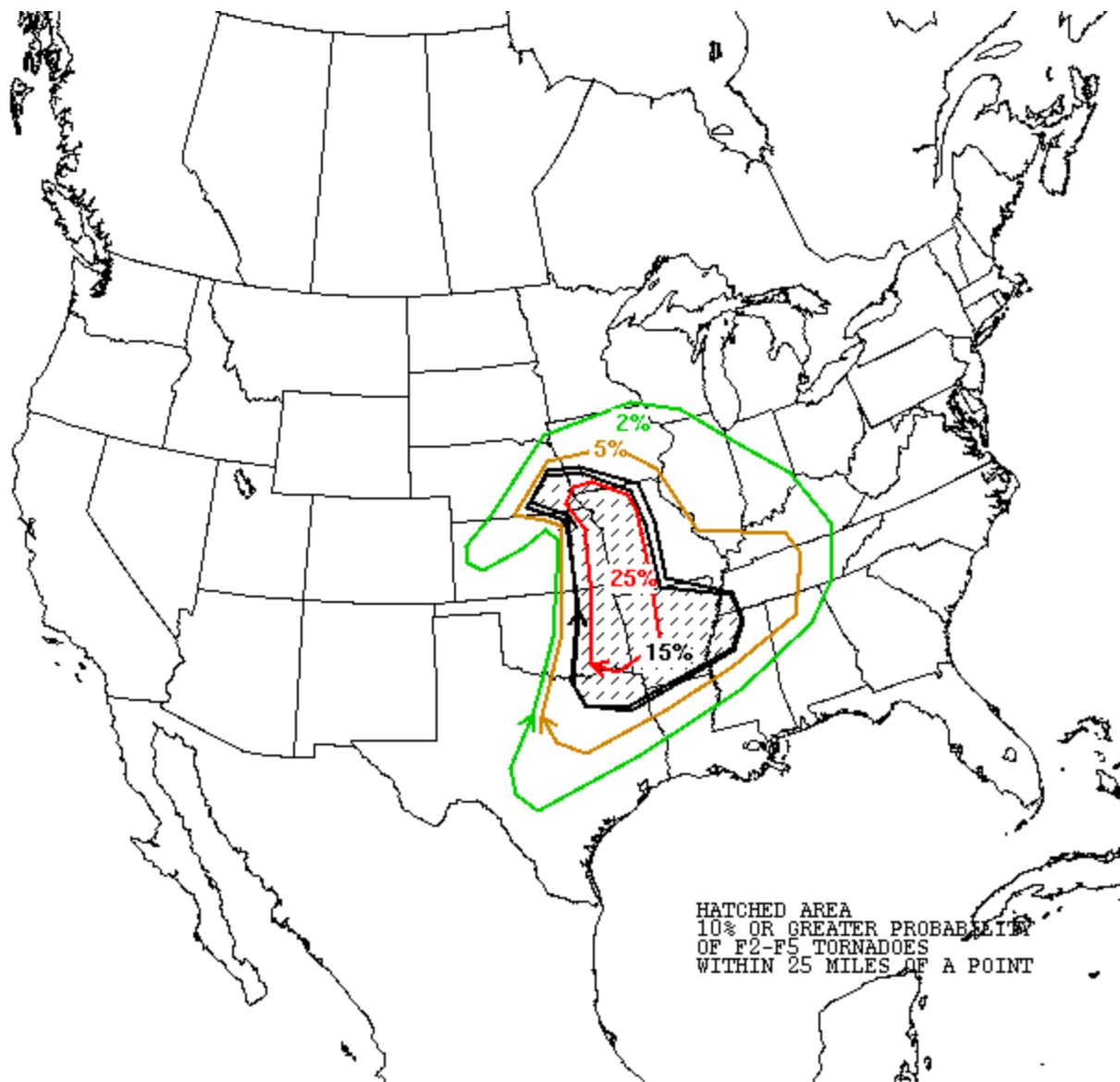


01z Outlook Update

- Will go through process with an actual event
 - Start with inherited 20z outlook
 - Examine last 3-6 hrs leading up to 00z
 - Consider large-scale pattern evolution
 - Distribution of supercell-tornado ingredients
 - Buoyancy, vertical shear, moisture, and storm mode
 - Project future threat areas (or lack thereof) using only synoptic and mesoscale interpretations (no explicit numerical model forecasts)



DAY 1 TORNADO

PROBABILITY OF A
TORNADO WITHIN 25
MILES OF A POINT

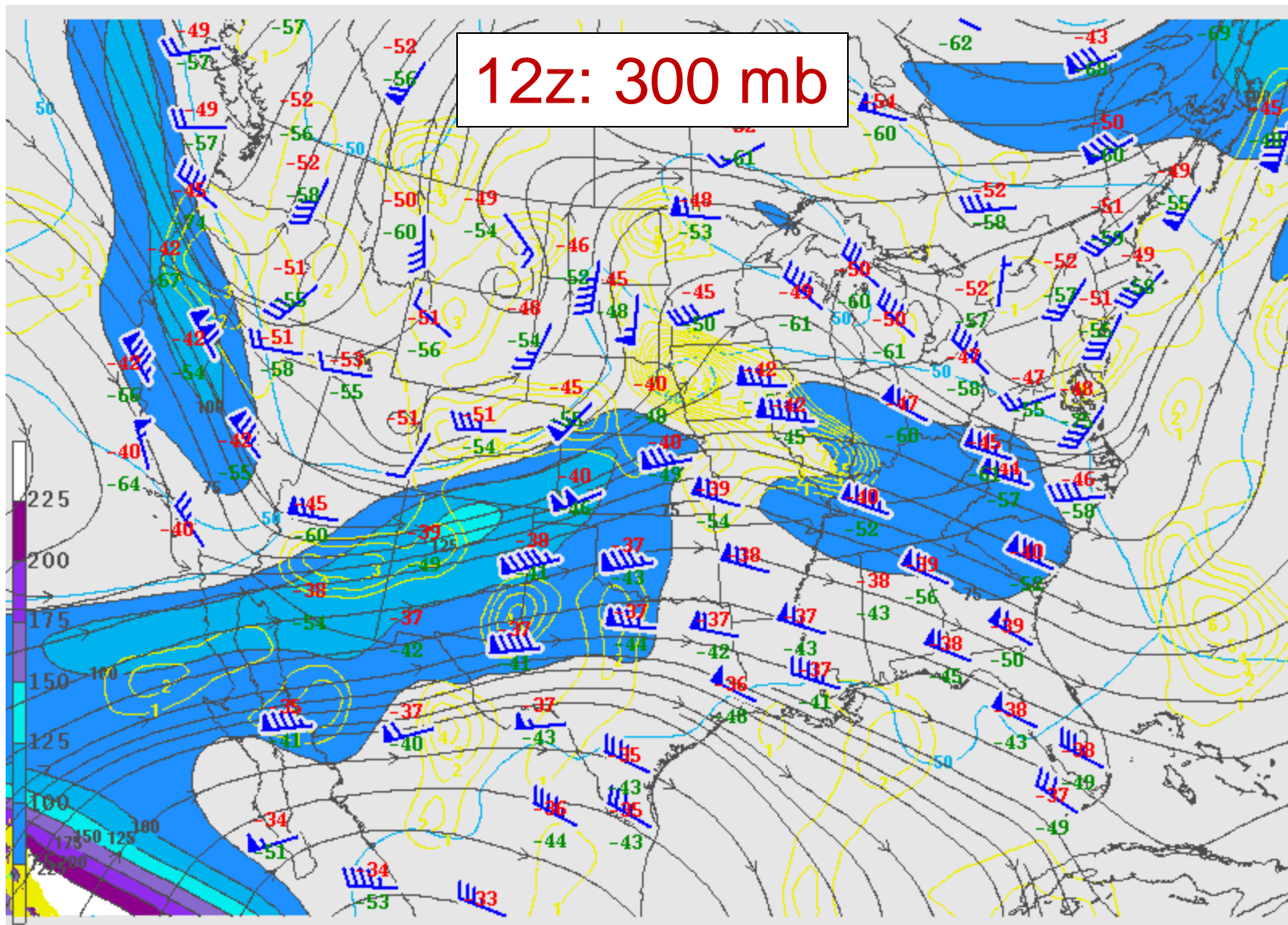
ISSUED 05/04/2003 2020Z
VALID 042000Z - 051200Z
FCSTR: DIAL
NOAA/NWS/NCEP
STORM PREDICTION CENTER

HATCHED AREA
10% OR GREATER PROBABILITY
OF F2-F5 TORNAOES
WITHIN 25 MILES OF A POINT

Diagnose Synoptic Pattern

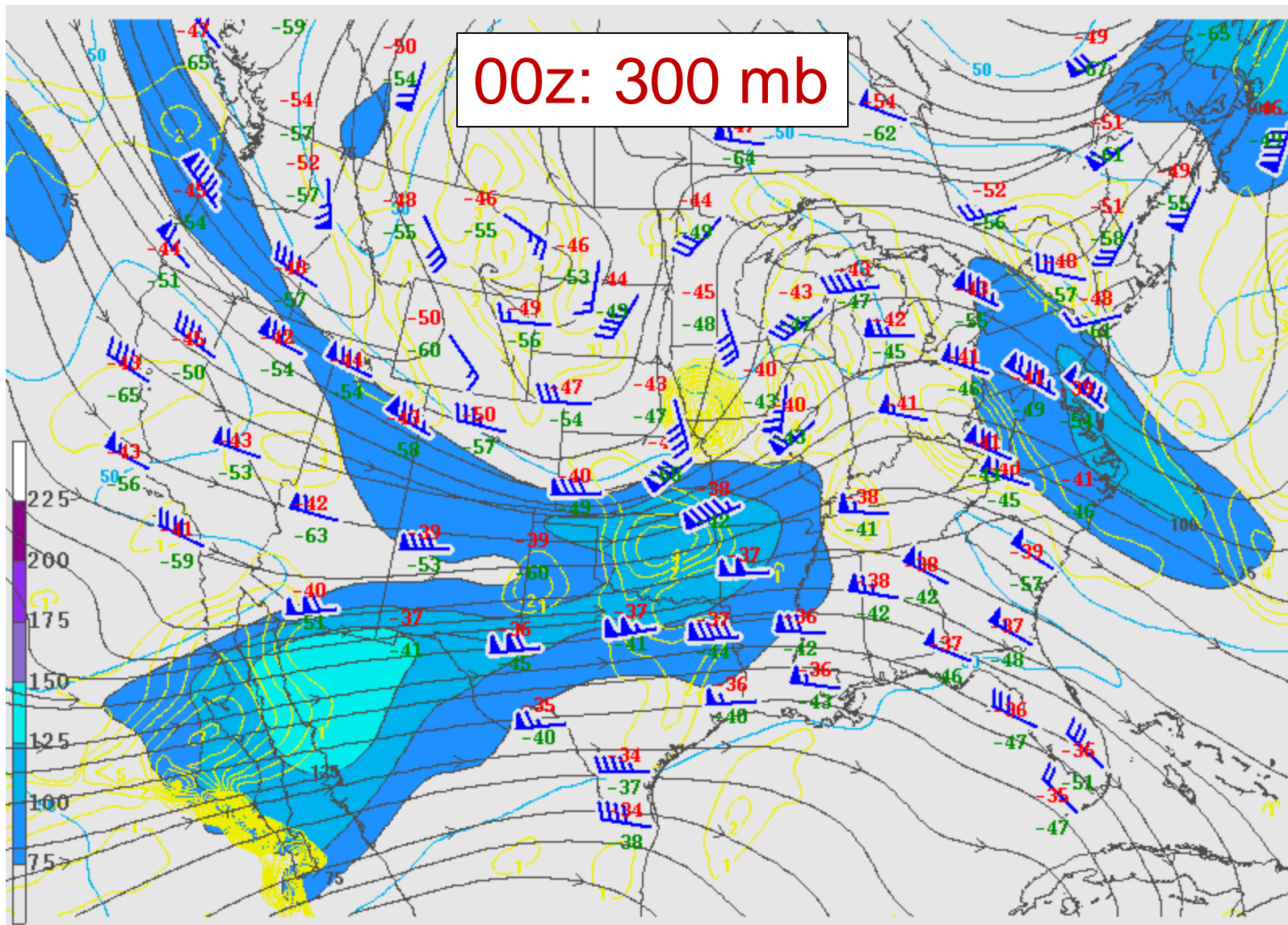
- Expected movement and intensity changes of shortwave troughs, cyclones, etc.
- Mass responses to cyclogenesis, and how that affects supercell-tornado ingredients.

12z: 300 mb



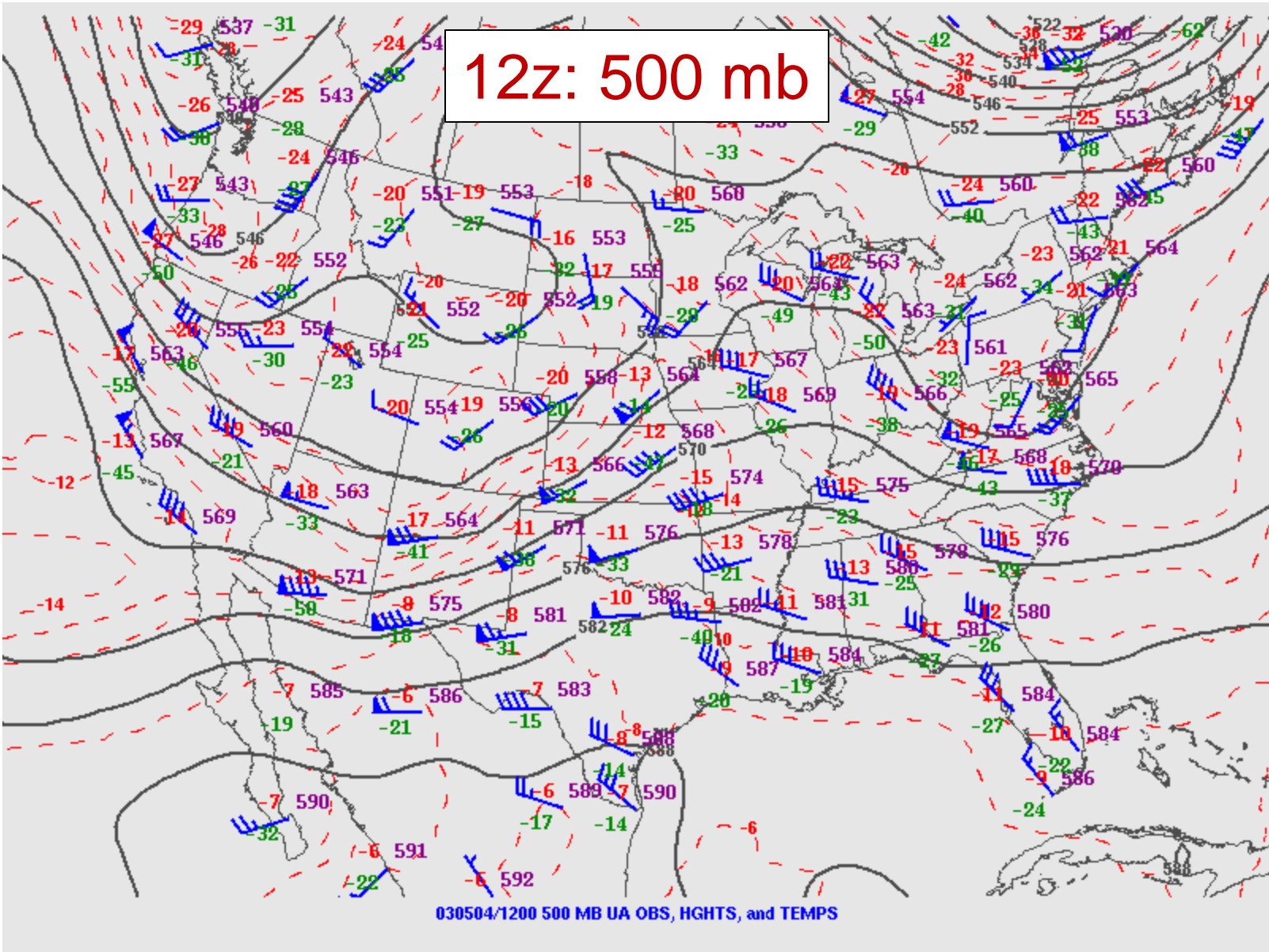
030504/1200 300 MB UA OBS, ISOTACHS, STREAMLINES, DIVERGENCE

00z: 300 mb

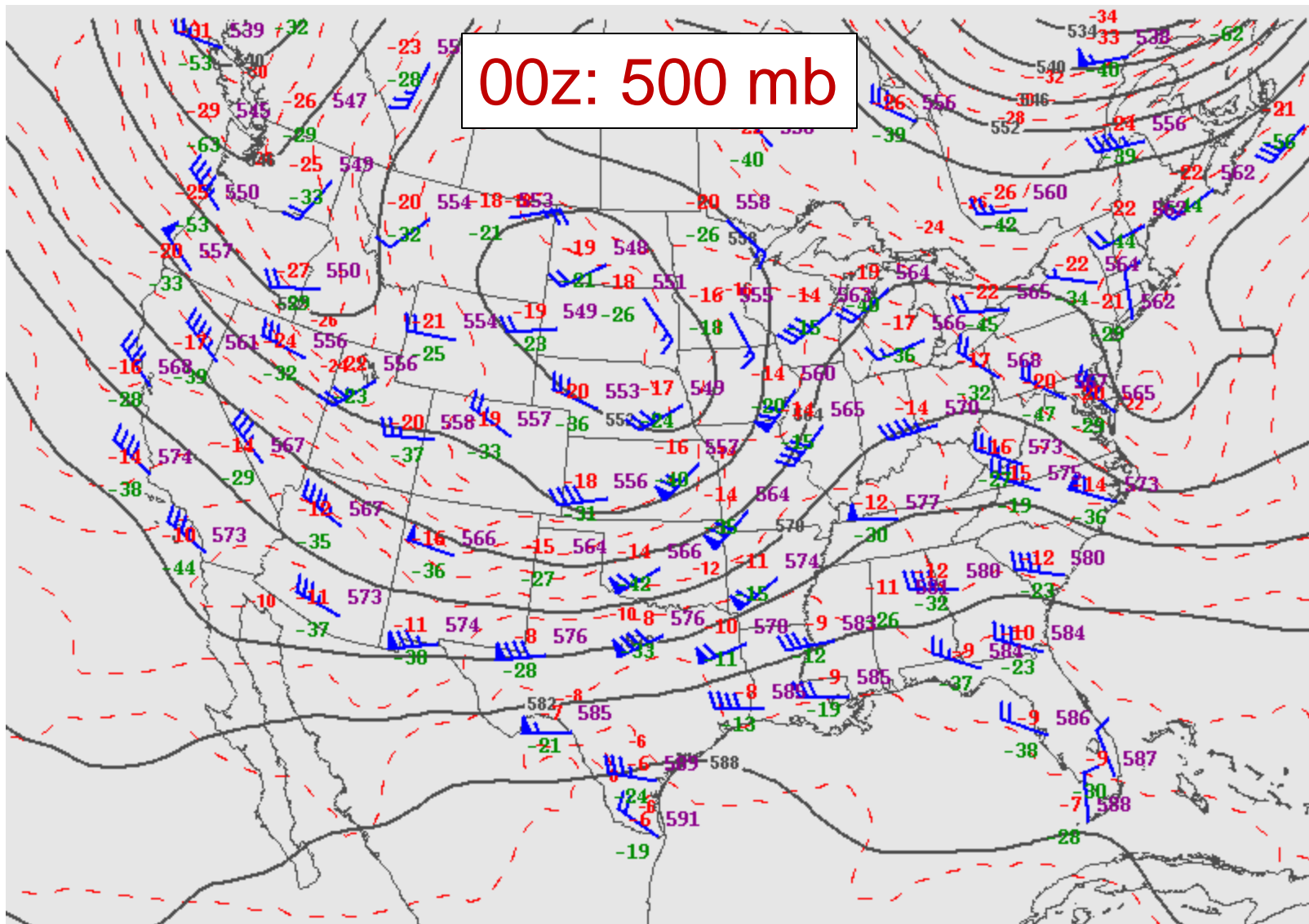


030505/0000 300 MB UA OBS, ISOTACHS, STREAMLINES, DIVERGENCE

12z: 500 mb

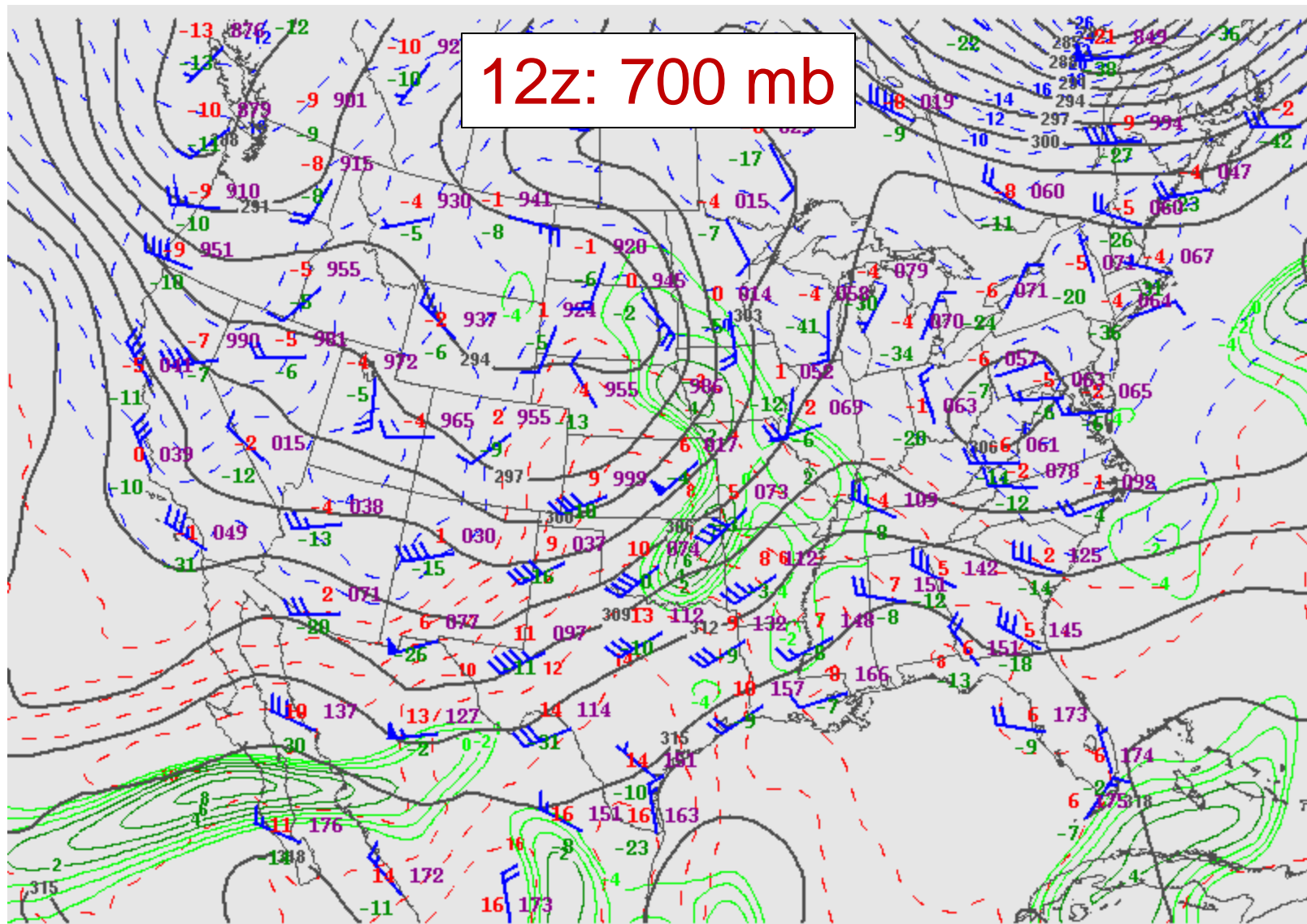


00z: 500 mb



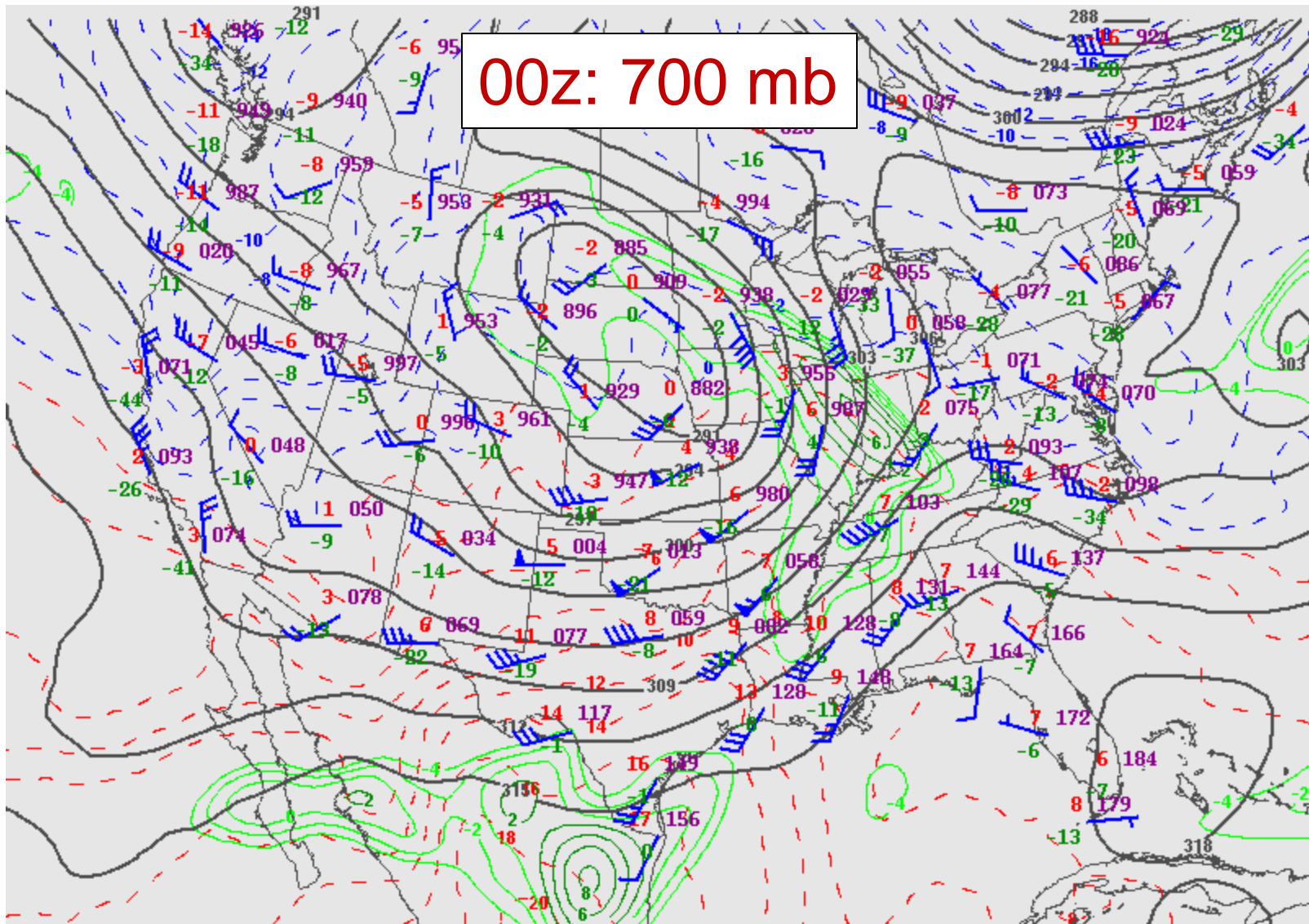
030505/0000 500 MB UA OBS, HGHTS, and TEMPS

12z: 700 mb



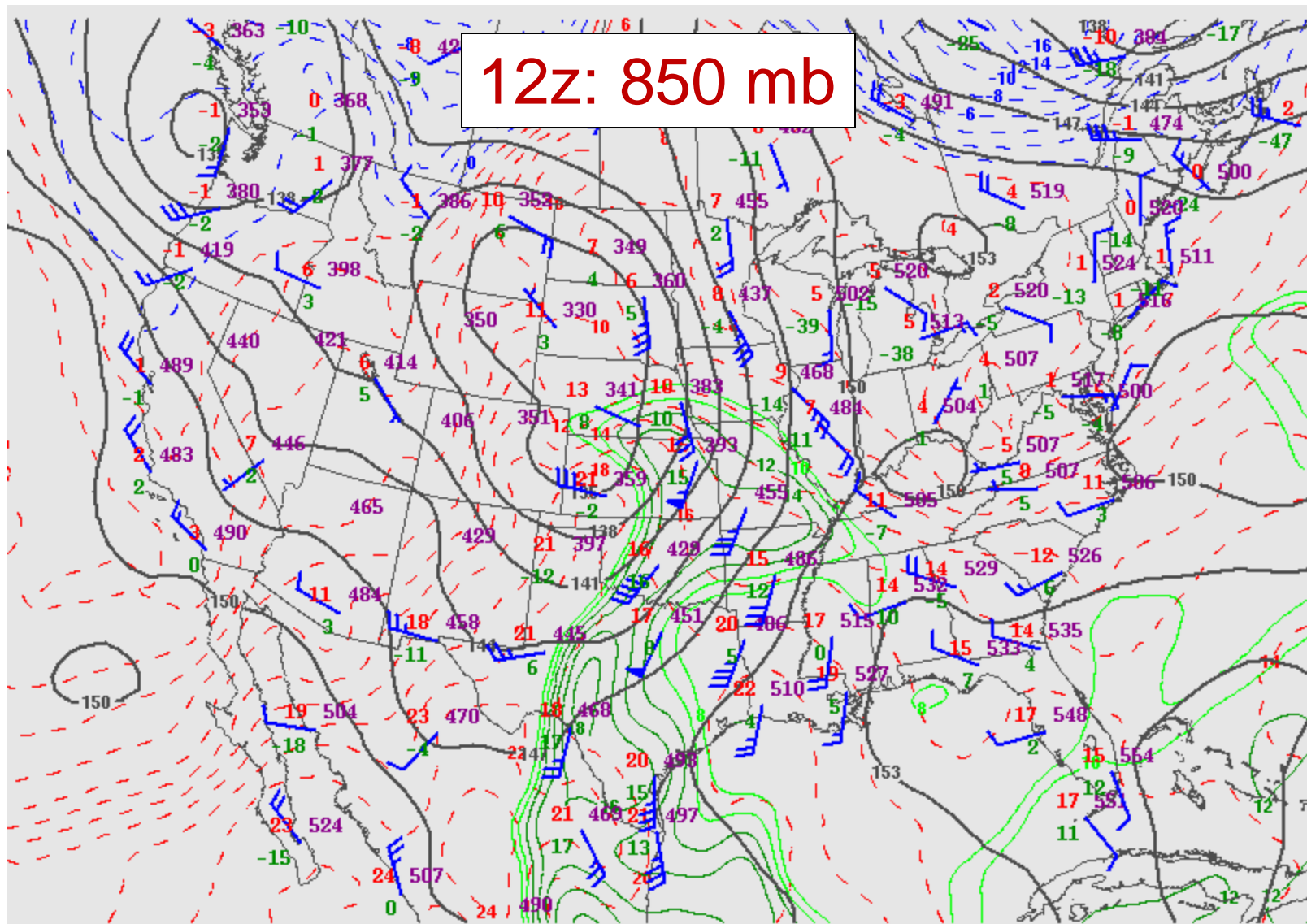
030504/1200 700 MB UA OBS, HGHTS, TEMPS, Td>=-4

00z: 700 mb



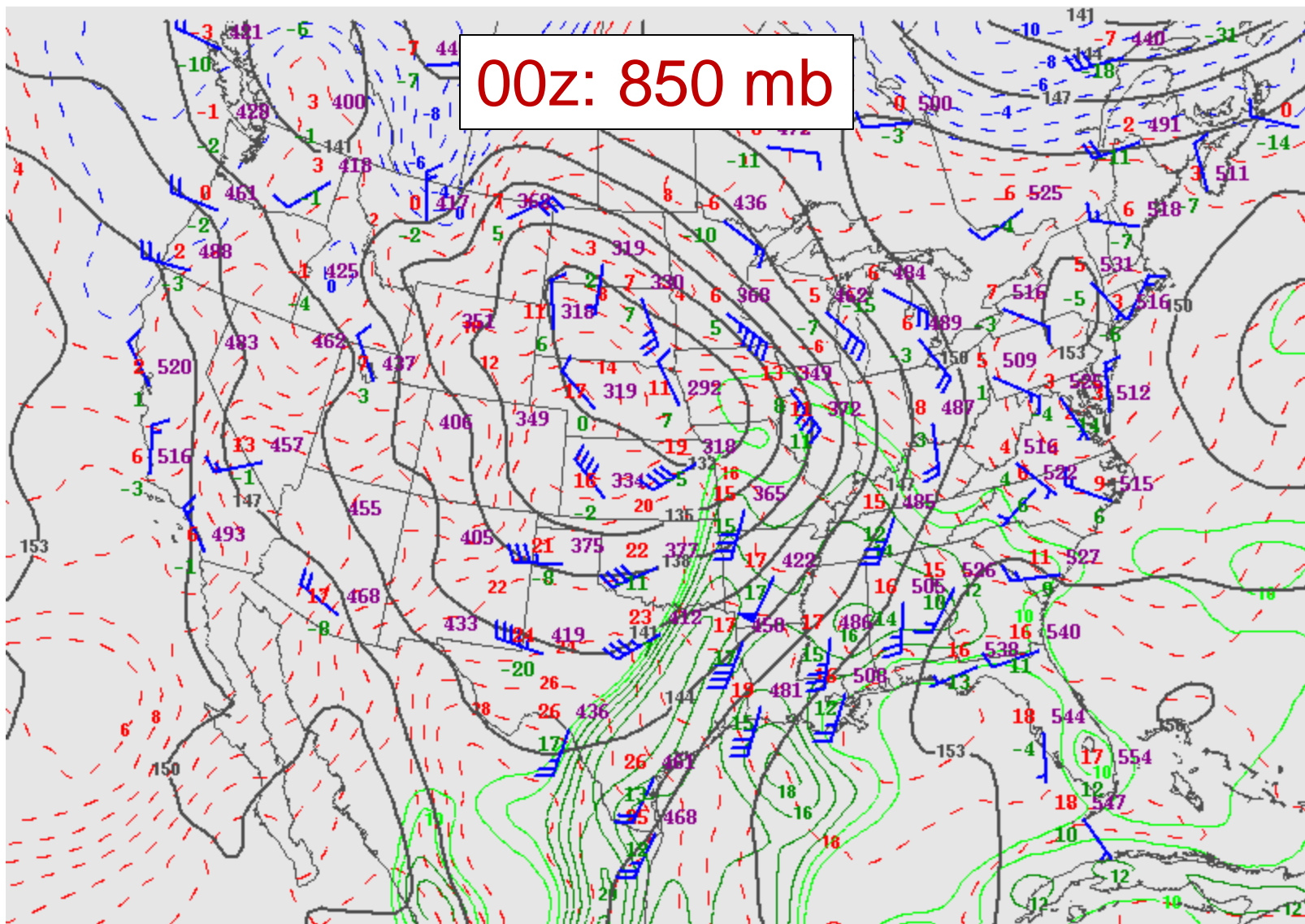
030505/0000 700 MB UA OBS, HGHTS, TEMPS, Td>=-4

