

# Forecast for 6/24-6/27

Forecaster: Matthew Brewer

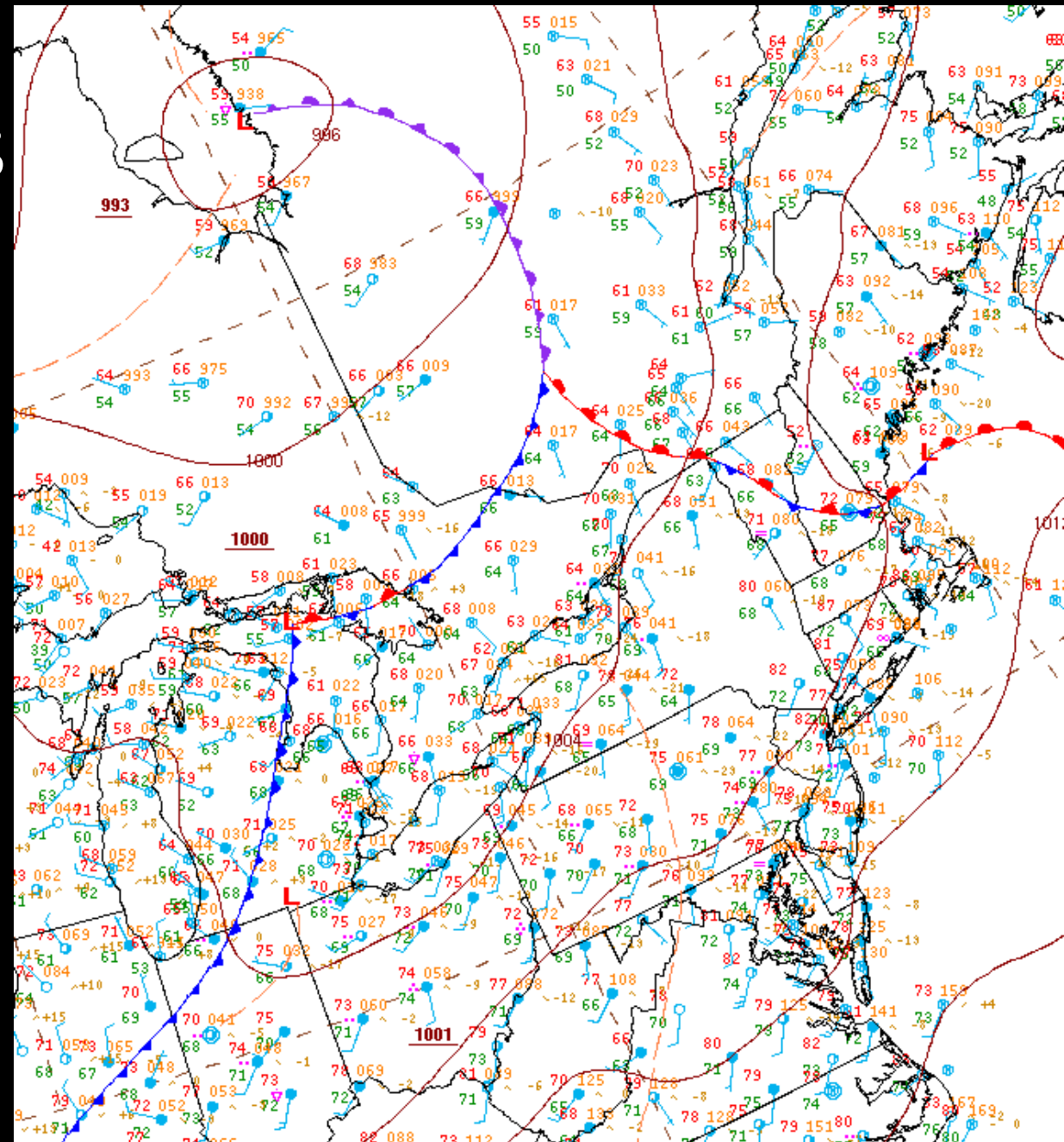
Forecast made at: 20z 6/23/2017

# Overview for Tomorrow

- TC Cindy has helped create ridging in the jet stream aloft intensifying a low pressure system over northern Quebec. The circulation from Cindy also has brought warm moist air into the area.
- Associated with the cyclone in Quebec a cold front has stretched down in the US which will shift winds from SW to W and bring in precip after 0z Saturday.
- Largest chance of precip will be between 0z-16z
- Only slight chance of precip after 16z
- Following precip LCL likely to lift above summit due to heating throughout the day

