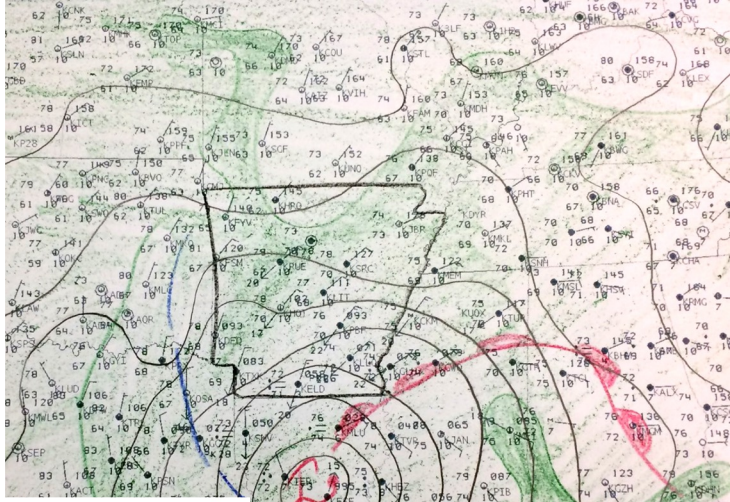
HOUR	FORECASTER
13 UTC	Ammon
14 UTC	Candela
15 UTC	Davis
16 UTC	Edelmaier
17 UTC	Eden
18 UTC	Gibson
19 UTC	McReynolds
20 UTC	Nozka
21 UTC	Saba
22 UTC	Schaefer

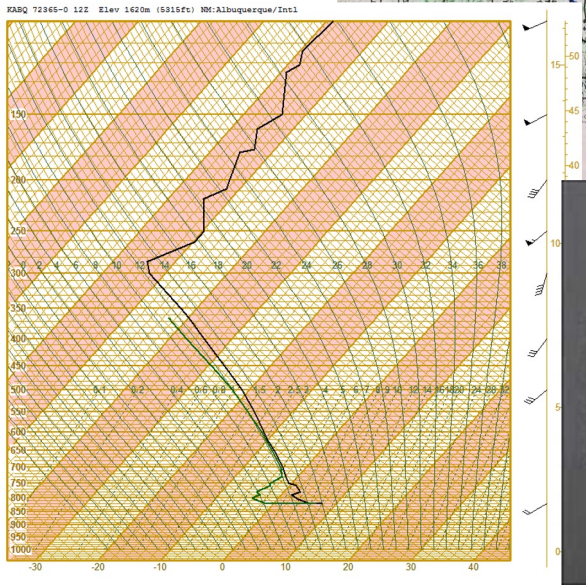
Blast from the Past!



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.

Blast from the Past!

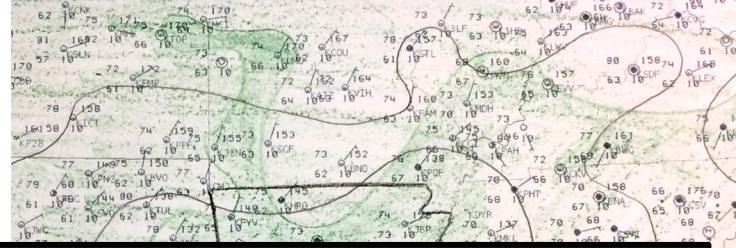
How today will work:

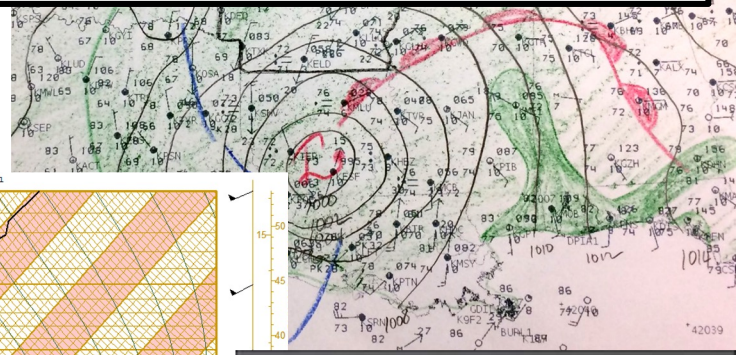
- Create a 13Z Outlook (20 minutes):
  - Analyze 12Z Data
  - Draw an outlook
- Monitor Hourly Trends
  - Complete hourly analyses (5 min each)
- Update our outlook at 1630 (10 minutes)
- Issue a Watch (if needed)
  - Determine *when* to issue (group)
  - Determine *what type* (group)

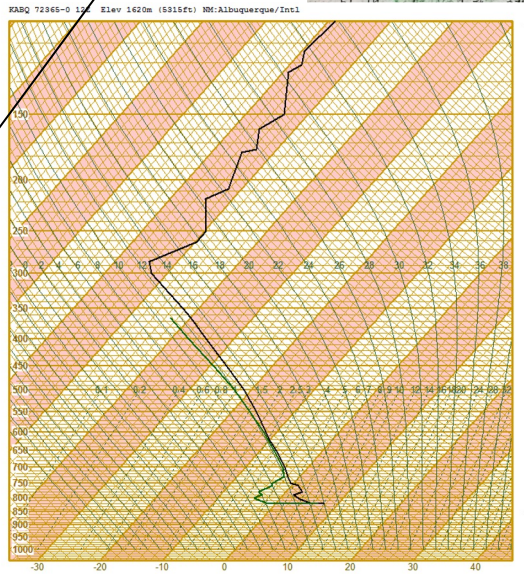
Remember!

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

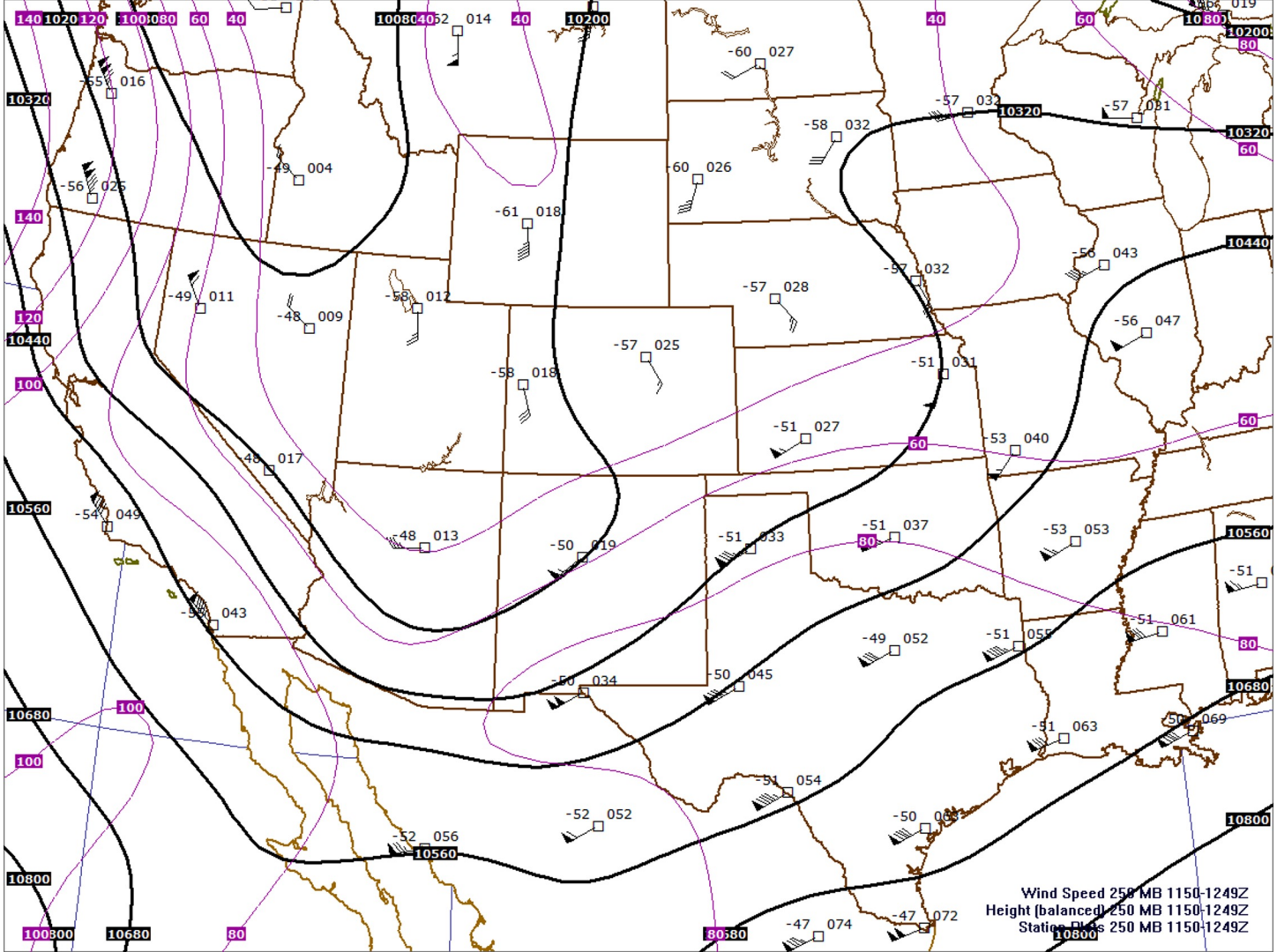
Outlook/Watch Draw Tool: wxwatcher.us/map/outlook/







250 mb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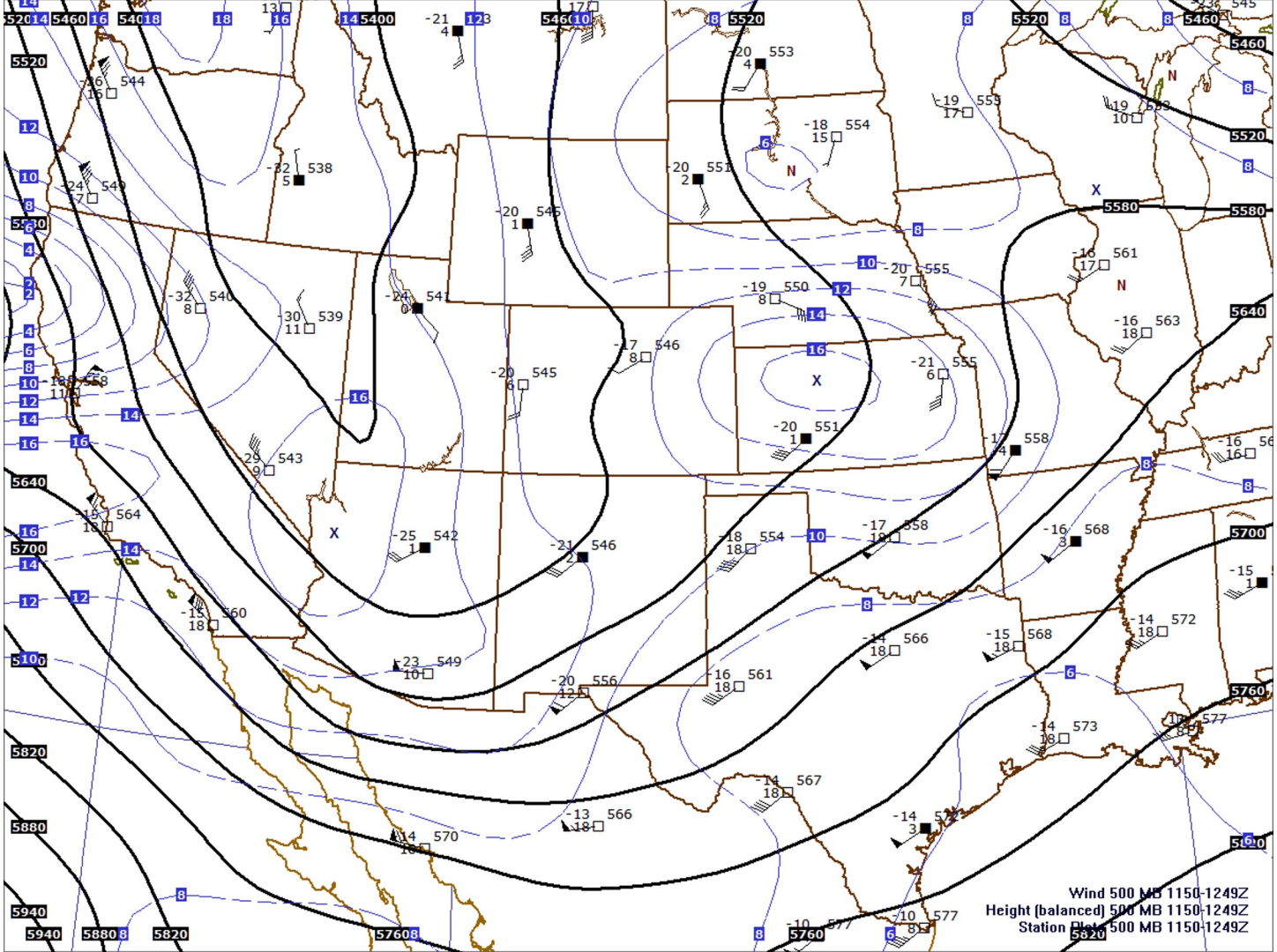
Height (balanced) 250 MB 1150-1249Z
Station Plots 250 MB 1150-1249Z

500 mb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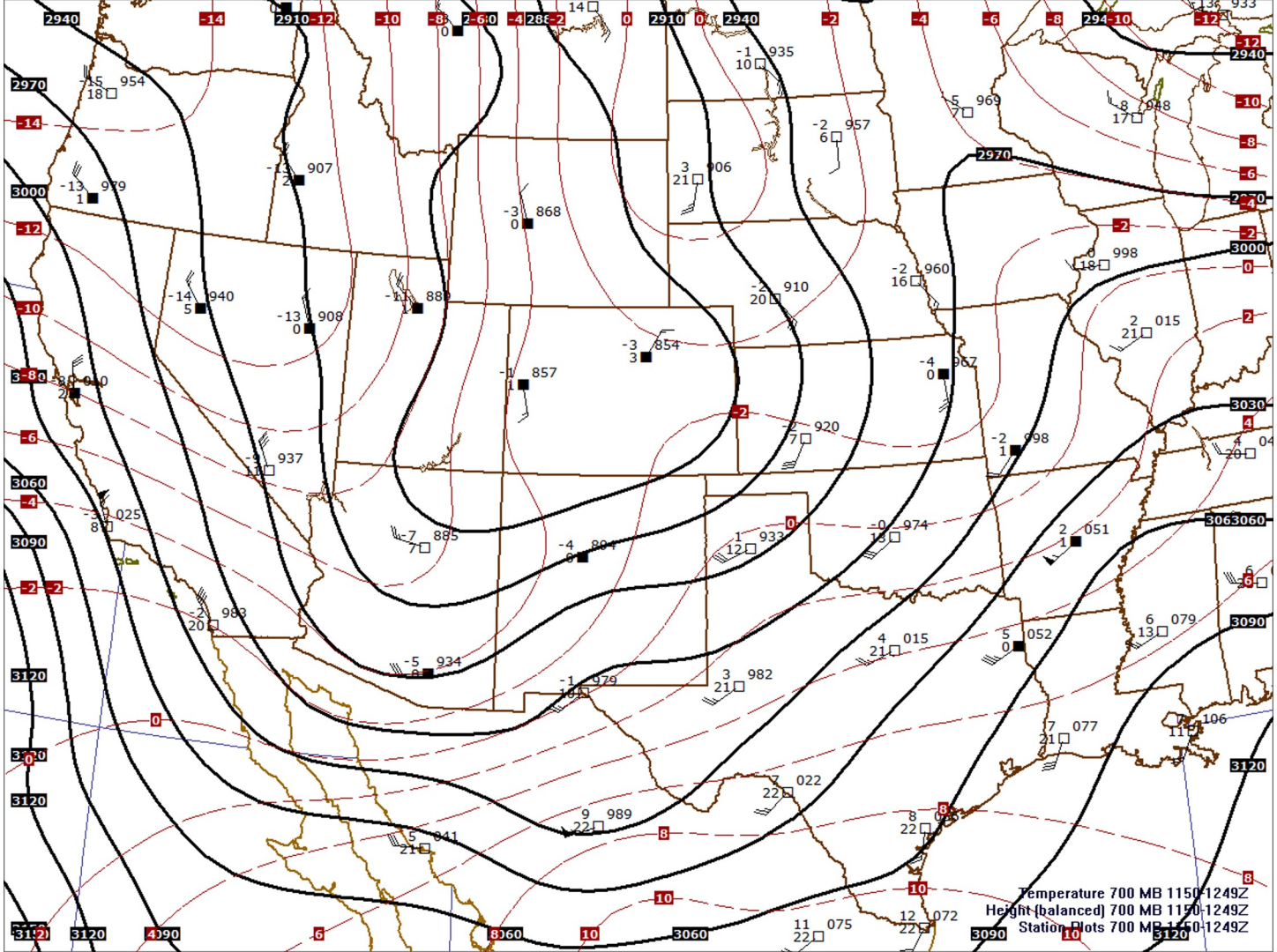
Height (balanced) 500 MB 1150-1249Z
Station Plots 500 MB 1150-1249Z

700 mb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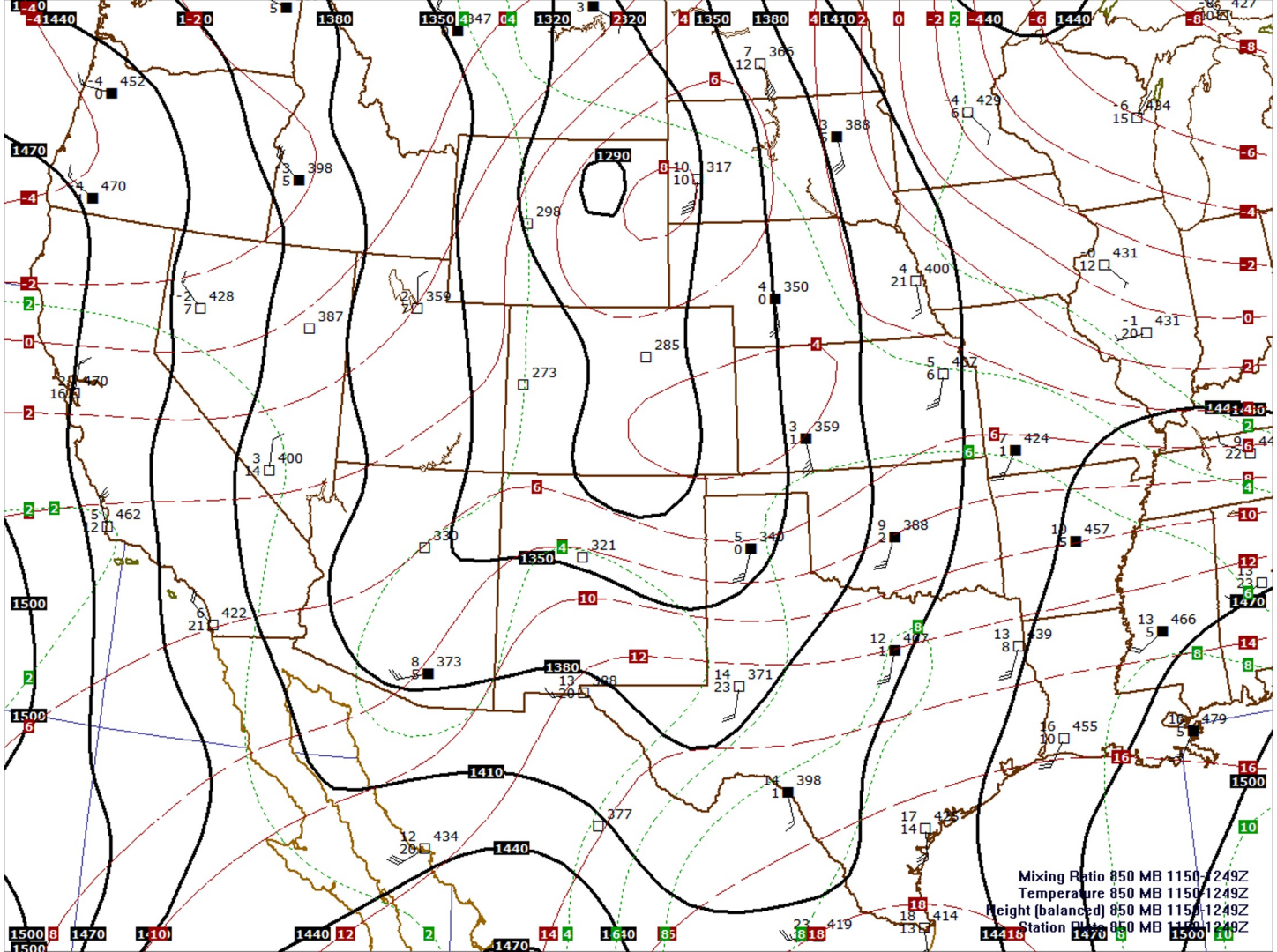
Height (balanced) 700 MB 1150-1249Z
Station Plots 700 MB 1150-1249Z

850 mb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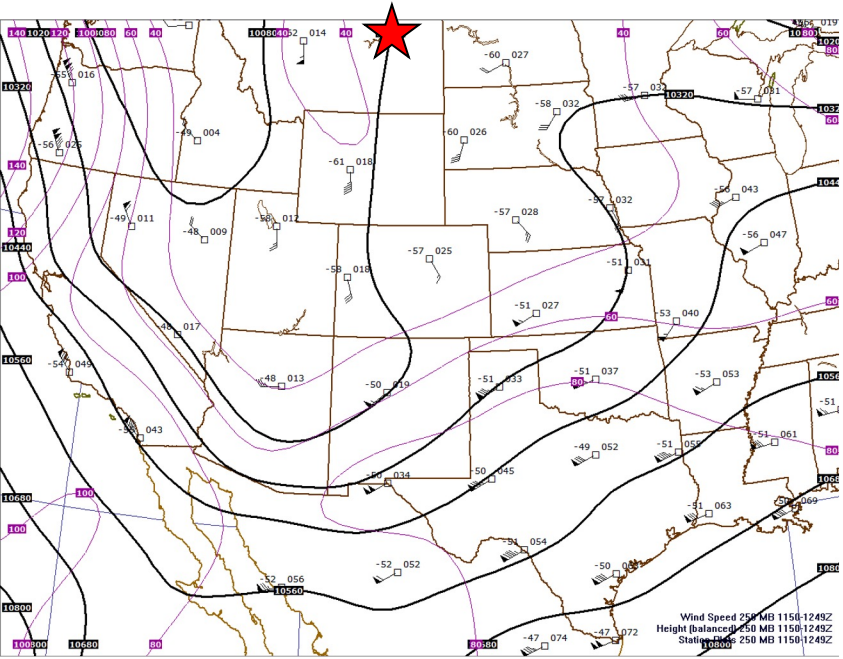
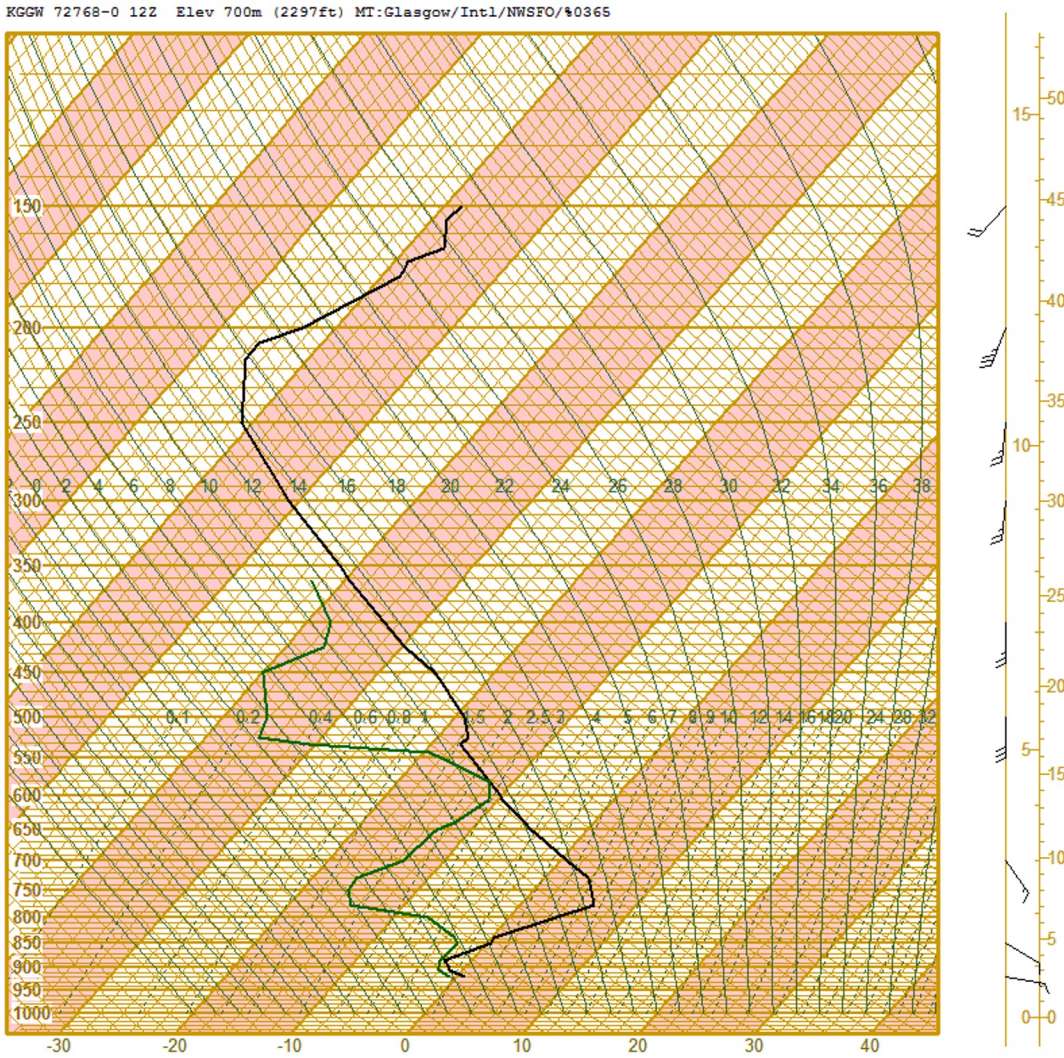
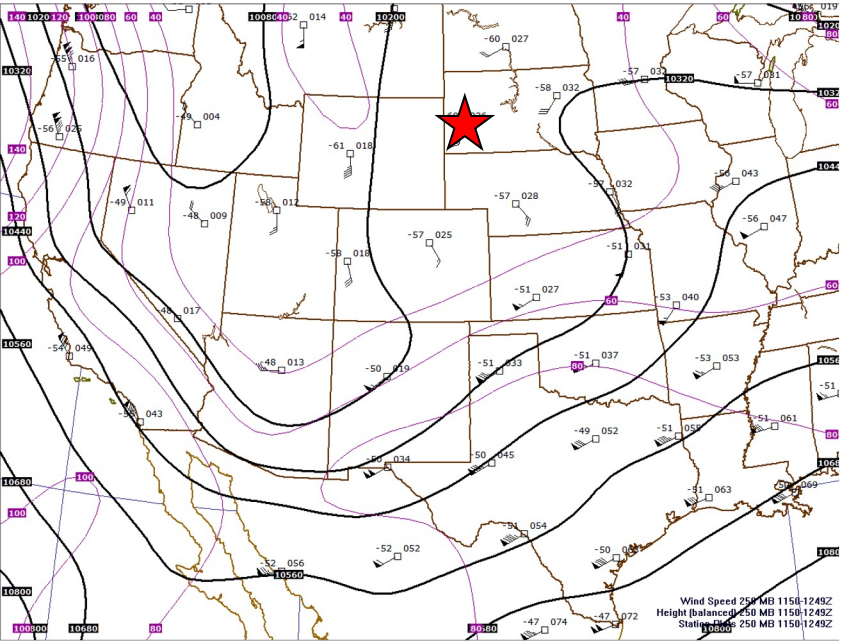
Temperature 850 MB 1150-1249Z
Height (balanced) 850 MB 1150-1249Z
Station Plots 850 MB 1150-1249Z