12z: 850 mb



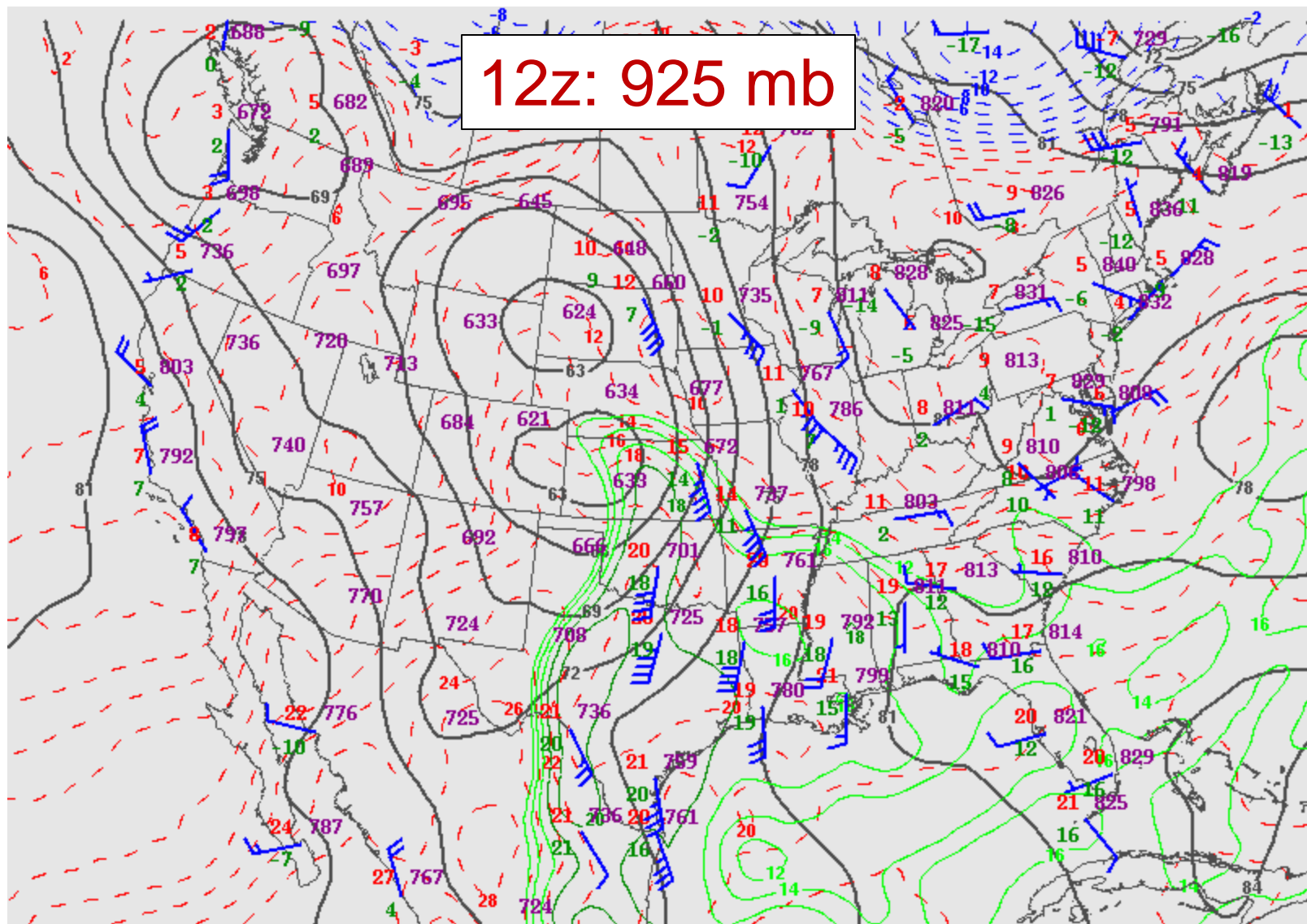
030504/1200 850 MB UA OBS, HGHTS, TEMPS, Td>=8

00z: 850 mb



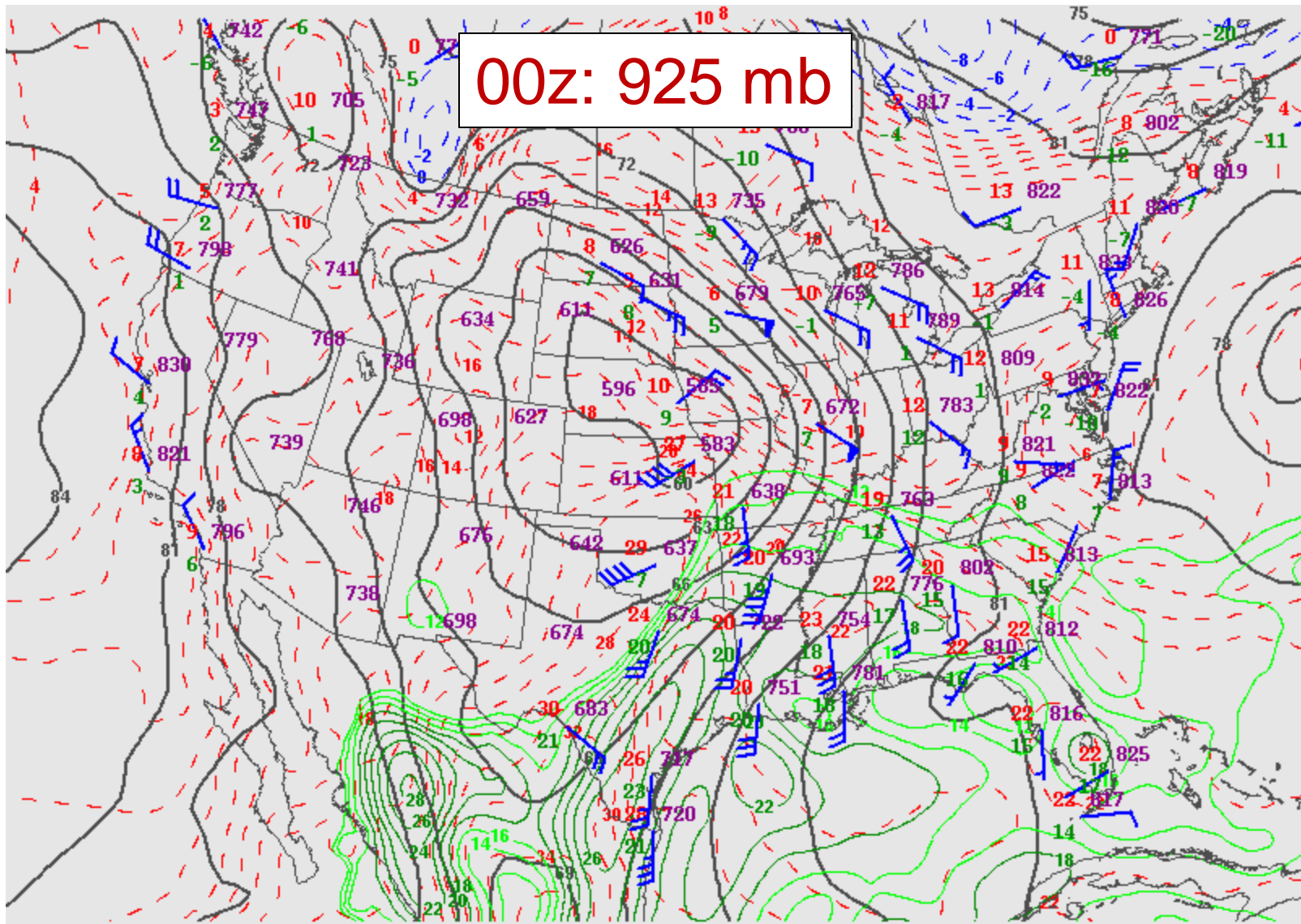
030505/0000 850 MB UA OBS, HGHTS, TEMPS, Td>=8

12z: 925 mb



030504/1200 925 MB UA OBS, HGHTS, TEMPS, Td=12

00z: 925 mb



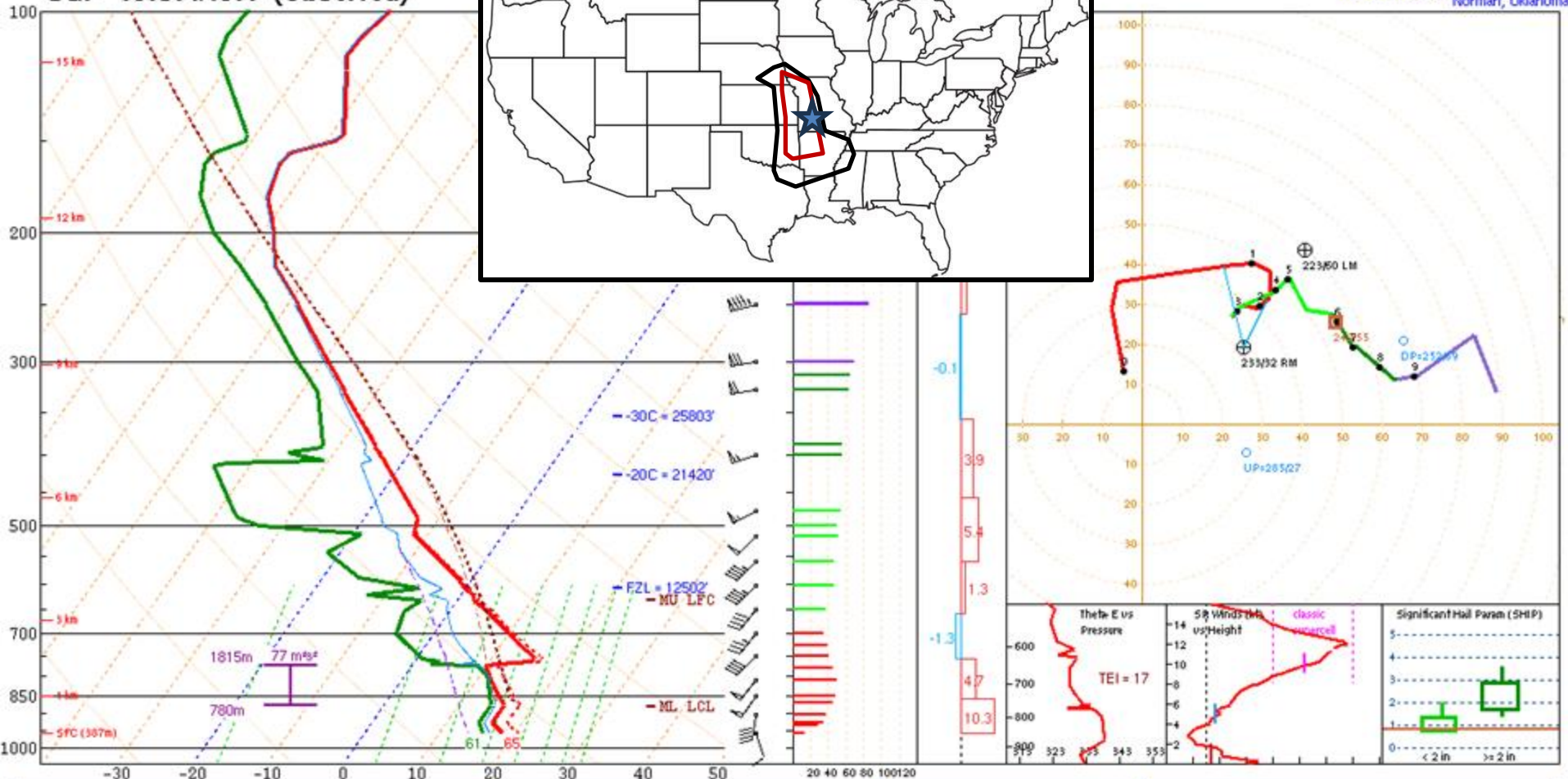
030505/0000 925 MB UA OBS, HGHTS, TEMPS, Td>=12

Diagnose Vertical Profiles

- Distribution of and changes in moisture, lapse rates, and vertical shear.
- First consider within the main outlook area, then around the periphery.

SGF 030504/1800 (Observed)

NOAA/NWS Storm Prediction Center
Norman, Oklahoma



PARCEL	CAPE	CINH	LCL	LI	LFC	EL
SURFACE	150	-438	338m	-2	4490m	28721'
MIXED LAYER	444	-301	741m	-3	3947m	33693'
FCST SURFACE	1412	-116	1352m	-6	3296m	38383'
MU (875 mb)	978	-167	997m	-5	3525m	37669'
PW = 1.21 in	3CAPE = 0 J/kg	WBZ = 10513'	WNOG = 0.0			
K = 25	DCAPE = 1106 J/kg	FZL = 12502'	ESP = 0.0			
MidRH = 51%	DownT = 57 F	ConvT = 95F	MMP = 0.96			
LowRH = 91%	MeanW = 11.7 g/kg	MaxT = 80F	NCAPE = 0.12			
SigSevere = 12558 m3/s3						
Sfc-3km Agl Lapse Rate = 4.3 C/km						
3-6km Agl Lapse Rate = 8.0 C/km						
850-500mb Lapse Rate = 6.6 C/km						
700-500mb Lapse Rate = 8.5 C/km						

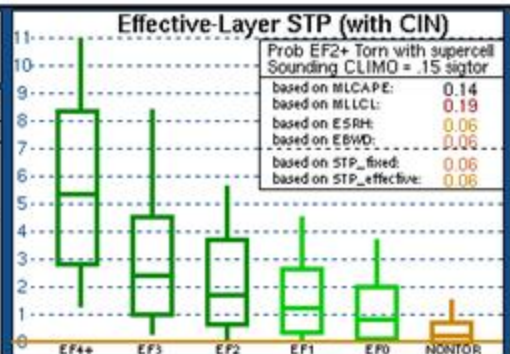
Supercell = 1.2
Left Supercell = -0.5
STP (eff layer) = 0.0
STP (fix layer) = 0.3
Sig Hail = 0.8

Supercell = 1.2
Left Supercell = -0.5
STP (eff layer) = 0.0
STP (fix layer) = 0.3
Sig Hail = 0.8

SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	379	42	191/34
SFC - 3 km	397	32	210/37
Eff Inflow Layer	77	14	218/48
SFC - 6 km	55	217/40	173/13
SFC - 8 km	64	221/40	188/11
LCL - EL (Cloud Layer)	73	224/44	204/13
Eff Shear (EBWD)	32	223/45	199/15
BRN Shear = 103 m/s²			
4-6km SR Wind = 225/19 kt			
Storm Motion Vectors			
Bunkers Right = 233/32 kt			
Bunkers Left = 223/60 kt			
Corfidi Downshear = 252/69 kt			
Corfidi Upshear = 285/27 kt			

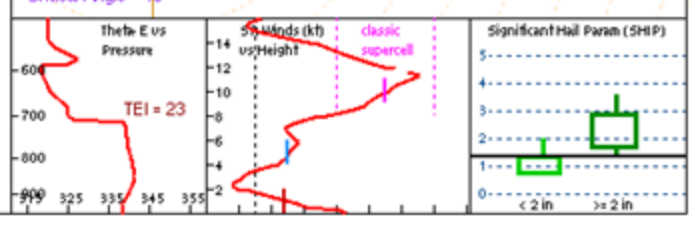
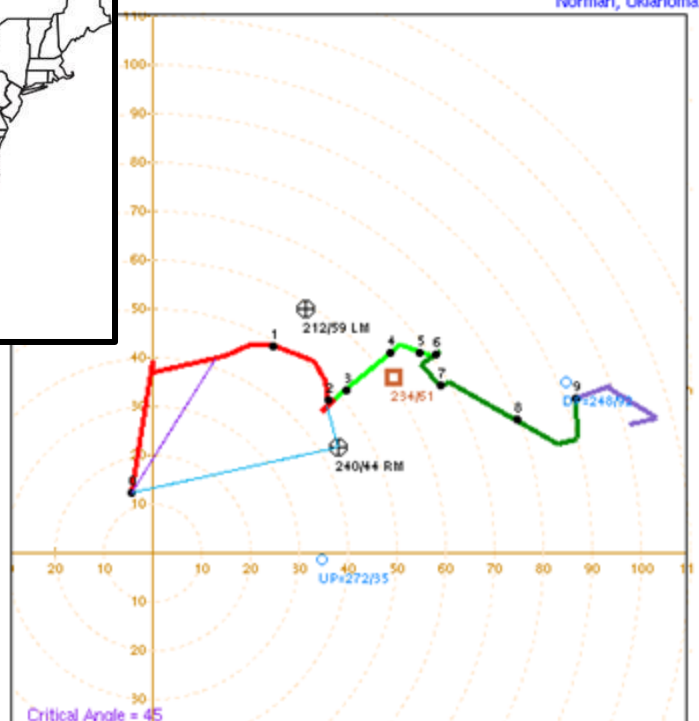
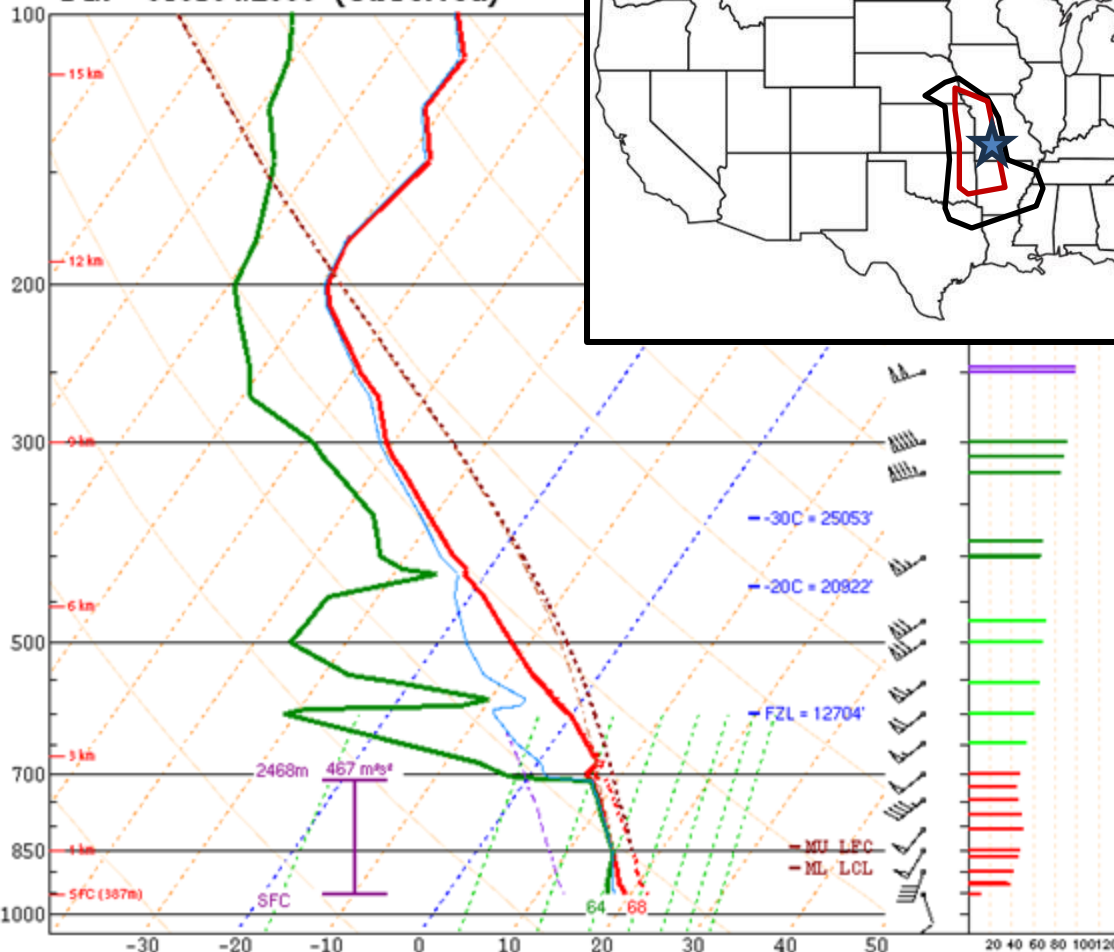
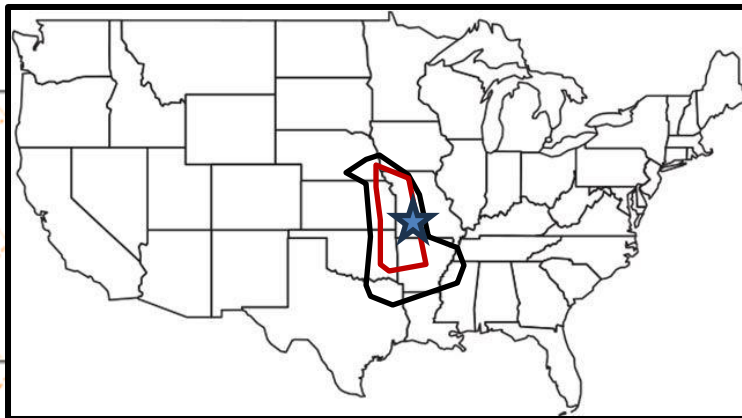


*** BEST GUESS PRECIP TYPE ***	
Rain.	
Based on sfc temperature of 65.5 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
No Quality matches	No Quality matches
(2 loose matches) SARS: 0% SIG	



SGF 030504/2000 (Observed)

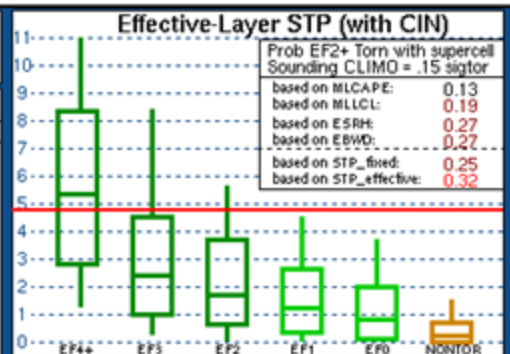
NOAA/NWS Storm Prediction Center
Norman, Oklahoma



PARCEL	CAPE	CIN	LCL	LI	LFC	EL
SURFACE	1218	-67	260m	-5	3271m	38186'
MIXED LAYER	1521	-18	574m	-5	2107m	38705'
FCST SURFACE	2638	0	1145m	-8	1145m	40458'
MU (850 mb)	1891	0	993m	-6	1043m	39237'
PW = 1.35 in	3CAPE = 12 J/kg	WBZ = 9561'	WNOG = 0.0			
K = 33	DCAPE = 859 J/kg	FZL = 12704'	ESP = 0.0			
MidRH = 59%	DownT = 55 F	ConvT = 74F	MMP = 1.00			
LowRH = 96%	MeanW = 13.2 g/kg	MaxT = 80F	NCAPE = 0.17			
SigSevere = 53757 m3/s3						
Sfc-3km Agl Lapse Rate = 5.3 C/km						
3-6km Agl Lapse Rate = 7.7 C/km						
850-500mb Lapse Rate = 6.7 C/km						
700-500mb Lapse Rate = 7.1 C/km						

SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	428	42	195/38
SFC - 3 km	477	49	214/42
Eff Inflow Layer	467	44	211/42
SFC - 6 km	69	222/48	158/16
SFC - 8 km	80	224/50	168/14
LCL - EL (Cloud Layer)	98	229/56	196/16
Eff Shear (EBWD)	69	222/48	158/16
BRN Shear = 122 m/s²			
4-6km SR Wind = 219/25 kt			
Storm Motion Vectors			
Bunkers Right = 240/44 kt			
Bunkers Left = 212/59 kt			
Corfidi Downshear = 248/92 kt			
Corfidi Upshear = 272/35 kt			

*** BEST GUESS PRECIP TYPE ***	
Rain.	
Based on sfc temperature of 67.6 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
No Quality Matches	No Quality Matches
(10 loose matches) SARS: 60% TOR	(50 loose matches) SARS: 76% SIG

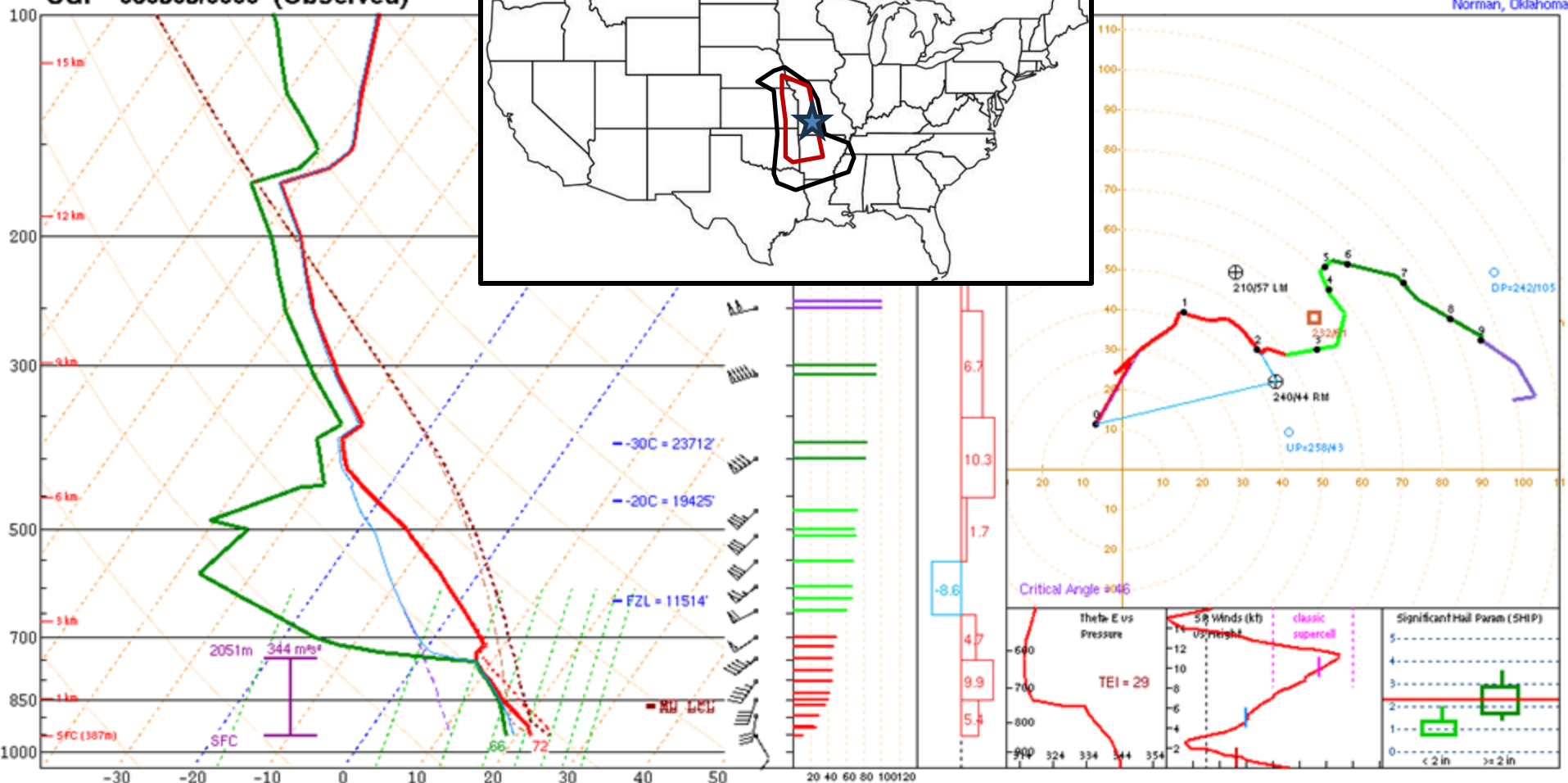


Supercell = 17.6
Left Supercell = 5.0
STP (eff layer) = 4.7
STP (fix layer) = 3.5
Sig Hail = 1.3

1km & 6km AGL
Wind Barbs

SGF 030505/0000 (Observed)

NOAA/NWS Storm Prediction Center
Norman, Oklahoma



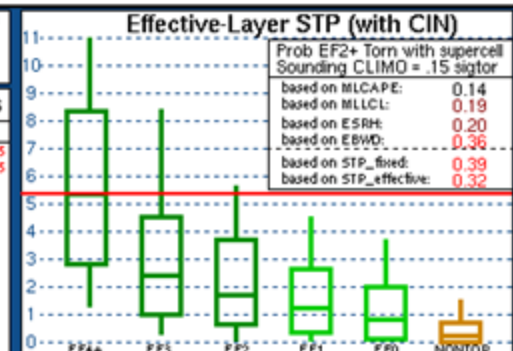
PARCEL	CAPE	CINH	LCL	LI	LFC	EL
SURFACE	2555	-18	411m	-9	832m	37458'
MIXED LAYER	2314	-3	750m	-8	882m	36947'
FCST SURFACE	2989	0	1122m	-10	1122m	38609'
MU (952 mb)	2555	-18	411m	-9	832m	37458'
PW = 1.12 in	3CAPE = 188 J/kg		WBZ = 7725'		WNOG = 1.7	
K = 21	DCAPE = 924 J/kg		FZL = 11514'		ESP = 0.1	
MidRH = 34%	DownT = 53 F		ConvT = 76F		MMP = 1.00	
LowRH = 90%	MeanW = 13.6 g/kg		MaxT = 80F		NCAPE = 0.24	
SigSevere = 88695 m3/s3						
Sfc-3km Agl Lapse Rate = 7.0 C/km						
3-6km Agl Lapse Rate = 8.2 C/km						
850-500mb Lapse Rate = 7.2 C/km						
700-500mb Lapse Rate = 7.6 C/km						

Supercell = 17.6
Left Supercell = -0.1
STP (eff layer) = 5.3
STP (fix layer) = 5.1
Sig Hail = 2.3

SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	298	35	189/29
SFC - 3 km	370	58	214/37
Eff Inflow Layer	344	45	205/34
SFC - 6 km	74	221/47	149/15
SFC - 8 km	92	224/50	159/15
LCL - EL (Cloud Layer)	99	230/57	199/16
Eff Shear (EBWD)	72	221/46	147/15
BRN Shear = 147 m/s²			
4-6km SR Wind = 205/30 kt			
Storm Motion Vectors.....			
Bunkers Right = 240/44 kt			
Bunkers Left = 210/57 kt			
Corfidi Downshear = 242/105 kt			
Corfidi Upshear = 258/43 kt			

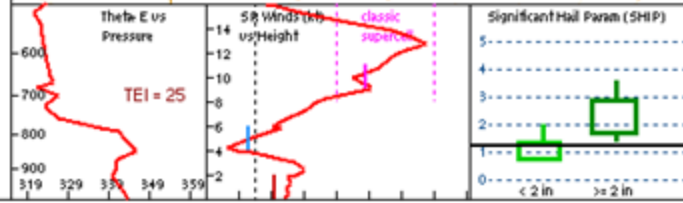
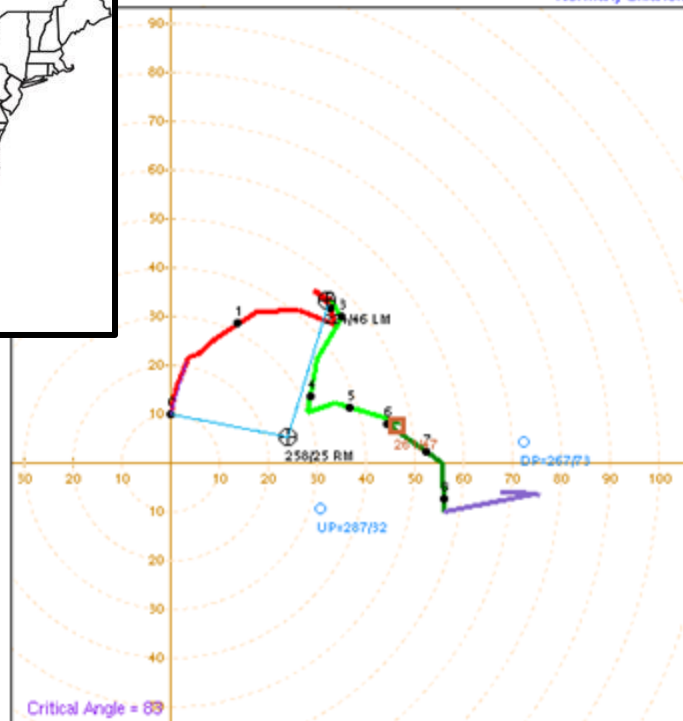
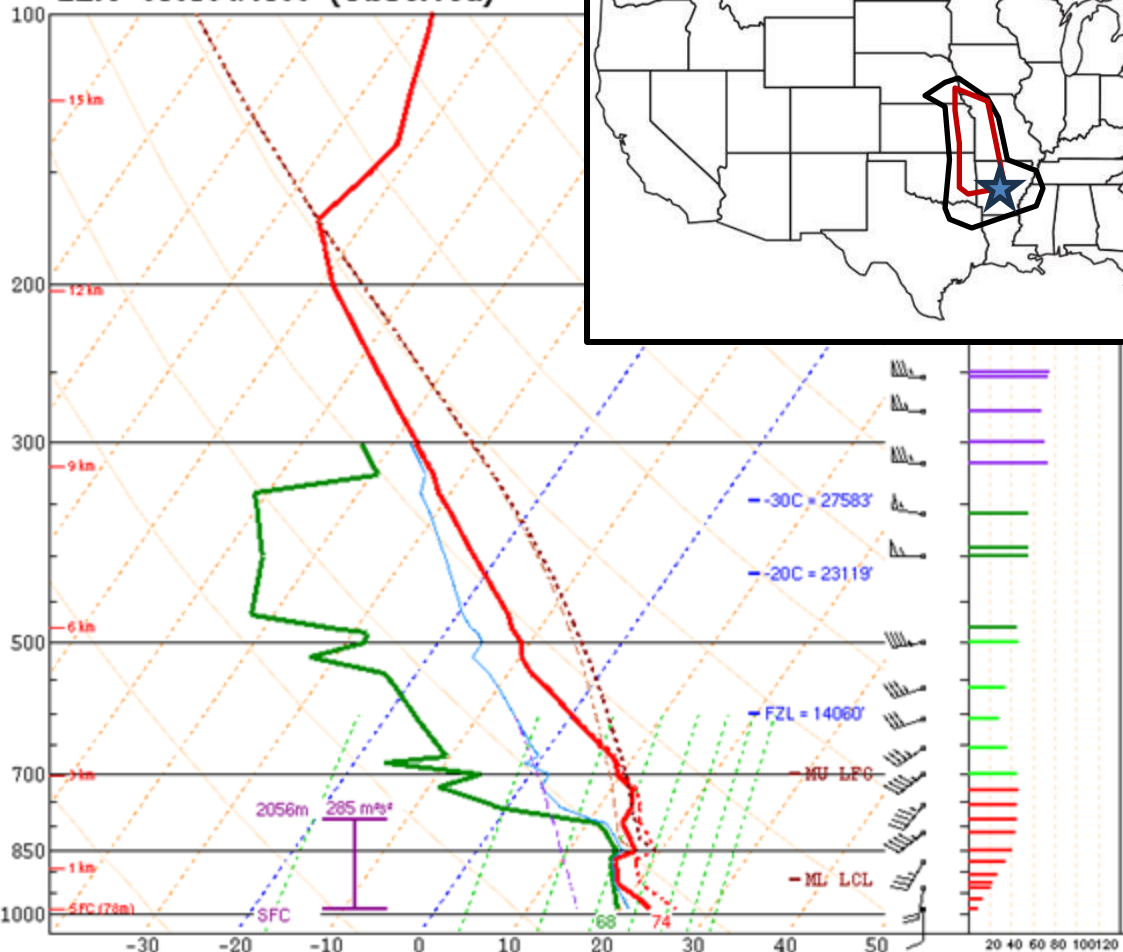


*** BEST GUESS PRECIP TYPE ***			
Rain.			
Based on sfc temperature of 72.0 F.			
SARS - Sounding Analogs			
SUPERCCELL		SGFNT HAIL	
03050500.UHBN	SIO	08020600.SH4U	4.25
79050500.0KCC	SIO	95042000.PTD	2.75
55042411.GUN	SIO		
(13 loose matches)		(13 loose matches)	
SARS: 77% TOR		SARS: 77% SIG	



LZK 030504/1800 (Observed)

NOAA/NWS Storm Prediction Center
Norman, Oklahoma



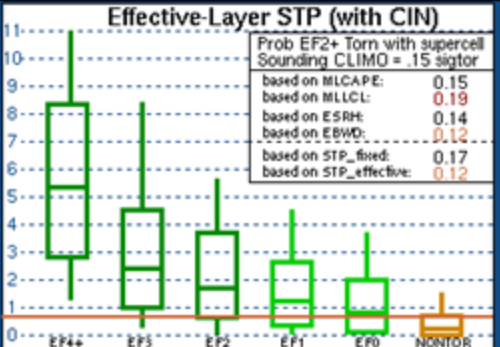
PARCEL	CAPE	CIN	LCL	LI	LFC	EL
SURFACE	1607	-82	534m	-6	3520m	41732'
MIXED LAYER	1146	-148	738m	-5	3766m	40238'
FCST SURFACE	2013	-35	1200m	-7	3025m	43138'
MU (850 mb)	2006	-29	1642m	-6	3025m	43138'
PW = 1.37 in	3CAPE = 0 J/kg	WBZ = 10475'	WNOG = 0.0			
K = 28	DCAPE = 1097 J/kg	FZL = 14060'	ESP = 0.0			
MidRH = 37%	DownT = 60 F	ConvT = 86F	MMP = 0.94			
LowRH = 92%	MeanW = 14.0 g/kg	MaxT = 82F	NCAPE = 0.20			
SigSevere = 26317 m3/s3						
Sfc-3km Agl Lapse Rate = 5.2 C/km						
3-6km Agl Lapse Rate = 7.8 C/km						
850-500mb Lapse Rate = 7.0 C/km						
700-500mb Lapse Rate = 7.8 C/km						

Supercell = 11.5
Left Supercell = 3.7
STP (eff layer) = 0.6
STP (fix layer) = 1.3
Sig Hail = 1.2

SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	160	23	194/20
SFC - 3 km	312	40	216/33
Eff Inflow Layer	285	40	212/29
SFC - 6 km	45	228/33	181/17
SFC - 8 km	59	234/34	193/15
LCL - EL (Cloud Layer)	93	243/39	222/17
Eff Shear (EBWD)	49	230/33	184/16
BRN Shear = 75 m/s ²			
4-6km SR Wind = 245/13 kt			
Storm Motion Vectors			
Bunkers Right = 258/25 kt			
Bunkers Left = 224/46 kt			
Corfidi Downshear = 267/73 kt			
Corfidi Upshear = 287/32 kt			