# Current Surface Analysis

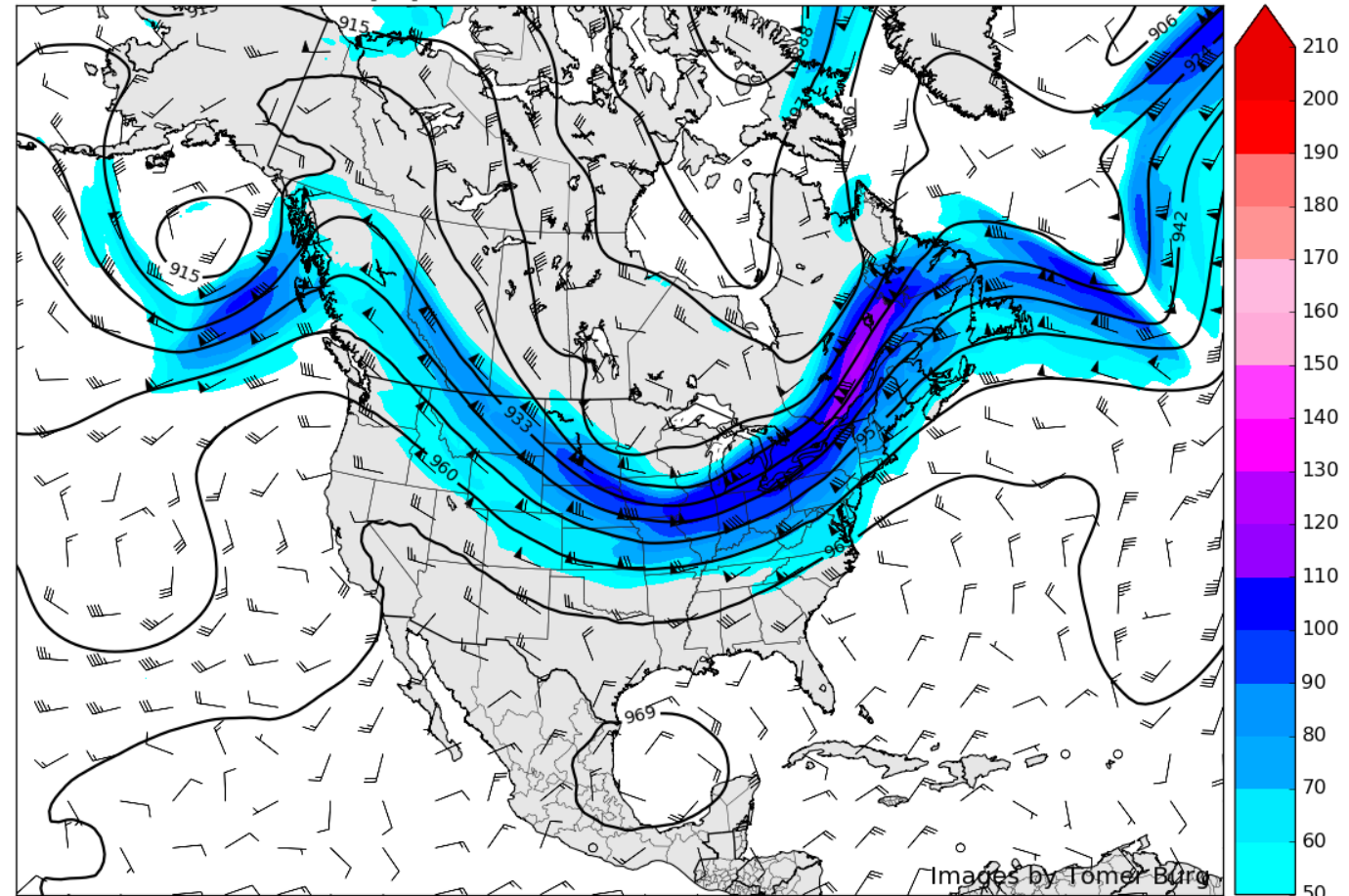
- Shown is the NOAA WPC surface analysis from 15z 6/23/2017
- The low over the Hudson bay and Lake Huron are forecasted to move that cold front in the Adirondack region tonight



# Synoptic weather

- Shown 300hPa heights, wind barbs, and isotachs filled from the 12z GFS from 6/23 valid for 12z 6/24
- Ridging from TC Cindy has amplified the upper level flow causing greater upper level divergence
- The poleward exit of the jet also adds to the upper level divergence
- The Upper level divergence helps to intensify the surface low located in northern Quebec

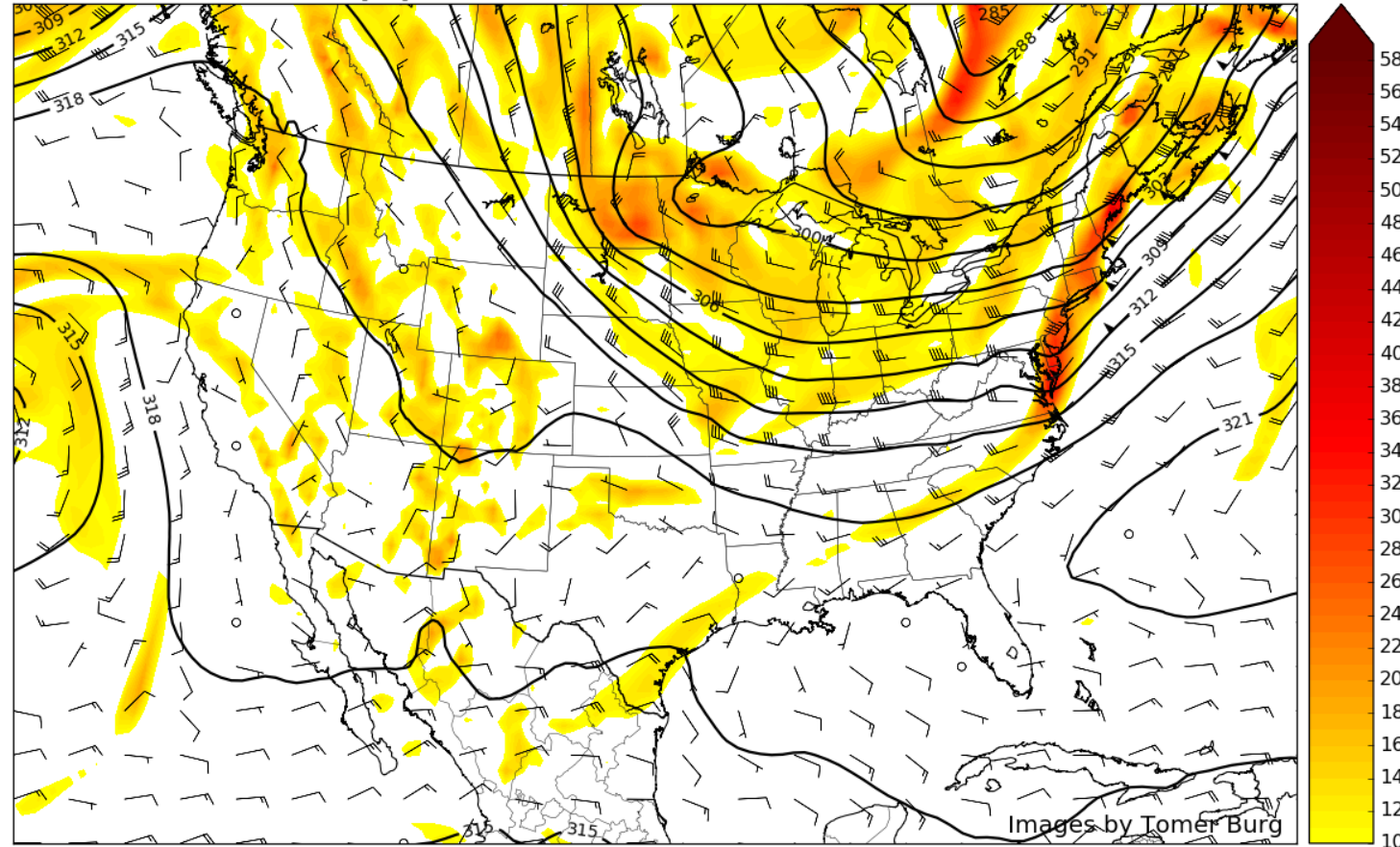
GFS 300 hPa Wind Isotachs, Geopotential Heights (dam), Wind (kt)  
Init 12z Fri 20170623 - Hour [24] - Valid 12z Sat 20170624



