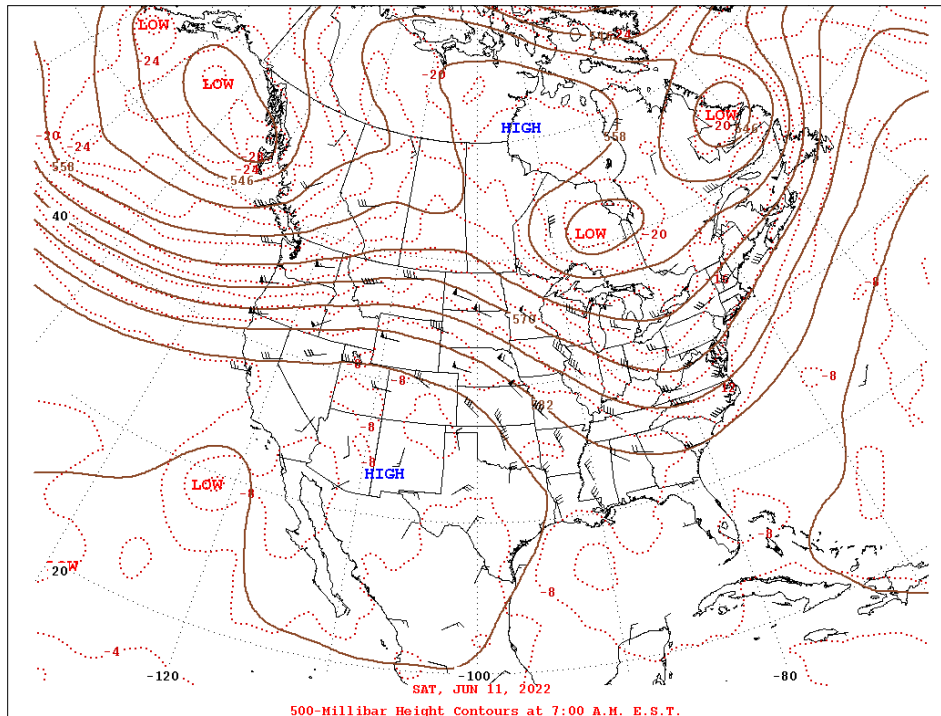
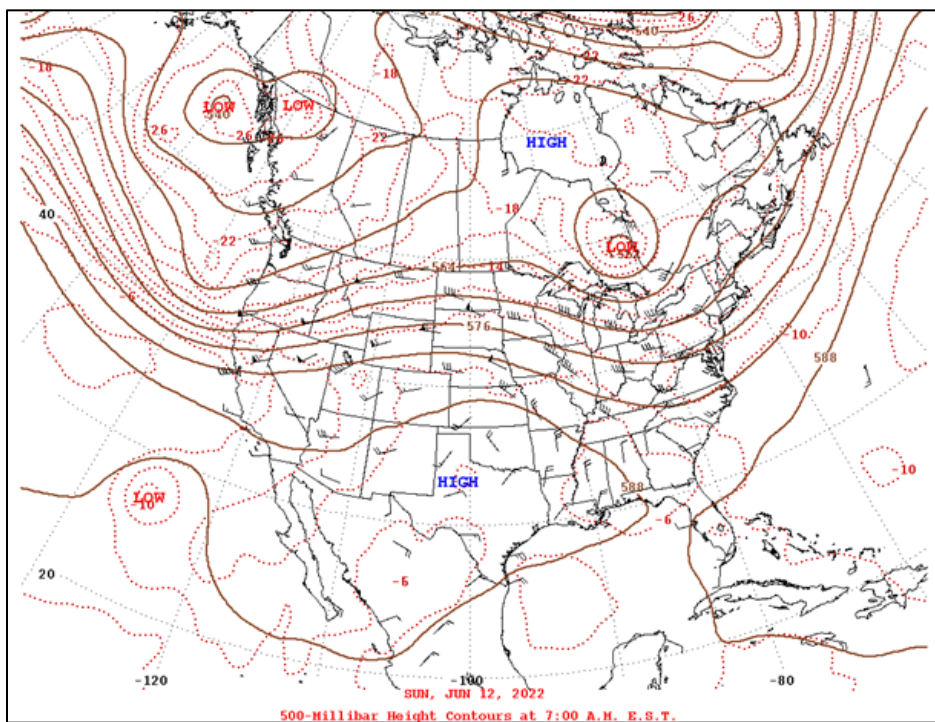


Figure A-38: National Weather Service Weather Prediction Center (June 12, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT





**Figure A-39: National Weather Service, Storm Prediction Center (June 11, 2022) 500 MB Analysis (12Z ) 6:00 a.m. CDT**



**Figure A-40: National Weather Service, Storm Prediction Center (June 12, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT**