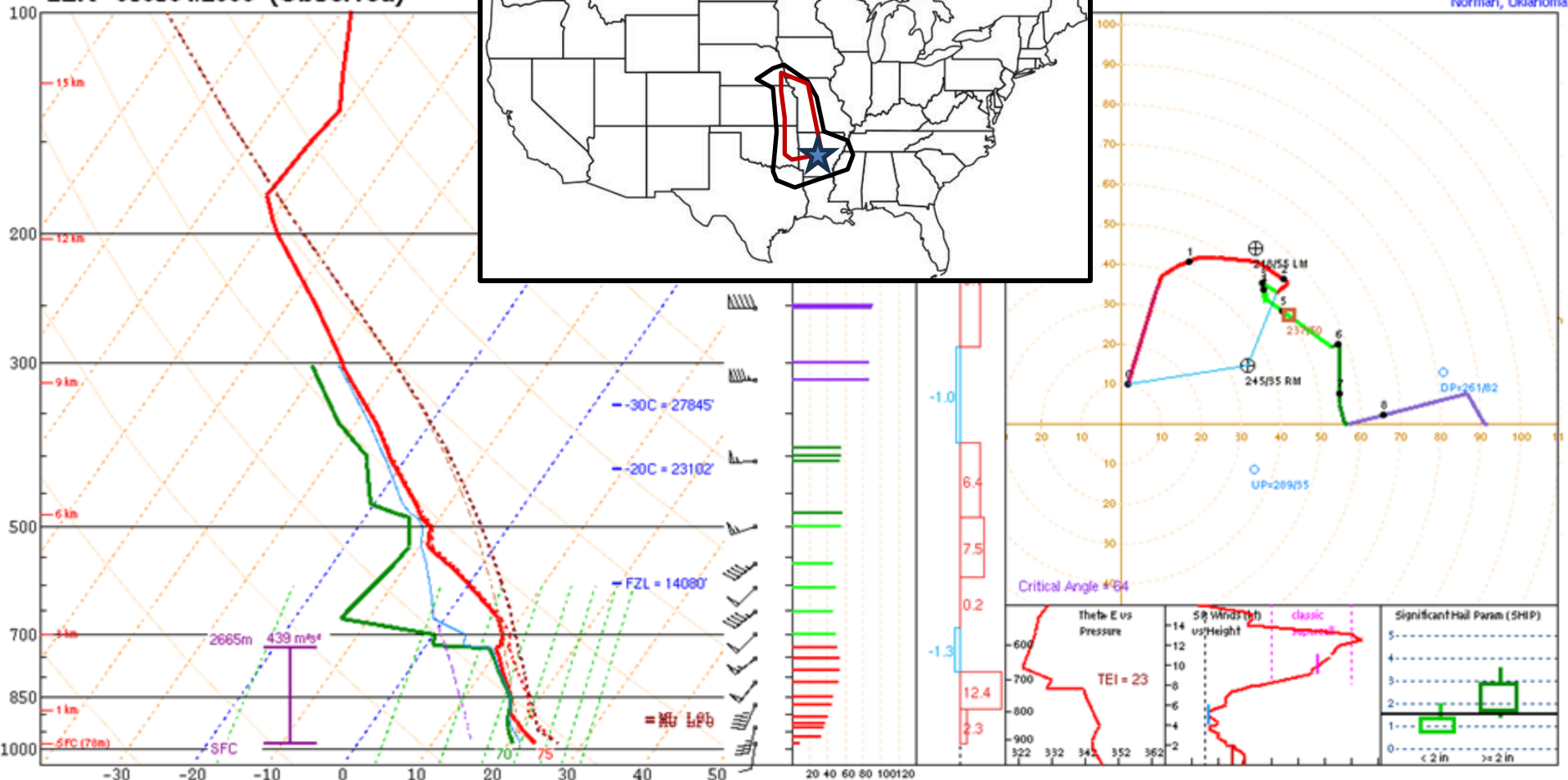


*** BEST GUESS PRECIP TYPE ***	
Rain.	
Based on sfc temperature of 74.5 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
03092620.URN NON	92070200.DEN 2.50
(14 loose matches)	(114 loose matches)
SARS: 50% TOR	SARS: 64% SIG



LZK 030504/2000 (Observed)

NOAA/NWS Storm Prediction Center
Norman, Oklahoma



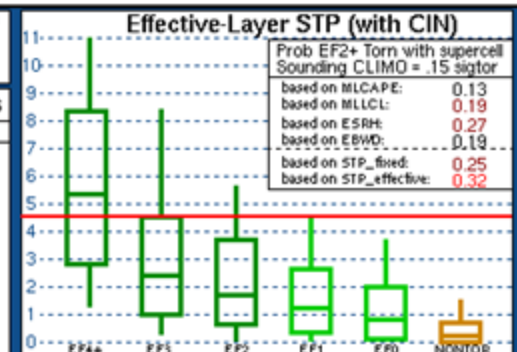
PARCEL	CAPE	CIN	LCL	LI	LFC	EL
SURFACE	2210	-6	451m	-6	689m	42729'
MIXED LAYER	1747	-5	793m	-6	1803m	42764'
FCST SURFACE	2625	0	1207m	-7	1207m	43324'
MU (985 mb)	2210	-6	451m	-6	689m	42729'
PW = 1.74 in	3CAPE = 14 J/kg		WBZ = 10924'		WNOG = 0.0	
K = 34	DCAPE = 877 J/kg		FZL = 14080'		ESP = 0.0	
MidRH = 64%	DownT = 60 F		ConvT = 79F		MMP = 0.98	
LowRH = 94%	MeanW = 14.8 g/kg		MaxT = 83F		NCAPE = 0.18	
SigSevere = 48284 m3/s3						
Sfc-3km Agl Lapse Rate = 5.5 C/km						
3-6km Agl Lapse Rate = 7.6 C/km						
850-500mb Lapse Rate = 6.6 C/km						
700-500mb Lapse Rate = 7.5 C/km						

Supercell = 19.4
Left Supercell = 7.2
STP (eff layer) = 4.5
STP (fix layer) = 3.5
Sig Hail = 1.5

SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	268	35	197/34
SFC - 3 km	416	42	214/43
Eff Inflow Layer	439	44	213/42
SFC - 6 km	54	221/44	172/18
SFC - 8 km	64	227/44	181/15
LCL - EL (Cloud Layer)	101	236/49	211/16
Eff Shear (EBWD)	53	223/44	172/18
BRN Shear = 66 m/s/s			
4-6km SR Wind =	217/17 kt		
.....Storm Motion Vectors.....			
Bunkers Right =	245/35 kt		
Bunkers Left =	218/55 kt		
Corfidi Downshear =	261/82 kt		
Corfidi Upshear =	289/35 kt		

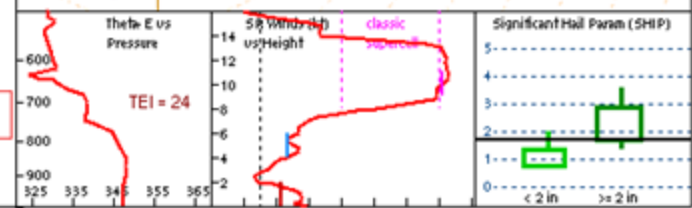
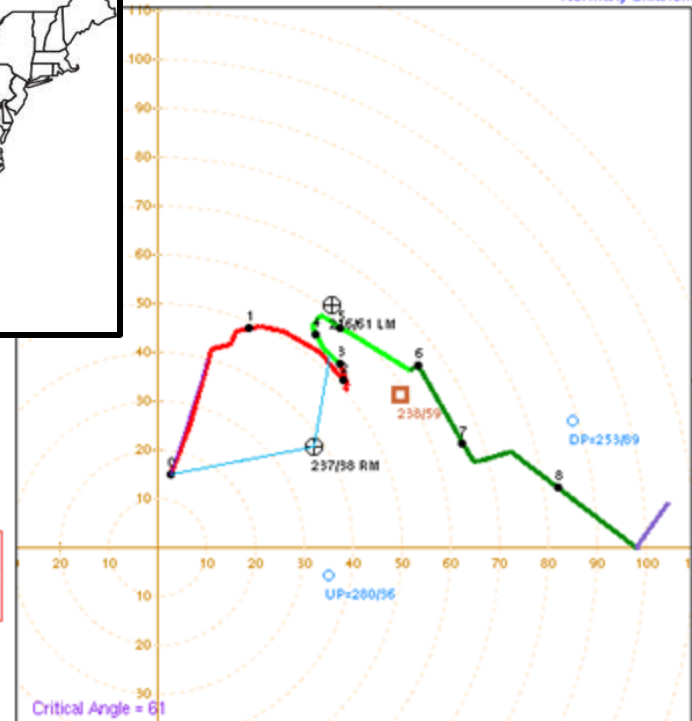
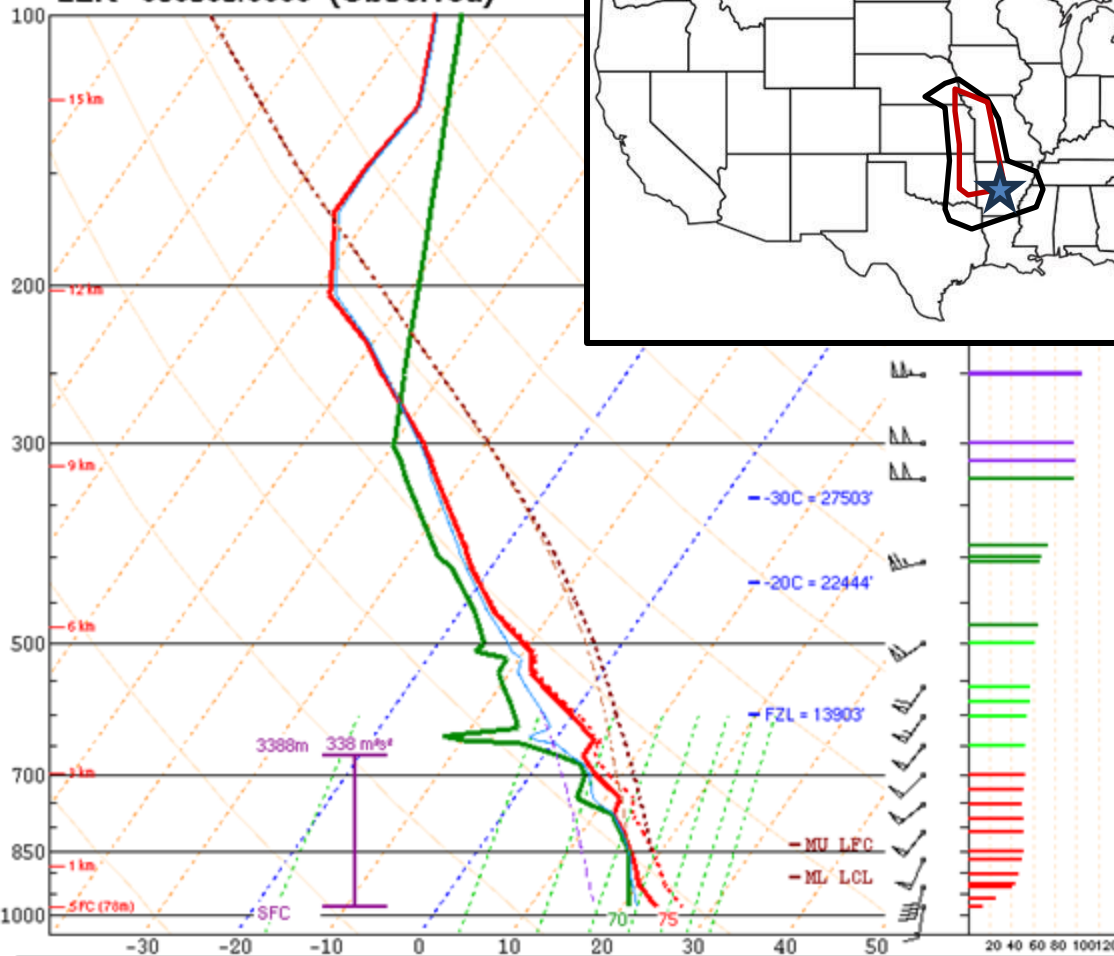
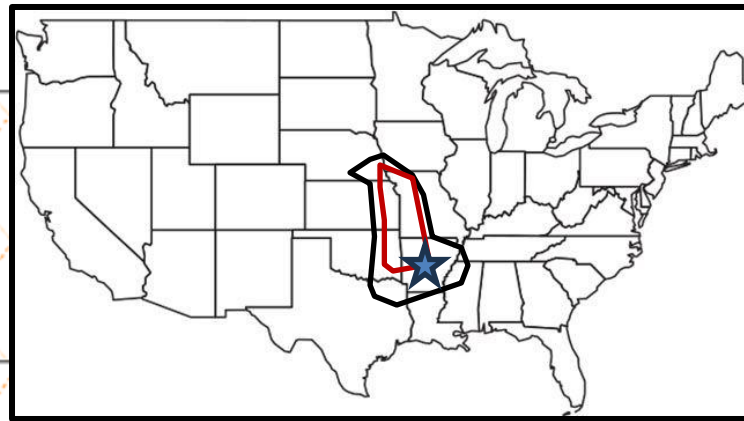


*** BEST GUESS PRECIP TYPE ***	
Rain.	
Based on sfc temperature of 75.2 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
03051100.URN SIO	
87111600.000 SIO	
54050121.1IK SIO	
03050918.CHO WEAK	
04042001.0w1 WEAK	
99050122.MAF WEAK	
No Quality Matches	
(40 loose matches)	(24 loose matches)
SARS: 68% TOR	SARS: 62% SIG



LZK 030505/0000 (Observed)

NOAA/NWS Storm Prediction Center
Norman, Oklahoma



PARCEL	CAPE	CIN	LCL	LI	LFC	EL
SURFACE	2439	-27	454m	-7	1751m	42729'
MIXED LAYER	2497	-11	747m	-7	1751m	42729'
FCST SURFACE	3595	0	1257m	-9	1257m	44642'
MU (850 mb)	2626	-0	1362m	-7	1483m	43332'
PW = 1.91 in	3CAPE = 42 J/kg	WBZ = 12025'	WNOG = 0.0			
K = 43	DCAPE = 696 J/kg	FZL = 13903'	ESP = 0.0			
MidRH = 71%	DownT = 63 F	ConvT = 81F	MMP = 0.99			
LowRH = 93%	MeanW = 15.5 g/kg	MaxT = 85F	NCAPE = 0.22			
SigSevere = 71235 m3/s3						
Sfc-3km Agl Lapse Rate = 6.1 C/km						
3-6km Agl Lapse Rate = 7.3 C/km						
850-500mb Lapse Rate = 6.9 C/km						
700-500mb Lapse Rate = 7.1 C/km						

Supercell = 17.7
Left Supercell = 5.9
STP (eff layer) = 5.4
STP (fix layer) = 3.7
Sig Hail = 1.7

SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	248	34	198/36
SFC - 3 km	350	42	214/44
Eff Inflow Layer	338	41	214/44
SFC - 6 km	55	217/47	169/18
SFC - 8 km	80	222/48	182/15
LCL - EL (Cloud Layer)	98	232/54	218/17
Eff Shear (EBWD)	58	218/48	170/18
BRN Shear = 80 m/s/s			
4-6km SR Wind = 198/24 kt			
Storm Motion Vectors			
Bunkers Right = 237/38 kt			
Bunkers Left = 216/61 kt			
Corfidi Downshear = 253/89 kt			
Corfidi Upshear = 280/36 kt			



*** BEST GUESS PRECIP TYPE ***
Rain.
 Based on sfc temperature of 75.2 F.

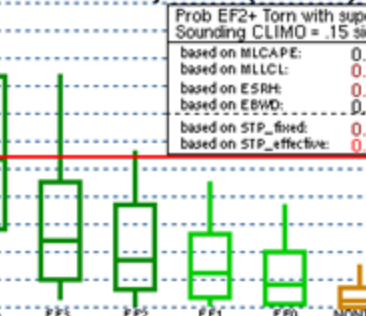
SARS - Sounding Analogs

SUPERCCELL	SGFNT HAIL
03050500.JBR SIG	
03051100.UN SIG	

No Quality Matches

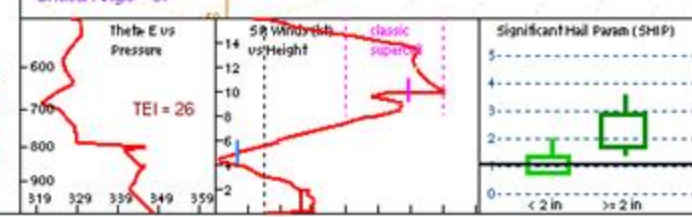
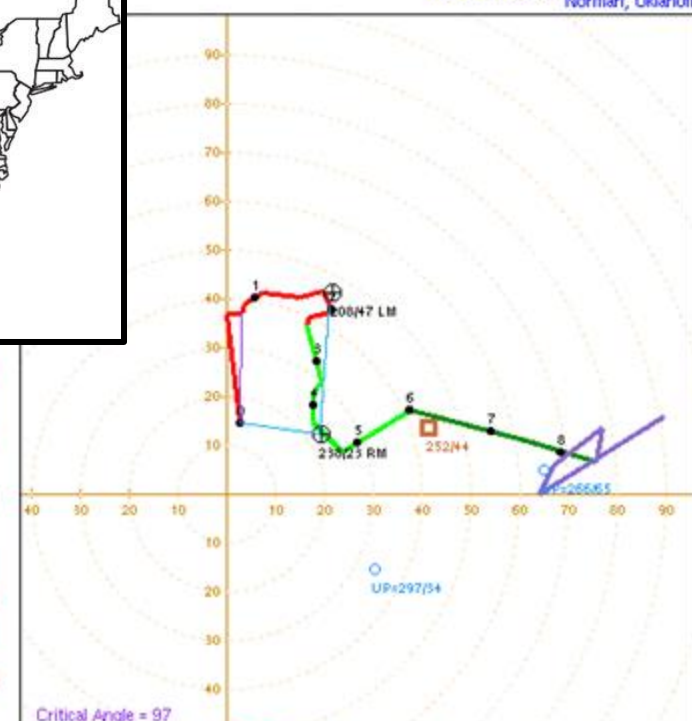
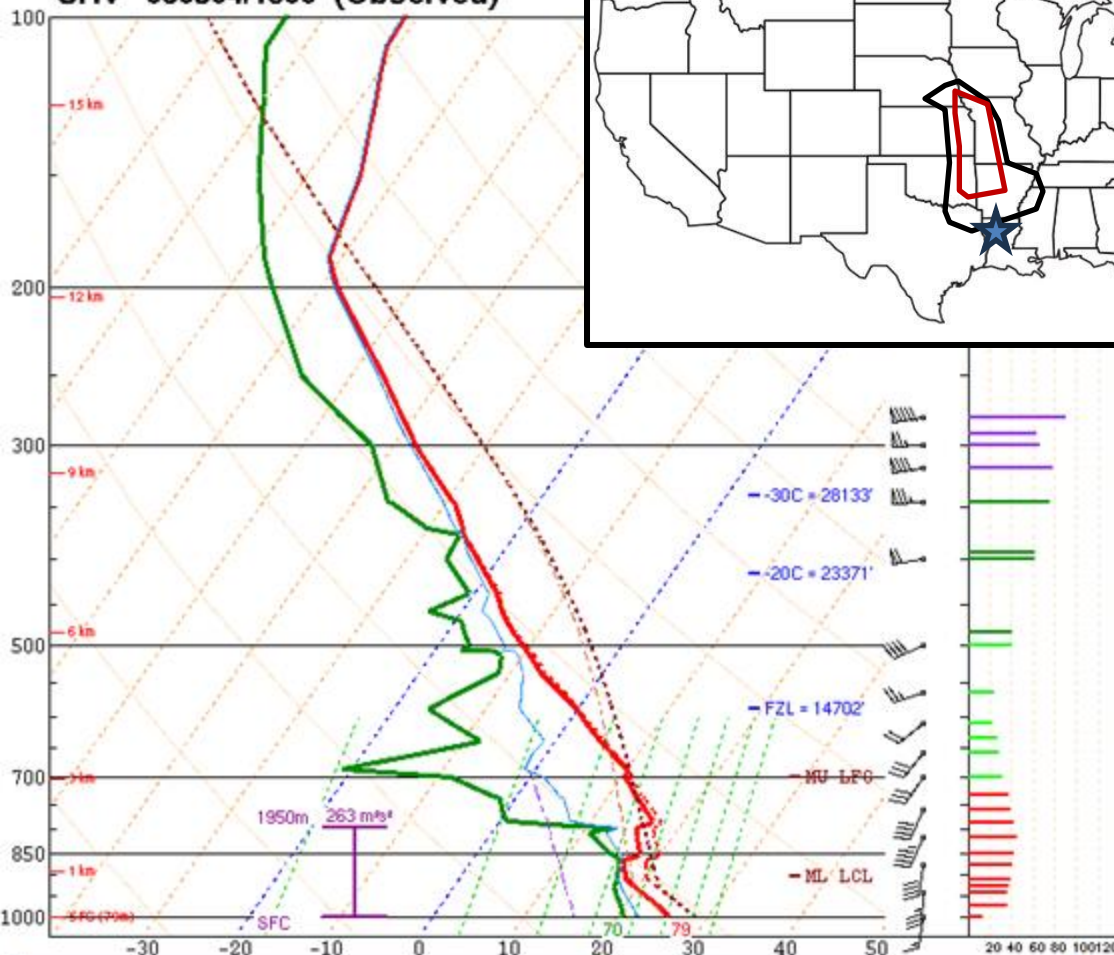
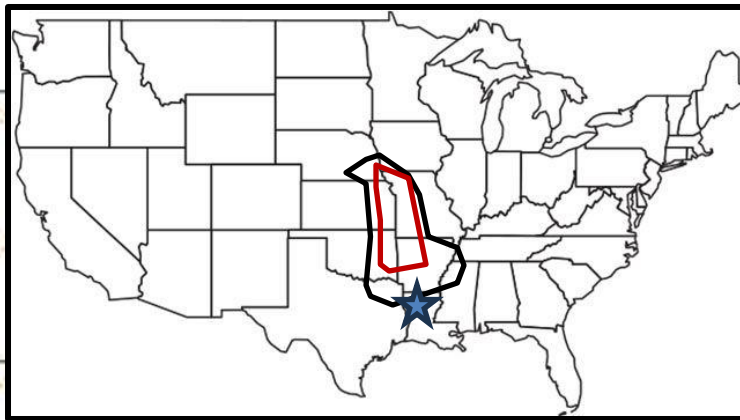
(32 loose matches)
SARS: 75% TOR

Effective-Layer STP (with CIN)



SHV 030504/1800 (Observed)

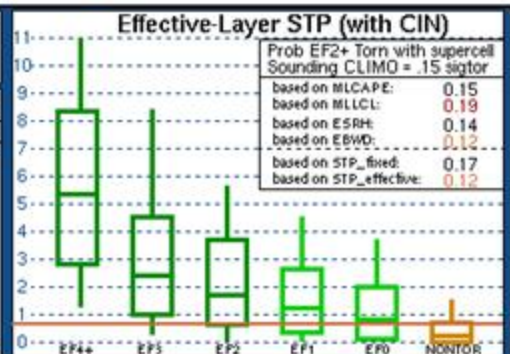
NOAA/NWS Storm Prediction Center
Norman, Oklahoma



PARCEL	CAPE	CINH	LCL	LI	LFC	EL
SURFACE	2207	-59	629m	-7	3044m	43726'
MIXED LAYER	1470	-155	880m	-5	3705m	42005'
FCST SURFACE	2052	-74	1199m	-7	3357m	42574'
MU (999 mb)	2207	-59	629m	-7	3044m	43726'
PW = 1.55 in 3CAPE = 0 J/kg WBZ = 10373' WNOG = 0.0 K = 24 DCAPE = 995 J/kg FZL = 14702' ESP = 0.0 MidRH = 38% DownT = 60 F ConvT = 95F MMP = 0.95 LowRH = 87% MeanW = 14.4 g/kg MaxT = 84F NCAPE = 0.21 SigSevere = 26258 m3/s3						
Sfc-3km Agl Lapse Rate = 5.8 C/km 3-6km Agl Lapse Rate = 7.9 C/km 850-500mb Lapse Rate = 7.0 C/km 700-500mb Lapse Rate = 7.9 C/km						

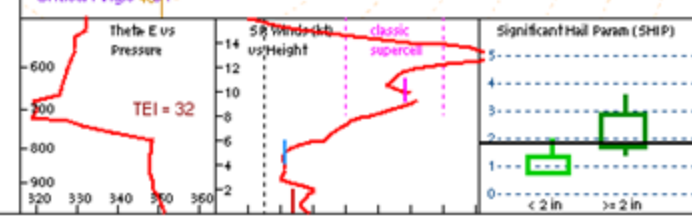
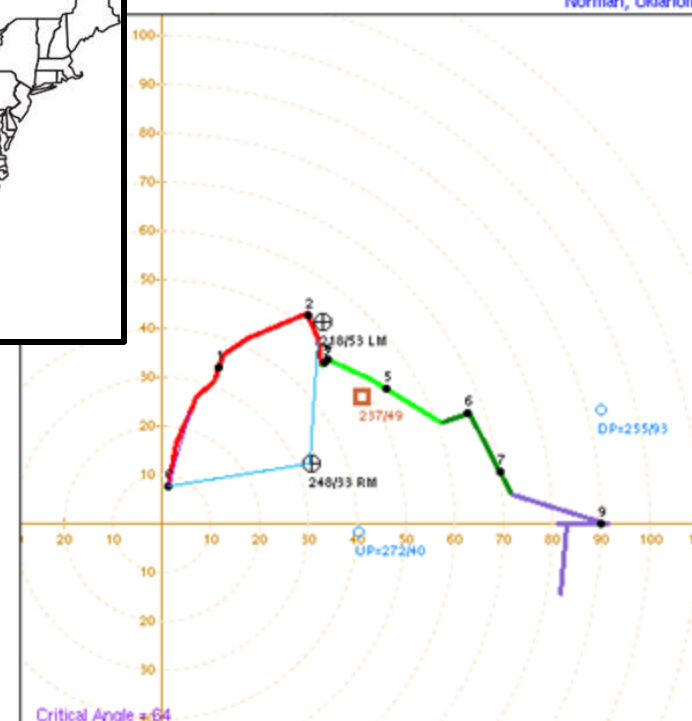
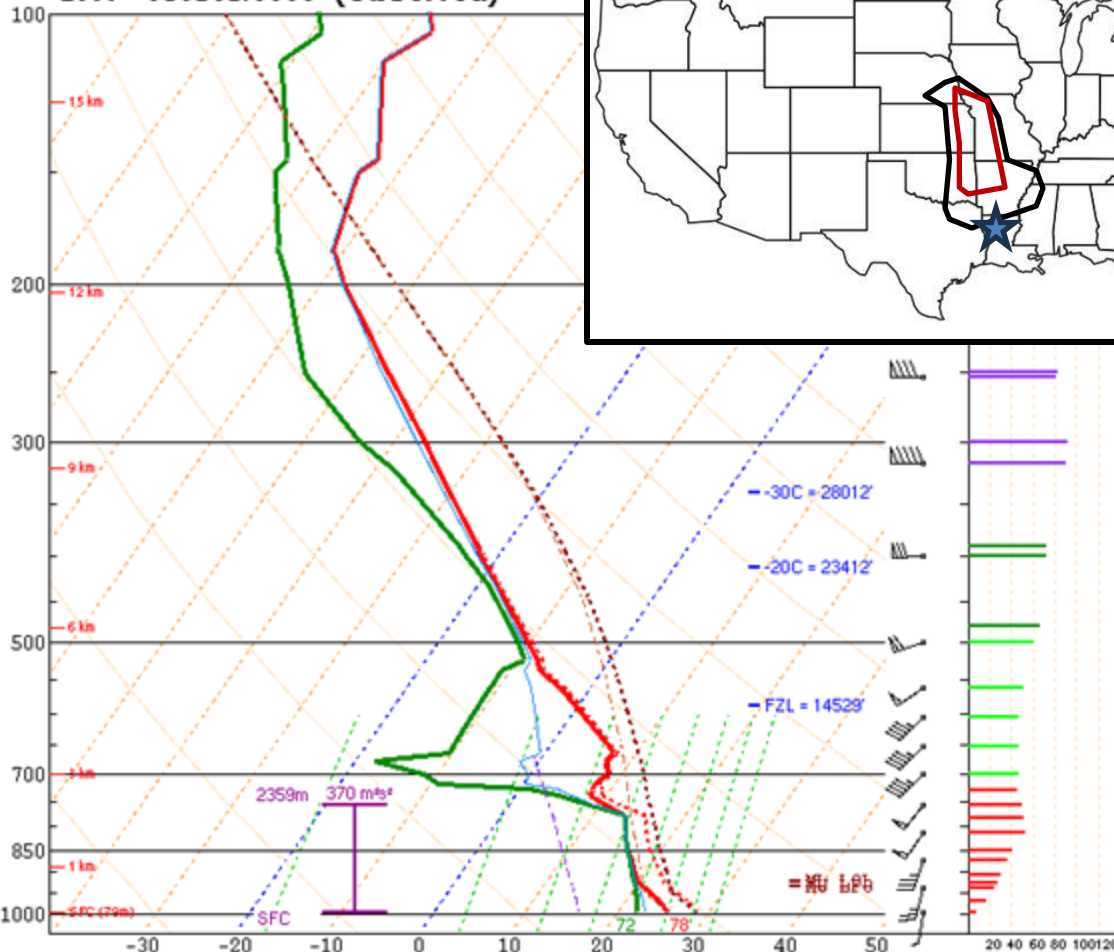
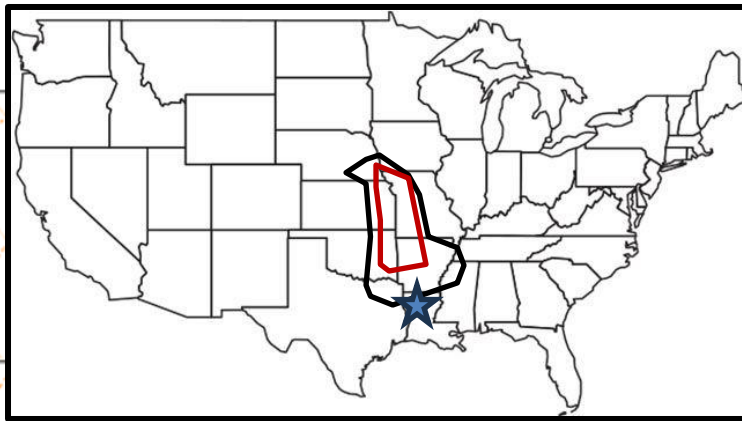
SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	144	26	184/35
SFC - 3 km	239	20	196/37
Eff Inflow Layer	263	30	192/38
SFC - 6 km	35	207/33	166/18
SFC - 8 km	66	215/33	181/15
LCL - EL (Cloud Layer)	86	229/38	216/16
Eff Shear (EBWD)	45	209/33	171/17
BRN Shear = 24 m/s/s			
4-6km SR Wind = 261/7 kt			
.....Storm Motion Vectors.....			
Bunkers Right = 238/23 kt			
Bunkers Left = 208/47 kt			
Corfidi Downshear = 266/65 kt			
Corfidi Upshear = 297/34 kt			

*** BEST GUESS PRECIP TYPE ***	
Rain.	
Based on sfc temperature of 78.8 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
06061800.PWD: 1.75	
No Quality Matches	
(15 loose matches)	(37 loose matches)
SARS: 73% TOR	SARS: 41% SIG



SHV 030505/0000 (Observed)

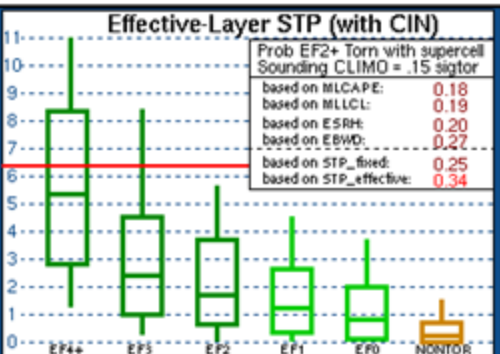
NOAA/NWS Storm Prediction Center
Norman, Oklahoma



PARCEL	CAPE	CINH	LCL	LI	LFC	EL
SURFACE	2950	-3	452m	-8	578m	44726'
MIXED LAYER	2567	0	689m	-7	736m	43477'
FCST SURFACE	3473	0	1094m	-9	1094m	44726'
MU (995 mb)	2950	-3	452m	-8	578m	44726'
PW = 1.86 in	3CAPE = 118 J/kg	WBZ = 9863'	WNOG = 0.0			
K = 23	DCAPE = 836 J/kg	FZL = 14529'	ESP = 0.0			
MidRH = 51%	DownT = 61 F	ConvT = 80F	MMP = 0.99			
LowRH = 94%	MeanW = 16.2 g/kg	MaxT = 86F	NCAPE = 0.23			
SigSevere = 83380 m3/s3						
Sfc-3km Agl Lapse Rate = 6.6 C/km						
3-6km Agl Lapse Rate = 6.9 C/km						
850-500mb Lapse Rate = 6.6 C/km						
700-500mb Lapse Rate = 6.9 C/km						

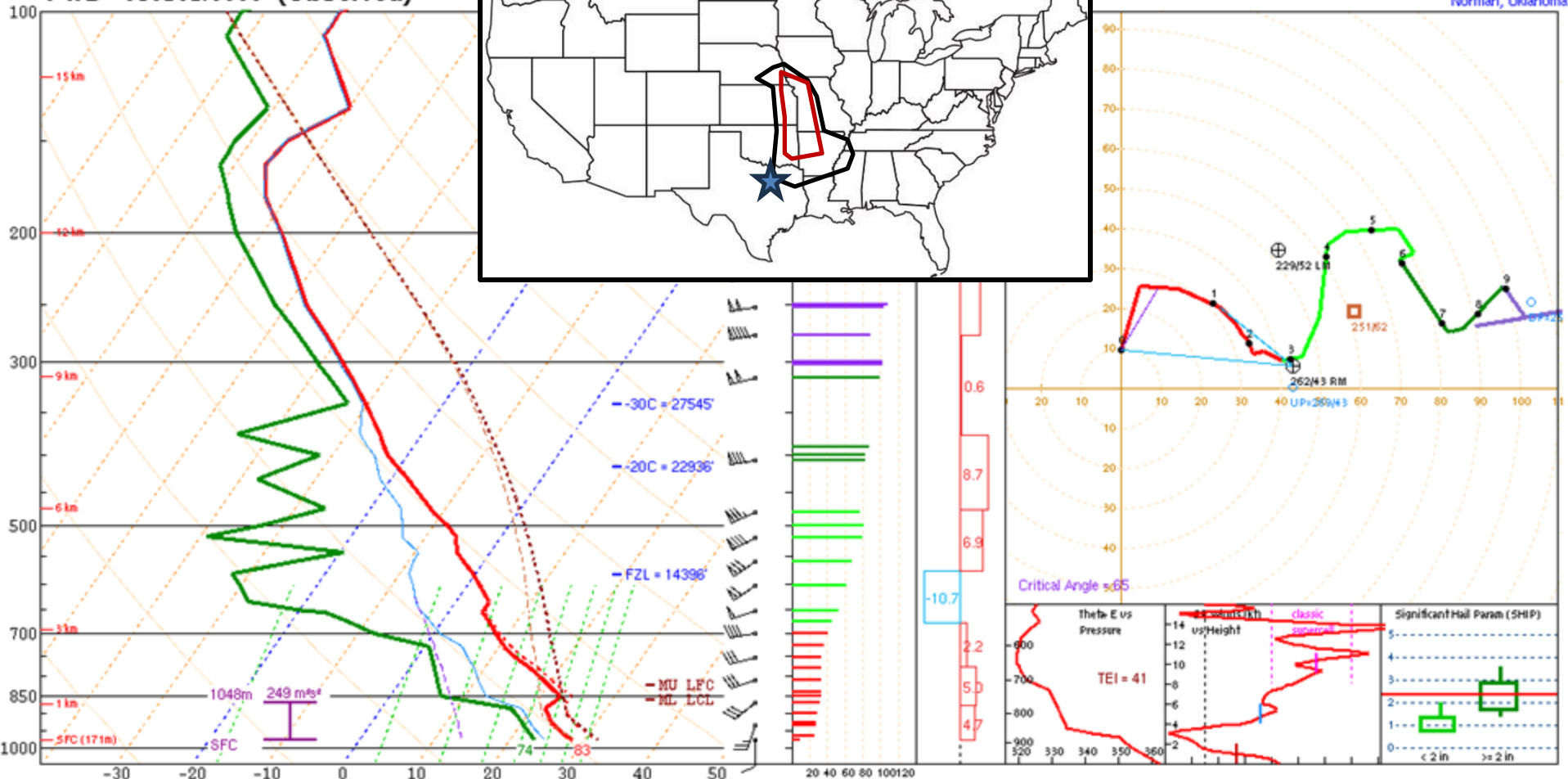
SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	191	26	196/23
SFC - 3 km	379	41	210/36
Eff Inflow Layer	370	43	206/34
SFC - 6 km	63	220/40	161/19
SFC - 8 km	76	227/41	175/16
LCL - EL (Cloud Layer)	104	237/48	215/16
Eff Shear (EBWD)	67	223/40	167/18
BRN Shear = 90 m/s/s			
4-6km SR Wind = 224/22 kt			
Storm Motion Vectors			
Bunkers Right = 248/33 kt			
Bunkers Left = 218/53 kt			
Corfidi Downshear = 255/93 kt			
Corfidi Upshear = 272/40 kt			