# Synoptic weather

- Shown is 700hpa height, wind, and vorticity(filled) from the same time as above map
- This map shows mid level vorticity advection which is providing upward vertical motion helping force precip in the area

GFS 700 hPa Absolute Vorticity (1/s), Geopotential Heights (dam), Wind (kt)  
Init 12z Fri 20170623 - Hour [24] - Valid 12z Sat 20170624

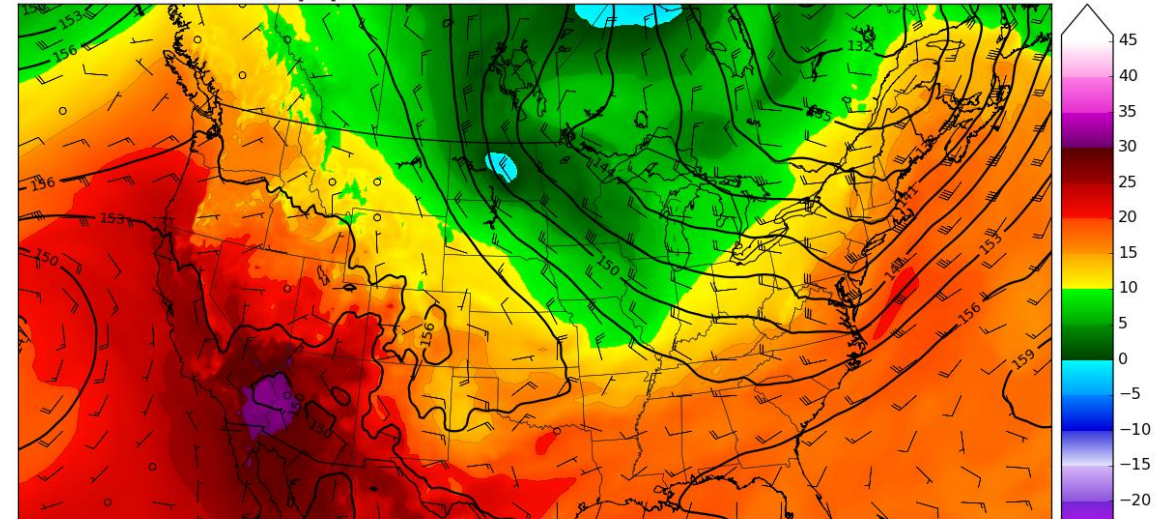




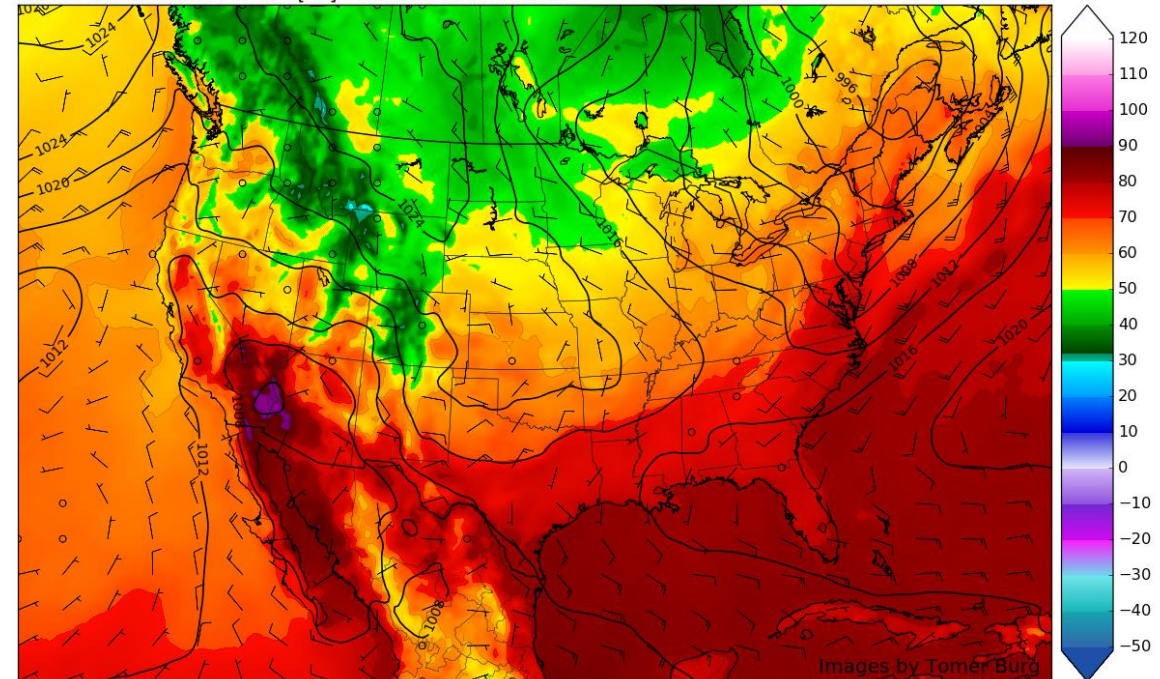
# Synoptic weather

- Above: 850hPa heights, Temp(C) , and wind barbs
- Below: mean sea-level pressure(hPa), 2m Temp, and wind barbs
- The circled area shows area where a cold front associated with the surface low would be located
- The front will be the primary forcing mechanism for the creation of precip
- The wind shift and temperature advection are indicative of a front

GFS 850 hPa Temperature (C), Geopotential Heights (dam), Wind (kt)  
Init 12z Fri 20170623 - Hour [24] - Valid 12z Sat 20170624



GFS 2m Temperature (F), MSLP (hPa), Wind (kt)  
Init 12z Fri 20170623 - Hour [24] - Valid 12z Sat 20170624

