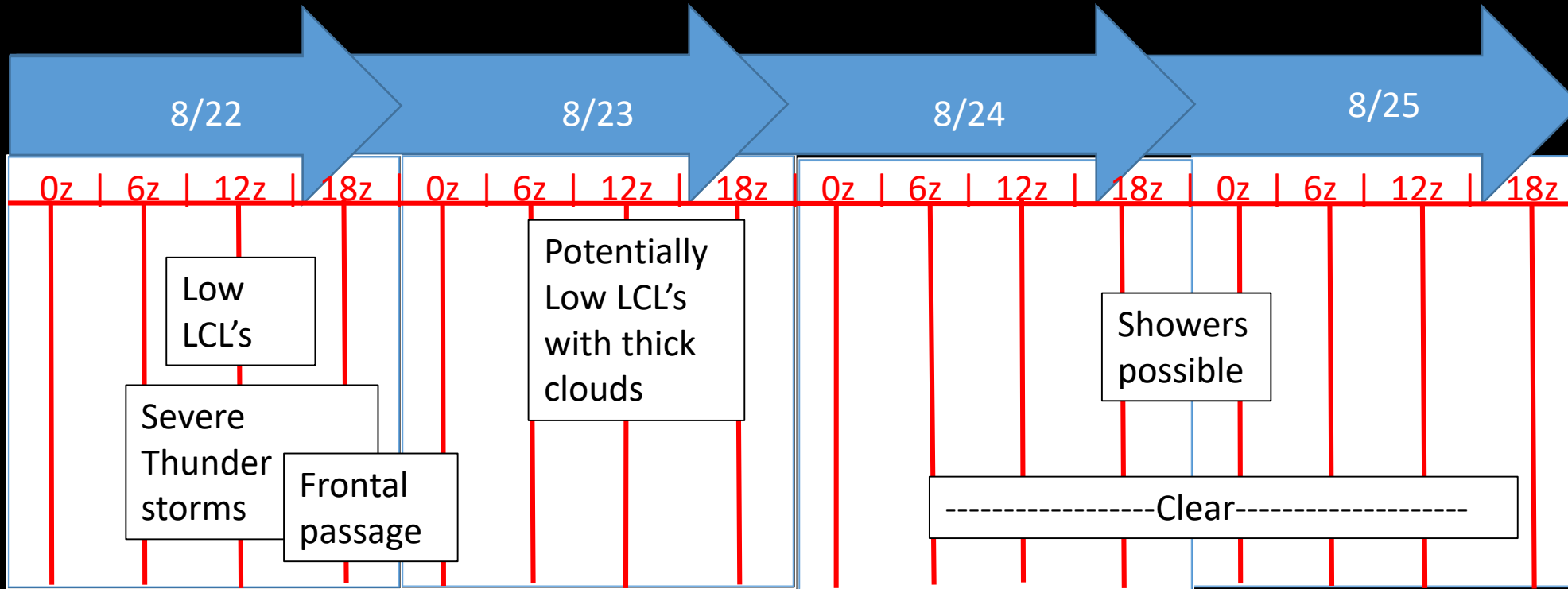


Forecast for 8/22-8/25

Forecaster: Matthew Brewer

Forecast made: 8/21/2017

Outlook



Day -1

Day 0

Day 1

Day 2

Day 3-5

Overview for Day 8/22

- Dry in the morning but as mixing occurs the LCLs in the afternoon may be favorable for operations
- Isolated thunderstorms are possible throughout the day due to moderate instability
- Frontal passage late in the afternoon will bring heavy precip

Day -1

Day 0

Day 1

Day 2

Day 3-5

Overview for 8/23

- Low LCL's will thicken stratus clouds
- Summit and Lake Placid turn will likely be in cloud much of the day
- Weak westerly winds

Day -1

Day 0

Day 1

Day 2

Day 3-5

Overview for Day 3-4

- Thursday- dry to start the day with chance of light showers in the early evening as due to upper level vorticity advection
- Friday- likely dry and mostly sunny

Day -1

Day 0

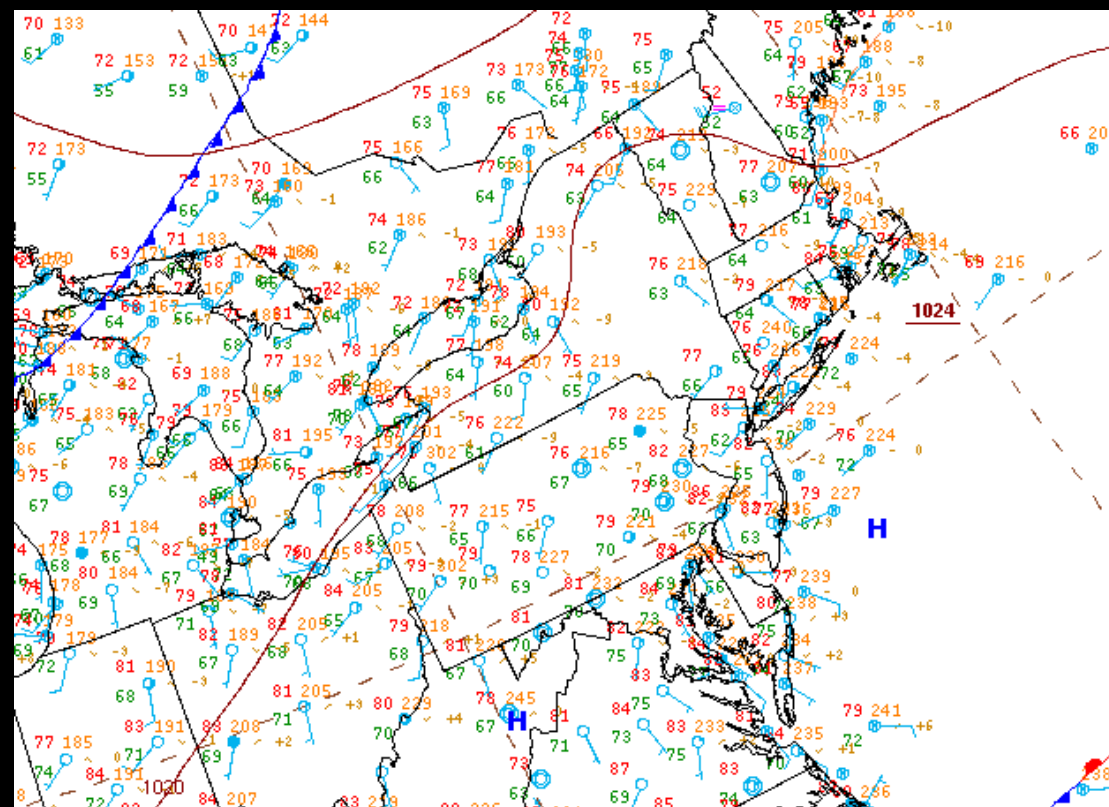
Day 1

Day 2

Day 3-5

Current Surface Analysis

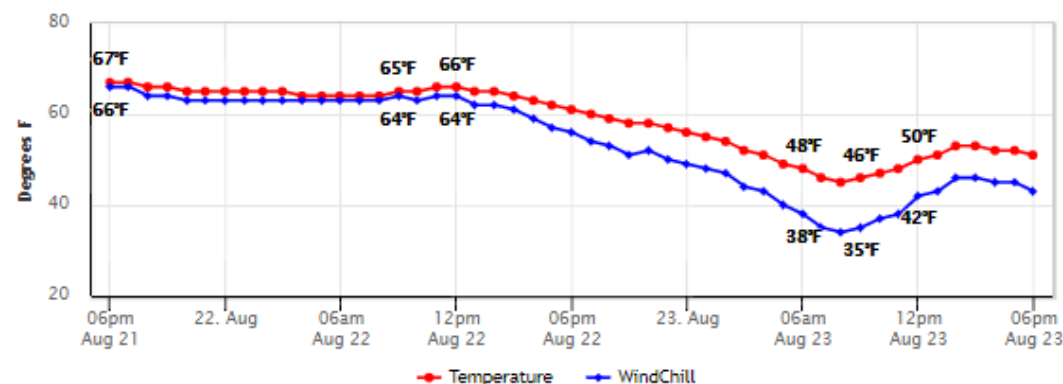
- Shown is the NOAA WPC surface analysis from 15z 8/21/2017
- The high to the south has created a dry partly cloudy day with relatively calm winds