*** BEST GUESS PRECIP TYPE ***	
Rain.	
Based on sfc temperature of 78.4 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
01041022 S2L WEAK	
03050518 MKL WEAK	
03050520 MKL NON	
No Quality Matches	
(17 loose matches)	(33 loose matches)
SARS: 65% TOR	SARS: 73% SIG



FWD 030505/0000 (Observed)

NOAA/NWS Storm Prediction Center
Norman, Oklahoma



PARCEL	CAPE	CINH	LCL	LI	LFC	EL
SURFACE	5405	-9	671m	-10	1507m	45845'
MIXED LAYER	3738	-60	1123m	-7	1963m	44764'
FCST SURFACE	4834	0	1631m	-9	1631m	45845'
MU (976 mb)	5405	-9	671m	-10	1507m	45845'
PW = 1.24 in	3CAPE = 101 J/kg		WBZ = 9866'		WNOG = 0.0	
K = 22	DCAPE = 1453 J/kg		FZL = 14396'		ESP = 2.0	
MidRH = 28%	DownT = 57 F		ConvT = 92F		MMP = 1.00	
LowRH = 60%	MeanW = 16.1 g/kg		MaxT = 92F		NCAPE = 0.43	
SigSevere = 141720 m3/s3						
Sfc-3km Agl Lapse Rate = 8.0 C/km						
3-6km Agl Lapse Rate = 6.6 C/km						
850-500mb Lapse Rate = 7.4 C/km						
700-500mb Lapse Rate = 6.2 C/km						

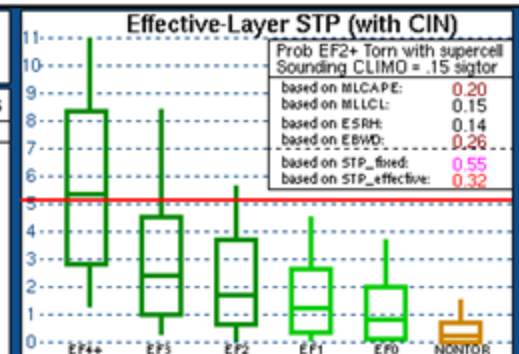
Supercell = 26.9
Left Supercell = 5.4
STP (eff layer) = 5.1
STP (fix layer) = 8.9
Sig Hail = 2.3

SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	246	26	204/26
SFC - 3 km	233	42	235/28
Eff Inflow Layer	249	27	205/26
SFC - 6 km	74	239/40	149/17
SFC - 8 km	90	243/44	165/15
LCL - EL (Cloud Layer)	100	249/55	211/16
Eff Shear (EBWD)	80	241/42	157/16
BRN Shear = 108 m/s ²			
4-6km SR Wind = 210/36 kt			
Storm Motion Vectors			
Bunkers Right = 262/43 kt			
Bunkers Left = 229/52 kt			
Corfidi Downshear = 258/105 kt			
Corfidi Upshear = 269/43 kt			



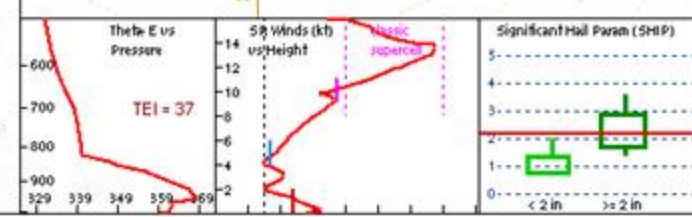
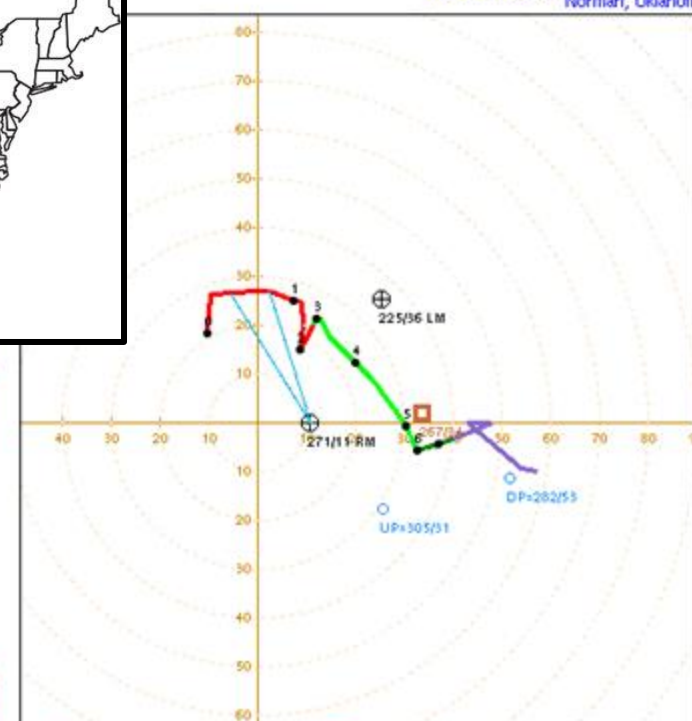
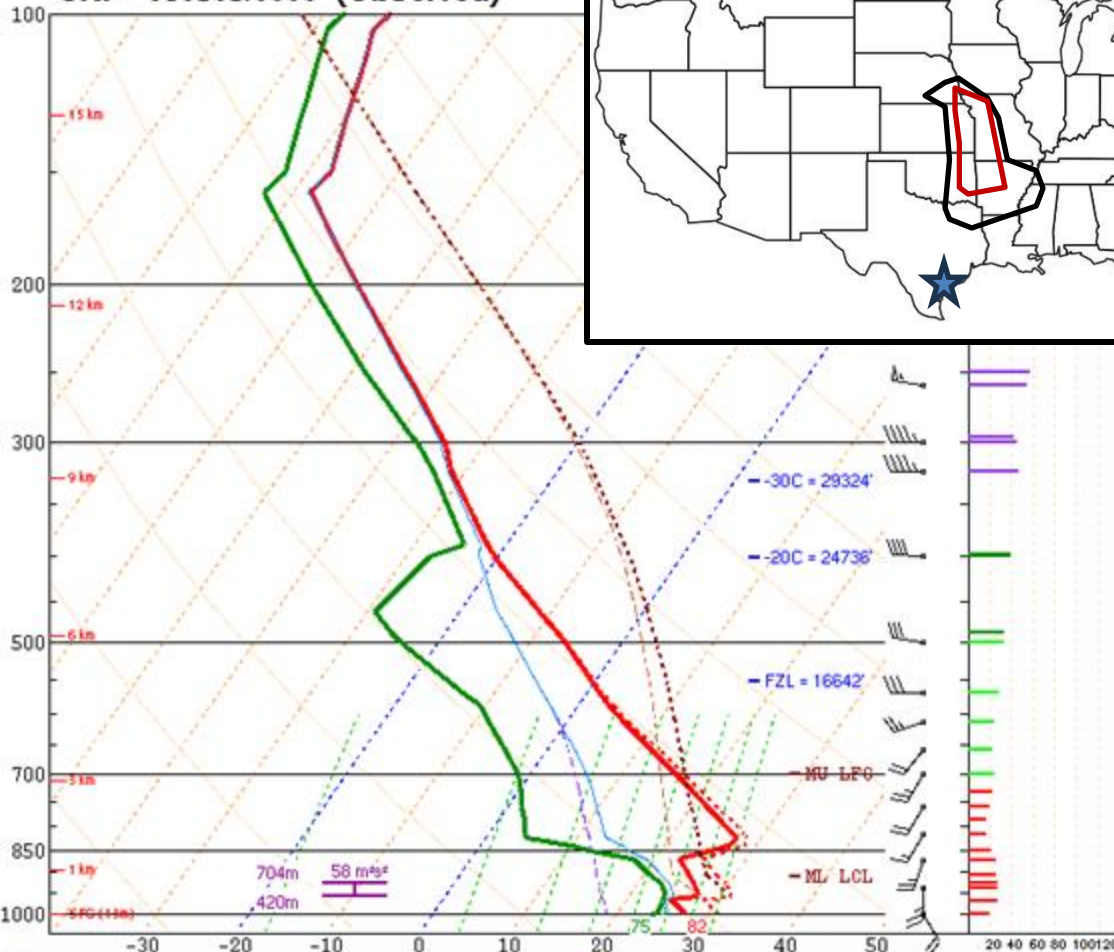
1km & 6km Agl
Wind Barbs

*** BEST GUESS PRECIP TYPE ***	
None. Based on sfc temperature of 83.5 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
No Quality Matches	No Quality Matches
SARS: 0% TOR	SARS: 88% SIG



CRP 030505/0000 (Observed)

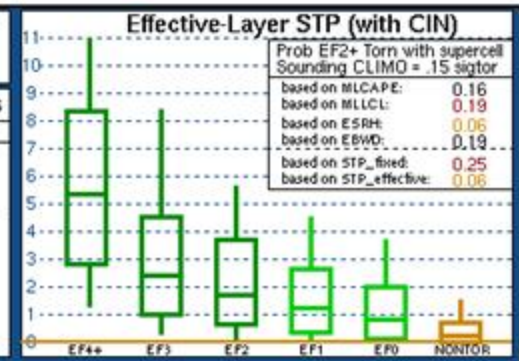
NOAA/NWS Storm Prediction Center
Norman, Oklahoma



PARCEL	CAPE	CINH	LCL	LI	LFC	EL
SURFACE	3490	-450	482m	-7	3708m	48941'
MIXED LAYER	4555	-288	835m	-8	3377m	49699'
FCST SURFACE	6005	-132	1484m	-11	2970m	51573'
MU (955 mb)	5413	-197	873m	-10	3136m	50740'
PW = 1.76 in	3CAPE = 0 J/kg	WBZ = 13650'	WNOG = 0.0			
K = 27	DCAPE = 1581 J/kg	FZL = 16642'	ESP = 0.0			
MidRH = 29%	DownT = 66 F	ConvT = 110F	MMP = 0.98			
LowRH = 79%	MeanW = 19.5 g/kg	MaxT = 97F	NCAPE = 0.44			
SigSevere = 115395 m3/s3						
Sfc-3km Agl Lapse Rate = 4.4 C/km						
3-6km Agl Lapse Rate = 8.3 C/km						
850-500mb Lapse Rate = 7.5 C/km						
700-500mb Lapse Rate = 8.2 C/km						

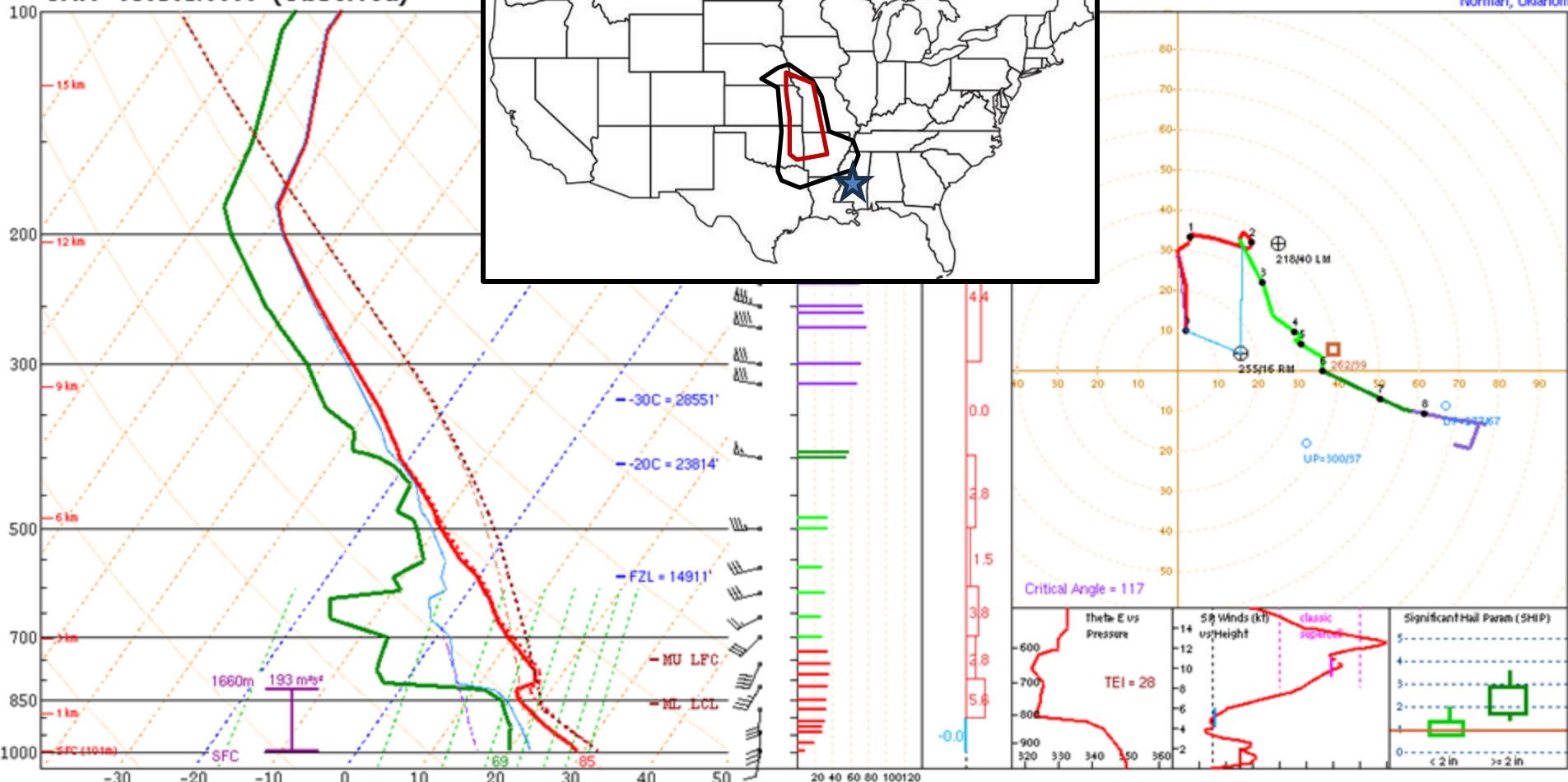
SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	171	19	173/25
SFC - 3 km	193	23	191/22
Eff Inflow Layer	58	8	177/27
SFC - 6 km	49	212/20	178/17
SFC - 8 km	56	223/19	189/15
LCL - EL (Cloud Layer)	67	242/24	221/15
Eff Shear (EBWD)	56	229/21	199/15
BRN Shear = 54 m/s/s			
4-6km SR Wind = 262/17 kt			
Storm Motion Vectors			
Bunkers Right = 271/11 kt			
Bunkers Left = 225/36 kt			
Corfidi Downshear = 282/53 kt			
Corfidi Upshear = 305/31 kt			

*** BEST GUESS PRECIP TYPE ***	
Rain.	
Based on sfc temperature of 82.0 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
No Quality matches	No Quality matches
(9 loose matches)	
SARS: 11% SIG	



JAN 030505/0000 (Observed)

NOAA/NWS Storm Prediction Center
Norman, Oklahoma

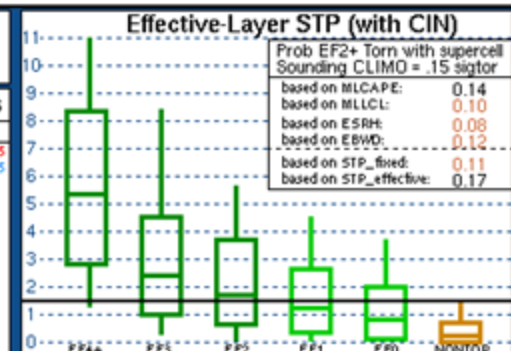


PARCEL	CAPE	CINH	LCL	LI	LFC	EL
SURFACE	2355	-14	1139m	-6	2448m	43459'
MIXED LAYER	2013	-29	1261m	-6	2642m	42866'
FCST SURFACE	2559	-5	1552m	-7	2337m	43459'
MU (997 mb)	2355	-14	1139m	-6	2448m	43459'
PW = 1.47 in 3CAPE = 11 J/kg WBZ = 10706' WNDG = 0.5 K = 25 DCAPE = 1043 J/kg FZL = 14911' ESP = 0.0 MidRH = 30% DownT = 61 F ConvT = 91 F MMP = 0.91 LowRH = 73% MeanW = 14.6 g/kg MaxT = 90 F NCAPE = 0.22 SigSevere = 36956 m3/s3						
Sfc-3km Agl Lapse Rate = 7.2 C/km 3-6km Agl Lapse Rate = 7.0 C/km 850-500mb Lapse Rate = 6.4 C/km 700-500mb Lapse Rate = 7.0 C/km						

Supercell = 9.1
Left Supercell = 6.7
STP (eff layer) = 1.4
STP (fix layer) = 0.8
Sig Hail = 0.9

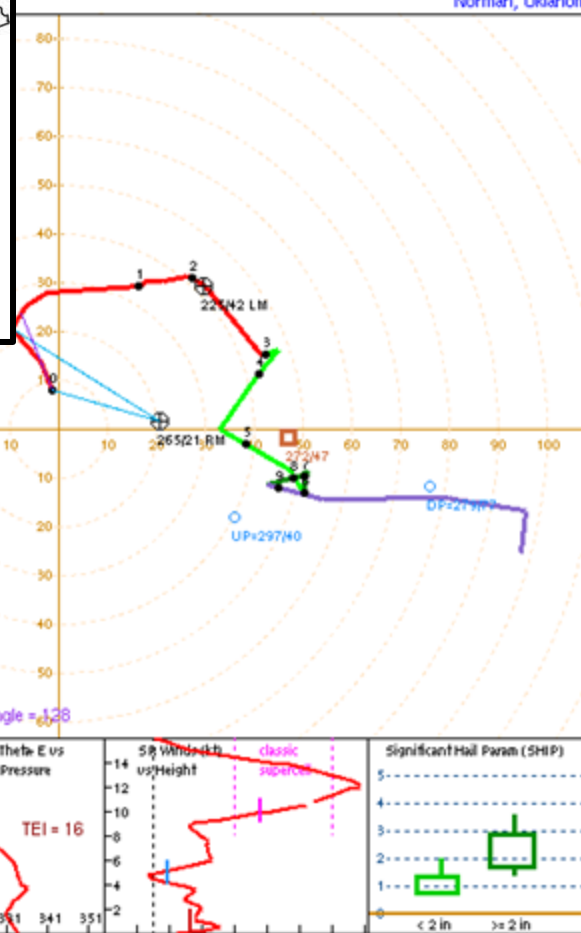
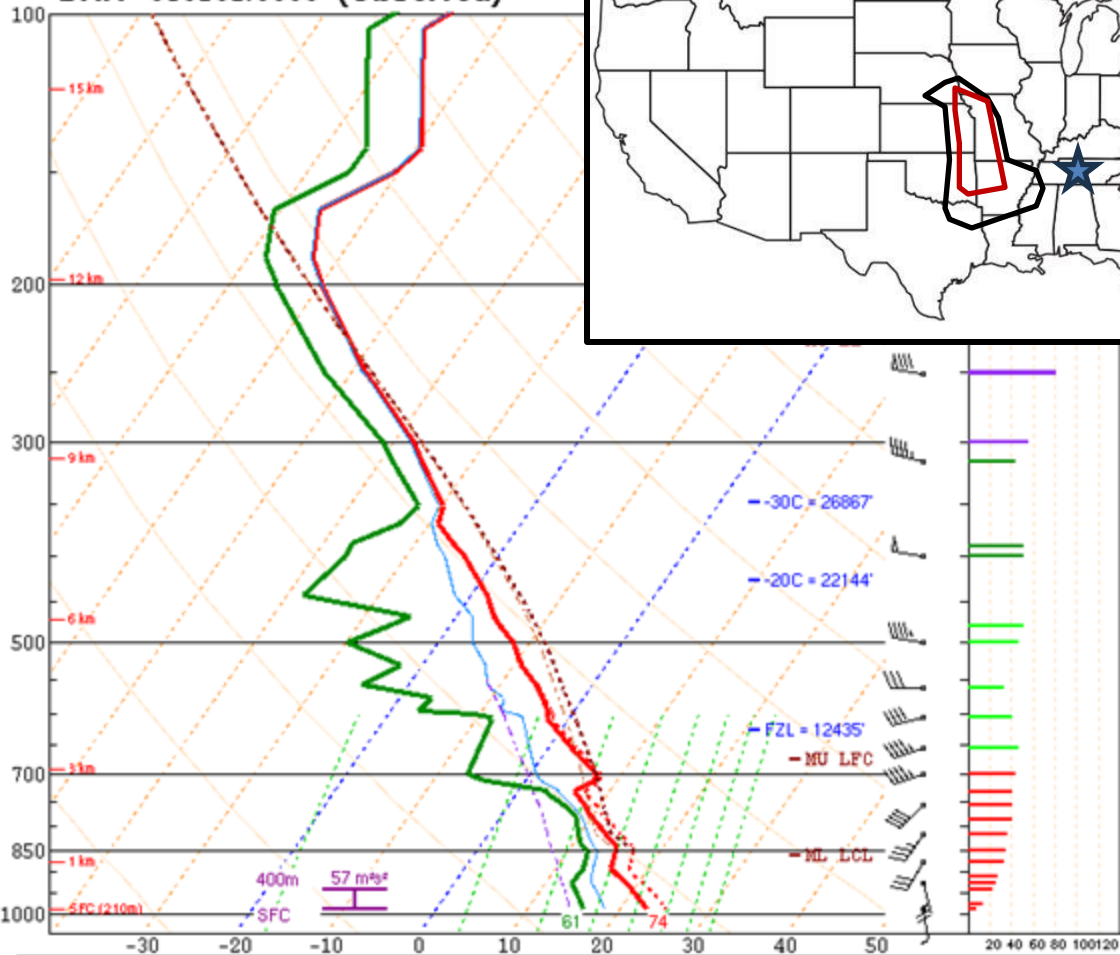
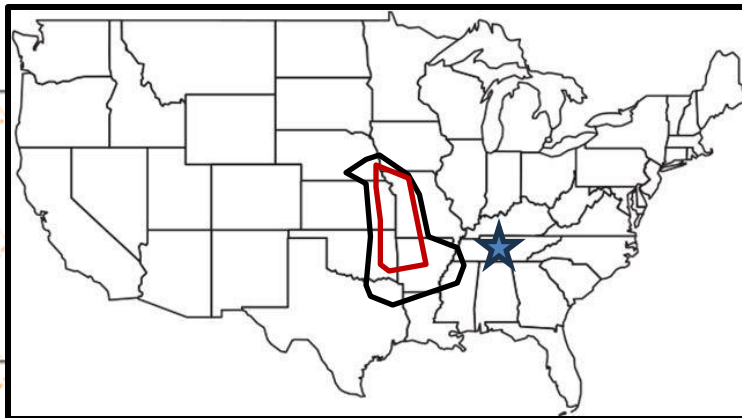
	SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	98	23	183/25	146/25
SFC - 3 km	226	23	197/30	165/25
Eff Inflow Layer	193	25	188/28	153/26
SFC - 6 km	36	215/27	180/18	
SFC - 8 km	63	226/27	194/15	
LCL - EL (Cloud Layer)	92	248/34	242/18	
Eff Shear (EBWD)	45	219/26	181/17	
BRN Shear = 26 m/s²				
4-6km SR Wind = 262/16 kt				
.....Storm Motion Vectors.....				
Bunkers Right =	255/16 kt			
Bunkers Left =	218/40 kt			
Corfidi Downshear =	277/67 kt			
Corfidi Upshear =	300/37 kt			

*** BEST GUESS PRECIP TYPE ***			
None.			
Based on sfc temperature of 84.9 F.			
SARS - Sounding Analogs			
SUPERCCELL	SGFNT HAIL		
00070400.MCK WEAK	92061300.AMA 2.75		
04041923.AMA WEAK	05100123.LBN 1.25		
00101408.CNM NON			
99072900.ADO NON			
99072420.MHT NON			
(21 loose matches)		(96 loose matches)	
SARS: 43% TOR		SARS: 45% SIG	



BNA 030505/0000 (Observed)

NOAA/NWS Storm Prediction Center
Norman, Oklahoma



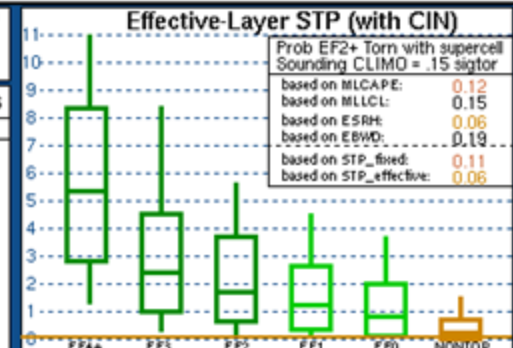
PARCEL	CAPE	CIN	LCL	LI	LFC	EL
SURFACE	335	-129	866m	-2	3510m	29301'
MIXED LAYER	205	-141	1174m	-1	3764m	26729'
FCST SURFACE	576	-33	1514m	-3	3448m	34862'
MU (850 mb)	685	-14	1655m	-3	3187m	36190'
PW = 1.30 in 3CAPE = 0 J/kg WBZ = 10054' WNDG = 0.0						
K = 26 DCAPE = 1007 J/kg FZL = 12435' ESP = 0.0						
MidRH = 67% DownT = 59 F ConvT = 85F MMP = 0.89						
LowRH = 74% MeanW = 10.8 g/kg MaxT = 81F NCAPE = 0.09						
SigSevere = 5870 m3/s3						
Sfc-3km Agl Lapse Rate = 6.1 C/km						
3-6km Agl Lapse Rate = 7.3 C/km						
850-500mb Lapse Rate = 6.7 C/km						
700-500mb Lapse Rate = 7.3 C/km						

Supercell = 0.8
Left Supercell = 2.0
STP (eff layer) = 0.0
STP (fix layer) = 0.6
Sig Hail = 0.0

	SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	294	28	175/22	131/30
SFC - 3 km	522	44	211/28	163/24
Eff Inflow Layer	57	15	160/16	118/30
SFC - 6 km	56	233/29	190/16	
SFC - 8 km	52	241/30	203/14	
LCL - EL (Cloud Layer)	53	249/37	229/18	
Eff Shear (EBWD)	50	230/29	186/17	
BRN Shear = 114 m/s²				
4-6km SR Wind = 277/20 kt				
.....Storm Motion Vectors.....				
Bunkers Right = 265/21 kt				
Bunkers Left = 225/42 kt				
Corfidi Downshear = 279/77 kt				
Corfidi Upshear = 297/40 kt				

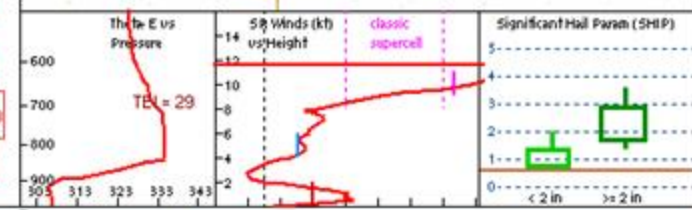
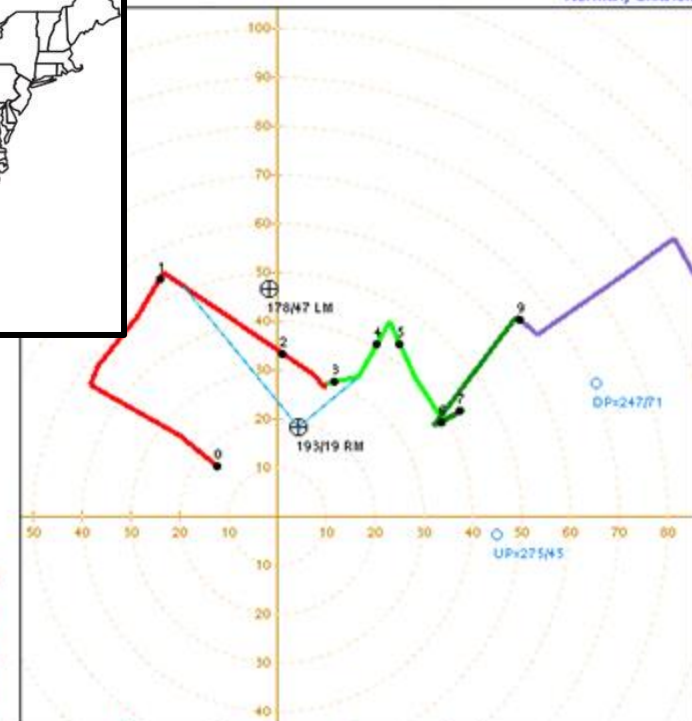
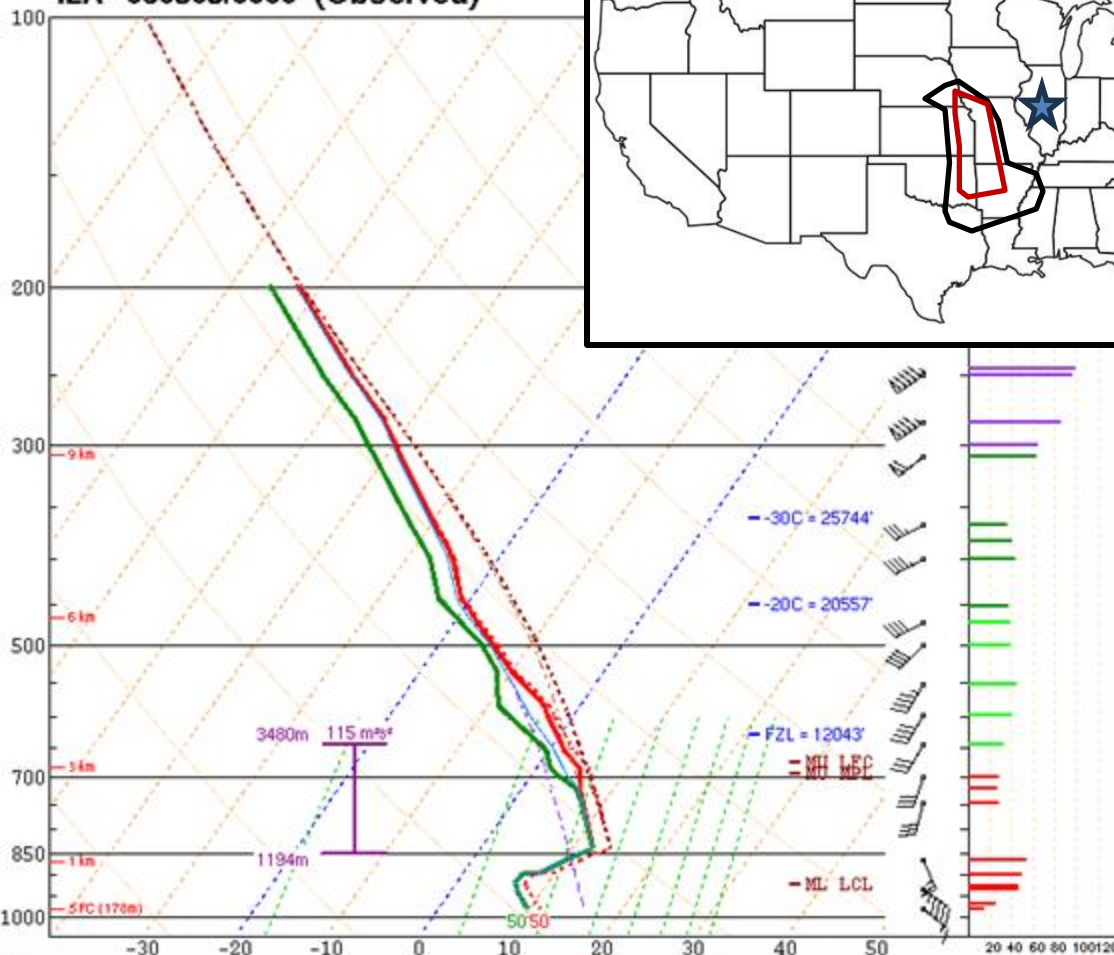
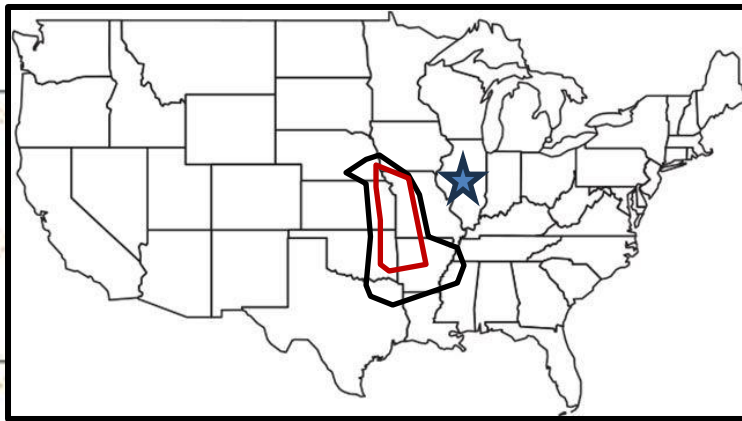


*** BEST GUESS PRECIP TYPE ***	
Rain.	
Based on sfc temperature of 73.8 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
No Quality matches	No Quality matches
(11 loose matches) SARS: 55% TOR	(4 loose matches) SARS: 0% SIG



ILX 030505/0000 (Observed)

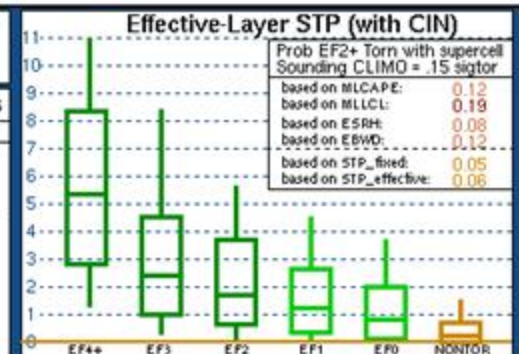
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Norman, Oklahoma



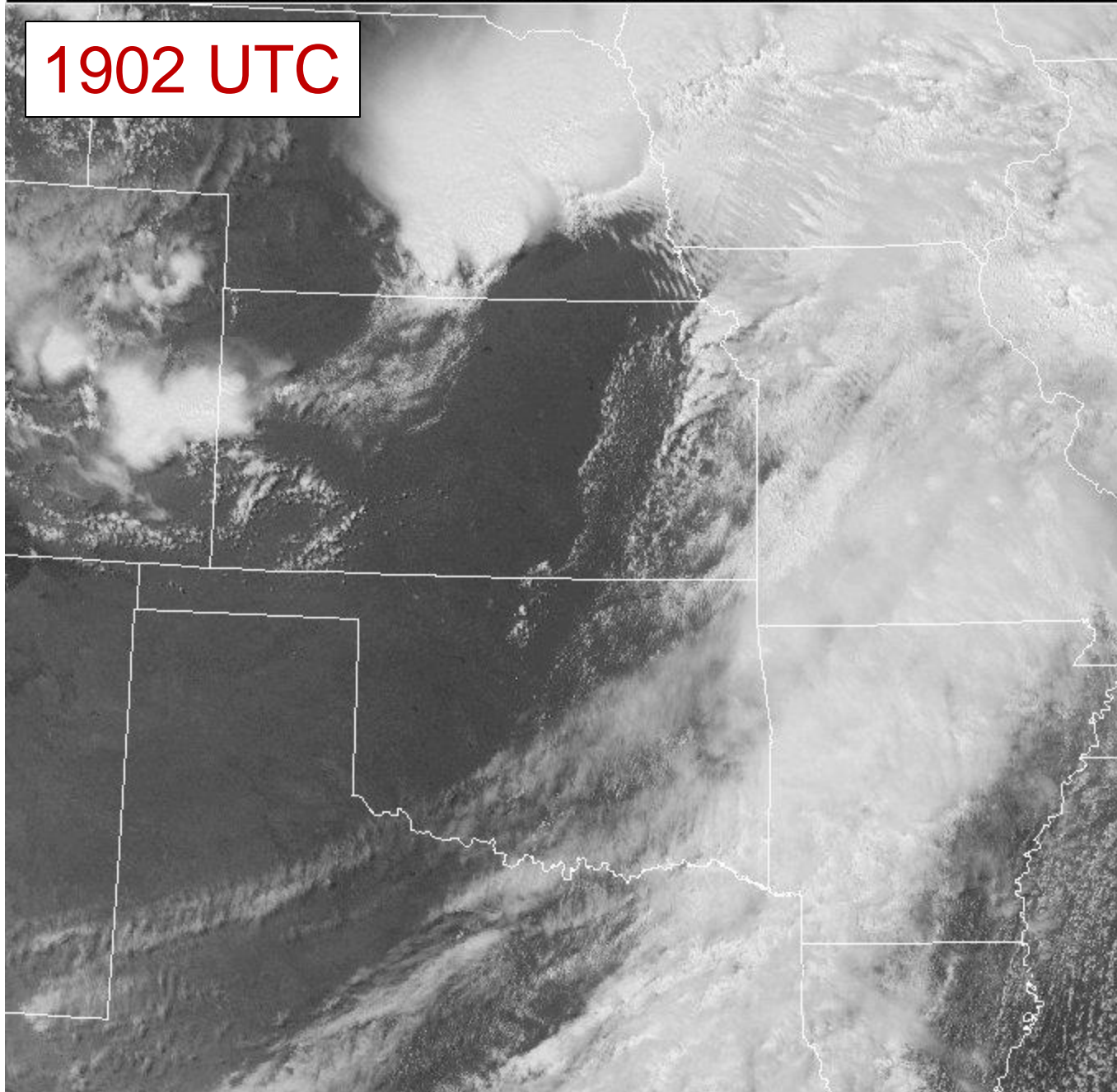
PARCEL	CAPE	CIN	LCL	LI	LFC	EL
SURFACE	4	0	0m	11	42m	2120'
MIXED LAYER	4	0	535m	10	535m	2414'
FCST SURFACE	0	0	1405m	5	M	4608'
MU (840 mb)	872	-1	1293m	-4	3106m	M
PW = 1.39 in	3CAPE = 4 J/kg	WBZ = 11404'	WNOG = 0.0			
K = 34	DCAPE = 149 J/kg	FZL = 12043'	ESP = 0.0			
MidRH = 90%	DownT = 61 F	ConvT = 54F	MMP = 0.00			
LowRH = 100%	MeanW = 7.2 g/kg	MaxT = 68F	NCAPE = -0.07			
SigSevere = 108 m3/s3						
Sfc-3km Agl Lapse Rate = 1.8 C/km						
3-6km Agl Lapse Rate = 7.9 C/km						
850-500mb Lapse Rate = 6.2 C/km						
700-500mb Lapse Rate = 7.6 C/km						