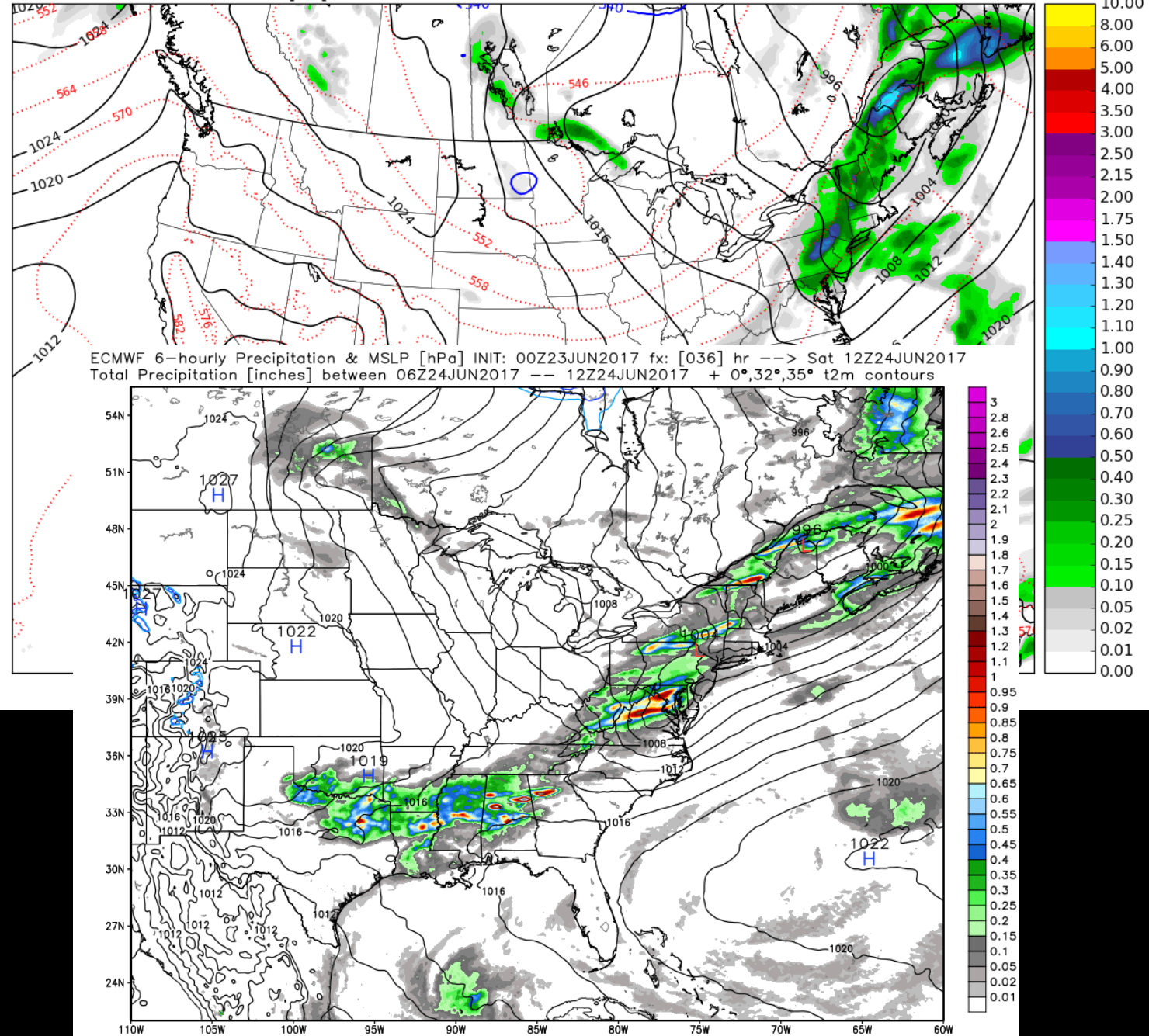


Images by Tomer Burg

# Synoptic weather

- Shown is mean sea-level pressure (hPa) and 6-hour precip. Same time as previous maps
- The precip is associated with the cold front, column average divergence/ upward vertical motion, and TC Cindy

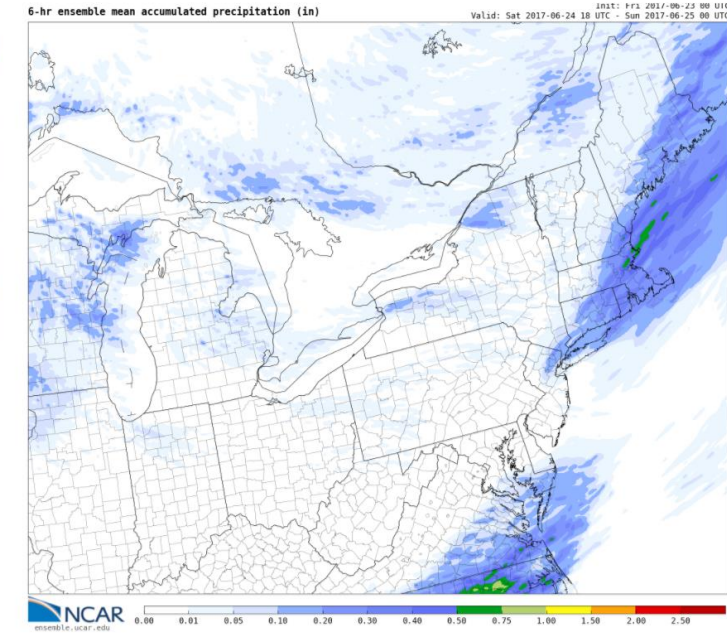
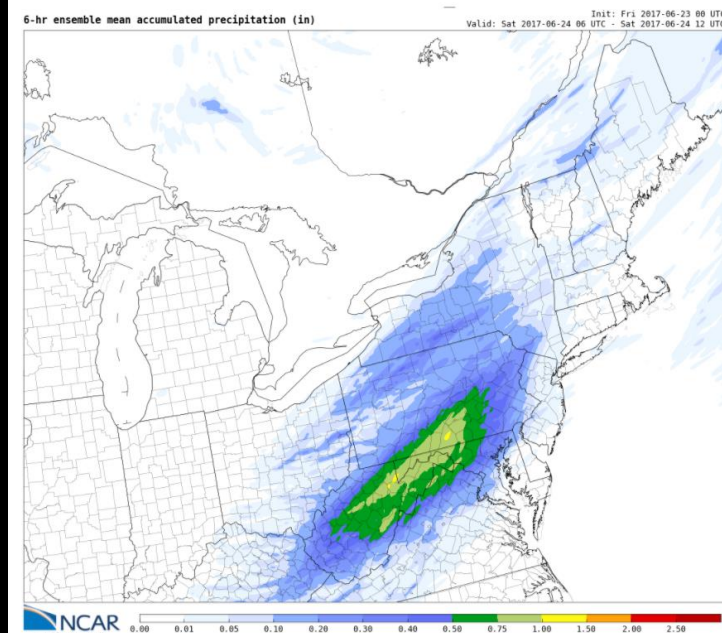
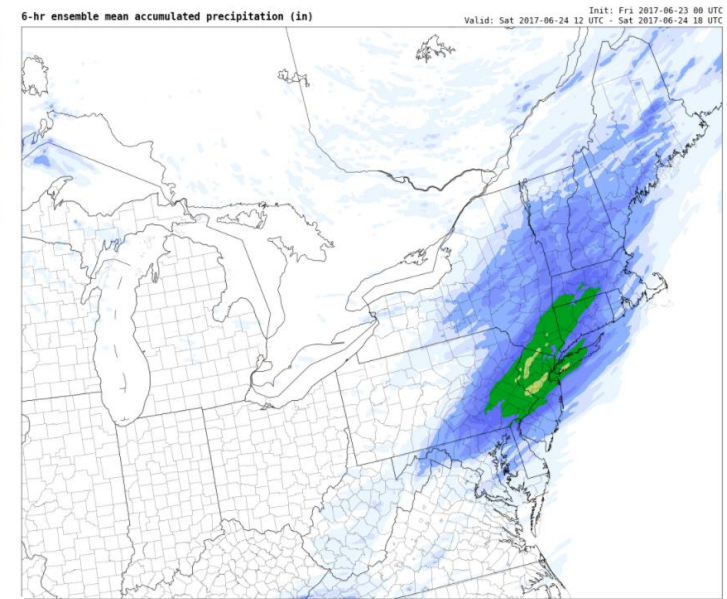
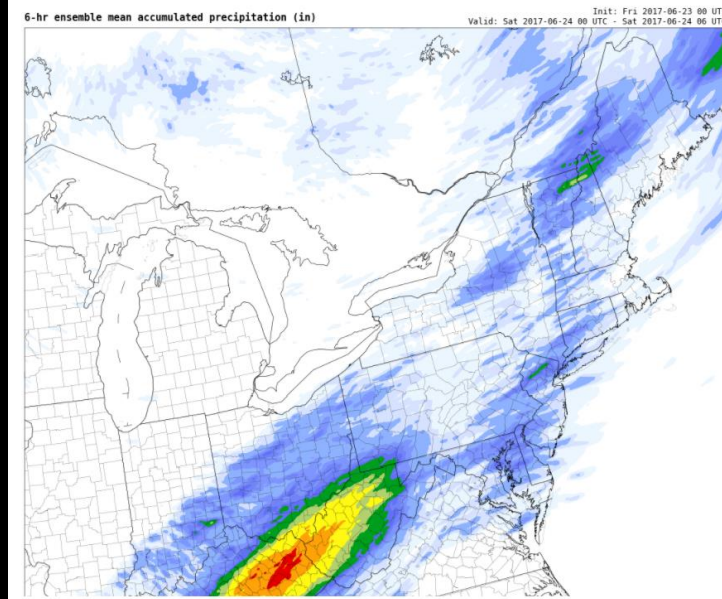
GFS MSLP (hPa), 6-Hour Precipitation (in)  
Init 12z Fri 20170623 - Hour [24] - Valid 12z Sat 20170624





