

HOUR	FORECASTER
13 UTC	Ammon
14 UTC	Candela
15 UTC	Davis
16 UTC	Edelmaier
17 UTC	Eden
18 UTC	Gibson
19 UTC	McReynolds
20 UTC	Nozka
21 UTC	Saba
22 UTC	Schaefer

# Blast from the Past!

## Today's goal:

Practice utilizing meteorological concepts learned so far to produce a 13 Z and subsequent Severe Weather Watch(es) (if needed)

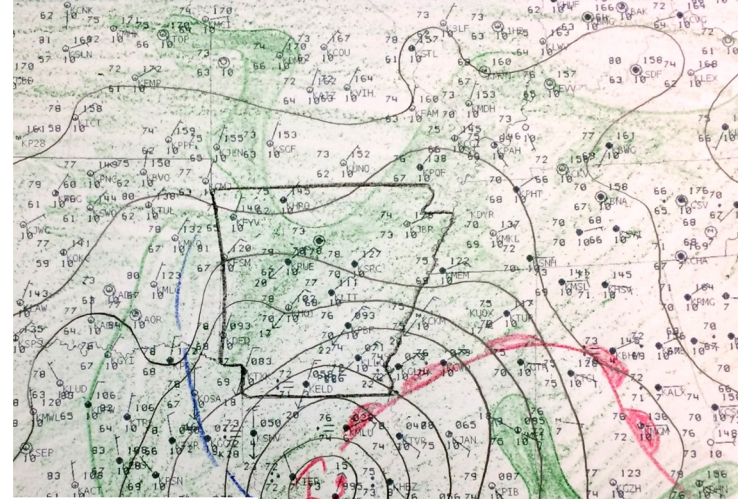
## Secondary Goal:

Get additional practice:

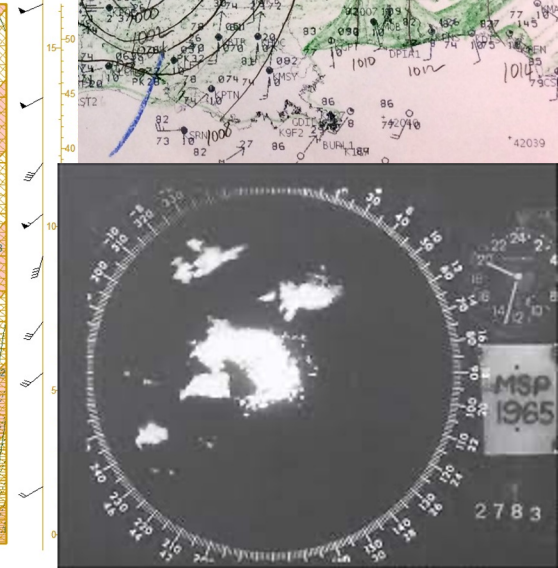
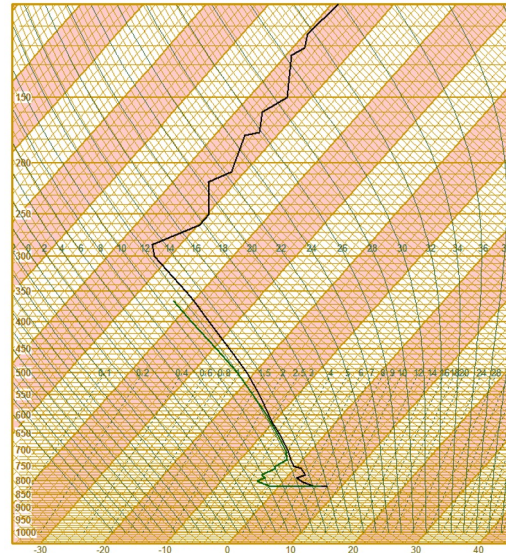
- creating an outlook
- hand analysis
- writing discussions before the final!

## Keep in mind:

During a real-time weather watch, you'll have to filter through and analyze a LOT of information to come to the right conclusion - today will try to simulate that.



FARQ 72865-0 12Z Elev 1620m (5315ft) NM-Albuquerque/Incl

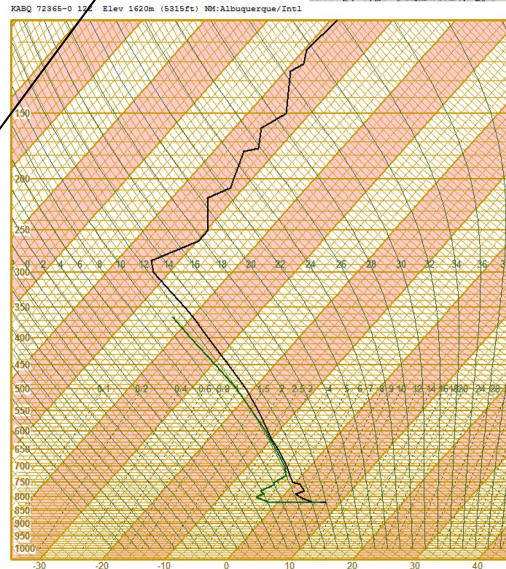
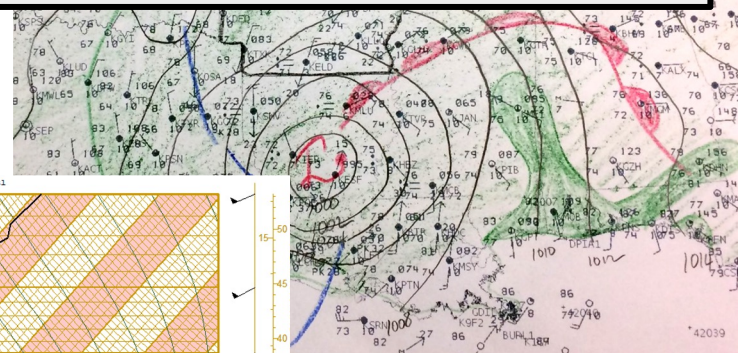
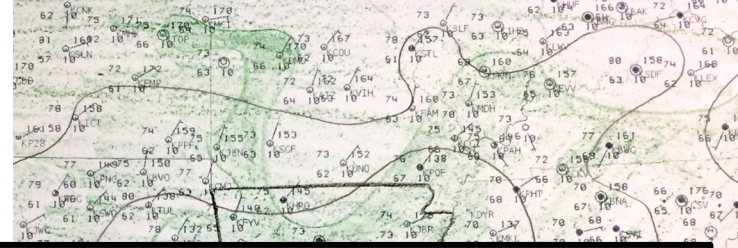


# Blast from the Past!

## How today will work:

- Create a 13Z Outlook (20 minutes):
  - Analyze 12Z Data
  - Draw an outlook
- Monitor Hourly Trends
  - Complete hourly analyses (5 min each)
- Update our outlook at 1630 (10 minutes)
- Issue a Watch (if needed)
  - Determine *when* to issue (group)
  - Determine *what type* (group)

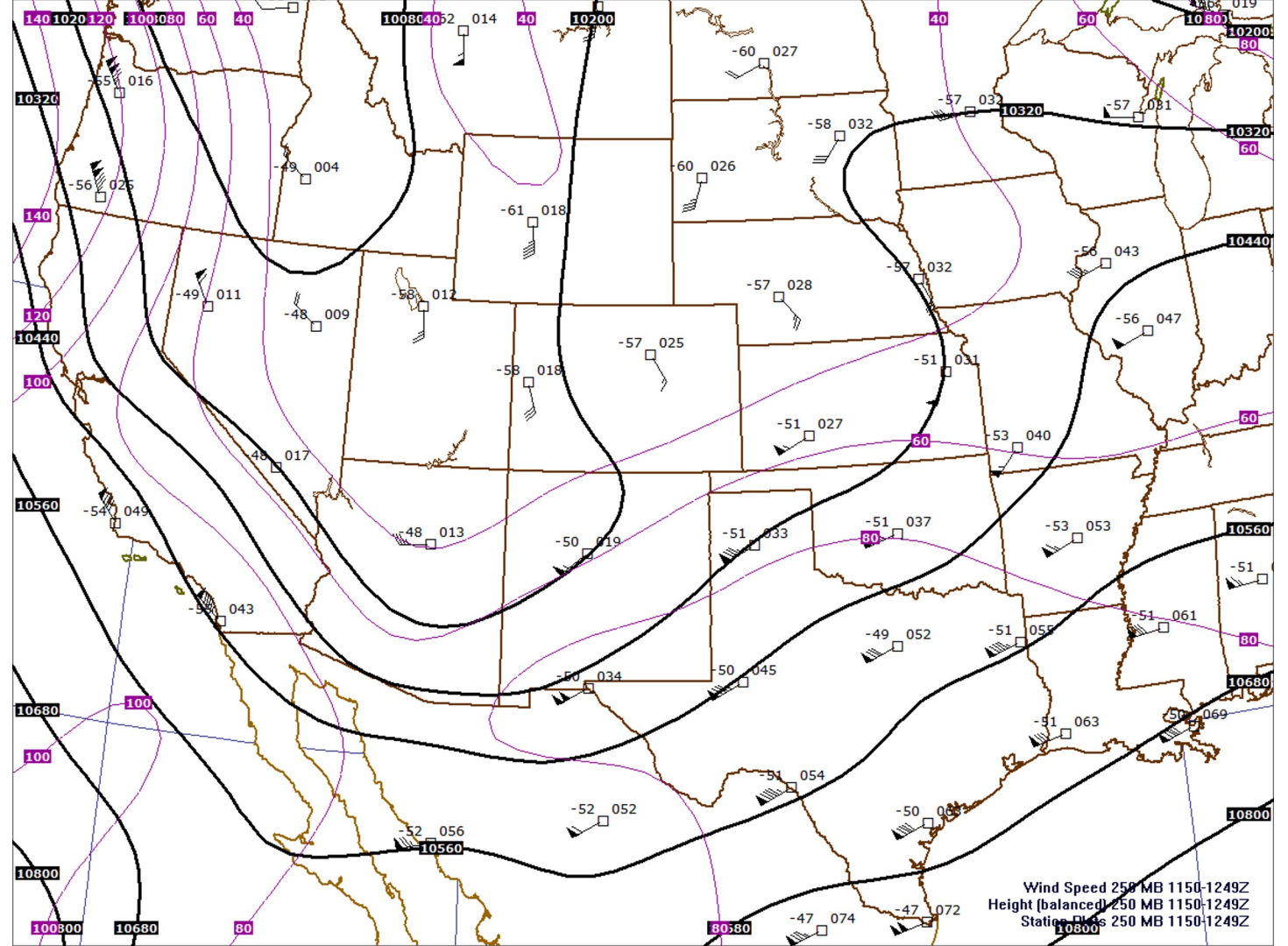
Outlook/Watch Draw Tool: [wxwatcher.us/map/outlook/](http://wxwatcher.us/map/outlook/)



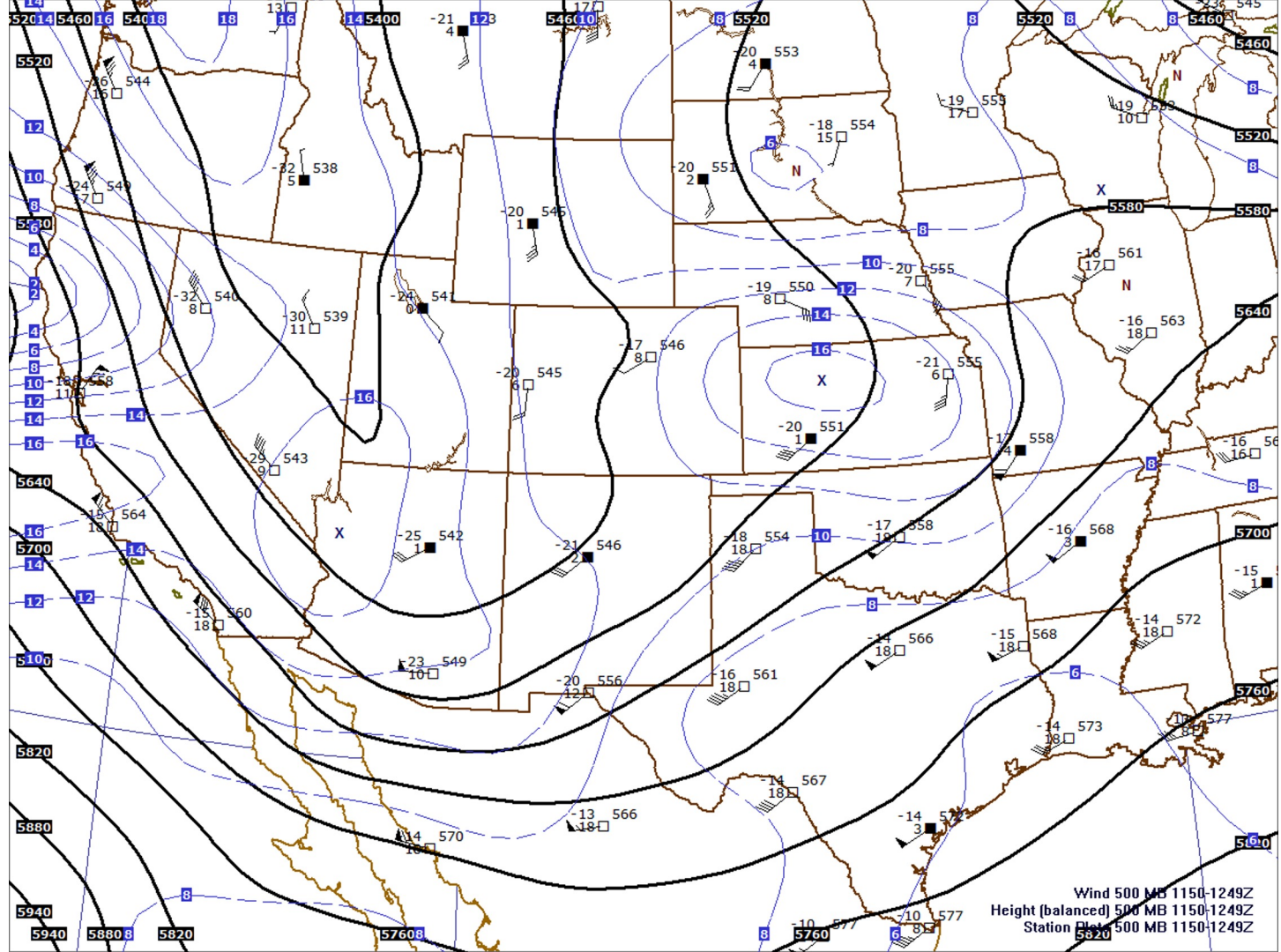
## Remember!

A watch should have 1-2 hours of lead time before the first report.