Summit forecast

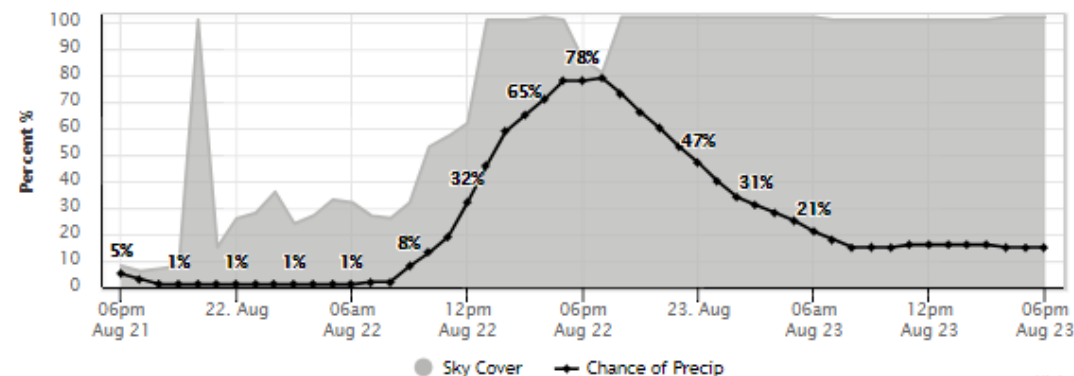
- Shown is the NWS Burlington's summit forecast
- This Forecast has the summit cloud free tomorrow with mostly sunny skies

Temperature & Wind Chill Forecasts for Whiteface Mountain, NY at 4867'



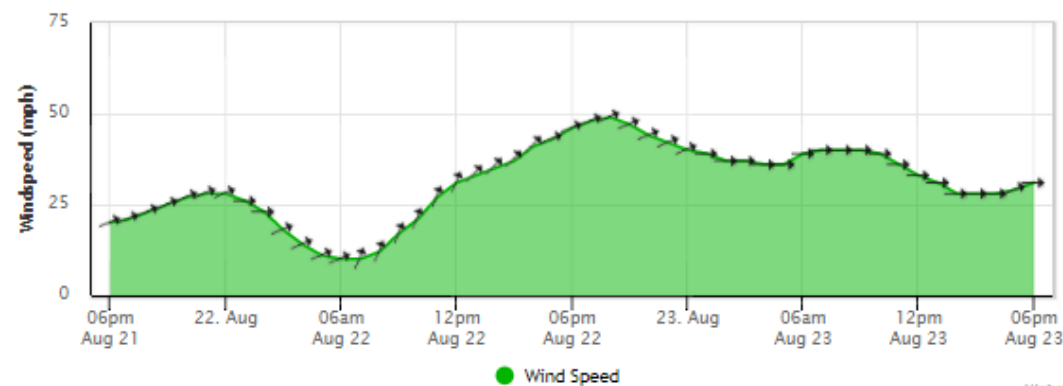
Highcharts.com

Precipitation & Sky Cover Forecasts for Whiteface Mountain, NY at 4867'



Highcharts.com

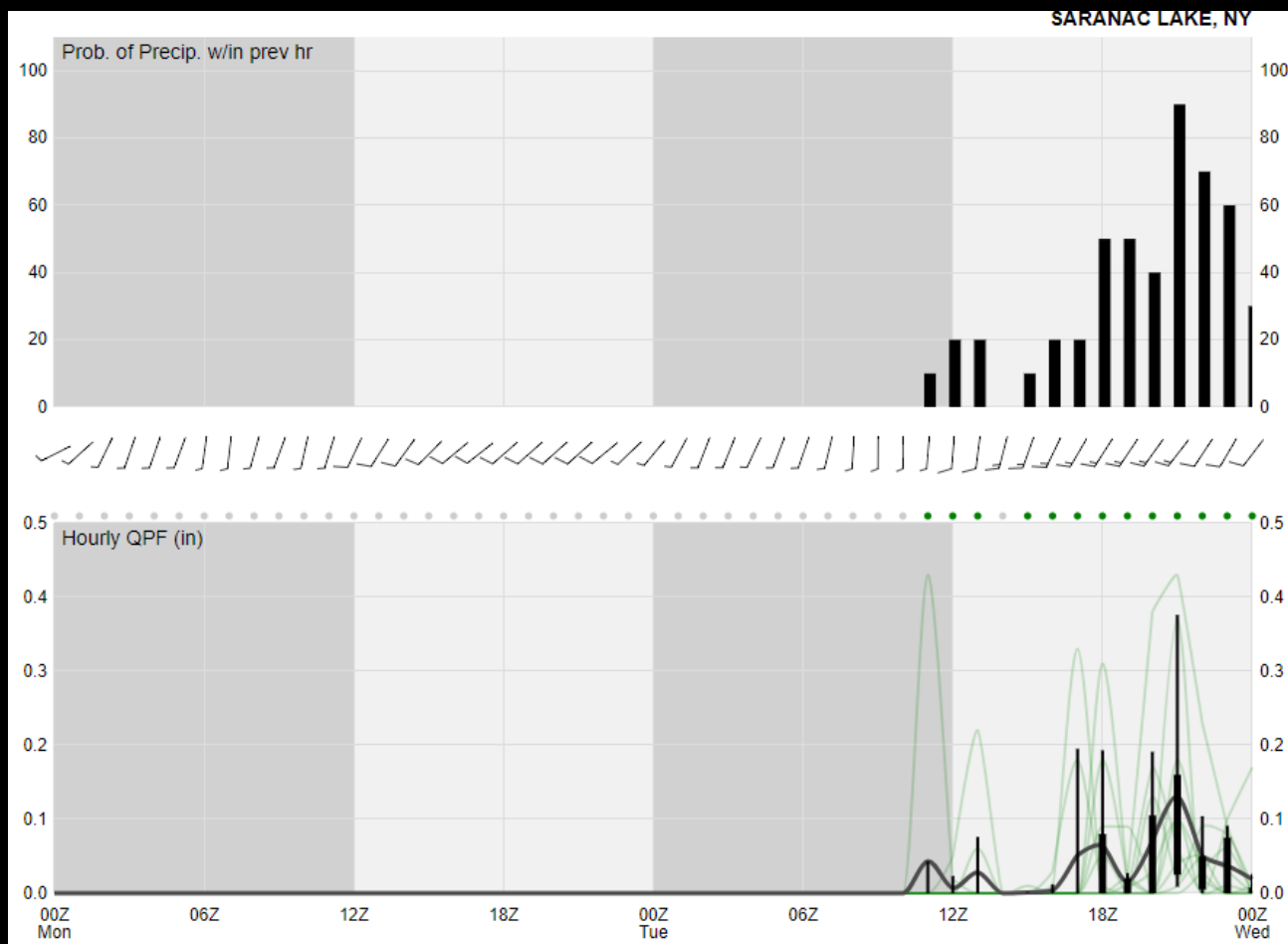
Wind Speed & Direction Forecasts for Whiteface Mountain, NY at 4867'



Highcharts.com

Precip Meteograms

- NCAR ensemble 0z 8/21 run showing probability of precip and hourly QPF
- The NCAR ensemble is forecasting the greatest chance of precip for tomorrow afternoon
- There is a chance of isolated thunderstorms throughout the day and a frontal passage later in the day is what will bring the majority of precip