# Synoptic weather

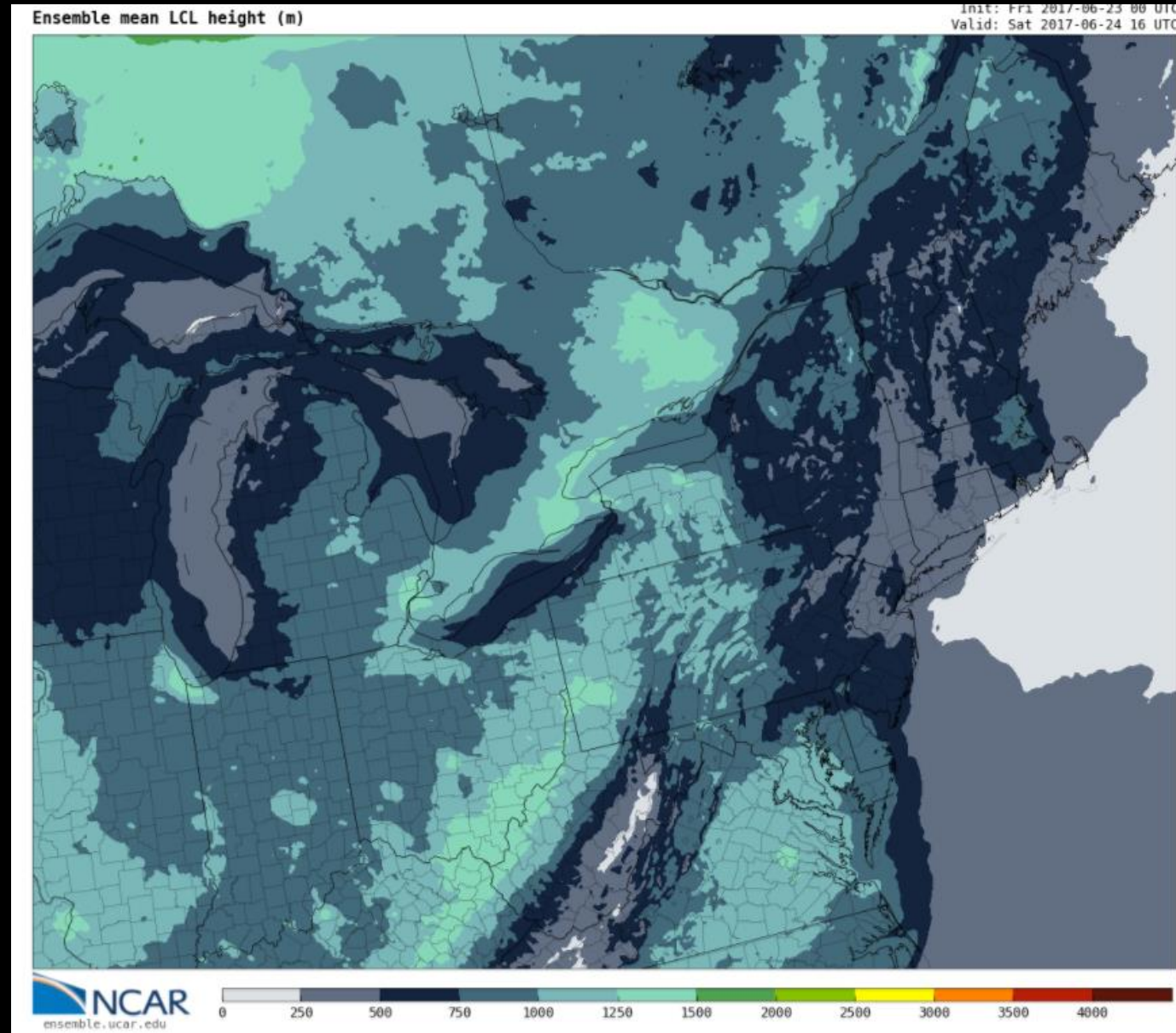
- Shown is NCAR 6 hour ensemble mean accumulated precip
- Top left: 0z-6z, bottom left: 6z-12z, top right: 12z-18z, bottom right: 18z-0z
- These maps show that there is a chance of precip through out the day