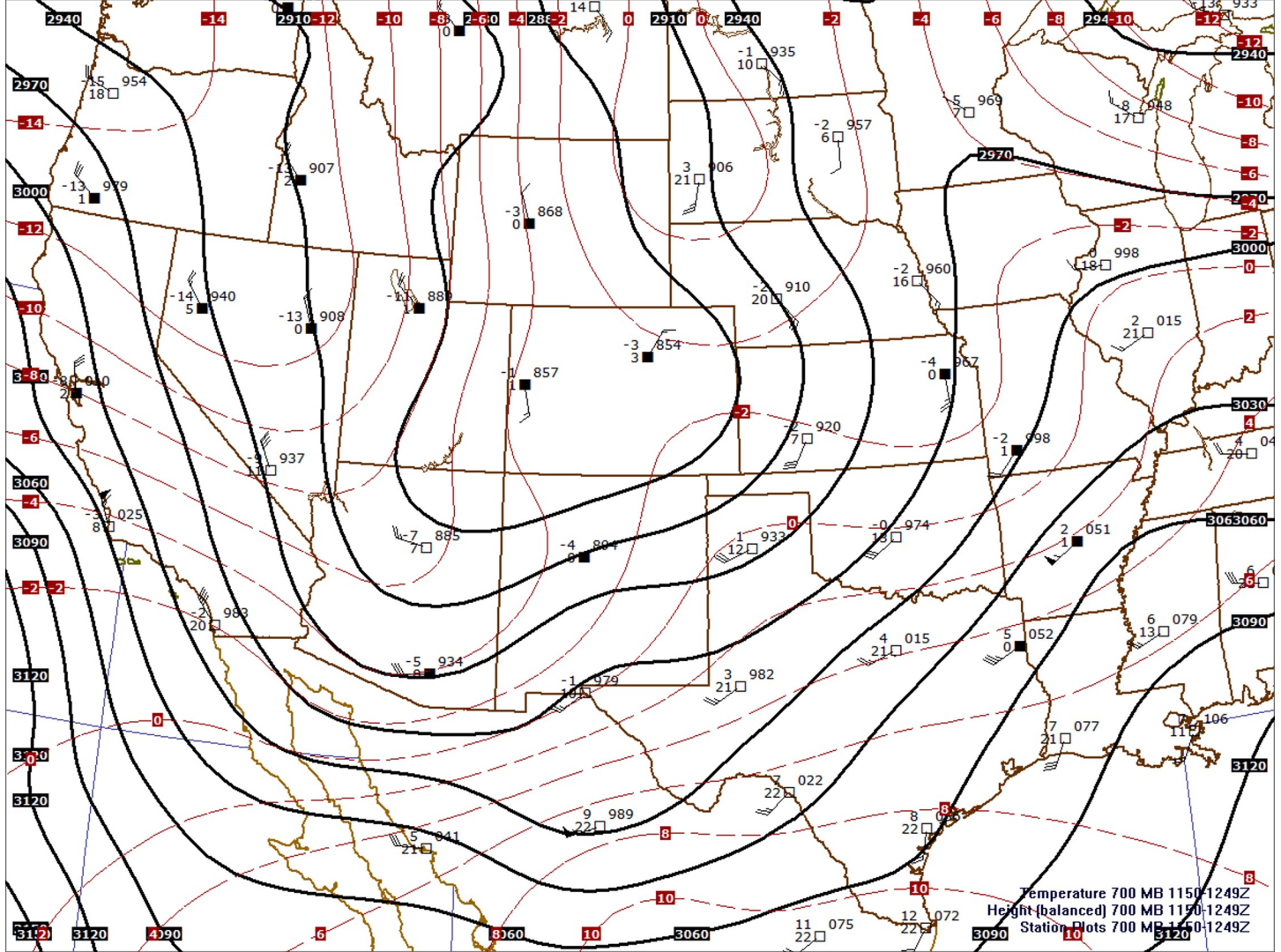
# 250 mb



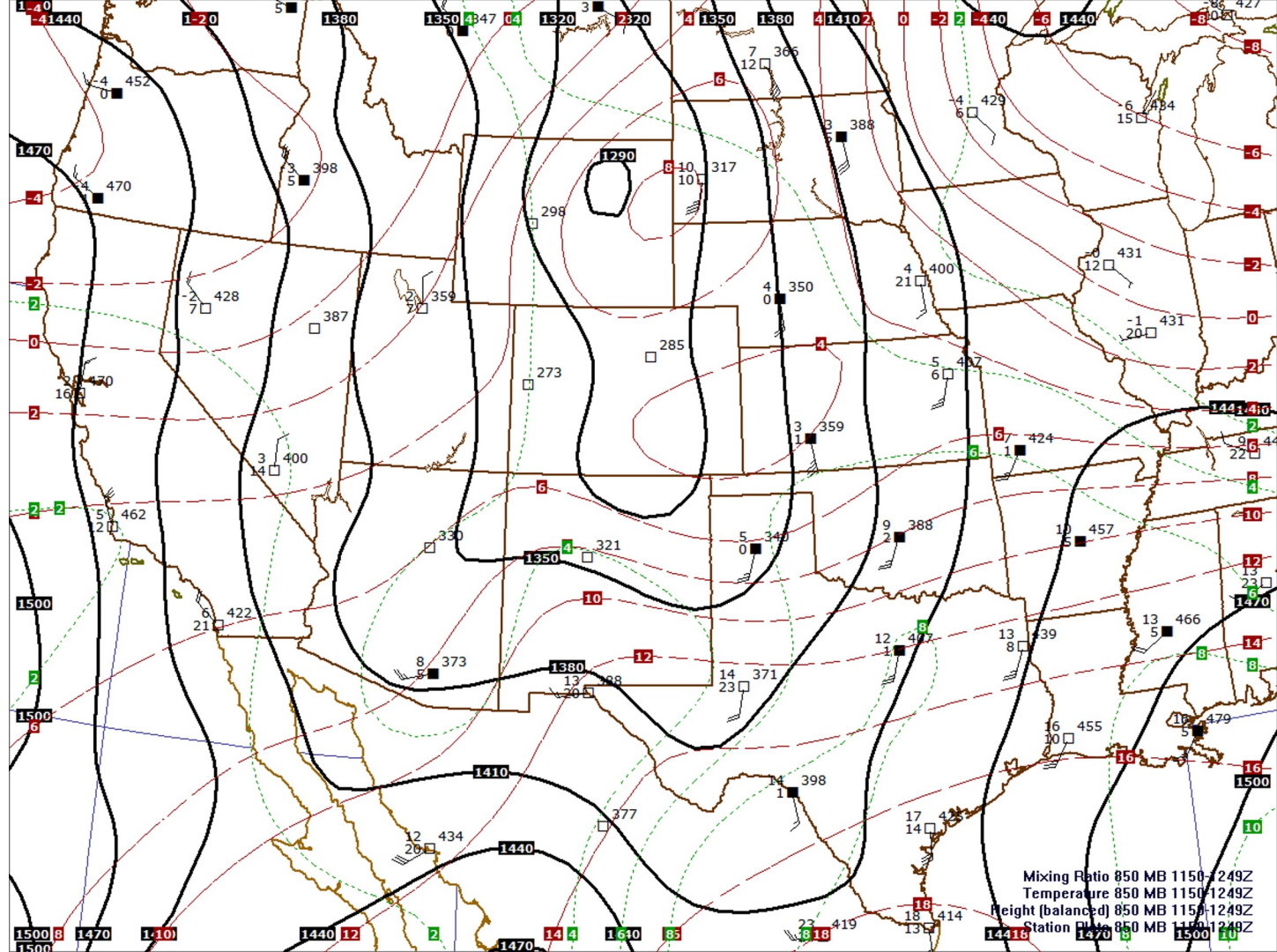
# 500 mb



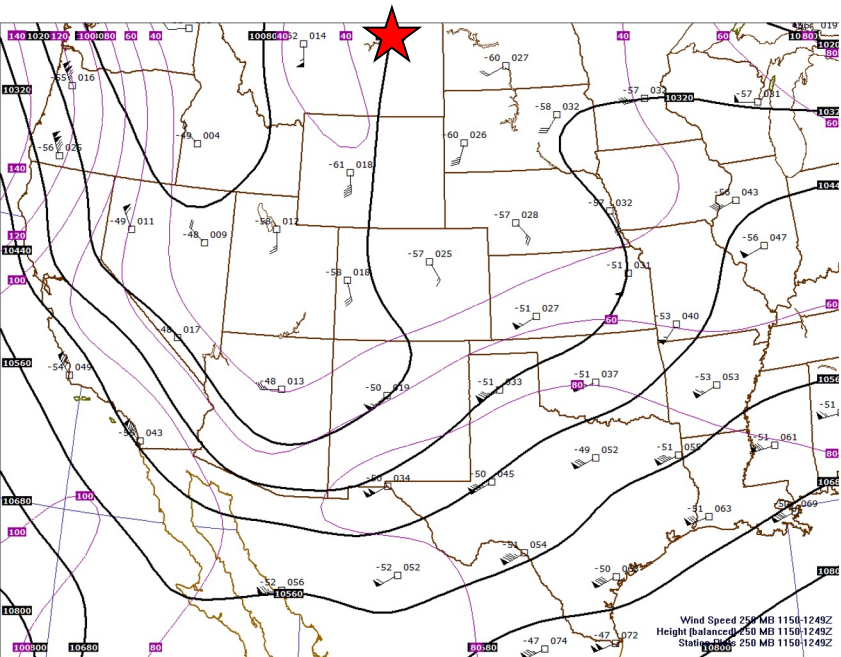
# 700 mb



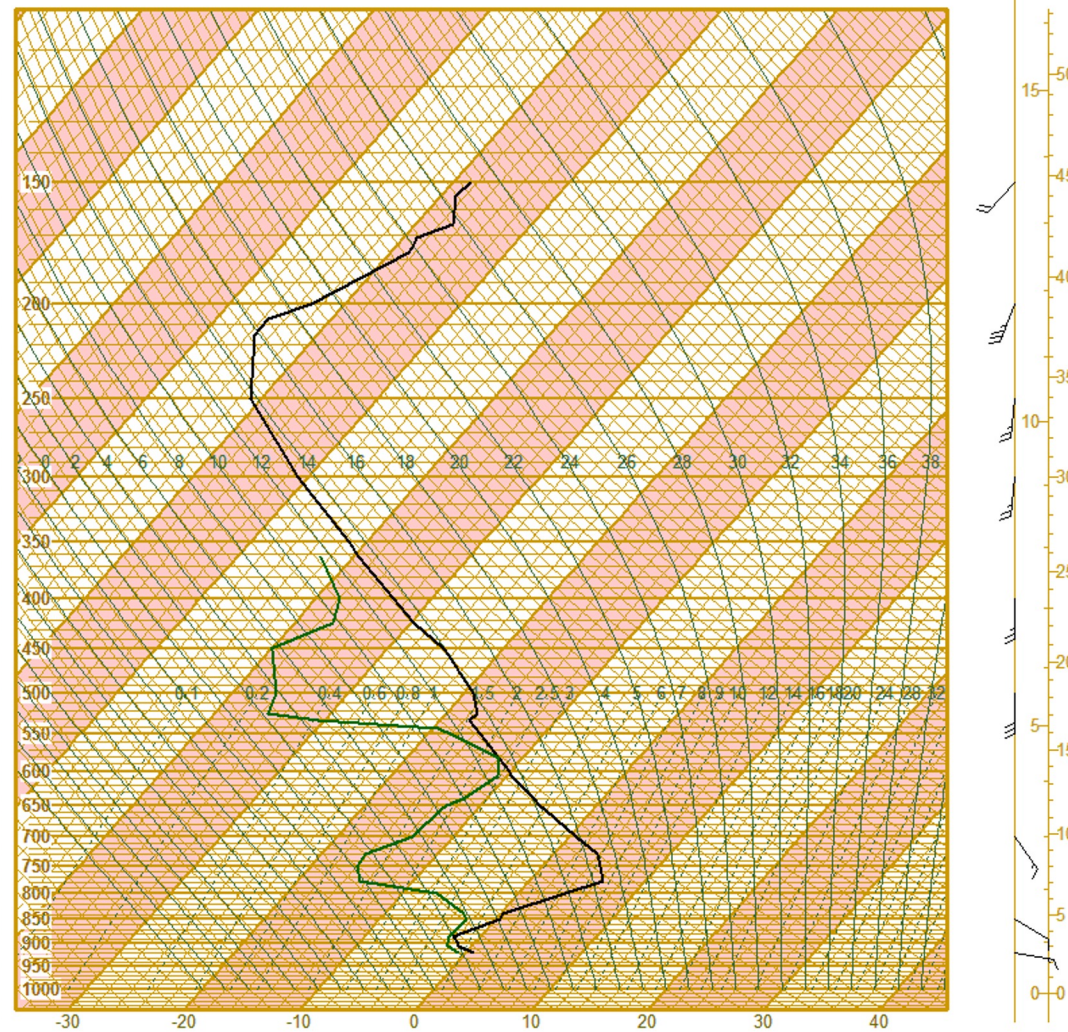
# 850 mb



# 12 Z Glasgow, MT

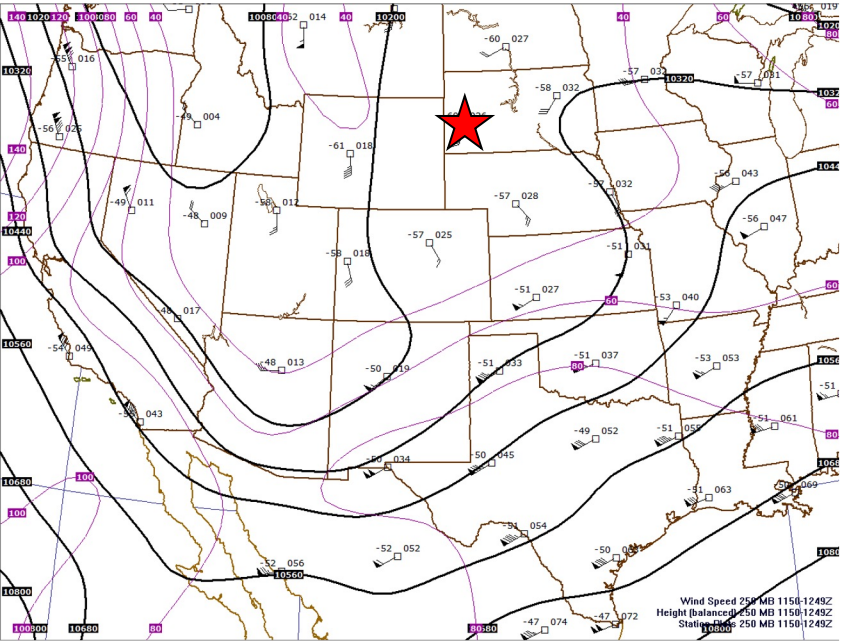


RGGW 72768-0 12Z Elev 700m (2297ft) MT:Glasgow/Int'l/NWSFO/40365



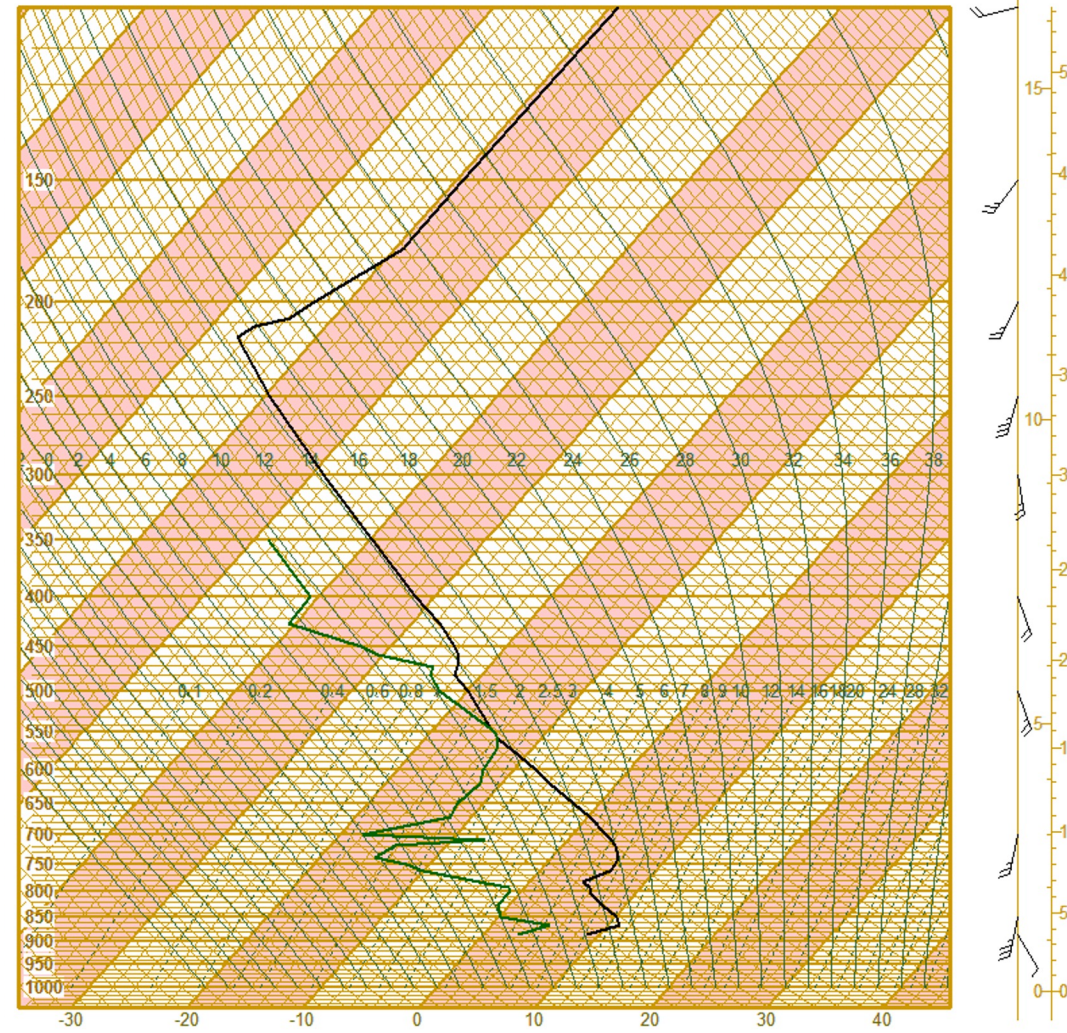


# 12 Z Rapid City, SD

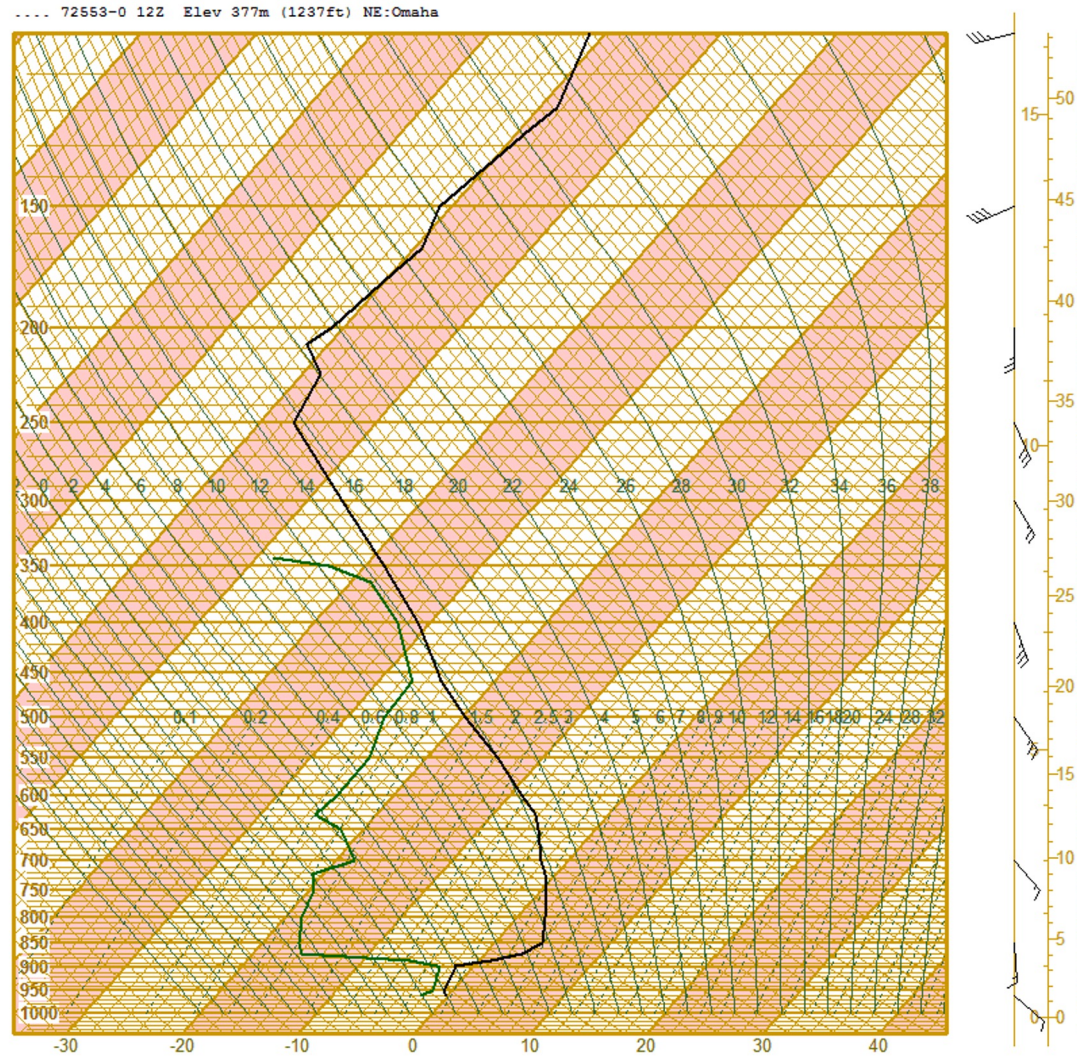
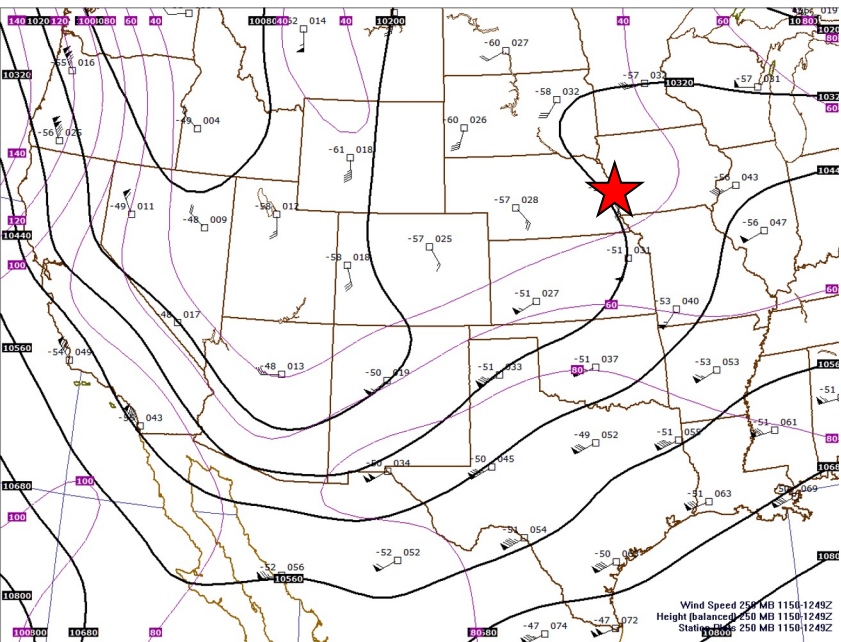


Wind Speed 250 MB 1150 1248Z  
Height Balance 250 MB 1150 1248Z  
Station 250 MB 1150 1248Z

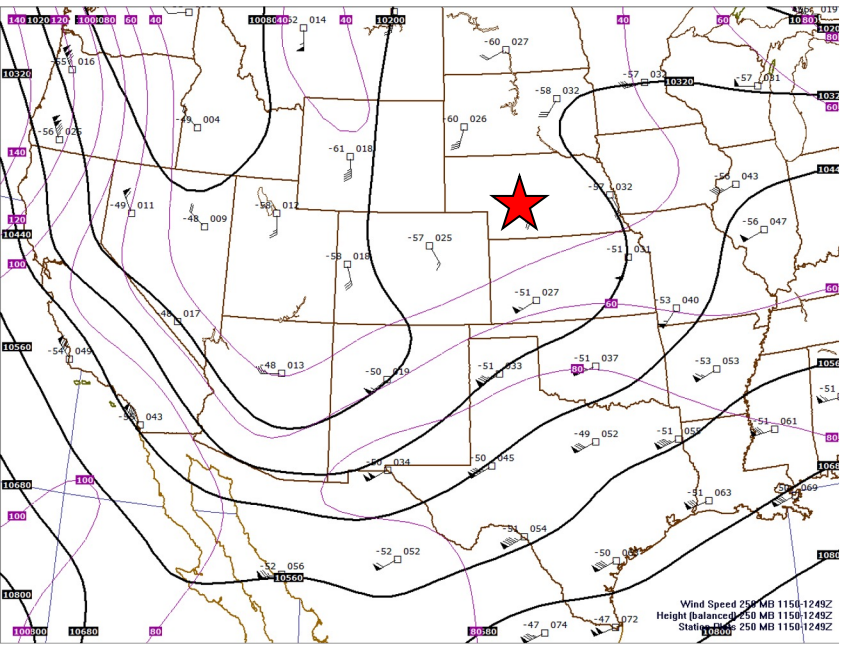
KRAP 72662-0 12Z Elev 965m (3166ft) SD:Rapid City/Regional



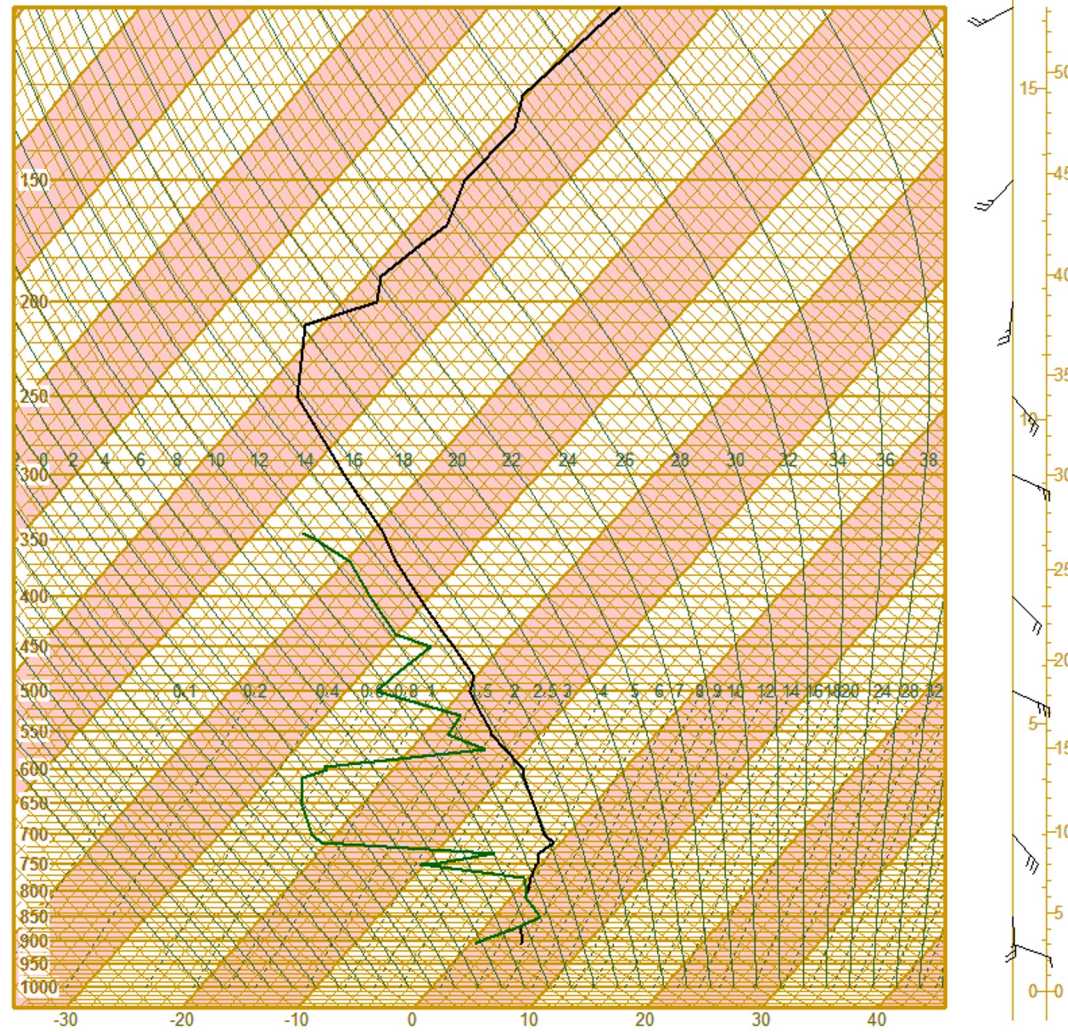
# 12 Z Omaha, NE



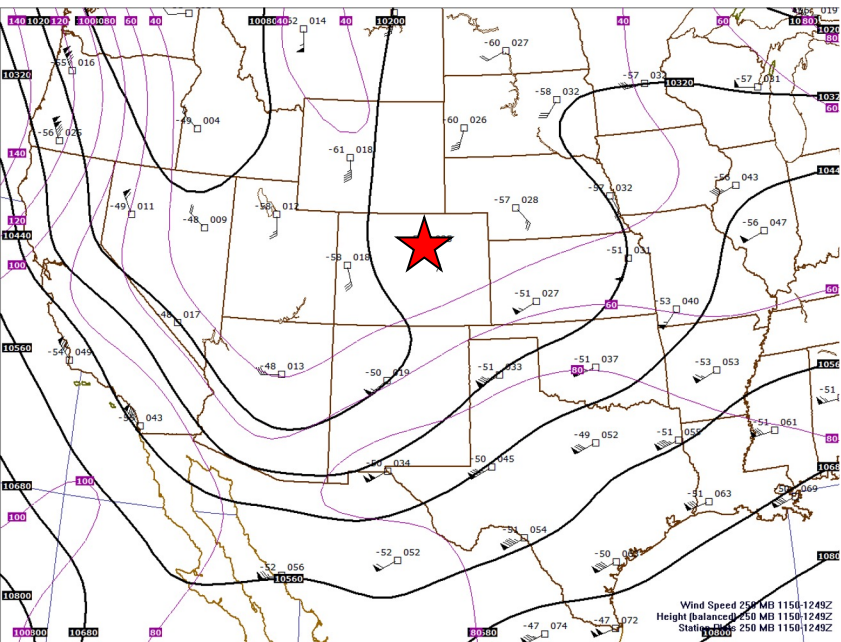
# 12 Z North Platte, NE



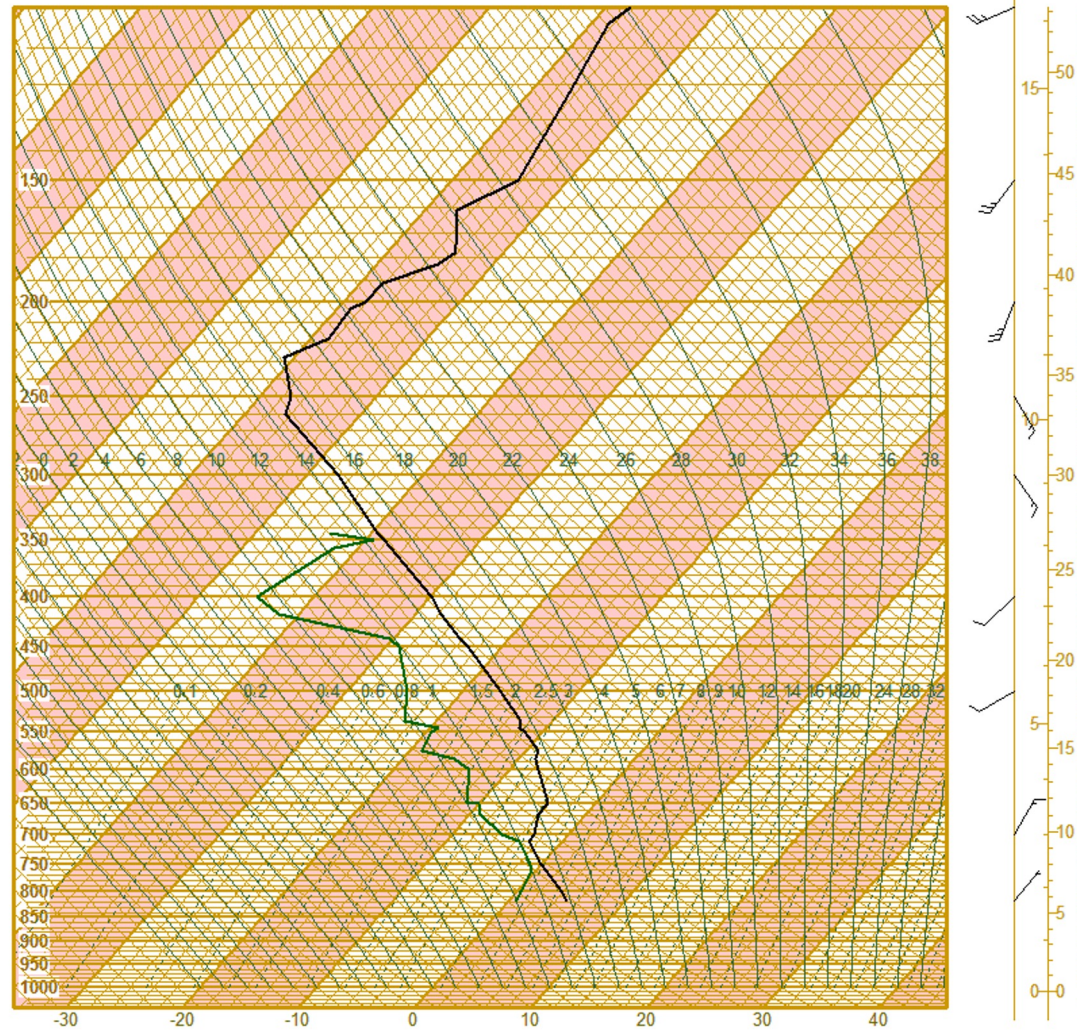
KLBZ 72562-0 12Z Elev 849m (2785ft) NE:North Platte/Lee Bird/NWSFO



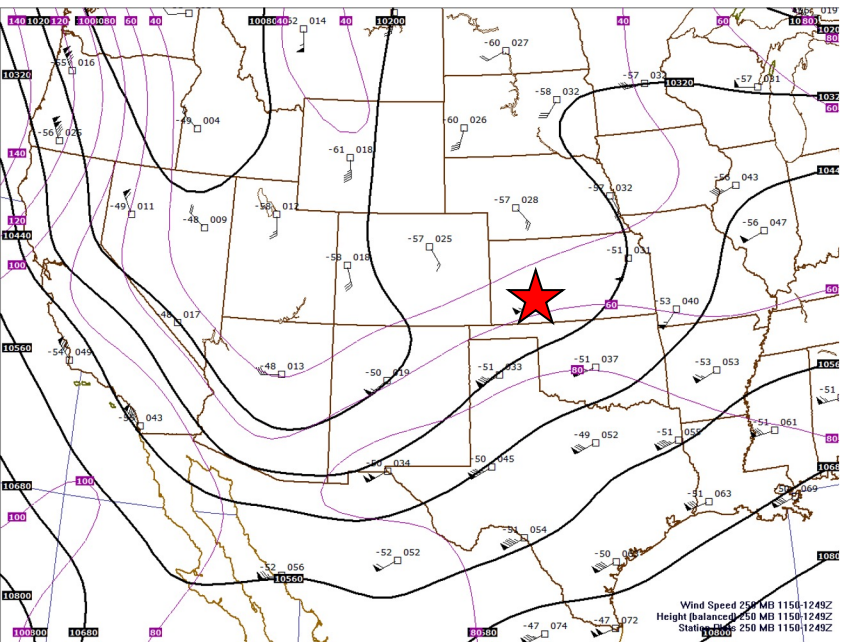
# 12 Z Denver, CO



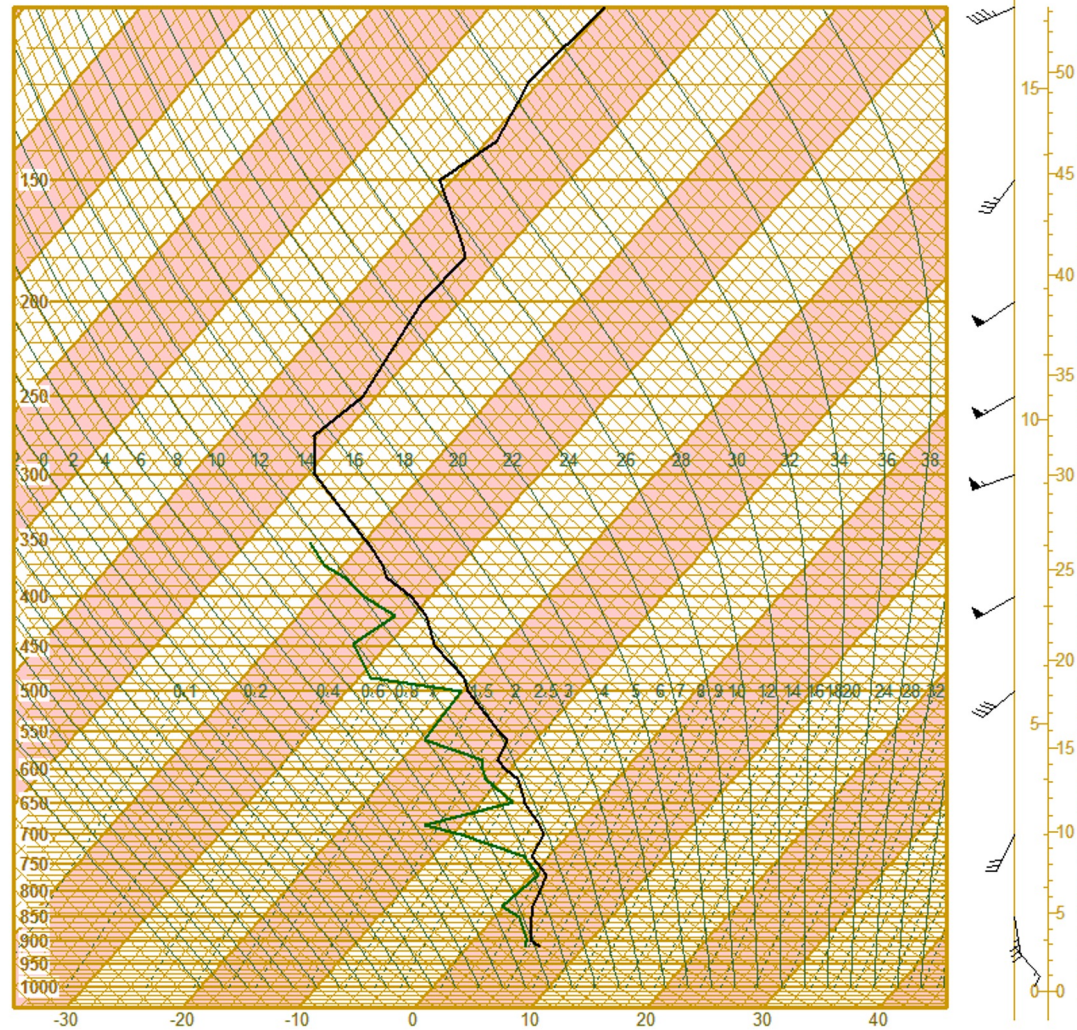
.... 72469-0 12Z Elev 1633m (5358ft) CO:Denver



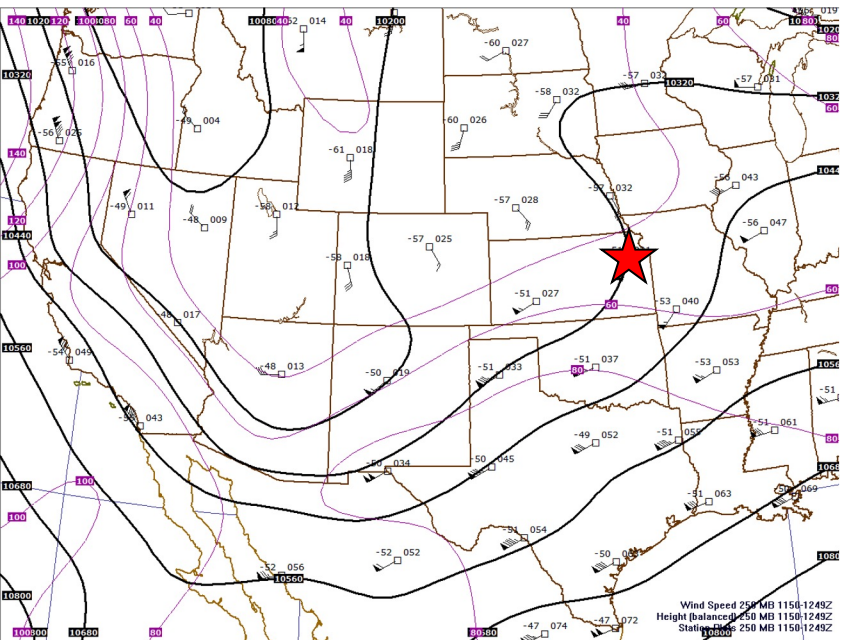
# 12 Z Dodge City, KS



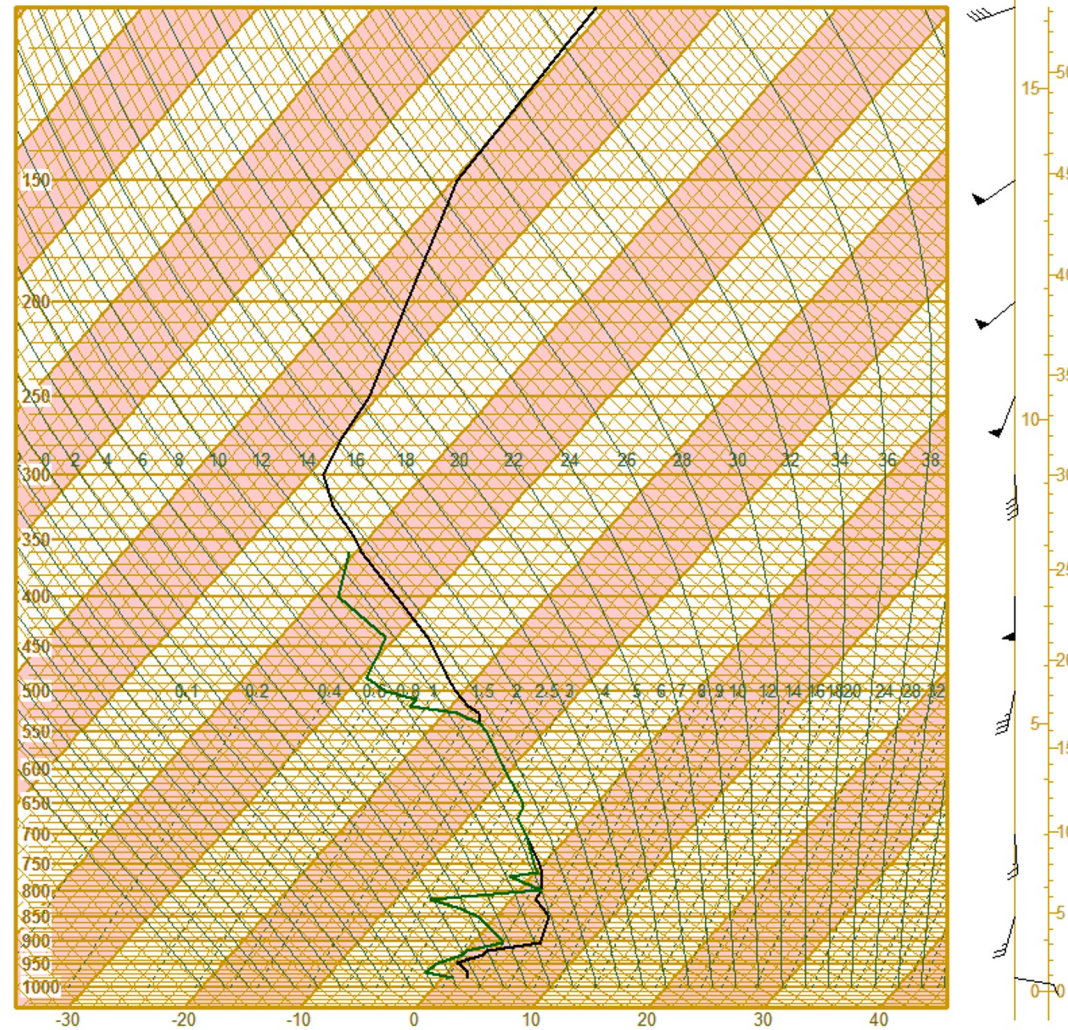
KDDC 72451-0 12Z Elev 790m (2592ft) KS:Dodge City/NWSFO/#0350