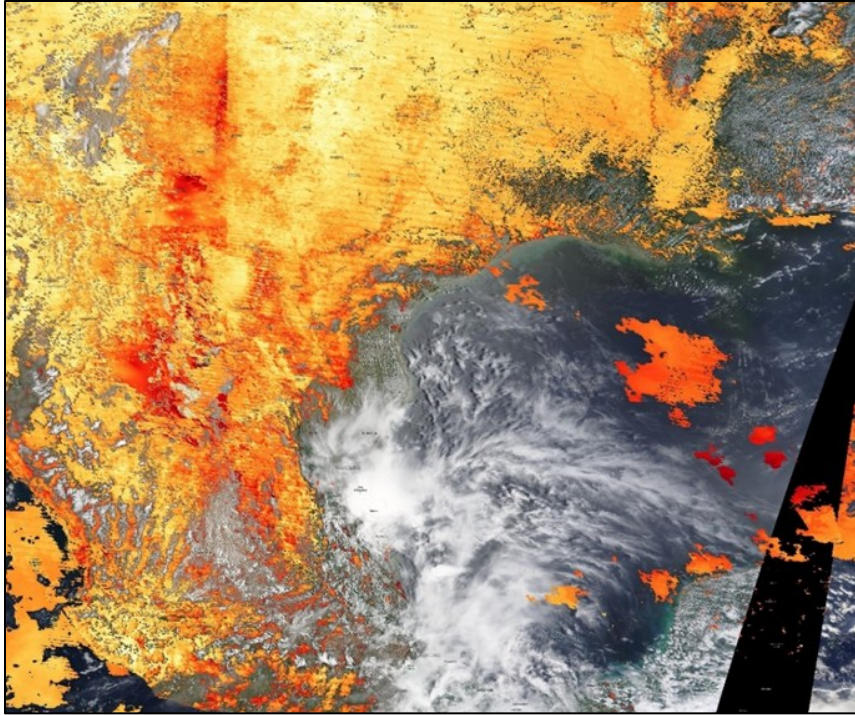


Figure A-41: MAIAC combined Aerosol Optical Depth Image on June 13, 2022

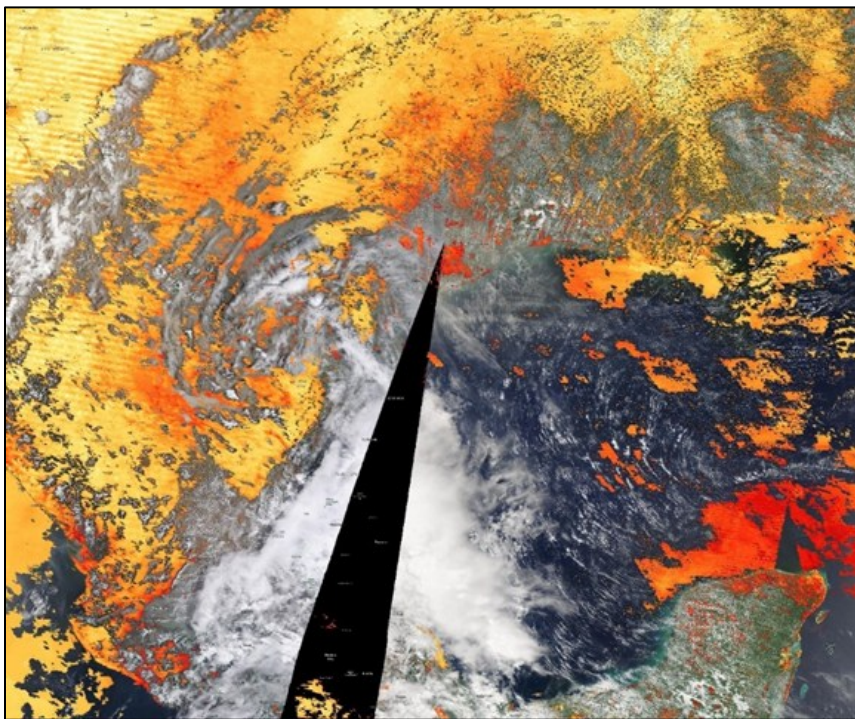


Figure A-42: MAIAC combined Aerosol Optical Depth Image on June 14, 2022



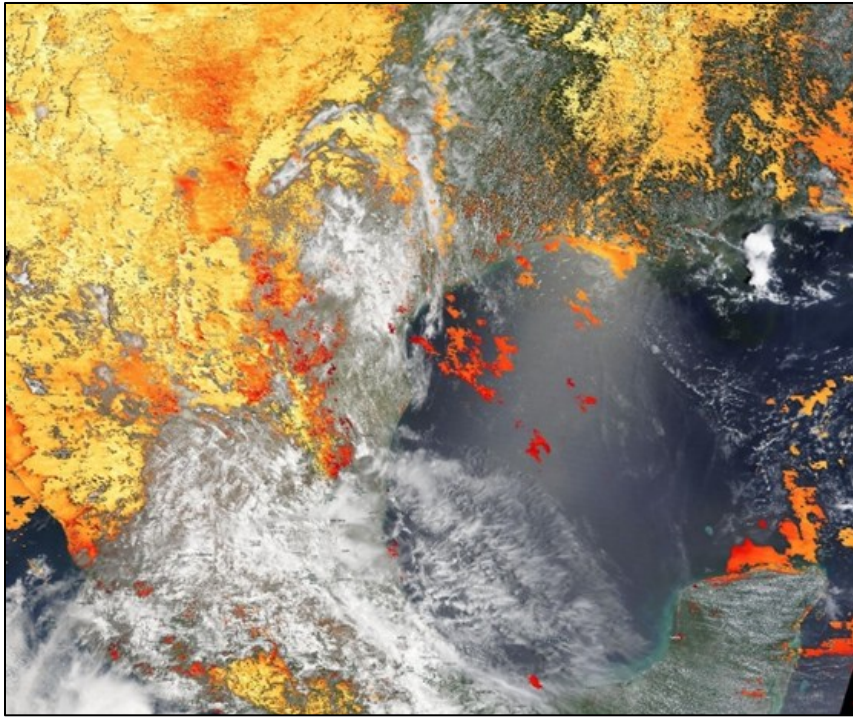


Figure A-43: MAIAC combined Aerosol Optical Depth Image on June 15, 2022

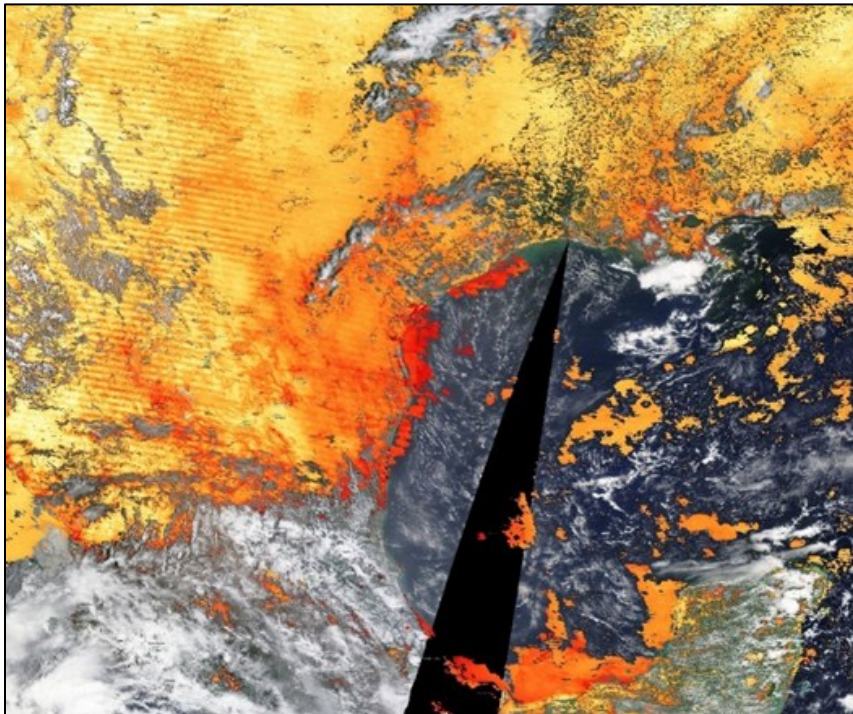
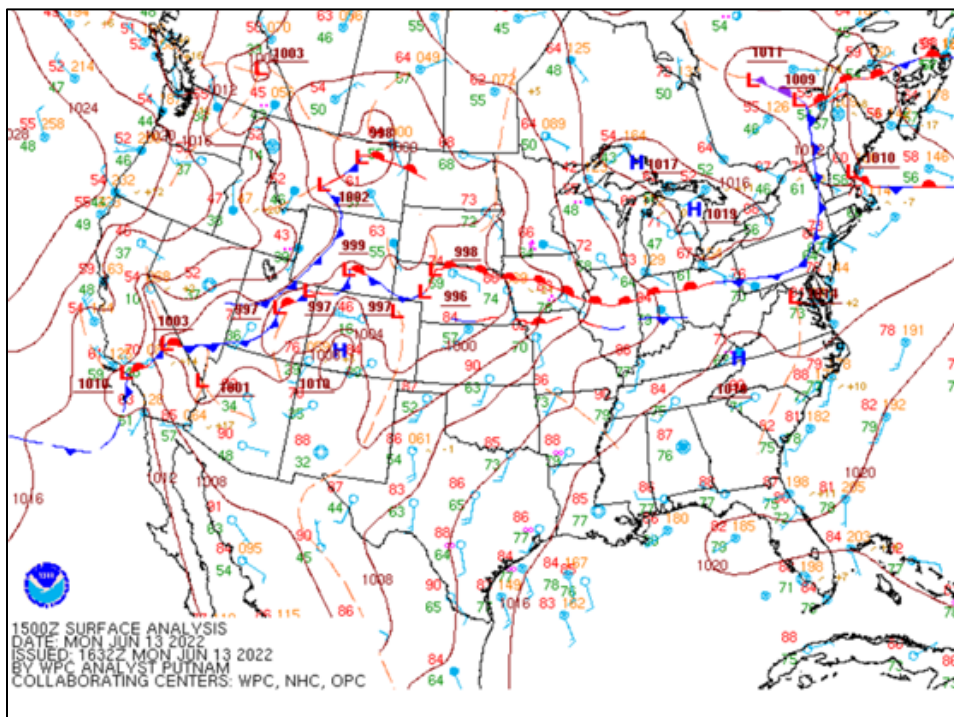
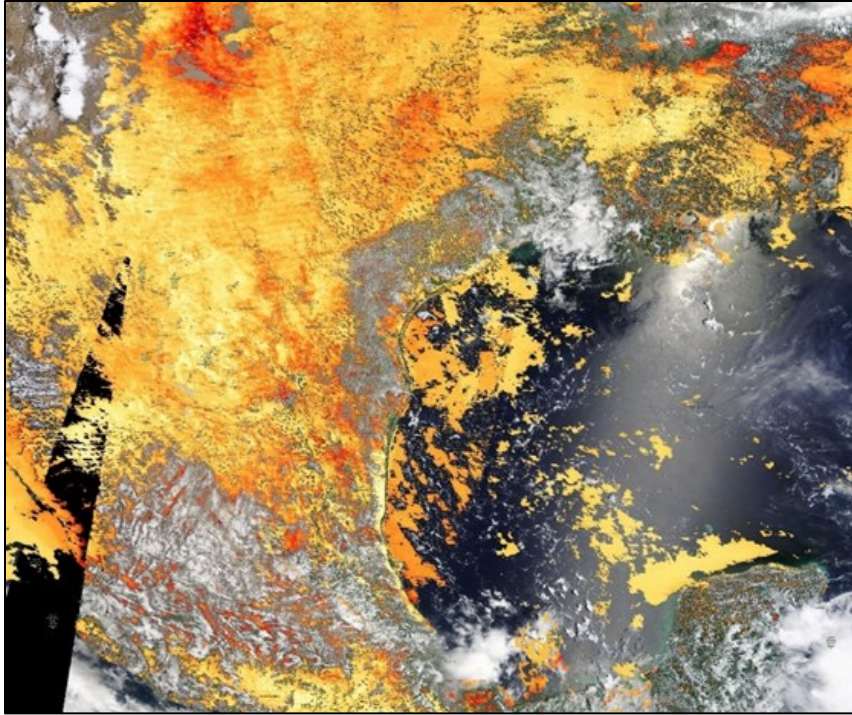


Figure A-44: MAIAC combined Aerosol Optical Depth Image on June 16, 2022





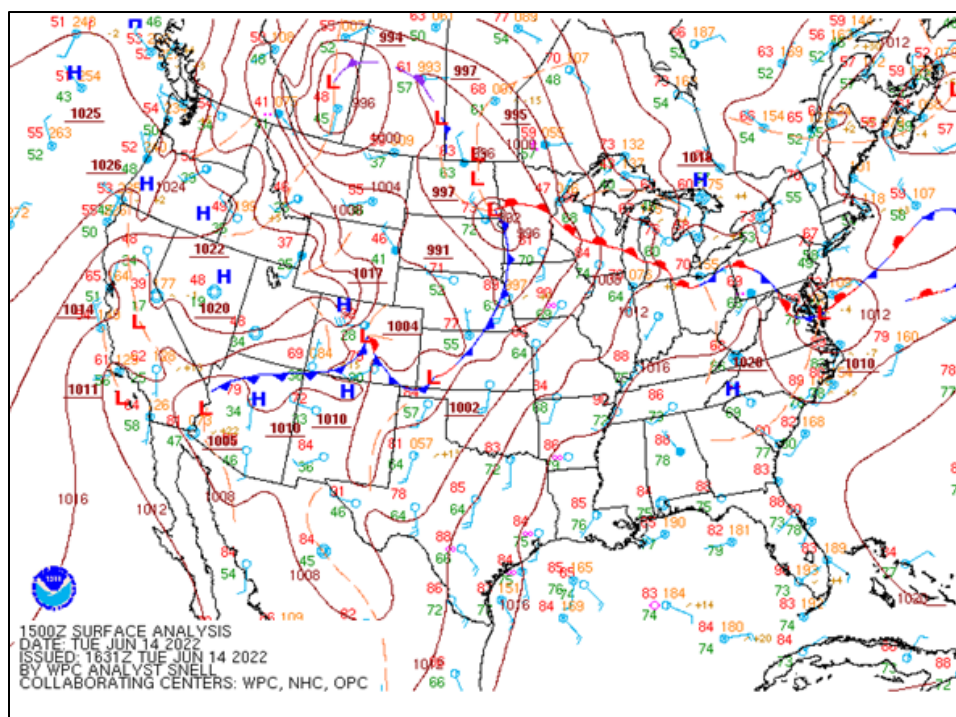


Figure A-47: National Weather Service Weather Prediction Center (June 14, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

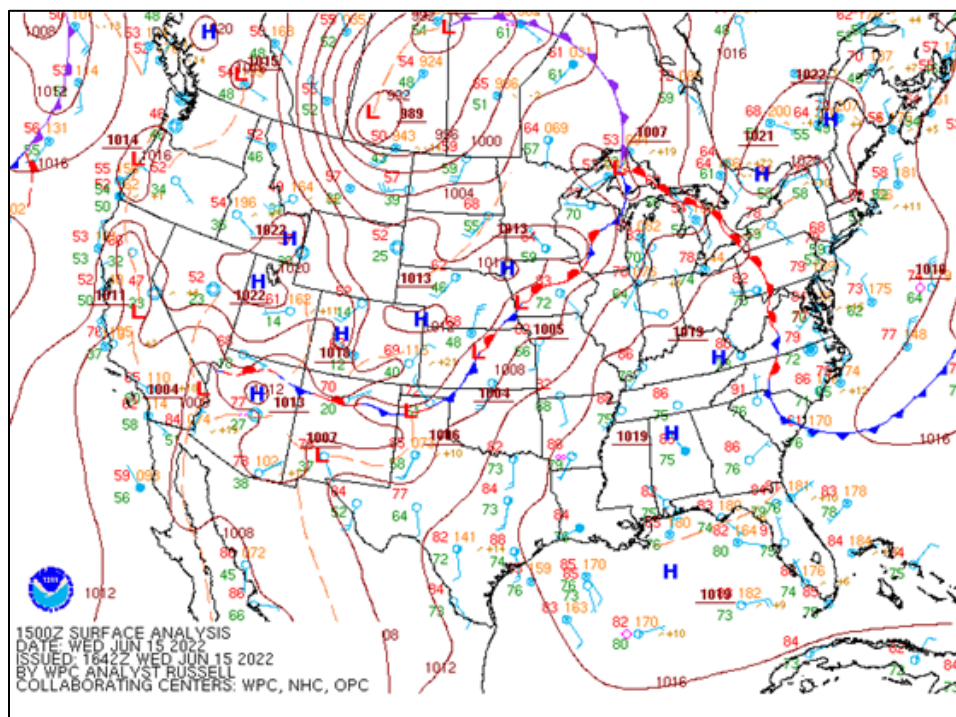


Figure A-48: National Weather Service Weather Prediction Center (June 15, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

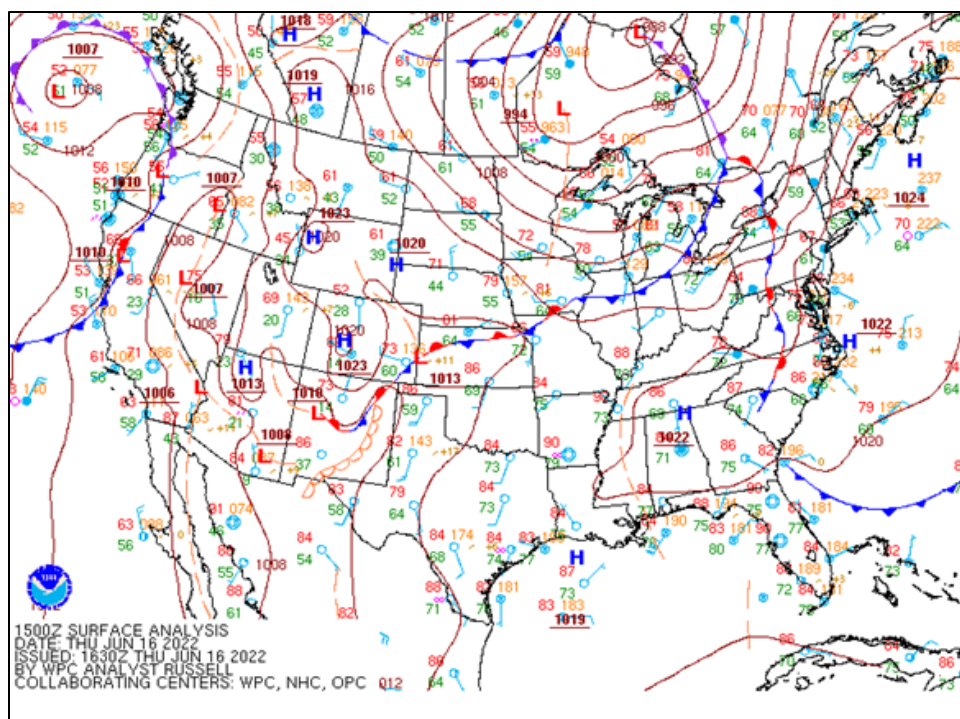


Figure A-49: National Weather Service Weather Prediction Center (June 16, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