# LCL forecast

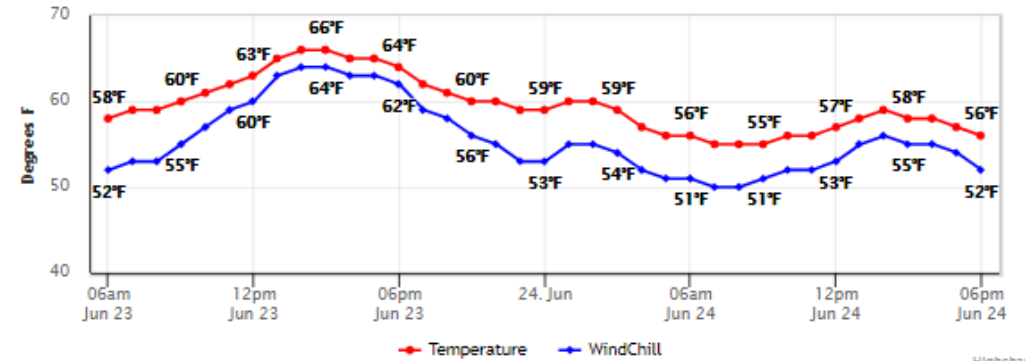
- Shown is the NCAR ensemble mean LCL height AGL valid for 16Z 6/24
- Circled is the Whiteface/Saranac/Lake Placid region
- Based off the LCL of surrounding area is it probable that if surface based convection occurred that the summit would be likely be below the cloud base



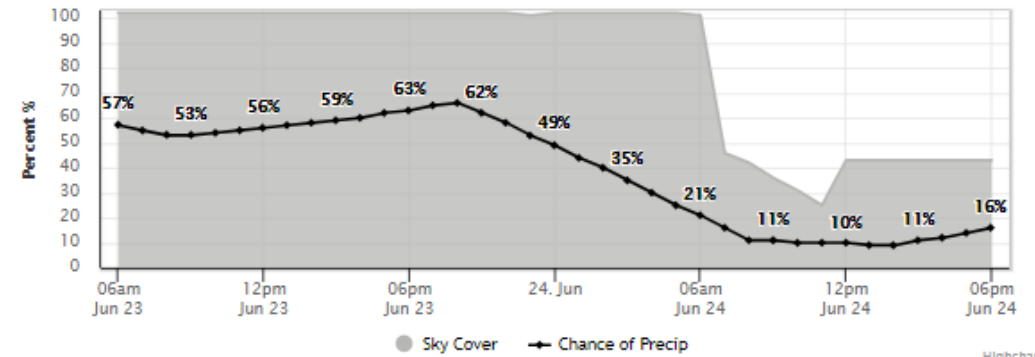
# Summit Forecast

- NWS at Burlington's mountain top forecast
- Temps to be in the mid 50's throughout the day tomorrow
- Winds shift from SW to WNW following the frontal passage in the night
- Rain likely in the evening and morning transitioning to only a slight chance throughout the day
- The summit will be in cloud throughout the evening and morning then change to out of cloud in mid morning

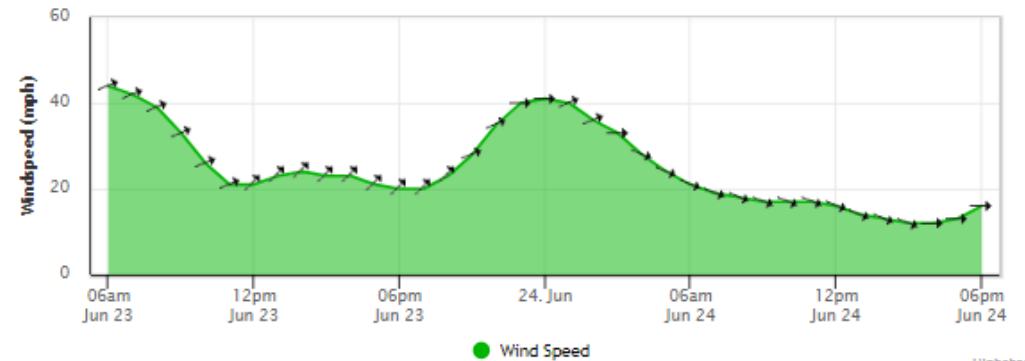
Temperature & Wind Chill Forecasts for Whiteface Mountain, NY at 4867'