SRH(m2/s2)	Shear(kt)	MnWind	SRW
SFC - 1 km	396	40	137/41
SFC - 3 km	530	30	158/35
Eff Inflow Layer	115	40	183/34
SFC - 6 km	47	177/32	154/16
SFC - 8 km	49	184/31	172/13
LCL - EL (Cloud Layer)	33	130/36	98/32
Eff Shear (EBWD)	M	M	M
BRN Shear = 100 m/s²			
4-6km SR Wind = 235/26 kt			
Storm Motion Vectors			
Bunkers Right = 193/19 kt			
Bunkers Left = 178/47 kt			
Corfidi Downshear = 247/71 kt			
Corfidi Upshear = 275/45 kt			

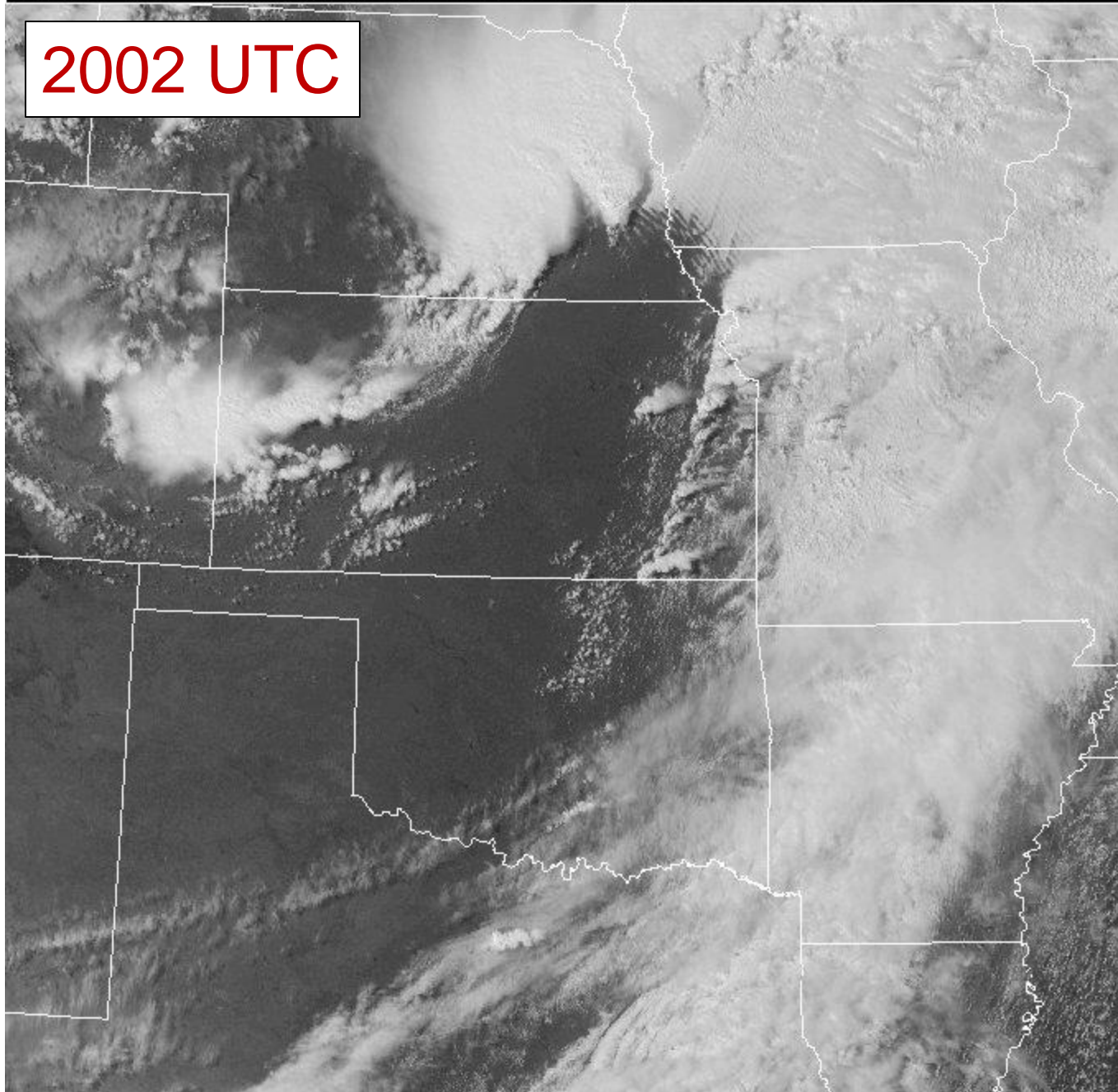
*** BEST GUESS PRECIP TYPE ***	
Rain.	
Based on sfc temperature of 50.0 F.	
SARS - Sounding Analogs	
SUPERCCELL	SGFNT HAIL
No Quality matches	No Quality matches
(7 loose matches)	SARS: 0% SIG