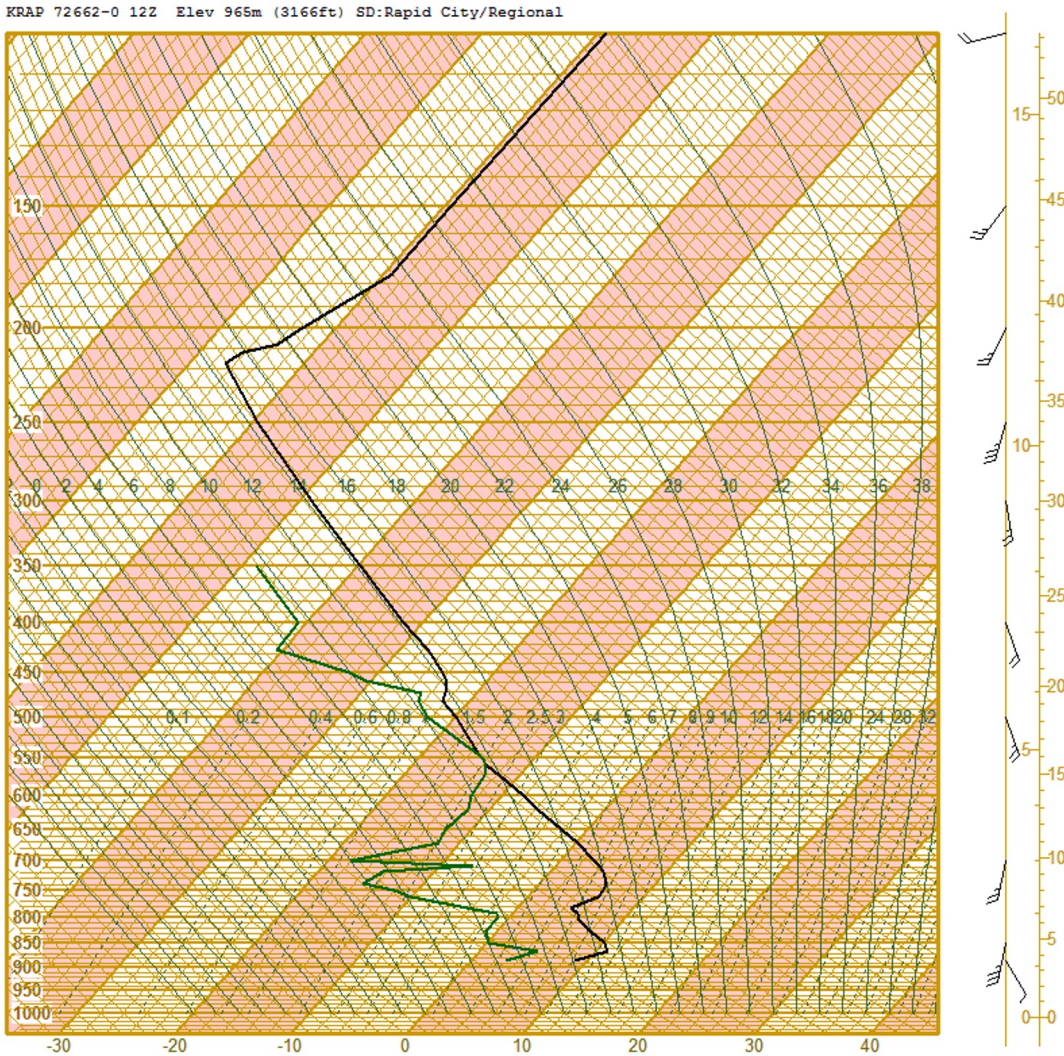
12 Z Glasgow, MT



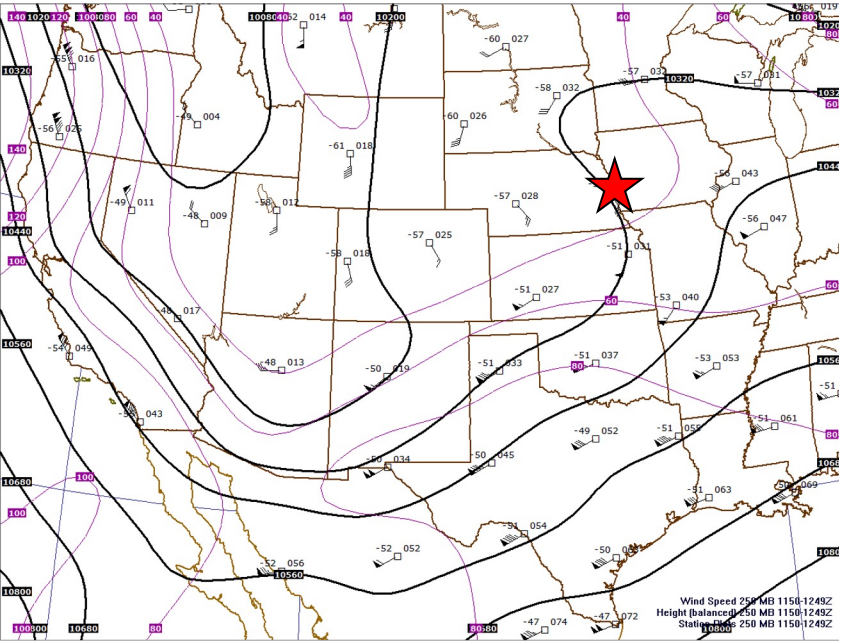


12 Z Rapid City, SD





12 Z Omaha, NE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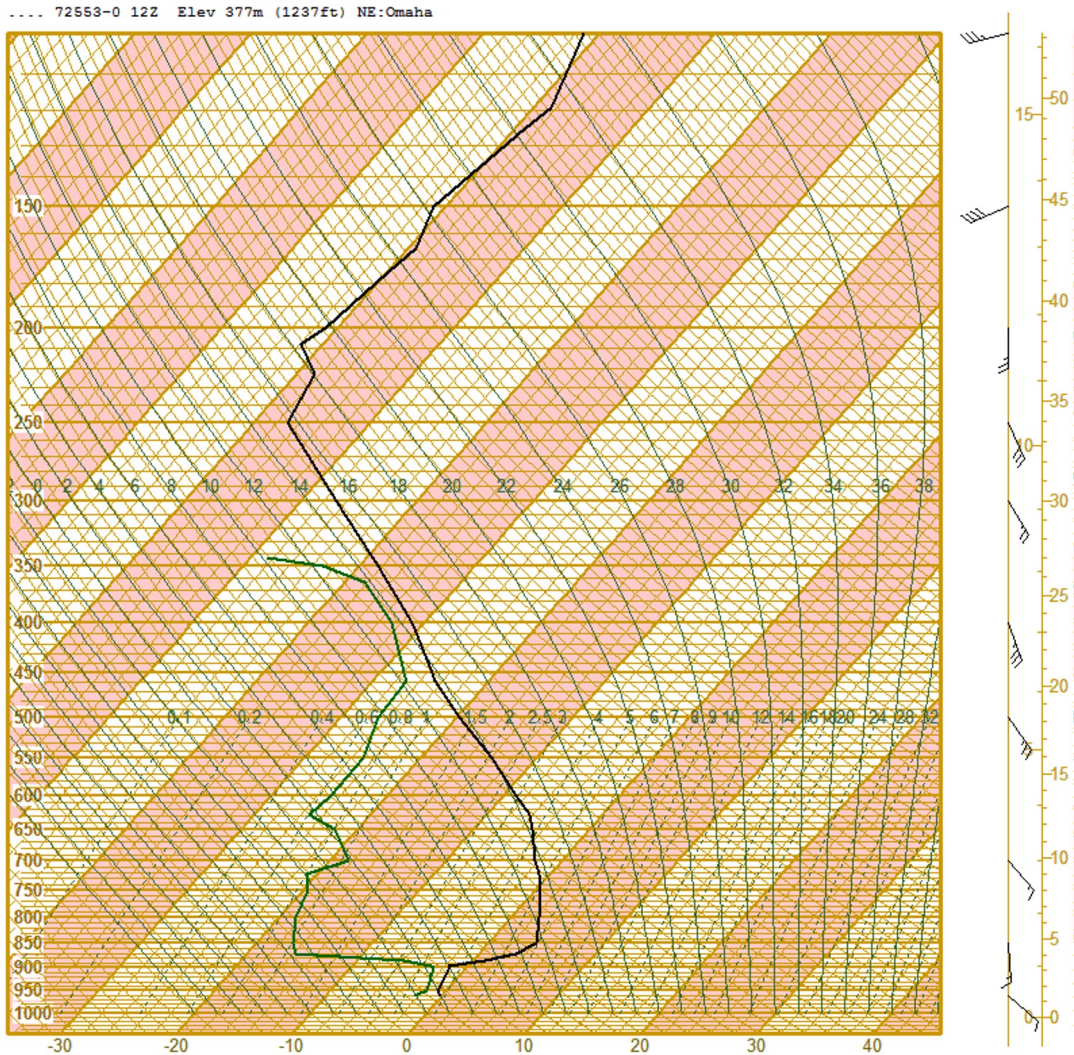
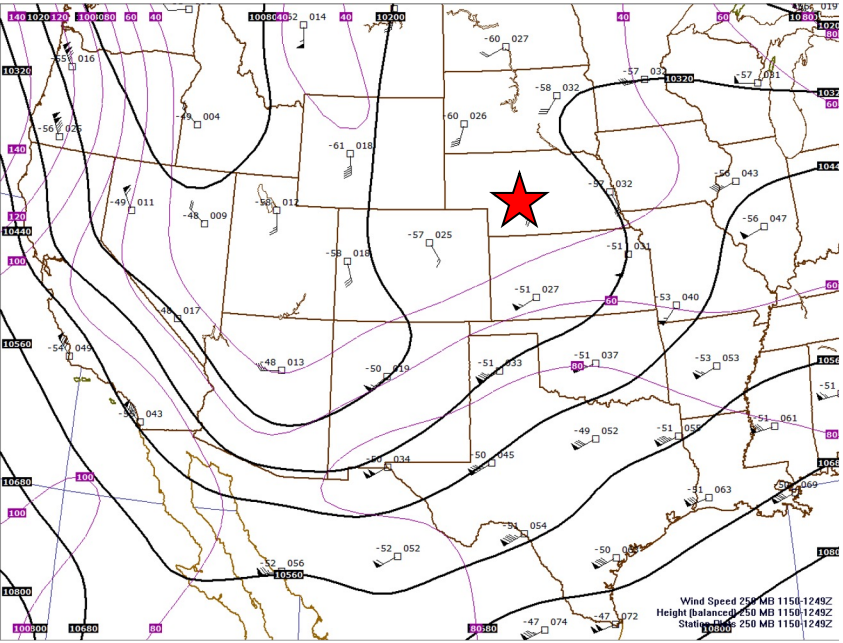
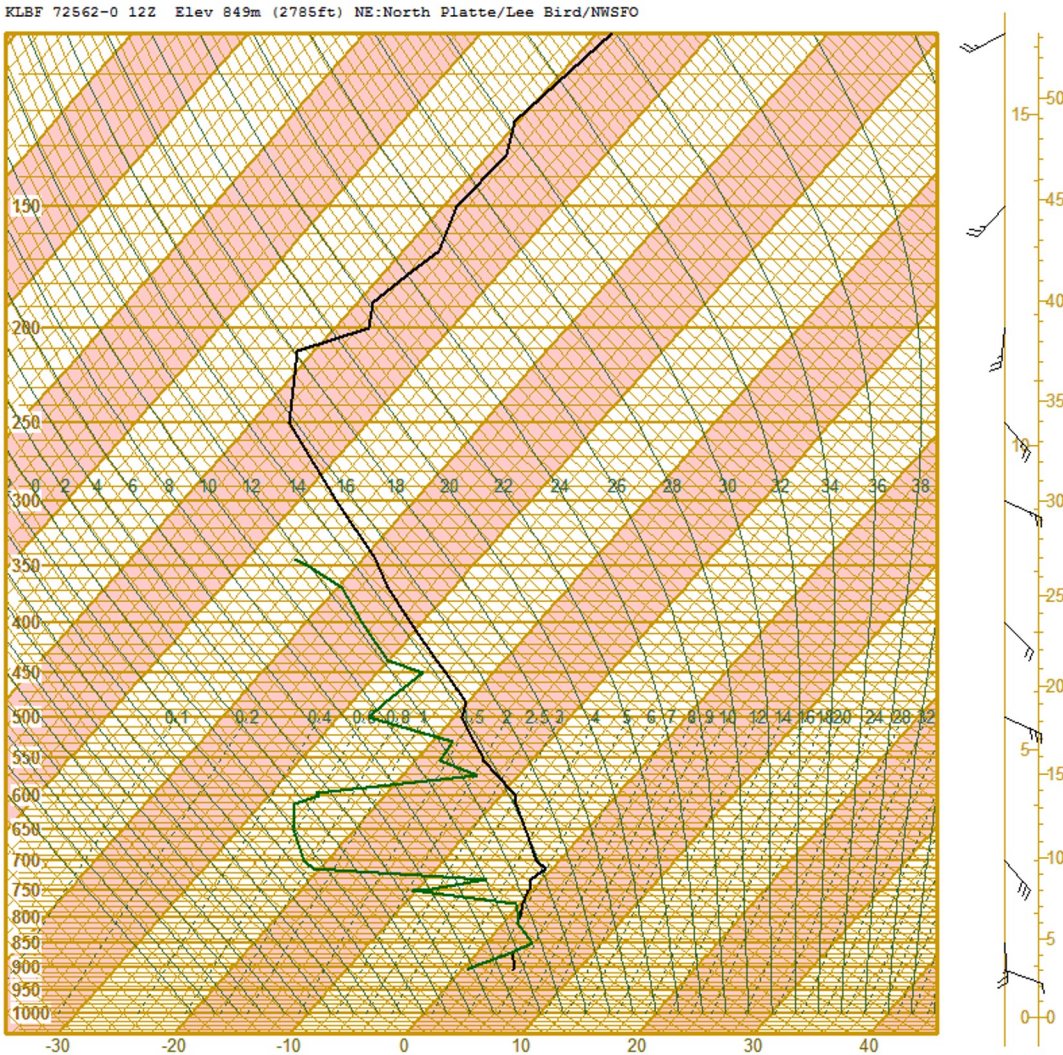
Height (balanced) 250 MB 1150-1249Z