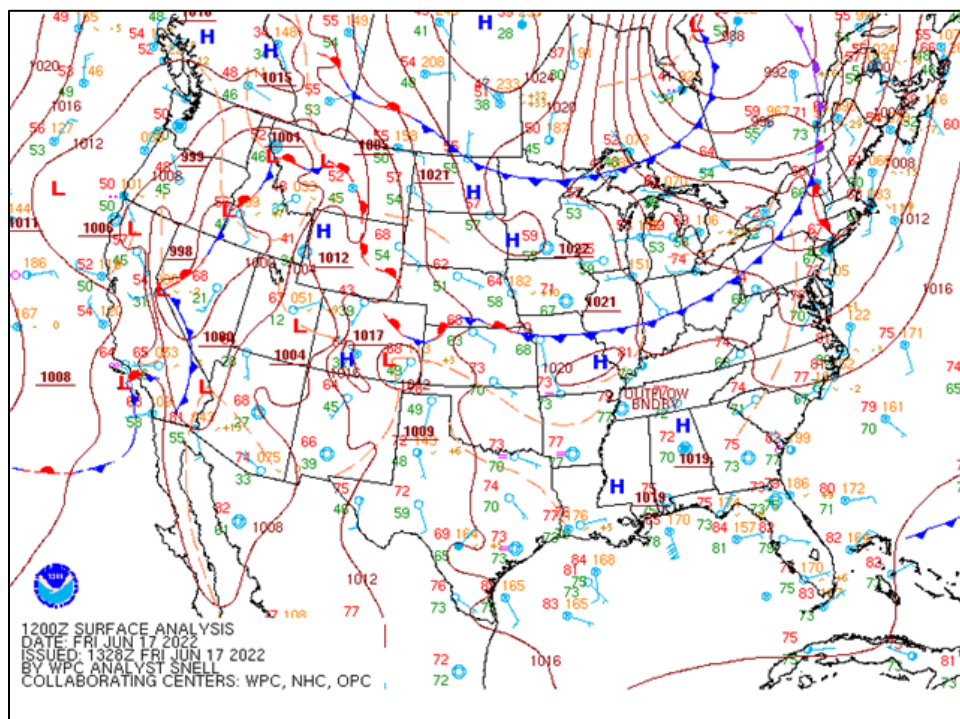


Figure A-50: National Weather Service Weather Prediction Center (June 17, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT



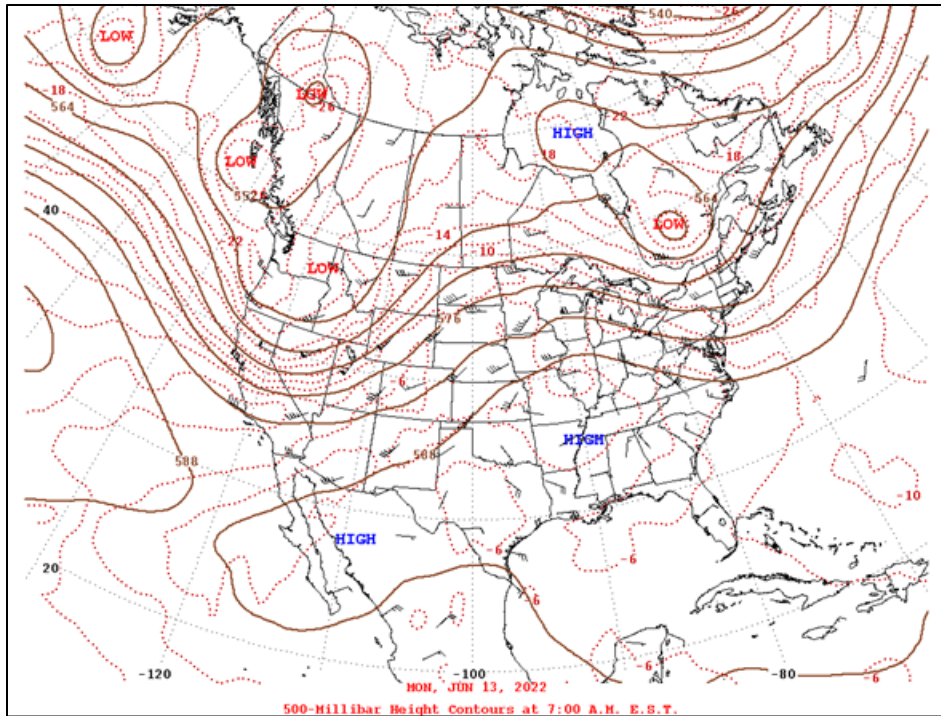


Figure A-51: National Weather Service, Storm Prediction Center (June 13, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT

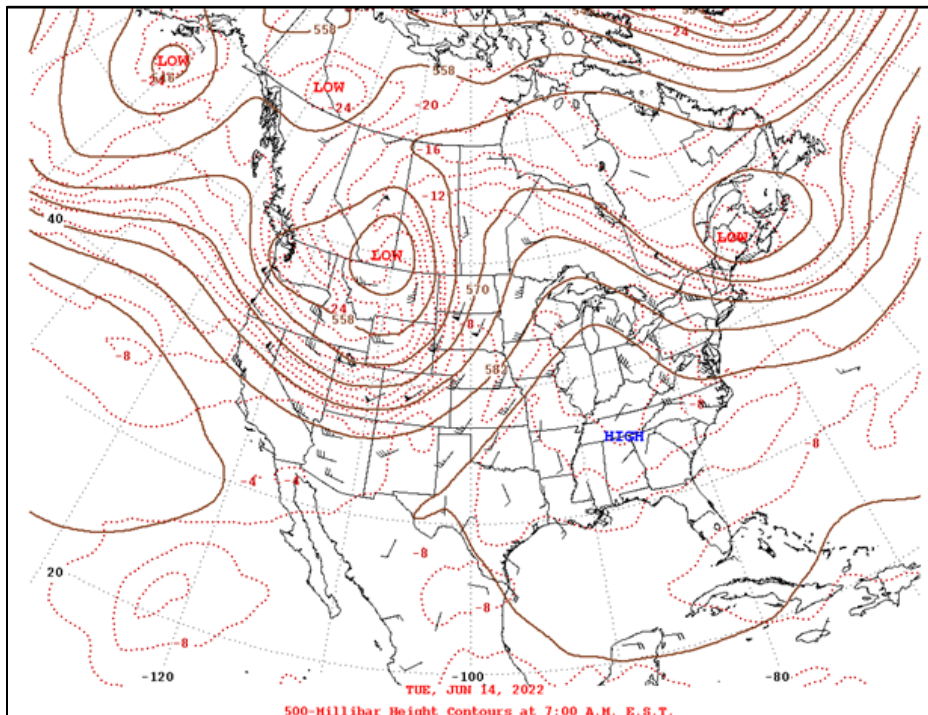


Figure A-52: National Weather Service, Storm Prediction Center (June 14, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT

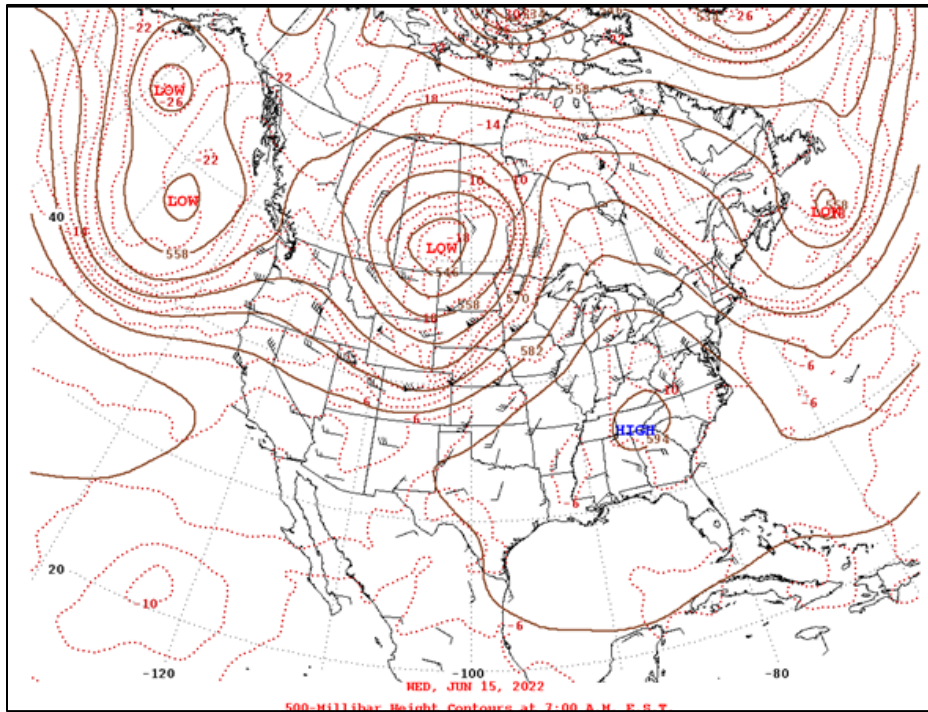


Figure A-53: National Weather Service, Storm Prediction Center (June 15, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT

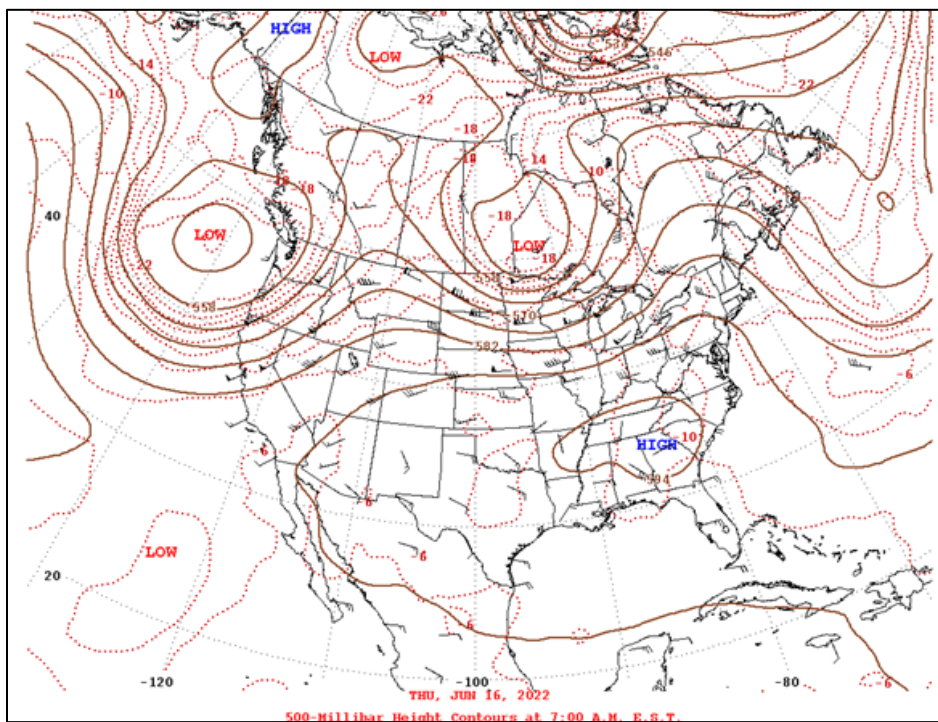


Figure A-54: National Weather Service, Storm Prediction Center (June 16, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT