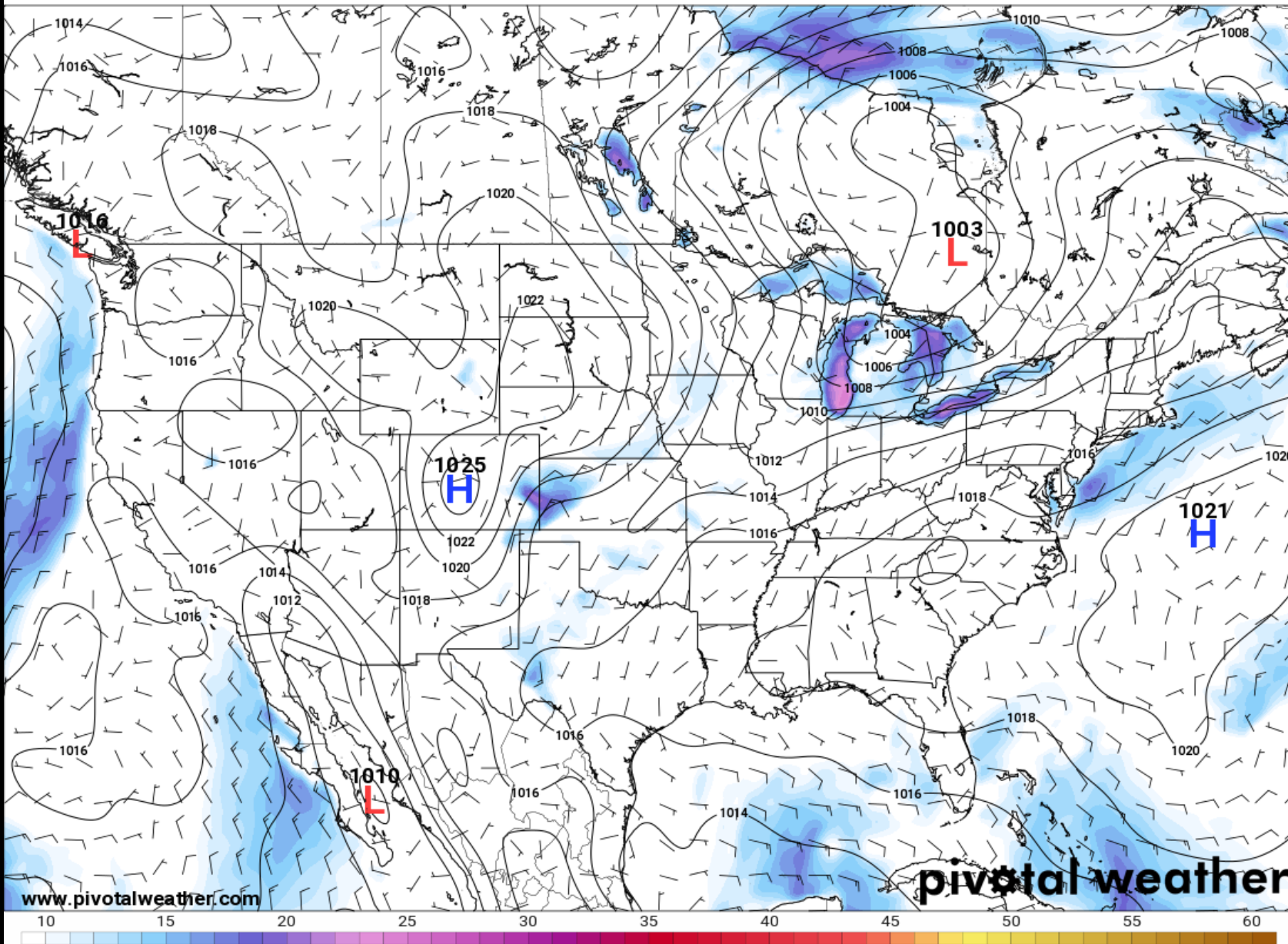
Synoptic weather

- Shown is the 8/21 12z GFS MSLP and 10m winds valid for 12z 8/22
- The low to the north west is what will be bringing heavy precip and severe thunderstorm to the area tomorrow afternoon/evening

MSLP (mb) and 10 m AGL Wind (kt)

F024 Valid: Tue 2017-08-22 12z

Init Mon 2017-08-21 12z GFS



Day -1

Day 0

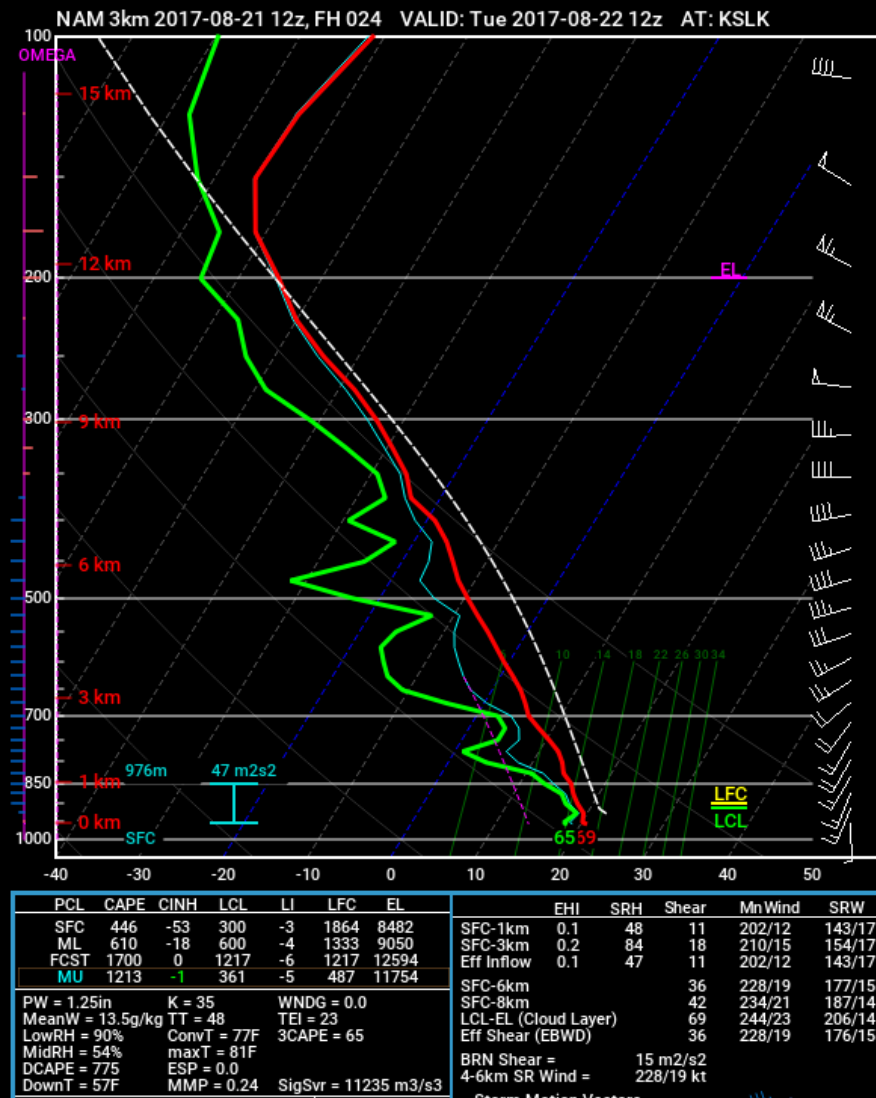
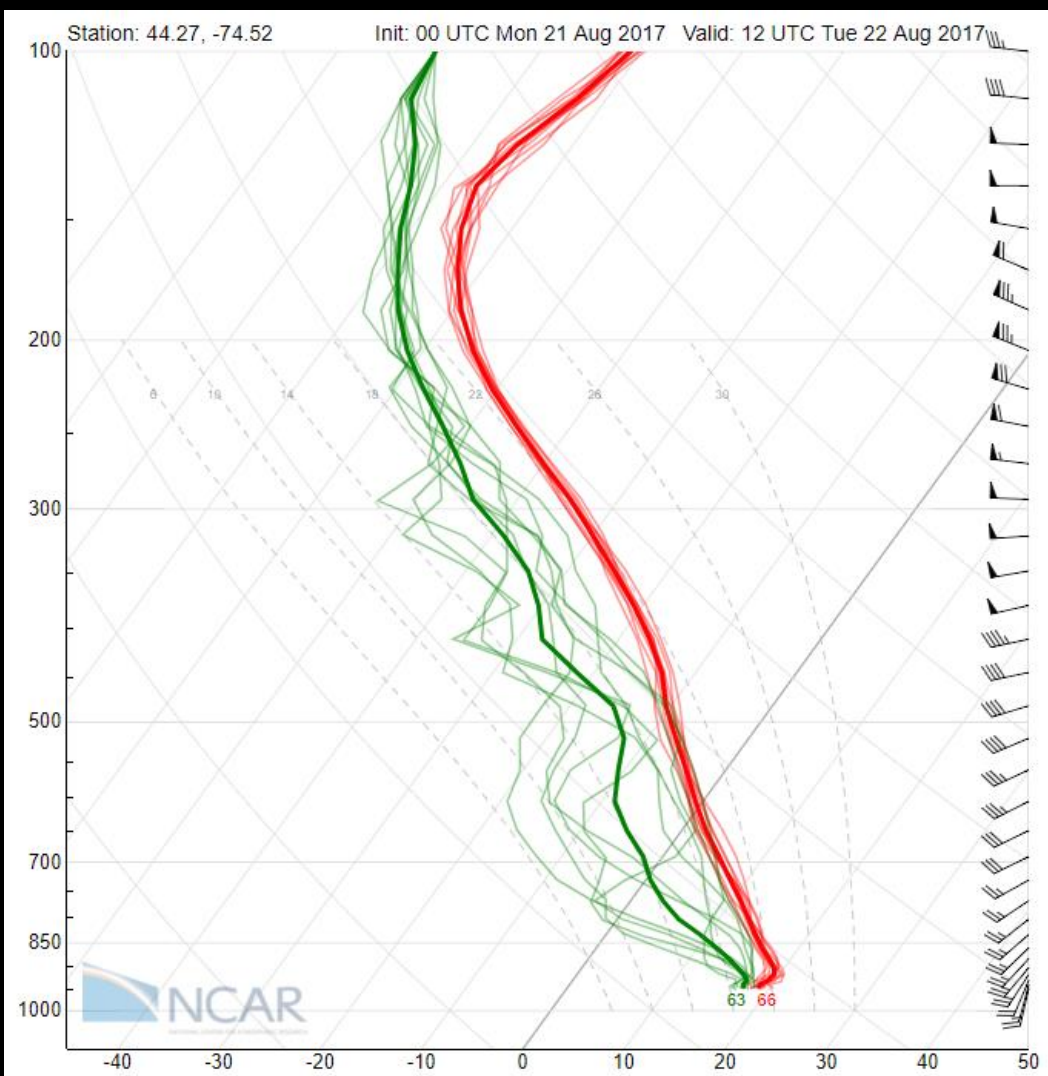
Day 1