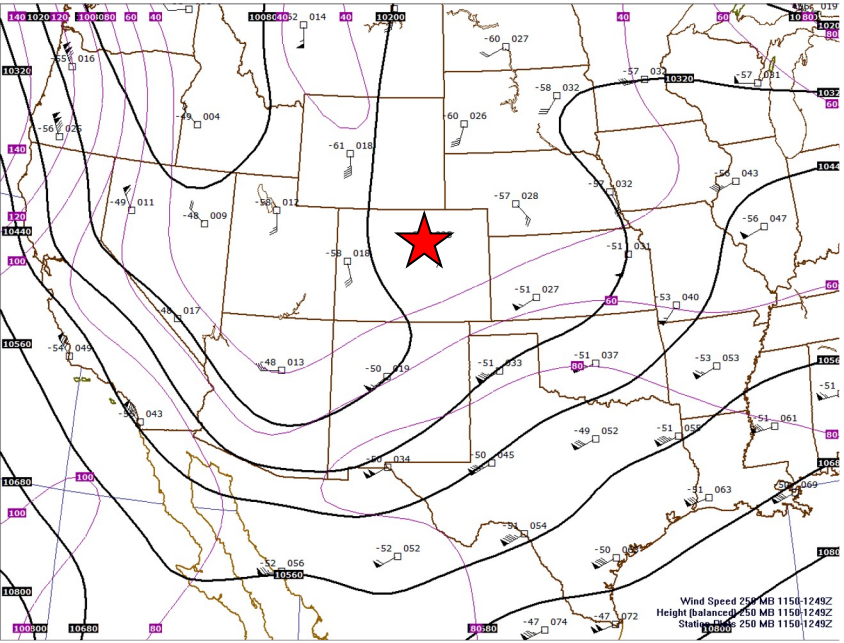

.... 72553-0 12Z Elev 377m (1237ft) NE:Omaha

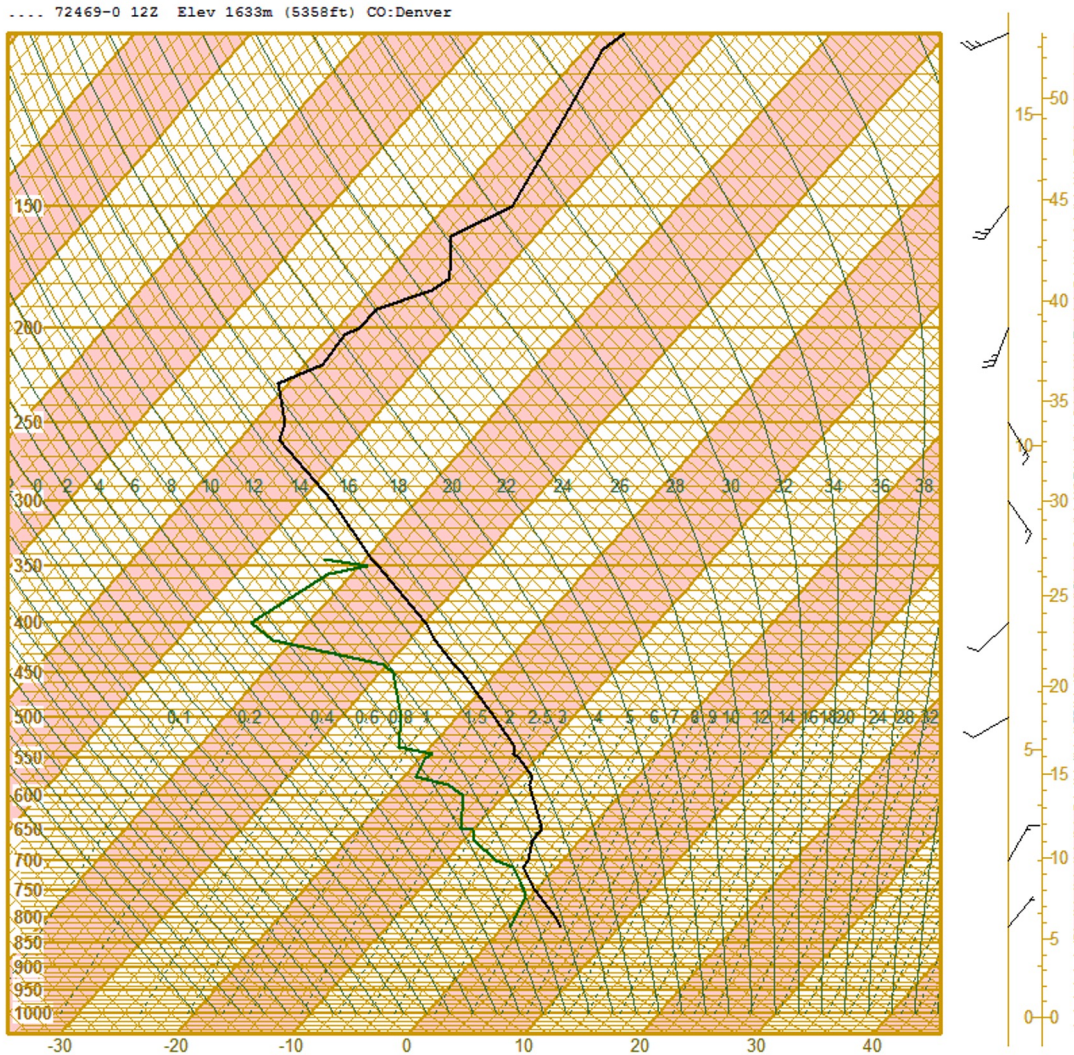
12 Z North Platte, NE



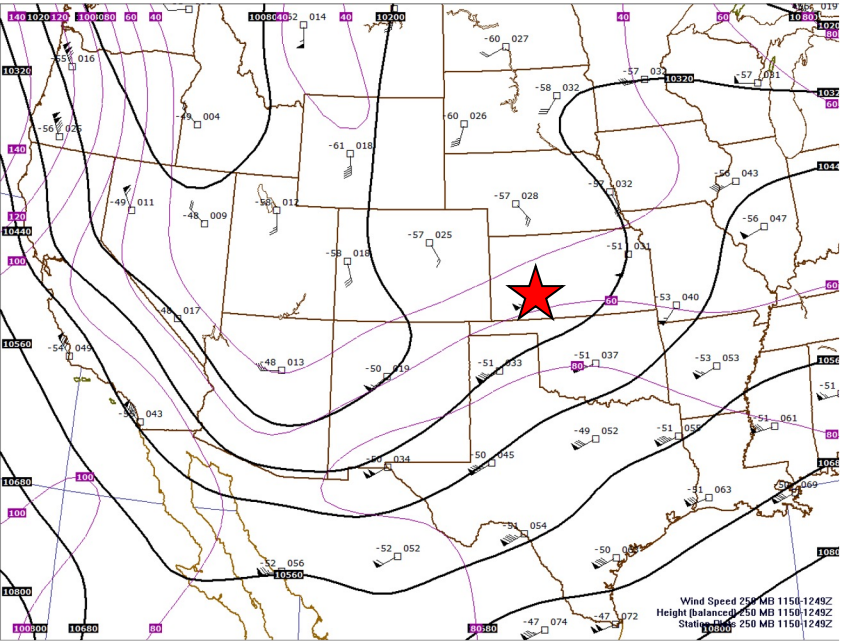


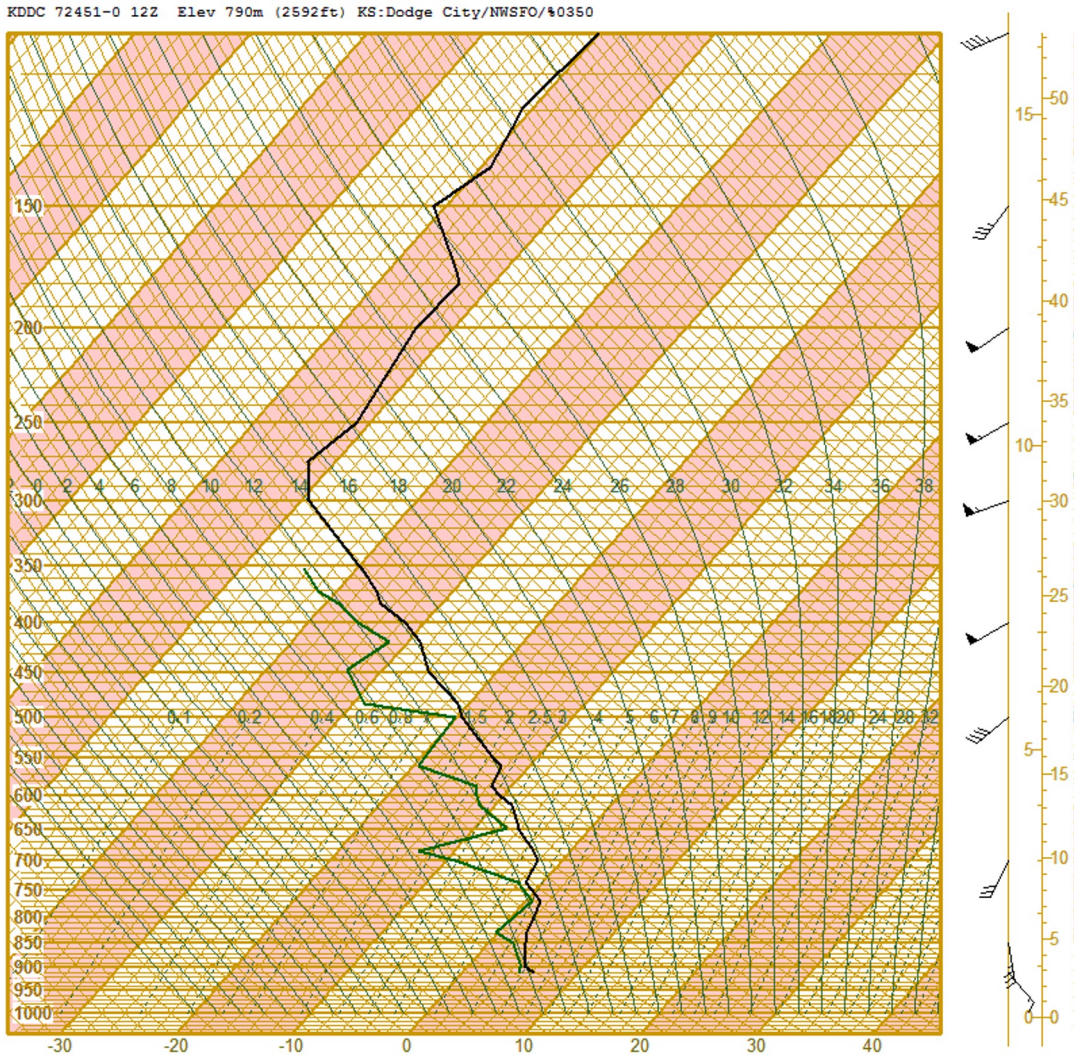
12 Z Denver, CO



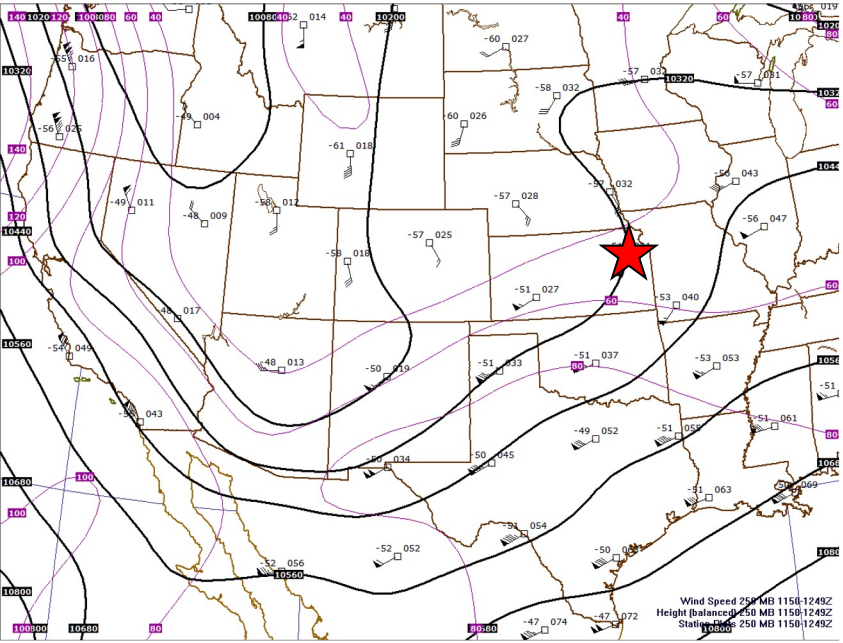


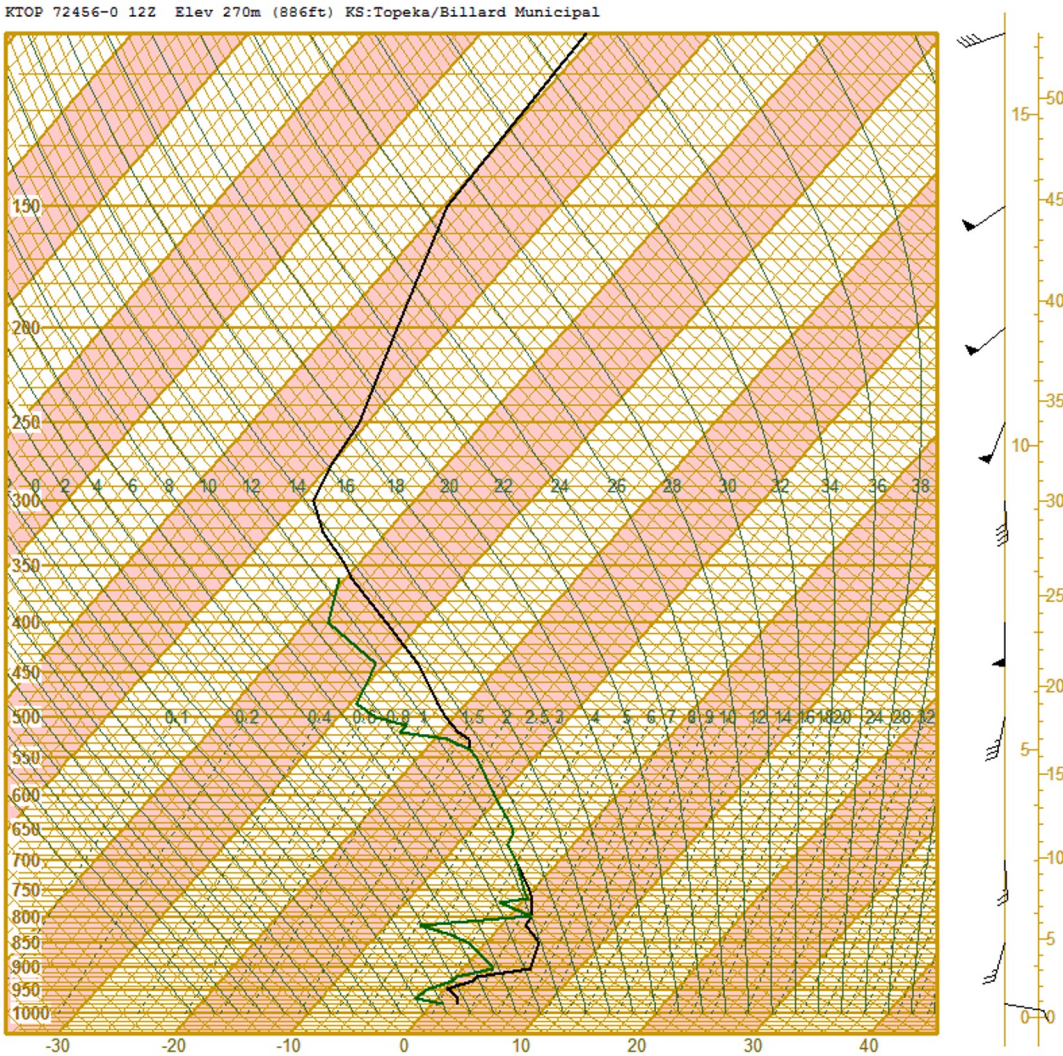
12 Z Dodge City, KS



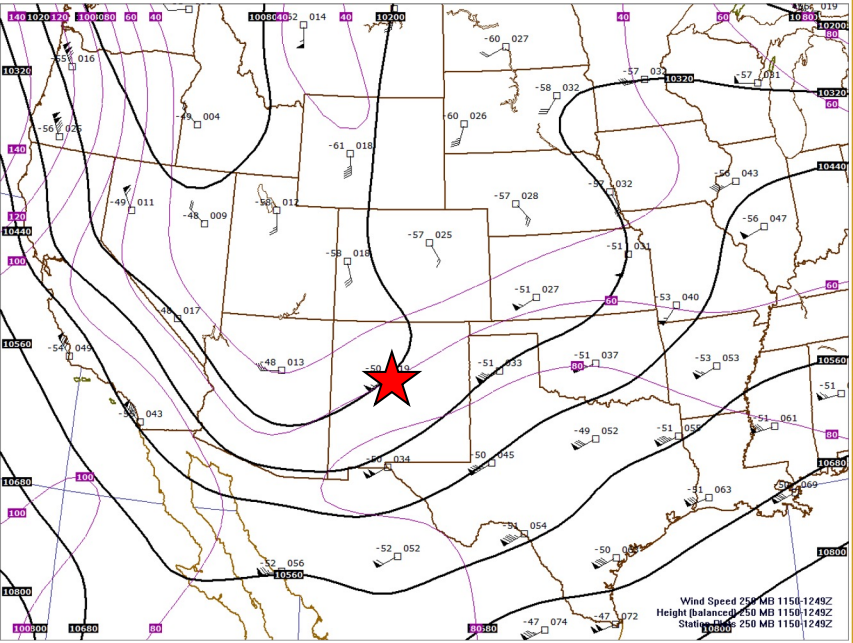


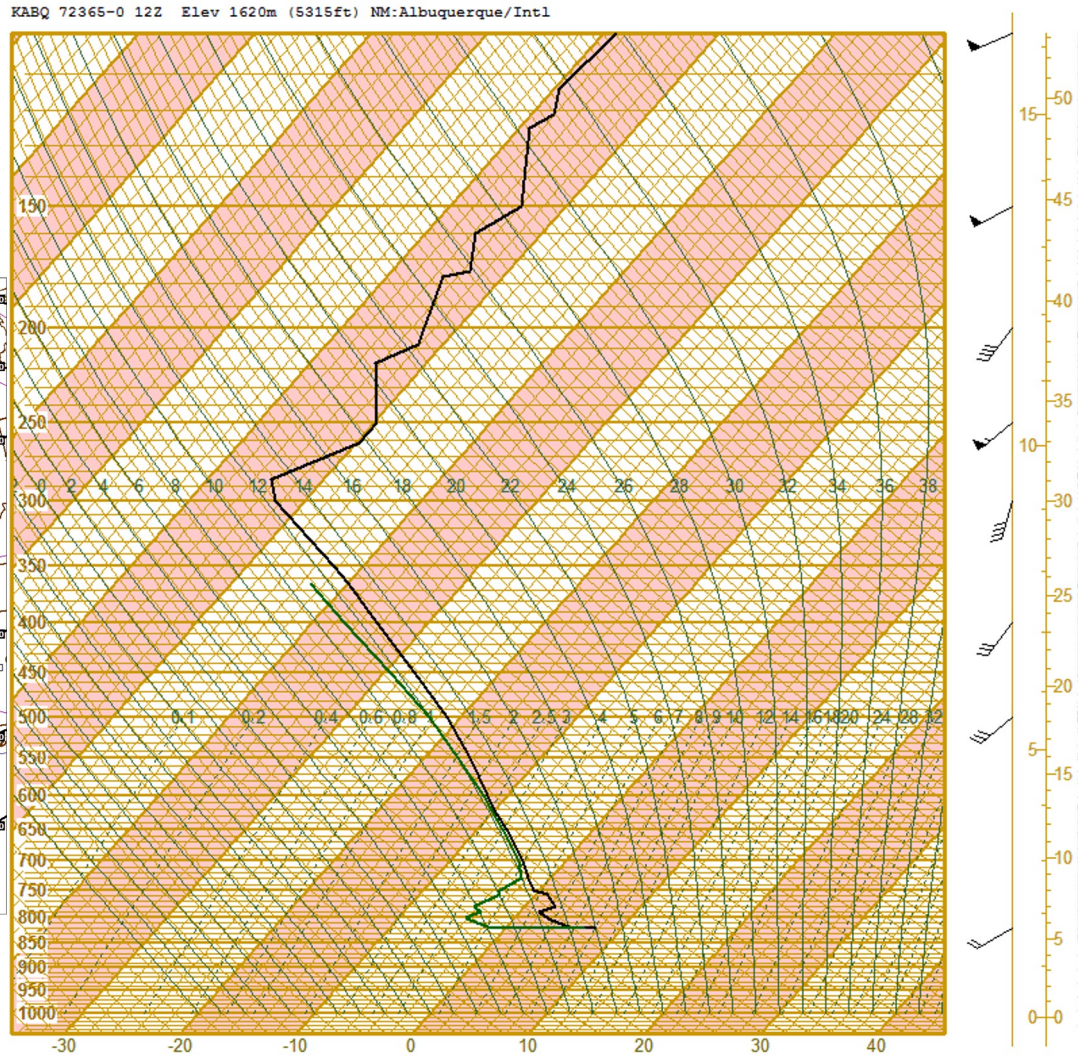
12 Z Topeka, KS



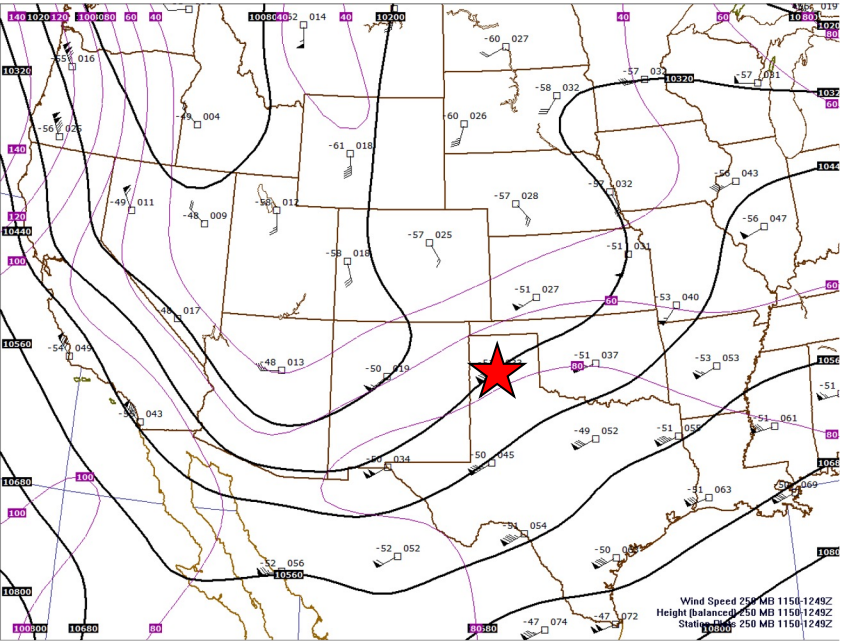


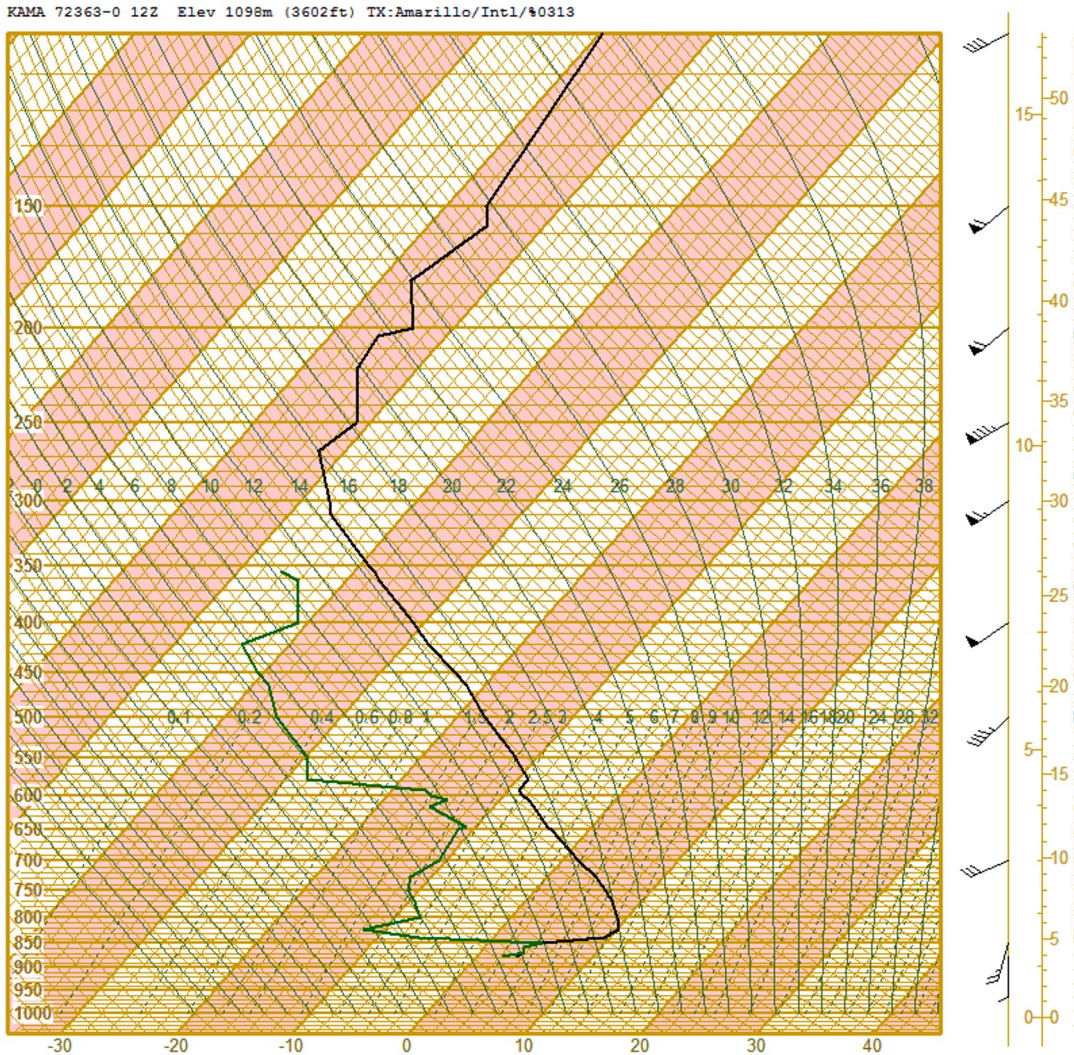
12 Z Albuquerque, NM



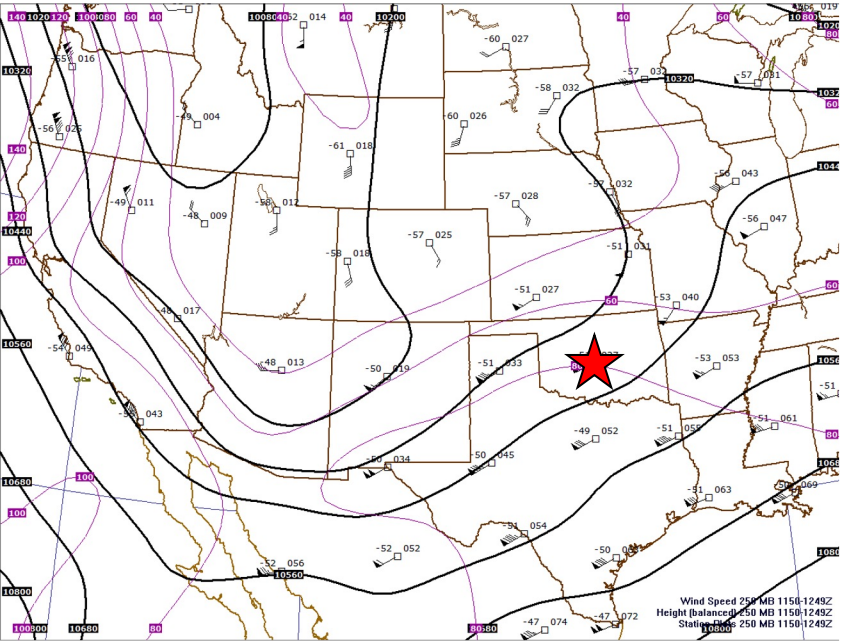


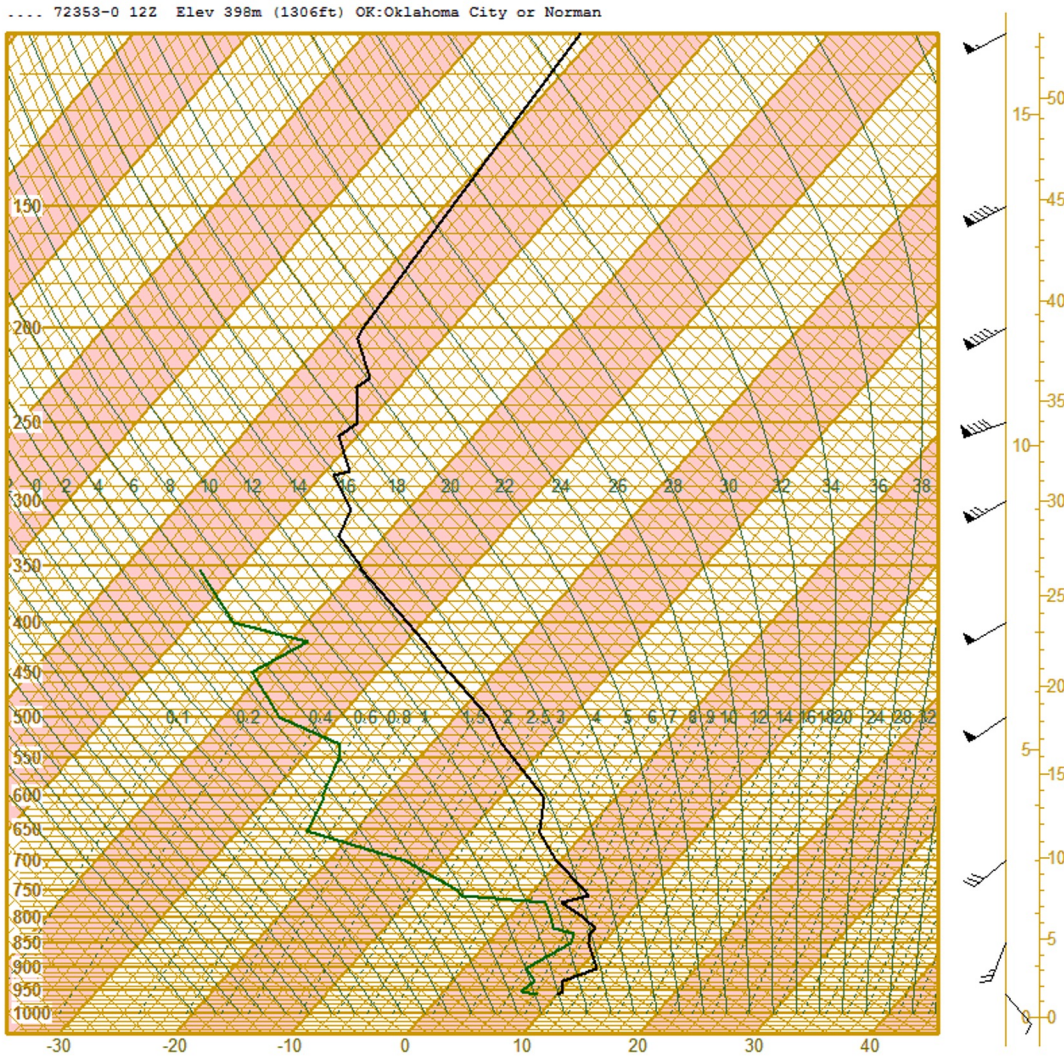
12 Z Amarillo, TX



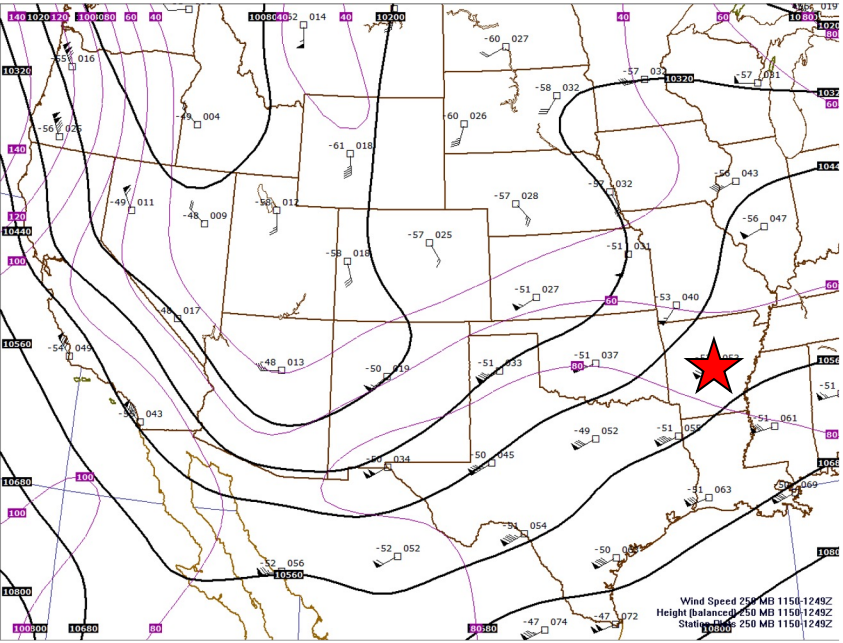


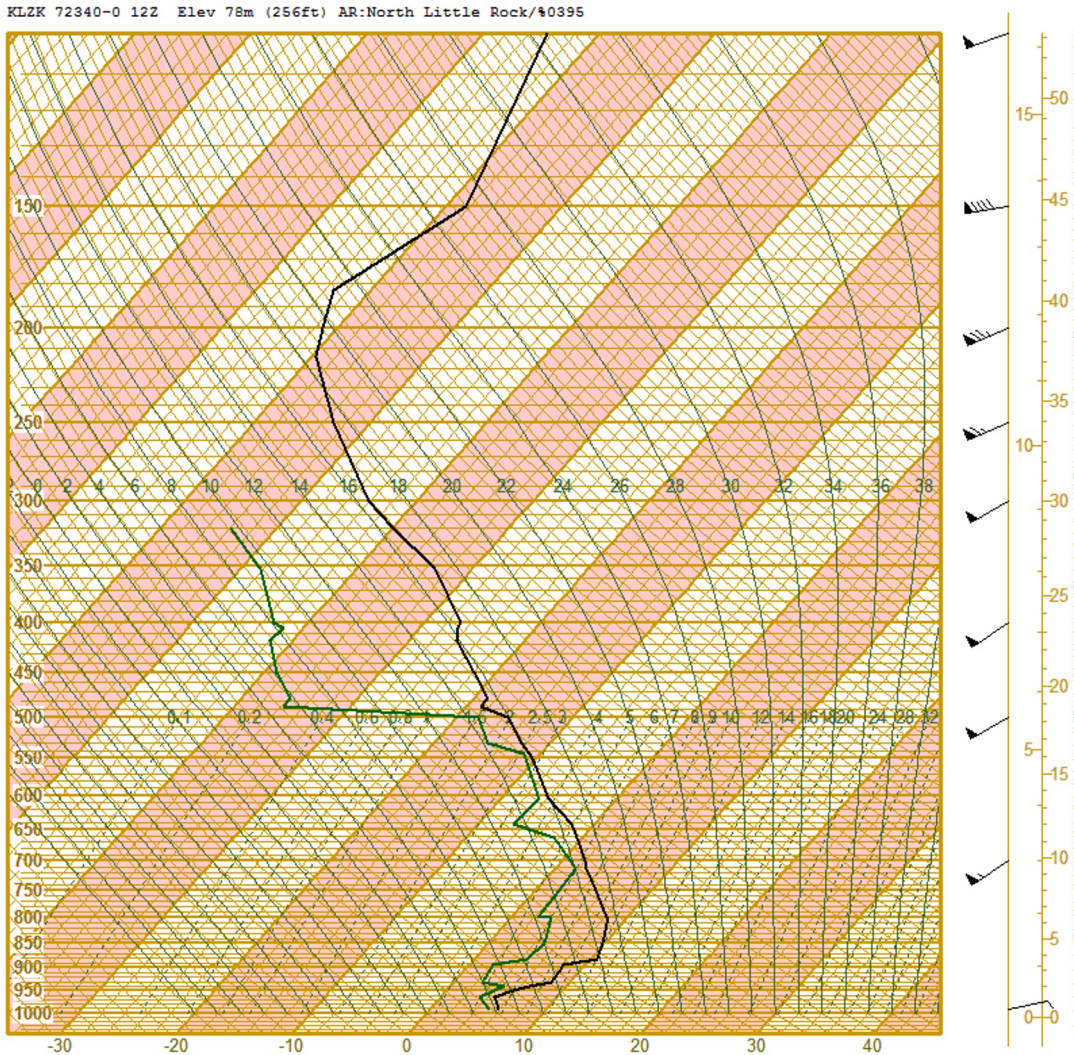
12 Z Norman, OK



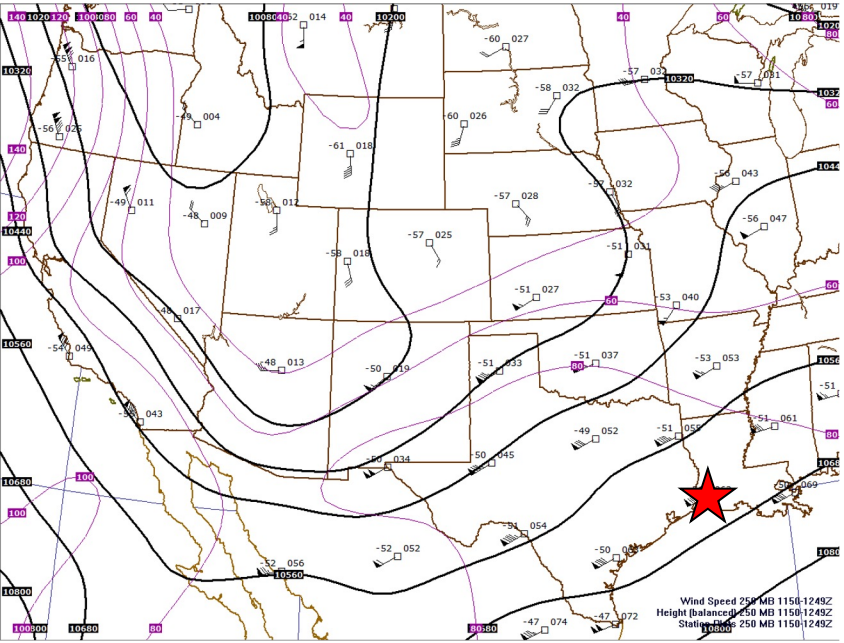


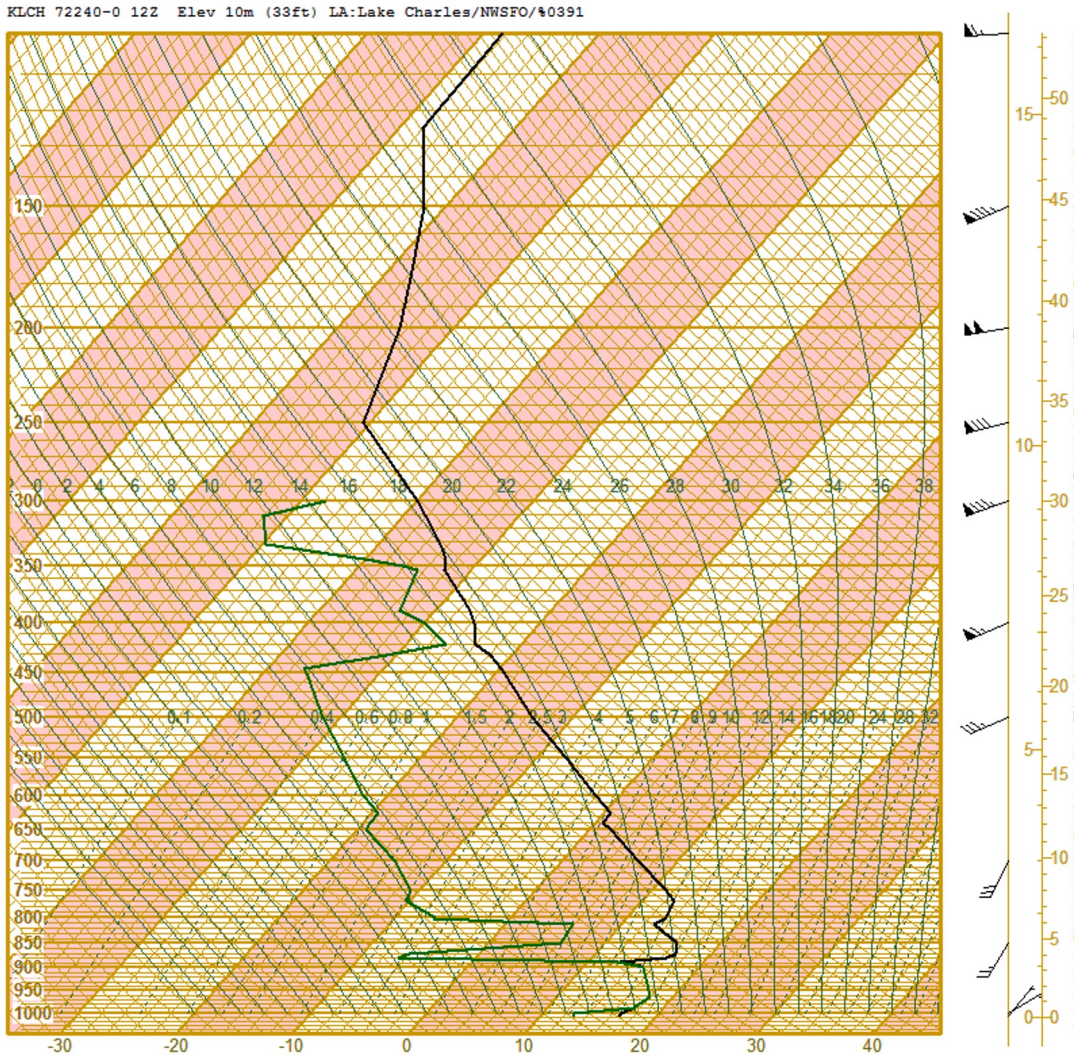
12 Z Little Rock, AR



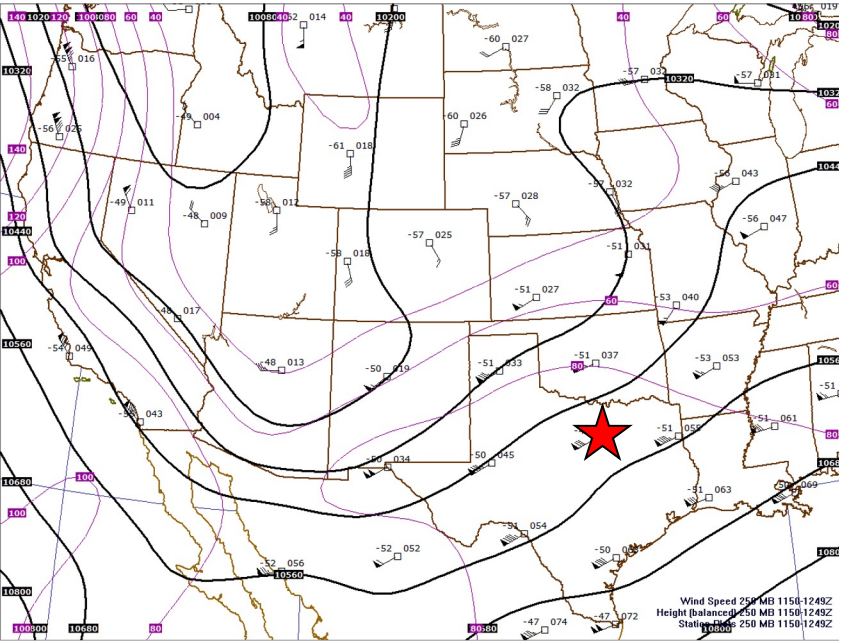


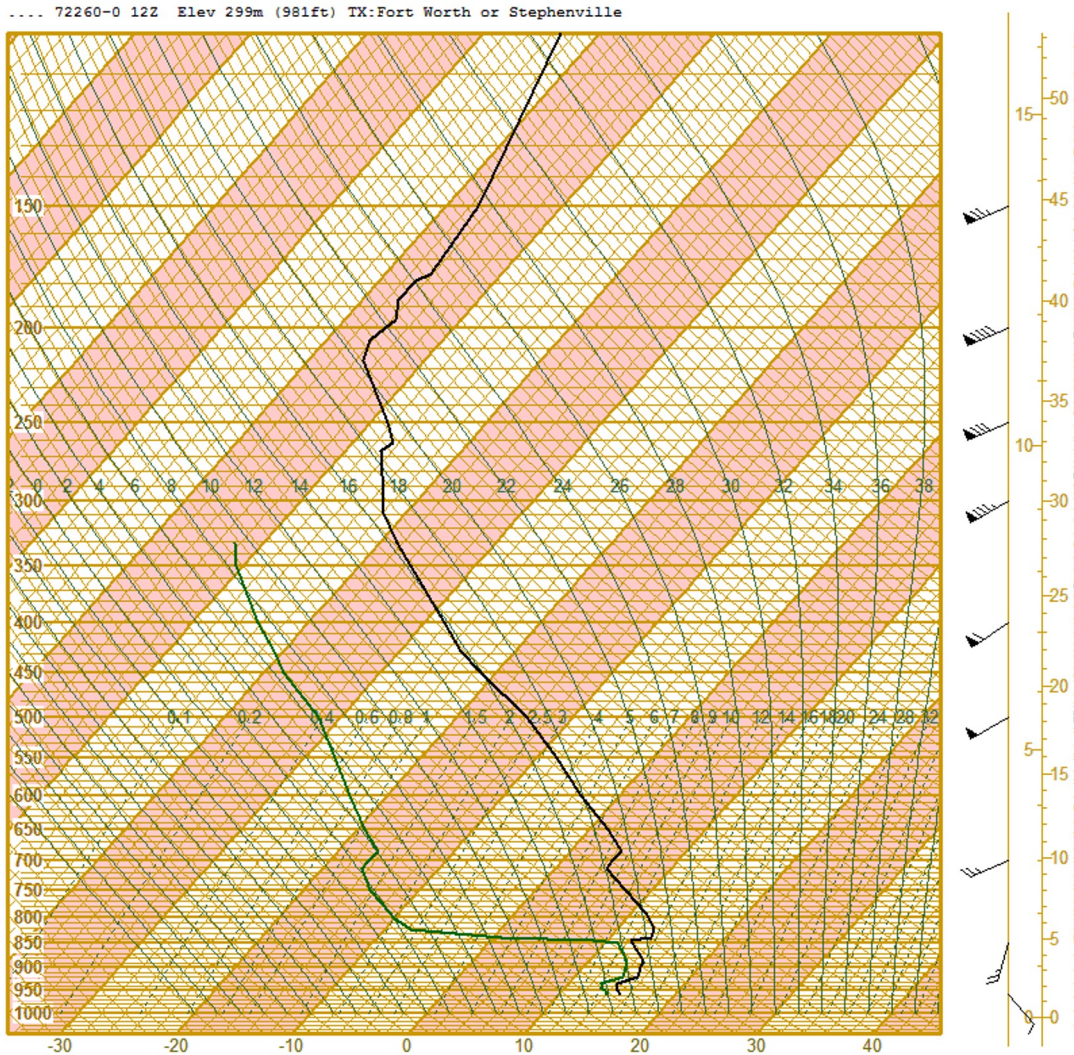
12 Z Lake Charles, LA



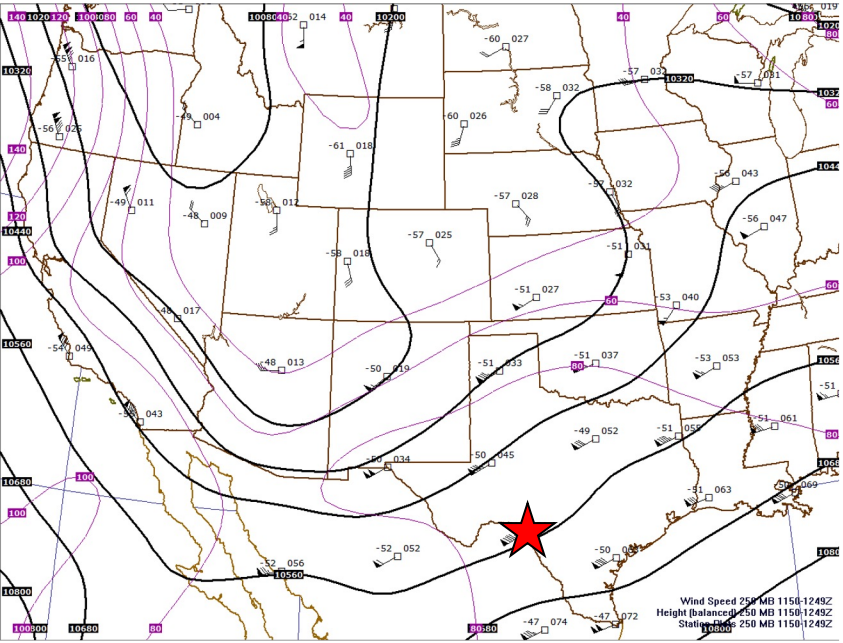


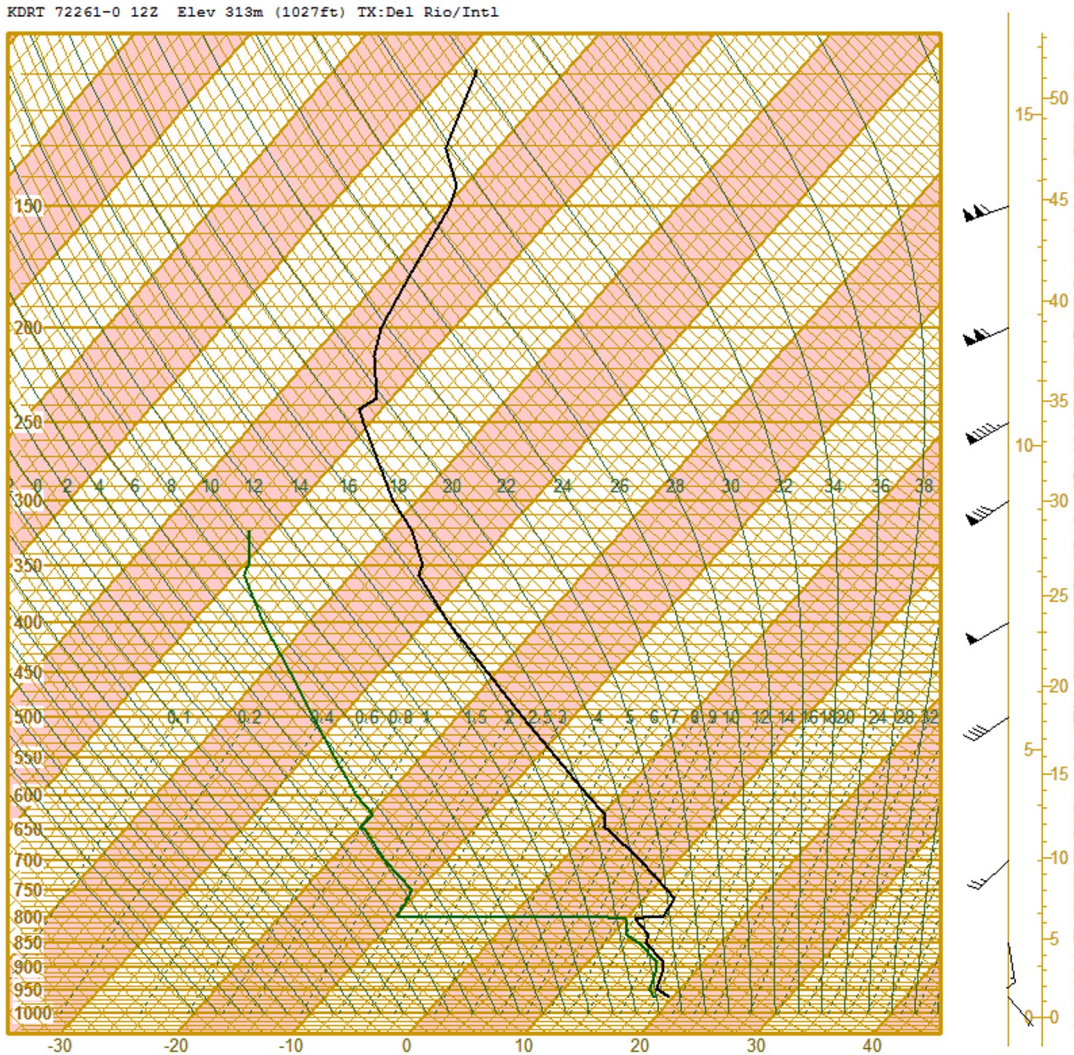
12 Z Fort Worth, TX



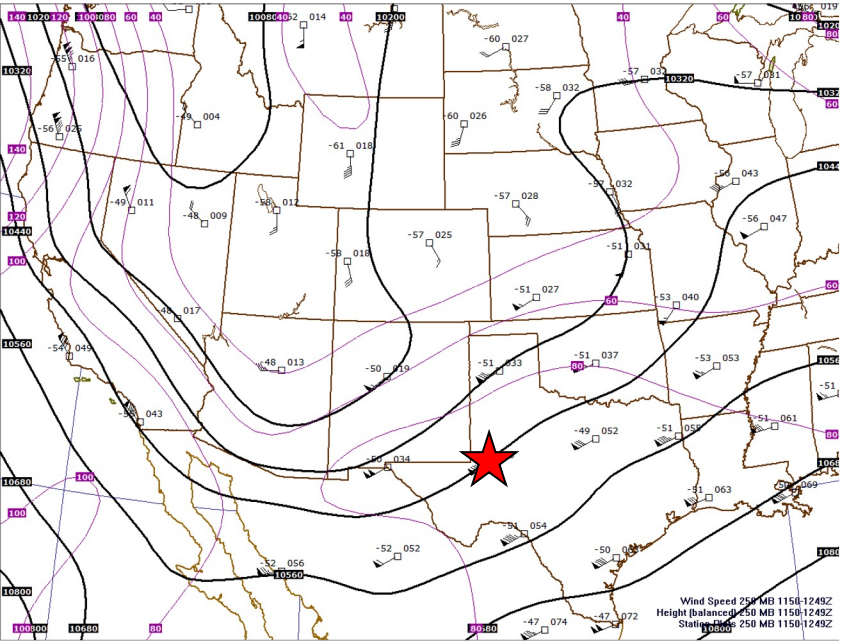


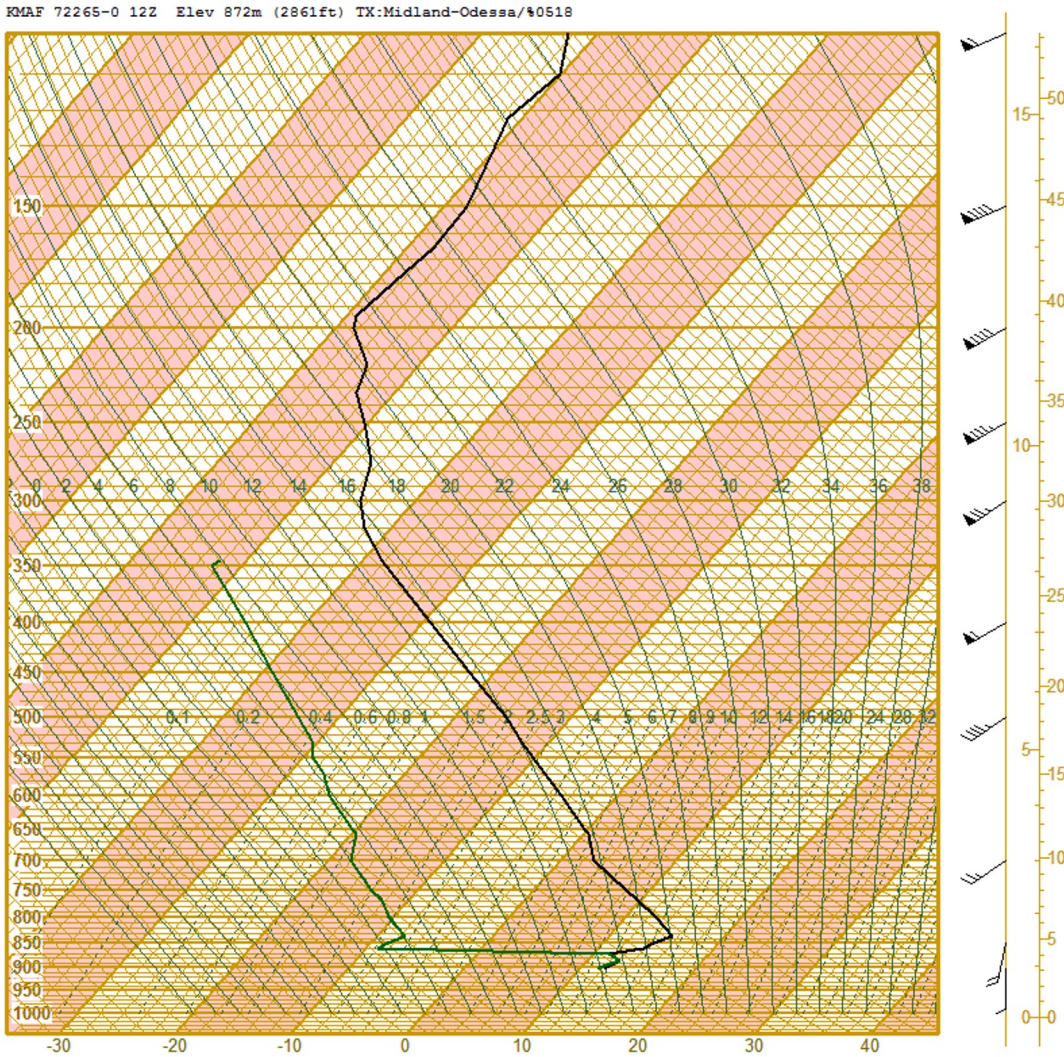
12 Z Del Rio, TX



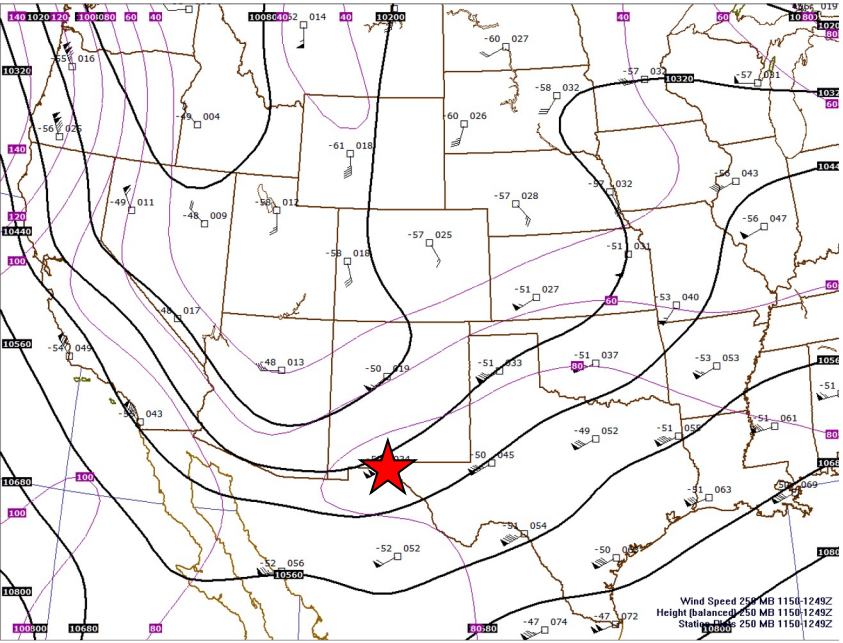


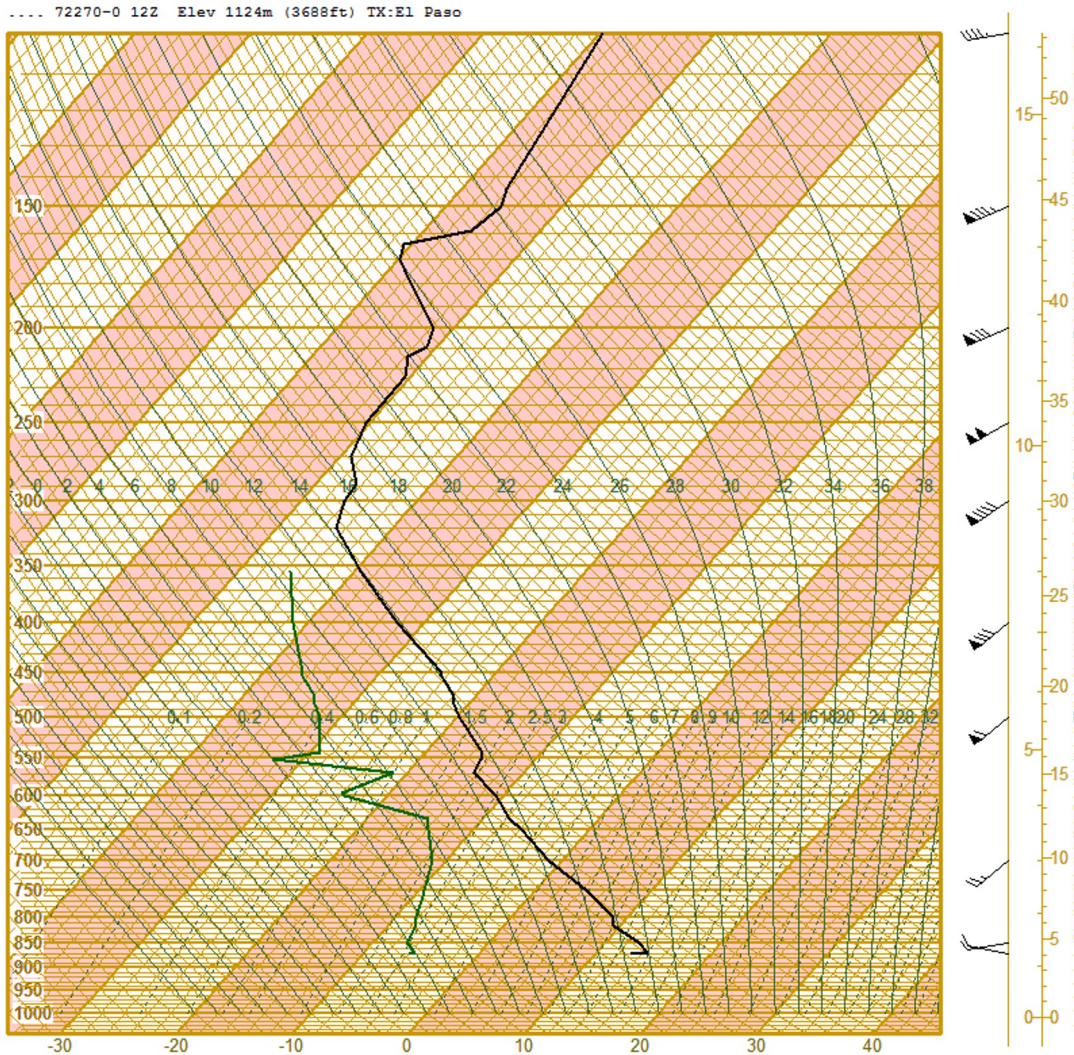
12 Z Midland, TX