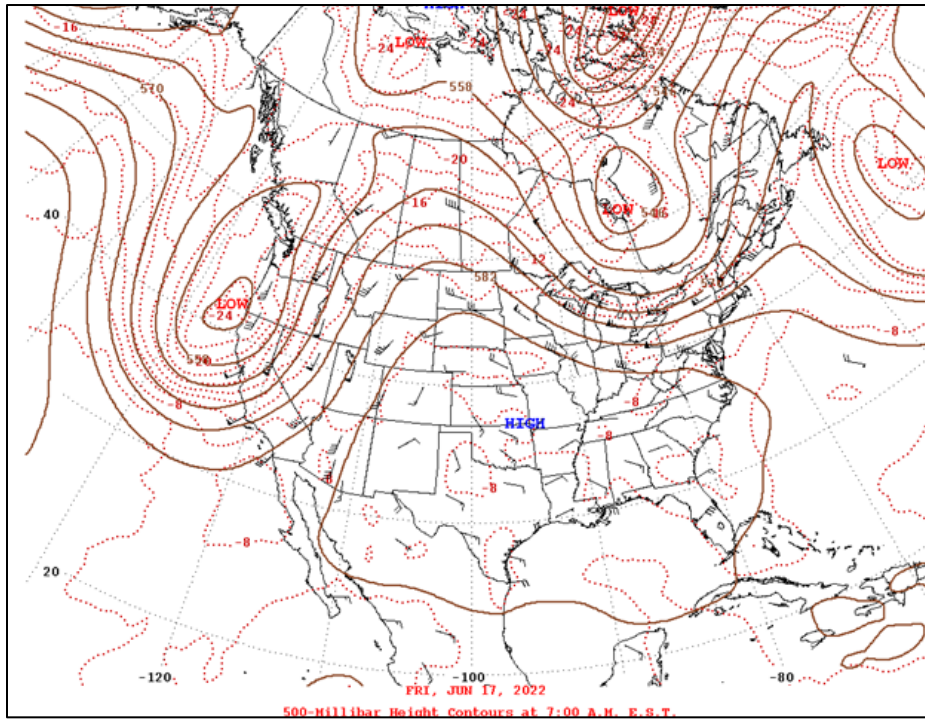
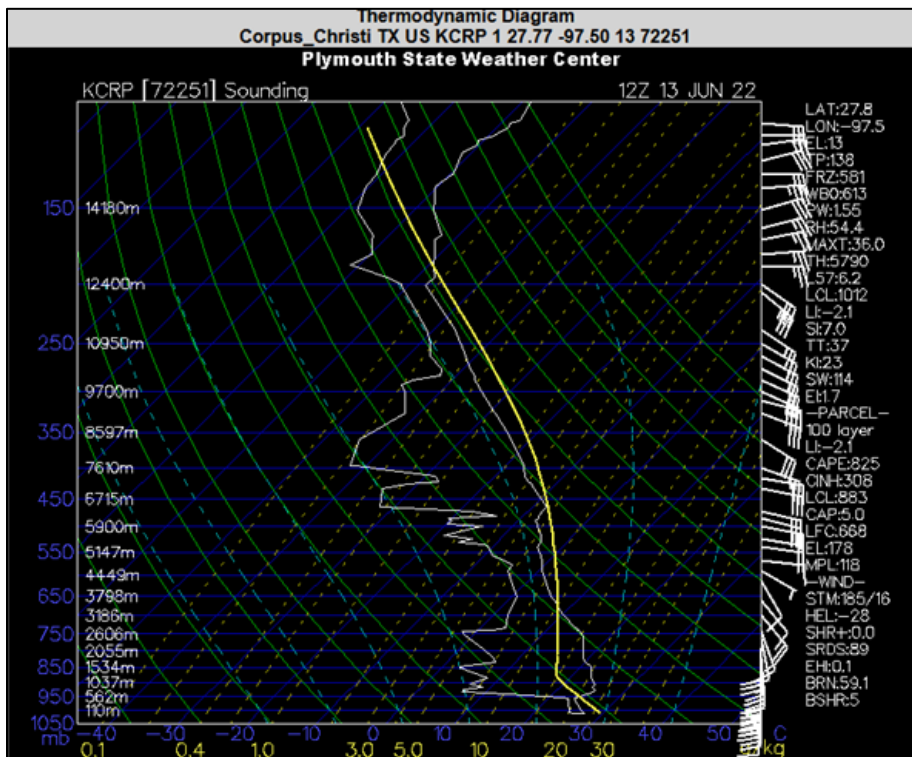
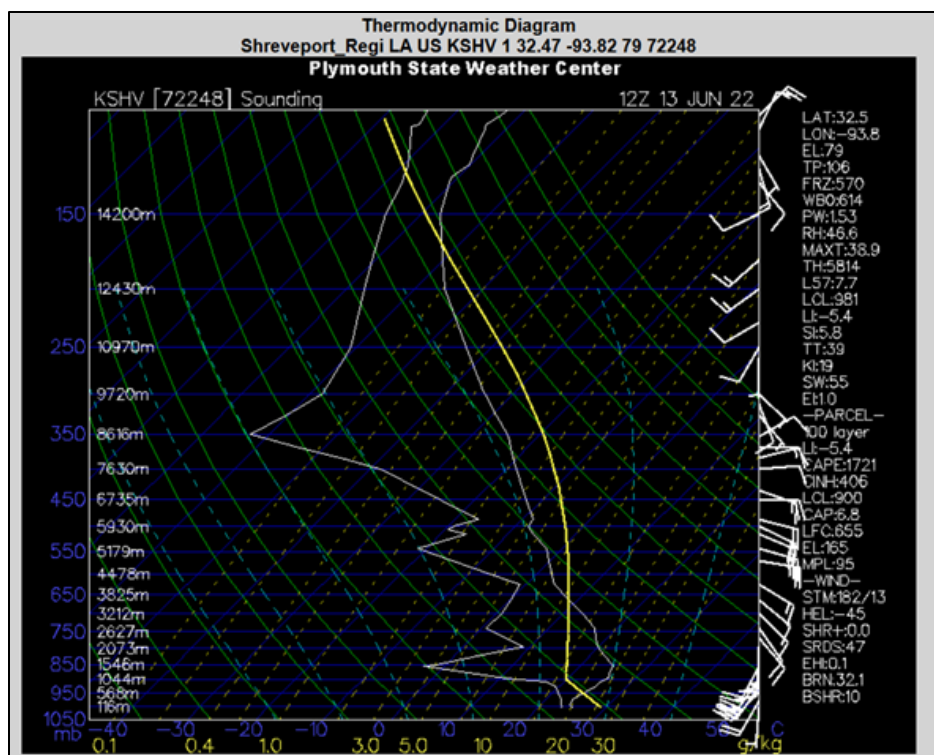


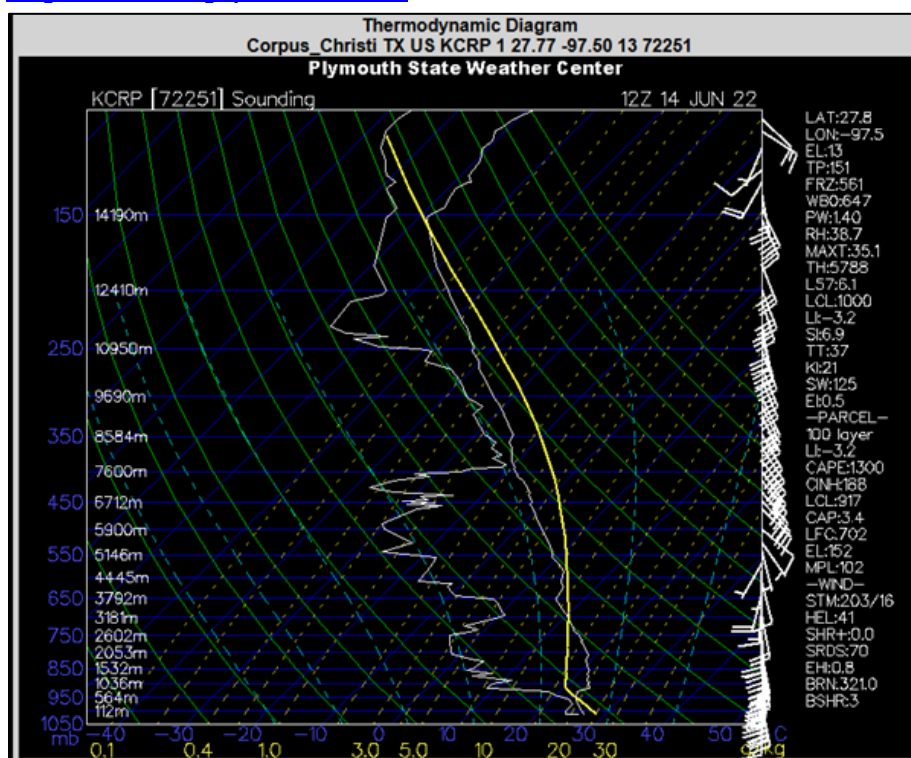
Figure A-55: National Weather Service, Storm Prediction Center (June 17, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT



Figures A-56: A sounding for Corpus Christi for June 13, 2022, 12Z. from <https://vortex.plymouth.edu/>

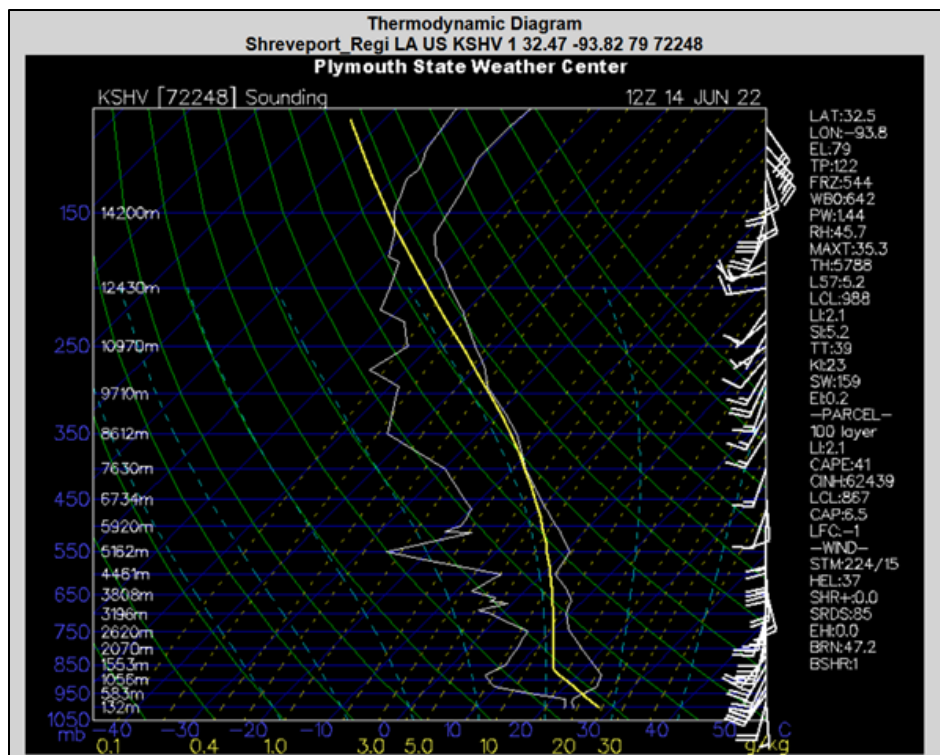


Figures A-57: A sounding for Shreveport for June 13, 2022, 12Z. from <https://vortex.plymouth.edu/>