Day 2

Day 3-5

Model Soundings

- Shown is the 8/21 12z 3km NAM sounding valid for 12z 8/22 and the 0z 8/21 NCAR ensemble sounding for 12z 8/22
- The NCAR ensemble sounding is forecasting tomorrow morning to be cloud free and dry
- The NAM is forecasting just above the surface to be completely saturated but dry at 850



Day -1

Day 0

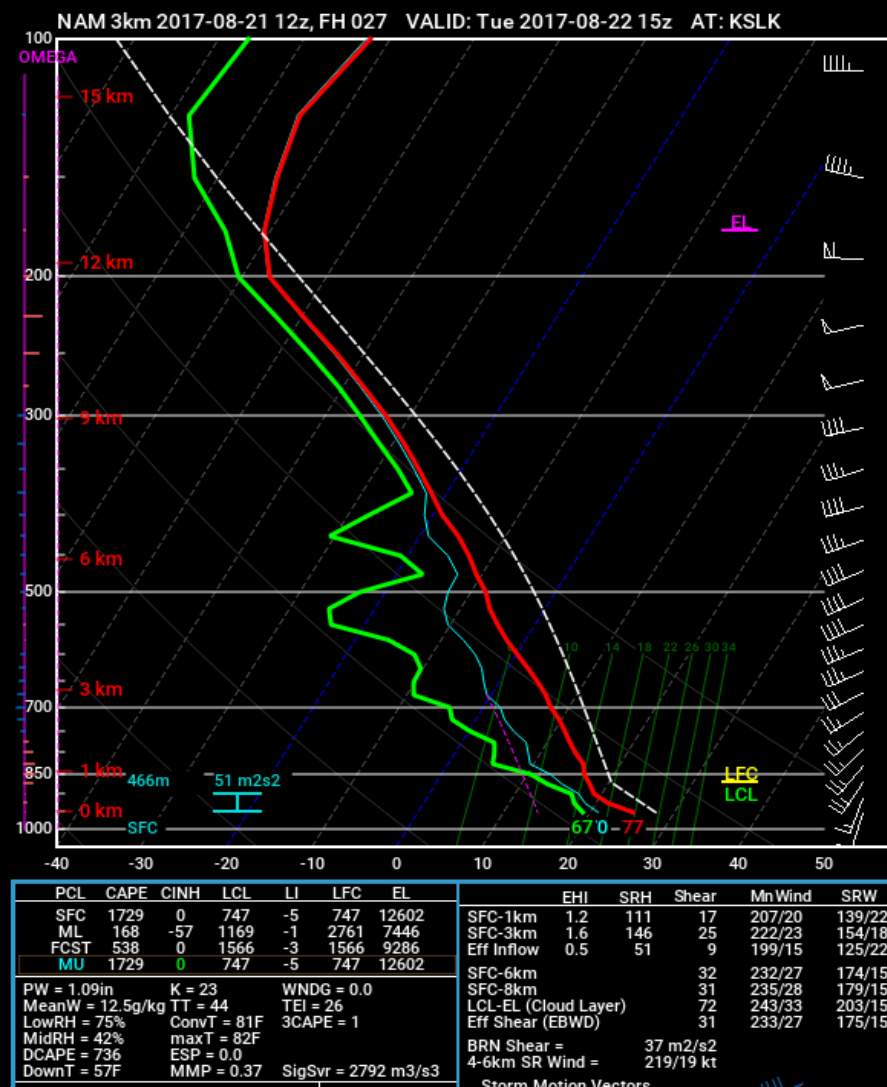
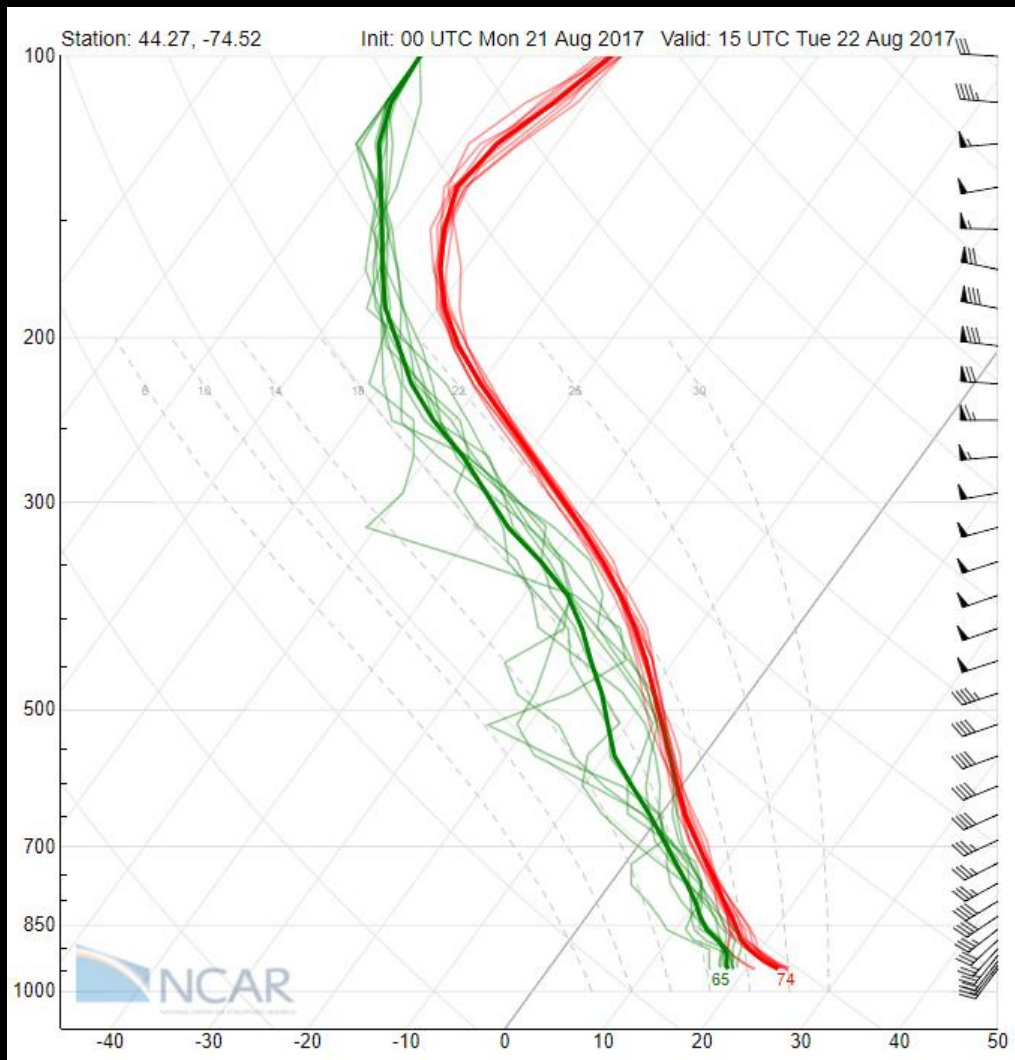
Day 1