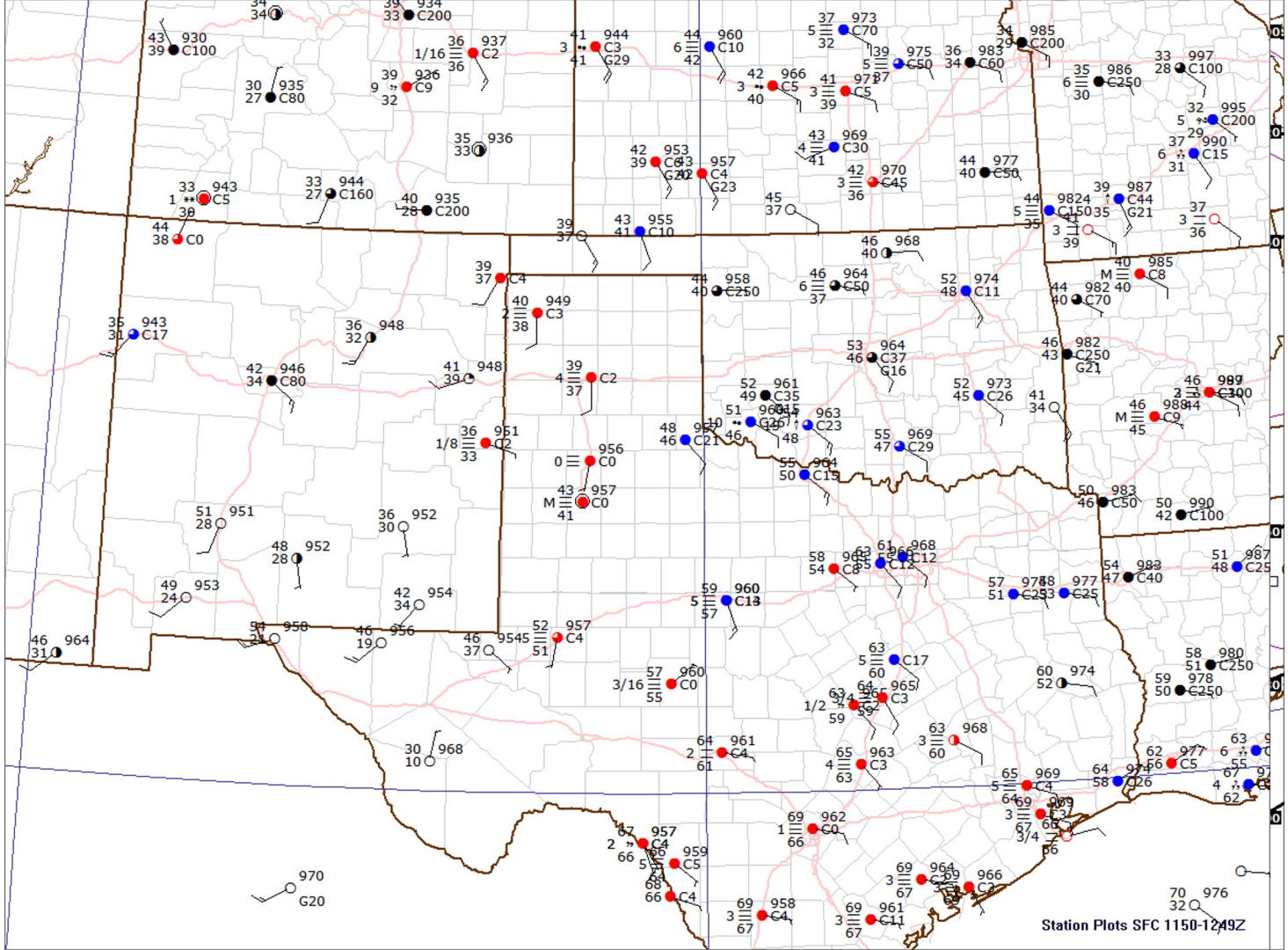




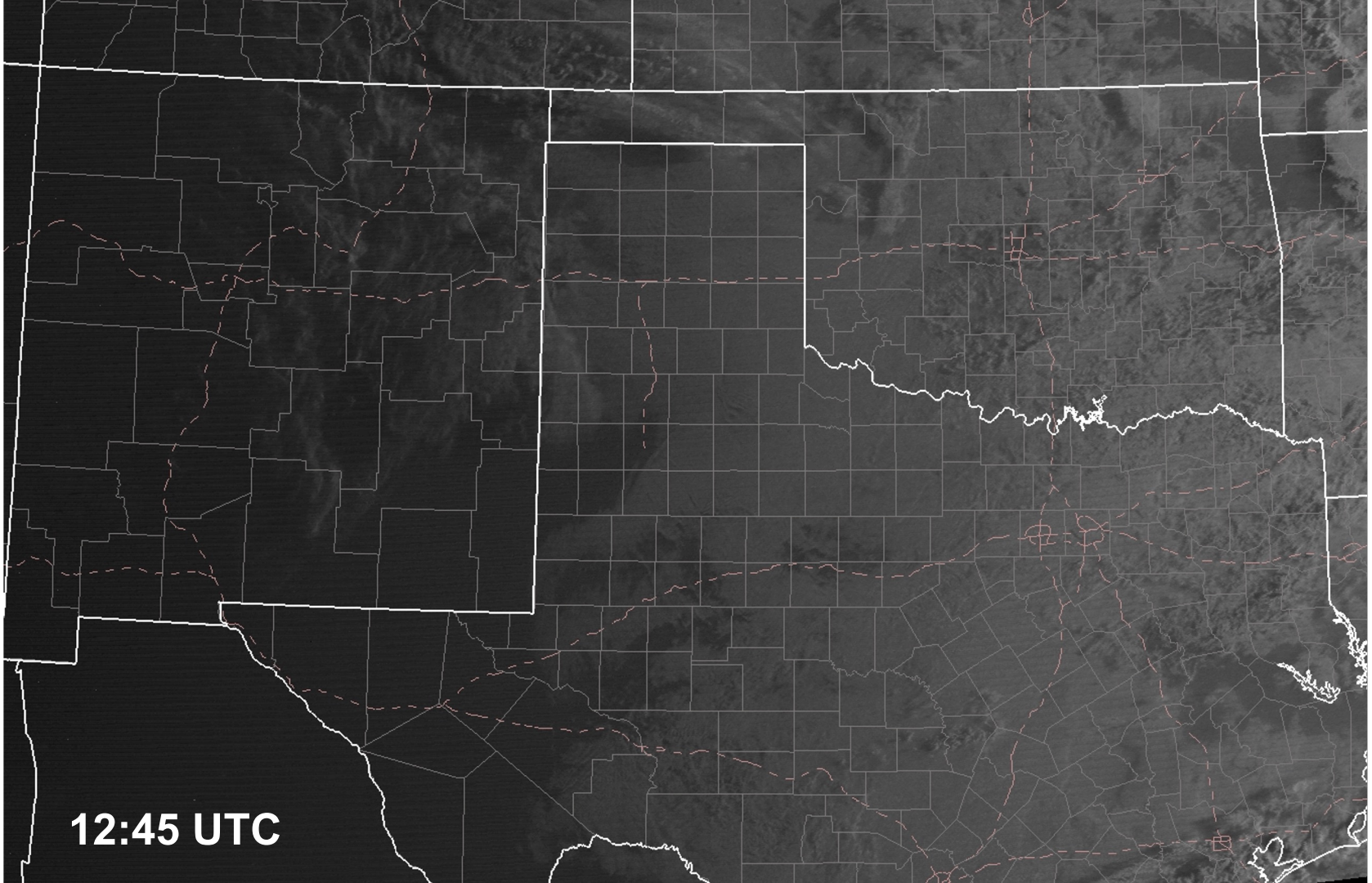
12 Z El Paso, TX







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

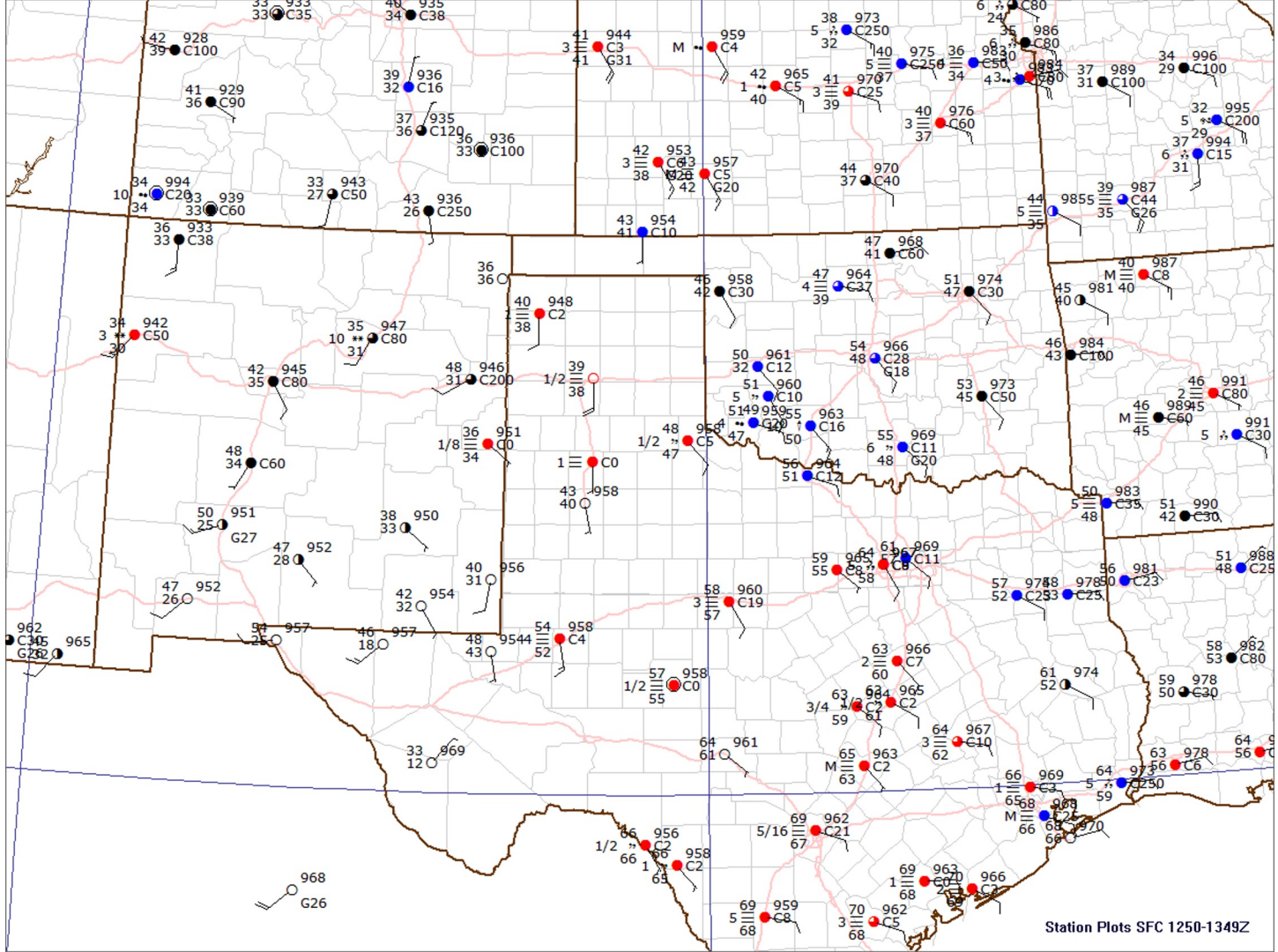
- What is the areal coverage of the threat?
- Are there more than one areas of concern?
- What is the most likely storm mode?
- What is the most likely hazard?
- What will the highest category be?
- How confident are we?

HAND ANALYSIS TIME!

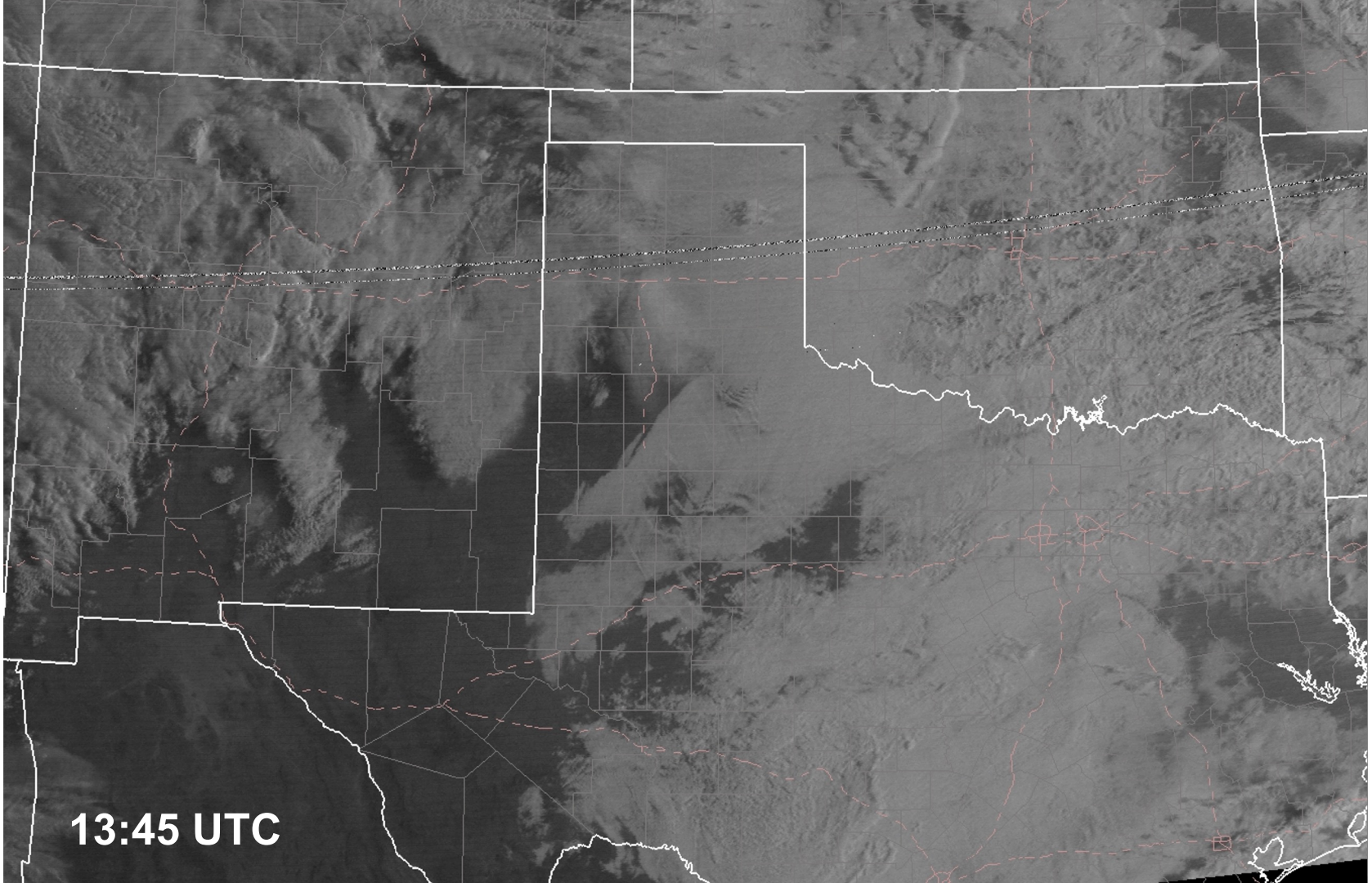
Let’s take the next 10-15 to do a rough hand analysis

Priorities:

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



13:00 UTC

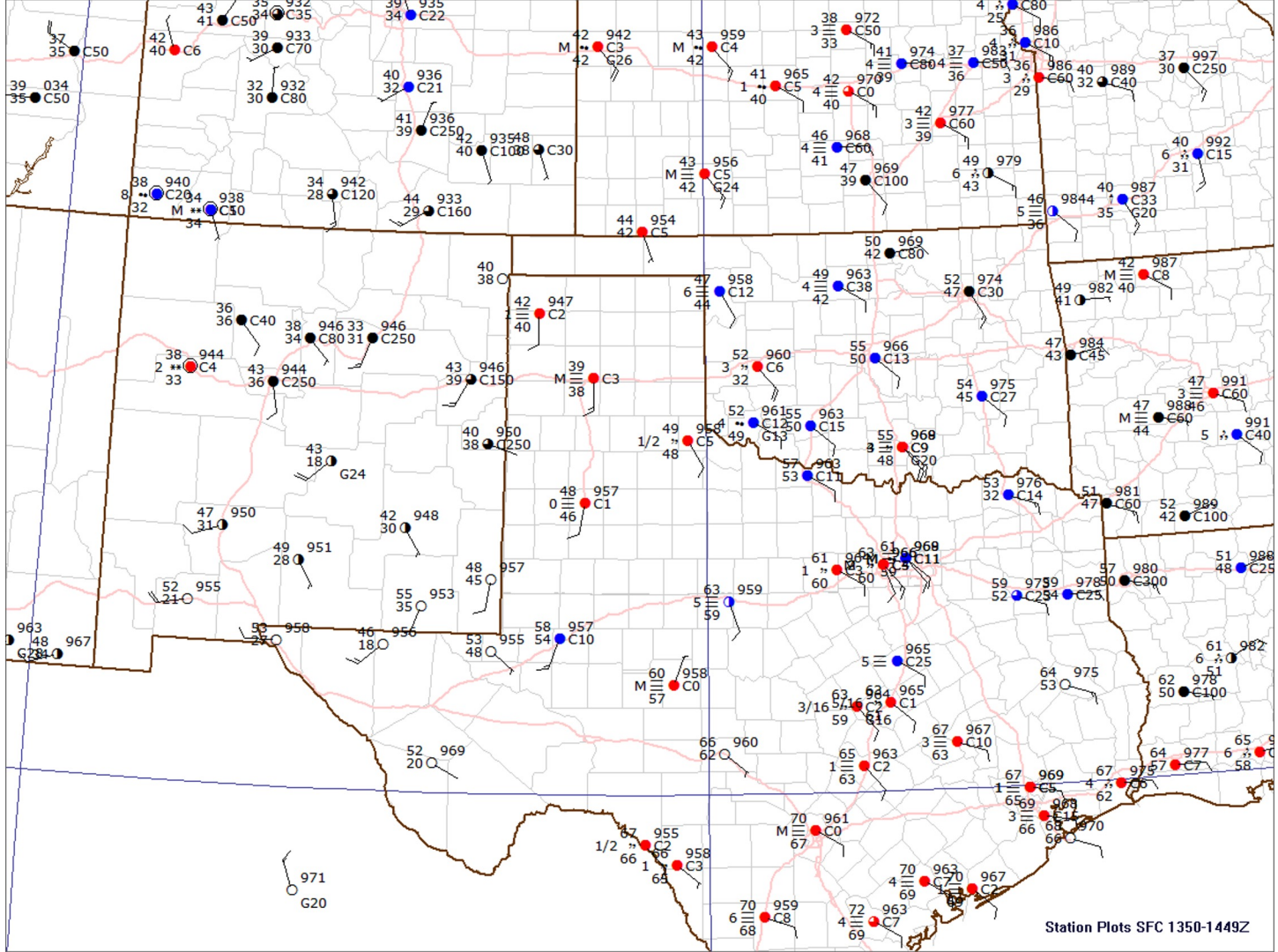

13:45 UTC

14 Z Update

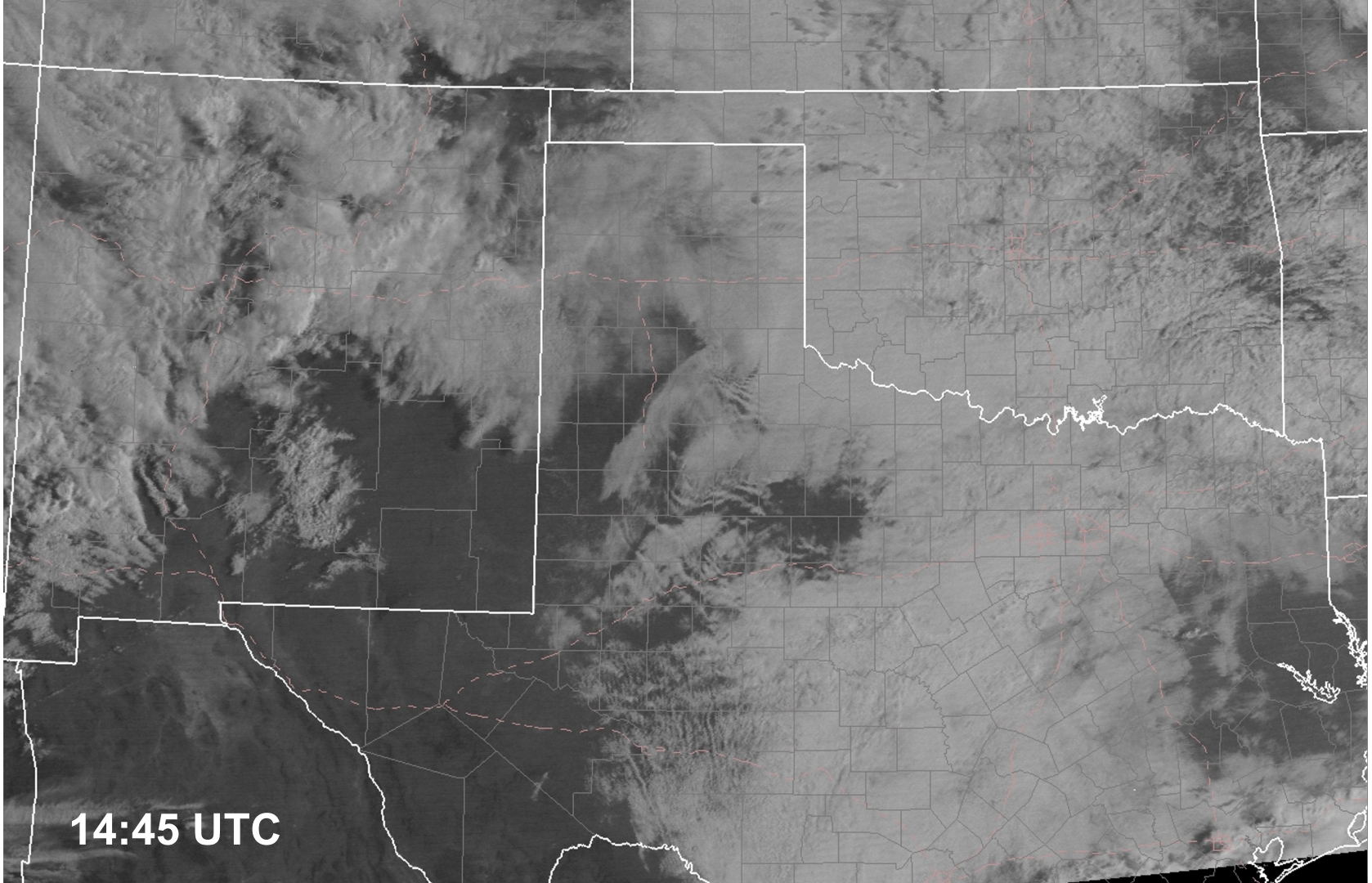
Watch Consideration:

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

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



14:00 UTC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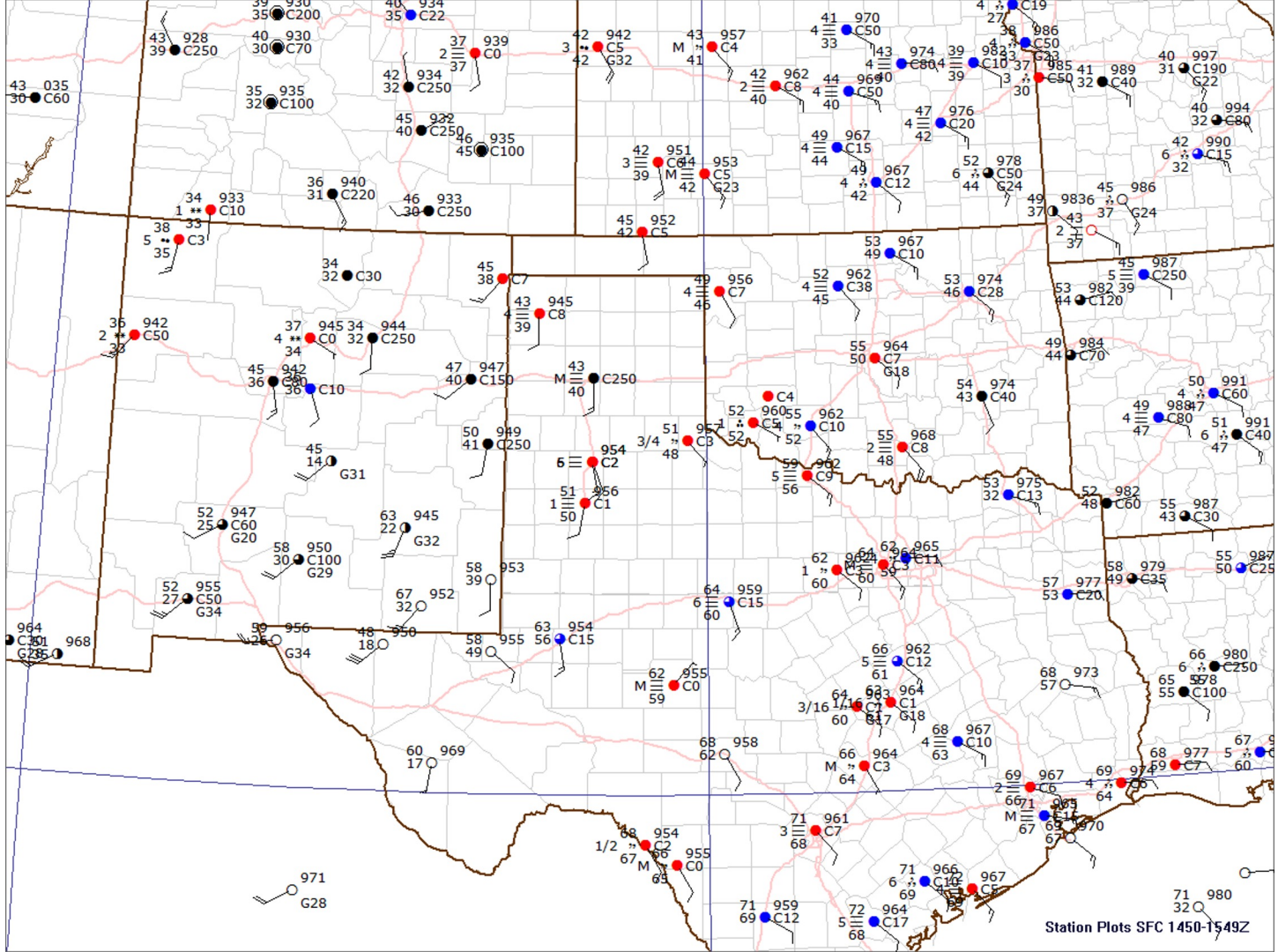
15 Z Update

Watch Consideration:

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

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



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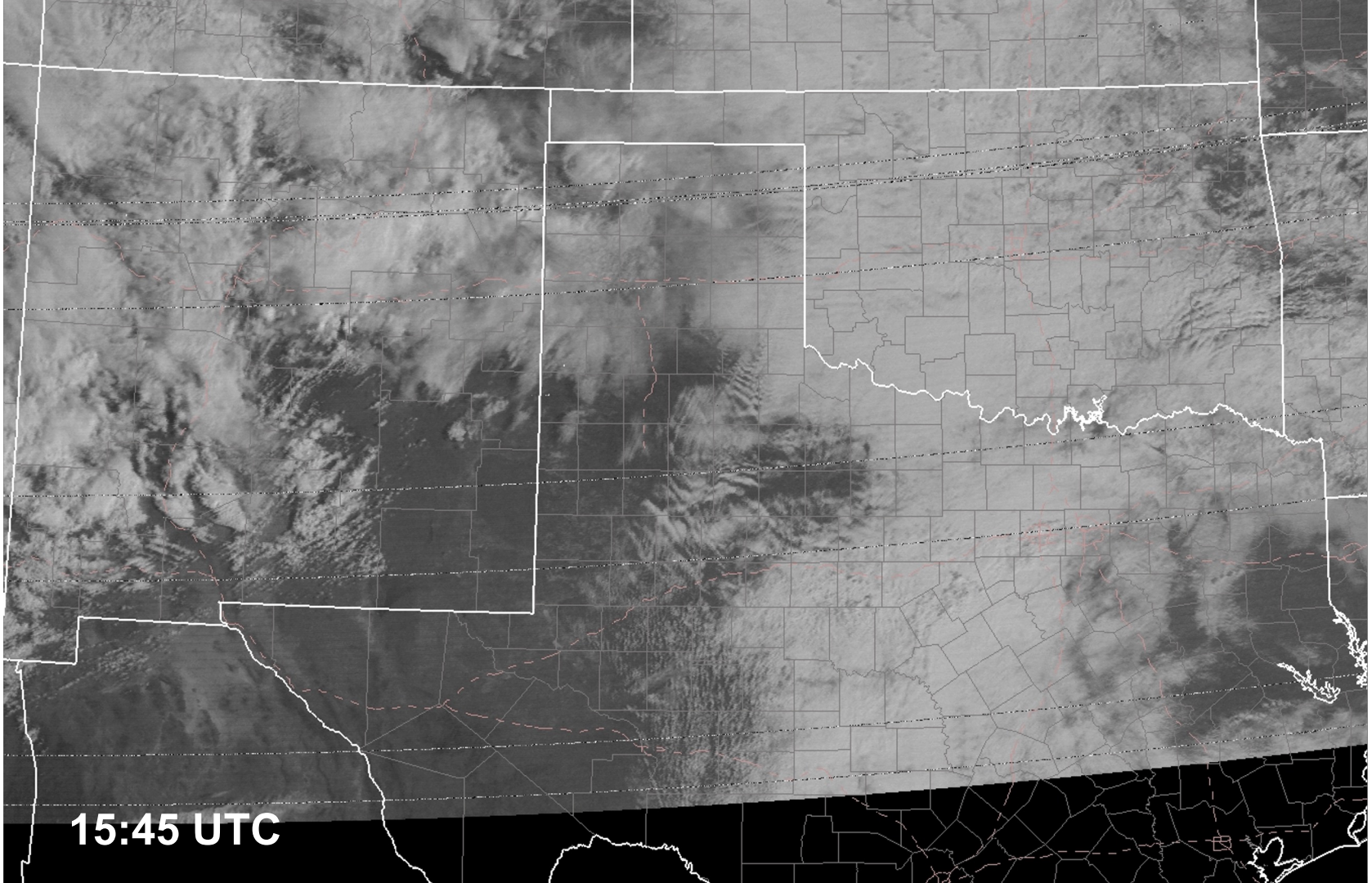
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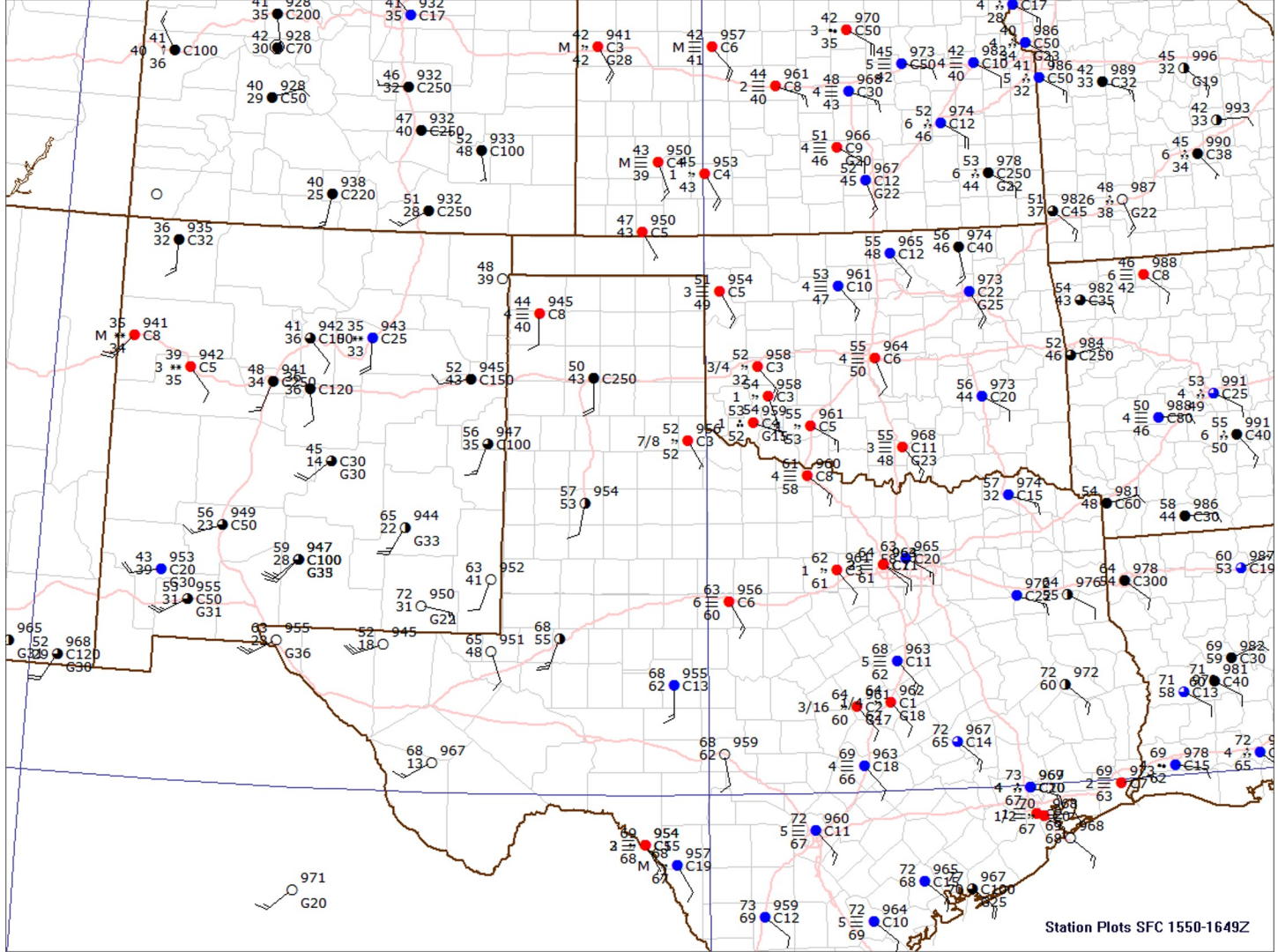
16 Z Update