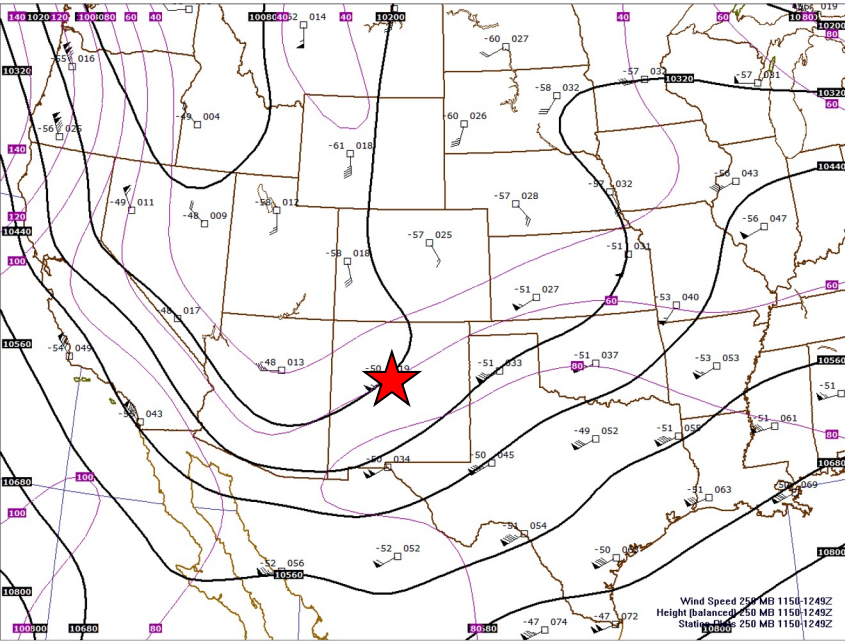
# 12 Z Topeka, KS



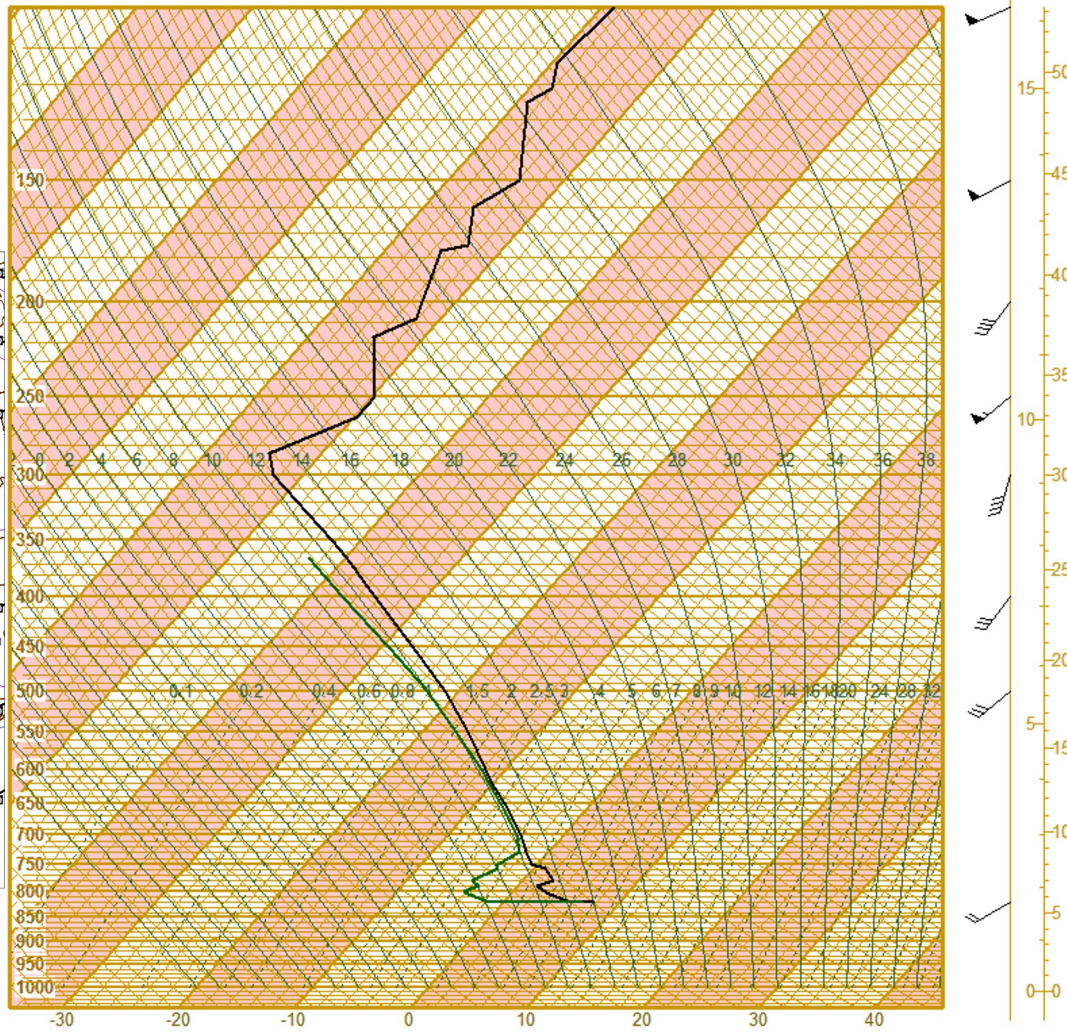
KTOP 72456-0 12Z Elev 270m (886ft) KS:Topeka/Billard Municipal



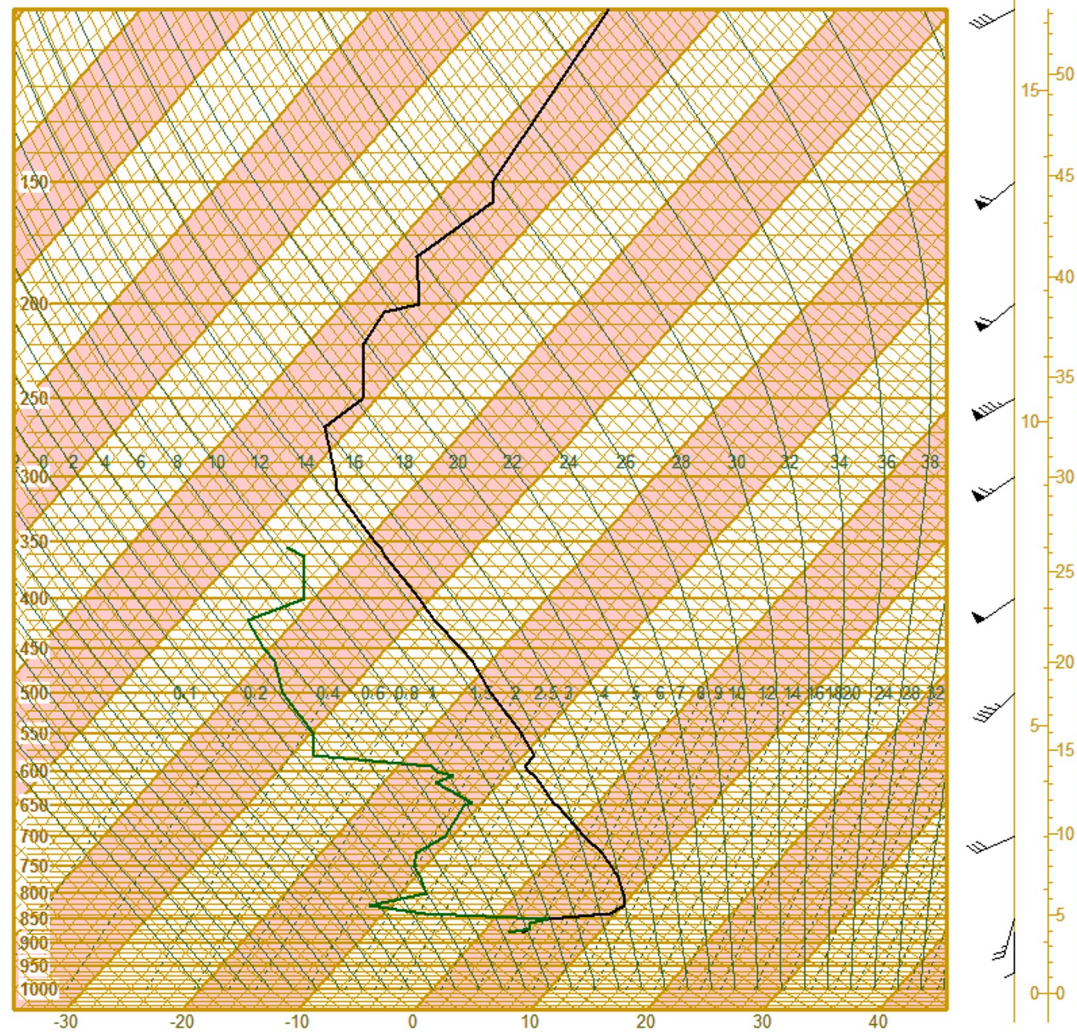
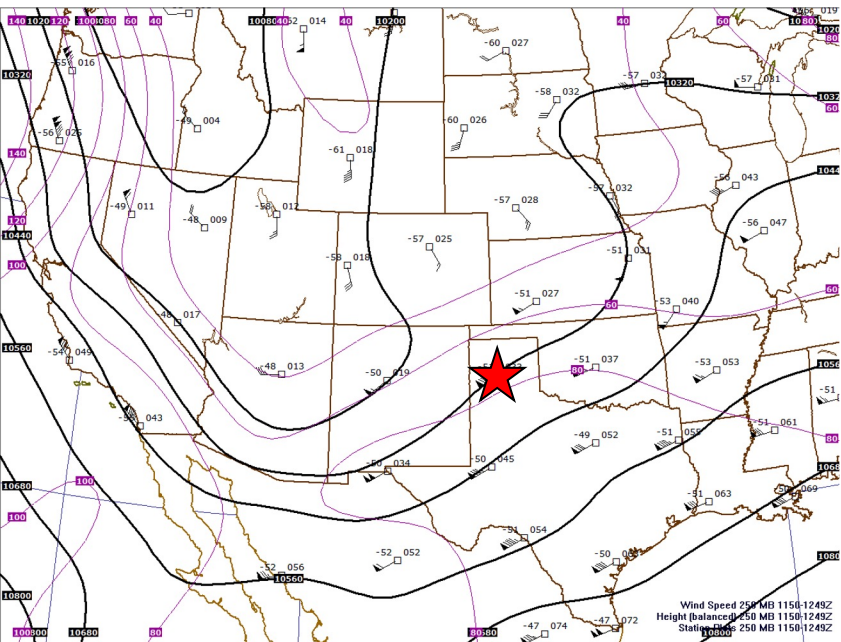
# 12 Z Albuquerque, NM



KABQ 72365-0 12Z Elev 1620m (5315ft) NM:Albuquerque/Intl

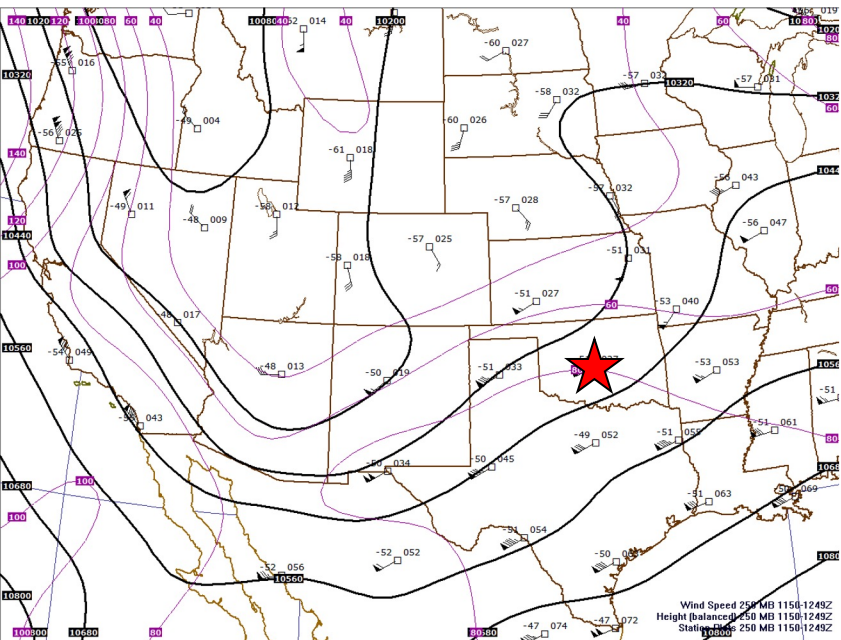


# 12 Z Amarillo, TX



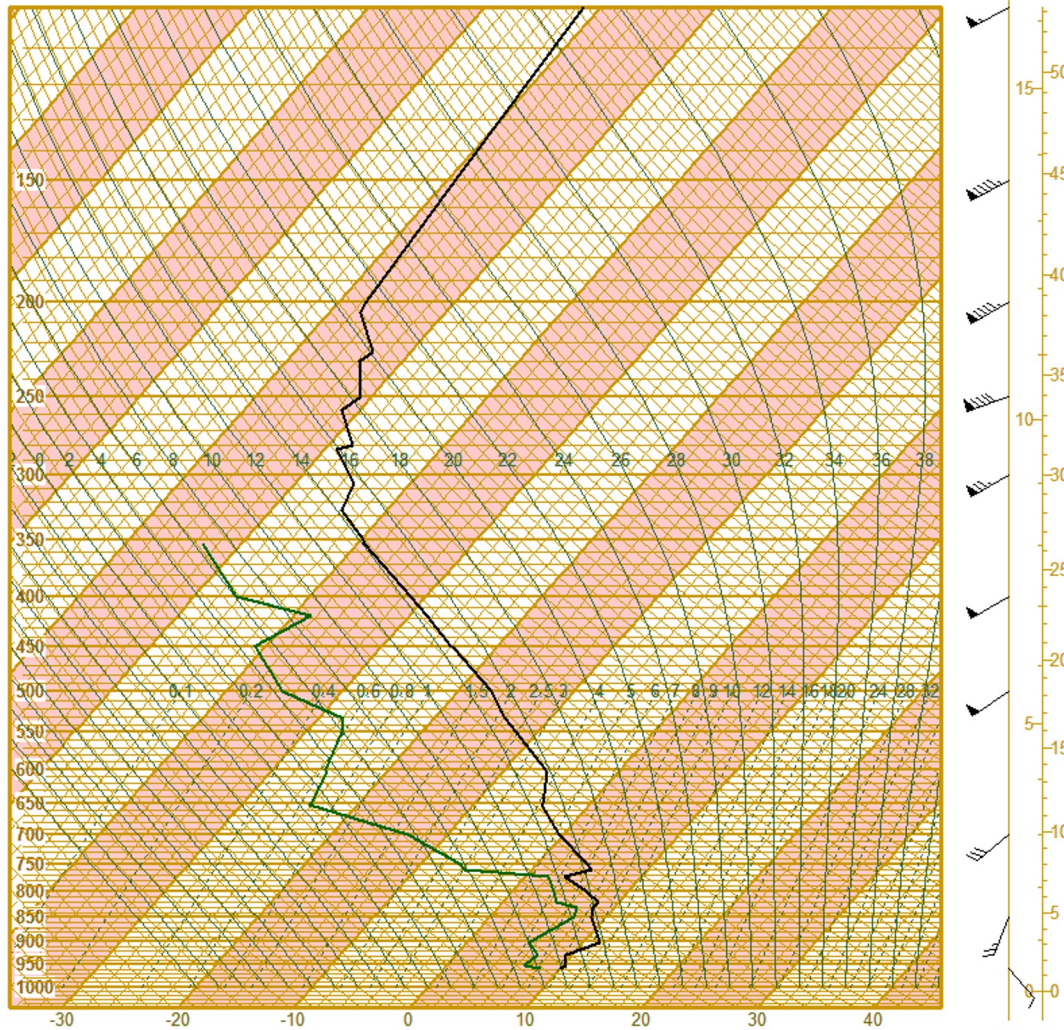


# 12 Z Norman, OK

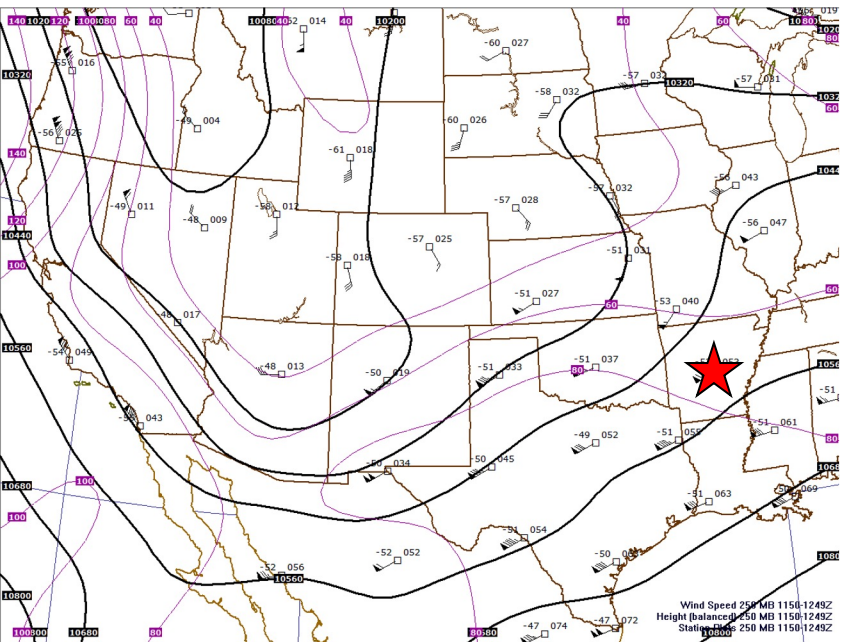


Wind Speed 250 MB 1150-1248Z  
Height Balance 50 MB 1150-1248Z  
Station 250 MB 1150-1248Z

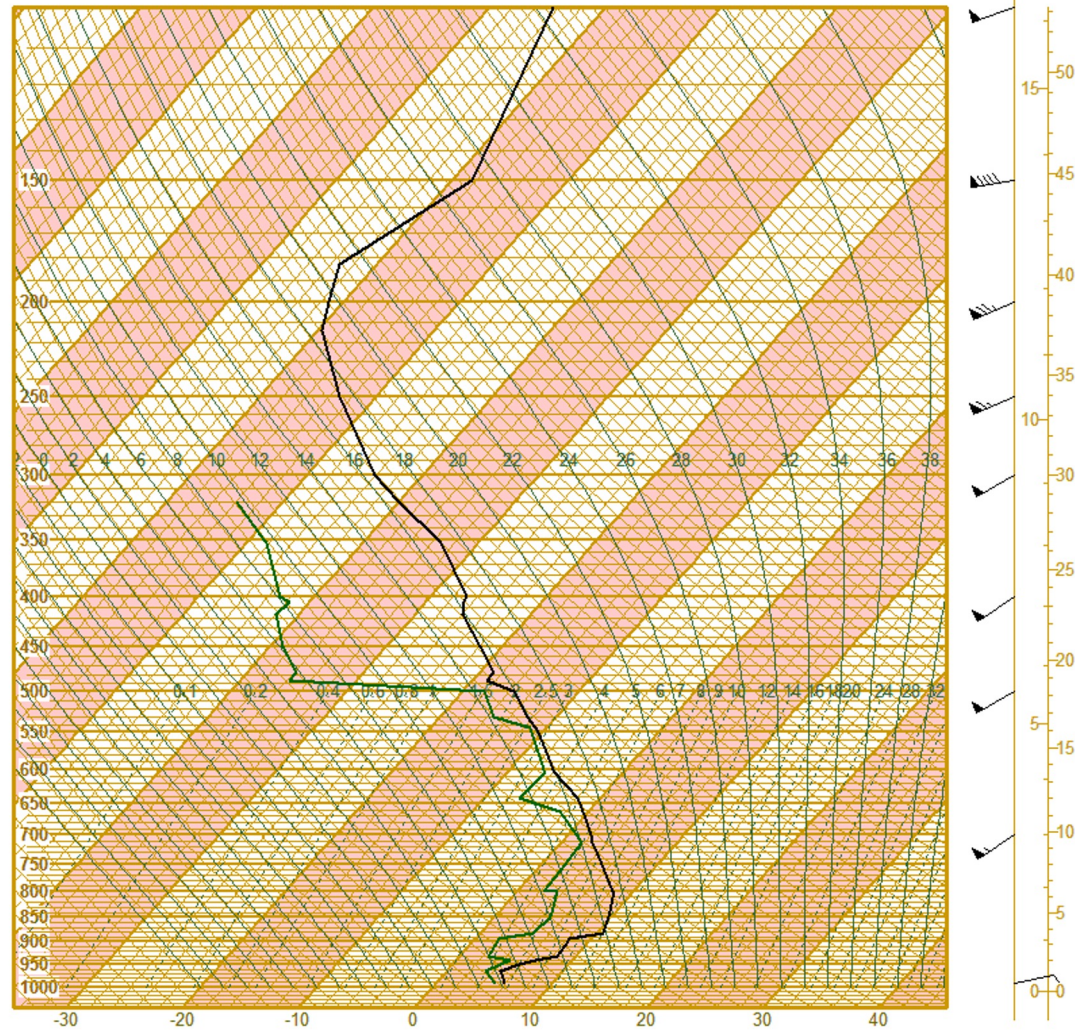
.... 72353-0 12Z Elev 398m (1306ft) OK:Oklahoma City or Norman



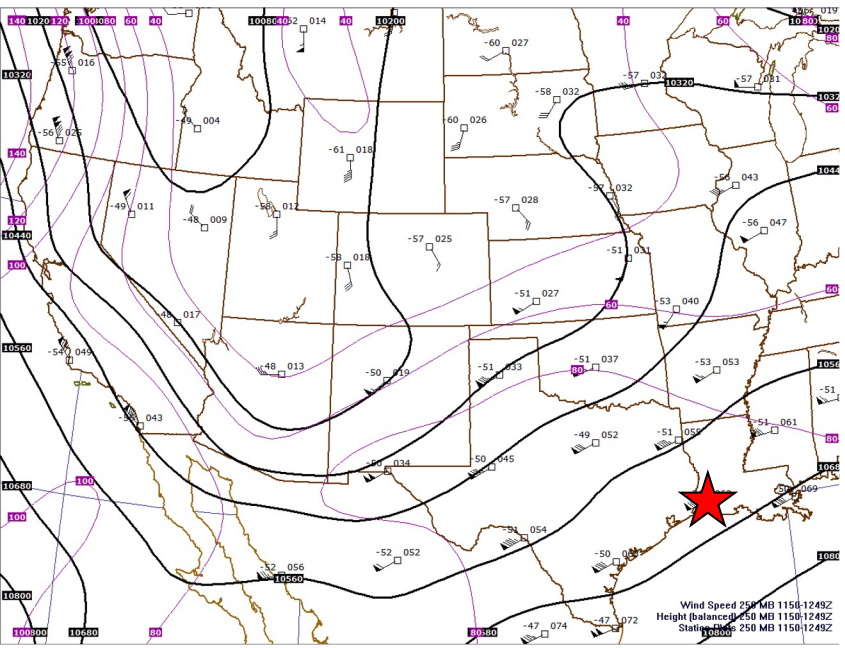
# 12 Z Little Rock, AR



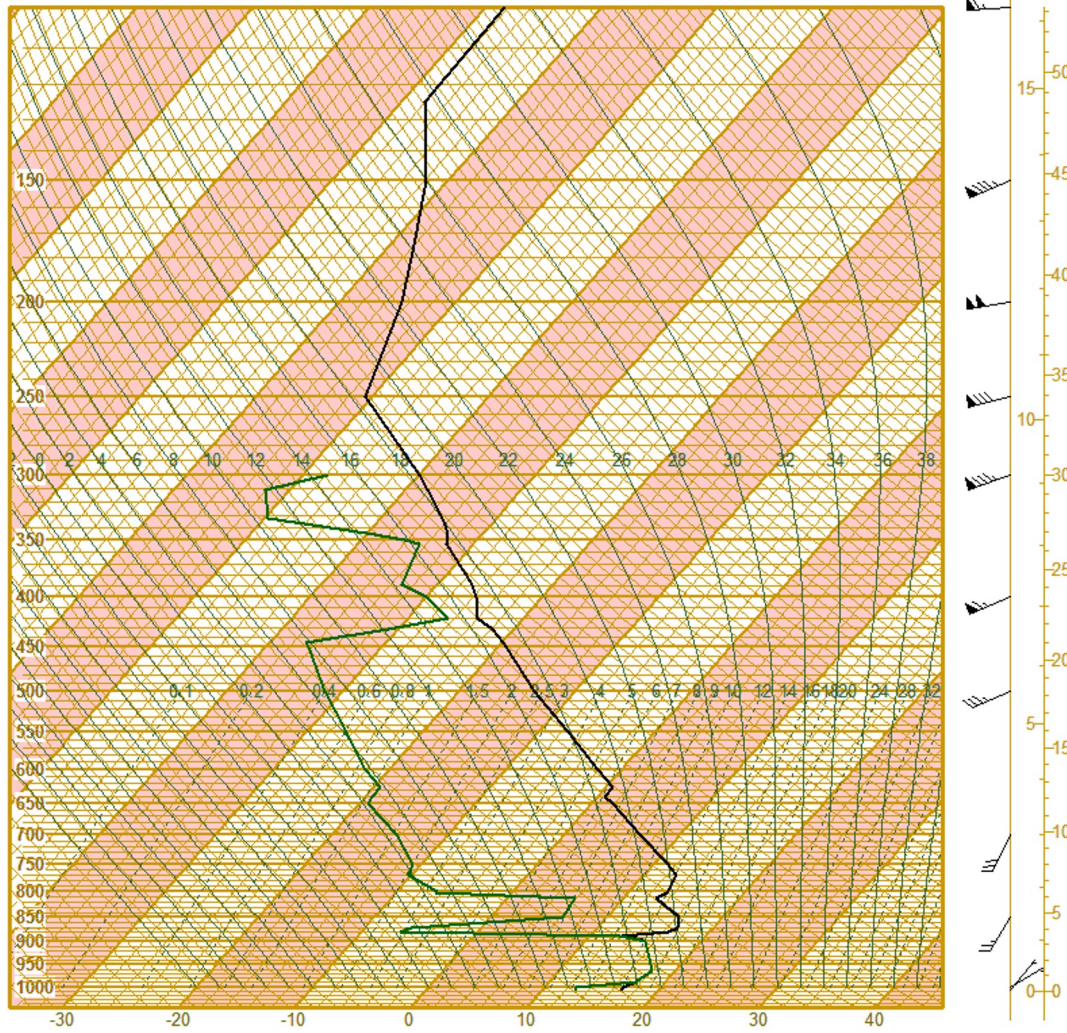
KLZK 72340-0 12Z Elev 78m (256ft) AR:North Little Rock/#0395



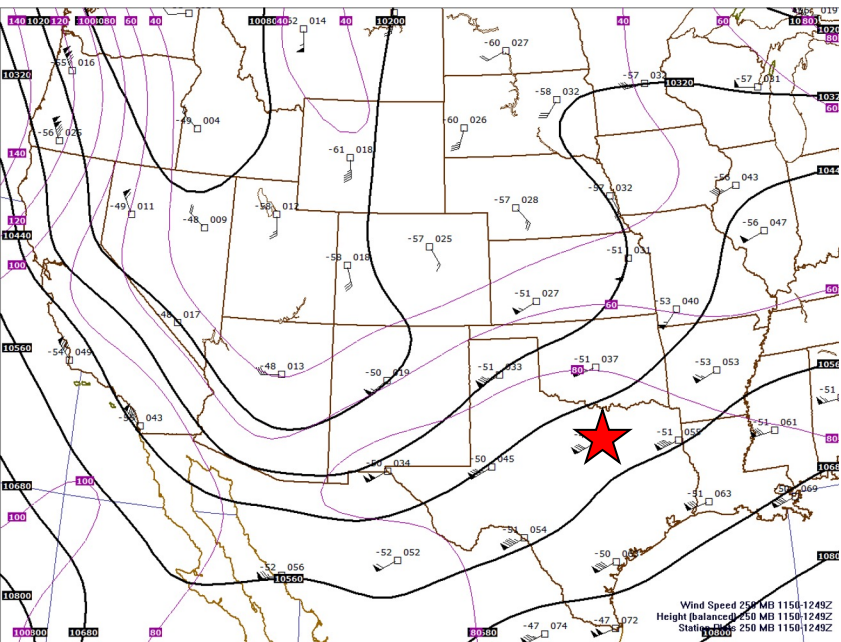
# 12 Z Lake Charles, LA



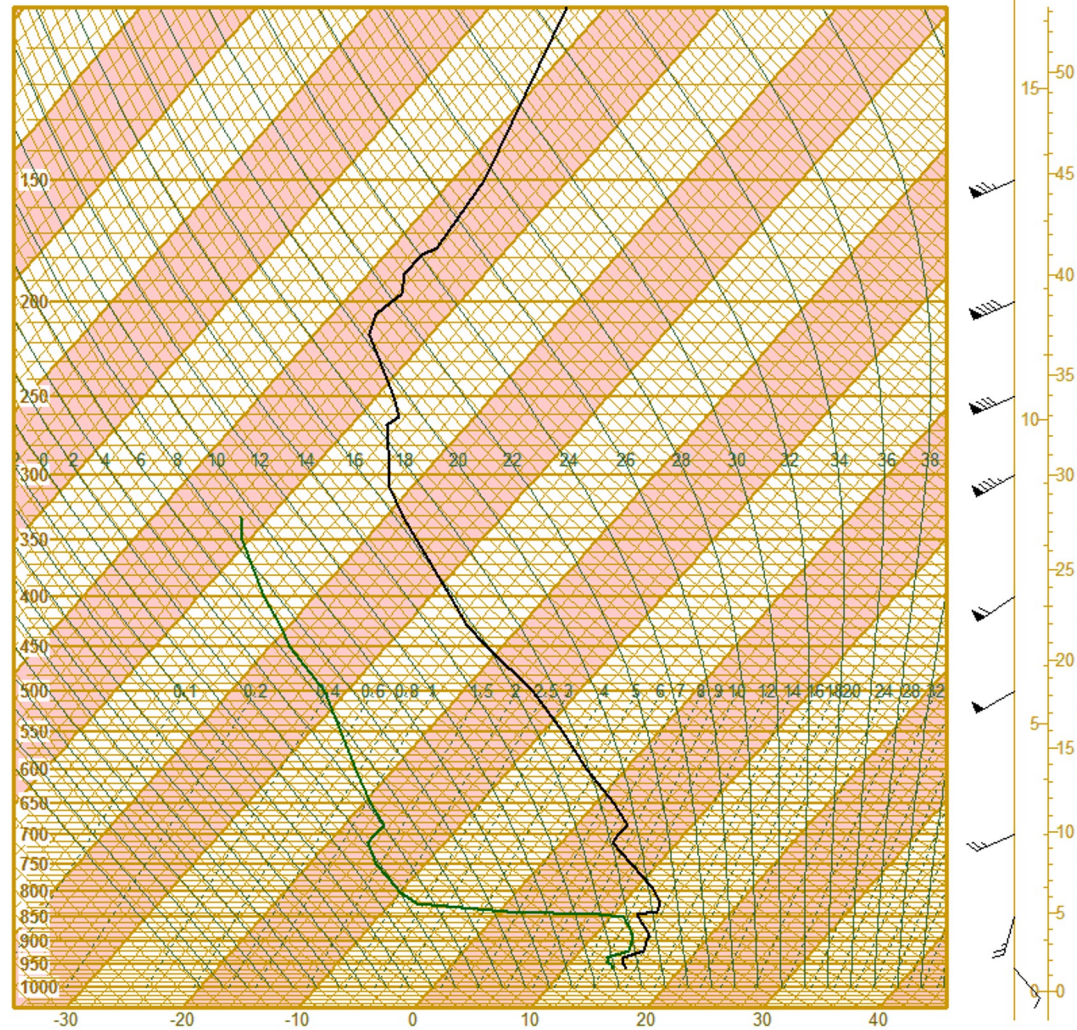
KLCH 72240-0 12Z Elev 10m (33ft) LA: Lake Charles/NWSFO/#0391