Day 2

Day 3-5

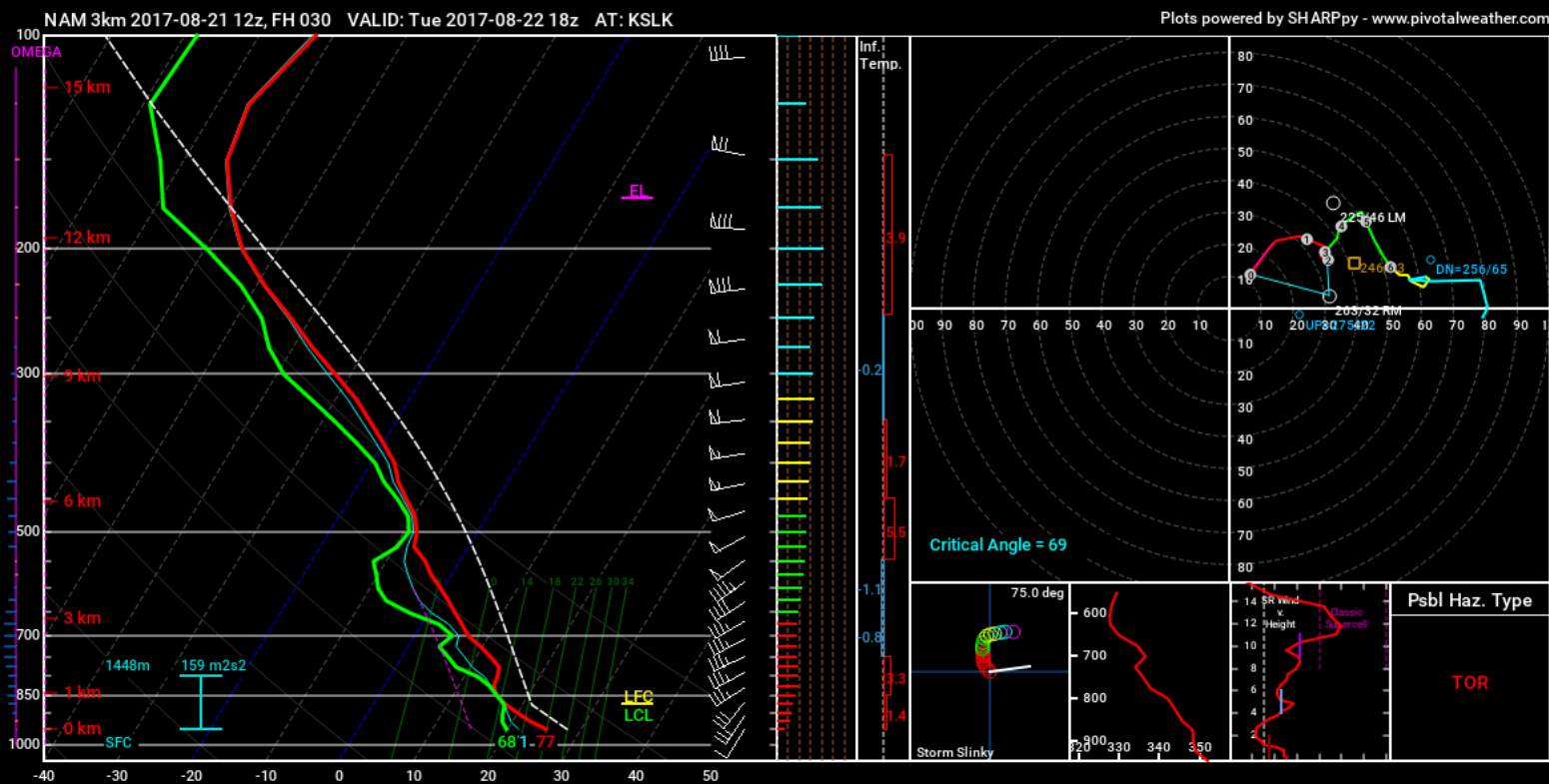
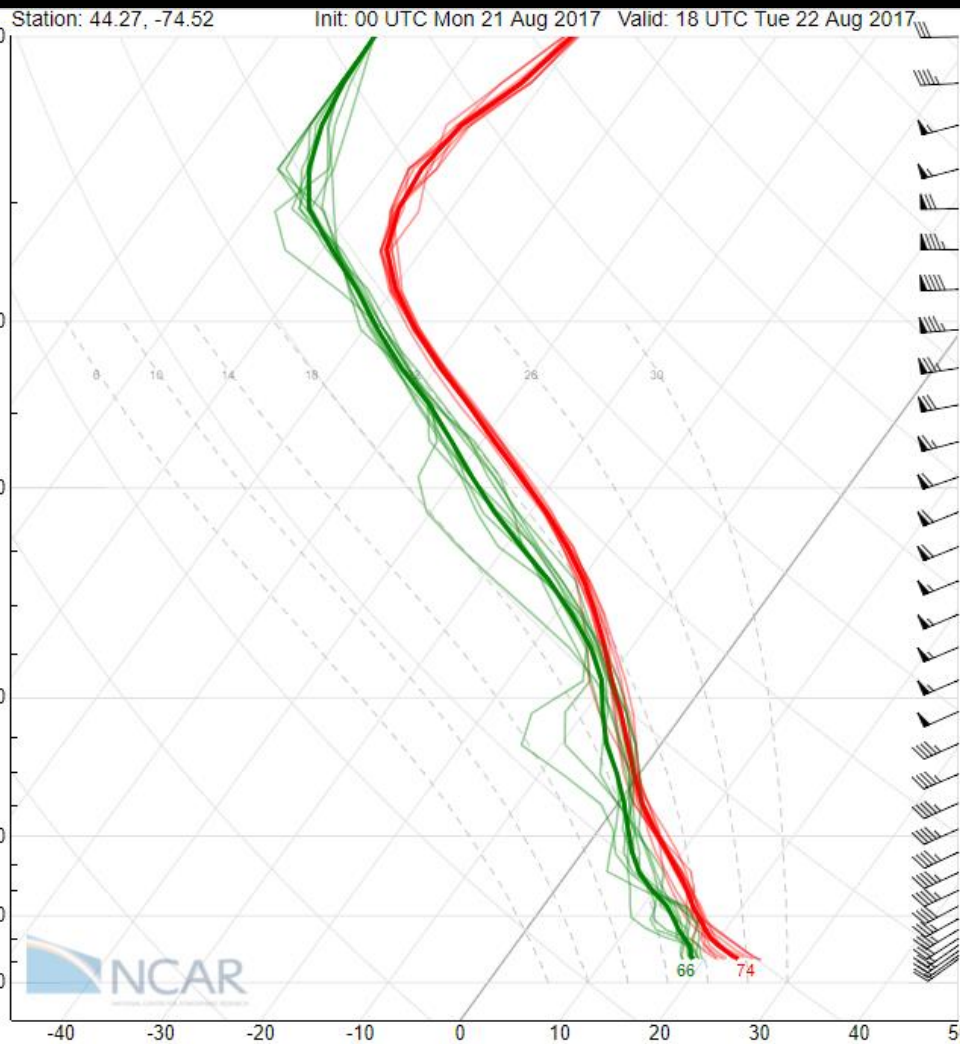
Model Soundings

- Shown is the 8/21 12z 3km NAM sounding valid for 15z 8/22 and the 0z 8/21 NCAR ensemble sounding for 15z 8/22
- There is some variability in the forecast but roughly half of the NCAR ensemble members are forecasting 850mb to be saturated by 15z which may be favorable for the summit to be in cloud
- The NAM is forecasting the LCL to be just below the summit, moderate instability will likely create cumulus cloud and give a chance of thunderstorms



Model Soundings

- Shown is the 8/21 12z 3km NAM sounding valid for 18z 8/22 and the 0z 8/21 NCAR ensemble sounding for 18z 8/22
- Still at 18z the NCAR ensemble has a great deal of variability in the forecast, however many members are looking favorable for the summit to be in cloud before the frontal passage
- The NAM is forecasting the summit to be totally saturated, additionally there is a chance of severe storms due to the moderate cape



PCL	CAPE	CINH	LCL	LI	LFC	EL	EHI	SRH	Shear	MnWind	SRW	SARS - Sounding Analogs		Effective Layer STP (with CIN)														
SFC 1904	0	682	-6	682	12795		SFC-1km 1.6	133	21	217/24	132/23	SUPERCELL		11														
ML 1114	-2	763	-4	763	12095		SFC-3km 1.9	158	24	233/29	151/16	00071122.BKX	SIG	89061600.ACY	0.75													
FCST 1693	0	1064	-6	1064	12618		Eff Inflow 1.9	159	25	224/26	140/20	04061318.RQB	WEAK															
MU 1904	0	682	-6	682	12795		SFC-6km 4.4		44	236/35	170/16	00110907.GZH	NON															
PW = 1.61in K = 38 WNDG = 0.7							SFC-8km 5.4			54	240/37	181/15	<table border="1"> <tr> <td>based on CAPE:</td> <td>0.15</td> </tr> <tr> <td>based on LCL:</td> <td>0.19</td> </tr> <tr> <td>based on ESRt:</td> <td>0.08</td> </tr> <tr> <td>based on EBWD:</td> <td>0.12</td> </tr> <tr> <td>based on STP_c:</td> <td>0.32</td> </tr> <tr> <td>based on STP_fixed:</td> <td>0.17</td> </tr> </table>				based on CAPE:	0.15	based on LCL:	0.19	based on ESRt:	0.08	based on EBWD:	0.12	based on STP_c:	0.32	based on STP_fixed:	0.17
based on CAPE:	0.15																											
based on LCL:	0.19																											
based on ESRt:	0.08																											
based on EBWD:	0.12																											
based on STP_c:	0.32																											
based on STP_fixed:	0.17																											
LowRH = 88% ConvT = 78F TEI = 24							LCL-EL (Cloud Layer) 67			67	246/43	211/16	<table border="1"> <tr> <td>EF4+</td> <td>EF3</td> <td>EF2</td> <td>EF1</td> <td>EF0</td> <td>NONTOR</td> </tr> </table>				EF4+	EF3	EF2	EF1	EF0	NONTOR						
EF4+	EF3	EF2	EF1	EF0	NONTOR																							
MidRH = 69% maxT = 81F 3CAPE = 104							Eff Shear (EBWD) 46			46	237/35	172/16	<table border="1"> <tr> <td>(19 loose matches)</td> <td colspan="2">SARS: 53% TOR</td> <td colspan="2">(37 loose matches)</td> <td>SARS: 27% SIG</td> </tr> </table>				(19 loose matches)	SARS: 53% TOR		(37 loose matches)		SARS: 27% SIG						
(19 loose matches)	SARS: 53% TOR		(37 loose matches)		SARS: 27% SIG																							
DCAPE = 730 ESP = 1.0 SigSvr = 25132 m3/s3							BRN Shear = 41 m2/s2			41																		
DownT = 59F MMP = 0.6							4-6km SR Wind = 197/25 kt			197/25																		
3-6km AGL LR = 7.5 C/km							... Storm Motion Vectors...																					
850-500mb LR = 6.0 C/km							Supercell = 6.0																					
700-500mb LR = 6.0 C/km							Bunkers Right = 263/32 kt																					
							Bunkers Left = 225/46 kt																					
							Corridi Downshear = 256/65 kt																					
							Corridi Upshear = 275/22 kt																					
							SHIP = 0.7																					