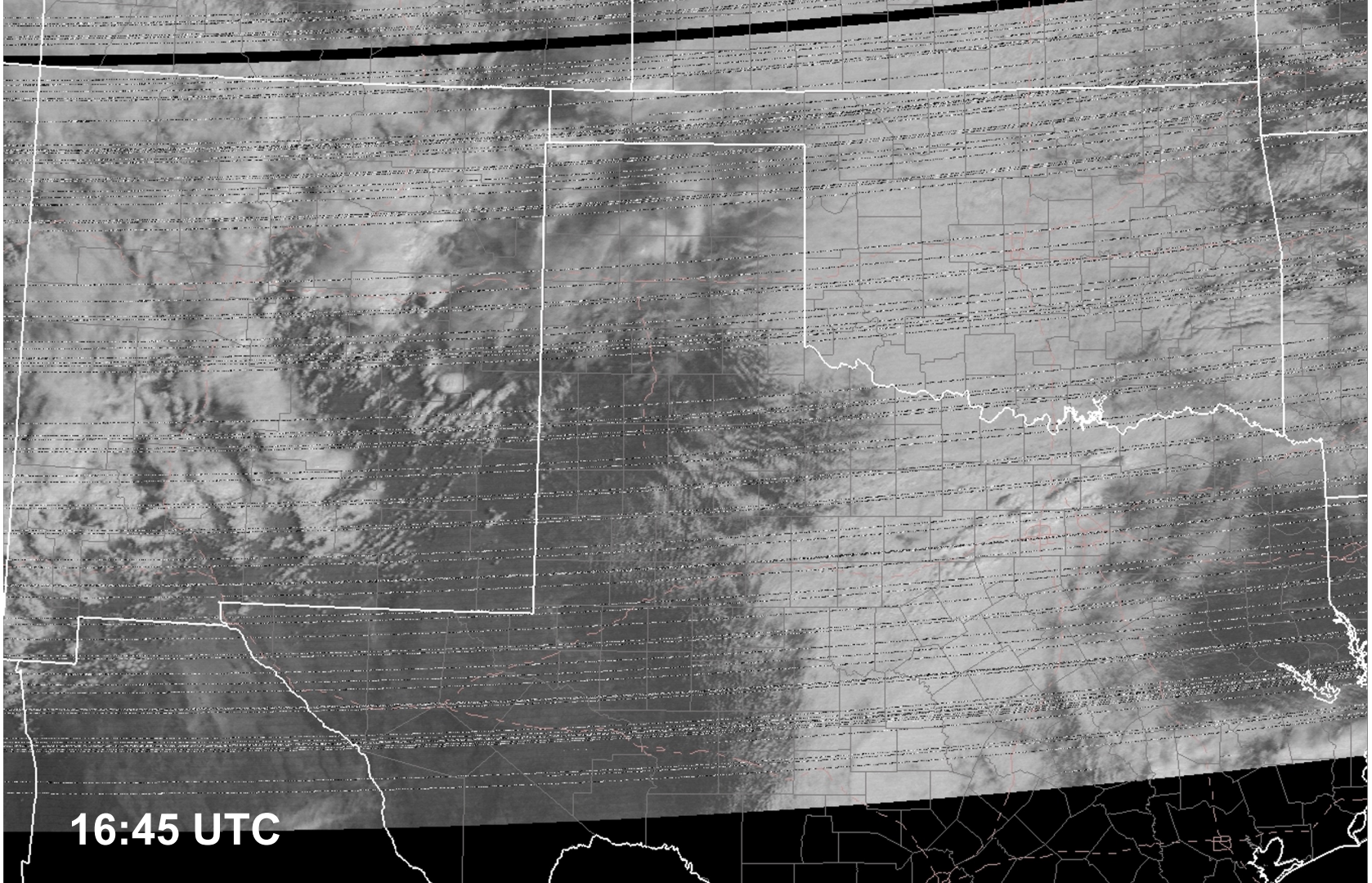
Watch Consideration:

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

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



16:00 UTC


16:45 UTC

1630 Outlook Update

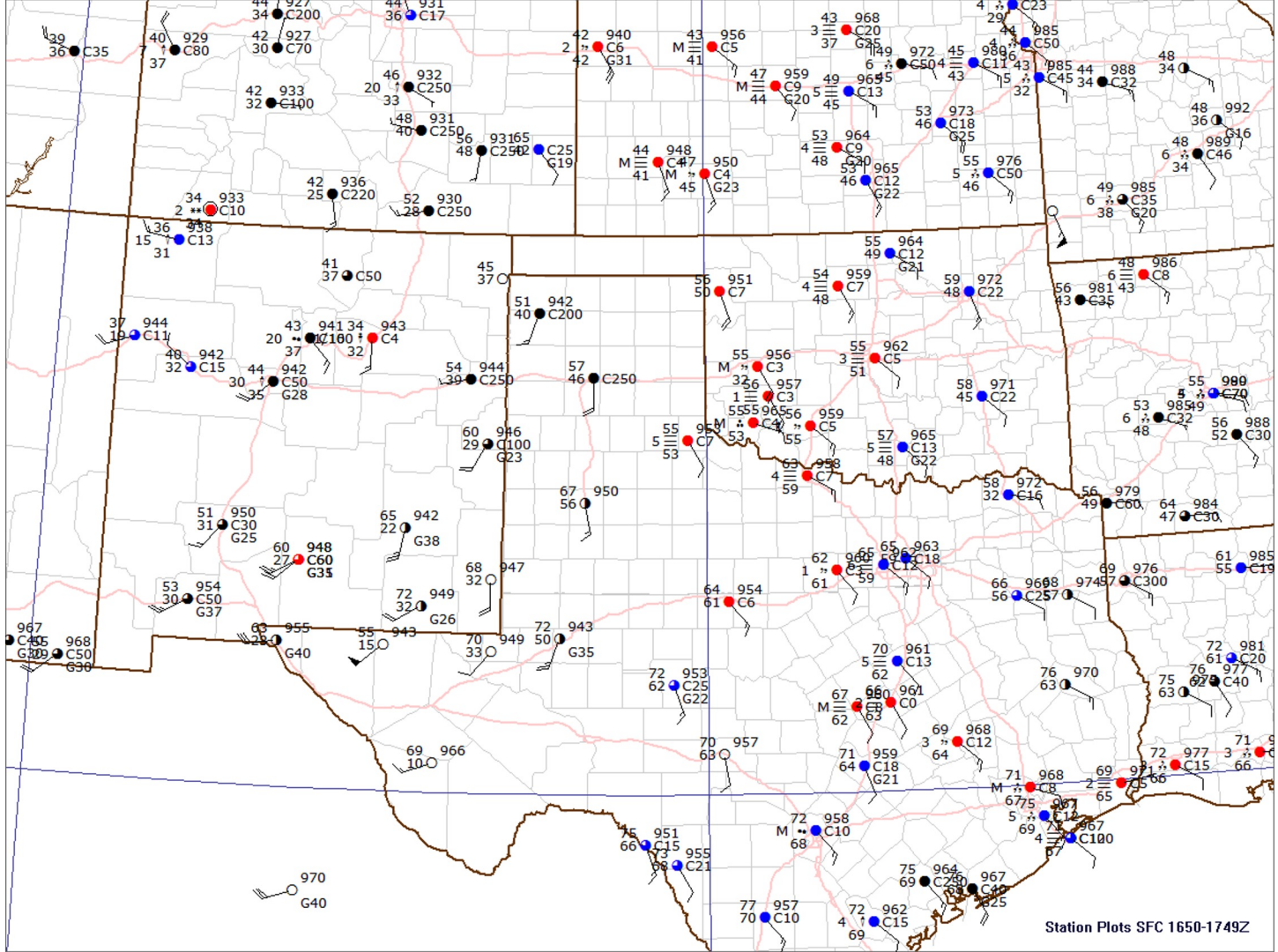
Based off the recent trends, do we need to adjust the outlook?

17 Z Update

<u>Watch Consideration:</u>

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

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



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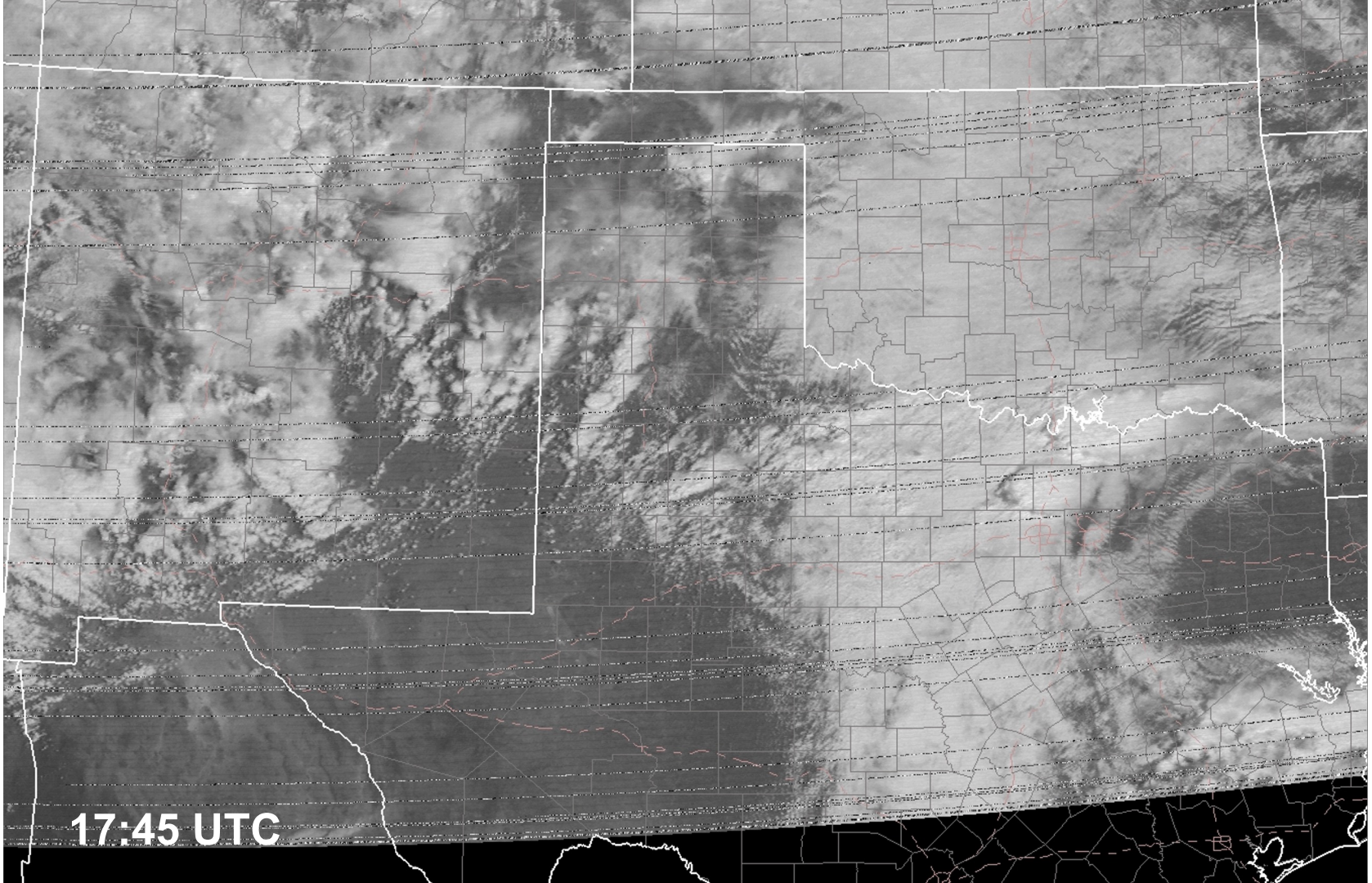
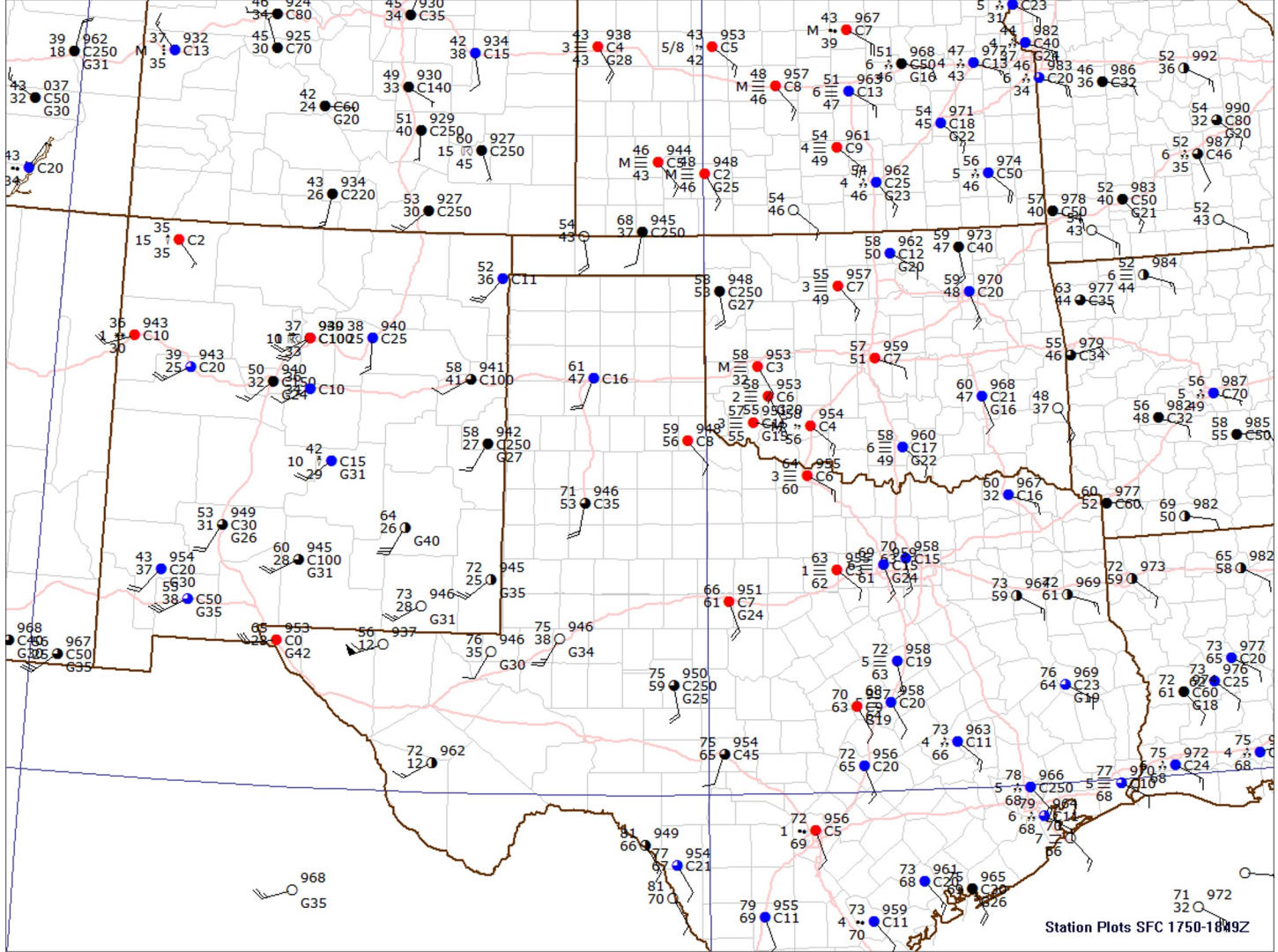

17:45 UTC

18 Z Update

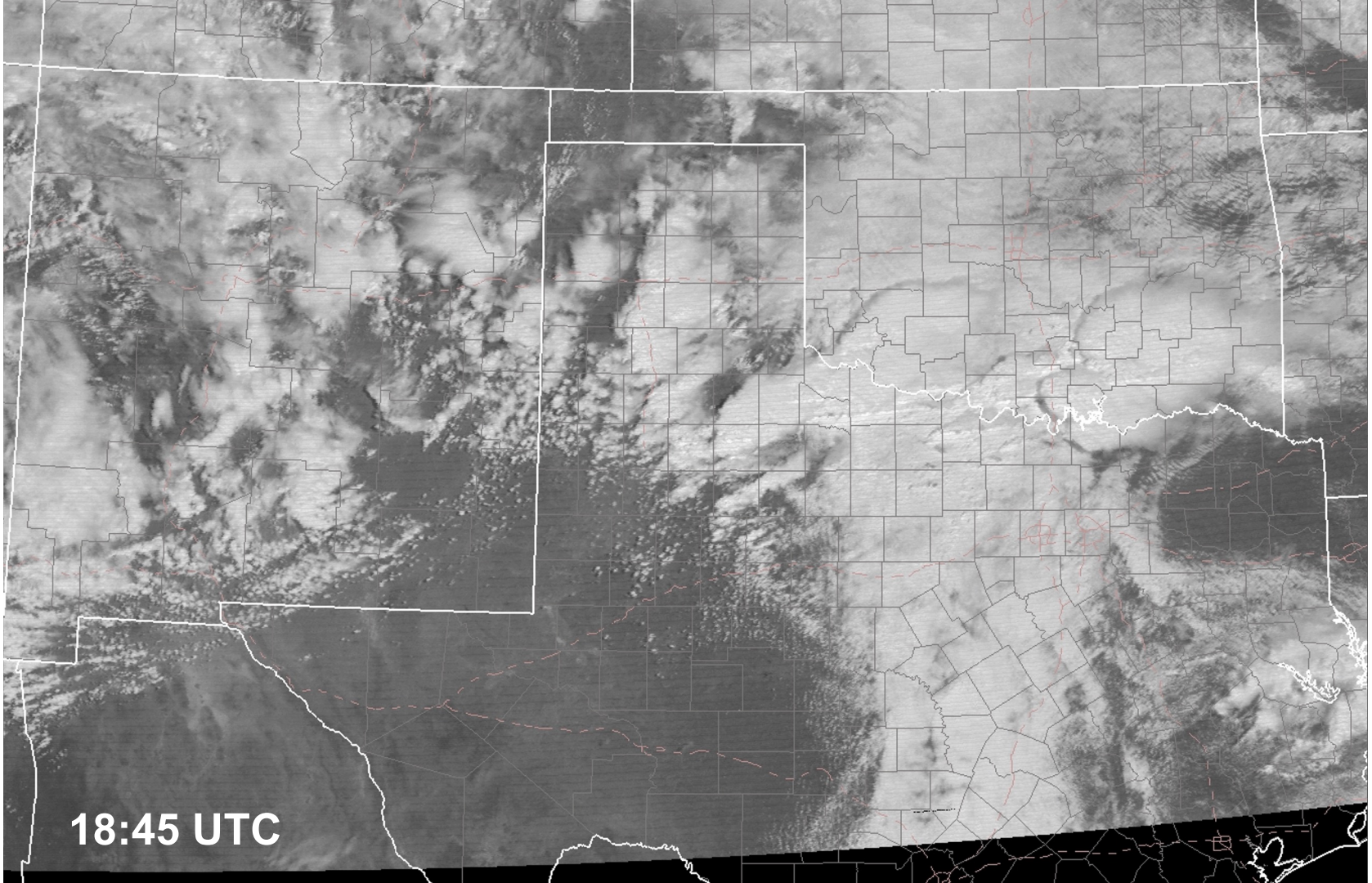
Watch Consideration:

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

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



18:00 UTC

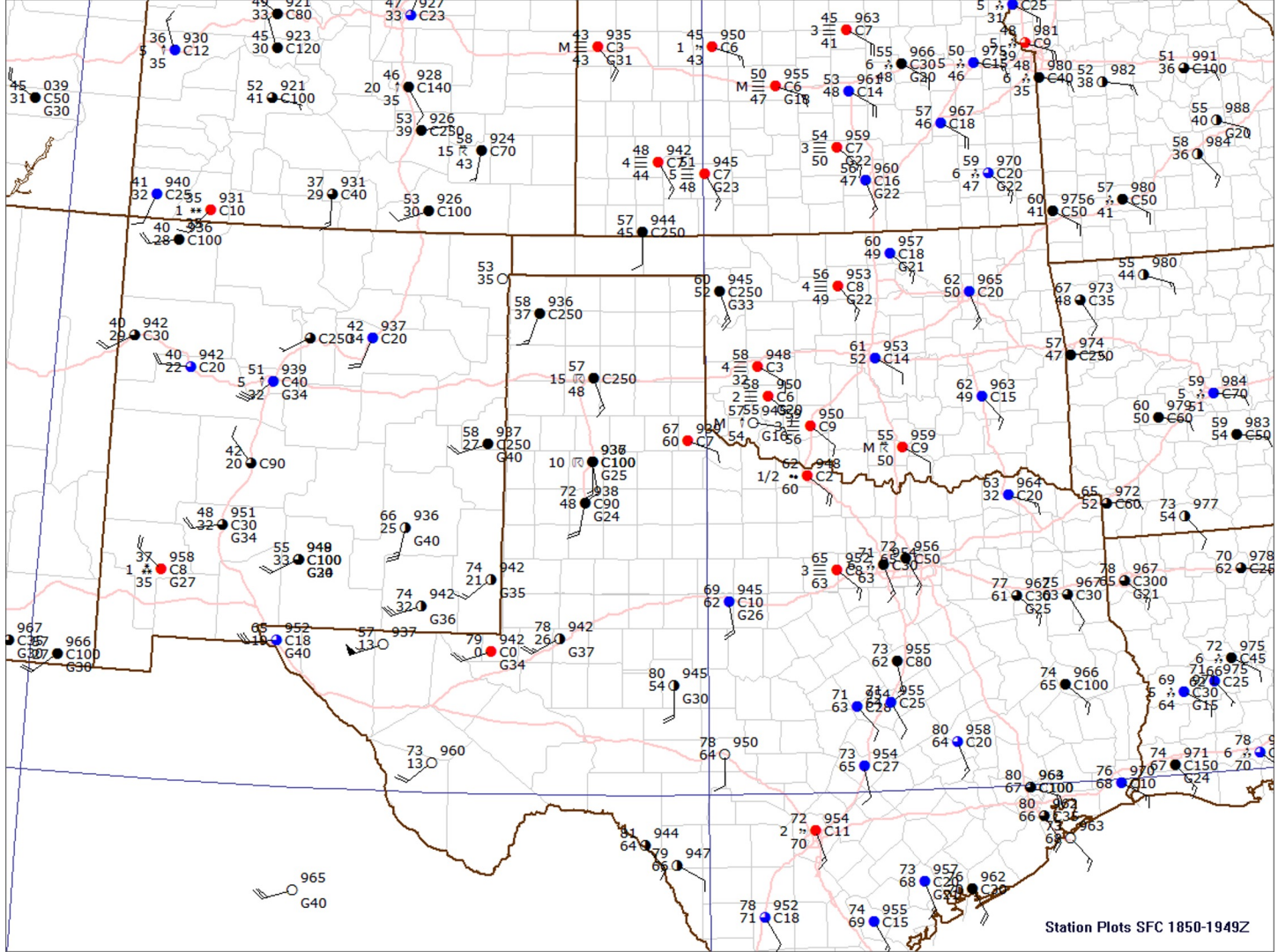

18:45 UTC

19 Z Update

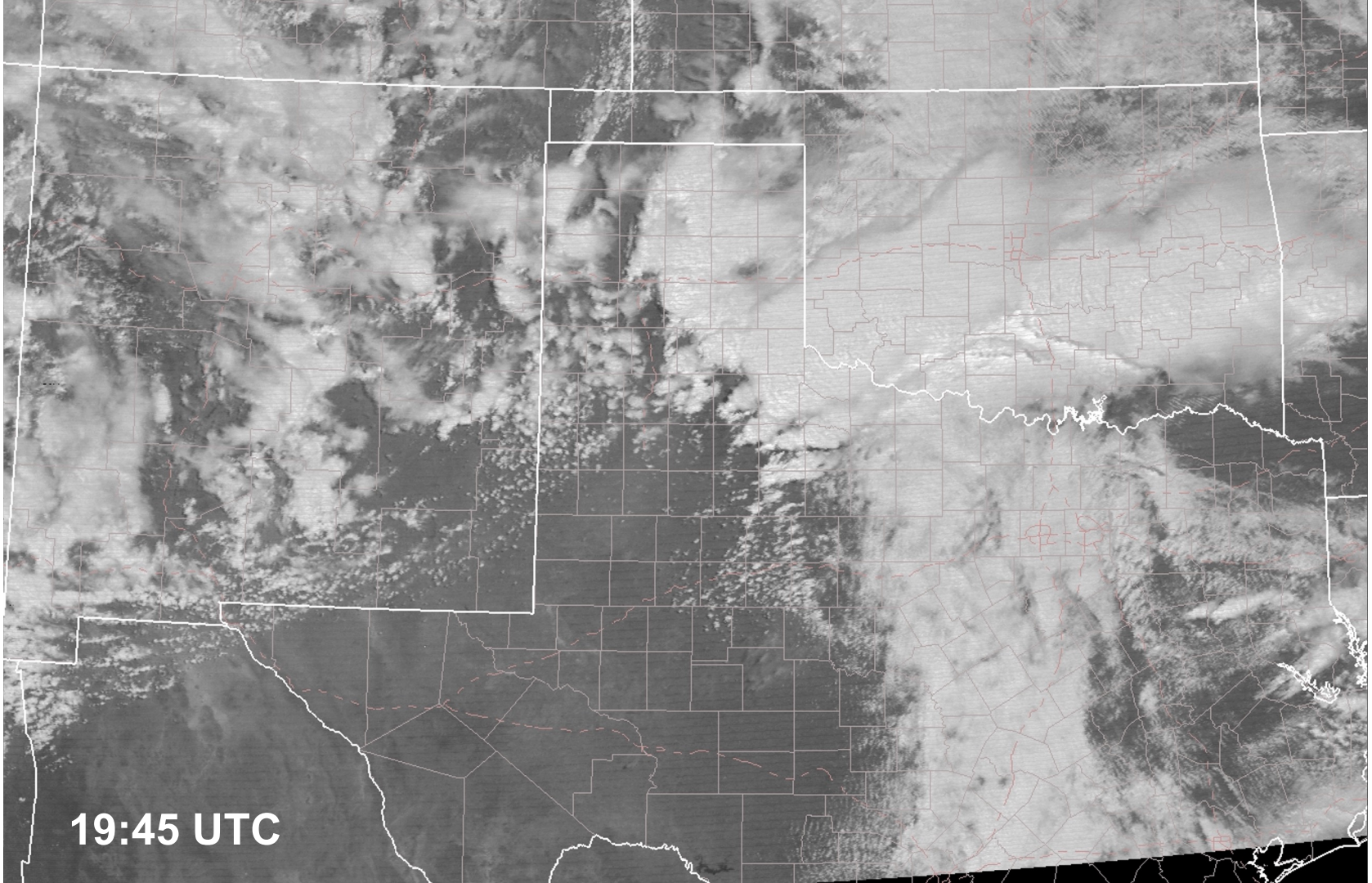
Watch Consideration:

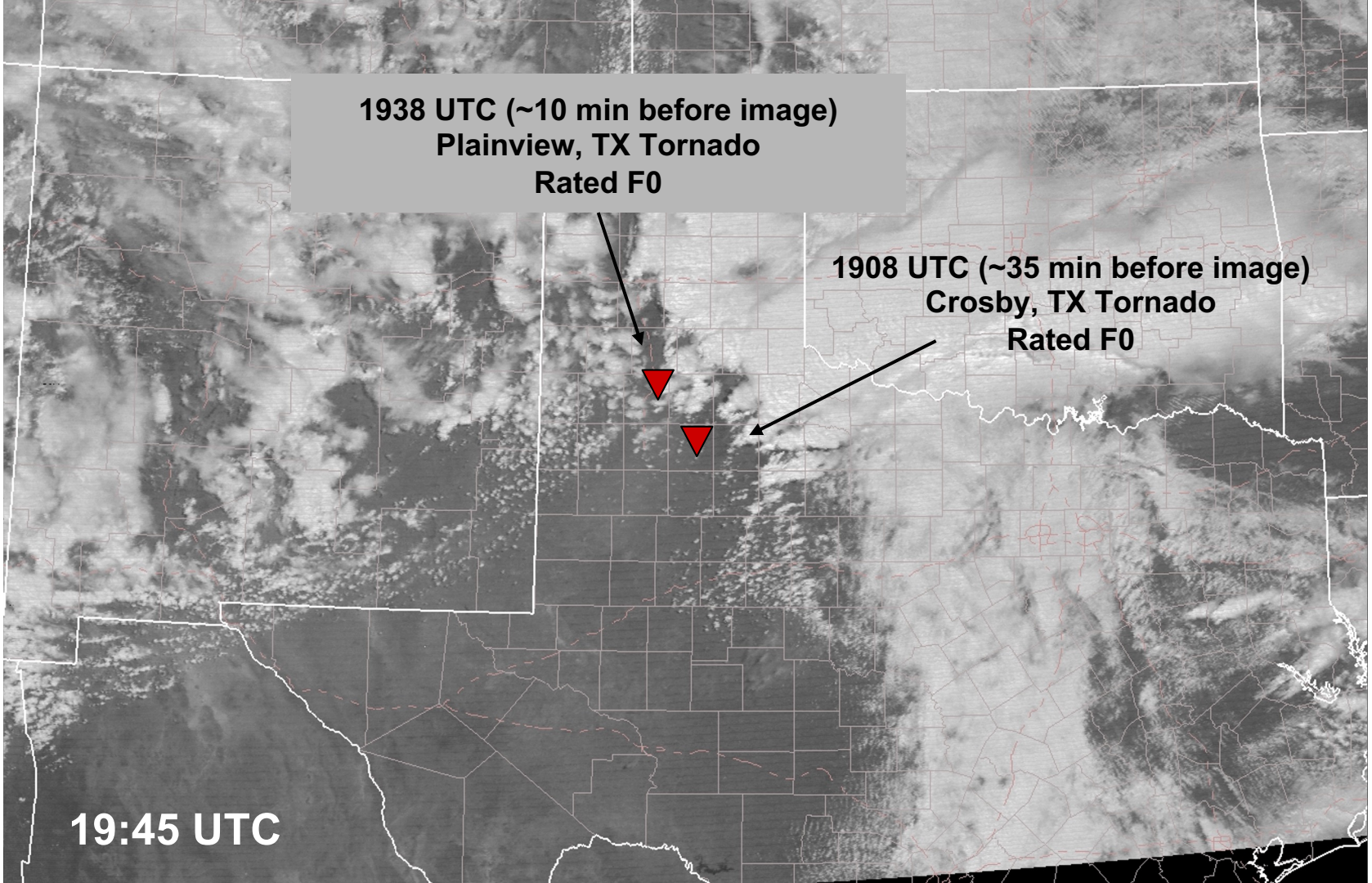
- When to start?
- When to end?
- What Type?