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

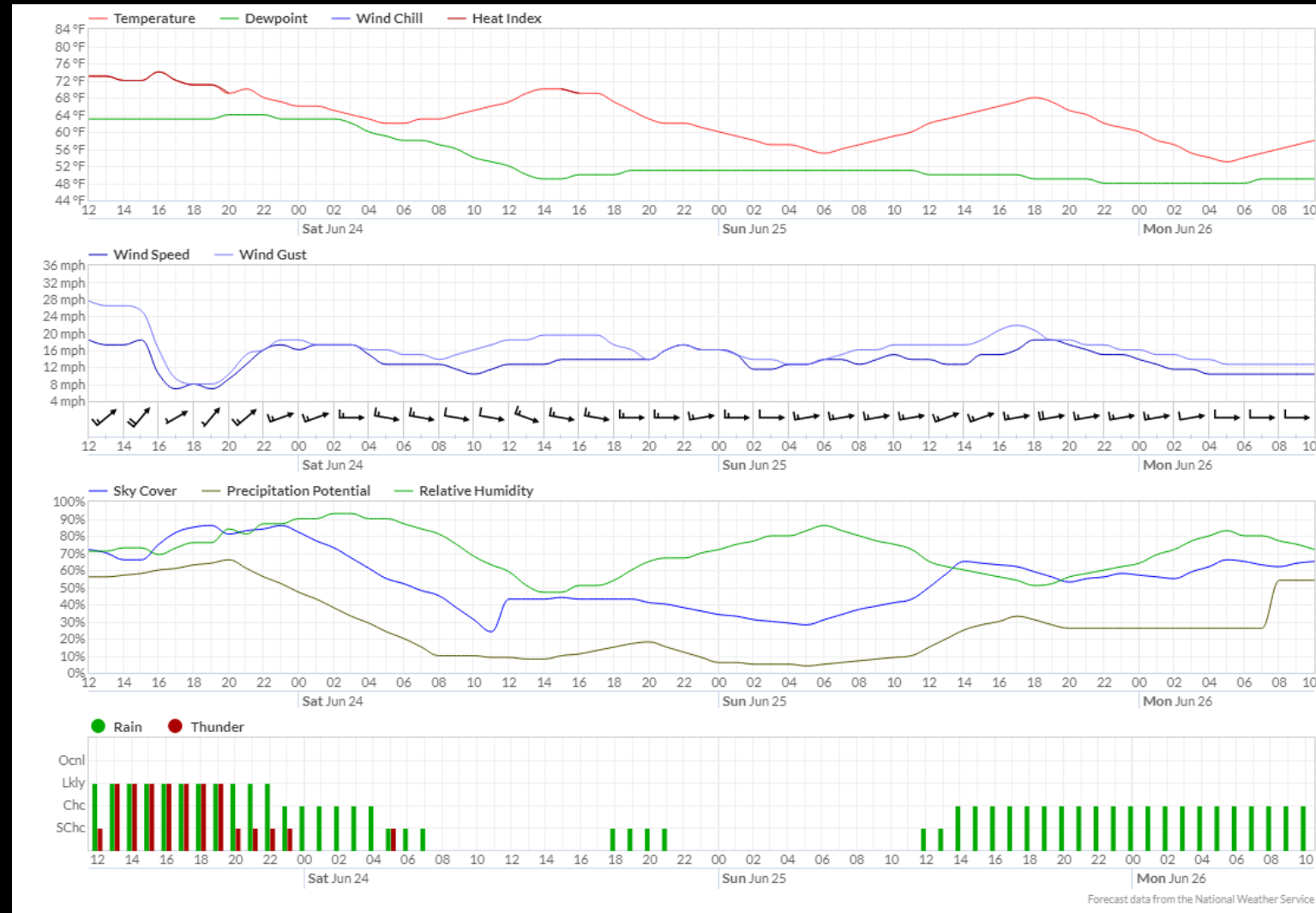


Wind Speed & Direction Forecasts for Whiteface Mountain, NY at 4867'



# Base forecast

- Shown is the 3 day forecast in local time for the Whiteface mountain lodge Mesonet site
- The wind forecast shows the frontal passage as the barbs shift from SW to W
- The precip potential show the chance of precip throughout the day

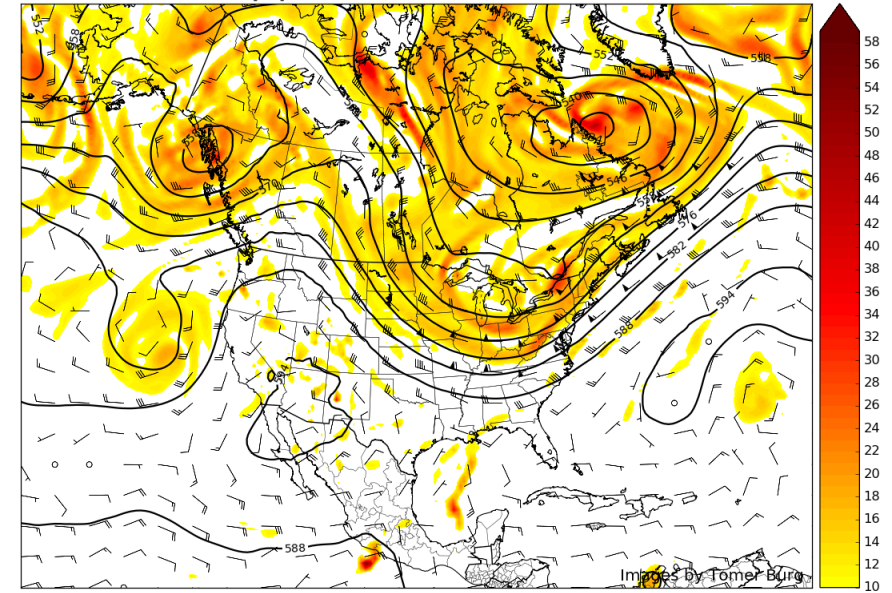




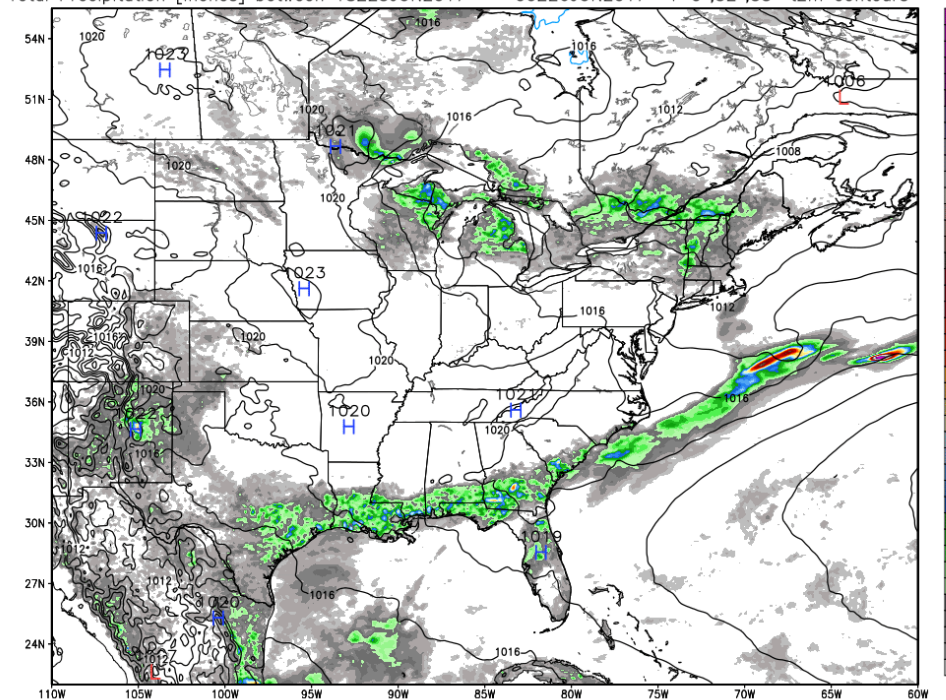
# Long Term Synoptic Forecast

- Rain likely Sunday due to an upper level short wave trough (circled) creating upper level divergence and vertical motion
- Bottom image is the ECMWF 6-hour precip forecast showing precip in the area