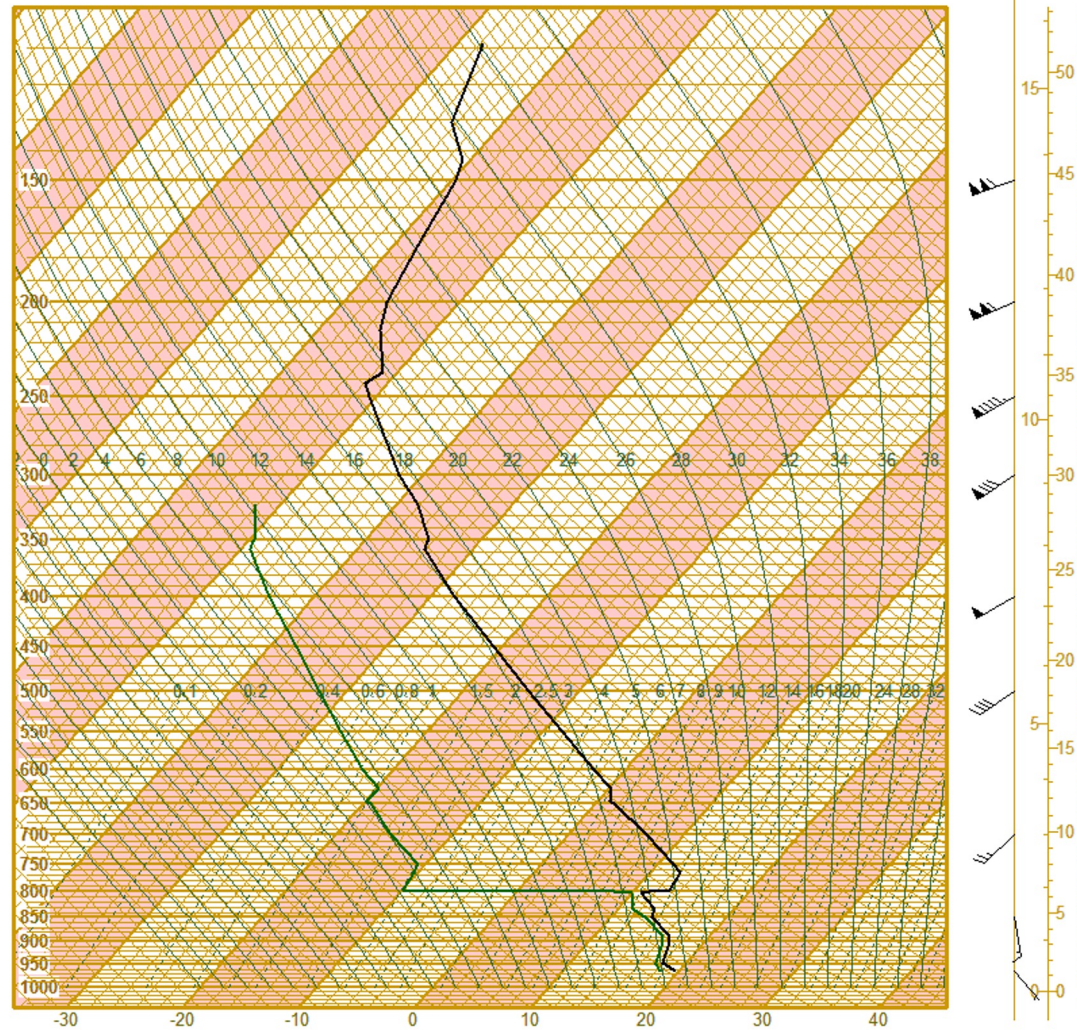
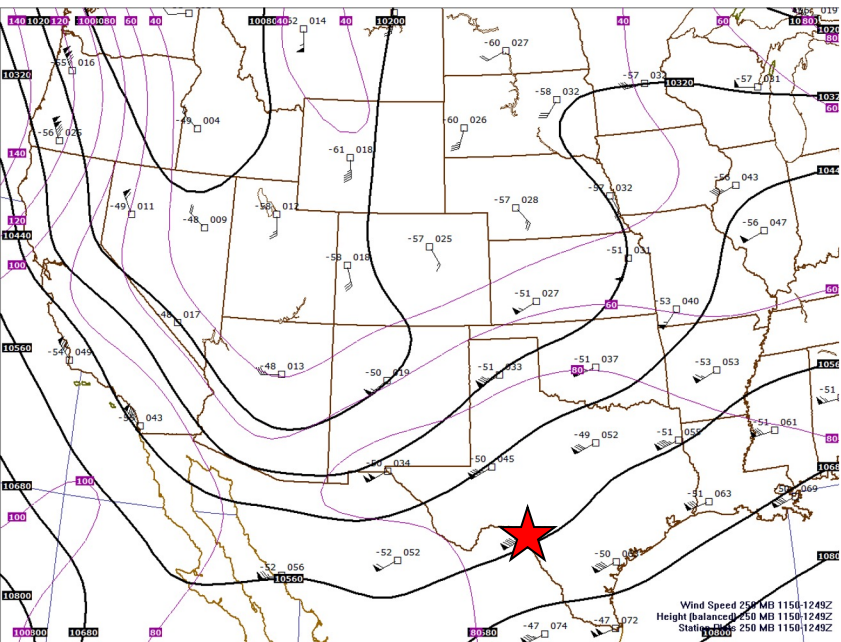
# 12 Z Fort Worth, TX



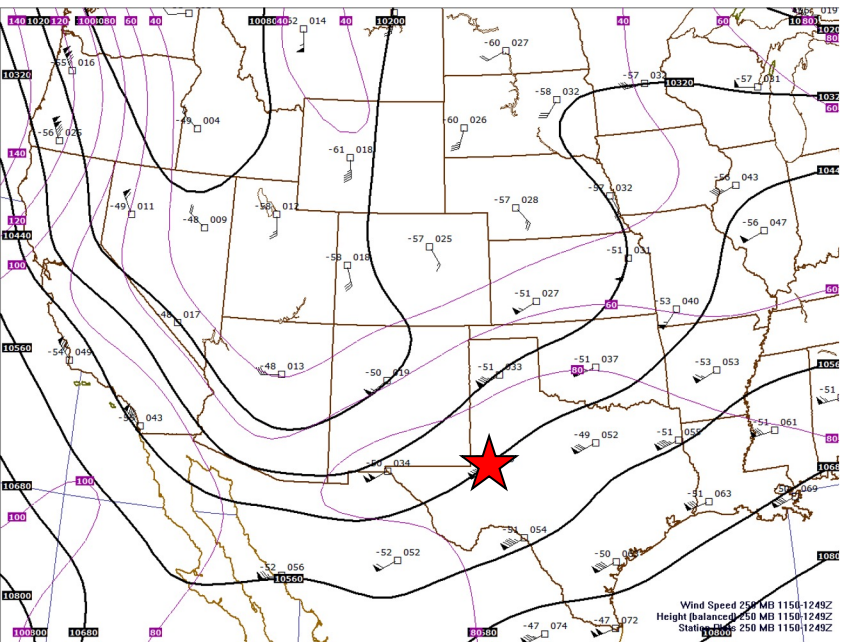
.... 72260-0 12Z Elev 299m (981ft) TX:Fort Worth or Stephenville



# 12 Z Del Rio, TX

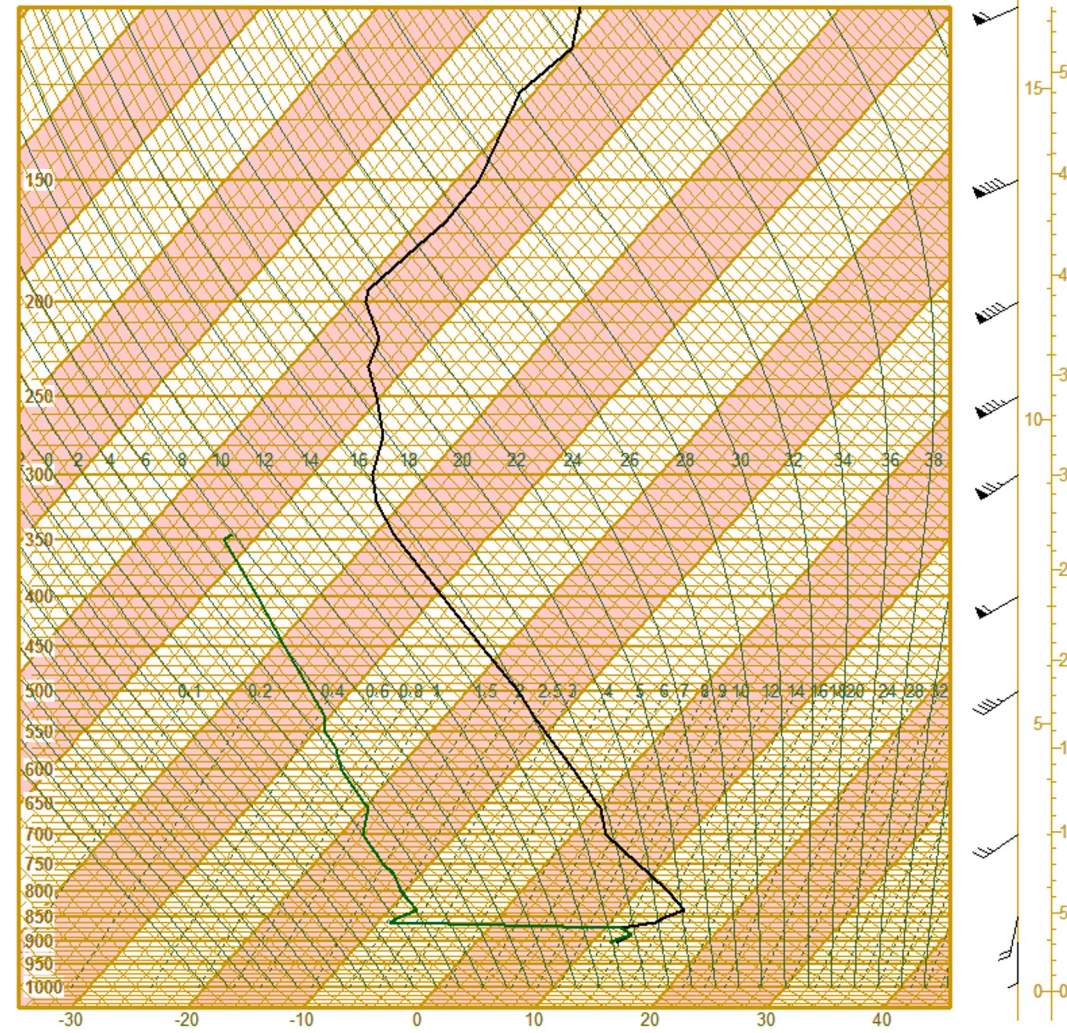


# 12 Z Midland, TX

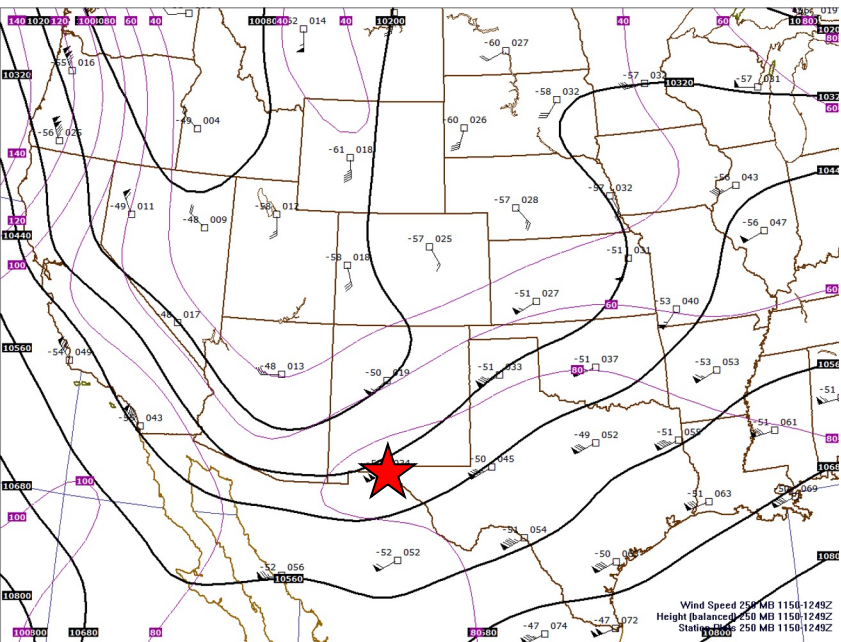


Wind Speed 250 MB 1150-1248Z  
Height Balance 250 MB 1150-1248Z  
Station 250 MB 1150-1248Z

KMAF 72265-0 12Z Elev 872m (2861ft) TX:Midland-Odessa/#0518

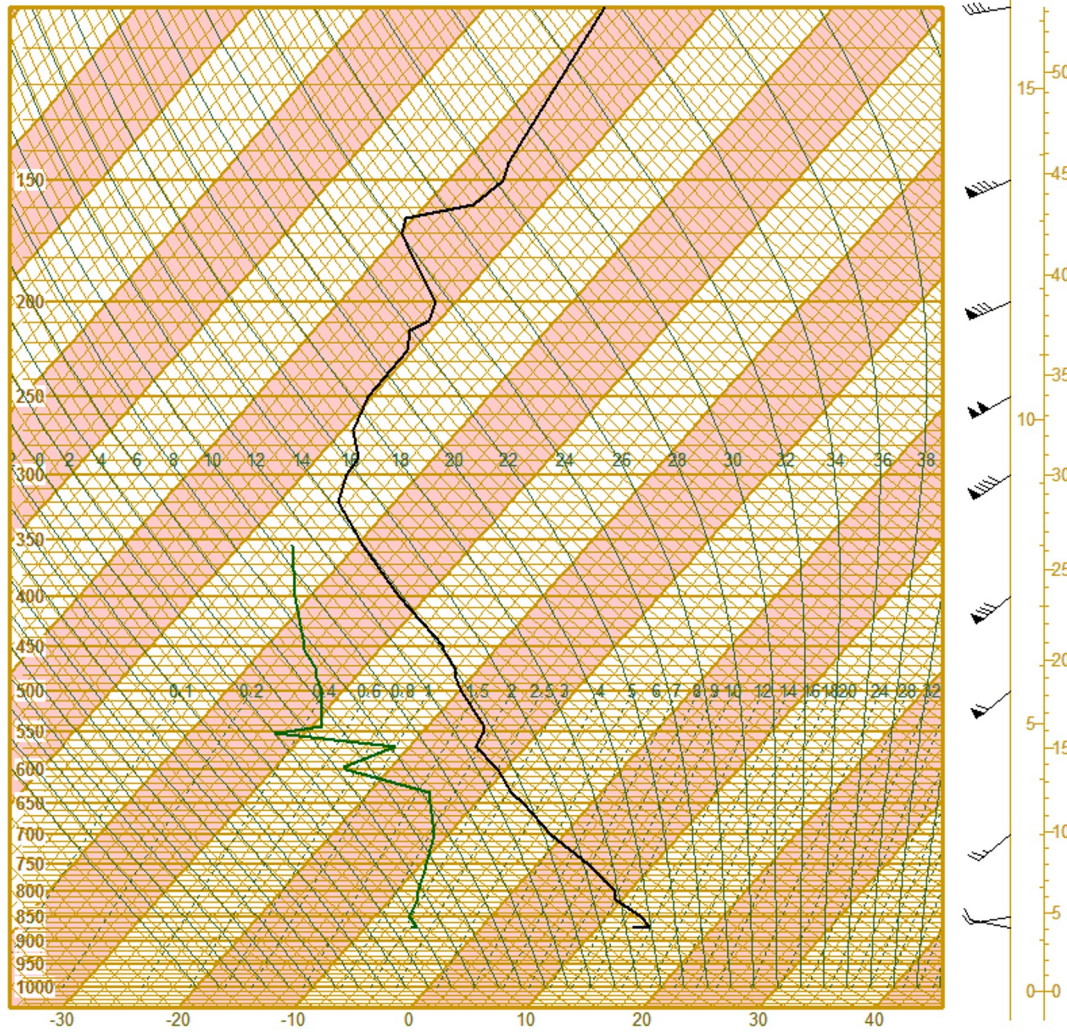


# 12 Z El Paso, TX

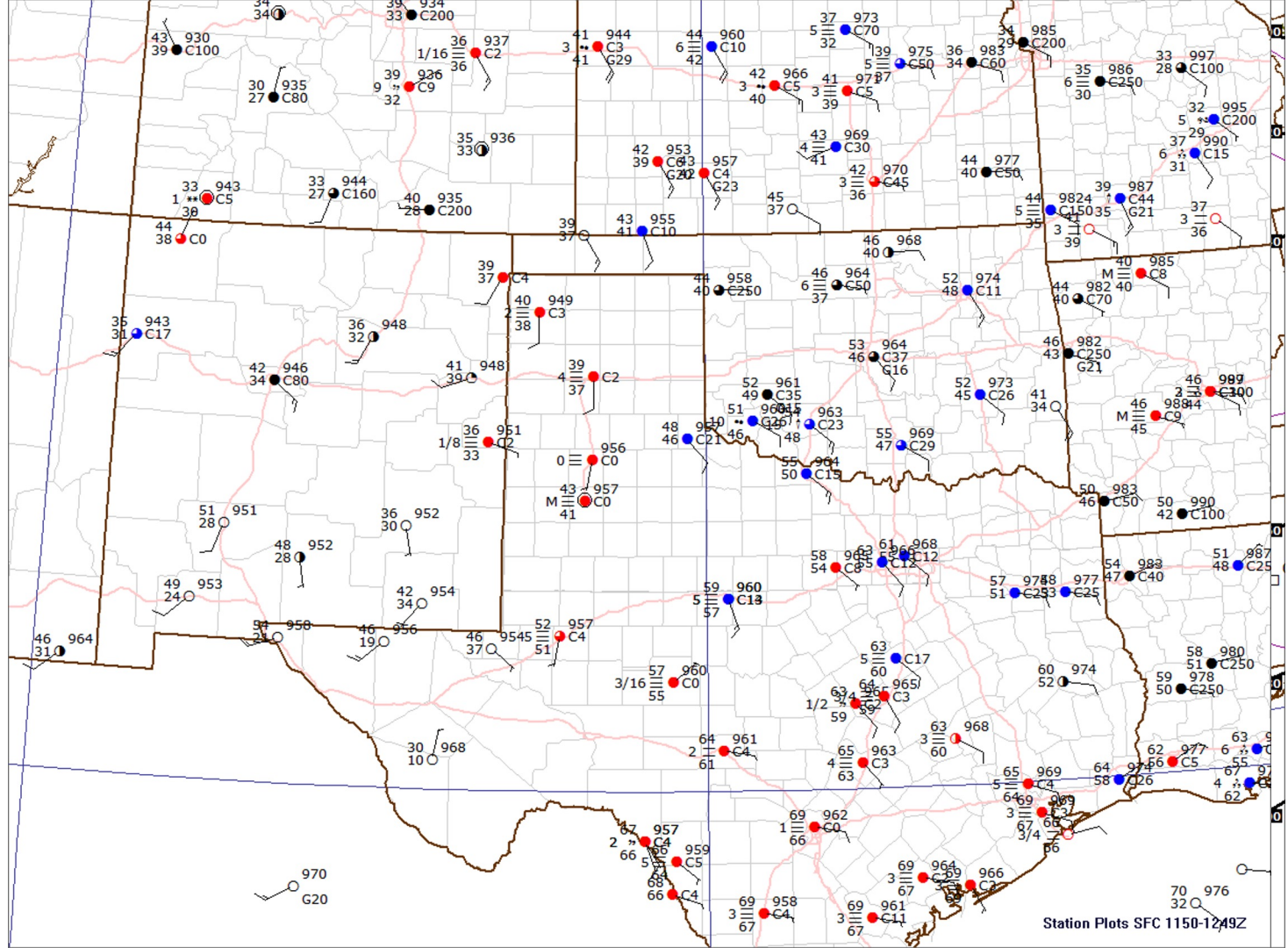


Wind Speed 250 MB 1150-1248Z  
Height Balance 250 MB 1150-1248Z  
Station 250 MB 1150-1248Z

.... 72270-0 12Z Elev 1124m (3688ft) TX:El Paso



12:00 UTC







12:45 UTC

## Initial Thoughts?

- Where will there be strong upper-level lift?
- Will the 850 mb low deepen? Move?
- Where are the best lapse rates?
- Where is the best low-level moisture?
- Where is favorable instability likely?
- Where do you expect the strongest deep-layer shear?
- Where do you expect the best low-level shear?



## Create a 13Z Outlook

- What is the areal coverage of the threat?
- Are there more than one areas of concern?
- What is the most likely storm mode?
- What is the most likely hazard?
- What will the highest category be?
- How confident are we?



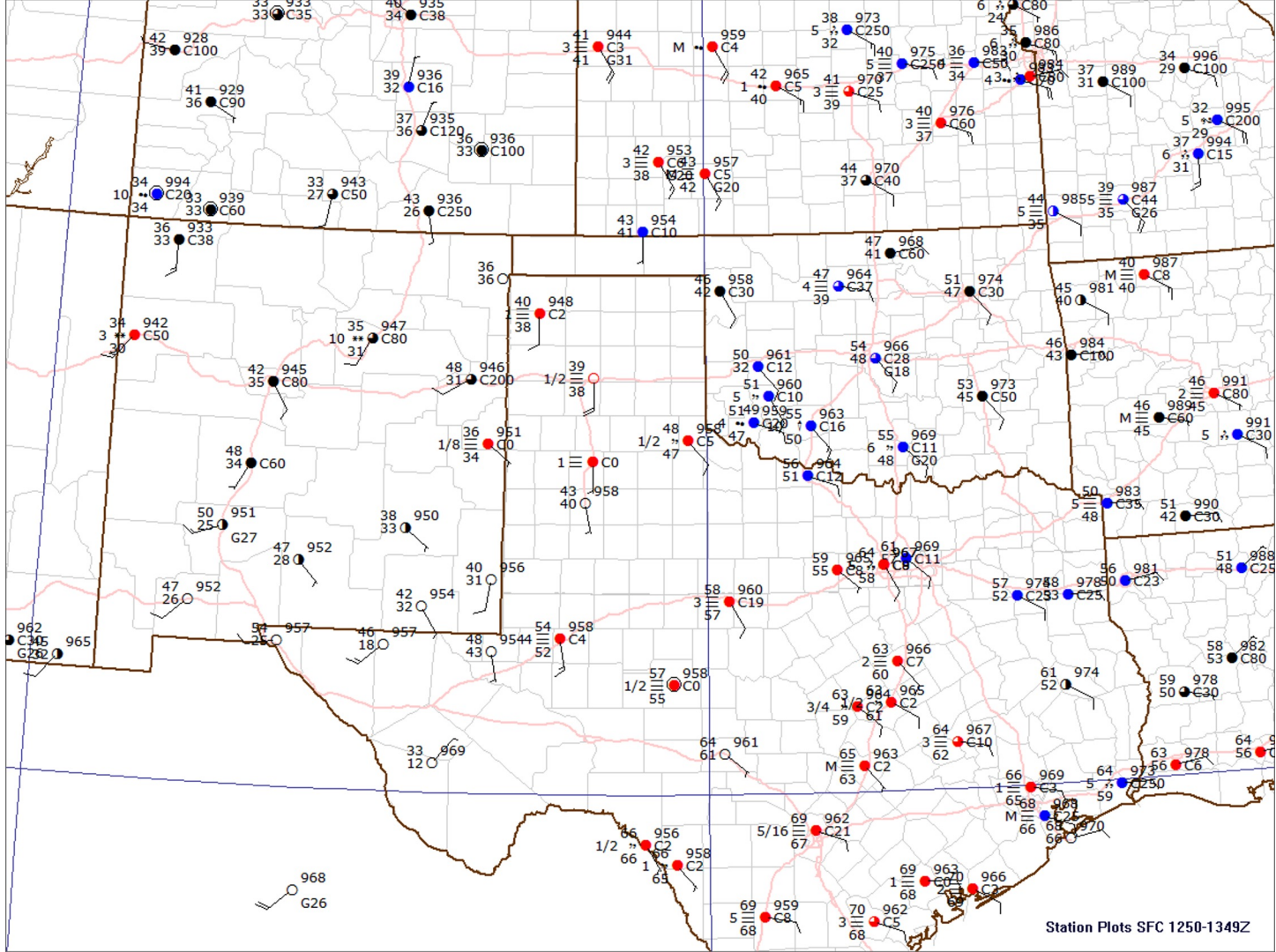
# **HAND ANALYSIS TIME!**

**Let's take the next 10-15 to do a rough hand analysis**

## **Priorities:**

- 1) Boundaries**
- 2) Moisture**
- 3) Temperature**
- 4) Surface Pressure**

13:00 UTC





13:45 UTC

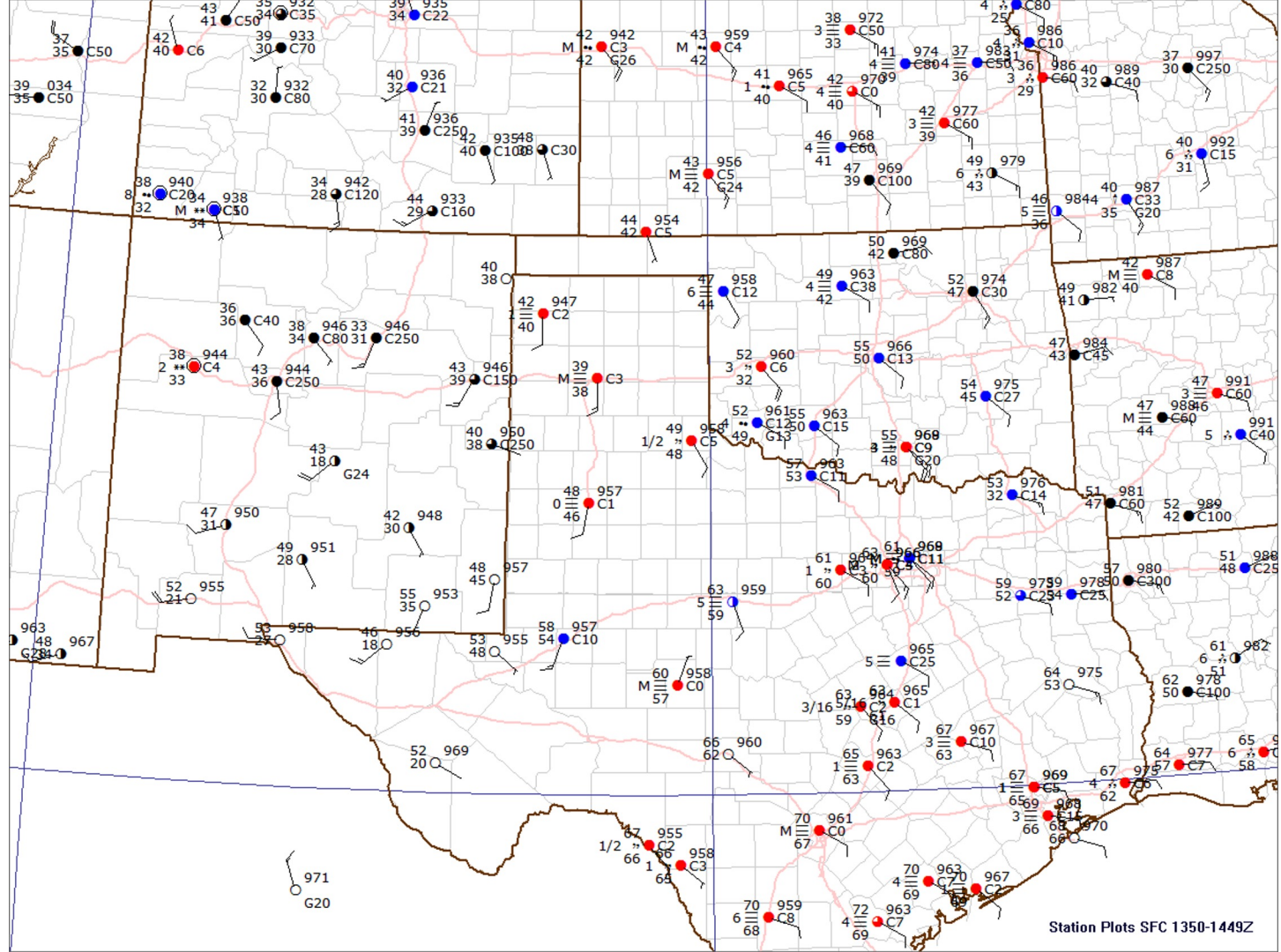
# 14 Z Update

## Watch Consideration:

- When to start?
- When to end?
- What Type?

**If it's time, let's write a mesoscale discussion!**





14:00 UTC

Station Plots SFC 1350-1449Z





14:45 UTC

# 15 Z Update

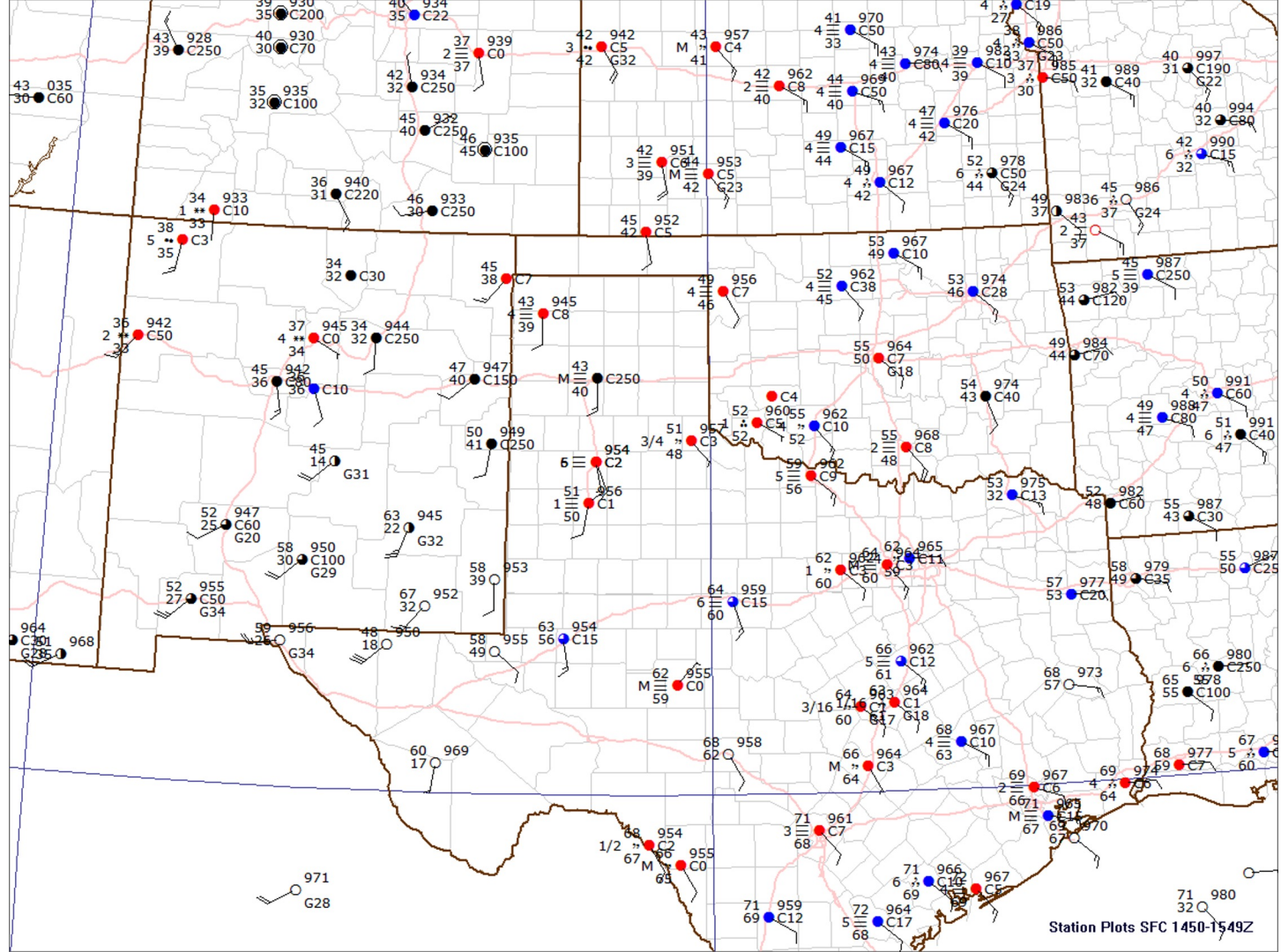
## Watch Consideration:

- When to start?
- When to end?
- What Type?