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



19:00 UTC


19:45 UTC

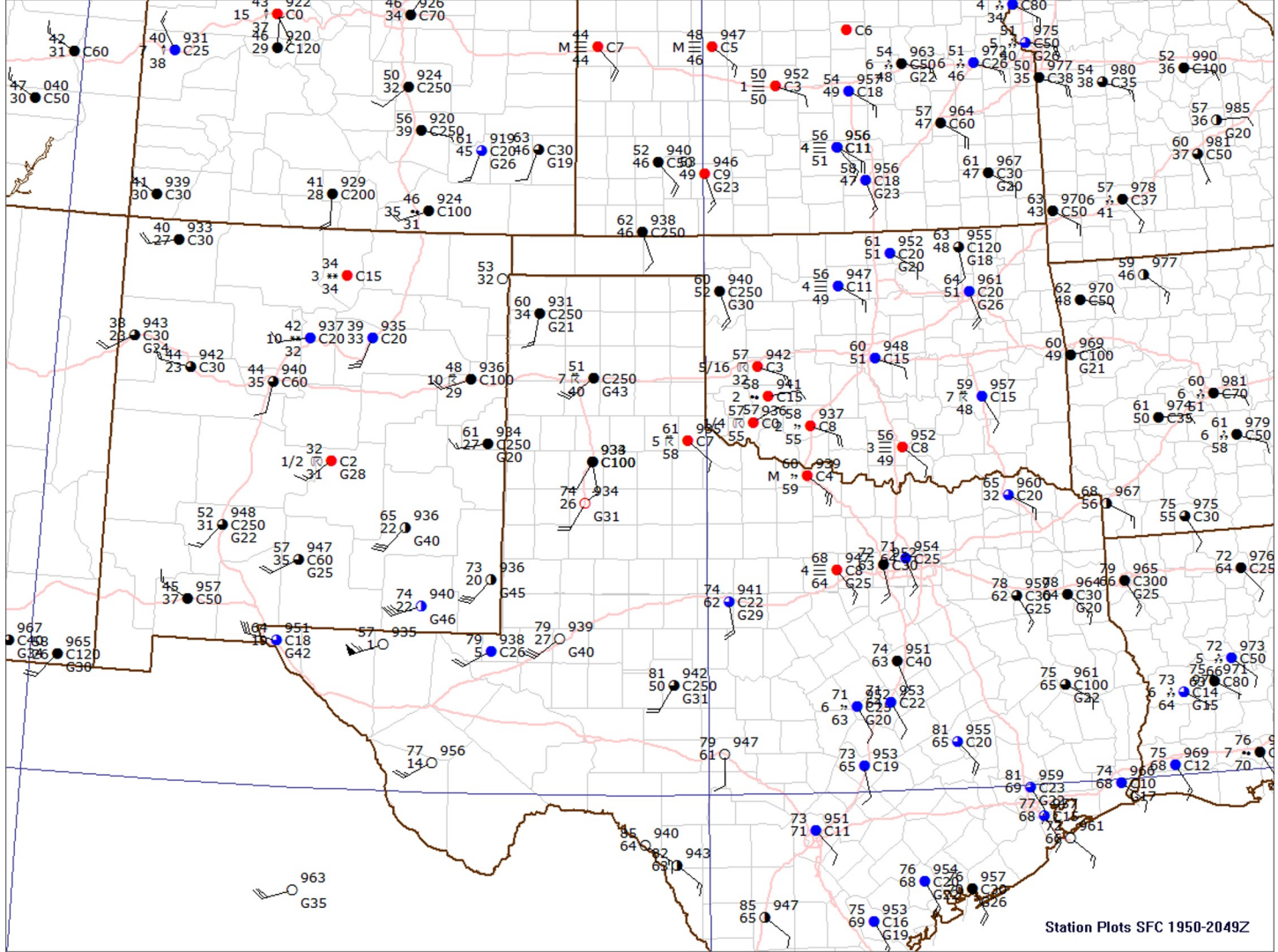

1938 UTC (~10 min before image)
Plainview, TX Tornado
Rated F0
1908 UTC (~35 min before image)
Crosby, TX Tornado
Rated F0
19:45 UTC

20 Z Update

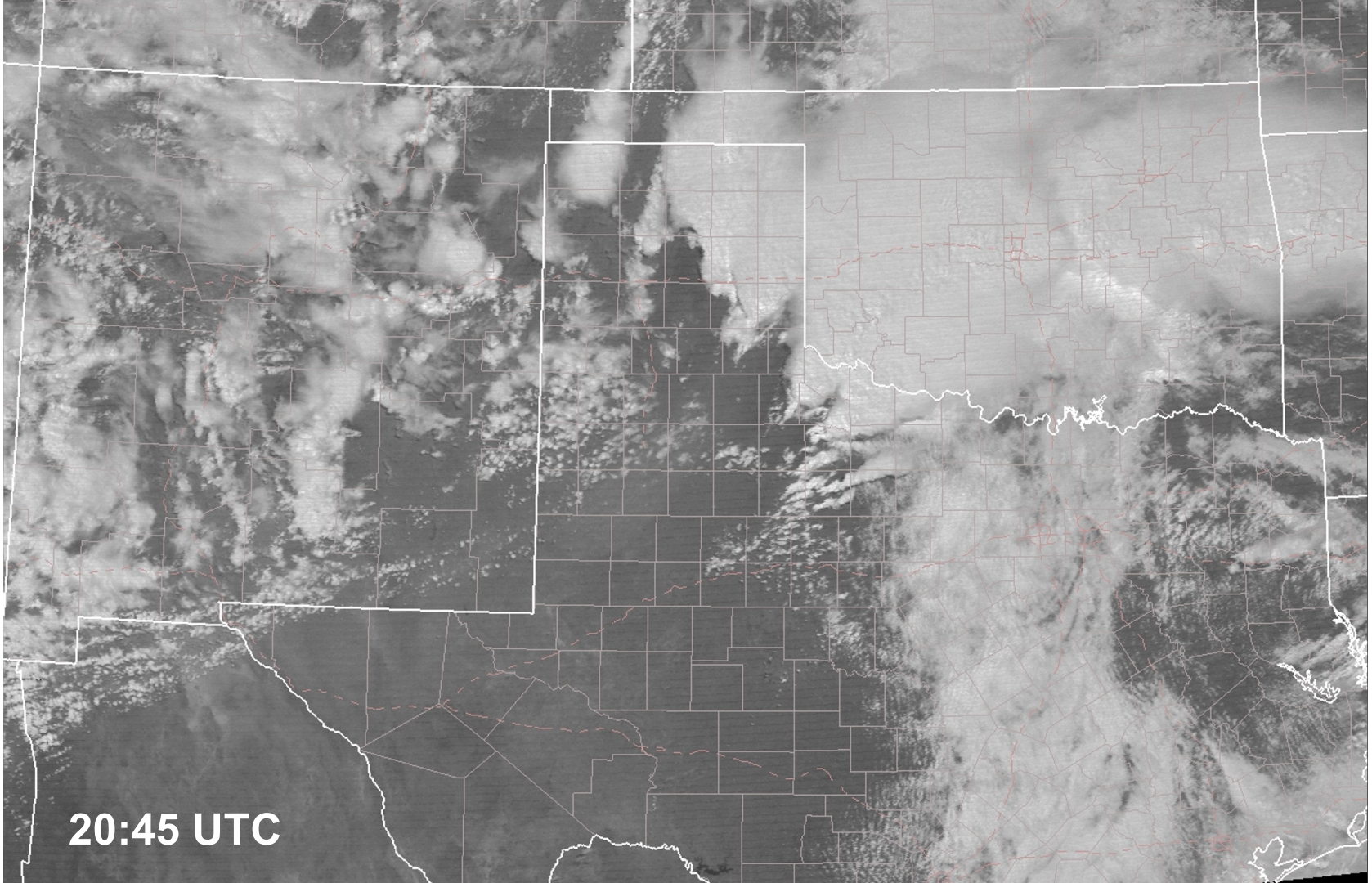
Watch Consideration:

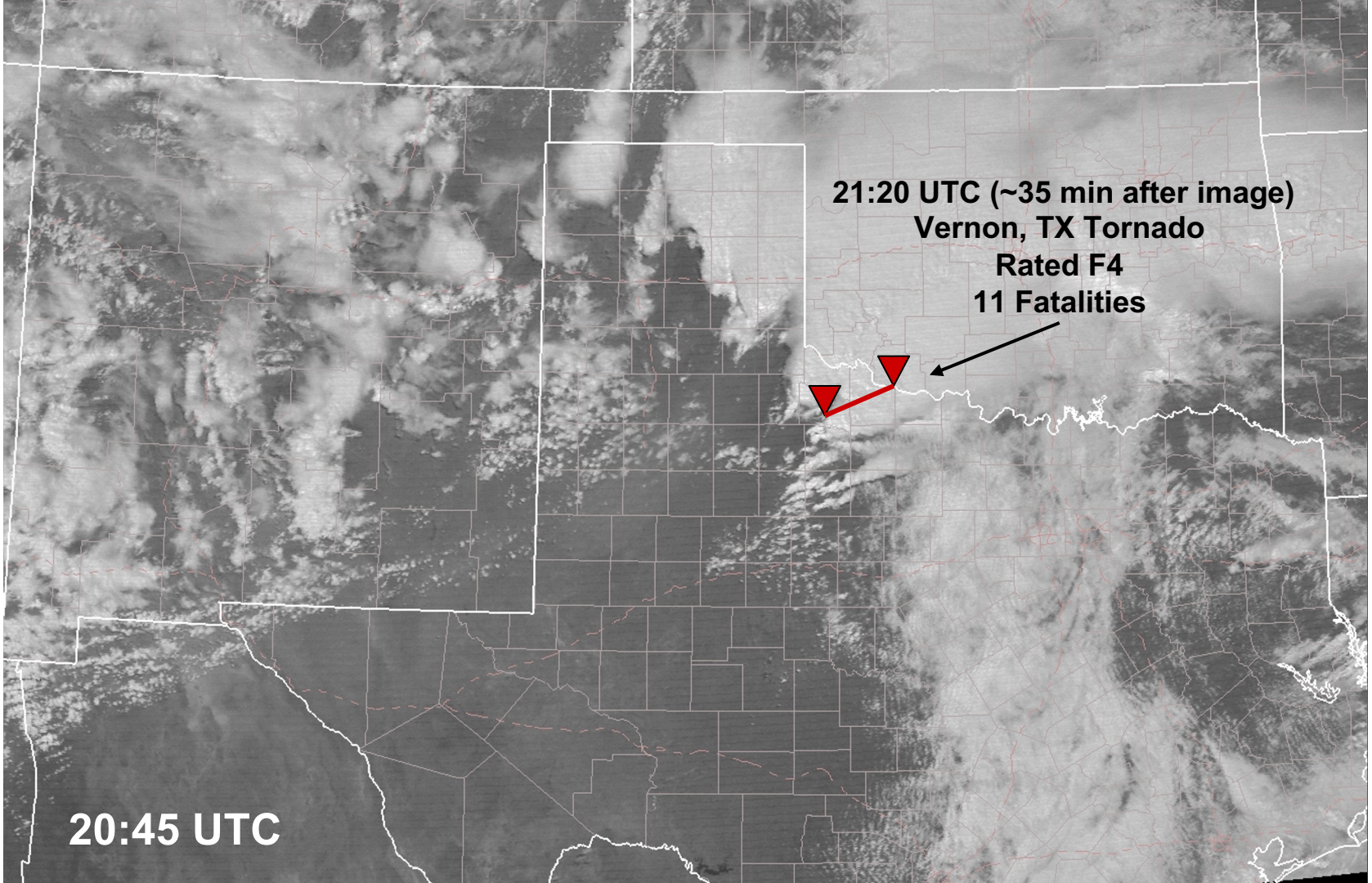
- When to start?
- When to end?
- What Type?

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



20:00 UTC


20:45 UTC

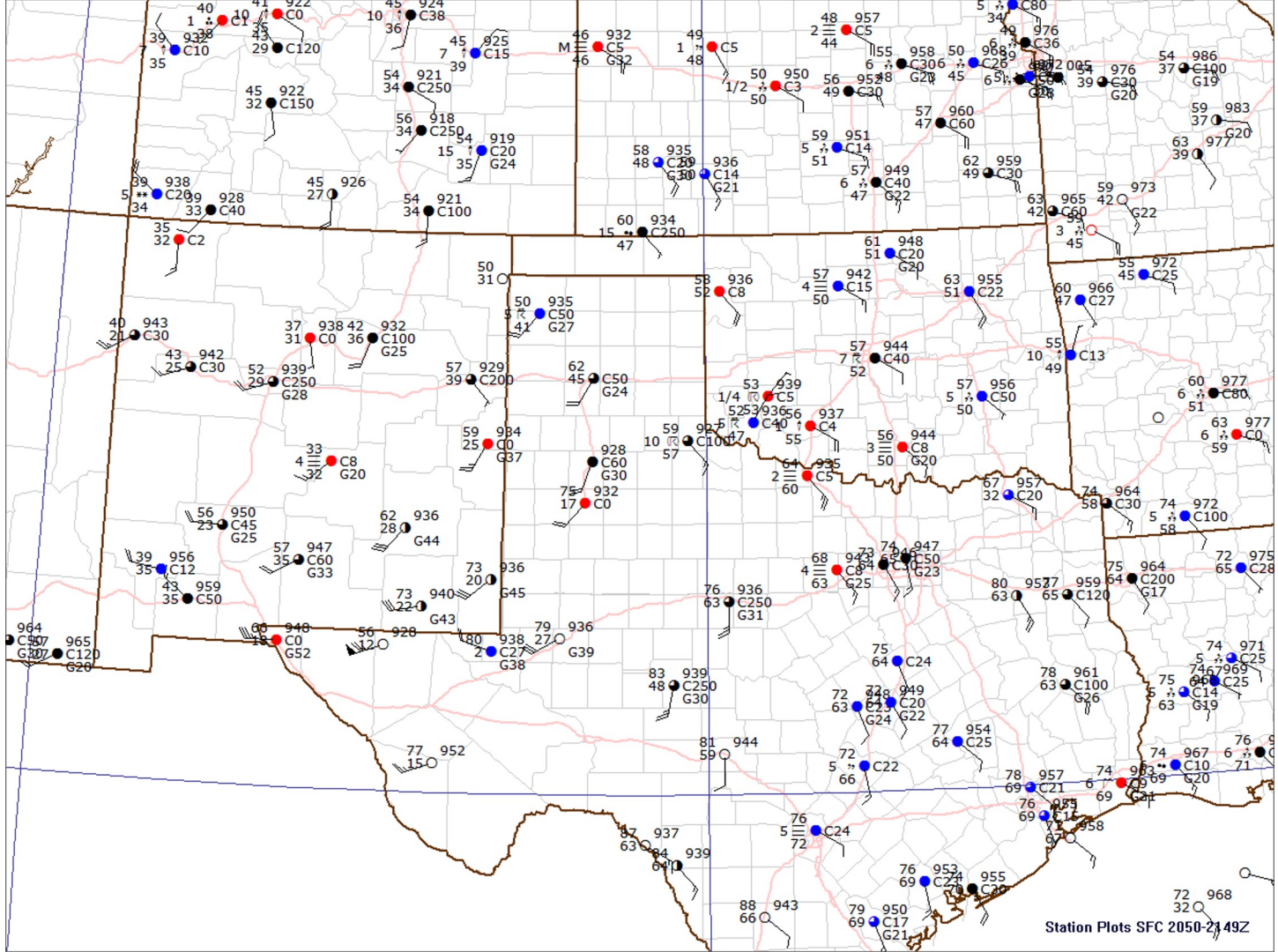

21:20 UTC (~35 min after image)
Vernon, TX Tornado
Rated F4
11 Fatalities
20:45 UTC

21 Z Update

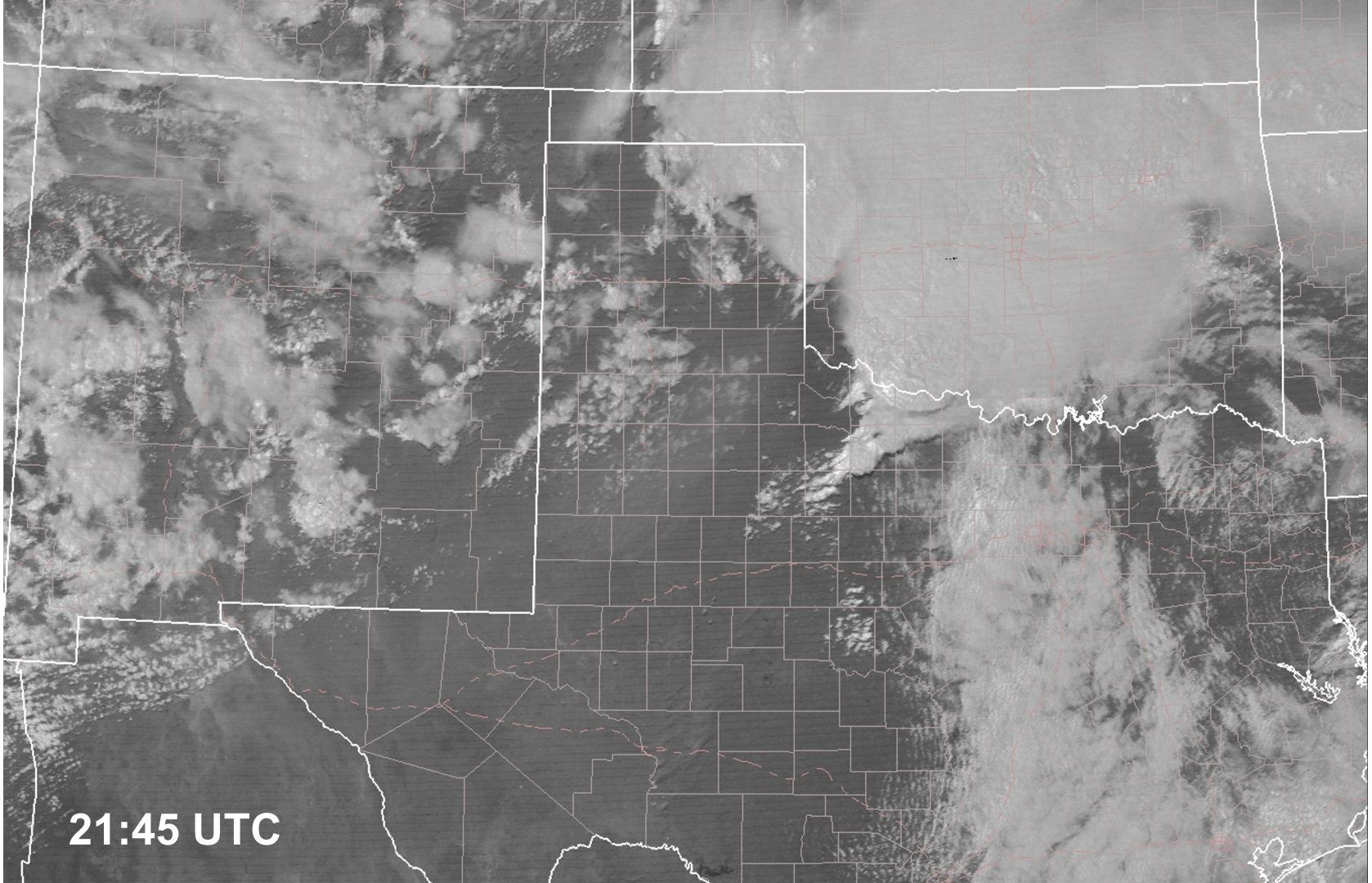
Watch Consideration:

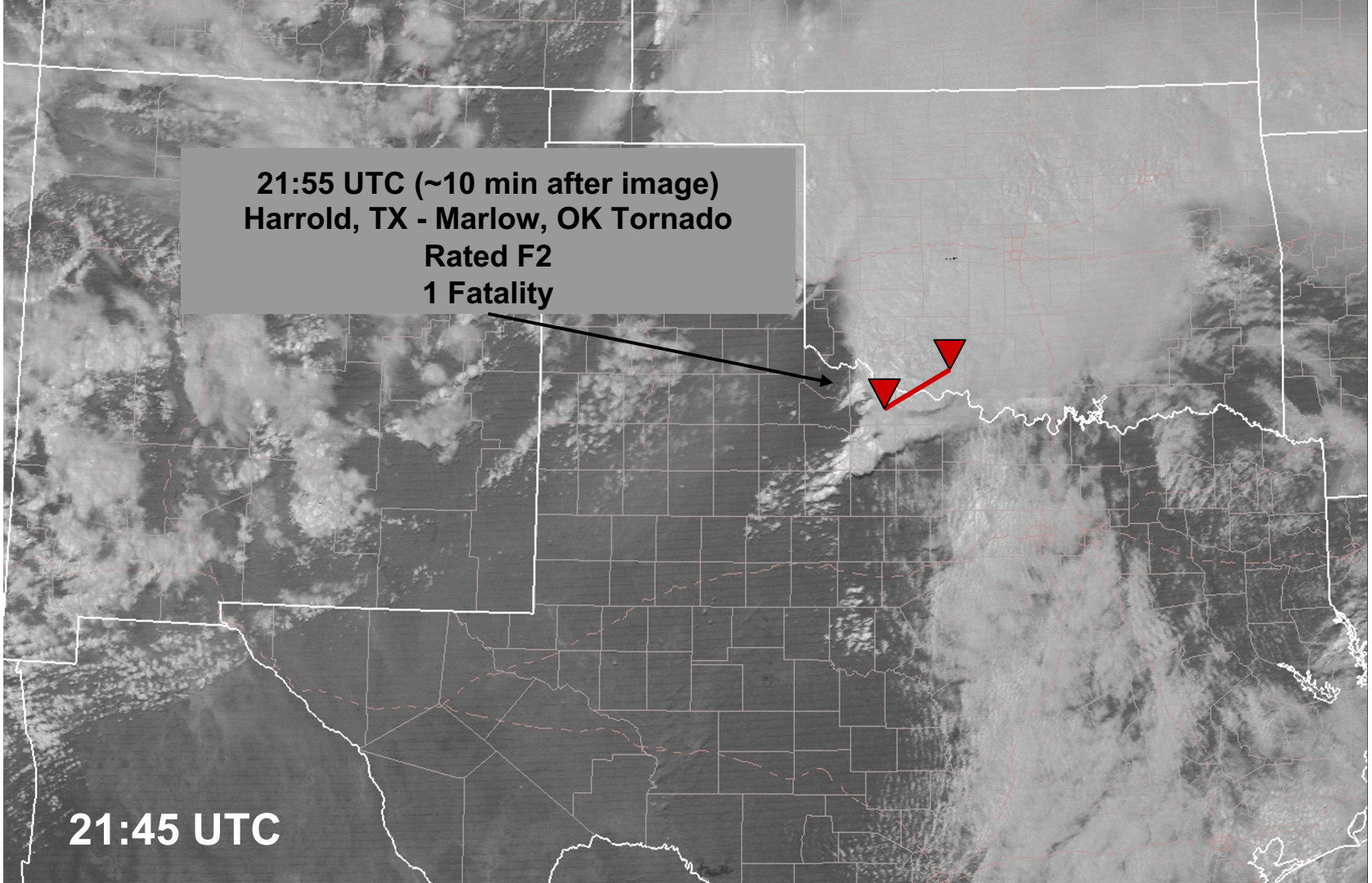
- When to start?
- When to end?
- What Type?

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



21:00 UTC


21:45 UTC

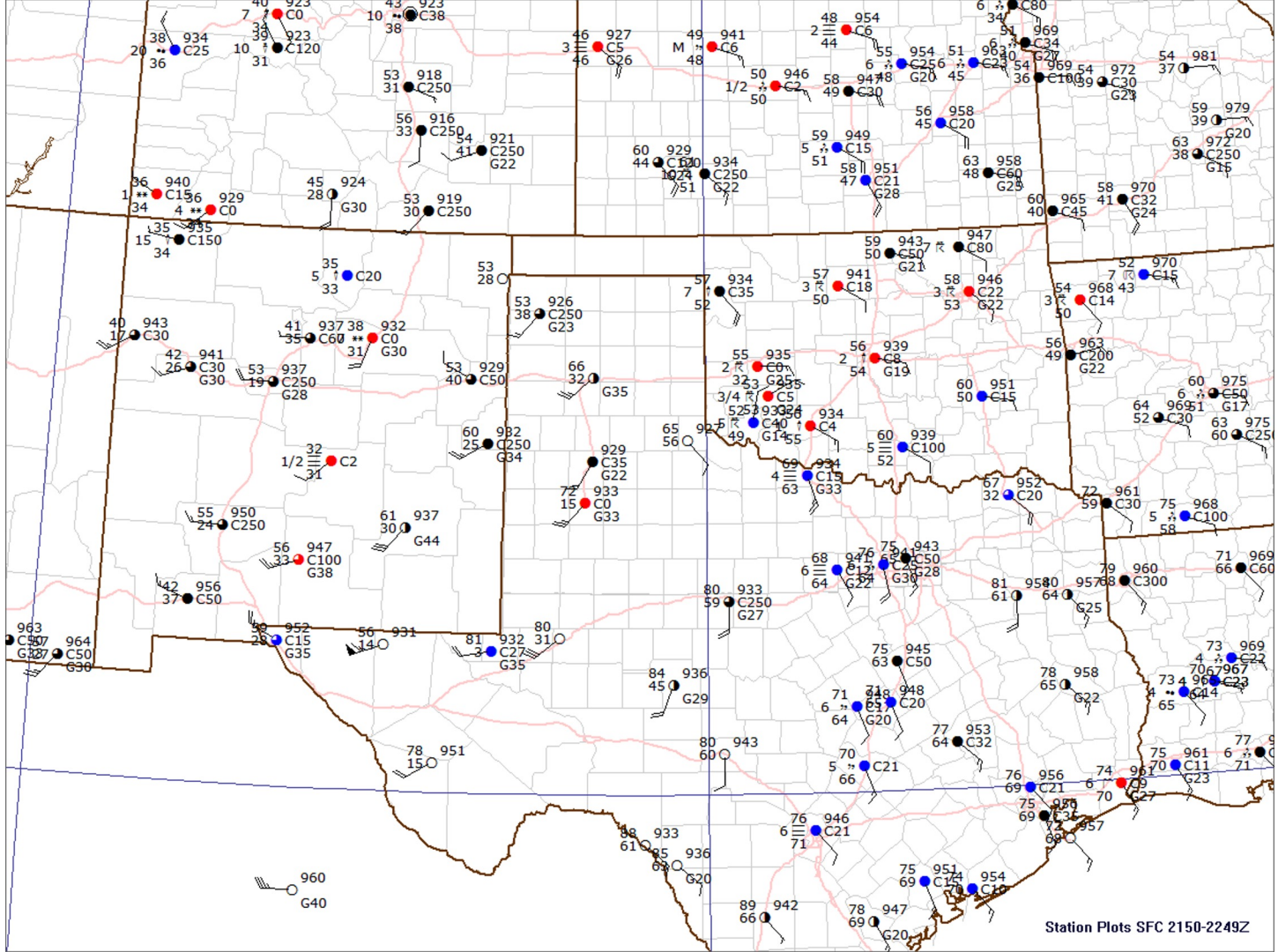

21:55 UTC (~10 min after image)
Harrold, TX - Marlow, OK Tornado
Rated F2
1 Fatality
21:45 UTC

22 Z Update

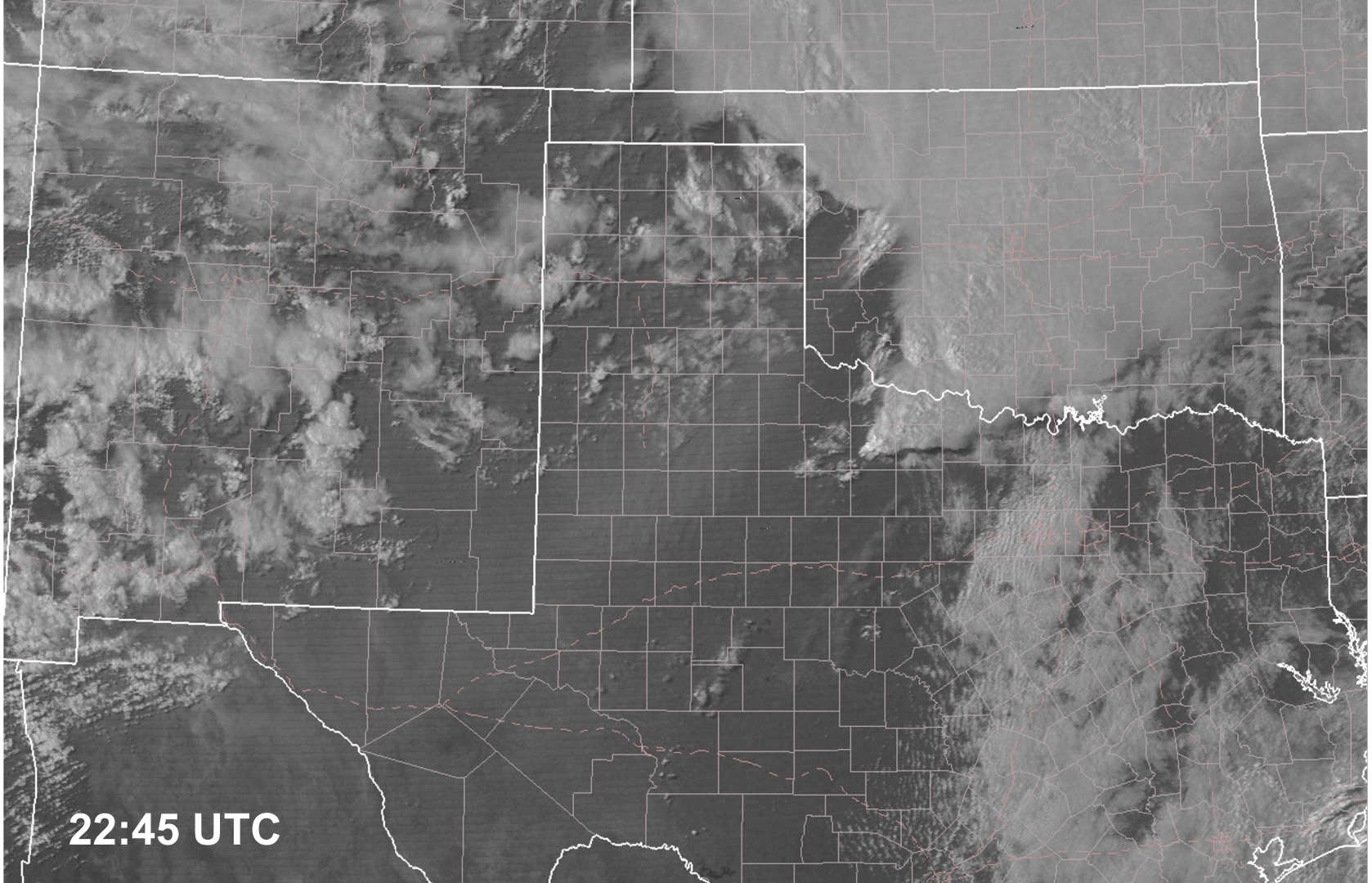
Watch Consideration:

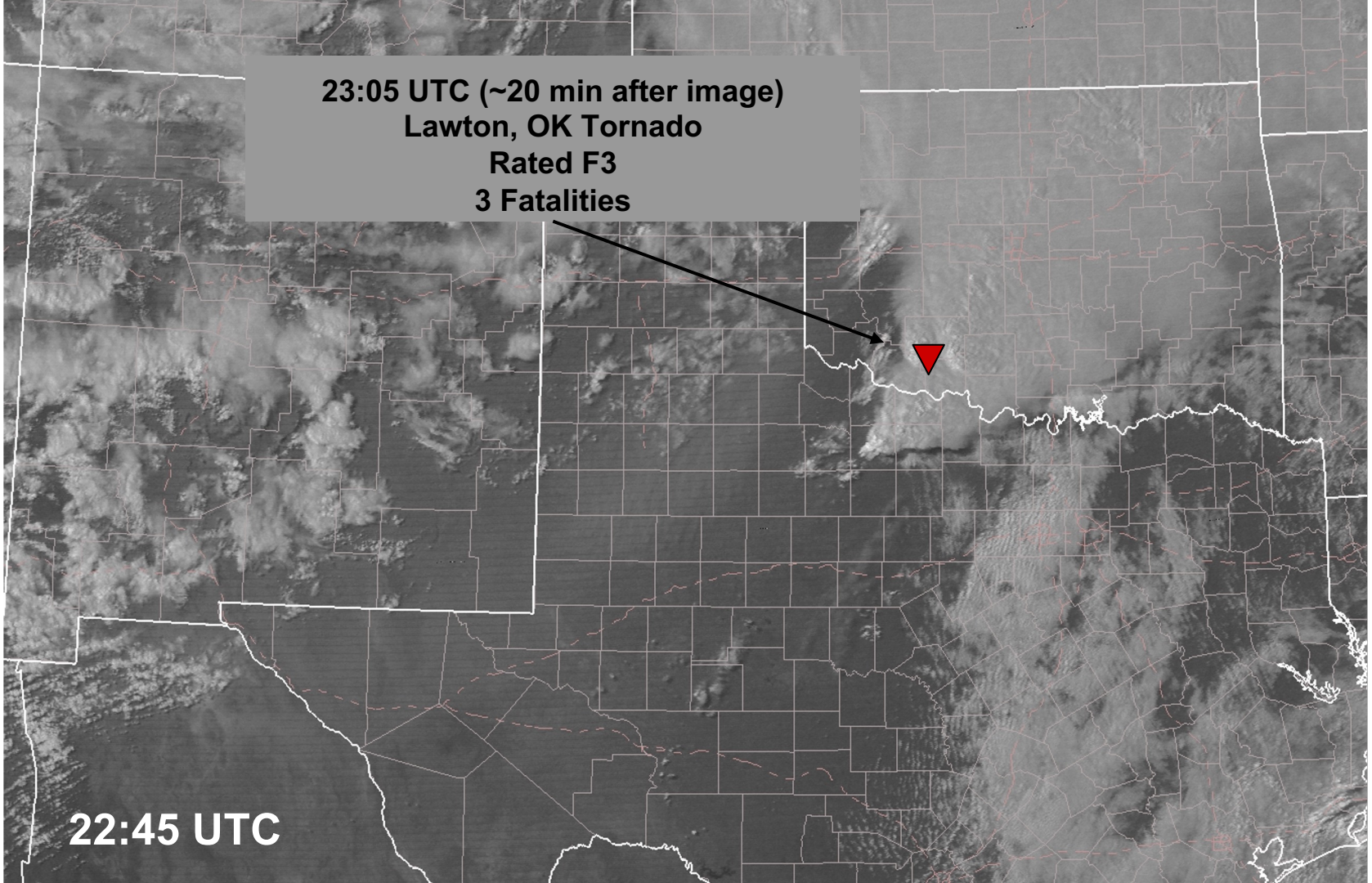
- When to start?
- When to end?
- What Type?