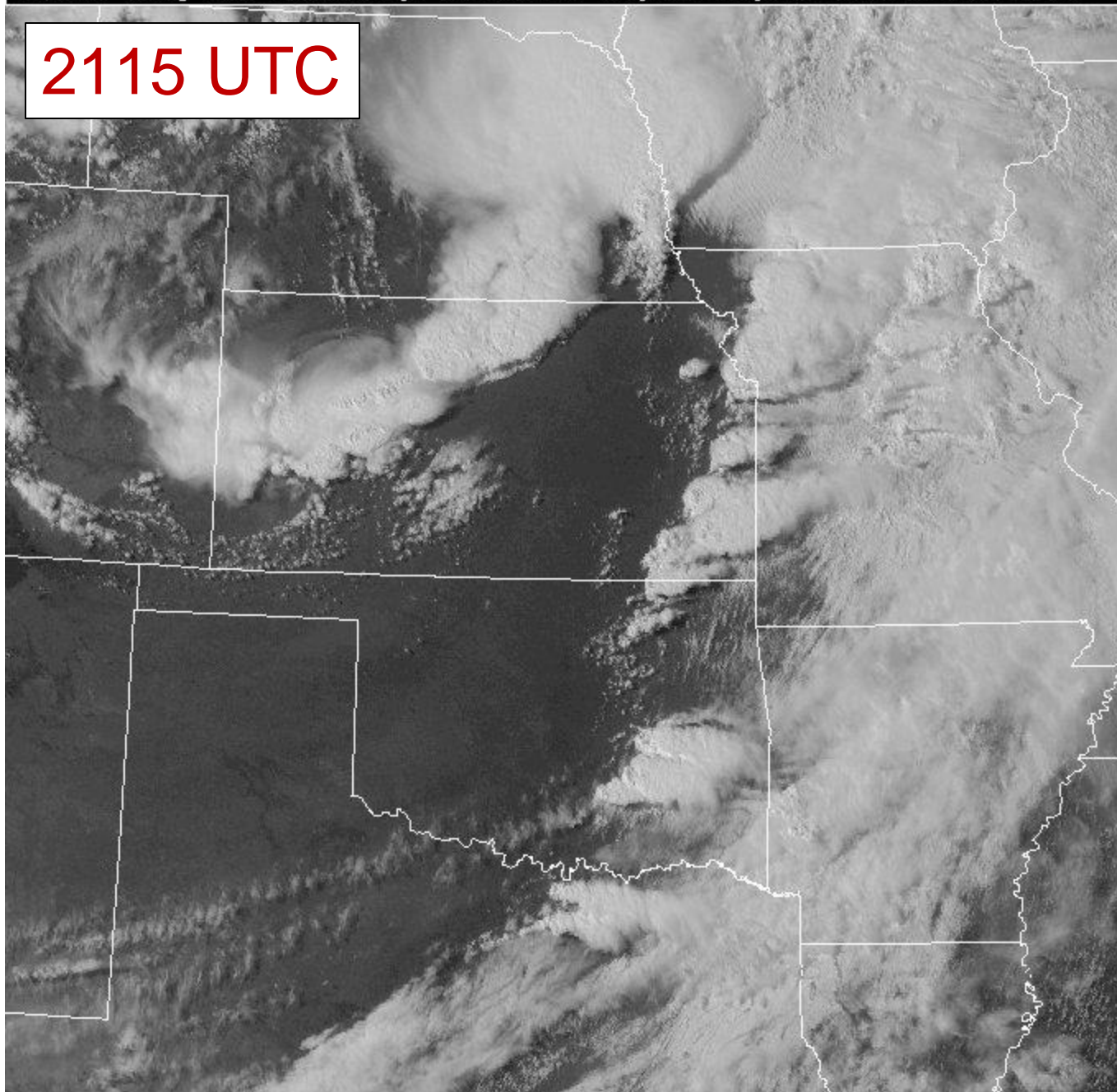
1902 UTC



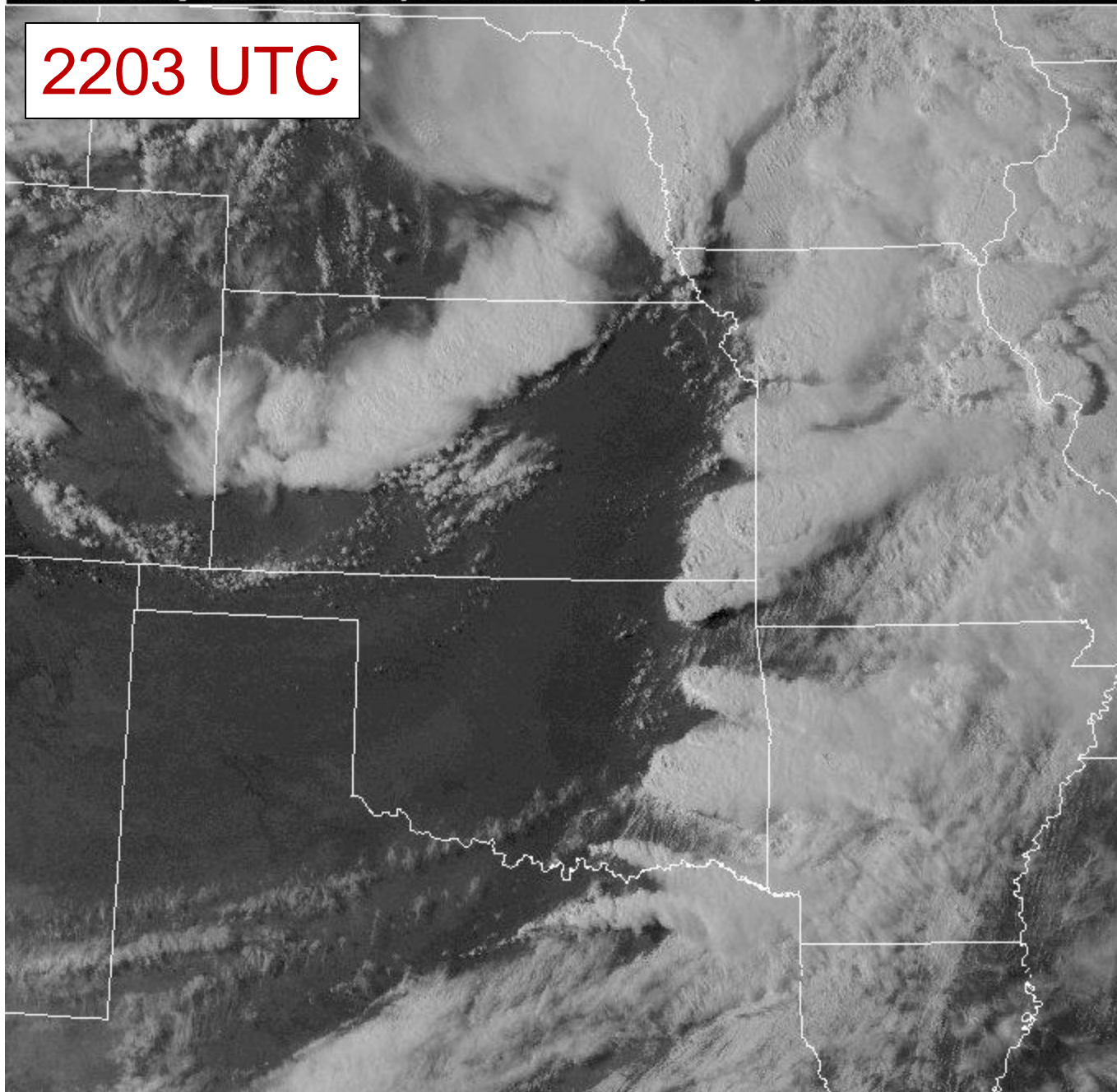
2002 UTC



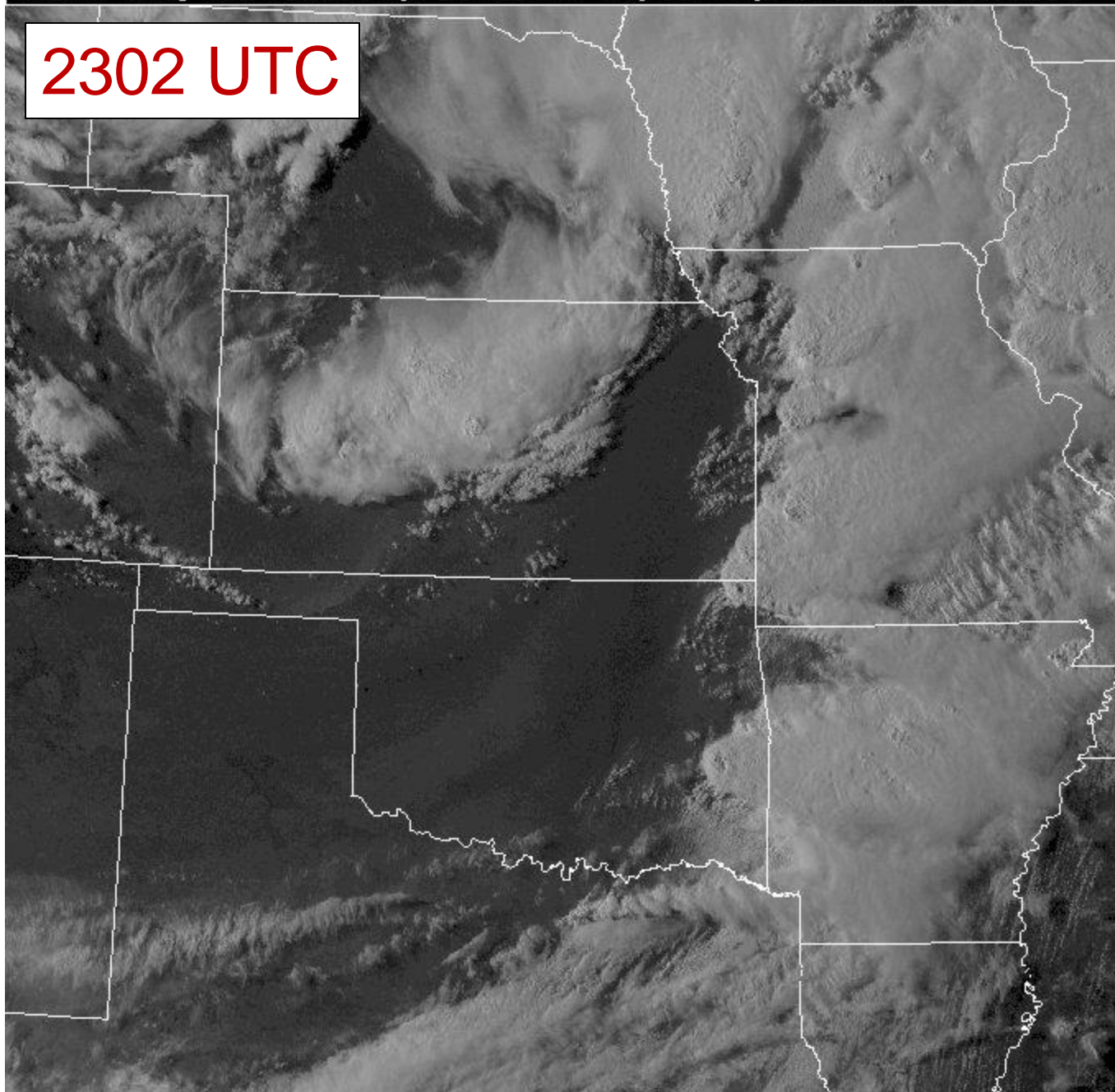
2115 UTC



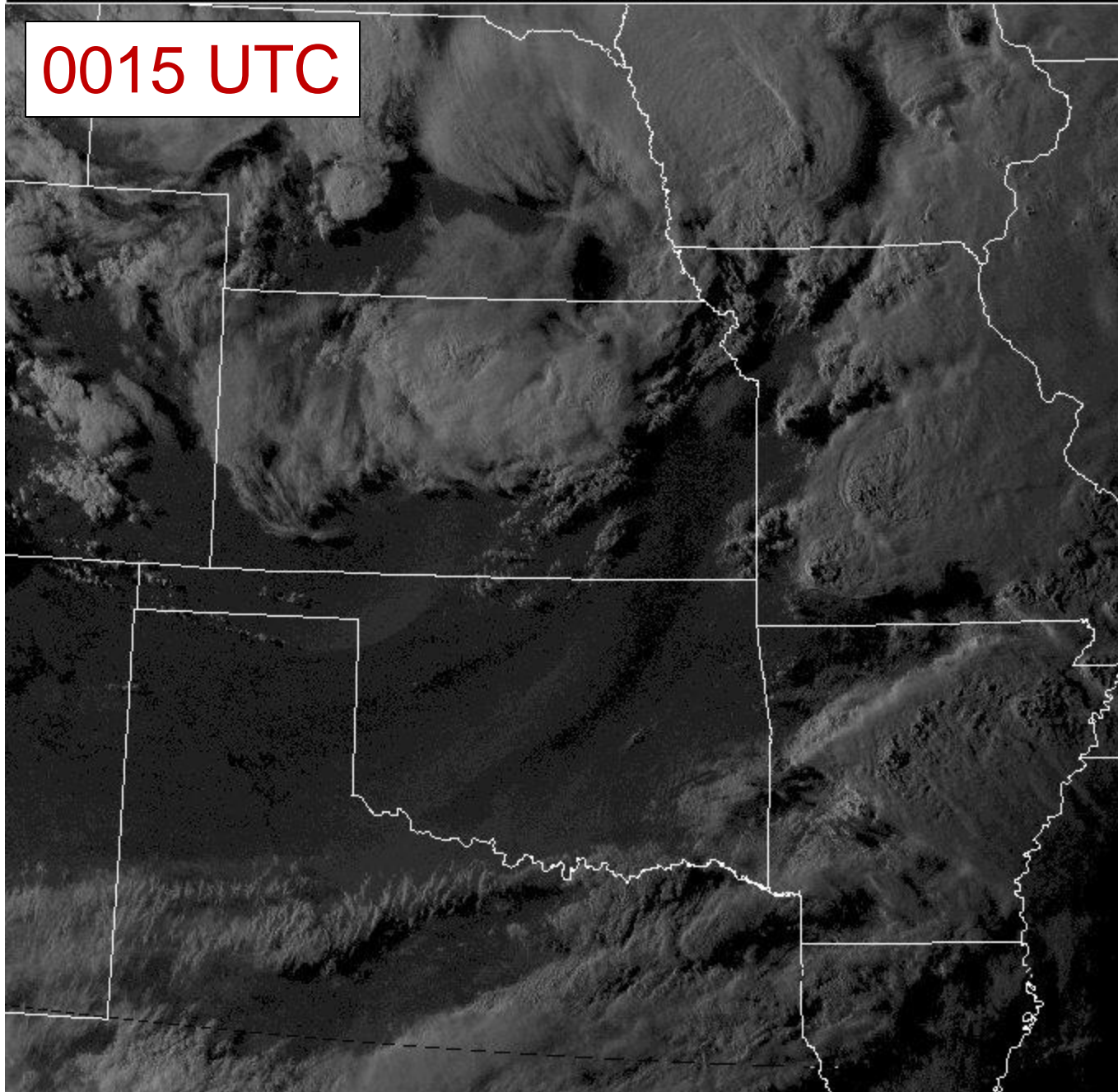
2203 UTC

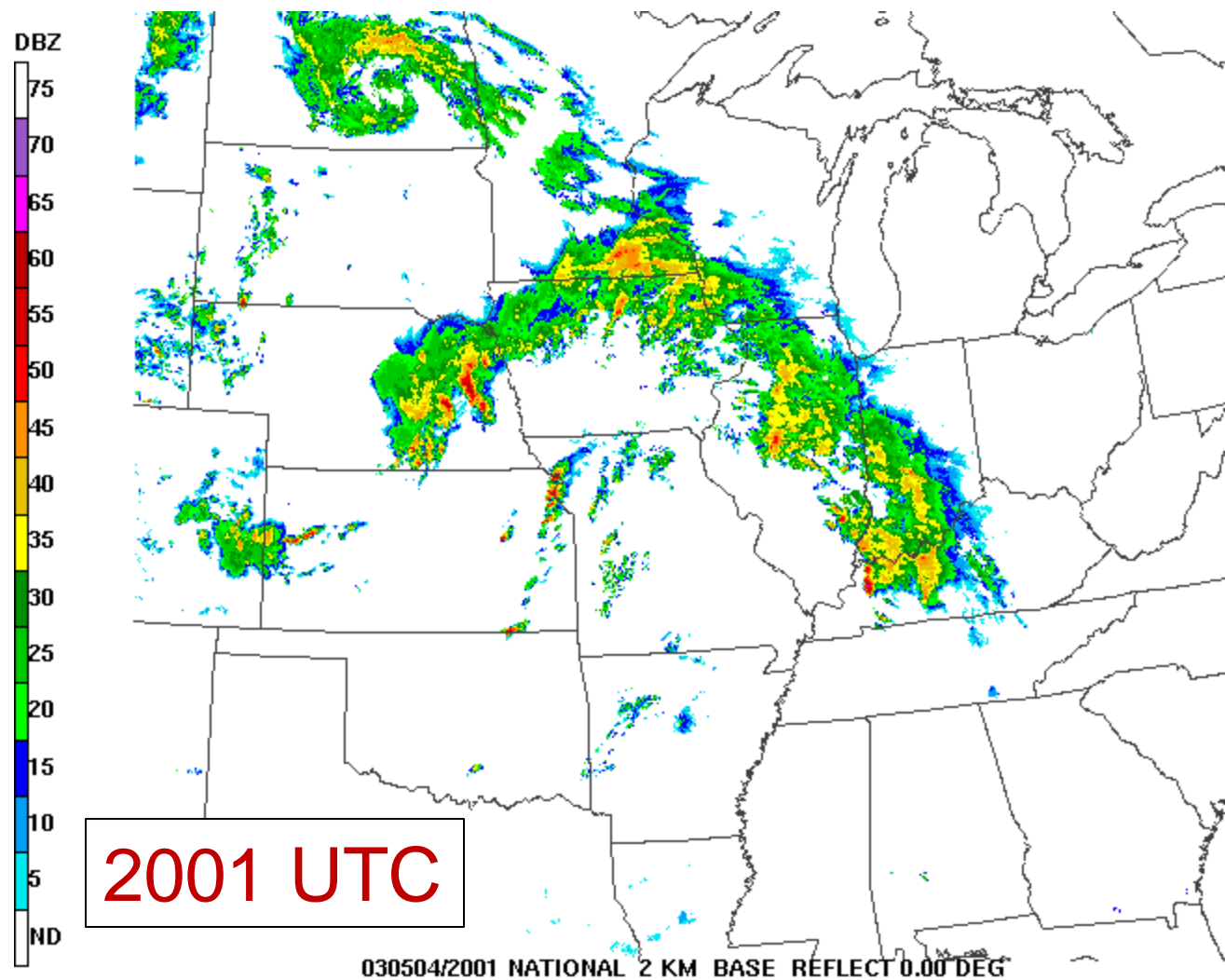


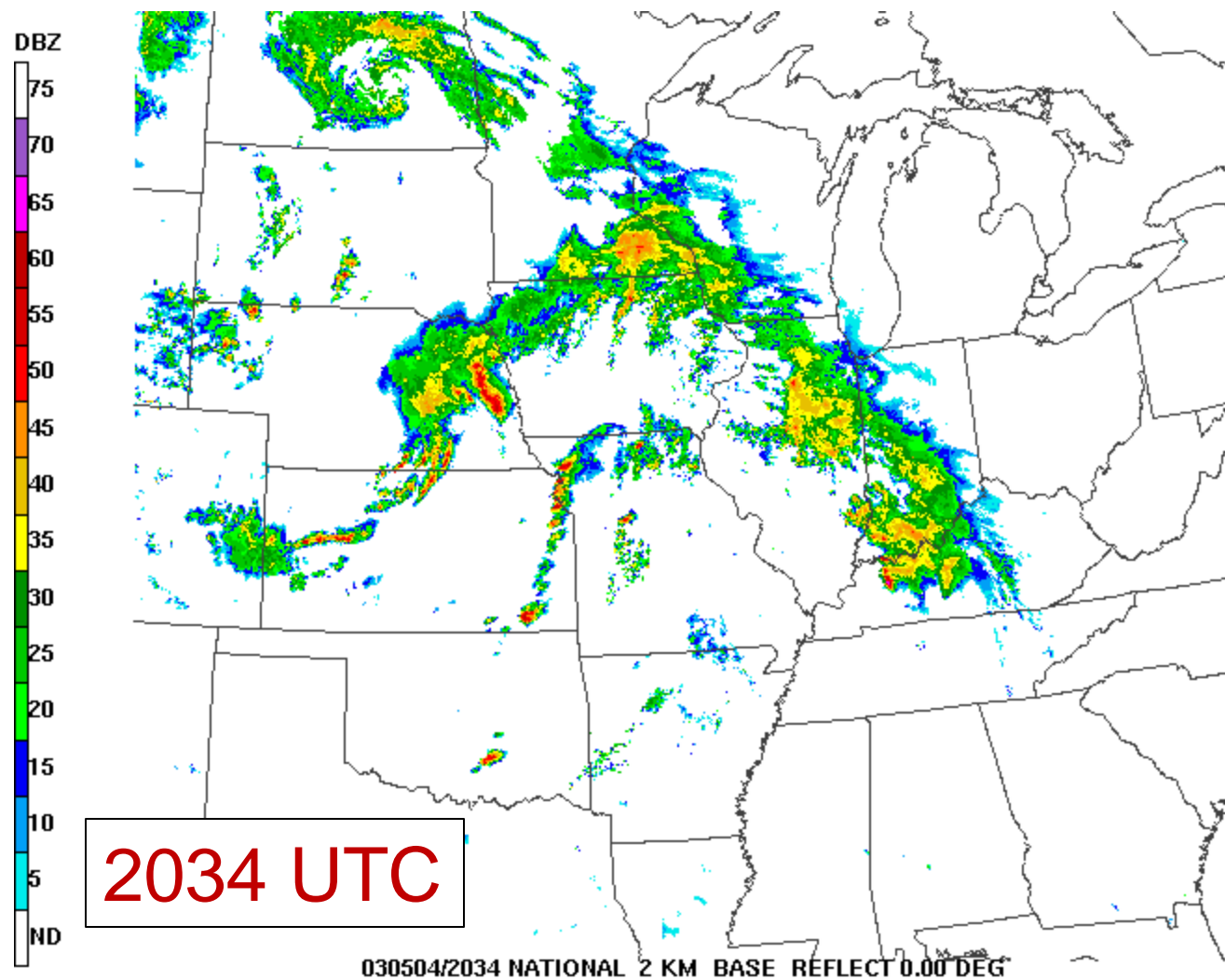
2302 UTC

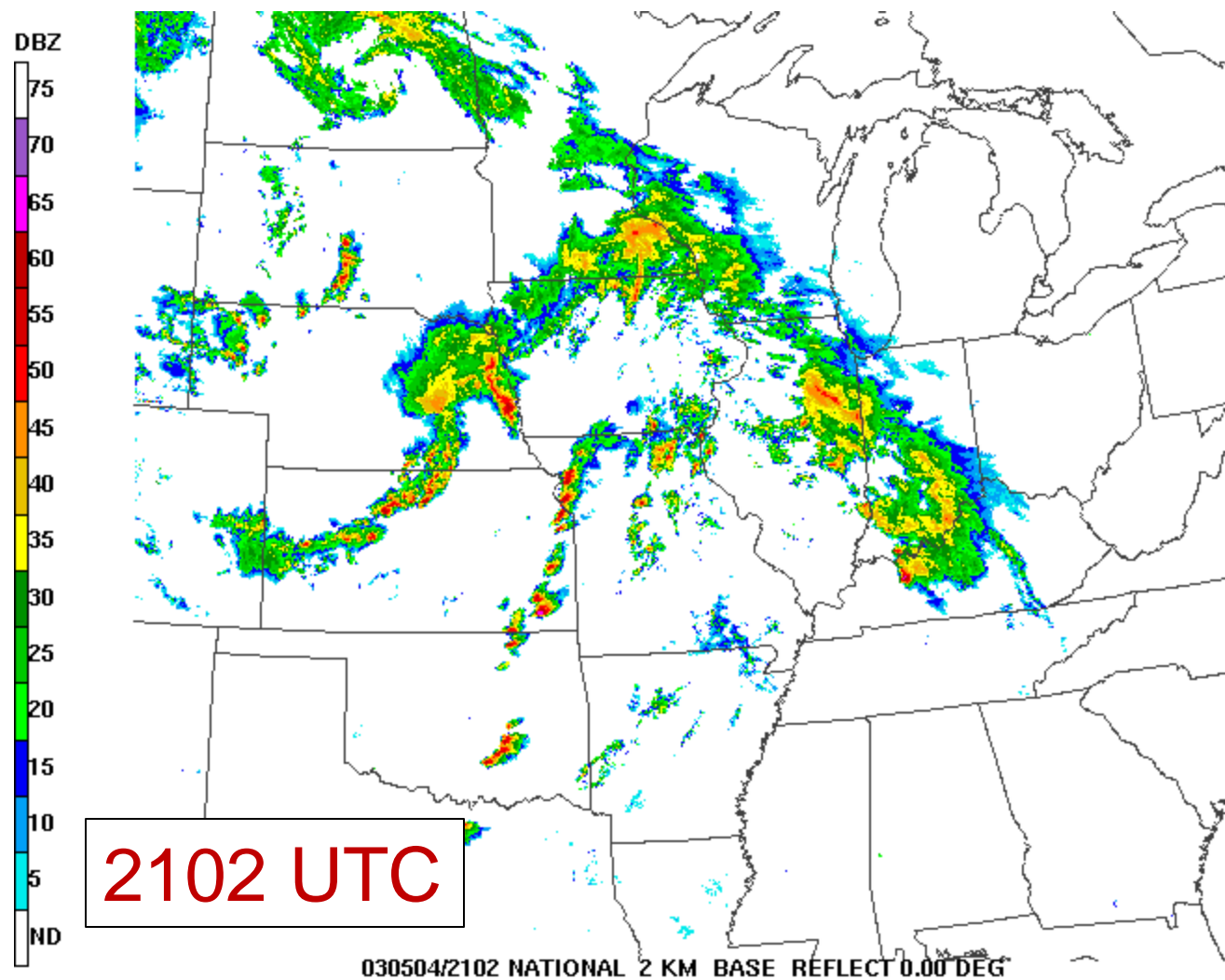


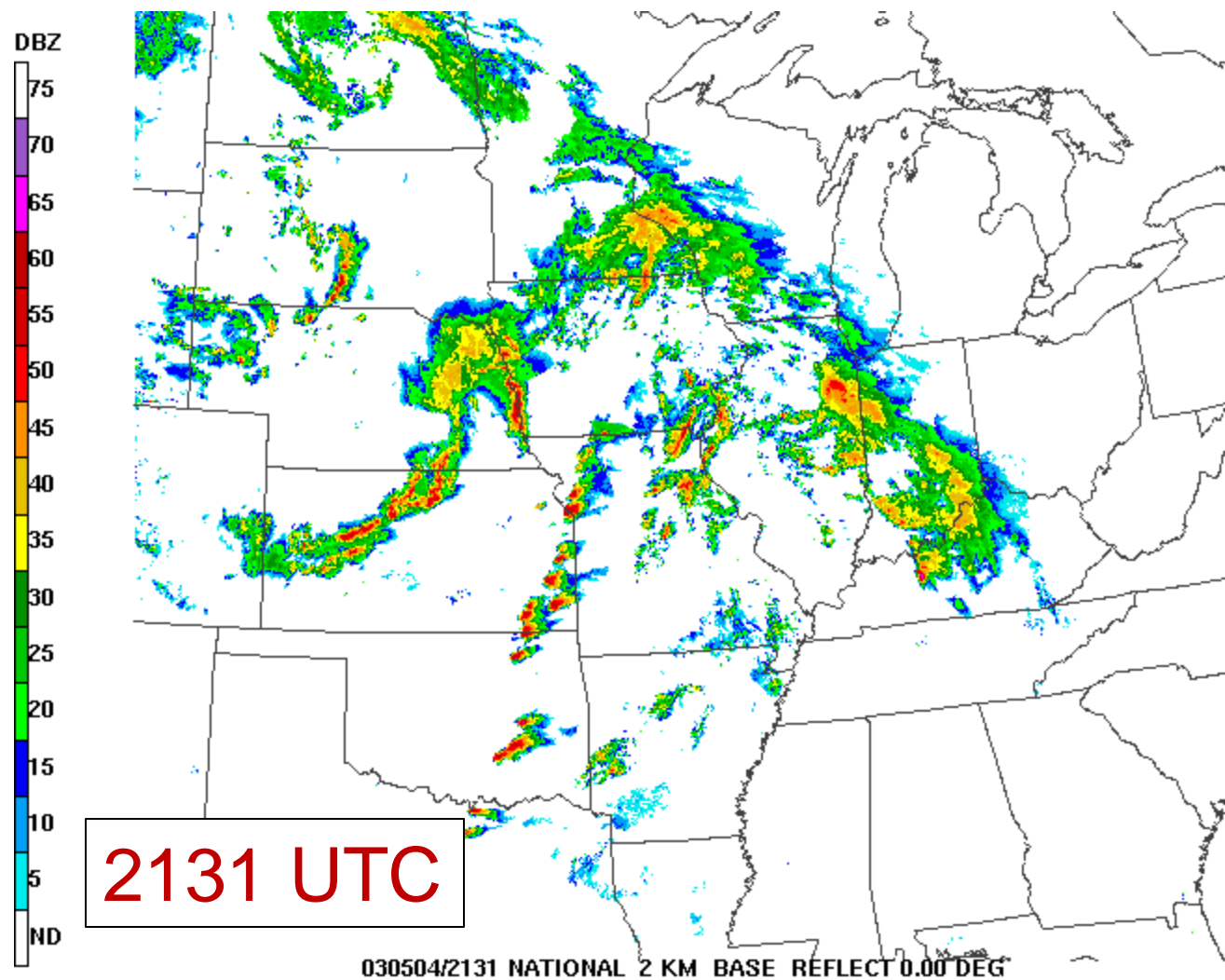
0015 UTC

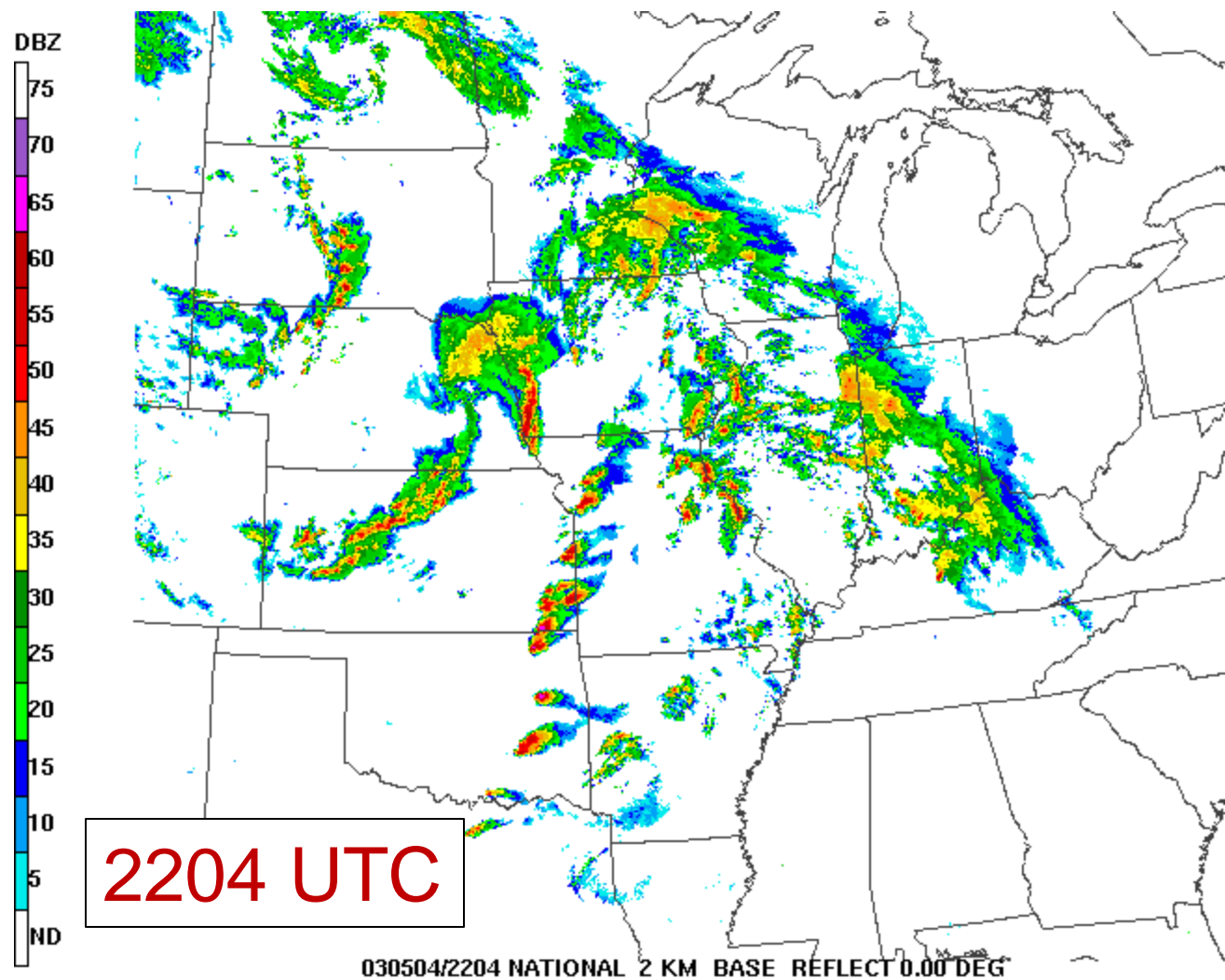


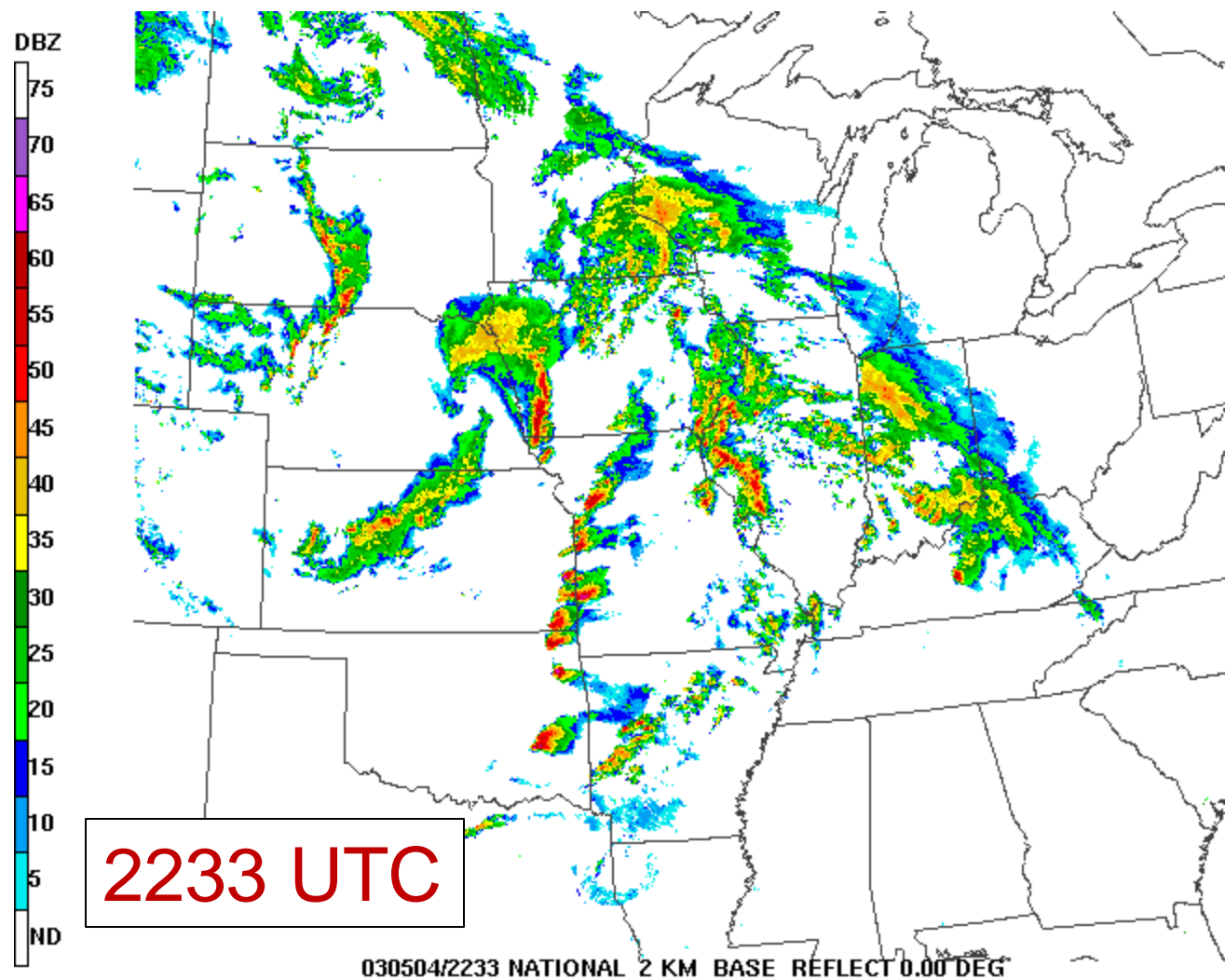


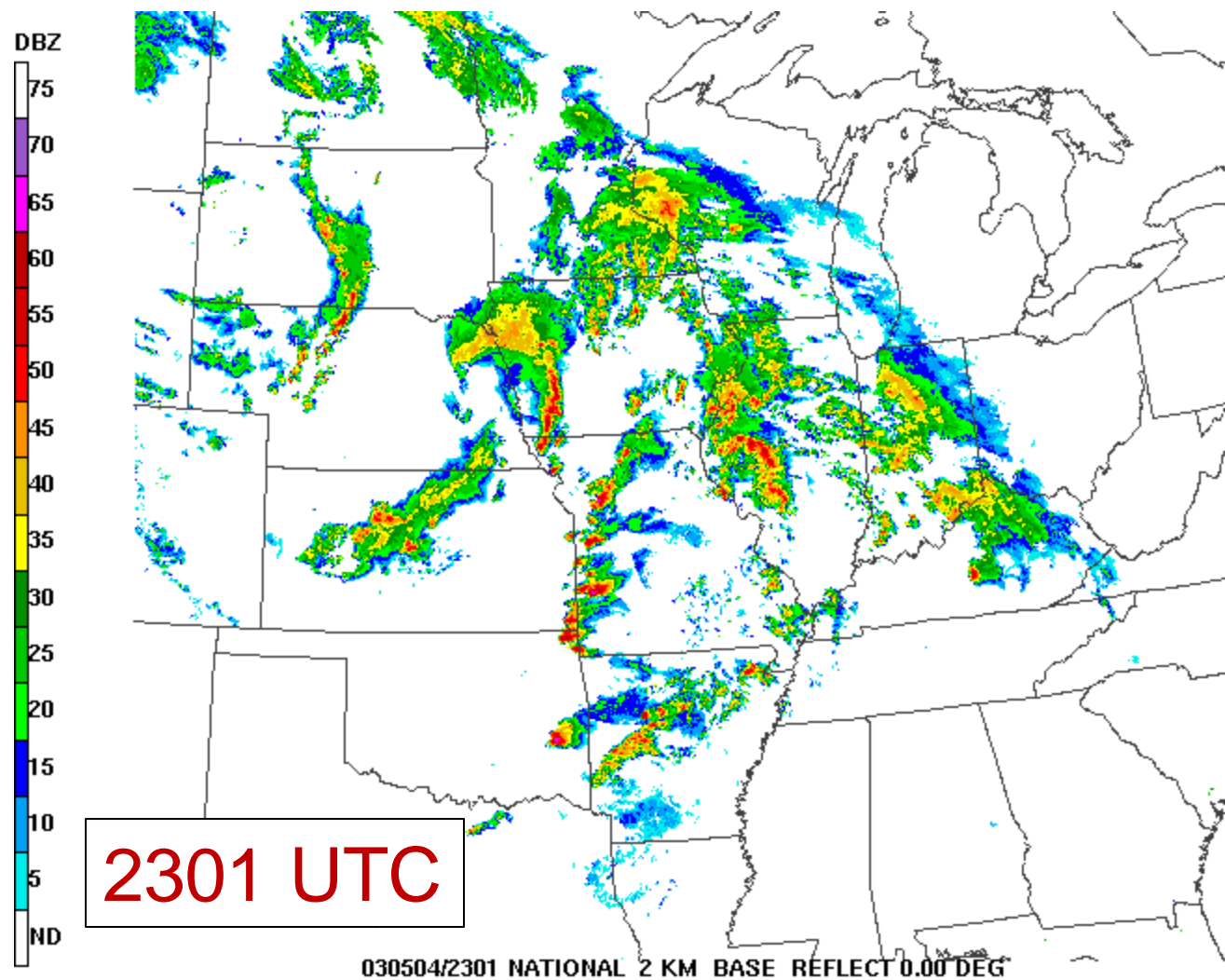




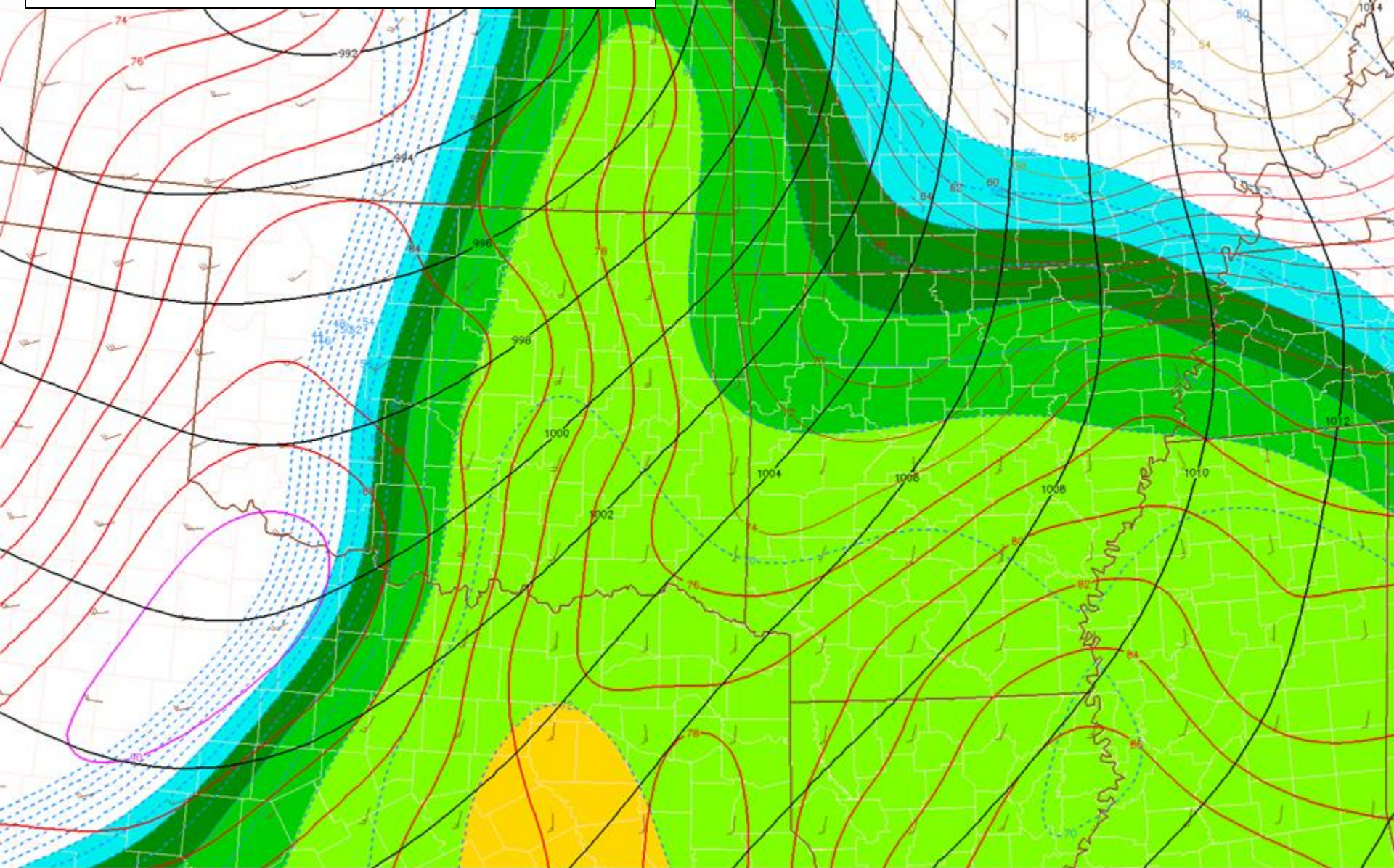








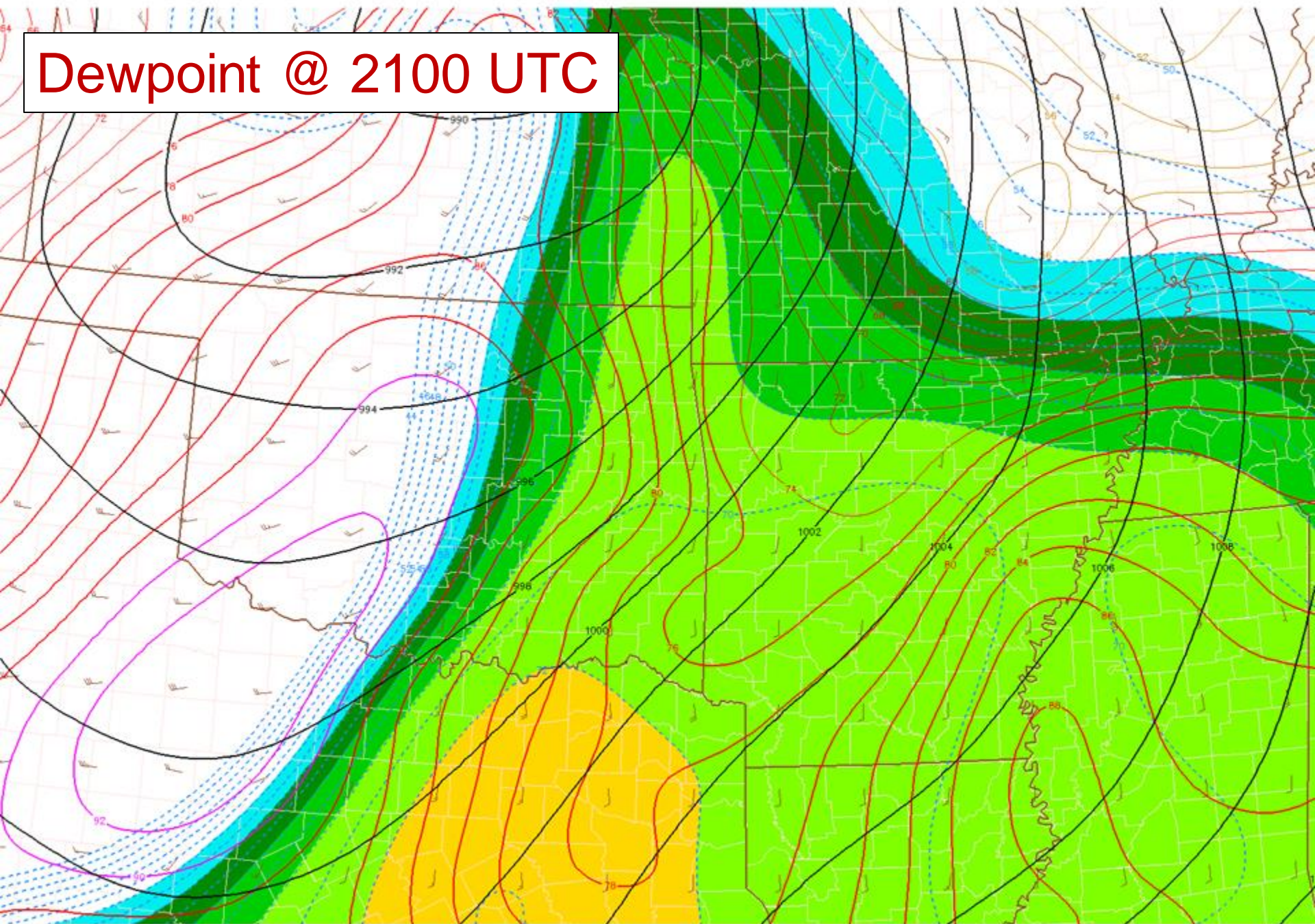
Dewpoint @ 1800 UTC



030504/1800 Surface temp, dewpoint, and pmsl

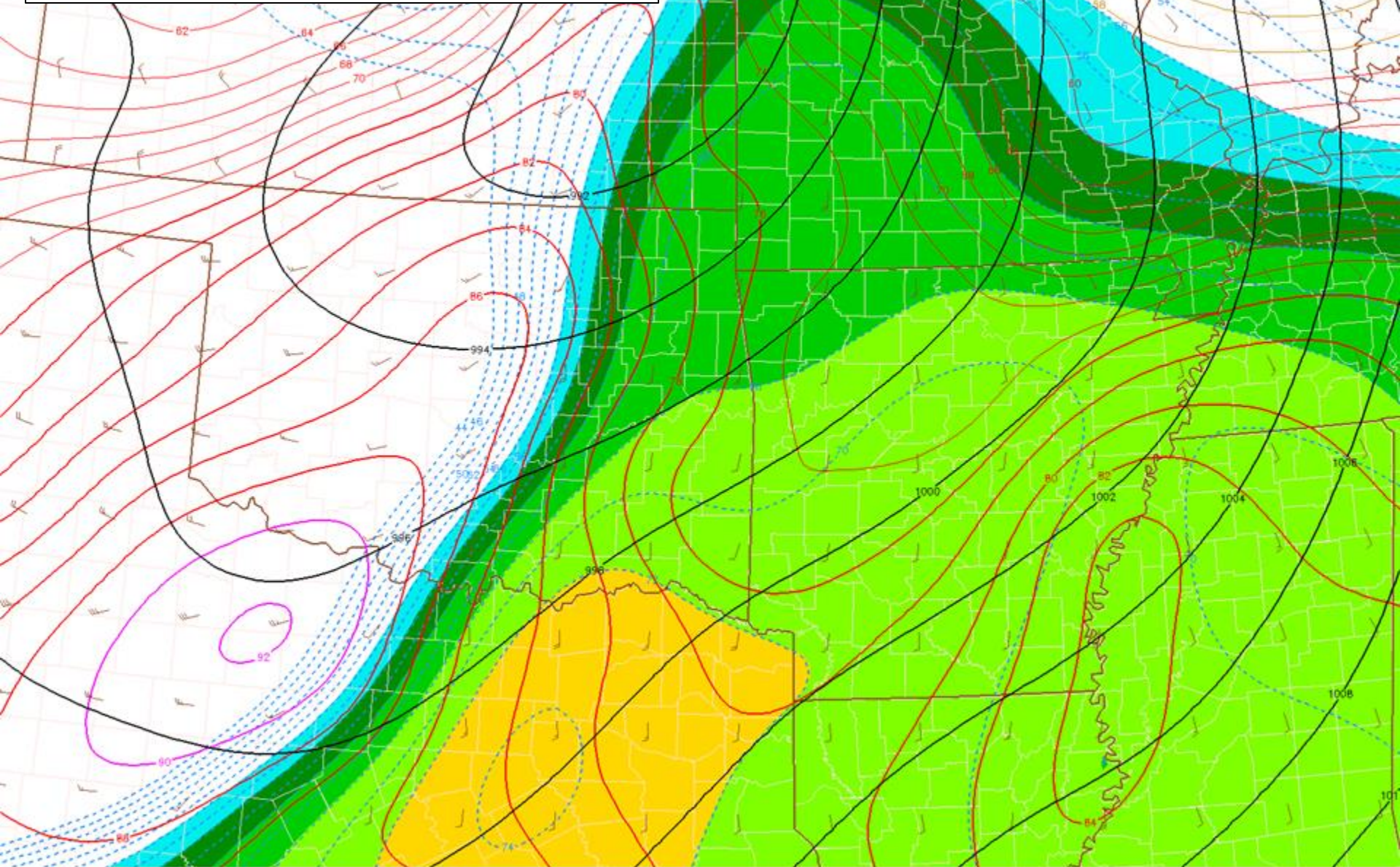


Dewpoint @ 2100 UTC



030504/2100 Surface temp, dewpoint, and pmsl

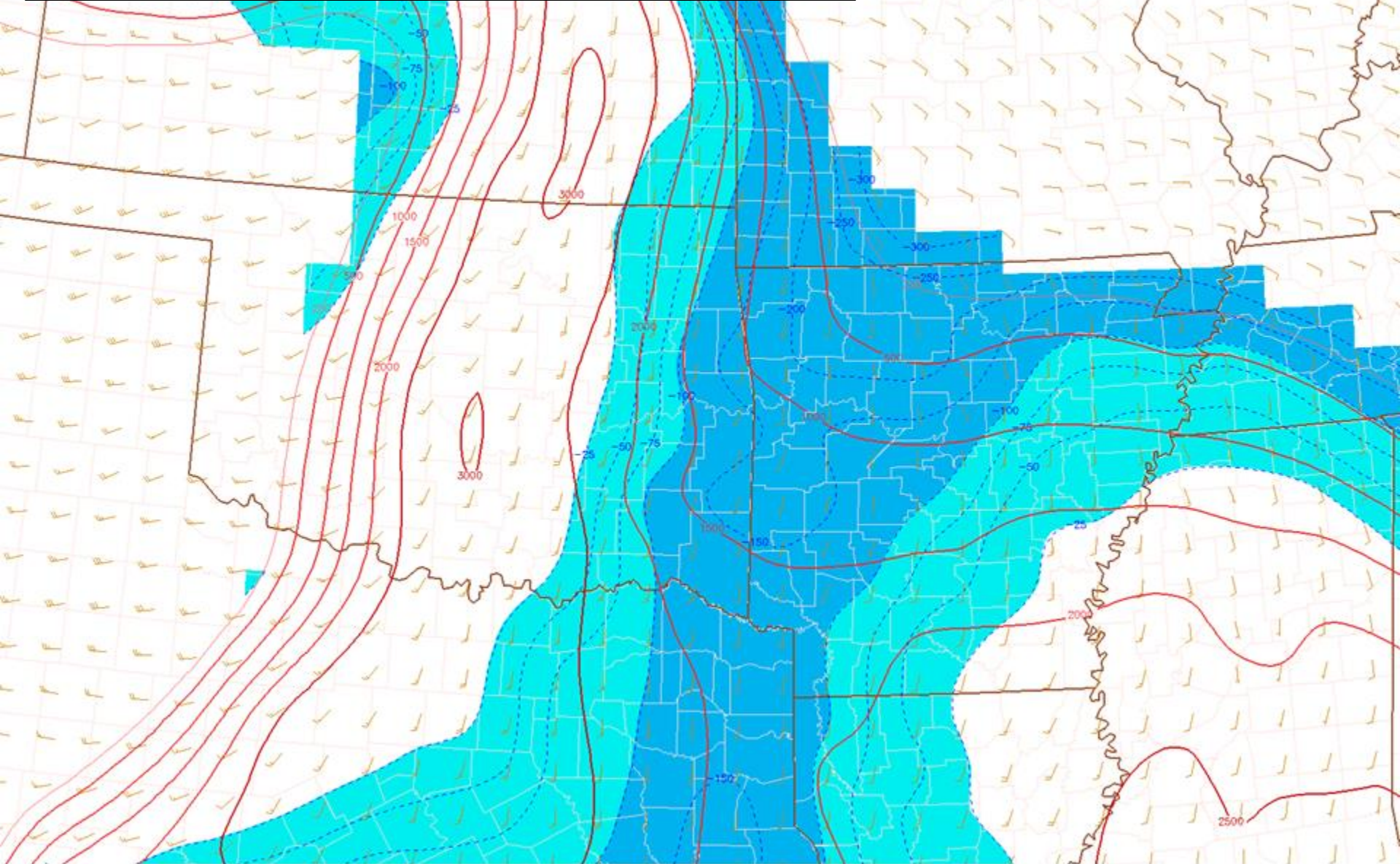
Dewpoint @ 0000 UTC



030505/0000 Surface temp, dewpoint, and pmsl



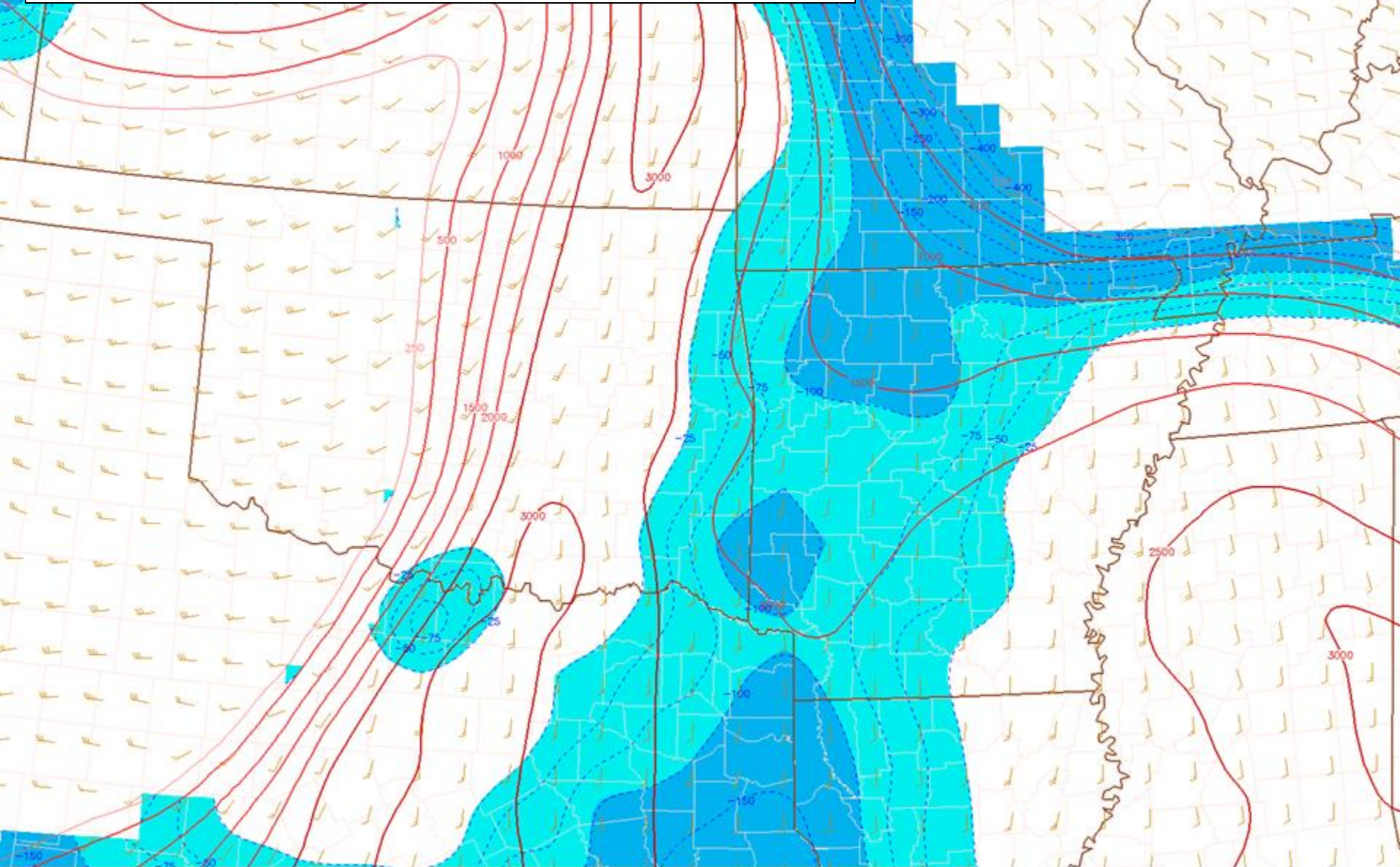
MLCAPE/MLCIN @ 1800 UTC



030504/1800 MLCAPE (contour) and MLCIN (J/kg, shaded)

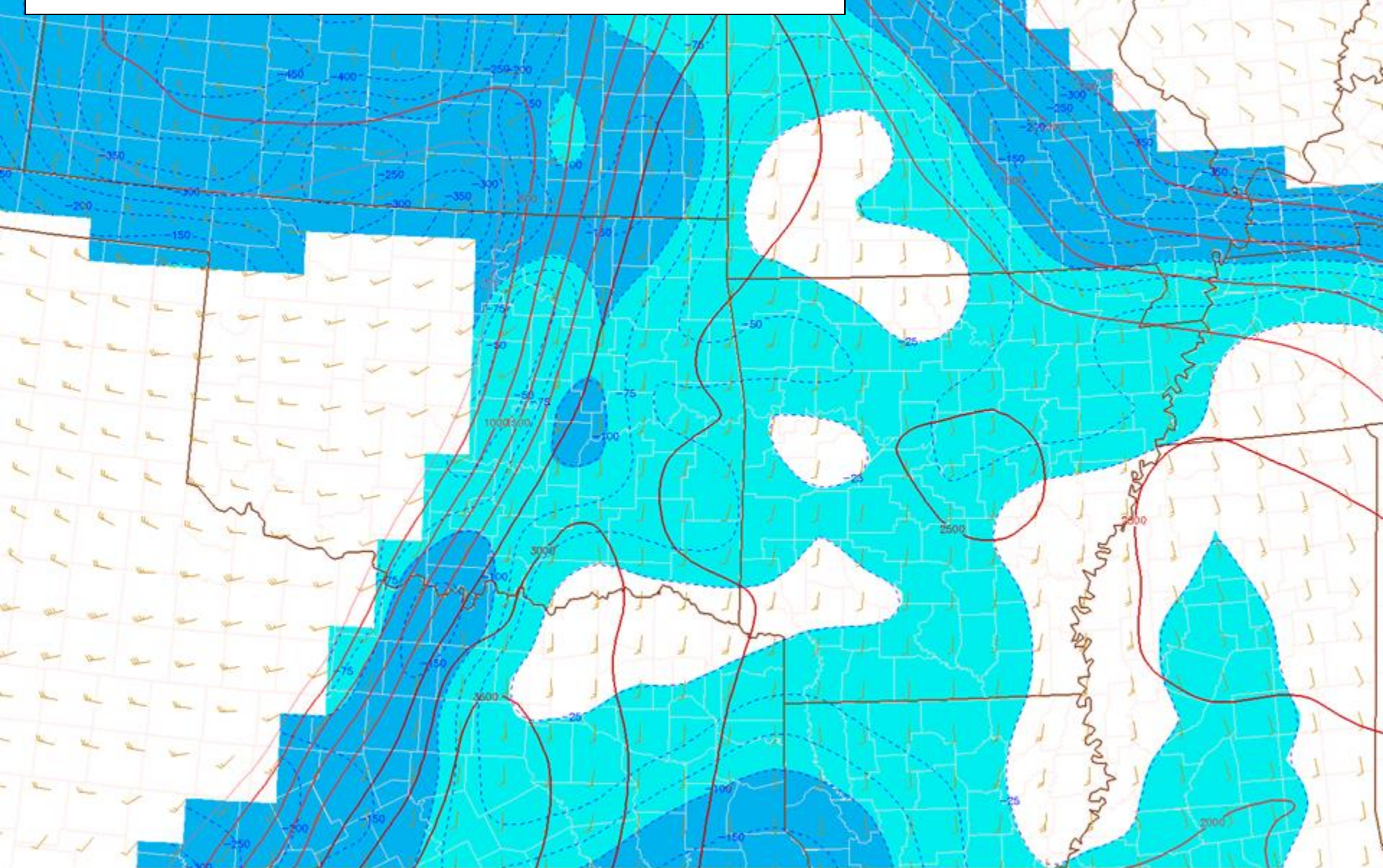


MLCAPE/MLCIN @ 2100 UTC



030504/2100 MLCAPE (contour) and MLCIN (J/kg, shaded)

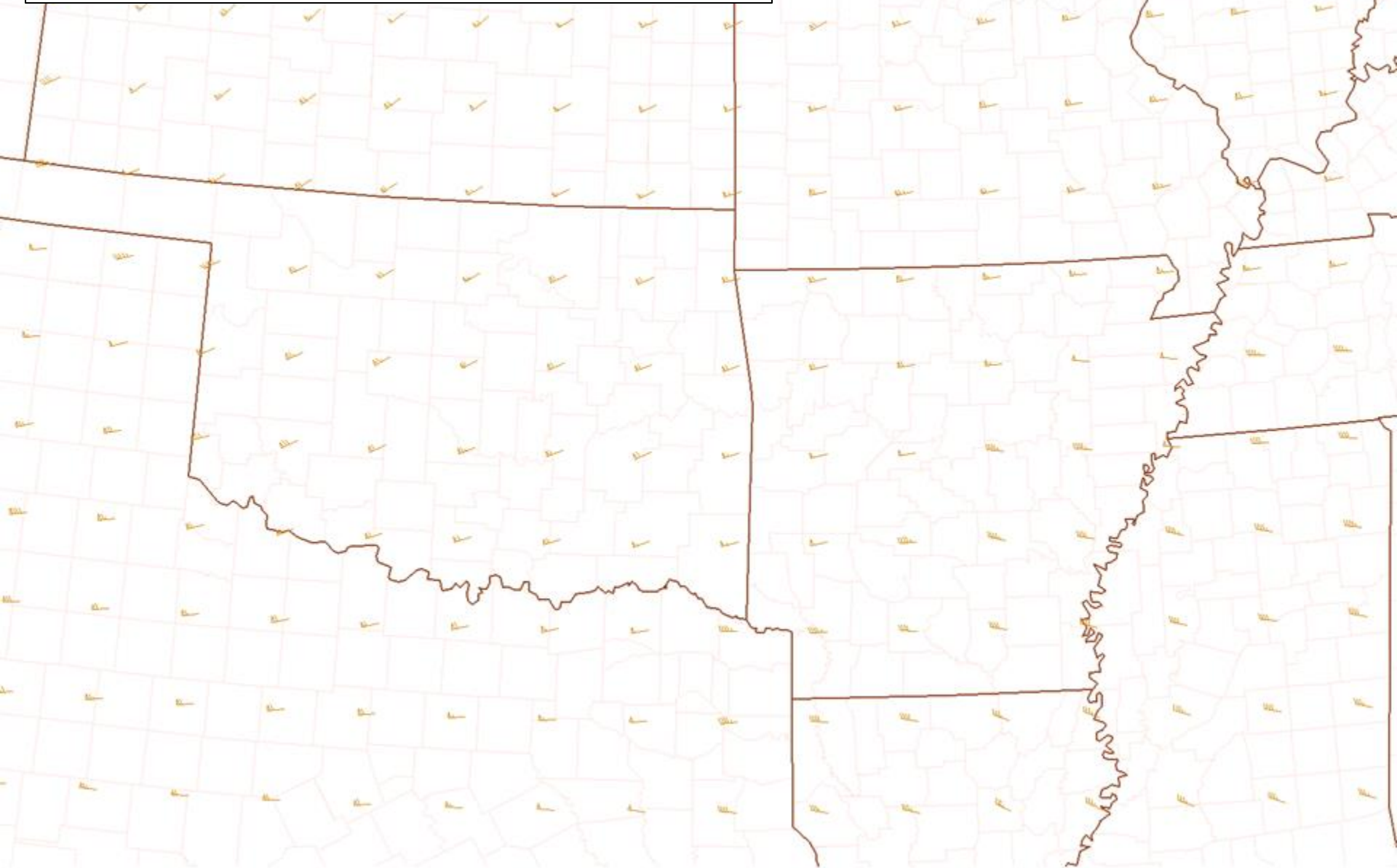
MLCAPE/MLCIN @ 0000 UTC



030505/0000 MLCAPE (contour) and MLCIN (J/kg, shaded)