Day -1

Day 0

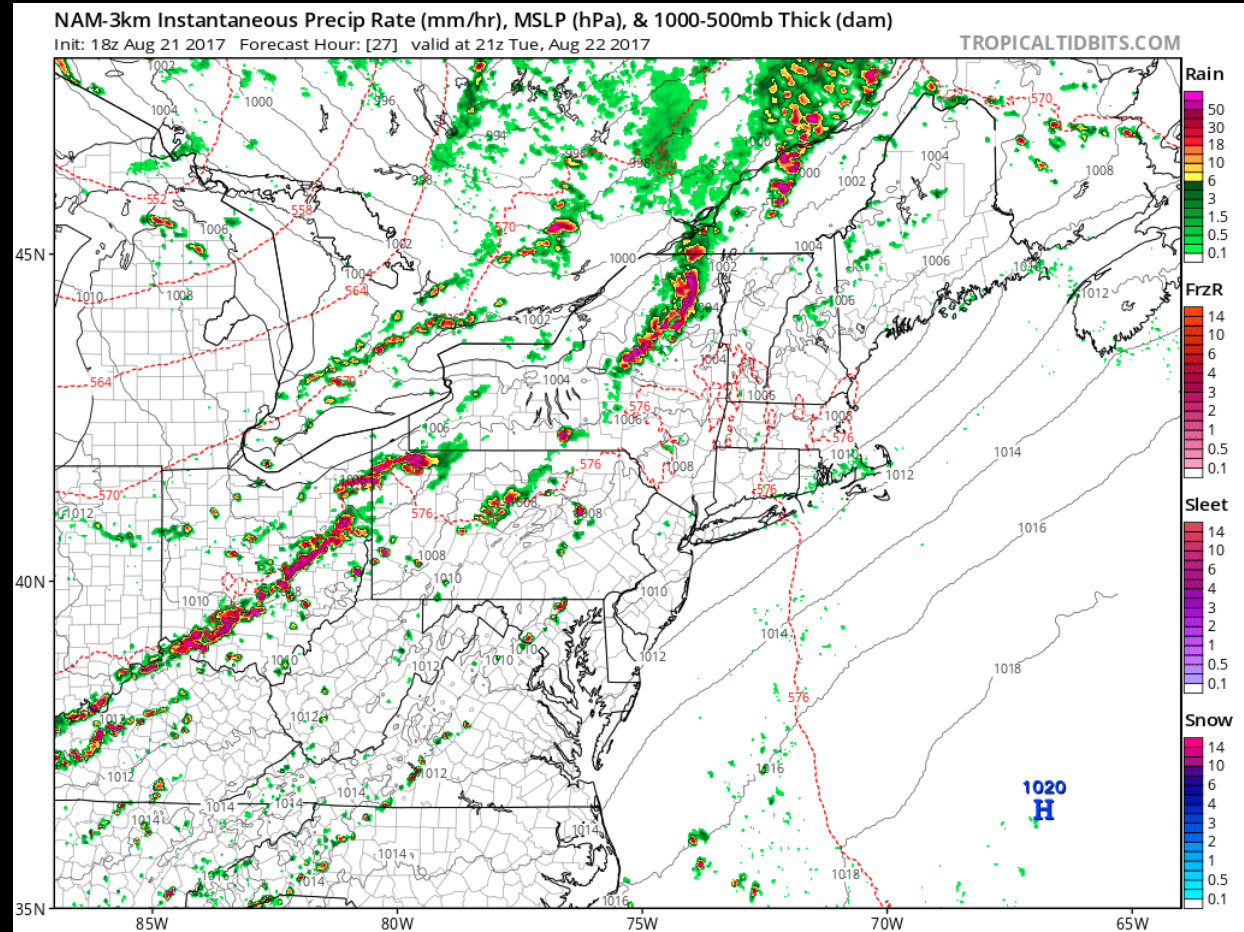
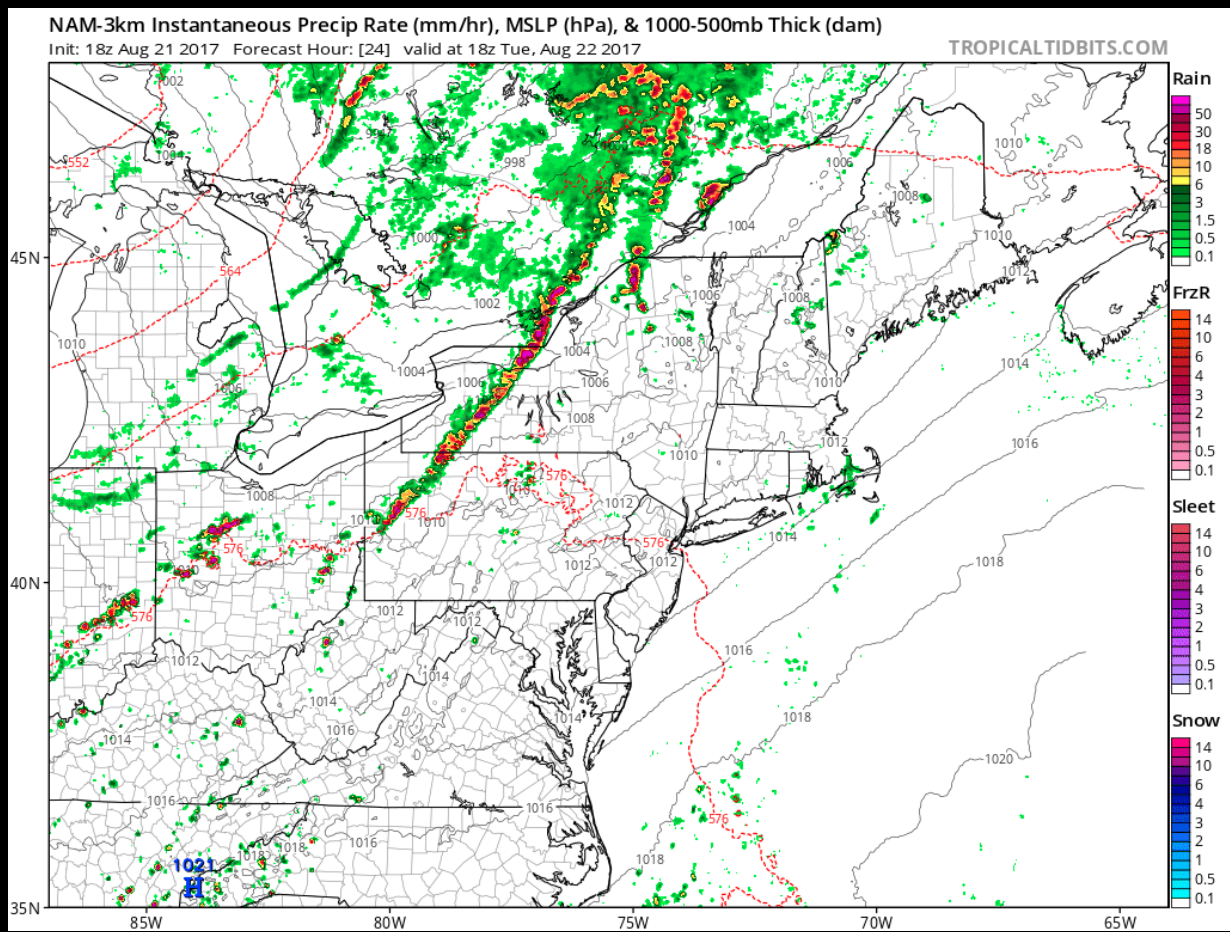
Day 1

Day 2

Day 3-5

Frontal Passage

- Shown is the 8/21 12z 3km NAM Instantaneous precip rate MSLP and 1000-500mb thickness valid for 18z and 21z 8/22
- We will likely be dry still at 18z, there is still a chance for a passing t-storm.
- The frontal passage will occur between 20z and 21z which will bring heavy precip