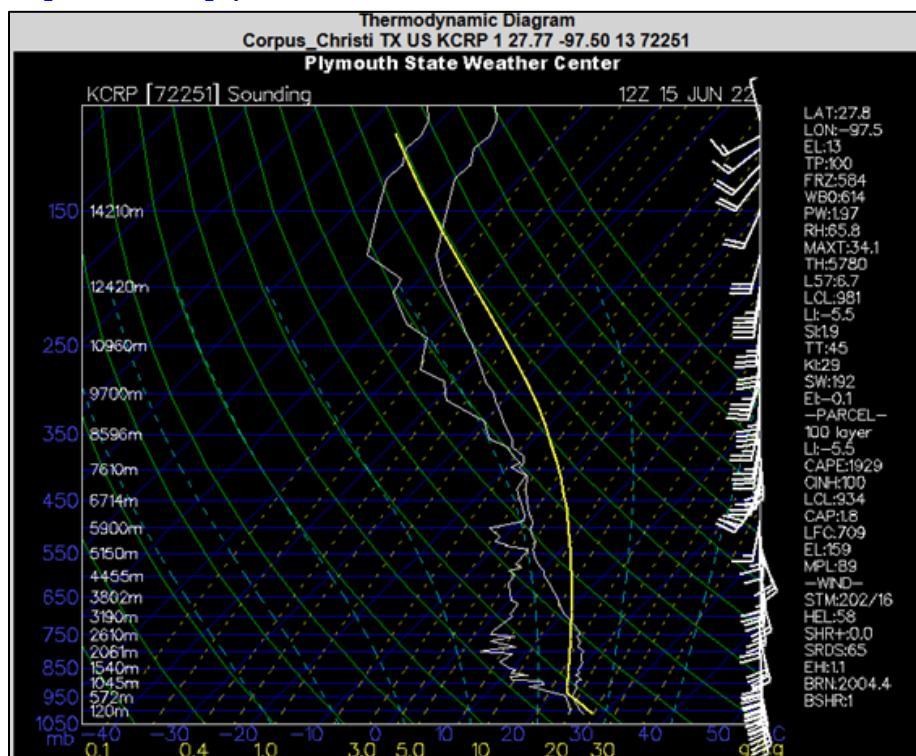


Figures A-58: A sounding for Corpus Christi for June 14, 2022, 12Z. from <https://vortex.plymouth.edu/>

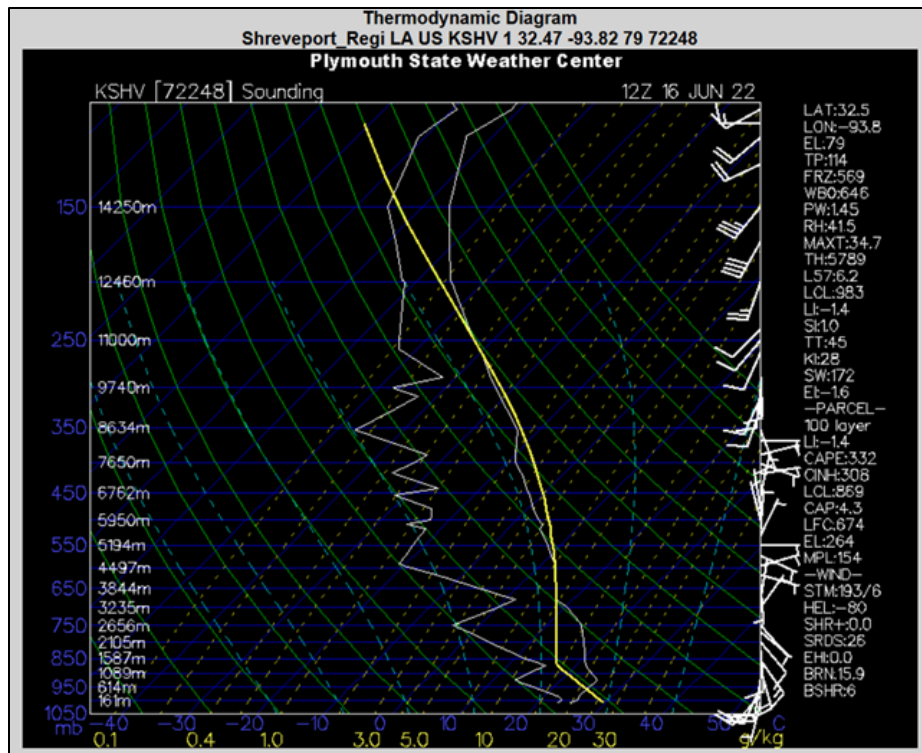




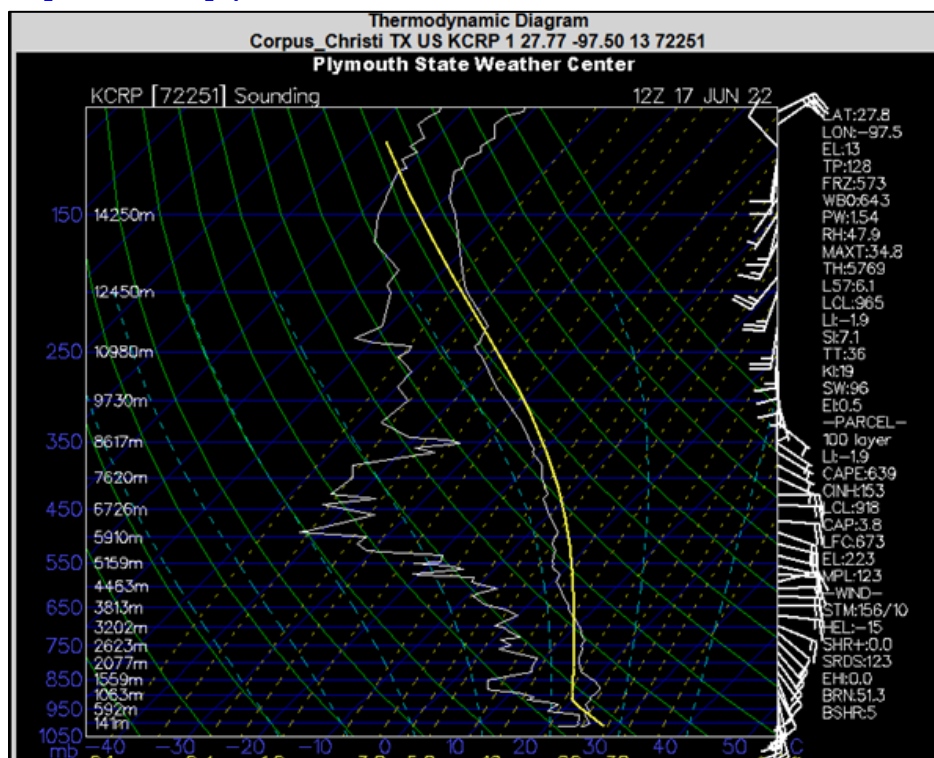
Figures A-59: A sounding for Shreveport for June 14, 2022, 12Z. from <https://vortex.plymouth.edu/>



Figures A-60: A sounding for Corpus Christi for June 15, 2022, 12Z. from <https://vortex.plymouth.edu/>



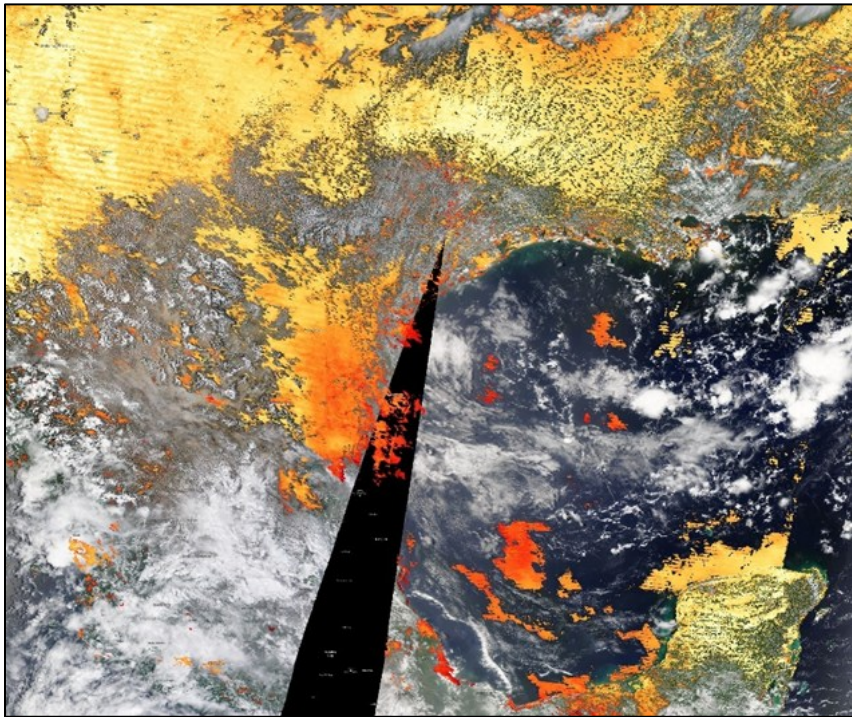
Figures A-61: A sounding for Shreveport for June 16, 2022, 12Z. from <https://vortex.plymouth.edu/>



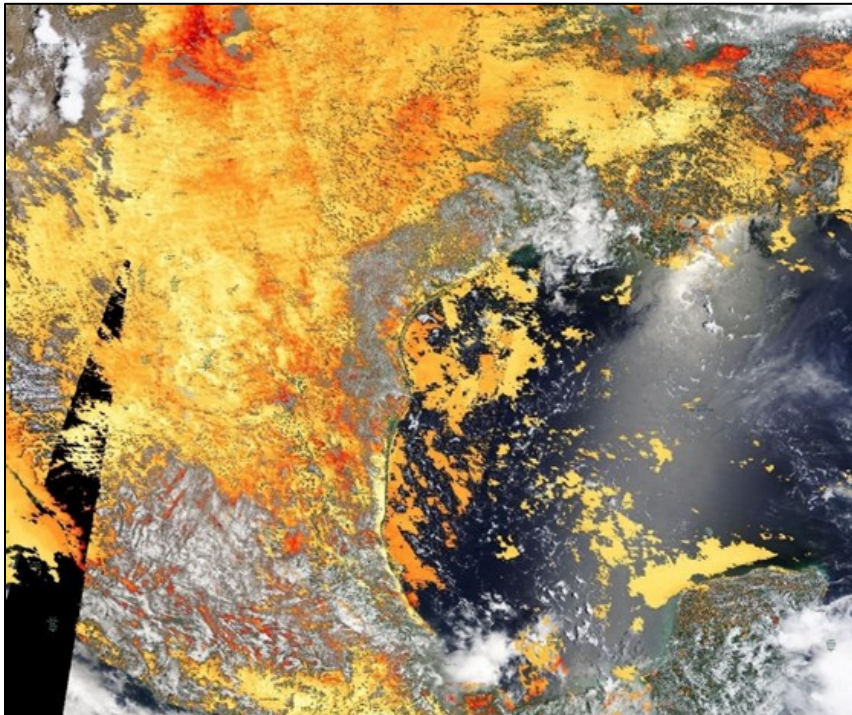
Figures A-62: A sounding for Corpus Christi for June 17, 2022, 12Z. from <https://vortex.plymouth.edu/>