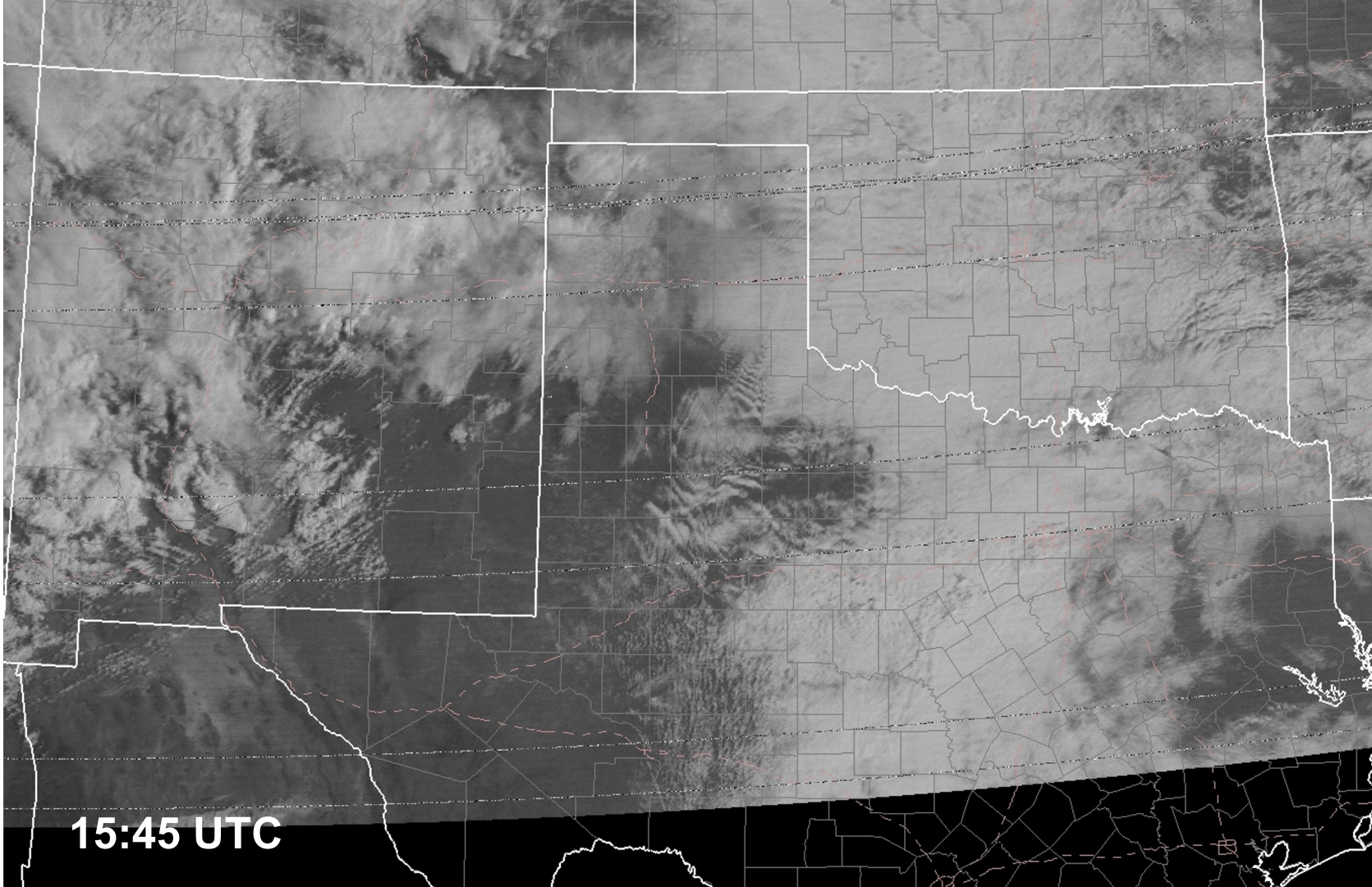
**If it's time, let's write a mesoscale discussion!**



15:00 UTC



Station Plots SFC 1450-1549Z



15:45 UTC

# 16 Z Update

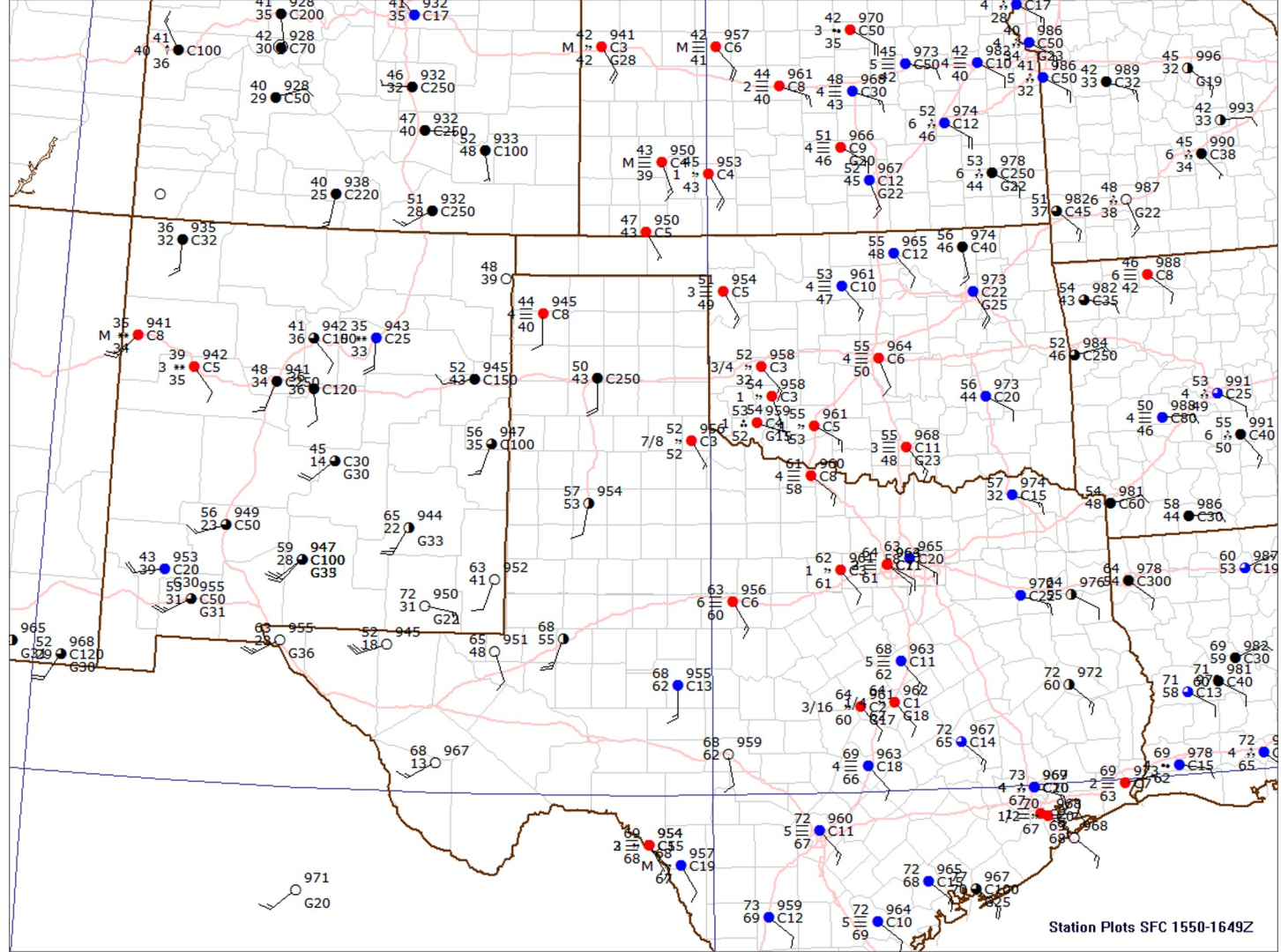
## Watch Consideration:

- When to start?
- When to end?
- What Type?

**If it's time, let's write a mesoscale discussion!**



16:00 UTC



Station Plots SFC 1550-1649Z



16:45 UTC

## **1630 Outlook Update**

**Based off the recent trends, do we need to adjust the outlook?**



# 17 Z Update

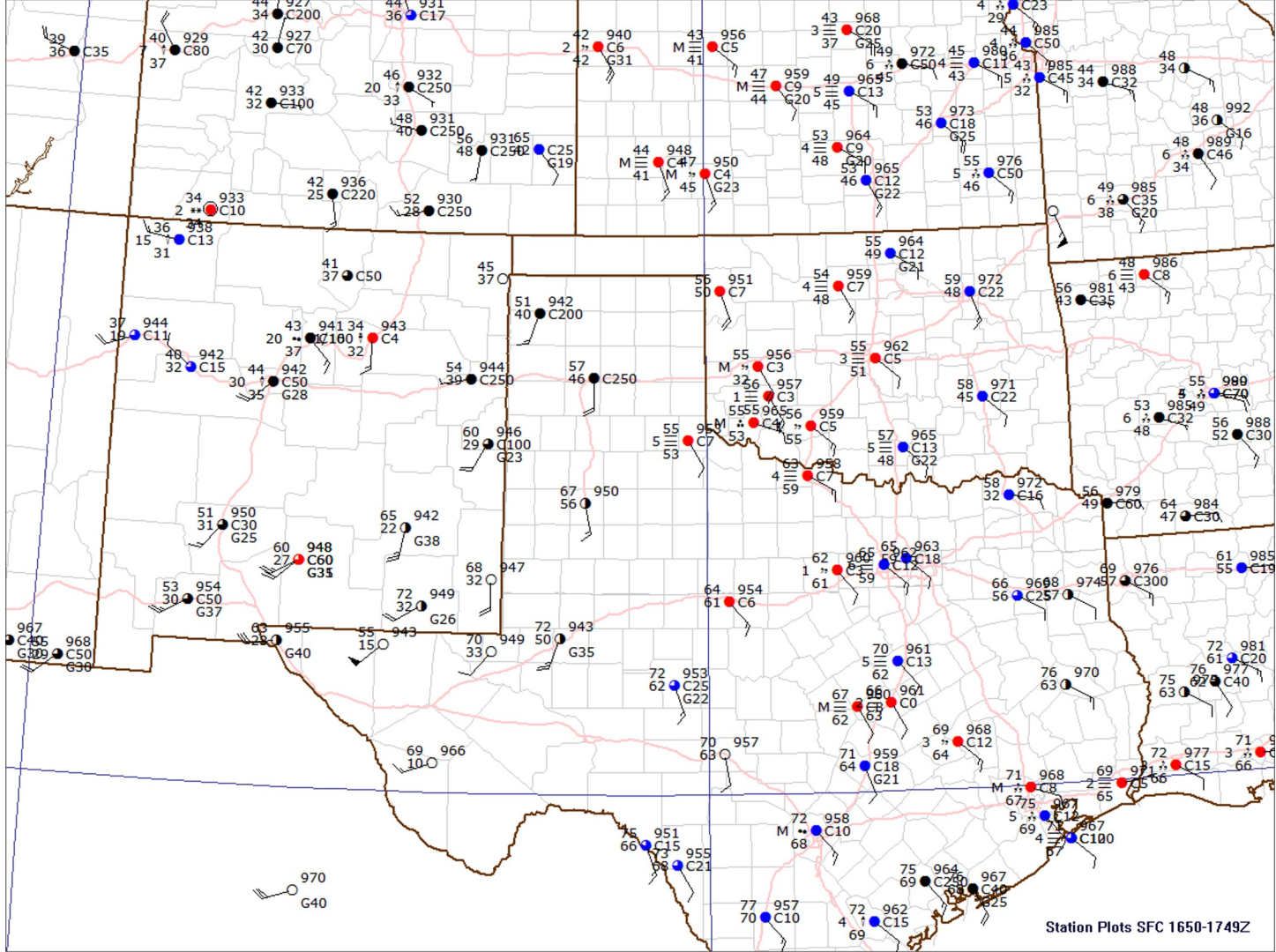
## Watch Consideration:

- When to start?
- When to end?
- What Type?

**If it's time, let's write a mesoscale discussion!**



17:00 UTC





17:45 UTC

# 18 Z Update

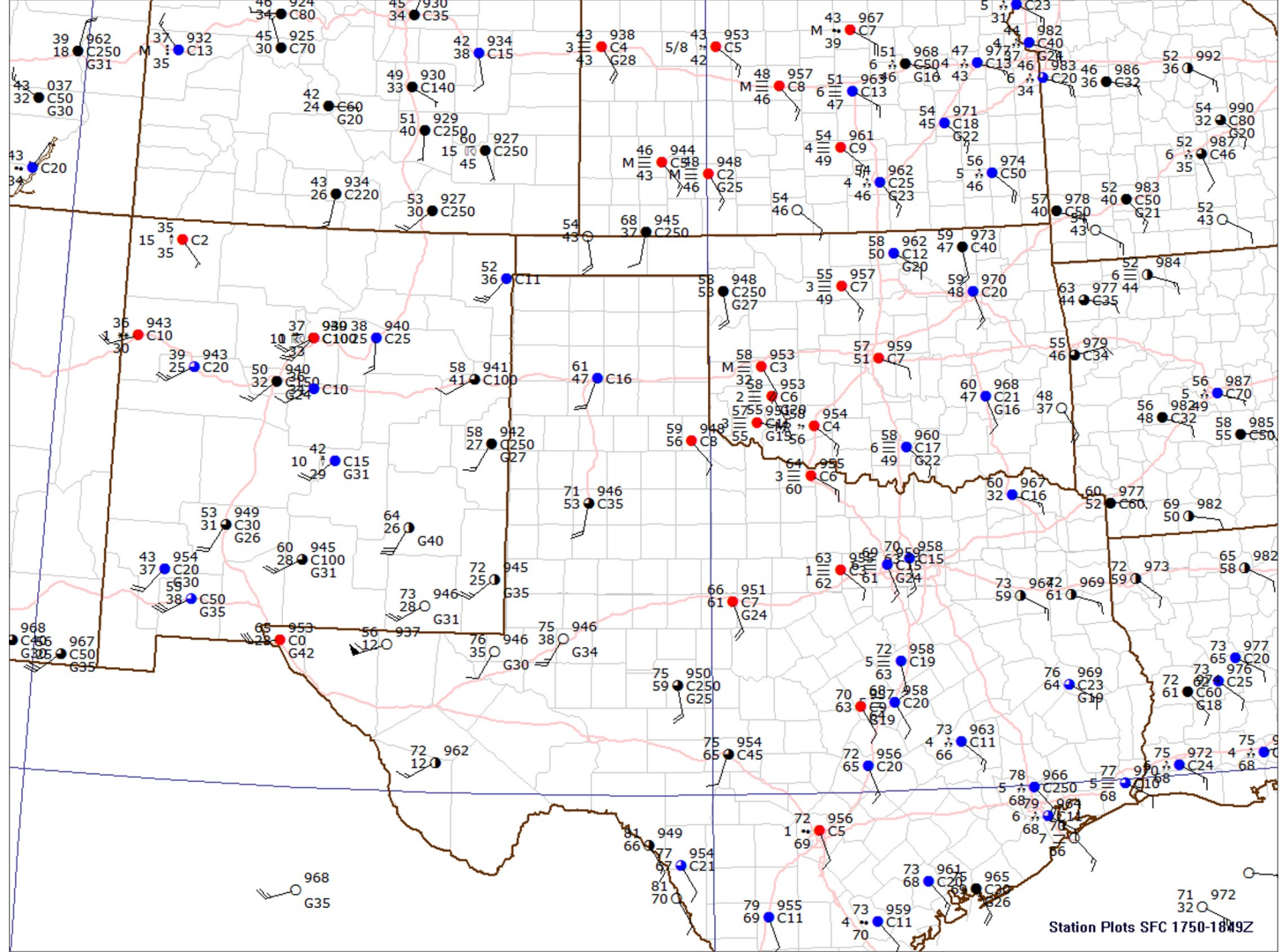
## Watch Consideration:

- When to start?
- When to end?
- What Type?

**If it's time, let's write a mesoscale discussion!**



18:00 UTC



Station Plots SFC 1750-1849Z

A grayscale satellite or radar image of a region, likely a coastal or mountainous area. The image is overlaid with a grid of white lines. A prominent white outline follows the coastline. A network of red dashed lines is scattered across the landmass. The image is tilted slightly clockwise. In the bottom-left corner, the text "18:45 UTC" is displayed in white.

18:45 UTC

# 19 Z Update

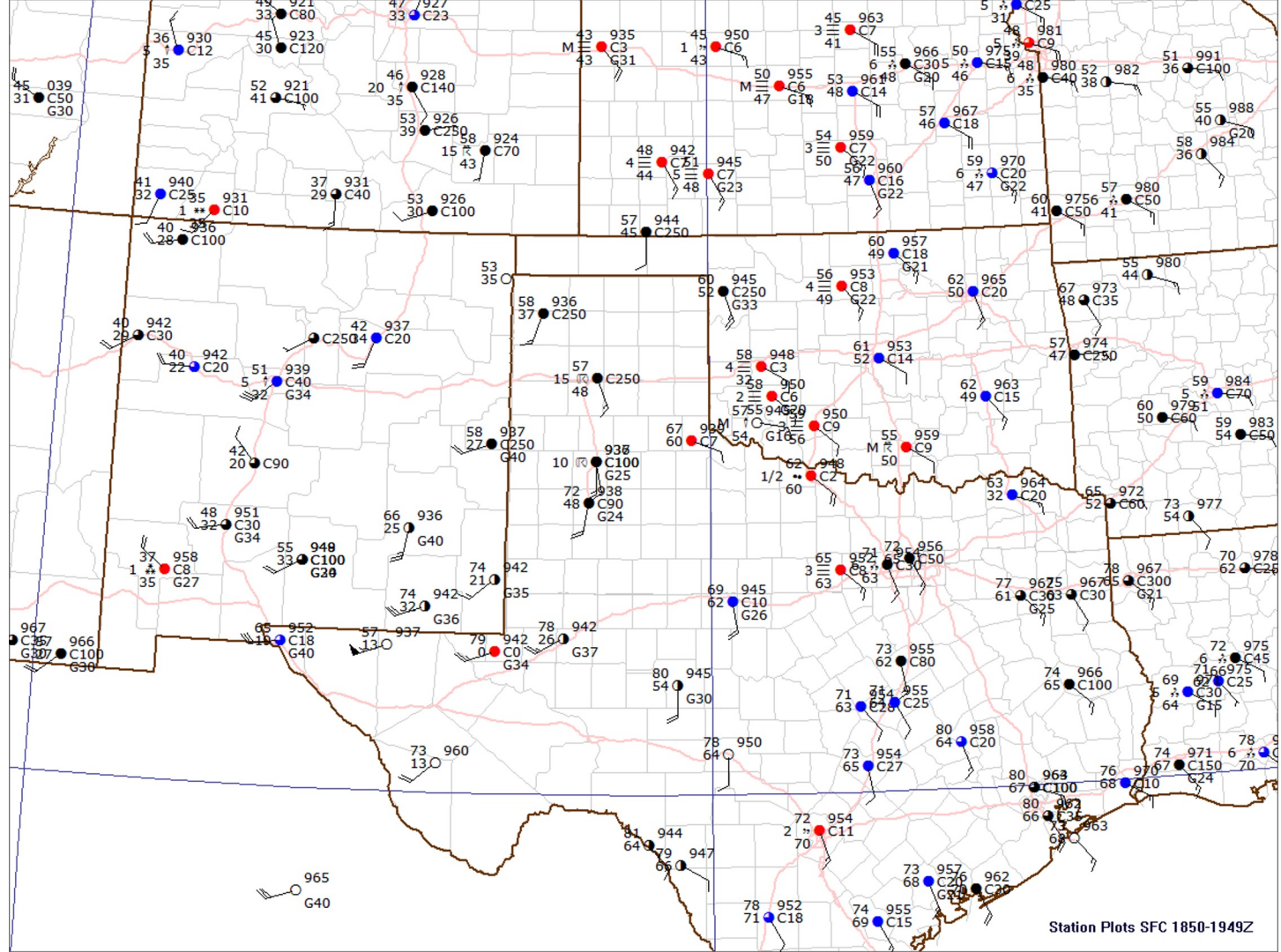
## Watch Consideration:

- When to start?
- When to end?
- What Type?

**If it's time, let's write a mesoscale discussion!**



19:00 UTC





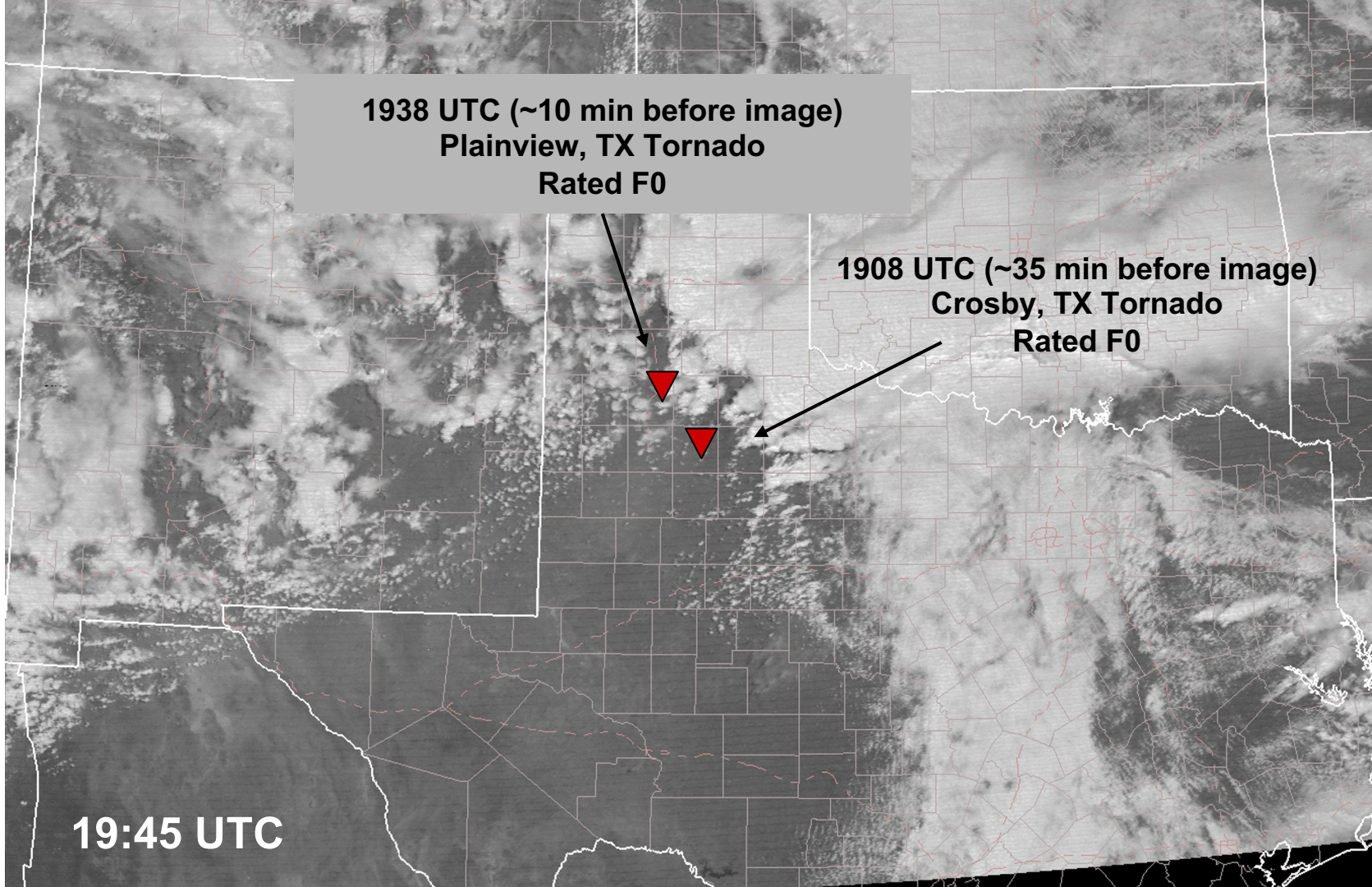
A satellite image of the United States showing cloud cover. A white rectangular box highlights a region in the central and eastern United States, including parts of Colorado, Kansas, Oklahoma, and Missouri. The image is overlaid with a grid of latitude and longitude lines. A red dashed line indicates a boundary or path across the country. The text "19:45 UTC" is located in the bottom left corner.

19:45 UTC

**1938 UTC (~10 min before image)  
Plainview, TX Tornado  
Rated F0**

**1908 UTC (~35 min before image)  
Crosby, TX Tornado  
Rated F0**

**19:45 UTC**



# 20 Z Update

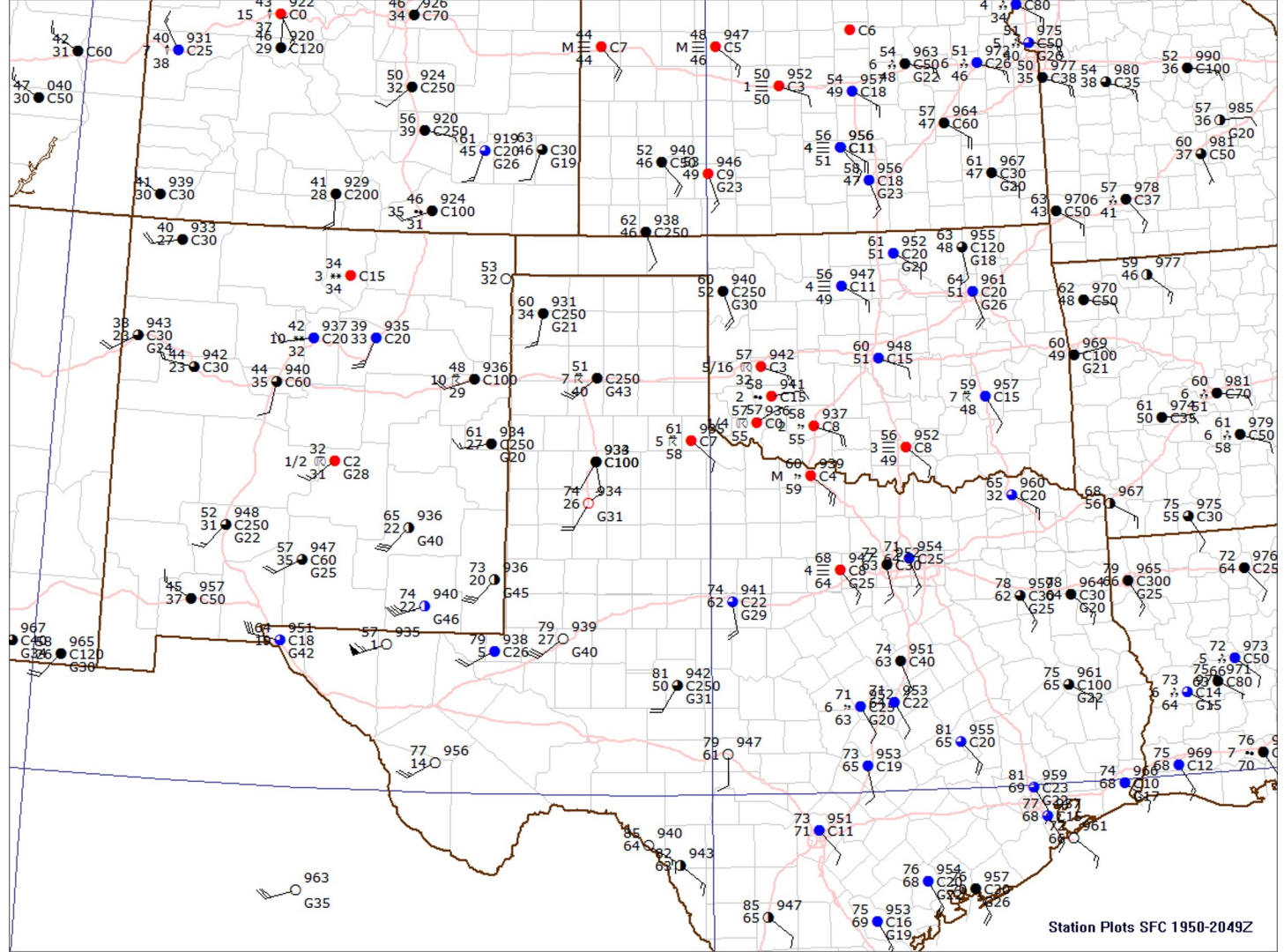
## Watch Consideration:

- When to start?
- When to end?
- What Type?