Day -1

Day 0

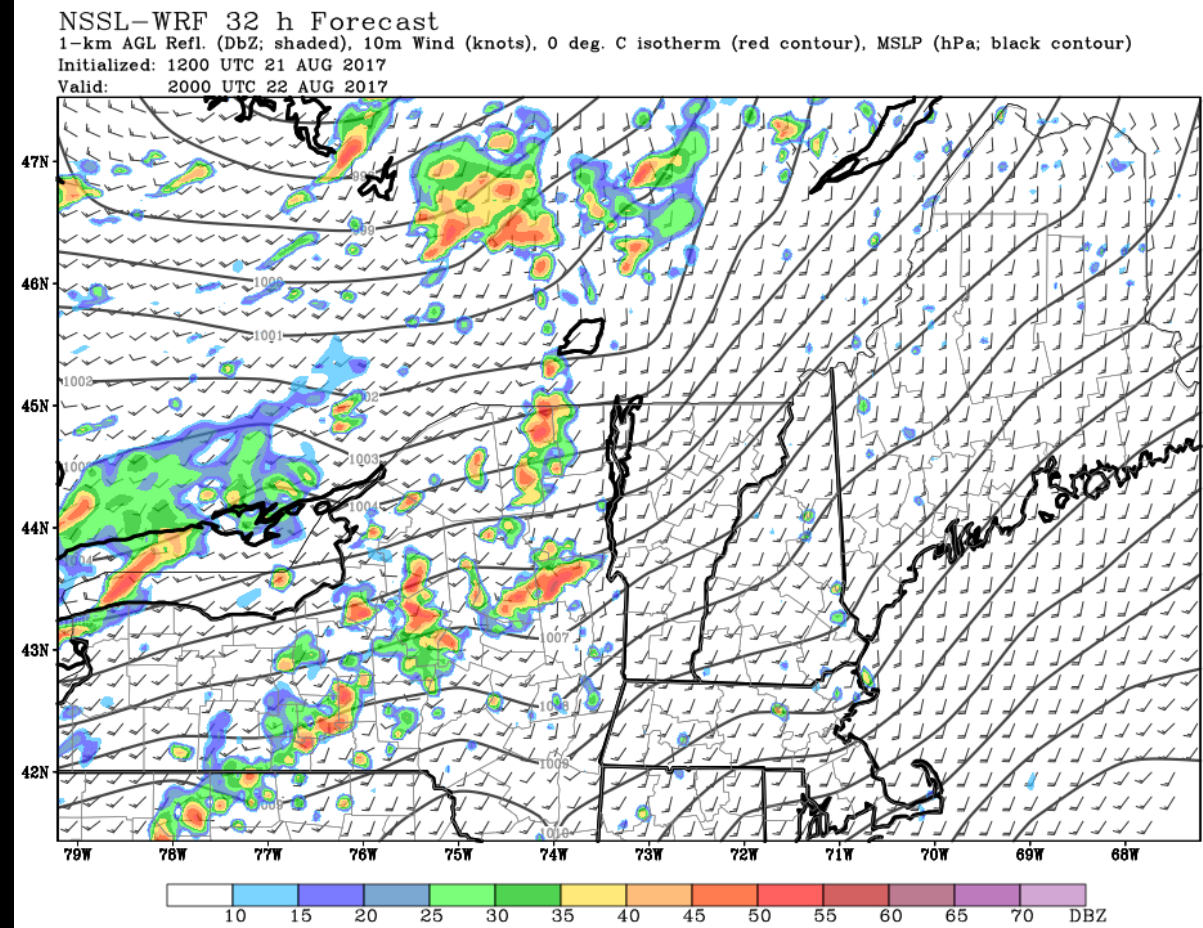
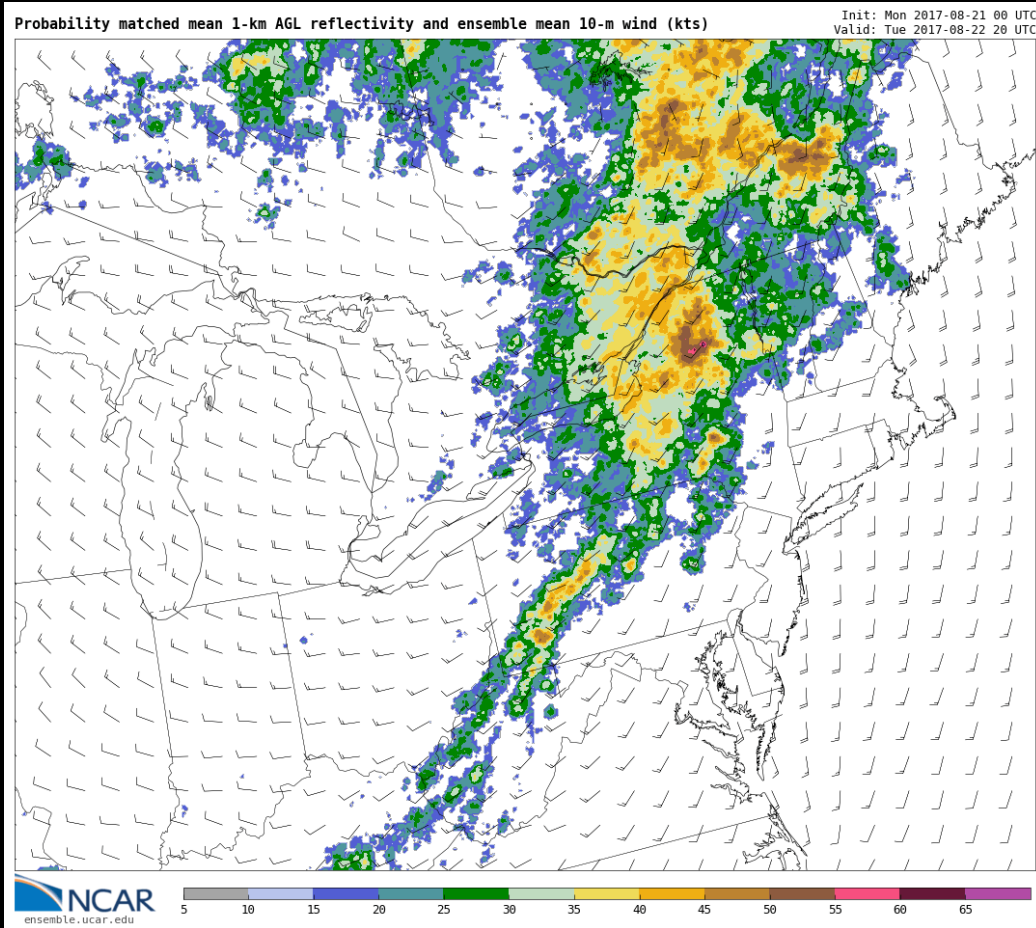
Day 1

Day 2

Day 3-5

Frontal Passage

- Left: NCAR ensemble mean 1km AGL reflectivity valid for 20z 8/22
- Right NSSL-WRF 1km AGL reflectivity valid for 20z 8/22
- The NSSL-WRF is forecasting precip to start moving through our area at 20z
- The NCAR ensemble is forecasting light rain to start prior to 20z and heavy precip to start following 20z