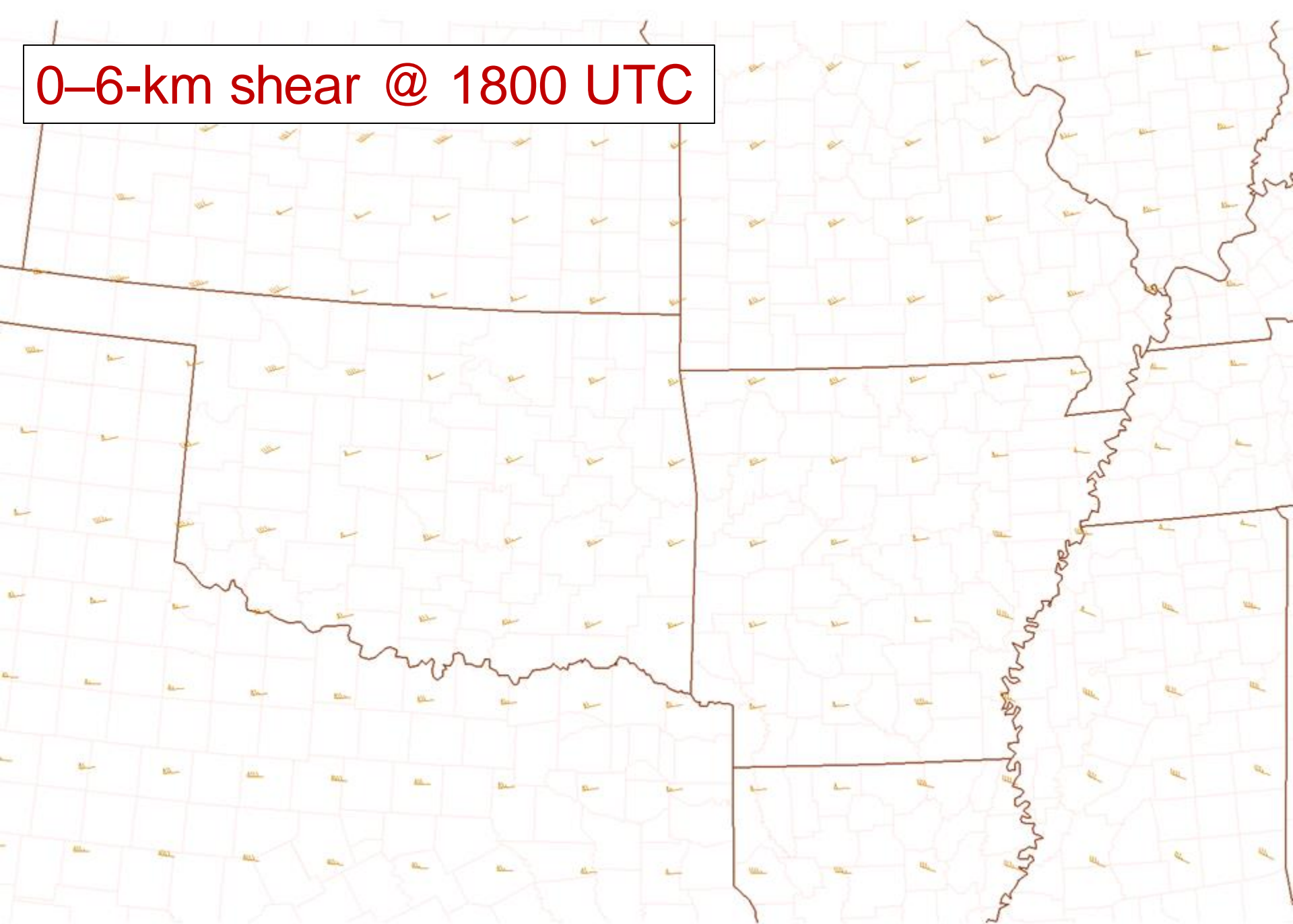
25 100

0–6-km shear @ 1800 UTC

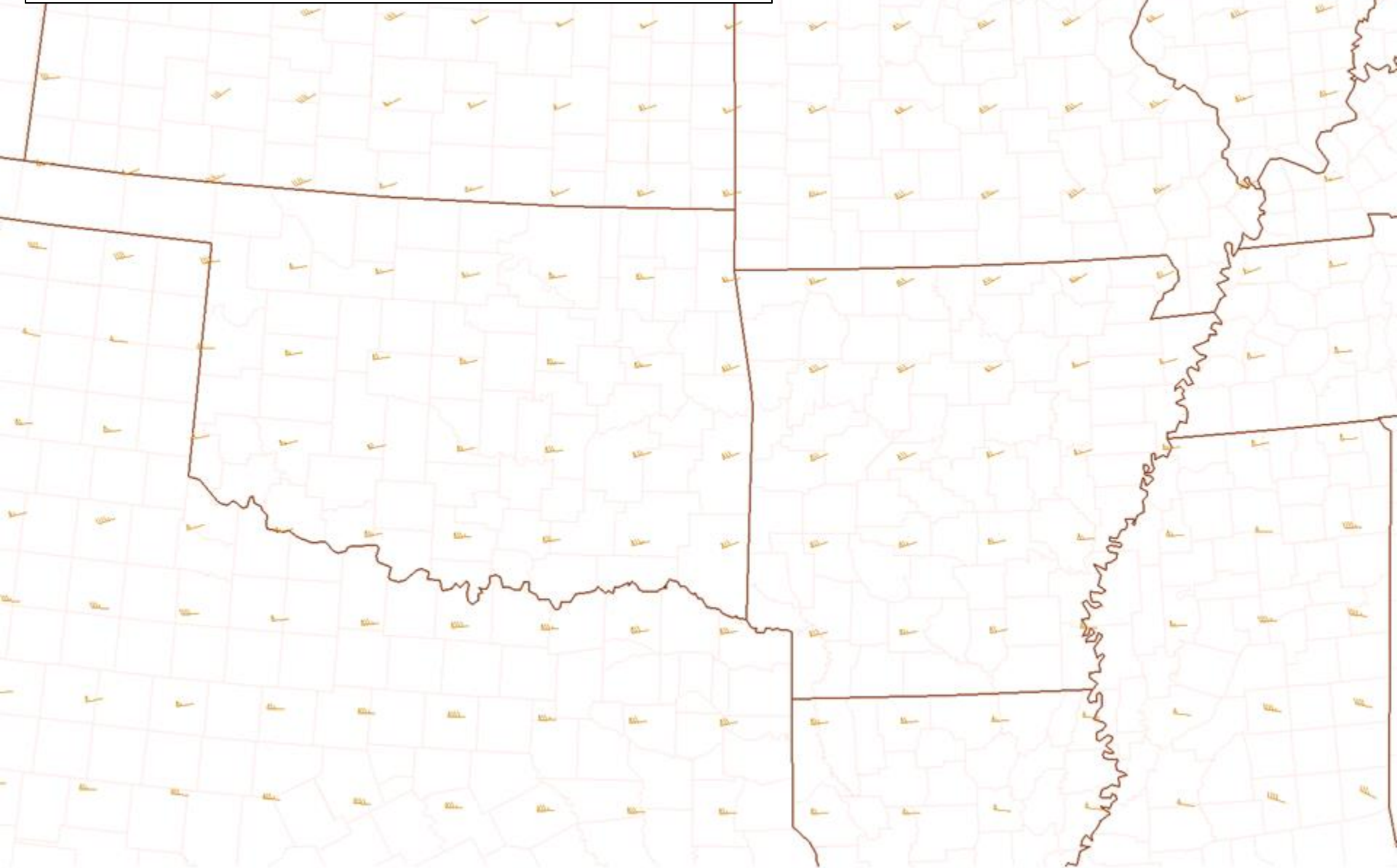


030504/1800 Surface to 6 km shear vector (kt)

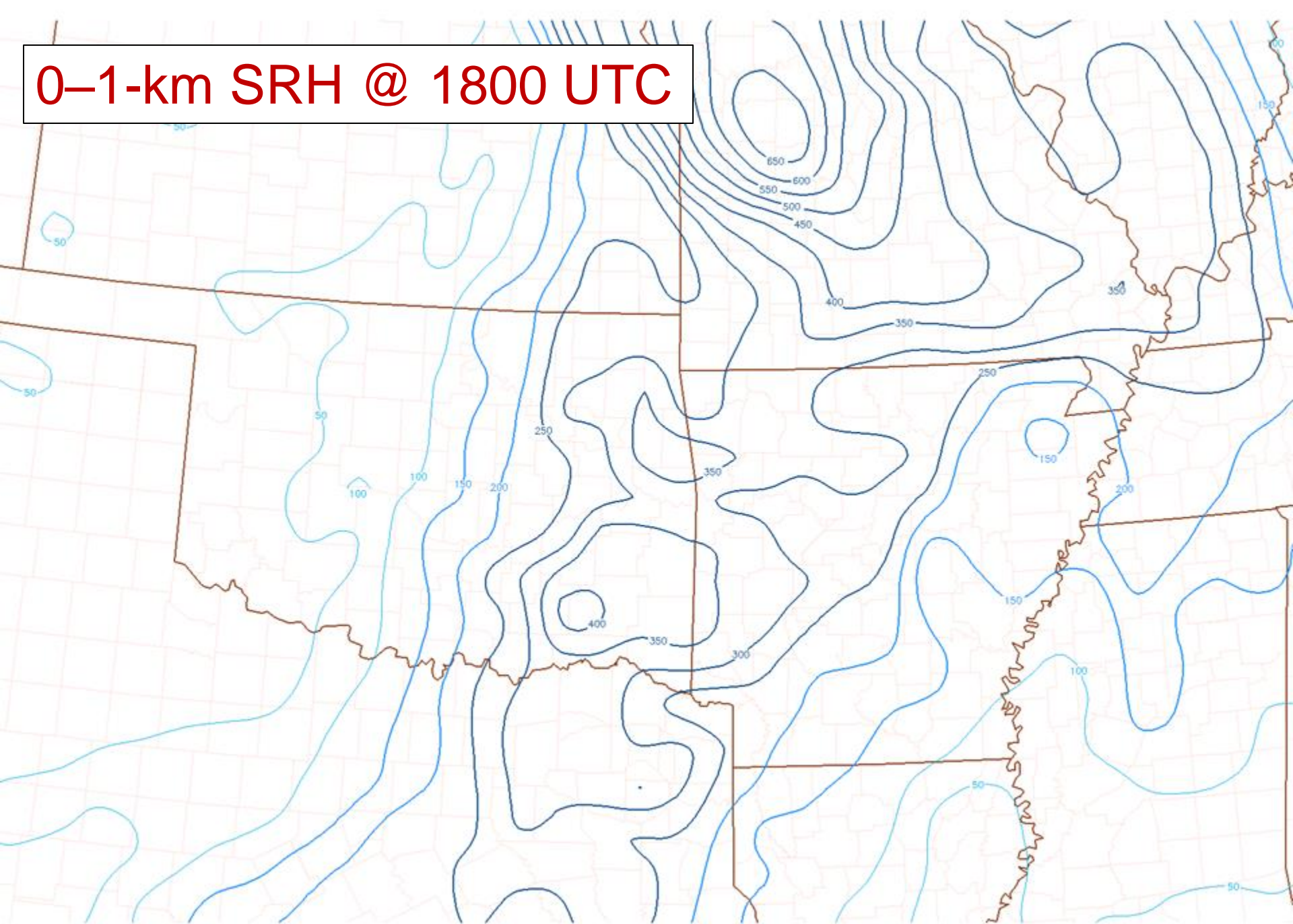
0–6-km shear @ 1800 UTC



0–6-km shear @ 1800 UTC

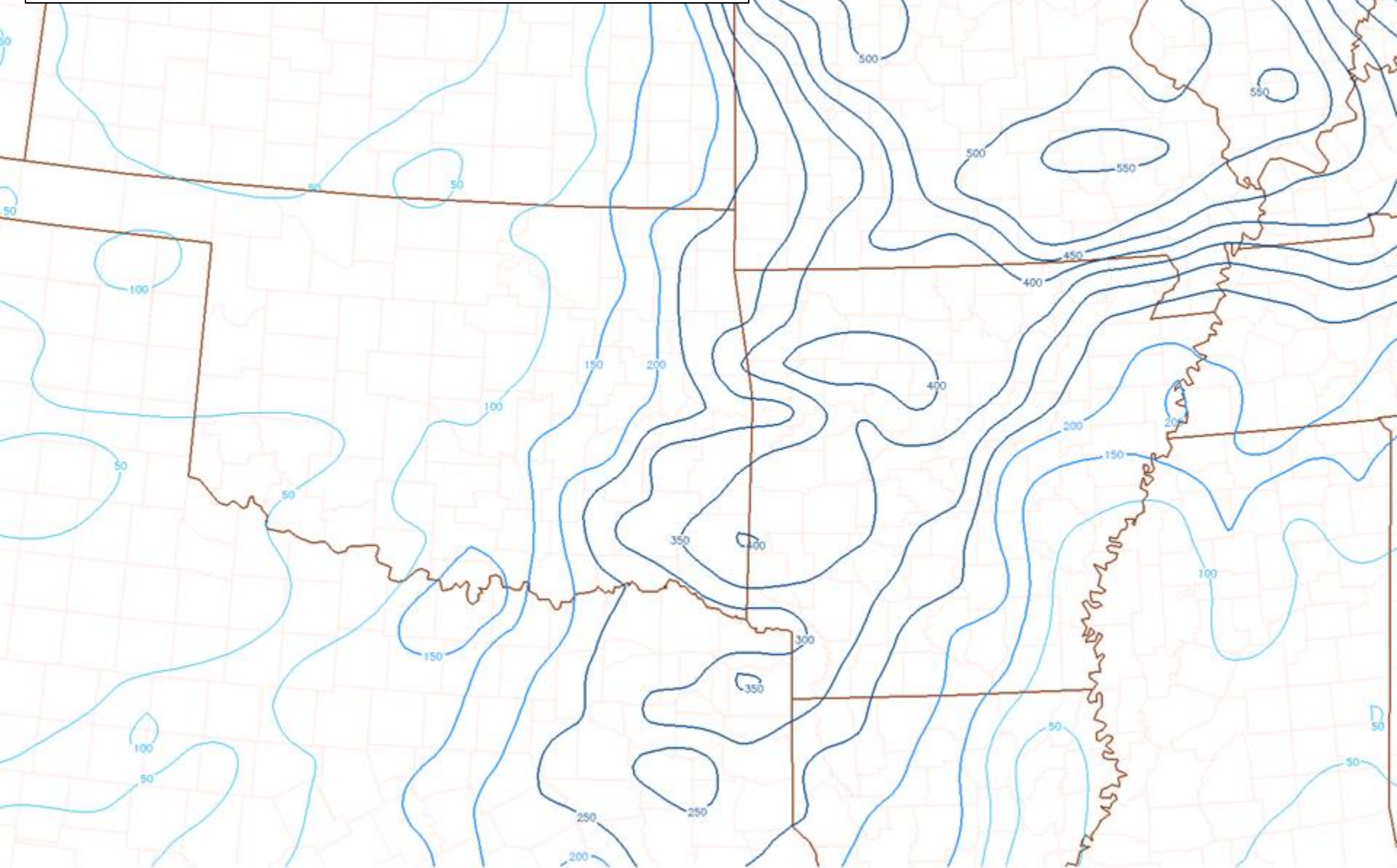


0–1-km SRH @ 1800 UTC



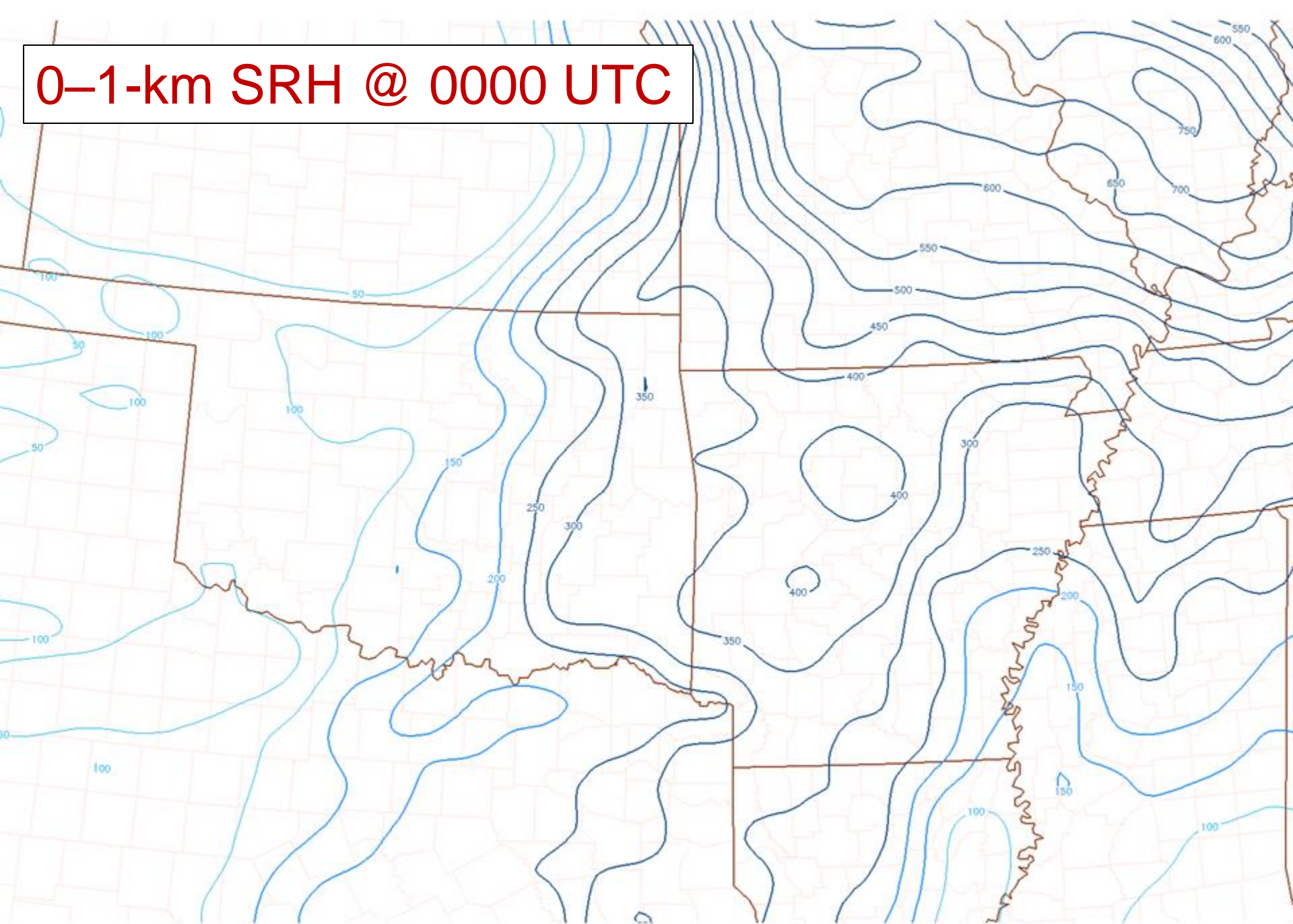
030504/1800 0–1 km SRH (m^2/s^2) and storm motion (kt)

0-1-km SRH @ 2100 UTC



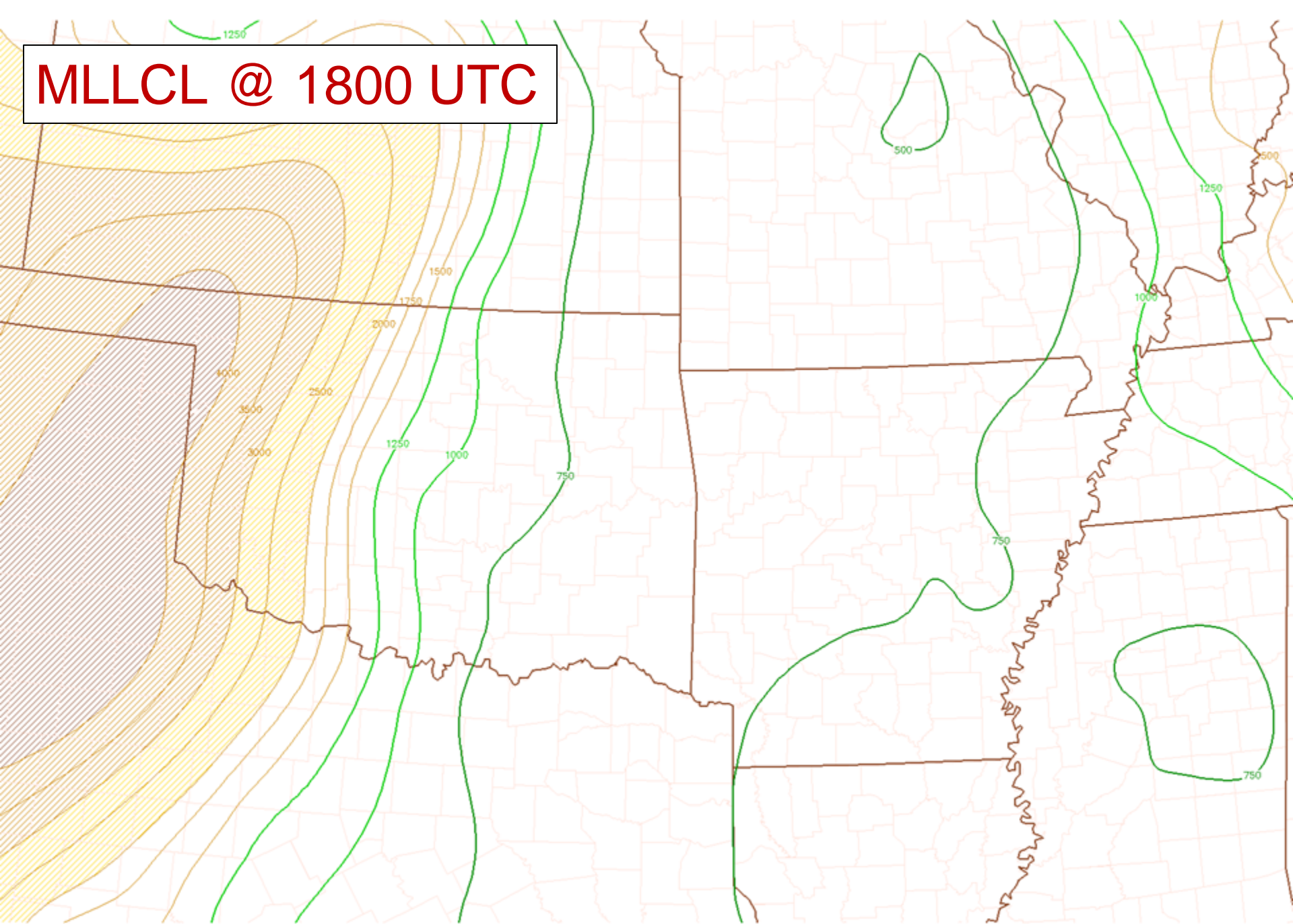
030504/2100 0-1 km SRH (m²/s²) and storm motion (kt)

0–1-km SRH @ 0000 UTC



030505/0000 0–1 km SRH (m²/s²) and storm motion (kt)

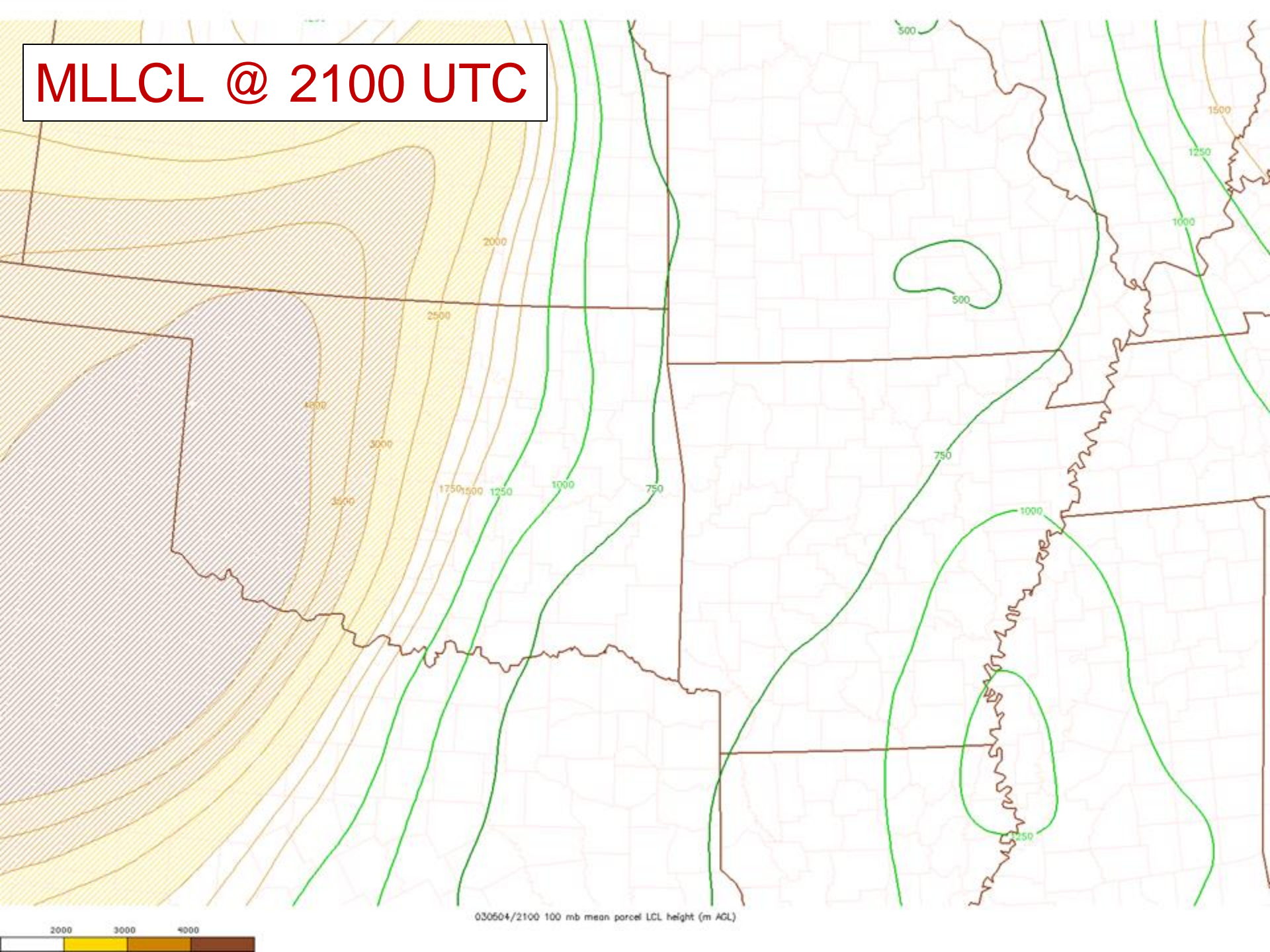
MLLCL @ 1800 UTC



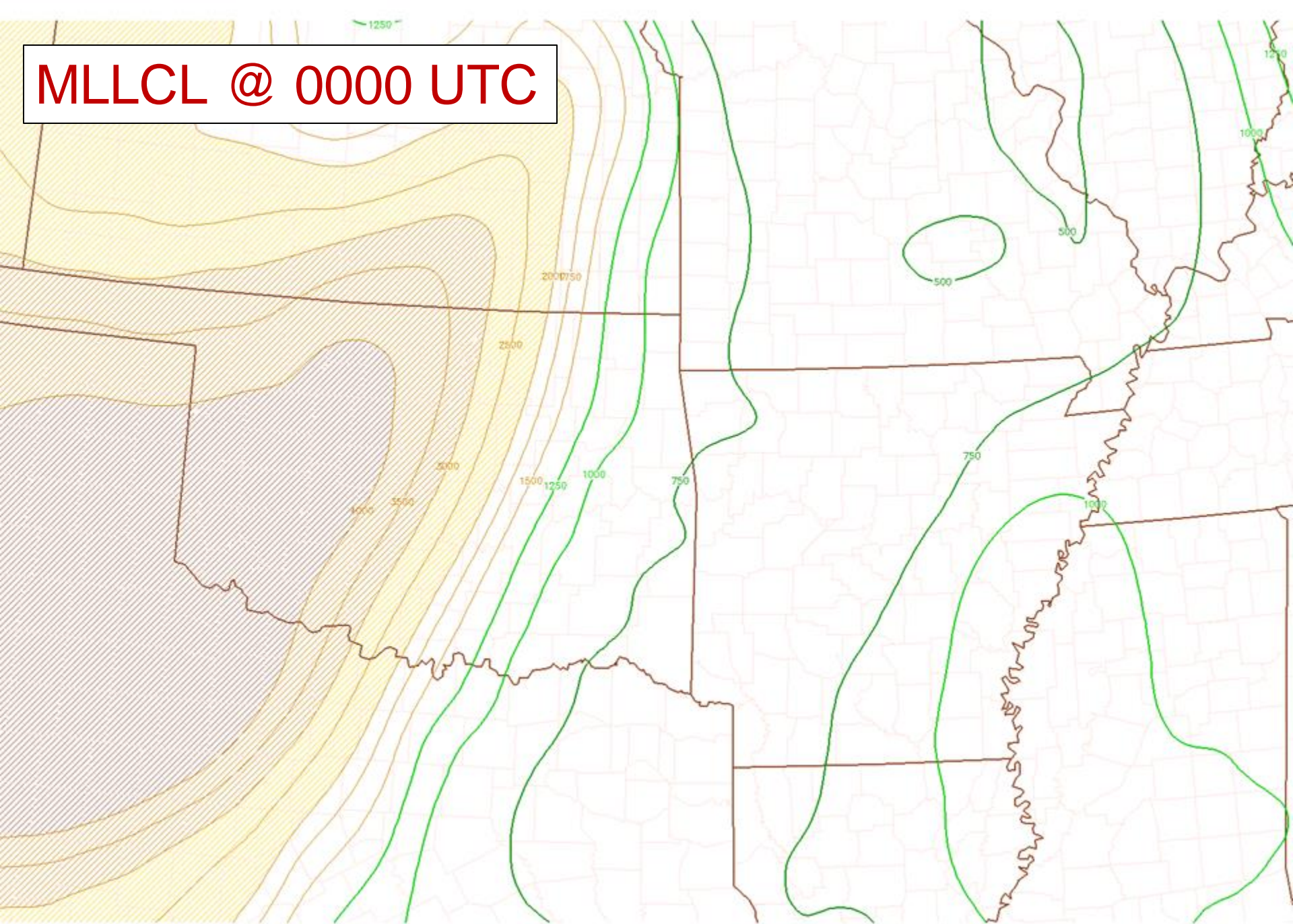
030504/1800 100 mb mean parcel LCL height (m AGL)

2000 3000 4000

MLLCL @ 2100 UTC



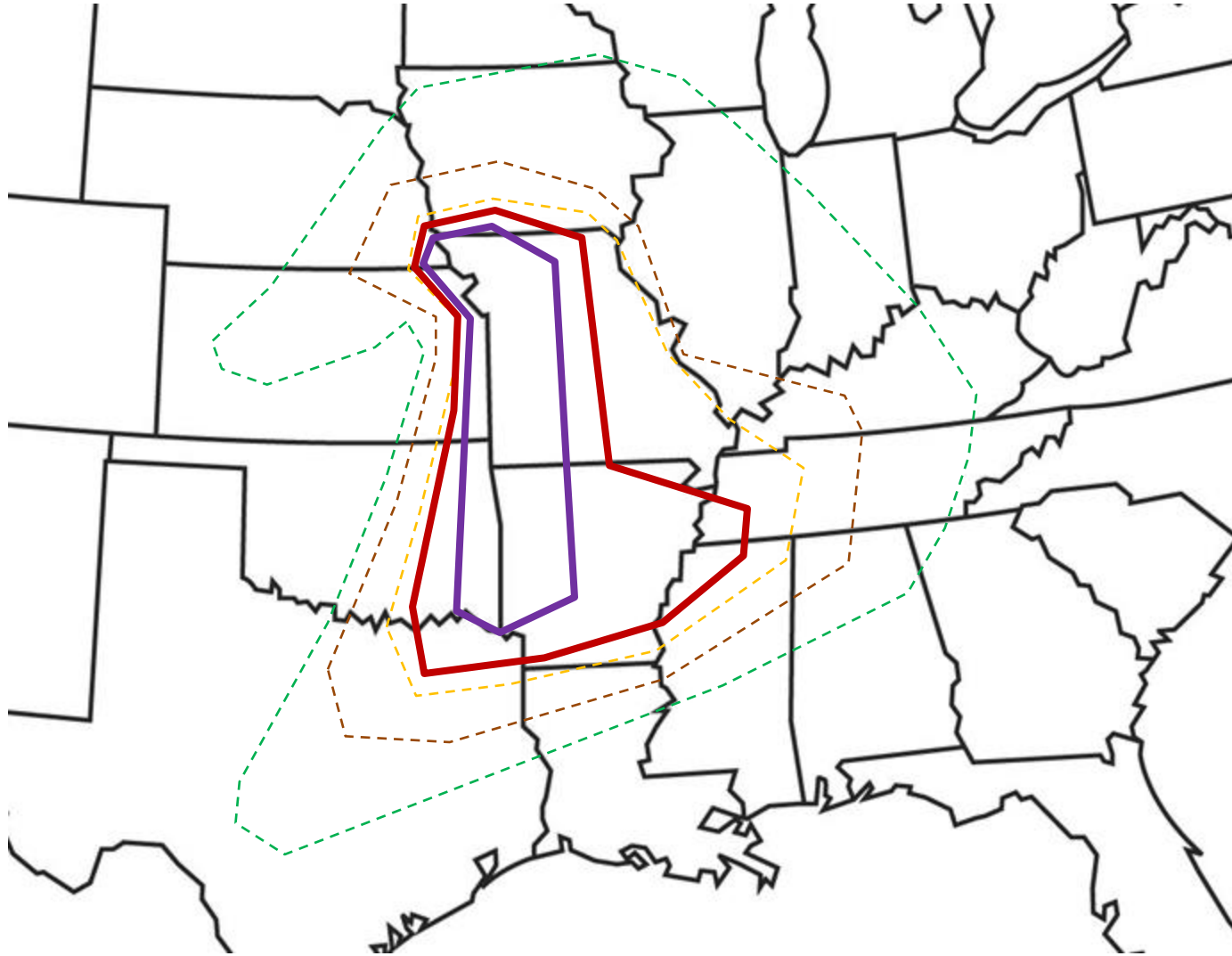
MLLCL @ 0000 UTC



030505/0000 100 mb mean parcel LCL height (m AGL)

2000 3000 4000

Draw your 01z tornado probabilities!