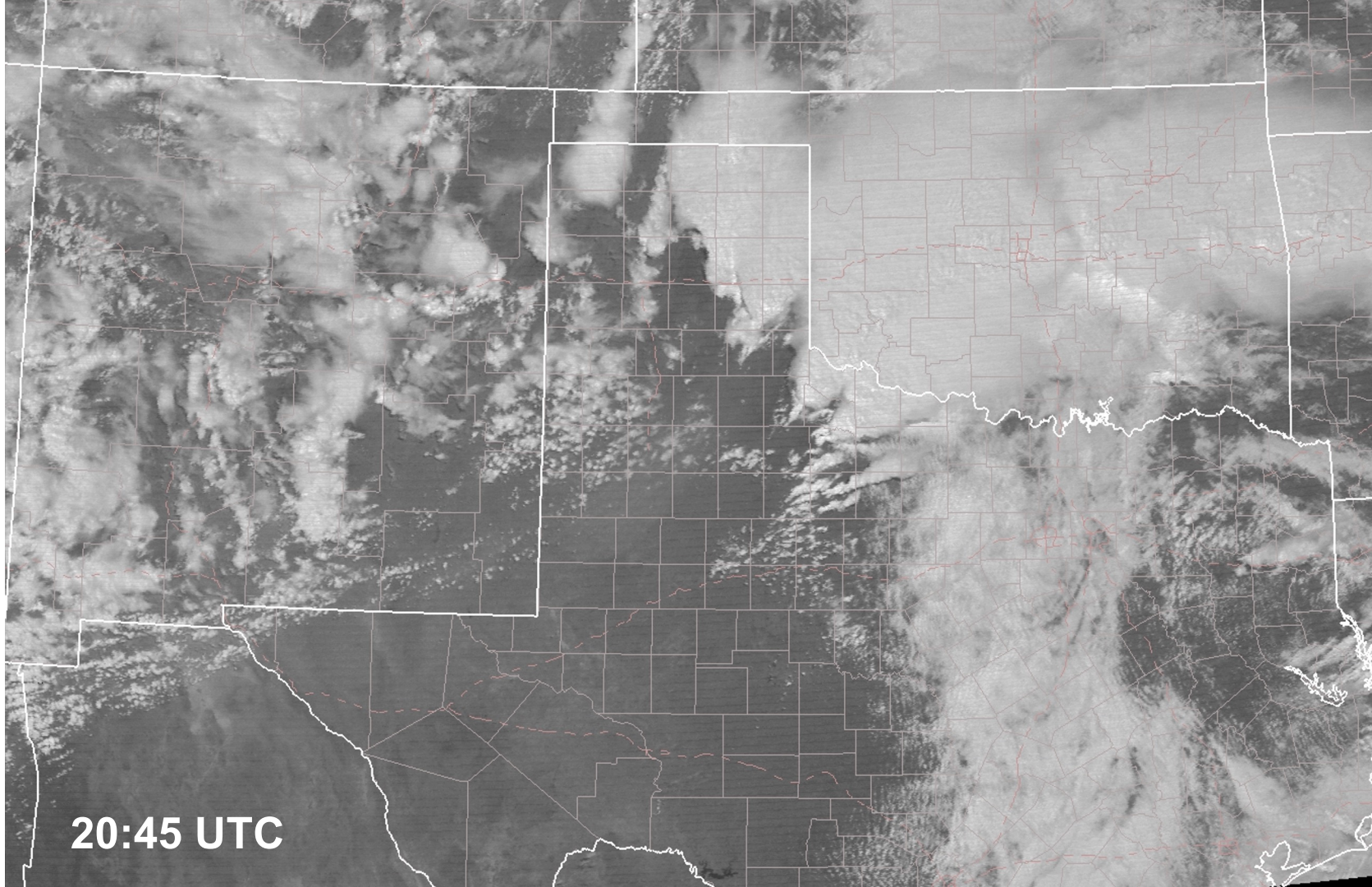
**If it's time, let's write a mesoscale discussion!**



20:00 UTC



Station Plots SFC 1950-2049Z



20:45 UTC

**20:45 UTC**

**21:20 UTC (~35 min after image)**  
**Vernon, TX Tornado**  
**Rated F4**  
**11 Fatalities**



## 21 Z Update

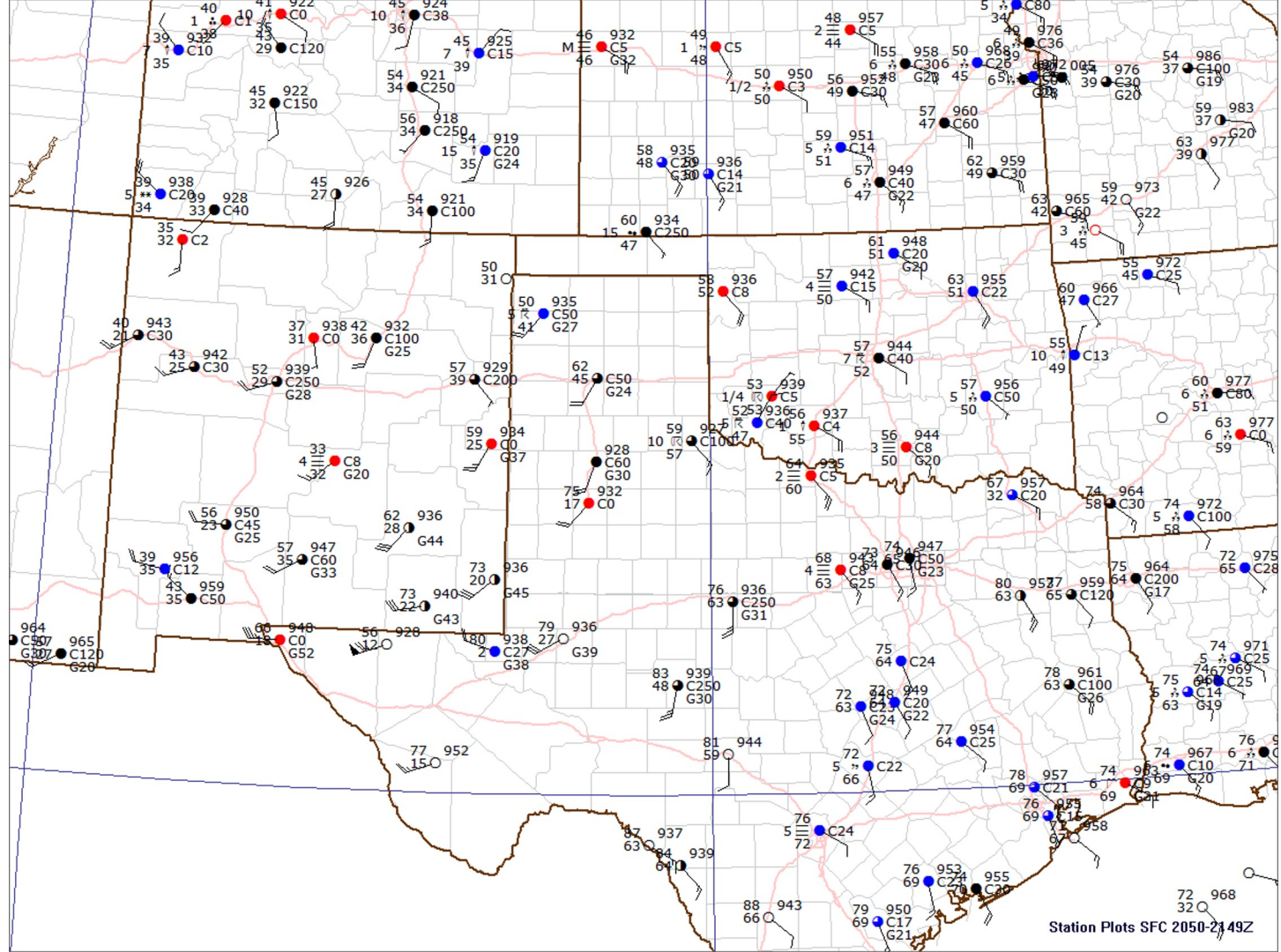
### Watch Consideration:

- When to start?
- When to end?
- What Type?

**If it's time, let's write a mesoscale discussion!**

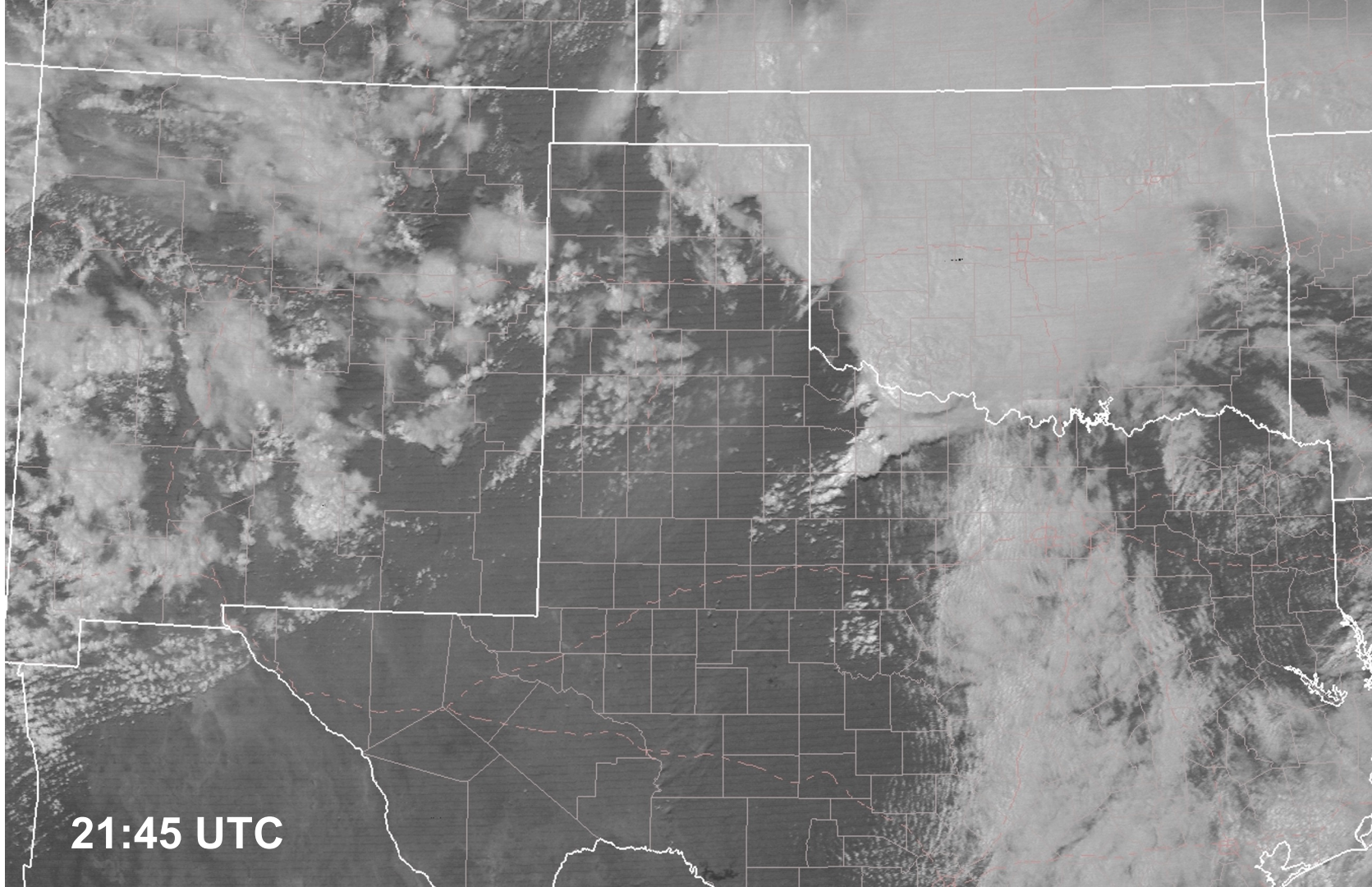


21:00 UTC



Station Plots SFC 2050-2149Z

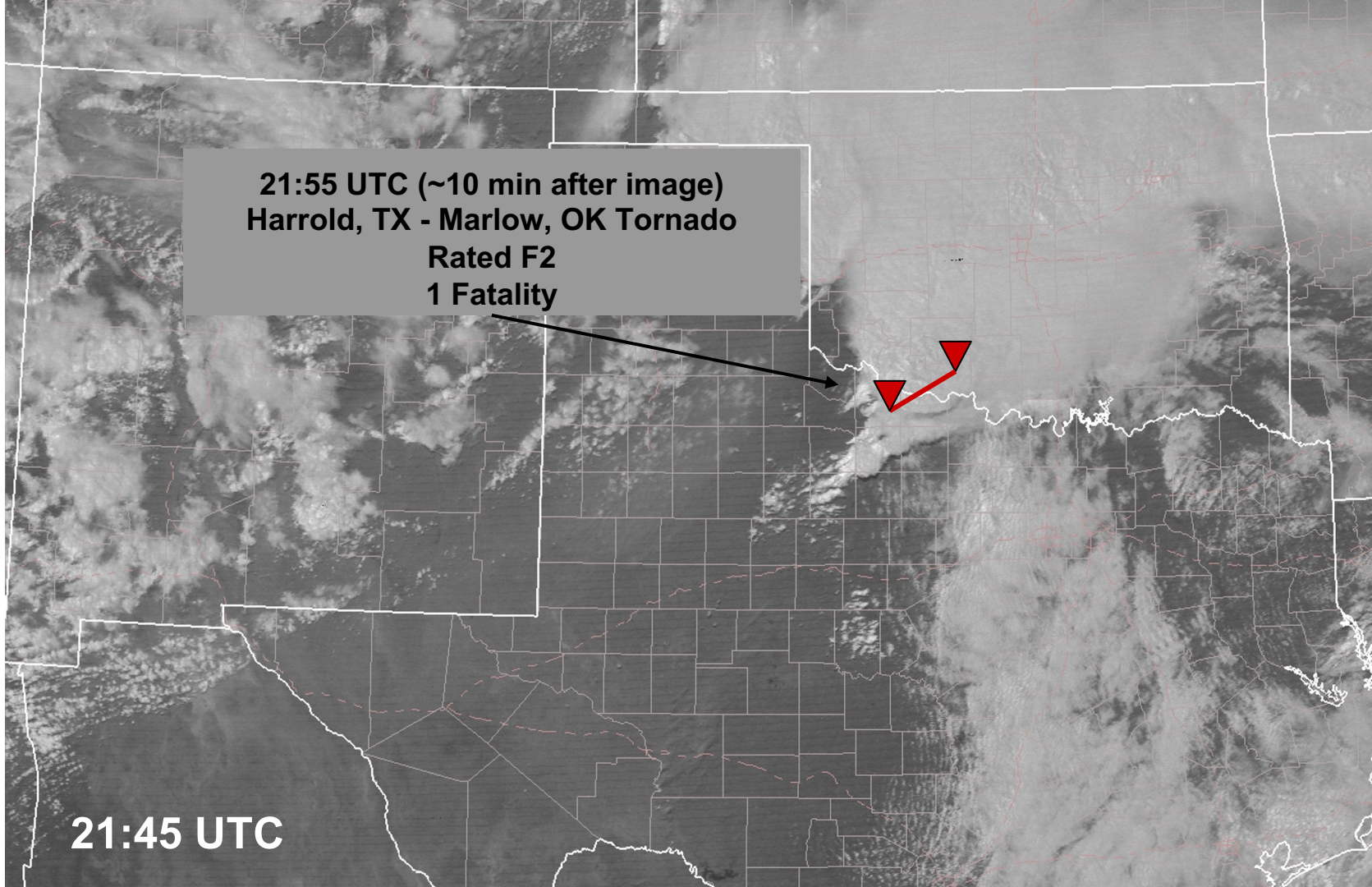




21:45 UTC

**21:55 UTC (~10 min after image)  
Harrold, TX - Marlow, OK Tornado  
Rated F2  
1 Fatality**

**21:45 UTC**



## 22 Z Update

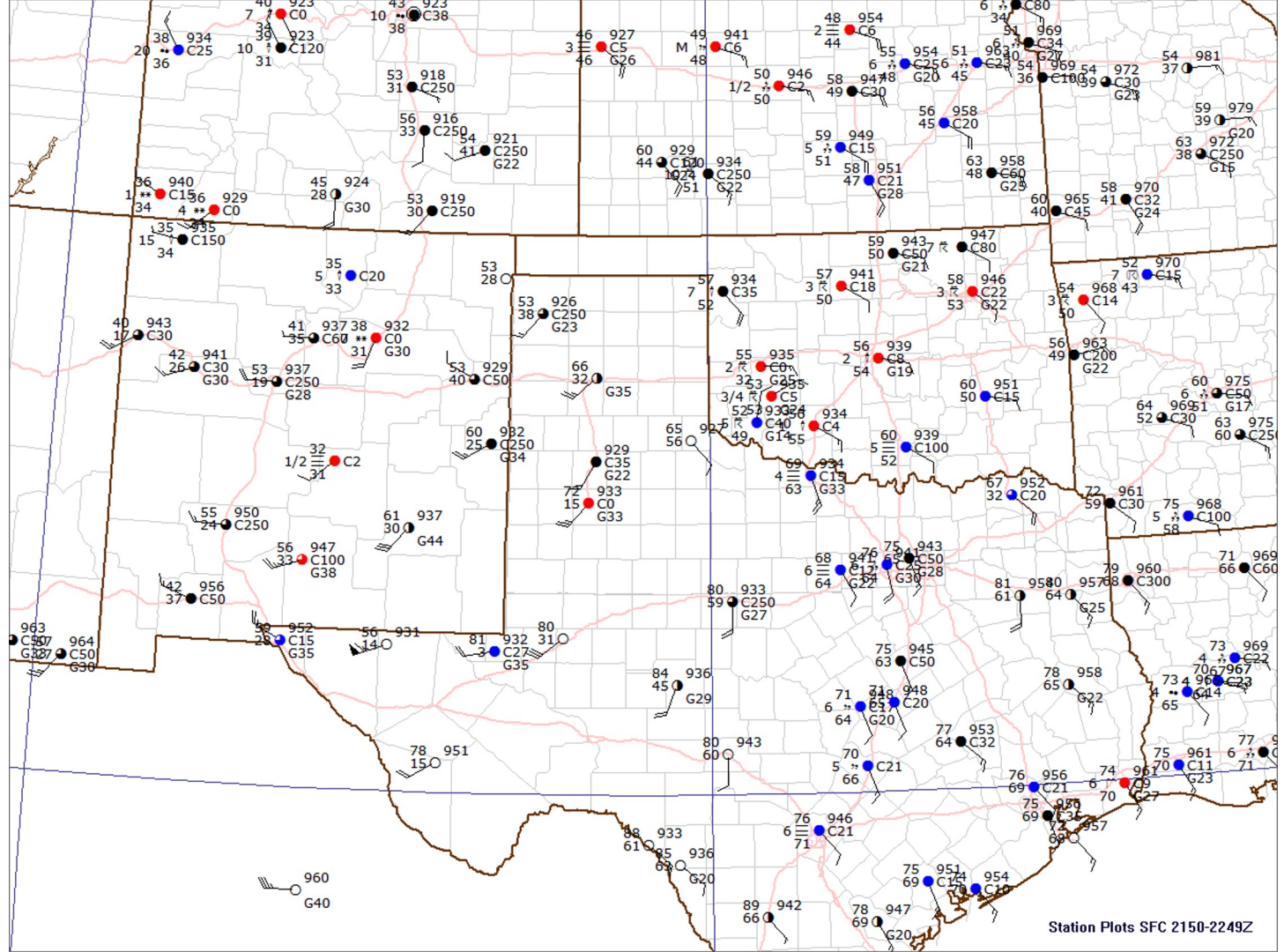
### Watch Consideration:

- When to start?
- When to end?
- What Type?

**If it's time, let's write a mesoscale discussion!**



22:00 UTC

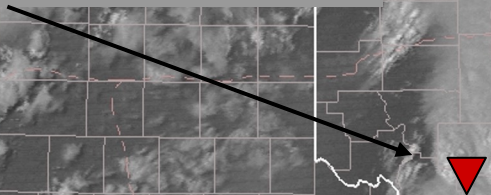


Station Plots SFC 2150-2249Z

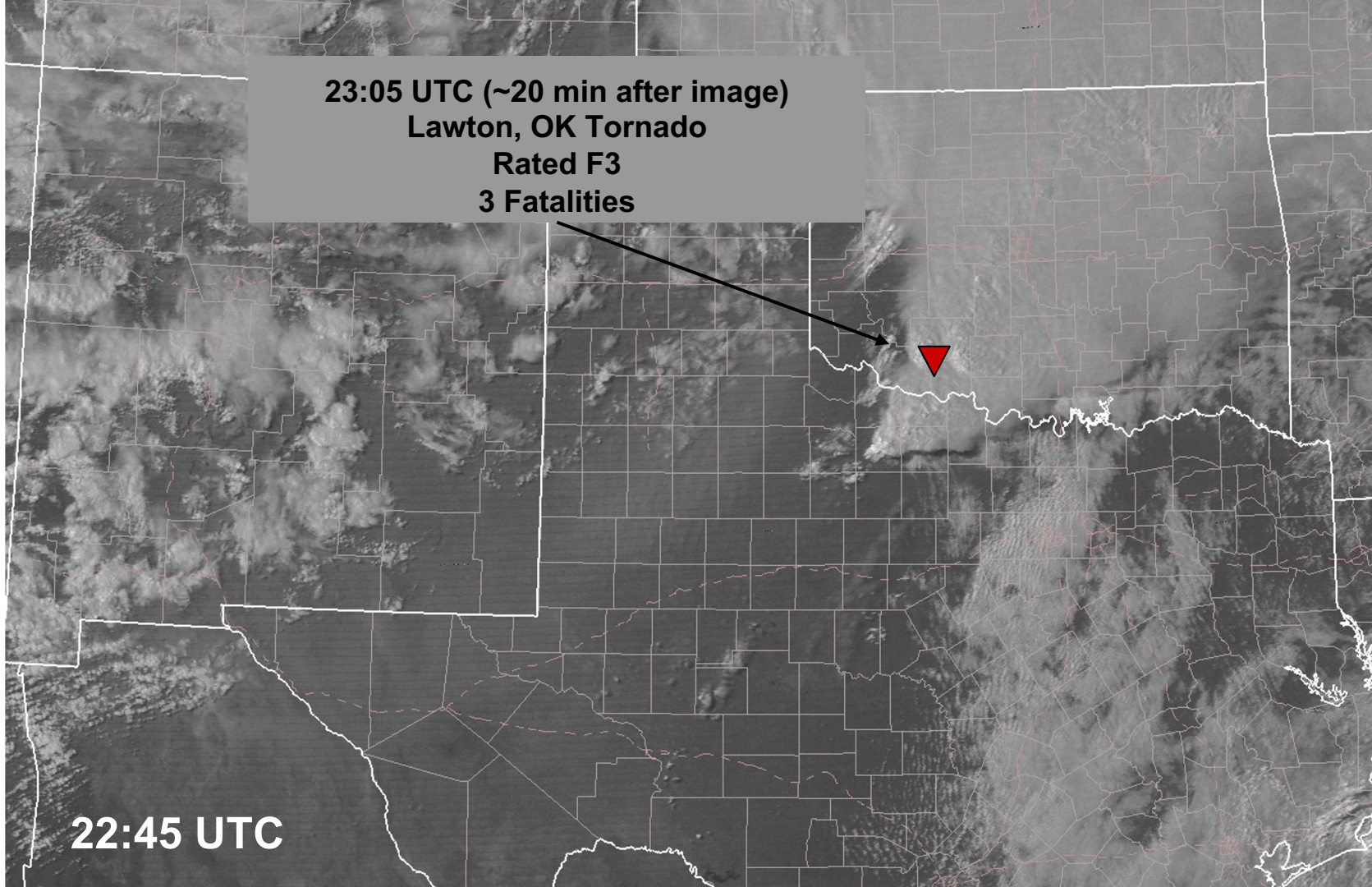
A satellite weather map of the central United States, showing cloud cover and precipitation patterns. The map includes state boundaries and a grid. A white box highlights a specific region in the upper central part of the image. The text "22:45 UTC" is located in the bottom left corner.

22:45 UTC

**23:05 UTC (~20 min after image)**  
**Lawton, OK Tornado**  
**Rated F3**  
**3 Fatalities**



**22:45 UTC**



## 23 Z Update

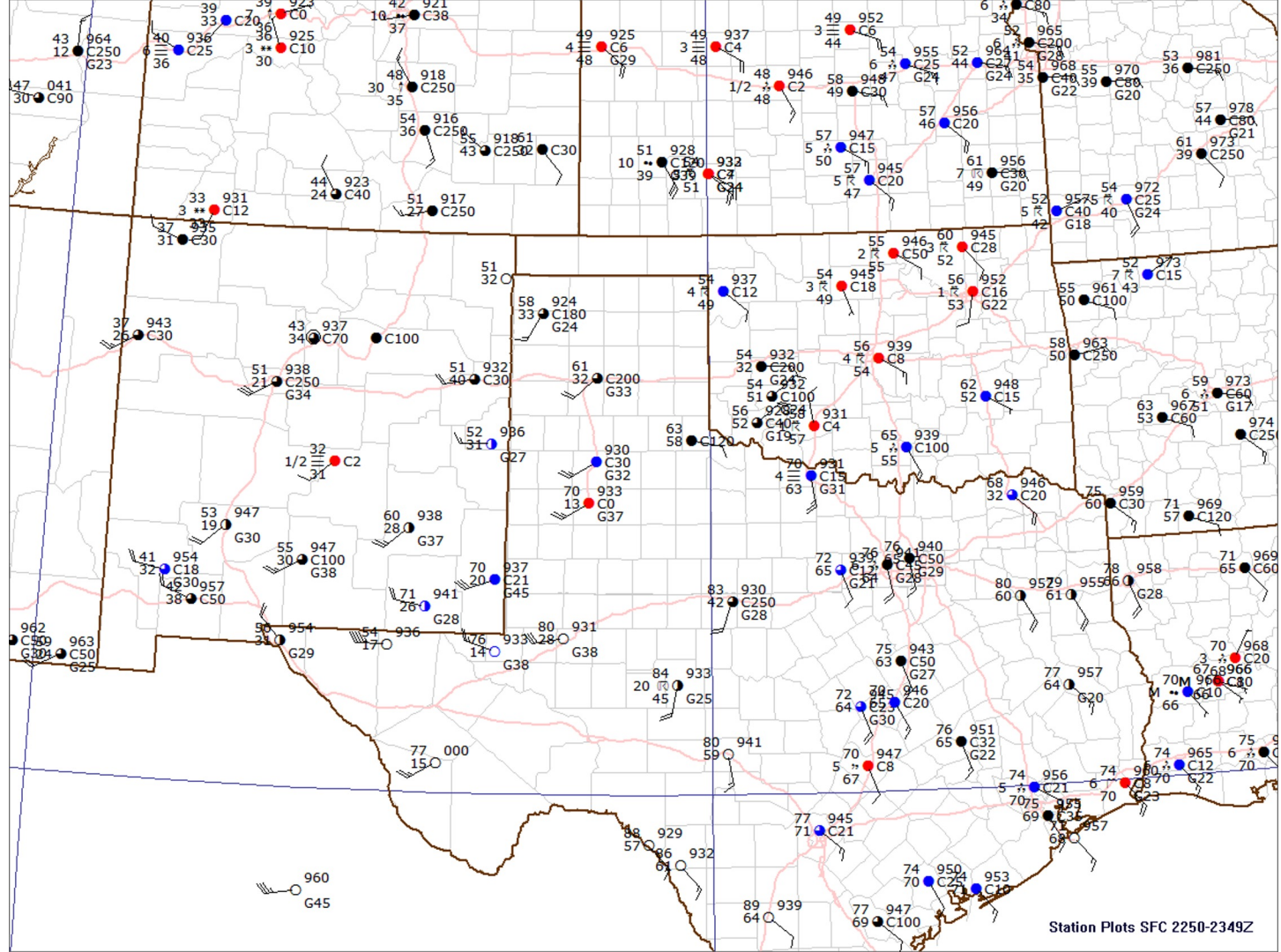
### Watch Consideration:

- When to start?
- When to end?
- What Type?

**If it's time, let's write a mesoscale discussion!**



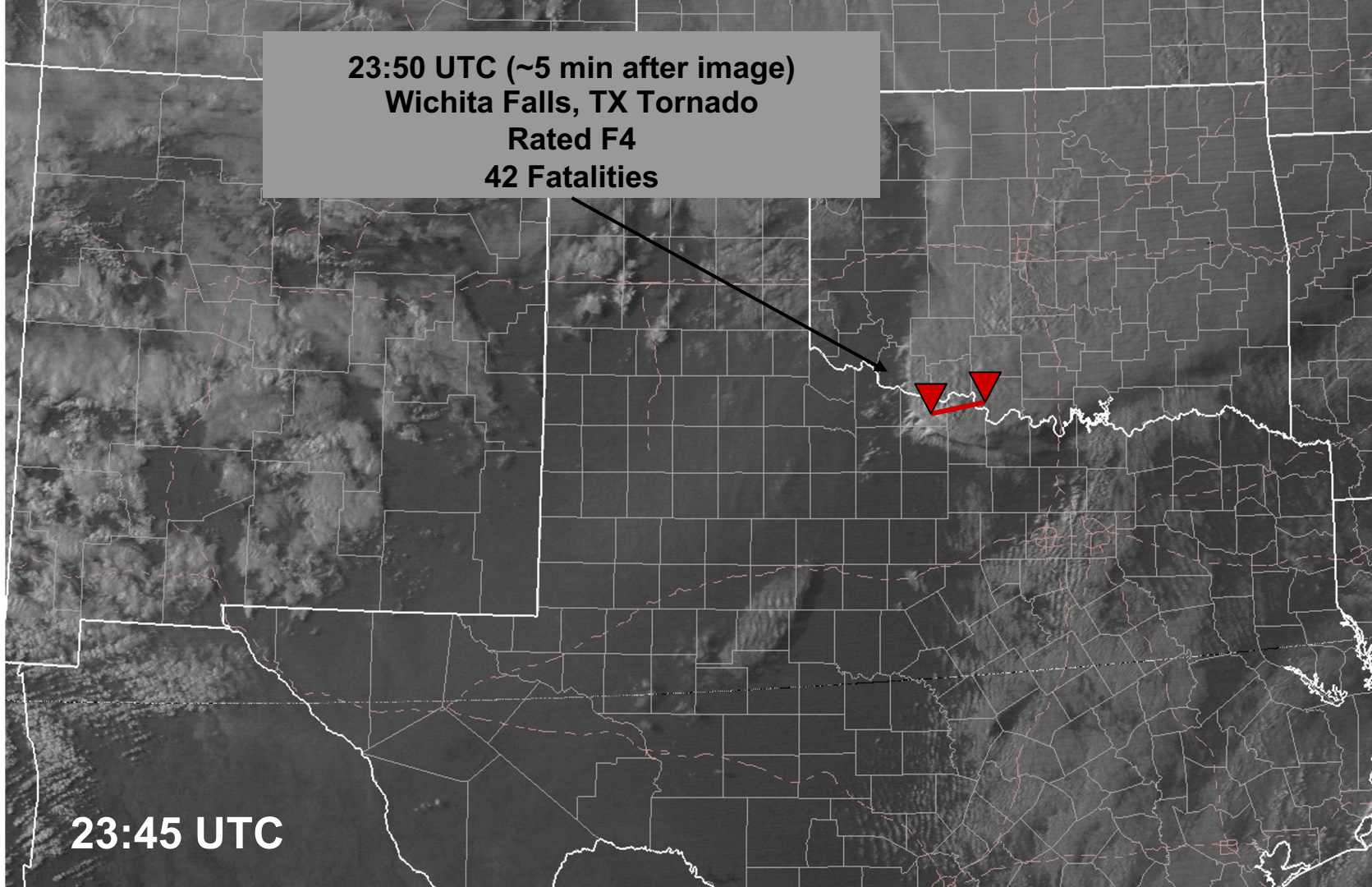
23:00 UTC





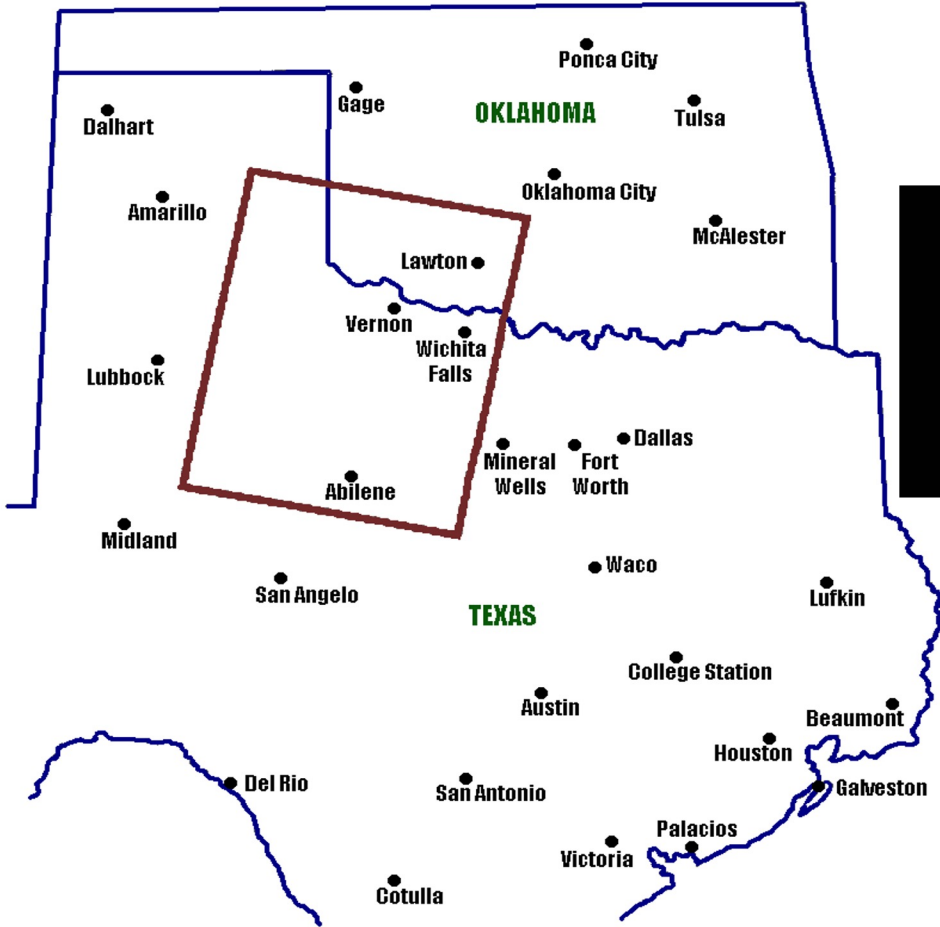
**23:50 UTC (~5 min after image)**  
**Wichita Falls, TX Tornado**  
**Rated F4**  
**42 Fatalities**

**23:45 UTC**



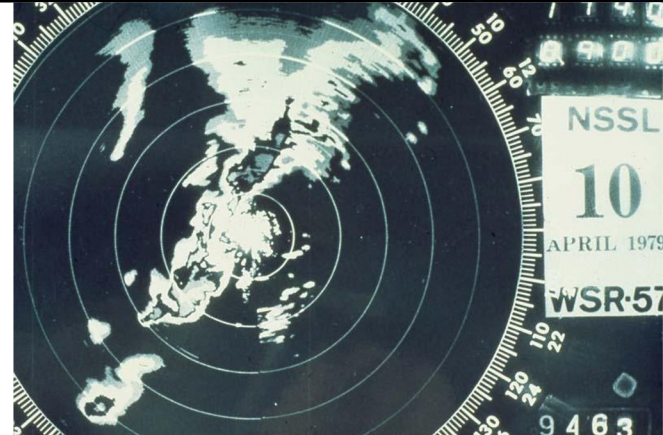
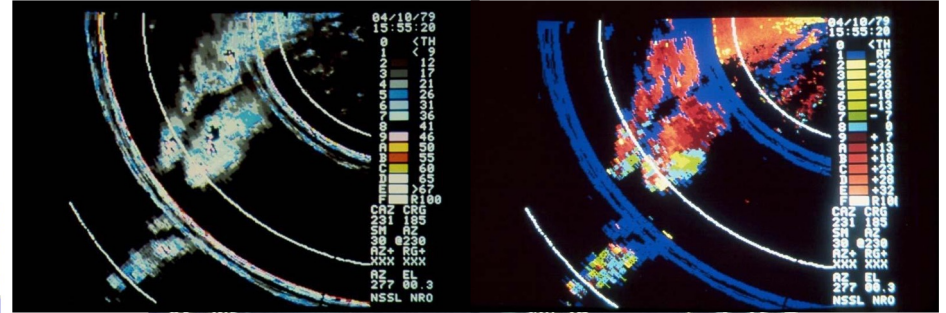
# Tornado Watch Box #67 Valid 2:30 p.m. to 7:00 p.m., April 10, 1979

The cities of Wichita Falls and Vernon, Texas  
and Lawton, Oklahoma are within the Watch Area.