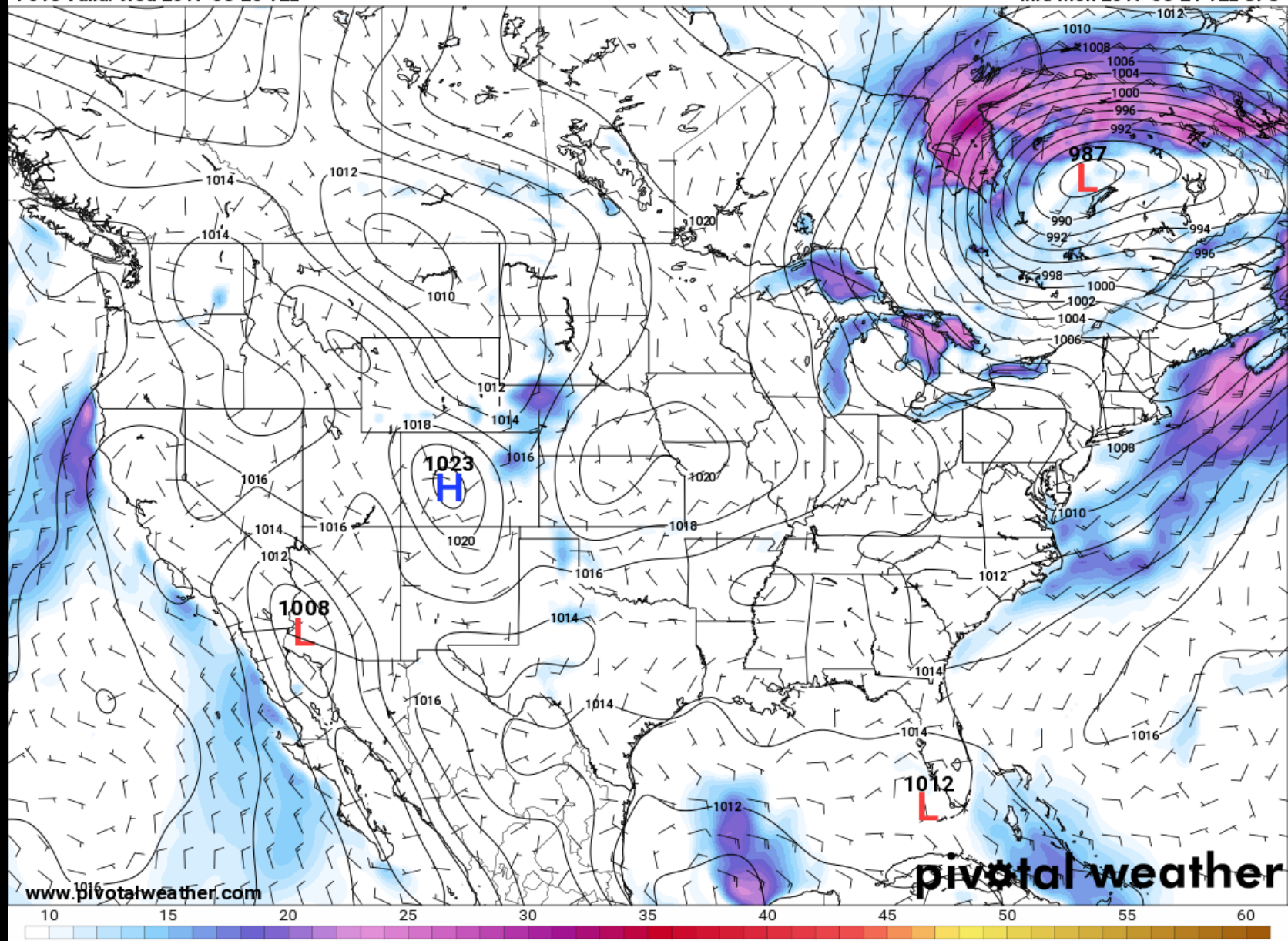
Sea level Pressure

- 12z 8/21 GFS run showing 6hr precip accumulation and MSLP for 12z 8/23
- A low pressure system will have moved to our North east giving us slightly cooler weather, weak west wind, and potentially low LCLs

MSLP (mb) and 10 m AGL Wind (kt)

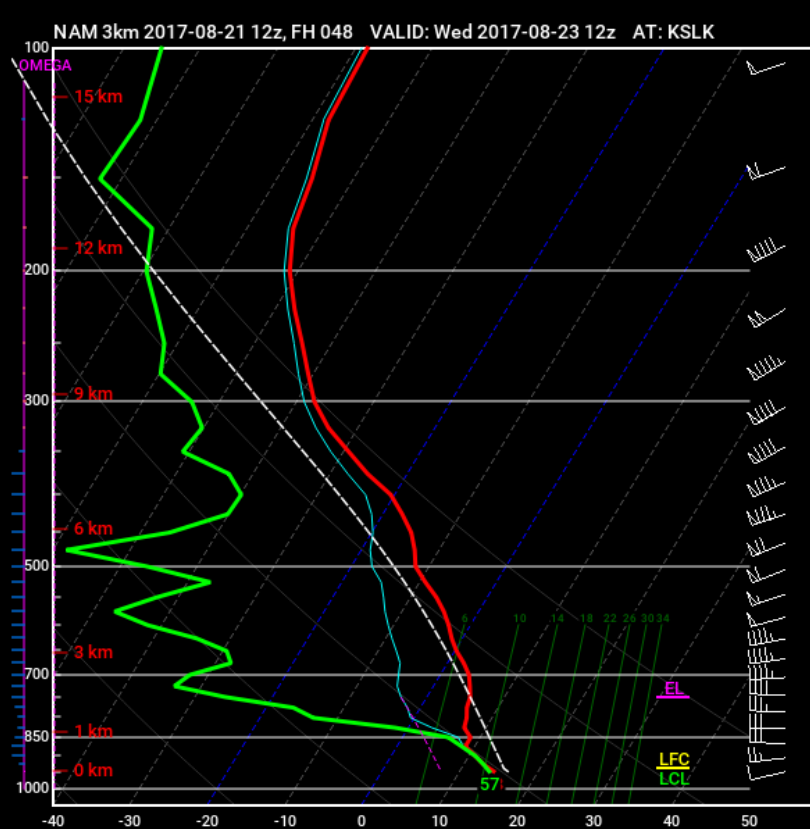
F048 Valid: Wed 2017-08-23 12z

Init Mon 2017-08-21 12z GFS



Sunday Model Soundings

- Shown is the 12z 8/21 3km NAM model soundings valid for 12z and 18z 8/23
- The forecasted LCL's will likely have the summit in cloud most of the day, however the deep clouds might also lock the lake placid turn in cloud which may not be the best conditions for an IOP

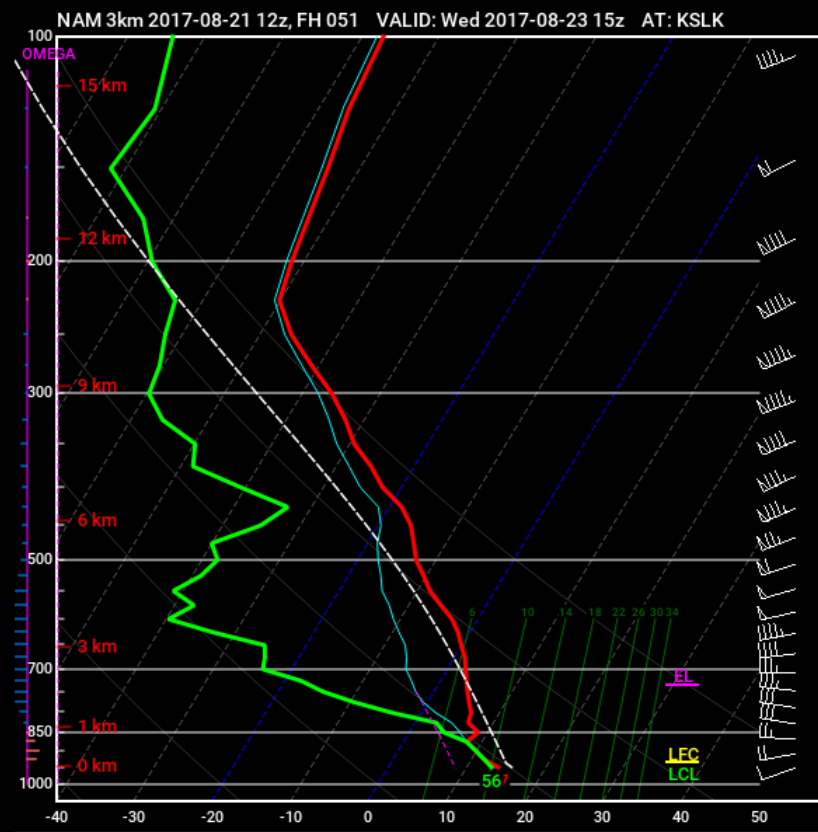


PCL	CAPE	CINH	LCL	LI	LFC	EL	EHI	SRH	Shear	Mn Wind	SRW	
SFC	83	-186	72	3	72	1906	SFC-1km	0.0	28	19	267/24	108/24
ML	0	0	649	6	--	745	SFC-3km	0.0	51	34	268/33	116/16
FCST	26	-192	1155	3	1155	1906	Eff Inflow	--	--	--	--	
MU	83	-186	72	3	72	1906	SFC-6km		67	261/40	147/14	
							SFC-8km		78	258/44	167/15	
							LCL-EL (Cloud Layer)		27	270/29	109/19	
							Eff Shear (EBWD)		--	--	--	
							BRN Shear =		43	m2/s2		
							4-6km SR Wind =		191/24	kt		

PW = 0.48in
 MeanW = 8.7g/kg
 LowRH = 96%
 MidRH = 8%
 DCAPE = 423
 DownT = 46F

K = -10
 TT = 38
 ConvT = 75F
 maxT = 67F
 ESP = 0.0
 MMP = 0.0

WNDG = 0.0
 TEI = 19
 3CAPE = 0
 SinSvr = 0 m3/s3



PCL	CAPE	CINH	LCL	LI	LFC	EL	EHI	SRH	Shear	Mn Wind	SRW	
SFC	71	-182	108	3	108	2078	SFC-1km	0.0	5	23	268/19	109/26
ML	0	0	691	6	--	738	SFC-3km	0.0	47	32	272/27	112/18
FCST	20	-167	1249	3	1249	2190	Eff Inflow	--	--	--	--	
MU	71	-182	108	3	108	2078	SFC-6km		72	263/36	144/15	
							SFC-8km		85	259/41	165/16	
							LCL-EL (Cloud Layer)		25	274/26	107/19	
							Eff Shear (EBWD)		--	--	--	
							BRN Shear =		58	m2/s2		
							4-6km SR Wind =		196/23	kt		

PW = 0.55in
 MeanW = 8.3g/kg
 LowRH = 95%
 MidRH = 18%
 DCAPE = 324
 DownT = 47F

K = 0
 TT = 38
 ConvT = 73F
 maxT = 67F
 ESP = 0.0
 MMP = 0.0

WNDG = 0.0
 TEI = 14
 3CAPE = 0
 SigSvr = 0 m3/s3

Long Term

- 12z 8/21 GFS run showing MSLP and 10m for 12z 8/24 and 8/25
- During the end of the weak we will be in an area of average pressure, creating weak winds
- An upper level trough will be located over head Thursday evening which may help force precip due to vorticity advection aloft