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



22:00 UTC


22:45 UTC

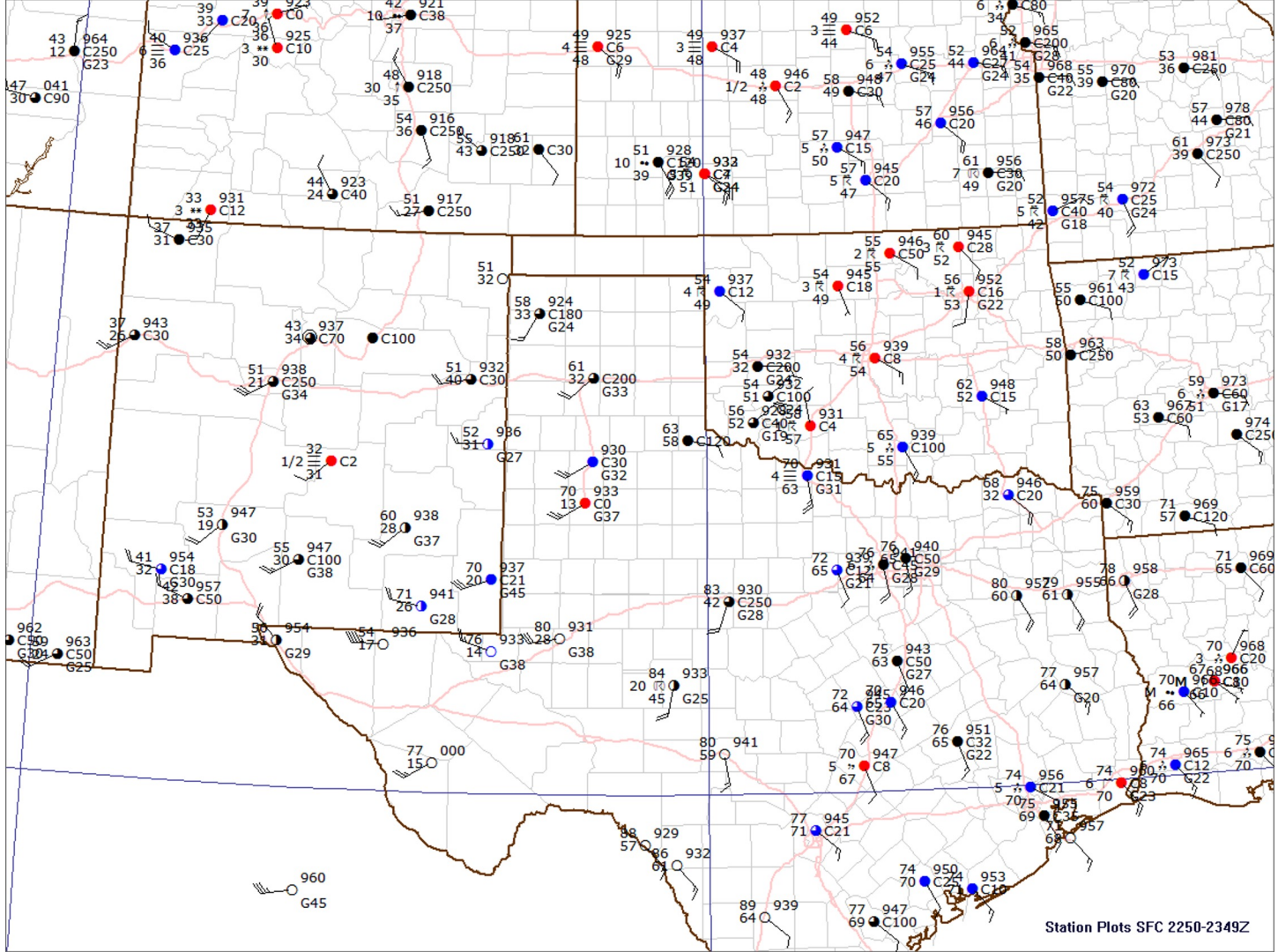

23:05 UTC (~20 min after image)
Lawton, OK Tornado
Rated F3
3 Fatalities
22:45 UTC

23 Z Update

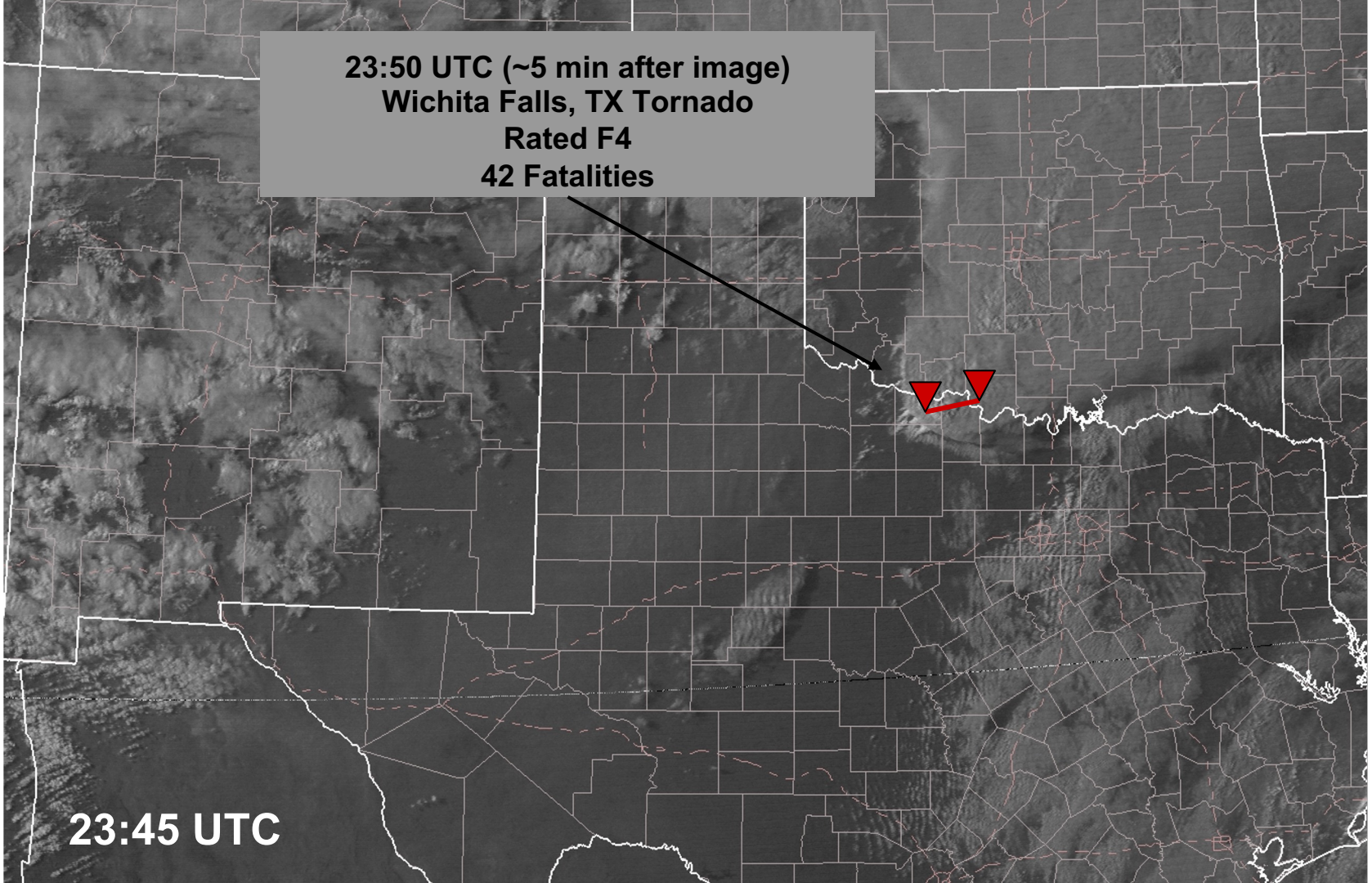
Watch Consideration:

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

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



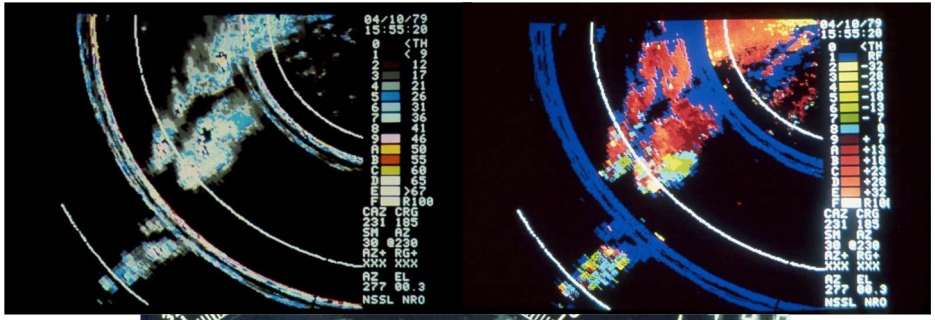
23:00 UTC

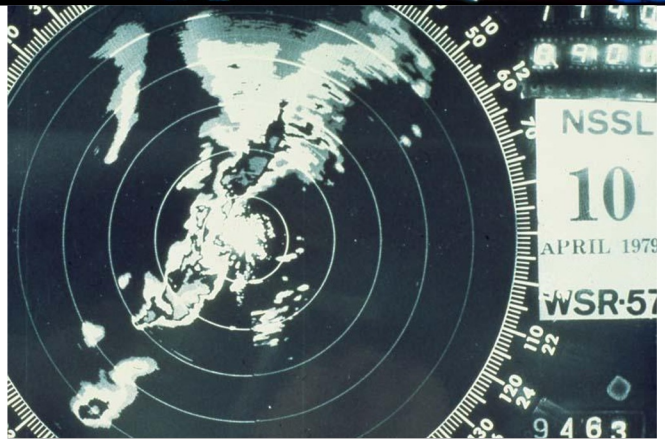

23:50 UTC (~5 min after image)
Wichita Falls, TX Tornado
Rated F4
42 Fatalities
23:45 UTC

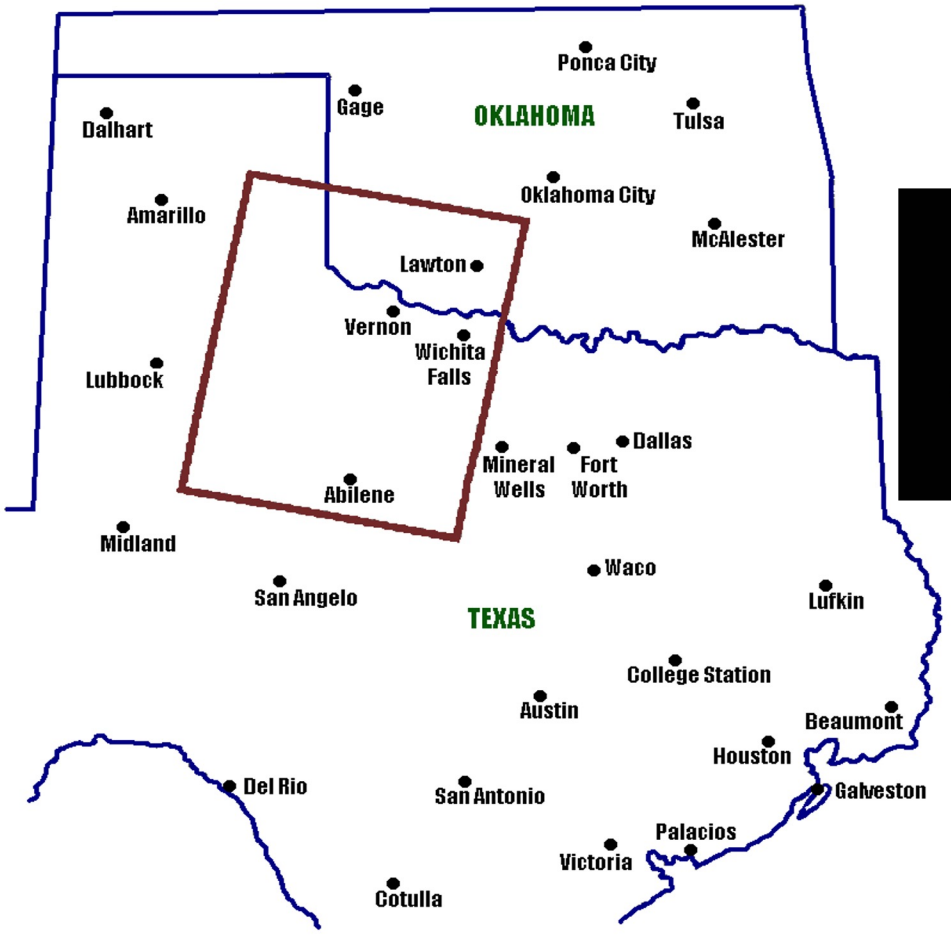
Terrible Tuesday!

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	23mi	2,3,2	0	1	U of C, NSSL
2.	Vernon Tornado	39	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	18	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.	Prague Tornado	3	2,2,2	0	1	NWS-OKC(48E 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	27mi	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

Central Standard Time

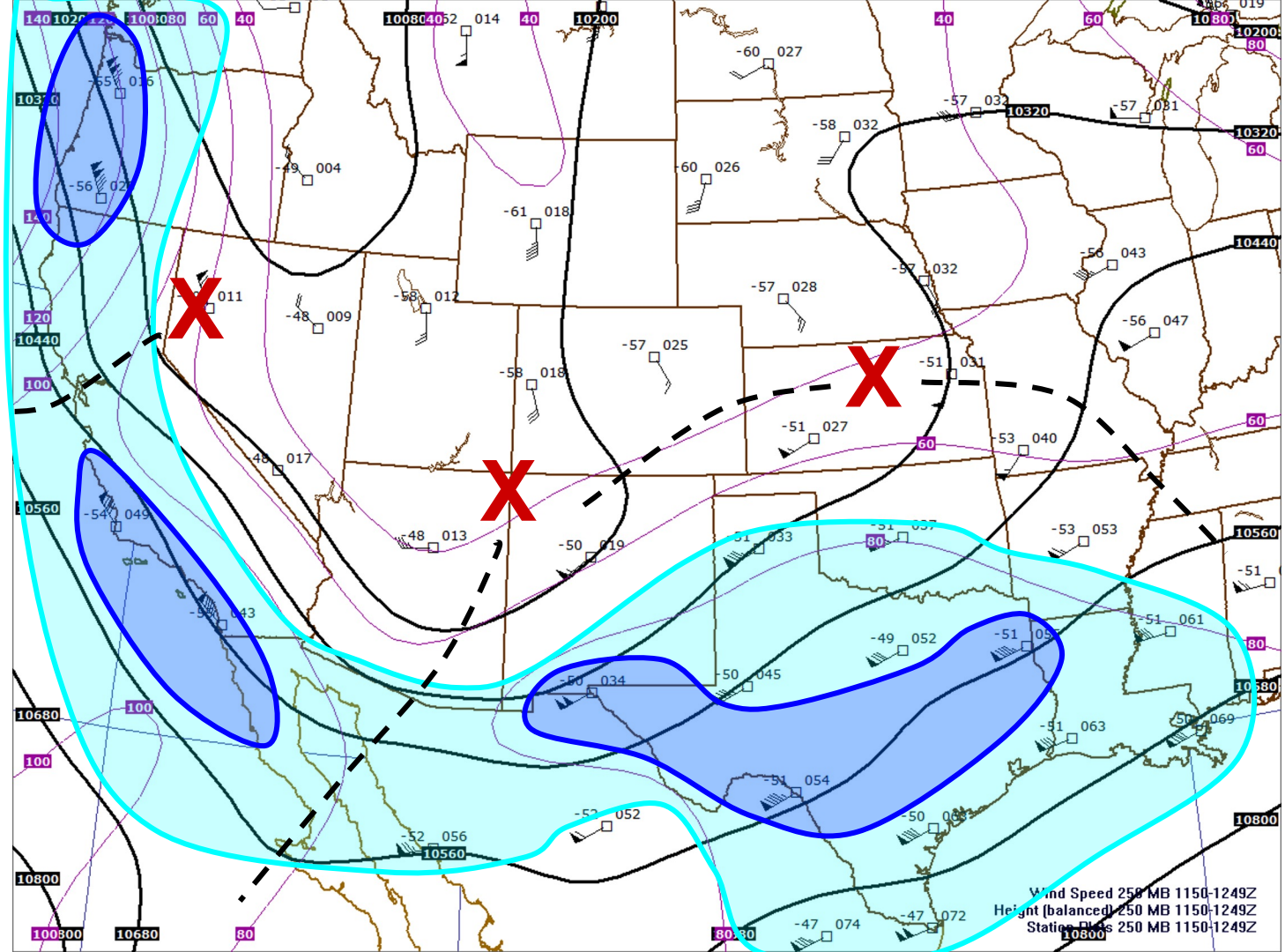
Terrible Tuesday Documentary:

Excellent review by WFO Norman:
https://www.weather.gov/oun/events-19790410

250 mb

75 knots

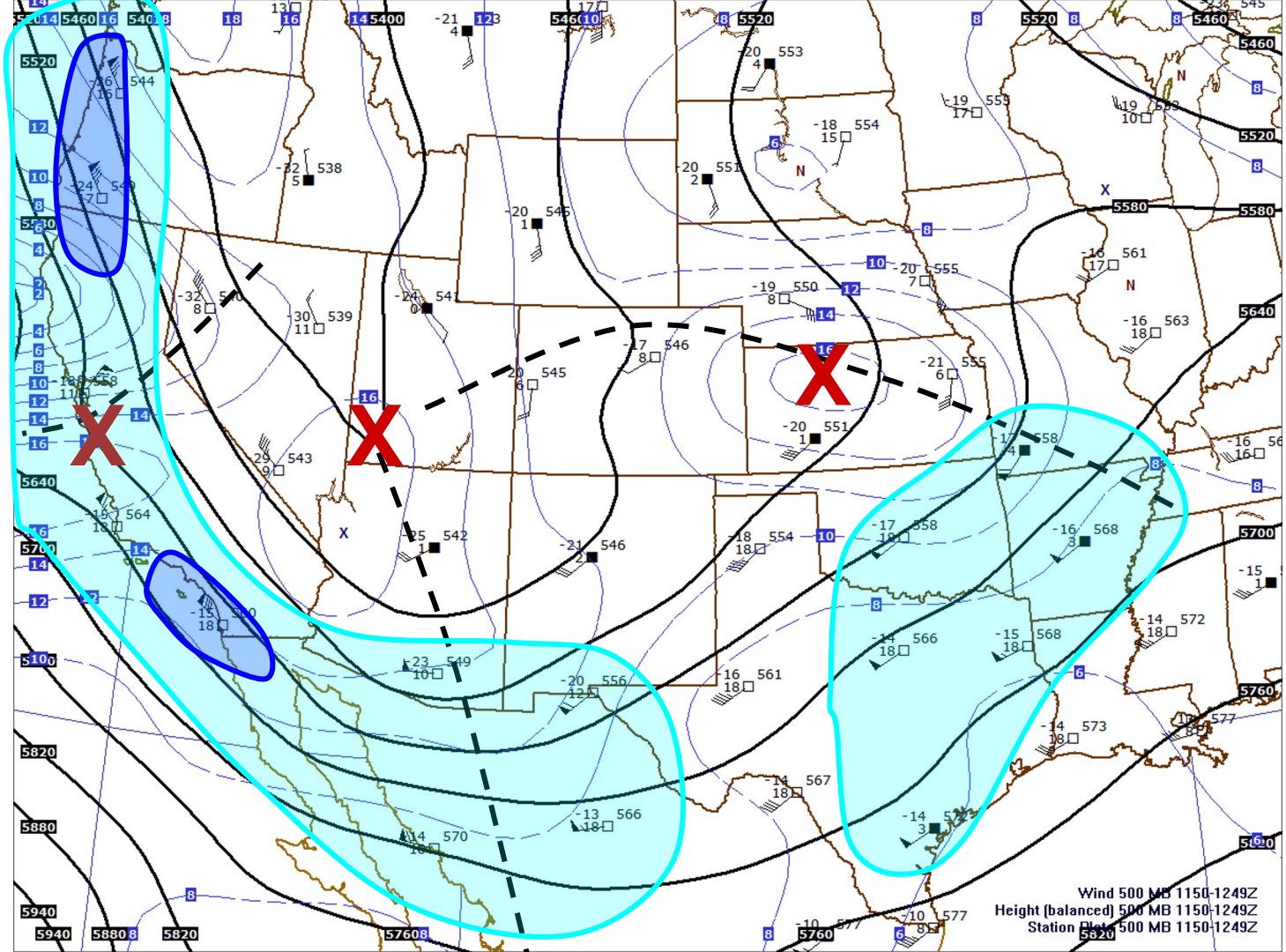
90 knots



500 mb

50 knots

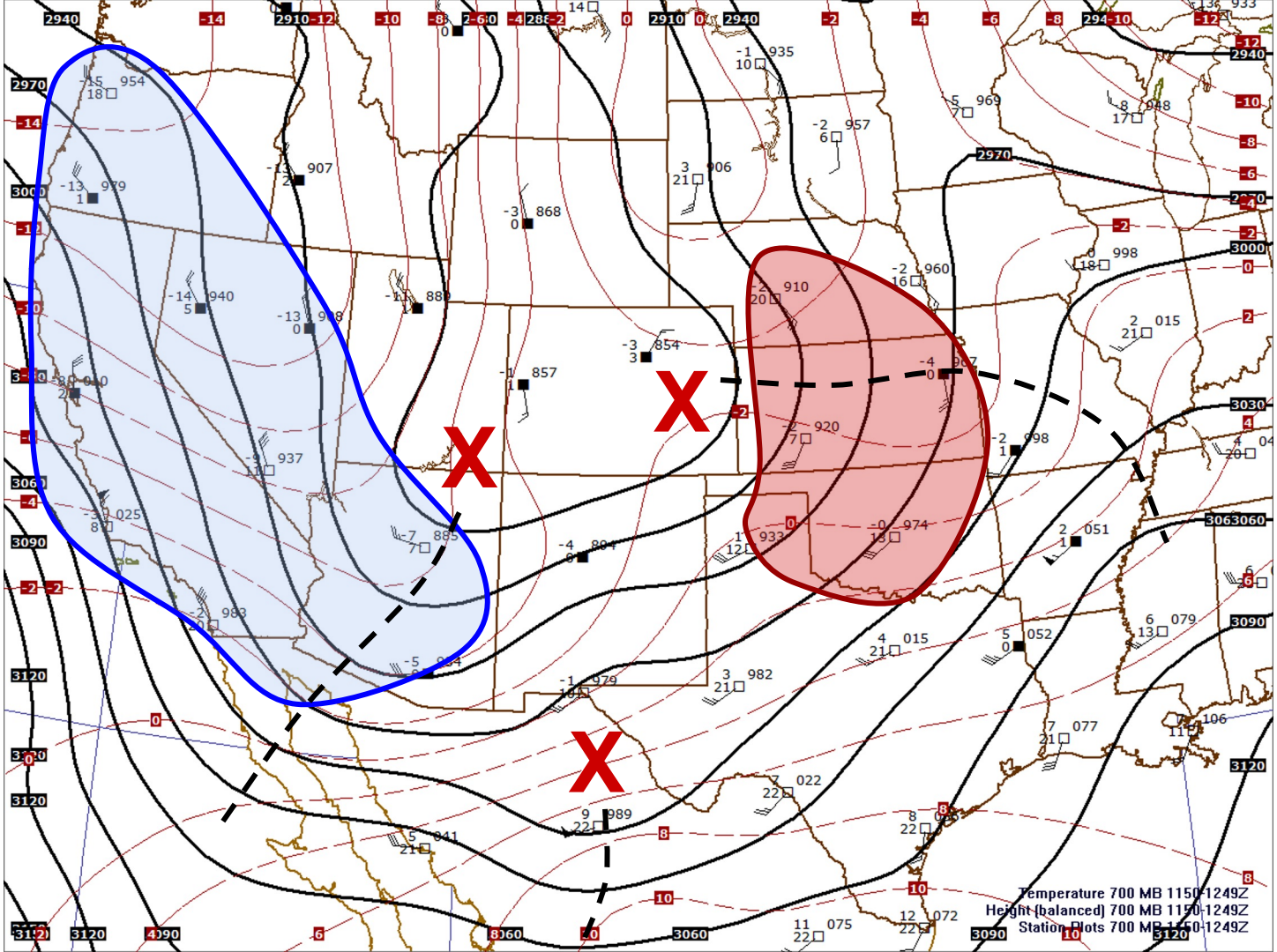
75 knots



700 mb

WAA

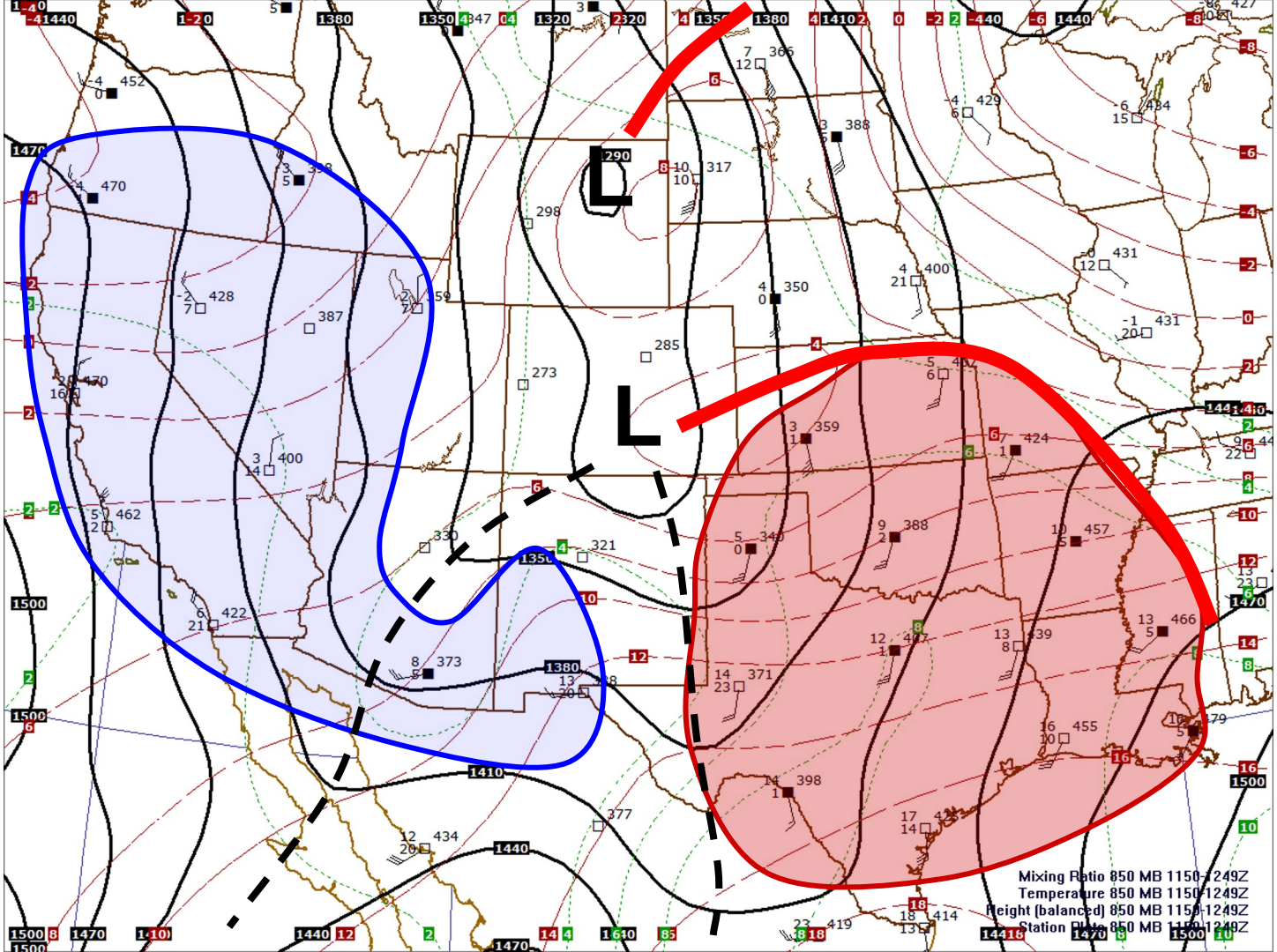
CAA

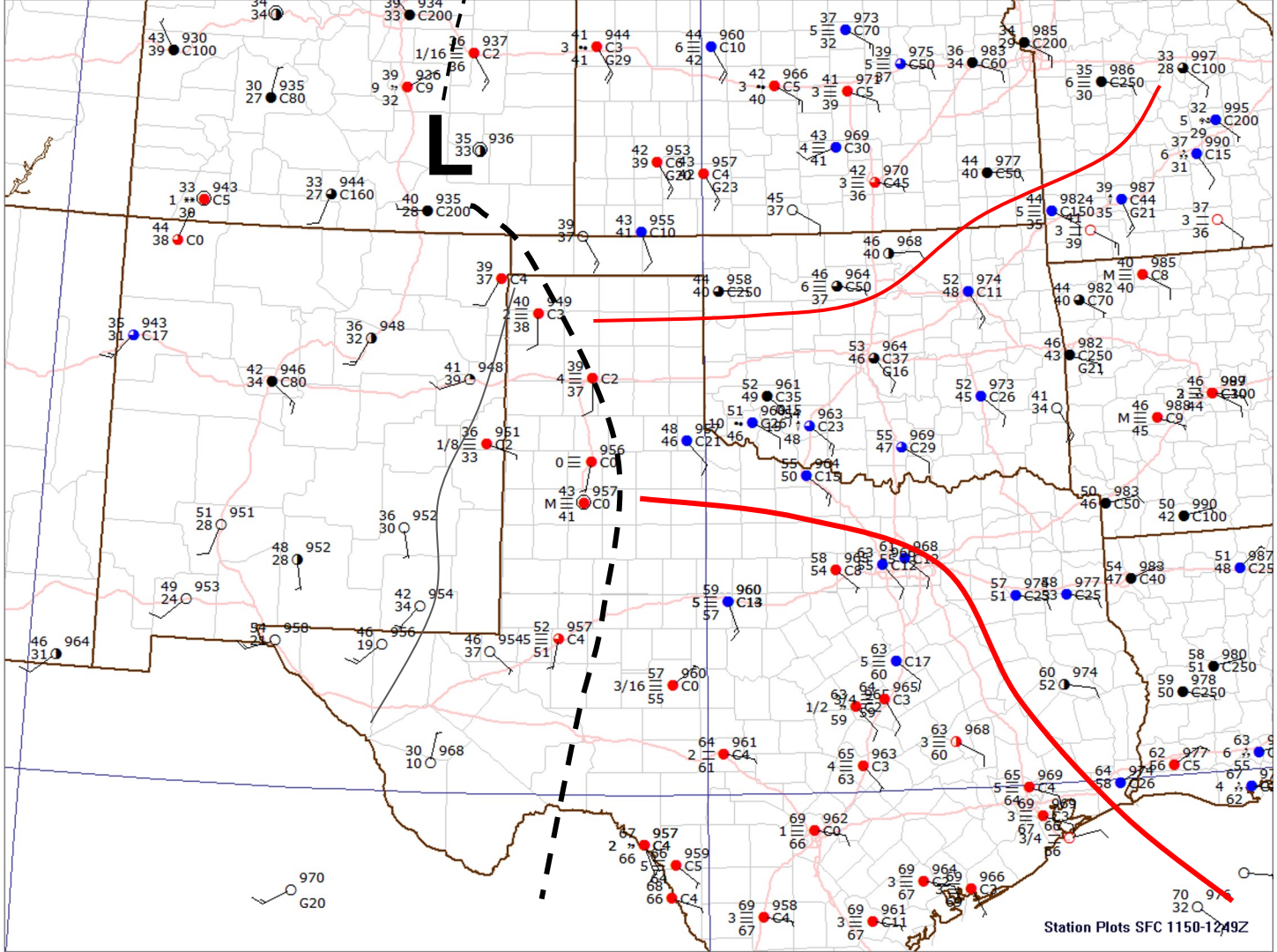


850 mb

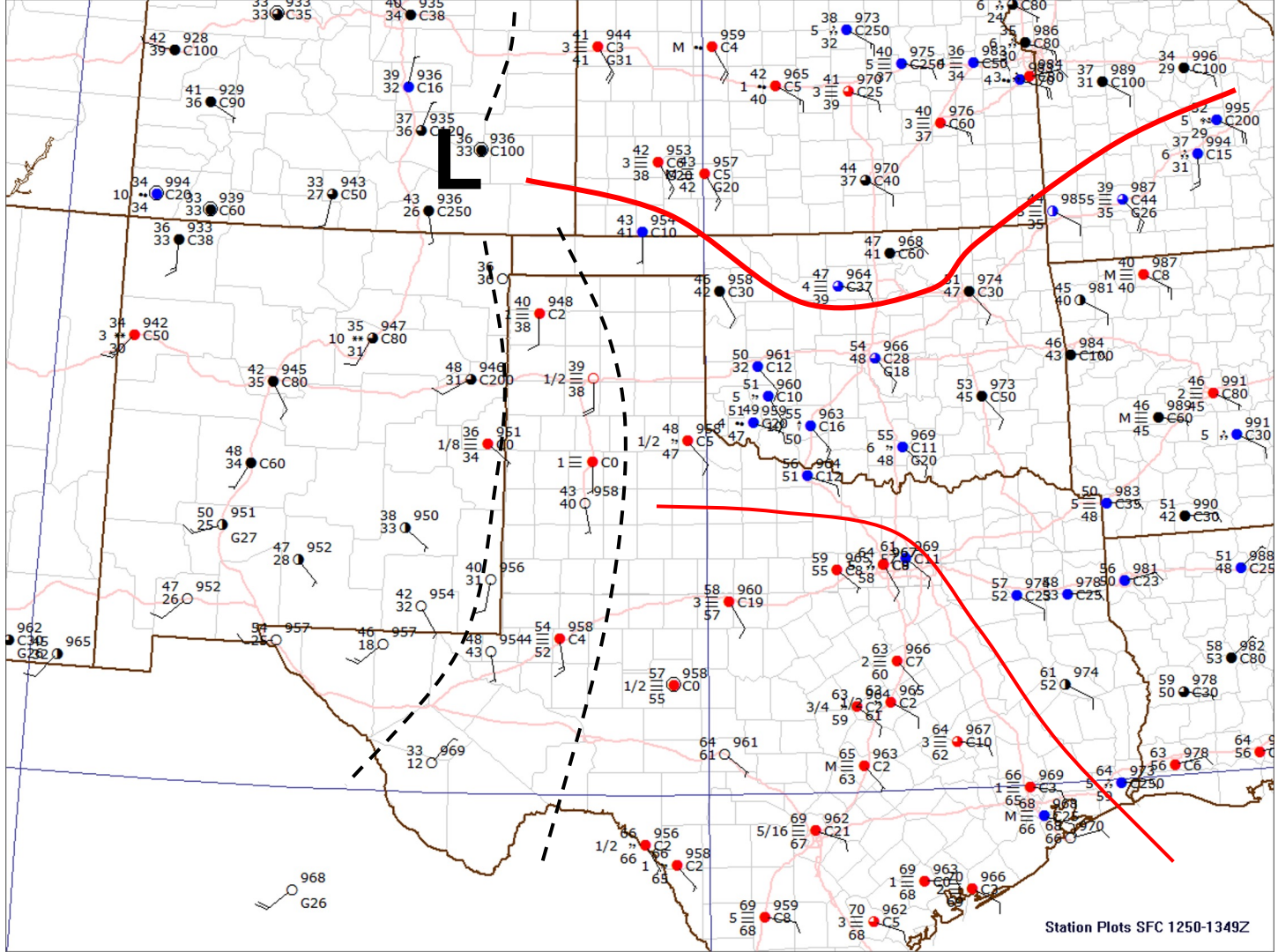
WAA

CAA

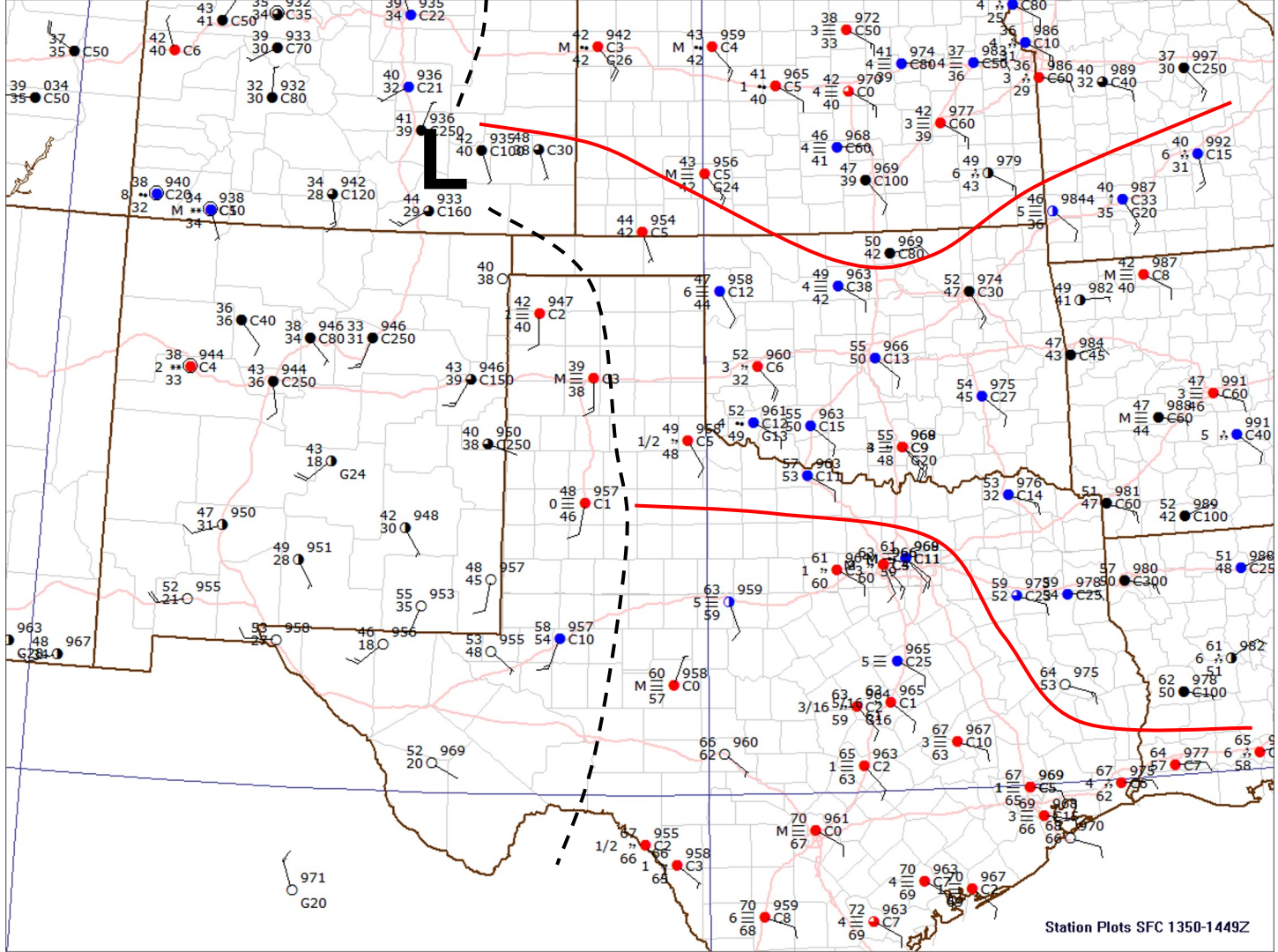




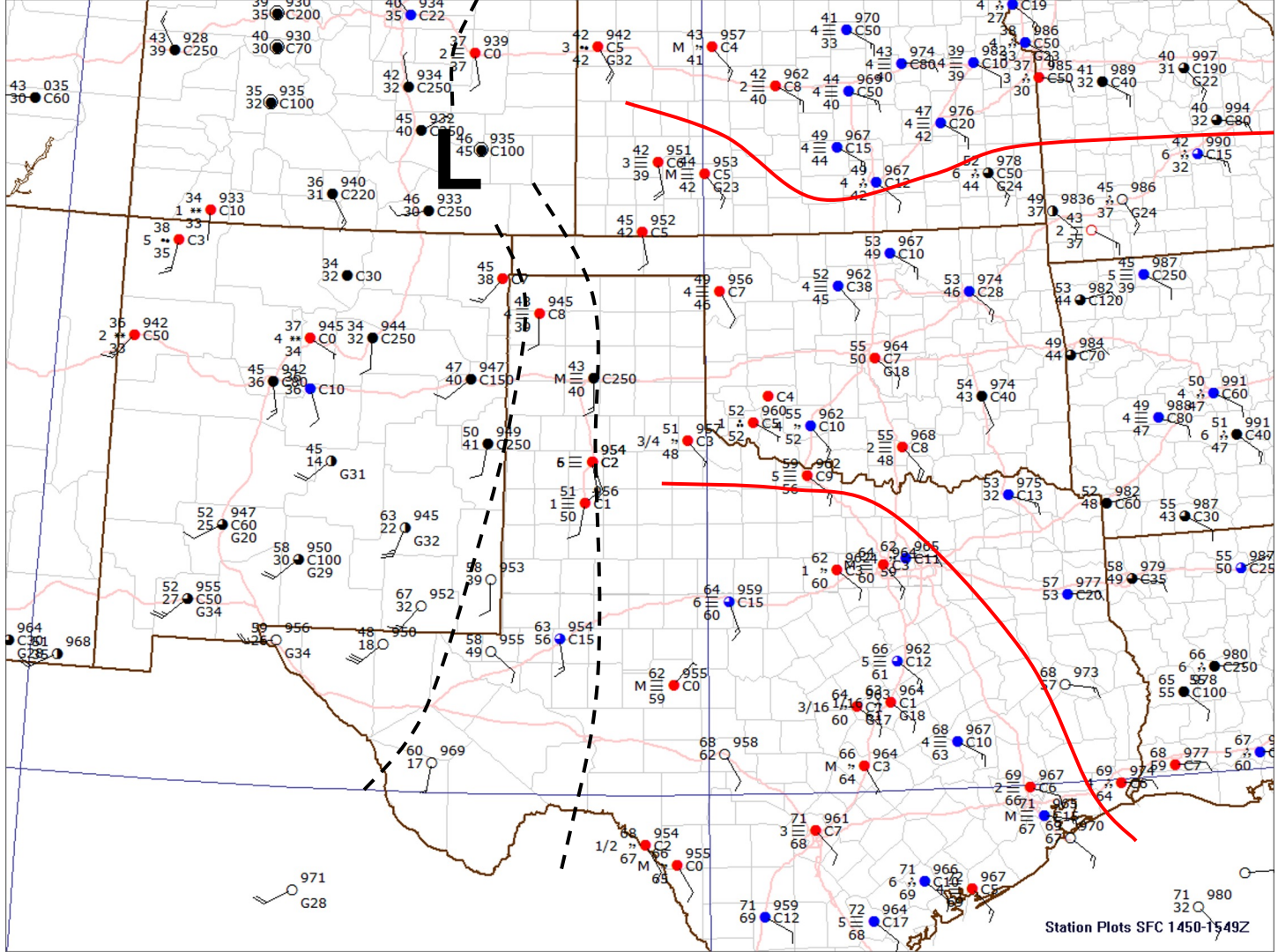
12:00 UTC



13:00 UTC



14:00 UTC



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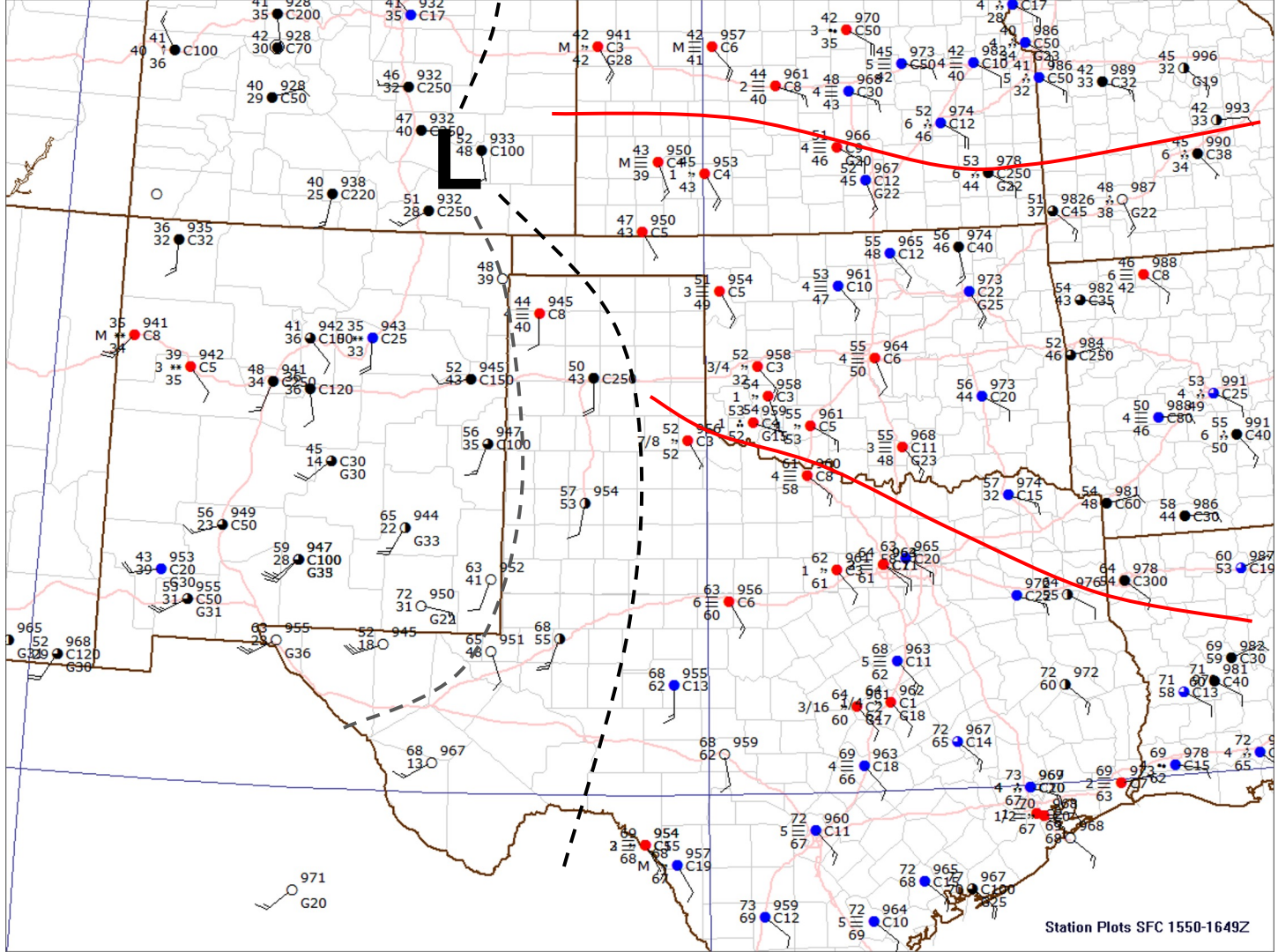
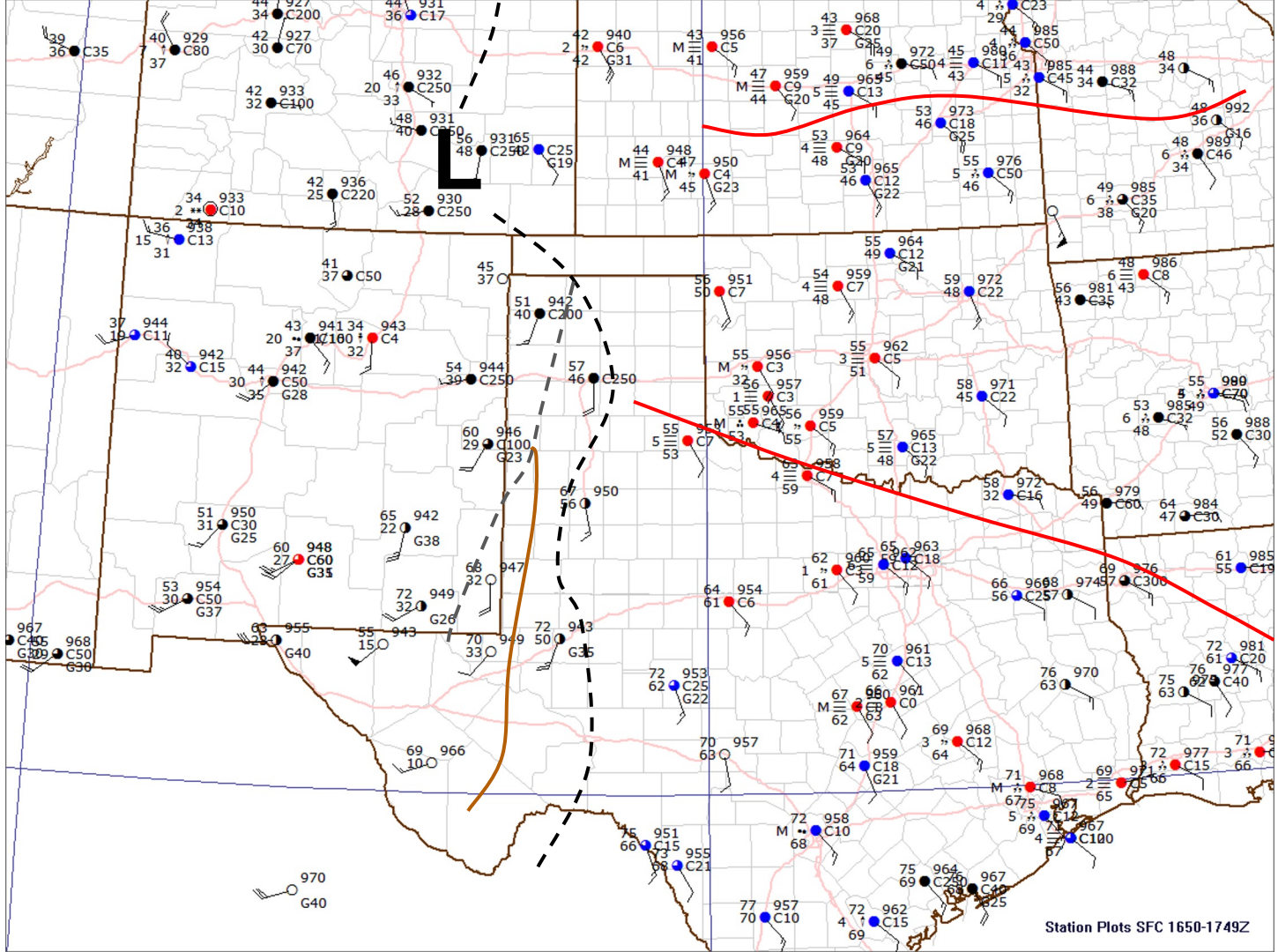


16:00 UTC



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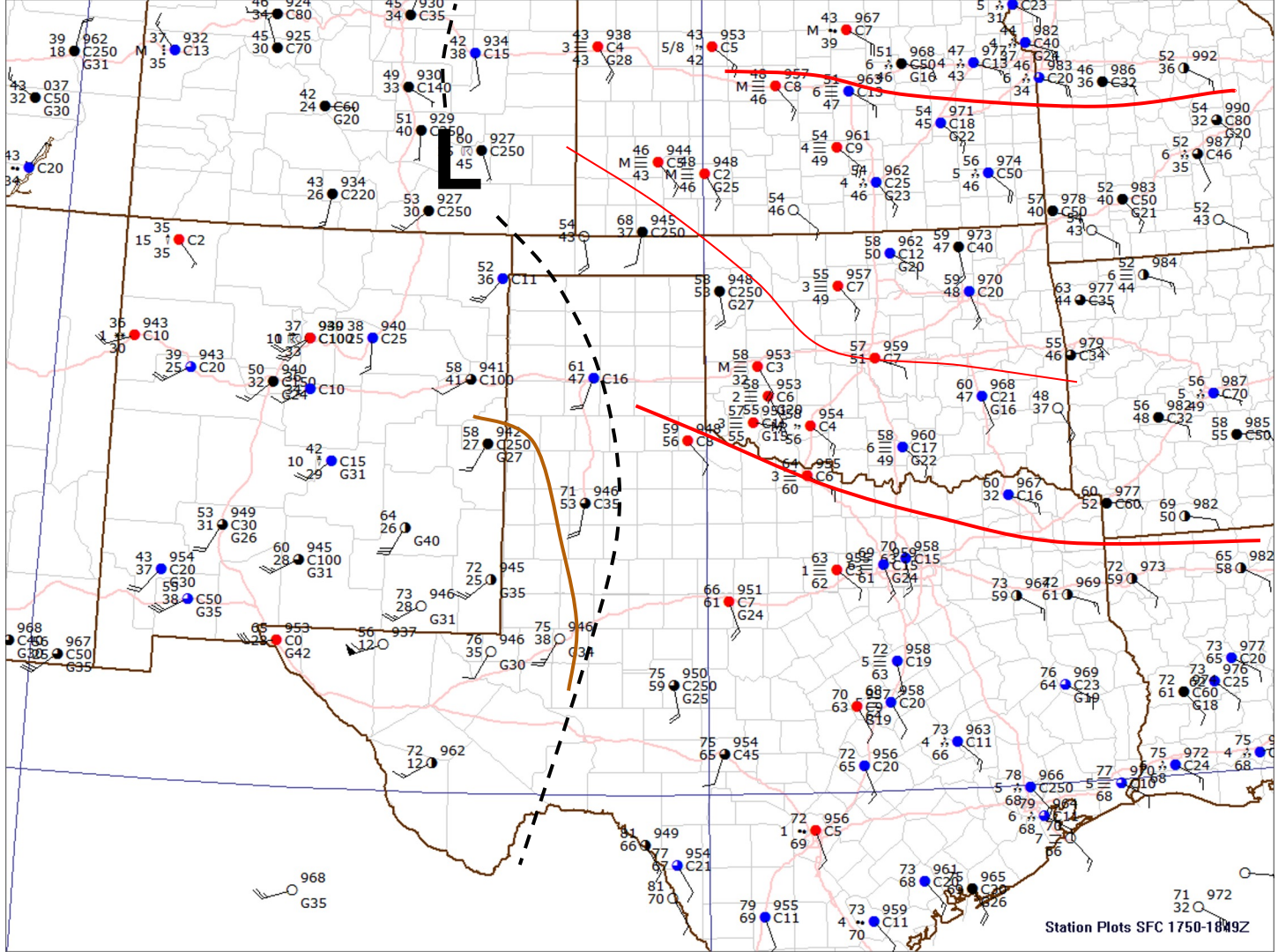

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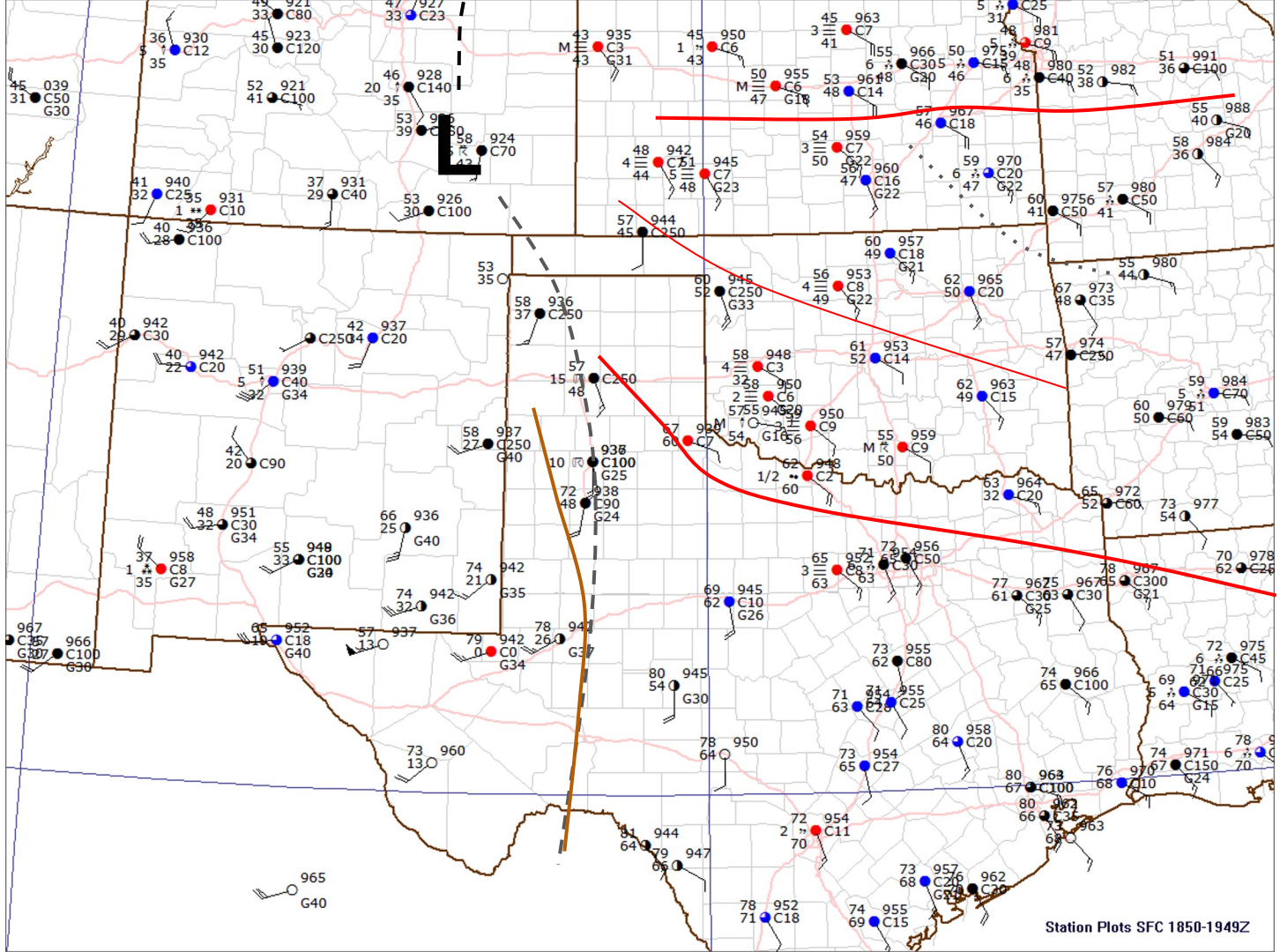

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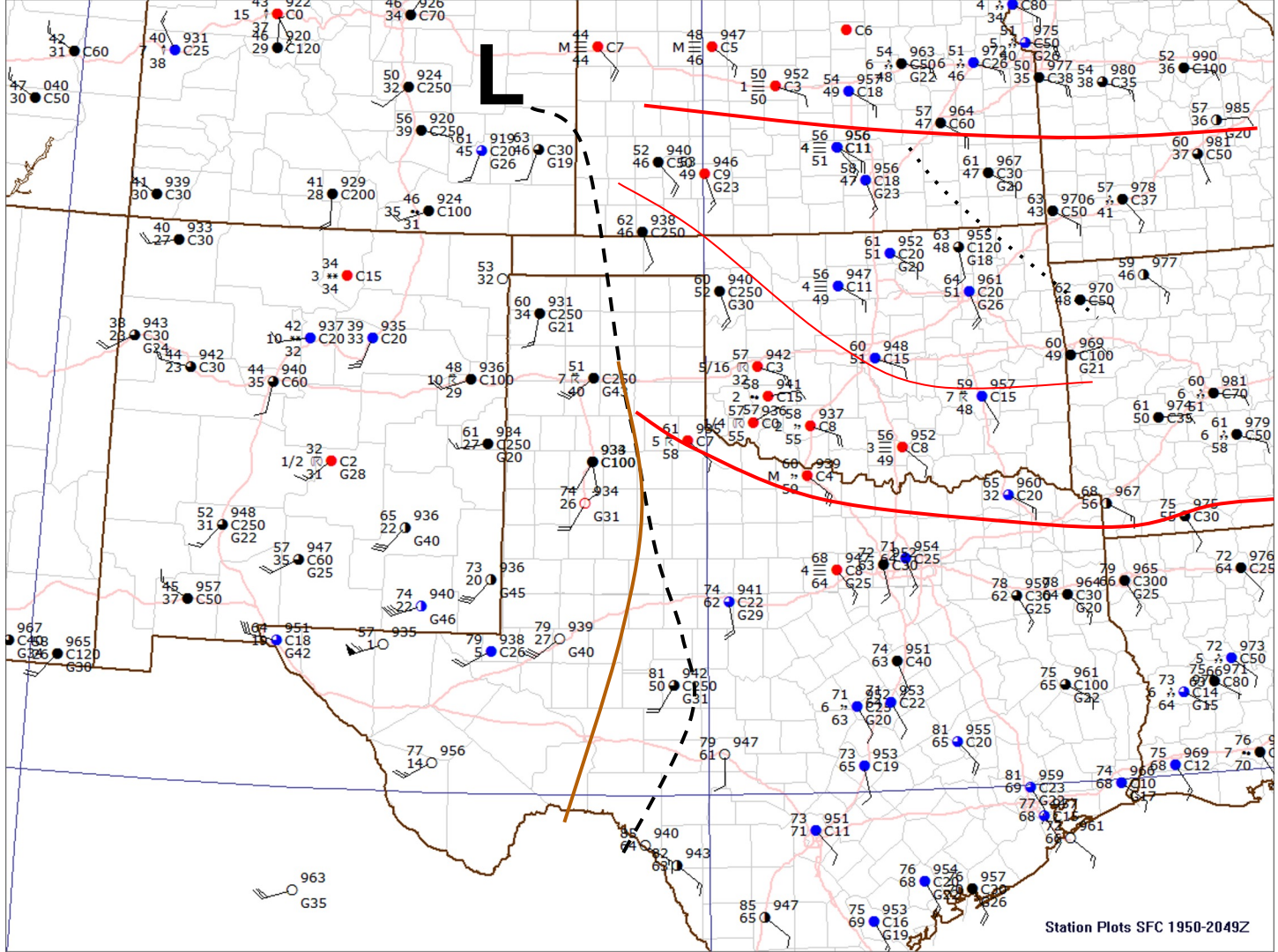

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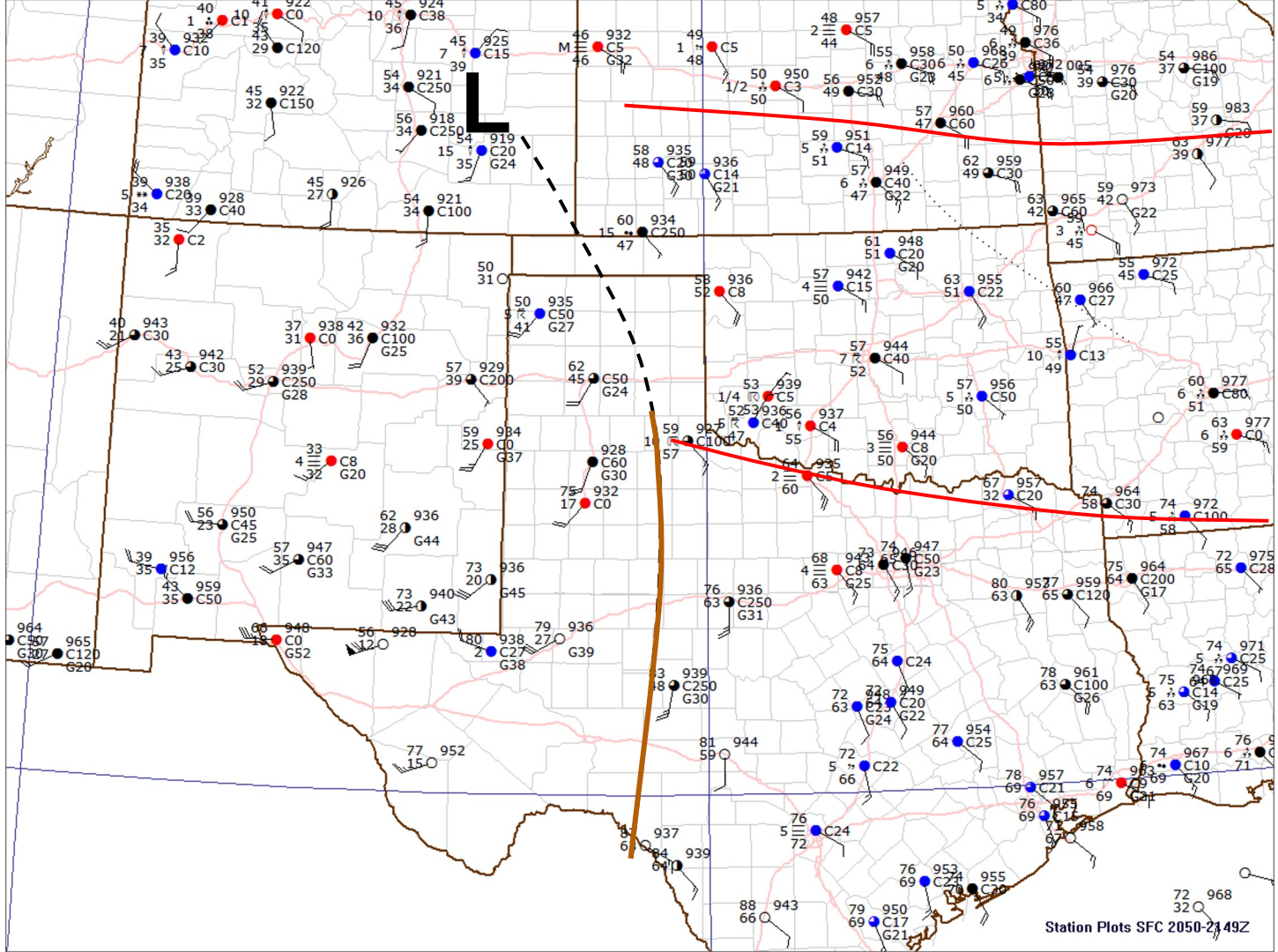

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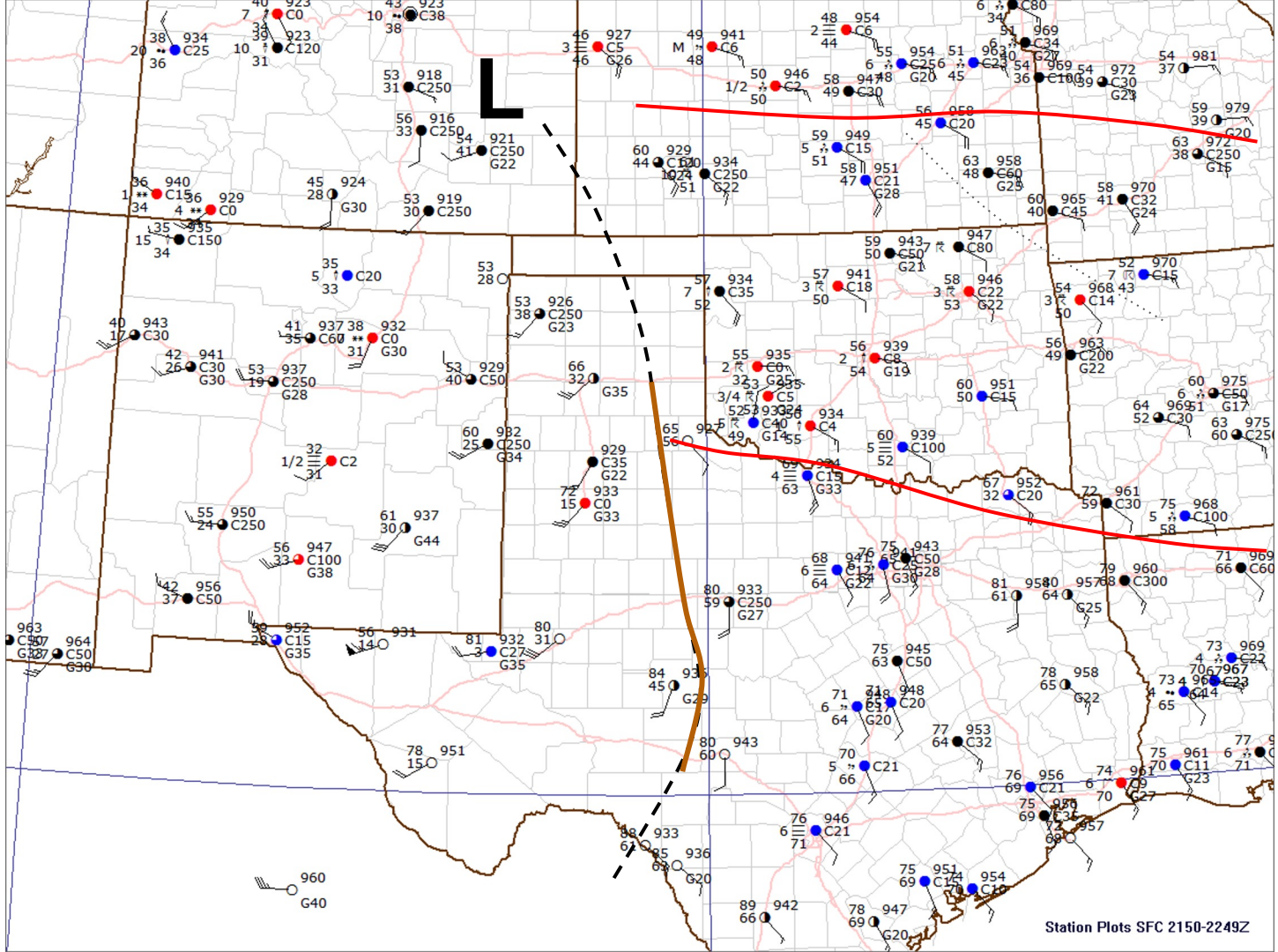

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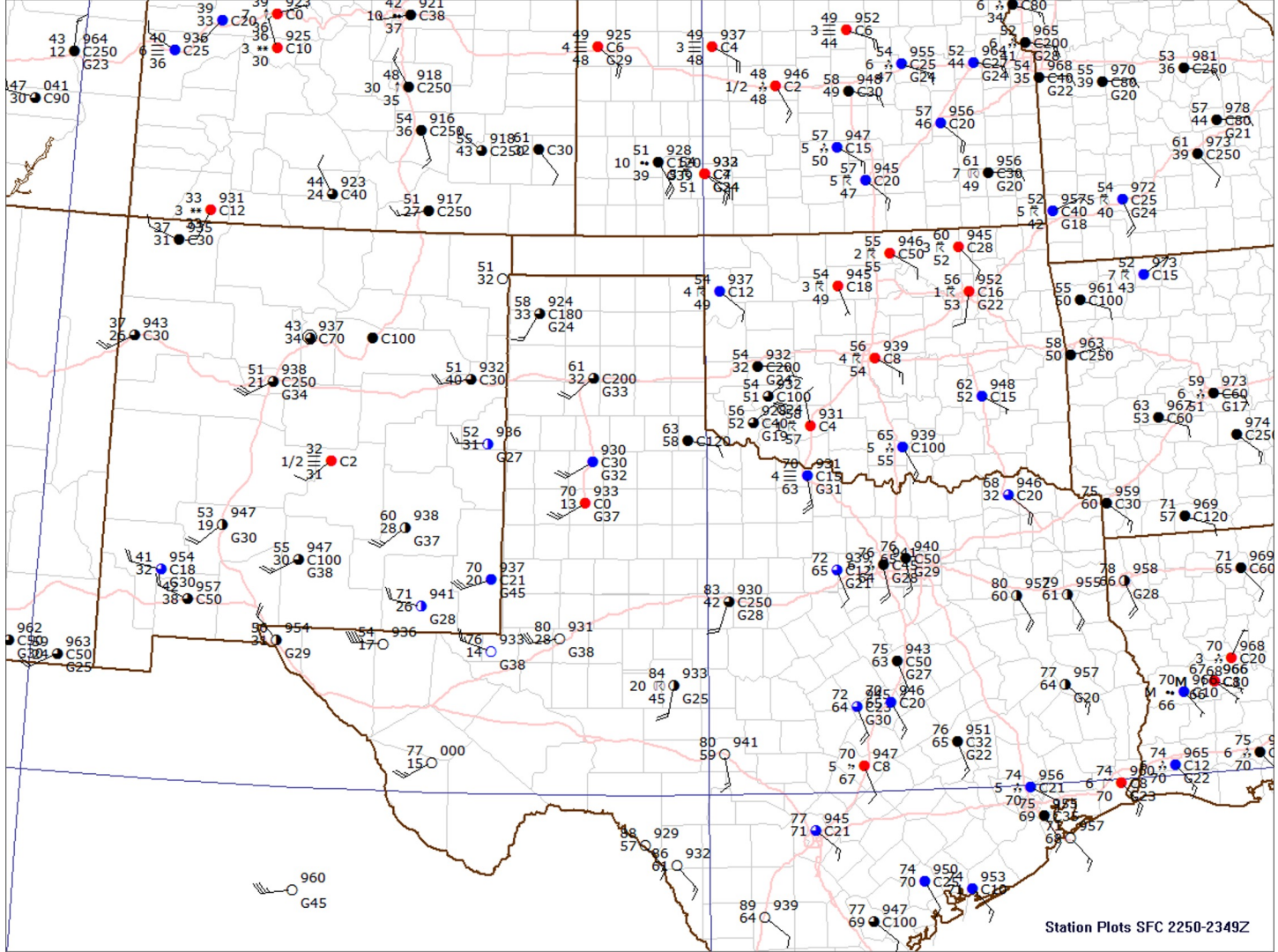

23:00 UTC