GFS 500 hPa Absolute Vorticity (1/s), Geopotential Heights (dam), Wind (kt)  
Init 12z Fri 20170623 - Hour [60] - Valid 00z Mon 20170626

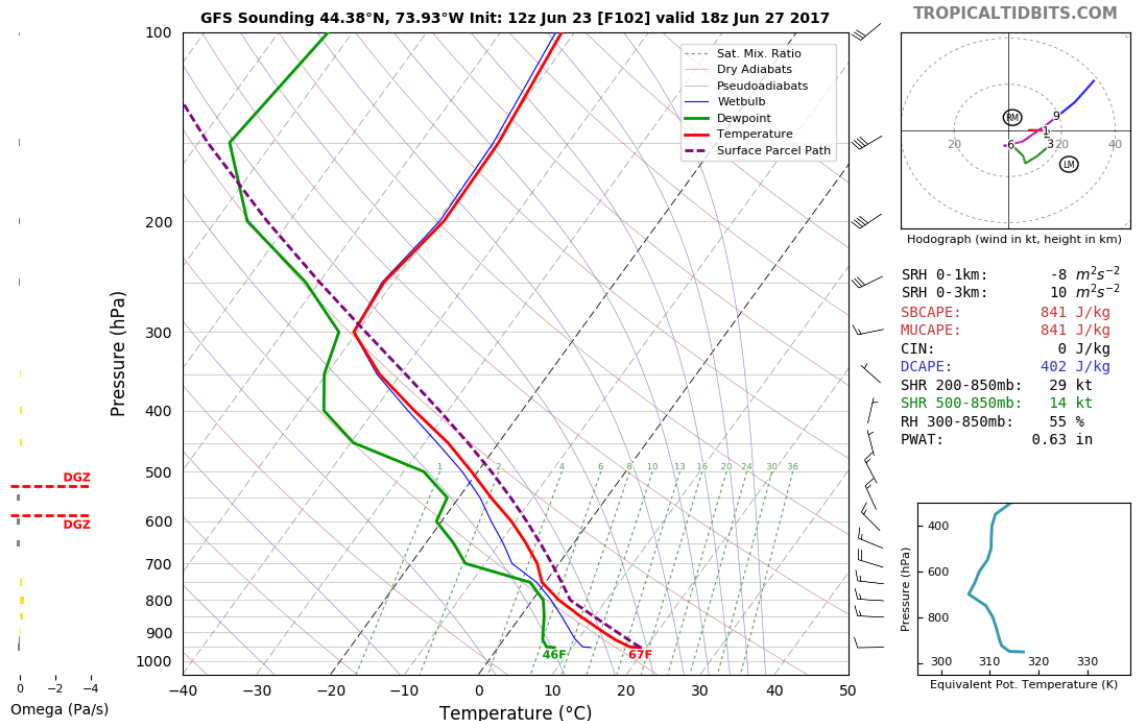
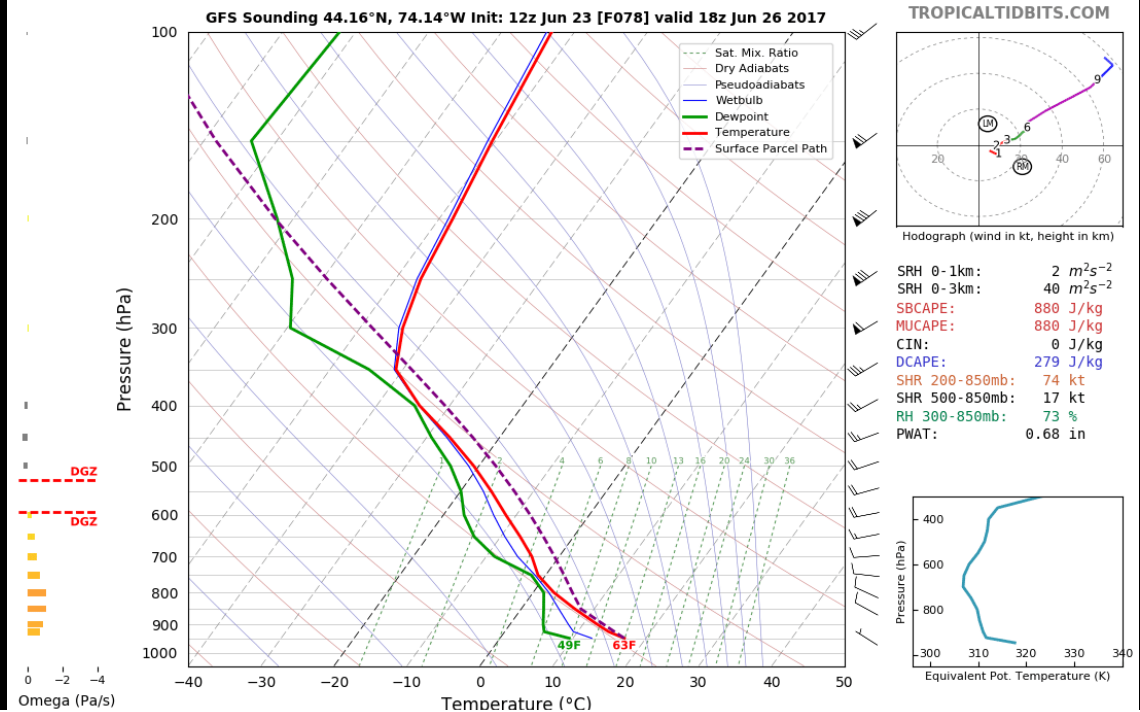


ECMWF 6-hourly Precipitation & MSLP [hPa] INIT: 00Z23JUN2017 fx: [072] hr --> Mon 00Z26JUN2017  
Total Precipitation [inches] between 18Z25JUN2017 -- 00Z26JUN2017 + 0°.32°,35° t2m contours



# Long Term Synoptic Forecast

- Rain possible on Monday and Tuesday due to vertical instability throughout the region creating convective shower
- GFS soundings shows the instability associated with mixing and steep lapse rates





# Long Term Synoptic Forecast

- A high pressure system move into the area on Wednesday giving us a brief period of dry weather
- However there is discrepancy in the GFS vs ECMWF in a warm front moving into the area Wednesday evening bringing precip along with it