# Terrible Tuesday! April 10, 1979

Red River Valley Tornado Outbreak  
59 Tornadoes  
56 Fatalities



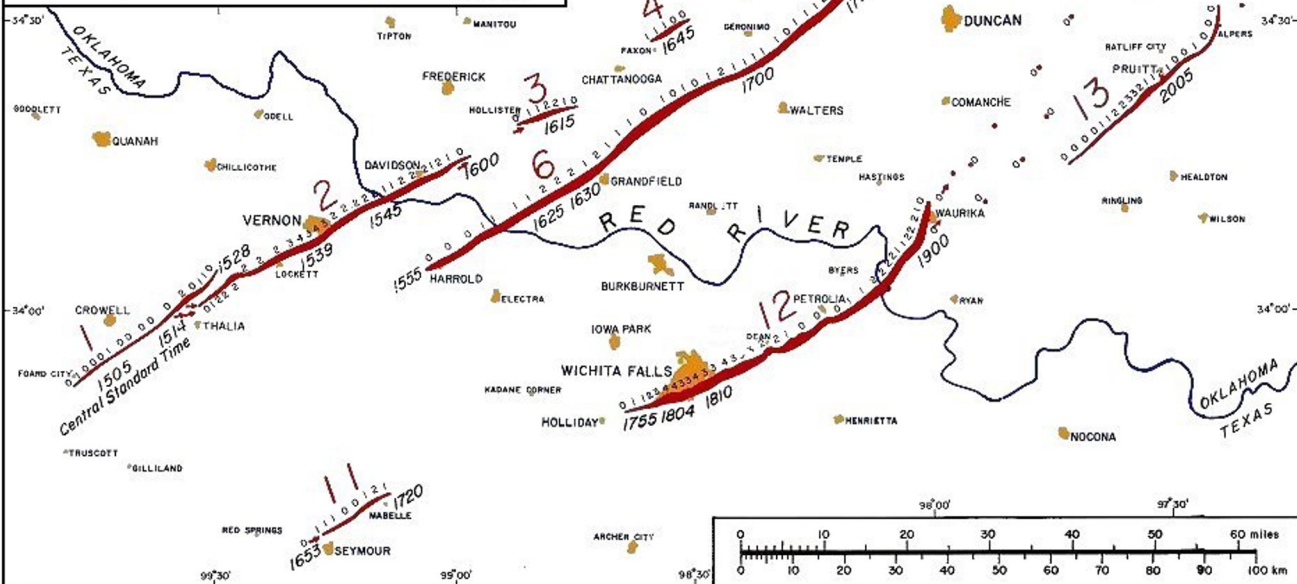
Mapped by FUJITA & WAKIMOTO  
THE UNIVERSITY OF CHICAGO  
(Based on data as of May 5, '79)

Mapping for "SESAME", 1979

# Red River Valley Tornado Outbreak of APRIL 10, 1979

NO.	Name and Storm Type	Length	F, P, P	Killed/Injured	Based on survey by
1.	Crowell Tornado	2.3mi	2,3,2	0 / 1	U of C, NSSL
2.	Vernon Tornado	3.9	4,4,3	10 / 70	U of C, NASA, NSSL
3.	Hollister Tornado	8	2,2,1	0 / 0	U of C, NSSL
4.	Faxon Tornado	7	1,2,1	0 / 2	U of C, NSSL
5.	Lawton Tornado	4	3,2,2	3 / 100	U of C, NASA, NSSL
6.	Grandfield Tornado	64	2,4,5	1 / 5	U of C
7.	Marlow Twg Downburst	1.8	1,3,6	0 / 0	U of C
8.	Purcell (west of) High Wind	8	0,2,5	0 / 0	U of C
9.	Noble Tornado	2	2,1,1	0 / 0	NSSL
10.	Praque Tornado	3	2,2,2	0 / 1	NWS-OKC(4BE OKC)
11.	Seymour Tornado	11	2,3,3	0 / 0	NSSL, U of C
12.	Wichita Falls Tornado	47	4,4,4	45 / 850	U of C, NASA
13.	Pruitt Tornado	2.7mi	3,3,3	0 / 0	U of C

0 1 2 4 3 1 2 1 = Fujita Scale  
**TORNADO**      HIGH WINDS      2,100 aerial photos of damage areas filed at U of C



## Terrible Tuesday Documentary:



**Excellent review by WFO Norman:**

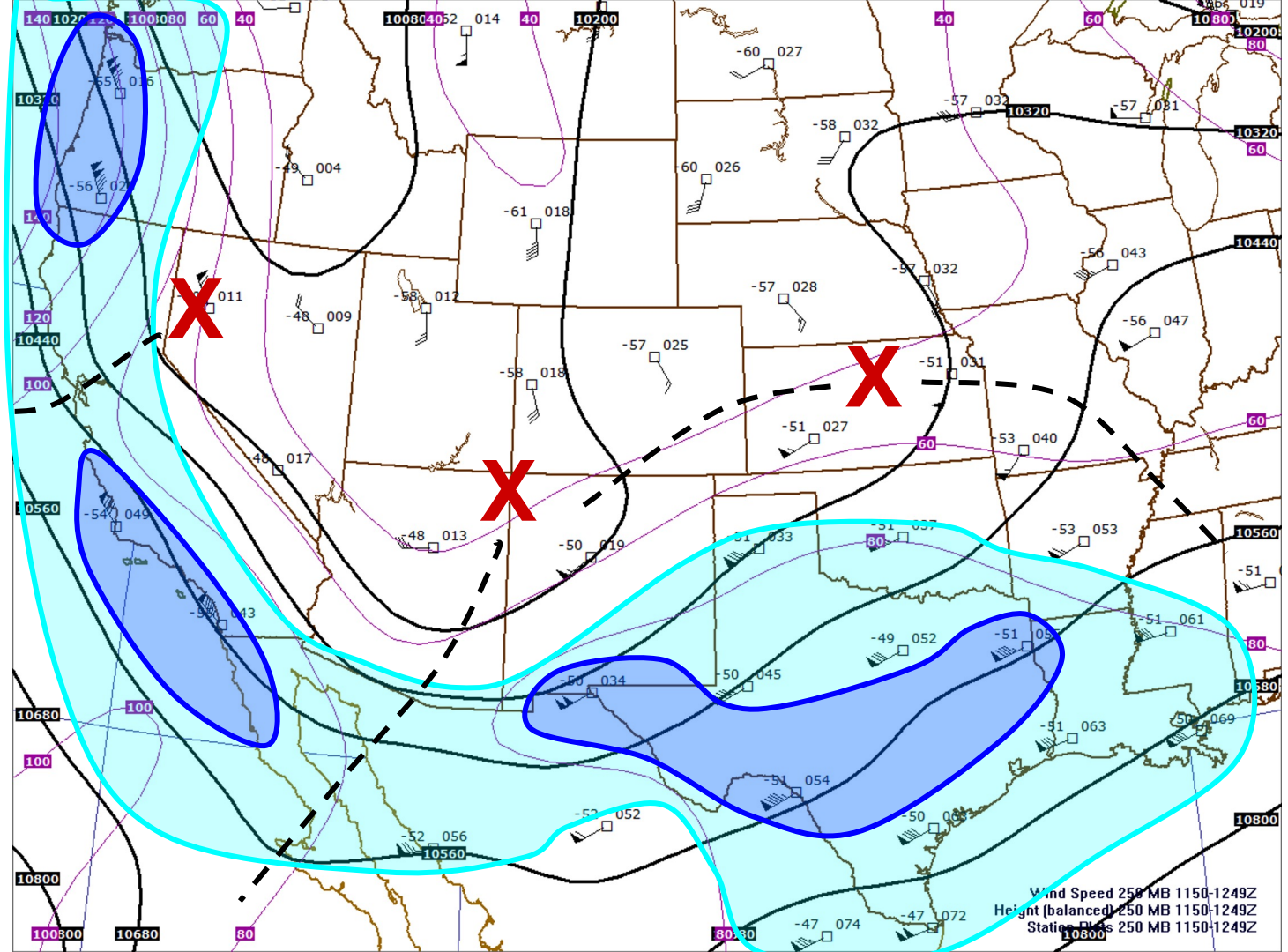
<https://www.weather.gov/oun/events-19790410>



# 250 mb

75 knots

90 knots

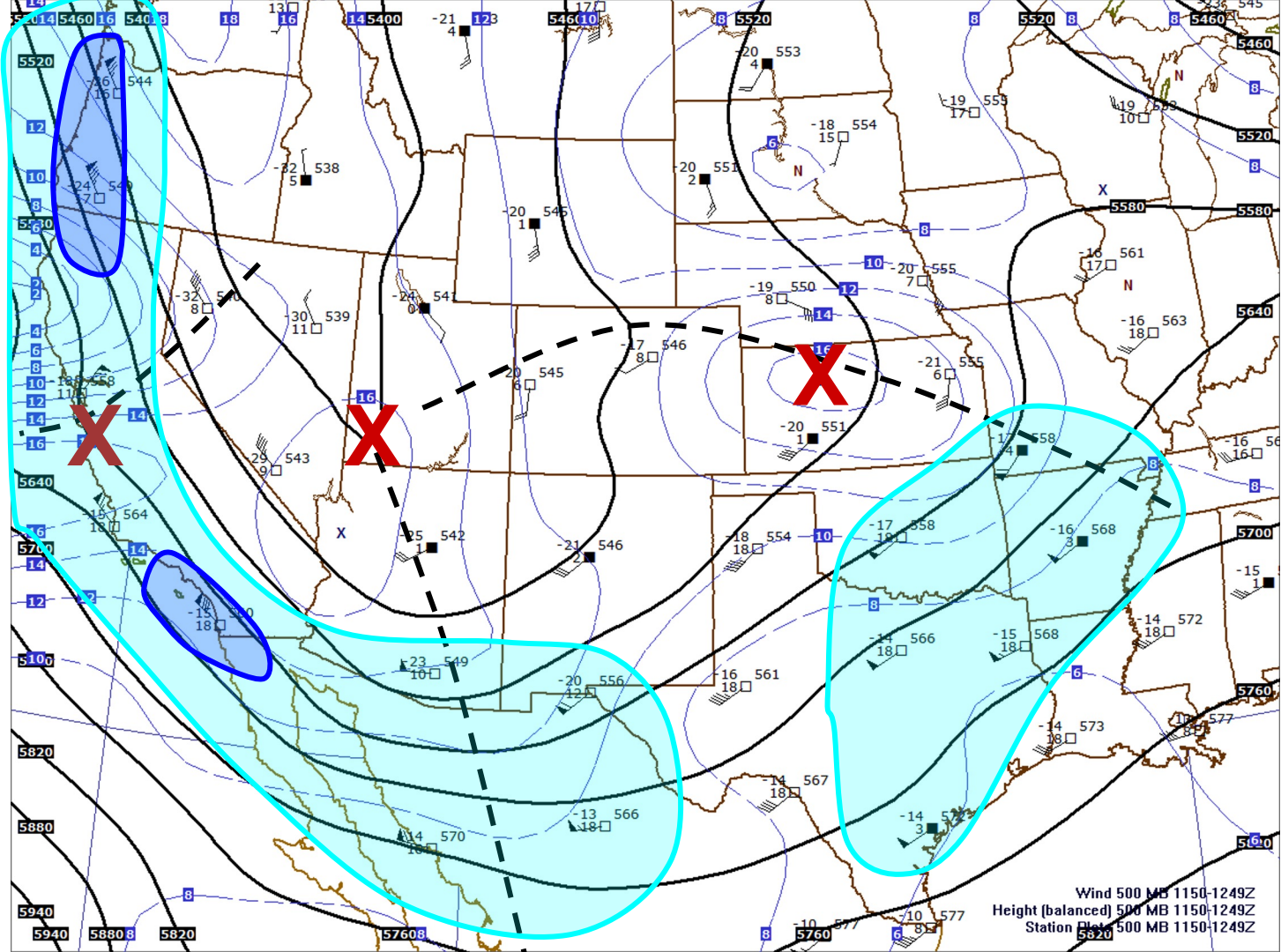


Wind Speed 250 MB 1150-1249Z  
Height (balanced) 250 MB 1150-1249Z  
Station Data 250 MB 1150-1249Z