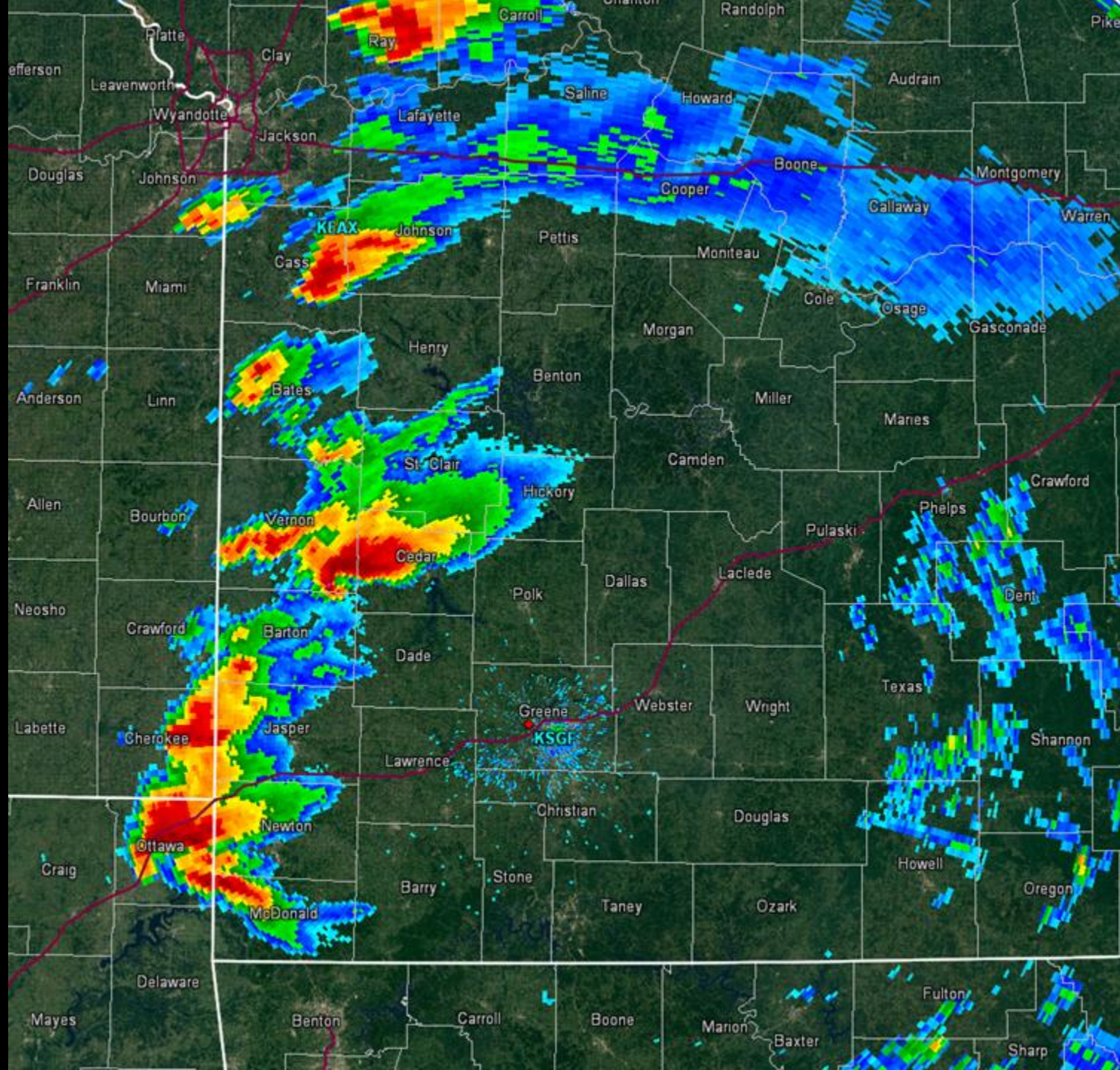
Moderate line for 15%

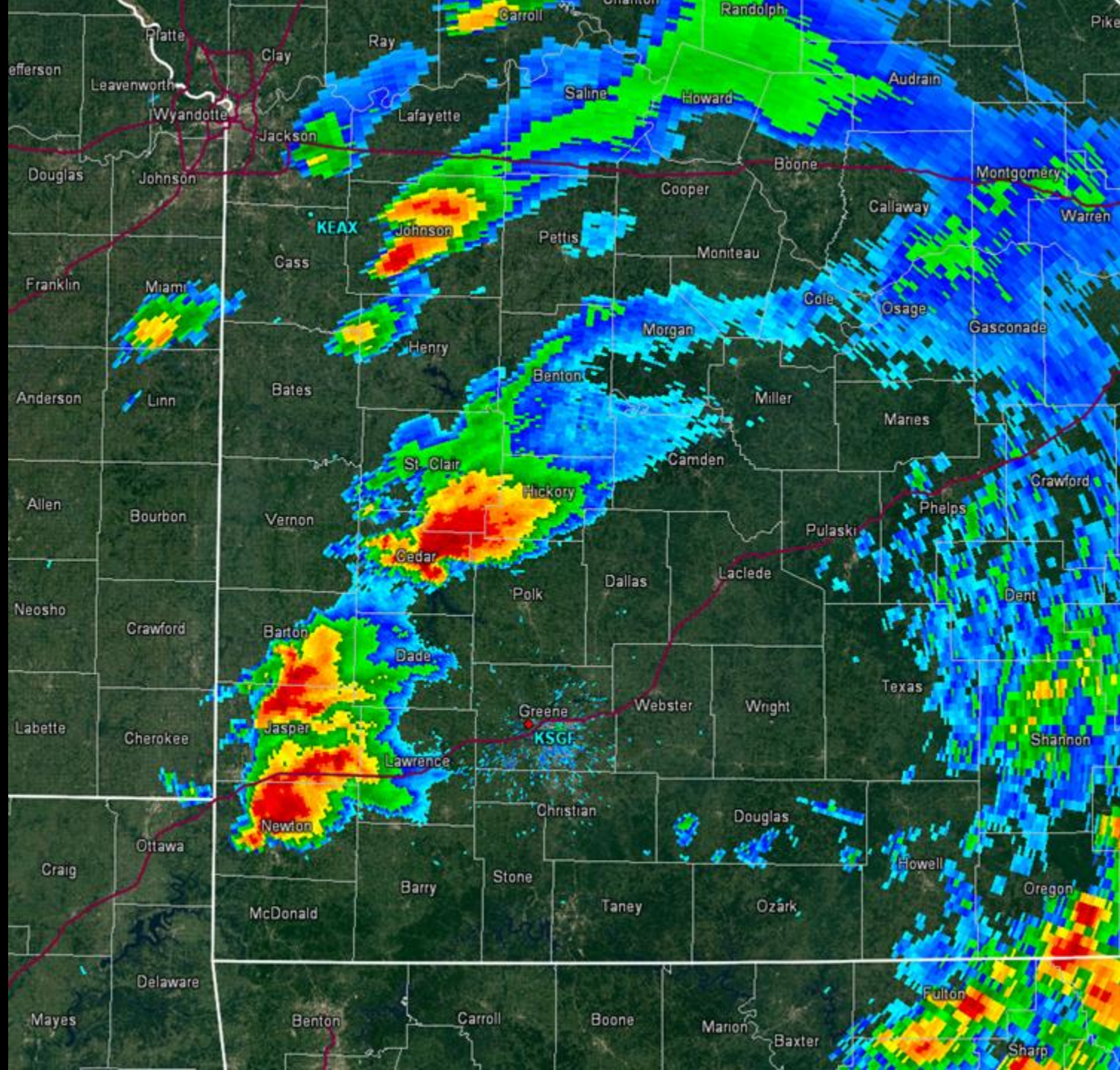
High line for 30%

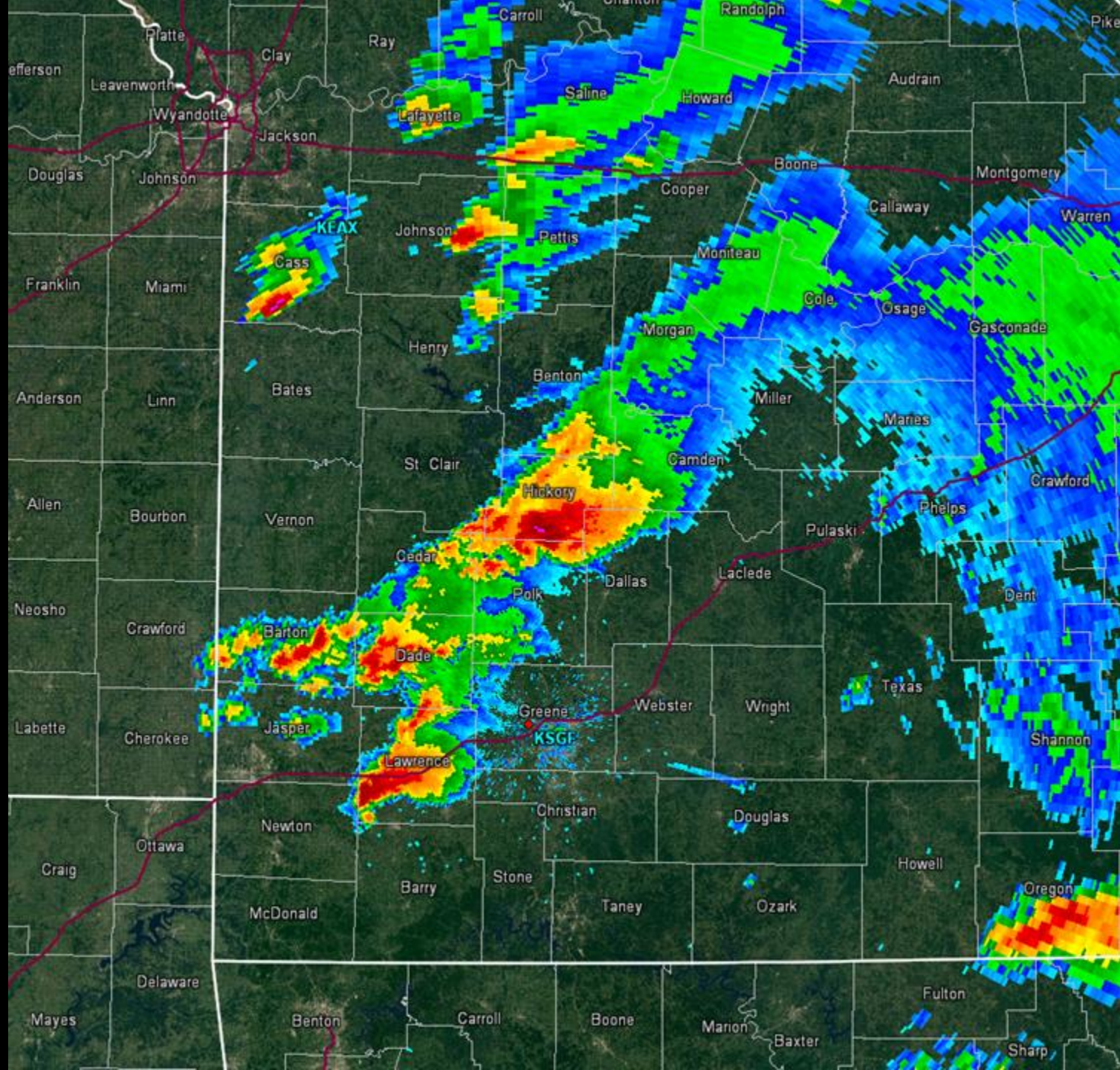
Black for hatched

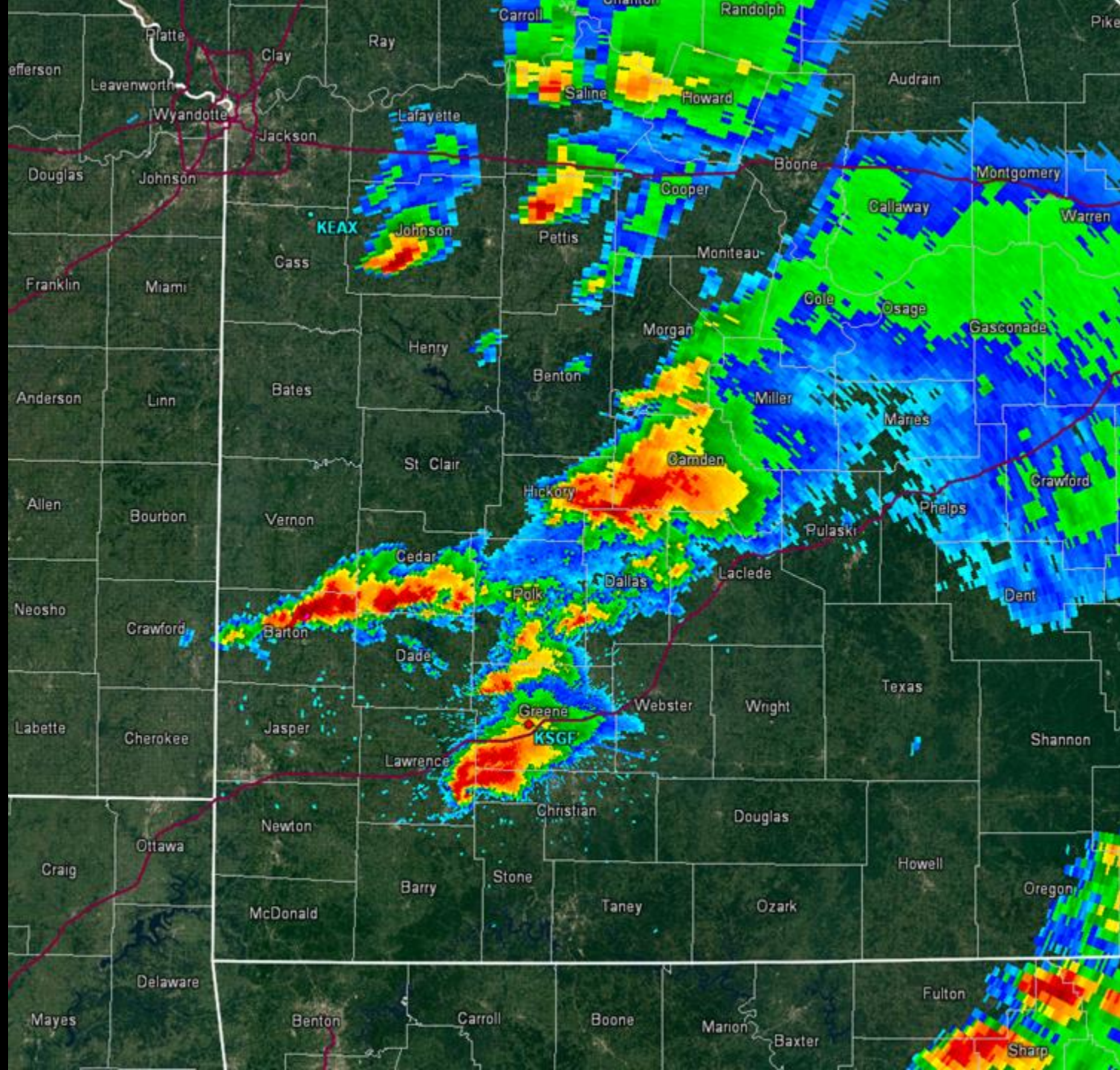
Email this slide to matthew.flournoy@noaa.gov

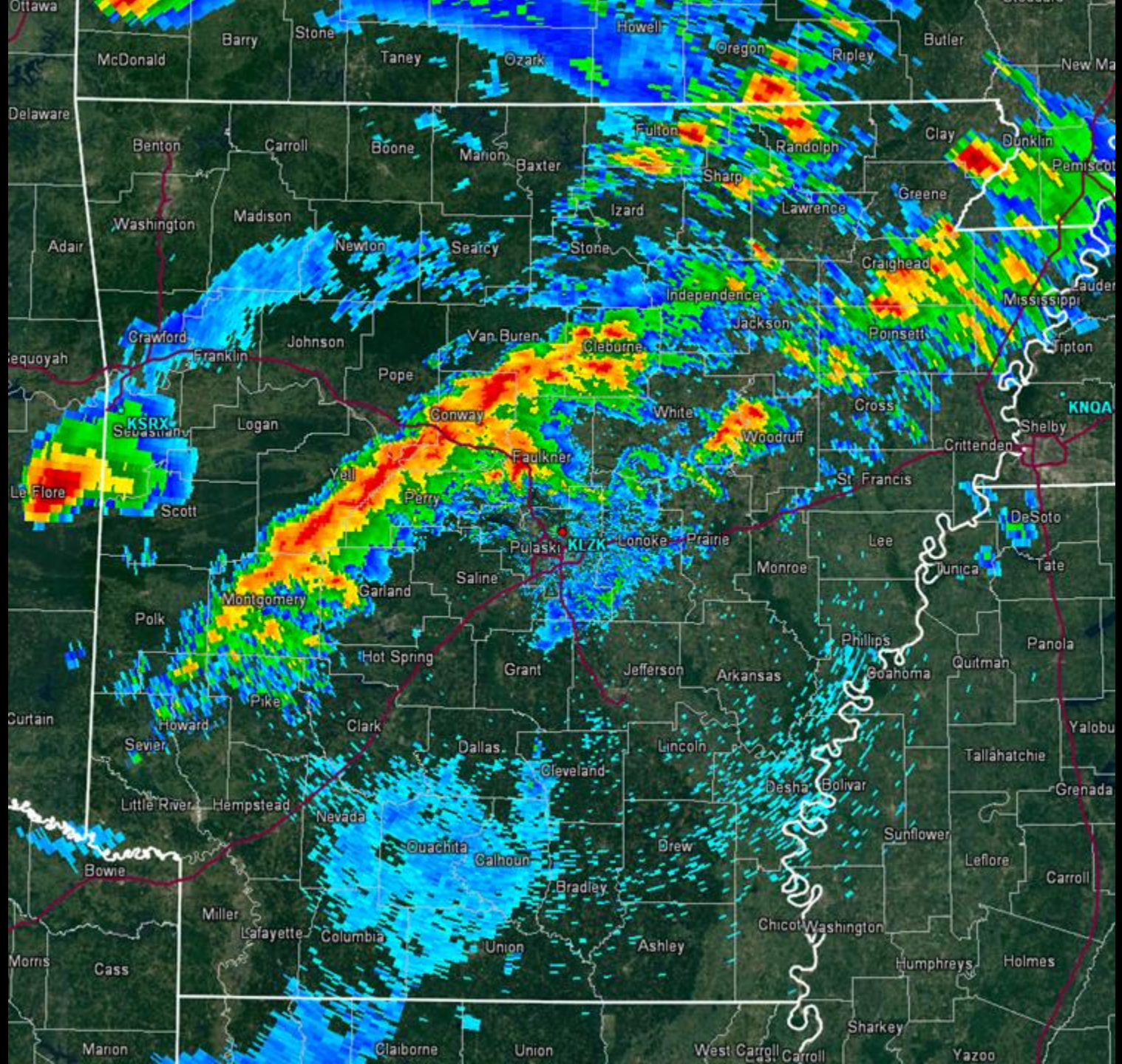
THE ANSWER

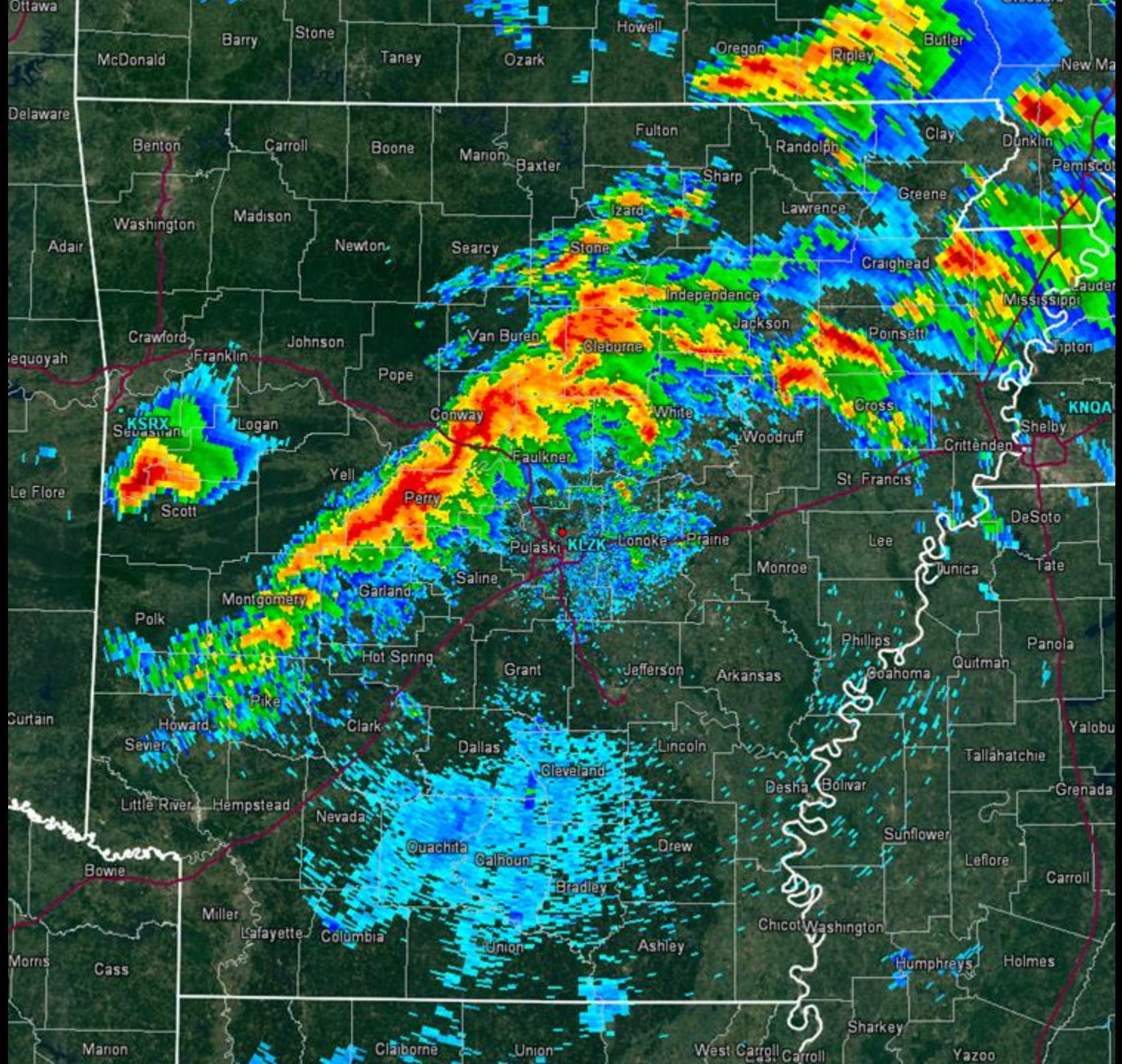


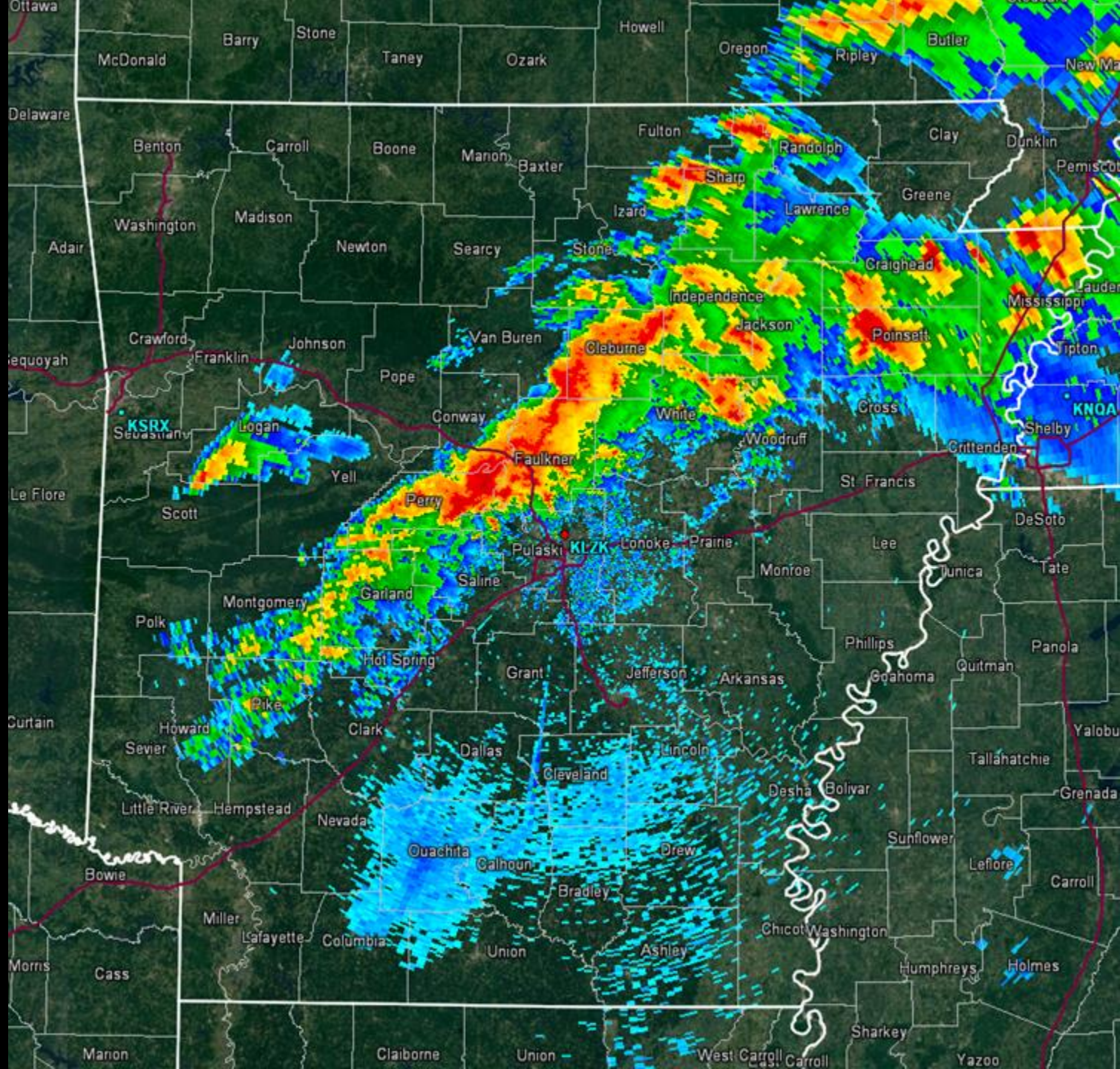


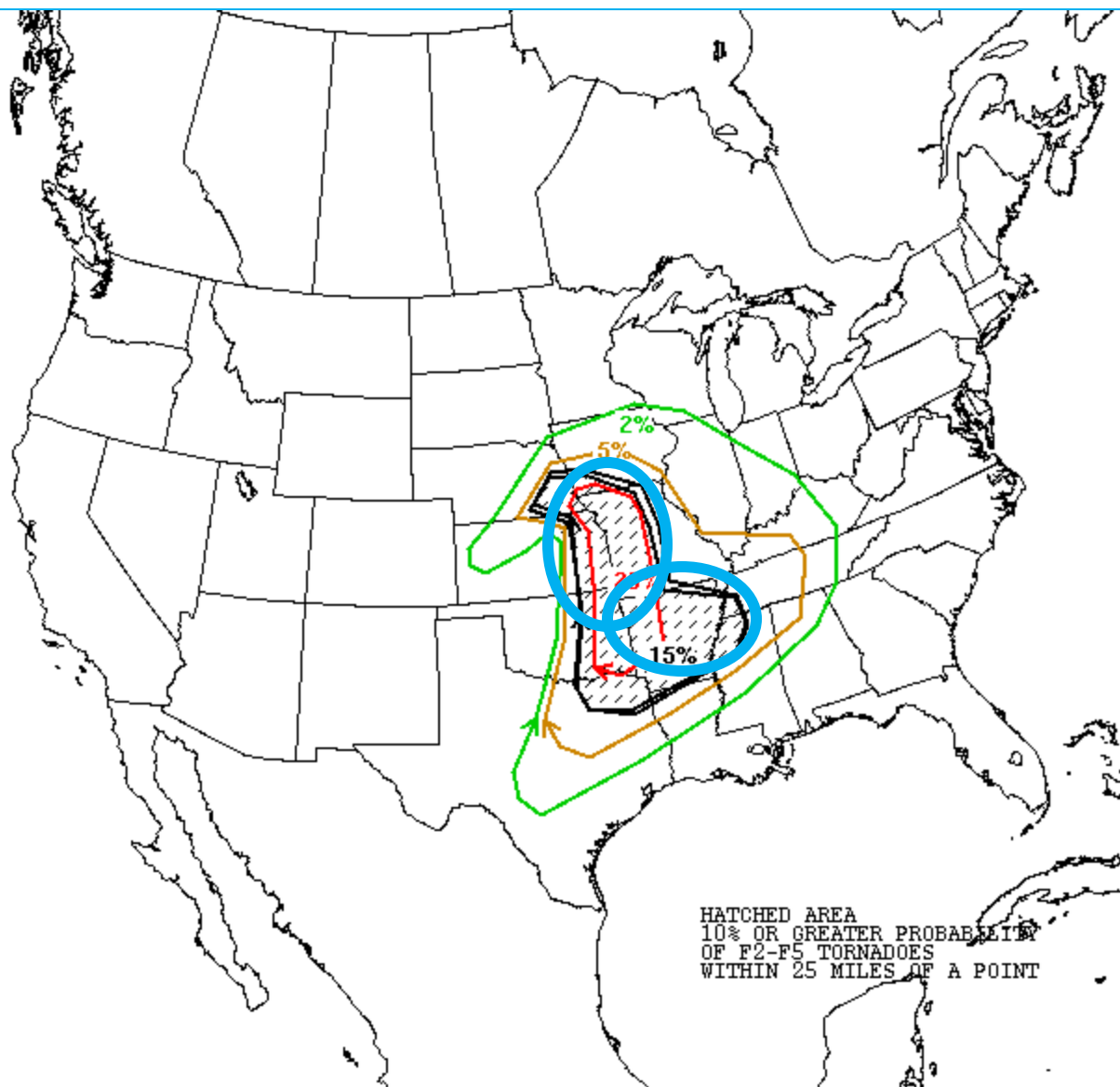












DAY 1 TORNADO

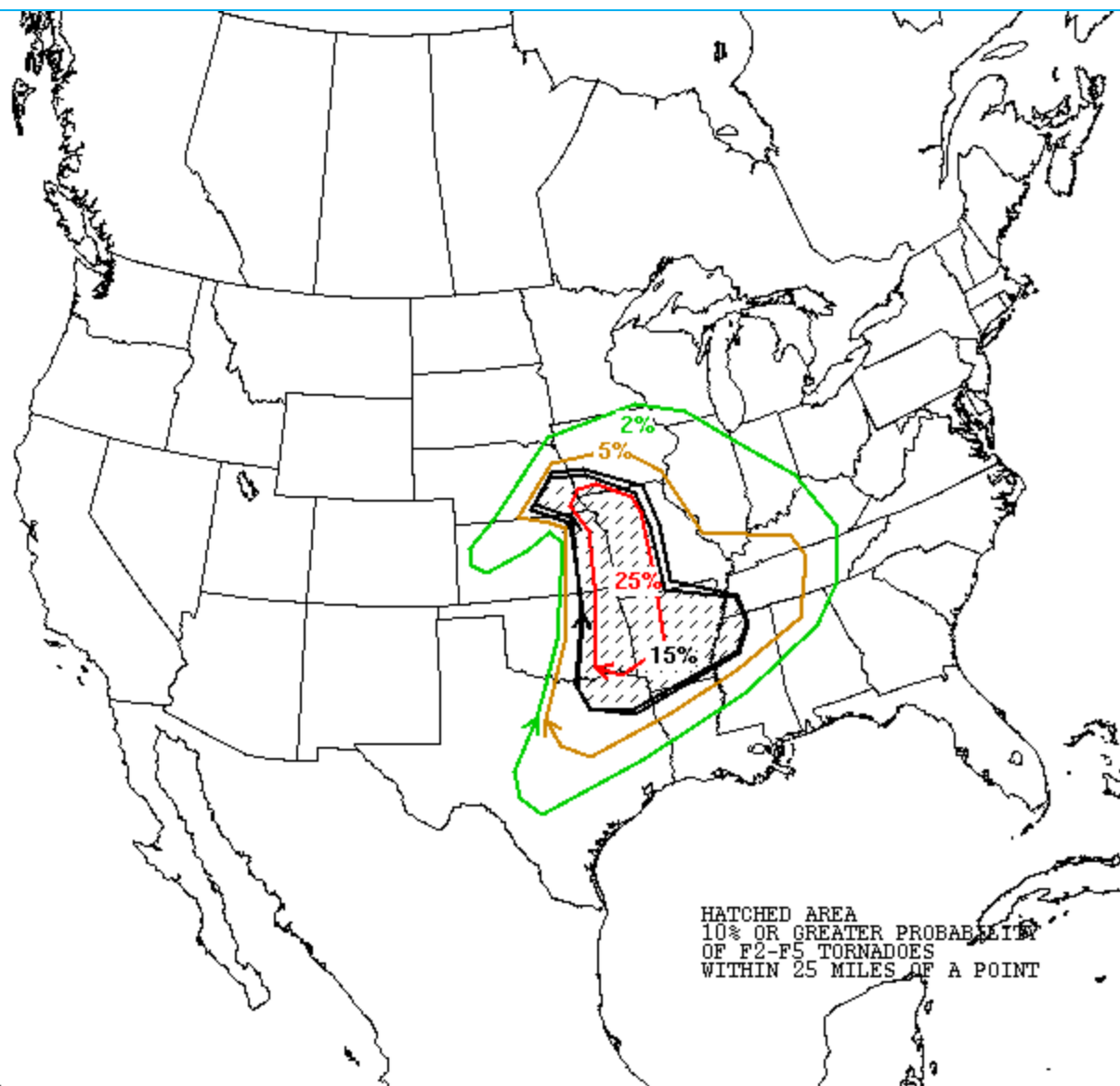
PROBABILITY OF A
TORNADO WITHIN 25
MILES OF A POINT

ISSUED 05/04/2003 2020Z
VALID 042000Z - 051200Z
FCSTR: DIAL
NOAA/NWS/NCEP
STORM PREDICTION CENTER

HATCHED AREA
10% OR GREATER PROBABILITY
OF F2-F5 TORNADOES
WITHIN 25 MILES OF A POINT

Summary

- Synoptic wave should maintain intensity and move to the east or east-northeast.
- Surface cyclone should develop toward the east-northeast in response to combined Q-G forcing for ascent.
- Mass response to cyclogenesis will be LLJ developing eastward toward MS River.
- Moist/unstable environment will maintain tornado risk overnight, esp. with cluster supercells across the Mid South.

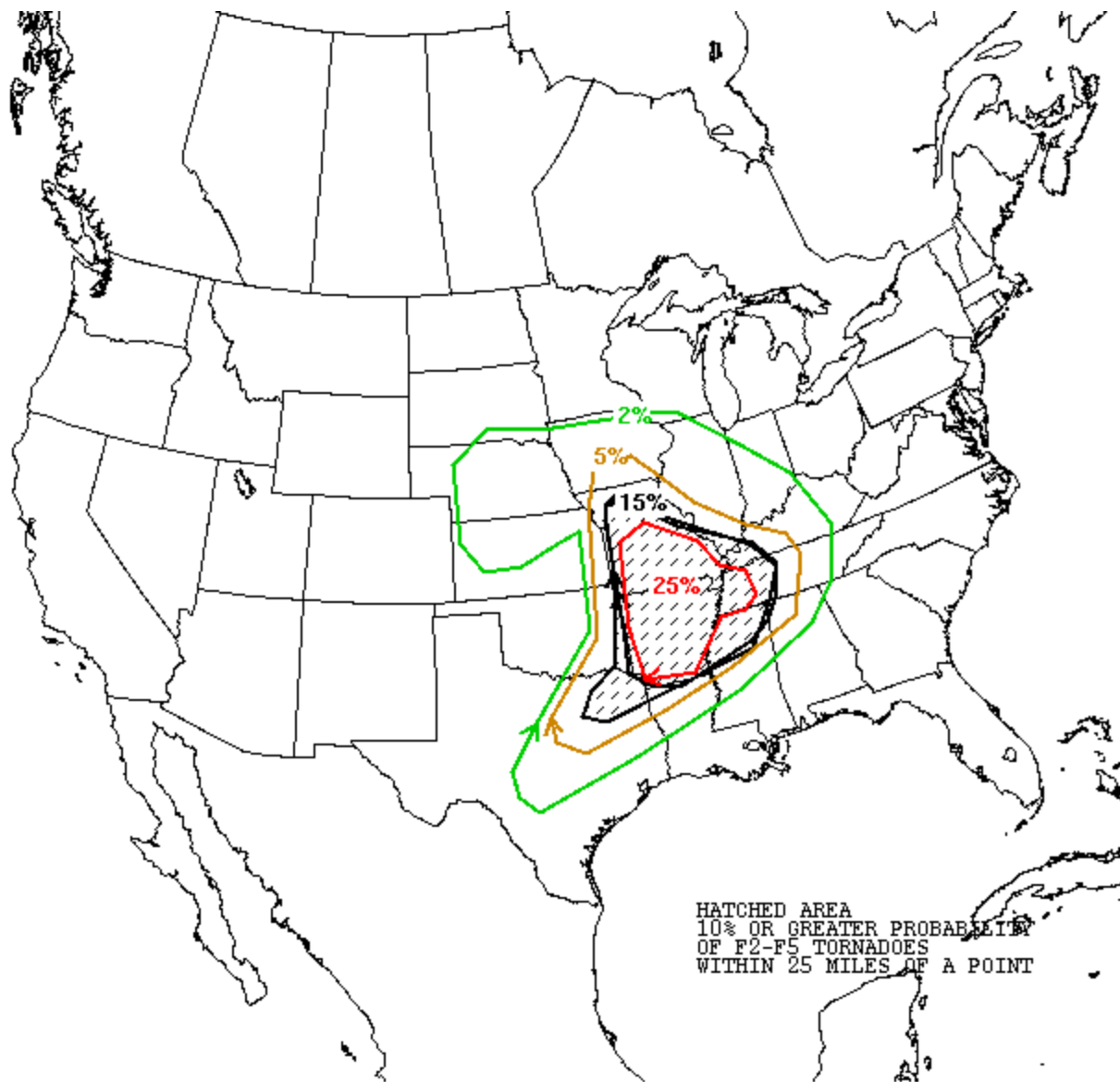


DAY 1 TORNADO

PROBABILITY OF A
TORNADO WITHIN 25
MILES OF A POINT

ISSUED 05/04/2003 2020Z
VALID 042000Z - 051200Z
FCSTR: DIAL
NOAA/NWS/NCEP
STORM PREDICTION CENTER

HATCHED AREA
10% OR GREATER PROBABILITY
OF F2-F5 TORNADOES
WITHIN 25 MILES OF A POINT



DAY 1 TORNADO

PROBABILITY OF A
TORNADO WITHIN 25
MILES OF A POINT

ISSUED 05/05/2003 0048Z
VALID 050100Z - 051200Z
FCSTR: MEAD
NOAA/NWS/NCEP
STORM PREDICTION CENTER

HATCHED AREA
10% OR GREATER PROBABILITY
OF F2-F5 TORNADOES
WITHIN 25 MILES OF A POINT

PRELIMINARY SEVERE WEATHER REPORTS
05/04/03