**A.8: GROUP 8 - JULY 16 THROUGH JULY 18, 2022**



**Figure A-63: MAIAC combined Aerosol Optical Depth Image on July 16, 2022**



**Figure A-64: MAIAC combined Aerosol Optical Depth Image on July 17, 2022**



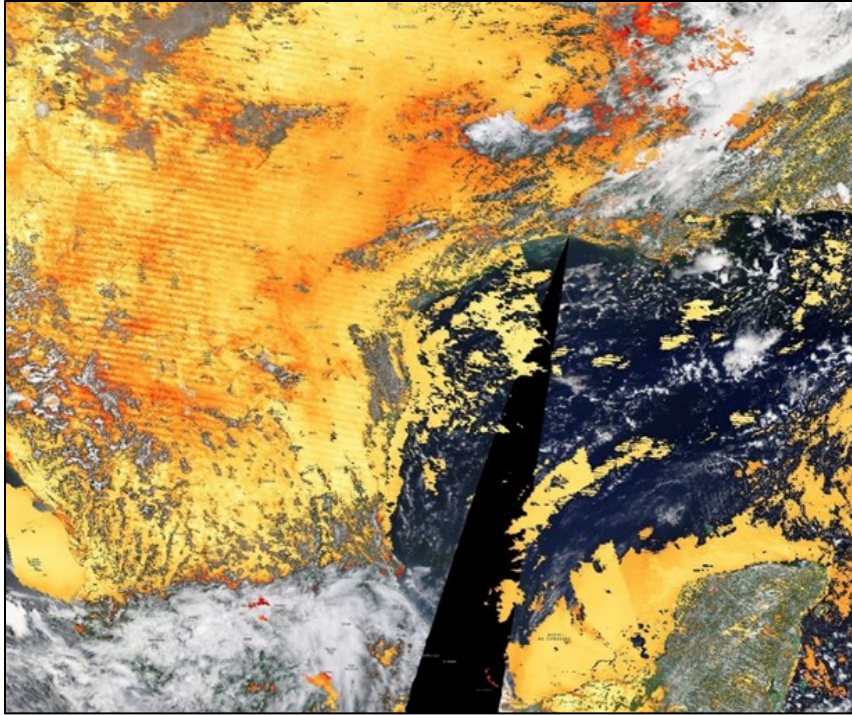


Figure A-65: MAIAC combined Aerosol Optical Depth Image on July 18, 2022

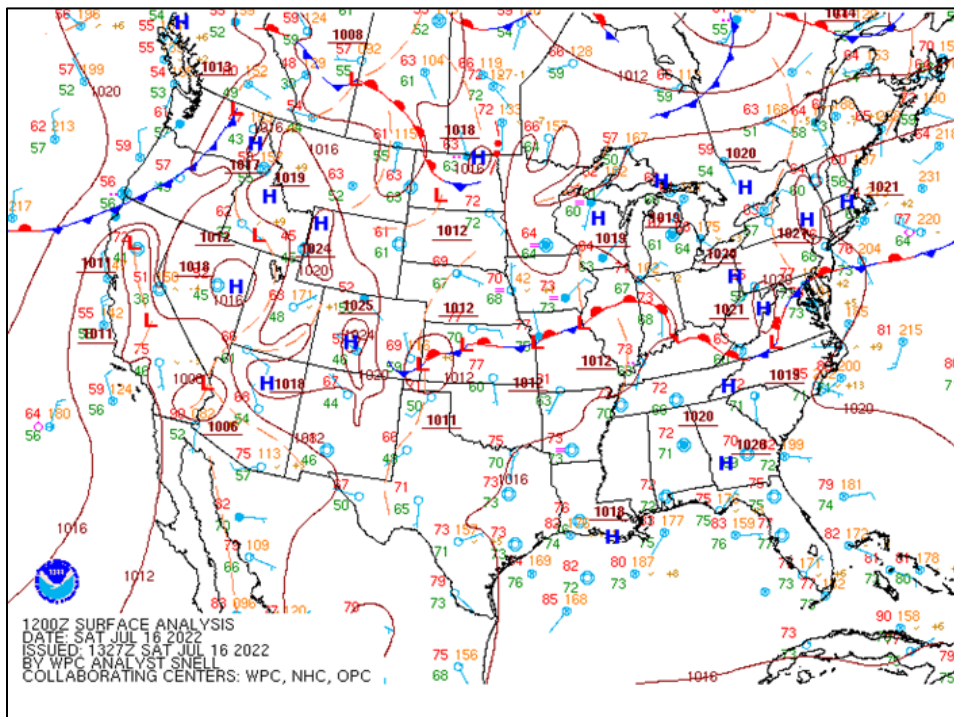


Figure A-66: National Weather Service Weather Prediction Center (July 16, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT



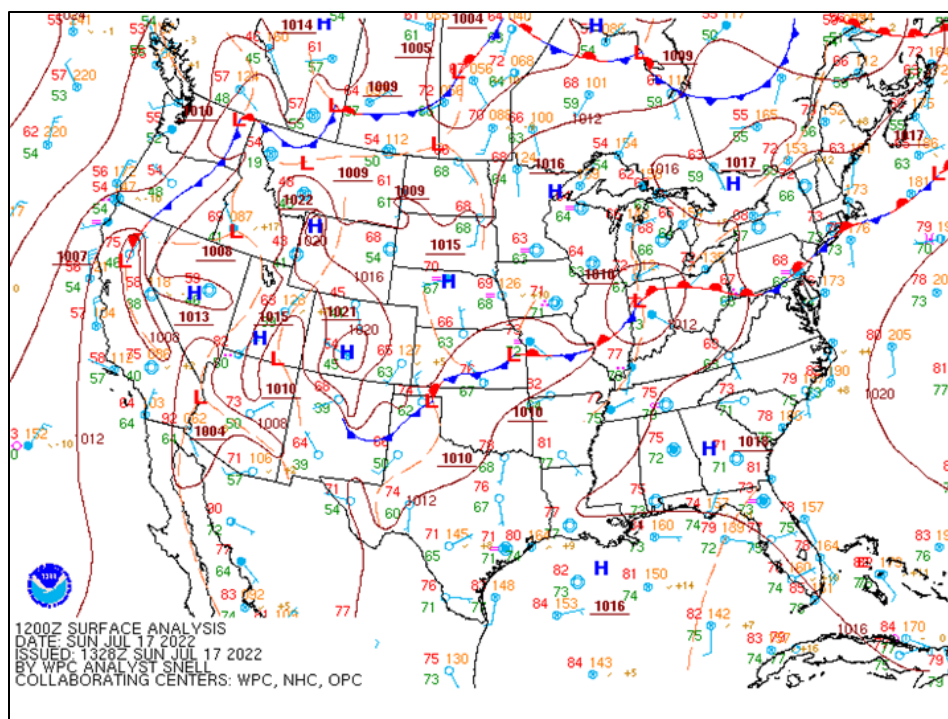


Figure A-67: National Weather Service Weather Prediction Center (July 17, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

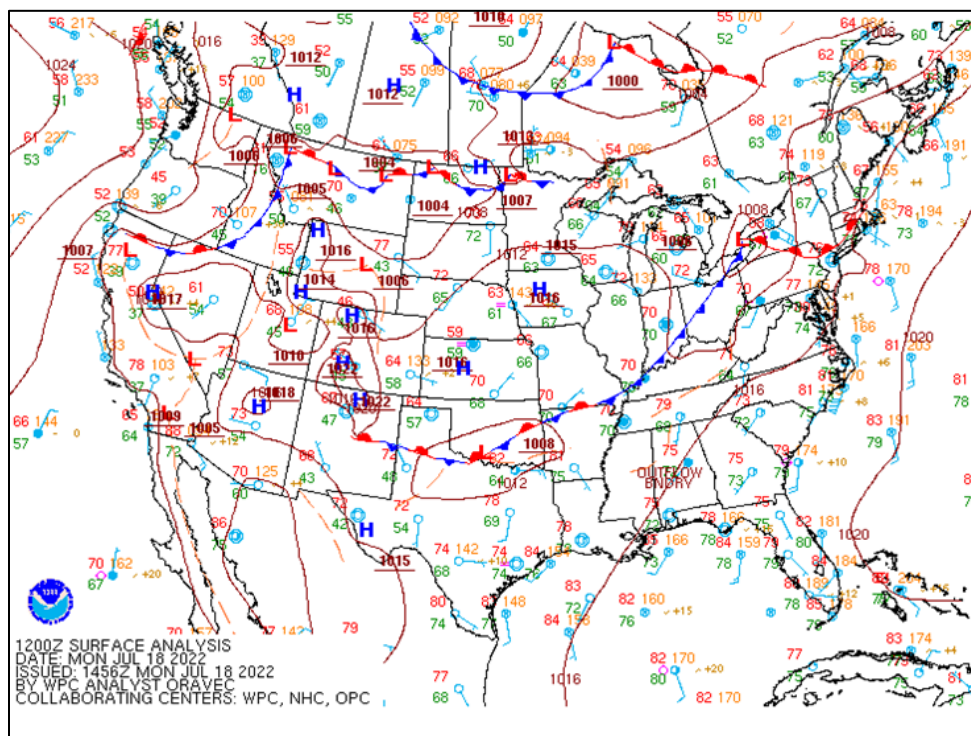


Figure A-68: National Weather Service Weather Prediction Center (July 18, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

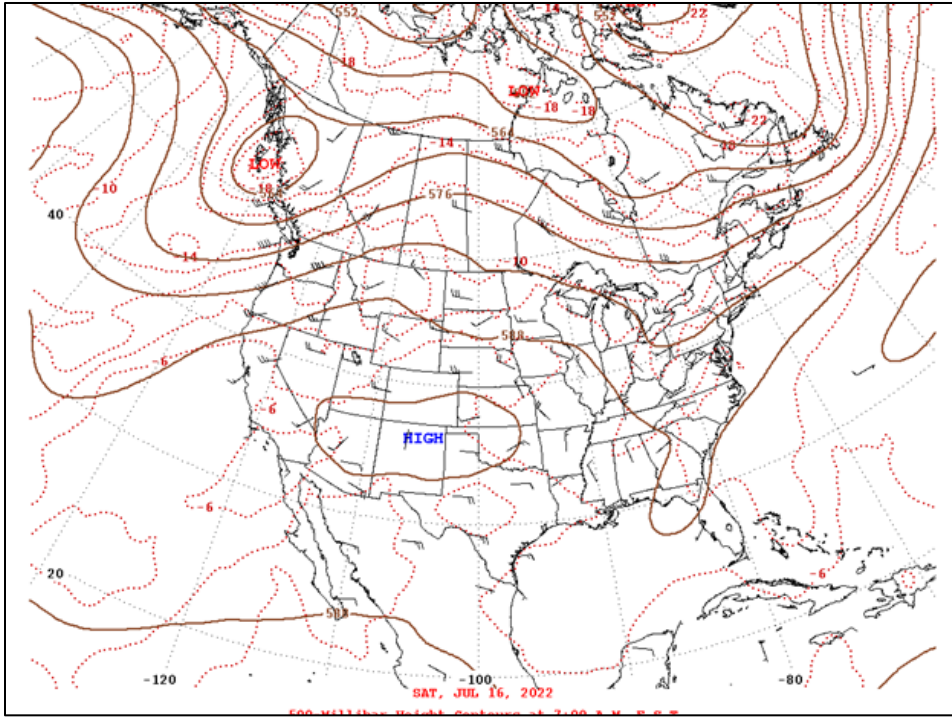


Figure A-69: National Weather Service, Storm Prediction Center (July 16, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT

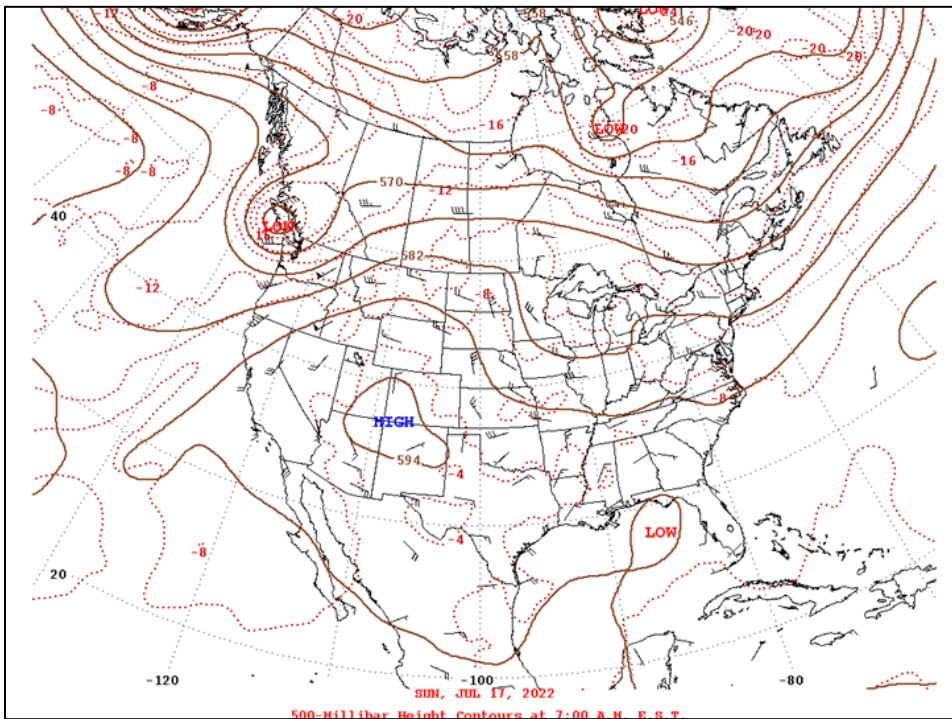


Figure A-70: National Weather Service, Storm Prediction Center (July 17, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT



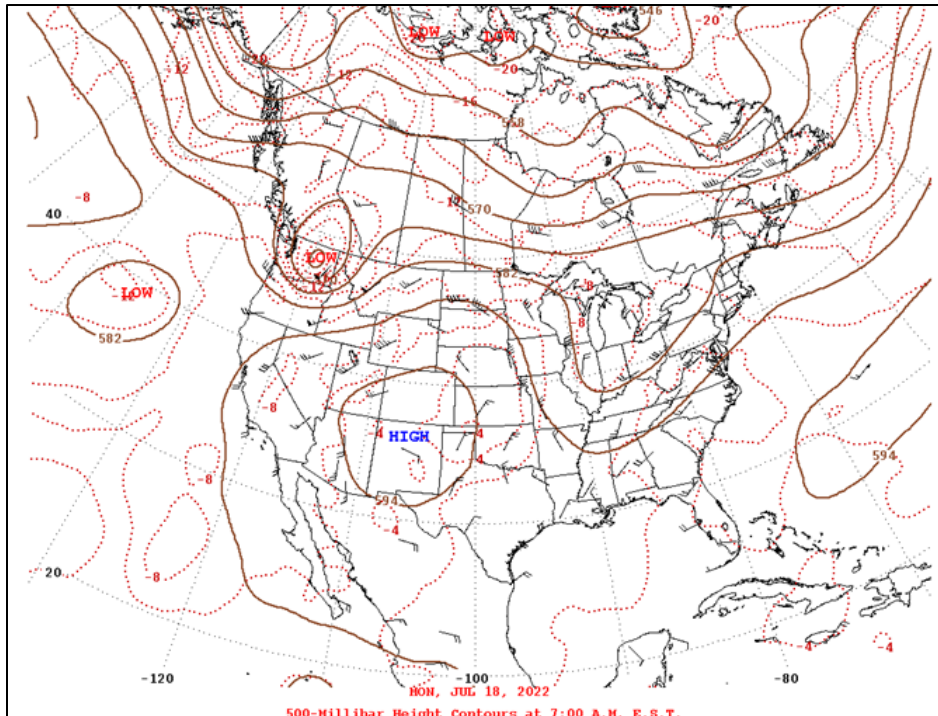
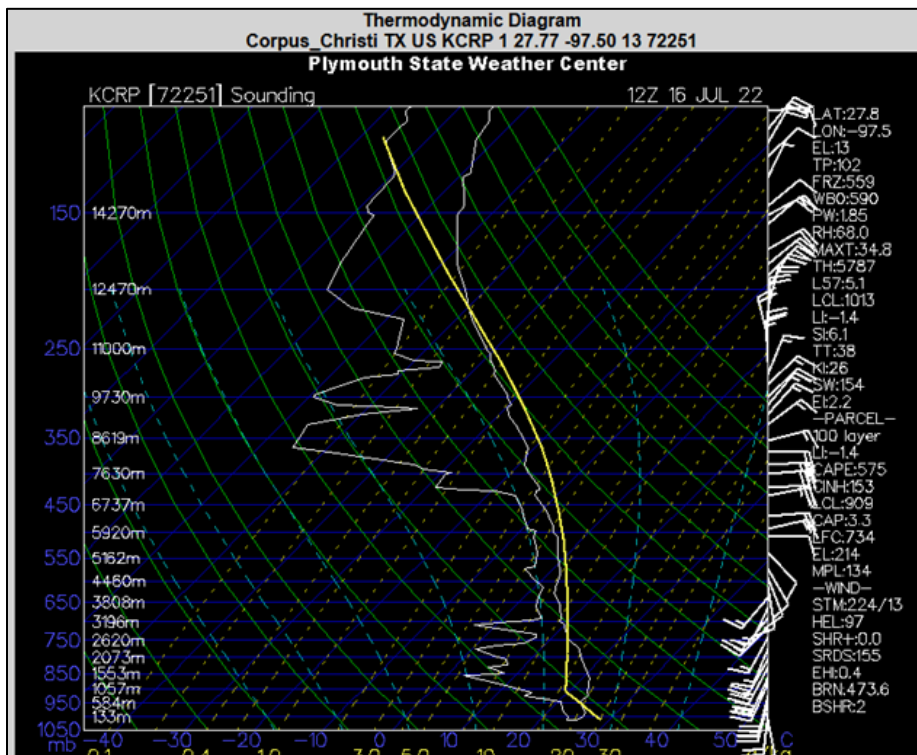
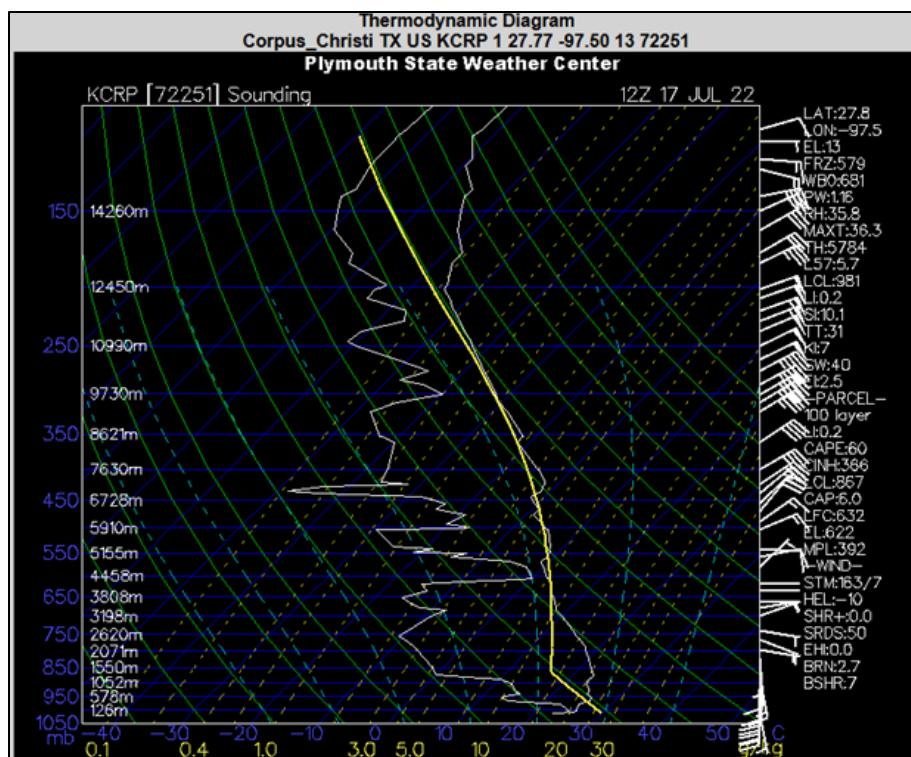


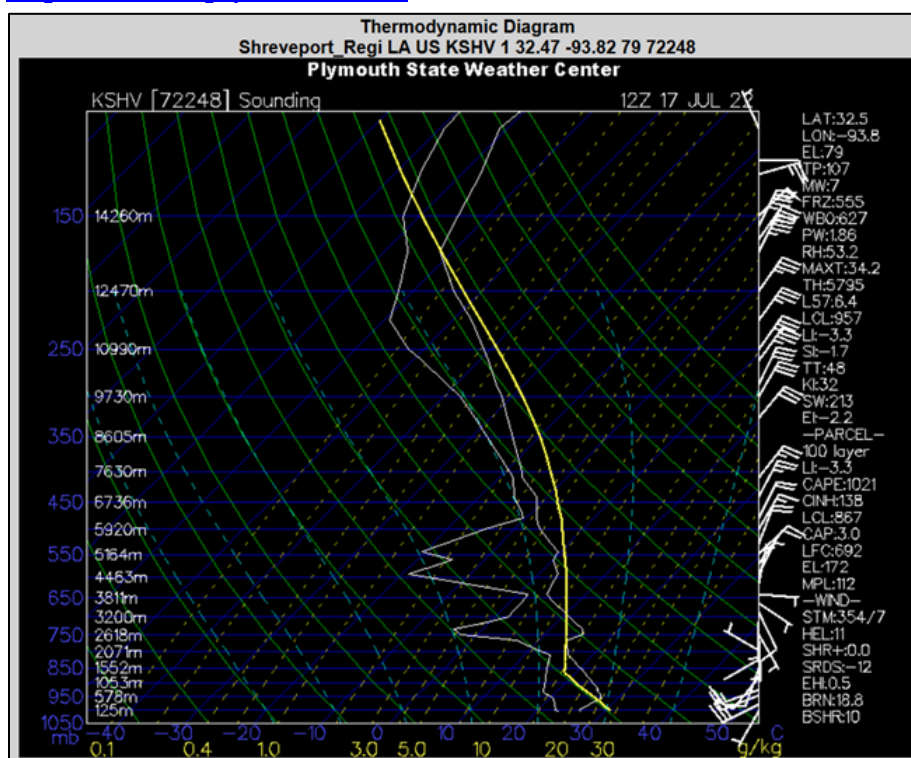
Figure A-71: National Weather Service, Storm Prediction Center (July 18, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT



Figures A-72: A sounding for Corpus Christi for July 16, 2022, 12Z. from <https://vortex.plymouth.edu/>