# 500 mb

50 knots

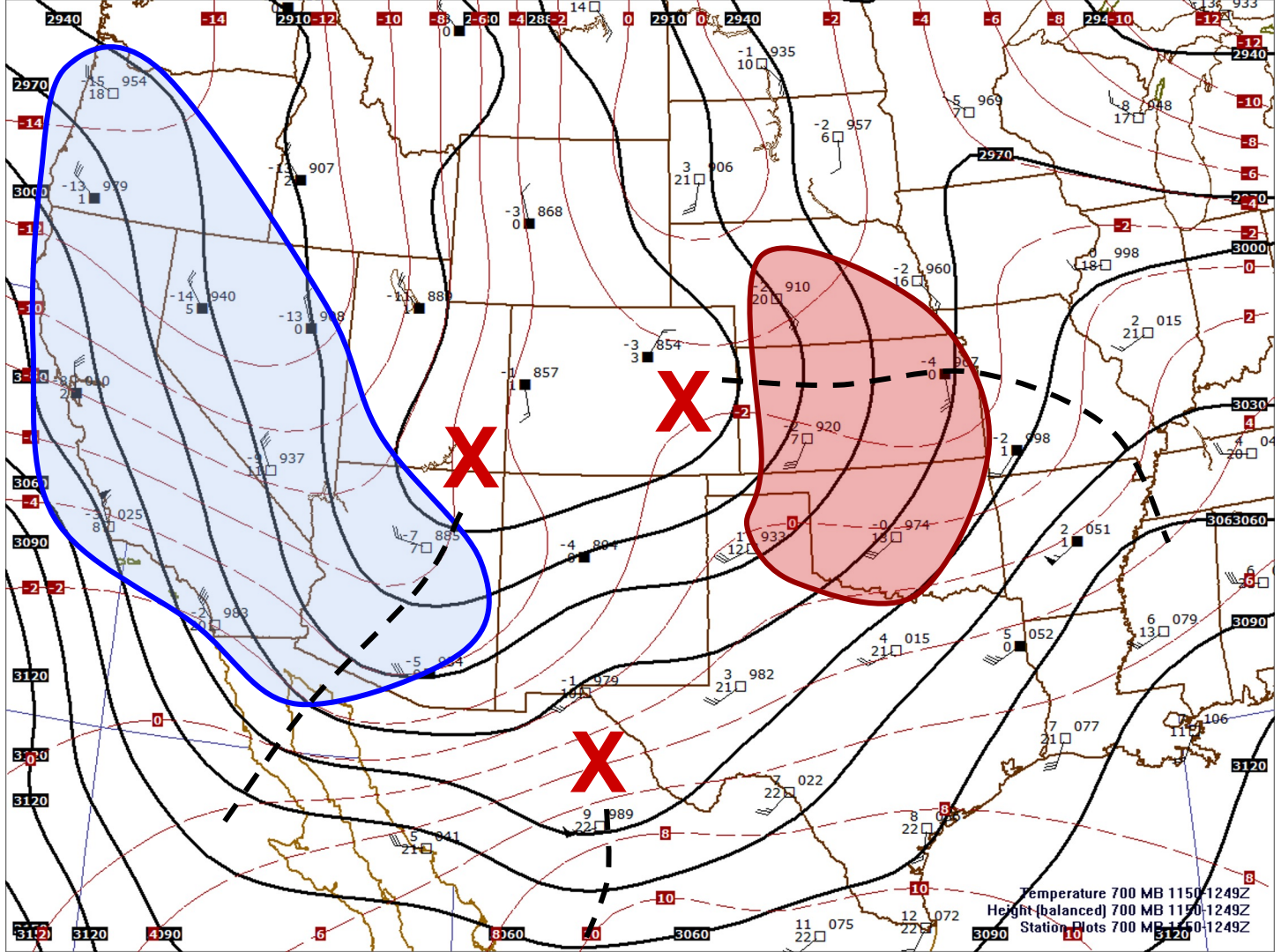
75 knots



# 700 mb

WAA

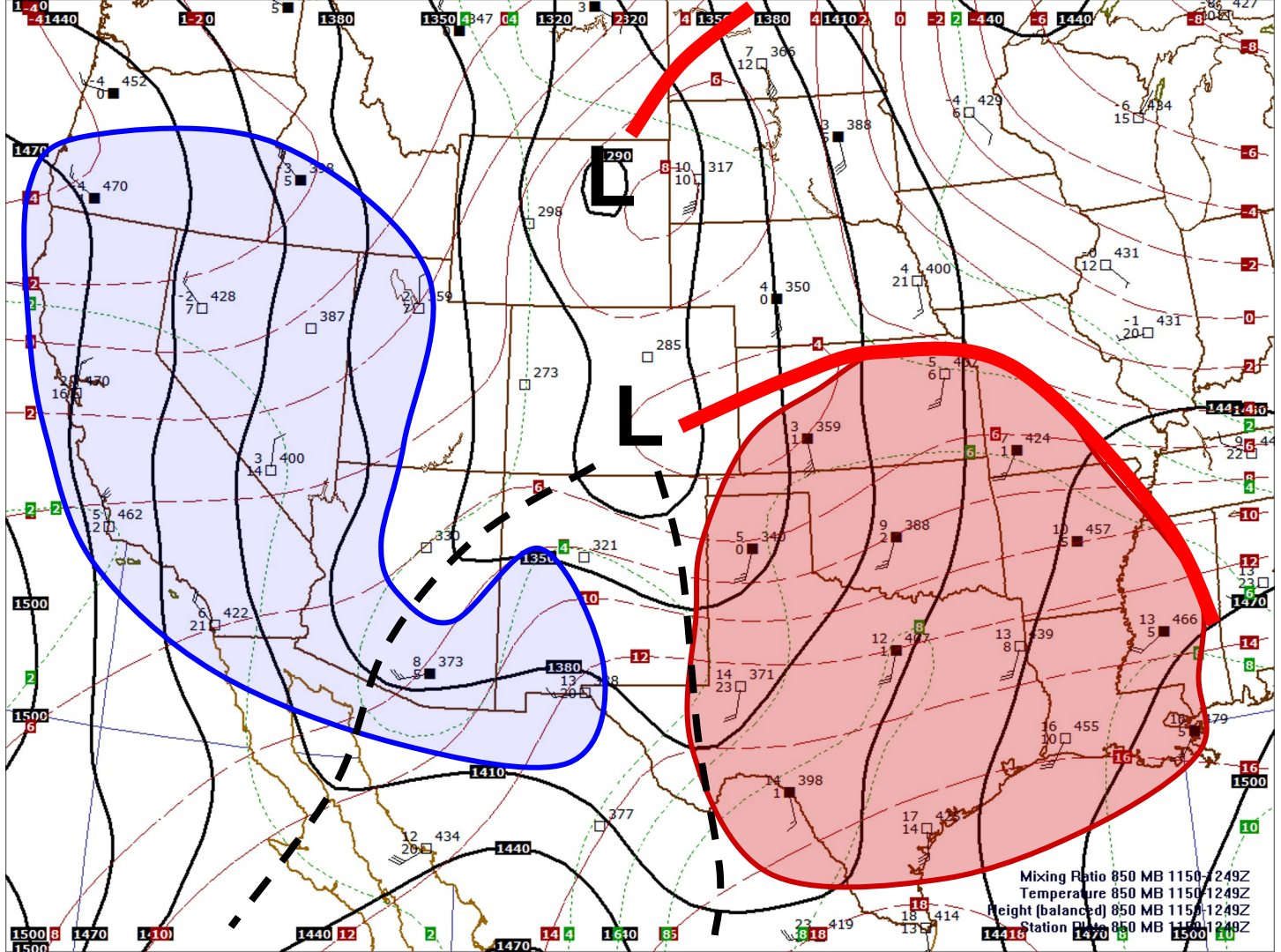
CAA



# 850 mb

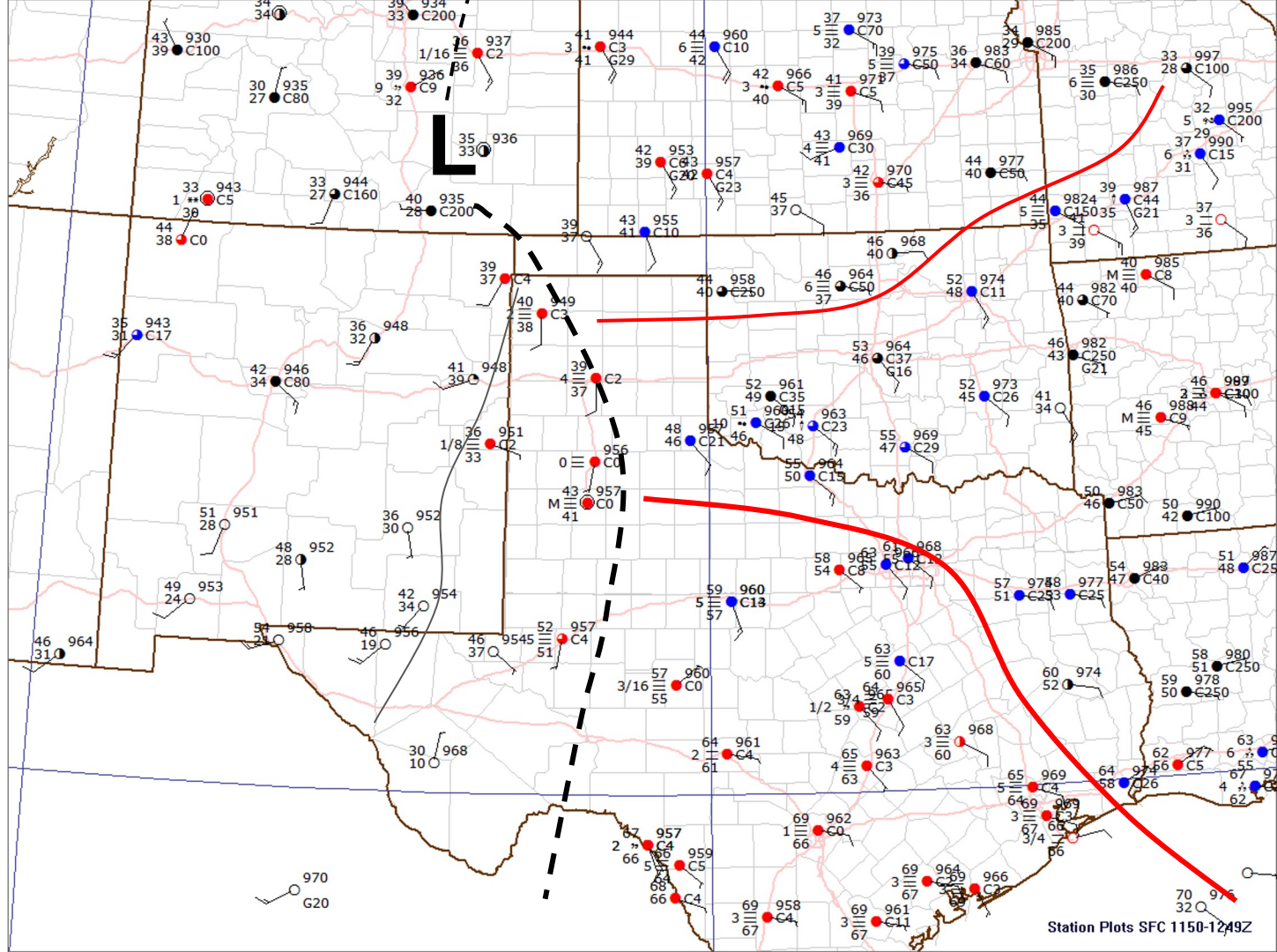
WAA

CAA



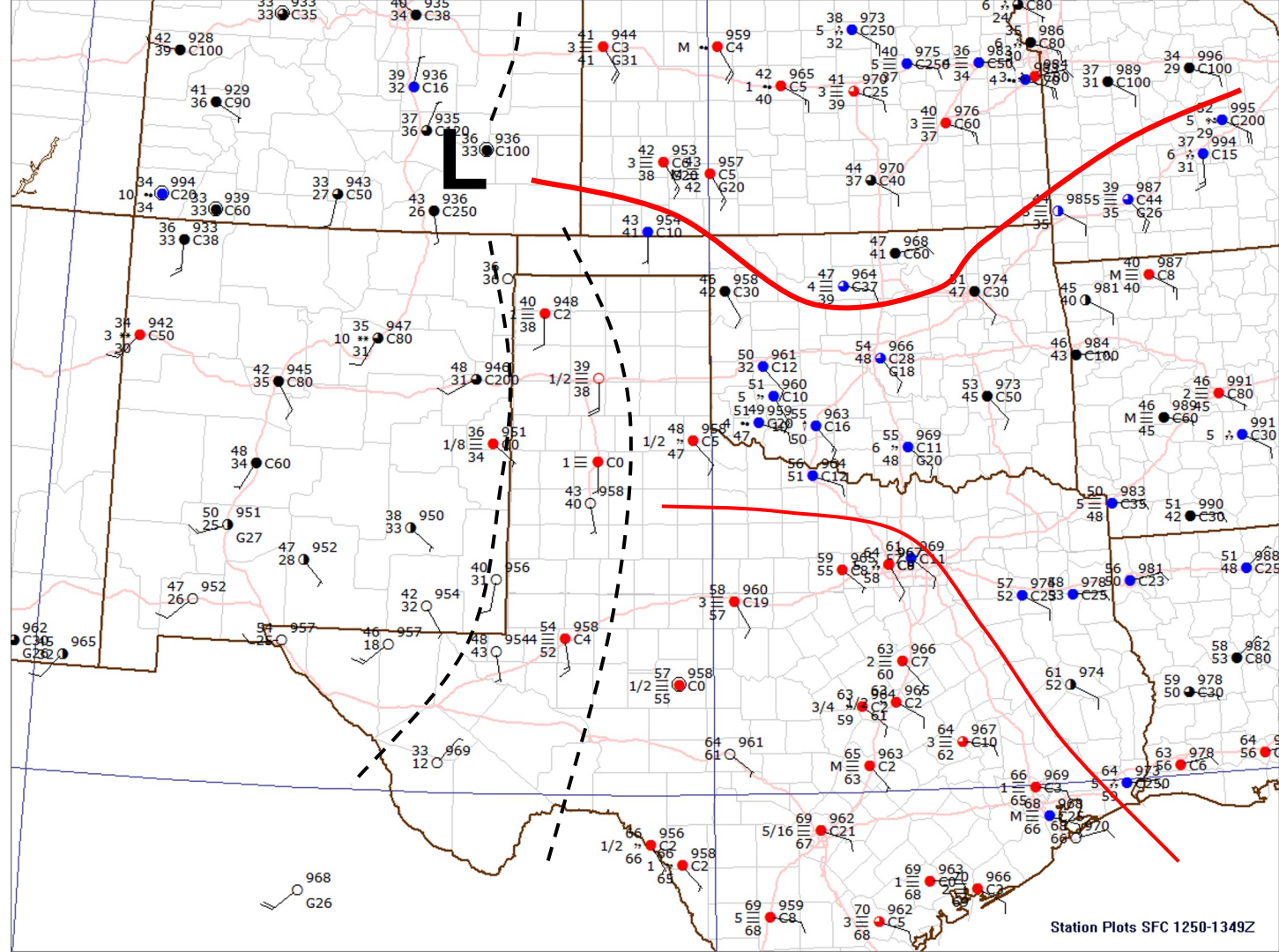


12:00 UTC



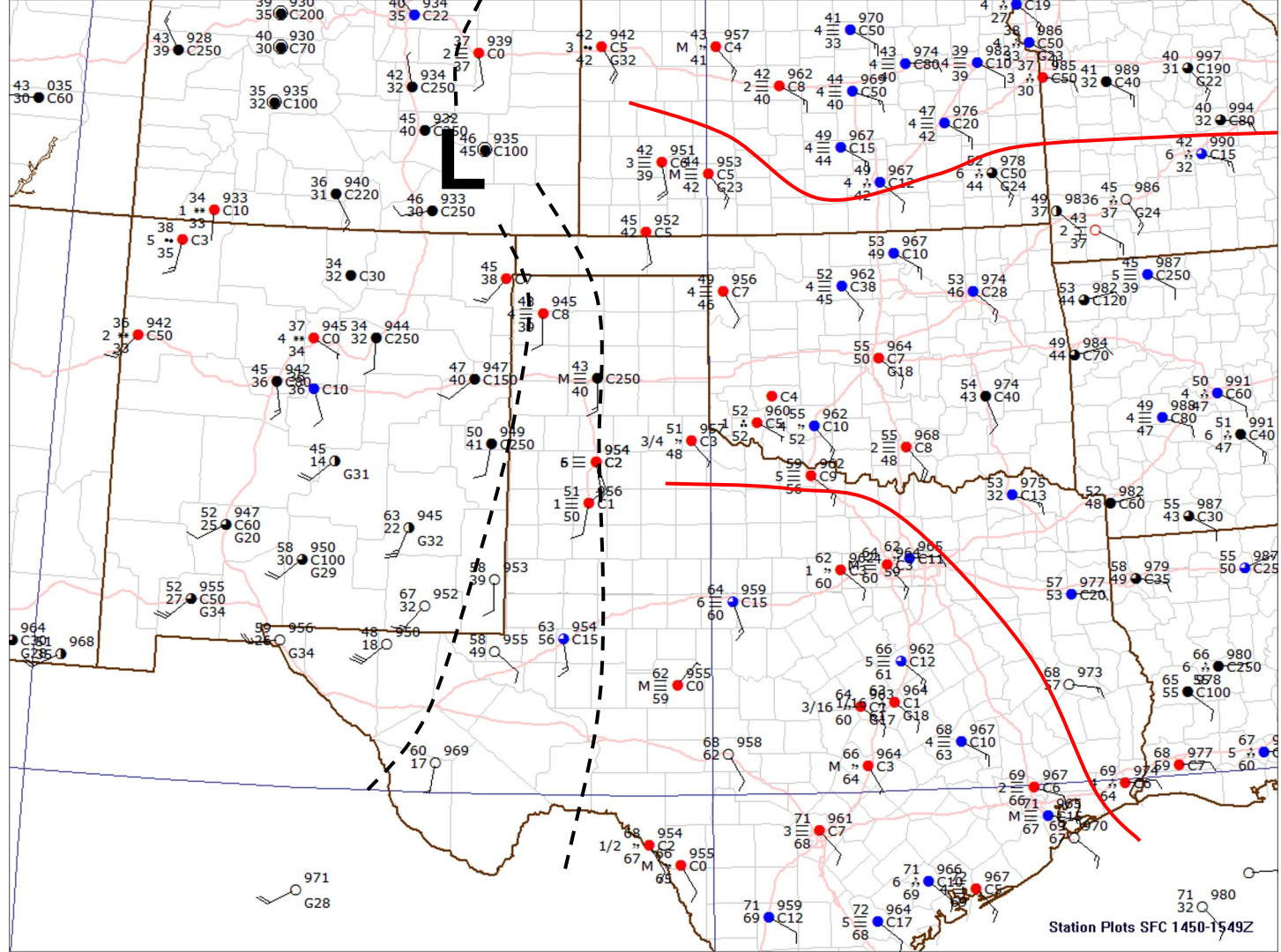
Station Plots SFC 1150-1249Z

13:00 UTC

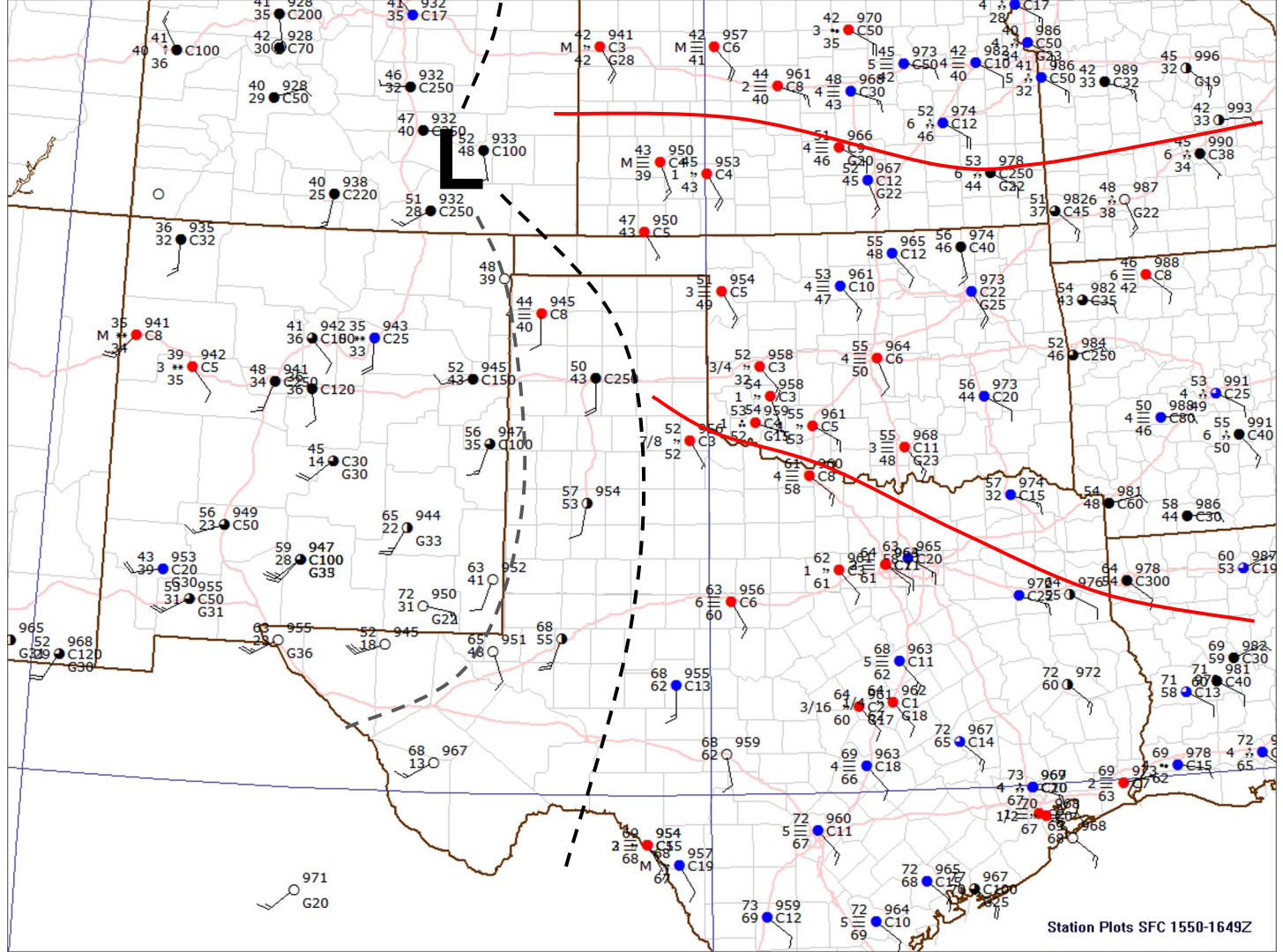




15:00 UTC

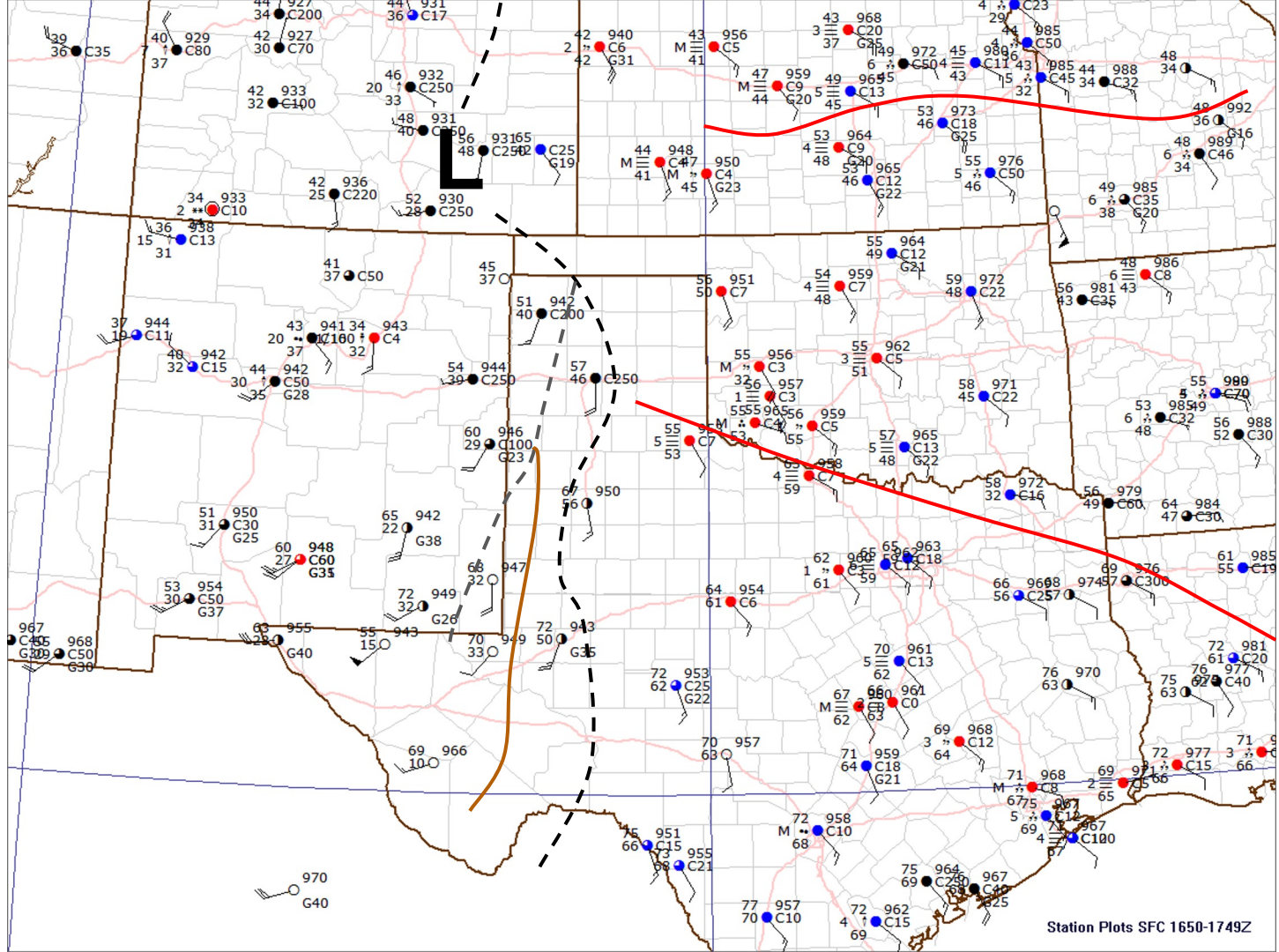


16:00 UTC



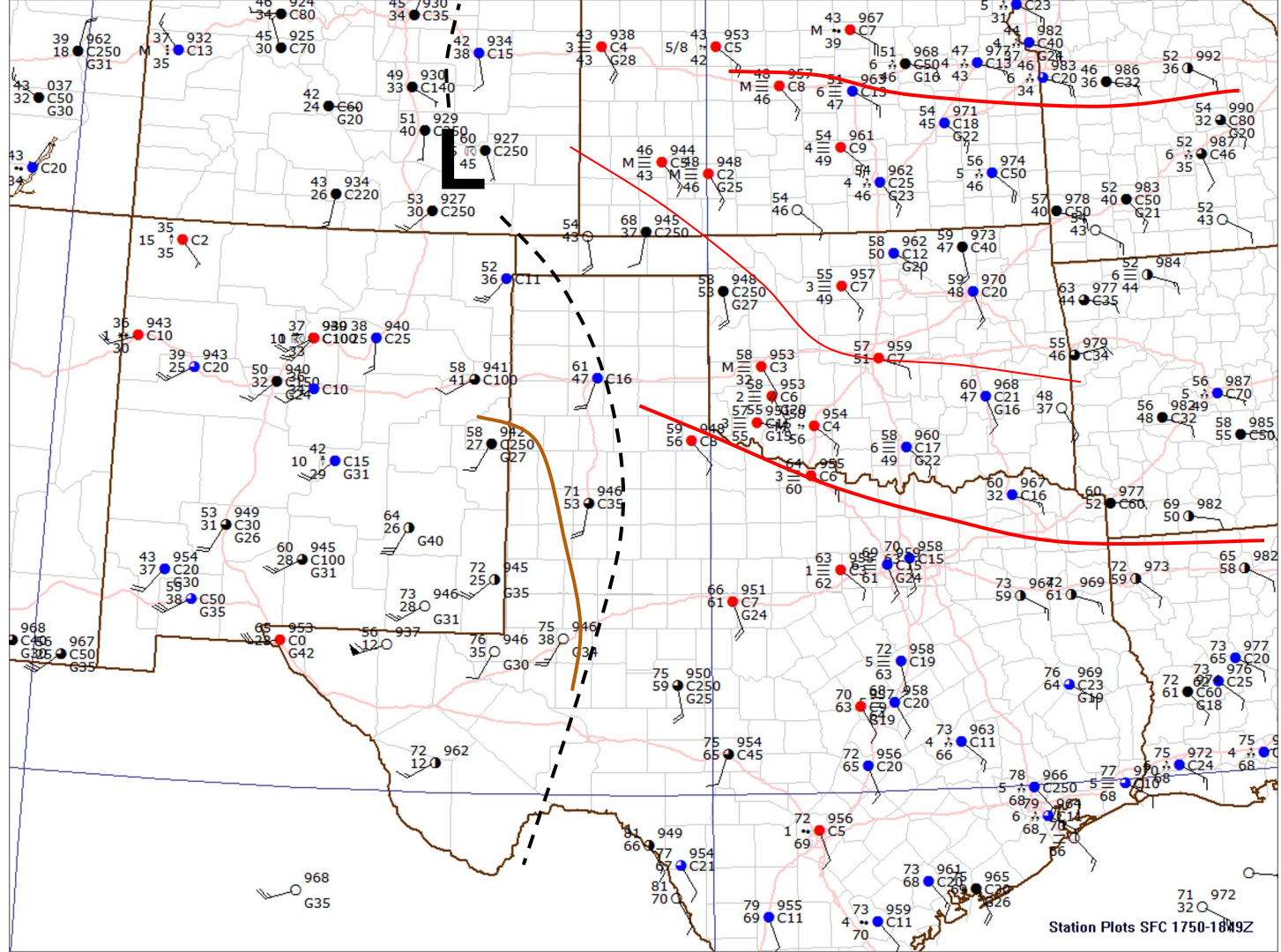
Station Plots SFC 1550-1649Z

17:00 UTC

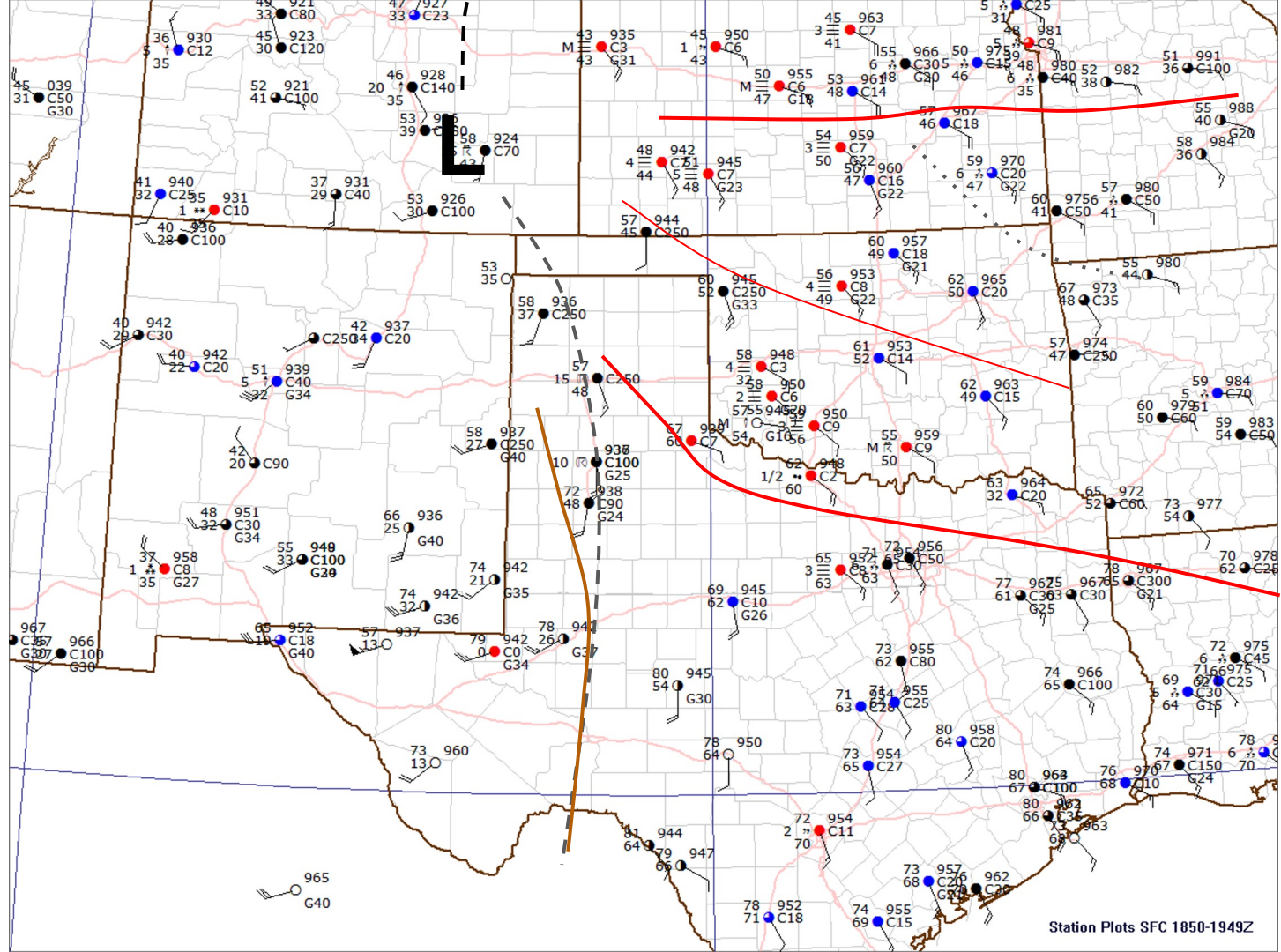


Station Plots SFC 1650-1749Z

18:00 UTC



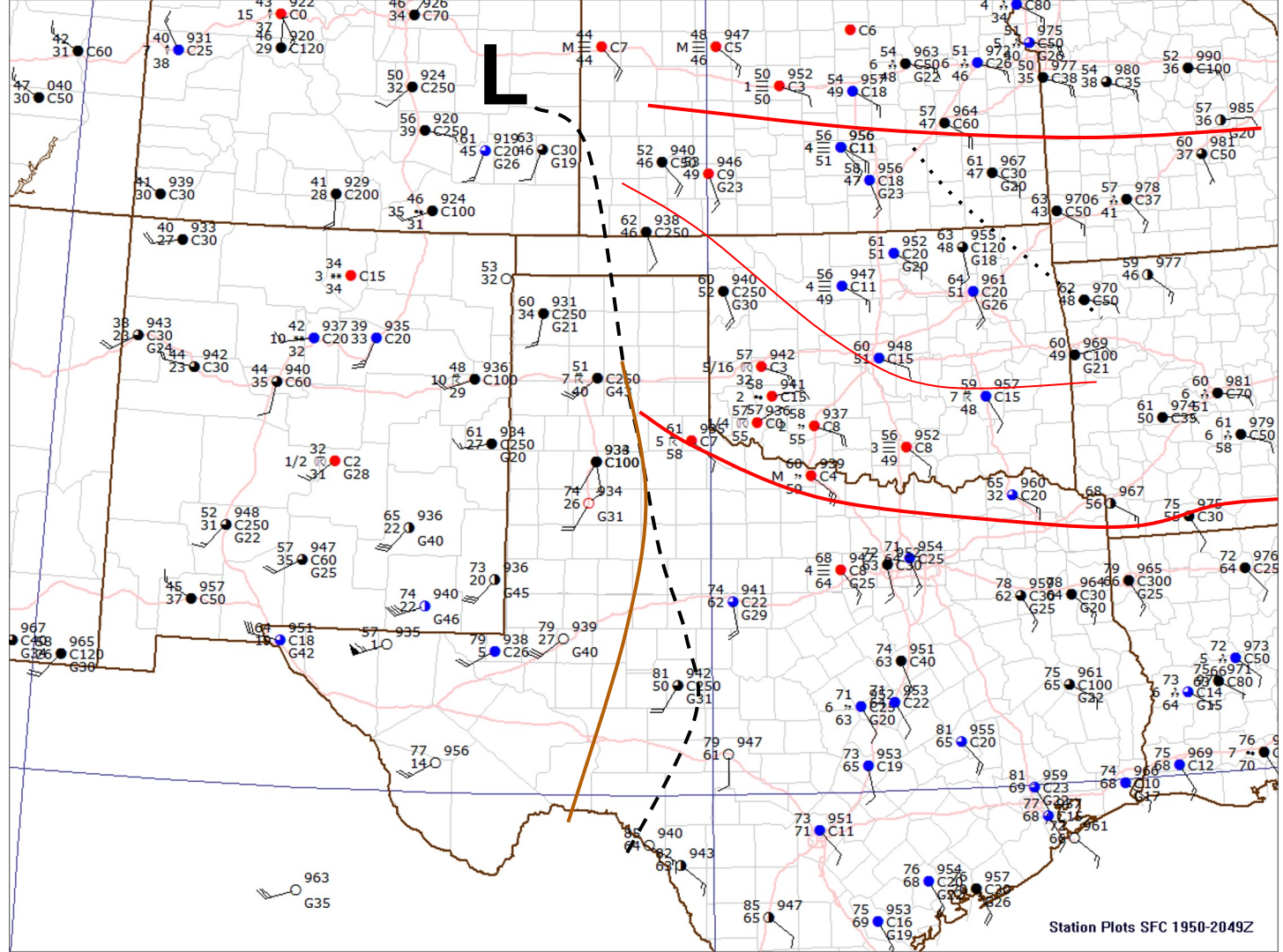
19:00 UTC



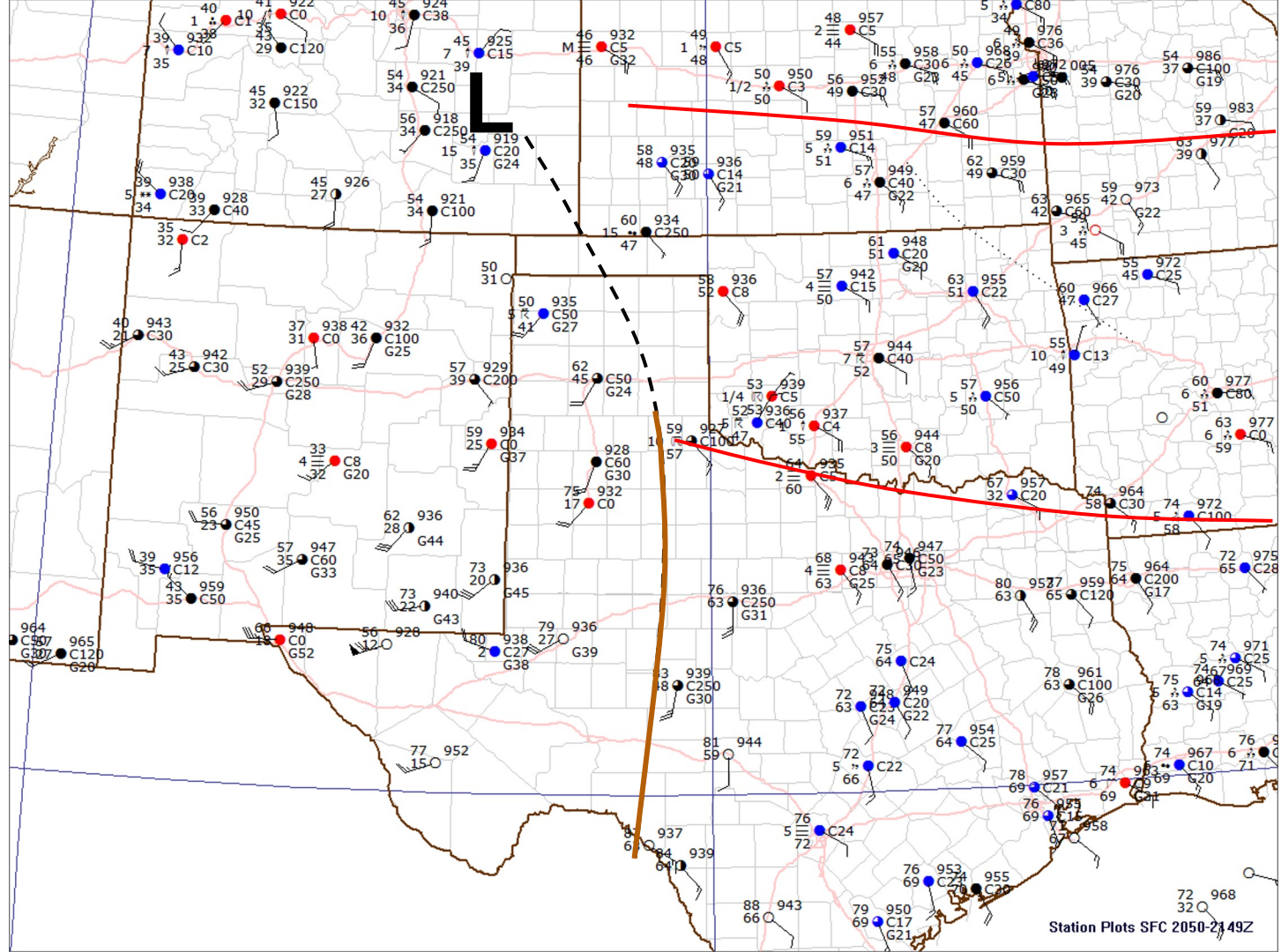
Station Plots SFC 1850-1949Z



20:00 UTC



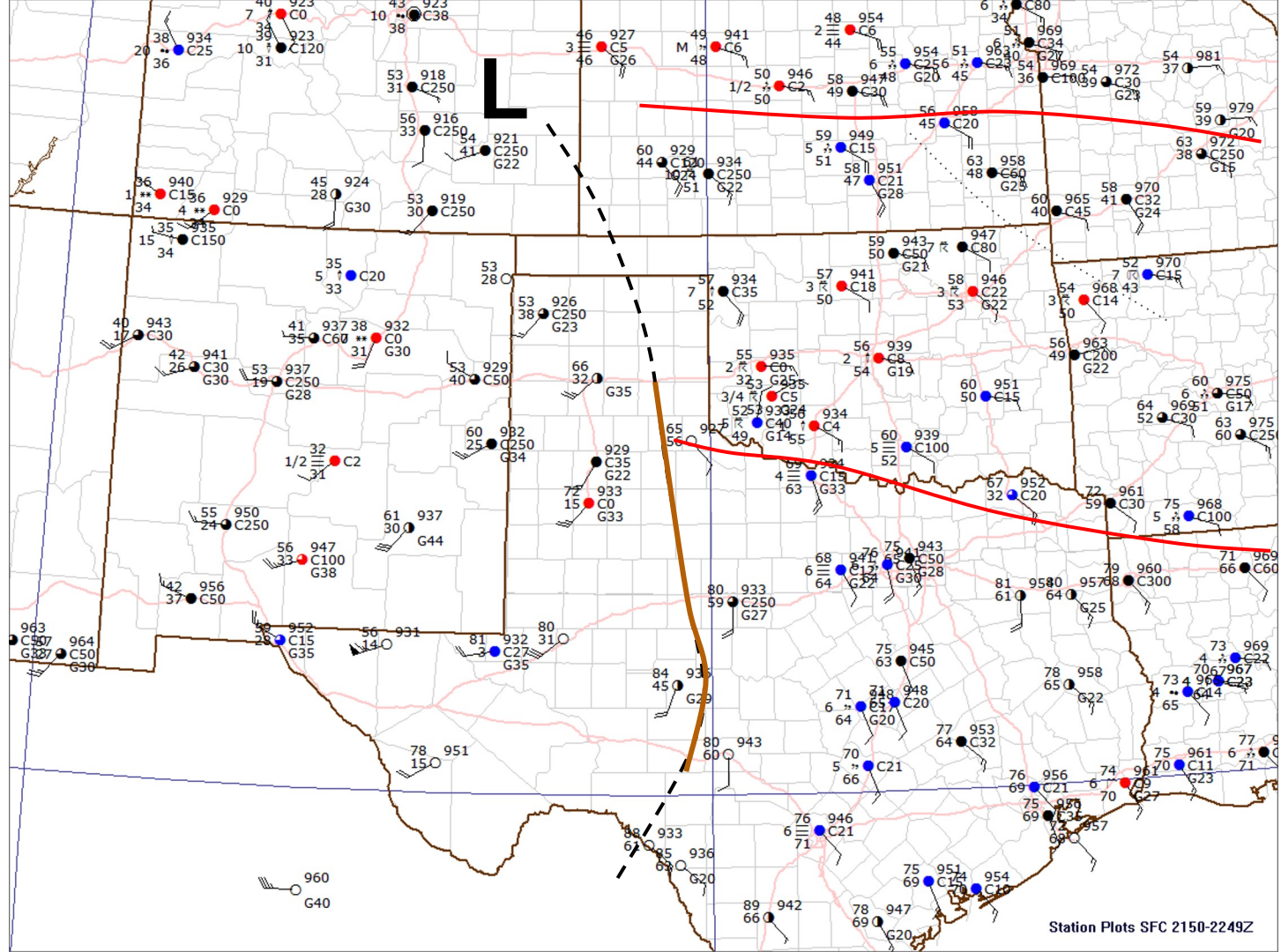
Station Plots SFC 1950-2049Z



21:00 UTC

Station Plots SFC 2050-2149Z

22:00 UTC



Station Plots SFC 2150-2249Z

23:00 UTC