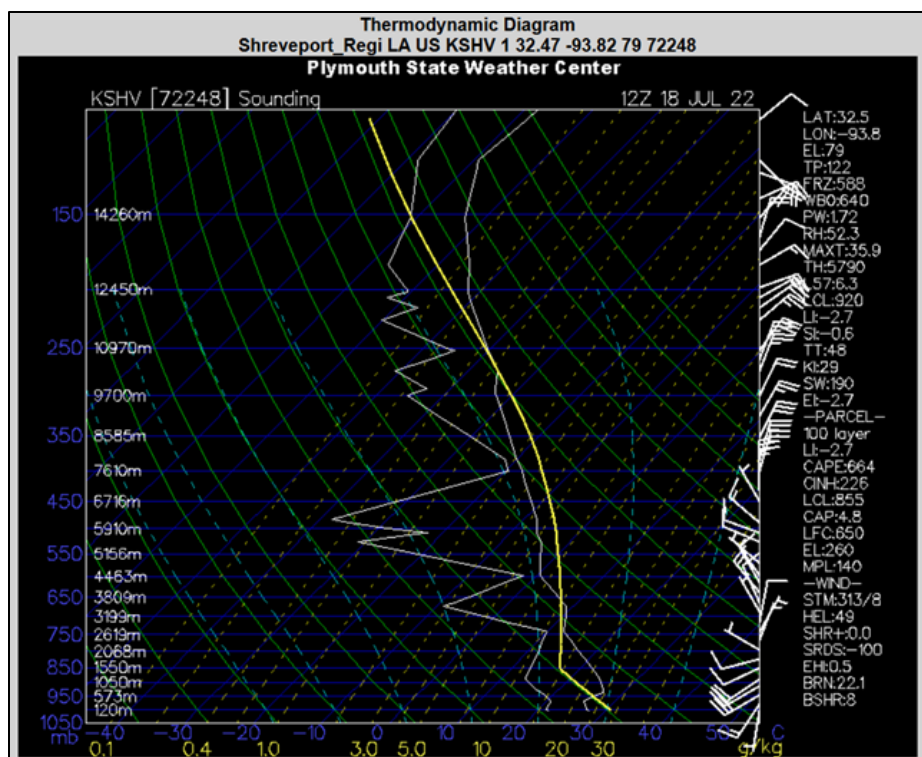


Figures A-73: A sounding for Corpus Christi for July 17, 2022, 12Z. from <https://vortex.plymouth.edu/>



Figures A-74: A sounding for Shreveport for July 17, 2022, 12Z. from <https://vortex.plymouth.edu/>





Figures A-75: A sounding for Shreveport for July 18, 2022, 12Z. from <https://vortex.plymouth.edu/>

#### A.9: GROUP 9 - JULY 21, 2022

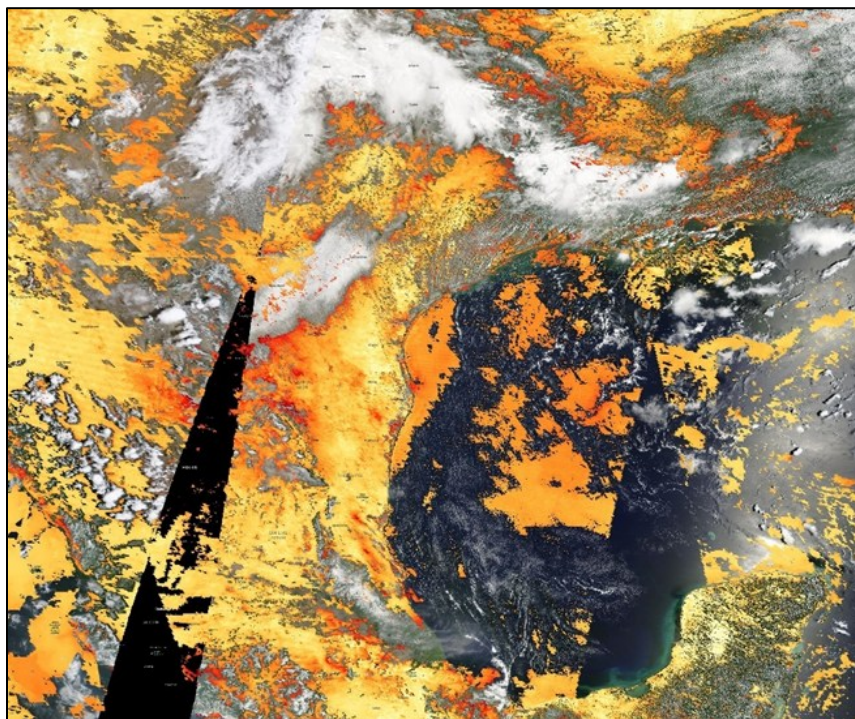


Figure A-76: MAIAC combined Aerosol Optical Depth Image on July 21, 2022

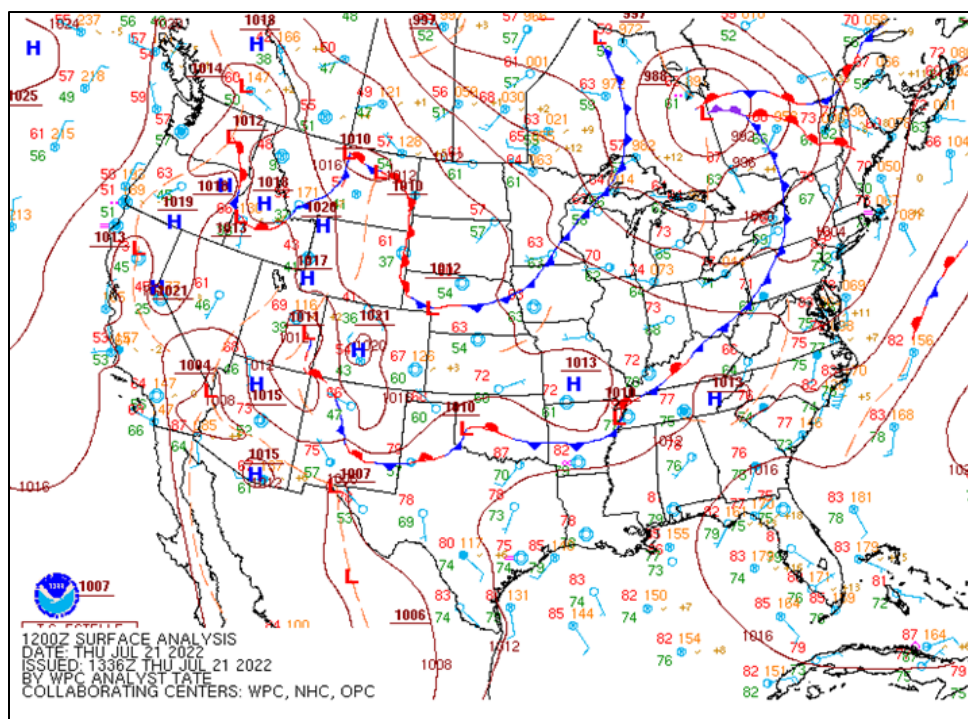


Figure A-77: National Weather Service Weather Prediction Center (July 21, 2022) CONUS Surface Analysis (12Z) 6:00 a.m. CDT

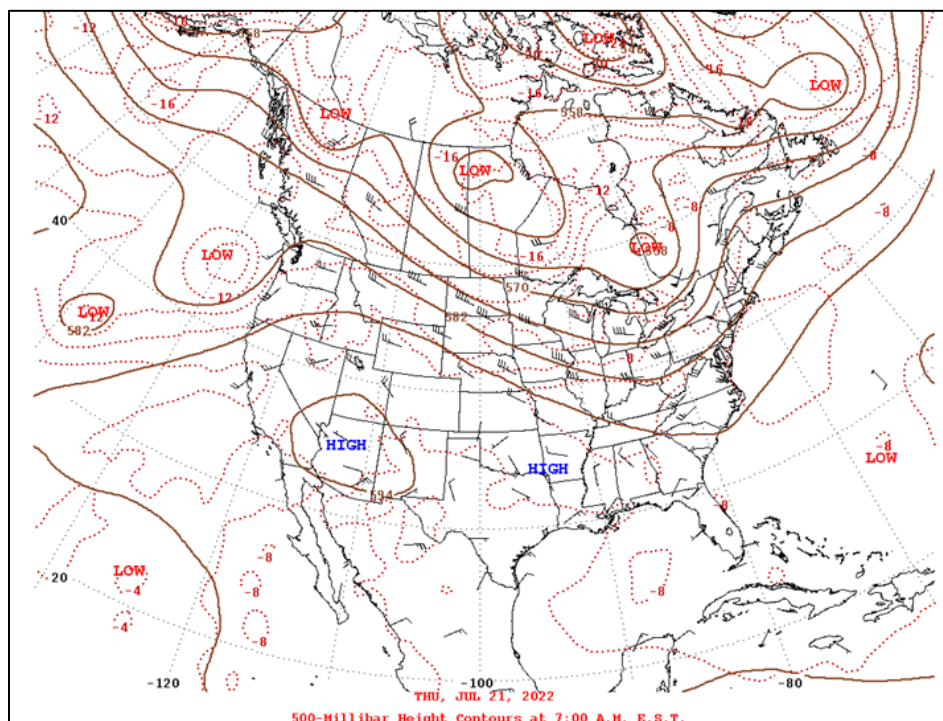
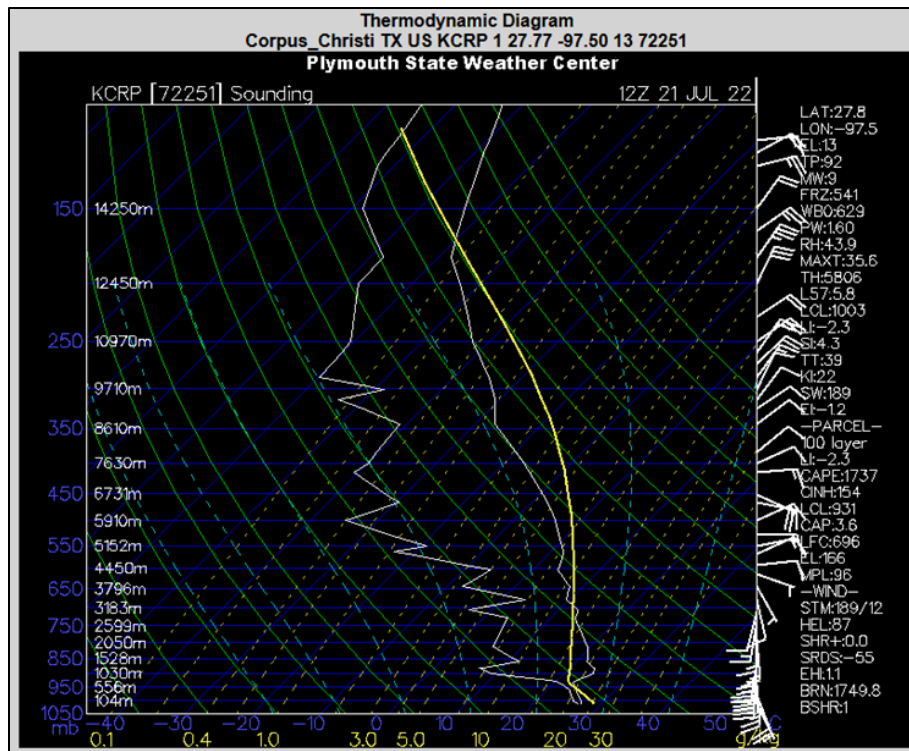


Figure A-78: National Weather Service, Storm Prediction Center (July 21, 2022) 500 MB Analysis (12Z) 6:00 a.m. CDT





Figures A-79: Sounding for Corpus Christi for July 21, 2022, 6:00 a.m. CDT. from <https://vortex.plymouth.edu/>